

Public Participation Information Brochure

Athea Flood Relief Scheme

February 2024



ATHEA HERITAGE TRAIL
13
Athea Bridge
Originally a six arch
wooden bridge
Present structure built 1882
by Michael Walsh,
Foynes
ATHEA TIDY TOWNS

Athea Footbridge
Dedicated to the memory of
Pope John Paul II.
1920-2005
Opened June 10th, 2005 by
Most Reverend Donal Murray D.D.
Bishop of Limerick

Background

Limerick City and County Council (LCCC) and the appointed environmental and engineering consultant Ryan Hanley are progressing the Athea Flood Relief Scheme (FRS) in Co. Limerick. The village of Athea experienced extensive flooding in April 2005, July/August 2008, September 2009 and September 2015. The Athea FRS has progressed significantly since the initial Public Consultation Event for the Scheme in June 2020 which was held online due to Covid-19 restrictions.

In order to assess, progress and implement an FRS for Athea, an assessment of viable options was required. The project team has now completed the hydrological and hydraulic analysis and have identified an Emerging Preferred Scheme for the Athea FRS. Measures are proposed which will address flooding from the River Galey, and also two local tributaries, namely the Athea West and East Streams, where flood risk is associated with a number of culverts.

Progress to date

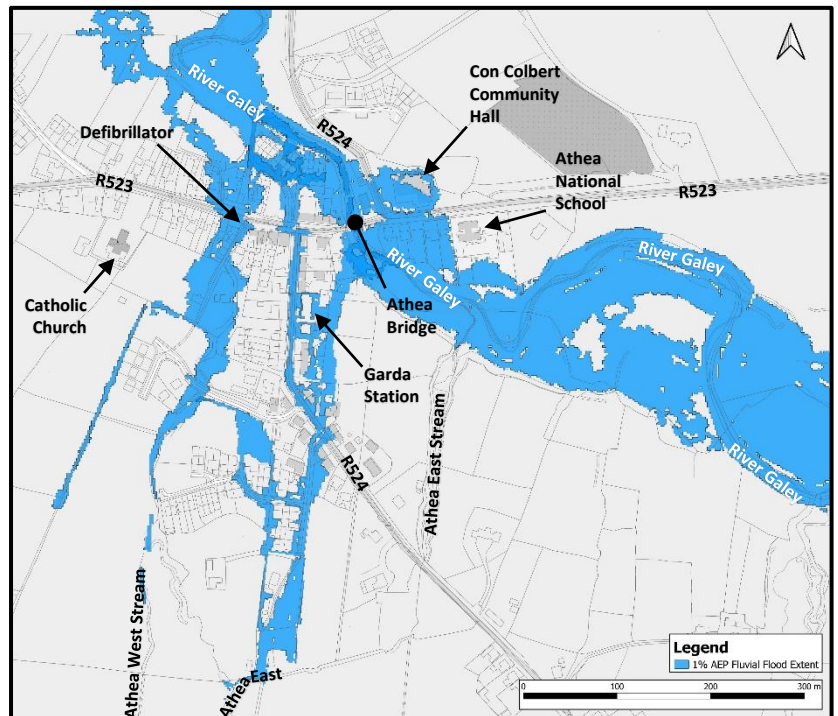
To date, work has been completed on the flood relief scheme including:

- Identification of the Study Area
- Extensive Data Collection
- Constraints Study
- Initial Public Consultation (June 2020)
- Stakeholder Consultation
- Topographical Surveys
- CCTV Surveys
- Geotechnical Investigation
- Environmental Surveys
- Hydrological Analysis
- Hydraulic Modelling
- Options Identification
- Options Development

Hydrological and Hydraulic Analysis

The Athea FRS has involved a detailed hydrological analysis and hydraulic modelling of the River Galey and two of its tributaries (Athea West Stream and Athea East Stream). This hydraulic model has enabled the project team to produce updated flood mapping for Athea.

The design standard is the 1% Annual Exceedance Probability (AEP) Fluvial flood extent within the Scheme Area and is presented in the map to the right. The impacts of climate changes is also being considered by the project team. A 1% AEP flood event has a 1 in 100 probability of occurring in any given year.



