



Aquaculture Licences Appeals Board

Technical Advisor's Report

Appeal(s) Reference No:

1. AP25/2019

Final Version

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Summary Description

Description:	The cultivation of Pacific Oysters using bags and trestles on a site of approximately 34.324 hectares at Loughros Mór Bay, Co. Donegal.
Licence Application	
Department Ref No:	T12/405A
Applicant:	Francis Gallagher, Derryness, Ardara, Co. Donegal
Minister's Decision:	Refuse application for an Aquaculture Licence and Foreshore Licence
Appeal	
Type of Appeal:	Appeal against the decision by the Minister for Agriculture, Food and Marine to refuse to grant Aquaculture and Foreshore Licences for the cultivation of Pacific Oysters at Loughros Mór Bay, Co. Donegal.
Appellant(s):	AP25/2019
Observers:	N/A
Technical Advisor:	Altamar, Marine and Environmental Consultants
Site Inspection:	22 nd July 2020

1.0 General Matters / Appeal Details

This report constitutes a complete account of technical advice and information provided to the Aquaculture Licence Appeals Board (ALAB) to support its assessment of the appeals submitted in respect to the refusal to grant a licence application for the cultivation of Pacific Oysters at a site in Loughros Mór Bay, Co. Donegal. Details of the application and its respective appeal(s) will be provided in the following sections.

1.1 Appeal Details & Observer Comments/Submissions

Appeal Number	Date Received by ALAB
AP 25/2019	18 th November 2019

Appeal Number	Location of Site Appealed
AP 25/2019	The foreshore of Loughros Mór Bay, Ardara, Co. Donegal.

1.2 Name of Appellant(s):

Appeal Number	Appellant	Address
AP 25/2019	Francis Gallagher	Derryness, Ardara, Co. Donegal.

1.3 Name of Observer(s):

No official observations outside of Appellants/Applicants responses were submitted/received.

1.4 Grounds for Appeal

The grounds for appeal for each Appellant are summarised below.

Appellant	Francis Gallagher	AP25/2019
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Appeal reference number AP25/2019 relates to application T12/405A which was refused a licence by the Minister. The following are the grounds for refusal as stated by the Minister:

The proposed site is unsuitable for aquaculture for reasons including the high elevation of the site, water quality concerns and long exposure times of oyster stock to the air;

- The high elevation of the proposed site relative to the bay would result in poor growth and survival conditions for the oysters. This is due to long exposure times of oyster stock to the air when the tide goes out. The oysters would be uncovered for approximately four hours per tide cycle leading to food safety concerns and high mortality rates;
- The primary outfall discharge point for the Ardara sewage scheme is proximate to the site (Coordinates 171679, 391662). The presence of a town sewage outfall in close proximity to the proposed aquaculture raises significant water quality and food safety concerns due to the enclosed nature of the bay and the continuous discharge from the outfall. The centre of Site T12/405A is within 450m of the outfall location. As the outflow is not restricted to high tides, effluence remains in the bay for longer periods;
- Possible scenic impacts from the proposed aquaculture are considered moderate. Views may be affected from the Wild Atlantic Way;
- Parts of the site extend into the low water branch of the Owenea River and would potentially impede salmonid migration upstream for spawning;
- Public access to recreational and marine leisure activities may be hindered by this project;
- The proposed site is not located within a designated Shellfish Growing Waters Area. Oysters in this area are currently not classified under Annex II of EU Regulation 854/2004;
- Taking account of the issues raised during the public and statutory consultation phase.”

The Appellant is also the Applicant and they are seeking to appeal the decision of the Minister to refuse, having offered the following reasons as part of their appeal. It should be noted that the concerns raised in appeal AP25/2019 are almost identical to those raised in AP24/2019.

Substantive Issues

1. Oyster growth/Site locations

The proposed site T12/405A contains suitable areas for trestle and bag deployment especially on the lower parts beside the channel, where there is stable, hard substrate encompassing >50% of both blocks from Low Water Spring Tide upwards. In addition, the area has the exact "same exposure profile as all the farms in existence in Loughros Beag".

2. Water quality and Shellfish monitoring

Regarding the issue of the Ardara discharge pipes, the Appellant claims that the discharge pipes are "currently covered by sand bank at south corner of T12/405A and therefore could not be discharging continuously at this point". Furthermore, an EPA Discharge Audit from May 2019 "confirms stable water quality and compliance under discharge licence conditions". The Appellant also argues that shellfish farms are monitored "monthly for Faecal Coliform and weekly for biotoxin" and that such matters are the responsibility of the SFPA and, therefore, they are the appropriate body to determine public risk.

3. Visual impact

The Appellant claims that the proposed sites are "1.2km from any point on the R251 or N56", therefore will not impact on any views from "the discovery point at Glengesh", which is cited as an issue by Donegal County Council. It is also claimed that it is erroneous to "assign equally high sensitivity to the entire Atlantic Way, which is 2,500km in length and gives access to a vast range of environments". In this regard, the inclusion of oyster trestles would not significantly impact the overall experience of the Wild Atlantic Way offer. It is also claimed that "it would be virtually impossible to see any trestles deployed on lower to mid parts of any applications from the Wild Atlantic Way even while exposed at low tide" and that oyster farms "are fully covered by water for 80% of daylight time with no floating structures involved".

4. Salmon fishery and migration

Due to the reducing number of salmon returning to Irish rivers the Appellant claims that salmon farming is unlikely to "*ever be allowed recommence*" in an SAC that has salmon listed as a qualifying species. Considering this, there is an "*opportunity to replace this tradition with an entirely renewable and sustainable source of seafood*", as offered by oyster farming. The Appellant also notes that the IFI did not cite any issues or conflicts with salmon as potentially arising from the proposed sites.

5. Access by boat

The Appellant proposes to use a specially designed oyster boat to access proposed site T12/405A, which means there is no need to use any local piers in the bay as "*the boat has a 0.5m draft fully loaded*".

6. Public road access

The Appellant claims that public access will not be hindered in any way as an alternative route "*on the Eastern side*" is already utilised for agricultural uses and is "*owned solely by the applicant...and can be used in any way to accommodate access for oyster farming*".

7. Recreational uses

The Appellant states that there will be "*no impact on recreational activities or access to the shore by oyster farming activity*". They claim that local recreational activity and commercial activities occur "*almost*

exclusively at the western end of Loughros Mór”, while Tramore Strand and Rosbeg, which are the “busiest tourist areas” are located 6-7km northwest of “the mouth of Loughros Mór Bay”.

8. Shellfish designation

While the Appellant acknowledges that the area is not a Shellfish Growing Waters Area, they claim that such a designation is *“not a prerequisite for licencing”*. The inclusion of the proposed sites on the SFPA’s sampling programme would enable designation.

Non-Substantive Issues

1. Economic Importance

The Appellant claims that the proposed activity is vital as it will help them to diversify their operations and ensure they can continue to generate income. It is further claimed that this will not only help them, but also *“provide much needed local employment and a boost to other businesses whom would benefit from extra spending on local resources”*.

2. Public consultation issues

The Appellant argues that issues raised during the public consultation can be *“inaccurate and sensationalist”*. They are concerned that by acknowledging public concerns the Minister is allowing *“aggressive Nimbyism to masquerade as scientific fact or environmental concern”* and that such submissions are *“at complete variance with the experiences on the ground”*.

1.5 Minister’s Submission

Section 44 of the Fisheries (Amendment) Act 1997 part 2 states that:

“The Minister and each other party except the Appellant may make submissions or observations in writing to the Board in relation to the appeal within a period of one month beginning on the day on which a copy of the notice of appeal is sent to that party by the Board and any submissions or observations received by the Board after the expiration of that period shall not be considered by it”.

No submissions are enclosed from the Minister in the light of appeals.

1.6 Applicant Response

The Applicant may submit a response to appeal submissions under the provision set out in Section 44(2) of the Fisheries Amendment Act 1997 which states:

“The Minister and each other party except the Appellant may make submissions or observations in writing to the Board in relation to the appeal within a period of one month beginning on the day on which a copy of the notice of appeal is sent to that party by the Board and any submissions or observations received by the Board after the expiration of that period shall not be considered by it.”

There are no recorded responses from the Applicant.

1.6.1 Additional Submissions/Responses

One additional submission was received in relation to AP25/2019 and is summarised below.

Submission 1 – Owenea Angling Club

A submission was received by the Owenea Angling Club seeking that the decision to reject a licence be upheld as *“oyster trestles in this area would totally impede and obstruct our sea trout fishing in the estuary, including night time sea trout fishing”*. Furthermore, the Respondents claim that they *“have a lease agreement with IFI on this fishery and rely on revenue from estuarine sea trout fishing”*, therefore oyster trestles cannot be placed where they have a right to fish.

2.0 Consideration of Non-Substantive Issues

Non-substantive issues raised in each appeal case have been compiled and responded to in the following table.

AP25/2019

#	Issue	Comment
1	Economic Importance	<p>The Appellant argues that the proposed activity would enable their company to generate revenue that would sustain both continued operation and <i>"provide much needed local employment and a boost to other businesses whom would benefit from extra spending on local resources"</i>.</p> <p>This Technical Advisor Report relates specifically to an application appeal and such a statement can have no bearing on the technical review process.</p>
2	Public Consultation Issues	<p>The Appellant claims that issues raised during public consultation by observers and the public are <i>"inaccurate and sensationalist"</i> and completely at odds with <i>"experience on the ground"</i>, therefore they should be dismissed by the Minister.</p> <p>Such claims cannot be verified and a review of such is not within the remit of this Technical Advisor Report.</p>

3.0 Oral Hearing Assessment

In line with Section 49 of the Fisheries Amendment Act 1997 an oral hearing may be conducted by the ALAB regarding the license appeals. A request for an oral hearing was submitted by one of the Appellants in the cases being considered as part of this Technical Advisor Report.

Appeal No.	Site Ref No.	Request for Oral Hearing
AP 25/2019	T 12/405A	No

Having reviewed the Ministers Files, all additional correspondence and undertaken site visits, it is felt that there is sufficient evidence in this technical report to make a clear decision in relation to the appeals. As a result, it is the opinion of the Technical Advisor that an Oral Hearing is not required in either appeal case.

4.0 Minister's File

In line with particulars of Section 43 of the Fisheries Amendment Act 1997 the following documented items were sent to the ALAB from the Minister and were reviewed:

AP 25/2019 – T12/405

- Submission to the Minister;
- The application form and all reports received in relation to the application;
- Submissions from Statutory Consultees;
- Notification of the Minister's decision to the applicant;
- A link to the West of Ardara/Maas Road Appropriate Assessment Report;
- A location map of the surrounding area including the;
 - Sites under application;
 - Sites lapsed;
 - Licensed sites; and,
 - Sites currently under appeal.

ArcGIS shapefiles were also sent from the Department to Altemar Ltd. for the review.

5.0 Context of Area

This Technical Advisor's Report considers appeal reference number AP25/2019, made against Ministerial decisions to refuse to grant Aquaculture and Foreshore Licenses for the following site: T12/405A. The subject site is located in Loughros Mór Bay in Co. Donegal and the site was proposed for the cultivation of Pacific Oysters using bags and trestles. The following sections will provide a general overview of Loughros Mór Bay and the relevant factors to be considered as part of an assessment of the appeal.

5.1 Physical Descriptions

Loughros Mór Bay is a small inlet located on the south-west coast of County Donegal (Fig 3). The bay is one of two associated with the Loughros peninsula, a small and narrow peninsula that is located west of the village of Ardara. Loughros Mór is situated north of the peninsula while Loughros Beag is the southern bay. Loughros Mór Bay is situated within the Municipal District of Glenties and is bounded by three Electoral Divisions: Dawros; Ard an Rátha; and, Gleann Gheis. Ardara is a town with a population of 732 people (Census 2016) and it lies adjacent to the bay, while Glenties is the only other settlement of scale in close proximity, possessing a population of 805 and situated approximately 10 km northwest of Ardara. The combined population of the three EDs that bound the Bay, and an additional fourth ED which is in close proximity to the bay (Maol Mosóg), is 2,690 people as of 2016 (Fig 1).

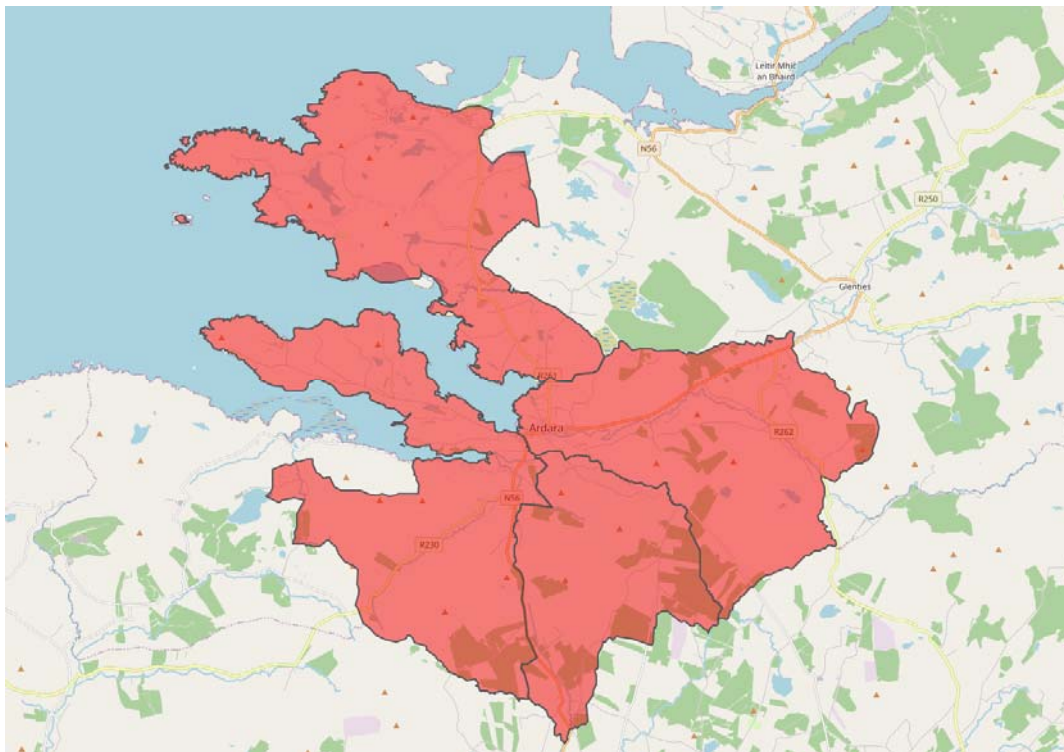


Figure 1. Four Electoral Divisions of Dawros, Ard an Rátha, Gleann Gheis and Maol Mosóg that surround Loughros Mór Bay

Loughros Mór Bay is located in an area with a temperate oceanic climate, ensuring relatively stable climactic conditions all year round. The Finner Camp weather station, operated by Met Éireann, is the closest active weather station to Loughros Mór at approximately 30km south near the town of Ballyshannon. Met Éireann provide monthly weather data from across their 25 active stations, including Finner Camp¹. Data from 2017 to July 2020 is provided (Fig 2), with January 2018 recording the highest total rainfall of any month at 219.7mm, whereas the mean average annual rainfall is recorded as 1249.9mm. Mean temperature in degrees Celsius is recorded as 9.7, with the months of July and August recording the highest mean monthly temperatures.

¹ <https://www.met.ie/climate/available-data/monthly-data#>

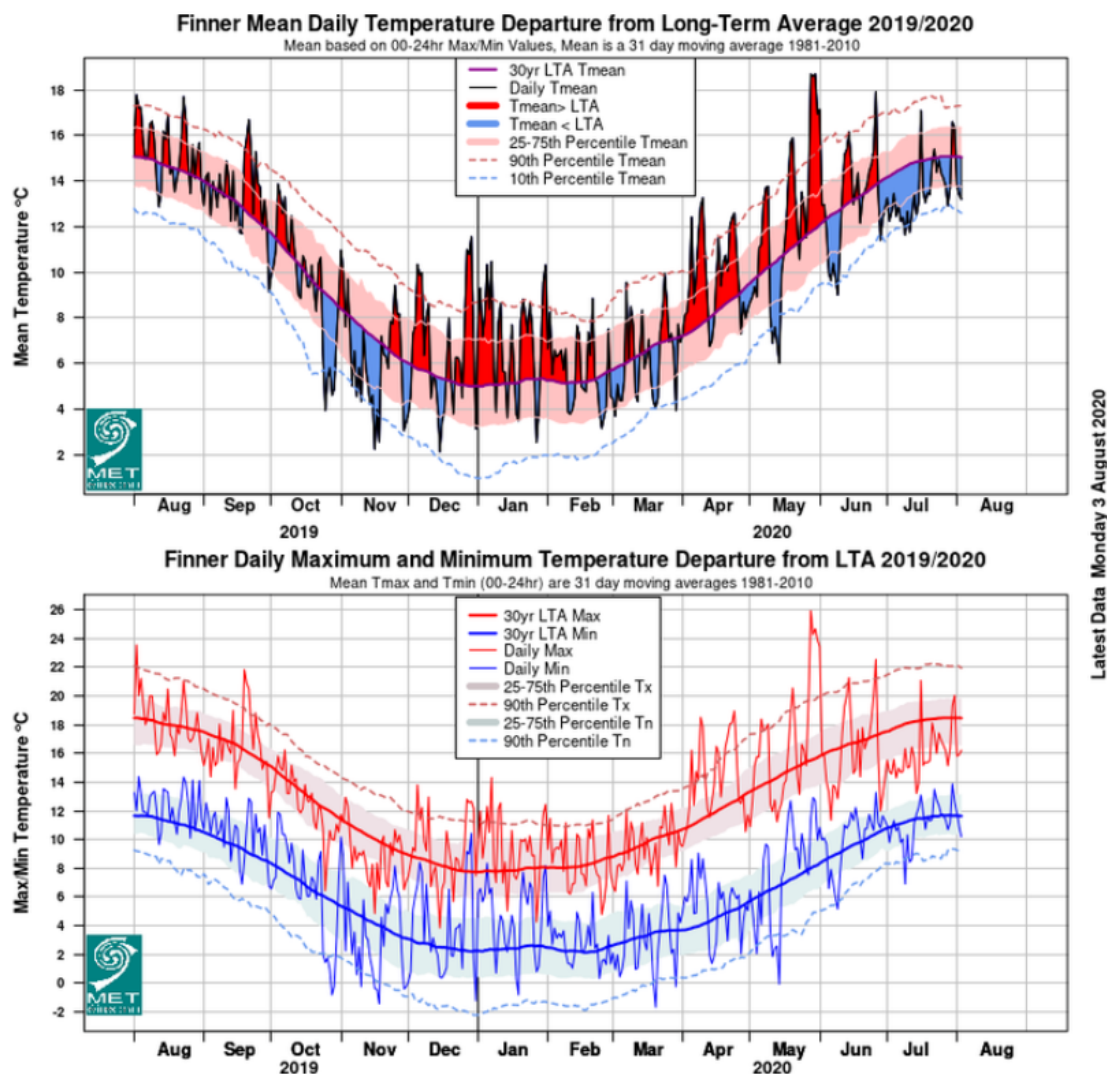


Figure 2. Finner Camp meteorological data, Met Eireann

Longer-term data for Finner Camp is not publicly available, however the CSO has records for the Malin Head weather station, located approximately 90km north of Loughros Mór Bay. Records exist for this weather station for several decades and a longer-term picture of climactic conditions can be assessed from this². Data spanning the twenty year period from January 2000 to December 2019 was retrieved and the following averages for various measures were identified:

- The average maximum wind speed is 54.5 knots;
- Average total monthly rainfall is 93.7mm;
- Average maximum temperature is 12.4, with minimum 7.7 and the average mean 10.1

Gweebarra-Sheephaven is the Water Framework Directive contributing catchment for Loughros Mór Bay and it drains a total area of 1,450km². There are two main rivers through which water from the catchment is drained into Loughros Mór Bay: the Owenea which rises on the western slopes of Croveenananta, flows west through Glenties and enters the Bay north of Ardara; and, the Owentocker which rises on the slopes of the Carnaween Mountain and west into the Bay by Ardara³. There are several other minor rivers that add to the catchment's drainage.

² https://statbank.cso.ie/px/pxeirestat/Database/eirestat/Climate/Climate_statbank.asp?sp=Climate&ProductID=DB_MT

³ <https://catchments.ie/wp-content/files/catchmentassessments/38%20Gweebarra-Sheephaven%20Catchment%20Summary%20WFD%20Cycle%202.pdf>

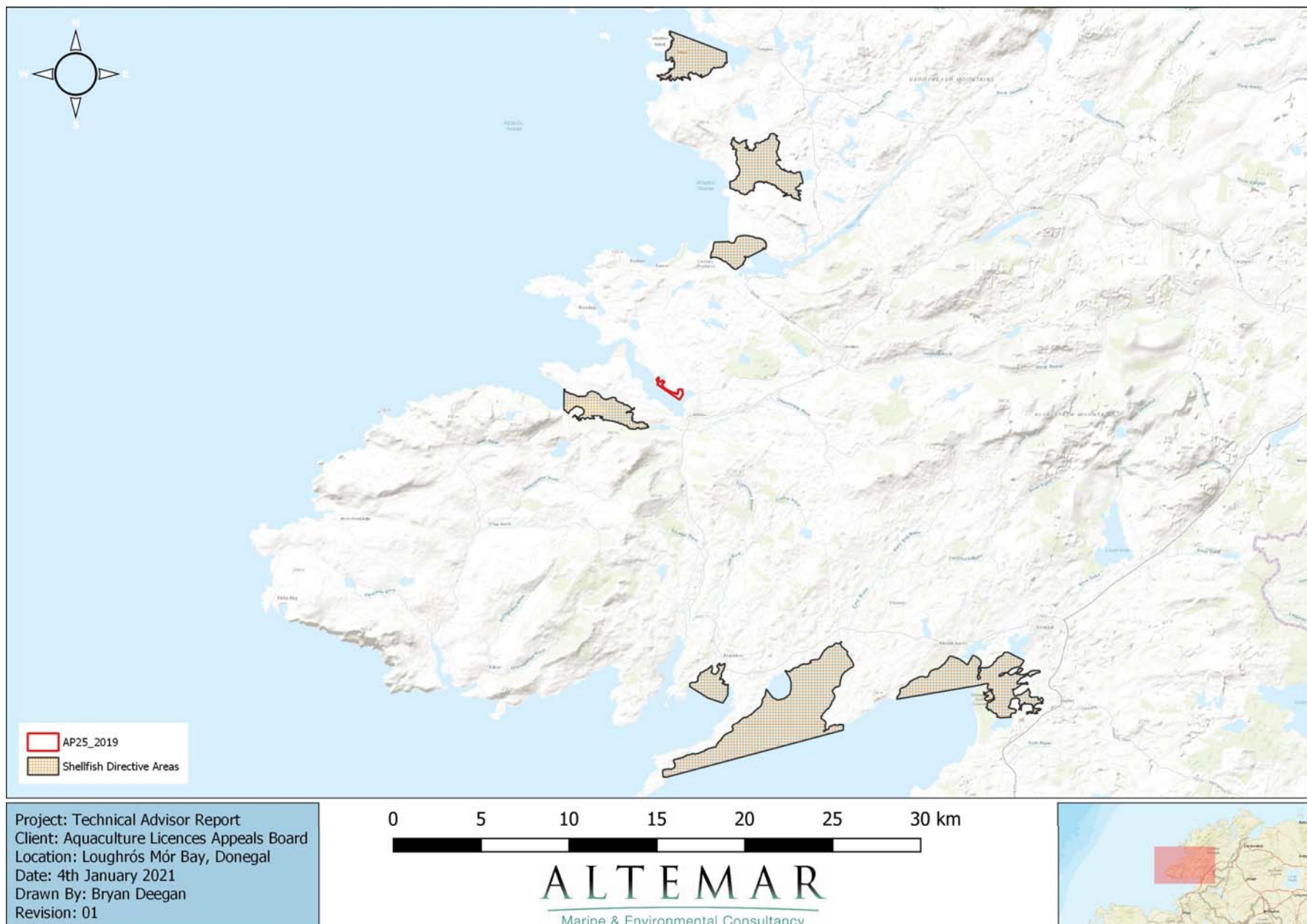


Figure 3. Loughros Mór appeal sites and Shellfish Directive Areas in South-west Donegal

5.2 Resource Users

Aquaculture Activity

Fisheries and aquaculture are a significant sector in Ireland's economy, with the overall value of seafood exports estimated at €564 million in 2015. In their 2016 development strategy, the Fisheries Local Action Group (FLAG) for the North stated that in the previous year the *"largest Irish seafood export by value is pelagic (€204m, 36%), followed by crustaceans (€113m, 20%), freshwater fish (€85m, 15%), molluscs (€82m, 15%), whitefish (€53m, 9%) and fish meat and oil (€26m, 5%). Sectorally, shellfish led the way – rising 12% to €195 million; followed by salmon – where exports increased to an impressive €75 million; and whitefish – where exports grew by 7% to €53 million. The only decline in 2015 was seen in pelagics, where exports fell 7% to €204 million as a result of falling trade and market prices"*⁴.

