



Further Information Response Report

King's Island Flood Relief Scheme

October 2020



Comhairle Cathrach & Contae **Luimnigh**

Limerick City & County Council



Oifig na nOibreacha Poiblí Office of Public Works

JBA Project Manager

Declan White 24 Grove Island Corbally Limerick Ireland

Revision History

Revision Ref / Date Issued	Amendments	Issued to
V1.0 28/10/2020		An Bord Pleanála

Contract

This report is on behalf of Limerick City and County Council. This report provides a response to the Further Information Request from An Bord Pleanála for the King's Island Flood Relief Scheme.

Prepared by	.Emily Rick BSc(Env) MSc
	Environmental Scientist
Reviewed by	.Bernadette O'Connell BA MSc CMLI Associate Director
	.Sheila O'Sullivan CEng MIEI
	Civil & Environmental Engineer
	.Declan White BE CEng MIEI
	Principal Engineer

Purpose

This document has been prepared as a Further Information Report for Limerick City and County Council (the Client). JBA Consulting accepts no responsibility or liability for any use that is made of this document other than by the Client for the purposes for which it was originally commissioned and prepared.

JBA Consulting has no liability regarding the use of this report except to the Client.

Copyright

© JBA Consulting Engineers and Scientists Ltd 2020

Carbon Footprint

A printed copy of the main text in this document will result in a carbon footprint of 91g if 100% post-consumer recycled paper is used and 150g if primary-source paper is used. These figures assume the report is printed in black and white on A4 paper and in duplex.

JBA is aiming to reduce its per capita carbon emissions.

Contents

1	Introduction	3
2	Comments received from An Bord Pleanála and corresponding response	4
Appen	dices	i
Α	Linear Areas	i
В	Submissions	ii
С	Letters of Consent/Agreement	xiv
D	Revised Planning Drawings	xv

JBA consulting



1 Introduction

Limerick City & County Council (LCCC) submitted a planning application to An Bord Pleanála in December of 2019 for a flood relief Scheme (FRS) for King's Island, Limerick City. An Bord Pleanála issued a Further Information (FI) request in relation to the proposed scheme.

This report along with the accompanying EIAR addendum and NIS addendum provide the response to the 11 separate points raised by An Bord Pleanála.

This report provides an outline of the response provided in light of the comments received by An Bord Pleanála. It is divided as follows:

- Section 1: Introduction
- Section 2: Comments received from An Bord Pleanála and corresponding responses
- Appendix A: Linear Areas
- Appendix B: Submissions
 - o Appendix B1: Response to Submissions Received
 - o Appendix B2: Architectural Conservation Report
- Appendix C: Letters of Consent/Agreement
- Appendix D: Revised Planning Drawings

The reader is referred to the additional corresponding reports for additional further information:

- 1. EIAR Addendum Report, King's Island Flood Relief Scheme (October, 2020)
 - Volume 1: EIAR Addendum Report
 - Appendix A Schedule of Environmental Commitments
 - Appendix B Supplemental Information to Section 4: Biodiversity
 - Appendix B1 Invasive Species Management Report
 - Appendix B2 Bryophyte Assessment Report
 - Appendix B3 Report on the Assessment of Potential *Groenlandia densa* Enhancement Sites
 - Appendix C Revised Photomontage VVM11
 - Volume 2: Appendix D Supplemental Information to Section 8: Cultural Heritage
 - Appendix D1a King's Island Flood Relief Scheme Preliminary Stratigraphic Report on Archaeological Testing (Volume 1)
 - Volume 3: Appendix D (additional)
 - Appendix D1b King's Island Flood Relief Scheme Preliminary Stratigraphic Report on Archaeological Testing (Volume 2)
 - Appendix D2 King's Island Flood Relief Scheme Underwater Archaeological Impact Assessment
 - Appendix D3 Drawings of design mitigation as a response to the results of the test excavations in Area B3

