

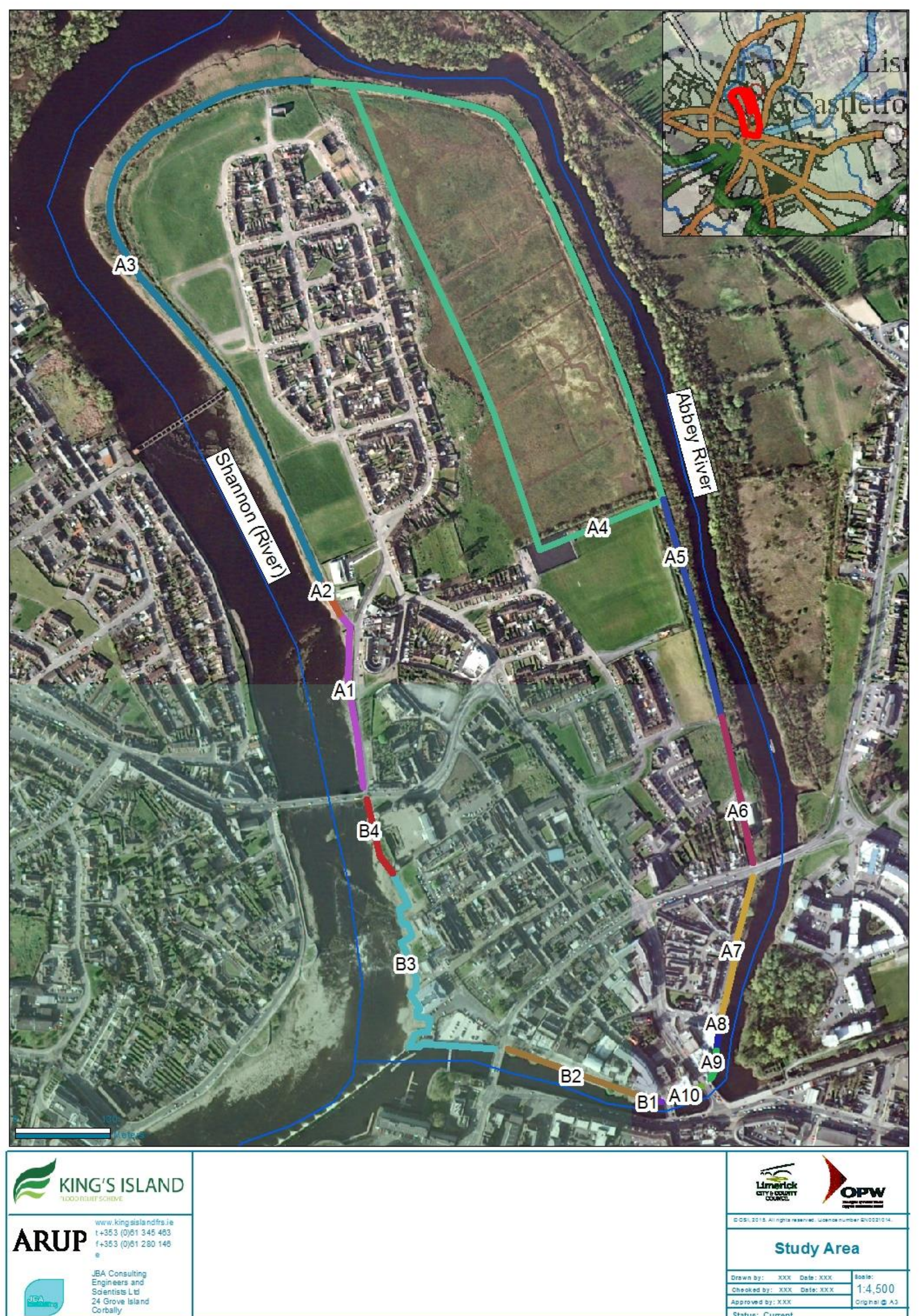


KING'S ISLAND

FLOOD RELIEF SCHEME

Introduction

- Limerick City and County Council has appointed the Arup JBA team to assess, develop and design a sustainable flood relief scheme for King's Island.
- This is our third public consultation event.
- The aim of the scheme is to reduce flood risk to the community and the Island's social amenity, environment and landscape.
- The scheme is being funded by the Office of Public Works.
- The project started in early September 2015.
- It is planned to complete work on site by late 2020.





