North Ayrshire Council
Comhairle Siorrachd Àir a Tuath

Mill Burn, Millport Flood Scheme

Mill Burn Flood Prevention Scheme, Millport

Non-Statutory Community Consultation April 2025

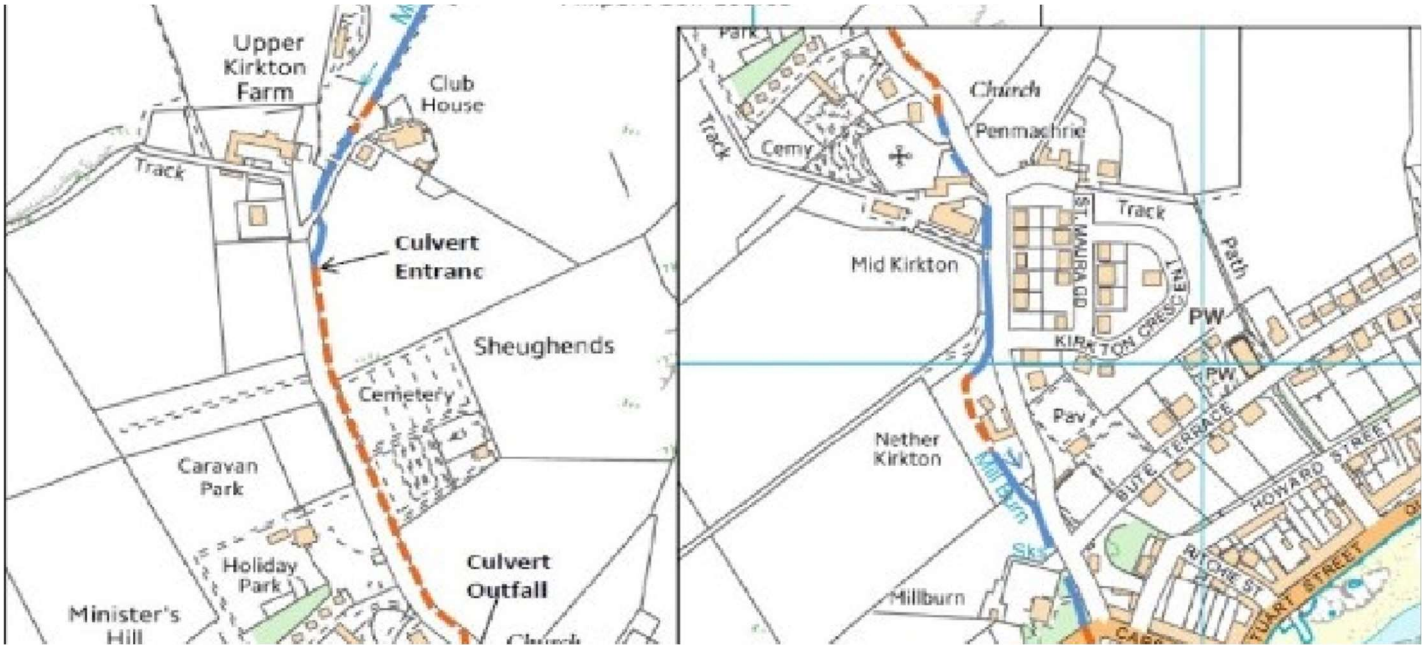
1st April 2025

Welcome to our Story Map!

This document will outline the purpose of the consultation and set out to answer the following questions:

1. **Why we need to develop a flood scheme?**
2. **What are the legislative drivers for the Scheme and how do we finance it?**
3. **What is the identified flood risk from the Mill Burn?**
4. **What are the details of the proposed scheme**
5. **What will be the Impact on the road network**
6. **What is the Preferred Scheme construction timing?**
7. **What is your view and what can you influence**

The purpose of this consultation is to involve the local community in the timing of the Mill Burn Flood Scheme construction works and seek their views and tap into local knowledge. The feedback which we collect during this consultation event will influence the Council's decision-making process.



Mill Burn Culvert

The Mill Burn originates from the outflow of the Lower Cumbrae Reservoir. The reservoir is fed by the Upper Cumbrae Reservoir, located a short distance upstream of the lower reservoir, and runoff from its natural catchment. The reservoir system was originally used to supply drinking water to Millport prior to the 1990s.

Downstream of the Lower Cumbrae Reservoir, the burn runs through Millport Golf course in a mixture of open channel and short culverts for approximately 450m before entering a long culvert that is approximately 355 m long.