2. NIS Addendum Report, King's Island Flood Relief Scheme (October, 2020)

- o Appendix A Comments received from An Bord Pleanála
- Appendix B Conservation Objectives and Maps for Annex 1 Habitats
- Appendix C Denyer Ecology (July 2020) King's Island Quay Wall Bryophyte Assessment





2 Comments received from An Bord Pleanála and corresponding response

1. Directive 2014/52/EU

The constraints study detailed in Section 3.1 of the EIAR states that same was undertaken by reference to the EPA's Guidelines 'Advice Notes on the current practice in the preparation of Environmental Impact Statements, 2003. Following the changes provided by Directive 2014/52/EU and in advance of its transposition by the European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018, the Environmental Protection Agency published Guidelines on the Information to be contained in Environmental Impact Assessment Reports (Draft August 2017).

While still in draft the Guidelines reflect the revisions in the Directive including the changes within the environmental factors to be addressed and are used as best practice. Whilst it is noted that the Guidelines are referenced at Section 1.3.1 of the EIAR, you are requested to review the EIAR in light of the changes provided for in Directive 2014/52/EU as transposed by the European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 and reflected within the EPA's most recent guidance.

This comment is addressed in Section 2.1 of the EIAR addendum report.

2. Environmental Factors – Land

The European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 transpose the requirements of Directive 2014/52/EU into Irish planning law and by so doing amend Section 171A of the Planning and Development Act 2000, as amended. Section 171A(b)(i) requires "an examination, analysis and evaluation, carried out by the planning authority or the Board, as the case may be, in accordance with this Part and regulations made thereunder, that identifies, describes and assesses, in an appropriate manner, in the light of each individual case, the direct and indirect significant effects of the proposed development on the following:

(I) population and human health;

(II) biodiversity with particular attention to species and habitats protected under the Habitats and the Birds Directive;

(III) land, soil, water, air and climate;

(IV) material assets, cultural heritage and the landscape;

(V) the interaction between the factors mentioned in clauses (I) to (V)"

You are requested to submit a revised Environmental Impact Assessment Report which includes an additional chapter which specifically address the matter of 'land' as it is included in Clause (III) above.

The matter of 'land' has been addressed in Section 5 of the EIAR addendum report. Also refer to Appendix C of this report for all received letters of consent from landowners for the Kings Island Flood Relief Scheme.

3. Mitigation measures

The Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (Environmental Protection Agency, Draft August 2017) state at Section 3.8.4 that all commitments made within the EIAR by way of mitigation and monitoring need to be clear and specific.

It is stated: 'For ease of reference and clarity and to facilitate enforcement, all such measures contained in an EIAR can be included in a compendium of mitigation and monitoring commitments (only). This may be a separate section or Appendix to the EIAR. Such a compendium should comprise a list of relevant measures but should not elaborate on the reasoning or expected



effectiveness of those measures as the elaboration will take place within the main body of the EIAR'. You are requested to submit a revised Environmental Impact Assessment Report which includes either an additional chapter addressing this matter or provide an Appendix with the compendium of mitigation and monitoring commitments.

A Schedule of Environmental Commitments has been provided in Appendix A of the EIAR addendum report.

4. Cultural Heritage

You are referred to the comments received from the Department of Culture, Heritage and the Gaeltacht relating to underwater archaeology. You are requested to address the concerns raised and in particular the following:

(i) Underwater AIA was recommended by NMS as part of consultation process for EIAR which has not been carried out but a recommendation for same included in the EIAR. It is stated that the full nature and extent of impacts arising on intertidal zones of the Abbey River and Shannon River for storage tanks, outfalls and spud leg barges are not fully detailed but potential for underwater cultural heritage to be present in areas not previously excavated are extremely high and it is again recommended that an UAIA be carried out as soon as possible to inform final design phase of works with part of Project Archaeologist role to advise on UAIA strategy.

