

## Appendix 12.3

### Mammal Surveys



## Mammal Surveys

### A1 Introduction

Dixon.Brosnan Environmental Consultants assessed the impact of the proposed Ringaskiddy Resource Recovery Centre at Ringaskiddy, County Cork on mammals utilising the Indaver site and the coastal habitats in proximity to it. The information in this report was used to determine the impacts on mammals in **Chapter 12** (*Biodiversity*) of the EIS.

### A2 Methodology

A desktop review was carried out to identify designated Natura 2000 sites in the surrounding landscape and to assess information from other surveys in this general area. The closest SAC is the Great Island Channel SAC, which is 5.6km from the proposed development site. The closed proposed Natural Heritage Area is the Lough Beg pNHA (Site code 001066) which is located c.0.5km south of the study area. No mammal species are listed as qualifying interests for either of these designated sites. Based on the characteristics of the Indaver site and the results of previous surveys, it was considered necessary to carry out more detailed surveys for otter, badger and bats.

### A3 General site characteristics

The Indaver site runs east-west parallel to the L2545 Ringaskiddy Road, an extension of the N28, which leads to Haulbowline Island and runs along the northern boundary of the site. To the south, the study area is bordered by agricultural land dominated by intensive pasture. A Martello Tower is located on the crest of a small hill (43m approx.) in agricultural land to the south of the study area.

To the east, the site reaches to the edge of the Cork Harbour West Channel that separates the mainland from Spike Island. The shoreline here is characterised by shingle beach with steep earthen cliffs. To the west, the site adjoins agricultural land (tillage and pasture) and a small group of residential dwellings.

The proposed development area is located in the eastern section of the study area. A small strip of ground with a footpath will be left in place between the eastern boundary of the development site and the coast to facilitate recreational users. A rectangle of land, used as a public car park, to the northeast of the site is not included in the development area, but is included in the study area.

Due to an absence of agricultural management, a high proportion of the study area, including the proposed development site, is covered in scrub/immature woodland and/or semi-natural grassland which has become more dominant over time.

DixonBrosnan carried out a range of surveys at the proposed development site in 2024 and 2025 as well as previously in 2008, 2010, 2014, 2015, 2018 and 2019. The following habitats were recorded within the Indaver site in 2019: Hedgerow WL1/Treelines WL2, Dry meadow and grassy verge GS2/, Scrub WS1. Scrub WS1/Immature woodland WS2.

### A4 Otter surveys

The proposed development site is located in proximity to the coast and a beach nourishment scheme is proposed. Thus, potential impacts on otter, which is relatively common in Cork Harbour, could occur.

Otters, along with their breeding and resting places are protected under the provisions of the Wildlife Act 1976, as amended by the Wildlife (Amendment) Act, 2000. Otters have additional protection because of their inclusion in Annex II and Annex IV of the Habitats Directive.

Otters are also listed as requiring strict protection in Appendix II of the Berne Convention on the *Conservation of European Wildlife and Natural Habitats* and are included in the Convention on International

Trade of Endangered species (CITES). Although rare in parts of Europe, they are widely distributed in the Irish countryside in both marine and freshwater habitats.

Otters are solitary and nocturnal and as such are rarely seen. Thus, surveys for otters rely on detecting signs of their presence. These include spraints (faeces), anal gland secretions, paths, slides, footprints and remains of prey items. Spraints are of particular value as they are used as territorial markers and are often found on prominent locations such as grass tussocks, stream junctions and under bridges. In addition, they are relatively straightforward to identify and these signs of Otter presence are considered an acceptable basis for Otter surveys.

Otters occasionally dig out their own burrows but generally they make use of existing cavities as resting placing or for breeding sites. Suitable locations include eroded riverbanks, under trees along rivers, under fallen trees, within rock piles or in dry drainage pipes or culverts, etc. If ground conditions are suitable, the holt may consist of a complex tunnel and chamber system. Otters often lie out above ground especially within reedbeds where depressions in the vegetation called “couches” are formed. Generally, holts or resting areas can be located by detecting signs such as spraints or tracks. In contrast natal holts which are used by breeding females can be extremely difficult to locate. They are often located a considerable distance from any aquatic habitats. In addition, natal holts are usually carefully hidden and without obvious sprainting sites. Otters do not have a well-defined breeding season.