The long culvert is 450 mm in diameter and runs along the east side of Golf Road, passing along the western boundary of the cemetery, before discharging next to the Commonwealth War Cemetery. Downstream of this point, the burn runs in a mixture of short open channel sections and culverts through Mid Kirkton for approximately 460 m before entering another long culvert at the junction of Golf Road and West Bay Road.

The second long culvert (along Crawford Street) is approximately 220 m long, rectangular in shape and discharges onto the beach on the west side of Millburn Street.

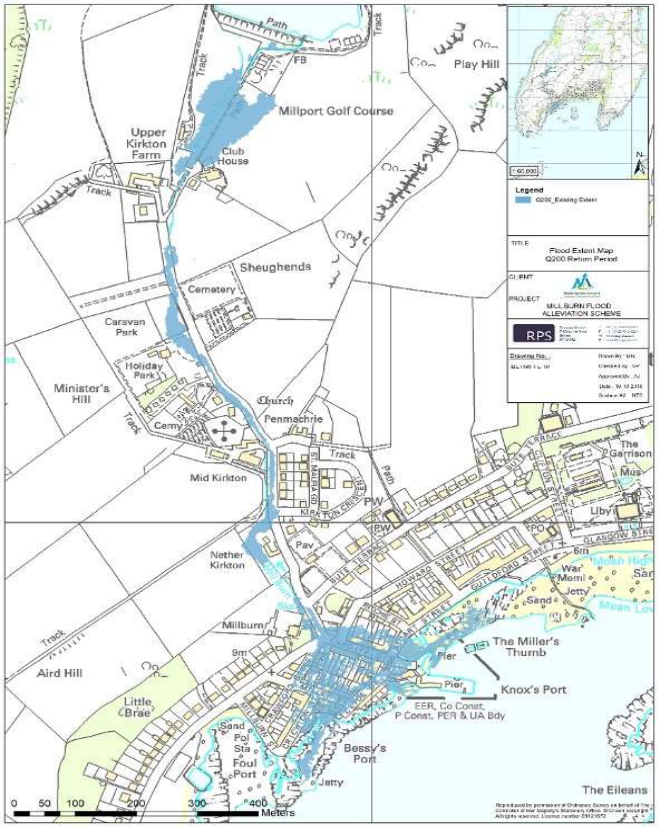
The length of the burn from Lower Cumbrae Reservoir to its outfall is approximately 1,495 m. Along its entire length, the burn is largely modified therefore it is not able to provide the required capacity and this is the main cause of the flooding.

1. Why we need to develop a flood Scheme?

The flooding from the Mill Burn is well known and understood within the Millport Community, especially people living in St Maura Gardens, Kirkton Crescent along Golf Course Road and in the Old Town near Crawford Street. It is an annual occurrence that the Mill Burn overflows Golf Course Road & Kirkton Crescent Junction and stops access to properties and threatens to flood the Nether-Kirkton property. In more severe events like the one in 2014, the flow cascaded down Golf Course Road with such force that an old masonry wall at the end of the road collapsed resulting in flooding many properties and businesses in the Town.

2. What are the legislative drivers for the Scheme and how we finance it?

The need for flood mitigation was recognised within the 1st Cycle of the Ayrshire Local Flood Risk Management Strategy and Plan in 2015 and 2016 respectively. A high-level Flood Risk Assessment (FRA) and Option Appraisal was completed on behalf of North Ayrshire Council, which identified potential options to mitigate flooding from the Mill Burn, Millport. On the basis of these reports, the proposed flood alleviation scheme was ranked 30 out of the 42 during the 1st SEPA National Prioritisation and government funding was allocated to implement it.



1 in 200 year flood extent.

3. What is the identified flood risk from the Mill Burn?

The table below summarises the flood risk to properties in different return period events. This data is identified based on a mathematical model which is built to analyse the flood risk from the Mill Burn in different theoretical flood events. For example, the 1 in 5-year return period event means that if you take a very long period of time, say 200 years, and analyse the different flood events and corresponding flows, on average in every 5 years there is a maximum volume of flood flow which occurs. This flow is labelled as a 1 in 5-year theoretical flow.

