

Curran Strand - Royal Portrush Golf Club

Planning Application: LA01/2017/0539/F

Synopsis of Marine & Fisheries Division concerns

Primary concern:

- First and foremost, the Department and Royal Portrush Golf Club have the same desired outcome, which is the protection of the golf course for now and in the future, in addition to the protection of the amenity value and natural protection provided by the beach and dune system.
- The primary concern of M&FD is the further extension of hard engineering within a soft dune system, protection that is now considered inappropriate.
- M&FD has consistently stated that the applicant should explore alternatives to hard defences at the site. Alternative design and/or the use of habitat restoration/soft defences we do not feel have been adequately explored or modelled by the applicant. We recommended that the proposal should focus on enhancing natural coastal defences (dune habitat), in order to become more resilient to climate change in the long term, whilst ensuring adjacent marine habitats and associated shoreline habitat are not impacted by continued erosion effects.
- We have consistently stated in our responses that engineering within a soft sand dune system impacts on the natural coastal processes and in the majority of instances causes further erosion problems. Hard structures, prohibits an on-shore/off-shore movement of sediment, causes scouring and erosion alongshore which results in edge/end effects, such as that a Curran Strand.
- There is a very real risk that if these works are permitted they could cause further erosion problems for the golf club, causing further destabilisation of the dune system alongshore. The primary concern is that the tapering is directly beside a very large, exposed sand dune where there is low cohesion of sediment and which already sees minor landslips due to the recreational pressure.

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- At this site, sand quantities are static and are not being replenished. If further engineering works prohibit sediment movement at this section, there will ultimately be a gradual sediment loss within this system.
- Flexibility is essential for a beach to survive.
- Examples worldwide demonstrate that construction of hard coastal defences on sandy beaches have a damaging effect on coastal ecosystems and negatively impact the amenity value and landscape quality of the area. For example, we just need to look around the corner at West Bay where hard engineering, while protecting the land behind, has been to the detriment of the beach, where significant sand has been lost and the underlying peat layers are exposed.
- This issue of hard engineering in sandy systems was recently discussed at a meeting of the Chartered Institute of Water and Environmental Management where it was stated by RPS professionals that hard engineered structures are inappropriate and unsustainable in soft sand systems and can cause more problems than solutions.
- Climate change scenarios are forecasting accelerated coastal change, as a result of sea level rise and increased intensity and frequency of storms. Our dune systems are the best form of defence and adequately dissipate wave energy.
- Past 40 years are not going to be the same as the next 40 – Climate Change needs to now be considered and factored in now. If further hard engineering is added to this coastal section, in combination with sea level rise and much more frequent extreme storm events, this area would become increasingly vulnerable and significant dune failure may occur. This could threaten a significantly larger proportion of the golf course than is currently considered “at risk”.

Marine Policy:

- RPS identified this as an area vulnerable to coastal erosion. Previous ministers of DAERA and DfI commissioned Amey Consulting to carry out a study of the NI coastline. In this report, which was published in 2019, it too identified this area at potential risk of erosion.
- As this is an area identified as one which is eroding, further development would therefore be contrary to the marine policy documents.

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- We have consistently stated that planning decisions that affect or might affect the whole or any part of the Northern Ireland marine area, must be made in accordance with appropriate marine policy documents, unless relevant considerations indicate otherwise.

This includes the following marine policy documents:

1. The UK Marine Policy Statement;
 2. The draft Marine Plan for Northern Ireland; and
 3. The Integrated Coastal Zone Management Strategy for Northern Ireland 2006-2026.
- The Marine Plan becomes a consideration in all relevant planning decisions once it is published for consultation – this took place in 2018 which is why it wasn't initially raised in 2017. All public authorities are responsible for implementing the Plan through existing regulatory and decision making processes.
 - It is the intention of these documents that planning proposals will adapt and mitigate to our changing climate, recognising that sea levels are rising and storm events, which cause flooding and erosion, are increasing in frequency and intensity.
 - The policy documents are explicit that development should be avoided in areas most vulnerable to coastal change and should not cause or exacerbate coastal erosion elsewhere or alter coastal processes. In areas known to be actively eroding, policy advises that a precautionary approach is taken and development is not permitted.

R&A work

- The issue that Royal Portrush is facing is common to other coastal links courses and the Royal and Ancient (R&A) has identified 'coastal change and its impact on golf courses' as a priority issue to be addressed in its **Golf Course 2030 initiative**.
- Within this initiative there is a Coastal Management Study which consists of 3 separate projects, which were awarded to Royal HaskoningDHV; this work commenced in 2020.
- M&FD represent Northern Ireland on the reference group for this work.

