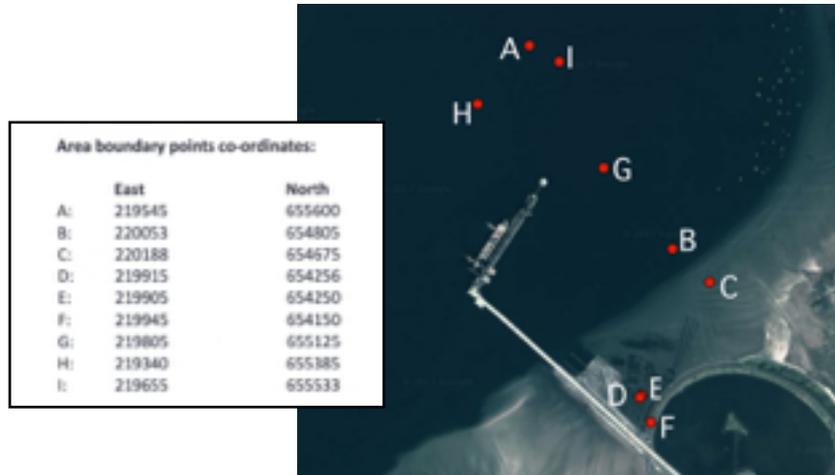


17/01005/PP - Objection to expansion of pacific oyster farm in Fairlie Bay

Fairlie Community Council objects to NAC planning application 17/01005/PP on the following grounds:

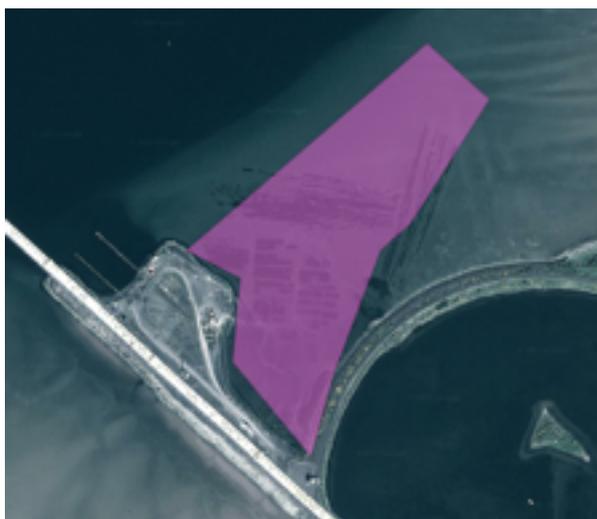
- 1 The planning application contains erroneous location co-ordinates.
2. Planning permission should not be granted retrospectively as the area proposed in the planning application is already being utilised for commercial oyster farming. The scale of oyster farm, production and the planning status of the existing site is unclear.
3. Clarification is needed as Marine Stakeholders may not been consulted properly on the correct location proposed for expansion as will constitute an unacceptable loss of local amenity and contrary to NAC Local Development Plan.
4. Expansion at this site will contribute to the fragmentation and further loss of SSSI designated habitat. The Intensive monoculture farming of introduced pacific oyster at this location may already be impacting some notified features of the SSSI and urgent requirement for environmental appraisal.
5. The Biosecurity Plan was not submitted with the application as requested by the SNH Case Officer.
6. Water quality in Fairlie bay is likely to deteriorate in the near future. Cefas and Food Standards Agency concluded in their Sanitary Report for Fairlie Bay that the area for pacific oyster production should not expand any greater than that currently in use.

1. Fairlie Community Council would like clarification on the actual position, coordinates and datum used to mark the boundary of both the existing pacific oyster farm, and proposed area of expansion. The coordinates supplied by the applicant are erroneous. The coordinates do not correspond to the 'Detailed Map of the Area', 'Block Diagram' or the 'Shellfish Protected Area' maps and diagrams submitted by the applicant. The area bounded by these points bears no relation to the size of the area proposed for site expansion that is detailed in the planning application.