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Emerging Preferred Option

- King's Island is at risk from a combination of both fluvial (river) and tidal flooding.
- A long list of possible flood management measures were initially considered.
- Different measures have been selected for different parts of the Island.
- The emerging preferred scheme has been identified by balancing the economic, social, cultural heritage and environmental aspects of each of the measures.
- The scheme has to be cost beneficial:
 - Cost €24.1m
 - Benefit Cost Ratio: 1.08

Area	Potential Measures
A1 - Thomond Bridge to Verdant Place	Advanced works completed
A2 - Verdant Place Steps and Crèche	Direct defences
A3 - North West Embankment	Direct defences
A4 - St Mary's Park / SAC	Direct defences - Inner alignment
A5 - Star Rovers to Athlunkard Boat Club	Direct defences
A6 - Athlunkard Boat Club	Direct defences
A7 - Sir Harry's Mall	Direct defences - raise existing wall
A8 - Absolute Hotel Boardwalk	Regrade ramps
A9 - South of Absolute Hotel Boardwalk	Direct defences
A10 - Abbey Bridge to Baals Bridge	Direct defences
B1 - George's Quay East	Direct defences - raise existing wall
B2 - George's Quay West	Direct defences – combination glass panels and walls
B3 - Potato Market and Civic Buildings	Direct defences – glass panels
B4 - King John's Castle	Do nothing



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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	Emerging Preferred Option
	Public Consultation
	Preparation of Environmental Assessment of Options Report
	Public Consultation on Preferred Scheme
	Preparation of Appropriate Assessment Environmental Impact Assessment Report for the Preferred Option
	Submission of Part 10 Planning Application to An Bord Pleanála
III and IV	Detailed design
III and IV	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



Activity	2015	2016	2017	2018	2019	2020
Assemble all the available data	Blue					
Site Investigation contracts	Blue	Blue	Blue			
Environmental Constraints Study	Blue	Blue	Blue			
Options development	Blue	Blue	Blue			
Environmental Impact Assessment			Blue	Green		
Preparation of planning submission				Green		
PART 10 Planning Application with An Bord Pleanála				Yellow		
Detailed design for Main Flood Relief Scheme				Green		
Tender process for Main Flood Relief Scheme					Green	
Construction works					Green	Green

Key Arup JBA led activities (Green) Ongoing / completed (Blue)
 Third party led activity (Yellow)



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Cultural Heritage and Archaeology

- King's Island forms part of the 'medieval core' of Limerick City and is important for residents and tourists.
- King John's Castle and St. Mary's Cathedral date from the 12th and 13th Century
- There are 28 structures on the Record of Protected Structures, 10 of which are in the National Inventory of Architectural Heritage (NIAH)
- There is a military cemetery at the southern edge of St. Mary's Park dating from the mid 19th Century
- We will be carrying out archaeological surveys as part of the flood relief scheme construction works.
- The area around Merchant's Quay is a major tourist attraction, with riverside views an important part of this.



