

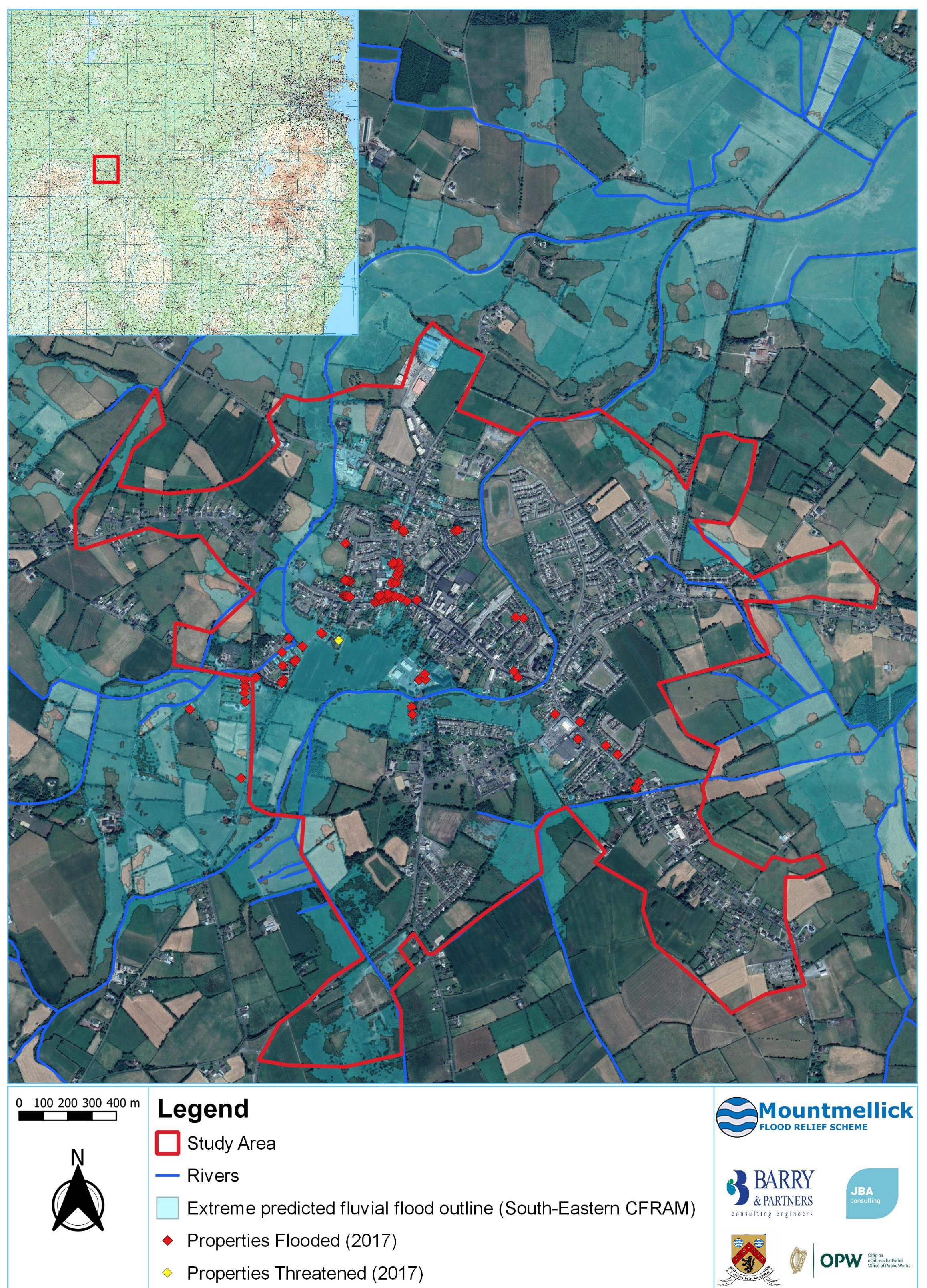


Mountmellick

FLOOD RELIEF SCHEME

Introduction

- Laois County Council has appointed the JBA Consulting and JB Barry team to assess, develop and design a sustainable flood relief scheme for Mountmellick.
- The aim of the scheme is to reduce flood risk to the community and the town's social amenity, environment and landscape.
- The scheme is being funded by the Office of Public Works.
- The project started in September 2019.
- Work on site is anticipated to be completed by 2025.
- This is our first public consultation event.





