

Laxey Flood Alleviation Wall, Frequently Asked Questions

Why is the DoI proposing to build walls around Laxey Harbour and along the Promenade?

In 2012 the Island suffered high tides and storms that had a significant impact across the Island including lower Laxey. Historically, that severity of storm and tide has approximately a 2% chance of happening each year. Given likely impact of climate change the Department commissioned research in to the likely effects of storms and climate change at each of the port towns, including measures that could be taken to mitigate against those effects.

That investigation highlighted that Laxey harbour will overtop every year by 2115 and that there will be a 20% chance of waves rolling over the top of the sea wall each year.

As part of a programme of work to protect the port towns against the impact of climate change, in relation to rising sea levels, the Department has proposed building these protective walls in Laxey.

The Department recognises that these walls will have a significant impact on the amenity of the harbours and promenades and has consistently stated that the project would not proceed unless it had the support of the community.

Who are the consultants?

In 2014 Jeremy Benn Associates Ltd (JBA) were engaged to consider the environmental impact of climate change. It was asked to follow UK guidance on climate change predictions and to consider the protection needed to defend against a storm/ tidal surge event with a ½% likelihood of happening each year in 2115.

Is the proposed Promenade wall the best method of defending against wave overtopping?

No, the proposed wall is a compromise of the suggested recommendations. The JBA report recommended three methods for reducing storm surges.

The first was for a rock revetment to be constructed across the entire Promenade. This was rejected on the grounds that it would ruin the existing beach in front of the promenade wall.

The second suggestion was that a new wall should be constructed 3 metres back from the existing sea wall. However, the design called for a wall height of 1.6m and this would have a considerable visual impact on the existing outlook and cause difficulties with parking on the Promenade.

The third suggestion was to raise the height of the existing sea wall by 1.7m. This would provide an overall wall height of 2.2m and again would have a huge visual impact on the landscape of Laxey.

The compromise design that has been chosen would mean the outlook from the Promenade would remain similar to what is there today. The design calls for part of the Promenade, from the Pier to the slipway, to be raised by approximately 0.65m and a new sea wall constructed to a height of 0.6m above this, giving a total height of 1.25m. This would provide limited protection from current levels of wave overtopping. However, the proposed wall has been designed to allow an extension to be added in the future if predicted sea level rises become problematic.

Why can't money be spent on flood defences for individual properties instead?

The Department has a responsibility to protect the public highway and simply providing flood boards for individual properties would not provide any protection to the highway. Individuals are, of course, responsible for protecting their own property and able to install flood protection to their own thresholds, if desired.

Would moving the stones on the beach away from the wall reduce wave overtopping and negate the need for a higher wall?

Advice from JBA tells us that maximum wave height is a function of water depth – in other words, shallow water cannot support a big wave. The water depth reduces as a wave runs up the shingle, and as a consequence the wave's height reduces.

The movement of the stones also helps to dissipate the energy. Some beach management, - for example, moving the stones around the beach to remove low spots against the wall - may have some benefit against wave overtopping but would not be effective in tackling still water flooding or rising sea levels due to climate change. In summary, a beach of shingle is good wave protection as long as it does not breach the wall's wave return.

Could the proposed walls along the promenade and harbour be undertaken as two separate entities?

Yes, the Department could construct either or both, subject to gaining the necessary planning approvals.

Why has river maintenance not been considered in the proposals?

The mechanisms for river flooding are different to those of tidal flooding. A cross-Government programme board is overseeing the progress on many climate change-related issues. River flooding is one of the areas being investigated, led by Manx Utilities.

Who will be responsible for the storm boards and flood gates?

It will be the responsibility of Garff Commissioners, supported by the DoI Harbour Keeper to deploy and store the storm boards.

Have Manx Utilities been involved in the proposed design

Yes - Manx Utilities were consulted on the proposals as there is an impact on its proposals for a new sewer treatment plant opposite the boat park.