(ii) In relation to Flood Cell Areas A5 & A6 it is stated that these areas are of high archaeological potential with Athlunkard directly linked with the Viking origins of Limerick with potential that sites or material relating to maritime activity including Athlunkard as a longphort with potential for remains of wrecks, nausts etc. to be present and original Viking settlement could be located within footprint of proposed works with similar potential for features of the walled city and its history. Recommendations proposed relate to the strategy for archaeology testing in areas that can be tested in advance of construction works. They also request that further information is required on outfalls proposed into Abbey River in terms of potential impacts on intertidal zone/Abbey River – the nature and extent of works. You are requested to address this matter.

(iii) Reference is also made to the works within Flood Cell Areas A9, A10, B1, B2 and B3 and in particular the potential for negative impacts on underwater cultural heritage from outfall works that may run into the intertidal zone or into the river within these areas and proposed intertidal works for the storage tanks and other works in the foreshore including use of spud leg barges and outfalls including one near King John's Castle with area to be impacted in foreshore and subtidal areas in Area B3.

(iv) It is stated that the proposed excavations for support walls behind historical quays will be deep with high potential to impact previously unrecorded archaeology.

- You are therefore requested to address the concerns expressed and to provide the further information requested and to outline the strategy proposed for the UAIA including scope and extent of the proposed assessment.
- You are also requested to review and revise the 'Proposed Testing Regime' outlined in Appendix G of Volume 2 of the EIAR which currently refers only to Flood Cell B3 to reflect the matters outlined within this request.

These comments have been addressed in Section 8 of the EIAR addendum report, and additional further information provided in Appendix D of the EIAR addendum report.

Design changes have been incorporated into the project to mitigate any potential impact to historic findings of the archaeological testing. Revised project planning drawings are provided in Appendix D of this report.

5. EIAR – Policy Consideration

The policy section of the EIAR (section 2.5) does not reference the National Climate Action Plan 2019 which was published in August 2019 prior to the submission of the application. You are requested to revise this section of the EIAR to address all current policy provisions at National, Regional and Local level which relate to the proposed development.



Policy considerations for the above are provided in Section 2.2 of the EIAR addendum report.

6. Japanese Knotweed Bund and Illegal Landfill

Reference is made in Chapter 10 (Soils and Geology) to excavation within Flood Cell A4 of contaminated soils on the site of the illegal landfill and to the excavation and movement of part of the Japanese Knotweed bund.

(i) In relation to the Japanese knotweed bund, it is noted that the development description provided in the planning report refers to replacing the excavated material on top of the existing bund (not within the SAC) and reprofiling same. However, section 2.4.7 of the NIS refers to the north-western section of the bund being relocated to the south-east of the bund to allow space for embankment construction. Furthermore, Section 11.4.2 of the EIAR relates to the potential construction phase Noise and Vibration Impacts and refers in the description of Area A4 to the 'possible retaining wall construction at bund encapsulating Japanese Knotweed'. Please clarify and provide details of the proposed works including plans, elevations and sections of same

(ii) Please submit the Invasive Species Management Plan referenced in Section 8.2.2 of the EIAR referenced in footnote 45 as an unpublished report prepared by JBA in 2019.

(iii) No detail is provided as to the removal of contaminated soils on the site of the illegal landfill. You are therefore requested to provide more detail on the current proposals for or remediation already carried out of same.

(i) Clarifications about the proposed works at the Japanese Knotweed Bund are provided in Section 3.1 of the EIAR addendum report.

(ii) The Invasive Species Management Plan has been included in Appendix B1 of the EIAR addendum report.

(iii) Details on the removal of contaminated soils from the illegal landfill site are provided in Section 5.1 of the EIAR addendum report.