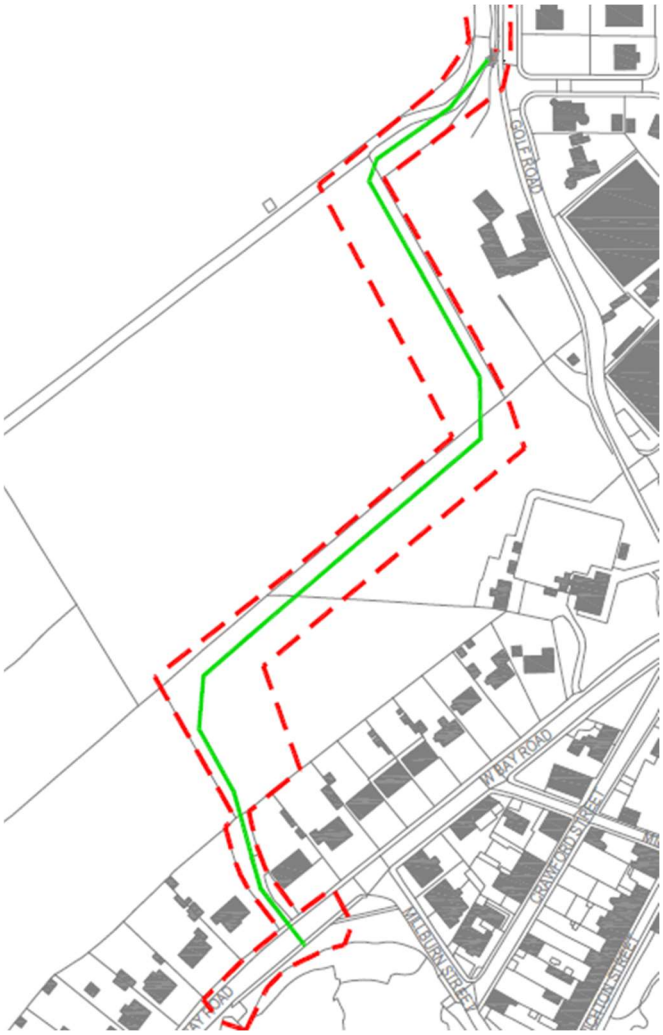
This does not mean that if it occurred today the next one will occur 5 years from now exactly. This can be sooner or later than 5 years.

In our calculation the 1 in 5 year flow would flood 7 properties and in a 1 in 200 year flood event would affect 124 properties.

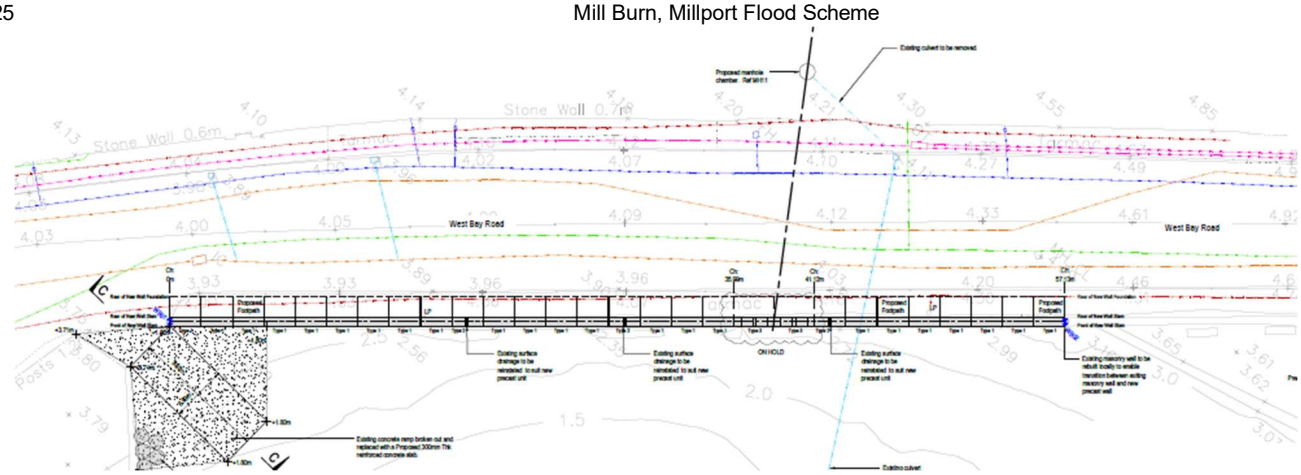
2019 FRA result	1 in x year Retun Period Flood Event						
Millport Town Flood Cell	1 In 2 year	1 In 5 year	1 In 10 year	1 In 25 year	1 In 50 year	1 In 100 year	1 In 200 year
No. of properties affected	0	7	77	98	120	122	124

4. What are the details of the proposed scheme

Following the consultation with stakeholders in July 2020, the preferred option for the culvert route was confirmed as a 495 metre 1000mm diameter flow diversion culvert between Golf Road/Kirkton Crescent Junction and West Bay via Nether Kirkton Farm with an outfall on the beach.