Mountmellick

FLOOD RELIEF SCHEME

Flood Risk Management Options

- Mountmellick is at risk from a combination of both fluvial (river) and pluvial (surface water) flooding.
- The Flood Relief Scheme will consist of one or a combination of flood risk management measures.
- Flood management measures that we are initially considering include:
 - Flood embankments
 - Flood walls
 - Raised road and footpath levels
 - Temporary / demountable gates and barriers
 - Diversion channel
 - Dredging / channel cleaning
 - Landscaped ground levels
 - Changes in land management practice (such as forestry and agriculture)
 - Individual property protection
- Different measures may be selected for different parts of the town.
- The preferred scheme will be identified by balancing the economic, social, cultural heritage and environmental aspects of each of the measures.



OPW

Oifig na
nOibreacha Poiblí
Office of Public Works



**BARRY
& PARTNERS**
consulting engineers



What's Involved in the Scheme

- There are a number of stages involved in the completion of any construction project, and a flood relief scheme is no different.
- There are five statutory phases of work. Progression to each stage relies on a successful outcome of the previous stage.
- The programme outlines some of the key steps involved in bringing the project from a blank page, as we started in September 2019, to having 'diggers on site'.
- However, there are always unknowns and unexpected difficulties. We will be working closely with LCC to keep these to a minimum, and more importantly to try and limit the impact they have on the overall project. We will also keep our Stakeholders and the project website up to date with any changes.

Activity	2019	2020	2021	2022	2023	2024
Assemble all the available data	<div><div></div><div></div></div>					
Site Investigation contracts		<div><div></div></div>				
Environmental Constraints Study	<div><div></div><div></div></div>	<div><div></div></div>				
Options development		<div><div></div></div>				
Ecological and environmental assessments		<div><div></div></div>				
Preparation of planning submission			<div><div></div></div>			
PART 10 Planning Application with An Bord Pleanala			<div><div></div></div>			
Detailed design for Flood Relief Scheme			<div><div></div></div>			
Tender process for Flood Relief Scheme				<div><div></div></div>		
Construction works				<div><div></div></div>	<div><div></div></div>	<div><div></div></div>

Key

JBA / JB Barry led activities

Third party activity

Ongoing / completed



BARRY
& PARTNERS
 consulting engineers



Stages of the Scheme

Stage	Statutory Processes
I	Scheme Development
	Constraints Study
	Screening for Appropriate Assessment
	Initial Consultation with Stakeholders
	Scoping for the Environmental Impact Assessment
	Screening for an Appropriate Assessment
II	Detailed Design
	Public Consultation
	Preparation of Environmental Assessment of Options Report
	Public Consultation on Preferred Scheme
	Preparation of Appropriate Assessment
	Environmental Impact Statement for the Preferred Option
III and IV	Submission of Planning Application to An Bord Pleanála
	Tender and construction
V	Handover to Client

Specific studies

- Data gathering and review
- Site walkover
- Ecological assessments
- Archaeological investigation
- Geotechnical surveys
- Flow velocity surveys
- Topographic surveys
- Hydrological assessment and hydraulic modelling
- Development of flood management options
- Cost benefit assessment
- Multi-criteria Analysis



