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Tionscadal Phasáiste Éisc
Annacotty
Fish Passage Project

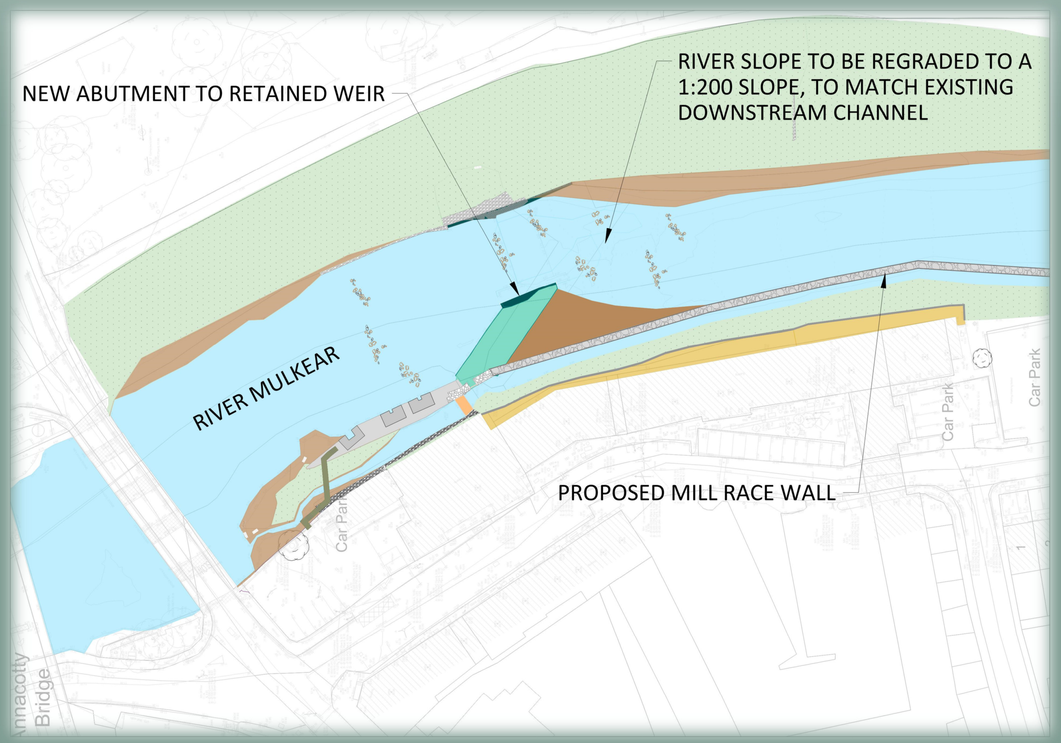
Iascach Intíre Éireann
Inland Fisheries Ireland

NATIONAL BARRIER MITIGATION PROGRAMME

Option A
Partial Removal of the Weir

Description

- Remove the eastern part of the weir, including the existing fish ladder
- Restore the river channel with gradient of 1:200, to match existing downstream channel
- Abutment works to end of retained weir
- Retain the Mill Sluice structure, with new wall to extend Mill Race



The Constraints and Options shown are draft only and subject to change. More detailed assessments, on-going studies and the information received from the public may result in changes to these Constraints and Options.

Commentary

- Fish: Main river flow in partially restored river channel allows free passage of fish
- Flood: Partial removal of obstruction to flood flow marginally reduces upstream flood levels, with no impact on downstream flood levels
- Nature: Partial restoration of river channel improves hydro-morphology and ecological diversity
- Amenity: Loss of the weir impoundment impacts on some water-based activities.
- Views and Scenery: Partial removal will leave retained part of weir visible and dry in normal flow conditions
- Heritage and Archaeology: Partial removal of the weir will leave in place an existing concrete structure adjacent to the protected Mill Building

