S2S and Coastal Protection. Updated September 2025

Coastal Protection Measures in Dublin Bay South

1.0 Introduction:

This is an updated version of the paper that was previously published in 2024. It takes account of the most recent changes to the proposals by NTA /Irish Rail for the coastal protection of the railway between Merrion Gates and Dun Laoghaire and how that relates to NTA/Dublin City Council's ongoing study of the coastal protection of the seafront in Sandymount.

These projects In Sandymount and Blackrock are inextricably linked. In Sandymount, there is an incomplete seafront walkway but no off-road cycleway. Between Merrion Gates and Dun Laoghaire there is no seafront walkway and an incomplete inland cycleway. The projects are not joined up at Merrion Gates and they are incomplete at both ends. The Sandymount brief includes the protection of private and public property whereas the protection of the Railway from Merrion gates to DL Harbour does not. Other objectives for national and local infrastructural projects, public services and community amenities are not included in either study.

2: Proposals

2.1 Rock Armour Revetment including a Haul Road

The **2024** NTA/Irish Rail study of this project concluded that a rock armour revetment was the most economical and effective way of achieving the necessary protection of the railway. **Ref. Appendix Fig 1.** In the **2025** study that approach has been replaced by a plan to demolish the old sea wall down to the level of the tracks and to replace it with precast concrete slabs that will be about 1.3m higher than the old wall making it about 3.0m high overall. **Ref. Appendix Fig 2.** This will preclude other infrastructure objectives being incorporated. In addition, it will result in the view from the Dart being obliterated forever.

S2S suggests that NTA/Irish Rail revert to their 2024 preferred solution using rock armour, but to do so by first constructing a haul road. This is a common, practical and environmental approach that would reduce the cost and provide a permanent facility by which all the other objectives could be achieved. **Ref Appendix Fig 3** This would allow most if not all of the construction plant and materials to be brought to the worksite as the work proceeds. Critically it reduces the need to travel back and forth on the strand - with all the implications that would entail for the habitats. This is the method by which similar work has been carried out by Fingal County Council/ NTA/Irish Rail in Wexford Harbour and the Malahide Estuary. **Ref Appendix Fig 4**

2.2 Other opportunities:

The NPWS guidance in relation to Appropriate Assessments makes it clear that, when planning a project, consideration must be given to all other projects that might have an impact on it. It states:

"A key protection mechanism, and the subject of this guidance, is the requirement to consider the possible nature conservation implications of any plan or project on the Natura 2000 site network before any decision is made to allow that plan or project to proceed. Not only is every new plan or project captured by this requirement but <u>each plan or project, when being considered for approval at any stage, must take into consideration the possible effects it may have in combination with other plans and projects when going through the process known as appropriate assessment</u>…."

It is accepted that the relevant projects have not yet reached the stage of carrying out an appropriate assessment. It is obvious however that all of them will have to do so, before they can proceed. For stakeholders to pin their hopes on a single solution at this stage, will inevitably lead to problems for those projects at subsequent stages. It is clear that the Sandymount project is proceeding without reference to it's potential to resolve the controversial issue of the badly needed cycleway. Between Merrion Gates and Seapoint a number of other objectives are being ignored, most importantly it could be the 225KVa Carrickmines to Poolbeg electrical link by Eirgrid. This is currently proposed to be laid in an 8.5Km route in the seabed in Dublin Bay. The same cable could be laid in a duct installed under the haul road along the coast. If this was to be incorporated in the works to the sea wall, it would be about 4kms long and be achieved at a fraction of the cost.

All these objectives could be achieved by starting with a haul road haul road. This would create a multi-function asset that would provide access to enable the protection of other private and public assets such as at Blackrock Baths, Maretimo, Brighton Vale and Seapoint, all of which are currently excluded. Once the basic haul road is complete it would allow much of the finishing construction work to proceed every day, regardless of tides. It has the potential to significantly reduce the time and cost required to complete the work on all these projects individually. It could provide a route for the installation of public services and the routine maintenance of the railway and other public assets. **Ref Appendix Fig 5 and Fig 6.**

3 Merrion Gates.

3.1 Protection of the Houses between Merrion Hall and Merrion Gates.

This section of Strand Road is very narrow. It is incapable of accommodating a two-lane cycleway alongside two lanes of vehicular traffic and pedestrian footpaths. Several attempts to resolve it in earlier studies have failed. At the same time, the houses on both sides of Strand Road deserve to be protected from the rising sea levels, no less than everything else along the coast. It is proposed that this be done by extending the rock armour revetment outside the existing houses at the southern end of the road. This can be done in such a manner that it does not affect the view from those houses and at the same time protects the privacy of their gardens. Such an approach is shown in **Appendix Fig 7**.

