### Report to Clare County Council

# Developing Nature-based Tourism Opportunities on The Shannon Estuary Way

Natural Heritage Information, Interpretation and Research on Access to Public Sites for Nature Based Tourism on The Shannon Estuary Way in County Clare





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### **Report Summary**

The project aimed to compile information on natural heritage and local sites in the context of developing nature-based tourism opportunities within the Shannon Estuary area of County Clare. Key finds are:

- The area holds a significant wildlife spectacle in particularly the high numbers of waterbirds that
  use the estuary and the chance of seeing rare or scarce bird species, as well as opportunities to
  see other wildlife like dolphins and Otter. These are complemented by wildlife in the wider
  county and this could combine to make the area attractive to wildlife watchers, particularly
  birdwatchers
- The report focuses on the provision of initiatives for wildlife watching albeit notes that the area has attributes for other nature-based activities such as walking, cycling and well-being focussed activities and these would bring added value to the area.
- There are a range of challenges to overcome including; the lack of a flagship site or sites, a general lack of access to shoreline areas, no guides or tours available and tourism providers lacking wildlife knowledge or specific targeting of the birdwatching audience.
- There is a significant challenge and conversely a significant opportunity lying with adaptation to climate change and specifically through managed realignment as a response to sea-level rise.
   This would require longer term planning for best effect but provides the opportunity for habitat restoration on a big scale with attendant wildlife enhancement and associated socio-economic and community benefits.
- The report proposes two phases of approach to developing wildlife tourism in the area:

**Phase 1** focusses on establishing reputation and targeted promotion to the birdwatching community along with the development of 9 sites with modest infrastructure needs. These sites are focussed in 3 main zones: the Clonderlaw/Labasheeda areas, the Kildysert and Clarecastle area and at Shannon Town.

**Phase 2** would look at longer term planning for more significant developments and activity, including the development of a major visitor and viewing centre around a nature reserve-style area as yet undefined.

• There are 8 strategic recommendations and 9 site-based recommendations and these are summarised below:

### Area-wide/strategic recommendations

Recommendation 1	Promote the area as a wildlife watching destination
Recommendation 2	Focus on birds but add value with dolphins and Otter
Recommendation 3	Focus on key audiences in the UK and northern Europe
Recommendation 4	Recruit a key individual to lead on developing the reputation of the area as the key promotional tool
Recommendation 5	Provide support for communities and tourism providers through training and awareness raising
Recommendation 6	Provide support for communities in site development
Recommendation 7	Convene a communities/stakeholder workshop to present findings
Recommendation 8	Scoping of potential for larger scale developments including climate adaptation

### Site based recommendations

#### Area 1 Site 1: Knock Pier

- Good viewing from Knock pier minimal infrastructure
- Create viewing at Rusheen point explore development of viewing hide
- Create walkway from pier to Rusheen Point
   –screening to prevent disturbance
- Minimal interpretation required –signature bird sculpture at pier

### Area 1 Site 2: Clonderlaw Bay

- Viewpoint developed at roadside with parking area
- Explore opportunity for additional enhanced viewpoint (screen or hide) as indicated on map
- Review and explore other option in Clonderlaw Bay to create larger plan

### Area 1 Site 3: Labasheeda Quay & shore

- Develop roadside viewing at points indicated – care needed on avoiding disturbance
- Enhanced viewpoint from screen or hide at Rinealon Point, Goleen Bridge and Boatman's Point
- Labasheeda Quay consider site signature bird sculpture

### Area 1 Site 4: Kilkerrin Point

- Indicate viewing sites by signature sculpture and delineated standing area
- Parking area formalising may bring minor benefits
- Explore option to combine with access to Battery

### Area 2 Kildysert to Clarecastle, Site 1: Kildysert Pier

 Enhanced viewing on existing footprint of old hide – develop new hide and screened access

- Good parking signed for hide access
- Site signature bird sculpture to indicate viewing area/access

#### Area 2 Site 2: Islandavanna

- Ensure road access is enhanced to include suitable passing places
- Develop parking area
- Two screened viewpoints bank top careful screening of access

### Area 3 Clarecastle - Shannon Airport, Site 1: Ing West

- Agree and enhance road access
- Explore development of parking area and one viewing hide

### Area 4 Shannon Town – Bunratty Site 1 Shannon Town Estuary walks

- No major infrastructure requirement promotion and consider signature sculpture to indicate good viewpoints
- Explore potential for larger scale visitor facility
- Explore access and viewing at Eastern end screening and viewpoints
- Signed or indicated parking within for birdwatching access

### **Additional sites**

- Review on a community by community basis through training and community group site visits
- Interaction with proposals for Cahiracon House & pier to ensure this development includes aspects of value for development of wildlife tourism, wildlife management and education in relation to wildlife.

### **Introduction & Aims**

Developing Nature-based Tourism Opportunities on The Shannon Estuary Way is an initiative of Clare County Council. It forms a key output to inform plans for developing community, environment and economic development around the Shannon Estuary deriving from the Strategic Integrated Framework Plan for the Shannon Estuary<sup>1</sup> and the Clare County Development Plan 2017-2023<sup>2</sup>

After a tender process Alan Lauder Consulting (ALC) was appointed to undertake the project in October and November 2018. This project complements The Shannon Estuary Way Heritage Recording project<sup>3</sup>

The primary aims of the project were to compile relevant natural heritage information in relation to sites along the Shannon Estuary Way in order to provide an appraisal of information in order to identify the potential for birdwatching and public viewing of wildlife and to inform the development of any relevant interpretation material for community use while providing recommendations for the provision of suitable facilities for nature-based tourism.

The project summary aims are:

- 1. To assess and compile relevant ecological and natural heritage data and information on the Shannon Estuary Way in order to develop interpretation material for community use;
- 2. To provide an appraisal of information in order to identify the potential for birdwatching and wildlife public viewing and site analysis;
- 3. To provide recommendations for the provision of suitable facilities for Nature Based Tourism along the Shannon Estuary Way.

<sup>&</sup>lt;sup>1</sup> http://www.shannonestuarysifp.ie/

<sup>&</sup>lt;sup>2</sup> https://www.clarecoco.ie/services/planning/clare-county-development-plan-2017-2023/

<sup>&</sup>lt;sup>3</sup> Shannon Estuary Way Heritage Recording Project, Abarta Heritage, November 2018

### **Background & Context**

#### Nature-based Tourism - a definition

"Nature-based tourism is leisure travel undertaken largely or solely for the purpose of enjoying natural attractions and engaging in a variety of nature-based activities – from scuba diving and bushwalking to simply going to the beach" (Tourism Australia, 2017 from "Nature Based Tourism in Australia Manifesto"<sup>4</sup>). In addition, it can include such diverse and sometimes conflicting activities as hunting and birdwatching which at certain times or locations can be both mutually exclusive and even antagonistic.

While nature-based tourism often has a very broad definition and can at times seem to include almost any activity in the outdoors, generally areas within which it is prevalent or is targeted for development as a sector have a natural fit to certain activities.

Studies of the demands and requirements of nature based-tourism providers and participants often revolve around a significant offering within the natural landscape (such as high value wildlife or a landscape feature), open access to natural areas (allowing hassle-free interaction with nature and the provision of certain facilities to assist in facilitating a visit (such as parking, trails and orientation signage).

In the context of The Shannon Estuary Way "simply going to the beach" or other more casual, non-directed activities are unlikely to be a significant draw over more directed, nature-focussed, activities such as wildlife watching and similar forms of nature appreciation. In particular, wildlife watching offers the potential to focus on a relatively new and un-tapped market and is complimentary to more general forms of nature-based tourism such as walking.

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### Wildlife Tourism - a world view

Definitions of wildlife tourism are largely consistent between studies and authors, and may be summarised broadly as:

Tourism with the primary purpose of viewing, studying and/or enjoying of wildlife (animals, plants and other organisms)

Such a definition includes wildlife watching holidays, wildlife boat trips, guided walks, visits to nature reserves, sanctuaries, viewpoints and project sites which are aimed at experiencing wildlife in natural or semi-natural conditions. Zoos, aquaria and other experiences of captive or domesticated wildlife does not constitute wildlife tourism in the context of this study. It also excludes activities where the interaction with wildlife is incidental to the experience and also consumptive forms of wildlife tourism such as hunting and fishing.

<sup>&</sup>lt;sup>4</sup> Nature Based Tourism in Australia Manifesto (Ecotourism Australia) <a href="https://www.ecotourism.org.au/assets/Uploads/Manifesto-v5.0.pdf">https://www.ecotourism.org.au/assets/Uploads/Manifesto-v5.0.pdf</a>

Wildlife tourism is widely considered a growth industry and is contributing substantially to the economy of many countries<sup>56</sup>.

In rural locations where a wildlife resource provides a potentially attractive experience and where there are few competing demands, wildlife tourism has been shown in many case studies to be a significant driver of economic benefit.

To achieve such benefits there are some parameters of the environment, society or economy which need to be in place to realise full benefits, these include:

- A wildlife "spectacle" a species, group of species, species community or habitat which is special and provides an experience which is special, intimate, powerful, emotional or impressive
- A set of natural features which enable the spectacle to be viewed and experienced in a sustainable or unobtrusive way,
   i.e. which does not adversely affect the wildlife spectacle itself
- A community, organisation or other entity which can realise the benefit through the value economically or socially that the wildlife brings

Some species, communities or natural habitats lend themselves well to wildlife tourism, being restricted in range and special by their rarity e.g. coral reefs<sup>7</sup> or snow leopards<sup>8</sup>, impressive by their scale, size or number e.g. seabird colonies<sup>9</sup>, whale watching<sup>10</sup>, safari animals or where they solicit an emotional connection to or response from people through their cute appearance, perception of threat or danger or unusual or appealing behaviour e.g. primates, wolves<sup>11</sup>, otters.

Figure 1 A guided wildlife watching group in the Himalayas watching Snow Leopards - rural locations can benefit significantly from wildlife tourism and the species gain direct economic value and community conservation efforts

### Waterbirds as a wildlife spectacle

Waterbirds have a number of characteristics which make them a particular draw for wildlife watchers:

- They tend to concentrate into large congregations
- They often rely on specific habitats and sites which are easily identifiable
- They are generally large and visible and are less secretive than e.g. woodland birds
- Their large numbers often create a visual or aural spectacle
- Many species migrate over great distances and this movement creates a story

<sup>&</sup>lt;sup>5</sup> The Economic Impact of Wildlife Tourism in Scotland. 2010. Scottish Government Social Research Http://Www.Gov.Scot/Resource/Doc/311951/0098489.Pdf

 $<sup>^6</sup> Higginbottom, K.\ (ed).\ 2004.\ Wildlife\ Tourism; Impacts, Management\ and\ Planning.\ Common\ Ground\ Publishing\ Pty\ Ltd$ 

<sup>&</sup>lt;sup>7</sup> https://oceanservice.noaa.gov/facts/coral economy.html

<sup>8</sup> http://wwf.panda.org/?200711/--

<sup>&</sup>lt;sup>9</sup> RSPB (2010) The Local Value of Seabirds: Estimating spending by visitors to RSPB coastal reserves and associated local economic impact attributable to seabirds. The RSPB, Sandy, UK

<sup>&</sup>lt;sup>10</sup> O'Connor, S., Campbell, R., Cortez, H., & Knowles, T., 2009, Whale Watching Worldwide: tourism numbers, expenditures and expanding economic benefits, a special report from the International Fund for Animal Welfare, Yarmouth MA, USA, prepared by Economists at Large.

<sup>&</sup>lt;sup>11</sup> Espírito-Santo, C. & Petrucci-Fonseca, F. 2016. Ecotourism as a vehicle of information for Iberian wolf conservation in Beira Interior – Central Portugal October. IV Iberian Wolf Conference

https://www.researchgate.net/publication/316741175 Ecotourism as a vehicle of information for Iberian wolf conservation in Beira Interior - Central Portugal

- The sites they use are often attractive and unique
- Their habitats often attract a wide variety of other species which make them good places for seeing a wide range of wildlife

#### Ireland and wildlife tourism

The nature reserve and wildlife watching network is much less developed in Ireland than in the UK but there is a high degree of potential for expansion. In particular, Ireland has a range of wildlife which is specialised to our northern maritime climate, temperate terrestrial and especially our marine and wetland habitats. Seabirds, cetaceans (whales and dolphins), migratory waterbirds like Whooper Swans and Brent Geese are of particular significance globally.

Examples of existing wildlife visitor sites include:

### Oxford Island, Lough Neagh

A well-established site on the shore of Lough Neagh which attracts over 200,000 visits per annum. Owned and managed by Armagh City, Banbridge & Craigavon Council much of the area is designated as a National Nature Reserve due to the diversity and local importance of habitats such as reed beds, open water, wildlife ponds, forests and wildflower meadows. The facility houses a number of facilities including a network of all access walking trails, bird watching hides, the Lough Neagh Discovery Centre, Kinnego Marina and the Kinnego Bushcraft Centre – this is an extensive facility with a large visitor centre, café, retail outlet – pitched to attract and cater for large visitor numbers.

The facility dovetails into its environment well, using designed wetland and the lough shore, the wildlife spectacle is modest though of interest to birdwatchers but the centre depends on multiple uses and its ability to act as a trail head for its trail network and marina for recreational users

### *Inch – Foyle Wildfowl Project, County Donegal*

A National Nature Reserve managed by NPWS (Inch Wildfowl reserve) and a local authority run series of shoreline access points on Lough Foyle near Myroe. Two sites twinned cross border went through an INTERREG funded programme to develop visitor infrastructure and events. The area being impressive for waterbirds, particularly in winter. Access was informal and relatively limited to a few small areas until around 2014 when a trail loop around the Inch lake was created and new viewpoints and signage installed there and at the Lough Foyle sites along with hides, screens and interpretation. The project saw overall visitor numbers increase from around 40000 to around 90000 but with out of state visitors accounting for only up to 15% of all visits. Additional annual visitor spend was estimated to comfortably exceed €700,000 per annum and equating to around 20 FTE jobs. This project utilised collaboration and a combination of impressive wildlife populations along with enhancing access in an area where access was relatively limited to unlock visitor activity.

#### Wexford Wildfowl Reserve, Co. Wexford

Established in 1969, the Wexford Wildfowl Reserve comprises some 200 hectares of reclaimed 'slobland' just north of Wexford Harbour. The reserve land is of international importance, sheltering almost half of the world's population of Greenland White-fronted Goose, which overwinters here from October to April. The Reserve was established by the National Parks and Wildlife Service (NPWS) in partnership with what is now Birdwatch Ireland, who provided the land and who remain joint owners of the Reserve. Day to day management is by the NPWS. The reserve attracts 20-30000 visitors per annum and provides a visitor centre, hides and short trails as well as an education programme



Figure 2 Wetland trails at Wexford Wildfowl Reserve



Visitor centre at Wexford Wildfowl Reserve – the wintering waterbird flocks at Wexford Wildfowl Reserve are spectacular and visitors can view the goose flocks from a purpose-built observation tower

### Special Wildlife in County Clare

The county holds some special wildlife and special wildlife sites. It is arguably one of the most wildlife rich counties in Ireland with a wide cross section of habitat types facilitating high species diversity. Notable areas and species (excluding the Shannon Estuary) include:

The Burren & Aran Islands – floristically rich and of European or global significance for botany

**Chough** – A bird species of restricted range within northern Europe and an enigmatic species attractive to birdwatchers. It is common and easily seen on the Cliffs of Moher and Burren coast

**Seabird colonies** – The Cliffs of Moher, Loop Head area and Aran Islands all hold significant, sometimes spectacular seabird colonies which are already popular with boat trips

**Puffins** – as part of the seabird population, Puffins are easily seen at the Cliffs of Moher – these are a well known and popular attracting but many visitors require assistance to see them well



Figure 3 Sea Eagle viewing centre at Mountshannon - attracts over 5000 visitors per year and seeks further development

White-tailed Eagles (Sea Eagles) – can be seen at Lough Derg, they are a spectacular and popular species having been re-introduced to Ireland in the late 2000s. A viewing project at Mountshannon<sup>12</sup> enables the public to view them at the nest.

**Peregrine Falcon** – Peregrine is a relatively common breeding species around the coast and at some inland sites. Public viewing of Peregrines is not offered within the county but an initiative to do this could be popular and there would be a number of useful sites.

**Hen Harrier** – This is a rare and declining species within Ireland and East of the county holds a significant population. Developing viewing of Hen Harriers could be an attraction if developed well.

Whooper Swans – While there are larger flocks in Ireland there are a number of sizeable flocks within County Clare including 100+ at the Shannon, flocks on Lough Derg and on the Burren lakes – swan viewing sites can be popular as they provide a vocal and visual spectacle.

**Migratory & pelagic seabirds** – Ireland is well known in the birdwatching community for some of the best "seawatching" in Europe. The Loop Head peninsula and Bridges of Ross already attract moderate

<sup>&</sup>lt;sup>12</sup> Lauder A, O'Flaherty, R. (2018) Mountshannon White-tailed Sea Eagle Development Plan - The feasibility and development of socio-economic benefits around wildlife viewing at Mountshannon, Lough Derg, Co. Clare. Report to Mountshannon Community Council

numbers of specialist birdwatchers in the peak August/September season and this could work synergistically to help develop birdwatching across the county

**Lough Derg, Burren lakes and other inland lakes** – In winter these lakes provide a good population if wintering ducks and whooper swans and occasionally hold rarities from North America. These complement the estuarine and marine areas in providing further birdwatching opportunities in the winter period.