As part of the scheme, a new sea defence wall is to be constructed along West Bay Road. The culvert is to discharge through the sea defence wall onto the beach. The new sea defence wall is to be constructed from 'Cozy corner' to the beach access ramp in the west corner of the bay.



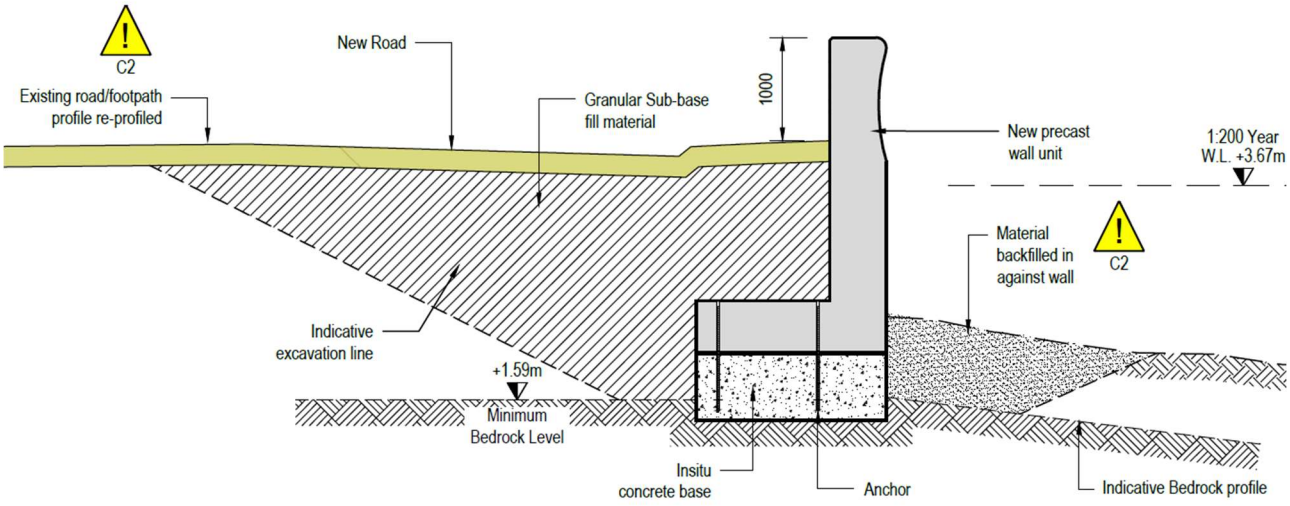
5. What will be the Impact on the road network

To enable the construction of the sea defence wall, West Bay Road will require to be closed to vehicular traffic for the duration of the wall construction works. Provision for pedestrians and cyclists to pass the works site will be provided at all times.

The closure of West Bay Road is required to allow for the installation of the precast concrete sea wall units and to provide sufficient space for the siting of a lifting crane and access for delivery vehicles. This closure to traffic is planned be in place for a period of 10 to 12 weeks.

Sheet Pilling to reduce the extent of excavation and road restrictions required was considered, however, due to the shallow rock head, this was discounted.

Access for emergency vehicles through the works will be maintained at all times.



Section through West Bay Road Sea Defence wall

6. What is the Preferred Scheme Construction Timing

The timing of the construction phase is to be consulted on to confirm if the works are to be carried out during summer or winter months.

Two options for the commencement of the construction works are to be considered;

Option 1 – Commencing construction works in September 2025 with associated road closures through winter months.

Option 2 - Commencing construction works in April 2026 with associated road closures through summer months;

A summary of the advantage - disadvantages of summer / winter options is provided below.

Description	Advantages	Disadvantages
Option 1 - Construction works start September 2025	Closure of West Bay Road during winter months minimizing impact on tourist traffic and disruption to community. Minimise impact on farming operations during summer months	Increased risk of adverse weather conditions affecting the programme of works. Shorter daylight hours reducing the overall road closure period Increased overall project construction costs Increased construction period duration due to weather risk and shorter daylight availability. Ferries running on reduced service
Option 2 - Construction works start April 2026	Reduced risk of adverse weather conditions affecting the programme of works. Longer daylight hours reducing the overall road closure period Reduced overall project construction cost due to shorter construction programme	Closure of West Bay Road during summer months with associated impact of tourist traffic and disruption to community Potential delay to construction programme due to environmental and licensing restrictions. Increased usage of the ferries for construction traffic during summer season

Mill Burn Millport Flood Protection Scheme

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Outline Design Development Stage