Signs of otter activity were recorded during surveys for the Ringaskiddy Port Redevelopment EIS (Port of Cork/RPS 2014). These included the following:

- Signs of otter were noted along the ADM Training Wall, including old spraints and an active trail
- Otter activity was widespread at the base of the ADM Jetty.
- A single sighting of an otter leaving the eastern side of the ADM Training Wall
- A large amount of fresh spraint and three well-used sprainting sites were identified at the point where the existing ADM Jetty leaves the land.
- The spaces between boulders to the north of the existing ADM Jetty are extremely large and well-connected right down to low water level. An otter couch is likely present within these boulders.
- The most likely holt location was identified off-site, further to the west of Paddy's Point, where boulders were larger. This off-site area was surveyed in 2014 and a potential temporary holt/lying-up site was identified here within rocks at sea level.

It was noted in 2012 that, despite human disturbance at Ringaskiddy East (the area being regularly used for boating, swimming and dog walking), evidence of otter presence was widespread along the shoreline; however, a holt was not identified.

It is noted that these areas are a considerable distance from the proposed development site. Paddy's Point and the ADM jetty are located approximately 550m and 1500m respectively from the Indaver site boundary.

Surveys by DixonBrosnan in 2014, 2015, 2018, 2019, 2024 and 2025 did not record the presence of otter within a radius of 150m from the study area, although some sprainting activity was recorded 300m north of the site in 2015, 2019 and 2024 (See **Figure 1**). It is noted that the upper shore of Gobby Beach, which adjoins the site, is extensively used by the general public, and that usage is highest in proximity to the car park that is located immediately adjacent to the proposed development site. These circumstances, particularly where dogs are also present, may reduce usage of the area by otter. Whilst otters may use the shore areas in proximity to the proposed development site on occasions, no holts were noted in this area, nor are they likely to occur in the area affected by beach nourishment works in the future.



**Figure 1. Showing closest signs of otter activity (sprainting site).**

## **A5 Bat surveys**

All bat species in Ireland are protected under the Wildlife Act 1976, as amended, and the Habitats Directive and Irish implementing legislation. Ireland is also a signatory to the Bonn convention (Convention on the conservation of migratory species of wild animals, Bonn 1979) and the Bern convention, 1982 (The Convention on the Conservation of European Wildlife and Natural Habitats), and it has a commitment to the “Eurobats” agreement (Agreement on the Conservation of Bats in Europe, 1991).

Bat surveys were undertaken in 2012 for the Ringaskiddy Port Redevelopment EIS (Port of Cork/RPS, 2015). Three bat species were recorded; Common Pipistrelle, Soprano Pipistrelle and Leisler’s Bat. Both Pipistrelle species were recorded foraging within woodland areas at the base of the ADM training wall and jetty and along hedgerows, treelines and scrub habitats in Ringaskiddy East, 1500m from the Indaver site.

Bat activity was assessed at the DePuy site in 2011, in relation to the development of a wind turbine. This site is located approximately 240m south of the Indaver site. Three species of bat were recorded within the DePuy site, namely Common Pipistrelle, Soprano Pipistrelle and Leisler’s Bat. However, activity within the site was relatively low. (DePuy Ireland, 2011.) Bat surveys were also carried out at the DePuy site in 2015. Only Common Pipistrelle was recorded during both surveys (DePuy, 2015).

Dixon.Brosnan carried out night-time bat activity surveys using standard heterodyne bat monitors (Batbox III and Batbox Duet) at different areas within the site in May 2008. The survey recorded foraging Common Pipistrelle and commuting activity at different areas within the site, including the hedgerows/treelines along northern, western and southern site boundaries. As expected, most activity occurred close to better quality hedgerows. No other species were detected.

DixonBrosnan resurveyed the site in September 2014 and August 2015. A transect was walked along the perimeter of the site and bat activity monitored using a Bat Box Duet heterodyne/frequency division detector. The following activity was recorded (See **Figure 2**):

- Common Pipistrelle were recorded feeding along the hedgerow which runs along the southern boundary (2014 and 2015).
- Common Pipistrelle feeding along the southern boundary in the southwest corner of the site and along the woodland boundary. (2015).
- Soprano Pipistrelle fly-over along the shoreline boundary (2015)

- Common Pipistrelle flyover/feeding over the proposed development site close to the boundary with Hammond Lane (2015).