**Loop Head bird observatory (bird migration)** – The reputation of the Loop Head peninsula as a site to observe migrant and rare vagrant birds, often transatlantic species, has grown and the area sis regularly watched by local birdwatchers. This could form part of the basis of a natural autumn "itinerary" for birdwatching visitors.

### The project area - character, attributes and challenges

### Defining the project area

The project focus area as advised by Clare County Council is the Shannon Estuary Way within the boundary of County Clare. This is annotated on the maps below (figure 4 and 5). It forms most of the northern shore of the Shannon estuary from Bunratty in the east to Killimer in the west.

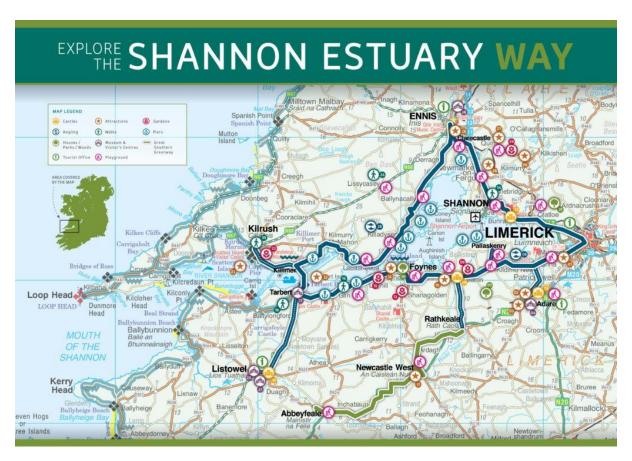


Figure 4 Shannon Estuary way map

The area comprises the northern shore of the Shannon estuary and the entirety of the Fergus Estuary. The whole estuarine complex is the largest in Ireland. The site has vast expanses of intertidal mud and sand flats which contain a diverse invertebrate community which provides a rich food resource for wintering birds, fish and other species. Salt marsh vegetation on the shoreline provides important high tide roost areas for the birds.

There are islands and groups of islands and these provide a tranquil refuge from the busier mainland both for wildlife and for the people who use them for farming, though these are difficult to access for others.

In parts the estuary is heavily built up and semi-urbanised particularly around Shannon but even in the more rural areas the signs of human use of the estuary are never far away

Elsewhere in the site the shoreline comprises stony or shingle beaches.

The land surrounding the estuary mostly slopes gently to the estuary edge and is dominated by pastoral farmland with attendant woodland and hedgerows and in places wetter grassland and marshes or fen habitats.

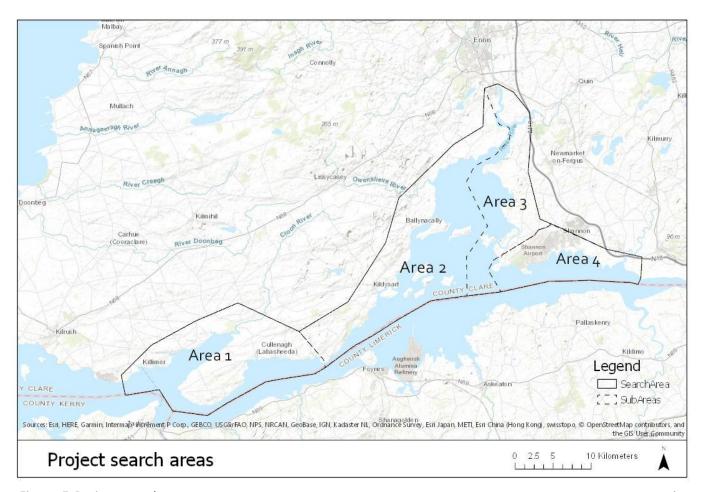


Figure 5 Project search area – The project search area is subdivided into 4 smaller units with biogeographic and/or community connectivity: Area 1 Clonderlaw & Labasheeda; Area 2 Kildysert to Clarecastle; Area 3 Clarecastle to Shannon Airport; Area 4 Shannon Town to Bunratty

Images typical of the area are shown below to illustrate the range of landscapes encountered and available.



Figure 6 The extensive mudflats of the Fergus estuary - this site forms a huge inter-tidal feeding zone for thousands of waterbirds at most times of the year but particularly in winter



Figure 7 A small bay in the outer estuary near Knock - mudflats, saltmarsh and surrounding farmland, woodland and dwellings are typical of the landscape

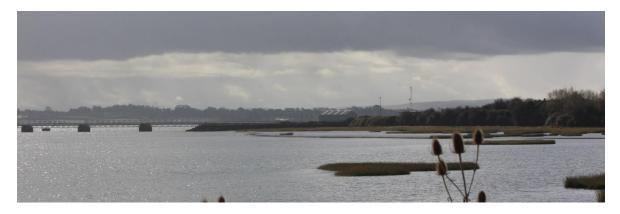


Figure 8 The estuary at Shannon - a backdrop of urban and industrial features to a wildlife rich site



Figure 9 Wader flocks at Shannon on the rising tide



Figure 10 Inner estuary near Bunratty - big skies and open vista contrast to nearby peri-urban sites – here the saltmarsh fringes to the mudflats bring diversity to the estuarine habitats



Figure 12 Mud fringed river channel separating island from mainland - the islands of the Fergus Estuary maintain intrigue, hold hidden natural assets and are difficult to access



Figure 11 The pier at Knock - piers and quays provide great estuary or bay views and an opportunity to get out on the water or to an island

The habitats present attract a wide diversity and large numbers of waterbirds providing a true wildlife spectacle.

The landscape brings intrigue – hidden corners, undiscovered islands, secluded bays, exposed shores and hidden depths. These are landscapes not generally well known to people and this, in itself, provides an opportunity for exploration and discovery.

The islands bring an opportunity for peace and tranquillity and a feeling of real discovery. Accessing these could be a challenge but there are rudimentary pier facilities in a number of places

Other water-based activities would need to be compatible with wildlife given the importance of the site in an international context but also in order to simply protect the special nature of the site for its own merits. The existence of piers could provide an opportunity for boat trips to bring a unique viewing experience to wildlife and the landscape of the estuary.



Figure 13 Farm lane on Horse Island - The islands offer quiet secluded corners and a chance for escape, tranquillity and discovery

### Developing concepts and opportunities

Nature-based tourism opportunities within the search area sit within two main themes:

Wildlife watching – birdwatching, botanising, entomology and mammal watching can all be practised within the area. Courses to teach identification and fieldcraft skills or tours to guide people to see the wildlife could be developed. Boat trips to view birds or dolphins are an obvious opportunity. The wildlife resource of the Shannon estuary is a defined and significant attraction which could appeal to

an audience which is completely undeveloped in the area, given the right marketing approach and development. This is identified in other strategies as being of high priority notably in the recent "The Shannon Estuary Way Heritage Recording Project, 2018" (Clare County Council)

### Recommendation 13 Nature-Focused Tourism on the Shannon Estuary Way

There is great opportunity to develop the Shannon Estuary Way as a nature / bird watching destination. A separate report on developing nature based tourism opportunities on the Shannon Estuary Way is currently being completed. This report will document key natural heritage information which will inform development of nature-based (wildlife-) tourism in the area, make developmental and promotional recommendations and will provide site-by-site assessments and recommendations for key sites and area-based recommendations for strategic level planning.

Recommendation from "The Shannon Estuary Way Heritage Recording Project, 2018" (Clare County Council)"

Landscape and quiet enjoyment – activities and features based around these topics are identified and recommended in other tourism strategies most recently "The Shannon Estuary Way Heritage Recording Project, 2018" (Clare County Council) and may include gentle outdoor activities such as walking and cycling, kayaking, swimming, foraging and even yoga, mindfulness and other therapeutic activities which can be conducted outdoors.

The wildlife watching audience is somewhat specialist who fit as a subset of normal tourism market segments and may lie across more than one of Fáilte Ireland's segment identifiers but may be most closely aligned with the "Great Escapers". Activities and experiences around landscape and quiet enjoyment may, classically, appeal to Great Escapers. But this is a less defined concept and the differentiation between this and more cultural heritage-based activities is blurred. It does, however, have synergy with the cultural heritage aspects and as such this synergy could potentially be developed further. Linking to findings from the *Shannon Estuary Way Heritage Recording Project* (In draft, Abarta Heritage, November 2018) will be important in creating a synergistic package of opportunities between the two aspects.

### Wildlife watching – opportunities and challenges

The area holds some wildlife populations of interest from a tourism point of view and in particular waterbirds and other birds associated with the estuary and adjacent wetland habitats.

In addition, there are marine mammals, particularly Bottlenose Dolphin and terrestrial mammals, notably Otter.

These are complemented by wildlife in the wider area – seabirds and Chough on the coast, inland waterbirds at The Burren Lakes and Lough Derg and spectacular raptors like White-tailed Eagle and Hen Harrier around Lough Derg and the Slieve Aughty Mountains and wild flowers, butterflies and dragonflies in the Burren and its wetlands.

### Birdwatching

The Shannon Estuary as a whole supports a very large assemblage of waterbirds in the winter months (September to March). During Autumn and spring migration periods it can attract large numbers of transient species and in some cases rare vagrants which can attract people to see them and in many cases the chance of seeing rarities, scarce birds and a wide range of species including some which may be difficult to see in other places or which occur in spectacular flocks is an attraction.

The site has the potential to attract birdwatchers due to some **key attributes of the sites and the species assemblage**:

### 1. Large numbers

The estuary holds large numbers of a wide range of waterbird species. It is a SPA on account of its waterbird populations and the site synopsis for the whole SPA is included at Appendix 1). Large flocks of waders and wildfowl can form spectacular feeding flocks which in flight provide a mesmerising spectacle both for birdwatchers and the wider visiting population



Figure 14 Black-tailed Godwit flock - large wheeling flocks of waders providing a wildlife spectacle which is admired both by birdwatchers and non-experts alike

Numbers of individual birds are complemented by the wide range of wetland species present which is arguably more important in attracting birdwatchers in particular.

#### 2. Some iconic or spectacular species

The attraction of most wildlife watching areas often centres around being able to see special species, either seen in high numbers and concentrations, large, very colourful or very charismatic species or where a species can be difficult to see in other places and a venue offers the best opportunity.

The challenge that the Shannon Estuary has is that it lacks a stand out single species. Many of the birds and other wildlife present can be seen widely in Northern Europe. The advantage the site has is

the wide range of wetland species present and very high numbers in many cases. And while this can also be found on many estuaries around Northern Europe, the opportunity to combine the Shannon estuary with other wildlife sites and alongside heritage and culture gives a potentially favourable offering for wildlife watching tourists. The key aspect of achieving this attractiveness is the occurrence of natural itineraries based around the wildlife watching opportunities available in the area.

The Shannon Estuary does support some more restricted bird species, notably Light Bellied Brent Goose as well as Bottlenose Dolphin and potentially Otter.

Therefore, the development of a wildlife tourism offering is perhaps best focussed on the all-round opportunities that the site has to offer in terms of bird numbers and the ability to see them well, coupled with the occurrence of species such as Light-bellied Brent Goose

### 3. The chance of seeing rare or scarce birds

Ireland is known for the regularity with which it attracts rare, accidentally occurring bird species from other parts of the world also known as "rarities" or "vagrants". It is particularly good for European birdwatchers being able to see North American species and of these, wetland birds are a particular speciality. A range of sites have grown a reputation for attracting these species and in the past areas such as Shannon Airport Lagoon was well known for attracting rare American wading birds.



Figure 15 Long-billed Dowitcher (by T. Melling) - a North American "vagrant" wading bird, regular in Ireland and one of many rare birds which attracts rarity hunting birdwatchers from Britain and Europe

The habitat across the site and its westerly position in the country means the whole site has the potential to attract these rare vagrant species. To a great extent though, these birds are detected more often as the presence of birdwatchers increases and as such, the site is currently regarded as currently "under watched". In turn, encouraging more birdwatchers to visit will likely result in a

growing reputation for rare birds as more will be discovered with increased coverage and thereby the feedback loop will likely arise which could increase visitor numbers as a result.

Some of the rarities that have occurred on or close to the Shannon estuary in the past include: Pectoral, Buff-breasted, White-rumped and Semi-palmated Sandpipers, Long-billed Dowitcher, American Golden Plover, Lesser yellowlegs, American Wigeon, Green-winged and Blue-winged Teal, Ring-billed and Bonaparte's Gull and many much rarer species

The occurrence of these rarities is an important aspect in the birdwatching community and can be a key driver for footfall by a site gaining a reputation for this – many sites become known simply through their regular appearance in the rare bird news social media threads for example.

Examples of this are widespread in Britain in particular and include island groups like The Scilly Isles and Shetland Islands, The North Norfolk coast and estuaries such as Humber. Locally, the reputation of the Bridges of Ross as one of Europe's greatest seabird watching sites already attracts some hundreds of visitors in a short late August to Early September period all coming to see the seabird migration and not least the rare seabirds that pass by the site at that time.



Figure 16 Seawatchers at the Bridges of Ross - hundreds of birdwatchers from all over Europe visit the Loop Head pensinsula in August and September to observe seabird migration including rare species which are difficult to see elsewhere

### 4. Proximity to other sites and species to provide a diverse birdwatching trip

As noted above, there are already sites within County Clare that attract visiting birdwatchers. The Shannon estuary provides the opportunity to expand the potential for visiting birdwatchers to increase their visit time within the county and to diversify their experience.

The proximity of potential birdwatching areas in the wider county could naturally form a diverse itinerary for a visitor.

These sites include,

- The Loop head peninsula breeding seabirds throughout the spring and summer and migrant seabirds in Aug-Oct.
- The Cliffs of Moher breeding seabirds in May-July
- Poulnasherry Bay another intertidal site nearby
- Dromore Lake and woodlands site with facilities such as a centre and walks for waterbirds, woodland birds and dragonflies
- The Burren lakes waterbirds in winter
- Burren coastline Chough year round
- Lough Derg White-tailed Eagles Apr-Aug, waterbirds and lower chance of eagles Oct-Mar
- Slieve Aughty Mountains Hen Harriers April July

### 5. Other (non-bird) species which add to the experience

Birdwatchers are often interested more widely in natural history and other species groups can form significant added value. Notable taxa popular with birdwatchers are; butterflies, dragonflies and damselflies, cetaceans and mammals and often also rare plants.

There are certain speciality species within these species groups that County Clare can offer visitors and would have the potential to offer added value. These are described in the sections below.

### 6. Infrastructure and other challenges

There are challenges which need to be addressed to enhance the offering for visiting birdwatchers and thereby the experience that birdwatchers will get. Key issues include:

Lack of a core/headline/flagship site or sites – normally popular birdwatching areas include one or more nature reserve style locations with hides and walkways, often a visitor centre, which can provide a hub for viewing speciality species or a gathering place which provides access to local information and knowledge and ease, trouble free access. The Shannon estuary, like much of Ireland, lacks a facility like this. There are however areas which could make good locations for developing this type of facility.



Figure 17 Nature reserve visitor centre - reserves with facilities often act as hubs for wildlife watching in a wider area

There have been efforts at developing centres and similar initiatives at other sites in Clare in the past including a significant investment at Poulnasherry Bay but for a number of reasons these have been less successful. Perhaps predominantly down to a lack of iterative development and focussed promotion – building for the grass roots community level is important, achieving a growing reputation before building the big infrastructure.

Lack of access – wider than core sites, access to the estuary shore for viewing is highly variable. Some of the best locations are at the end of private farm tracks. Developing access opportunities such as these could help deliver the birdwatching potential of the site

No guides or tours – there are no known birdwatching guides in the Shannon Estuary area. While this is not essential, it can be popular, particularly with international wildlife watching visitors, to hire a guide for one or more days. This, in itself, would provide an opportunity for local business development.

Wildlife guides can plan single day tours, full holidays or just short trips to see individual species on request. They exist in many parts of the world where wildlife watching destinations have become established. An example of this is the market that has sprung up on the Scottish Islands of Mull and Islay, both of which receive good numbers of wildlife watchers and in turn local guiding enterprises have become established<sup>131415</sup>.



Figure 18 Wildlife guiding - a guided wildlife watching tour or bespoke trip can enhance the experience of an area significantly saving visitors time and effort and targeting the wildlife they want to see with local knowledge (image courtesy J. Sykes – juliansykeswidlife.com)

Accommodation and tourism providers lack wildlife knowledge – For birdwatchers staying in accommodation within the area the knowledge base of your accommodation provider or your local pub or shop etc. can provide valuable information which can lead to memorable experiences.

<sup>13</sup> http://www.wildislaybirding.co.uk/

<sup>14</sup> http://www.mullwildlifetours.co.uk/

<sup>15</sup> http://www.discovermull.co.uk/

Upskilling the tourism "providers" within the area could be important in achieving this. Basic knowledge about where and to look, what has been around and when to go to certain sites can be valuable – a simple understanding of birdwatchers needs alone can enhance an experience and in addition knowing how to market to this visitor group can be important. Training and information exchange in this area would enhance this.

### Mammal watching

There are over 100 Bottlenose Dolphins which regularly use the Shannon Estuary<sup>16</sup>. Dolphin watching is already established in the outer estuary with at least one operator and in addition a coastal dolphin watching trail was in existence in the past. There is one key site within the project search area, at Kilkerrin Point, where Dolphins are most often recorded<sup>14</sup> although they can also occur further up the estuary at a number of points. The inclusion of this site could provide an excellent opportunity to bring significant added value to wildlife watching opportunities in the area.