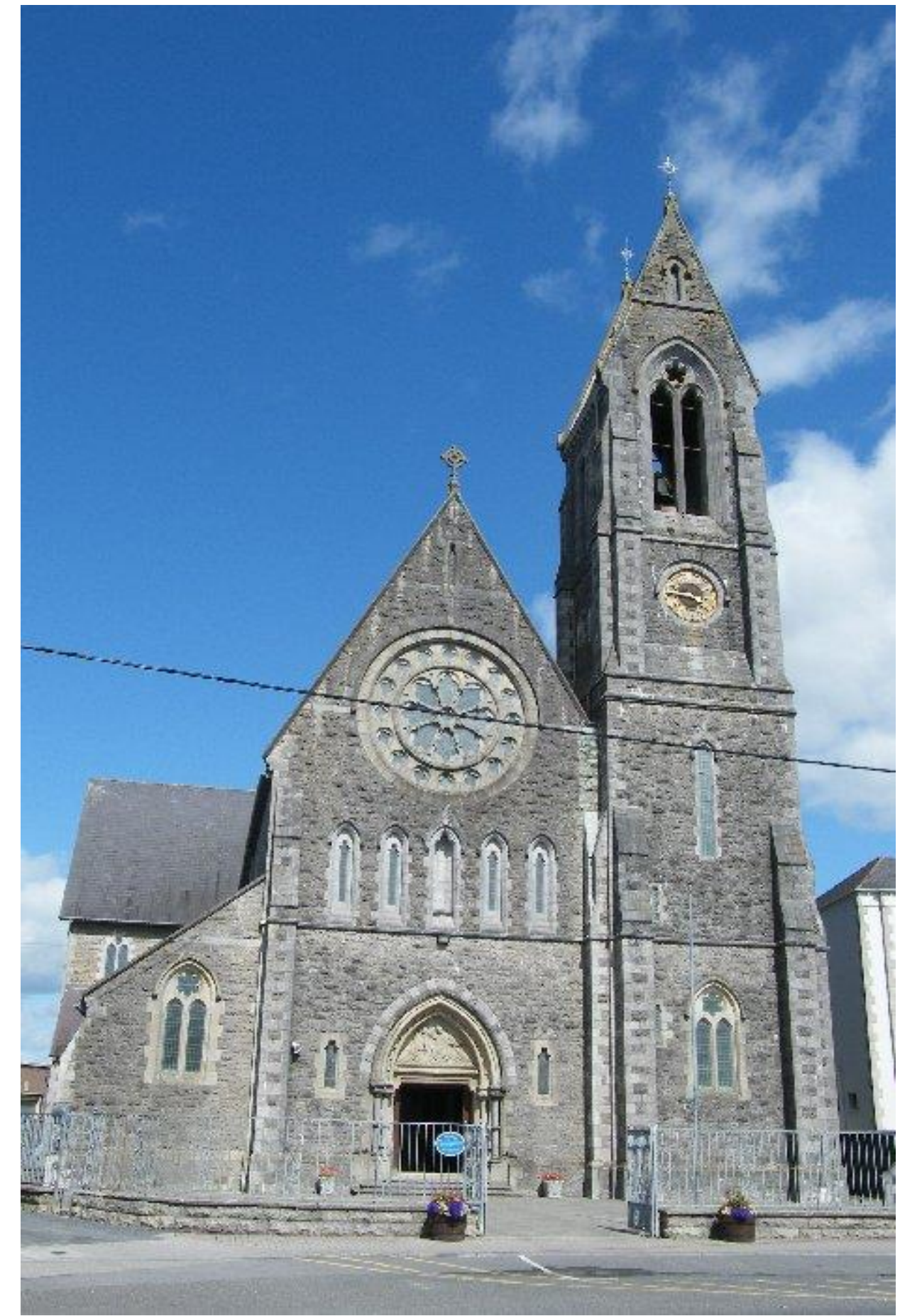


Mountmellick

FLOOD RELIEF SCHEME

Cultural Heritage and Archaeology

- Mountmellick has a range of Cultural Heritage buildings and features.
- There are 3 National Monuments and 57 National Inventory of Architectural Heritage (NIAH) sites within the Mountmellick study area.
- These monuments and sites include features such as churches, graveyards, bridges, monuments, court houses and a town hall.
- Notable amongst them are St Paul's Church of Ireland, St Joseph's Catholic Church, Mountmellick Library and the United Irishmen Memorial.
- The riverside walk and heritage trail allow exploration of the cultural and historical aspects of Mountmellick.



OPW

Oifig na
nOibreacha Poiblí
Office of Public Works



**BARRY
& PARTNERS**
consulting engineers



Mountmellick

FLOOD RELIEF SCHEME

Environment and Ecology

- The River Barrow and River Nore Special Area of Conservation (SAC) runs centrally through Mountmellick along the River Owenass.
- The SAC is considered to be important on a European as well as Irish level and are protected under the EU Habitats Directive.
- This SAC means there are specific protocols we need to follow when developing the scheme and carrying out the construction.
- The local riparian treeline and scrub habitats are comprised of trees such as willow, alder, poplar, hawthorn, sycamore and ash, with an undergrowth dominated by bramble. These habitats offers food, shelter and cover for terrestrial mammals, bats and birds, including important protected species such as otter.
- The River Owenass also supports populations of white-clawed crayfish, brook lamprey and Atlantic salmon, which would have been recently impacted by the pollution event of June 2019.
- Two stands of invasive non-native Japanese knotweed are currently present in the riverside area. However, these stands have been included within a invasive species treatment plan which started last month.