7. Natura Impact Statement

(a) Screening out of Qualifying Interests in Lower River Shannon SAC

The NIS screens out the following qualifying interests:

- Sandbanks which are slightly covered by sea water all the time [1110]
- Coastal lagoons [1150]
- Large shallow inlets and bays [1160]
- Reefs [1170]
- Perennial vegetation of stony banks [1220]
- Vegetated sea cliffs of the Atlantic and Baltic coasts [1230]
- Salicornia and other annuals colonising mud and sand [1310]
- Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330]
- Mediterranean salt meadows (Juncetalia maritimi) [1410]
- Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260]
- Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae) [6410]
- Margaritifera margaritifera (Freshwater Pearl Mussel) [1029]
- Tursiops truncatus (Common Bottlenose Dolphin) [1349]

It states that such screening out is based on the ecological surveys and data sources referenced however no detail of same is provided and the ecology baseline included in Chapter 3 of the NIS



does not reference any of the aforementioned qualifying interests. Therefore you are requested to provide a detailed rationale for screening out the aforementioned qualifying interests. You are advised that particular attention should be given to 'Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260]'.

This information can be submitted by way of either a revised NIS or an addendum to the current NIS

(b) In-combination Effects

Further information is required regarding the potential in-combination effects with other plans and projects to clearly demonstrate no risk of adverse effects on the integrity of any European site. The reliance on the absence of in-combination effects on the basis that such effects would have been considered during the environmental and planning process of an extant development. Where such cumulative effects are discounted, no evidence has been presented as to whether the other plans or projects considered the proposed development in their assessment of in-combination effects. Furthermore, statements that it is not possible to state in known detail whether a planned development will present cumulative impacts in combination with the proposed development is not considered satisfactory.

You are advised that it is the proposed development that needs to address the in-combination effects with the other plans or projects.

You are therefore requested to provide a comprehensive consideration of in-combination effects with other plans and projects as is required by Article 6(3) of the Habitats Directive.

You are also advised that there are numerous references within Chapter 6 of the NIS to "no detailed assessment of likely cumulative impacts can be assessed as part of the EIAR for this project". Furthermore, the description of the Limerick Distributor Road refers to Phase 1 being 450m northwest of Kings Island and elsewhere states that Phase 1 is not located near the River Shannon which requires clarification.

This information can be submitted by way of either a revised NIS or an addendum to the current NIS.

(c) Upgrading of existing pathway

Section 7.2.1.1 of the NIS outlines potential sources of impact via surface water pathways. One such potential source is stated to be the laying of the macadam topped path to the north of the sheet piling (connecting the paved areas of path on the present eastern embankment with the paths on top of the new centre and western embankments) will require excavation of 50m length x 255mm depth x 2.4m width of soil prior to laying 200mm stone, with capping of Macadam.

Please clarify if the upgrading of the existing pathway to the northeast and east of the site linking into the proposed new embankment pathways comprises part of the proposed development or whether it is proposed to be undertaken as part of another phase/project.

The above issues relating to Screening out of Qualifying Interests of the Lower River Shannon SAC, In-combination Effects, and upgrading of existing pathways, have been addressed in the Addendum NIS Report.

8. Bryophyte communities

A number of submissions refer to the presence of bryophyte communities (mosses and lichens) associated with the qualifying interest 'watercourses of plain to montane levels' associated with the Lower River Shannon SAC on Quay walls within the application boundary. You are requested to respond to this matter.

Information on the presence of bryophyte communities has been included in Section 4 of the EIAR addendum report, as well as addressed in the Addendum NIS Report.

9. Irish Water

The Board have received a submission from Irish Water and you are requested to address the matters raised as follows:



- Surface water drainage proposals include surface water connections and overflows to the Irish Water public foul network. It is Irish Water's policy not to accept surface water or storm water run-off into its network and current proposals are unacceptable to Irish Water. The applicant is required to engage with Irish Water in respect of alternative proposals.
- Irish Water record indicate the presence of water/waste infrastructure which may be impacted by the proposed development with further information required as follows:
- Applicant shall submit a division enquiry to IW as a significant number of water mains and foul sewers will be impacts by the proposed works and all necessary measures to protect and maintain access to IW infrastructure should be undertaken.
- Applicant shall submit a pre-connection enquiry to IW to assess feasibility in respect of water and/or waste-water connections for Athlunkard Boat Club.