3.2 Crossing the Railway Line

The other intractable problem is to link the existing new cycleway on the Merrion Road to the proposed cycleway in Strand Road. It is suggested that this can be done by installing a new cycle/pedestrian level crossing on the South side of the existing level crossing. This would be linked to the existing control system which would operate both gates simultaneously. There are numerous examples of this arrangement in the Netherlands, one of which is shown in **Appendix Fig. 8.**

This arrangement would allow cyclists and pedestrians to safely transfer from a cycleway on the seafront coming from Sandymount to the Merrion Road where it could be extended to the point where it currently terminates at the County boundary. This would create a continuous segregated commuter cycleway all the way from Blackrock to Sean Moore Park in Sandymount. It also enables pedestrians to cross the railway more safely at Merrion Gates, not having to share the main crossing with motor vehicles. The general intention for this arrangement is shown in **Appendix Fig 9**.

The objective to achieve a walkway and cycleway from Merrion Gates to Sean Moore Park can be achieved on the seafront in a holistic solution that combines flood protection with routes for essential electrical and other infrastructural installations and a permanent way to facilitate ongoing maintenance and repair. See **Appendix Fig 10.**

4 The Potential Benefits

- It provides an efficient and less risky way to carry out the work on the seafront, minimising the intrusion into the Bay and significantly reducing the cost and time to complete.
- It is a solution that will make it possible to retain the view from the DART and provide a long-promised seafront walkway/cycleway from Sean Moore Road to Dun Laoghaire.
- When completed it would give unprecedented safe access for the public to the seafront without having to intrude into the habitat.
- It will provide an important new public amenity together with access for ongoing routine maintenance of the railway other seafront infrastructure and historic structures.
- The inclusion of cableways for other infrastructural services will reduce the overall cost and make for greater efficiency.
- It resolves the problem of how to get around the bottleneck at Merrion Gates and connect the unfin-ished cycleway on the Merrion Road with the new cycleway in Sandymount.
- It would transform the project from one that will face significant challenges from the local community and Irish Rail's passengers to one that will have significant community gain and universal support.

Appendix: Drawings and Images referred to in the text

The following are images to which reference is made in the foregoing text:

Preliminary Option Selection Report Merrion to Dún Laoghaire (Coastal Cell Area 1)