OPW

Oifig na
nOibreacha Poiblí
Office of Public Works



BARRY
& PARTNERS
consulting engineers



Mountmellick

FLOOD RELIEF SCHEME

November 2017 Flood Event

- The flooding followed a period of heavy and intense rainfall that fell in the Slieve Bloom Mountains and flowed into the Owenass and Pound and their tributaries.
- The rivers overflowed their banks onto the flat floodplains in the town causing damage to a reported 89 properties.
- The flood was the largest event on record.
- JBA are currently developing a computer flood model of the river network to calculate the severity of that flood, so that the flood relief scheme is designed to protect against a similarly severe event in the future.
- We will be looking at future changes in land use and climate and in particular, changes to the frequency and severity of rainfall events, and taking these into account in the scheme design.



OPW

Oifig na
nOibreacha Poiblí
Office of Public Works



**BARRY
& PARTNERS**
consulting engineers

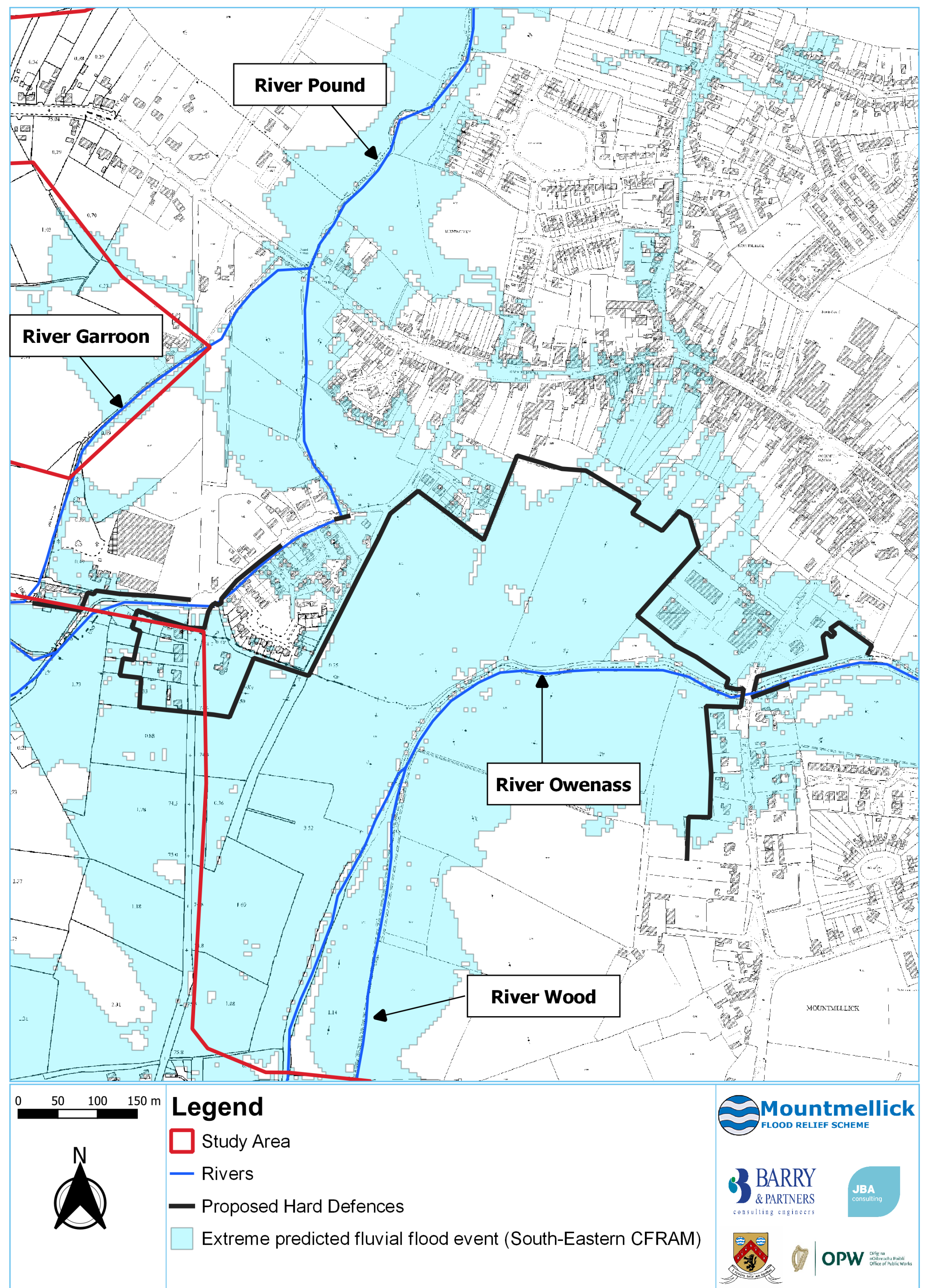


Mountmellick

FLOOD RELIEF SCHEME

South-Eastern CFRAM

- The South Eastern Catchment Flood Risk Assessment and Management (CFRAM) study was commissioned by OPW to meet the requirements of the EU Floods Directive, and to deliver on core components of the 2004 National Flood Policy.
- One of the aims of the study was to identify options for managing the flood risks for localised high-risk areas, including Mountmellick.



- A key output was the UoM14 Preliminary Options Report which highlighted potential flood management options, the most feasible of which was the hard defences option (e.g. flood walls, embankments and road raising), as shown above.
- However, it should be noted that the hard defences proposed under the CFRAM study would not protect all the properties that flooded in 2017, so although a starting point for this scheme, will not be the preferred option.



OPW

Oifig na
nOibreacha Poiblí
Office of Public Works



**BARRY
& PARTNERS**
consulting engineers



Mountmellick

FLOOD RELIEF SCHEME

Your Opportunities to Take Part

- At this early stage of the project it is important that we have the opportunity to listen to the views of those who will be living and working near the scheme, and others who may also have an interest in the long term plans.
- Questionnaire forms are available and can be completed today, or returned at a later date.
- We will hold more consultation days as the project progresses and you will be given the chance to comment again as the scheme develops.
- The next of these will be in the spring, when we will have developed some outline options for the defence that we will be able to show you.
- You can find out more about the project in the following places:
 - www.mountmellickfrs.ie