The above concerns have been addressed in Appendix B1 of this report.

Please refer to Appendix C for further letters received from Irish Water, providing satisfaction that the requirements as outlined have been met, and Appendix D for the proposed revised project planning drawings.

10. Curraghgour Boat Club

It is proposed within Flood Cell B3 to construct an automatic flood gate at the entrance to Curraghgour Boat Club between the quay wall and the Potato Market boundary wall. You are requested to respond to the concerns expressed in the submission received from the Curraghgour Boat Club in respect of the proposed works.

The above concerns have been addressed in Appendix B1 of this report.

11. Noise and Vibration

Reference is made at Section 11.4.2 of the EIAR to a boardwalk over the SAC within Area A5 – Star Rovers to Athlunkard Boat Club – please clarify what is meant by boardwalk and if it is intended to provide same please provide comprehensive details of the proposal.

The reference to a boardwalk was made in error. The project description for this area is clarified in Section 3.2 of the EIAR addendum report.

The assessment under Noise and Vibration for Area A5 is amended in Section 6 of the EIAR addendum report.

12. Linear Areas

Please provide the linear area of each flood cell.

The length and area of each flood cell is provided in Appendix A of this report.

13. Submissions and Observations

Please respond to the submissions and observations received by the Board in respect of this application.

The submissions and observations received by the Board are addressed in Appendix B1 of this report.

An additional report regarding Architectural Conservation in response to The Department of Culture, Heritage and the Gaeltacht submission dated 14 February 2020 is also provided in Appendix B2.



Appendices

A Linear Areas

During construction, the total area of the proposed works, i.e. the area within the red line boundary in planning drawing no. KIFRS-A-001, totals $197,010m^2$. The aboveground footprint of the proposed development when operational is $50,196 m^2$ in total, and is further detailed in Table 3-1 below.

Table 0-1. Size and description of each flood cell

Flood cell		Chainage		Length	Area	Type of
		Start	End	(m)	(m²)	structure
A1	Thomond Bridge and Verdant Place	0+00	0+260	260	169	wall
A2	Verdant Place Steps and Crèche	0+260	0+365	105	68	wall
A3	North West Embankments	0+365	1+250	885	20948	embankment
A4	North East Embankment	1+250	1+920	670	21083	embankment
A5	Star Rovers to Athlunkard Boat Club	1+920	2+500	580	4494	embankment
A6	Athlunkard Boat Club	2+500	2+655	155	2421	wall + embankment
A7	Sir Harry's Mall	2+670	2+880	210	153	wall
A8	Absolute Boardwalk	2+880	2+910	30	395	ramp
A9	South of Boardwalk to Abbey Bridge	2+910	2+960	50	33	wall
A10	Abbey Bridge to Baal's Bridge	2+965	3+020	55	36	wall
B1		3+035	3+265	230	138	wall
B2	George's Quay					
B3	Potato Market and Civic Buildings	3+275	3+705	430	258	wall
B4	King John's Castle	-	-	-	-	-
Scheme total				3,660	50,196	