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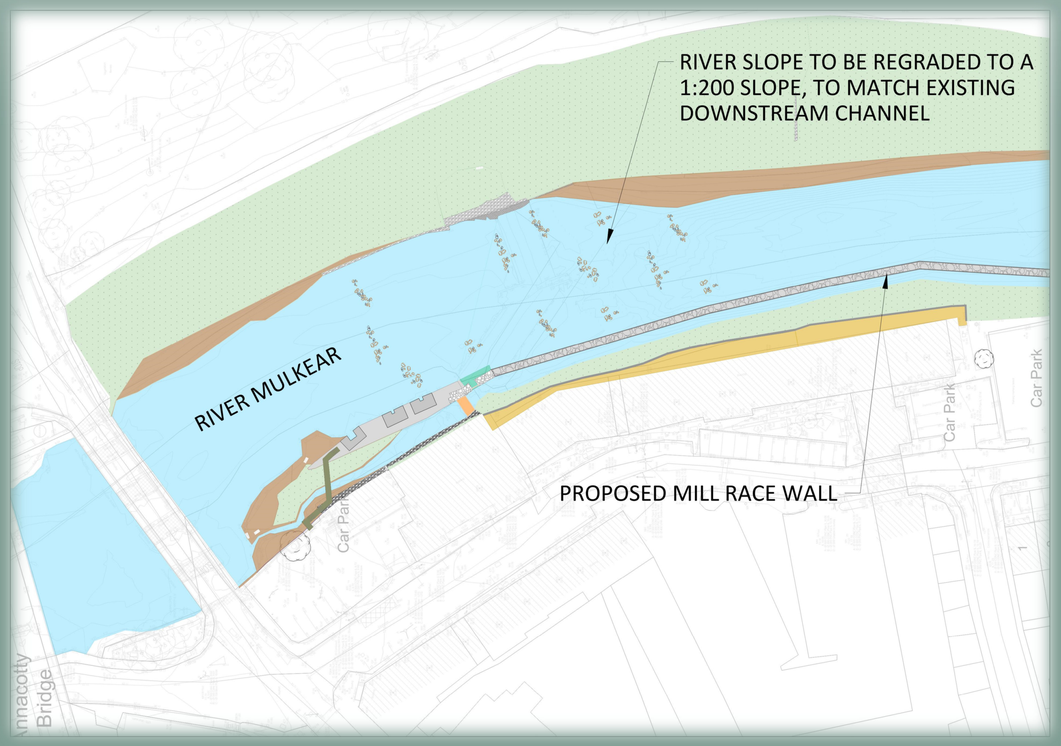
Option B
Full Removal of the Weir

Description

- Remove the entire weir, including the existing fish ladder
- Restore the river channel with gradient of 1:200, to match existing downstream channel
- Retain the Mill Sluice structure, with new wall to extend Mill Race



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Commentary

- Fish: Main river flow in restored river channel allows free passage of fish
- Flood: Full removal of obstruction to flood flow significantly reduces upstream flood levels, with no impact on downstream flood levels
- Nature: Restoration of river channel improves hydro-morphology and ecological diversity
- Amenity: Loss of the weir impoundment impacts on some water-based activities.
- Views and Scenery: Full removal of the modern weir structure will allow views of the restored river channel
- Heritage and Archaeology: Full removal of the modern concrete weir, leaving original historic features in place adjacent to the protected Mill Building

