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University College Cork, Ireland

A Scoping Study towards Integrated Coastal Zone Management of Tramore Bay, Co. Waterford

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An Action of the County Waterford Heritage Plan 2006-2010



An Chomhairle Oidhreachta
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EXECUTIVE SUMMARY

This report was commissioned by Waterford County Council to ascertain why the Tramore Bay area is of significance from an environmental, social and economic perspective with a view to determining how it could be managed using an integrated approach. In order to do this it is necessary to look at each of the above elements individually, determine potential and existing pressures on the area and identify relevant stakeholders with a view to preparing an overall statement of the value. The research and work was conducted by members of the Coastal and Marine Resources Centre (CMRC) of University College, Cork and facilitated by members of Waterford County Council.

The objective of this study is to prepare a Statement of Significance of the environmental and ecological value of Tramore Bay and hinterland by collating all existing knowledge and experience into one document with a view to recognising the area as an integrated coastal zone that requires coordinated management and continuous monitoring to maintain its unique ecosystem, avoid future conflicts and promote best practice in developing and enhancing the Tramore Bay area. Part of this process also involved assessing the potential for future environmental and/or ecological designations of Tramore Bay.

To achieve this, it was necessary to scope for environmental and recreational management issues in Tramore by identifying current pressures and conflicts of use. Three questionnaires were designed and circulated to stakeholders within the Recreation, Tourism and Culture sector, the Economic and Development sector and the Environmental and Ecology sector. The responses were then analysed and the outcomes presented in a readily accessible format as part of this final document with a view to demonstrating how the area is or may be impacted upon and potential areas of conflict.

The outcomes from the five work packages will be the preparation of a Statement of Significance of the environmental and ecological value of Tramore Bay and hinterland, recommendations for the future management of the area and examples of how this has been achieved elsewhere using an integrated management approach.

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1.0 INTRODUCTION

This study was commissioned by the Heritage Office of Waterford County Council. It forms part of a wider study on the preparation of a Coastal Zone Plan for Tramore Bay, Co. Waterford. This characterisation study attempts to collate all existing knowledge and experience on the site into one document which will then act as a statement of significance of the ecological, social and economic value of the site. It is proposed that this document will support the need and development of an integrated management plan for the area. Such a management approach requires coordination of various management objectives by the range of agencies involved as well as continual site monitoring. This will ensure conservation of the unique ecosystems present used to best advantage and contribute to the social, cultural and economic well being of the people of Tramore and beyond.

1.1 BACKGROUND

The Tramore area is important to the South East Region from environmental, social and economic (ESE) perspectives. Environmentally the significance of the area is supported with various conservation designations. It is locally economically important given its popularity as a tourist attraction as well as its proximity to Waterford City and status as county Waterford's Secondary Service centre. Socially, the beach area is an important local recreational resource. In light of these, sometimes competing uses, the site is subject to a range of pressures which have the potential to impact negatively on the integrity of the site. Thus, there is a need for a more sustainable approach to management of the coastal site that takes account of the site's potential as a tourism resource and recreational amenity but also its importance as a unique ecosystem. In light of these factors, this characterisation report attempts to document all the uses of the site at present, the legal obligations arising from the various applicable site designations and potential for other designations which may enhance the attraction of the site.

This characterisation report recognises the need to work within existing statutory boundaries as well as specific planning and development documents such as: South East Regional Authority Regional Planning Guidelines (2004); the Waterford County Development Plan 2005-2011 (2005) and the Tramore Local Area Plan 2007-2013 (2006). In light of this mixed use framework, this report ascertains why the area is of significance from an environmental, social and economic perspective with a view to determining how it could be managed using an integrated approach. These elements will be examined individually firstly, before the input of the various stakeholders is procured during the second stage of the study. It is important to recognise that this study builds upon existing material and information obtained from relevant council personnel.

1.2 GEOGRAPHIC AREA

Tramore Strand is located on the south-east coast of Ireland, 13km south of Waterford City. The landscape surrounding Tramore is variable reflecting its coastal location and includes sandy beaches, cliff tops, agricultural land and the town itself. The area has a spectacular and varied coastline that provides tourists and residents alike with exceptional walking routes such as the Doneraile Walk, the Cliff Road and Newtown Wood. Views from the beach out across Tramore Bay or west along Tramore strand and the Cush to Great Newtown Head and the Metal man tower and east to Rinnashark Harbour and the town lands of Lisselly and Brownstown are impressive.

The existing form and structure of the town has been influenced by the natural topography and physical landscape and generally slopes to the east. According to Brady, Shipman, Martin (2006) the landscape is an intrinsic part of the town and provides for its identity. To the north of the town there are elevated lands with views of both Great Newtown Head and Rinnashark Harbour and beyond. The protection of these views has been recommended by the SEA of the Tramore Local Area Plan such that all development proposals would be required to mitigate against impact to ensure the overall integrity of the landscape. The strand is at the lowest point of the town and it is here the town's main recreational and activity base is centred.



Tramore Strand is approximately 5km long, of varying width and faces the south-west. The maximum tidal range is c. 3.3m and the beach is characterised by high energy waves making it popular with surfers. The strand forms part of a rectangular basin with c.1000 hectares of water

surface between the two townlands of Great Newtown Head and Browntown Head (McGrath, 2001). It is backed by clay cliffs composed of organic sediments, hard shoreline defences, a shingle ridge and a dune-beach barrier system dominated by a mature dune complex of national and international importance. Behind the spit, there is a large shallow water area characterised by inter-tidal sediments and extensive channel development. The site is bordered to the north by farm land and to the west of the site are a number of nationally important historical monuments.

The beach and spit system is a local amenity and is heavily utilised by local residents and tourists, which is placing pressure on the natural resources in this section of the coastline. The main issues include: erosion resulting from natural processes and levels of usage, the decommissioning and restoration of a nearby landfill site, internal impact on the dune system from human activity, which has contributed to the formation of blowouts as a result of wind erosion; and water quality concerns which should now be off set by the new water treatment and drainage scheme.

According to a recent study (CMRC, 2006); continued shoreline erosion is threatening the dunes and therefore the viability of the spit. Thus, there is concern that any potential breach of the spit could cut off the dune system as a public amenity and expose the coast behind to the full force of wave action.

STRATEGIC ISSUES:

- **Maintenance of views**
- **Coastal and dune erosion**
- **Restoration of landfill site**
- **Water quality**

2.0 SOCIAL AND ECONOMIC

It is beyond the scope of this characterisation study to undertake a comprehensive economic and social assessment of the Tramore area. In light of this various documents have been used as a basis for this information, primarily the Waterford County Development Plan and the Tramore Local Area Plan.

2.1 DEMOGRAPHICS

According to the Tramore Local Area Plan 2007-2013 (2006) the population of the town has grown considerably in recent years due to the town's proximity to Waterford City and other urban areas for work. The Plan recognises that this trend needs to be reversed if the town is to fulfil its role as a Secondary Service Centre. According to the 2006 census figures, the population of Tramore was 10,575 in 2005, which represents a population increase of 14.5% since the 2002 census. During the period between 1996 and 2002 the population of Tramore increased by 27% (LAP, p.16). A breakdown of the demographics for the area indicate that the area has a high population of young people which in turn reflects a need for educational and youth facilities. The highest proportion of the population falls within the 25-44 year old age bracket. This is in spite of the fact that there is no considerable local employer (LAP, p.17) and the town acts as a commuter town for nearby larger urban centres such as Waterford City and Dungarvan.

The local authority projects that if an average yearly increase of 2.54% is sustained the population of Tramore is expected to be 12,605 by 2013. According to Waterford County Council, 736 new households were constructed since 2002 with an average household size of 2.74 persons. These statistics suggest that Tramore is becoming a dormitory town with large numbers of the resident population leaving the town for work.

2.2 RESIDENTIAL DEVELOPMENT

To meet predicted residential development needs the Council proposes that substantial land banks outside the current town boundary should be subject to Master Plans, which will address in detail the land use strategy for the area while paying particular attention to the topography of the land and the protection of highly visual or exposed areas. Three areas have been identified: Tramore Racecourse, Monvoy/Knockenduff and Pickardstown and Ballinattin.

STRATEGIC ISSUES:

- Residential development
- Re-zoning additional lands
- Protection of topography and views

2.3 EMPLOYMENT

Employment has traditionally been centred largely upon the tourism industry and service sectors. This has created a one dimensional employment base. The Local Area Plan however recognises that industrial developments have increased since the last Local Area Plan (covering the period 2003-2009) and this suggests the need to define and zone specific areas suitable for future industrial development.

In light of the large numbers of commuters living in Tramore, the Local Area Plan seeks to reverse this trend and provide sufficient zoned lands for commercial, retail and industrial development. Areas for expansion are relatively limited given the coastal location of the town. The Council recognises this in its Local Area Plan and aims to detail land use through Master Plans which will pay particular attention to the topographic characteristics of the area and the protection of visually important or exposed areas.

Given the town's designation as a Secondary Service Centre and the fact that it is the fastest growing town in Co. Waterford, the Local Area Plan states that it is failing to meet the shopping needs of its residents or those of its hinterland. The Local Area Plan seeks to address this through the designation of appropriate lands for retail development as well as promotion of the reuse and regeneration of existing derelict buildings.

The LAP also notes there are a number of current and future initiatives which are likely to impact on the town in terms of employment change and opportunity, including:

- Waterford City's Gateway status,
- WIT campus expansion at Carriganore,
- Future development of Waterford Regional Airport, and,
- The expansion of the town area towards the promenade area.

STRATEGIC ISSUE:

- Development of commercial, retail and industrial employment opportunities

2.4 COMMUNITY AND SOCIAL DEVELOPMENT (SPORTS AND RECREATION)

The Local Area Plan for Tramore recognises that sustainable communities need not only economic development but also social and community development. Currently the main leisure and recreational area in Tramore is along the promenade and the associated beach area. There are plans to develop a town park as an additional amenity area. Historically Tramore has relied

heavily on the fact that it is a seaside resort and in this regard annually experiences an influx of visitors during the Summer season. The Local Authority has, however, noted that the town has developed a one-dimensional tourism product orientated solely around the beach area and associated activities. Accordingly, the objective of the Local Area Plan is to promote sporting and recreational activities in the town and to encourage the provision of indoor and outdoor facilities for local clubs and organisations. It is anticipated that such resources may also attract non-seasonal visitors thereby improving the range of year round attractions.

STRATEGIC ISSUE:

- **Development of all-weather recreational facilities**

2.5 TOURISM

The South East region earned €500m from two million visitors in 2006, of which €300m was spent by overseas visitors. Two out of every three visitors were on a holiday or leisure trip with overseas and domestic holiday visitors in almost equal numbers – 650,000 and 692,000 respectively. The region's share has slipped in most markets since 2000 – most noticeably in the home and British markets, while marginally gaining share of the North American market. Bed-nights spent in the region by overseas holiday visitors, excluding British, have shown a trend of steady increase over the past six years, while British holiday bed-nights have been falling by an average of 5% per annum over the period. Most noticeable has been the decline in car-touring visitors arriving via Rosslare. Overall the South East attracts about a 10% share of holiday bed-nights spent by overseas visitors in the country outside of Dublin (South East Regional Tourism, 2008).

Fáilte Ireland South East, as part of the National Development Authority is charged with delivering increased tourism benefits to the counties of Carlow, Kilkenny, South Tipperary, Waterford and Wexford. According to the Fáilte Ireland South East, Regional Tourism Development Plan 2008-2010, the key South East Regional Strategic goals are as follows:

- Strengthen the region as a leading heritage destination,
- Expand the cultural and events offered, positioning the South East as a “happening place”;
- Further develop the “Family Fun and Resorts Activities” offered;
- Develop water- and land- based access and recreational activities; and,
- Improve transport access to and within the region.

Fáilte Ireland's commitment to the development of tourism in the Tramore area has been advocated via the 'Family Fun and Resorts Activities' product. The rationale behind this product is the integration of a range of holiday components and the commitment of operators to co-operate in delivering a quality experience designed to enable the South East to gain a larger share of the market. The LAP fully recognises and supports this strategic view.

Historically Tramore has been classified as the premier seaside resort in the south-east. The Local Area Plan accepts that to realise the full potential of this asset, there is a need to develop a high quality product that can accommodate year round visitors and a range of activities. It is, therefore, necessary to diversify the tourism product in Tramore and support new innovations for a more sustainable tourism product. In the Local Area Plan the objectives relating to this are to encourage the establishment of a five star hotel and associated leisure facility and conference facility within the town; to encourage a mixture of tourist related uses along the promenade area with a specific focus on year-round activities, to continue to strive for Blue Flag status for Tramore Beach and to monitor water quality to achieve this aim, to investigate the feasibility of extending the promenade eastwards subject to the availability of resources and likely environmental impacts; to support and facilitate the relocation of the existing racecourse, and finally, to support the establishment of a range of water based tourism activities.

The Tramore area is currently marketed as home to a spectacular and varied coastline that provides a largely unexploited tourism product. This would include opportunities for walking routes and tours, surfing, golfing and horse-riding (LAP, p.46). Additional recreational activities in the town include the Tramore Race Course and associated race meetings which attract large numbers of visitors. The area also has an 18-hole golf course and various sports grounds for soccer, GAA and tennis. It is clear that these are all outdoor activities which may not be practical in Ireland on a year-round basis. In light of this the Local Area Plan seeks to promote and support the extension and diversification of the range of tourist attractions and facilities in Tramore. It is recognised that this must be achieved in conjunction with the protection of the natural environment.

STRATEGIC ISSUES:

- **Seasonality of tourism product**
- **Development of diversified attractions and facilities**
- **Development of a range of new accommodation**

2.6 INFRASTRUCTURE

Given the increasing population of Tramore town and the seasonal influx of tourists, it is necessary for the Local Authority to ensure sufficient infrastructure is in place to meet these needs. These are addressed under water supply; waste water treatment; surface water, drainage systems and flood control; and waste management. In relation to telecommunications, Phase 2 of the Regional Broadband Programme ensures the provision of broadband services will be extended to include Tramore Town. The Local Area Plan anticipates that this will act as an incentive to attract new businesses while also offering existing residents the opportunity to work remotely (from home).

Water supply: Tramore is supplied via two water treatment plants at Carrigavantry (Tramore) and Adamstown (Kilmeaden). The treatment plant at Carrigavantry requires high maintenance, with some of the equipment being almost 70 years old and nearing the end of its useful life. The 'winter' water demand (permanent population) is 2,700m³ with summer peaking rising to 3,300m³. The balance of potable water is supplied from the Adamstown plant. The objectives of the Local Area Plan include ensuring an adequate supply of water for residential and other developments during the life time of the plan.

Waste water treatment: a new waste water treatment plant is in place and has been operational since 2007 with a capacity for 17,500PE [Population Equivalent]. The scheme consists of an upgrading of the collections system, the provision of new pumping stations, a wastewater treatment plant at Riverstown and a 2km outfall pipe for the discharge of treated effluent into the Bay.

Surface water, drainage systems and flood control: policy is to ensure that all new developments can be attenuated on site or to a nearby watercourse and not pose any risk of flooding to adjacent lands. The objective here has been to prepare a Flood Studies report for the lands within the catchment of the Gaurran Stream.

Waste management: the Tramore solid waste landfill has been closed since 2005 and landscaping is currently in progress. The site is located on an area of the back strand, east of the town. Restoration and aftercare works have commenced on the site and it is expected that this should improve the environmental and bathing water quality standards of the area. Currently collected waste is disposed of outside the county. Waste objectives for Tramore town include the creation of Construction and Demolition Waste Management Plans by developers and the promotion of waste reduction.

