



AQUAFAC

**Provisional RMP Assessment
Paddy's Point Oysters & Mussels
(S7 AFFNI 76)**

Produced by

AQUAFAC International Services Ltd

On behalf of

Food Standards Agency in Northern Ireland

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Table of Contents

1.	Summary of Information	1
1.1.	General	1
1.2.	Major Potential Faecal Pollution Sources	5
1.3.	Major Potential Chemical Pollution Sources	5
1.4.	Nearby Classified Production Areas	5
1.5.	Summary of Available E. coli Data	6
2.	Assessment	8

List of Figures

Figure 1: Location of Paddy's Point licensed aquaculture site (S7 AFFNI 76).	3
Figure 2: Production Area 2 (PA2) in Strangford Lough with classified and licensed Harvesting Areas.	4
Figure 3: FSA shellfish sampling locations at Paddy's Point June 2013 - September 2015.	8
Figure 4: Location of PA2 RMP	9

List of Tables

Table 1: Coordinates of Paddy's Point Licensed Site (S7 AFFNI 76)	3
Table 2: Paddy's Point oyster monitoring June 2013 to September 2015.	6
Table 3: Paddy's Point mussel monitoring June 2013 to September 2015.	7
Table 4: Coordinates of sampling locations.	8
Table 5: Coordinates of PA2 RMPs (tolerance of 50m)	9

Area	Paddy’s Point
Reference No.	FS315019
Assessment Date	26/11/2015

1. Summary of Information

Site	Paddy’s Point
SIR	S7 AFFNI 76
Production Area	Production Area 2
Species	Oysters & Mussels
Wild or Farmed?	Farmed
Growing Method	Rope mussels and oyster trestles
RMP	For both species, 54° 31.293’ W, -5° 39.085’ N

1.1. General

The purpose of this assessment is to officially establish a monitoring point for Paddy’s Point (S7 AFFNI 76). This site is located in the northwestern part of Strangford Lough (see Figure 1) and it is currently classified for both oysters and mussels.

A sanitary survey was carried out for Strangford Lough in 2011 and the lough was divided into 5 Production Areas. Production Area 2 (PA2) encompasses much of the western half of the lough and three licensed harvesting areas were located within it; Paddy’s Point (S7 AFFNI 76), Reagh Bay (S6 AFFNI 93) and Dunsy Island (S24 AFFNI 23) (see Figure 2). As the Paddy’s Point (S7 AFFNI 76) and Dunsy Island (S24 AFFNI 23) harvesting areas were not classified at the time of the sanitary survey, the Representative Monitoring Point (RMP) selected for PA2 was Reagh Bay (S6) which was classified for oysters at that time.

Reagh Bay (S6 AFFNI 93) harvesting area was subsequently declassified by FSA in January 2013 and the Paddy’s Point (S7 AFFNI 76) harvesting area (see Table 1) was classified by FSA in June 2013 for oysters and mussels. As a result, when this site was classified, it was also designated as the RMP for PA2, although a geographical monitoring point was not established at that time. The Reagh Bay (S6 AFFNI 93) site was however classified again in 2014. FSA has monitored Paddy’s Point (S7 AFNI 76) since June

2013 and following consultation with UKNRL it was agreed to maintain Paddy’s Point (S7 AFFNI 76) as the RMP for PA2.

The shoreline adjacent to Production Area 2 is primarily agricultural with one off housing dispersed throughout the rural area. Nine rivers/streams discharge into PA2 and these waterbodies drain an area dominated by a mixture of arable and pastoral farming. The largest river which drains into PA2 is the Blackwater River which discharges into Reagh Bay, a bay area immediately south of Paddy's Point which is enclosed to the east by Reagh Island and Mahee Island and to the north, west and south by the mainland and which opens into Strangford Lough proper in the southeast corner at Rainey Island. The Blackwater river enters Reagh Bay c. 3km south of the Paddy’s Point S7 harvesting area (see Figure 2). The largest settlement in the catchment area for PA2 is Killinchy, located 5.4km southwest of the harvesting area.

The Paddy’s Point (S7 AFFNI 76) harvesting area is located in the northern most part of PA2 close to where it borders PA1. PA1 receives discharges from the Comber River which flows through the town of Comber ca 3km northwest of the harvesting site. This river drains 11% of the total Strangford catchment area (CEFAS, 2005). Another river discharges into PA1 through the village of Ballydrain and this is located c. 1.5km to the west of Paddy’s Point harvesting area.