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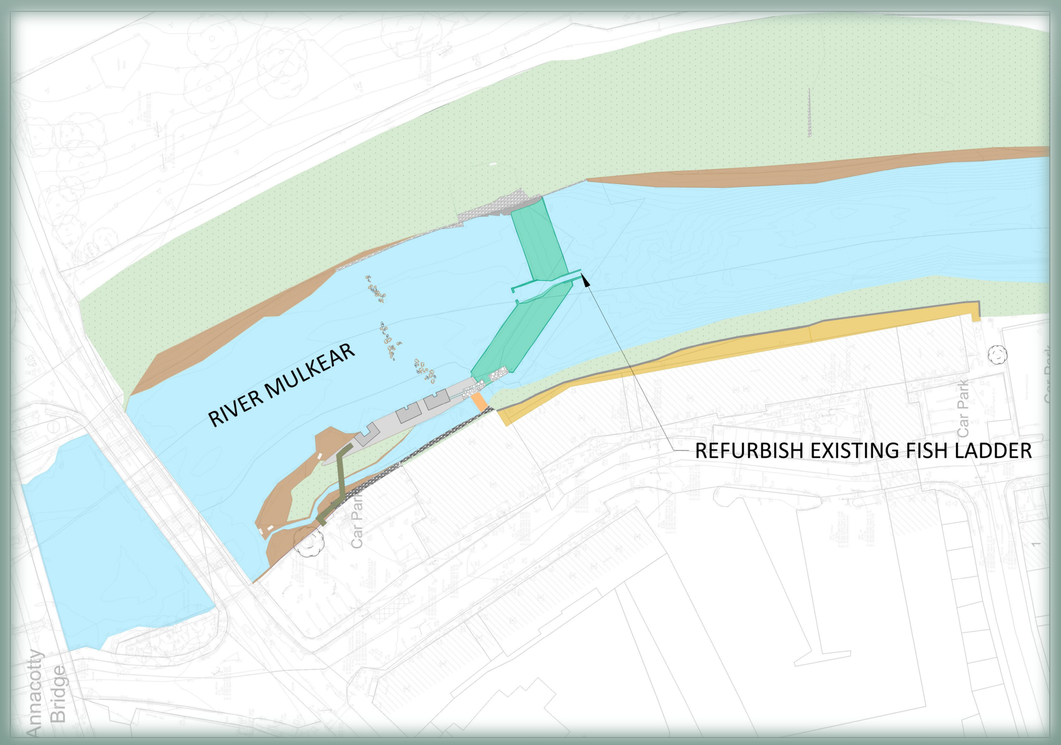
Option C
Refurbish Existing Fish Ladder

Description

- Retain the entire weir, including the existing fish ladder
- Retain the Mill Sluice structure
- Refurbished fish ladder, moderately improving gradient and placement of baffles
- Refurbishment constrained by existing geometry



Commentary

- Fish: The existing ladder is impassable for certain fish species and fish at particular life stages due to its steep gradient
- Flood: No change to flood levels
- Nature: No change to existing conditions
- Amenity: No change to existing conditions
- Views and Scenery: This option retains the existing modern weir and fish ladder
- Heritage and Archaeology: This option will retain the prominent modern concrete weir structure adjacent to the protected Mill Building

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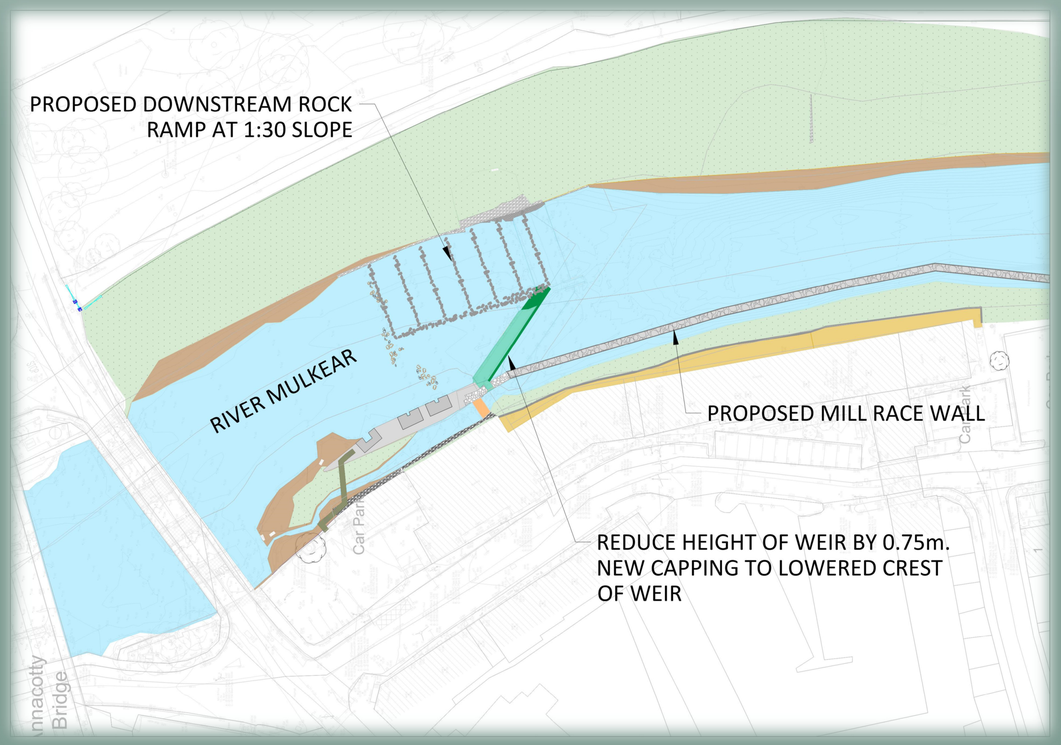
Option D
Lower the Weir Crest Level and Rock Ramp