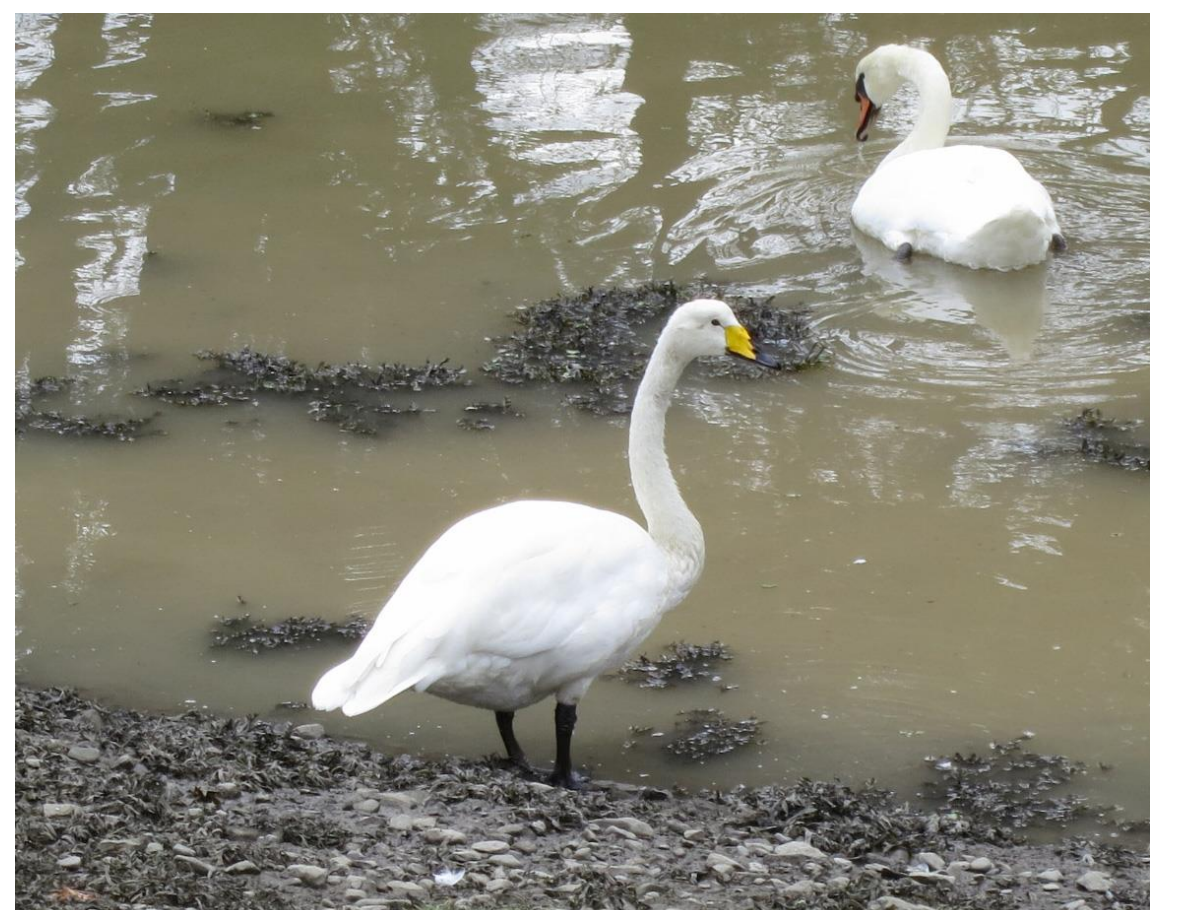


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Environment and Ecology

- The Lower River Shannon Special Area of Conservation (SAC) covers part of King's Island and the River Shannon and River Fergus Estuaries Special Protection Area (SPA) is downstream of the Island.
- These areas are considered to be important on a European as well as Irish level and are protected under the EU Habitats Directive.
- Alluvial woodland, wet grassland and tall-herb swamp are important habitats.
- The tall-herb swamp contains plants such as yellow flag iris, bulrush and sweet grasses.
- The riparian woodland, which is dominated by willow trees and plants such as willowherbs and brambles offers food, shelter and cover for mammals and birds including important protected species such as otter.
- In the winter a number of wetland birds also arrive to feed on the wet grassland and swamp, the Whooper Swan is one visitor to the island.
- The SAC and SPA means there are specific protocols we need to follow when developing the scheme and carrying out the construction





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Appropriate Assessment

- Required for important nature conservation sites including Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) that form the Natura 2000 Network

Stage 1 – Screening for AA

- 1. Is project connected with/needed for site management?
- 2. Will project have a significant adverse impact on a Natura 2000 site?
- Consider impacts of project alone and in-combination
- Where significant adverse impacts are identified, or are uncertain, proceed to next stage

Stage 2 – Appropriate Assessment

- In-depth evaluation of project and its potential impacts
- Devise mitigation or avoidance measures
- Can only agree to project at this stage if no significant adverse impacts can be concluded

Stage 3 – Alternative Solutions

- If significant adverse impacts cannot be avoided or mitigated, need to consider alternative ways of delivering objectives of project
- Need to look at alternatives

Stage 4 – Imperative Reasons of Overriding Public Interest (IROPI)

- Where no alternatives exist, project can only proceed and impact on Natura 2000 site where Imperative Reasons of Overriding Public Interest (IROPI) can be demonstrated (e.g. human health, public safety, economic reasons, environmental benefit)
- Compensatory measures (e.g. habitat creation) will be needed to protect site
- Very time-consuming process
- Risk of legal challenges
- European Commission must be informed
- Process is stricter where priority habitats and species are present



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Stakeholder Advisory Group (SAG)

- The emerging preferred option was presented to the Stakeholder Advisory Group (SAG), which includes councillors and residents' associations, on Friday 15th December



- Comments from the SAG:

- Outer walkway to be retained and the use of the inner embankment will be reviewed with a view to including walkway, or for flood defence only
- Confirmed access for fishing and boats is being provided
- A continuous walk (Sli Na Slainte) around the island which may need traffic management at Sir Harry's Mall
- If the pitch at Star Rover's is to be relocated, works to be timed for the off season and improvement to surface provided
- Resident and user safety around embankments and walls remains paramount, including provision of additional CCTV and lighting. Screening to be carefully planned





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Your Opportunities to Take Part

- This is your chance to influence the scheme.
- We are interested in your views on the emerging preferred option.
- Questionnaire forms are available and can be completed today or taken away to be returned by Monday 15th January 2018.
- There will be a further Public Exhibition of the final option in conjunction with lodgement for planning permission.
- There will also be an opportunity to submit observations to An Bord Pleanála once the planning application has been lodged.
- You can find out more about the project in the following places:
 - www.kingsislandfrs.ie



@kingsislandfrs



Kings Island Flood Relief Scheme



Comhairle Cathrach
& Contae **Luimnigh**
Limerick City
& County Council



ARUP