The County Donegal Development Plan emphasises the importance of the aquaculture sector in Donegal, stating that the *"county has a strong aquaculture sector (e.g. Salmon, Oyster and Mussel farming) providing considerable local employment both onshore and offshore for coastal communities around the Donegal Coastline"*. The Development Plan goes on to state that *"the Council will support the sustainable development of onshore/ancillary aquaculture developments to maximise the potential of the sector in terms of employment and product export."*

Loughros Mór Bay is presently not utilised as an area for aquaculture activities, nor is it a Designated Shellfish Area. The proposed aquaculture site that is the subject of this Technical Advisor Report, along with three other sites (T12/397A, T12/397B & T12/397C), are the only recorded applications in Loughros Mór Bay at this time.

Loughros Beag is the bay immediately south of Loughros Mór and is a Designated Shellfish Area which is utilised for aquaculture activities, particularly the cultivation of oysters. At this time there are five licensed aquaculture sites recorded for Loughros Beag: T12/161A; T12/162A; T12/403A; T12/460A; and, T12498A. All five of the licensed sites are for the cultivation of Pacific Oysters using bags and trestles⁵.

Figure 4 provides a visual overview of the currently licensed aquaculture activities in Loughros Beag Bay and those aquaculture license applications that are under appeal in Loughros Mór Bay.

Figure 5 also highlights the licensed sites in Loughros Beag and the applications under appeal in Loughros Mór, but identifies the primary species being cultivated, or proposed for cultivation, under each application.

⁴ <http://www.bim.ie/schemes/fisheries,local,area,group,development,flag,2016,-,2023/>

⁵ <https://www.agriculture.gov.ie/seafood/aquaculture/foreshoremanagement/aquaculturelicensing/shellfishlicences/donegal/loughrosbeg/>

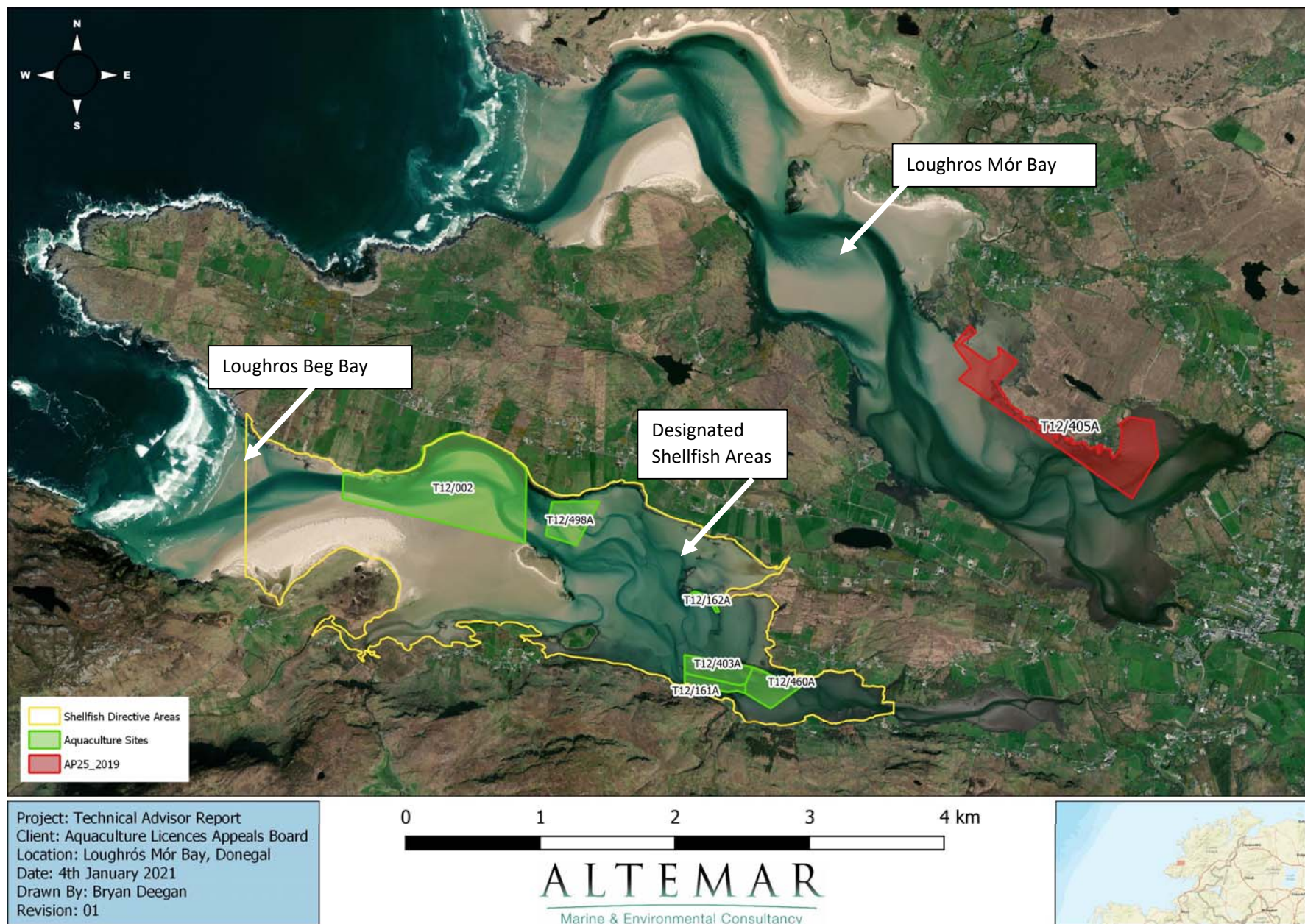


Figure 4. Licensed aquaculture sites and applications under appeal

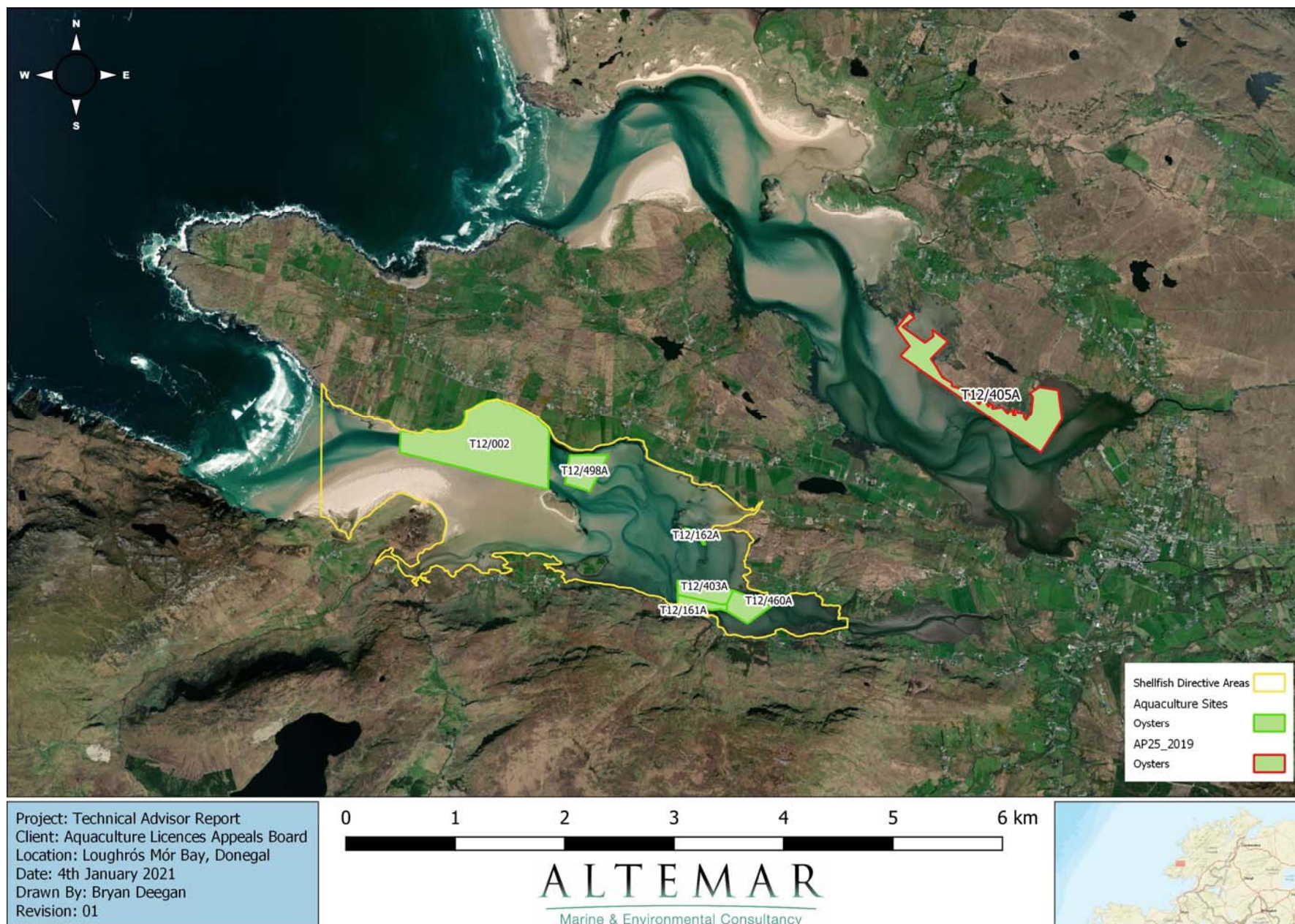


Figure 5. Species

Agricultural Activity

As with most rural areas in Ireland, agriculture accounts for a significant proportion of land use in the areas surrounding Loughros Mór Bay and is an important sector of employment in this part of the country. Central Statistics Office (CSO) data for the four EDs that surround Loughros Mór Bay highlight the importance of agriculture in this area. According to the Census of 2016, in the four EDs of Dawros, Ard na Rátha, Maol Mosóg and Gleann Gheis, the Agriculture, Forestry and Fishing industries account for a combined 7.7% of total industries of employment. In the ED of Maol Mosóg the proportion was much higher at 12.3%. These figures give an indication of the reliance on agriculture and fishing that exists in the area.

The CSO also developed a 'Census of Agriculture' that covered the period from 1991 to 2010, the aim of which was to compile census data on crops, livestock, farm labour and miscellaneous agricultural items⁶. Information from this exercise is useful to understand the composition of agricultural activities in particular areas and will now be used to provide some insights into activities in the areas adjacent to the subject site(s).

There are four EDs with information that are adjacent to Loughros Mór Bay. However, information for three of the four EDs, as contained within the Census of Agriculture, will now be provided. The three EDs selected for inclusion are those that immediately bound the Bay:

Electoral Division of Dawros

- Total number of farms, classified by Agricultural Area Utilised (AAU), has decreased from 88 in 1991 to 65 in 2010. Interestingly, while smaller farms (those under 20 hectares) have seen a dramatic reduction in numbers, there has been an increase in the larger farms over the same time period, with those between 30 and 50 hectares increasing from 15 to 23.
- 'Rough grazing' accounts for the majority of land-use with 1,302 hectares dedicated to this activity in 2010, reducing from 1,582 in 1991. 'Pasture' has increased from 89 to 639 hectares while 'silage' has also seen an increase (23 to 189)
- Regarding livestock, total cattle numbers have decreased from 1,418 in 1991 to 893 in 2010. Sheep account for the majority of livestock, but total sheep numbers have also decreased from 2,285 in 1991 to 950 in 2010.
- The total number of persons engaged in farm activity has decreased from 125 to 105. This is also reflected in the total number of 'Annual Work Units' measure which decreased from 100 to 56 over the same time period.

Electoral Division of Ard na Rátha

- Total number of farms, classified by Agricultural Area Utilised (AAU), has decreased from 102 in 1991 to 93 in 2010. While smaller farms (those under 20 hectares) have seen a reduction in numbers, there has been an increase in the larger farms over the same time period, with those between 30 and 50 hectares increasing from 13 to 29.
- 'Rough grazing' accounts for the majority of land-use with 1,310 hectares dedicated to this activity in 2010, reducing from 1,603 in 1991. 'Pasture' is the second largest land use and has dramatically increased from 410 to 1,009 hectares.

⁶ <https://www.cso.ie/en/methods/agricultureandfishing/censusofagriculture/>

- Regarding livestock, total cattle numbers have decreased from 896 in 1991 to 507 in 2010. Sheep account for the majority of livestock (3,876), however they have also seen a reduction from 1991 levels (6,501).
- The total number of persons engaged in farm activity has decreased from 182 to 160. This is also reflected in the total number of 'Annual Work Units' measure which decreased from 119 to 74 over the same time period.

Electoral Division of Gleann Gheis

- Total number of farms, classified by Agricultural Area Utilised (AAU), has decreased from 168 in 1991 to 99 in 2010. There has been a dramatic reduction in the total number of small farms (under 20 hectares) from 113 to 37, whereas larger farms (30 to 50 hectares) have shown an increase from 13 to 20.
- 'Rough grazing' accounts for the majority of land-use with 2,205 hectares dedicated to this activity in 2010, reducing from 2,691 in 1991. 'Pasture' has increased significantly from 375 to 1,030 hectares and is the second highest proportion of land use.
- Regarding livestock, total cattle numbers have decreased from 1,796 in 1991 to 824 in 2010. Sheep account for the vast majority of livestock, but total sheep numbers have also decreased from 13,905 in 1991 to 9,448 in 2010.
- The total number of persons engaged in farm activity has decreased from 225 to 163. This is also reflected in the total number of 'Annual Work Units' measure which decreased from 177 to 94 over the same time period.

Consideration of the Site Characterisation report for Loughros Beag which is a designated shellfish area, is useful as it offers some indication of the range of pressures on the surrounding systems in this area of Donegal and in this respect it can assist in helping identify pressures which may also be impacting Loughros Mór⁷. Table 1 provides an estimate of the average number of dairy and drystock livestock units and the average loadings of nitrogen and phosphorus chemical fertiliser per hectare of farmed land within the contributing catchment areas for Loughros Beag, some of which is shared with Loughros Mór. The national averages are also included for comparison purposes. This information was obtained from the Shellfish Waters Characterisation Reports prepared by the Department of the Environment, Community and Local Government⁸.

Table 1. Average number of dairy and drystock livestock units and the average loadings of nitrogen and phosphate per hectare

Indicator	Loughros Beag Catchment (p/ha of farmed land)	National Average (p/ha of farmed land)
Livestock Units	0.17 LU	1.20 LU
Nitrogen Fertiliser	22.79 kg	92.09 kg
Phosphate Fertiliser	2.18 kg	9.74 kg

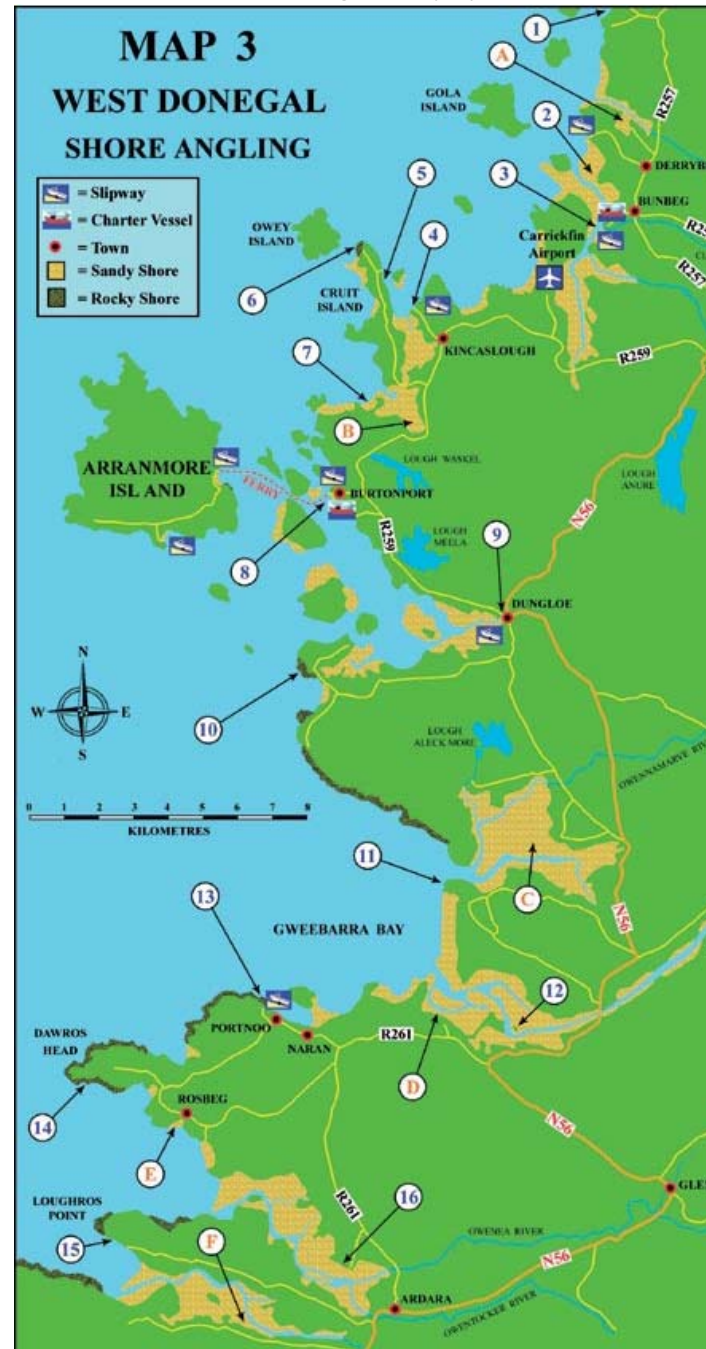
⁷ <https://www.housing.gov.ie/sites/default/files/publications/files/filedownload21907en.pdf>

⁸ <https://www.housing.gov.ie/water/water-quality/shellfish-waters/shellfish-waters-final-characterisation-reports-and-prps>

In relation to Table 1 and agricultural activity in the surrounding catchment, the Loughros Beag Characterisation Report states that *“approximately 50% of the area of this catchment is farmed land. However, estimates of livestock density and fertiliser usage are lower than the national averages. The EPA’s diffuse model risk assessment, which investigates the relationship between catchment attributes (percentages of diffuse land cover including agriculture), water chemistry and ecological status, does not highlight any diffuse risk areas in the catchment. However, the prevalence of wet soil types in the catchment and the high slopes mean that there is a risk of agricultural runoff. Monitoring does not indicate any water quality issue which are likely to be associated with agriculture and therefore it is unlikely to be affecting shellfish water quality in this shellfish area.”*

Angling and Inshore Fishing Activity

The County Development Plan highlights the important contribution that the fishing sector plays in the local economy, with the marine sector noted as employing



approximately 3,200 full and part time people in fishing/farming, processing and service activities. The Development Plan states that *“Killybegs (with €92m of landings) and Greencastle (with €69m of landings) are the 2nd and 8th were the largest fishing ports in the country in terms of overall fish landings in 2015. Killybegs, Greencastle and Burtonport are important centres for fishing and fleet activity and act as vital economic catalysts for their respective local economies.”*

In their article entitled ‘Sea Fishing in West Donegal’, the Angling Ireland website provides a map (Fig 6) of various key locations along the Donegal coast⁹. The article also discusses the characteristics of fishing in the areas around Ardara, including the following:

“South east of Dawros is the small seaside village of Rossbeg (E) where lugworm and white ragworm are plentiful in the main channel banks. Peeler crab can also be gathered around the base of the rocks bordering the mouth of the bay. The fishing on Loughros Point (15) is very similar to that found at Dawros. Indeed the south western side is also the best area to fish. The bottom is boulder strewn and weedy but seems to be alive with dogfish and pollack in particular. Specimen dogfish up to 1.70kg have been recorded there. In the estuary formed by the Owenea and Owentocker Rivers, flounder and eels are very common to bottom baits of crab and sandeel. Spinning or freelining sandeel will result in seatrout on a flood tide. The area around Ranny Point (16) about a mile west of Ardara is a popular angling station with local fishermen. There is a well stocked tackle shop in Ardara. To the southwest of Ardara, on the Bracky River estuary at Maghera Strand (F) there is good digging for lugworm, white ragworm and clam.” The Owentocker and Owenea rivers (fishery codes 222 and 223) are both considered salmon and sea trout fisheries and are classed as such within the Letterkenny Fisheries District (Fig 7). Both rivers have proved popular for angling, although a temporary conservation order is currently in place preventing such activities. The proposed aquaculture sites would be in the estuarine element of these rivers (Figure 4). Based on Irelands Marine Atlas Fisheries data the site is noted as a dredge fishery (Hydraulic Dredge for Cockle) (Figure 8). The Conservation of Salmon and Sea Trout (Draft Nets and Snap Nets) Bye-law No. 988, 2021

Figure 6. West Donegal shore angling locations, Angling Ireland

⁹ <https://fishinginireland.info/sea/north/westdonegal/>

will reopen the Owenea/ Owentocker draft net fishery 1 July 2021 and close them on 21 July 2021.