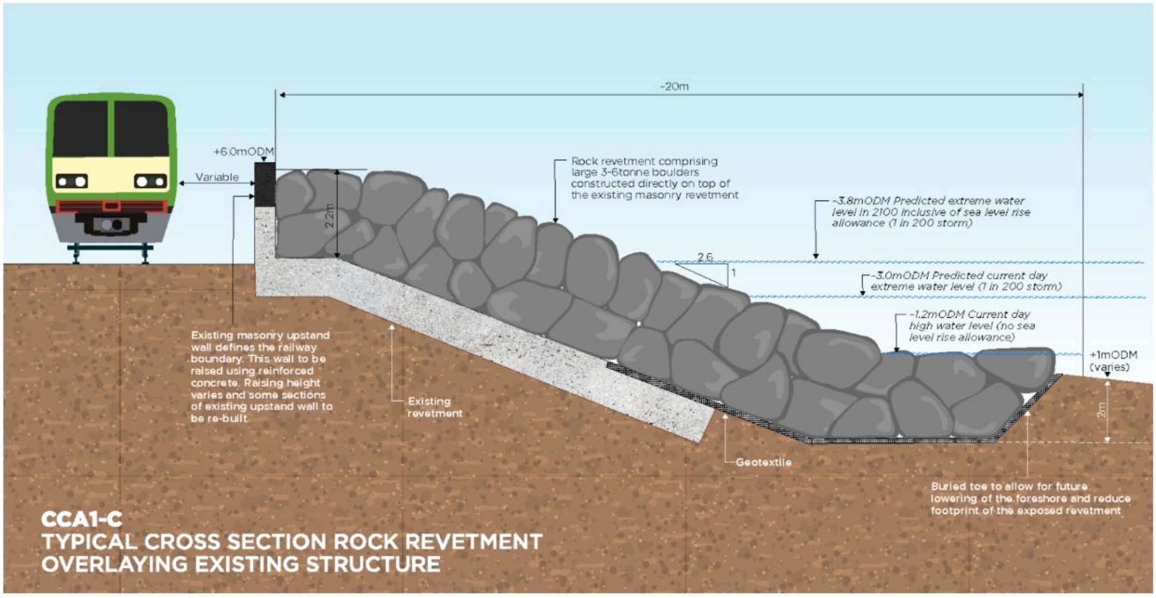

Figure 5-2 CCA1-C Option A typical cross section

Fig 1: This shows the Irish Rail preferred proposal in 2024. It comprises a Rock Revetment with a raised sea wall as the basic protection of the Railway between Merrion Gates and Blackrock. There are other variations on it in sections between Blackrock and Dun Laoghaire

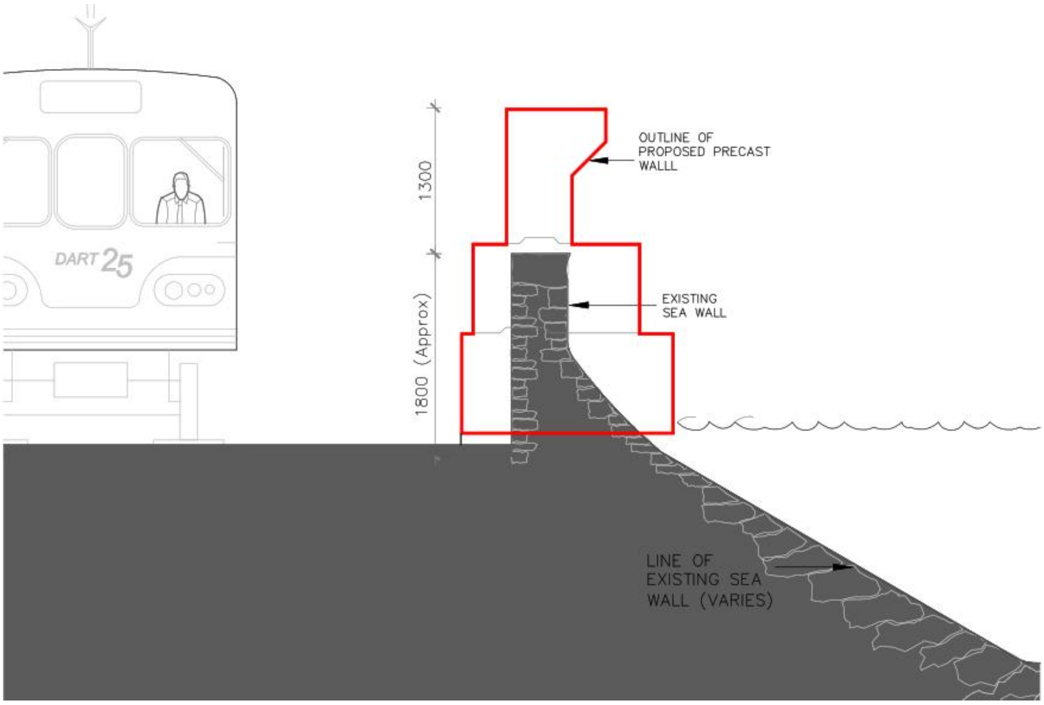

Fig 2: This shows the new proposal in 2025- demolish the old sea wall down to the level of the tracks and to replace it with precast concrete slabs that will be about 1.3m higher making it about 3.0m high overall.