Mountmellick Flood Relief Scheme

- Or email info@mountmellickfrs.ie



OPW

Oifig na
nOibreacha Poiblí
Office of Public Works



**BARRY
& PARTNERS**
consulting engineers

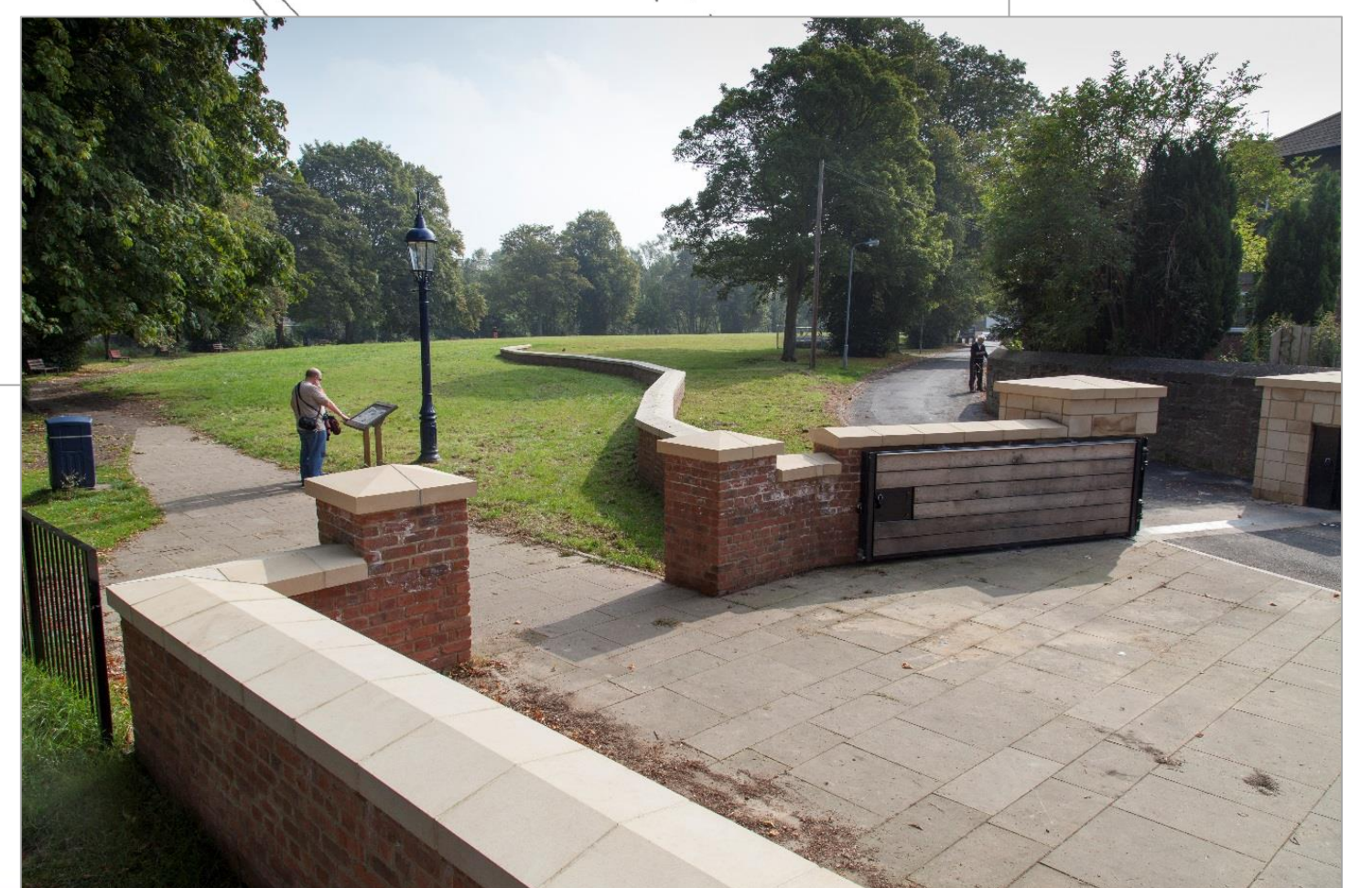


Mountmellick

FLOOD RELIEF SCHEME

Examples of Flood Walls

- A wall built along a river bank to prevent floods by giving a raised, uniform crest level.