Understanding the dolphin occurrence there better would enhance the opportunity to guide visitors to be able to see them more effectively.

There are also populations of Otter around the estuary and these are regularly seen on estuary and open shore areas but are secretive and observations occur by chance. Identifying and establishing a



Figure 19 Pine Marten at viewing site - Badgers and Pine Martens can be attracted to feeding sites and are these popular among wildlife enthusiasts

<sup>&</sup>lt;sup>16</sup> Ingram S., Rogan, E. (2003) *Bottlenose dolphins (Tursiops truncatus) in the Shannon Estuary and selected areas of the west-coast of Ireland*. Report to the National Parks and Wildlife Service. University College Cork. <a href="https://www.npws.ie/sites/default/files/publications/pdf/Ingram">https://www.npws.ie/sites/default/files/publications/pdf/Ingram</a> %26 Rogan 2003 Bottlenose dolphins.pdf

regular site or sites for otter viewing would be of high value as this species is extremely popular and a challenge to see well. Identifying an area for this would require specialist survey which could be carried out using a range of techniques such sign searching and use of remote cameras. Approaching Otter dens or holts would require a specific licence for the National Parks and Wildlife Service and should only be done by suitably experienced individuals.

Badgers and Pine Martens are popular mammals amongst a UK audience and in many places in the UK there are feeding sites established for them which facilitate viewing. This would add significant value, akin to those sites found the Speyside<sup>17</sup> in Scotland to enable wildlife enthusiasts a chance to observe the species up close.

### **Butterflies and Dragonflies**

Butterflies and dragonflies are recognised as "the birders insects" in that many birdwatchers also hold an interest in seeing these species groups. Providing opportunities to see rare or scarce species within these groups would add value to the area.

The Shannon Estuary is not well known as a site for special or rare butterflies and dragonflies, but it is likely that identifying new sites for these in the vicinity would add value to the sites on offer. There are sites in wider County Clare which are good for some scarcer species and would complement the development of wildlife watching on the Shannon Estuary.

### Botany

The mudflats and saltmarshes offer some interest to botanists, in addition, the proximity of the area to the Burren, famed for its botanical interest, means the attraction of that area would complement and add to itineraries centred around the Shannon Estuary

### Landscape and quiet enjoyment – opportunities and challenges

Landscape character - The landscape character of the estuary search area is illustrated in section 4. It is typically characterised by the open vistas of the estuary and its fringes surrounded by pastoral agriculture and small woods. The character of the hinterland is similar to much of the wider county, but the estuarine landscape brings a more unique set of vistas and views.

The County Clare landscape character assessment<sup>18</sup> identifies the low-density population due to flooding and inundation in many areas as contributing to the character and the importance of the ecology and wildlife communities in lending uniqueness to the landscape.

A significant constraint or issue identified is that wider views include distant industrialisation around the estuary which can detract from the rural feel of the area.

The landscape perhaps offers opportunities as a natural venue for low-key quiet activity linked to nature (in addition to the already identified wildlife watching and Heritage discovery explored in complementary studies).

Walking, cycling, kayaking/SUP<sup>19</sup> art & crafts, yoga, mindfulness and meditation, are all activities that could be developed with a close link to nature and which the area could support well.

<sup>&</sup>lt;sup>17</sup> https://www.speysidewildlife.co.uk/Holidays.aspx?location=evening

<sup>18</sup> http://oldsitehc.info/tirdhreach/publications/landscape-character-assessment-of-co-clare/?L=3

<sup>&</sup>lt;sup>19</sup> Stand-up paddleboard

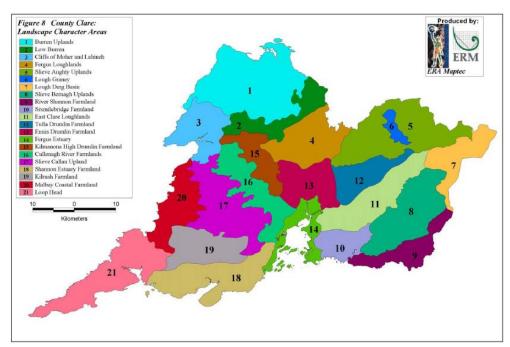


Figure 20 Landscape character areas in County Clare from "Landscape Character Assessment of Co. Clare" 2004

Walking – There are no long-distance walking routes that coincide with the search area but a number of shorter loop walk routes and route proposals already exist which offer local circular walking routes e.g. in the Labasheeda-Kilkerrin area and at Clarecastle. In addition, there is already an existing network in Shannon town which includes sections along the estuary which are well used by local people. How this may be developed to encourage use by visitors, over and above usage by birdwatchers would need further exploration. The more urban setting may not attract walkers in its own right, but there may be obvious opportunities to include it within a longer distance route.



Figure 21 shoreline walks already exist at Shannon town and are well used by local people

Extensions and linkages to the East Clare Way and Burren Way offer potential. A significant challenge in establishing walking routes is the range of private landowners, the need to prevent disturbance to wildlife when close to the estuary and the challenge of route finding and route construction along coastlines which are prone to seasonal flooding

Cycling – the broad corridor of the SEW already exists within the concept of long-distance cycle routes proposed by Fáilte Ireland and coincides in part with the National Cycle Network<sup>20</sup>.

The main challenge for promotion of cycling within the area is the very obvious lack of cycling specific infrastructure on existing roads but the quiet country roads may well be attractive to cyclists even in their current form and the existing Ring of Clare Cycle Sportive is popular among leisure cyclists. The existing estuary walks in Shannon would require specific retro fitting of marking and signage to facilitate use for cycling.

The potential to promote the area through cycling specific media, particularly in the very large market within the UK, the US and northern Europe is high and would form an important marketing tool. Gaps for development of "higher end" bike rental at key potential hubs exist in e.g. Ennis and Shannon. The current relative lack of cycle hire provision in the area would need addressed for the overseas tourist.

Provision for family cycling would require more off-road and segregated infrastructure and this may be a longer-term aim.



Figure 22 The Ring of Clare cycle sportive route – this includes a long section through the search area (from <a href="http://ringofclare.ie">http://ringofclare.ie</a>)

**Well-being & mindfulness** – There is a fairly unique opportunity to develop this as a significant attraction on one or more of the islands in the Fergus Estuary.

National Cycle Network Scoping Study - August 2010
http://www.smartertravel.ie/sites/default/files/uploads/FINAL%20NCNScopingStudyAugust2010%5B1%5D.pd
f

The opportunity lies in the concept of stepping away from the mainland and retreating to an island (akin to monastic retreat) to focus on personal well-being. This would require development of an appropriate enterprise which would be based around one or more island facilities which could receive guests for specific courses or quiet breaks on the islands.

The challenges lie in the development of appropriate accommodation on the islands and in the transport to and from the islands.



Figure 23 Islands in the Fergus Estuary - an opportunity to develop unique quiet retreats for personal well-being

### Potential linkages to heritage-based tourism

The Shannon Estuary Way Heritage Recording Project 2018 (Clare County Council, 2018), identifies a range of key aspects of cultural heritage which can contribute to the development of tourism on the SEW.

The specific cultural heritage of the area could be a significant added value element to the nature-based tourism offering explored in this report. The defined linkages between the two aspects however are less important than the development of parallel offerings within the area.

The practicality of wildlife-watching or quiet enjoyment activities mean that visits are unlikely to be centred around cultural heritage but rather that cultural heritage can bring added value to a visit for other primary purposes.

Mixed development of both wildlife watching and heritage interpretation or exploration are unlikely to have any significant natural co-benefits other than the potential facilitation of access and some amenities, but their coincidence can bring added value as described. The site evaluations in section 6 identify where there may be added value at a wildlife watching site that is derived from the presence of or interpretation of cultural or built heritage at the site. These could include sites such as Kilkerrin Battery or Knock pier for example.

### Climate change and the big opportunity for habitat restoration

Estuaries and coastal areas around the world are under increasing pressure from sea-level rise. This is pressuring intertidal land, coastal shorelines and coastal defences and in flood and surge conditions causes significant inland flooding and damage.

The Shannon estuary has a long history of coastal reclamation and evidence can be seen in many areas of this reclaimed land now being used for agriculture or development. This often relies on large sea walls and heavy drainage regimes and with rising sea levels this is becoming increasingly challenging to manage.

Managed re-alignment offers an opportunity to reduce pressure on coastal defences and low-lying land by moving defences back and allowing the tide to inundate areas which formerly were intertidal or saltmarsh habitats. While losing productive land area, this can achieve a number of key benefits including

- Reduced frequency of flooding
- Reduced sea defence maintenance costs
- Increased biodiversity benefit (with side benefits like tourism, hunting resource and fisheries benefits)
- Enhanced residual property security and value
- Enhanced amenity value for the community

These initiatives have seen widespread success and in the context of this study offer the potential to create, in the long term, significant new wetland areas which could act as the focus for a nature reserve facility in addition to being of wider strategic benefit to the estuary area as a whole.



Figure 24 Freiston Shore managed re-alignment area in Lincolnshire, England - tidal inundation of previously reclaimed land is creating new wildlife areas and provide more secure coastal defences for the future (cc-by-sa/2.0 - © Chris - geograph.org.uk/p/4962350)

## Site identification, information and evaluation – wildlife watching

### Introduction and approach

This section examines the site-based opportunities that exist in the area for the development of wildlife-watching, particularly birdwatching as a key driver for tourism development along the SEW.

A process of area exploration, community engagement and desk-based analyses of existing information was undertaken during October 2018, to identify sites which have short- and longer-term potential for development as wildlife watching sites or areas.

Some 11 large areas and more than 20 individual sites within these were identified and visited to examine the on-site opportunities and constraints. In some cases, community representatives were met to discuss the opportunities and existing initiatives.

The areas were identified based on existing knowledge or from inferences taken from habitat observations and this was backed up by checking species distributions derived from bird survey efforts undertaken in 2017/2018<sup>21</sup>

The overall search area and the sub areas identified for follow up are shown in Figure 25.

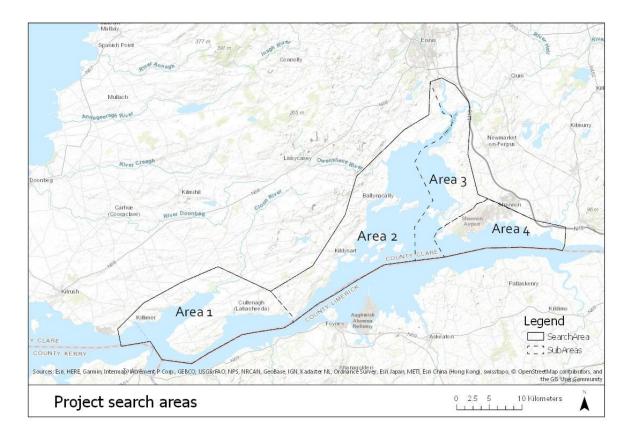


Figure 25 Search area and sub-areas identified for location of potential wildlife watching sites

<sup>&</sup>lt;sup>21</sup> Ash, A, Corrigan S., O'Dowd, D (2018) Waterfowl Counts of the River Shannon and River Fergus Estuaries. McCarthy Keville O'Sullivan for SIFP

The sites evaluated in this section are split in two categories

**Phase 1:** those which hold potential to hold significant value for visiting birdwatchers and which are thought to be the most practical for development in the short term (1-3 years), Particularly those which require relatively limited infrastructure to establish and where there is community capacity or prior interest in developing them

The species lists and occurrence patterns noted for birds are estimated from expert knowledge or compiled from data provided in the Shannon Estuary Bird Survey report. The species list provided is

not exhaustive but indicates the most regularly occurring waterbird species which form the basis of the wildlife spectacle at the sites.

Additional species of note may be mentioned in the descriptive narrative

**Phase 2:** Site which have potential either in the short-term years but have significant challenges or long-term where development may be complex and require significant resource allocation, fund raising or complex negotiation and planning

These phase 2 sites are presented on a map and with a summary description of the opportunity.

### **PHASE 1 SITES**

### Area 1 Clonderlaw & Labasheeda, Site 1: Knock Pier

#### Site description

The site lies at Knock on the outer, western edge of Clonderlaw Bay. The site has two main viewing areas. The primary site is the Pier at Knock village with a secondary site in the bay near Rusheen point.



Figure 26 The pier at Knock – looking south to the mouth of Clonderlaw Bay

The pier has roadside parking and has easy access over a gravel or grass surface for its entire length. Adjacent to the pier are small harbour/inlets which at low tide hold intertidal mud and shallow water and at high tide are inundated. To the east the shoreline is a narrow band of mud and stony shore while to the west the shore forms a bay around to Rusheen point and the intertidal mud and saltmarsh habitats are more extensive.

There are good habitats for waders and wildfowl across all of the intertidal habitat, and offshore the shallow waters host divers, grebes and wildfowl.



Figure 27 Knock Pier site map and viewing options



Figure 28 Seating at Knock Pier



Figure 29 View West from Knock Pier – looking toward Rusheen Point, waders like Redshank, Greenshank and Lapwing present on the shoreline and high numbers of Wigeon and Teal loafing offshore and in the bay at Rusheen



Figure 30 Roost of Grey Heron, Little Egret and Cormorant to east of Rusheen Point

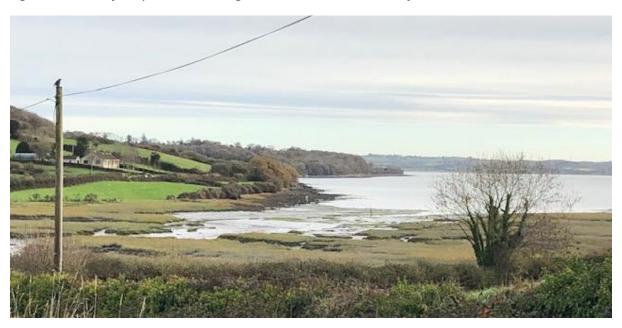


Figure 31 The bay at Rusheen Point with high numbers of Wigeon, Teal and Lapwing present but difficult to view from the road



Figure 32 Rusheen Point and bay - bird numbers were high but screened access would be needed to get good, close views - a hide on the point with screened access would be desirable

#### Wildlife community description

Regularly occurring waterbirds and their likely occurrence patterns are shown in table 1

The site is predominantly intertidal so attracts waders and wildfowl feeding on mudflats, shoreline and saltmarsh vegetation. Some grazing birds may use coastal pasture e.g. Wigeon and Curlew.

The site is one of the best areas in the Shannon Estuary complex for Greenshank and these are easily seen close to the pier at Knock

It is also a hot spot for Great Crested Grebe in Winter, the only large concentration in the estuary. The grebes are seen offshore, sometimes a little distant but often viewable with a telescope. This latter species may make a good site motif e.g. sculpture, signage or interpretation. It is likely that in spring the grebes enter breeding plumage before departure and a feature could made of this period in Feb-April.

Table 1 Waterbirds - status and occurrence pattern

Species	Status	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Red-throated Diver	Offshore												
Ned timeated biver	winter												
Great Northern Diver	Offshore												
Great Northern Diver	winter												
Great Crested Grebe	Offshore												
Oreat Orested Orebe	winter												
Cormorant	Resident												
Little Egret	Resident												
Grey Heron	Resident												
Brent Goose	Irregular												
Wigeon	Winter												
Teal	Winter												
Mallard	Resident												

Oystercatcher	Winter						
Ringed Plover	Winter						
Lapwing	Winter						
Knot	Winter						
Dunlin	Winter						
Snipe	Winter						
Black-tailed Godwit	Winter						
Whimbrel	Passage						
Curlew	Winter						
Redshank	Winter						
Greenshank	Winter						
Turnstone	Winter						
Black-headed Gull	Non- breeder						
Common Gull	Winter						
Lesser Black-backed Gull	Summer visitor						
Iceland Gull	Irregular						
Great Black-backed Gull	Winter						
Common Tern	Summer visitor						

# Key site features and opportunities

- Good viewing from Knock pier typically birdwatchers will have quality optical equipment which will allow viewing species such as grebes and divers offshore.
- Access to pier and parking is already available
- Opportunity to create screened<sup>22</sup> viewing at Rusheen point to achieve closer views of concentrations of birds in good light

# Site appraisal matrix

	ppraisarmatrix
Opp	portunity – what range of wildlife is present and when does it occur?
1	Good range of waterbirds in modest to high numbers. Includes Great Crested Grebe and
1	Greenshank in higher numbers than elsewhere in the estuary.
Vie	wing potential – Is there a suitable means of viewing and interpreting the wildlife
pre	sent?
2	Viewing from pier area already good though views mostly moderate to distant though some
2	shorebirds closer.
3	Simple signage to indicate best viewpoints
4	Interpretation via online or printed material resource, signage not required unless demand for
4	interpretation to general public required
5	Screened access to a hide or screen <sup>22</sup> at Rusheen Point to achieve closer views of concentrations
5	of birds in good light would be advantageous
App	praisal of existing infrastructure and access
6	Pier good for viewing though exposed in poor weather

<sup>22</sup> See Appendix 3 for examples of viewing screens and associated infrastructure

Parking in low numbers achievable easily on street adjacent to pier Access poor at Rusheen Point – landowner permission required. Site stories/spectacle – what stories are there to be told for interpretation or promotion? Great crested Grebes – best site on the estuary and story of their occurrence in winter, feeding on small fish, transition to impressive summer plumage Other typical wildfowl and shorebirds present – interpretation of migration stories Constraints & solutions – identification of any constraints: from viewing direction, light conditions, distance, vegetation, disturbance potential, access restrictions etc and identification of likely solutions Viewing direction is predominantly south into sun and can be problematic especially during low 11 Planning any viewing at Rusheen point should look predominantly northwards and provides good 12 light conditions Risks – identification of risks to wildlife, site integrity, visitor safety which would require management intervention Pier – viewing from pier exposes visitors to risk of steep drop Access – access to a viewpoint/hide at Rusheen point, if negotiated, would require screening to 14 prevent disturbance to birds present No obvious parking provision at Rusheen Point – access would be required along road or 15 alternative Sustainability – are any measures required to enhance sustainability or to ensure no impacts Normal assessment of impacts from any proposed viewing development at Rusheen Point

### Area 1, Site 2: Clonderlaw Bay

#### Site description

The site is the main complex of Clonderlaw Bay which lies north east of Knock. One main viewing site has been identified at the site but there are additional potential areas which could be developed in future in the right circumstances.