Recreational facilities in the immediate vicinity of Paddy’s Point (S7 AFFNI 76) harvesting area consist of a number of boat access points and canoe trails off Reagh Island. There is a golf club and yacht club further south with a wildlife sanctuary to the northwest.

All of Strangford Lough is a Special Area of Conservation (SAC), Special Protection Area (SPA) and Ramsar site.

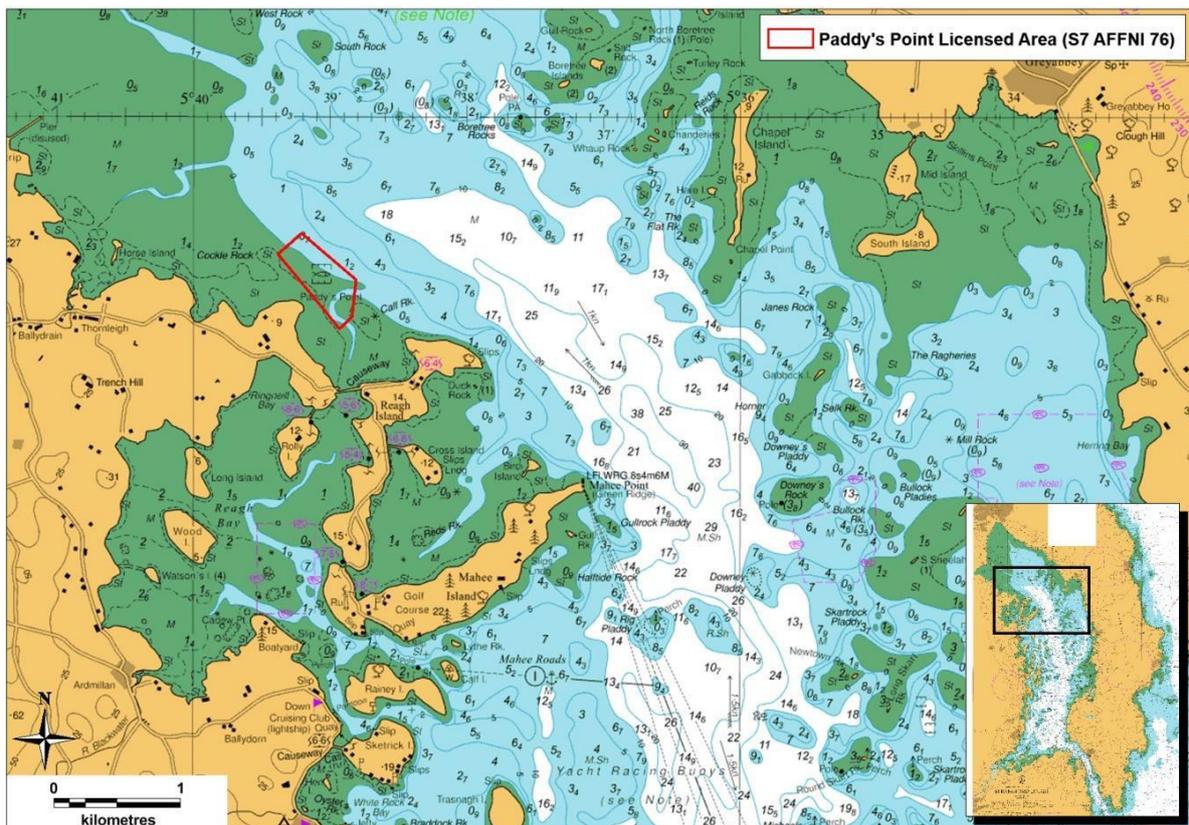


Figure 1: Location of Paddy’s Point licensed aquaculture site (S7 AFFNI 76).

Table 1: Coordinates of Paddy’s Point Licensed Site (S7 AFFNI 76)

Latitude (DDM, WGS84)	Longitude (DDM, WGS84)
54° 31.415'	5° 39.384'
54° 31.505'	5° 39.214'
54° 31.305'	5° 38.814'
54° 31.145'	5° 38.844'
54° 31.095'	5° 38.934'
54° 31.165'	5° 39.034'