The applicants coordinates plotted using OSGB 1936 EPSG:27700

There also needs to be clarification on the coordinates supplied by Marine Scotland to the applicant by MS Licensing Case Officer on 24/04/17 as 'they differ from coordinates in the other application documents'. When plotted these coordinates indicate an area that is not included in the planning application. Both the applicants and Marine Scotland's coordinates are inconsistent with the the maps and drawings that indicate the proposed area of expansion. Furthermore, the area encompassed by the Marine Scotland coordinates totals 15.5 ha which is 478% greater than the total area (3.24 ha) submitted in the planning application.



FCC would like clarity on what these Marine Scotland coordinates are meant to represent.

If this area is meant to represent the proposed area of expansion, why has the applicant not submitted it during the application process?

2. Fairlie Community Council would like clarification on what this planning application pertains to. The applicant has submitted a map with the planning documents that indicate the area proposed for expansion is 'fawn' coloured (bounded by points A,B,C,D,E,I,A) and an area coloured 'blue' that is currently being used for oyster production (bounded by points I,E,D,F,G,H). This planning application is incongruous as both these areas are currently being utilised for commercial oyster cultivation. FCC assumes that planning consent has been granted for the 'blue' area marked on the map. FCC would like to know whether the applicant also has planning permission for the 'fawn' coloured area on the map. If not, there may have been an irregularity in planning permission as all areas detailed on the map are currently being utilised for cultivation.



The fawn area is the proposed area of expansion. This area is already fully utilised for oyster cultivation. The photograph below was taken from the vantage point marked by the red arrow on the map.



The SNH Case Officer requested clarification about the total size of development and number of trestles currently existing at, and to be added to, the farm. FCC would like to reiterate that there is confusion as to exactly what this application pertains to, and the size of the proposed expansion. The applicant has applied for a 1.98 ha expansion in planning documents. This would, therefore, constitute a retrospective planning application as this area is already utilised. Conversely if we are talking about the MS coordinate based expansion of 12.26ha, the applicant's reasoning surrounding trestle numbers disintegrates and the figures appear inconsistent and confusing. FCC therefore requires clarification on this issue

3. Fairlie Community Council would like to ascertain what set of coordinates were sent to stakeholders (Peelports, NLA, MCA, RYA) for comment and consultation. FCC assumes that these stakeholders were emailed by Marine Scotland Case Officer on the 18/04/17 to request a consultation response. It is, therefore, natural to assume that stakeholders were given a much smaller area to consider, which poses a reduced risk to water users. Marine Scotland provided coordinates to the applicant at a later date (24/04/17) but do not appear on his planning application. This area forms part of the recreational beach for the community of Fairlie and utilised by those seeking flatter, calmer and safer water behind the coal terminal pier. Raised underwater trestles situated in this area would pose a substantial entrapment risk to local and visiting water users. It is unreasonable for the applicant to suggest that exiting water user groups should carry their kayaks, windsurfers, dinghies, kite boards to oversubscribed facilities at Largs Yacht Haven. The applicant should reconsider his plans for expansion in this area and relocate his proposed aquaculture farm and equipment to a location that does not conflict with existing water users,

The applicant states incorrectly that Fairlie bay is an 'expansive site' and affords an 'abundance of area for other uses'. The intertidal zone, between high water springs and lowest astronomical tide, in Fairlie bay has a total area of 135 ha (1.35km²). The coordinates that Marine Scotland have

supplied with the planning application documents measure 15.5 ha (0.155 km²) and equates to 11.5% of Fairlie bay. The area that the SSSI occupies in Fairlie bay amounts to 34.7 ha (0.347 km²) and equates to 25.7% of Fairlie Bay. The non-SSSI and oyster farm intertidal area of Fairlie bay that would be available to the community for recreational and other uses is not 'expansive' as 37.2% of Fairlie bay would be technically unavailable to the community.