Description

- Retain the existing weir, lower the crest level by 0.75m
- Remove the existing fish ladder
- Install new fish pass (downstream rock ramp)
- Retain the Mill Sluice structure, with new wall to extend the Mill Race



Commentary

- Fish: Moderately improves passage of fish species
- Flood: Lowering the weir crest level will substantially reduce upstream flood levels, with no impact on downstream flood levels (except with downstream rock ramp)
- Nature: Marginal change to existing conditions
- Amenity: Reduced water depth in the weir impoundment potentially impacts on water-based activities.
- Views and Scenery: Visual impact of weir will be diminished as it will be reduced in height.
- Heritage and Archaeology: Reduces the prominence of the modern concrete weir structure adjacent to the protected Mill Building

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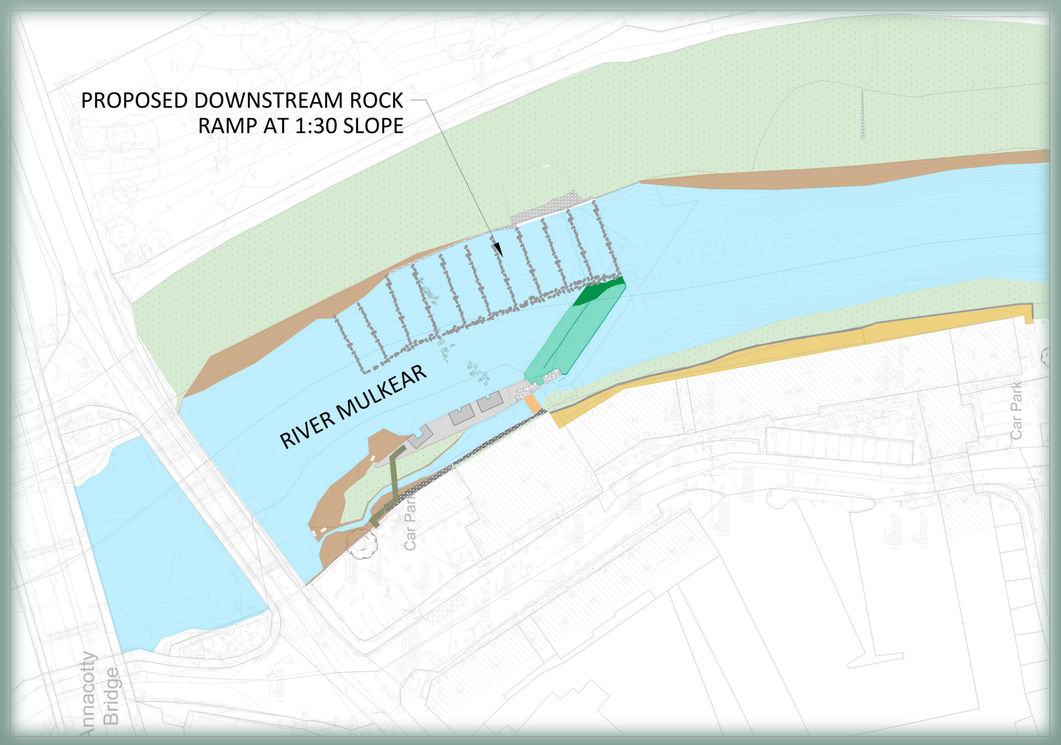
Option E
Downstream Rock Ramp