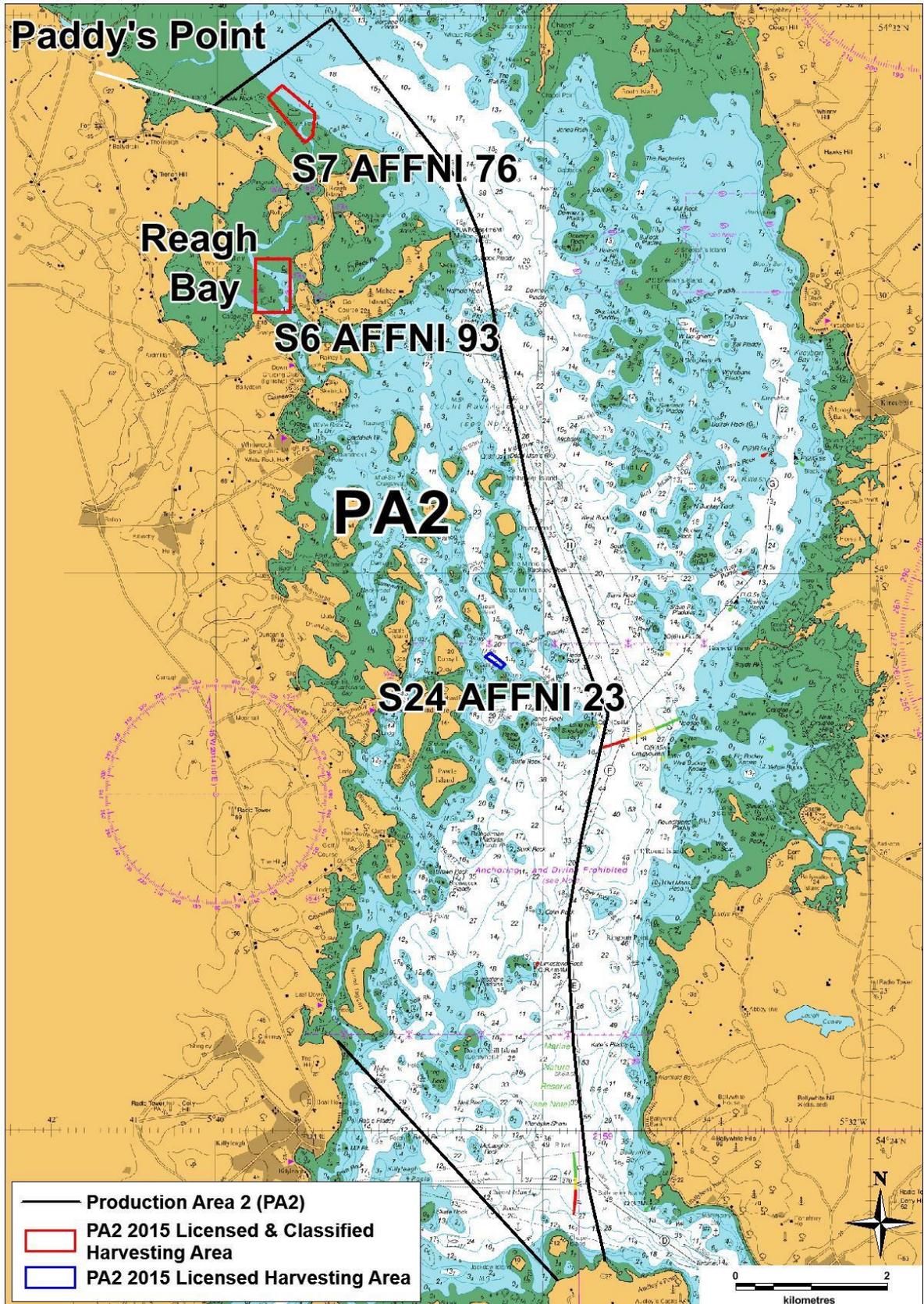


Figure 2: Production Area 2 (PA2) in Strangford Lough with classified and licensed Harvesting Areas.

1.2. Major Potential Faecal Pollution Sources

There are nine watercourses which flow into PA2. The major sources of faecal contamination in these watercourses is from waste water treatment works, overflows, septic tanks, private domestic outfalls and livestock.

The Blackwater River is the largest source of waste water into Production Area 2. Waste water discharges from Ardmillan, Balloo, Killinchy, Kilmoody and Ballygowan discharge into the Blackwater River, which enters PA2 through the Reagh Bay area.

The Paddy’s Point S7 harvesting site is located north of the enclosed Reagh Bay area and is therefore isolated from the discharges into Reagh Bay. The site is more exposed to discharges from the Comber River which drains 11% of predominantly agricultural land of the Strangford catchment. Waste water from the Ballyrickard WWTW (the largest sewage works discharging into Strangford Lough) also discharges into the Comber river as does waste water from the Ballydrain area.