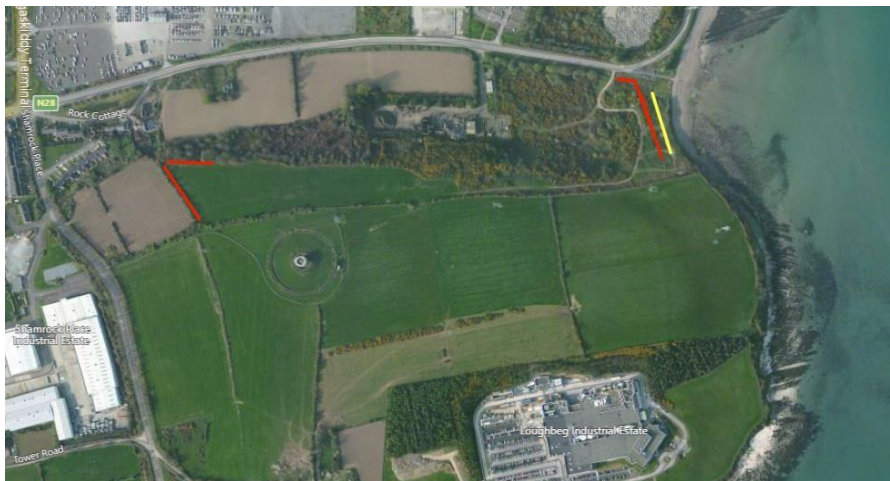


**Figure 2 showing general bat activity patterns 2014 and 2015. Red indicates Common Pipistrelle; Yellow indicates Soprano Pipistrelle**

The highest level of activity recorded in 2014 and 2015 was along the external hedgerow along the southern boundary and the scrub/woodland in the western section of the site. These results are broadly similar to those obtained in 2008. The surveys found that bat activity was low, with only limited Common and Soprano Pipistrelle activity recorded. Only small numbers of individuals were recorded.

DixonBrosnan resurveyed the site in May 19, 2019. Transects were walked along the perimeter of the site and through accessible internal areas of the site. Bat activity monitored using a Bat Box Duet heterodyne/frequency division detector and Echo Meter Touch 2 PRO bat detector. (See **Figure 3**). The following were recorded:

- Foraging by Common and Soprano Pipistrelle along the shoreline boundary (2019)
- Soprano Pipistrelle foraging along southwestern boundary (2019)



**Figure 3. Showing general bat activity patterns. Red indicates Common Pipistrelle, Yellow indicates Soprano Pipistrelle 2019.**

Surveys by DixonBrosnan in 2014, 2015 and 2019 indicated that there were no suitable roosting sites for bats within the Indaver site boundary. There are no structures which could potentially support roosts, and the trees are all relatively young and/or lack the structural complexity (i.e. rotten wood, holes etc), that would provide suitable roosting sites for bats. The EIS prepared for the Hammond Lane development (Doherty Environmental, 2012) likewise did not record any high value roosting habitat. In conclusion, the hedgerows and treelines on external boundaries are of some local value for feeding bats, but do not provide roosting habitat.



Bat surveys were carried out on the 15<sup>th</sup> and 19<sup>th</sup> September 2022 by walking transects through the site, along the shoreline and along external boundaries. Surveys were carried out using Elekon Batloggers, Ecotouch pro and a Haleon thermal imaging camera.

Leisler's bat were recorded early in the survey period with a small number of bats recorded foraging and commuting. Small numbers of Common and Soprano Pipistrelle were recorded foraging later in the survey period. Bat numbers were relatively low with most activity recorded along the treeline which adjoins the L2545 road, adjoining areas of scrub and along the hedgerow which forms the southern boundary the site.

Bat surveys were carried out on the 8<sup>th</sup> and 16<sup>th</sup> September 2024 by walking transects through the site, along the shoreline and along external boundaries. Surveys were carried out using Elekon Batloggers, and Ecotouch pro and a Haleon thermal imaging camera.

An assessment of potential roosting habitat was carried out and although some of the trees within the site are more mature, no habitat suitable for roosting bats were detected. It is noted that some localised changes along the boundary of the L2545 road may have led to localised changes in commuting patterns in the local landscape. It is also noted that light levels in this general area are generally high due to lighting associated with the Hammond Lane facility as indicated in **Plate 1**.