OPW Oifig na nOibreacha Poiblí
Office of Public Works



BARRY & PARTNERS
consulting engineers

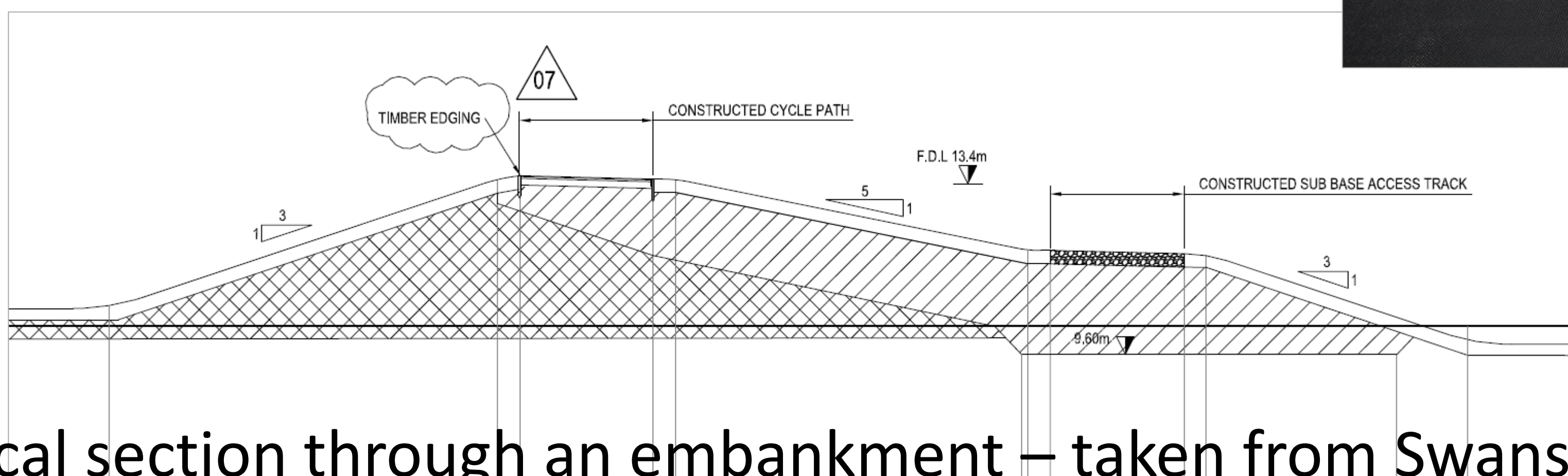
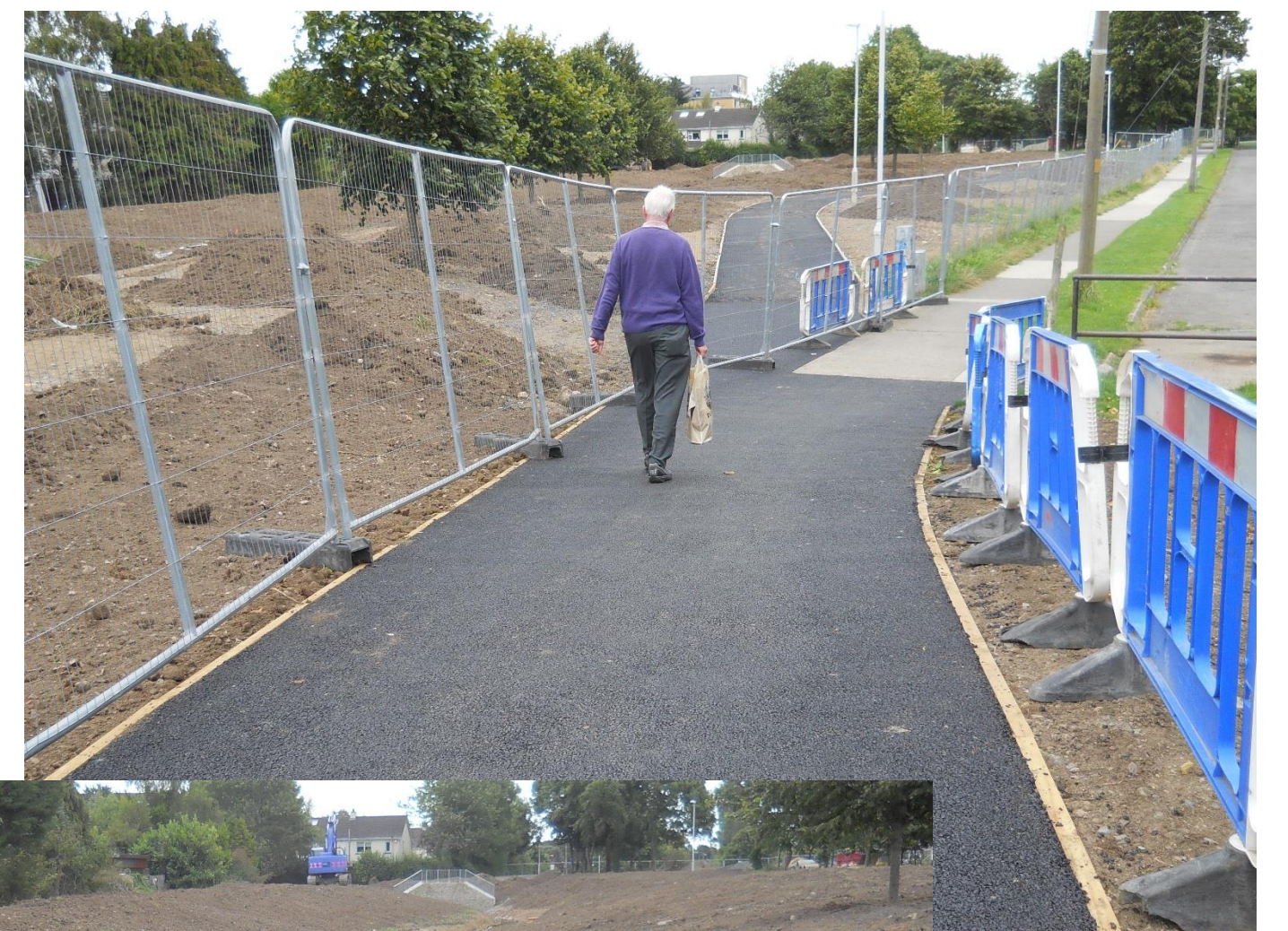


Mountmellick

FLOOD RELIEF SCHEME

Examples of Flood Embankments

- Embankments are usually made of earth and have a clay core to prevent water seeping through.
- They need more space than a flood wall
- There are better opportunities to integrate them into the surrounding landscape.



Typical section through an embankment – taken from Swansea, South Wales