High level Flood Risk Assessment	A high level Flood Risk Assessment (FRA) was completed in 2015 and used to develop initial scheme options. The scheme is identified in the Ayrshire Flood Risk Management Strategy and Plan.	Complete
National Prioritisation	Based on the high level FRA and initial option appraisal the Mill Burn Scheme secured 80 % funding from Scottish Government and 20% funding from North Ayrshire Council	Complete
Review Flood Risk Assessment and high level options	Since the FRA in 2015, fundamental changes happened within the datasets which underpinned our assessment, such as the latest rainfall data had to be used which was not available in 2015; address points data now shown multiple occupancy; and climate change projections increased to 44%. This led us to revisit the FRA. The result of the assessment showed increasing flood risk from the Mill Burn. Consequently we needed to revisit the earlier flood mitigation measures.	Complete
Options Development	Two technically feasible options are: Option 1 Construct a flow diversion culvert between Golf Road/Kirkton Crescent Junction and West Bay via Nether Kirkton Farm following the perimeter of the field. Option 2 Upgrade the existing culvert at the lower part of Golf Course Road and the full length of Crawford Street, a distance of 258m	Complete
Surveys	Utility Surveys and ground investigation, including trial pits on land, has now been completed to enable design conditions to be determined.	Complete
Economic Analysis	Assessment of the expected costs of the proposed scheme components.	Complete
Community consultation	Non-statutory consultation which will influence the determination of the Council's preferred Option. Our aim is to understand your concerns and to address these in the design development.	Complete
Environmental	Environmental Screening assessment to identify the impact of the option on the Environment.	Complete
Recommend preferred solution	Combining the findings of our investigations, technical studies, economic analysis and your input, we will review the constraints and opportunities for the flood scheme. **This will enable the most appropriate solution to be recommended and reviewed by North Ayrshire Council.**	Complete

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Statutory Consultations

Environmental Report	The Environmental Screening **report will determine if any further environmental surveys or assessments are required.** The Environmental Report will be a supporting document for the applications for scheme approval and for a Marine Licence which might needed to construct a new outfall. So the report will be updated following completion of the detailed design.	Complete
Utility Providers	The impact of the scheme proposals on the utilities will need to be negotiated with the various utility providers affected. Where utility diversions are required the necessary agreements and design needs to be agreed.	Complete
Prepare FPS application and consultation	Formal pre-application consultation with relevant regulators and stakeholders is required before the scheme can be approved. A consultation meeting will be held and documents published setting out the plans for the scheme. We will provide full information about the formal consultation process. Once a preferred solution has been identified, the scheme design will be developed. An application to the Scottish Government will be prepared for approval of the proposed Flood Protection Scheme. Planning permission for the scheme is combined with the Scottish Government approval.	Complete

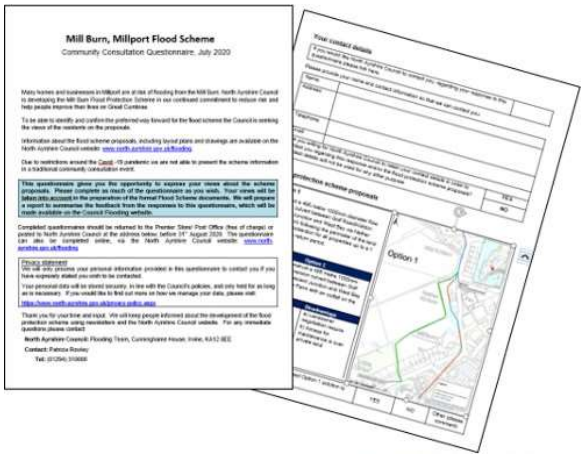
Detailed Design

Detailed design	The detailed engineering design of the scheme will progress following its approval. Construction drawings and contract documents will be prepared.	Ongoing
Appoint contractor & construct scheme	A competitive tendering process will be conducted to appoint a Contracting Civil Engineering company to construct the scheme. The scheme will then be constructed. Construction will be supervised to ensure high quality and that any requirements of the consents and licences are met.	Spring 2025

7. What is your view and what can you influence?

We would like to hear your views on the scheme proposal and would appreciate it if you could complete the on-line questionnaire.

If you are more comfortable completing a paper questionnaire you can print the questionnaire by clicking on this **link** and put it in a collection box free of charge at the Garrison House, Millport in a sealed envelope. You can also pick up printed copies of the questionnaire at this location.



All questionnaires are expected by the 30h April 2025.

The responses will be analysed, and a summary feedback document will be made available in May 2025.

The Council`s Flooding Team would like to thank you for your interest, and we hope that we will hear your opinion about the Mill Burn Flood Scheme proposal in due course.