STRATEGIC ISSUES:

- Sustainability of water supply
- Capacity/operation of waste water treatment plant
- Surface water, drainage and flood control
- Water quality monitoring
- Sustainable waste management

3.0 GEOLOGY AND THE PHYSICAL ENVIRONMENT

The Co. Waterford coast was formed during the Ordovician and Silurian periods dating back approximately 460-500 million years ago. During these periods a deep ocean trough was transformed into dry land imposing its imprint on strata that predates this event. These are primarily exposed in the coastal zone from Tramore to Stradbally. In light of this unusual geology and the areas copper mining history the area became the Copper Coast Geopark in 2004 and covers 25km of coastline. A Geopark is a territory, which includes a particular geological heritage and a sustainable territorial development strategy supported by a European programme, such as Interreg or LEADER, to promote development. West of Tramore Bay are volcanic igneous rocks dating from the later Ordovician Period. To the east of Tramore Bay are old Red Sandstones dating from the Upper Palaeozoic. Inland layers of quaternary sediments can be found (McGrath, 2001). Shales, siltstones and sandstones may also be found in the greater Tramore area. The Characterisation Report (Pettit *et al.*, 2003), carried out to fulfil certain requirements of the Water Framework Directive, states that due to the fact the bedrock in the Tramore area is composed of dark grey to black mudstones and minor siltstones, the aquifer may be classified as highly vulnerable. Moving westwards along the Cooper Coast area, there are deposits of black mudstones with thin siltstones as well as igneous Rhyolite rocks, which are well exposed south of Great Newton Head (McGrath, 2001).

3.1 GLACIAL ACTIVITY

McGrath (2001) states that extensive gravel beaches resulted from massive amounts of debris generated by the previous geological upheavals which was then moved onshore by the sea. This was influenced by a number of factors including changes in sea-level, wave action and deposition of sediment by meltwater. The dunes currently visible in Tramore probably date back 5,000 years ago (McGrath, 2001). At this time, sediment was supplied from offshore and also by way of run-off from the land. Longshore currents evolved due to the oblique approach of the waves and transport sediment along the shore leading to the formation of spits, like that in Tramore.

4.0 SEA-LEVEL RISE AND CLIMATE CHANGE

4.1 GENERAL IMPLICATIONS

In Ireland, climate change will give rise to sea level rise and storminess which will impact on biodiversity, ecosystems, groundwater, the built environment and infrastructure (Devoy 2007: Boelens et al, 2005). The major effects in the coastal zone will be a loss of land due to inundation and increased erosion, and increased risk of flooding both at the coast and along major rivers during storm surge events (Fealy, 2003). Counties in the south-east will be most affected by the consequences of coastal erosion, having both densely populated areas and vulnerable sandy and mud cliff coastlines (Devoy, 2000). According to the report "Ireland in a Warmer World" (DOEHLG, 2008), the key predictions of relevance to the coastal area are that:

- The climate will **continue to warm**, particularly in the summer and autumn seasons: possible increases of 3 to 4°C towards the end of the century. The greatest warming will occur in the **south and east of the country**.
- The seas around Ireland have been warming at the rate of 0.3-0.4°C per decade since the 1980s; over the Irish Sea a greater warming has been observed (0.6-0.7°C per decade). The trends are consistent with what has been observed globally and are **predicted to continue** over the coming decades.
- Sea levels are **rising on average about 3.5 cm per decade** around Ireland.
- Ocean modelling results indicate an **increase in the frequency of storm surge events** around Irish coastal areas; in the northwest the increase in surge heights between 50 and 100cm is around 30% by mid century. **Extreme wave heights are also likely to increase** in most regions.
- Changes in precipitation and temperature are likely to lead to a **rise in winter stream flows (increasing the risk of flooding)**, and a reduction in summer flows.

4.1.1 General implications for South East coast

Devoy (2008) states that analyses of wind variations for south-east and eastern coasts may suggest an increased occurrence of easterly winds and associated storminess in these regions. This would have implications for coastal erosion in these areas. Large areas of intertidal habitat (mudflats, saltmarsh and sand flats) may be lost with little possibility of compensatory habitats being created (Emblow *et al.*, 2003).

4.2 COASTAL EROSION

Previous studies have shown that coastal change in Tramore is not limited to erosion but there is also large scale accretion occurring at the eastern end of the Strand (CMRC, 2006). With respect to erosion various attempts have been made to control this through both soft and engineered means. Erosion occurring at the site is primarily a result of natural coastal processes and wind scour. In certain parts of the site, however, erosion has been exacerbated by particular types and

levels of usage, which is evident from dune blowouts. In both situations it is arguable whether the system has ever had time to respond naturally to erosion events given the fact that there has always been some form of intervention as a consequence of erosion being perceived as a problem rather than a natural process. As the previous study suggests (CMRC, 2006), some form of baseline monitoring needs to inform any future management regime. This becomes ever more important in future years where sea levels are expected to rise and coastal inundation events are expected to become more frequent.

4.3 FLOODING

Modelling results (DOEHLG, 2008) suggest an amplification of the seasonal cycle across the country, with increased winter precipitation leading to a rise in winter stream flow, and the combination of increased temperature and decreased precipitation causing a reduction in summer stream flow. Change to the seasonal cycle will have an impact on water supply management and design. Increased winter flows, coupled with the predicted increase in extreme precipitation events lead to an elevated risk of flooding. While there are no localised projections for the Tramore region, increased winter flows and extreme events are particularly significant in the southwest of the country, and those catchments with fast response times. The decrease in summer stream flow will impact on water availability, water quality, fisheries and recreational water use.

In relation to flooding, Waterford County Council is obliged to undertake a Flood Studies Report on the Garraun Stream as, according to the Tramore Local Area Plan, this has a limited capacity

Table 1 Locations of recent flood events in Tramore

Location	Effect
Tramore Lower Promenade	The Promenade is regularly impassable due to a combination of high tides and strong winds.
Tramore Lower Promenade	The Promenade is regularly impassable. During periods of high tides, the local drainage network becomes backed up.
Tramore	The Old Waterford Road at Kennedy Park was regularly flooded due to inadequate local drainage.
Tramore Boat Cove	Runoff from higher ground causes damage to roadway.
Tramore: Pickardstown at the Metal Bridge.	The R675 regional road is regularly impassable due to recurring flooding from the adjacent river.
Tramore: Newtown area	The county road is regularly impassable near the caravan park due to inadequate local drainage.

Source: ESB and Waterford County Council, Flood Hazard Mapping Meeting, 2/2/06.

to cater for additional surface water runoff from adjacent lands. The Office of Public Works also carries out flood risk management and this information is available through the www.floodmaps.ie website. A query on Tramore indicates a number of relatively recent flood events. Phase one of the Office of Public Works' Flood Hazard Mapping project identified locations within the Tramore area that are vulnerable to regular or historic flooding (ESBI meeting minutes, 2/2/06). These areas are tabulated in Table 1. Photographs from the 1989 flood event are presented in Appendix 3.

4.4 IMPLICATIONS FOR BIODIVERSITY

Climate change could also have implications for biodiversity in the Tramore area. Generally, sand dunes are expected to suffer from increased summer droughts, although this is likely to have limited effects on the drought-tolerant species of embryonic, marram and fixed dune systems. It may be hypothesised that Cord Grass and other invasive (alien) species are likely to become more problematic. The proximity of Waterford Harbour, on a major international shipping route, is potentially problematic given this could act as a corridor for the introduction of new marine species. Japanese seaweed (*Sargassum muticum*) has already been discovered in a bed off Tramore Strand in 2006 (Coastwatch report, 2006).

STRATEGIC ISSUES:

- Sea level rise
- Increased storminess and precipitation
- Increased flooding
- Habitat and biodiversity loss
- Coastal erosion
- Water quality, supply and management
- Future planning and development

5.0 FLORA AND FAUNA AND THEIR PROTECTION

5.1 INTRODUCTION

The lands surrounding and within Tramore are of major ecological importance due to a range of good quality coastal habitats. The area generally has a remarkably rich flora composition, featuring a number of rare and protected species. The intertidal area is also an important resting and feeding area for over-wintering waterfowl. Tramore Dunes and Back Strand are of ecological, botanical and ornithological importance and this is recognised in a number of international, European and national designations.

The dunes (i.e. the Burrows) are well developed and contain several habitats listed on Annex I of the EC Habitats Directive, including the priority habitat fixed dune with herbaceous vegetation. The flora is particularly rich and is the only site in the county where sea knotgrass is found.

The Back Strand is an area of some importance for shorebirds on the south coast and over 10,000 waterfowl (all species) have been recorded. The site regularly supports internationally important numbers of Brent Geese and the nationally important Golden Plover (see below).

There are a number of woodlands surrounding Tramore, which are worthy of preservation, including Newtown Woods, which is an area of botanical interest of great local importance (Brady, Shipman, Martin, 2006).



5.2 RELEVANT DESIGNATIONS

In recognition of the uniqueness of certain elements of the environment, a designation may be applied which marks out an area or feature of special interest which is in need of preservation and protection. In this context, the term environment can be taken to include both the landscape and amenities. Designations primarily have implications for planning and development matters in the sense that it will require a planner or developer either to do something proactively or to refrain from doing something which may damage the area designated. Traditionally private property rights are strongly protected in Irish law which in turn means that conservation policies are relatively poorly developed in comparison with other European countries. As a result of membership of the EU, Ireland has had to designate certain areas and with this development other sectors, such as the tourism and food sectors have recognised the value of a healthy natural environment in the promotion of their products. This section outlines the current designations in place at Tramore. These cover a range of scales from international to the local level. An overview of each designation and the legal obligations associated with that designation are presented.

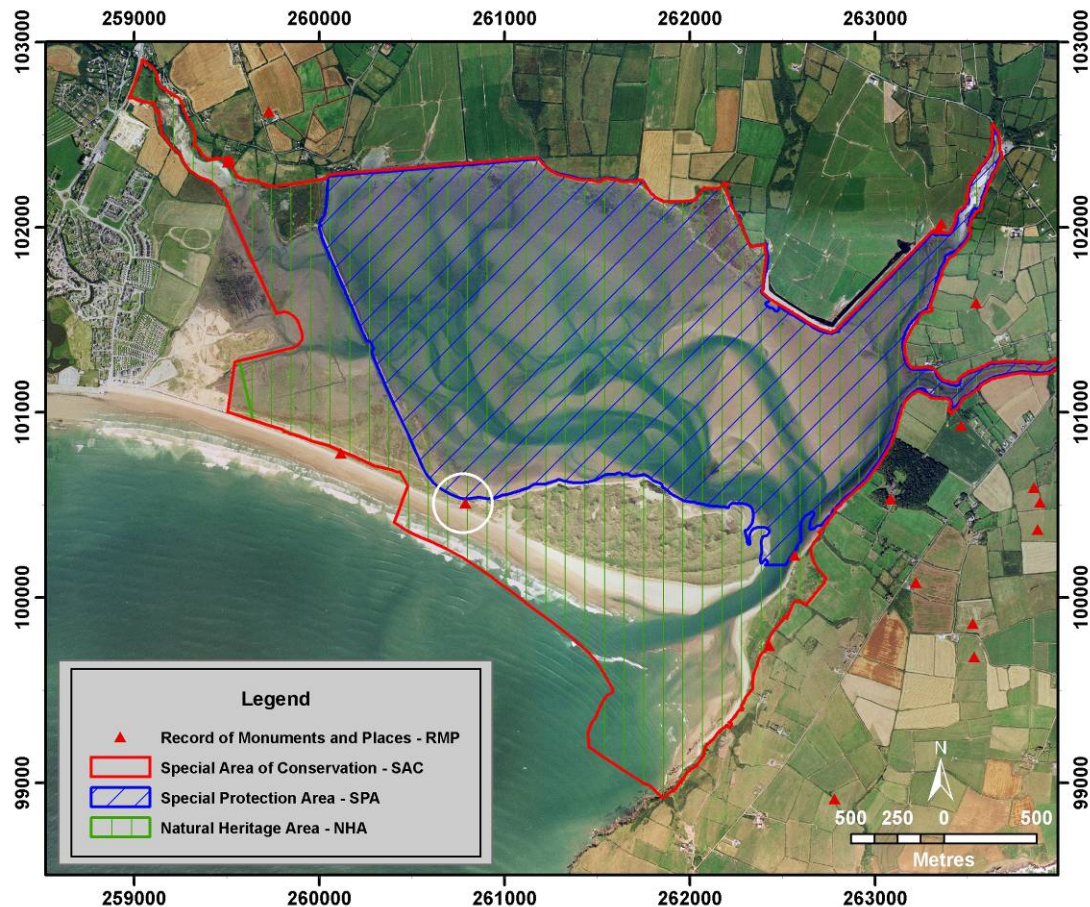


Figure 1 Site Designations at Tramore

5.3 INTERNATIONAL

5.3.1 Ramsar sites

Tramore is currently designated as a Wetland of International Importance under the Ramsar Convention. The site was designated in 1986 and covers an area of 367 hectares. To qualify as a Ramsar site, the wetland must regularly host at least 20,000 waterfowl, or at least 1% of the population of a particular species. While the Convention requires signatories to designate and conserve wetlands as Ramsar sites there is no specific legal backing of the designation and consequently governments cannot be prosecuted for lack of implementation. This explains why the majority of Ramsar sites in Ireland also have other site designations attached to them. In the case of Tramore this includes the SPA designation at European level and could also include 'Nature Reserve' designation at national level (see below). These latter designations thereby allow conservation objectives of the Ramsar site to be incorporated into their statutory management plans.

5.4 EUROPEAN

5.4.1 Special Protection Area (SPA)

The Birds Directive was adopted by the EC in 1979. This required Member States to designate the most suitable areas of their territory for the protection of habitats for endangered as well as regularly occurring migratory species through the establishment of a network of Special Protection Areas. The Directive prohibits activities that directly threaten birds such as the deliberate taking or catching of such birds, the destruction of their nests and taking of their eggs etc. Trading in such species is also covered by the Directive.

Ireland is obliged under Article 4(4) of the Directive to "take appropriate steps to avoid pollution or deterioration of habitats or any disturbances affecting the birds...". This obligation also applies to areas outside of the SPA. Annex II of the Directive identifies certain species that may be hunted under national legislation. In allowing this, however, Member States are obliged to ensure that any such hunting does not jeopardise the conservation objectives of the site. Another key provision of the Directive is the criminalisation of certain activities affecting protected birds and requiring consents for certain activities.

Tramore Backstrand is designated as an SPA and covers an area of 367 hectares. It supports an internationally important population of Brent Geese as well as seven other species which are present in nationally important numbers. These are listed in Table 2 overleaf.

Three additional species, the Golden Plover, Bar-tailed Godwit and the Little Egret are listed in Annex I of the Birds Directive which means these species are strictly protected and cannot be killed, captured, disturbed or traded.

Table 2 Bird numbers for Tramore

Species Name	Numbers (Average peaks for 1990s)
Golden Plover	2,924
Grey Plover	299
Lapwing	3,308
Dunlin	1,723
Sanderling	46
Black-tailed Godwit	289
Bar-tailed Godwit	367

Source: NPWS, Site Synopsis; 4 March 2002

The Birds Directive in Ireland is implemented under a number of orders made under Section 3 of the European Communities Act, 1972 however these designate the SPAs to be protected but do little else. More specific objectives are achieved through the Wildlife Acts, 1976-2000 and regulations made thereunder as well as various Natural Habitats Regulations, the Planning & Development Acts, 2000-2006, the Foreshore Acts, 1933-2005 and other secondary legislation implementing the EIA Directives. The Birds Directive and management of SPA sites are enforced by the National Parks and Wildlife Service, part of the Department of the Environment, Heritage and Local Government.

5.4.2 Special Area of Conservation (SAC)

The Habitats Directive allows for the creation of a network of Special Areas of Conservation which, together with SPAs, will make up a network of European sites known as Natura 2000. The main aim of the Habitats Directive is to promote the maintenance of biodiversity by requiring Member States to take measures to maintain or restore natural habitats and wild species at a favourable conservation status, introducing robust protection for those habitats and species of European importance. The Directive is intended to fulfil the EU's commitments under the Convention on Biodiversity. Each designated SAC must be given significant protection so as to conserve adequately the listed habitats and/or species. A number of 'priority' habitats are listed in Annex I (Natural Habitat types of Community Interest) and include sand dunes and machair in coastal zones. Stricter protection is given to SACs which host these priority habitats and species. The Habitats Directive was revised in 1997 (Directive 97/62/EC) to update the list of species and habitat types. The Habitats Directive applies to all European territory of Member States including both land and sea areas.