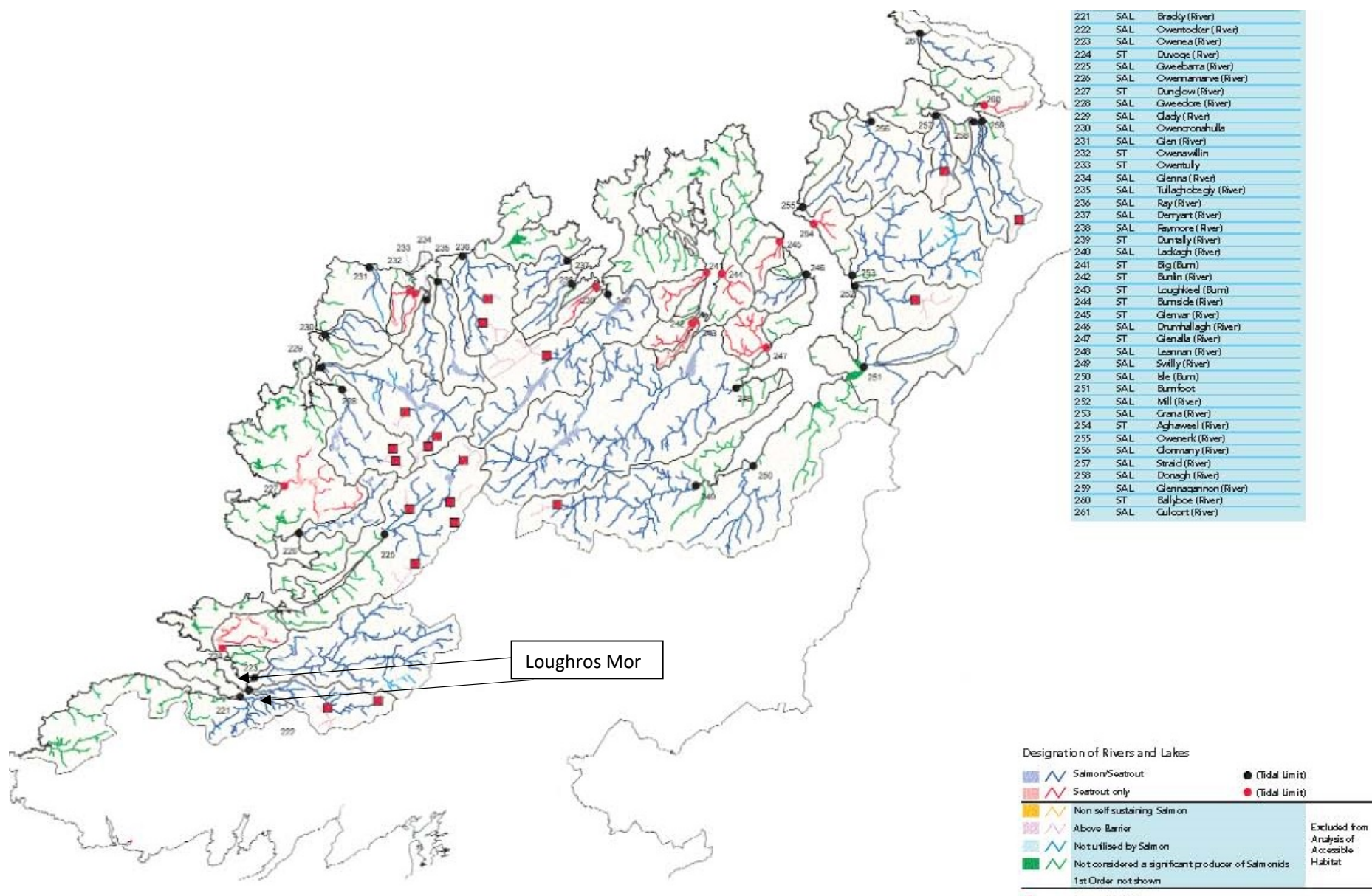
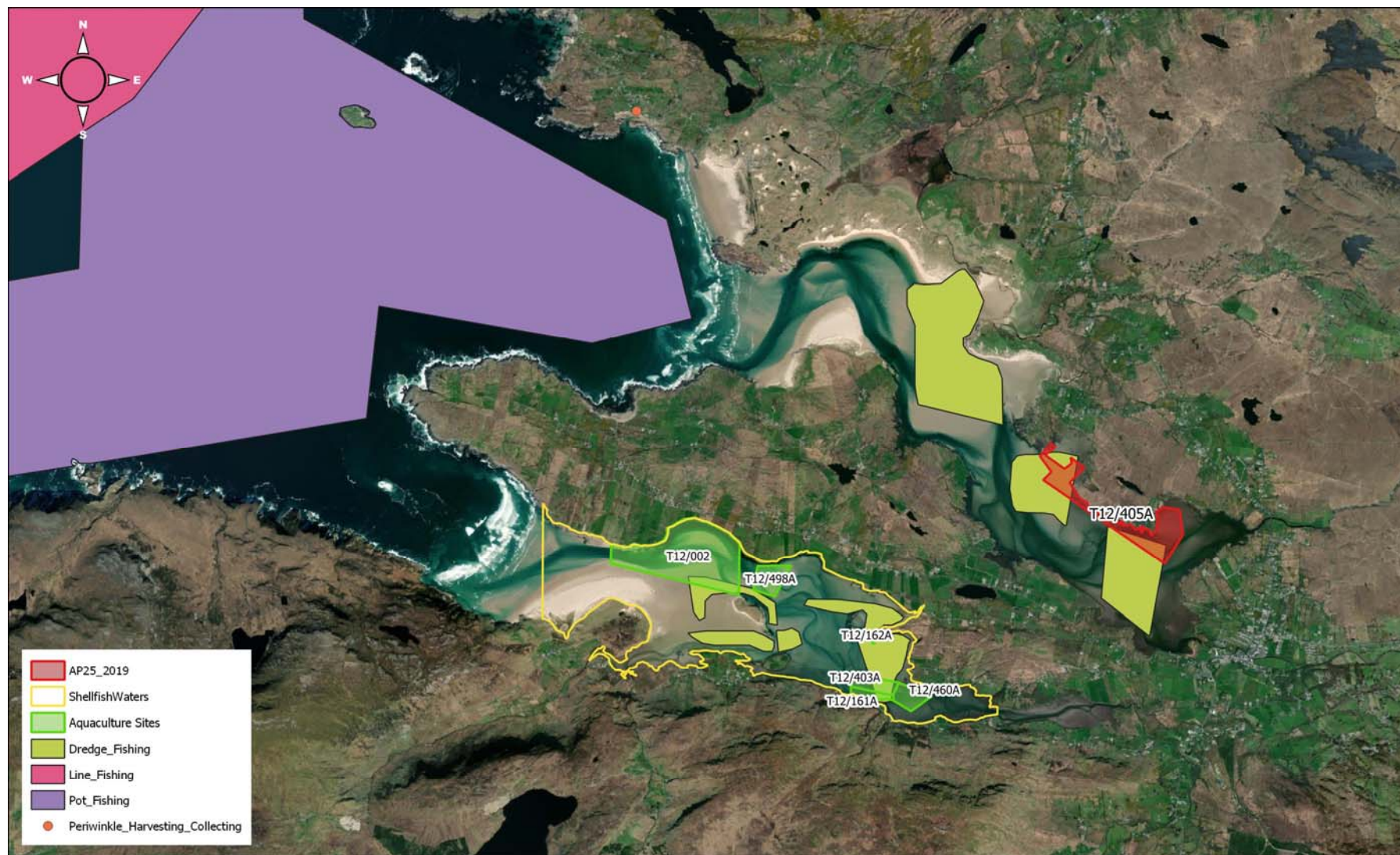


Figure 7. Map of rivers within the Letterkenny Fisheries District, IFI



Project: Technical Advisor Report
 Client: Aquaculture Licences Appeals Board
 Location: Loughrós Mór Bay, Donegal
 Date: 4th January 2021
 Drawn By: Bryan Deegan
 Revision: 01

0 1 2 3 4 5 6 km

ALTEMAR
 Marine & Environmental Consultancy



Figure 8. Inshore fishing activities

Tourism and Leisure

Faillte Ireland provide statistics on tourism in Ireland, with regional breakdowns for visitor numbers and estimated spend¹⁰. The 'Border' region contains counties Cavan, Donegal, Leitrim, Monaghan and Sligo Galway. Loughros Mór Bay is located in Donegal and therefore within the Border region which saw an estimated 752,000 of overseas visitors who helped to generate approximately €224 million in revenue in 2018.

Unsurprisingly, where the Border region excels in terms of attracting visitors is with Northern Irish tourists, of which 644,000 visited in 2018 and generated an estimated revenue of €153 million. This makes the Border region by far the most popular destination for visitors from Northern Ireland.

In terms of domestic tourists, the Border region saw an estimated 1.001 million Irish tourists visit in 2018. Domestic tourism helped to generate approximately €180 million in revenue for the region. Clearly tourism is an integral part of the economy along the west coast of Ireland, something that has been emphasised by the major success of the Wild Atlantic Way branding exercise.

The County Donegal Development Plan 2018-2024 stresses both the importance of tourism to the County and the ambitions to increase the strength of the sector. It is argued that with its rugged coastal landscapes, windswept mountains, offshore islands, varied natural habitats, vibrant cultural life and Gaeltacht areas, and rich built heritage, Donegal possesses a wealth of world class tourism assets. The success of the Wild Atlantic Way tourism initiative and media exposure has marketed Donegal on a par with other destinations, significantly raised market awareness both for overseas and domestic visitors and resulted in a growth in visitor numbers in recent years. Coastal areas are proving immensely popular to visitors, with Sliabh Liag recording an estimated 185,760 visitors in 2016 alone¹¹.

Although there are no details or reports on tourism specific to the area surrounding the Bay, there are several businesses and organisations that cater to the tourism and recreation markets. Activities such as rowing and horse riding take place locally through the Loughros Point Rowing Club and Castlevue Equestrian. There is a wide array of B&Bs and Guesthouses that cater to visitors, with hiking and cycling popular in the area, while Ballinreavy Strand on the northern shore of the Bay is used by beachgoers. The town of Ardara is also known for its heritage and acts as an attractor too.

Figure 9 identifies some of the locations and routes for activities in the area, including coastal walks, bathing locations and the Wild Atlantic Way.



Plate 1. Well used path on the upper shore of T12 405A

¹⁰ https://www.failteireland.ie/FaillteIreland/media/WebsiteStructure/Documents/3_Research_Insights/Key-Tourism-Facts-2018.pdf?ext=.pdf

¹¹ <http://www.donegalcoco.ie/media/donegalcountyc/planning/pdfs/viewdevelopmentplans/countydonegaldevelopmentplan2018-2024/partaandb/Part%20A%20The%20Strategic%20Plan%20and%20Part%20B%20Objectives%20and%20Policies.pdf>



Figure 9. Tourism activities near Loughros Mór

5.3 Environmental Data

Water Quality

The EPA regularly sample and monitor bathing water quality at 147 locations across Ireland, however there are no bathing water sampling locations within Loughros Mór Bay. The nearest designated EPA sampling point is found at Naran Beach, north of Loughros Bay and opposite Inishkeel island. Naran recorded a bathing water quality status of 'Excellent' in the 2019 bathing season results¹². It also recorded an 'Excellent' status in each of the previous four years (2018, 2017, 2016 & 2015), highlighting the quality status of the area's waters.

Water Framework Directive

Loughros Mór Bay is located within the Gweebarre-Sheephaven Catchment which covers the majority of Donegal's western and northern coasts, extending from Glencolumbkille in the south to Fanad Head in the north and draining an area of approximately 1,450km². In relation to the catchment's characteristics in the area around Loughros Mór Bay, the Catchment Assessment states that this area of the catchment is:

"Drained by two main rivers, the Owenea and Owentocker Rivers. The Owenea rises on the western slopes of Croveenananta, flowing west and through Glenties, before making its way to the sea north of Ardara. The Owentocker River rises on the western side of Carnaween Mountain, flowing west and into the sea at Ardara where it joins the outfall of the Owenea River and reaches the sea via Loughros More Bay. The southern part of the catchment from Ardara to Glencolumbkille is drained by numerous small rivers, the most significant of which (east to west) are the Bracky, Owenree and Murlin Rivers."

A summary of the catchment finds that:

- 22 of the 88 river water bodies are *At Risk* of not meeting their WFD objective
- 7 of the 83 lake water bodies are *At Risk* of not meeting their WFD objective
- 1 of the 24 transitional and coastal water bodies (Mulroy Bay Broadwater) are *At Risk* with the significant pressure considered aquaculture activities
- 7 *At Risk* surface water bodies are 'High Ecological Status' objectives and are failing to meet this objective

Figure 10 offers a visual overview of the main river waterbodies located in the area surrounding Loughros Mór as identified by the Environmental Protection Agency (EPA). The Owentocker and Owenea rivers are salmonid rivers.

Figure 11 showcases the environmental status of those recorded rivers in the area and the coastal water quality as defined by the WFD.

Two WFD subcatchments drain into Loughros Mór Bay, the Owenea to the north and east, and the Owentocker to the south. Each of these subcatchments has a WFD Cycle 2 assessment report from which the most pertinent points have been identified and reproduced below¹³.

Owenea Subcatchment (38 9)

- There are a total of 33 waterbodies of which 15 are lakes, 11 rivers, 3 groundwater, 3 coastal and 1 transitional;
- Of the 33 waterbodies there are 2 requiring 'review' while the remaining 31 are deemed Not At Risk;
- There are 37 monitoring points for water quality status, with 27 recording a 'Good' status, 3 deemed to be 'High' quality, a further 3 considered 'Moderate' and 4 points deemed to be of 'Poor' status
- There are 2 coastal waterbodies designated High Ecological Status
- Loughros Bay has been deemed to be *Not At Risk* in terms of its WFD objectives

¹² <https://www.epa.ie/pubs/reports/water/bathing/Bathing%20Water%20Quality%20Map%20of%20Ireland%202019.pdf>

¹³ <https://www.catchments.ie/data/#/catchment/32? k=eq226a>

Owentocker Subcatchment (38 4)

- A total of 19 waterbodies are identified: 12 rivers, 2 lakes, 2 coastal, 2 groundwater and 1 transitional;
- Of the 19 waterbodies there are 10 considered *Not At Risk* of meeting WFD objectives, with 3 requiring *Review* and the remaining 6 deemed to be *At Risk*;
- There are 27 monitoring points for water quality status with 12 recording 'Good' status, 9 deemed to be 'Poor' quality, 3 considered 'Moderate', 2 of 'High' quality and 1 'Bad'
- There is a single coastal waterbody that is assigned High Ecological Status
- The Owenree-Loughros (38O080050), Owentocker (38O060050) and Netownburke (38N040540) river waterbodies are 3 of 8 river waterbodies deemed to be either *At Risk* or requiring *Review*.

Based on EPA data¹⁴ there is a primary effluent emission point proximate to three of the proposed sites T12/405, T12/297B and T12/397C and a storm water overflow on the Owentocker River (Figure 10). However, see section 6 for additional information that was noted during the appeal's process.

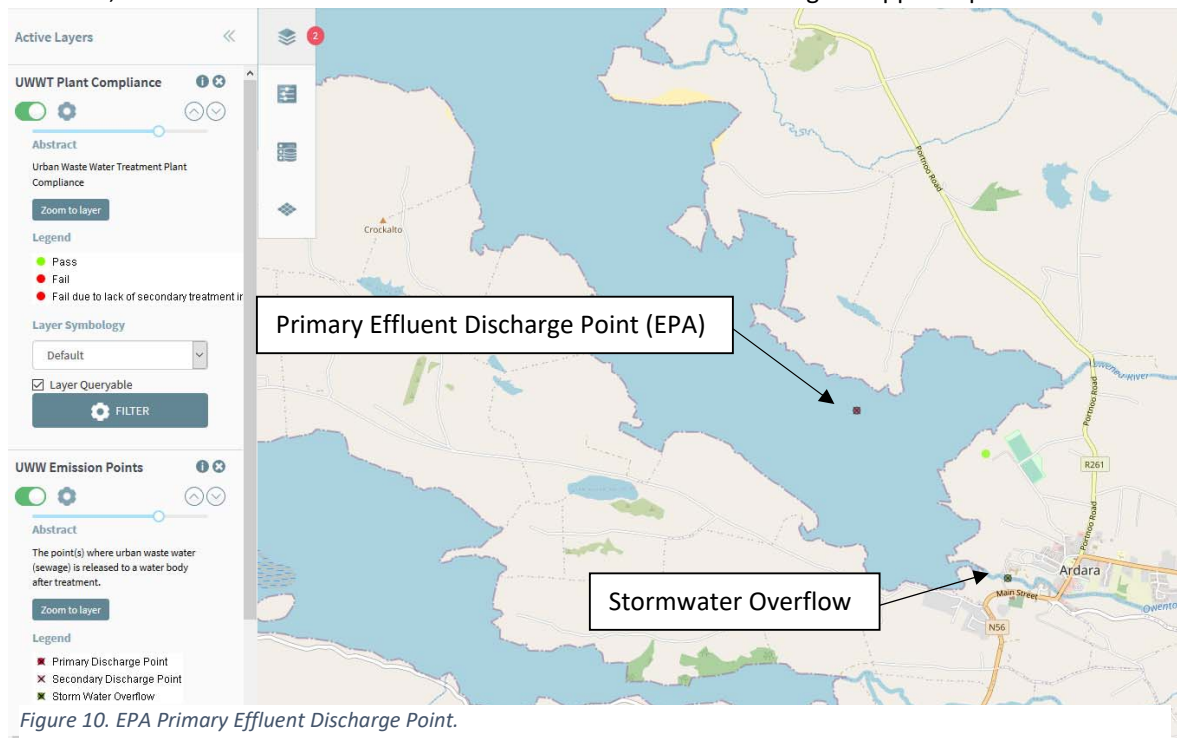


Figure 10. EPA Primary Effluent Discharge Point.

Shellfish Monitoring Programme

Shellfish flesh classifications are carried out under the European Communities (Live Bivalve Molluscs) (Health Conditions for Production and Placing on the Market) Regulations, 1996 (S.I. No. 147 of 1996)). The Marine Institute carries out shellfish monitoring at designated shellfish areas. This dedicated shellfish monitoring programme involves analysing for general components, metals and organics in both water and biota samples. Shellfish safety data can be obtained from the Marine Institute HABs website and it provides results of sampling of specified shellfish flesh from each of the designated shellfish areas¹⁵.

Although Loughros Mór Bay is not a Designated Shellfish Area, its sister Bay Loughros Beag is designated as one and aquaculture activities, including shellfish cultivation, occurs in this area. Biotoxin results for shellfish species *Crassostrea gigas* in Loughros Beag are provided in the table below in order to showcase test results from a location proximate to Loughros Mór. The results are taken from regular sampling that occurred from January 11th 2016 to July 6th 2020, of which there are a total of 80 sample results.

¹⁴ <https://gis.epa.ie/EPAMaps/>

¹⁵ <http://webapps.marine.ie/HABs/Locations/Inshore>

Area Species Status	# of Occurrences	% of Total
Closed	0	-
Closed Pending	2	3%
Open	78	98%
Rejected – Nonstandard Reason	0	-

In the Site Characterisation report for Loughros Beag it is stated that *“the licensed area is classified as Class B meaning that shellfish may be placed on the market for human consumption only after treatment in a purification centre or after relaying so as to meet the health standards for live bivalve molluscs laid down in the EC Regulation on food safety (Regulation (EC) No 853/2004)”*.

Although Loughros Mór Bay is not classified as a Designated Shellfish Area, there are to existing samples from the bay which date to June 2003. Both samples were undertaken on *Mytilus edulis* with one requiring closure pending further tests and the subsequent sample results enabling an ‘open’ classification.