Description

- Retain the existing weir
- Remove the existing fish ladder
- Install new downstream rock ramp
- Retain the Mill Sluice structure



Commentary

- Fish: Moderately improves passage of fish species
- Flood: No impact on upstream flood levels. Marginal increase in flood levels downstream of the weir, making this option unacceptable
- Nature: No change to existing conditions
- Amenity: No change to existing conditions
- Views and Scenery: Downstream Rock Ramp will be conspicuous from Annacotty Bridge
- Heritage and Archaeology: This option will retain the prominent modern concrete weir structure adjacent to the protected Mill Building

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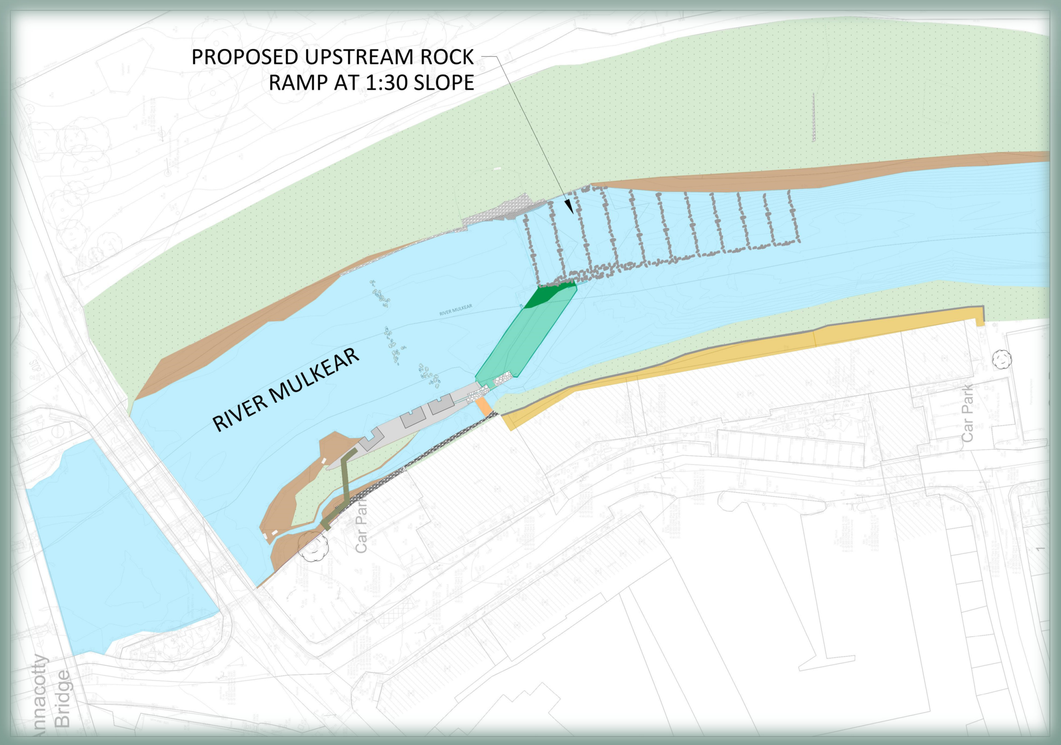
Option F
Upstream Rock Ramp

Description

- Retain the existing weir
- Remove the existing fish ladder
- Install new upstream rock ramp
- Retain the Mill Sluice structure