Article 2 of the Habitats Regulations provides that where a development is proposed which is not directly concerned with or necessary for the management of the site but is likely to have a significant effect thereon individually or in connection with other developments, planning authorities and An Bord Pleanála must require an “appropriate assessment” of the implications of such a development for the site’s conservation objectives when deciding on planning applications. While an EIA is deemed the appropriate assessment a full EIA may not always be necessary. Provision is made in Article 6(4) of the Directive for the granting of permission where there are “imperative reasons of overriding public interest, including those of a social or economic nature”. In such circumstances the Member State must, however, take all compensatory measures necessary to ensure that the overall coherence of the Natura 2000 network is protected. Where the site host a priority natural habitat type and/or a priority species, the only considerations which can be taken into account by the local authority and/or An Bord Pleanála are those relating to human health or public safety or further to a favourable opinion of the Commission.

Tramore Dunes and Back Strand is designated as an SAC. The dunes are well-developed and contain several priority habitats listed in Annex 1. This includes the priority habitat fixed dune.



According to the NPWS (1999), the flora on the fixed dunes is not as species-rich as at other systems, primarily because there is no grazing at this site. Most characteristic dune species are found at the site. These include Marram Grass (*Ammophila arenaria*), Wild Thyme (*Thymus praecox*), Common Bird’s Foot Trefoil (*Lotus corniculatus*), Lady’s Bedstraw (*Galium verum*),

Rest Harrow (*Ononis repens*), Fairy Flax (*Linum catharticum*) and Red Fescue (*Festuca rubra*). The site also has scrub vegetation which is uncommon in Ireland (NPWS, 2003).

The site also has well developed and fairly extensive salt marsh area. Salt marsh is another priority habitat listed in Annex I of the Habitats Directive. The type of salt marsh occurring in Tramore is lagoon type saltmarsh which is the rarest type in Ireland. According to the NPWS (1999) the main species present at the site include Thrift (*Armeria maritima*), Common Salt Marsh Grass (*Puccinellia maritima*), Sea Lavender (*Limonium humile*), Sea Plantain (*Plantago maritima*), Sea Aster (*Aster trifolium*), Sea Pulsane (*Halimione portulacoides*) and Sea Rush (*Juncus maritimus*). Golden Samphire (*Inula crithmoides*), a species rarely found in Irish salt marshes is also present.

A third priority habitat found in Tramore are the intertidal mud flats and sand flats which cover approximately 45% of the site. These are also well-developed and have numerous macrofauna including Cockles (*Cerastoderma edule*) and large patches of Mussels (*Mytilus edulis*) and Periwinkles (*Littorina littorea*). There are no major fisheries or aquaculture developments related to these species presently, however, Cockle (Fisheries Management and Conservation) (Tramore Bay) Regulations 2007 are already in place. The effect of these Regulations is to prohibit the taking of Cockles by fishing boats or harvesting by any other means except by hand raking for private consumption in the Tramore Bay area, including the Back Strand. Another key feature of this habitat is the presence of Eelgrass (*Zostera* spp.) which is a key feeding material of Brent Geese (*Branta bernicla*).

5.4.3 European site management

Management of SAC sites is primarily the responsibility of NPWS. In this regard, under Article 6 of the Directive, Member States are required “to establish the necessary conservation measures involving, if need be, appropriate management plans specifically designed for the sites or integrated into other development plans...”. From this Article it can be assumed that Member States may take a range of measures to ensure the conservation status of the SAC. Scannell (2006) states that such measures could include, for example, contracts with landowners, compulsory purchase, fiscal and economic incentives or disincentives, controls over development and other activities, revocations and modifications of planning permissions and other authorisations. Any such plans prepared under this Article must be reviewed on a five year basis. The current management plan for Tramore Dunes and Backstrand SAC and SPA covers the period 2003 to 2008. In this document, the NPWS recognise that the site is under considerable pressure from recreational uses at certain times of the year. These activities have led to erosion

of the dunes at the Burrow which may potentially lead to the disappearance of rare plant species within the site. Sand is also being extracted from the dunes at Bass Point.

The main conservation issues identified in the Management Plan are:

- Recreational pressure and associated erosion;
- Spread of unwanted species;
- Burning; and,
- Collection of biological material.

In light of these issues, the main management objectives for the site, identified by the NPWS, are:

- To maintain and, where possible, enhance the quality of the priority fixed coastal dune habitat (10% of the site);
- To maintain and, where possible, enhance the diversity and scientific value of the other habitats, including shifting dunes along the shoreline (7% of the site), mud and sand flats (45% of the site), saltmarsh (14% of the site) and scrub and woodland (2% of the site);
- To maintain and, where possible, enhance populations of Annex I and migratory birds and other important bird species at the site;
- To maintain and, where possible, enhance the population status of important plant and animal species;
- To consider the alteration of the site boundary; and,
- To maintain effective liaison between the NPWS, relevant authorities and interested parties (for example, landowners, the public and Waterford County Council) on the management of the site.

In order to achieve these objectives the NPWS propose in the management plan to control recreational pressure, implement and maintain dune stabilisation measures, monitor and maintain habitats and species and ensure effective liaison between the relevant stakeholders. With respect to controlling recreational pressure, the Management Plan refers specifically to the Beach Bye-laws which have been enacted for the area (see below). Vehicular access is also problematic at the site in that heavy machinery causes compaction of the soils and inhibits vegetation growth. The Plan recognises the need to “manage the amenity use of the area in a more sustainable manner” (NPWS, 2003, p.27).

The Management Plan outlines a monitoring regime for the site. This includes water quality monitoring, scientific monitoring, site surveillance and bird counts. Water quality monitoring is discussed in greater detail in section 6.2. The Conservation Ranger for the site is also responsible for the enforcement of notifiable actions. These are actions which require Ministerial

permission before they can be carried out within the site. For the sand dune areas of the site notifiable actions include causing erosion by any means, grazing of livestock above the recommended stocking density and supplementary feeding of stock. For the salt marsh elements of the site notifiable actions are the digging or disturbance of the substrate and the harvesting of shellfish by mechanical methods.

Table 3 Management Zones within the SPA/SAC

Zone	Strategy
Zone A: A Natural Zone	Area of high conservation value which requires little or no intervention. This includes areas of mudflats, sand flats, estuarine channels, sandy and shingle beaches, scrub and woodland.
Zone B: Active Management	Areas of high conservation value where high maintenance input is needed to maintain, rehabilitate, or restore to a more desirable state. This zone includes areas of fixed coastal dune habitat with herbaceous vegetation, shifting dunes along the shoreline and embryonic shifting dunes and sandy grassland.
Zone C: Intensive Use Zone	Areas of low conservation value managed for objectives other than nature conservation but which are an important part of a nature conservation site, e.g. infrastructure. This consists of roads and/or tracks.
Zone D: Impact Zone	This zone comprises areas outside the site which may have an impact on the site. This zone includes the adjacent landfill site and also includes development on the coast which has the potential to influence longshore drift.

Source: NPWS, 2003

The Management Plan sub-divides the site into a number of specific zones listed in Table 3 with relevant strategies identified for each.

The Habitats Directive in Ireland is implemented through a myriad of secondary legislation as well as the Wildlife Acts, 1976-2000, the Planning and Development Acts, 2000-2006; the Foreshore Acts, 1933-2005 and various EIA Regulations. Implementation and enforcement of the Directive and local level site management is the responsibility of the National Parks & Wildlife Service.

5.5 NATIONAL

5.5.1 Natural Heritage Area (NHA)

This is the basic national designation for areas which are considered important for specific habitats or plant and animal species whose habitat needs protection. The designation derives from the Wildlife Act, 1976 and evolved from the previous Area of Scientific Interest designation. Section 6 of the Wildlife (Amendment) Act, 2000 defines a NHA as “an area worthy of conservation for one or more species, communities, habitats, landforms or geological or

geomorphological features or for its diversity of natural attributes". Section 15 of the 2000 Act defines certain works which are subject to control under the Act in a similar way to those contained in the Habitats Directive and its associated implementing legislation. Similarly the Minister has the power under section 20 of the Act to apply to the relevant court to prohibit the continuance of works which are being carried out on or are proposed to be carried out on land comprising a NHA or those being carried on outside a NHA which have the potential to adversely effect the integrity of the site. This can include both terrestrial and maritime areas.

In addition to the above ecological designations Tramore also hosts a number of important species identified in national legislation such as the Flora Protection Orders 1987 and 1999 (Wild Asparagus *Asparagus officinalis* spp. *prostratus*, Lesser Centaury *Centaureum pulchellum*; and Cottonweed *Otanthus maritimus*) as well as Red Data Book flora (Bee Orchid *Ophrys apifera*, Spring Vetch *Vicia lathyroides*, Sea Kale *Crambe maritima*) and fauna (Dunlin, Black-tailed Godwit, Greenshank, Pochard, Pintail and Common Scoter).

STRATEGIC ISSUES:

- Designations may be made in an *ad hoc* manner with little attention given to other related designations
- Designations tend to overlap with each other despite the fact that different designations carry with them different obligations
- Need for understanding of each designation and what that implies
- Educational and advisory schemes may aid conservation efforts
- Given the variety of designations at Tramore, an integrated and coherent management strategy is recommended
- There needs to be effective liaison between the relevant management authority and other statutory agencies as well as stakeholders, particularly in relation to recreational pressure and the potential damage this can cause

6.0 AQUATIC ENVIRONMENT

This section explores the current management regime applicable to the aquatic environment of the Tramore area. As Tramore is located along the coast and constitutes a leading seaside resort for the South East Region, the aquatic environment is highly important for the economy of the local area. The aquatic environment is also an important amenity resource for local residents. The waters adjoining the long, sandy strand is utilised for various water-based leisure activities such as surfing and swimming. This section encapsulates general water management under the Water Framework Directive and associated monitoring. It also covers monitoring carried out under the Bathing Waters Directive and other national legislation. This section also outlines current provisions in place to manage human activities on and/or adjacent to the water body which are covered by bye-laws made under various pieces of primary legislation.

6.1 WATER FRAMEWORK DIRECTIVE AND ASSOCIATED MONITORING

The Water Framework Directive was adopted in October 2000. This recognised that the best model for water management is management based on the river basin unit which is both the natural geographical and hydrological unit and does not correspond with existing political or administrative boundaries. The Directive has a number of objectives including general protection of aquatic ecology, protection of drinking water resources and protection of bathing waters. Member States are required to adopt implementation strategies as stipulated by the WFD. The main activities for the implementation of the WFD will take place in the context of River Basin Management Projects. The overall objective of river basin projects is to establish an integrated monitoring and management system for all waters within a River Basin District (RBD), to develop a dynamic programme of management measures and to produce a River Basin Management Plan which must be updated and reviewed every six years. The Directive applies to surface water, groundwater, estuarine and coastal waters. A River Basin District must include coastal/marine waters up to one nautical mile beyond the baseline from which territorial waters are measured.

The Tramore area forms part of the South Eastern River Basin District. This is one of the largest river basin districts in Ireland covering an area of 14,000km² when coastal and marine waters are included. Since 2002 a number of milestones have been achieved in this area including an analysis of pressures and impacts on water in the area in 2004 and the operationalisation of a monitoring programme in 2006. In 2007 a report on the significant water and management issues in the region was published which allowed time for public participation and input. The first River Basin Management Plan was due to be published in June 2008 and this must be operational by June 2009. It is now anticipated that this Plan will not be published for the South Eastern River Basin District until December 2008. Article 8(1) of the Directive requires Ireland to establish

monitoring programmes in accordance with Annex V of the Directive and to conduct an overall study of water status in each River Basin District. Once this has been carried out a monitoring programme must be put in place for those waters identified as being at risk of failing to meet the specified environmental objectives.

6.2 WATER QUALITY MONITORING

While water quality monitoring is an essential part of the Water Framework Directive, there are also monitoring requirements prescribed in various pieces of existing national legislation. Water pollution law in Ireland is codified, to a certain extent, in the Local Government (Water Pollution) acts, 1977-1990 which give local authorities primary responsibility for ensuring the preservation, protection and improvement of water quality. Water in this context includes beaches and coastal waters. Water quality management plans may be made by a local authority in accordance with section 15 of the 1977 Act. Such plans may extend to coastal waters if the appropriate Minister so approves. When drawing up such plans local authorities are obliged to have regard to any quality objectives published by the EPA and also any nature conservation objectives.

With respect to monitoring, the Acts contain a wide range of provisions for this which can apply to all waters (inland or sea) as well as discharges of effluents to waters. This monitoring work is the responsibility of the relevant local authority. Specified provisions, primarily those relating to prevention or limitation or remedying of effects, are the responsibility of the EPA.

The Geological Survey of Ireland have certain monitoring responsibilities in relation to groundwater. This is carried out to inform the preparation of Groundwater Protection Schemes. The GSI have recognised that in many cases the sampling protocols employed are unknown and this can affect the concentration of certain parameters in a particular sample. The closest groundwater monitoring site to Tramore is located in Ballykinsella. The EPA have stated that this aquifer is extremely vulnerable especially to nitrates. In addition to the GSI monitoring programme the EPA and the local authority also have responsibilities in relation to groundwater quality monitoring. The EPA operate the National Groundwater Quality Monitoring Programme where sites are monitored twice a year. Local Authorities are obliged to monitor groundwater quality at abstraction points used for drinking water supply in order to comply with EC law on this. In relation to coastal and transitional waters, these are monitored by a number of additional agencies including the Marine Institute and the Department of Agriculture, Fisheries and Food.

6.3 BATHING WATER QUALITY

The EC Directive on bathing water quality specifies the standards to be met by bathing waters in European Member States. The aim of the Directive was to protect the environment and public

health by reducing pollution of such waters and protecting them from further deterioration. The quality standards to be met are specified in the Annex to the Directive by way of a series of microbiological and physico-chemical parameters, with specific guideline and mandatory values. It is important to note that there is no conclusive definition of bathing waters but the Directive is taken to apply to all waters where bathing is explicitly authorised by the associated competent authorities or where it is traditionally practiced by a large number of bathers. In Co. Waterford the local authority carries out monitoring at 52 coastal sites although only 6 of these are designated as bathing water areas. Where the waters in question do not meet the specified quality parameters in the Directive, the relevant local authority is obliged to notify the public of this. Failure to comply with guidance values prescribed by the Directive were noted at Tramore Strand and Dunmore East Counsellors Strand in 2001. Tramore did, however comply with both the mandatory values and the national limit values (EPA, 2001). Tramore's compliance with the Directive since then is given in Table 4. The EPA published annual reports on compliance with the Directive and these reports are also submitted to the European Commission.

Table 4 Tramore Strand compliance with the Bathing Water Directive

Year	Guideline	Mandatory	National Limit Values
2003	X	✓	✓
2004	✓	✓	X
2005	✓	✓	✓
2006	✓	✓	X
2007	✓	✓	✓

Source: Derived From EPA Bathing Water Quality Reports, 2004-2008.

Many local authorities also partake in the Blue Flag Beach Scheme which is essentially an indicator of compliance with the Bathing Water Directive and its quality standards. It is anticipated that in light of the opening of the new waste water treatment plant, water quality in Tramore should continue to improve and Blue Flag Beach status may be reclaimed sometime in future.