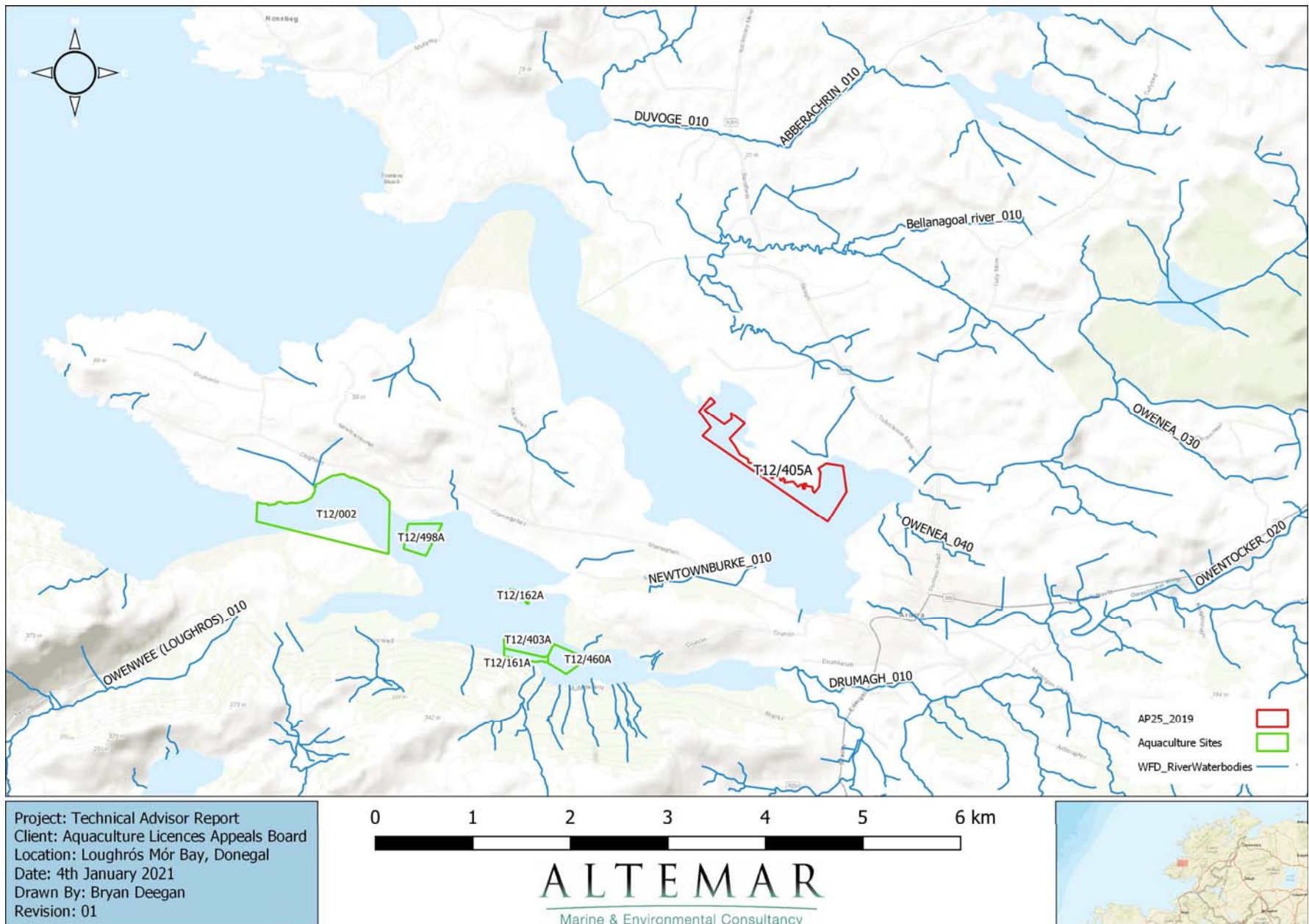


Figure 10. River waterbodies, EPA

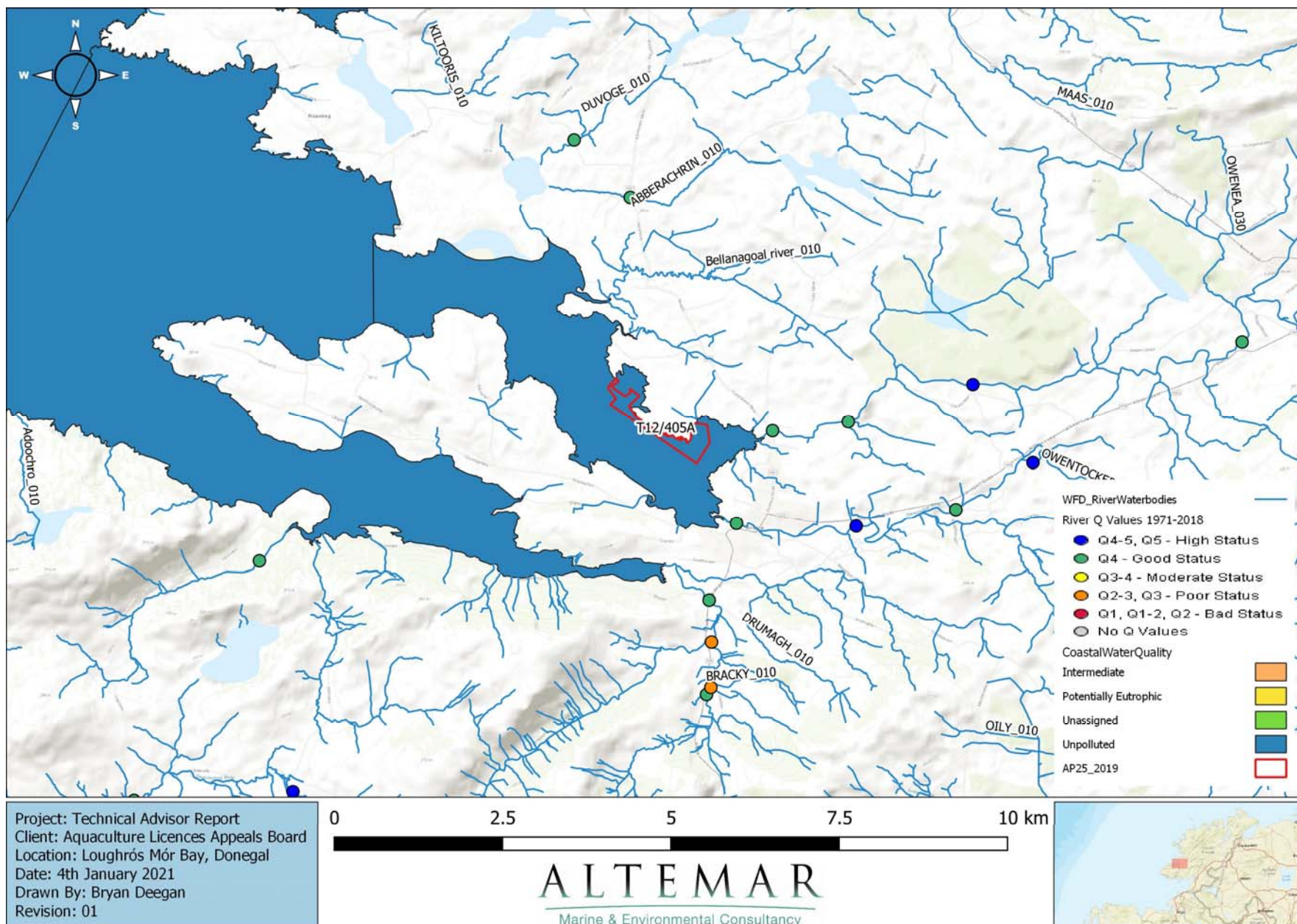


Figure 11. Water Framework Directive Status, EPA

5.4 Statutory Status

Nature Conservation Designations

The proposed aquaculture sites under appeal are based in Loughros Mór Bay which itself is situated within a Natura 2000 site. Natura 2000 is a European network of important ecological sites. The EU Habitats Directive (92/43/EEC) placed an obligation on Member States of the EU to establish the Natura 2000 network. The network is made up of Special Protection Areas (SPAs), established under the EU Birds Directive (79/409/EEC), and SACs, established under the Habitats Directive. Loughros Mór is located in the West of Ardara/Maas Road Special Area of Conservation (SAC). Additionally, there are other protected sites in close proximity to the bay which also should be considered. Details on the sites are as follows:

- West of Ardara/Maas Road SAC (000197) – This SAC covers an area that extends north along the coast from Ardara to Doocharry and eastwards towards Glenties, adjacent to the Slieve Tooley Mountain and Lough Beg Bay. It also includes the River Owenea and many of its tributaries. It is deemed to be of great ecological interest containing a large number of habitats and species which are listed in the E.U. Habitats Directive (specifically, six priority habitats, 20 non-priority habitats and eight species). The site exhibits a highly diverse range of both coastal and terrestrial habitats, this feature itself being of high scientific value. The following are listed as the Qualifying Interests for this SAC:
 - Estuaries [1130]
 - Mudflats and sandflats not covered by seawater at low tide [1140]
 - Large shallow inlets and bays [1160]
 - Annual vegetation of drift lines [1210]
 - Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330]
 - Mediterranean salt meadows (*Juncetalia maritimi*) [1410]
 - Embryonic shifting dunes [2110]
 - Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) [2120]
 - Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]
 - Decalcified fixed dunes with *Empetrum nigrum* [2140]
 - Atlantic decalcified fixed dunes (*Calluno-Ulicetea*) [2150]
 - Dunes with *Salix repens* ssp. *argentea* (*Salicion arenariae*) [2170]
 - Humid dune slacks [2190]
 - Machairs [21A0]
 - Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*) [3110]
 - Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or *Isoeto-Nanojuncetea* [3130]
 - Northern Atlantic wet heaths with *Erica tetralix* [4010]
 - European dry heaths [4030]
 - Alpine and Boreal heaths [4060]
 - *Juniperus communis* formations on heaths or calcareous grasslands [5130]
 - Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites) [6210]
 - *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*) [6410]
 - Lowland hay meadows (*Alopecurus pratensis*, *Sanguisorba officinalis*) [6510]
 - Blanket bogs (* if active bog) [7130]
 - Depressions on peat substrates of the *Rhynchosporion* [7150]
 - Alkaline fens [7230]
 - *Vertigo geyeri* (Geyer's Whorl Snail) [1013]
 - *Margaritifera margaritifera* (Freshwater Pearl Mussel) [1029]
 - *Euphydryas aurinia* (Marsh Fritillary) [1065]
 - ***Salmo salar* (Salmon) [1106]**

- *Lutra lutra* (Otter) [1355]
 - *Phoca vitulina* (Harbour Seal) [1365]
 - *Petalophyllum ralfsii* (Petalwort) [1395]
 - *Najas flexilis* (Slender Naiad) [1833]
- Slieve Tooley/Tormore Island/Loughros Beg Bay SAC (000190) – A significant proportion of the northern half of the Slieve League peninsula is covered by this SAC, stretching from Ardara to Glencolumbkille. Coastal habitats dominate its northern and western fringes, whereas the inland region is comprised of mountainous areas. The following are listed as the Qualifying Interests for this SAC:
 - Vegetated sea cliffs of the Atlantic and Baltic coasts [1230]
 - Embryonic shifting dunes [2110]
 - Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) [2120]
 - Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]
 - Decalcified fixed dunes with *Empetrum nigrum* [2140]
 - Atlantic decalcified fixed dunes (*Calluno-Ulicetea*) [2150]
 - Alpine and Boreal heaths [4060]
 - Blanket bogs (* if active bog) [7130]
 - *Vertigo angustior* (Narrow-mouthed Whorl Snail) [1014]
 - *Lutra lutra* (Otter) [1355]
 - *Halichoerus grypus* (Grey Seal) [1364]
- Sheskinmore Lough SPA (004090) – Sheskinmore Lough is situated north of Loughros Mór Bay and is an SPA that is comprised of coastal and freshwater habitats. It has received its SPA status due to the presence of Greenland White-fronted Geese (*Anser albifrons flavirostris*) [A395]
- West Donegal Coast SPA (004150) – This SPA covers an area that contains the majority of the Slieve League Peninsula's coast, from Kilcar in the south to Loughros Beag Bay in the north. A small portion of the shoreline of Loughros Peninsula in Loughros Mór Bay is also classified as the West Donegal Coast SPA. Due to the extensive nature of the SPA there are several species identified that have ensured it retains a special conservation interest.
 - Fulmar (*Fulmarus glacialis*) [A009]
 - Cormorant (*Phalacrocorax carbo*) [A017]
 - Shag (*Phalacrocorax aristotelis*) [A018]
 - Peregrine (*Falco peregrinus*) [A103]
 - Herring Gull (*Larus argentatus*) [A184]
 - Kittiwake (*Rissa tridactyla*) [A188]
 - Razorbill (*Alca torda*) [A200]
 - Chough (*Pyrrhocorax pyrrhocorax*) [A346]

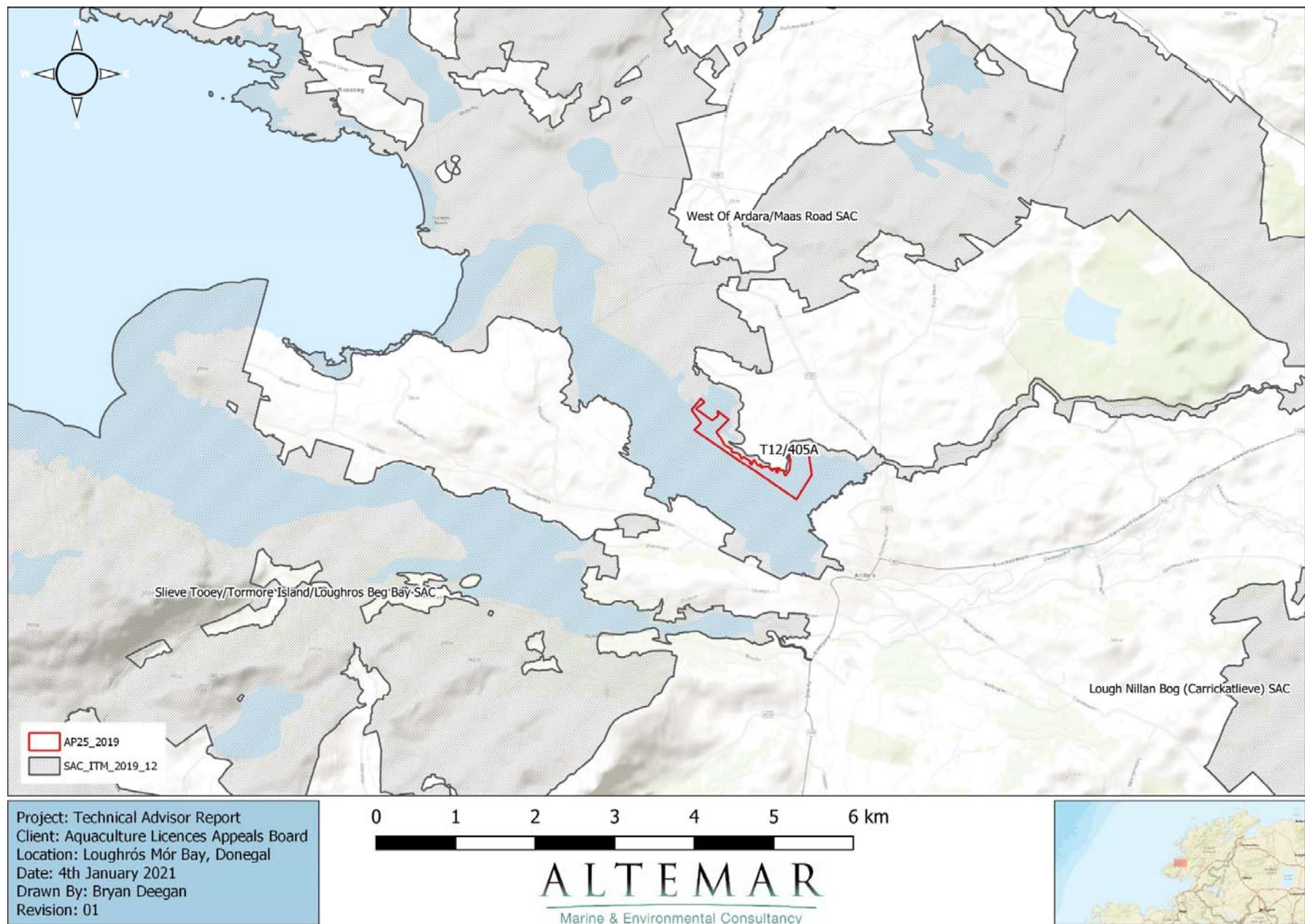


Figure 12. Special Areas of Conservation in proximity to the appeal sites

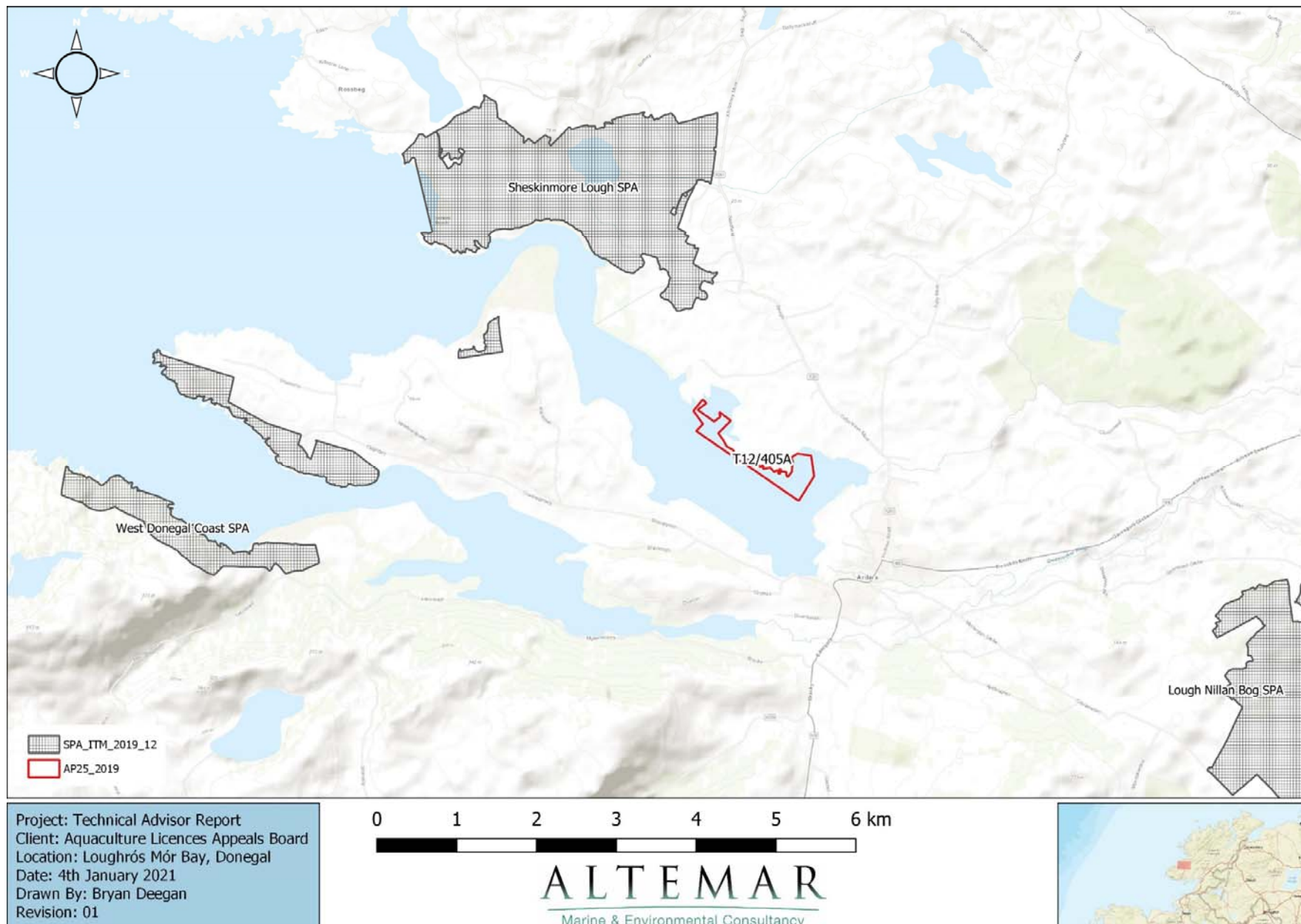


Figure 13. Special Protection Areas in proximity to the appeal sites

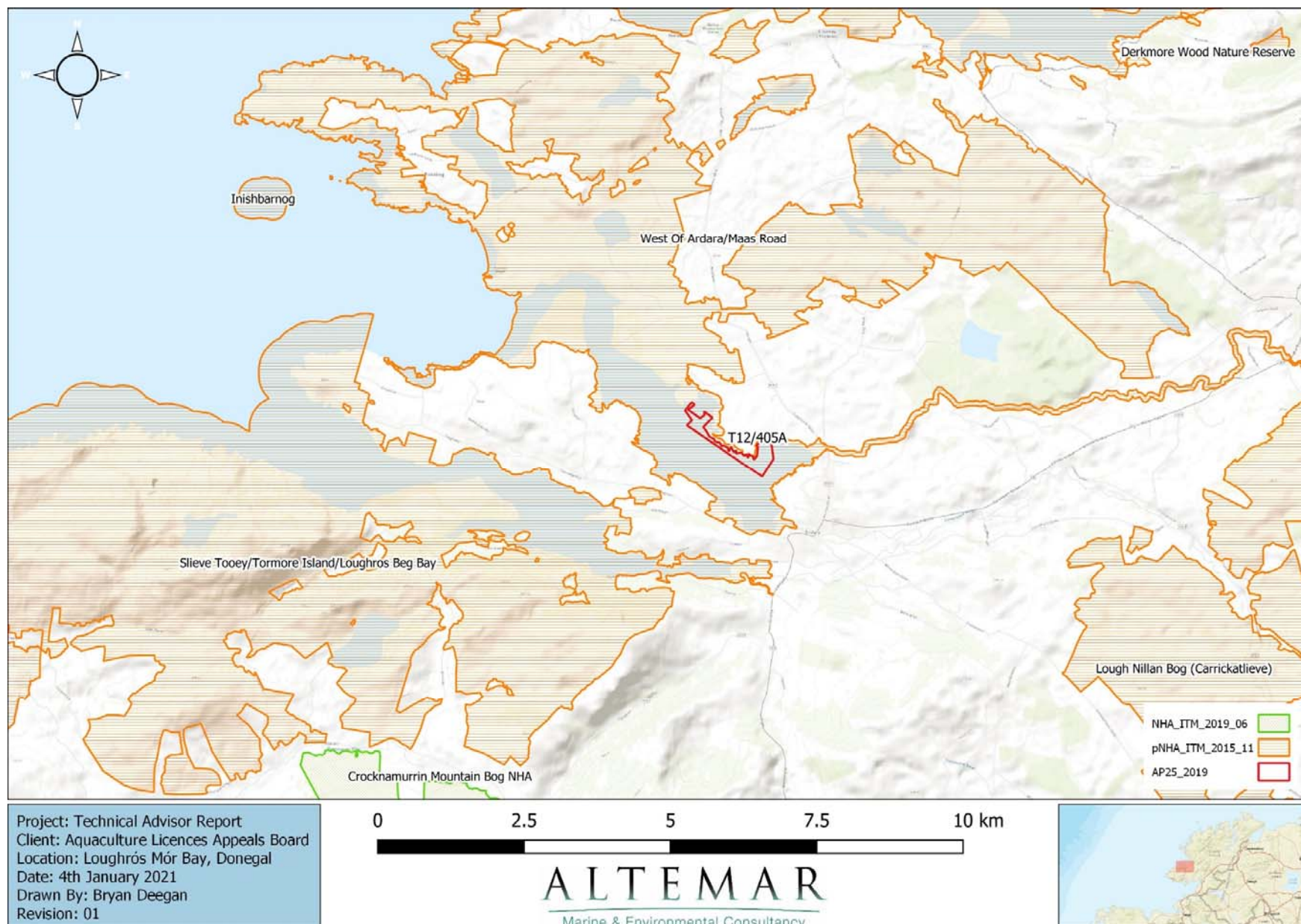


Figure 14. Proposed Natural Heritage Areas in proximity to the appeal sites

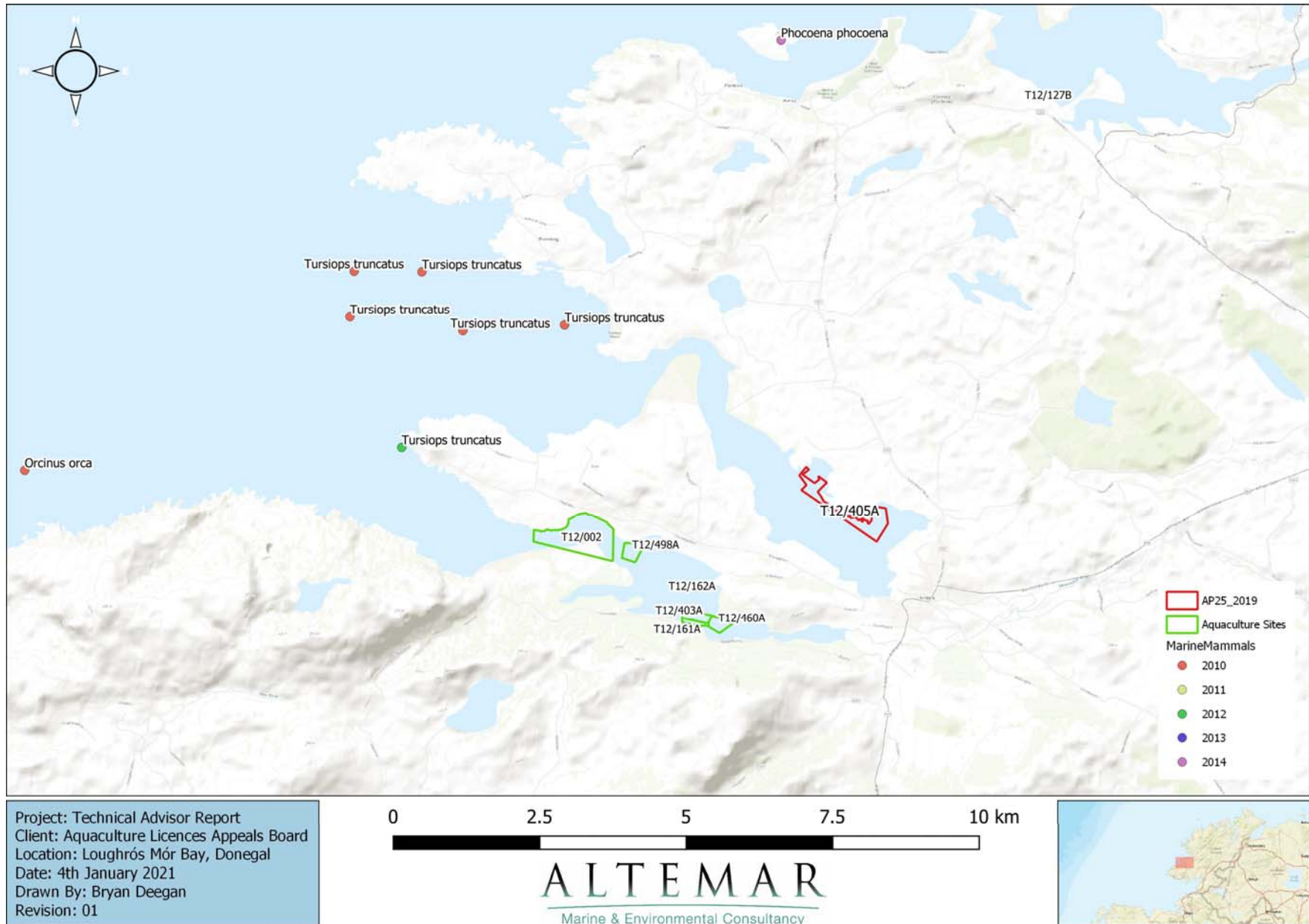


Figure 15. Marine mammal sightings in the waters around Loughros Mór Bay, IWDG

Protected Species and Habitats

The West of Ardara/Maas Road SAC has received its designation due to the presence of the following habitats and species listed on Annex I/II of the EU Habitats Directive:

- [1130] Estuaries
- [1140] Tidal Mudflats and Sandflats
- [1160] Large Shallow Inlets and Bays
- [1210] Annual Vegetation of Drift Lines
- [1330] Atlantic Salt Meadows
- [1410] Mediterranean Salt Meadows
- [2110] Embryonic Shifting Dunes
- [2120] Marram Dunes (White Dunes)
- [2130] Fixed Dunes (Grey Dunes)
- [2140] Decalcified Empetrum Dunes
- [2150] Decalcified Dune Heath
- [2170] Dunes with Creeping Willow
- [2190] Humid Dune Slacks
- [21A0] Machairs
- [3110] Oligotrophic Waters containing very few minerals
- [3130] Oligotrophic to Mesotrophic Standing Waters
- [4010] Wet Heath
- [4030] Dry Heath
- [4060] Alpine and Subalpine Heaths
- [5130] Juniper Scrub
- [6210] Orchid-rich Calcareous Grassland
- [6410] Molinia Meadows
- [6510] Lowland Hay Meadows
- [7130] Blanket Bogs (Active)
- [7150] Rhynchosporion Vegetation
- [7230] Alkaline Fens
- [1013] Geyer's Whorl Snail (*Vertigo geyeri*)
- [1029] Freshwater Pearl Mussel (*Margaritifera margaritifera*)
- [1065] Marsh Fritillary (*Euphydryas aurinia*)
- [1106] Atlantic Salmon (*Salmo salar*)
- [1355] Otter (*Lutra lutra*)
- [1365] Common (Harbour) Seal (*Phoca vitulina*)
- [1395] Petalwort (*Petalophyllum ralfsii*)
- [1833] Slender Naiad (*Najas flexilis*)

The Slieve Tooley/Tormore Island/Loughros Beg Bay SAC has received its designation due to the presence of the following habitats and species listed on Annex I/II of the EU Habitats Directive:

- [1230] Vegetated Sea Cliffs
- [2110] Embryonic Shifting Dunes
- [2120] Marram Dunes (White Dunes)
- [2130] Fixed Dunes (Grey Dunes)
- [2140] Decalcified Empetrum Dunes
- [2150] Decalcified Dune Heath
- [4060] Alpine and Subalpine Heaths
- [7130] Blanket Bogs (Active)
- [1014] Narrow-mouthed Whorl Snail (*Vertigo angustior*)
- [1355] Otter (*Lutra lutra*)
- [1364] Grey Seal (*Halichoerus grypus*)

Sheskinmore Lough is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species:

- Greenland White-fronted Goose

The West Donegal Coast is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species:

- Chough
- Peregrine
- Fulmar
- Cormorant
- Shag
- Herring Gull
- Kittiwake
- Razorbill

Marine mammal sightings in the vicinity of Loughros Mór Bay as recorded by the Irish Whale and Dolphin Group (IWDG) are showcased in Figure 15. Records primarily consist of Common bottlenose dolphin (*Tursiops truncatus*).

West of Ardara/Maas Road SAC (Features of interest)-Potential for impact

Based on the NPWS Conservation Objectives Documents for the Natura 2000 sites, there are species and habitats of specific relevance to the presence of the proposed facilities within the West of Ardara/Maas Road SAC. The relevant species and habitats are outlined in Figs 16-22. Based on the “Appropriate Assessment Conclusion Statement by the Licensing Authority for proposed aquaculture activities in the West of Ardara/Maas Road Special Area of Conservation (SAC) (Site Code: 000197) (Natura 2000 site)–July 2019” the following was stated:

“Loughros Mór Bay and Gweebarra Bay are situated north of Ardara on the southwest coast of Co. Donegal and are designated as a Special Area of Conservation (SAC) under the Habitats Directive. The West of Ardara/Maas Road SAC is designated for the marine Annex I qualifying interest of Estuaries (1130), Mudflats and sandflats not covered by seawater at low tide (1140) and Large shallow inlets and bays (1160). The SAC is also considered an important site for Otter (*Lutra lutra*), Harbour Seal (*Phoca vitulina*) and Atlantic Salmon (*Salmo salar*).”

“The constituent marine community types identified in the broad Annex I feature -1130 Estuaries and 1140 Mudflats and sandflats not covered by seawater at low tide are: -Sand with amphipods, polychaetes and *Tellina tenuis* community complex; -Estuarine sand with oligochaetes community complex (no spatial overlap with aquaculture). The Large shallow inlets and bays (1160) were subsequently excluded from further consideration of aquaculture interactions. The West of Ardara/Maas Road SAC is designated for the Otter (*Lutra lutra*). This species is listed in Annex IV (a) of the Habitats Directive and is afforded strict protection. The SAC is also designated for the Annex II species -Harbour Seal (*Phoca vitulina*) and Atlantic Salmon (*Salmo salar*).”

“The Conservation Objectives for the qualifying interests of the West of Ardara/Maas Road SAC (Site Code: 000197) were identified in NPWS (2015a). The natural condition of the designated features should be preserved with respect to their area, distribution, extent and community distribution. Habitat availability should be maintained for designated species and human disturbance should not adversely affect such species. The objective for these species is to maintain various attributes of their populations including population size, habitats quality and distribution.”

“The likely interaction between aquaculture activities and the conservation features of the designated habitats and species of the West of Ardara/Maas Road SAC were considered. A screening exercise resulted in 26 habitat features and species being excluded from further consideration in the assessment as none of the proposed aquaculture activities overlap or likely interact with the particular features or species.

Within the West of Ardara/Maas Road SAC, the qualifying habitats/species considered subject to potential disturbance and carried forward to full assessment were: -

- Estuaries (1130) –
- Mudflats and sandflats not covered by seawater at low tide (1140) -
- Atlantic Salmon (*Salmo salar*) (1106) –
- Otter (*Lutra lutra*) (1355) –
- Common (Harbour) Seal (*Phoca vitulina*) (1365).

Of the two constituent community types recorded within the qualifying interests 1130 and 1140, 'Estuarine sand with oligochaetes community complex' was shown to have no spatial overlap with the proposed aquaculture activities and was excluded from further analysis. However, an overlap was shown between the proposed aquaculture activities and the specific marine community type of 'Sand with amphipods, polychaetes and *Tellina tenuis* community complex' and this was therefore carried forward to full assessment. The likely effects of the aquaculture activities (species, structures, transport routes) were also considered in light of the sensitivity of this community type.

The Grey Seal (*Halichoerus grypus*) (1364) which is a designated species for the adjacent Slieve Tooley/Tormore Island/Loughros Beg Bay SAC and the Greenland White-Fronted Goose (*Anser albifrons flavirostris*) (A395) which is a designated species for the adjacent Sheskinmore Lough SPA were also considered subject to potential disturbance and carried forward to full assessment.

Findings and Recommendations of the Appropriate Assessment of Aquaculture

Aquaculture and Habitats: Habitat Area:

It is unlikely that the proposed activities will reduce the overall extent of permanent habitat within the feature Estuaries (1130) and Mudflats and sandflats not covered by seawater at low tide (1140). The habitat area is likely to remain stable.

Some activities (e.g. access routes) might result in long-term change to these community types, but no potentially disturbing activity (individually or combined) extends beyond 15% of the community types. Combined activities (clam culture and access routes) overlap with 0.65% and 0.78% of habitat features (1130) Estuaries and (1140) Mudflats and Sandflats not covered by seawater at low tide, respectively. The proposed cultivation sites extend over 7.3% of the marine community type, Sand with amphipods, polychaetes and *Tellina tenuis* community complex, but disturbing activities only overlap with 0.69% of this marine community type.

The proposed aquaculture activities will be unlikely to have any detrimental impact on the habitat conservation features (habitat area and community distribution) for the West of Ardara/Maas Road SAC on the basis that aquaculture activities which might be considered potentially disturbing to Annex I habitat conservation features occur below the 15% threshold.

Based upon the scale of spatial overlap of proposed aquaculture activities and the relatively high tolerance levels of the habitats and associated species, the general conclusion is that the proposed activities would be considered non-disturbing to the Annex I habitats 1130 Estuaries and 1140 Mudflats and sandflats not covered by seawater at low tide and their constituent community types.

Aquaculture and Species:

Otter (*Lutra lutra*): The West of Ardara/Maas Road SAC and the Slieve Tooley/Tormore Island/Loughros Beg Bay SAC are designated for the Otter (*Lutra lutra*). The interaction of aquaculture activities with the Otter is likely to be minimal given that shellfish culture operations are likely to be carried out in daylight hours and Otter foraging is primarily crepuscular. The Appropriate Assessment report found that the proposed shellfish culture activities are likely to be non-disturbing to the Otter.

Harbour Seal (*Phoca vitulina*): The West of Ardara/Maas Road SAC and the Rutland Island and Sound SAC are designated for the Harbour Seal (*Phoca vitulina*). The Harbour Seal may migrate from Rutland Island and

Sound SAC into the West of Ardara/Maas Road SAC and interact with aquaculture production activities within the SAC.

The six applications for shellfish cultivation within the West of Ardara/Maas Road SAC are located in inner Loughros Mór Bay and do not present a barrier to movement for seals to the haul out locations, into and out of the bay. These proposed shellfish culture areas are located more than 700 metres from any identified Harbour Seal site and while interaction is possible, aquaculture activities should be tailored to minimise negative interactions. Given the distance, it is concluded that aquaculture activities are likely to be non-disturbing to the Conservation Objectives for the species within the West of Ardara/Maas Road SAC and the Rutland Island and Sound SAC. In Gweebarra Bay, the existing and proposed aquaculture activities are located more than 400 metres from the closest Harbour Seal site. This distance is also considered non-disturbing to the seal within the relevant SACs. Notwithstanding the lack of likely disturbance to haul-out locations, the location of proposed structures across the inner part of Loughros Mór Bay may present a barrier to seal movement and should be considered further.

Atlantic Salmon (*Salmo salar*): The West of Ardara/Maas Road SAC is designated for the Atlantic Salmon (*Salmo salar*). The Appropriate Assessment report concluded that the proposed aquaculture activities are likely to be non-disturbing to the Conservation Objectives for Atlantic Salmon within the West of Ardara/Maas Road SAC taking into account the intertidal nature of the structures to be used in the proposed culture activities.

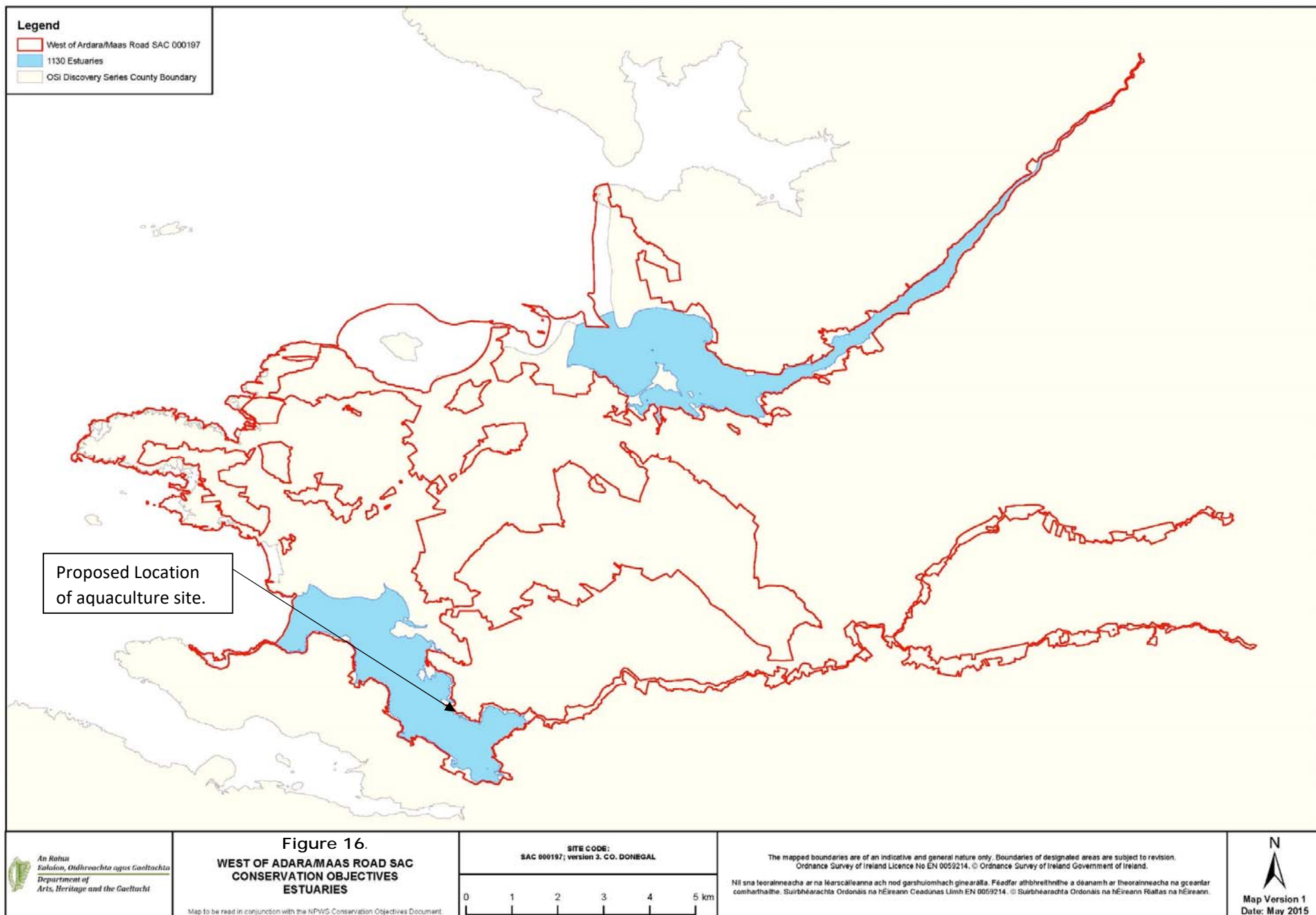
Grey Seal (*Halichoerus grypus*): The Slieve Tooley/Tormore Island/Loughros Beg Bay SAC, located to the south of the West of Ardara/Maas Road SAC is designated for the Grey Seal (*Halichoerus grypus*). The Appropriate Assessment report concluded that the proposed levels of shellfish culture within the West of Ardara/Maas Road SAC are considered non-disturbing to the site specific Conservation Objectives within the Slieve Tooley/Tormore Island/Loughros Beg Bay SAC for the Grey Seal.

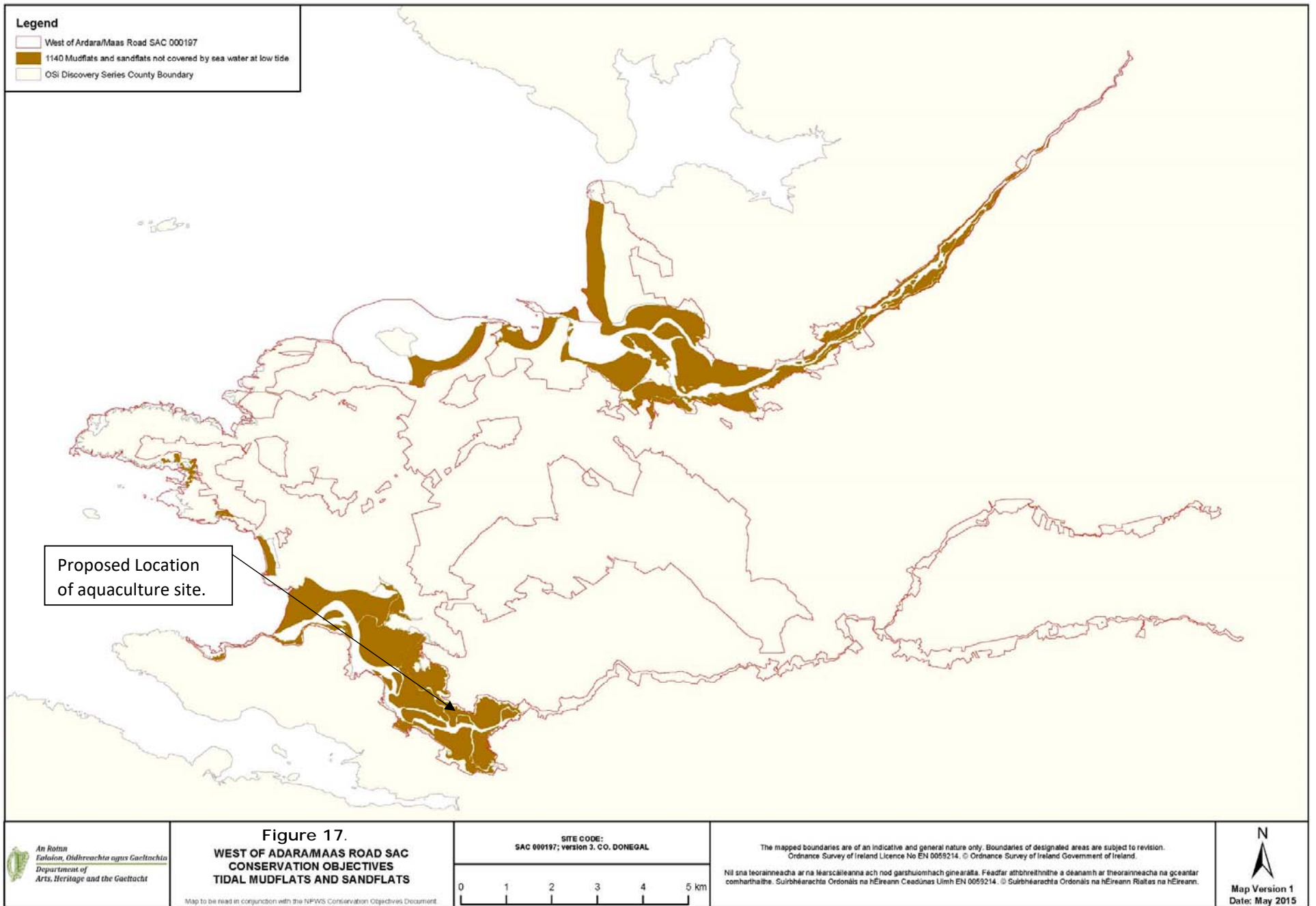
Greenland White-Fronted Goose (*Anser albifrons flavirostris*): The Sheskinmore Lough SPA which is adjacent to the West of Ardara/Maas Road SAC is designated for the Greenland White-Fronted Goose (*Anser albifrons flavirostris*). Studies have found that Greenland White-Fronted geese forage and roost within Loughros Mór Bay. It would appear that foraging is confined to the south shore primarily and that roosting occurs on a reef outcropping towards the mouth of the bay. The goose roosting site is approximately 300 metres from the closest proposed aquaculture operation. Furthermore, and on the basis of GPS tagging, the roost site is occupied primarily at night which is outside of operational times for the proposed aquaculture operations. On the basis of these factors it is unlikely that the proposed aquaculture operations will result in disturbance to the Greenland White-Fronted geese originating from the Sheskinmore Lough SPA."

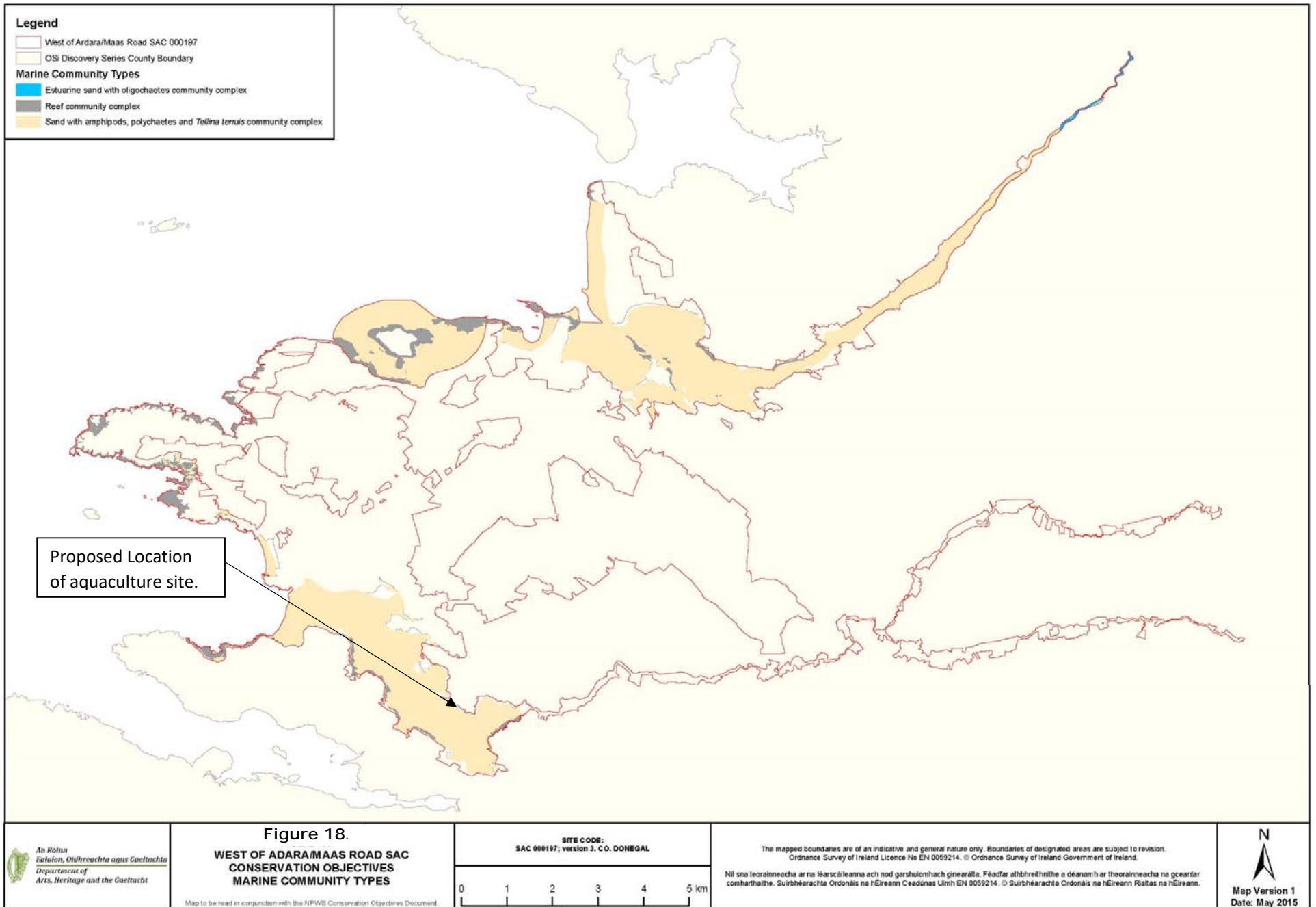
Technical advisor assessment of the Appropriate Assessment and potential impact on Features of Interest.