The main view point lies on the south side of the bay at a point where the minor road bends immediately by a small area of saltmarsh and a muddy bay and island. This is marked on the map at Figure 33. It provides what is potentially the easiest access point to view some of the best parts of the bay and is ideal from a light direction point of view with a predominantly northwards aspect.

The area overlooks mudflats and saltmarsh patches and on a rising or falling tide, produces views of good numbers of waterbirds, relatively close to the roadside.

It would be feasible to view from a car or provide a semi-screened viewpoint at this area to facilitate enhanced viewing. There are higher concentrations of birds noted on the northern edge (Ash *et al* 2017<sup>23</sup>) but this is more difficult to access.

<sup>&</sup>lt;sup>23</sup> Ash, A, Corrigan S., O'Dowd, D (2018) Waterfowl Counts of the River Shannon and River Fergus Estuaries. McCarthy Keville O'Sullivan for SIFP



Figure 33 Clonderlaw Bay site map and potential viewing infrastructure



Figure 34 Roadside access to Clonderlaw Bay and intertidal habitats beyond – enhanced parking and a viewpoint would assist viewing

At high tide the small island forms a roost for waders and egrets in small numbers. The wet fields to the east can hold high numbers of Lapwing, Curlew, Golden Plover and sometimes Whooper Swans.

This area would have the potential to become an impressive wetland if managed appropriately and should be considered in the longer term as an opportunity.

The access to the main viewpoint is on a minor road running west from the R473 for 1.5 km and this would need some minor upgrading (passing places) to facilitate easy access.

Parking would be by the shore and two viewing options present themselves – the roadside as previously described and a point further to the north east which would require a screened walk – this is indicated on Figure 33



Figure 35 Looking back into extensive Intertidal habitat and good wader flocks in Clonderlaw Bay - a screened walk and hide or viewing screen would help with viewing

## Wildlife community description

Regularly occurring waterbirds and their likely occurrence patterns are shown in table 2 below

The site is predominantly intertidal so attracts waders and wildfowl feeding on mudflats, shoreline and saltmarsh vegetation. Some grazing birds may use coastal pasture e.g. Wigeon, Lapwing and Curlew.

The site, along with the Knock area, is one of the best areas in the Shannon Estuary complex for Greenshank

Table 2 Waterbirds - status and occurrence pattern

Species	Status	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Cormorant	Resident												
Little Egret	Resident												
Grey Heron	Resident												
Whooper Swan	Winter												
Shelduck	Resident												
Wigeon	Winter												
Teal	Winter												
Mallard	Resident												
Oystercatcher	Winter												
Ringed Plover	Winter												

Golden Plover	Winter						
Lapwing	Winter						
Knot	Winter						
Curlew Sandpiper	Passage						
Dunlin	Winter						
Snipe	Winter						
Black-tailed Godwit	Winter						
Whimbrel	Passage						
Curlew	Winter						
Redshank	Winter						
Greenshank	Winter						
Turnstone	Winter						
Black-headed Gull	Non- breeder						
Common Gull	Winter						
Lesser Black-backed Gull	Summer visitor						
Great Black-backed Gull	Winter						
Common Tern	Summer visitor						

While it does not hold as high numbers of birds as sites on the inner estuary the site is compact and allows relatively good views at many tidal states and is therefore less restricted by tidal state that the more extensive mudflats on the inner estuary.

Scenically, the area is also attractive.

Greenshank may make a good site motif for e.g. sculpture, signage or interpretation. And interpretation infrastructure should be avoided other than simple low-key material alongside any viewpoints or more usefully printed or online material

#### Key site features and opportunities

- Good viewing from the viewpoint described—typically birdwatchers will have quality optical
  equipment which will allow good views of intertidal species and the period of mid incoming
  or outgoing tide would produce large numbers and a good spectacle of birds moving past
  the viewing areas. High tide viewing may be possible where roosts can be located.
- Access for viewing relatively easy from roadside parking and marked viewpoint would be valuable
- Opportunity for additional enhanced viewpoint from screen or hide near road would require modest development
- A range of longer-term viewpoint options are possible and could be explored in future

## Site appraisal matrix

	appraisarmann
Ор	portunity – what range of wildlife is present and when does it occur?
1	Good range of waterbirds in modest to high numbers. Includes d Greenshank in higher numbers than elsewhere in the estuary.
	ewing potential – Is there a suitable means of viewing and interpreting the wildlife esent?

Viewing from roadside already good Simple signage to indicate parking and viewpoint required Interpretation via online or printed material resource to minimise visual impact on area Screened access to a hide or screen for viewing inner bay would be valuable Appraisal of existing infrastructure and access No infrastructure Parking currently limited to single pull in on rough ground unsuitable for normal cars 7 Access to shore for viewing difficult without causing disturbance Site stories/spectacle – what stories are there to be told for interpretation or promotion? Greenshank - origins and occurrence at the site Viewpoint over roosting island - interpretation of roost (safety in numbers, shelter, predators) Other typical wildfowl and shorebirds present – interpretation of migration stories Constraints & solutions – identification of any constraints: from viewing direction, light conditions, distance, vegetation, disturbance potential, access restrictions etc and identification of likely solutions Advanced viewpoints on private land - would require access agreements etc Roadside works required to provide suitable passing places on access road and a parking area Risks – identification of risks to wildlife, site integrity, visitor safety which would require management intervention Access – access to a viewpoint/hide if negotiated, would require screening to prevent disturbance to birds present Sustainability – are any measures required to enhance sustainability or to ensure no impacts Normal assessment of impacts from any proposed viewing developments 17 suitable for linking to walking and/or cycle route access proposals

### Area 1 Site 3: Labasheeda Quay & shore

#### Site description

The site encompasses Labasheeda Bay and extends east along the shoreline to Rinealon Point. A section of shore extending to c. 5km. Within the site there are a number of small areas where viewing can be developed and promoted.

Labasheeda Quay – the quay at Labasheeda provides views of intertidal habitat and open water and can hold small numbers of a range of species.



Figure 36 Labasheeda Quay - views onto a small bay/inlet, best at lower tidal state than shown, when mud will attract a range of waders and wildfowl

There would be value in exploring the option of a viewing hide at, and short walk to, Boatman's Point which could give good views of the wider bay.



Figure 37 Existing interpretation at Labasheeda Quay - mentions some regular birds and caters for anglers

Boatman's Point to Goleen Bridge – the road runs close to the shore and 1-3 small pull in car viewpoints could be located along this section to view the shoreline here. A small lagoon at Goleen Bridge would benefit from a screened watchpoint or small hide – this is a small site and easily disturbed. There is a gateway and some hard standing at the small bay at Rinealon Point and this could be easily developed as a screened parking area with a hide or screen and would enable good numbers of waders and wildfowl to be seen at close quarters.



Figure 38 Lagoon and spit at Goleen Bridge - this area held small numbers of waders and Teal providing good views from a parked car at the roadside. Otter were seen in the lagoon – an area to park and a screened viewpoint would prevent disturbance and provide enhanced viewing



Figure 39 Bay at Rinealon Point - an area to pull in already exists - susceptible to disturbance and a screened parking and viewing arrangement would provide good views of waders and wildfowl quite close up

## Wildlife community description

Regularly occurring waterbirds and their likely occurrence patterns are shown in table 3 below

Table 3 Waterbirds - status and occurrence pattern

Species	Status	Ja	Fe	Ma	Ар	Ma	Ju	Ju	Au	Se	Oc	No	De
Species	Status	n	b	r	r	У	n	1	g	р	t	V	С
Great Northern Diver	Offshore winter												
Great Crested Grebe	Offshore winter												
Cormorant	Resident												
Little Egret	Resident												
Grey Heron	Resident												
Shelduck	Resident												
Wigeon	Winter												
Teal	Winter												
Mallard	Resident												
Shoveler													
Oystercatcher	Winter												
Lapwing	Winter												
Knot	Winter												
Dunlin	Winter												
Black-tailed Godwit	Winter												
Whimbrel	Passage												
Curlew	Winter												
Redshank	Winter												

Greenshank	Winter						
Black-headed Gull	Non- breeder						
Common Gull	Winter						
Lesser Black- backed Gull	Summer visitor						
Great Black- backed Gull	Winter						
Common Tern	Summer visitor						

The site is predominantly intertidal so attracts waders and wildfowl feeding on mudflats and shoreline.

The site has shallow water shorelines and small bays and can hold Shoveler at times. High numbers of Teal can be seen with smaller numbers of Wigeon and a mix of common waders including Greenshank, Curlew and good numbers of Black-tailed Godwit can be found, including around the public area of Labasheeda Quay.

While it does not hold as high numbers of birds as sites on the inner estuary it does allow relatively good views at many tidal states and is therefore less restricted by tidal state that the more extensive mudflats on the inner estuary.

Teal or Black-tailed Godwit may make a good site motif. While interpretation already exists at Labasheeda any viewpoints would benefit from motif marking and specific wildlife interpretation at the public area around Labasheeda Quay would be of value. Other printed or online material would be of benefit in promoting the site.

In addition to birds, Otter were noted on this shore and mentioned as regular by people within the community.

#### *Key site features and opportunities*

- Good viewing from the viewpoints described there are birds present within the bay in good numbers at most tidal states
- Access for viewing relatively easy from roadside parking and marked viewpoints would be valuable but care would be required to guide people on avoiding disturbance by staying in cars or sticking to screened areas
- Opportunity for additional enhanced viewpoint from screen or hide near road would require development of roadside and traffic works both at Rinealon Point at Goleen Bridge.
- A viewpoint at Boatman's Point may provide a good option for off road viewing and should be explored
- Viewing is mainly directly south so light conditions can be a challenge. Viewing hides or screens should take account of that and provide options for alternative viewing directions



Figure 40 Labasheeda Key site map (part 1) and viewing potential



Figure 41 Labasheeda Quay (part 2- east) site map and viewing potential

#### Site appraisal matrix

# Opportunity - what range of wildlife is present and when does it occur? Good range of waterbirds in small numbers. Occur throughout tidal range in variable numbers but something to see at most tidal states Viewing potential – Is there a suitable means of viewing and interpreting the wildlife Viewing from roadside possible but needs provision of easy parking Interpretation via online or printed material resource to minimise visual impact on area Screened access to a hide or screen for viewing from Boatman's point, Goleen Bridge and Rinealon 5 Point valuable Appraisal of existing infrastructure and access No parking infrastructure away form Labasheeda Quay, but Labasheeda has good parking and existing interpretation 7 Current roadside areas for viewing not suitable for parking at present Access to shore (away from Labasheeda Quay) for viewing difficult without causing disturbance Site stories/spectacle – what stories are there to be told for interpretation or promotion? No specific interpretive stories 10 Other typical wildfowl and shorebirds present – interpretation of migration stories Constraints & solutions – identification of any constraints: from viewing direction, light conditions, distance, vegetation, disturbance potential, access restrictions etc and identification of likely solutions Viewpoints on private land - would require access agreements etc Roadside works required to provide suitable parking and viewing areas Risks – identification of risks to wildlife, site integrity, visitor safety which would require management intervention 14 | all works close to shoreline would require screening to prevent disturbance to birds present Sustainability – are any measures required to enhance sustainability or to ensure no impacts Normal assessment of impacts from any proposed viewing developments 16 suitable for linking to walking and/or cycle route access proposals

## Area 1, Site 4: Kilkerrin Point

### Site description

The site is the area at Kilkerrin point. The exact boundary is difficult to determine as it could be limited to the end of the access track or could extend to the battery. This will be highly dependent upon landowner co-operation.

It is a suitable viewpoint looking west to view wildlife in the open water off Kilkerrin point.



Figure 42 Kilkerrin Point shoreline and Battery - this location is ideal for looking out for birds moving along the river channel and not least as a regular site for Bottlenose Dolphins

The area has much less intertidal habitat and rather views onto a narrowing of the river channel with its tidal flow and has a small area of open shoreline and is surrounded by small fields, including a small wetland area to the south of the road



Figure 43 Informal parking could be enhanced to give a sense of arrival

There is a good, informal, parking area, a small fairly dilapidated picnic bench and an existing, rather faded interpretive sign. While it lies close to private property, it is clear that the area allows current

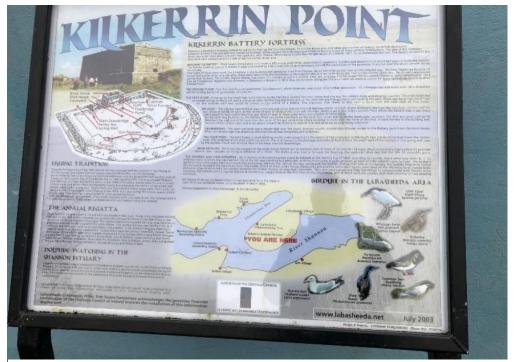


Figure 44 Existing interpretation at Kilkerrin point – combines heritage and wildlife for the general visitor

access at least to the shoreline but the opportunity to make more of the area (notably the battery cf. The heritage recording report) is obvious.

While bird numbers are never likely to be the main feature of this site it does provide an opportunity for more transient species to be seen and is likely to be the best area to see terns and other seabirds which may venture up the estuary to feed in the areas. Encouraging and promoting use as a potential Dolphin viewing site is perhaps it most effective wildlife watching role.

#### Wildlife community description

Regularly occurring waterbirds and their likely occurrence patterns are shown in table 4 below

The site is predominantly open shore and most birds seen will be those passing up and down the river channel. The tide races offshore are likely to attract terms and gulls feeding and possibly other seabirds from time to time.

The site has stony shoreline and this will be likely to attract small number of waders typical of that habitat, including turnstone and oystercatcher. It is likely that offshore there will be regular views of Great Northern and perhaps Red-throated Diver and perhaps grebes and some diving ducks.

Tidal state will matter less at an open shore site such as this but the mid tide periods when water is flowing may be best for seabirds. The mainly western aspects are good for viewing until later in the day.

The regularity of occurrence of Dolphins at the point is not clear but it is noted a point from which they can be seen and this provides significant added value by way of a wildlife attraction.

The development of access to the Battery would provide a heightened viewpoint which would be advantageous for viewing wildlife as well as experiencing the story of the Battery itself.

Table 4 Waterbirds – likely status and occurrence pattern at Kilkerrin

Species	Status	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Red-throated Diver	Offshore												
Red-tilloated Diver	winter												
Great Northern Diver	Offshore												
- Croat Horaron Brion	winter												
Great Crested Grebe	Offshore winter												
Cormorant	Resident												
Little Egret	Resident												
Shelduck	Resident												
Wigeon	Winter												
Teal	Winter												
Oystercatcher	Winter												
Whimbrel	Passage												
Curlew	Winter												
Redshank	Winter												
Black-headed Gull	Non-												
Diack-fleaded Guil	breeder												
Common Gull	Winter												
Lesser Black-backed Gull	Summer visitor		_		_	_	_	_	_	_	_	_	

Iceland Gull	Irregular						
Great Black-backed Gull	Winter						
Common Tern	Summer visitor						

## *Key site features and opportunities*

- Good viewing from the shore or potentially from the Battery if access developed
- Access for viewing simple to shoreline area
- Parking area currently informal but adequate formalising may bring minor benefits
- Views of passage birds and dolphins screening is not required but raised viewpoint may be of value

# Site appraisal matrix

Op	portunity – what range of wildlife is present and when does it occur?
1	Shorebirds and seabirds passing along river channel, small numbers shoreline waders or offshore divers and grebes
2	Bottle-nose Dolphin possible- regular: only regular site within the search area
3	Birds occur throughout tidal range in variable numbers but something to see at most tidal states
	wing potential – Is there a suitable means of viewing and interpreting the wildlife sent?
4	Viewing from shore is adequate but enhance if raised viewpoint was provided
5	Interpretation via online or printed material resource to minimise visual impact on area
App	praisal of existing infrastructure and access
6	Informal parking at present - formalised parking and signage may assist in avoiding conflict with residents
7	Existing interpretive sign in poor to moderate condition, picnic bench becoming dilapidated
Site	e stories/spectacle – what stories are there to be told for interpretation or promotion?
8	Dolphins of the estuary
9	Bird movements around the estuary
con	nstraints & solutions – identification of any constraints: from viewing direction, light additions, distance, vegetation, disturbance potential, access restrictions etc and attification of likely solutions
10	Viewpoints at battery on private land - would require access agreements etc
Risl	ks – identification of risks to wildlife, site integrity, visitor safety which would require
ma	nagement intervention
11	Few risks out with development of access to battery
Sus	tainability – are any measures required to enhance sustainability or to ensure no impacts
12	Normal assessment of impacts from any proposed viewing developments
13	Suitable for linking to walking and/or cycle route access proposals

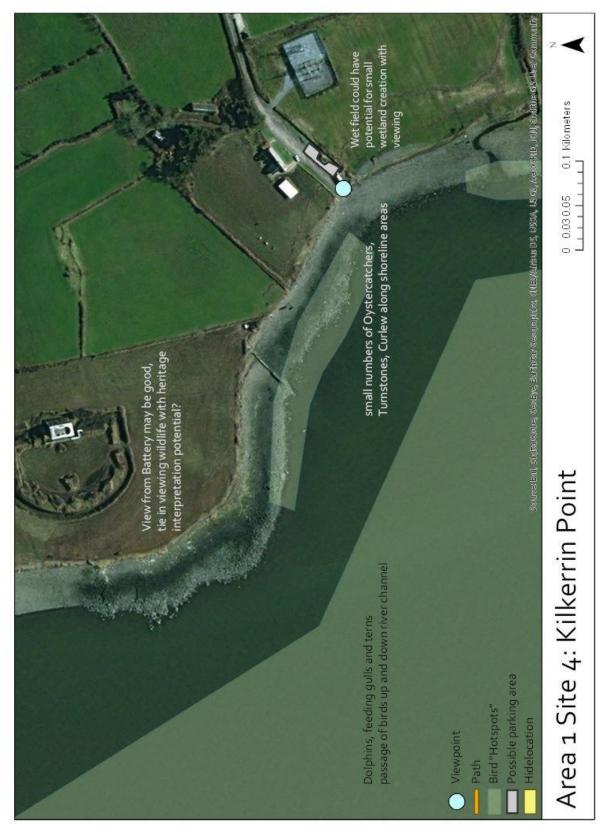


Figure 45 Kilkerrin Point Site Map and viewing potential

## Area 2 Kildysert to Clarecastle Site 1: Kildysert Pier

Site description

The site is the area immediately in the vicinity of Kildysert pier.