B Submissions

- B.1 Response to submissions
- **B.2** Architectural Conservation Report



B1 Response to submissions

Submission received from	Key Issues Raised	Response
Department of Culture, Heritage and the Gaeltacht 14 February 2020	 The proposed development will impact the habitat of the protected plant species - opposite-leaved pondweed. While the EIAR concludes that there would be no significant effects on the overall population of this species a detailed translocation plan will need to be finalised and agreed with the NPWS. 	In fulfilment of the mitigation requirements of NPWS regarding the translocation of Opposite-leaved pondweed on King's Island, translocation/habitat enhancement works of two other sites in or as near to King's Island as possible, were outlines in the original King's Island FRS EIAR. Since then four potential sites were surveyed by Denyer Ecology in 2020, and three sites were identified as having potential for pondweed embankments. These three sites will be discussed with NPWS and of these, two sites will be selected. A habitat conservation and management plan in relation to Opposite-leaved pondweed will then be created for these two sites and Section 21 licence application submitted for the proposed works. Refer to Section 4 and Appendix B.3 of the EIAR Addendum Report for further detail on the surveys undertaken in 2020.
Department of Culture, Heritage and the Gaeltacht 14 February 2020	 A project Archaeologist should be engaged to manage the archaeological mitigation of the Kings Island Flood Relief Programme of Works. Archaeological testing programme should be undertaken by suitably qualified and experienced archaeological contracts. Monitoring strategy should be included with the licence application method statement and updated as contracts are engaged on site. All archaeological testing and monitoring shall be licensed by the Department of Culture, Heritage and Gaeltacht and a detailed method statement shall accompany the licence application. An underwater Archaeological Impact Assessment should be undertaken. There is an impact to historic quay walls and quays and therefore a suitably qualified and experienced 	 Ms Sarah McCutcheon, Local Authority Archaeologist, has been appointed as Project Archaeologist for the duration of the project Refer to Section 7 and Appendix C1 of the EIAR addendum report for details of the archaeological testing and monitoring undertaken in 2020 for the King's Island Flood Relief Scheme. Refer to Section 7 and Appendix C2 of the EIAR addendum report for details of the Underwater Archaeological Impact Assessment completed in 2020 for the King's Island Flood Relief Scheme. Refer to Appendix B2 of this report for An Architectural Conservation Report undertaken for the King's Island Flood Relief Scheme by Tom Cassidy the Architectural Conservation Officer for Limerick City and County Council.

ARUP JBA consulting

JBA	
consulting	

Submission received from	Key Issues Raised	Response
	 conservation architect should be engaged to submit a strategy for the architectural conservation, recording and protection of any of these historic structures. There is a need for an archaeological strategy in place to address any potential discoveries in order to fully mitigate same and prevent undue delays to the flood relief works. Suitable on-site temporary storage should be in place in advance of all archaeological excavation works to ensure any material recovered can be placed in suitable tanks or holding facilities. 	
Limerick Market Trustees 14 February 2020	Indicating consent for submission	No response required.
Sarah McCutcheon, Archaeologist, Limerick City and County Council 12 February 2020	 A description of the completed and proposed archaeological assessment works is provided including details on the following: A full archaeological desktop assessment was undertaken for the EIAR; Test trenching strategy has been devised and will commence once Ministerial Consent is granted; Consultation will be sought with DCHG; The National Policy on Town Defences (2008) will be adhered to where the historic Limerick City Walls are encountered; Archaeological monitoring will be undertaken during the construction phase during topsoil stripping and the entire construction phase. 	• No response required.
Curraghgour Boat Club, Merchants	The club noted in its submission that it is objecting to the proposals based on its understanding of the	1. Access will be maintained to the club except in the event of a flood automatic flood gate and demountable barrier would be erected blocking access. This would ensure access would not be achieved should the area flood.