**Plate 1. High night time light levels**

No significant changes in activity patterns were recorded in respect of Common Pipistrelle and Soprano Pipistrelle which were most common along the hedgerow along the southern boundary and on the periphery of the scrub and treeline on the lower sections of the site. Foraging by Soprano Pipistrelle was also detected along the upper shoreline where it adjoins the proposed development site. In general activity levels were low with relatively low levels of activity recorded.

Levels of activity by Leisler's was generally relatively low with sporadic signals indicative of a small number of bats. Signals were most numerous in the early part of the survey and may be indicative of bats commuting throughout the wider landscape. Overall activity levels were low.

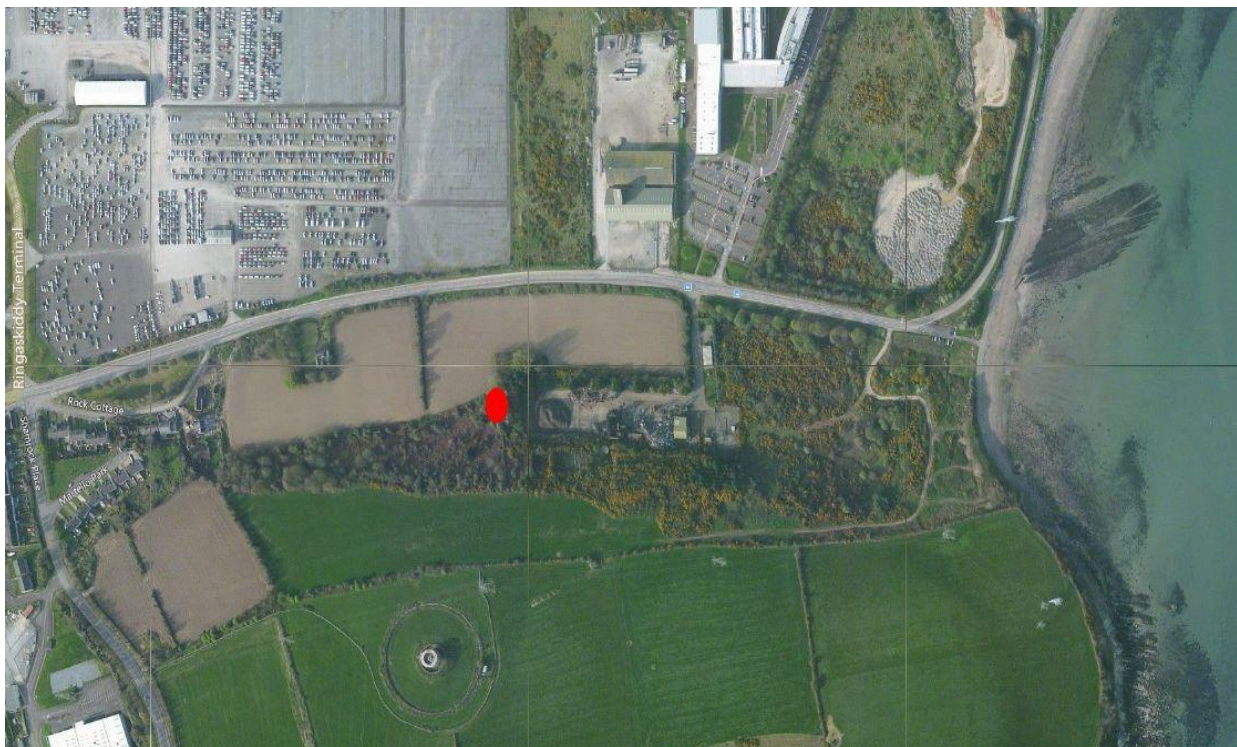
Foraging by Brown Long Eared bat was recorded within scrub/woodland habitat in the north east corner of the site. The signals were indicative of one individual. It is noted that in the absence of development a natural succession process from scrub to woodland is taking place. Brown Long Eared Bat generally favours woodland habitat and therefore this site has become of more value for this species. No roosting habitat for this species was recorded and the site is considered of low value for this species.

## A6 Badger surveys

Badgers and their setts are protected under the provisions of the Wildlife Act 1976, as amended and it is an offence to intentionally, knowingly or unknowingly kill or injure a protected species, or to wilfully interfere with or destroy the breeding site or resting place of a protected wild animal. Badger setts are formed by a complex group of interlinked tunnels, and therefore works in proximity to setts can potentially cause damage. The presence of badgers is indicated by readily identifiable signs including prints, trails, latrines, feeding signs and trapped hairs.