The red circle indicates the area that is presented on the applicants planning application and upon which consultees were likely asked to respond to.

Underwater trestles located in the remainder of the area will pose a significant risk and restrict access to existing water user groups.

FCC would like clarification on whether consultees were informed about the larger area?

4. Fairlie Community Council would like planning authorities to note that approximately 52% of the habitat that would have been available to the SSSI has been lost to industrial land reclamation. The proposed expansion of a commercial oyster farm (using Marine Scotland's coordinates) in this area will have a significant impact, further fragmenting the SSSI. Habitat fragmentation will reduce the capacity and resilience of the SSSI to respond to environmental change. Sand accumulates on the beach during summer months and then dissipates during winter storms. This dynamic environment helps protect the community of Fairlie from storm surges. Any development on the sands has the potential to upset this equilibrium and consequences for our community. There needs to be a shift towards a more environmentally focussed, integrated coastal zone management system that works in harmony with the environment to better prepare for the challenges that the next generation will encounter.



Green - SSSI

Light Red - Reclaimed Land

Dark Red - Proposed Oyster Expansion (using MS coordinates)

Fairlie Community Council disagree with the applicants statement that, “The impact on the environment is expected to be negligible or nil”. FCC agrees with SNH Operations Officer assessment that the proposed development will further, exacerbate damage to the protected SSSI features and sought assurances that the shoreline would be free from waste shell material to limit benthic impacts. The applicant confirmed that the waste material will not, and have not, been deposited on the shore. It is not clear whether the SNH Officer has not made a site visit as would have seen accumulations of oyster shell on the foreshore and under trestles within the designated SSSI area.



Live oysters, shell litter, farm debris, and fouling or epi-benthic organisms tend to accumulate beneath oyster trestles. Such accumulated materials may provide novel habitats for fouling organisms and associated mobile biota. These can persist for many years, even after the cessation of farming, thereby resulting in long-term shifts in benthic community composition (Peterson et al., 2003; Escapa et al., 2004; Ruesnink et al., 2005; Coen et al., 2007; Grave et al., 1998; Forrest et al., 2006). This is clearly evident around the older and abandoned oyster trestles and ground bags.



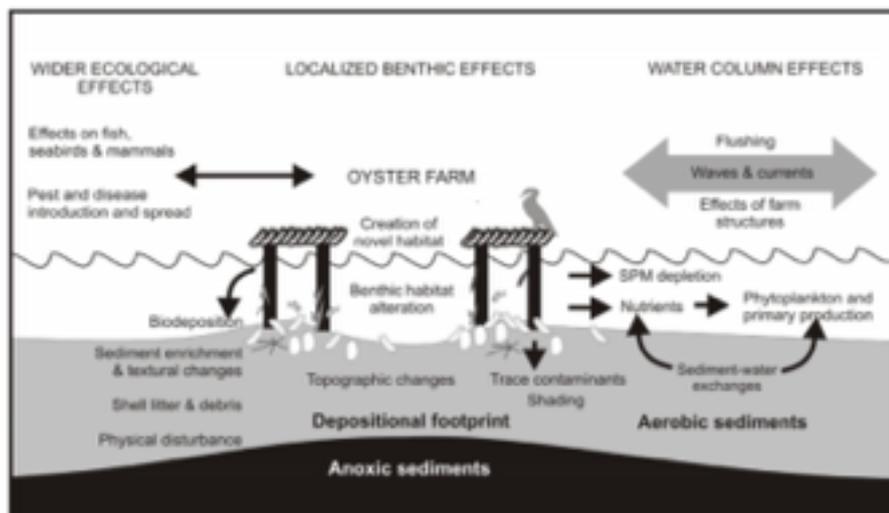
The SNH Case Officer expressed concerns, that the proposed expansion would not affect the physical and geomorphological processes on the SSSI. The proposed expansion (using MS coordinates) will extend trestles into the highly dynamic area of the SSSI. The existing oyster site has already changed the seabed topography and clearly visible on google earth which shows altered bermcrest and runnel sand formations around the farm. At a smaller scale, the bio-