An area of mudflats, channels and upper saltmarsh adjacent to the pier and amenity areas.

There is an existing small, rudimentary hide close to a picnic area and this looks onto an island and area of shoreline used by moderate numbers of mostly waders and ducks like Wigeon and Teal for feeding and roosting.

While the area only has small to moderate bird numbers it provides an area which would provide good views of regular species with little difficulty in providing infrastructure to support viewing



Figure 46 Existing basic hide at Kildysert - could be simply replaced and screening enhanced



Figure 47 Muddy river channels at Kildysert - good for waders like Redshanks and attract Little Egrets



Figure 48 Access to shore is open in some places - reducing disturbance by screening on some areas would enhance viewing potential

There is good parking and access to the area and the key enhancement would be the provision of enhanced screening and an improved viewing hide which would create significant added value by reducing disturbance impact on birds and allow better views.



Figure 49 Small picnic area by viewing hide ay Kildysert - better screening and an enhanced hide would help improve bird viewing potential but picnic area is already an asset to a visitor



Some management of activity to discourage dogs from the immediate shoreline area would also help by enabling birds to remain undisturbed

This site would be unlikely to provide an impressive wildlife spectacle in itself but does provide ready access and a simple site to access for s short visit by any birdwatcher in the area.

Figure 50 some basic interpretive information at Kildysert - no mention of wildlife to be seen, would benefit from enhancement

#### Wildlife community description

Regularly occurring waterbirds and their likely occurrence patterns are shown in table 5 below

The site is predominantly muddy channels and flats with some saltmarsh and islands. It will likely attract birds typical of the upper estuary but as the area is fairly small numbers and range of species will be small. Notable species at the site would likely be Little Egret, Redshank and Teal. Little Egret may make a striking motif for the site and should be able to be seen in any season.

It is likely that bird numbers will be best on a rising or falling tide though some birds may remain at roost sites and if these can be viewed from the hide it provides an opportunity through most of the tidal range.

Table 5 Waterbirds – likely status and occurrence pattern at Kildysert

Species	Status	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Cormorant	Resident												
Little Egret	Resident												
Grey Heron	Resident												
Shelduck	Resident												
Wigeon	Winter												
Teal	Winter												
Mallard	Resident												
Oystercatcher	Winter												
Lapwing	Winter												
Dunlin	Winter												
Snipe	Winter												
Black-tailed Godwit	Winter												
Curlew	Winter												
Redshank	Winter												
Greenshank	Winter								_				
Black-headed Gull	Non- breeder												

# Key site features and opportunities

- Easy access and existing footprint of infrastructure could be enhanced
- Good parking and general access
- Viewpoints could be marked simply signature sculptures
- Hide replaced and enhanced screening required
- Good range of birds in modest numbers

# Site appraisal matrix

Op	portunity – what range of wildlife is present and when does it occur?					
1	waders and wildfowl of upper estuary in small numbers					
2	Birds occur wildlife occur throughout tidal range but best on rising tide					
Vie	Viewing potential – Is there a suitable means of viewing and interpreting the wildlife					
pre	sent?					
3	Existing small hide could be replaced easily					
4	Interpretation within hide would be appropriate as site may be used by general visitors as well as					
	birdwatchers					
App	praisal of existing infrastructure and access					
5	Parking good around pier area					
6	Existing hide small and probably not fit for purpose and requires enhanced screening to prevent					
	bird disturbance					
7	Existing interpretive sign in poor to moderate condition, picnic area informal					
Site	e stories/spectacle – what stories are there to be told for interpretation or promotion?					
8	No specific interpretation - simple identification charts for general visitors					
Cor	nstraints & solutions – identification of any constraints: from viewing direction, light					
con	ditions, distance, vegetation, disturbance potential, access restrictions etc and					
ide	ntification of likely solutions					
9	Care over viewing direction and hide and screening design to reduce existing disturbance levels of					
	birds in vicinity would be of value					
Ris	ks – identification of risks to wildlife, site integrity, visitor safety which would require					
ma	nagement intervention					
11	No obvious risks					
Sus	tainability – are any measures required to enhance sustainability or to ensure no impacts					
12	Normal assessment of impacts from any proposed viewing developments					
13	Suitable for linking to walking and/or cycle route access proposals					

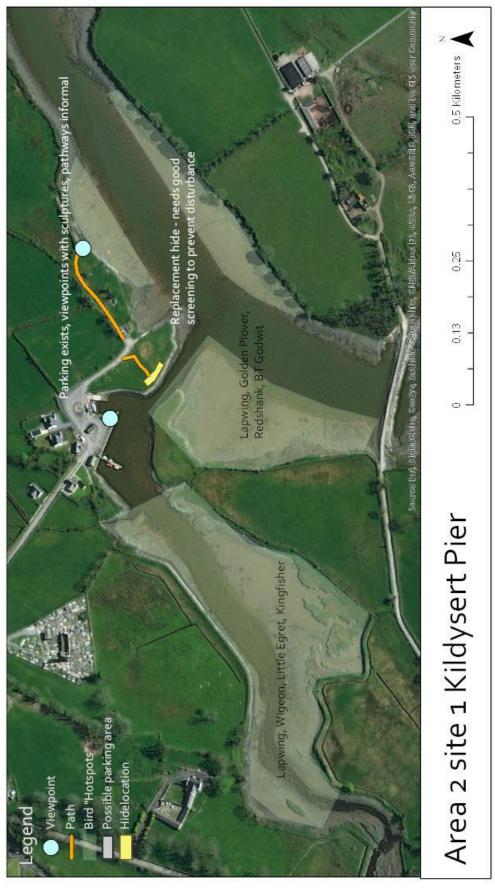


Figure 51 Kildysert Pier Site Map and viewing potential

### Area 2, Site 2: Islandavanna

#### Site description

This site lies in the Fergus Estuary and is a sea wall/bank area overlooking a very extensive area of mudflats, a small area of saltmarsh and the channel of the Clareen River.

A minor road runs behind the base of the bank and there are two very small off-road pull ins to park



Figure 52 No formal parking - pull-ins allow only limited car parking for views onto the estuary

at the east and west ends of the bank, both of which appear to be the most interesting for birds.

Walking to the top of the bank to view the flats and channel and appearing on the bank can cause some disturbance so this would benefit from viewing screens at key points.

The mudflats are extensive and the birds are best viewed as the tide comes in and they are pushed towards the sea wall. At low tide many birds, particularly the large numbers of small waders are further out.



Figure 53 Panorama from West end of site - looking SE into morning light can be problematic but saltmarsh nearby can hold a high tide roost as the water levels increase



Figure 54 The sea bank, estuary channels and mudflats at Islandavanna - the bank top provides a good view but is not screened so causes disturbance and is exposed to high winds

An area of saltmarsh at the west end of the bank appears to contain a wader roost and viewing this in the approach to hide tide can be impressive with numbers of birds building up including waders, gulls and ducks.

The light conditions can be poor in strong sunlight as the main aspect is south facing and viewing infrastructure provided should allow for viewing east and west to avoid this where possible.

Main enhancements to the area would be developing parking areas and one (possibly two) viewing screens with access on the bank top. Access up the steep bank will need to be constructed and tying access in behind the bank to provide screening will allow good views of the birds.

### Wildlife community description

Regularly occurring waterbirds and their likely occurrence patterns are shown in table 6 below



Figure 55 A group of Teal resting in a river channel at Islandavanna at low tide – they are easily disturbed from the bank top unless screening is provided The site is predominantly extensive mudflats but with small areas of saltmarsh and backed by low lying grass fields on the landward side.

The numbers of birds peak as they are pushed close by the rising tide and large wheeling flocks of waders such as Knot and Dunlin are accompanied by a range of other waders and wildfowl include good numbers of Black-tailed Godwit, Curlew, Redshank, Teal and shelduck with a range of other species in smaller numbers. Notable species at the site are most of the waders in high numbers, particularly Knot, Dunlin and Redshank.

It is likely that bird numbers will be best on a rising or falling tide though some birds may remain in the channels through the low tide. The very highest spring tides will likely see the period at high water with few birds around as they are pushed off the relatively low-lying saltmarsh roosts.

Table 6 Waterbirds – likely status and occurrence pattern at Islandavanna

Species	Status	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Little Egret	Resident												
Shelduck	Resident												
Wigeon	Winter												
Teal	Winter												
Oystercatcher	Winter												
Golden Plover	Winter												
Lapwing	Winter												
Knot	Winter												
Dunlin	Winter												
Snipe	Winter												
Black-tailed Godwit	Winter												
Curlew	Winter												
Redshank	Winter												
Greenshank	Winter												
Black-headed Gull	Non- breeder												
Common Gull	Winter												
Lesser Black- backed Gull	Summer visitor												

The high numbers of waders are more than likely to be attractive to rare waders during migration and it is likely to be a site where rarities could turn up. Providing comfortable viewing conditions would be valuable in facilitating the ability to look through flocks carefully and for long periods.

# Key site features and opportunities

- Very high bird numbers and spectacular flocks
- potential for rarities among the common species
- Good road access but roads may need some enhancement to take higher traffic load
- Needs parking
- Good views from bank top but needs careful screening two sites optimal

# Site appraisal matrix

<ul> <li>Waders and wildfowl of upper estuary in very high numbers</li> <li>Wader flocks and possibility of rarities among common species</li> <li>Tidal – best on rising tide 4-1 hour before high tide and possibly over high tide when not sprin tides</li> <li>Viewing potential – Is there a suitable means of viewing and interpreting the wildlife present?</li> <li>Bank provides good view but needs hides/screens for shelter and cover to prevent disturbanc</li> <li>Little interpretation required, this is a birdwatcher's site</li> <li>Appraisal of existing infrastructure and access</li> <li>No adequate parking – would require parking area to be developed</li> </ul>					
Tidal – best on rising tide 4-1 hour before high tide and possibly over high tide when not sprin tides  Viewing potential – Is there a suitable means of viewing and interpreting the wildlife present?  4 Bank provides good view but needs hides/screens for shelter and cover to prevent disturbanc Little interpretation required, this is a birdwatcher's site  Appraisal of existing infrastructure and access					
Viewing potential – Is there a suitable means of viewing and interpreting the wildlife present?  4 Bank provides good view but needs hides/screens for shelter and cover to prevent disturbanc  5 Little interpretation required, this is a birdwatcher's site  Appraisal of existing infrastructure and access					
Viewing potential – Is there a suitable means of viewing and interpreting the wildlife present?  4 Bank provides good view but needs hides/screens for shelter and cover to prevent disturbanc   5 Little interpretation required, this is a birdwatcher's site  Appraisal of existing infrastructure and access	,				
present?  4 Bank provides good view but needs hides/screens for shelter and cover to prevent disturbanc  5 Little interpretation required, this is a birdwatcher's site  Appraisal of existing infrastructure and access					
5 Little interpretation required, this is a birdwatcher's site  Appraisal of existing infrastructure and access					
Appraisal of existing infrastructure and access	:				
• • •					
6 No adequate parking – would require parking area to be developed					
- I					
7 No other infrastructure					
Site stories/spectacle – what stories are there to be told for interpretation or promotion	1				
8 Wader flocks and safety in numbers/value of mud					
Constraints & solutions – identification of any constraints: from viewing direction, light					
conditions, distance, vegetation, disturbance potential, access restrictions etc and					
identification of likely solutions					
9 Care over viewing direction to minimise effect of direct sunlight on viewing conditions					
Hide/screen and access screening design need good planning to minimise disturbance of birds vicinity and enable comfortable access for people					
Risks – identification of risks to wildlife, site integrity, visitor safety which would require	in				
management intervention	in				
11 No obvious risks	in				
Sustainability – are any measures required to enhance sustainability or to ensure no impacts					
12 Normal assessment of impacts from any proposed viewing developments					
13 Suitable for linking to walking and/or cycle route access proposals					

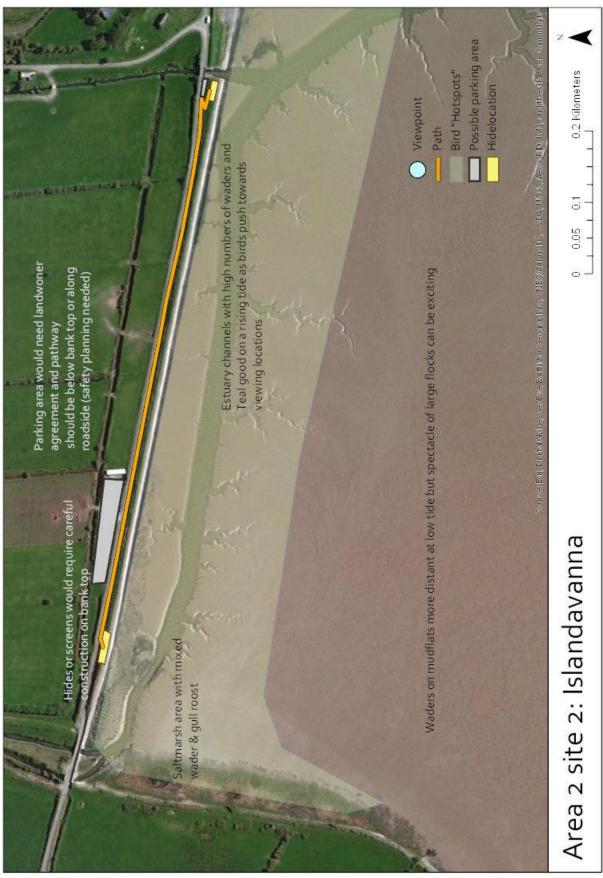


Figure 56 Islandavanna Site Map and Viewing Potential

# Area 3 Clarecastle - Shannon Airport: Site 1 Ing West

Site description

This site lies in the Fergus Estuary and is a large complex of mudflat and saltmarsh habitats bounded by low lying farmland lying just west of Newmarket of Fergus.

While the area from Ing Point to Latoon Creek is all of interest the most straightforward and readily accessible site to observe birds is close to Ing West.



Figure 57 Ing West - extensive saltmarsh, pools and mudflats hold high numbers of birds but they can be distant. Nearby pools if managed well may help to bring some species closer and bank top hides could provide comfortable viewing

This is low sea wall which separates the saltmarsh from farmland and provides views across a good area of saltmarsh, intertidal mudflats and river channel.

The bird numbers in the area are high and the species mix that occurs is quite diverse.

There is a minor access road which turns into an unsealed road leading to farms. Use by more people would require effort to adapt the road accordingly. There is a stretch of sea bank which lies parallel to the road and affords good views but to achieve this without causing disturbance would require screened viewpoints or hides.

The site holds further potential for walks and viewpoints at and around Ing Point but this requires further investigation.

It is likely that viewing is best on a rising or falling tide when waders are moving extensively across the site. In addition, there may be opportunities to see Grazing Wigeon, Greylag Geese or Whooper swans on the saltmarsh or flighting out of the estuary at dawn to feed on nearby fields.



Figure 58 Ing West road and bank – some road improvements, parking and hides on the bank would provide ample infrastructure for birdwatching

The light conditions are generally good as viewing is to the North west aspect albeit views of some species may be quite distant form the sea bank, however the bird movement is impressive and most serious birdwatchers are equipped with good quality spotting scopes which enable better viewing of distant birds.

Main enhancements to the area would be developing parking areas, improving road access and at least one viewing screen or hide on the bank top. In addition, habitat management within the saltmarsh areas to create more pools and get the grazing regime at optimal levels would enhance the area near the bank for birds.

#### Wildlife community description

Regularly occurring waterbirds and their likely occurrence patterns are shown in table 7 below

The site is predominantly extensive mudflats but with areas of saltmarsh and backed by low lying grass fields.

