

23rd October 2015

Re: Sea Level Rise is Dublin Bay due to global warming.

Global warming and associated sea level rise is nothing new. It has been going on since the end of the last Ice age around 10,000 years ago, apart from a few hiccups (e.g. mini Ice Age 1550-1850). World temperatures have increased by an estimated 5 degrees centigrade over these 10,000 years and sea levels have risen by around 30m (100 feet) in this period. In the 20th century it is estimated that world sea levels rose by 100mm to 250mm (Intergovernmental Panel on Climate Change) and 100-200mm of sea level rise has been typical over the last few centuries since the industrial revolution.

What has changed is that over the last 40-50 years there is estimated to be acceleration in this warming and as a result sea level rise and increased wave heights. This acceleration is largely associated with green house gases. Sea level rise is affected by two main constituents' ice melt and warmer sea water causing expansion.

Sea levels have been monitored closely in Dublin Bay particularly since the tidal flooding of 1st February 2002 when over 1250 buildings in the City (most of them dwellings) were flooded.

The average tide level is estimated to have risen by around 90mm in the Dublin City area since 2000 giving an average annual sea level rise of 90mm over 15 years = 6mm (1/4") per annum. Global figures indicate an annual increase of 2-4mm/annum but in some areas this can be larger due to local factors.

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This means that a significant proportion of the global warming allowance for the new Dollymount flood defence wall has already occurred.

With higher tide levels in Dublin Port and Dublin Bay larger waves can also be generated as a result of deeper water levels.

Thus I would strongly recommend that the minimum Office of Public Works allowance for global warming due to sea level rise not be reduced at Dollymount between the Wooden Bridge and the Causeway Road.

If you require any further information please feel free to contact Mr. Gerard O'Connell, Engineer-in-Charge, Regional Projects & Flood Advisory Office, Dublin City Council at 01-2224302.

**Gerard O'Connell,
Engineer-in-Charge,
Regional Projects & Flood Advisory Office.**