STRATEGIC ISSUES:

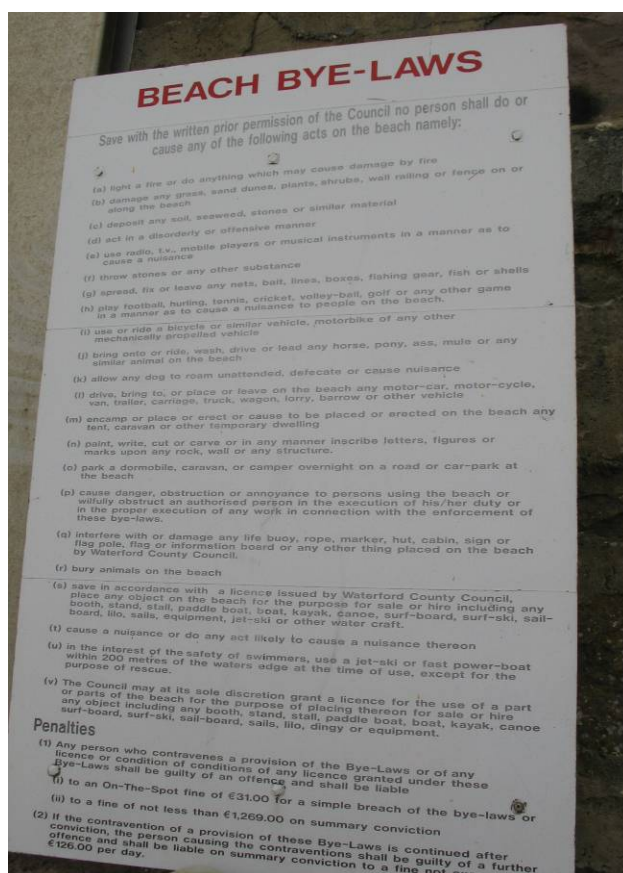
- Water quality monitoring
- Possible award of Blue Flag Beach Status

6.4 BYE-LAWS

6.4.1 Beach Bye-Laws

Under the Local Government Act, 2001 local authorities may make bye-laws for or in relation to the use, operation, protection, regulation or management of any land, services or any other matter provided for or under the control of that local authority (s.199, LG Act, 2001). These can

be made where, in the opinion of the local authority, the bye-law is desirable in the interests of the common good of the local community. Section 199(6) of the Act specifically provides for the making of bye-laws in relation to the foreshore and coastal waters adjoining the functional area of the local authority. Waterford County Council enacted bye-laws in 1997 which entered into force in 1998 which apply to Tramore Strand. These bye-laws cover a range of activities and are included in Appendix 2. Briefly a number of activities are prohibited specifically the depositing of soil, seaweed, stones and similar materials as well as fire, damage to grasses and plants, sports activities, camping, mechanical vehicles, dogs and horses. The bye-laws also give the local authority the power to licence selling activities. The bye-laws specify what constitutes an offence and provides for on-the-spot fines as well as prosecution by the Local Authority or Gardaí.



6.4.2 Jet-Ski and Fast Power Boat Bye-Laws

In addition to the beach bye-laws, Tramore Town Council enacted Jet-Ski and Fast Power Boat Bye-Laws in 2003, under the Local Government Act, 2001. These bye-laws apply to Tramore Strand and Back Strand, Tramore Pier (Lady Elizabeth's Cove) and Guillamene. The bathing season for the purposes of the bye-laws is specified as meaning the months of June, July and August. Any person who contravenes a provision of these bye-laws shall be liable on summary

conviction to a fine not exceeding €1200. If the contravention continues after conviction, the person shall be liable to an additional fine of €126 per day. Now such bye-laws may be made under the Maritime Safety Act, 2005. Under that Act a local authority, a harbour authority or Waterways Ireland can make such bye-laws. The bye-laws may prohibit or restrict the operation of jet-skis and/or certain classes of fast power boats in certain specified areas or at certain times to prevent nuisance or injury or to protect a Natural Heritage Area or a monument or wreck protected by the National Monuments Acts.

7.0 CULTURE AND HERITAGE

7.1 CULTURAL DESIGNATIONS

In addition to the ecological designations, outlined above, the Tramore area has a number of archaeological and cultural sites of significance. The National Monuments Acts, 1930-2004 provides protection for such sites by a variety of means:

1. **The Register of Historic Monuments:** This register was established by the National Monuments (Amendment) Act 1987. Site or building owners have to be informed that their property is to be included on the register. Protection to monuments listed in the register is through the implementation of development control carried out by the Local Authority.
2. **The Record of Monuments and Places (RMP):** Under the National Monuments (Amendment) Act, 1994 the pre-existing non-statutory Sites and Monuments Record was replaced by the Record of Monuments and Places. Under the new Act, protection is now given to the sites and monuments in the RMP. Protection to monuments listed in the RMP is also provided through the implementation of development control carried out by the Local Authority.
3. **Preservation Orders:** The Minister can make a preservation order providing that a monument is a national monument, is in danger of being or is actually being destroyed, or is falling into decay through neglect. The Minister may also make a temporary preservation order where a monument is considered to be a national monument.

Under the 1987 amendment Act, all shipwrecks¹ over 100 years old became protected sites and any investigation of these sites required prior approval from the Minister. Additionally, there was a restriction put on the use of detection devices. The Minister may also designate, by means of an Underwater Heritage Order (section 3(2)) “an area of the sea bed of land covered by water, around and including the site as a restricted area.”

The Department of the Environment, Heritage and Local Government maintain an online map viewer and database of all sites and monuments records. This can be viewed online at: <http://www.archaeology.ie/smrmapviewer/mapviewer.aspx> . This lists a number of SMRs for the Tramore area and are shown in Table 5. Perhaps the best known of these is the midden in Tramore Burrow. This is to be found in the sand dunes at the isthmus of Burrow Island sand dunes and a sand spit. There is a spread of broken and burnt shells in a black matrix (Moore,

¹ Section 1 of the 1987 Act defines a wreck as “a vessel, or part of a vessel, lying wrecked on, in or under the sea bed or on or in land covered by water, and any objects contained in or on the vessel and any objects that were formerly contained in and on a vessel and are lying on, in or under the sea bed or on or in land covered by water”.

1999). In addition to those features listed there are also a number of protected houses and other buildings in Tramore town and vicinity.

Table 5 Sites and Monuments records for the greater Tramore area

Classification	Location
Earthwork (site)	Ballinattin
Enclosure (site)	Ballinattin
Earthwork (site)	Corbally More
Enclosure (site)	Corbally More
Roasting pits on foreshore	Corbally More/Lisselty
Fulacht fiadh	Corbally More/Lisselty
Earthwork (site)	Kilmacleague East
Ring Fort	Kilmacleague East
Church	Kilmacleague West
Graveyard	Tramore Burrow
Midden	Tramore Burrow
Standing Stone	Tramore West

A shipwreck inventory is currently being developed by the Underwater Archaeology Unit of the Department of the Environment, Heritage and Local Government. The information currently available is presented in Figure 1.



Figure 2 Location of wrecks around Tramore Bay

Section 51 of the Planning and Development Act, 2000 requires every planning authority to include as part of its Development Plan a Record of Protected Structures (RPS). This list includes structures which the local authority believes to be part of the architectural heritage “which are of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest”. There are currently 26 structures on this list and a further 199 structures have been recommended by the Minister for the Environment, Heritage and Local Government for inclusion in the RPS for the Tramore area (Tramore LAP, p.64).

7.2 ARCHITECTURAL CONSERVATION

Section 81 of the Planning and Development Act, 2000 provides that a local authority may designate as an Architectural Conservation Area (ACA) those places, areas, groups of structures or townscapes, which either as a collective unit contain a special heritage interest or alternatively contribute to the appreciation of a structure listed in the RPS. Generally ACA status is given to groups of buildings forming part of an historic planned settlement or urban centre, and for the purpose of protecting important street-scapes and views to or from protected structures (Scannell, 2006). Works carried out to the exterior of structures within an ACA will be classified as exempted development only where they do not materially affect the special interest character of the area. The Council have agreed to assess the viability of such a designation for the Tramore area during the period of the Tramore Local Area Plan.

The National Inventory of Architectural Heritage (NIAH) may also inform the designation of an ACA. The NIAH was established under the Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act, 1999. A search of the study on Co. Waterford reveals 199 structures are currently on the inventory for the Tramore area. Usually this list is added to the existing RPS for the area.

STRATEGIC ISSUES:

- Preservation and conservation of cultural and architectural sites of significance
- Designation of an Architectural Conservation Area (ASA)
- Amendment to, and extension of, the Record of Protected Structures (RPS)

8.0 STAKEHOLDER CONSULTATION

8.1 INTRODUCTION

A central element of this study was the identification of strategic issues for the area, management responsibilities, potential points of conflict and methods for their resolution. The aims and methodology used in completing the survey, along with the results, is contained in Appendix 5.

8.2 SUMMARY OF QUESTIONNAIRE RESULTS

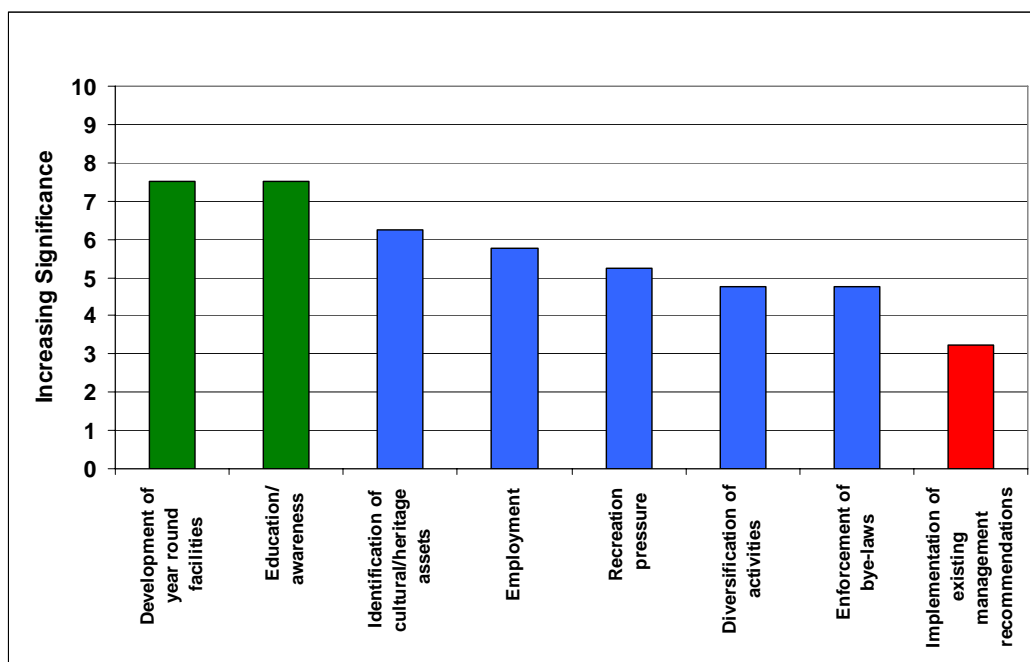
One of the key aims of all three questionnaires was to establish what each sector thought were the most pressing issues for the Tramore Bay area. These results are illustrated below.

8.2.1 Strategic issues identified

Respondents were asked to grade the strategic issues of most and least importance within their sector.

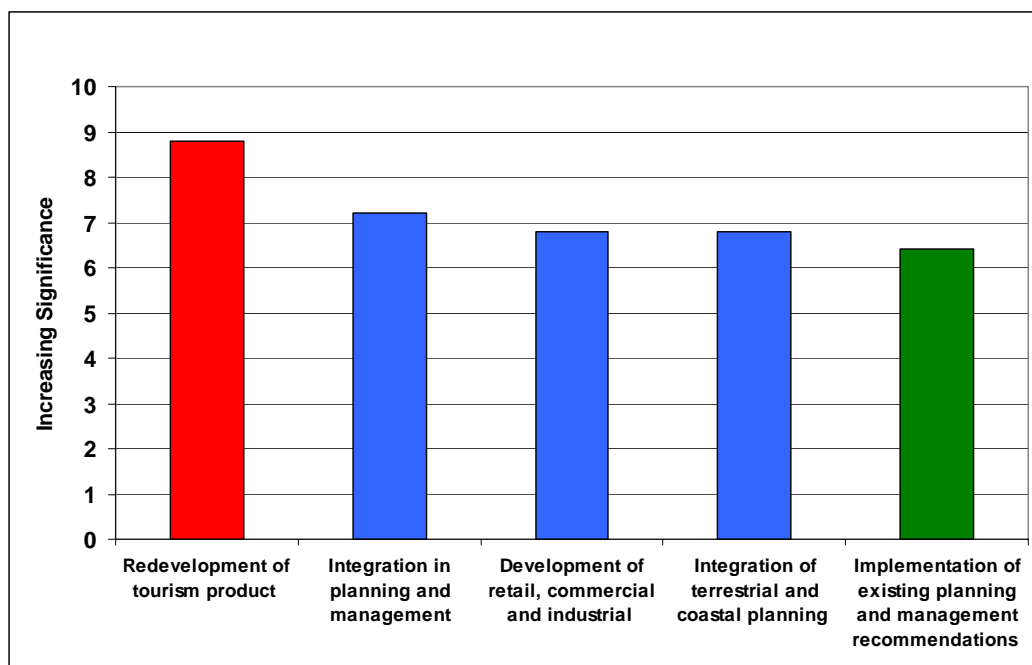
8.2.1.1 Recreation, tourism and culture issues

Respondents were first asked to grade 8 strategic recreation, tourism and culture issues in order of preference along the scale of 1-8, with 1 being the most pressing issue.



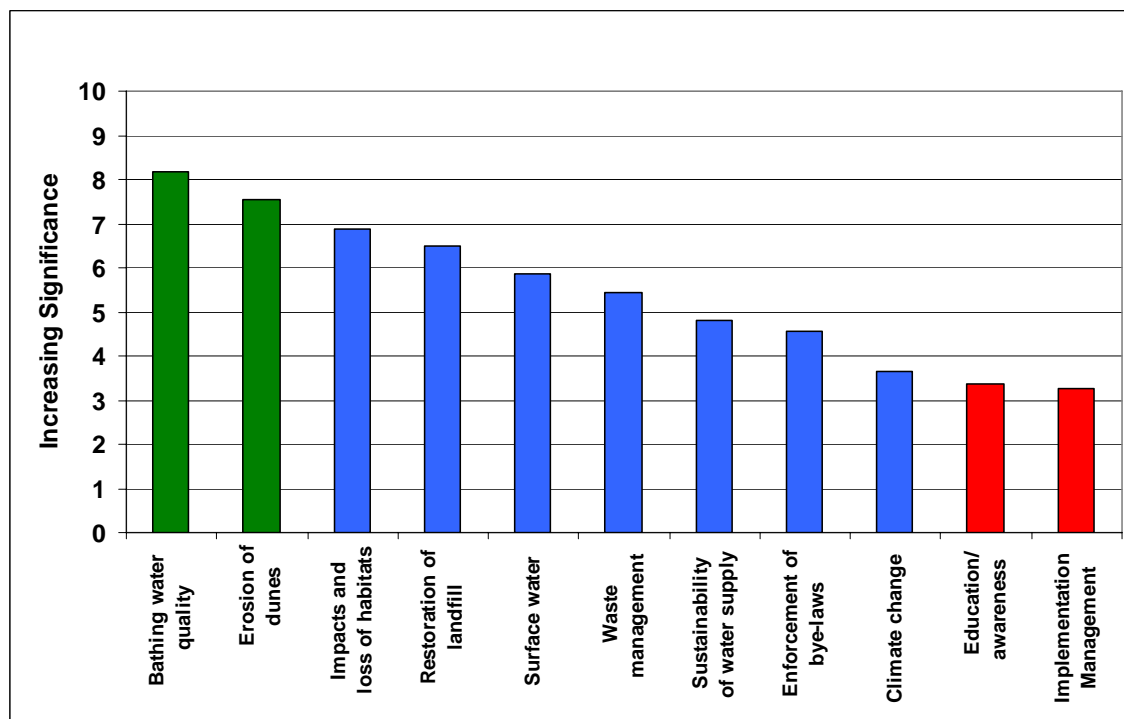
8.2.1.2 Economic and development issues

Respondents were first asked to grade 5 economic and development issues in order of preference from 1-5, with 1 being the most pressing issue.



8.2.1.3 Environmental and ecological issues

The respondents were asked to grade 11 strategic environmental and ecological issues in order of preference from 1-11, with one being the most pressing issue and 11 being the least pressing.