These watercourses pass through predominantly agricultural land used to rear livestock and grow crops. There is not much in the way of tourism accommodation in the vicinity of Paddy’s Point and Reagh Bay to expect any seasonal variation in human sewage impacts. The site is also subject to diffuse contamination from wildlife such as birds, although these levels are considered low when compared with land-based discharges. In addition, the moorings south of Mahee Island and around Sketrick Island may be a pollution source for Reagh Bay; however, levels are considered low when compared with land-based discharges.

1.3. Major Potential Chemical Pollution Sources

The industrial discharges that flow into the watercourses are confined to site drainage discharges for quarries and unspecified works. There is no known chemical pollution source discharging into the Production Area.

1.4. Nearby Classified Production Areas

As stated previously, there are 4 other Production Areas within Strangford Lough as defined in the sanitary survey. However, only one of these has a classified harvesting area within it. Production Area

4 is located southwest of PA2 and encompasses the Quoile River area. Within PA4, Skate Rock (S2 AFFNI 42) is currently classified for mussels.

1.5. Summary of Available *E. coli* Data

Tables 2 and 3 show the FSA’s official control microbiological results of oyster and mussel samples, respectively from Paddy’s Point S7 classified harvesting area from June 2013 to September 2015. The locations for these samples can be seen in Figure 3 and their coordinates can be seen in Table 4.

Table 2: Paddy’s Point oyster monitoring June 2013 to September 2015.

Date	Species	<i>E. coli</i> MPN/100g	Result Classification	Current Classification
09-Jul-13	Oysters	<20	A	A-provisional
06-Aug-13	Oysters	80	A	A-provisional
02-Sep-13	Oysters	20	A	A-provisional
30-Sep-13	Oysters	<20	A	A-provisional
05-Nov-13	Oysters	<20	A	A-provisional
03-Dec-13	Oysters	40	A	A-provisional
19-Feb-14	Oysters	330	B	A-provisional
03-Mar-14	Oysters	<20	A	A-provisional
01-Apr-14	Oysters	<20	A	A-provisional
06-May-14	Oysters	<20	A	A-provisional
02-Jun-14	Oysters	<18	A	A-provisional
02-Jul-14	Oysters	20	A	A-provisional
30-Jul-14	Oysters	<18	A	A-provisional
26-Aug-14	Oysters	78	A	A-provisional
22-Sep-14	Oysters	<18	A	A-provisional
27-Oct-14	Oysters	20	A	A-provisional
26-Nov-14	Oysters	170	A	A-provisional
30-Dec-14	Oysters	7900	C	A-provisional
13-Jan-15	Oysters	45	A	B
26-Jan-15	Oysters	<18	A	B
09-Mar-15	Oysters	45	A	B
31-Mar-15	Oysters	78	A	B
21-Apr-15	Oysters	<18	A	B
26-May-15	Oysters	<18	A	B
22-Jun-15	Oysters	330	B	B
20-Jul-15	Oysters	<18	A	B
24-Aug-15	Oysters	4900	C	B
21-Sep-15	Oysters	45	A	B

Table 3: Paddy’s Point mussel monitoring June 2013 to September 2015.

Date	Species	<i>E. coli</i> MPN/100g	Result Classification	Current Classification
09-Jul-13	Mussels	80	A	A-provisional
06-Aug-13	Mussels	110	A	A-provisional
02-Sep-13	Mussels	<20	A	A-provisional
30-Sep-13	Mussels	<20	A	A-provisional
05-Nov-13	Mussels	70	A	A-provisional
03-Dec-13	Mussels	<20	A	A-provisional
19-Feb-14	Mussels	1300	B	A-provisional
03-Mar-14	Mussels	<20	A	A-provisional
01-Apr-14	Mussels	50	A	A-provisional
06-May-14	Mussels	<20	A	A-provisional
02-Jun-14	Mussels	<18	A	A-provisional
02-Jul-14	Mussels	<18	A	A-provisional
30-Jul-14	Mussels	20	A	A-provisional
26-Aug-14	Mussels	20	A	A-provisional
22-Sep-14	Mussels	20	A	A-provisional
27-Oct-14	Mussels	78	A	A-provisional
26-Nov-14	Mussels	45	A	A-provisional
30-Dec-14	Mussels	780	B	A-provisional
26-Jan-15	Mussels	78	A	B
09-Mar-15	Mussels	40	A	B
31-Mar-15	Mussels	78	A	B
21-Apr-15	Mussels	<18	A	B
26-May-15	Mussels	<18	A	B
22-Jun-15	Mussels	<18	A	B
20-Jul-15	Mussels	130	A	B
24-Aug-15	Mussels	1700	B	B
21-Sep-15	Mussels	20	A	B