Options Assessment Process

The options assessment under Stage 1 is substantially complete. The project team have now identified an Emerging Preferred Scheme for Athea. The options assessment was undertaken in two steps. The measures considered at **Step 1** [the preliminary assessment of options] included:

- Do Nothing/ Do Minimum
- Property/ Infrastructure Relocation
- Conveyance Improvements
- Flow Diversion
- Non-structural Measures (Flood Forecasting System/ Flood Early Warning System/ Planning Restrictions)
- Sediment Management
- Flow Reduction (Flood Storage)
- Flow Reduction (Natural Flood Management)
- Flood Defences/ Pumping

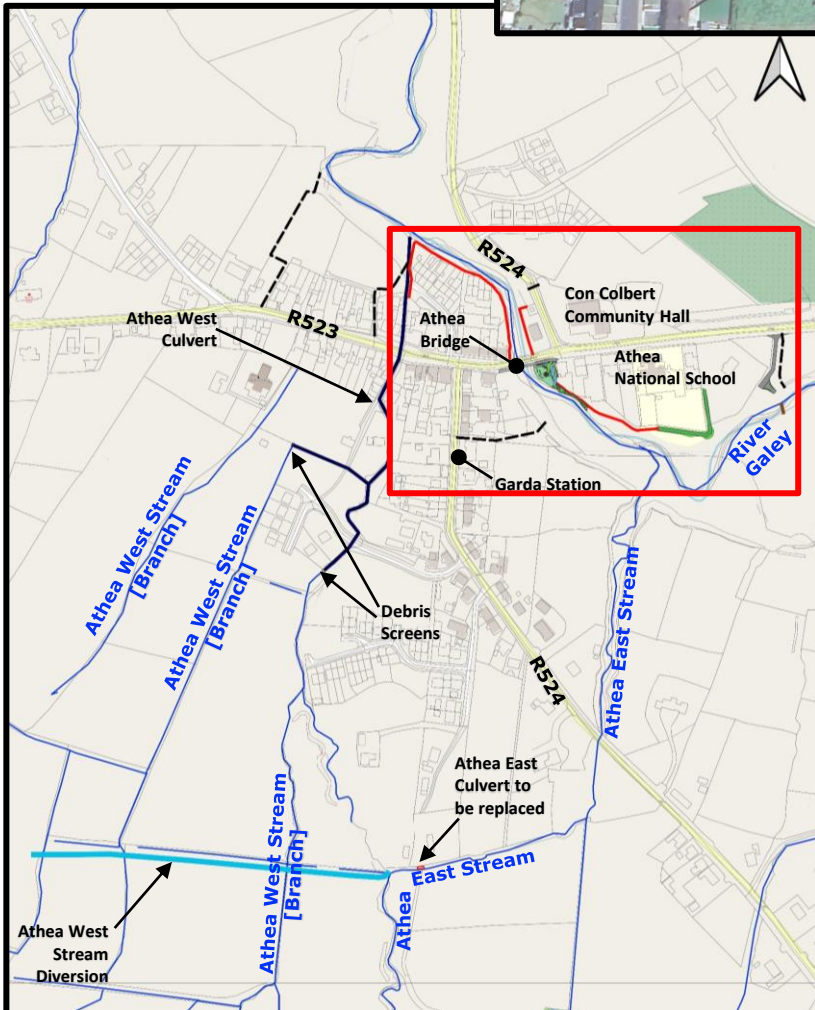
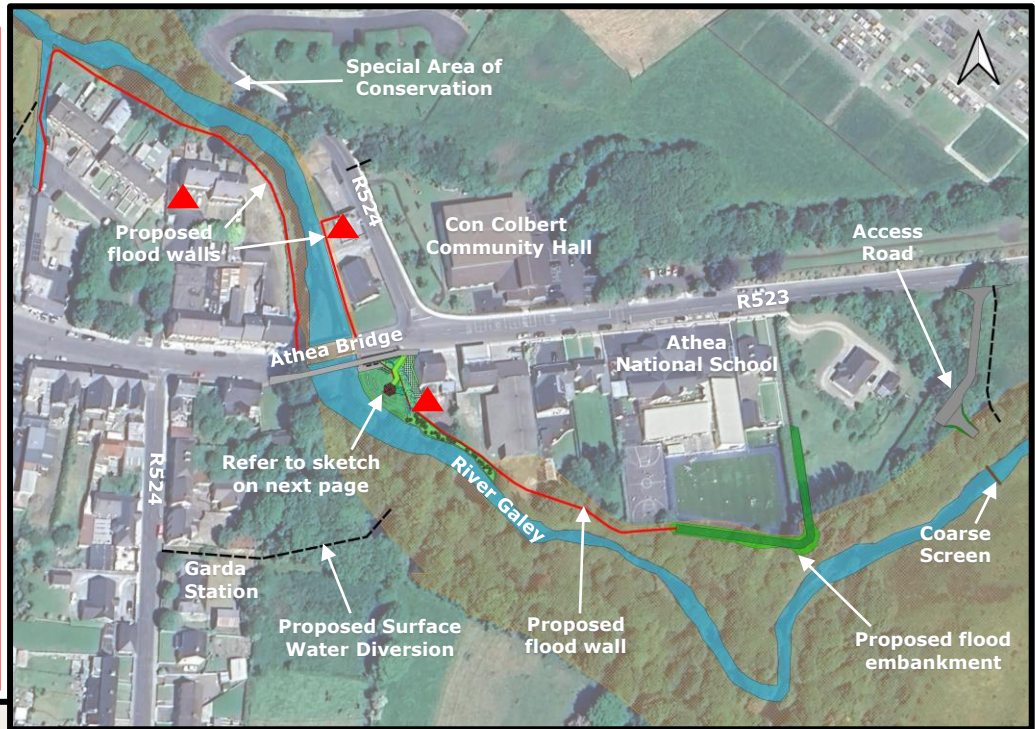
Step 2: Measures deemed viable for Athea on conclusion of Step 1 were brought forward for consideration at Step 2. Measures were combined into a number of alternative Options. These shortlisted Options were compared under social, economic, environmental, and technical criteria, prior to identifying the most appropriate Option for Athea – described here as the Emerging Preferred Scheme. Some commentary on options is also provided on the next page.