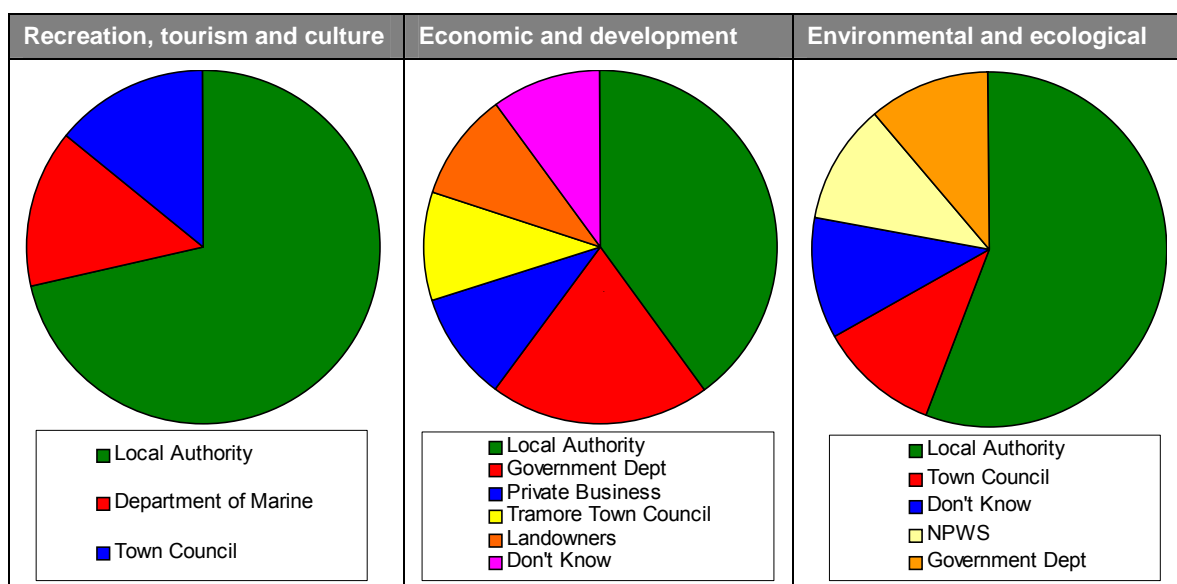
Based on the analysis; development of year round facilities and re-development of the tourism product were seen as the most pressing issues by the recreation and economic sectors respectively. The environmental sector identified bathing water quality as the most pressing issue. Unfortunately all three sectors felt that the implementation of existing management recommendations was the least pressing issue for the Tramore Bay area. A full list of additional issues identified by each of the three sectors is contained in Appendix 5.

8.2.2 Statutory responsibilities for managing issues identified

In order to determine statutory responsibilities for managing the various issues identified, respondents were asked to identify who they felt were responsible.

The recreation, tourism and culture sector had the perception that only three bodies have statutory responsibilities in the study area. The economic and development sector perceived more bodies to be involved. Responsibilities for managing the issues were assigned to Waterford County Council, Tramore Town Council, the [former] Department of the Marine and Natural Resources, and the Department of the Environment, Heritage and Local Government as well as private businesses and landowners. The environmental and ecological sector felt that responsibilities for managing the issues described were assigned to Waterford County Council, Tramore Town Council, the Department of the Marine and Natural Resources [now DAFF], and the National Parks and Wildlife Service (NPWS). In the latter two sectors there were also significant respondents who indicated that they did not know who was responsible.

Who is responsible for management at Tramore? (response by sector)

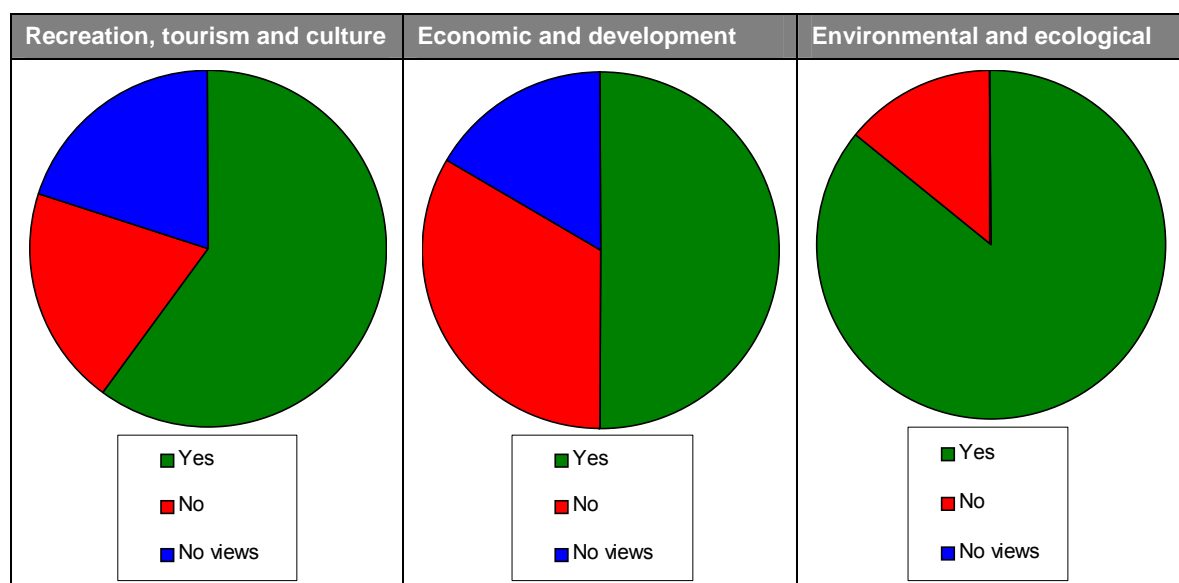


Overall the results from this question indicate that in all sectors there is confusion as to where responsibilities lie for managing the area.

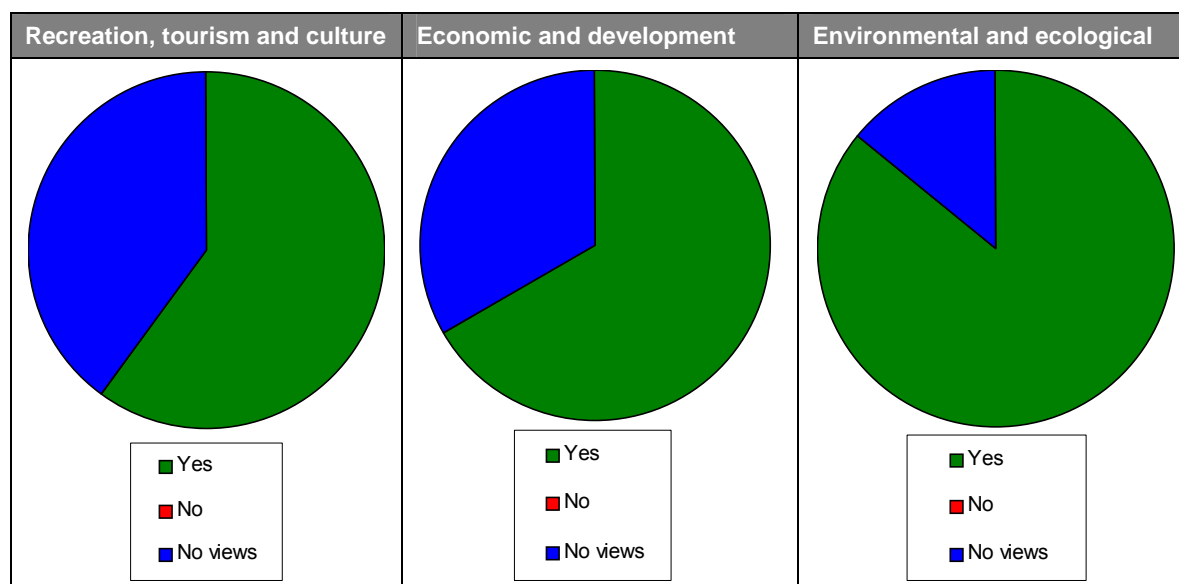
8.2.3 Potential of ICZM as a management tool

In this question all three respondent sectors were asked of their awareness of ICZM as a management tool and its potential to resolve conflicting strategic issues. The responses are tabulated below.

Are you aware of ICZM as a management tool? (response by sector)



Do you feel that there should be an ICZM plan for Tramore? (response by sector)



In reply to this question over half of the respondents in all sectors were aware of the concept of ICZM. Further to this, respondents were also asked if they would favour the development of an ICZM plan for the area. Results are shown above.

In response it is clear that those with knowledge of ICZM were fully in favour of its use as a management tool in the study area, while those with no knowledge of the approach expressed no opinion.

8.3 Discussion of Questionnaire Results

Based on the findings of the questionnaire survey it is clear that the respondents were, on the whole, in agreement with the strategic issues identified for the study area as outlined earlier in the report. While some additional issues were revealed from the individual questionnaires [see Appendix 5] on the whole these could be accounted for in the strategic issues set out in the other questionnaires. Overall, when the additional issues are combined with the issues set out in the questionnaires, it would seem the most pressing strategic social, economic and environmental issues for the study area have been identified through the questionnaire survey. These issues should form the basis of the scoping study element of a wider management strategy for the area in due course.

In relation to the recognition of ICZM as a management tool it is noteworthy that a general high level of awareness of the concept exists amongst the three stakeholder groups, with the highest level of recognition in the environmental group. In all groups those with knowledge of the approach were overwhelmingly in favour of its use as a management tool in the study area.

9.0 MANAGEMENT REGIME AND FUTURE OPTIONS

9.1 CURRENT POLICIES AND OBJECTIVES

A number of spatial planning and development policies and objectives of relevance to the Tramore area are set out in the National Spatial Strategy, South East Regional Authority Planning Guidelines, Waterford County Development Plan, Tramore Local Area Plan and the Strategic Environmental Assessment (SEA) of the Tramore Local Area Plan. These are set out briefly below:

- **National Spatial Strategy (NSS)** (DOEHLG, 2002); Under the NSS Tramore will serve as a 'large town' providing a range of services and opportunities for employment.
- **South East Regional Authority Regional Planning Guidelines (2004)**: note that Tramore has recently experienced a high level of population growth and continues to be an attractive location for new residential development.
- **Waterford County Council County Development Plan 2005-2011 (2005)**: recognises that Tramore has the critical mass to support its own services and industry such that the unsustainable perception of Tramore as a dormitory town is out-dated, as it emerges as a town 'in its own right'. Thus, Tramore must strengthen and widen its economic base so as to retain its population, and promote a balanced population and spatial structure to ensure its continued vitality and development.

Specifically the Local Area Plan for Tramore has a number of identified objectives to be delivered during the lifetime of the Plan [2007-2013] (2006). These cover topics such as employment, residential, economic, retail, community and social development, tourism, infrastructure and built heritage. The objectives for the environment are summarised below:

Environment

- *Coastal zone management*: The council recognises the need for a strategic approach to coastal protection. The objective is to implement the findings of the CMRC study (2006).
- *Protection of the sand dunes*: A number of threats exist to Tramore dunes and back strand area. The objectives here are to protect, where possible, the sand dunes in Tramore and to implement the findings of CMRC study (2006); integrated heritage management with the protection and enhancement of the dunes and back strand.
- *Public open space*: proposed town-park to be developed around the existing boating lake. The objective here is to integrate heritage management with the protection and enhancement of Tramore Dunes and Back strand.
- *Protection of the natural environment*: air quality, the objective is to develop 'green energy' technology and resources to reduce air pollution and improve air quality.

Strategic Environmental Assessment of the Tramore Local Area Plan Review (Brady, Shipman, Martin, 2006)

A number of SEA objectives for the Tramore LAP were set out in this report. These have been generated as a result of consultation between the planning authority, the report authors and based on the overall strategy of the planning authority to safeguard the environmental integrity of the area. The objectives are set out under a number of headings as follows:

- *Biodiversity (flora and fauna)*: to conserve the diversity of habitats and protected species including the marine environment and to promote Integrated Coastal Zone Management strategies.
- *Human beings*: to provide and promote a safe, healthy and high quality environment in which to live and work and to promote the provision of housing needs to accommodate a growing population.
- *Soil/geology*: to ensure that the soil/geology environment is not unduly impacted upon through contamination, that preference is given to brown field sites and that waste arising from construction and demolition is reused/recycled where possible.
- *Water services*: to ensure that the population has access to adequate drinking water and that all zoned lands are connected to the public sewerage network ensuring treatment of wastewater prior to discharge and that flooding is avoided in selecting sites for development.
- *Air quality and climate change*: to maintain and where possible improve air quality. To promote the use of sustainable modes of transport and energy use.
- *Material assets*: to promote sustainable modes of transport and provide for ease of movement for all road users.
- *Cultural heritage*: to promote the protection and conservation of the cultural heritage, including architecture and archaeological heritage.
- *Landscape*: to conserve and enhance valued natural landscapes and features within them.

Review of the Coastal Protection at Tramore Strand (CMRC, 2006)

The study concluded that coastline at Tramore was subject to change. The changes were partially as a result of natural erosion and large scale accretion at the eastern end of the strand. There was evidence of attempts to control erosion resulting from coastal process and wind scour. However, it was further noted that erosion was also as a result of the detrimental effects of the types and levels of usage at Tramore. This was apparent across the area but was most obvious in the dune complex where, for example, user activity had contributed to and was continuing to contribute to the problems being encountered in the form of blowouts. In this respect, the report suggested that the sensitive areas on the sand dunes might need to be protected to avoid further

damage and to encourage recovery the provision of trails and the fencing of the more sensitive areas should be considered. In general there was little public information about the schemes that had been attempted or even general information about Tramore's cultural and environmental significance.

Based on the findings of the report a number of recommendations were made:

- *Information:* for users, awareness raising (signage) of the sensitivity of the dune/spit area and evolution of the coastline. Highlight the extent of Tramore's designations. Targeted educational measures during peak periods;
- *Structures:* provision of fencing to protect the most sensitive areas, build trails to encourage user to adhere to prescribe routes;
- *Consultation:* with user groups to ascertain if they could modify their usage patterns; promotion of the approach of Integrated Coastal Zone Management (ICZM)
- *Enforcement:* provision of a beach warden;
- *Funding:* innovative mechanisms to pay for warden/signage etc.

Strategic Issues:

- Implementation of all plans and policies and their associated objectives and recommendations
- Designation of an Architectural Conservation Area (ASA)
- Amendment to, and extension of, the Record of Protected Structures (RPS)

9.2 CURRENT INSTITUTIONAL RESPONSIBILITIES

It is widely acknowledged that a number of Government departments, statutory agencies and local authorities have some management responsibility in the coastal zone (Brady Shipman Martin, 1997). The primary Government Departments with sectoral responsibilities in the coastal zone are: the Department of Agriculture, Fisheries and Food (DAFF), Department of Environment, Heritage and Local Government (DEHLG), Department of Communications, Energy and Natural Resources (DCENR), Department of Community, Rural and Gaeltacht Affairs (DCRGA), the Department of Arts, Sport and Tourism (DAST), and from January 2006 the Department of Transport. Other semi-State bodies, such as the Environmental Protection Agency (EPA) and the Marine Institute, have water and pollution monitoring responsibilities. An overview of the institutions with a management responsibility in the Tramore area is presented in Table 6.

Table 6 Institutions with a role in managing the coastal zone.

