

## **Public Participation** | Day No.3

# Scheme Climate Change Adaptation Plan



**Objectives of the Scheme Climate Change** 

**Potential Future Flood Risk** 

#### Adaptation Plan

- To ensure that flood risk management interventions are planned and sequenced to mirror increasing flood risks arising due to climate change.
- To ensure that these planned interventions are flexible and adaptable to the uncertainty related to possible future climate scenarios.
- To provide greater value for money than the more traditional approach of implementing a once-off intervention.
- To ensure that the flood relief scheme designed in the present day is readily adaptable to modifications in the future.

## Assumptive vs Adaptive Approach

Two approaches can be taken to maintain the standard of protection as flood risk increases due to climate change:

• Assumptive Approach

designing and constructing the current scheme to account for an assumed future flood risk scenario

Adaptive Approach

undertaking regular interim

Due to the nature of the proposed flood mitigation measures in Areas 4 and 5, an Assumptive Approach has been deemed suitable and provides value for money. In these areas, a higher standard of protection will be provided now and further interventions will not be required in the future.

An Adaptive Approach is proposed in Areas 1, 2 and 3. It is these areas that the Scheme Climate Change Adaptation Plan is mainly focused on.



580 properties are at risk of flooding in the Current scenario for the design flood event



modifications of the scheme after it is constructed in order to maintain the target standard of protection

# The SCCAP Decision Tree

The emerging preferred option for the current scenario is readily adaptable to 3 different Mid Range Future Scenario Options which include:

- Direct Defences Adaptation
- Direct Defences Adaptation and Upstream Storage
- Direct Defences Adaptation and Conveyance Improvements

The Mid Range Future Scenario options are then in turn also adaptable to a number of High End Future Scenario Options as indicated.

A Benefit Cost Ratio was calculated for each of the individual adaptation measures. Each measure was required to have a Benefit Cost Ratio greater than 1 in order to be economically viable and considered as part of the SCCAP. 1144 properties are at risk of flooding in the Climate Change (High End Future) scenario for the design flood event if the scheme is not constructed High End Future Scenario Flood Extent (1 in 100 year fluvial/1 in 200 year tidal)

The various economically viable options and adaptations were assessed considering:

- Public perception
- Societal benefits
- Environmental impacts
- Technical robustness

The final decision tree of all the acceptable Adaptation Pathways is shown in the figure below

The Midleton SCCAP will remain a 'live' document and will be reviewed every 10 years at a maximum. As new knowledge on the onset of climate change and its impact on flood risk in Midleton is gained, it will inform future SCCAP reviews. This in turn will allow for the adaptation pathways to be refined and their means of implementation to be assessed.