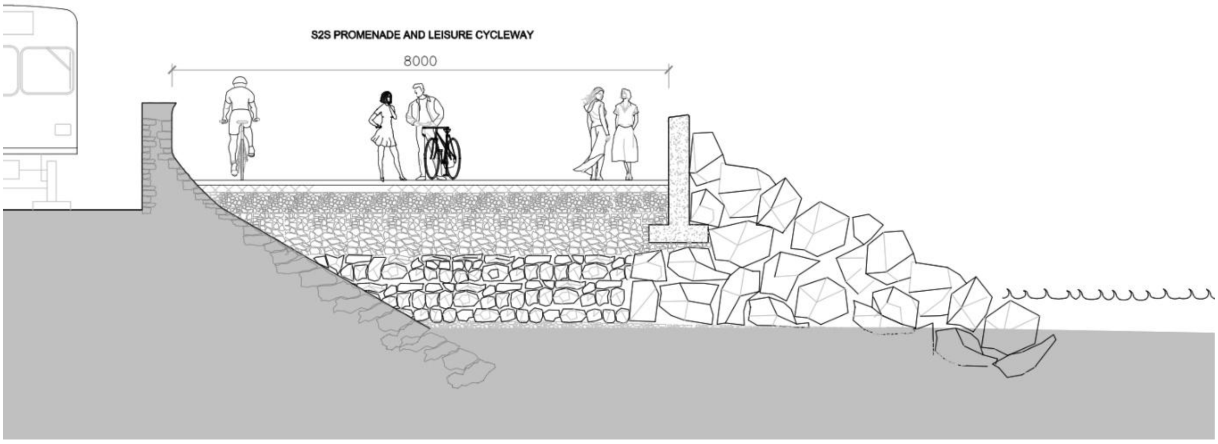

Fig 3: S2S Proposal: A similar Rock Armour Revetment including a haul road/permanent way which would accommodate a walkway/leisure cycleway and access for ongoing maintenance and repair of the railway and other infrastructure. Note- the height of the existing sea wall should not need to be raised to prevent overtopping waves damaging the railway while preserving the passengers' view from the DART.

Fig 4. Building on the initial haul road, Fingal Co Council commenced a project to extend it across the Estuary and on to Donabate as a walkway/cycleway. Started in late 2023 by building a haul road, it is scheduled to be completed in early 2026. (Irish Times Picture August 2023)

Fig 5: **The current proposed 8.5 km undersea route across Dublin Bay and an alternative 4 Km on-shore route for the proposed Eirgrid 225 KVa line from Carrickmines to Seam Moore Park. A further 1.6Km line could be laid along with the line from Inchicore to reach the substation at Poolbeg.**

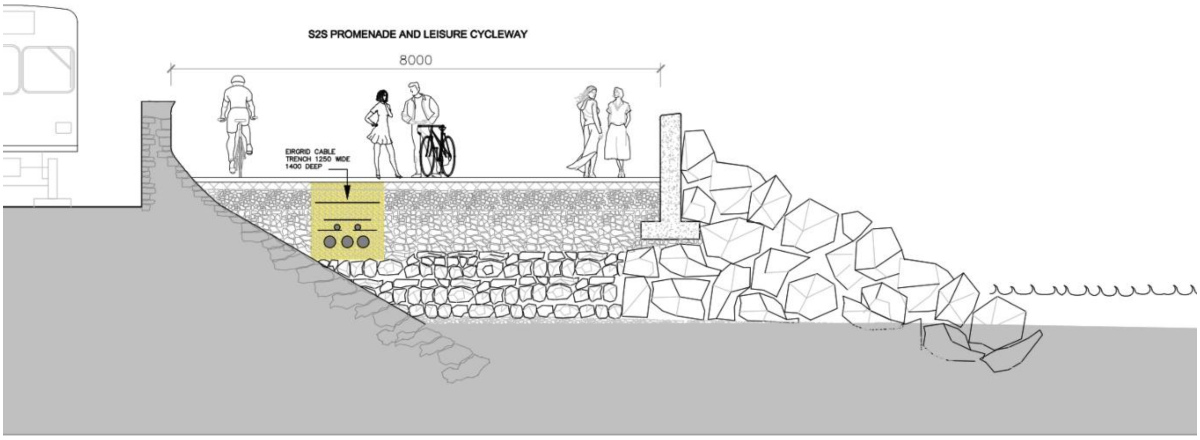

Fig 6: A typical section through the proposed construction including the required trench for the Eirgrid 225kva integrated into the construction. This would result in significant reduction in difficulty, time, cost while minimising damage to the habitats.