Institution	Key Coastal / Marine Functions
Agriculture, Fisheries and Food http://www.agriculture.gov.ie/	<p><u>Fisheries and Marine Infrastructure</u>: responsibility for sea fisheries; aquaculture; coastal protection; marine research; marine engineering; pier and harbour development for all piers and harbours (with the exception of commercial and island harbours).</p> <p><u>Licensing</u>: tasked with responsibility for all aquaculture licensing and foreshore licensing (except energy, aggregate and mineral extraction and commercial harbours).</p>
Environment, Heritage and Local Government http://www.environ.ie/	<p><u>Environmental Protection</u>: meeting international and European commitments on environmental issues; licensing of mineral extraction projects on the foreshore under national legislation.</p> <p><u>Heritage</u>: remit extends to cover built and natural aspects of heritage, including archaeological functions.</p> <p><u>Development</u>: implementation of the national spatial planning system (which generally ends at the mean high water mark) incorporating protection of the natural and built environment and promoting the efficient use of land and infrastructure.</p>
Department of Transport http://www.transport.ie/	<p><u>Maritime Affairs</u>: regulating and enforcing maritime safety and security standards; safeguarding the maritime environment; ports and shipping policy (including foreshore licensing of commercial harbours).</p>
Waterford County Council http://www.waterfordcoco.ie/en/	<p>Manages the delivery of local government services in the Co. Waterford including housing, roads and transportation, water and waste water services, planning and development, environmental protection, community development, recreation and amenity, agriculture, health and welfare services.</p>
Tramore Town Council http://www.waterfordcoco.ie/en/localauthorities/tramoretowncouncil/	<p>Administers local government, proper planning and sustainable development of the Tramore area through provision of local government services (e.g. planning; waste management; water and road services).</p>
South Eastern River Basin District http://www.serbd.com	<p>Multi-partner group comprising public and private bodies tasked with managing the South Eastern River Basin District (SERBD) and producing River Basin Management Plans (RBMPs) and Programme of Measures (POMs) for the SERBD required by the Water Framework Directive.</p>
National Parks and Wildlife Service http://www.npws.ie	<p>Part of the Department of the Environment, Heritage and Local Government, the NPWS is responsible for the conservation of numerous habitats and species as well as enforcement of conservation legislation. Their role includes the designation and protection of sites such as Natural Heritage Areas (NHAs), Special Areas of Conservation (SACs) and Special Protection Areas (SPAs).</p>
Environmental Protection Agency http://www.epa.ie	<p>The EPA has a wide range of statutory duties and powers including responsibility for licensing, enforcement, monitoring and assessment activities associated with environmental protection.</p>

South East Regional Authority http://www.sera.ie	The South East Regional Authority (SERA) is a regional public body with responsibility for the coordination of strategic planning in the southeast region.
Industrial Development Agency http://www.idaireland.com	The IDA is a State-sponsored body with responsibility for securing new investment from overseas in manufacturing and internationally traded services sectors. It also encourages existing investors to expand and develop their businesses.
Fáilte Ireland http://www.failteireland.ie	The national Tourism Development Authority for Ireland whose role is to guide and promote tourism as a leading indigenous component of the Irish economy. It has specifically promoted the southeast in recent campaigns.

Management institutions in existence are predominantly sectoral with a strong land / sea divide. The interpretation of the extent of the coastal zone will often vary from location to location and the concept of ICZM must therefore be flexible enough to take account of different geographical, pragmatic and local situations. The difficulty in defining the coastal zone from an administrative perspective lies in the reality that it encompasses both marine and terrestrial elements. The coastal zone traverses the Mean High Water Mark (MHW) and therefore under Irish law falls under two jurisdictions from a planning and permitting perspective. As a general rule, planning on the landward side of the MHW is undertaken by local authorities while the area from the MHW extending to the outer limit of the territorial seas falls under the jurisdiction of the Department of Agriculture, Fisheries and Food who now have responsibility for foreshore licensing and leasing. If part of the foreshore is to be used for development purposes, planning permission must now be obtained from the associated local authority since the Planning and Development Act, 2000.

9.3 FUTURE MANAGEMENT OPTIONS

It is clear from the foregoing text, that the Tramore site is widely used and important from environmental, social and economic points of view. Currently some of these uses conflict with each other and this has the potential to affect the overall integrity of the site. In light of this it is recognised that an integrated approach to management may provide a means to manage the site in a proactive and holistic way. According to the European Commission (1997), Integrated Coastal Zone Management (ICZM) is a continuous process which has the overall aim of implementing sustainable development in coastal zones and maintaining their diversity. It aims, by more effective management, to establish and maintain optimum sustainable levels of use, development and activity in coastal zones and eventually to improve the state of the coastal environment.

ICZM has a relatively chequered past but in more recent years the process has been employed by both developed and developing countries in managing coastal resources. At the European level, a Recommendation concerning the implementation of ICZM was adopted in 2002. Any

future ICZM strategy or plan should reflect the principles of successful ICZM contained in the Recommendation. These are applicable at all management scales. These are listed below.

- (a) **broad overall perspective;**
- (b) **long-term perspective**
- (c) **adaptive management**
- (d) **local specificity**
- (e) **working with natural processes**
- (f) **involving all the parties concerned**
- (g) **support and involvement of relevant administrative bodies**
- (h) **use of a combination of instruments**

Source: ICZM Recommendation 2002/413/EC

Integration is key to understanding what ICZM is about and what it seeks to achieve. In this respect, the ICZM process should facilitate improved integration of the sectors operating in any coastal zone. This would mean improved integration of the way those sectors are governed, managed, operated and how the community can interact with those structures. The ICZM process should bring benefits to all sectors of the community be it on an economic, environmental or social level. In Tramore it is clear that a variety of management plans and objectives exist. ICZM would seek to coordinate all of these to ensure the coast is managed in a more proactive and sustainable manner. Any schemes implemented, for example to deal with erosion or to attract tourists, need to be part of an *overall* management strategy. This would ensure all stakeholders are kept informed of their changing coastal environment and why there is a need for management as well as the benefits that this will bring to the area.

Essential parts of any management strategy are the enforcement and compliance aspects. It is anticipated that if all stakeholders are involved in the formulation of such a management plan, those individuals or groups will feel a sense of 'ownership' of that management process and hence become somewhat self-patrolling. While this is desirable and, to an extent, achievable the reality of coastal management suggests that the variety of uses of a coastal zone will always result in conflict. While conflict resolution is a key aspect of ICZM, it is also necessary to have other, perhaps stronger, enforcement mechanisms in place. This could be in the form of a beach warden or indeed through the implementation of bye-laws for particular activities as outlined

above. For particularly sensitive habitats of the area, it may be achieved through more awareness-raising and public education.

9.3.1 Examples of ICZM approaches in Ireland and the UK

While ICZM is the recommended approach to management of coastal areas, its operation to date has been limited to discrete areas, usually funded by specific projects or initiatives. This section demonstrates some such examples. Experience associated with these, as well as methods employed, may be useful to consider in any future ICZM strategy for the Tramore Bay area.

Bantry Bay Charter Project

Bantry Bay, Co. Cork was one of the pilot sites in the EU-wide Demonstration Programme on ICZM between 1996 and 1999. Bantry Bay hosts a diverse mixture of coastal activities, including aquaculture, tourism, fishing, conservation and shipping. The overall aim of the Bantry Bay Charter Project was to develop “a consensus-based integrated coastal zone management strategy for Bantry Bay; through the adoption of a stakeholder’s charter, the use of innovative dispute resolution techniques and a community based GIS catalogue of resources.” The Charter aimed to ensure the participation of all stakeholders in the Bantry Bay area. Encouraging regulatory bodies to see the wider benefits of an integrated approach was regarded as an important achievement. The ultimate aim was to pursue the implementation of the Charter following the conclusion of the EU’s ICZM Demonstration Programme. This long-term view was shared by Cork County Council who proceeded to fund a project office over a two year period between 2001 and 2003. However, the project office was closed in February 2003 because of funding problems within the local authority, which were augmented by a lack of support from Government Departments.

Lessons learned:

- The need to ensure sustained financial commitment before engaging in a process, which raises expectations among stakeholders.
- Stakeholders in Bantry and in other coastal areas are reticent to trust or invest their time in such initiatives again. This legacy presents an obstacle to the development of ICZM at the local level in Ireland.

Further information on the Bantry Bay Charter Project can be found in the Final Technical Report (Cork County Council *et al.*, 2001).

Cork Harbour Integrated Management Strategy

The Cork Harbour Integrated Management Strategy was enabled by the COREPOINT (Coastal Research and Policy integration) project, funded through the EU INTERREG IIIB programme. The project ran from October 2004 to April 2008. The aim of the Strategy is to bring together all those involved in the development, use and management of Cork Harbour in a framework which encourages integration of their interests and responsibilities to achieve common objectives in a sustainable manner. The process that underpinned the development of the Strategy involved facilitation by COREPOINT project partners, widespread consultation with all stakeholders in the Cork Harbour Forum, the organisation of two stakeholder workshops and consultation with the Strategic Advisory Group involving organisations with statutory responsibilities within the Harbour. The stakeholder workshops identified issues and recommendations for action in relation to the sustainable development of Cork Harbour. The Strategy itself was developed on the basis of a consultative process. Although the Strategy is a non-statutory one, it aims to bring about a new approach to coastal management in Cork Harbour by focusing the attention on the regulatory duties and powers of the various statutory Departments and agencies to deliver their goals. The Strategy will be implemented through two key mechanisms:

1. Partnership, that is identification of objectives that can be facilitated by collaborative action in the short, medium and long-term;
2. Integration of objectives into statutory planning documents and into the strategic policy documents of the relevant organisations.

The next step of the Strategy is the development and implementation of an Action Plan for 2008-2011 which will be facilitated through the INTERREG IIIB project, Innovative Management for Europe's Changing Coastal Resource (IMCORE), which will run over the corresponding period.

The Cork Harbour Integrated Management Strategy is available online at:

http://crc.ucc.ie/pages/cork_harbour_strategy.pdf

The Cork Harbour Forum was established in 2006. The Forum provides an opportunity for stakeholders living and working within the vicinity of Cork Harbour to participate in dialogue while simultaneously raising awareness of the Harbour region. The Forum comprises individuals from various organisations with an interest in the Harbour as well as the general public. The Forum has also organised numerous events in the Harbour such as boat-trips, information evenings on various topics such as port development, marine tourism and flood management. For further information on the Cork Harbour Forum see www.corkharbour.ie

Many ICZM approaches in the United Kingdom are based on the partnership approach to coastal management. A recent study on these found that there are 41 active voluntary coastal partnerships in the UK (Entec Ltd., 2008). The roles of coastal partnerships vary greatly but predominantly they aim to help establish sustainable levels of economic and social activity in coastal areas while protecting the coastal environment, which is the key objective of ICZM.

The role each coastal partnership undertakes has developed according to specific local issues and needs. In general terms, partnerships bring together those involved in the development, management and use of the coast within a framework that facilitates the integration of their interests and responsibilities. Such partnerships can provide facilitation and engagement services, raise awareness of existing coastal issues, information collection and dissemination as well as fulfil other gap areas in management. An example of the approach used in Scotland is presented below. Further information on marine and coastal management can be found in the Scottish Government's Consultation Document on the Marine Bill – Sustainable Seas for All (2008). This is available online at: <http://www.scotland.gov.uk/Publications/2008/07/11100221/0>

ICZM in Scotland

The experience of ICZM in Scotland to date has been shaped by the geography of the country and the uses of the coastal resource. The first attempt at ICZM came in response to increasing pressure for aquaculture development in the Highlands during the 1980s. Local Coastal Partnerships were set up in the early 1990s arising from the Earth Summit in Rio and the UK's commitment to develop integrated management strategies for a number of estuaries and firths. Scottish Natural Heritage's 'Focus on Firths' campaign, along with funding from the EU's ICZM Demonstration Project, provided financial and administrative support to employ dedicated Project Officers in a number of areas around the Scottish coast. Between 1993 and 2001, seven Management Strategies were produced for the major firths and other coastal areas. These recognised the interactions and competition for space in coastal zones. The management strategies were developed by partnerships of statutory and voluntary organisations with the benefit of stakeholder participation which reflect the principles of ICZM. Currently, Scotland has seven Local Coastal Partnerships encompassing most of the mainland east coast, the major firths and the Western Isles. These partnerships can deal with familiar issues, such as beach litter, but they also provide a mechanism for the discussion of other matters such as coastal defence SAC management and conflict resolution.

It may be argued that the site already has a sufficient number of conservation designations. If the obligations arising from these were understood completely and enforced accordingly, the site could be accorded with a high degree of protection. To be comprehensive, a number of other designations may also be of relevance. These include Nature Reserve status at national level and Biosphere Reserve at international level. These are outlined briefly below.

9.3.2 Nature Reserve

Nature Reserves may be designated under the Wildlife Act, 1976 as amended. A Nature Reserve is an area of importance to wildlife, which is protected under Ministerial order. Nature Reserves can apply to:

- (a) land (including land covered by inland waters) owned by the State,

- (b) any foreshore which belongs to the State,
- (c) land, other than foreshore mentioned in paragraph (b), which forms the seabed under the territorial seas of the State.

Most Nature Reserves are owned by the State, however, some are owned by organisations or private landowners. Usually persons interested in acquiring this type of statutory protection for their lands seek advice on this matter from the Department of the Environment, Heritage & Local Government.

In order to designate an area as a nature reserve, Section 15 of the Wildlife Act, 1976 as amended by Section 25 of the Wildlife (Amendment) Act, 2000 the Minister must be satisfied that:

- “(a) land to which this section applies
 - (i) includes the habitat or forms, or is capable of being made to form, the habitat or part of the habitat of one or more species or community, being a species or community which is of scientific interest, or
 - (ii) includes or forms an ecosystem, or part of an ecosystem, which is of scientific interest, or
 - (iii) contains features of geological, geomorphological or other natural interest, and that in the case of such habitat or ecosystem, or such part of the ecosystem, or geological, geomorphological or other natural interest is likely to benefit if measures are taken for its protection,
- (b) it is desirable to establish the land as a nature reserve, and
- (c) the proper management of the land as a nature reserve would not be precluded by any interest of any other person (including a person who is an owner with the Minister) in or over the land.”

If the Minister is of the opinion that the above conditions are satisfied, he may sign an establishment order which will specify the reason why, and indicate the objectives for which, the nature reserve is being established. The Minister shall manage the land to which an establishment order relates so as to secure, as best as may be, the objectives indicated in the order having regard to and in accordance with the general protection of the natural environment. The Minister cannot amend an establishment order unless he considers that the objectives, as regards which the relevant nature reserve was established, require revision because of changes in the features or characteristics of the reserve or in any other circumstance which affects the reserve. The Minister shall not revoke an establishment order unless he considers that it is no longer practicable or is no longer desirable to maintain the nature reserve established by the order. A copy of such an order must be sent to the Office of Public Works, An Bord Pleanála and

to any planning authority within whose area the land comprised in the nature reserve, or any part thereof, is situate. There is currently only one nature reserve, Fenor Bog, in Co. Waterford.

It is important to note that the Irish nature reserve designation is not included in the Habitats Directive definition of “Natura 2000”. The effect of this is that such sites would be better protected with infinitely superior enforcement procedures under European Directives or European-inspired Irish legislation. In the case of Tramore, these designations are already in place.



9.3.3 Biosphere Reserves

Biosphere Reserves were launched in 1976 as part of UNESCO's Man and the Biosphere Programme to innovate and demonstrate approaches to conservation and sustainable development. They have no legal backing in the sense that UNESCO has no powers to enforce them and the areas remain under the sole sovereignty of the State. Despite this, experience and ideas on the site may be shared nationally, regionally and internationally within the World Network of Biosphere Reserves. As of 20 May 2008, there are 531 sites worldwide in 105 countries. Ireland currently has two Biosphere Reserves: North Bull Island designated in 1981 and Killarney designated in 1982.

Biosphere Reserves can be comprised of terrestrial, coastal and marine ecosystems or combinations of all three. Reserves are nominated by national governments; each reserve must meet a minimal set of criteria and adhere to a minimal set of conditions before being admitted to the Network. Each Biosphere Reserve is intended to fulfil three complementary functions:

Biosphere reserves have three inter-connected functions:

- Conservation of landscapes, ecosystems, species and genetic variation,
- Development of economic and human and culturally adapted,
- Logistic support regarding research, monitoring, environmental education and training.

UNESCO envisages Biosphere Reserves as tools to help countries implement the results of the WSSD and in particular the Convention on Biological Diversity and the Ecosystem Approach which it advocates.

Physically, according to the Seville Strategy for Biosphere Reserves, each reserve should contain three elements:

- one or more **core areas**, which are securely protected sites for conserving biological diversity, monitoring minimally disturbed ecosystems, and undertaking non-destructive research and other low-impact uses (such as education);
- a clearly identified **buffer zone**, which usually surrounds or adjoins the core areas, and is used for cooperative activities compatible with sound ecological practices, including environmental education, recreation, ecotourism, and applied and basic research; and
- a flexible **transition** area, or area of co-operation, which may contain a variety of agricultural activities, settlements and other uses and in which local communities, management agencies, scientists, non-governmental organizations, cultural groups, economic interests and other stakeholders work together to manage and sustainably develop the area's resources.