The numbers of birds are noted as large and the species diversity is relatively high for the upper estuary. Large wheeling flocks of waders such as Knot and Dunlin are accompanied by a range of other waders and wildfowl including high numbers of Black-tailed Godwit, Curlew, Redshank, Teal and shelduck with a range of other species in smaller numbers. In addition, and notably, the site is used by both greylag Geese and Whooper Swans in winter and these provide an impressive sound scape along with other species.

It is likely that bird numbers will be best on a rising or falling tide though some birds may remain in the river channel over low tide and will be more distant alternatively there are saltmarsh pools in some places closer to the bank and these can hold e.g. Little Egret and some duck species, which provide some interest outside of peak viewing times in advance of high water.

Table 7 Waterbirds – likely status and occurrence pattern at Ing West

Species	Status	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Cormorant	Resident												
Little Egret	Resident												
Grey Heron	Resident												
Whooper Swan	Winter												
Greylag Goose	Winter												
Shelduck	Resident												
Wigeon	Winter												
Teal	Winter												
Mallard	Resident												
Pintail	Winter												
Shoveler	Winter												
Oystercatcher	Winter												
Golden Plover	Winter												
Lapwing	Winter												
Knot	Winter												
Dunlin	Winter												
Snipe	Winter												
Black-tailed Godwit	Winter												
Whimbrel	Passage												
Curlew	Winter												
Redshank	Winter												
Greenshank	Winter												
Black-headed Gull	Non-breeder												
Common Gull	Winter												
Lesser Black-backed Gull	Summer visitor												
Great Black-backed Gull	Winter												

The large flocks of waders and wildfowl are more than likely to be attractive to rarer species during migration periods when they seek similar species to reside with and this is likely to be a site where rarities could turn up. Providing comfortable viewing conditions would be valuable in facilitating the ability to look through flocks carefully and for long periods and the discovery of rarities would in turn enhance the reputation of the whole area.

### Key site features and opportunities

- Very high bird numbers and spectacular flocks
- potential for rarities among the common species
- Good road access but roads may need some enhancement to take higher traffic load
- Good views from bank top but needs careful screening two sites optimal
- Parking required

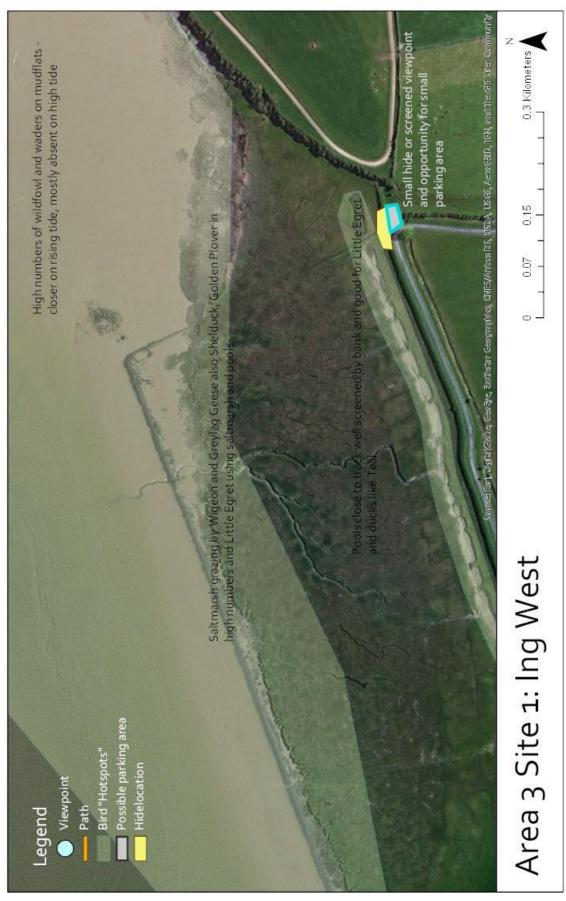


Figure 59 Ing West Site Map and Viewing Potential

### Site appraisal matrix

Opportunity - what range of wildlife is present and when does it occur?   Waders and wildfowl of upper estuary in very high numbers   Wader flocks and possibility of rarities among common species   Tidal - best on rising tide 4-1 hour before high tide and possibly over high tide including on spring tides flooding the saltmarsh   Whooper Swans and Greylags - best site on the estuary for them   Viewing potential - Is there a suitable means of viewing and interpreting the wildlife present?   Bank provides reasonable views but needs hides/screens for shelter and cover to prevent disturbance   Little interpretation required, this is a birdwatcher's site   Appraisal of existing infrastructure and access     No adequate parking - would require parking area to be developed     Road improvements for safety of access by car	Site d	appraisal matrix					
Wader flocks and possibility of rarities among common species  Tidal – best on rising tide 4-1 hour before high tide and possibly over high tide including on spring tides flooding the saltmarsh  Whooper Swans and Greylags – best site on the estuary for them  Viewing potential – Is there a suitable means of viewing and interpreting the wildlife present?  Bank provides reasonable views but needs hides/screens for shelter and cover to prevent disturbance  Little interpretation required, this is a birdwatcher's site  Appraisal of existing infrastructure and access  No adequate parking – would require parking area to be developed  Road improvements for safety of access by car  Site stories/spectacle – what stories are there to be told for interpretation or promotion?  Migration of Whooper swans and Golden Plover  Constraints & solutions – identification of any constraints: from viewing direction, light conditions, distance, vegetation, disturbance potential, access restrictions etc and identification of likely solutions  Working farm and grazing animals – agreements and fencing etc required  Risks – identification of risks to wildlife, site integrity, visitor safety which would require management intervention  Vicinity and enable comfortable access for people  Working farm and grazing animals – agreements and fencing etc required  Risks – identification of risks to wildlife, site integrity, visitor safety which would require management intervention  Narrow road needs enhanced passing places  Sustainability – are any measures required to enhance sustainability or to ensure no impacts  Normal assessment of impacts from any proposed viewing developments	Op	portunity – what range of wildlife is present and when does it occur?					
Tidal – best on rising tide 4-1 hour before high tide and possibly over high tide including on spring tides flooding the saltmarsh  Whooper Swans and Greylags – best site on the estuary for them  Viewing potential – Is there a suitable means of viewing and interpreting the wildlife present?  Bank provides reasonable views but needs hides/screens for shelter and cover to prevent disturbance  Little interpretation required, this is a birdwatcher's site  Appraisal of existing infrastructure and access  No adequate parking – would require parking area to be developed  Road improvements for safety of access by car  Site stories/spectacle – what stories are there to be told for interpretation or promotion?  Migration of Whooper swans and Golden Plover  Constraints & solutions – identification of any constraints: from viewing direction, light conditions, distance, vegetation, disturbance potential, access restrictions etc and identification of likely solutions  Hide/screen and access screening design needs good planning to minimise disturbance of birds in vicinity and enable comfortable access for people  Working farm and grazing animals – agreements and fencing etc required  Risks – identification of risks to wildlife, site integrity, visitor safety which would require management intervention  Working farm and grazing animals – agreements and fencing etc required  Risks – identification of risks to wildlife, site integrity, visitor safety which would require management intervention  Livestock  Narrow road needs enhanced passing places  Sustainability – are any measures required to enhance sustainability or to ensure no impacts  Normal assessment of impacts from any proposed viewing developments	1	, , , ,					
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12 Normal assessment of impacts from any proposed viewing developments	13	Narrow road needs enhanced passing places					
	Sus	Sustainability – are any measures required to enhance sustainability or to ensure no impacts					
13 Suitable for linking to walking and/or cycle route access proposals	12	Normal assessment of impacts from any proposed viewing developments					
	13	Suitable for linking to walking and/or cycle route access proposals					

#### Area 4 Shannon Town – Bunratty Site 1 Shannon Town Estuary walks

Site description

This site is an extensive shoreline walk and lies on the Shannon embankment at Shannon town. It extends for over 4 Km and includes largely intertidal mud and areas of saltmarsh backing onto woodland, park, pasture and scrub.

It is already well developed as a walking trail with hard surfaced paths along the 2 Km of shoreline adjacent to Shannon Town further development of complementary infrastructure, notably a visitor centre concept has been proposed for the embankment area and this should be considered in light of the recommendations provided in this report. Further infrastructure is outlined in the Shannon Town Green Infrastructure Plan 2013 and in the Clare County Development Plan and these appear to cover most of the needs outlined by recommended approaches here but the immediate need for further development on the Shannon embankment to enhance birdwatching specifically is not urgent but would be desirable and beneficial.



Figure 60 Footpaths and amenity infrastructure are present at Shannon Town shoreline – additional infrastructure specific to wildlife watching is not needed in the short term

Development of access to the east towards Bunratty however offers the potential for further development of access and viewing areas in a more rural part of the estuary and affords a range of subtly different estuary habitats to enhance diversity further.

In general, an approach of enhancing car and pedestrian access along the roads close to the estuary as far as the sewage works near Bunratty provides a good facility for birdwatching throughout the area. There are extensive bird rich habitats throughout the area and in many places the birds are

habituated to the presence of people and allow relatively close approach, being tolerant of disturbance.



Figure 61 Views of intertidal habitats rich in waterbirds at Shannon Town embankment – pedestrian access allows good views and the birds are relatively tolerant of people on the paths

Specific viewing infrastructure along this section of coast would be more than likely to attract unwanted anti-social behaviour so avoiding this in Phase 1 would be advisable while the area could be a suitable site for a visitor centre style development in the longer term.

The light conditions can be challenging in places as much of the viewing is directly south but in most cases bays and peninsulas/points allow multiple viewing angles to be achieved.

Access to the East is currently not clear and is on a narrow road. Clarifying access and enabling road enhancements to enable access may be of value.

The birds in this area are less tolerant of disturbance so screened viewpoint in some areas may be desirable. But this could be a second phase approach.



Figure 62 The walks are well constructed and signposted



Figure 63 waders often allow fairly close approach along the shoreline at Shannon Town – viewing is best in many bays as the tide comes in



Figure 64 Mixed open estuary habitats holding high waterbird diversity between Shannon Town and Bunratty would make a good extension for birdwatching to the Shannon Town access routes

There are also livestock present in parts of the site which may require warning signage etc but in any case, the area appears to be over private land and would therefore require appropriate agreements to be put in place.

In addition to Shannon Town shoreline as described the areas around Shannon Airport – the airport lagoon and nearby bays – can support good bird populations but the lagoon and enclosed bay have deteriorated as vegetation and particularly reed encroachment has increased. The lagoon is now difficult to see and holds many fewer birds than in the past. Without management to promote a more open wetland habitat the value of this site for birdwatching is of secondary importance as the views are poor and the species diversity is low. There is a hide at the site but current condition and access is unclear.

Notwithstanding these issues, its former status could be restored if some of these constraints could be overcome though this would likely be a longer-term project.



Figure 65 Telescope view of distant wildfowl on the Shannon Airport Lagoon - sadly this area is now heavily enclosed by reed, the formerly mixed lagoon habitats were once more open and supported far greater numbers and diversity of waterbirds. Significant habitat management would be required to enhance or restore the site in the longer term

Perhaps the greatest asset of the wetlands around Shannon Town, is the ease of access for visitors from the airport and major road network – the Shannon area if well promoted as birdwatching site could becoming the start and end point of any birdwatching trip to the area or indeed the county.

#### Wildlife community description

Regularly occurring waterbirds and their likely occurrence patterns are shown in table 9 below

The site is predominantly extensive mudflats but with areas of saltmarsh and backed by low lying grass fields, urban parks or woodland.

The concentration of waders and wildfowl here is high and the species diversity is also high as the range of habitats present is good. Large wheeling flocks of waders such as Knot, Golden Plover and Dunlin are accompanied by a range of other waders and wildfowl including high numbers of Blacktailed Godwit, Curlew, Redshank, Teal and Wigeon and a range of other species in smaller numbers.

The airport lagoon supports good numbers of scarce duck species at times including Shoveler, Pintail and Gadwall but numbers are lower than in the past. They disperse to other nearby areas of the estuary and can be seen along with other wildfowl from time to time.

The whole area is well known already within Irish birdwatching community for attracting Rare vagrant birds ("rarities"), particularly North American Waders but this reputation has declined since the airport lagoon deteriorated – it is likely that many still occur but that promoting more regular

birdwatching will be required to create the re-establishment of their occurrence and thereby restore the area's reputation among birdwatchers.

Table 8 Waterbirds – likely status and occurrence pattern at Shannon Town

Species	Status	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Little Grebe	Resident												
Cormorant	Resident												
Little Egret	Resident												
Grey Heron	Resident												
Mute Swan	Resident												
Whooper Swan	Winter												
Greylag Goose	Winter												
Shelduck	Resident												
Wigeon	Winter												
Gadwall	Winter												
Teal	Winter												
Mallard	Resident												
Pintail	Winter												
Shoveler	Winter												
Oystercatcher	Winter												
Ringed Plover	Winter												
Golden Plover	Winter												
Grey Plover	Winter												
Lapwing	Winter												
Knot	Winter												
Curlew Sandpiper	Passage												
Dunlin	Winter												
Jack Snipe	Winter												
Snipe	Winter												
Black-tailed Godwit	Winter												
Whimbrel	Passage												
Curlew	Winter												
Redshank	Winter												
Greenshank	Winter												
Black-headed Gull	Non-breeder												
Common Gull	Winter												
Lesser Black-backed Gull	Summer visitor												
Herring Gull	Resident												
Great Black-backed Gull	Winter												
Common Tern	Summer visitor												

#### *Key site features and opportunities*

- Very high bird numbers and spectacular flocks
- potential for rarities among the common species
- Excellent pedestrian access to most areas
- Good road access but roads may need some enhancement to take higher traffic load
- Good views from footpaths and some roads careful screening may be required at eastern extremity of site to achieve best views
- Signed or indicated parking within Shannon Town would be helpful

#### Site appraisal matrix

Op	Opportunity – what range of wildlife is present and when does it occur?						
1	Waders and wildfowl of upper estuary in very high numbers						
2	Wader flocks and possibility of rarities among common species						
3	Tidal – best on rising or falling tide. High tide roosts difficult to observe						
Vie	Viewing potential – Is there a suitable means of viewing and interpreting the wildlife						
pre	present?						
4	Shannon embankment walks provide good views and need no significant further development						
5	Interpretation and guidance for birdwatcher online would be helpful to guide birdwatchers to the best sites						
6	Viewing at airport lagoon poor due to degraded habitat – restoration required						
App	oraisal of existing infrastructure and access						
7	Extensive road access already in place – minor improvements at eastern extremity of area only						
8	Footpaths and directional signage already in place – enhancements at east end would be helpful						
9	Access not clear around airport – longer term project						
Site	Site stories/spectacle – what stories are there to be told for interpretation or promotion?						
10	10 Migration and linkage to air traffic is an obvious "hook"						
	nstraints & solutions – identification of any constraints: from viewing direction, light						
	ditions, distance, vegetation, disturbance potential, access restrictions etc and						
ide	ntification of likely solutions						
11	access agreements may be required I some areas						
12	Working farm and grazing animals – agreements and fencing etc may be required						
13	Airport lagoon restoration and access works needed (long-term?)						
Ris	ks – identification of risks to wildlife, site integrity, visitor safety which would require						
ma	management intervention						
14	Livestock						
15	Narrow roads at east end may need enhanced passing places						
Sus	Sustainability – are any measures required to enhance sustainability or to ensure no impacts						
16	Normal assessment of impacts from any proposed viewing developments						
17	Mainly already linked to walking and/or cycle routes						



Figure 66 Area 4 Site 1: Shannon Town – overview site map with viewing potential



Figure 67 Area 4 Site 1: Shannon Town – site map with viewing potential - western section detail



Figure 68 Area 4 Site 1: Shannon Town - site map with viewing potential - Eastern section detail

## Additional sites for further consideration or investigation

The maps in figures 69 and 70 indicate a number of additional sites which could offer alternatives or additional viewing opportunities subject to further investigation or for development during phase 2. These are listed in Table 9 and cross referenced to the map.

Table 9 Additional/alternative sites for investigation

Map ID	Site Name	Brief Description
A	Clonderlaw Carrowbane	view point on North side of Clonderlaw bay to look east onto mud rich bay and possible Whooper Swan area
В	Ballygeery West	A point overlooking wet fields for Whooper Swans and other species – would need access and hide
С	Goleen Bay	Bay near road would complement other Labasheeda sites
D	Cahericon House & Bay	Derelict site overlooking bay – development concept for "Centre of Maritime Excellence" exists – would have potential to host wildlife tourism interpretation, wildlife courses, educational initiatives and potentially act as a management base for wildlife tourism on the estuary/county. Subject to inclusion of these aspects in plans in future.
Е	Cahericon Pier and shore	Pier overlooking a small intertidal area and island and with nearby lagoons with some potential for redevelopment – opportunity to link to developments at Cahericon House.
F	Kildysert inner bay	Opportunity for a hide looking into the inner bay at Labasheeda
G	Inishcorker	Area looking onto saltmarsh and intertidal land – potential for hide or viewing screen, may be access challenges
Н	Crovraghan Pier	Easy access to a view across river channels to islands and a muddy bay – diverse range of birds present in small area – simple viewpoint
I	Islandobrien/Inishdea	Complex of reedbeds, saltmarsh and intertidal land – scope for a well-placed hide or viewing screen in this area
J	Clarecastle riverside	Clarecastle riverside walk and wet meadows adjacent to the town – easy access and a good range of species including river birds – one or more viewpoints, potentially a viewing screen if a small wetland could be created and managed – some proposals in development
K	Latoon swan fields	Explore options for sites or events to enable viewing of the large Whooper Swan flock in this area
L	Ing Point area	Potential for walk and viewpoint at Ing Point
M	Shannon Airport Lagoon	Needs habitat management, has had hide in past and formerly very good site. Could be restored.
N	Bunratty River (Shannon link)	Obvious opportunity to create link walk to Shannon and created viewing opportunities on areas along the estuary



Figure 69 Additional sites in Area 1



Figure 70 Additional sites in Area 2-4

Of particular significance is the potential of Cahiracon House. Clare County Council are reimagining bringing Cahiracon back into educational and maritime. This use would be consistent with the Strategic Integrated Framework Plan for the Shannon Estuary (SIFP). The proposed initiative is that of creating a Centre of Maritime Excellence. This would include development of a National Cruise College, a Field Research Centre along with the promotion of the site for the renewal energy market in the area of tidal test device development. A noted objective is to renew and bring back into use the existing on-site infrastructure in a manner that is sustainable. The site and the associated pier area and adjacent habitats would be of value as an educational, interpretive or visitor experience opportunity in relation to wildlife tourism and with careful planning could act as a project hub for wildlife initiatives in the area.