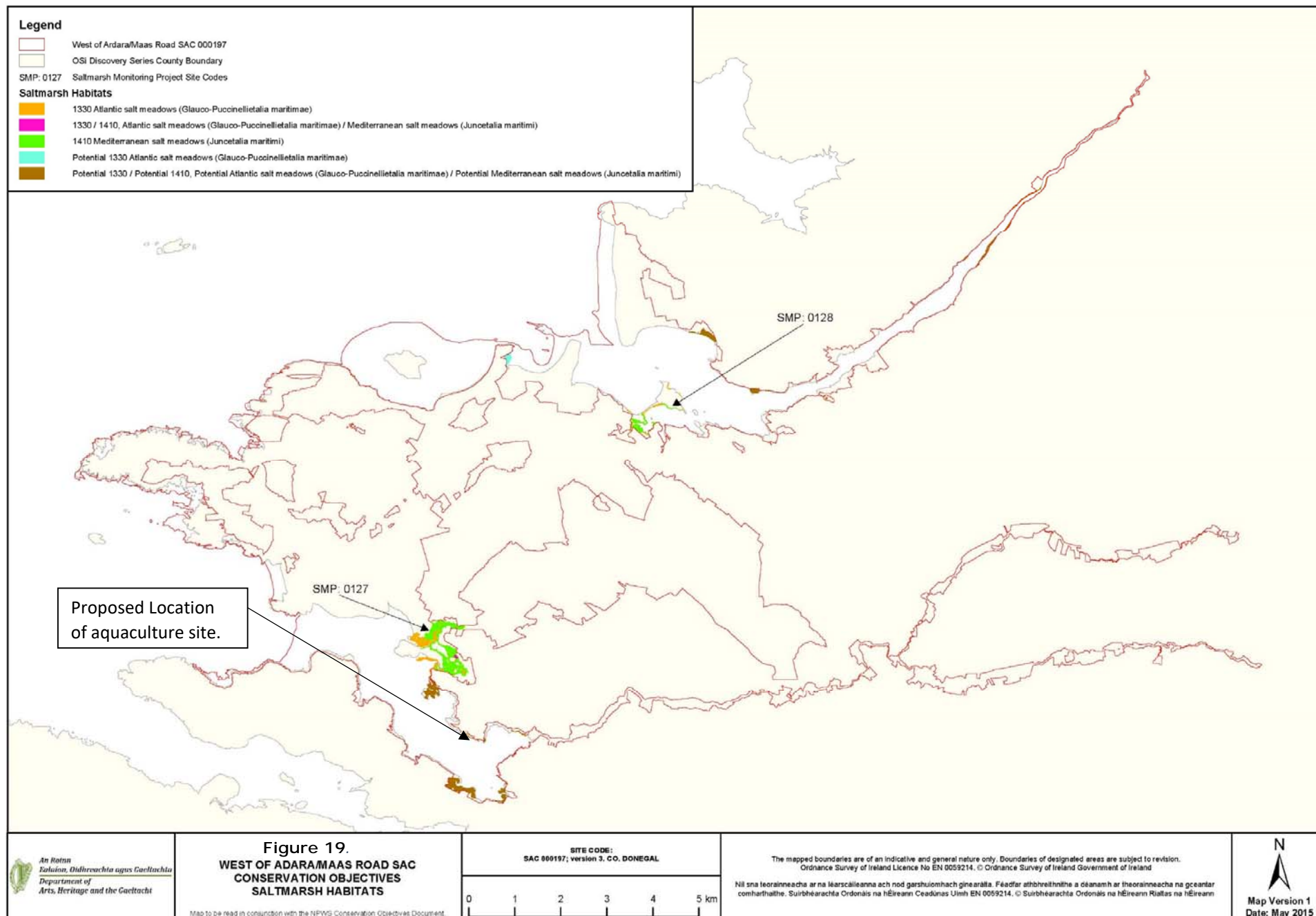
Based on assessment of the NPWS Conservation Objectives document and the proposed aquaculture sites, it is felt that the potential impact of the proposed aquaculture site has been underestimated in several places:

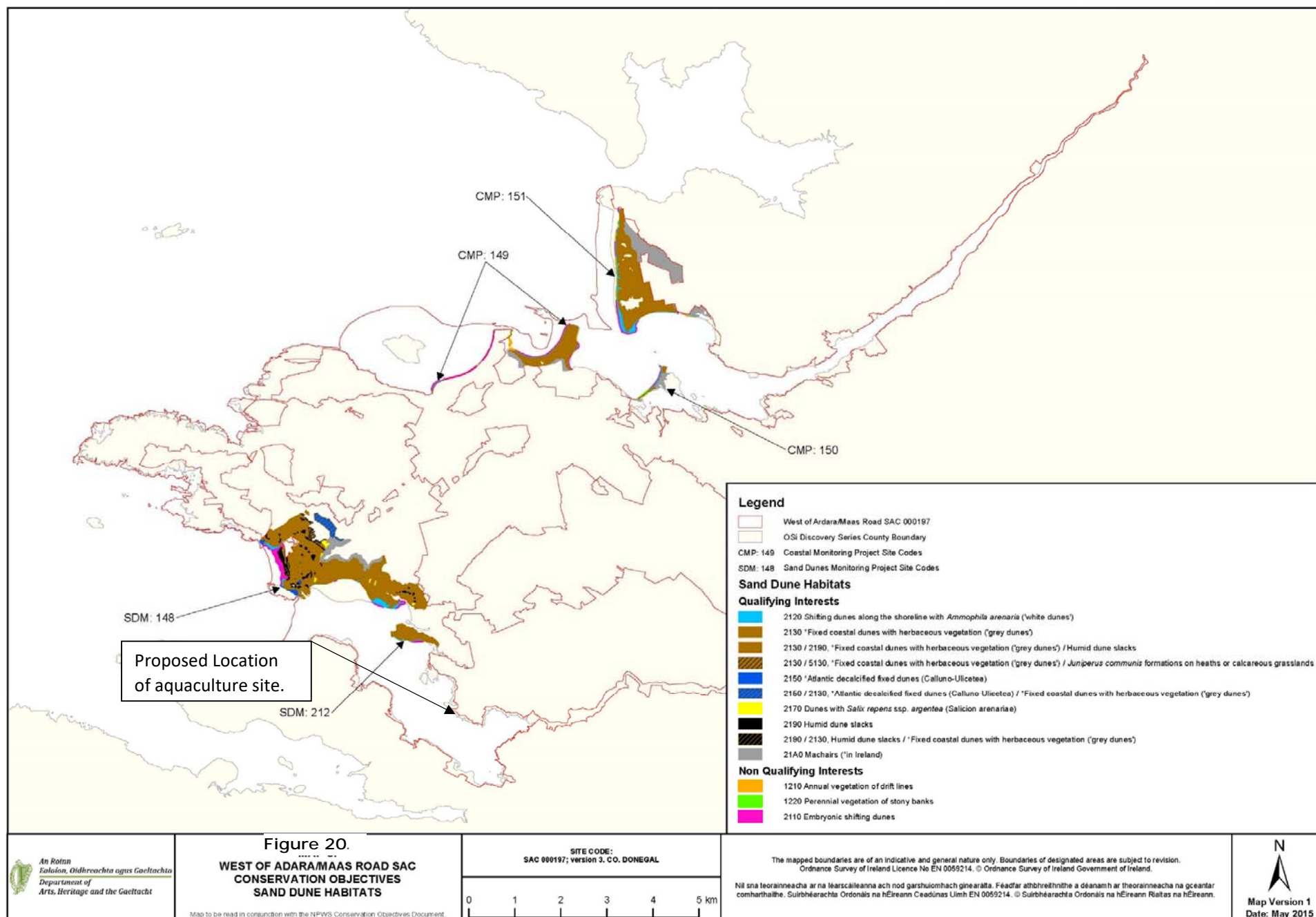
- 1) As can be seen from Figures 22 and 23 T12/405A overlaps with Potential 1330 / Potential 1410, Potential Atlantic salt meadows (*Glauco-Puccinellietalia maritima*) / Potential Mediterranean salt meadows (*Juncetalia maritimi*) habitat and Otter commuting habitat. In addition, as seen in Figure 24 there are several areas across the proposed aquaculture sites where the proposed sites impact on the flow of salmonid rivers at low tide. These would potentially impact on salmonids within the upstream watercourses. It should be noted that pearl mussel are also within these catchments and are features of interest (Figure 21). At juvenile stages pearl mussel attach to the gills of either Atlantic salmon or brown trout. Therefore there is potential for impact on these features of interest if the salmonid population is significantly impacted. It should also be noted that upon examination of the historic satellite imagery of the bay from 1995 to present day that there are significant changes in the location of the main channels of the salmonid rivers within the bay based on the movement of the sand banks (<http://map.geohive.ie/mapviewer.html>).

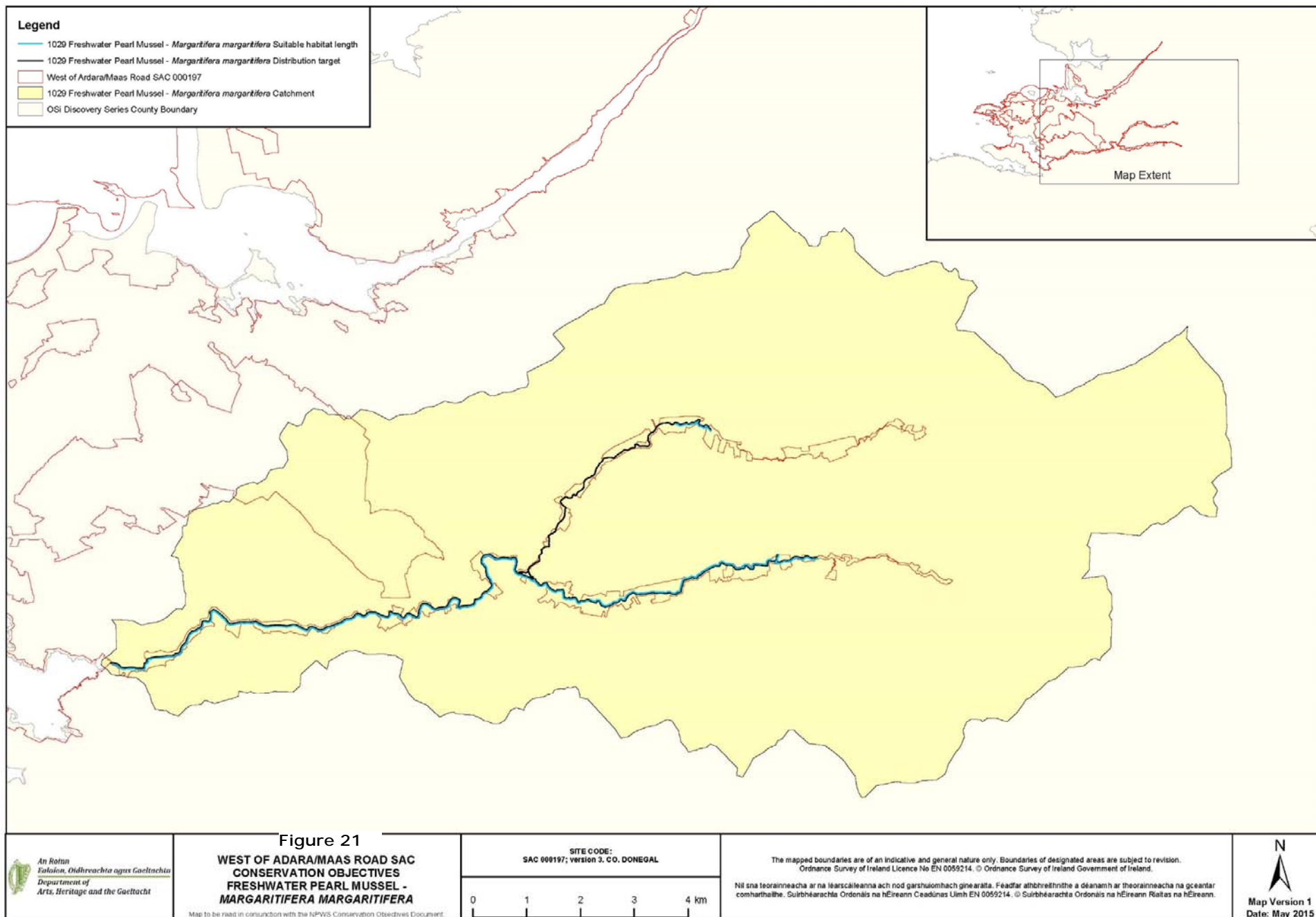


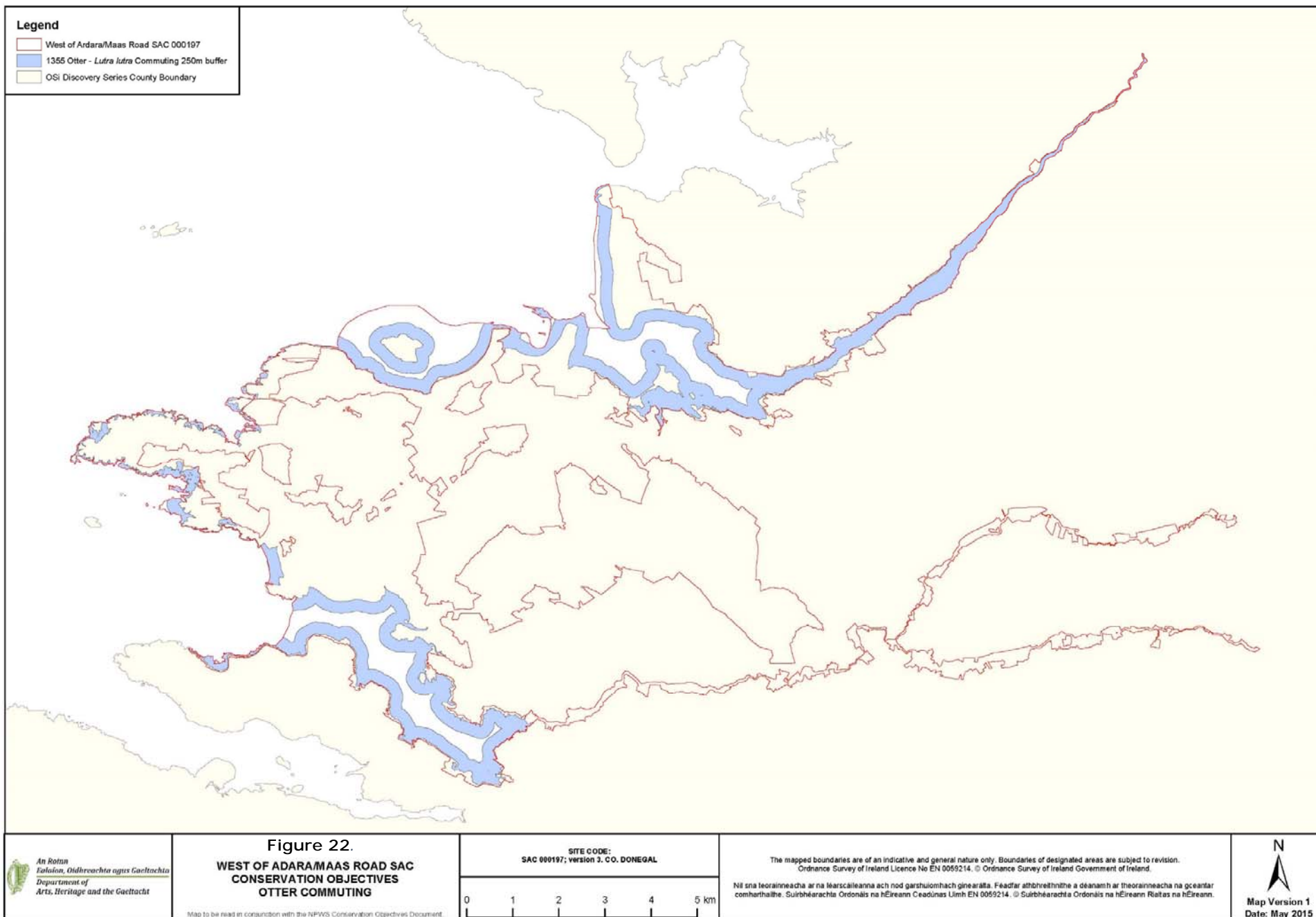


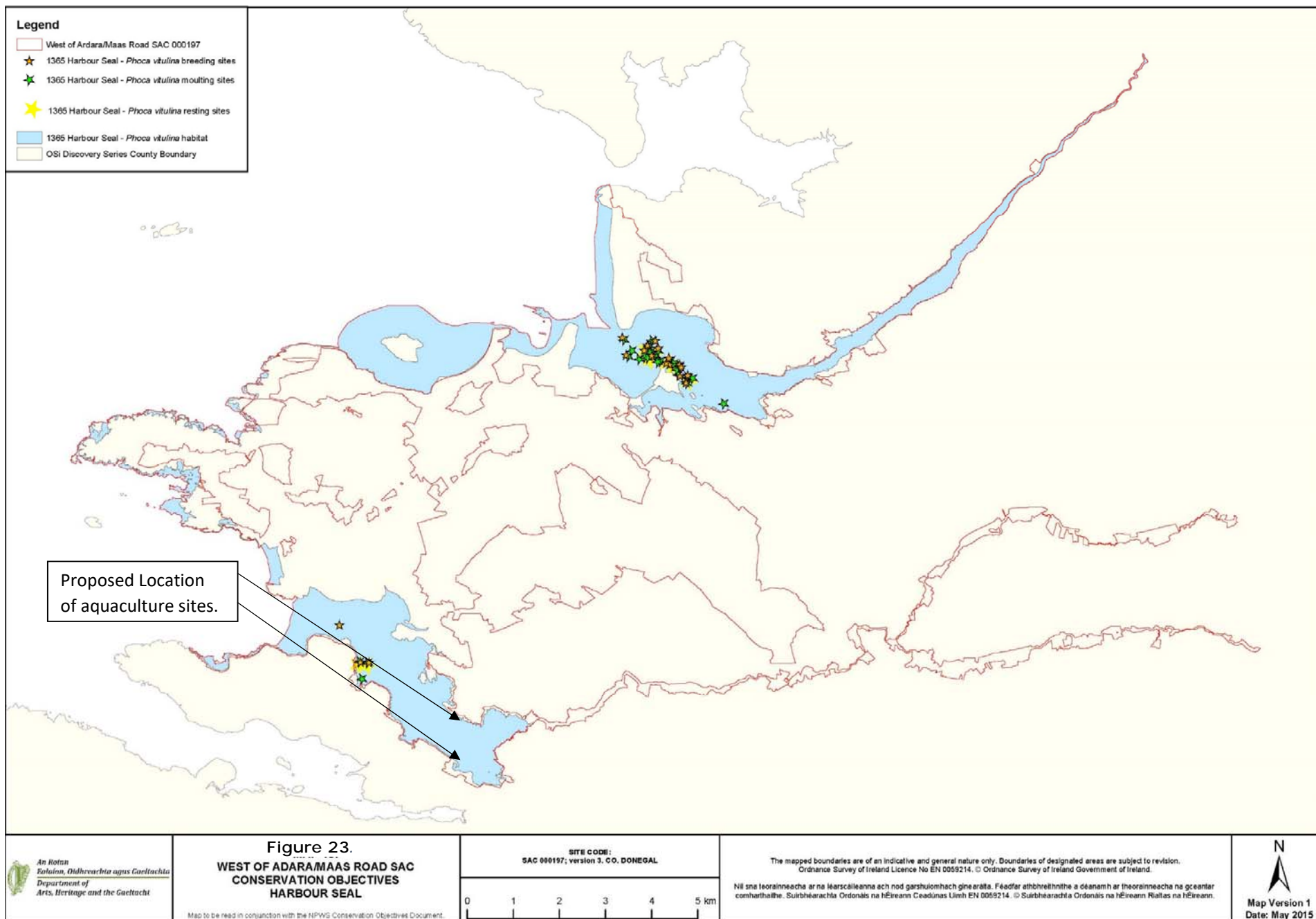












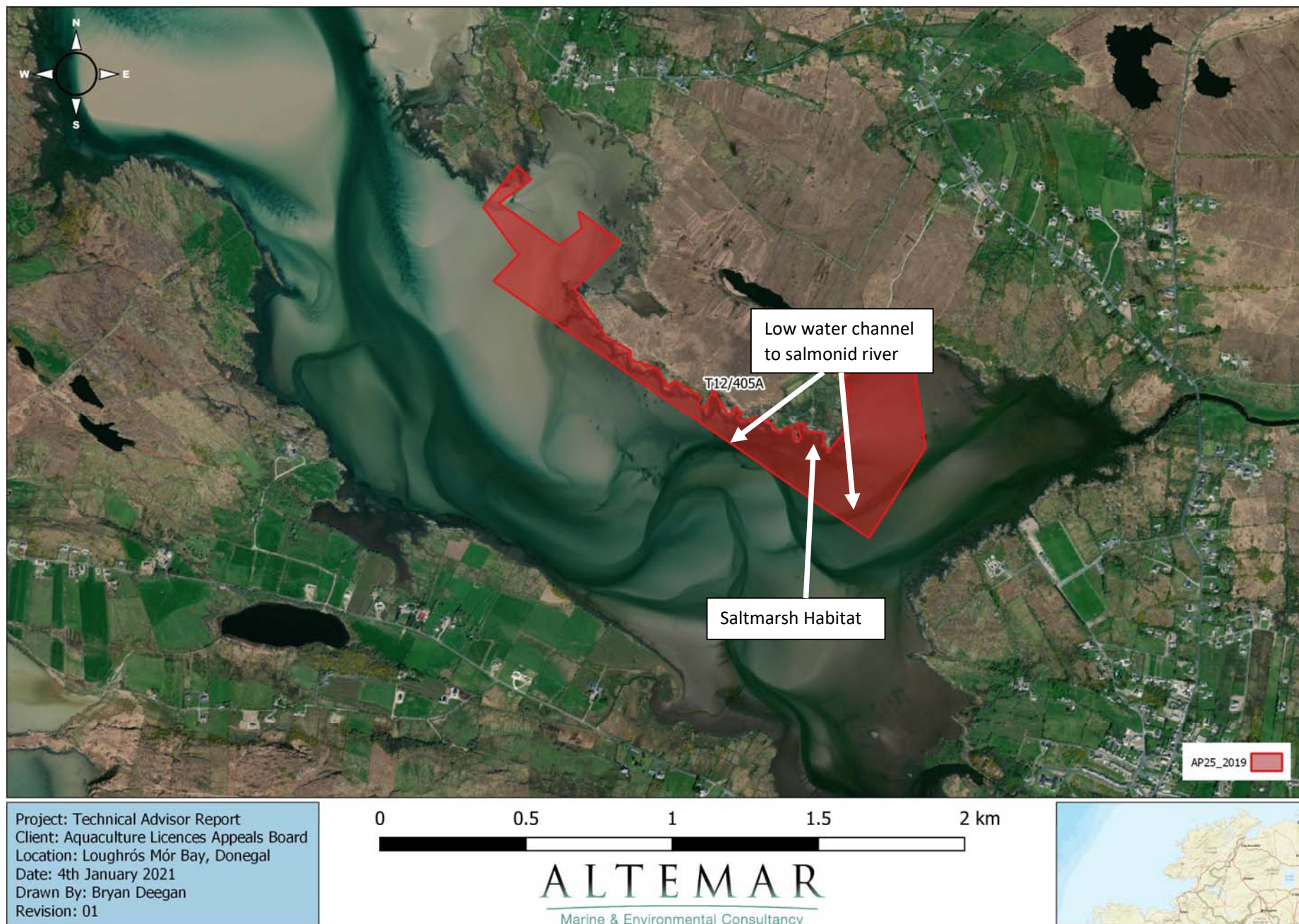


Figure 24. Satellite image of the proposed aquaculture sites.