The Seville Strategy recognises that some countries have enacted legislation specifically to establish Biosphere Reserves while in others, only the core areas and buffer zones are designated (in whole or in part) as protected areas under national law. A number of Biosphere Reserves encompass areas protected under other designations such as national parks or nature reserves as well as other international designations such as World Heritage or Ramsar sites.

While the various zones required for Biosphere Reserve status reflect the existing zones under the SAC management scheme for Tramore it is important to recognise the additional requirements such a designation would need. The designation, for example, does not require any change in law or land ownership. Each Biosphere Reserve needs its own unique system of governance to ensure it meets its functions and objectives. This, like all good governance, needs to be open, evolving and adaptive in order for the local community to better respond to external political, economic and social pressures, which would affect the ecological and cultural values of the area. To achieve this, it is usually necessary to establish a specific committee or

board that will plan and coordinate all the activities of all the stakeholders concerned. Each Biosphere Reserve usually has an allocated 'coordinator' who acts as a contact person for all matters dealing with the Biosphere Reserve.

With respect to financing of Biosphere Reserves, this will depend on the nature and extent of the projects and activities undertaken at the site. Usually additional funding is not needed and existing budgets are adjusted to meet specific objectives. There is potential for industry, tour operators, charitable foundations, research funding agencies, governments, and local authorities to contribute. UNESCO does not provide dedicated annual funding but can provide advice and may at times provide 'seed funding' to initiate local efforts which may in turn help broker projects or establish lasting financial mechanisms.

10.0 DISCUSSION AND RECOMMENDATIONS

Overall it is clear from both the desktop review of materials and from the three questionnaire studies that Tramore is a widely used site and important from environmental, social and economic points of view as supported by the questionnaire findings. Currently some of these uses conflict with each other, also evidenced by the questionnaire findings, and this has the potential to affect the overall integrity of the site. In light of this it is recognised that an integrated approach to management may provide a means to manage the site in a proactive and holistic way. This is supported by the stakeholder questionnaire findings which found a general high level of awareness of the concept of ICZM amongst all three stakeholder groups. While the highest level of recognition was in the environmental group, it is interesting and encouraging to note that in all groups those with knowledge of the ICZM approach were overwhelmingly in favour of its use as a management tool in the study area.

In relation to the assignment of responsibilities for the overall management of the study area, it is clear from each of the three groupings of the stakeholder questionnaire that there is a general lack of knowledge in relation to which bodies have responsibilities in the study area. While the desktop review demonstrated that at least 11 bodies (including the State agencies and local authorities) have varying responsibilities in the area, overall only 5 bodies were identified from the survey. Based on this it would seem that some form of awareness-raising exercise needs to be undertaken to communicate where responsibilities lie in the area. In addition, in light of any management plan which might be drawn up for the area in the future, it is the view of the authors that a Forum of responsible bodies for the area should be established at the outset. This would compliment the approach suggested by the NPWS in their management plan for the SAC/SPA areas. Case studies presented on Cork Harbour and Scottish experience in ICZM emphasise the need for some sort of Forum and a partnership approach in order to achieve better integration.

One of the stakeholder questionnaire results indicates that implementation of existing management recommendations is the least pressing issue. In terms of an integrated approach to management and thereby more successful and sustainable management of the area, this is unfortunate as such an attitude could be detrimental to the area. Simple solutions like new signage for the SPA/SAC areas and explanation boards for the dune rehabilitation works could help give local residents a sense of ownership of their area and management process while simultaneously encouraging tourism through better information on the existing natural resource. It is hypothesised that a Tramore Bay Coastal Forum could help raise awareness on issues such as conservation as well as provide a mechanism for responsible authorities to meet and liaise on current and future work they intend to do in the area.

Parallel to the above, is the reality that better integration of existing management institutions and stakeholders would lead to better management overall. Fundamental to this is public participation in the management process as well as mutual recognition and understanding of all stakeholders involved. In light of the survey results it would be useful to follow up with the stakeholders on a one to one interview basis to determine why particular views were expressed. In addition, it is also clear that while a variety of environmental, social and economic strategic issues prevail in the area it would be very useful to bring the various stakeholder groups together with a view to understanding each others opinions and view points on the management of the study area.

Overall, it would seem the most pressing strategic social, economic and environmental issues for the study area have been identified through the questionnaire survey. These issues should form the basis of the scoping study element of a wider ICZM strategy for the area in due course.

10.1 RECOMMENDATIONS

- An integrated approach to management is necessary for sustainable development and management of the area. This should take the form of an over-arching integrated coastal management strategy for the Tramore Bay area. Once such a strategy has been developed a targeted implementation plan and action list can be developed.
- Some form of awareness-raising exercise needs to be undertaken to communicate where institutional responsibilities lie in the area. This could be incorporated into any future ICZM strategy for the area.
- Provision of information on the coastal processes occurring at the site possibly as part of an overall awareness raising campaign. In-built into this should be ongoing monitoring of the site. This is necessary to establish the sediment budgets that affect the system's functioning and that have an impact on the spit in terms of shoreline position and shape over time.
- Existing management recommendations need to be implemented. This could include relatively simple tasks like new signage to more comprehensive tasks like community awareness raising such as emphasising the extent of Tramore's designations and the reasons why the areas were designated.
- These issues identified from this study as well as issues identified by other stakeholder groups should form the basis of a scoping study element for a wider ICZM strategy for the area in due course.
- There is, perhaps, a need for a short document for regulators in the area on the various institutions involved in management, their roles and responsibilities and where they can be contacted. It is possible that this should also be provided to stakeholders.

- Provision of a beach warden - this was suggested in the previous CMRC report as well as by various authors (e.g. Goodwillie, 1983). It is envisaged that such a position could begin on a temporary basis during the peak Summer months. Their remit could include education, enforcement, monitoring as well as raising awareness.
- Building of trails to encourage visitors to adhere to prescribed routes to limit effect of tramping on the dune system.



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APPENDIX 1

Annotated Aerial Photograph of Tramore, Co. Waterford



APPENDIX 2
Tramore Beach Bye-Laws

COMHAIRLE BAILE TRA MHOR
TRAMORE TOWN COUNCIL

TRAMORE TOWN COUNCIL (JET SKIS AND FAST POWER BOATS) BYE-LAWS 2003
BYE-LAWS GOVERNING TRAMORE BAY

These Bye-Laws were made by TRAMORE Town Council at the Council Meeting held on

And are set out hereunder. They shall come into force on the

MADE BY

Tramore Town Council in exercise of the power conferred on it by Part 19 of the Local Government Act, 2001.

TITLE

These Bye-Laws may be cited as the Tramore Town Council (Jet Skis and Fast Power Boats) Bye-Laws 2003.

INTERPRETATION

Throughout the Bye-Laws, unless the context otherwise requires, the following words and expressions have the meaning hereafter respectively assigned to them, that is to say -

(a) "Jet-ski" means a power operated pleasure craft propelled by water jet, normally capable of carrying one or two persons at high speeds, which may constitute a danger to persons on or in the water in any area or a danger to surface craft in any area;

(b) "Fast Power Boat" means a power operated pleasure craft other than a jet-ski, whether engaged in towing other appliances or not, capable of speeds which may constitute a danger to persons on or in the water in any area or a danger to surface craft in any area;

(c) "Trailer" means a vehicle towed by another vehicle and used to carry a jet ski or fast power boat;

For the purposes of these Bye-Laws Tramore Bay shall include:

(i) Tramore Strand and Back Strand, Tramore Pier (Lady Elizabeth's Cove) and Newtown Cove and Guillamene.

(ii) Any walls, railing, barriers, fence, roadway, seats, footpath, ramps, alleyways, access, walkways, step, sewer, drain or gully therein;

(iii) Any post, sign, notice, sign board, life saving apparatus or equipment, toilet, litter receptacle, lamp, lamppost, appliance, flagpole, flag, water pipe, gas pipe, hut, shelter, ornament, building or other structure forming part thereof or erected by the Council or the County Council or by the authority of the Council or the County Council either in Tramore Bay or adjacent to Tramore Bay for the benefit of the public;

(iv) Any tree, shrub, bush, hedge, flower, flower bed, turf, grass or other plant growing thereon or placed thereon by the authority of the Council;

(v) Any implement, barrow, article, tractor, trailer or thing thereon belonging to the Council or County Council or placed thereon by the authority of the Council;

(d) "Council" means the Town Council of the Town of Tramore

(e) "County Council" means the council of the County of Waterford

(f) "Employee of the County Council" shall include every Superintendent, Supervising Official, Litter Warden, Dog Warden, Lifeguard, or other person employed by and duly authorised by the Council to administer and/or enforce these Bye-laws.

(g) "authorised person" means a person authorised in writing by the Council for the purposes of these Bye-laws.

(h) "Consent of the Council" means the permission in writing of an authorised person.

(i) "designated area" means an area designated pursuant to Bye-law no. 3. and for the purposes of these Bye-laws means the area from the cliff at the Western end of Tramore Bay to the sign marking the end of the beach guards patrol at the eastern end of the Promenade.

(j) "Electrical suppression" means the reduction and/or elimination of the emission of electromagnetic waves so as not to cause interference to radio and/or television reception.

(k) "Bathing Season" for the purposes of these bye-laws means the months of June, July and August.

3. REGULATION OF JET SKIS AND FAST POWER BOATS

(a) The Council may designate areas of or within Tramore Bay, and periods of time with respect to Tramore Bay, where and when the use of jet skis is allowed.

(b) Any person who is in charge of a jet ski or fast power boat in Tramore Bay shall ensure the following:-

- * That it is not used in the designated area in the bathing season.
- * That it is at all times under proper and adequate control.
- * That it is driven or operated at such reduced speeds as are necessary in the vicinity of bathers and/or other water users (including wind surfers, surfers, canoeists, etc.) so as not to cause such bathers or other water users fear or anxiety.

Every person who is in charge of a jet ski or fast power boat in or on Tramore Bay shall act in such a manner as not to cause injury, annoyance or danger to other persons, including persons resident near the coastline of Tramore Bay or other persons using Tramore Bay or windsurfing or swimming in the sea or to disturb naturally occurring flora or fauna.

(c) Any person using a jet ski or fast power boat shall ensure that any trailer used to tow such vehicle is not left or parked in such a way as to cause any obstruction.

4. OBSTRUCTION, ETC.

A person shall not wilfully cause danger, obstruction or annoyance to other persons using Tramore Bay or wilfully obstruct any officer or employee of the Council in the execution of his/her duty in the enforcement of the Bye-laws.

5. ALCOHOLIC BEVERAGES/INTOXICATING SUBSTANCES

A person in charge of a jet ski or fast power boat shall not drink, consume or partake of alcoholic beverages or any intoxicating substance in or on Tramore Bay, or be under the influence of alcohol or any intoxicating substance while in charge of a jet ski or fast power boat in Tramore Bay.

6. ELECTRICAL SUPPRESSION OF JET SKI MOTORS, ETC.

Electrical suppression shall be included for all motors of jet skis and fast power boats which are operated in or on Tramore Bay.

7. OFFENCES AND ENFORCEMENT

(a) Any person bringing a jet ski or power boat onto Tramore Bay who contravenes these Bye-Laws must remove it from Tramore Bay if so directed by an authorised person or a member of An Garda Síochána.

(b) It shall be lawful for any authorised person or member of An Garda Síochána to enforce these Bye-Laws and to exclude or remove from any part of Tramore Bay any person committing any breach of these bye-laws and to take such other steps as authorised by law.

(c) Any person who contravenes a provision of these bye-laws shall be guilty of an offence and shall be liable on summary conviction to a fine not exceeding €1,200.

(d) If the contravention of a provision of these bye-laws is continued after conviction, the person causing the contravention shall be guilty of a further offence and shall be liable on summary conviction to a fine not exceeding €126 per day.

(e) A person who obstructs or impedes or refuses to comply with a request of a member of An Garda Síochána or of an authorised person

acting in the exercise of the functions conferred on an authorised person by these bye-laws shall be guilty of an offence.

(f) Where an authorised person or a member of An Garda Síochána is of the opinion that a person is committing or has committed an offence to which these bye-laws relate, the authorised person or the Garda Síochána, as the case may be, may demand the name and address of such person and if this demand is refused or the person gives a name or address which is false or misleading, the person shall be guilty of an offence.

8. These Bye-Laws shall not apply to jet skis or fast power boats kept by An Garda Síochána and wholly used by a member of An Garda Síochána in the execution of his/her duty, or kept or operated by the Irish Marine Emergency Service, the RNLI or the Inshore Lifeboat Service.

9. COMMENCEMENT

These Bye-Laws shall come into force on

APPENDIX 3

Photographs of the 1989 flood event in Tramore



Storm damage at Tramore, Saturday 16th December 1989.



Storm damage at Tramore, Saturday 16th December 1989.



Storm damage at Tramore, Saturday 16th December 1989.



Storm damage at Tramore, Saturday 16th December 1989.



Storm damage at Tramore, Saturday 16th December 1989.



Storm damage at Tramore, Saturday 16th December 1989.



Storm damage at Tramore, Saturday 16th December 1989.



Back Strand Tramore, Saturday 16th December 1989.

All of the above photographs were taken by Waterford County Council and are available on www.floodmaps.ie.

APPENDIX 4

Stakeholder Questionnaires

1. Recreation, Tourism and Culture stakeholders questionnaire



Questionnaire Survey on the identification of strategic recreation, tourism and cultural issues for the Tramore beach area

Name:

Position:

Responsibilities:

1. From the following list of strategic recreation, tourism and culture issues for Tramore beach area, put into order of importance (1-9 with 1 being most important and 9 being least important)

- Development of tourism based employment
- Development of year round facilities for community and tourists
- Diversification of activities
- Recreation pressure on dunes and back strand
- Identification of cultural/heritage coastal and maritime assets
- Education/ awareness of ecological/cultural/heritage importance of area
- Enforcement of bye-laws
- Implementation of existing management recommendations for the area

2. Are there any other strategic recreation, tourism and culture issues in relation to the beach area that you feel are important? Y/N If yes, please state:

3. Are these issues being dealt with currently? Y/N If yes, please state how and where?

If not, please state how you think they should be dealt with?

4. Who does the statutory responsibility lie with for managing these issues?

5. Are these issues conflicting with economic issues? Y/N
If yes, please state how?

6. Are these issues conflicting with environmental issues? Y/N
If yes, please state how?

7. What measures should be taken to resolve the conflicting issues?

8. Are you aware of the concept of 'Integrated Coastal Zone Management'? Y/N

9: If you answered Yes to Q8, do you think this form of management would help reconcile the conflicting social/economic/environmental issues in the Tramore Beach area?

10. What is your opinion on the development of an Integrated Coastal Zone Management Plan for the area?

2. Economic stakeholder questionnaire



Questionnaire survey on the identification of strategic economic and development issues for the Tramore beach area

Name:

Position:

Responsibilities:

1. From the following list of strategic economic and development issues for Tramore beach area, put into order of importance (1-5 with 1 being most important and 5 being least important)

- Development of retail, commercial and industrial opportunities
 - Redevelopment of tourism product
 - Implementation of existing planning and management recommendations for the area
 - Integration in planning and management
 - Integration of terrestrial and coastal planning
-

2. Are there any other strategic economic and development issues in relation to the area that you feel are important? Y/N If yes, please state:

3. If you answered yes to Q.2, are these issues being dealt with currently? Y/N

If yes, please state how and where?

If no, please state how you think they should be dealt with?

4. Who does the responsibility lie with for managing these issues?

5. Are these issues conflicting with environmental and ecological issues? Y/N

If yes, please state how?

6. Are these issues conflicting with recreation, tourism and cultural issues? Y/N

If yes, please state how?

7. What measures should be taken to resolve the conflicting issues?

8. Are you aware of the concept of 'Integrated Coastal Zone Management'? Y/N

9: If you answered Yes to Q8, do you think this form of management would help reconcile the conflicting social/economic/environmental issues in the Tramore beach area?