This is not highlighted as a main site at this stage as it appears currently to sit at the concept development stage and appears out with the auspices of community groups which this report focuses on but it is a clear opportunity should the council choose to develop it in this way.

# Strategic actions and activities

The development of wildlife watching, particularly birdwatching, is a clear opportunity to develop a new tourism audience for the area. The SEW is already in a rich area for wildlife, particularly with good waterbird communities and could form an important, or key, part of opportunities for wildlife watching areas within the county and wider. The "wildlife spectacle" of waterbird populations is strong and there are enough individual sites to develop for viewing.

The biggest challenge is developing both the county and the project area specifically, as a destination within the consciousness of those potential visitors who base their holiday planning primarily on wildlife watching and to provide the orientation, facilities and services they need within the area. This will take some time to fully establish but is relatively low cost, can be driven by grass roots providers and communities and can be iterative which helps to spread and manage the cost of developing this market.

To achieve development of the area as a destination in this regard, lessons can be learned from other countries where wildlife tourism is already established as a major market. Relevant examples include: Galloway Kite Trail<sup>24</sup> or Isle of Islay (Scotland)<sup>2526</sup>, The Camargue<sup>27</sup> (France), Extremadura (Spain)<sup>28</sup>, and Biebrza marshes<sup>2930</sup> (Poland)

# Strategic actions for developing wildlife tourism

## **Phase 1** (years 1-3)

- Capacity building developing the right organisational structures, resources and skills
- Development of main sites & resources
- Marketing and promotion establishing the reputation and a "buzz" about the area's wildlife
- Longer term planning of bigger projects

## **Phase 2** (year 3+)

- Development of larger projects
- Enhance reputation further
- Become recognised as a leader in the field
- Wider linkages to County Clare wildlife tourism

Two phases of development and associated strategic actions are identified. These promote capacity building through initially developing sites and upskilling and awareness raising of providers and also developing the reputation and wider awareness of the area as a destination. In the longer term this would be followed by creating more established or larger scale sites at which to view wildlife and to seek to play a major role in developing a market leading reputation as part of wider efforts within both the county and country.

The strategic actions in phase 1 are broken down further in table 9 into suggested cross cutting activities which are area wide.

#### Phase 1 actions

**Capacity building** – currently there are no significant resources and little knowledge of the specific wildlife watching market. Developing a critical mass of resources (predominantly awareness,

<sup>&</sup>lt;sup>24</sup> http://www.gallowaykitetrail.com/

<sup>&</sup>lt;sup>25</sup> http://www.wildislaybirding.co.uk/

<sup>&</sup>lt;sup>26</sup> http://www.wild-scotland.org.uk/2007/03/wildlife-tourism-operators-get-stars-in-their-eyes/

<sup>&</sup>lt;sup>27</sup> http://www.marais-vigueirat.reserves-naturelles.org/

<sup>&</sup>lt;sup>28</sup> http://www.birdinginextremadura.com/viajar/birding/en/index.html

<sup>&</sup>lt;sup>29</sup> https://wildpoland.com/biebrza-marshes/

<sup>&</sup>lt;sup>30</sup> https://www.degruyter.com/downloadpdf/j/tour.2014.24.issue-2/tour-2014-0012/tour-2014-0012.pdf

knowledge and people's own time) within the local community will be required to achieve delivery of sites and activities on which to build the wildlife tourist market.

This will require appropriate organisational structure within which project activity can sit. It will require leadership and drive, and this is, arguably, best achieved through appointment of a knowledgeable, credible professional to lead and develop the project activities — they would need to have knowledge and skills of the global birdwatching community and have experience in project development and community engagement work as well as good communication skills including through online media.

Awareness raising and training will be needed to upskill the local communities, businesses and other stakeholders in the area in developing appropriate activities and venues for wildlife watching and the services these tourists need. This can be done both by direct training and by study tours and exchanges.

Table 10 strategic and cross cutting activities for the development of wildlife tourism on the SEW

	ACTION		ACTIVITY				
1	Capacity building & upskilling						
а	Establish a project group	i)	Project presentation, stakeholder workshop & plan				
b	Leadership action	i)	Project officer: Credible, knowledgeable and dynamic individual to lead				
		i)	tourism provider training events				
С	Training	ii)	Community wildlife awareness training - local area discovery days				
		iii)	stakeholder & community study tours to key demo sites				
2	Development of main s	sites	& resources				
a	Signature sites	i)	Site developments plans				
а	Signature sites	ii)	Delivery of site infrastructure				
b	Providing orientation, interpretation & activities	i) ii) iii)	Site information guide(s)  Develop events programme and guided wildlife watching opportunities  Produce online guide for birdwatching				
		iv)	Events programme including festival				
3	Marketing & promotio	n					
	Establish reputation and "buzz" about the area's wildlife	i)	Linkages to wider Clare wildlife tourism initiatives				
а		ii)	Message out to the wildlife watching community in UK +; promotion – Social media (e.g. birding trip reports), wildlife news services, BBC Winterwatch location, Sunday supplements, RSPB Nature's Home magazine, Birdwatch and Birdwatching magazines etc				
		iii)	Building "natural itineraries" - develop site guides and itinerary planner				
4	Long-term planning						

	Identifying the opportunities for hub site(s)	i)	work with communities to identify and plan a nature reserve style facility as a "hub" - develop a project concept and plan and seek funding – consideration to role of Cahiracon House and Pier
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**Development of main sites and resources** - The sites identified in section 6 can provide a focus but it will be important not to close down other opportunities also. These signature sites will need development however and these would ideally be community or enterprise led with support and facilitation potentially from a project officer and other professional help. A notable opportunity exists at Cahiracon House and pier which is dependent upon the development of this project concept by Clare County Council but has potential to contribute to wildlife tourism facilities in a number of ways

An important aspect of resource development will be the design and production of orientation materials and information. This should be derived from discussions within an umbrella group and delivered by a project officer in consultation with communities. Section 8 discusses some concepts around suggested approaches to information and interpretation.

**Marketing and Promotion** – This would lie central to the project. The area, even as it stands could attract some level of wildlife tourism by building a reputation for good wildlife experiences. The missing aspect is the awareness of the area among the wildlife watching, mainly birdwatching, community, particularly internationally.

This promotion can start domestically but should extend quickly to the relatively large and near market of the UK<sup>31</sup> and then more widely to the markets in the Netherlands, Germany, the Scandinavian countries and more widely in Europe. Promotion could be extended to the USA where the market for birdwatching is the largest in the world with over 18 million<sup>32</sup> Americans classing themselves as birdwatchers and the activity being viewed as one of the fastest growing recreational activities in the country.

Primary among the promotion would be developing accessible material through normal media channels that birdwatchers use. This would include:

Conventional media – achieving exposure through articles in magazines and features on television – opportunities to explore would be the site or regional guides in Birdwatch and birdwatching magazines, membership magazines of e.g. the RSPB<sup>33</sup> and VBN<sup>34</sup>

Social media – establishing a blog or blogs from local birdwatchers and the project itself, not least, dedicated Twitter and Facebook feeds and active promotion of these by a skilled social media user (cf. the project officer)

<sup>&</sup>lt;sup>31</sup> 2.85 million adults aged over 15 in Britain go birdwatching regularly or occasionally (Target Group Index, BMRB International 2004).from <a href="https://www.rspb.org.uk/birds-and-wildlife/wildlife-guides/birdwatching/the-birdwatchers-code/#Bp0AguzGQvEVxT0X.99">https://www.rspb.org.uk/birds-and-wildlife/wildlife-guides/birdwatching/the-birdwatchers-code/#Bp0AguzGQvEVxT0X.99</a>

<sup>32</sup> http://wsfrprograms.fws.gov/subpages/NationalSurvey/National Survey.htm

<sup>33</sup> https://www.rspb.org.uk/birds-and-wildlife/natures-home-magazine/

<sup>34</sup> https://www.birdlife.org/europe-and-central-asia/partners/netherlands-society-protection-birds-vbn

Social influencers and celebrities – finding opportunities to produce watchable media, associate with key influencers within the group e.g. David Lindo<sup>35</sup> or Chris Packham in the UK or Kenn Kaufmann<sup>36</sup> or Sharon Stiteler<sup>37</sup> in the US

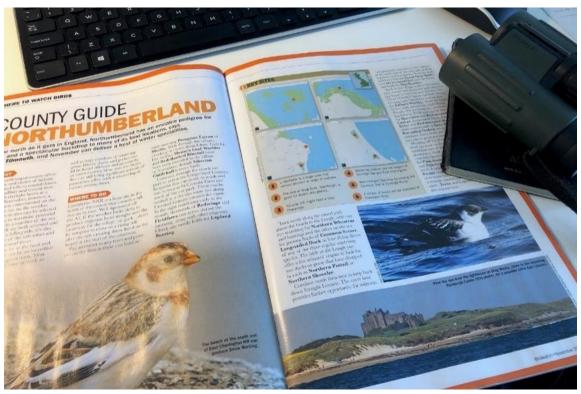


Figure 71 Birdwatching itineraries in magazines are often the place where birdwatchers get their idea for a visit to a new area from – producing and disseminating these is important in marketing the area

Blogs, articles and project social media should focus around identifying and building natural itineraries which can consist of clearly laid out days with where and when to go and what to expect to see. These can be combined with wider County Clare sites and should be produced by knowledgeable local birdwatchers or a project officer who can fill this role. Magazines in the UK welcome this content and have a relatively high readership.

Long-term planning – this in particular would focus on the development of one or major sites, akin to the style of major visitor focussed nature reserves. This would require potentially very significant funding and logistical planning but can be a major attraction. Exploring the potential for estuary-side visitor centres or the development of opportunities for wetland restoration in formerly reclaimed land – such sites can be a major tourism draw in themselves and are often the centrepiece for wildlife watching more widely<sup>3839</sup>.

and also, to the development of appropriate local support facilities and initiatives such as developing bespoke services within local accommodation providers such as drying rooms and local events and evening activities. There are good examples of this approach in other locations which appear to be

<sup>35</sup> https://theurbanbirderworld.com/

<sup>36</sup> http://birdingwithkennandkim.blogspot.com/

<sup>37</sup> http://www.birdchick.com/blog/

<sup>&</sup>lt;sup>38</sup> Lauder, A and O'Toole, L. 2017. Concept development for a landscape-scale wetland wilderness park in the mid-Shannon region <a href="https://drive.google.com/file/d/0ByqBVdHDt">https://drive.google.com/file/d/0ByqBVdHDt</a> vKV1ExODYwdVc0dUE/view

<sup>&</sup>lt;sup>39</sup> Shiel, A., et al, 2002, RSPB Reserves and Local Economies. RSPB unpublished report

successful such as the Bird Watching and Wildlife Club and its associated facilities in Speyside at the Grant Arms Hotel<sup>40</sup>

#### Phase 2 actions

Phase two actions should focus on the delivery of the larger projects – the delivery of a major nature reserve style facility with appropriate visitor provision. The benefits of nature reserves on local economies is shown in a number of studies<sup>33, 34</sup> but the key driver in this case is the potential for it to act as a hub site around which the further development of wildlife watching as a tourism draw would revolve. While this is not essential for project establishment it is important for further development and significant growth.

Developing this would lead to reputational enhancement and the potential to become a market leader in a national context.



Figure 72 State of the art nature centre - they can host thousands of visitors, education programmes and even conferences but design should be appropriate – this one at RSPB Saltholme is on a wetland site in an urban setting

There is significant potential for development of nature reserve style sites. I all cases these should be based around either existing wildlife hotspots or perhaps more significantly could be associated with habitat creation or restoration which would enhance the wildlife populations of the area.

A clear opportunity exists to achieve significant gains for climate adaptation through a response to sea-level rise by establishing a series of managed re-alignment<sup>41</sup> sites on areas which have been previously reclaimed for the estuary. While this is not without its difficulties, the challenges faced by landowners in these areas in keeping land drained which was formerly intertidal or more often saltmarsh, is significant. Achieving the restoration of sites, in many cases as coastal lagoons or similar wetlands provides a significant opportunity for both enhancing biodiversity and also providing a focussed wildlife resource to attract visitors. Examples of this are now becoming more

<sup>40</sup> https://www.grantarmshotel.com/

<sup>&</sup>lt;sup>41</sup> Esteves, L.S., 2014. Managed realignment: A viable long-term coastal management strategy? SpringerBriefs in Environmental Science. New York: Springer

common in e.g. the UK<sup>4243</sup> and the Netherlands. Some of these sites are now significant nature reserves in their own right and attract large numbers of visitors.

Cahiracon house offers an opportunity for a hub for projects and actions in relation to sustainable management of the estuary in future.

# Developing the visitor experience and interpretation

#### Visitor Experience

Developing a wildlife tourism initiative is not like developing initiatives within the general tourism market i.e. those made up of the market segments identified by Fáilte Irelands strategies. Wildlife tourists, like other tourists, enjoy nice accommodation, good transport links, good food and will occasionally delve into local history or cultural activities BUT they come for a strong almost singular reason, they come to see wildlife. Table 11 outlines some of the regular or general likes and dislikes

Table 11 The likes and dislikes of the wildlife watching visitor

able 11 The likes and dislikes of the wildlife watching visitor							
THE BIRDWATCHER (OR DOLPHIN WATCHER OR BUTTERFLY ENTHUSIAST ETC!)							
LIKES	DISLIKES						
<ul> <li>information before arrival not at the site</li> <li>is usually well informed</li> <li>can be self-reliant</li> <li>Is map dependent and needs to know where to go</li> <li>Will normally have or hire a car</li> <li>Will know what they want to see before they arrive</li> <li>Will have a passing interest in other local features</li> <li>Will be focussed on achieving their goal</li> <li>They like good signposting</li> <li>Bird hides and viewpoint seating is good</li> <li>Like access at all times of day</li> <li>Like local knowledge and being off the beaten track</li> <li>Ethical reasons to go – support a cause</li> </ul>	<ul> <li>Interpretation boards</li> <li>Leaflets given out locally unless they have a useful map included</li> <li>They get annoyed by poor or mis-named illustrations on boards and signs</li> <li>Hides that don't work as hides are not appreciated</li> <li>Hides that are too far from the best spots</li> <li>Zoos and bird collections (but sometimes their children like them!)</li> <li>Sites or hides or centres that do not open early and do not close late</li> <li>Signs of environmental damage and wildlife crime</li> </ul>						

of the wildlife tourist.

Sometimes they just want to tick as many species as possible on their lists, sometimes they want to see just one or two local specialities, sometimes they want to take a tour with a knowledgeable local guide and sometimes they want opportunities to take good photographs. Sometimes all of these things matter to a single individual. So, the most important things to establish to drive wildlife watchers to the site and some means of achieving these are good wildlife, good opportunities to see wildlife and good information about how to see it in advance of people arriving. The infrastructure and information needed on an individual site are much less important. Table 12 identifies a suite of

<sup>42</sup> http://ww2.rspb.org.uk/Images/medmerry\_tcm9-405348.pdf

<sup>43</sup> https://www.rspb.org.uk/reserves-and-events/reserves-a-z/freiston-shore/

visitor experience priorities in terms of the identified needs, appropriate approaches to provision of these needs and things to avoid.

#### Approaches to interpretation and information provision

Interpretive themes – the use of an interpretive theme across the whole area as a single unit is likely to be superfluous to need. The casual visitor is not the target audience for wildlife watching tourism and the active wildlife watcher, as described already, is motivated and knows what they will see and why it is there. More often static interpretation can detract from a visit as it rarely provides any assistance of value, beyond basic site information, and can often be poorly delivered – typically illustrating only common species and sometimes making errors in production of species images which are surprisingly common.

A more effective approach to interpretation for the active wildlife watcher is face-to-face interaction with site information givers such as wardens, volunteers and sometimes local people who bring local knowledge, unique stories, up to date information, personal interaction and authentic character to an interpretive experience. In the absence of a visitor centre or nature reserve this is most likely done through interaction with tourism providers, perhaps local wildlife guides, or at events run by communities or organisations e.g. guided walks.

Events form perhaps the most significant means of generating high quality interpretation and have a range of other high value benefits including creating material for promotion, generating a focus for communities, being mobile around the area to spread benefits and providing an opportunity for local people to benefit and interact with the project.