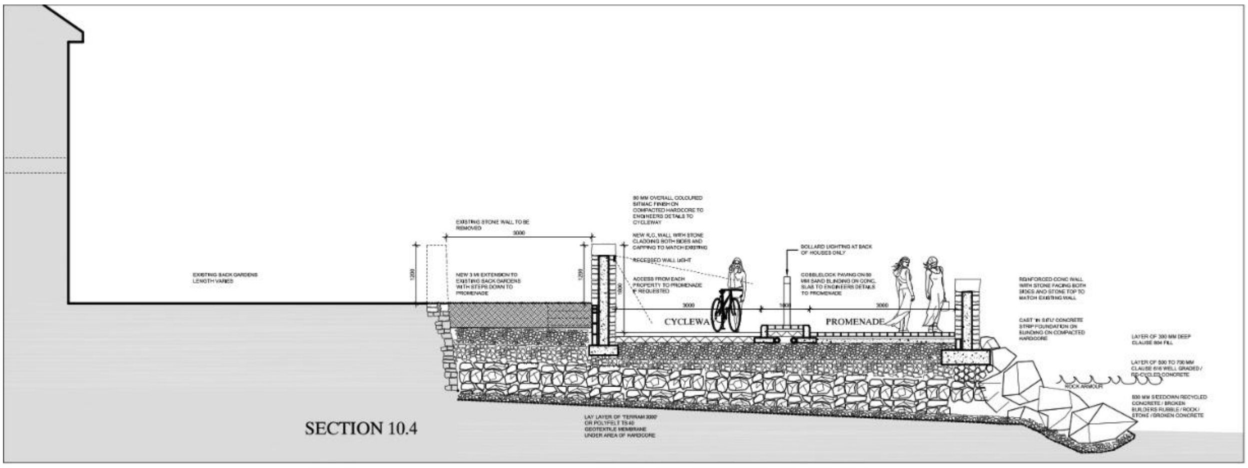

Fig 7: An earlier proposal to improve the coastal protection of the houses on Strand Road in a manner that protected the privacy of residents and preserved their views of Dublin Bay should be considered.

Fig 8. Segregated Road and Cycleway level crossing at Amersfoort Netherlands. All barriers operated simultaneously by one control system. Such systems are common in the Netherlands and Scandanavia

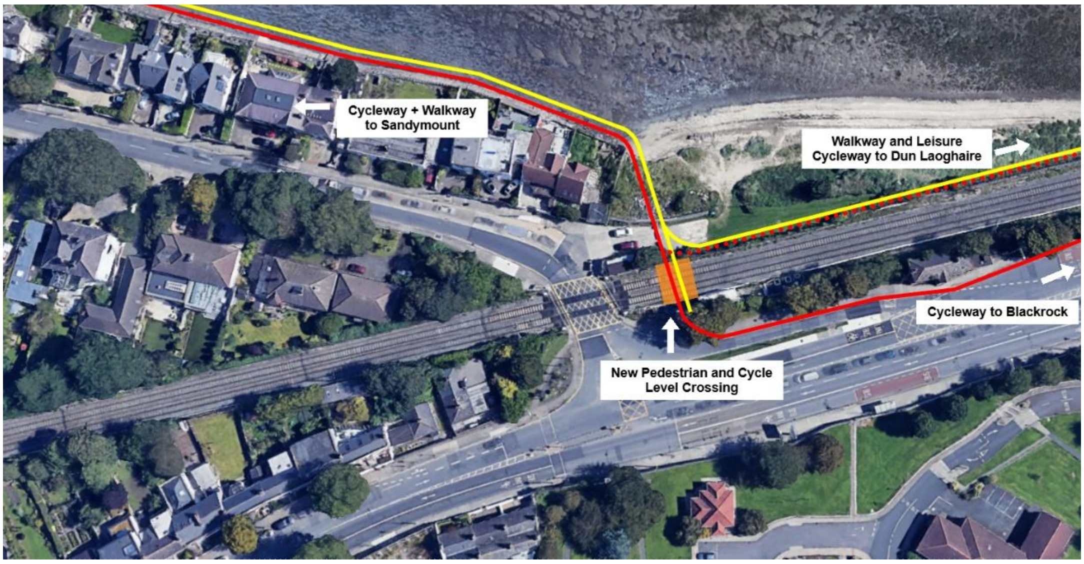

Fig 9. An indicative layout of the proposed level crossing at Merrion Gates. The new walkway and leisure cycleway outside the railway line (shown in yellow and dotted red) would connect the coastal protection and walkway on Strand Rd to the section outside the railway on the seafront. It could have a link across the level crossing to the Merrion Road. The recently completed cycleway coming from Blackrock, which stops at the County Boundary on Merrion Road, would be extended to the Merrion Gates. It would cross the railway by way of the new level crossing working on the same control system as the main level crossing barriers and continue alongside the new walkway outside the houses on Strand Road.

Fig 10: Merrion Gates to Sean Moore Park: a holistic solution that combines flood protection with routes for essential electrical and other infrastructural installations, a continuous traffic free walkway and cycleway together with a permanent way to facilitate ongoing maintenance and repair.