Emerging Preferred Scheme for Athea

The Emerging Preferred Scheme includes a combination of measures. For the River Galey, the preferred solution is containment (defences). Alternative options such as dredging were discounted largely due to the Special Area of Conservation (SAC) and associated environmental concerns. Variations in flood defence alignments were also considered. Flood risk on the Athea West and East streams is concentrated at locations of culverts. For Athea West, the preferred solution is to reduce flow to the main culvert. For Athea East, culvert replacement and local regrading is preferred. Sediment management, debris control, pumping and Surface Water management are also key elements of the Emerging Preferred Scheme.

River Galey:

- Flood containment/ defences at the locations shown. Where space is available, embankments are preferred. This is only possible at Athea NS. Take a closer look at sketch provided for the bandstand area overleaf.
- Three new pumping stations at locations shown ▲
- Sediment management involving periodic removal of excess gravel deposits in areas which are particularly hydraulically sensitive, e.g. at Athea Bridge.
- Coarse screen [debris management] at the location shown, incl. access track from R523.



Pluvial Flooding [Overland Runoff]:

Due to the steep topography of Athea and its environs, there is pluvial flood risk mainly associated with the various approach roads to Athea (including the R523 & R524). Athea FRS will incorporate four new surface water interceptors and an upgrade of an existing pipe on the four main roads through Athea. New petrol interceptors will also be installed on the four new surface water pipelines. This proposed surface water infrastructure will redirect surface water runoff away from areas where it could pose a flood risk to residential and commercial property.