Statutory Plans

Northern and Western Assembly Regional Spatial and Economic Strategy

Loughros Mór Bay is situated in Donegal, a county which is part of the Northern and Western Regional Assembly (NWRA). The Assembly is one of three regional-level administrative units in Ireland, intended to act as a layer of government between National and Local. One of the core functions of these newly established Assemblies is to prepare a Regional Spatial and Economic Strategy (RSES) for their respective regions which will guide all future economic and spatial development. The RSES is guided by the overarching aims contained in the National Planning Framework (NPF), a high-level strategic document prepared by the Irish Government, and it transposes these aims and objectives to a more regional context. All future Local Authority Development Plans must be cognisant of the objectives set out in their respective RSES, and for this reason alone the RSES is an important document to consider.

The RSES has established a range of key aims and objectives which will be the focus of future policy-making and co-ordinated development for the Assembly area entitled Regional Policy Objectives (RPOs). The following table provides a list of RPOs that are deemed to be the most relevant to the aquaculture sector and context of this Technical Advisor Report.

Table 2. Regional Policy Objectives, NWRA RSES

Regional Policy Objective	Focus
RPO 4.2	To support the maintenance of, and enhanced access to state lands, such as National Parks, Forest Parks, Waterways together with Monuments and Historic Properties, for recreation and tourism purposes.
RPO 4.30	To review, and where necessary amend, the RSES upon adoption of the National Marine Planning Framework (NMPF) to ensure alignment, and consistency between landuse and oceanbased planning, and to ensure co-ordination which supports the protection of the marine environment and growth of our marine economy.
RPO 4.31	To protect, upgrade and expand our key Fisheries Ports of Killybegs, Greencastle and Ross a Mhil, and to ensure adequate continued investment in facilities to ensure their ongoing success.
RPO 4.32	To enable the expansion of our regional assets in the Blue Economy in the following sectors: <ul style="list-style-type: none"> - Marine research and innovation - Gas and Oil deposits within Ireland's waters - Seafood innovation through Greencastle, Killybegs, Pairc Na Mara and other BIM fishery centres
RPO 4.33	To facilitate where possible Marine Renewable Technology Projects off the West and North West coasts of Ireland, and subject to environmental and amenity considerations (feasibility studies), and where applicable, enable National Grid connection.
RPO 4.34	To enable the development (and/or expansion) of a number of strategic Marine Resource Innovation Parks, including locations at Greencastle, Killybegs, Co. Donegal and Cill Chiaran, Co. Galway, (Pairc na Mara), to increase aquaculture and seafood sectoral growth in the Marine Economy.
RPO 4.35	To support the ongoing upgrade and improvement of the region's harbours and ports, and ensure the sustainable development of this infrastructure to enable aquaculture and seafood industry expansion responsively.
RPO 5.2	a) Protect, manage and conserve the quality, character and distinctiveness of our landscapes and seascapes.
RPO 5.5	Ensure efficient and sustainable use of all our natural resources, including inland waterways, peatlands, and forests in a manner which ensures a healthy society a clean environment and there is no net contribution to biodiversity loss arising from development supported in this strategy. Conserve and protect designated areas and natural heritage area. Conserve and protect European sites and their integrity.

County Donegal Development Plan 2018-2024

Development Plans are the main strategic documents that direct the future growth and development of local authority areas. The most recent development plan for County Donegal is the 2018-2024 Development Plan, which sets out the planning and sustainable development strategy for the County that covers a six-year period from 2018 to 2024.

A range of policies and objectives are set out under broad thematic areas such as the economy, tourism, water, climate change and the environment. Their intention is to manage or steer the direction of growth and development in these areas. The most pertinent objectives, in terms of aquaculture and/or the study area, identified in the Development Plan are outlined below.

Table 3. Key Objectives from Donegal County Development Plan

Objective	Focus
ED-O-5	To promote appropriate rural economic development by encouraging diversification that supports the growth of emerging rural enterprises functionally related to the countryside.
WES-O-4	To implement the EU Water Framework Directive through the implementation of the appropriate River Basin Management Plan and Programme of Measures as it affects Donegal
NH-O-2	To comply with Article 6 of the Habitats Directive (92/43/EEC) and have regard to the relevant conservation objectives, management plans, qualifying interests and threats to the integrity of Natura 2000 sites.
NH-O-3	To maintain the conservation value of all existing and/or proposed SACs, SPAs, NHAs and RAMSAR sites including those plant and animal species that have been identified for protection under the EU Habitats Directive (92/43/EEC), EU Birds Directive (79/409/EEC as amended by 2009/147/EC), the Wildlife Acts (1976-2014) and the Flora Protection Order (2015).
NH-O-5	To protect, manage and conserve the character, quality and value of the landscape having regard to the proper planning and development of the area, including consideration of the scenic amenity designations of this plan, the preservation of views and prospects and the amenities of places and features of natural, cultural, social or historic interest.
NH-O-6	To protect and improve the integrity and quality of Designated Shellfish Waters, and Freshwater Pearl Mussel Basins and to take account of any relevant Shellfish Reduction Program or Fresh Water Pearl Mussel Sub-basin Plan.
NH-O-7	To protect the areas of Especially High Scenic Amenity from intrusive and/or unsympathetic developments.
NH-O-10	To maintain and restore ecosystems and to conserve valuable or threatened habitats and species in order to prevent further loss of biodiversity and to meet the EU's target to halt biodiversity loss by 2020 through the implementation of the EU Biodiversity Strategy (2011) or as updated.
EX-O-1	To conserve and protect the environment, including in particular, the archaeological and natural heritage and conservation and protection of European designated sites and any other sites, which are prescribed.
EX-O-2	To preserve the character of the landscape where and to the extent that, the proper planning and sustainable development of the area requires it, including the preservation of identified views and prospects, cultural features and the amenities of places and features of natural beauty or interest.
TOU-O-7	To manage development in a manner which supports and sustains the Wild Atlantic Way Tourism initiative.
MRCM-O-1	To maximise the social and economic potential of Donegal's marine sector by: Supporting the offshore primary production sector of the aquaculture industry, subject to adequate environmental assessments and safeguards being provided to the satisfaction of the

	Council and to the avoidance of the development giving rise to an overbearing visual impact on the locality in which it is proposed.
MRCM-O-2	To safeguard and improve and the health of our Marine ecosystem by: Protecting the qualifying habitat and species of Natura 2000 sites through Appropriate Assessment of development proposals. Maintaining and improving water quality in our estuaries and seas by implementing River Basin Management Plan and any future programmes under the Marine Strategy Framework Directive. Ensuring that there is; sufficient sewage treatment capacity to serve development in urban areas, adequate on-site effluent treatment to EPA standards for developments in rural/unserved areas, and adequate pollution control measures for commercial/industrial development.
MRCM-O-3	To manage our coastal environment in a sustainable manner by: Managing development in a manner which protects sensitive coastal environments (e.g. dune environments) and undertaking coastal zone management projects.

The status of water services at Ardara, which is located adjacent to Loughros Mór Bay, is discussed in the Development Plan where it states that *"at present, water treatment capacity and water availability are adequate. Upgrades proposed to the Glenties and Ardara WTP"*. The wastewater treatment plant for Ardara is recorded as sufficient for a population of 2,350, with the urban area it serves recording a population of 1,920.

Ardara itself is identified as a 'strategic town' that 'performs a special economic function' due to its importance for tourism and the Wild Atlantic Way. It is also considered a heritage town with significant built heritage resources.

The Development Plan also assigns 'Scenic Amenity Designations' to areas of Donegal, with protected/important views also identified. There are two protected/important views from the tip of the Loughros Peninsula looking north towards Rossbeg. The coastal areas immediately adjacent to the shoreline of Loughros Mór Bay are designated as 'Areas of Especially High Scenic Amenity' (EHSA), with those areas further from the coast considered 'Areas of High Scenic Amenity' (HAS) (Fig 16).



Figure 16. Amenity Designations and protected/important views, Donegal County Development Plan

FLAG North Local Development Strategy 2016

The Fisheries Local Action Groups (FLAG) are regional organisations focused on community-led development to enhance the economic opportunities and social sustainability of Fisheries and Aquaculture dependent areas. Each FLAG has, through a process of public consultation developed a Local development Strategy, aimed at supporting job creation, adding value, promoting innovation as well as enhancing environmental assets and promoting each area's maritime cultural heritage. Although non statutory documents, the FLAG Development Strategies offer useful insights into the local economies of Irish coastal communities. Figure 17 highlights the areas contained as part of the FLAG North region.

The following information is detailed in the FLAG North Local Development Strategy:

- FLAG North contains 16% (61) of the total number of companies engaged in the Irish marine and seafood sector;
- The majority of companies are involved in Processing (26), with Fishing (21) representing the second largest business type. Aquaculture (10) and Wholesale (4) account for the remaining;
- FLAG North accounts for 17% of Irish vessels (372 of 2,196);
- FLAG North represents 64% of the total volume of fish landed across all FLAGs, accounting for 129,482 of 203,423 tonnes;
- The total value of fish landed in FLAG North is estimated at €74.94m, representing 34% of the total value across all FLAGs;
- Killybegs Port is ranked as the largest port in Ireland for fish landed and total value domestically.



Figure 17. FLAG North region, FLAG North LDS

5.5 Man-made Heritage

The proposed aquaculture site(s) that are subject to the appeals being considered as part of this Technical Advisor Report are located in the waters of Loughros Mór Bay and do not impinge or interfere with any man-made heritage sites or protected structures (Fig 18).

Nonetheless, a study of the National Monuments Service database was undertaken and recorded built heritage sites in close proximity to the proposed aquaculture site have been identified. Sites that are contained within a 2km buffer from the aquaculture site have been recorded and details of them are set out below, with information retrieved from the Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs' 'Historic Environment Viewer'¹⁶.

National Monuments Service

- DG073-013001- Cross – Kilcashel
- DG073-013005 – Ecclesiastical enclosure – Kilcashel
- DG073-013002 – Church – Kilcashel
- DG073-013004 – Burial Ground – Kilcashel
- DG073-013003 – Midden – Kilcashel
- DG073-015001 – Ringfort - Kilcashel
- DG073-015002 – Cross-inscribed stone – Kilcashel
- DG073-023 – Ringfort – Crannogeboy
- DG073-024 – Crannog – Crannogeboy
- DG073-027 – Bullaun stone – Drumalough
- DG073-052 – Bullaun stone – Drumalough
- DG073-028 – Ringfort – Crannogeboy
- DG073-029001 – Church – Shanaghan
- DG073-029002 – Ritual site/Holy well – Shanaghan
- DG073-029003 – Graveyard – Shanaghan
- DG082-002 – Burial ground – Killasteever
- DG082-001001 – Standing stone – Kinnoghty
- DG082-001002 – Standing stone – Kinnoghty
- DG073-042001 - Ecclesiastical site - Drumbaran
- DG073-042002 – Ritual site/Holy well – Drumbaran
- DG073-041 - Megalithic tomb – Ardara
- DG073-040 – Burial ground – Ardara
- DG074-010 – Ringfort – Ardara
- DG073-048 – Megalithic structure – Ardara
- DG073-025 – Standing stone – Ardara
- DG073-016 – Standing stone – Tullycleave More

National Inventory of Architectural Heritage

- Reg. No. 40836017 - rectory/glebe/vicarage/curate's house – 1870/1880
- Ard Conail - Reg. No. 40836009 - presbytery/parochial/curate's house – 1900/1910
- Church of the Holy Family - Reg. No. 40836003 – church/chapel – 1895/1905
- Tadhg Ó Breisleán - Reg. No. 40836019 – house – 1810/1850
- Reg. No. 40836007 – house – 1910/1930
- Nesbitt Arms Hotel - Reg. No. 40836008 – hotel – 1860/1920
- Corner House - Reg. No. 40836006 – public house – 1860/1900
- The Present Day Gift Shop - Reg. No. 40836004 – house – 1800/1840

¹⁶ <https://webgis.archaeology.ie/historicenvironment/>

- Ardara Heritage Centre - Reg. No. 40836005 - market house; court house – 1850/1920
- The Ardara Parish Hall Limited - Reg. No. 40836010 - church hall/parish hall – 1920/1930
- Nancy's Bar - Reg. No. 40836014 – house – 1820/1860
- Reg. No. 40836018 – house – 1800/1840
- Reg. No. 40836013 – house – 1860/1900
- Reg. No. 40836012 – water pump – 1900/1930
- Gatsby House - Reg. No. 40836011 – house – 1860/1900
- Ardara Methodist Church - Reg. No. 40836002 – church/chapel – 1830/1835
- St. Conall's Church of Ireland Church - Reg. No. 40836001 – church/chapel – 1830/1835
- Wood Hill - Reg. No. 40836015 – walled garden – 1770/1800

6.0 Section 61 Assessment

This act states that “The licensing authority, in considering an application for an aquaculture licence or an appeal against a decision on an application for a licence or 11 revocation or amendment of a licence, shall take account, as may be appropriate in the circumstances of the particular case, of-

- (a) the suitability of the place or waters at or in which the aquaculture is or is proposed to be carried on for the activity in question,
- (b) other beneficial uses, existing or potential, of the place or waters concerned,
- (c) *the particular statutory status, if any, (including the pro-visions of any development plan, within the meaning of the Local Government (Planning and Development) Act, 1963 as amended) of the place or waters,*
- (d) *the likely effects of the proposed aquaculture, revocation or amendment on the economy of the area in which the aquaculture is or is proposed to be carried on,*
- (e) *the likely ecological effects of the aquaculture or proposed aquaculture on wild fisheries, natural habitats and flora and fauna, and*
- (f) *the effect or likely effect on the environment generally in the vicinity of the place or water on or in which that aqua-culture is or is proposed to be carried on-*
 - (i) *on the foreshore, or*
 - (ii) *at any other place, if there is or would be no discharge of trade or sewage effluent within the meaning of, and requiring a licence under section 4 of the Local Government (Water Pollution) Act, 1977, and*
- (g) *the effect or likely effect on the man-made environment of heritage value in the vicinity of the place or waters.”*

6.1 Site Suitability

Effluent outfall

It should be noted that based on EPA data the proposed site is close to the primary effluent discharge point within Loughros Mór Bay. As this is not a Designated Shellfish Water area there is limited water quality information. However, with an aquaculture site located adjacent to the primary effluent discharge point, it would identify the potential for negative water quality issues and risk in relation to human health e.g. faecal bacteria and Norovirus from the primary effluent discharge.

The location of outfall points that are linked to the Ardara sewerage scheme is discussed in several appeals made against the proposed aquaculture sites, as well as by the Appellant themselves. The exact location of the outfall is seemingly a contentious issue that forms the basis of several arguments both for, and against the proposed aquaculture sites. The documents received as part of the proposed aquaculture site were studied by the Technical Advisor in order to clarify this matter, in particular the Technical Consultation document and the Further Consultation document. The following information has been obtained from these sources and is quoted verbatim.

In the **Technical Consultation** document received as part of application AP24/2019, a Mr. Paul O’Sullivan states the following, dated on 16/04/18, in relation to the sewage outfall points:

“The outfall point from Ardara sewerage scheme is located 1125m from site 397 at its closest point and 2080m at its furthest point; site 397b varies from 350m away at its closest point to 1215m at its furthest; site 397c varies in range from the outfall point 400m to 850m.”

However, there appears to have been some debate over the accuracy of the outfall point’s location, something that becomes apparent having read the email thread contained within the **Further Consultation** document. A request is made to Irish Water, by Mr. Paul O’Sullivan, for confirmation of the exact location of the sewage outfall, as the following text shows:

“Can you confirm for us the position of the primary discharge point in the Owenea estuary. It is given in the formal application form to EPA by Donegal County Council as 172200, 391730. it is referred to as SW001 with the same ING coordinates in EPA annual environmental reports. It is difficult to know from surface surveys at low tide where it is but our survey work on shore recently found distinct upwelling at low tide at a point some 525 m further to the west at 171679 391662 which we think might be the actual outfall point?? (see image taken at this point attached where upwelling is at centre foreground – mp4 video also taken and available if required)). If the outfall is in fact at or close to 171679,391662 we would welcome confirmation of this as we had relied on the official coordinates up to now and it is an important piece of information in our aquaculture assessment work. (The actual outfall position would also affect the choice of downstream monitoring point –as it stands it may be in the wrong place at 172034.5, 391710.2 (not downstream)).” – 14/01/19

Following this, Mr. Matthew Collins of Irish Water provides a response, which is as follows:

“We recorded the diffuser coordinates as: 171692.8 391644.1

This is close to coordinates given by Paul O Sullivan below (171679 391662) as being where they noted upflow (25m away). The difference between these 2 sets of coordinates could be explained by the there being four outlets from the diffuser in series. Different ones could have been blocked during survey.” – 25/01/19

In the final response recorded as part of the email thread, Mr. Paul O’Sullivan notes his concerns regarding the siting of aquaculture sites in proximity to outfall points, while also acknowledging the confusion over the exact location of the same outfall points:

“While not recommended by any of the statutory consultees it seems to me that an exclusion zone for licensing aquaculture in the vicinity of a town sewage outfall would be a sensible approach — such licensing exclusion areas have been used elsewhere e.g. Carlingford and Omeath in Carlingford Lough. This approach of not licensing within a zone around a main outfall can be justified on the ground of expected low water quality in that zone. Note that the survey information collected by IVIED in the Bay In January 2019 identified the primary outfall discharge point for Ardara sewage scheme to be at the south corner of site 397B - prior to this we had understood it was located some 500m further to east. We contacted Irish Water seeking clarification on the coordinates of the discharge point. They have confirmed that the outfall is at/close to coordinates 171679,391662 and discharges within site 39713/close to 397C as shown in map overleaf.” - 04/02/19

Figure 19 shows the approximate locations of both outfall points in relation to the aquaculture sites; the originally recorded location noted by the EPA and the subsequent location as confirmed by Irish Water. It should be reiterated that this discharge has undergone primary treatment of the effluent only and as a result would be expected to have basic treatment only.

Movement of the estuarine channels of the watercourses and the sandflats within Lough Ros Mor is noted over the period from 2000 to 2020 based on examination of orthophotography (OSI) and satellite imagery (Bing data)(Figure 20). The main channel movements observed over this short time period are the main channel itself within the bay and the channels at the confluence of the three rivers in the vicinity of the outfall diffusers. These movements have an impact on the extent of the sandflats but importantly shows that the movement of these channels i.e. the intertidal elements of the salmon rivers can change within the Bay. Therefore, if a proposed site is licenced to avoid a salmon river at a particular location, the location of these channels can vary within the Bay. The location of an aquaculture facility may not impact on the channels initially but, movement of the channels in the future may result impacts on these salmon rivers, particularly in the vicinity of the main channel and at the confluence of the three rivers. It should be noted also that it is unclear what the placement of trestles within the bay will do to the hydrodynamic regime and corresponding channel movements.