Commentary

- Fish: Moderately improves passage of fish species
- Flood: No change to flood levels
- Nature: No change to existing conditions
- Amenity: No change to existing conditions
- Views and Scenery: Upstream Rock Ramp will be moderately conspicuous from Annacotty Bridge
- Heritage and Archaeology: This option will retain the prominent modern concrete weir structure adjacent to the protected Mill Building

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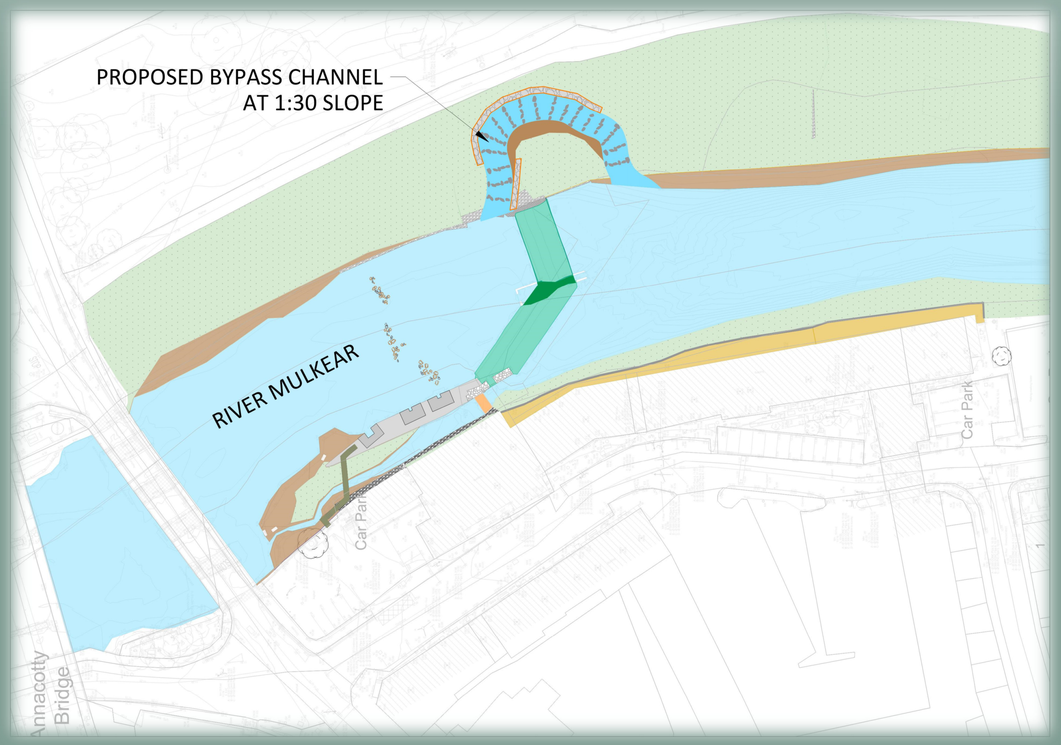
Option G
Bypass Channel

Description

- Retain the existing weir
- Remove the existing fish ladder
- Install new by-pass channel in right bank (eastern bank)
- Retain the Mill Sluice structure



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Commentary

- Fish: Marginally improves passage of fish species
- Flood: No change to flood levels
- Nature: No change to existing conditions in the river. The bypass channel would be constructed in the right bank riparian corridor, which is part of the Lower Shannon Special Area of Conservation (SAC)
- Amenity: No change to existing conditions
- Views and Scenery: Bypass Channel will be noticeable, but will be largely obscured by the riverbank
- Heritage and Archaeology: This option will retain the prominent modern concrete weir structure adjacent to the protected Mill Building. The bypass channel would be constructed in an area of potential archaeological features.