10. What is your opinion on the development of an Integrated Coastal Zone Management Plan for the area?

3. Environmental stakeholder questionnaire



Questionnaire survey on the identification of strategic environmental & ecological issues for the Tramore beach area

Name:

Position:

Responsibilities:

1. From the following list of strategic environmental & ecological issues for Tramore beach area, put into order of importance (1-11 with 1 being most important and 11 being least important)

- Erosion of dunes and back-strand
- Impacts and loss of habitats, flora and fauna
- Bathing water quality
- Climate change (sea level rise and flooding)
- Sustainability of water supply
- Surface water, drainage and control
- Waste management
- Restoration of closed landfill
- Education/ awareness of ecological importance of area
- Enforcement of bye-laws
- Implementation of existing management recommendations for the area

2. Are there any other strategic environmental & ecological issues in relation to the beach area that you feel are important? Y/N If yes, please state:

3. Are these issues being dealt with currently? Y/N

If yes, please state how and where?

If no, please state how you think they should be dealt with?

4. Who does the statutory responsibility lie with for managing these issues?

5. Are these issues conflicting with economic issues? Y/N

If yes, please state how?

6. Are these issues conflicting with recreation, tourism and cultural issues? Y/N.

If yes, please state how?

7. What measures should be taken to resolve the conflicting issues?

8. Are you aware of the concept of 'Integrated Coastal Zone Management'? Y/N

9: If you answered yes to Q8, do you think this form of management would help reconcile the conflicting social/economic/environmental issues in the Tramore beach area?

10. What is your opinion on the development of an Integrated Coastal Zone Management Plan for the area?

APPENDIX 5

Stakeholder Questionnaire Methodology and Results

A5.0 INTRODUCTION

A central element of this study was the identification of strategic issues for the area, management responsibilities, potential points of conflict and methods for their resolution. The aims of the questionnaire were as follows:

- Elicit opinions on the issues identified in the characterisation study,
- Identification of any other issues,
- Determine where responsibilities lay for the management of such issues,
- Identification of areas of conflict between issues,
- Exploration of the potential of ICZM as a management tool.

Due to the short time line for the study and the lack of funding available it was necessary to design a short questionnaire and target it to the stakeholders most immediately concerned with the study area during the mid phase of this three month study. None of the stakeholders were interviewed on a one to one basis for the study.

A5.1 METHODOLOGY

The survey took the form of three questionnaires based on:

1. strategic recreation, tourism and cultural issues;
2. strategic economic and development issues; and,
3. strategic environmental and ecological issues.

The strategic issues identified for each of the three categories were generated from the desk based characterisation study and on further consultation with Waterford County Council. The issues subsequently chosen for each category were those deemed to be the most pressing. However, it is worth noting that the strategic issues chosen are an amalgam of a number of more specific issues, which can in the future be disaggregated to their component parts.

Each of the three questionnaires consisted of 10 questions relating to:

1. identification of strategic issues within the study area;
2. identification of any additional issues not included in those identified by the study team; 3) responsibilities and management of the issues identified;
3. areas of conflict between the issues identified; and
4. potential of ICZM as a tool for managing conflicting strategic issues within the study area.

A list of potential stakeholders was compiled and subdivided into three groupings based on their respective environmental, economic and social interests in the study. These three groups were then matched with the appropriately themed questionnaires. However, the recipients were not given access to the other two themed questionnaires, which were deemed not to be of most interest to them. The stakeholder list included: local authority personnel; elected representatives; State agencies; development and tourism interests, recreational interests, NGOs and known interested others. A package containing a cover letter and the appropriate (recreation and tourism; economic and development; and environmental and ecological) questionnaire was forwarded by email to the previously identified stakeholders. The recipients were requested to return the completed forms by email within one month of receipt of the questionnaires. A follow up email reminder was sent to those who had not returned the completed forms after two weeks. A further follow up email and/or telephone call was made to outstanding respondents whose completed forms had not been received at the end of the four week period in a final effort to maximise survey response.

A5.2 RESULTS

A5.2.1 Survey return

The questionnaires were sent to 50 individuals, subdivided into the three respective social, economic and environmental groups with a mix of institutional and public personnel. In total 28 gross responses were received for the full survey, of which 19 completed the questionnaires, 5 had no opinions on the survey and 4 are still outstanding. The latter had expressed an opinion but did not return the forms. Thus, in terms of the actual survey only those 19 respondents who completed the questionnaires are included in this assessment.

Table 6 Gross return rates for either the full survey or the form

Strategic Area	Total sent	Total Returned	Response Rate
Tourism/culture	14	5	37.5%
Economic	12	6	50%
Environment	22	7	32%

A5.2.2 Recreation, tourism and culture results

Additional recreation, tourism and culture issues identified

Respondents were asked to identify any additional issues, which were not included in the first question. Additional issues raised include:

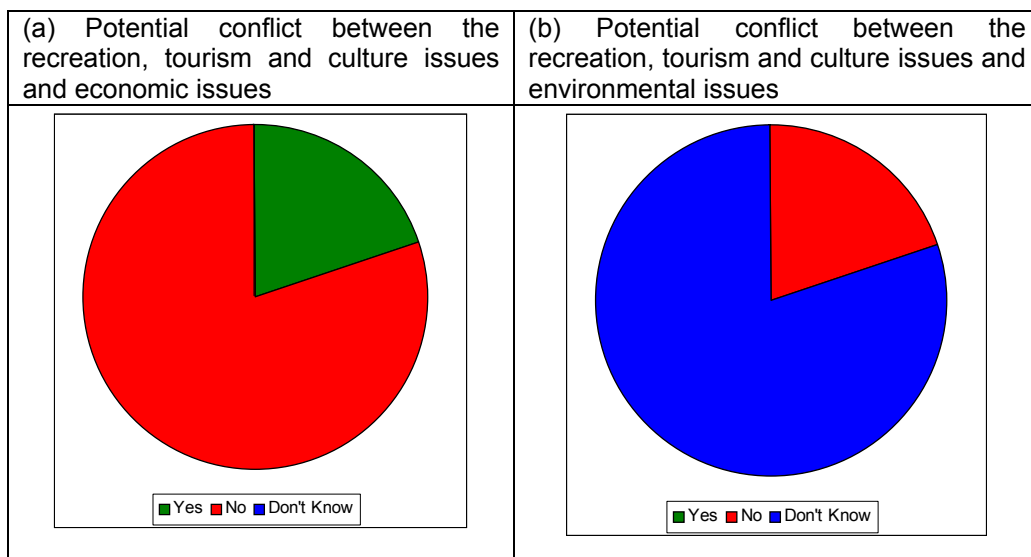
- Reinstatement of Blue Flag Beach status
- Beach access improvements: including pathways, concrete surfaces and railings

- Board-Walk/Café Node at the end of the Promenade
- Dunes Centre to raise awareness.

While four additional issues were raised by the respondents, it is worth noting that the reinstatement of the Blue Flag Beach status is included as a strategic issue in relation to bathing water quality in the ecological and environmental questionnaire, while the development of a Dune Centre could be included as a strategic issue relating to education and awareness. In addition the development of promenade facilities and the improvement of beach access would be further included under the strategic issue of tourism business.

Potential conflict between strategic issues

Respondents were asked if (a) they saw potential conflict between the recreation, tourism and culture issues and economic issues and (b) if they saw potential conflict between the recreation, tourism and culture issues and environmental issues.



Interestingly, in this set of responses, the recreation, tourism and culture issues are not perceived to be in conflict with the economic issues for the area. The vast majority of respondents saw no conflict between the recreation, tourism and culture issues and the environmental issues for the area.

In addition, the respondents were asked how conflicting issues might be resolved. In all cases no suggestion was made by the respondents. It is worth noting, however, that the respondents were not prompted as to what conflicting issues might be as they had no access to the other questionnaires.

A5.2.3 Economic and development issues

Additional economic and development issues identified

In this question respondents were asked to identify any additional issues not included in the first question. The following additional issues have also been identified from the questionnaire analysis:

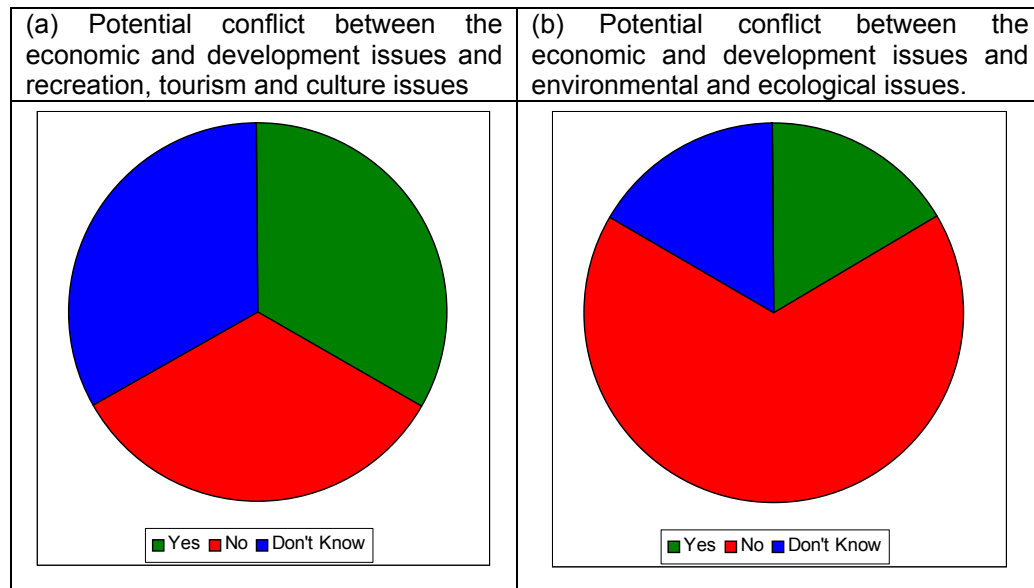
- Development of new racecourse with mixed development proximate to area,
- New wetland area,
- Development of Tramore as a fulcrum for the wider area,
- Provision of quality tourism related development,
- Greater diversification away from the traditional 'products' and a greater effort to develop the natural amenities around Tramore,
- Support and promotion of guided walks in the area,
- Boardwalk through part of the sand dune system to help to minimise erosion,
- Improved signage on the beach area,
- Support and promotion of local educational based initiatives on sea safety awareness and environmental issues,
- Tourist information centre/interpretive centre,
- Blue Flag status for Tramore Beach.
- Improved access and wheelchair access to the beach.

Based on this element of the survey some new and additional issues have been highlighted. New issues identified include: the development of the wetland area; the promotion of mixed development in proximity to the proposed new racecourse; and the development of a tourism or interpretive centre. Each of the other issues have been included under the tourism, recreation and culture, and ecological and environmental strategic issues questionnaires. Overall, while some new issues have come to light, there is a large amount of overlap with issues set out elsewhere which can in part be attributed to placing tourism under the social element of the study.

Potential conflict between strategic issues

Respondents were asked if (a) they saw potential conflict between the economic and development issues and recreation, tourism and culture issues and (b) potential conflict between the economic and development issues and environmental and ecological issues.

In answering part (a) of this question, it is apparent that there strong disagreement as to whether the issues are in conflict with each other. In relation to part (b), there is a high level of uncertainty if the economic issues are in conflict with the ecological and environmental issues.



In addition the respondents were asked how the conflicting issues might be resolved. In all cases no suggestion was made by the respondents, which might be explained by the fact that such a high percentage of respondents saw no conflict or were uncertain if conflicts existed.

A5.2.4.Environment and ecology sector

Additional environmental and ecological issues identified

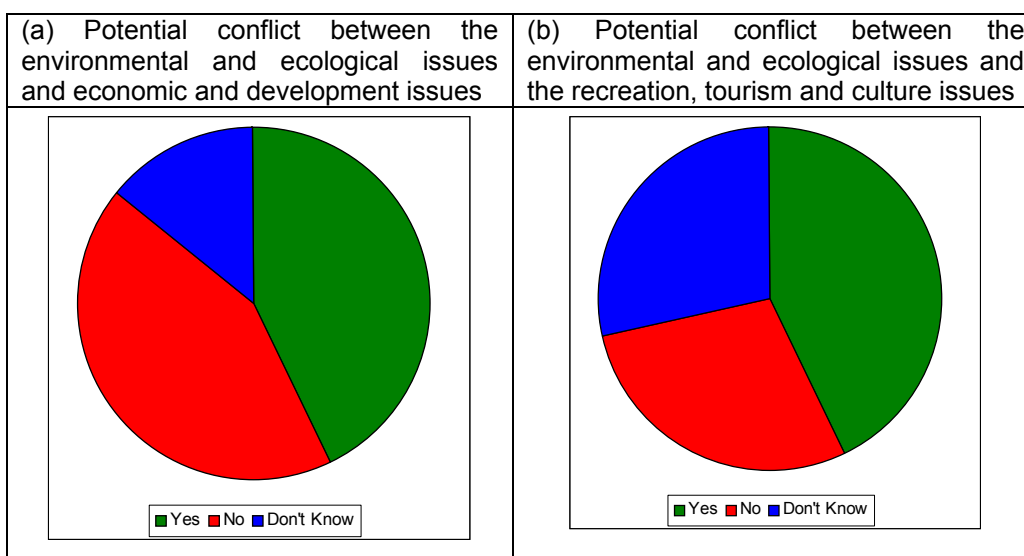
In this question respondents were asked to identify any additional issues not included in the first question. The following additional issues were identified:

- Pathways and signage through the dunes,
- Restore the back strand and support local wildlife, flora, and fauna,
- Implementation of SAC and SPA management plans,
- Protection of the back strand from large scale cockle harvesting,
- Enforcement of bye-laws regarding horses, quads, motor bikes and jet skis.

Based on this element of the survey some additional issues have been highlighted. The issue of paths and signage is included under the recreation, tourism and culture questionnaire, while the restoration of the back strand has emerged as a new issue under the earlier economic and development questionnaire results. The protection of the back strand from cockle fishing is included under the issue of impacts on and loss of habitats, flora and fauna while the issue of enforcement of specific bye-laws is included under the general issue of enforcement of bye-laws.

Potential conflict between strategic issues

Respondents were asked if they saw (a) potential conflict between the environmental and ecological issues and economic and development issues and (b) potential conflict between the environmental and ecological issues and the recreation, tourism and culture issues. In replying to the first question there was an almost even divide between those who perceived there would be conflict and those who felt there would not be any conflicting issues. In replying to whether they saw potential conflict between the environmental and ecological issues and the recreation, tourism and culture issues, less than half felt that there were no conflicts while the remainder either had no view or felt there was some form of conflict.



In addition the respondents were asked how the conflicting issues might be resolved. A number of suggestions have been made in this respect including:

- Raising awareness,
- Enforcement of bye-laws,
- Mapping exercise to set out types of business and industry to be encouraged in the area,
- Development and implementation of a coastal zone management plan for the area,
- Establishment of a coastal zone management forum for the area,
- Establishment of strategic priorities for the area.

Interestingly, while there was a level of uncertainty around the potential of conflict between the three strategic areas, it is noteworthy that where respondents felt conflict existed they also offered opinions as to how they might be resolved. Overall some form of an integrated coastal plan was advocated as a potential solution for the study area.

A5.3 Discussion

The question in relation to the perceived conflicts between strategic issues was perhaps one of the more revealing aspects of the study. Based on the findings it would seem that from the perspective of the tourism, recreation and culture stakeholders there are very few points of conflict with either environmental or economic issues. Similarly the economic stakeholders saw very few conflicts with tourism, recreation and culture, with some small degree of conflict with environmental and ecological issues. However, the environmental stakeholders saw some conflict with economic issues and were unclear in relation to the tourism, recreation and culture issues. These findings are surprising overall and might be accounted for by 1) general lack of understanding within the groups as to how most strategic issues are usually a mix of social, economic and environmental issues; 2) entrenched sectoral views with little understanding of the role of other actors/issues in the study area; 3) in dividing the questionnaire into three separate stakeholder groups issues outside the immediate reference group might not seem as significant.