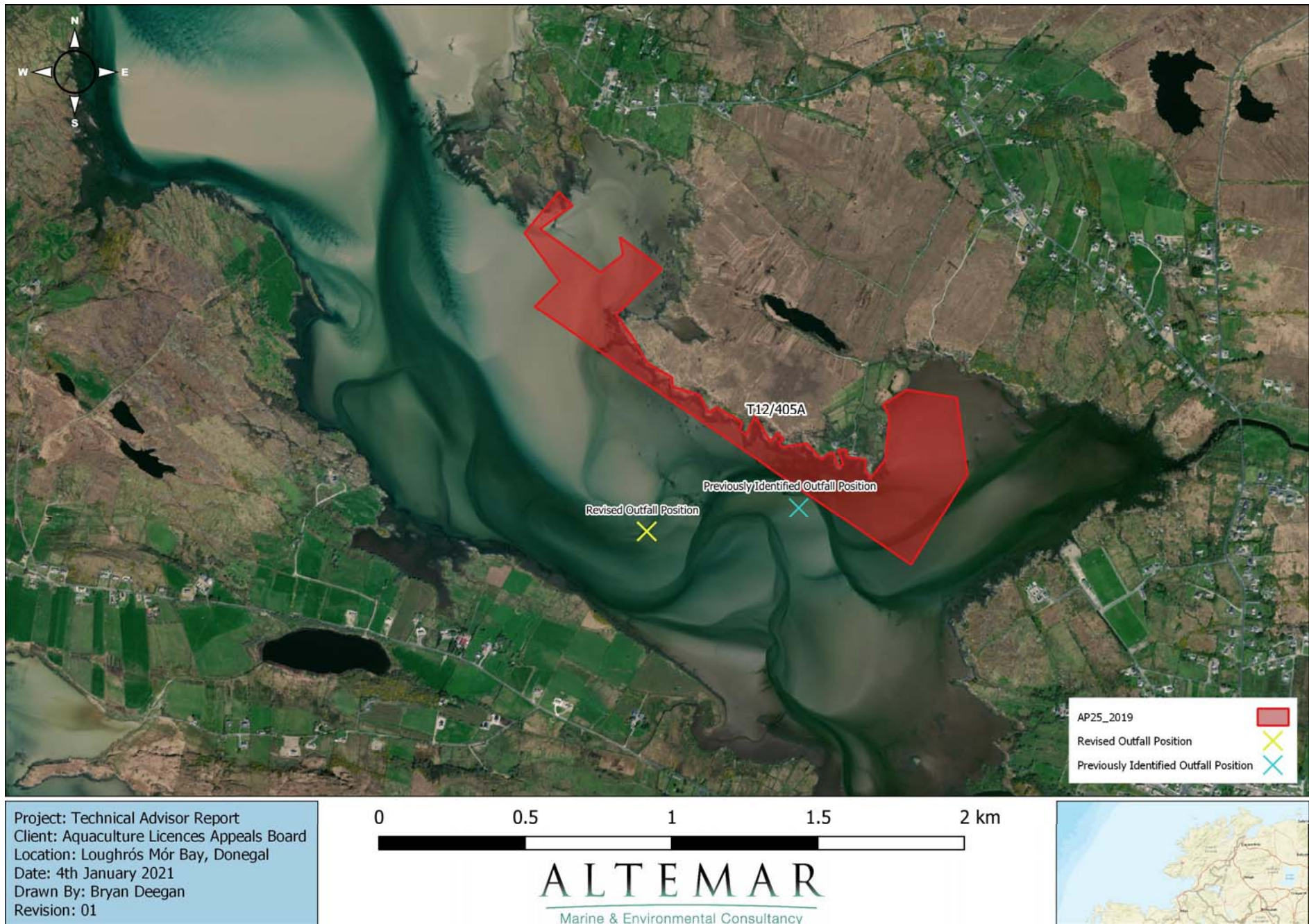


Figure 19. Location of outfall outlet based on EPA data and clarification from Irish Water.

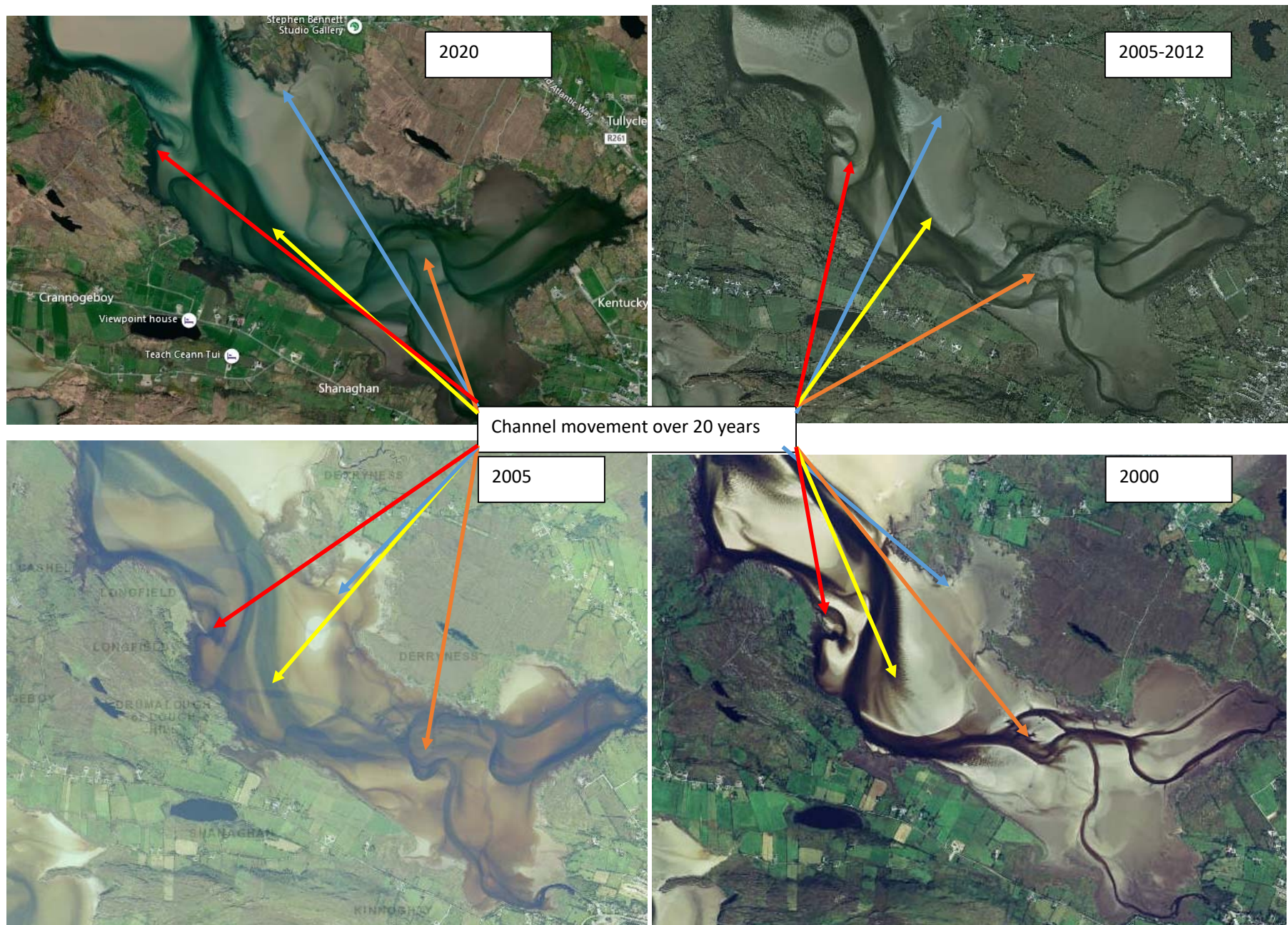


Figure 20. Movement of channels over a short period of 20 years (Main channel = yellow, confluence of three rivers (diffuser location)= orange) ([OSI](#))

In relation to T12/405A, a very small proportion of site are in the terrestrial environment. In addition, based on the location of the site from terrestrial to intertidal the site would impede safe access on the upper shore to the public. It should be noted that areas of this site are in the upper intertidal and terrestrial, where oysters wouldn't survive. As can be seen from Figure 19 there are few areas within T12/405A that are not either terrestrial, upper intertidal, within an intertidal channel of a salmonid river or in a location that would impact pedestrian movement on the upper shore.

In summary, the site is; proximate to a primary effluent discharge point which has the potential to cause risk to human health, located in or proximate to mobile estuarine channels of salmonid watercourses and several portions of the site are in areas where oysters would not survive. **The proposed sites are therefore deemed not to be suitable for aquaculture development.**

6.2 Other Uses

Tourism/Recreation/Leisure

Castleview Equestrian Ardara¹⁷ is an equestrian centre that is located on the shores of Loughros Mor and utilise the sand flats of Loughros Mor Bay for riding. It would be expected that the proposed aquaculture site would limit the extent of horse-riding activity that could take place within the bay.

The Wild Atlantic Way is proximate to the site. The proposed aquaculture activity, would be expected to significantly impact on the scenic landscape.

Fishing/ Harvesting/Aquaculture

As outlined in the Ministerial File John Ward stated that *"Owenea and Owentocker salmon fisheries are important recreational and commercial salmon fisheries"* and the Loughrosmore draft net fishery has been issued with draft net licences by the IFI for a practice that has been in place since 1860. The appeal sites *"fall within the main draft net fishery"* and would be detrimental to their functioning, if licensed. Furthermore, the closure of draft net fishing in the area is *"only temporary"* and should not be replaced by oyster farming as both practices *"cannot co-exist in the same area"*. This claim in relation to the presence of the draft fishery is also supported by Paul Boyle / Loughrosmore SAC Conservation Group. The Conservation of Salmon and Sea Trout (Draft Nets and Snap Nets) Bye-law No. 988, 2021 will reopen the Owenea/ Owentocker draft net fishery 1 July 2021 and close them on 21 July 2021. The proposed aquaculture sites would significantly impact on the operation of the fishery through the obstruction of fishery areas. It should also be noted that as seen in Figure 8 that the proposed sites overlap with a "dredge" fishery. In addition, Owenea Angling Club stated that *"oyster trestles in this area would totally impede and obstruct our sea trout fishing in the estuary, including night time sea trout fishing"* It is likely that the trestles would impede and obstruct the sea trout fishing, through the obstruction of channels and causing obstructions to movement of fishermen. Should this fishing be carried out at night, as stated in the appeal, the aquaculture sites could pose a health and safety risk to fishermen, through snagging and restriction of movements, particularly in the vicinity of the intertidal watercourse channels.

The proposed aquaculture sites have the potential to obstruct and negatively impact on existing users of the bay, with the potential to cause health and safety risks.

6.3 Statutory Status

The coastal areas immediately adjacent to the shoreline of Loughros Mór Bay are designated as 'Areas of Especially High Scenic Amenity' (EHSA), with those areas further from the coast considered 'Areas of High Scenic Amenity' (HAS). As outlined in the Donegal County Development Plan "Areas of Especially High Scenic Amenity are sublime natural landscapes of the highest quality that are synonymous with the identity of County Donegal. These areas have extremely limited capacity to assimilate additional development." As

¹⁷ <https://www.facebook.com/pages/category/Artist/Castleview-Equestrian-Loughros-Point-Ardara-336117856463352/>

outlined in the Development Plan Objectives “NH-O-7: To protect the areas of Especially High Scenic Amenity from intrusive and/or unsympathetic developments” and “MRCM-P-10: It is a policy of the Council to ensure that development proposals do not adversely compromise the recreational amenity and environmental quality of coastal areas including Flag Beaches, Natura 2000 sites and areas of Especially High Scenic Amenity.” **The proposed aquaculture site would potentially impact on the statutory status.**

6.4 Economic Effects

The scale of the proposed aquaculture site is moderate and would only be expected to benefit the applicants and their employees. **The proposed site is likely to have a non-significant positive effect for the farmers in question. However, there is potential for negative impacts on tourism industries** including horse riding and on salmonid fishing both within the Bay and in the upper catchments.

6.5 Ecological Effects

Based on the contents of, the Ministerial File, data from the NPWS and historic satellite imagery, it is likely that **the proposed licence area (T12/405A)(as refused by the Minister) has the potential to significantly impact on the conservation objectives of NATURA 2000 sites and in particular those of West of Ardara Road/Mass Road SAC.**

The potential impact is primarily through directly impacting salmonid migration on the low water channels of salmonid rivers (T12/405A). Based on an examination of historic aerial imagery, particularly that of 2000¹⁸ the intertidal sands in the area are highly mobile and the channels within the bay move across the intertidal sands. It is unclear if there is potential for impact on the population of pearl mussel in the upper catchment, but it is clear that due to the life cycle connection with salmonids, that if there is a significant effect on the salmonid population in the catchments from the proposed aquaculture facilities it could only have a negative impact on the life cycle of pearl mussel in the upper catchment.

6.6 General Environmental Effects

Having assessed the potential environmental impacts outlined above (Section 6.1). This would include potential impacts on Atlantic salmon and pearl mussel within the upper catchments. **The proposed sites have the potential for a significant impact on the environment.**

6.7 Effects on Man-Made Heritage

See section 5.5 for additional details. No National Monuments are in the vicinity of the proposed aquaculture development. The proposed aquaculture site will not significantly impact on man-made heritage of the area

6.8 Section 61 Assessment Conclusions

It is concluded that the licences refused by the Minister, are not likely to significantly impact on the environment, navigation or man-made heritage and visual landscape.

However, based on the reasons outlined above there is potential for impact on other users of the area, the environment, conservation objectives of West of Ardara/Maas Road SAC and the economy of the area and in particular have the potential to impact on:

1. the particular statutory status of the place or waters,
2. the environment generally in the vicinity of the place or water on or in
3. visual landscape.
4. Other users (draft fishery).

¹⁸ <http://map.geohive.ie/mapviewer.html>

In addition, the proximity to the to the primary effluent discharge point for Ardara should be taken into account due to the potential environmental and health risks.

6.9 Confirmation re: Section 50 Notices

There are no matters which arise in the section 61 assessment which the Board should take into account which have not been raised in the appeal documents. It is not necessary to give notice in writing to any parties in accordance with section 50 (2) of the 1997 Act.

7.0 Screening for Environmental Impact Assessment

As outlined in S.I. No. 240/2018 - Aquaculture (Licence Application) (Amendment) Regulations 2018 in relation to *“Requirement for certain applications to be accompanied by an Environmental Impact Assessment Report”*

“5. (1) Subject to paragraph (3), an application under section 10 of the Act for an aquaculture licence in respect of—

(a) a marine based intensive fish farm (other than for trial or research purposes where the output would not exceed 50 tonnes);

(b) all fish breeding installations consisting of cage rearing in lakes;

(c) all fish breeding installations upstream of drinking water intakes;

(d) other fresh-water fish breeding installations which would exceed 1 million smolts and with less than 1 cubic metre per second per 1 million smolts low flow diluting water;

(e) where the Minister, as part of his or her consideration of an application for intensive fish farming, makes a determination under Regulation 4A that such action is necessary

shall require an environmental impact assessment and be accompanied by an Environmental Impact Assessment Report.

(2) In the case of an application other than one referred to in paragraph (1), the Minister may require the applicant to submit an environmental impact statement if the Minister considers that the proposed aquaculture is likely to have significant effects on the environment.

(3) An environmental impact assessment shall not be required in respect of an application which is solely for movement of navigation buoys, internal reconfiguration of the site, upgrading equipment used on the site, technology changes or improvements, or to comply with public safety requirements or a combination of these, and is unlikely to have significant effects on the environment. In such a case the Minister shall consider if another form of assessment would be appropriate and take such steps as are considered appropriate to bring the information obtained under the other form of assessment to the attention of the public.

(4) For the purpose of this regulation “marine based” means an installation that is located below the line of the high water of ordinary or medium tides.”

As a result of the above legislation the proposed shellfish aquaculture sites would not require an Environmental Impact Assessment Report.

8.0 Screening for Appropriate Assessment

A report supporting Appropriate Assessment of Aquaculture in West of Ardara/Maas Road SAC (Site code: 000197) was prepared by the Marine Institute in June 2019. The report states that “There are currently no aquaculture activities occurring within the West of Ardara/Maas Road SAC but there are however six applications for shellfish culture, four for the cultivation of the Pacific oyster *Crassostrea gigas* on trestles and two for clam culture under netting on the seafloor. All applications are in intertidal areas within Loughros Mór Bay. The profile (prepared by BIM) of the aquaculture industry in the Bay, used in this assessment, is derived from the list of licence applications received by DAFM and provided to the MI for assessment in February 2015.” All of the sites under appeal are included in this report.”

It should be noted that despite the overlap with saltmarsh habitats which are features of interest of the SAC the Marine Institute did not determine the habitat as “considered subject to potential disturbance and therefore, carried further in this assessment”. The impact on these habitats is therefor under assessed in the Marine Institute Report.

In relation to Atlantic Salmon the following was stated in the Report “Scientific advice from the Stating Scientific Committee on Wild Salmon Stocks (see SSCS 2015) indicates that salmon populations in the Owenea/Stracashel and Owentocker rivers, which run into the SAC, are currently exceeding their Conservation Limit (CLs) for spawning stock level estimates required to allow sustainable level of spawning. Given the intertidal nature of the structures to be used in the proposed culture activities, it is concluded that should proposed shellfish culture in the SAC be permitted the activities would not pose any significant risk to the following salmon attributes;

- Distribution (in freshwater)
- Fry abundance (freshwater)
- Population size of spawners (fish will not be impeded or captured by the proposed activity)
- Smolt abundance (out migrating smolts will not be impeded or captured by the proposed activity)
- Water quality (freshwater)

Should proposed aquaculture activities be permitted they are likely to be non-disturbing to the Conservation Objective for Atlantic Salmon within the West of Ardara/Maas Road SAC.”

However, this assessment does not assess the potential impact of the placing of structures within the intertidal elements of these rivers which could impact on/impede the movement of Atlantic salmon and sea trout both in relation to returning adults and salmon smolts going to sea. In addition, the potential consequence on the population of freshwater pearl mussel as a result in the potential decline in salmonids within the rivers has not been addressed. The author would therefor question the conclusions of the Marine Institute report in relation to the potential impact of the proposed aquaculture sites on the conservation objectives of the SAC.

9.0 Evaluation of the Substantive Issues in Respect of Appeal and Submissions/Observations Received

Appellant 1	Francis Gallagher	AP25/2019
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1. Oyster growth/Site locations

The proposed site T12/405A contains suitable areas for trestle and bag deployment especially on the lower parts beside the channel, where there is stable, hard substrate encompassing >50% of both blocks from Low Water Spring Tide upwards. In addition, the area has the exact “same exposure profile as all the farms in existence in Loughros Beag”.

Technical Advisor Response: See Figure 24. It is acknowledged that there are areas that may be suitable within the site. However, the site is assessed as a whole and the area outlined above that may be suitable is significantly smaller than the proposed site area.

2. Water quality and Shellfish monitoring

Regarding the issue of the Ardara discharge pipes, the Appellant claims that the discharge pipes are “currently covered by sand bank at south corner of T12/405A and therefore could not be discharging continuously at this point”. Furthermore, an EPA Discharge Audit from May 2019 “confirms stable water quality and compliance under discharge licence conditions”. The Appellant also argues that shellfish farms are monitored “monthly for Faecal Coliform and weekly for biotoxin” and that such matters are the responsibility of the SFPA and, therefore, they are the appropriate body to determine public risk.

Technical Advisor Response: The EPA also identify the location of the Primary Effluent Discharge Pipe proximate to the aquaculture site. Based on the position of the outfall pipe and recent satellite imagery the pile is covered by sand. However, on recent satellite imagery at low tide a water channel on the surface can be observed in the area, which may indicate percolation through the sand. However, as previously discussed (Section 6) an additional diffuser may be located further to south.

3. Visual impact

The Appellant claims that the proposed sites are “1.2km from any point on the R251 or N56”, therefore will not impact on any views from “the discovery point at Glengesh”, which is cited as an issue by Donegal County Council. It is also claimed that it is erroneous to “assign equally high sensitivity to the entire Atlantic Way, which is 2,500km in length and gives access to a vast range of environments”. In this regard, the inclusion of oyster trestles would not significantly impact the overall experience of the Wild Atlantic Way offer. It is also claimed that “it would be virtually impossible to see any trestles deployed on lower to mid parts of any applications from the Wild Atlantic Way even while exposed at low tide” and that oyster farms “are fully covered by water for 80% of daylight time with no floating structures involved”.

Technical Advisor Response: The coastal areas immediately adjacent to the shoreline of Loughros Mór Bay are designated as ‘Areas of Especially High Scenic Amenity’ (EHSA), with those areas further from the coast considered ‘Areas of High Scenic Amenity’ (HAS). As outlined in the Donegal County Development Plan “Areas of Especially High Scenic Amenity are sublime natural landscapes of the highest quality that are synonymous with the identity of County Donegal. These areas have extremely limited capacity to assimilate additional development.” As outlined in the Development Plan Objectives “NH-O-7: To protect the areas of Especially High Scenic Amenity from intrusive and/or unsympathetic developments” and “MRCM-P-10: It is a policy of the Council to ensure that development proposals do not adversely compromise the recreational amenity and environmental quality of coastal areas including Flag Beaches, Natura 2000 sites and areas of Especially High Scenic Amenity.” The proposed aquaculture site would potentially negatively impact on the statutory status.

4. Salmon fishery and migration

Due to the reducing number of salmon returning to Irish rivers the Appellant claims that salmon fishing is unlikely to “ever be allowed recommence” in an SAC that has salmon listed as a qualifying species. Considering this, there is an “opportunity to replace this tradition with an entirely renewable and sustainable

source of seafood”, as offered by oyster farming. The Appellant also notes that the IFI did not cite any issues or conflicts with salmon as potentially arising from the proposed sites.

Technical Advisor Response: It is clear from overlaying the proposed site on satellite imagery that the trestles will impede both inward and outward migration of salmon and sea trout at low water. This could have not only impact on Atlantic salmon and sea trout populations but also on the population of the freshwater pearl mussel in the catchment, whose lifecycle is dependent on the presence of salmonids in freshwater.

5. Access by boat

The Appellant proposes to use a specially designed oyster boat to access proposed site T12/405A, which means there is no need to use any local piers in the bay as *“the boat has a 0.5m draft fully loaded”*.

Technical Advisor Response: T12/405A is a long linear site much of which is at the upper intertidal. Besides the point of restricting public access in this area, it is felt that accessing this area by boat would be very limited due to the very limited tidal times required to access the areas. Public road access

As outlined and shown in a map within the Appeal received on the 18th November 2019 the Appellant claims that public access will not be hindered in any way as an alternative route *“on the Eastern side”* is already utilised for agricultural uses and is *“owned solely by the applicant...and can be used in any way to accommodate access for oyster farming”*.

Technical Advisor Response: This is acknowledged.

6. Recreational uses

The Appellant states that there will be *“no impact on recreational activities or access to the shore by oyster farming activity”*. They claim that local recreational activity and commercial activities occur *“almost exclusively at the western end of Loughros Mór”*, while Tramore Strand and Rosbeg, which are the *“busiest tourist areas”* are located 6-7km northwest of *“the mouth of Loughros Mór Bay”*.

Technical Advisor Response: As outlined above there are other users within the Bay including walkers and horse riding. The proposed sites will impede the movement of these users.

7. Shellfish designation

While the Appellant acknowledges that the area is not a Shellfish Growing Waters Area, they claim that such a designation is *“not a prerequisite for licencing”*. *“The inclusion of the proposed sites on the SFPA’s sampling programme would enable designation”*.

Technical Advisor Response: This statement is acknowledged

10.0 Recommendations of Technical Advisor with Reasons and Considerations

It is recommended to confirm the Minister's decision and refuse the licences for the proposed aquaculture sites. Based on the Technical Advisors assessment of the proposed aquaculture site there is potential for the proposed sites to impact on the following:

- 1) Features of interest of the West of Adara/Maas Road SAC (saltmarsh habitats, Atlantic salmon and pearl mussel)
- 2) Salmonid (Atlantic salmon and sea trout) catchments upstream of the proposed sites through the impeding of inter tidal channels.
- 3) Human health (due to the proximity of primary treatment outfalls).
- 4) Human safety (due to the impeding of pedestrian traffic on the upper shore)
- 5) The current users of the Bay including the salmon draft fishery.

11.0 Draft Determination

Having carried out an inspection of the proposed sites and in accordance with Sections 59 & 61 of the Fisheries (Amendment) Act 1997, it is recommended to confirm the Ministers decision and refuse the licences for the sites below:

Appeal No.	Site Ref No.
AP25/2019	T12/405A

Technical Advisor: Bryan Deegan

Date: 22nd April 2021