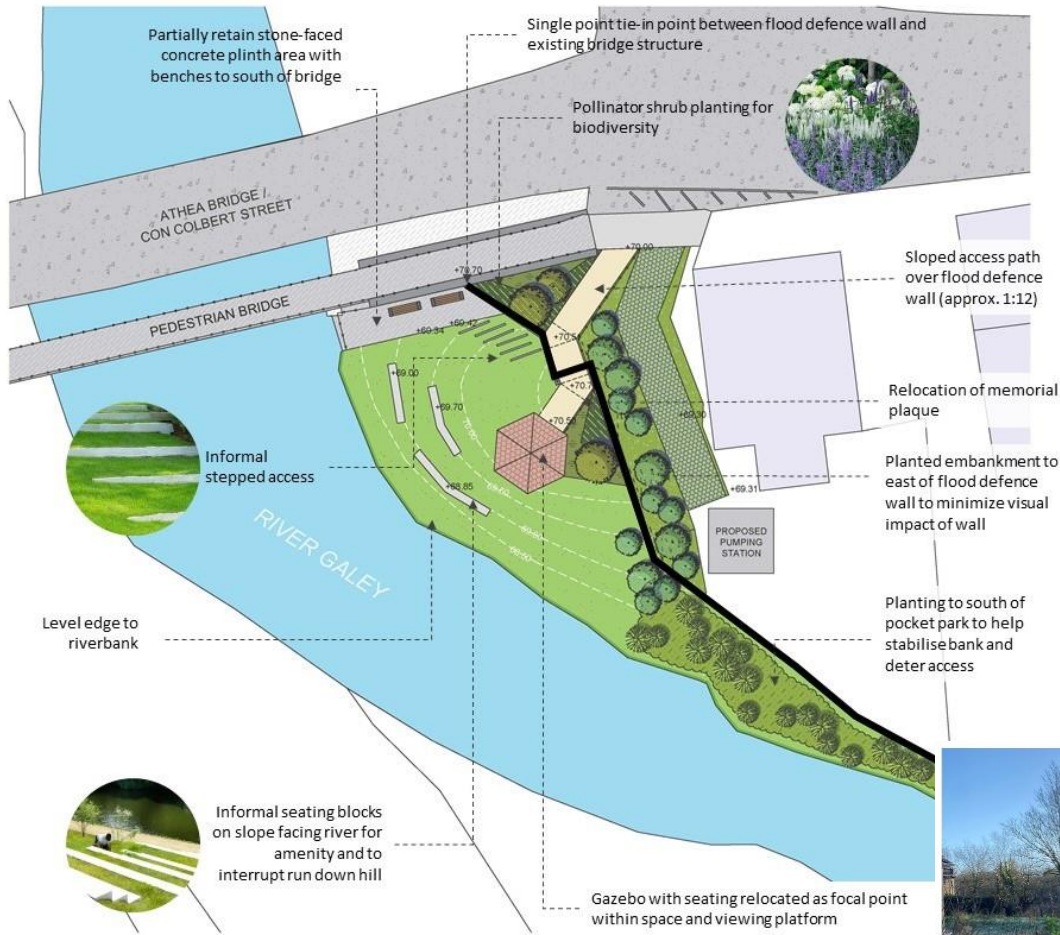
Athea West Stream:

The Athea West Stream has caused flooding in the recent past. The c300m long culvert at the downstream end and blockage at the culvert inlets are key contributing factors. The preferred solution here is flow diversion to the Athea East Stream which has greater conveyance capacity and debris screens on the culvert inlets. The alternative approach of replacing the entire existing culvert would cause significant disruption along the route and would also be a costly undertaking.

Athea East Stream:

The flood risk at the Athea East stream is associated with the culvert shown on the map to the left. The preferred solution for Athea East is to replace the short existing pipe culvert with a 1m high x 2.2m wide box culvert along with minor regrading of the stream bed. These upgrades will also cater for the flow diverted from the Athea West catchment.

Public Realm Enhancement



The scheme presents an opportunity to enhance the public amenity value at the bandstand area at the heart of Athea. LCCC have engaged CSR Land Planning & Design to devise a proposal which will enhance the public amenity value of the bandstand area while also incorporating the essential flood relief elements. The emerging preferred option is presented below. The design incorporates the existing bandstand (relocated) and includes additional seating and tree planting.



The Public Participation Event No.2

Where: Con Colbert Community Hall, Athea, Co. Limerick

When: Wednesday 21st February 2024 from 17:00 – 20:00 hrs

The project team wants to hear your views on the Emerging Preferred Scheme for Athea, Co. Limerick. Please let your views be known either at the Public Participation Day or by writing to the address below, giving your comments. A questionnaire can also be found on the project website. The questionnaires can be returned using drop boxes provided at the Public Participation Event or emailed to atheafrs@ryanhanley.ie. Please return your information and questionnaires by **Wednesday 6th March 2024**.

Your opinion is greatly appreciated and will be given full consideration by the project team. The comments and views received will be analysed and included in a review of the Emerging Preferred Scheme.

Further Information

All queries, questionnaires and comments in relation to this project can be addressed to:

Address: Ryan Hanley Ltd,
1 Galway Business Park,
Dangan, Galway, H91 A3EF.

Phone: 091 587116

Email: atheafrs@ryanhanley.ie

Website:

<https://www.limerick.ie/council/services/water-and-drainage/flooding-related-schemes-and-assistance/athea-flood-relief>