A survey of the study area in 2001 recorded an active badger sett to the west of the Hammond Lane facility (See **Figure 4**). A survey by DixonBrosnan in 2008 found that this sett remained in active use although the adjoining field had been changed from pasture to arable land. Evidence of activity was recorded at this sett, with one large latrine located in close proximity to an active burrow entrance. A short distance to the west of the active sett, there were further entrances. A disused sett entrance was also located to the south of the active sett, and signs of badger activity including tracks, feeding signs and a latrine were recorded in pasture in the southern section of the site.

A survey in 2012, during the preparation of the EIS for the Hammond lane facility (Doherty Environmental, 2012), did not record any signs that this sett was active although badger activity was noted in dense bracken further west within the Indaver site. Surveys in 2014, 2015, 2018 and 2019 by DixonBrosnan did not record any signs of badger activity, and the previously identified sett is no longer in active use (See **Figure 3**). The reasons for this change are uncertain. However, it is possible that over time the site has become less valuable for badgers due to the incremental change from large areas of grassland to a predominance of scrub, which is of less value as feeding habitat. As the original recorded sett was small it may have been a subsidiary sett which was used sporadically as an adjunct to a main sett. Any impacts on badger from the proposed development are predicted to be negligible.



**Figure 4. Location of badger sett recorded in 2001 and 2008 denoted by red circle.**

An initial visual survey of the site was carried out on the 10<sup>th</sup> of October 2022. There was no obvious signs of recent activity such as fresh spoil, latrines, hairs etc around the sett location. Some lightly worn tracks in proximity the sett were indicative of possible sporadic badger activity. The sett entrance, which located in an area of scrub/woodland, was choked with fallen leaves suggesting no recent usage (See **Plate 2**). Therefore, the primary purpose of the survey was to determine if the sett is used sporadically as an annex or subsidiary sett.



A trail cameras were placed in situ at the disused sett from November 12<sup>th</sup> to 29<sup>th</sup> November 2024 and 1<sup>st</sup> May to 29<sup>th</sup> May 2025 .



**Plate 2. Scrub/woodland on the periphery of the Hammond Lane facility. Elder, which often grows near badger setts, grows around the periphery of the sett entrance.**



**Plate 3. Sett entrance choked with leaf litter with no signs of active usage**

In the period from the 12<sup>th</sup> November to the 29<sup>th</sup> November 2024, activity was recorded on two dates namely the 23<sup>rd</sup> and 24<sup>th</sup> November. A badger was recorded entering and emerging from the sett entrance on both dates (Plate 4 and 5).



**Plate 4. Badger entering sett 23<sup>rd</sup> November 2024**



**Plate 5. Badger entering sett 24<sup>th</sup> November 2024**

It is also noted that one badger was recorded foraging along the shoreline which adjoins the shoreline on the 18<sup>th</sup> September 2024. This badger was observed during a bat survey using a thermal imaging camera.

In the period from 1<sup>st</sup> May to 29<sup>th</sup> May 2025 a badger was recorded at the sett entrance on the 28<sup>th</sup> May. No other badger activity was recorded during the survey period (See **Plate 6**). A visual survey of the site on 7<sup>th</sup> August 2025 did record any additional badger setts or signs of badger activity.



**Plate 6. Badger close to sett entrance on 28<sup>th</sup> May 2025**

It is noted that the surveys in 2024 and 2025 were carried out during a period of significant disruption within this area, due to the construction of the M28 road. Construction works were ongoing throughout the 2024 and 2025 survey periods. As part of the mitigation for the M28 works, artificial setts and a badger underpass have been created immediately to the west of the Indaver boundary where it adjoins the new road. A survey of the artificial setts did not indicate any evidence of usage.

Notwithstanding the high levels of disturbance associated with road construction, trail camera surveys indicate that a badger social group is still present within this general area. The sporadic usage of the existing sett within the proposed development site boundary indicates that this is a subsidiary or annex sett which is used sporadically. There is no evidence to indicate that this is a main sett which is continual usage by this badger social group. It is noted that the location of the main sett is unknown at this point and given that badger territories can cover a wide area it is not considered practical or necessary to determine its exact location. It is also noted that as road construction works are ongoing, the high levels of disruption may be continuing to impact on the distribution and behaviour of badgers in this general area.