deposition of oyster faeces enriches sediment with nitrogen and phosphorus changing the chemical composition of sediments (DPIF, 1997; Rice 1999; Kasper et al., 1985; Newel et al., 2004). Martin et al. (1991) and Forrest et al. (1991) have shown that trestle cultivation of oysters is responsible for increased sedimentation below trestles and deposits from oysters brings about noticeable geological modifications of the underlying sediment (Sornin et al., 1983; Nugues et al., 1996). The dynamic processes mentioned above are clearly visible on the photographs below.



Decreases in macro-faunal abundance have been detected in areas of extensive intertidal oyster cultivation (Castel et al., 1989; Heral et al., 1986; Simenstad et al., 1995). Shading by the Oysters, trestles, farm infrastructure and farm activities such as boat and vehicular traffic have a detrimental impact on macro benthos and seagrass communities (Thorne, 1998; Bulmer et al., 2012; Castel et al., 1989) in favour of species that prefer disturbed ground (Forrest et al. 2006).

One of the greatest potential impacts of filter feeder cultivation such as oysters is the net loss of energy, in the form of phytoplankton, from the ecosystem. Competition for plankton and detritus from the water column will have an effect on wild species that are dependent on the same trophic food source will inevitably suffer. (Powell et al., 1992; Cloern, 1982; Officer et al., 1982; Haure et al., 1991) Oyster cultivation has a significant adverse effect on seagrass and eelgrass communities (Bulmer, 2012). Areas which would normally be available for birds and other animals will be occupied by shellfish culture. It is well documented that loss of habitat causes reduction in the species that are dependant on it and presence of oyster trestles increases the energy expenditure of wading species which has fitness consequences that are most likely to affect over wintering bird species. (O'Brian, 1993; Davidson et al., 1993; Zydalis et al., 2006; Coveney et al., 1993).



Schematic of benthic impacts below oyster trestles (Kaiser, 2001)

5. Pacific oysters are able to harbour and transfer disease and pest to native species (Minchin et al., 1993). FCC have concerns that the widespread movement of cultured species (broostock, seed, or planting stock) will facilitate the movement of disease-causing organisms and exotic species (Naylor et al., 2001; Ford, 1996; Spencer, 1991). Pacific oysters may be invasive, primarily in rocky habitats and artificial structures, but there is also evidence that they can invade soft-sediment estuarine habitats like this found in the SSSI (Jenkins, 1997; Cognie et al., 2006). SNH case officer requested a copy of the bio-security plan primarily to reduce biogenic risk from non-native pest and disease impacting designated SSSI features. The applicant insists that a bio-security plan exists with the Marine Scotland but has not been submitted with the planning application as requested. FCC have noted the presence of pacific oysters from the distant areas of Fairlie bay and have doubts that the existing husbandry practices are adequate enough to prevent non-native species establishing in surrounding ecosystem. FCC insists that the bio-security plan is scrutinised to ensure that it is adequate for a sensitive SSSI site.



6. The applicant stated that the water quality around the site is perfect for oyster cultivation. This is contrary to SEPA's Shellfish Growing Waters data and regularly fails due to faecal coliform pollution. Reclassification to Category B waters means the pacific oysters require depuration to reduce coliform loadings to marketable levels. The Cefas & Food Standards Agency Sanitary Report for Fairlie Bay identified the most significant source of faecal contamination to the pacific oyster farm is human sewage from both continuous and storm-related discharges, most notably the Fairlie WWTW as final effluent and CSO discharges. This issue will be exacerbated by the 20% increase in Fairlie's population and development of houses on greenfield site which will increase the available of contamination too the pacific oyster farm. Due to pollution issues in Fairlie Bay Cefas and Food Standards Agency recommended a production area for the pacific oyster farm in Fairlie bay which is comparable to that already in use by the applicant.



Current production area



Cefas recommendation

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