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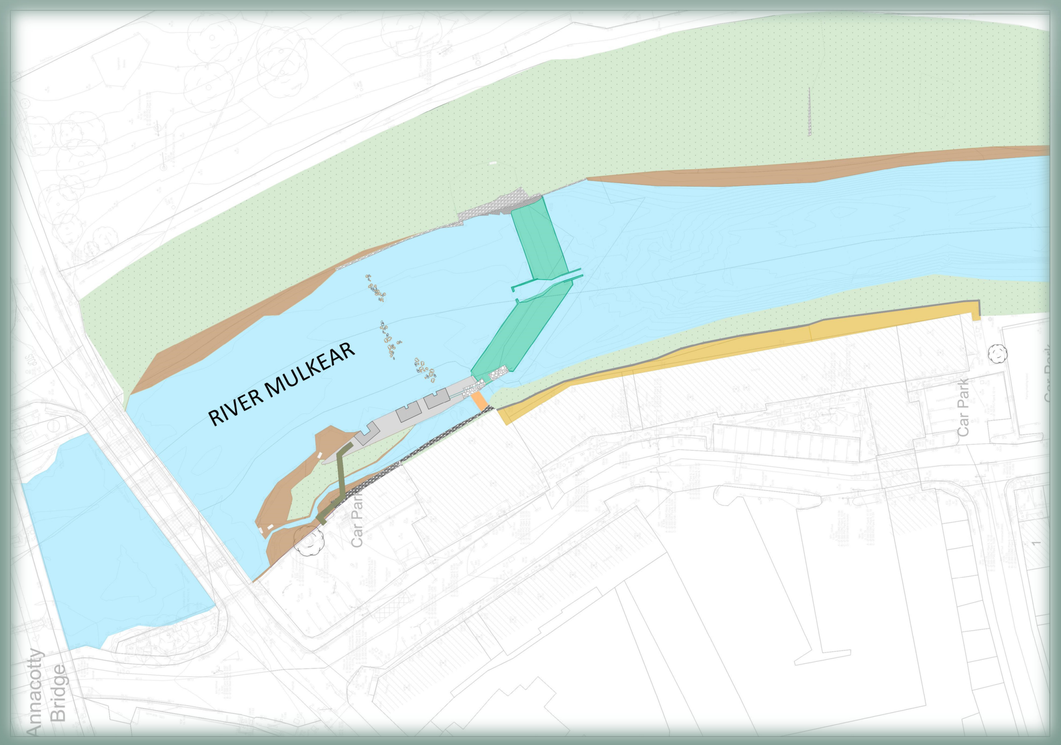
Option H
Retain Existing

Description

- Retain the existing weir
- Retain the existing fish ladder
- Retain the Mill Sluice structure



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Commentary

- Fish: Existing weir acts as a barrier to the passage of fish
- Flood: No change to flood levels
- Nature: No change to existing conditions
- Amenity: No change to existing conditions
- Views and Scenery: This option retains the existing modern weir and fish ladder
- Heritage and Archaeology: This option will retain the prominent modern concrete weir structure adjacent to the protected Mill Building