Therefore, additional surveys (trail camera/visual surveys) will be carried out prior to commencement of proposed development site works. This will allow a more accurate and up-to-date picture of how badgers are using the site once road construction is completed and when usage of the road commences. Once construction has been completed, there may be a change in the distribution of badgers within the site and the adjoining area. This may include the utilisation of the new artificial sett and underpass.

Overall the site provides some low value potential foraging habitat for badgers within the mosaic of scrub/woodland and grassland habitats. No signs of foraging was recorded in grassland areas, which are dominated by a tall sward and are sub-optimal for badgers. One badger was recorded along the shoreline and this may provide important foraging resources for this social group in the context of the local landscape.

## **A7 Other mammals**

### **A7.1 Seals**

Harbour Seal and Grey Seal are listed on Annex II of the Habitats Directive, and both are known to occur within Cork Harbour. There are no known haul-out sites for Grey Seal in Cork Harbour. Generally, this species uses more exposed sites although Grey Seals are known to feed within the overall Cork Harbour.

Haul-out sites for harbour seals may occur inshore, for example on estuaries, coves, islands etc. and this species tends to forage within a relatively short distance of such haul-out sites. Over half of foraging trips may be within 5km of the haul-out sites. Although there is no evidence for significant haul-out sites or breeding sites in Cork Harbour, there are several small haul-out sites in this general area, as noted below. The beach adjoining the proposed development site is not of value as a haul-out site due to high levels of disturbance by walkers and dogs.

A small haul-out site near Haulbowline Island (RPS, Port of Cork, 2014)

An adult Harbour Seal occasionally uses a partially submerged tyre to haul-out on at mid-high tide approx. 10m from the shoreline adjacent to the National Maritime College in Ringaskiddy

Approximately six Harbour Seals were recorded using the slipway at the National Maritime College (DixonBrosnan, 2014, RPS/Port of Cork, 2014)

During winter bird counts by DixonBrosnan in 2014/2015, four Harbour Seals were recorded in the channel between the mainland and Spike Island

DixonBrosnan recorded a small haul-out of four seals near Paddy's Point (South of Haulbowline Island) in May 2025.

Although there is nothing to indicate that the area in the immediate vicinity of the proposed development site is of particular value for seals, it is within the feeding range for local Harbour Seal populations. During the 2015 surveys seals were recorded moving through the channel between Ringaskiddy and Spike Island.

### **A7.2 Cetaceans**

Species that have been recorded by the Irish Whale and Dolphin Group within the overall harbour include Bottlenose Dolphin (*Tursiops truncatus*), Harbour Porpoise

(*Phocoena phocoena*), Common Dolphin (*Delphinus delphis*), Risso's dolphin (*Grampus griseus*), Killer Whale (*Orcinus orca*) and Minke Whales (*Balaenoptera acutorostrata*). Of these, it is the smaller species such as Harbour Porpoise which are most likely to occur in the channel offshore from the site.



### **A7.3 Other mammals**

Pygmy Shrew, Hedgehog and Stoat were not recorded but may be present but were not recorded during surveys. Rabbits are numerous and signs of fox were noted on site. Small mammal surveys in the study area in 2001 and 2008 recorded the presence of Field Mouse, Bank Vole and Brown Rat. Such species are common in the Irish countryside.

### **A8 Conclusions**

No otter activity was recorded in proximity to the Indaver site although foraging by otter could potentially occur within the channel which adjoins the site.

Usage of the badger sett within the Indaver site boundary is sporadic and there are high levels of local disruption associated with road construction. However, the data from the trail camera survey indicates that a badger social group remains active within the wider landscape and that the sett within the Indaver site boundary is sporadically used as an annex or subsidiary sett.

Some limited usage of the Indaver site by Leislars Bat, Common Pipistrelle, Soprano Pipistrelle bat and Brown Long Eared bat was recorded. Although there is nothing to indicate that the area in the immediate vicinity of the Indaver site is of particular value for seals, it is within the feeding range for local Harbour Seal populations that forage within this general area

### **A9 References**

Ringaskiddy Port Redevelopment EIS (Port of Cork/RPS, 2014)

DePuy (Ireland) Wind Energy Project Environmental Impact Statement April 2011 Hammond Lane Metal Co, Ringaskiddy EIS Flora and Fauna Chapter (Doherty Environmental 2012).

M28 Cork to Ringaskiddy Project Environmental Impact Statement Volume 2 (2017)