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- Project 1 was a coastal survey which Royal Portrush took part in. The purpose of the survey was to identify courses where erosion is an issue and find out how it was being managed and what the clubs perceptions of it are.
- The 2nd project is to identify a Coastal Golf Course Management Plan for coastal clubs which would be specific to the club and the tools would be provided to develop this. Development of these plans is seen as a way of getting ahead of the game in terms of planning and addressing concerns related to coastal change.
- The 3rd project contributes to this plan and in this project the R&A will provide a catalogue of **alternative management options** at sites which are experiencing erosion. These are largely innovative and nature based solutions and measures which provide an alternative to hard engineering. In essence this will be a toolbox to help clubs come up with the best suited plan.
- The R&A, through this project, are also encouraging clubs to consider an ecosystems benefits management tool which will have wider ecosystem benefits. This will enable managers to establish what habitats are present, what the conservation interests are of the local area and then help club managers identify possible solutions for their site which will provide wider ecosystem benefits and ensure any management taken does not negatively impact the surrounding area.
- Through this study Royal Haskoning are also making clubs aware that our coastline is changing and that certain clubs are going to have to adapt and possibly redesign and “roll-back” elements of their course in order to adapt to our changing climate.

Marine and Fisheries Preferred Approach

- The desired approach of the department, is to improve the natural resilience of the coast and to enable it to naturally adapt to our changing climate.
- Our aim is that coastal systems function as naturally as possible, with dune systems acting as a natural buffer, dissipating wave energy and providing natural shoreline resilience, particularly during storm events, allowing the coastline to naturally erode and accrete.
- On this basis, the Department has advised planners over the past few years that alternative “softer” options should be considered to further hard

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engineering. This included redesigning the defences within the existing footprint and developing a more sustainable approach to future-proofing the golf course and associated beach against climate change and coastal erosion. Appreciate options were listed in the RPS report but not sure they were fully considered.

- Alternative softer forms of management could be trialled, such as infilling the blowout area with sand, or a sand-trapping fence scheme with attempts made to stabilise by planting. While this was ruled out by RPS, tapering which is the preferred option, is still trying to marry rocks with an area of sand, ultimately this will still create “end-effects” and our fear is the area where these effects may occur – is the large exposed dune.
- Nature based solutions such as those detailed above are also options which have been trialled by Ulster University and an area of work where they have carried out significant research.
- The issue of trying to reduce recreational pressure on the dune system has also been discussed with the planners and recommended.
- Overall, it is strongly encouraged that the golf course is future proofed in respect to climate change. However, it may soon be a reality that golf clubs are going to have to accept that our shoreline is changing and rather than persisting with attempts to hold the line, courses are going to have to redesign their layout and possibly roll back. Ultimately this will be the most cost-effective and environmentally sustainable option. Unfortunately it is not simply a matter of building more and more defences or building them higher – if this is the case then while as asset may be protected, the beach will be lost – as you can’t have both.
- The Department advises that it should be the intention of both the applicant and the planning authority to protect the golf course in its entirety and the beach system which supports it, ensuring both will be able to adapt to climate change and be present so that both can be enjoyed for future generations, thereby balancing the needs of the environment and the economy.

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Additional Information:

Info on Precautionary Principle

- While we have evidence to demonstrate that this coastline is changing, the impact of climate change, sea level rise, and increased frequency and intensity of extreme storm events is largely unknown. However, it is widely accepted that predictions which were made several years ago were underestimated and climate change is now happening at a considerably faster rate than previously advised.
- Marine Policy documents therefore recommend in the absence of this information we defer to the precautionary principle, particularly in areas known to be experiencing coastal flooding or erosion.
- UK MPS advises the consideration of the precautionary approach. Section 2.6.8.4 states:
“Marine plan authorities should be satisfied that activities and developments will themselves be resilient to risks of climate change and flooding and will not have an unacceptable impact on coastal change. A precautionary and risk-based approach, in accordance with the sustainable development policies of the UK Administrations, should be taken in terms of understanding emerging evidence on coastal processes”
- This approach is also reflected in the draft Marine Plan under paragraph 119 of the Coastal Processes policy which requires authorities to apply a precautionary approach in assessing proposals, including when considering the impact of proposals on national and international nature heritage resources.
- Therefore while the impact of climate change, SLR and increased storminess is largely unknown, it is now widely accepted that CC is happening and considerably faster rates than predicted. Therefore in areas known to be experiencing coastal flooding and or erosion, a precautionary approach should be taken.

Info on modelling

- No major issues with modelling, few queries raised and questions around why alternative options omitted. Modelling only related to the extension of hard engineering.

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- However, as RPS pointed out, the problem along Curran Strand is an acute one, rather than chronic. While predictions can be made for extreme storm events, it is difficult to capture the reality of this in a model, particularly in relation to the impact on the large, exposed dune which is composed of loose granular material immediately next to the “end effect”.

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