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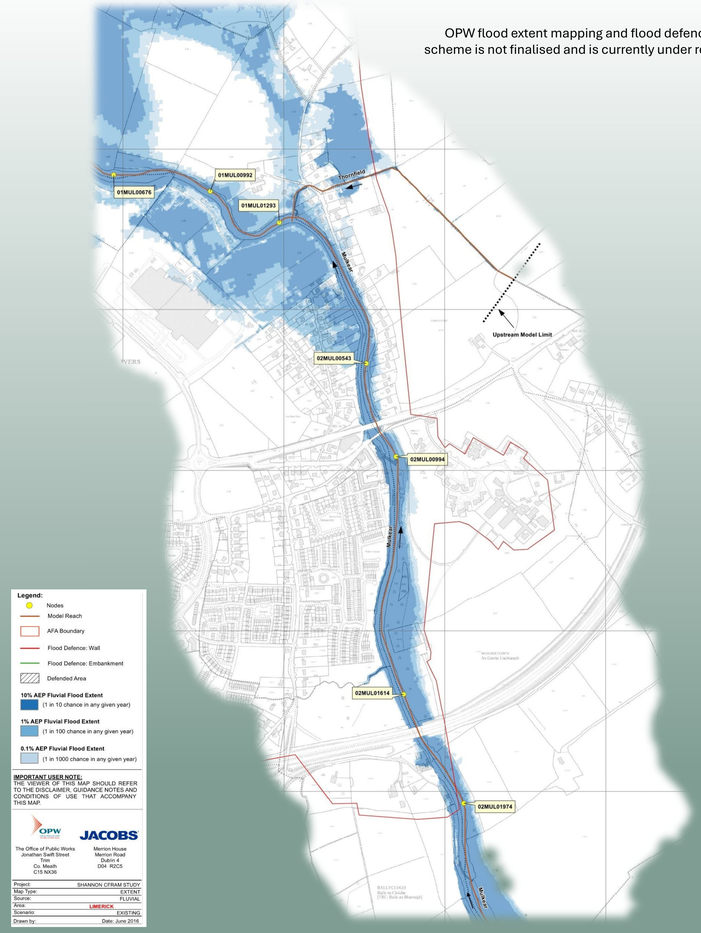
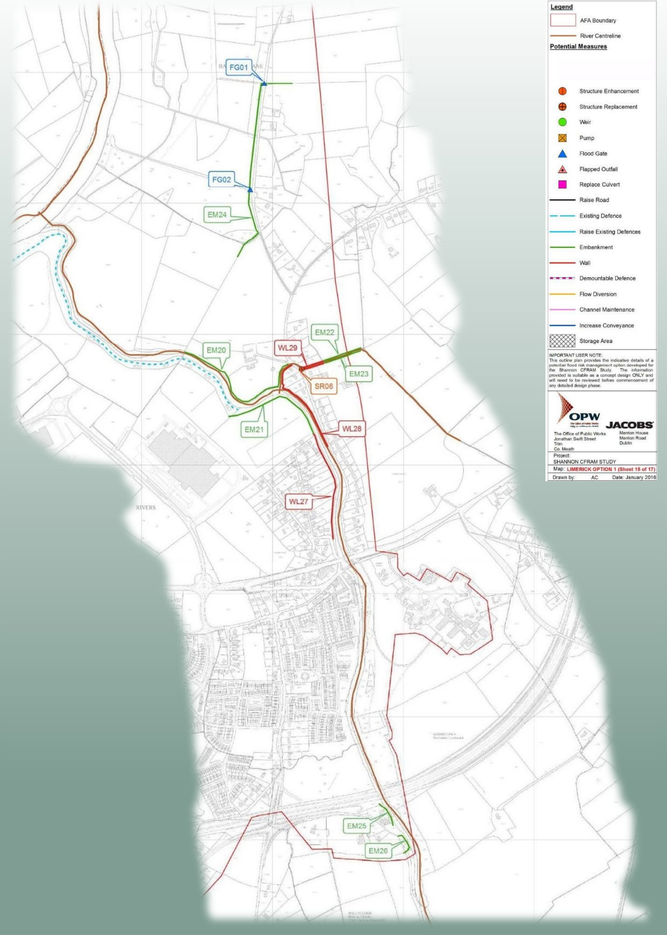
Flood Risk Context

OPW flood extent mapping and flood defence scheme is not finalised and is currently under review





Commentary

- The OPW has responsibility for leading and co-ordinating the implementation of the National Flood Policy which involves the development of a planned programme of feasible works, with a greater emphasis on non-structural flood risk management measures. The OPW carries out this role by coordinating the implementation of flood risk management policy and measures.
- The OPW's flood extent mapping (published in 2016) is not finalised and is currently under review. The associated flood defence scheme proposals are also under review by OPW.
- All options for Annacotty Weir result in no change to rate of flow passing downstream of the weir.
- Option E (downstream rock ramp) occupies some of the existing channel downstream of the weir and results in a small increase is water levels locally.
- All other options result in no negative impact on flood water levels.