Table 12 Visitor experience priorities for wildlife tourism

NEED	RECOMMENDED APPROACH	AVOID		
Knowledge that the area is good for wildlife	Promotional activity (see section 7)	Promotion of wildlife that doesn't occur - seasonality and expertise important		
Good information about the area that they can get before the come	Web based guides, app or online publication	Large runs of general leaflets available locally		
Good signage	Maps available online and locally, good signage	No signs, no maps		
Simple and accurate Symbol or sign to identify site,		"busy" generalist interpretive signs, errors in interpretive material		
Up to date local wildlife information	Provide news feed to bird news website and social media, "what's about" notices in local pubs and cafes	Out of date information		
Hides and viewpoints	Unobstructed views in the right place and looking in the right direction	Hides with paths in front of them are not really hides! Hides facing directly south into glare and viewpoints where birds are scared away by people arriving		
Local knowledge Widespread awareness of wildlife news among tourism providers		Uninformed and unconnected hosts		
A good cause Local conservation projects supported by tourist income and publicised		Reputational damage from local environmental issues or wildlife crime incidents		

A typical range of example events that could be run using modest resources (a combination of a projects officer, local volunteers and community experts) but which would add value for wildlife watchers visiting the area are outlined in table 13

Table 13 Selection of example wildlife events as the core of interpretative provision

When	Event & focus	Location	Target audience	Lead
Mid-April - mid-May	Spring Bird migration Guided walk of 2+ hours to view spring migrating waders and other spring bird migrants locating first migrant bird arrivals	Shannon Town embankment or walk around Clonderlaw Bay	Wildlife tourists, community and local visitors	Project officer or local expert
May bank holiday	Dolphin watch & bird migration A drop-in session with suggested best times	Kilkerrin point	Wildlife tourists, community and local visitors	Project officer or e.g. IWDG <sup>44</sup> or local operator <sup>45</sup>

<sup>44</sup> Irish Whale & Dolphin Group

<sup>&</sup>lt;sup>45</sup> e.g. <a href="https://www.dolphinwatch.ie/">https://www.dolphinwatch.ie/</a>

August, September and October	"Waders on the move" Multi-site tour of best wader sites for early autumn migrant waders	All key sites — car or minibus-based tour — can be run 1-2 times per month	Birdwatching visitors	Project officer or local expert
October	Shannon Estuary bird migration festival (or tie in to a wider bird festival for the Clare coast??) Programme of guided walks and evening talks and family events over a long weekend in mid-late October — celebrating arrival of whooper swans and other waterbirds, wader migration and terrestrial birds like redwing and fieldfares arriving for winter as well as good chance of rarities	Various	Target visitors coming in specifically to the event	Various
December	Mid-winter wildfowl A targeted event to watch wildfowl particularly Whooper Swans	Islandavanna/Ing and Shannon	Birdwatching visitors	Project officer and/or guest leader

# Community and Socio-economic Benefits

In addition to the economic value of tourism to the local area, a community-based wildlife watching initiative would bring additional and highly significant benefits to the community and to individuals if structured in the right way. These benefits would be likely to include:

- lifelong learning experiences increased awareness and educational resources for schools, children and adults through the development of formal education programmes and events and through increased awareness and knowledge of wildlife as well as through discussion and engagement informally
- Training and upskilling offering new opportunities for local people through formal training and volunteering
- Environmental and amenity benefits a better living environment through enhanced access
  routes and viewpoints to see wildlife community with a vested interest in enhancing its
  surroundings and amenities in response to increased visitors but having the added value of
  improving facilities for local people
- Personal and community well-being engagement with nature can enhance mental and physical health<sup>46</sup>
- Community identity strengthening community identity and social cohesion by sharing common goals, aspirations and in working together to achieve enhanced wildlife spaces and wildlife viewingTo achieve these benefits it is important to deliver the project on a community led basis.

The sites themselves could form an important educational resource either for formal education for schoolchildren and for "lifelong learning" for those taking up wildlife watching for the first time or getting back into it. Having sites spread through the area with simple facilities often close to e.g. local primary schools give good opportunities for access. The potential for small enterprises or community initiatives to build an education program within their area based around these sites is significant.

The training aspects are of potential benefit to secondary, third level and adult learners – the use of sites by e.g. local colleges and institutes could provide a field-based learning and practical training opportunity.

The maintenance of the sites and the encouragement of local people to get out and use them contributes to health and well-being and in particular the mental health benefits of exposure to wildlife and nature are becoming more widely recognised. Perhaps this represents an opportunity for local health initiatives in conjunction with medical practises.

The opportunity to tie sustainable development and natural heritage management into future planned developments should be key. Notably the development of a maritime facility at Cahercon could be closely examined to build in added value for wildlife tourism development and in particular for the provision of training and upskilling in key knowledge and skills.

<sup>&</sup>lt;sup>46</sup> https://www.rspb.org.uk/our-work/conservation/projects/how-does-contact-with-nature-affect-our-wellbeing/

## Recommendations

Recommendations for taking this initiative forward are outlined below and grouped into those strategic recommendations which are required for the area as a whole and those which are on a site by site basis. These are derived from discussion and actions identified in sections 6 and 7

#### Area-wide/strategic recommendations

#### Recommendation 1 Promote the area as a wildlife watching destination

There is a "wildlife spectacle" and enough individual sites with development potential to form the basis of a high-quality birdwatching area. The promotion would need to develop around a series of key sites and would be best promoted in conjunction with sites elsewhere in the county to attract birdwatchers (mainly) form the UK and Europe and potentially further afield.

#### Recommendation 2 Focus on birds but add value with dolphins and Otter

Focus of the initiative should be mainly on birds, particularly waterbirds as these forms the biggest wildlife spectacle. The seasonality of the occurrence of the largest concentrations of waterbirds is an advantage in some respects as the peak periods fall out with the periods of peak general tourist numbers. The development of additional viewing areas for Bottlenose Dolphins and Otter in the immediate vicinity bring added value but with species like these, where their occurrence is more sporadic, guaranteeing good viewing is much more difficult.

#### Recommendation 3 Focus on key audiences in the UK and northern Europe

The largest and most likely audience for wildlife watching in this area is likely to come from the UK and potentially more widely within Northern Europe. The relatively limited species diversity in Ireland as a whole tends to limit its attractiveness to birdwatchers form North America. UK birdwatchers on the other hand, can see most of the species that occur within their own area but are likely to combine a visit to the SEW area with other birdwatching within Ireland and where speciality species and species diversity matter less but rather the all-round package of good birdwatching which might include rarities and will always include good numbers of some species which are scarcer in the UK like Chough or where viewing opportunities are hard to come by e.g. White-tailed Eagle. The draw of west coast seabird watching is an also potentially a powerful attraction and would be complementary with birdwatching along the SEW. These wider opportunities will help to differentiate the wildlife spectacle from that available within the visitor's own country.

# Recommendation 4 Recruit a key individual to lead on developing the reputation of the area as the key promotional tool

Area reputations take time to develop and to do this quickly will take focussed effort. The area is under watched by birdwatchers and thus "flies udert ha radar" of their perception. A project officer appointed, with the skills to develop birdwatching initiatives and the attendant reputation of the area through bird news social media feeds, magazine articles and liaison and facilitation with social

influencers in this sector would be the ideal way to proceed. Resource would be required to appoint someone and the lag time may be 1-2 years before full traction is achieved.

# Recommendation 5 Provide support for communities and tourism providers through training and awareness raising

Provide a programme of wildlife awareness events within each local community area, to include a walk to explore the local area for opportunities for wildlife watching. Provide a programme of workshops in marketing to the wildlife watching audience – co-ordinated by a project officer. The development of a maritime facility at Cahiracon could be closely examined to build in added value for wildlife tourism development and in particular for the provision of training and upskilling in key knowledge and skills.

#### Recommendation 6 Provide support for communities in site development

A project officer with project development skills would be ideally placed to build capacity and support for communities who are willing to develop sites within their own area. In particular ensuring that there is suitable awareness of Appropriate Assessment<sup>47</sup> requirements (all local projects will require screening and may require further levels of assessment dependent upon their scale and potential impacts) and co-ordination to ensure projects across the area are complementary.

#### Recommendation 7 Convene a communities/stakeholder workshop to present findings

A workshop to present the concepts and findings in this report should be held to further scope and develop the site-based and strategic recommendations.

# Recommendation 8 Scoping of potential for larger scale developments including climate adaptation

A scoping study to look at potential for managed realignment sites to enhance biodiversity, site condition, climate adaptation and provide for a visitor and community resource should be undertaken. Opportunities for sites with visitor facility potential should also be examined including that noted for Cahiracon House & Pier.

#### Site based recommendations

#### Area 1 site 1: Knock Pier

- 1. Good viewing from Knock pier promote as viewing site minimal infrastructure
- Create viewing at Rusheen point explore development of viewing hide to view bay and/or from point to achieve closer views of concentrations of birds in good light
- 3. Create walkway from pier to Rusheen Point careful screening to prevent disturbance
- 4. Minimal interpretation required consider signature bird sculpture at pier

#### Area 1 Site 2: Clonderlaw Bay

- 1. Viewpoint developed at roadside with parking area
- 2. Explore opportunity for additional enhanced viewpoint (screen or hide) as indicated on map
- 3. Review and explore other option in Clonderlaw Bay to create larger plan

#### Area 1 Site 3: Labasheeda Quay & shore

<sup>&</sup>lt;sup>47</sup> https://www.npws.ie/sites/defa<u>ult/files/publications/pdf/NPWS 2009 AA Guidance.pdf</u>

- 1. Develop roadside viewing from cars at points indicated care needed to guide people on avoiding disturbance by staying in cars or sticking to screened areas
- 2. Explore opportunity for enhanced viewpoint from screen or hide at Rinealon Point, Goleen Bridge and Boatman's Point
- 3. Labasheeda Quay needs little additional work other than promotion consider site signature bird sculpture

#### **Area 1 Site 4: Kilkerrin Point**

- 1. No viewing infrastructure required immediately Indicate viewing site by signature sculpture and delineated standing area
- 2. Parking area currently informal but adequate formalising may bring minor benefits
- 3. No screening required but raised viewpoint may be of value explore option to combine with access to Battery

#### Area 2 Kildysert to Clarecastle, Site 1: Kildysert Pier

- Enhanced viewing on existing footprint of old hide develop new and larger hide and a=screened access
- Good parking signed for hide access
- Site signature bird sculpture to indicate viewing area/access

#### Area 2 Site 2: Islandavanna

- Ensure road access is enhanced to include suitable passing places
- Develop parking area
- Two screened viewpoints bank top (one scree, one hide?) careful screening of access required

#### Area 3 Clarecastle - Shannon Airport, Site 1: Ing West

- Agree and enhance road access
- Explore development of parking area and one viewing hide

#### Area 4 Shannon Town - Bunratty Site 1 Shannon Town Estuary walks

- No major infrastructure requirement at Shannon Town promotion and consider signature sculpture to indicate good viewpoints
- Explore potential for larger scale visitor facility (as per Shannon Town plan)
- Explore access and viewing options at Eastern end screening and viewpoints
- Signed or indicated parking within Shannon Town for birdwatching access

#### **Additional sites**

- Review on a community by community basis through training and community group site visits
- Interaction with proposals for Cahiracon House & pier to ensure this development includes aspects of value for development of wildlife tourism, wildlife management and education in relation to wildlife.

# Appendices & additional resources

### Appendix 1 Special Protection Area - Site Synopsis SITE SYNOPSIS

SITE NAME: RIVER SHANNON AND RIVER FERGUS ESTUARIES SPA

**SITE CODE: 004077** 

The estuaries of the River Shannon and River Fergus form the largest estuarine complex in Ireland. The site comprises the entire estuarine habitat from Limerick City westwards as far as Doonaha in Co. Clare and Dooneen Point in Co. Kerry.

The site has vast expanses of intertidal flats which contain a diverse macro-invertebrate community, e.g. *Macoma-Scrobicularia-Nereis*, which provides a rich food resource for the wintering birds. Salt marsh vegetation frequently fringes the mudflats and this provides important high tide roost areas for the wintering birds. Elsewhere in the site the shoreline comprises stony or shingle beaches.

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Cormorant, Whooper Swan, Lightbellied Brent Goose, Shelduck, Wigeon, Teal, Pintail, Shoveler, Scaup, Ringed Plover, Golden Plover, Grey Plover, Lapwing, Knot, Dunlin, Black-tailed Godwit, Bar-tailed Godwit, Curlew, Redshank, Greenshank and Black-headed Gull. It is also of special conservation interest for holding an assemblage of over 20,000 wintering waterbirds. The E.U. Birds Directive pays particular attention to wetlands and, as these form part of this SPA, the site and its associated waterbirds are of special conservation interest for Wetland & Waterbirds.

The site is the most important coastal wetland site in the country and regularly supports in excess of 50,000 wintering waterfowl (57,133 - five year mean for the period 1995/96 to 1999/2000), a concentration easily of international importance. The site has internationally important populations of Light-bellied Brent Goose (494), Dunlin (15,131), Black-tailed Godwit (2,035) and Redshank (2,645). A further 17 species have populations of national importance, i.e. Cormorant (245), Whooper Swan (118), Shelduck (1,025), Wigeon (3,761), Teal (2,260), Pintail (62), Shoveler (107), Scaup (102), Ringed Plover (223), Golden Plover (5,664), Grey Plover (558), Lapwing (15,126), Knot (2,015), Bar-tailed Godwit (460), Curlew (2,396), Greenshank (61) and Black-headed Gull (2,681) - figures are five year mean peak counts for the period 1995/96 to 1999/2000. The site is among the most important in the country for several of these species, notably Dunlin (13 % of national total), Lapwing (6% of national total) and Redshank (9% of national total).

The site also supports a nationally important breeding population of Cormorant (93 pairs in 2010).

Other species that occur include Mute Swan (103), Mallard (441), Red-breasted Merganser (20), Great Crested Grebe (50), Grey Heron (38), Oystercatcher (551),

Turnstone (124) and Common Gull (445) - figures are five year mean peak counts for the period 1995/96 to 1999/2000.

Apart from the wintering birds, large numbers of some species also pass through the site whilst on migration in spring and/or autumn.

The River Shannon and River Fergus Estuaries SPA is an internationally important site that supports an assemblage of over 20,000 wintering waterbirds. It holds internationally important populations of four species, i.e. Light-bellied Brent Goose, Dunlin, Black-tailed Godwit and Redshank. In addition, there are 17 species that have wintering populations of national importance. The site also supports a nationally important breeding population of Cormorant. Of particular note is that three of the species which occur regularly are listed on Annex I of the E.U. Birds Directive, i.e. Whooper Swan, Golden Plover and Bar-tailed Godwit. Parts of the River Shannon and River Fergus Estuaries SPA are Wildfowl Sanctuaries.

# Appendix 2 Images of Main Bird Species Mentioned in Report

Mute Swan (Image copyright T. Melling)



Whooper Swan (Image copyright T. Melling)



**Greylag Goose** 



Light-bellied Brent Goose



Shelduck



Wigeon



Teal



Gadwall



Mallard



Pintail (Image copyright T. Melling)



Shoveler





Red-throated Diver



**Great Northern Diver** 



Great Crested Grebe (Image copyright T. Melling)



Cormorant Little Grebe



Little Egret



Grey Heron



Oystercatcher



Ringed Plover



Golden Plover



Grey Plover



Lapwing



Knot



Sanderling



Dunlin



Snipe (Image copyright T. Melling)





Whimbrel



Curlew (Image copyright T. Melling)



 $Redshank \ (Image \ copyright \ T. \ Melling)$ 



Black-tailed Godwit

### Greenshank



Black-headed Gull



Common Gull



Lesser Black-backed Gull



Turnstone



Great Black-backed Gull



Common Tern (Image copyright T. Melling)



### Appendix 3 Infrastructure examples

#### 1. Viewing screen



This viewing screen overlooks an estuary channel on an estuary in north east England. It is placed at the top of a high sea bank/sea defence and the access is via a path rising up the bund and directly to the screen so that people entering or using the hide are well hidden from birds and seals which occur in front of the screen. Features of relevance include, the open nature of the screen (not enclosed by full roof) and lack of seating both of which help to discourage anti-social behaviours. There is a rear wall which prevents silhouetting of people in the viewing slots and there are a range of slot heights for different user heights. The exposed, bank top position means the structure must be robust and has a metal frame to withstand high winds.



The screen above is on the approach to a bird hide and hides those approach from birds. In this case screening is a combination of woven willow fencing panels and a natural living willow hedge screen.

Any screening which uses natural cover like banks and hedgerows is preferable to creating new screen fences.



This birdwatching hide is well screened to each side using a woven hazel panel which helps to boost the screening provided by natural vegetation growth. The screen here needs some maintenance to be fully effective!



Where birds are already used to people or where only minimal screening is needed, the screens can act to signify the right place to view from and also provides a platform for interpretation. In such an exposed site this type of construction is extremely robust to high winds.



The slots can be places at variable heights for multiple user heights and abilities. Interpretation in this case is aimed at the casual visitor.



A hedge is maintained along this nature reserve path to provide a walking route which avoids disturbance to birds on the wetland to the right. Even a sparse hedge can be effective and often having a backdrop, as well as a screen, is important to avoiding moving silhouettes which can be seen through the screen.



This hide (left)has its door placed sensibly on the rear and the access path runs behind the hide which in itself provide screening of the approach.