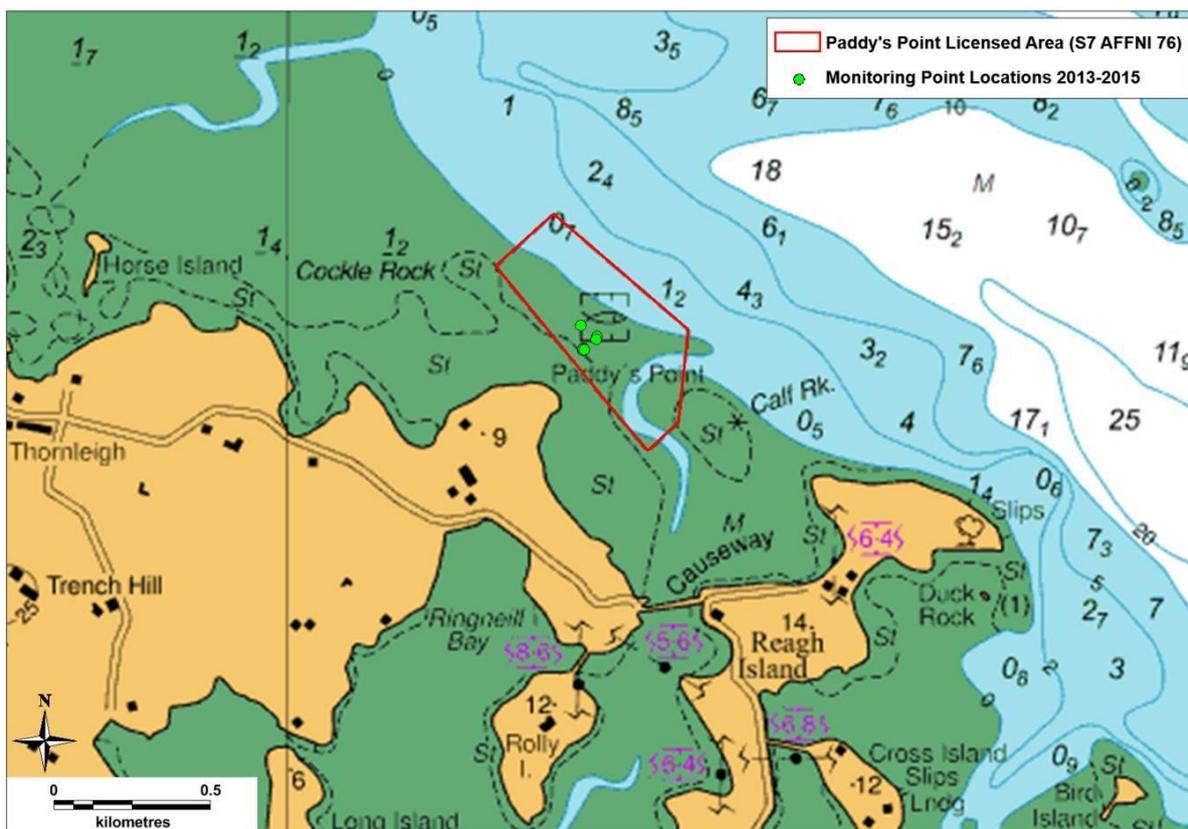


Figure 3: FSA shellfish sampling locations at Paddy’s Point June 2013 - September 2015.

Table 4: Coordinates of sampling locations

Latitude (DDM, WGS84)	Longitude (DDM, WGS84)
54° 31.293'	-5° 39.384'
54° 31.289'	-5° 39.214'
54° 31.313'	-5° 38.814'
54° 31.273'	-5° 38.844'
54° 31.269'	-5° 38.934'
54° 31.273'	-5° 39.034'
54° 31.272'	-5° 39.126'
54° 31.270'	-5° 39.122'

2. Assessment

The major faecal pollution sources in the area are:

- Waste water discharges from WWTW
- Overflows and septic tanks
- Domestic discharges not connected to the public sewer
- Agricultural run-off
- To a much lesser extent, wildfowl and boats

The major discharges into PA2 are through the Blackwater River which discharge into the Reagh Bay area. The Paddy’s Point (S7 AFFNI 76) harvesting area is isolated from these discharges but the site is subject to the discharges from the Comber River and the waterbody discharging through Ballydrain. These discharges include the largest sewage plant in the Strangford area. Despite the distances to the S7 AFFNI 76 harvesting site (c. 3km from Comber River discharge and 1.5km from the Ballydrain discharge), the higher volumes and increased loadings associated with these discharges result in a contamination level (after dilution) similar to that experienced in the Reagh Bay area. As such the use of Paddy’s Point S7 AFFNI 76 as a RMP for PA2 is representative of the most likely highest level of faecal contamination. The location of the official RMP for PA2 can be seen in Figure 4 and its coordinate can be seen in Table 5. This location, with a tolerance of 50m (to allow for stock rotation during the growth cycle) should be sampled monthly for oysters and mussels. In reality, anywhere within the licensed boundary is suitable as a sampling point (in the event of future stock being located in different areas of the site).

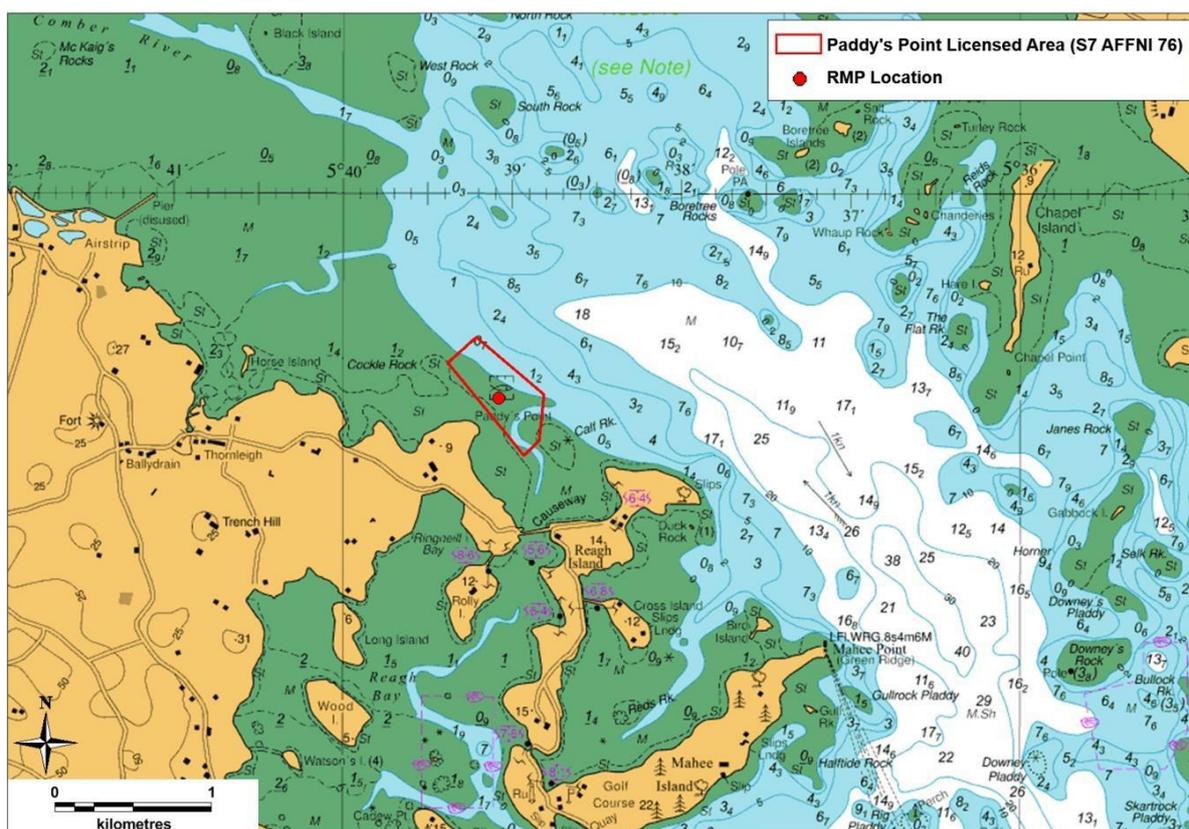


Figure 4: Location of PA2 RMP

Table 5: Coordinates of PA2 RMPs (tolerance of 50m)

Site Name	Latitude (DDM, WGD84)	Longitude (DDM, WGS84)
PA2 RMP	54° 31.293'	-5° 39.085'