Submission received from	Key Issues Raised	Response
Quay, Limerick 04 February 2020	following:1. The erection of a barrier to the club as it removes the sole access to the club.	Unfortunately, it is not appropriate to install the flood defence system within the Boat Club's property around the slipway (defend the entire property from flooding also) as:
		 Access is required for LCCC to the automatic flood gate for maintenance and/or to erect the demountable barrier and therefore required to be constructed on LCCC or public property where possible; Such a proposal would result in restricted access to the river within the Boat Club's property.
		Similarly unfortunately, it is not appropriate to install the flood defence barrier further away from the Boat Club's property (at the northern end of the proposed 'raised table') as:
		 This would require the construction of the flood defence wall along the full length of the raised table within the property of the Potato Market immediately adjacent to the existing historic wall and railing. The proposed wall is proposed to be higher than the historic wall. Therefore to maintain the architectural heritage of the protected structure it is preferable to minimise the length of flood wall within the property and immediately adjacent to the Potato Market historic wall and railings. The preferred location of the automatic flood gate and demountable barrier are as shown, which is around the corner from the parking at the side of the courthouse. The flood barrier is positioned in a location with fewer vehicular movements. The ramp, automatic flood gate and demountable barrier are located on public property and outside the ownership of the Curraghgour Boat Club property.
	 The position of the proposed ramp which it believes is too close to the existing boat club gate. They indicate their belief that the ramp does not comply with regulations. 	 2. The design in the area has been considered in detail in this area. A 'raised table' is proposed for aesthetic purposes rather than a 'ramp' and is located where it will not interfere with the operations of the gate. The raised table will be designed in accordance with DTTAS Design Manual for Urban Roads and Streets (DMURS), taking into account the following specific guidance: Section 4.4.6 Alignment and Curvature: In urban areas, it is likely that the comfort of vulnerable road users will be the determining factor for desirable maximum longitudinal gradients on streets.





Submission received from	Key Issues Raised	Response
	 The proposed automatic barrier which they note would not be used and tested adequately to prove its reliability over a long period. 	 Part M of the building regulations advises that access routes with a gradient of 1:20 or less are preferred. Therefore a maximum gradient of 5% (1:20) is desirable on streets where pedestrians are active. In hilly terrain, steeper gradients may be required but regard must be had to the maximum gradient that most wheelchair users can negotiate of 8.3% (1:12), although this should be limited to shorter distances. Section 4.4.7 Horizontal and Vertical Deflections: Raised tables, or platforms, may be placed strategically throughout a network to promote lower design speeds, slow turning vehicles at junctions and enable pedestrians to cross the street at grade. An entry slop of 1:20 will allow most vehicles to cross at moderate speeds. An entry slop of 1:15 is more appropriate for lower speeds. The height of a raised table should generally correspond with that of the adjoining kerb. Although previously proposed as a 1:6 gradient ramp at either end, upon review and to ensure adherence with standards and guidance, we propose to modify this to 1:12 to ensure wheelchair accessibility. We propose to maintain the previous proposal for providing a raised table of 250mm in height, as the raised table is not to promote lower design speeds or enable pedestrians to cross the street at grade. It is to maintain suitable flood defence levels. Therefore, we have included for a height greater than the standard kerb (125mm). The footpath will be raised to the same height as the raised table. Refer to revised planning drawings KIFRS-C-103 PL2, KIFRS-C-118 PL2, KIFRS-A-011 PL3 for details. Parking spaces will be marked out on the raised table but clearly set back from the ramp section, where the automatic barrier is proposed to raise from, to mitigate any parking of vehicles on this area. A warning system will be installed along with the automatic barrier. All automatic barriers would be tested 2-3 times each year and a manual failsafe/safeguard for physical deployment included in the design. A secon





Submission received from	Ke	y Issues Raised	Response
	4.	Ladder access to the club while the barrier is erected.	4. The ladder detail has been modified upon review of the design. A ladder will not be installed, however it is proposed to install metal rungs on the wall to be used in the case of a flood event where emergency egress may be required. A ladder or metal rungs are not provided on the dry side of the wall to mitigate people gaining access during a flood event.
	5.	The proposed wall on the quayside as it would remove access to the harbour for boats.	5. The wall at this location is required as part of the flood defence boundary. The design has been completed to ensure the wall will not extend into the boat club property boundary but will be located on local authority property external to the boat club property. Therefore, while it does mitigate access from the public property it has been located to ensure it does not impact access to the river for within the boat club property. The existing railing will also be retained immediately adjacent to the boat club's property for approximately 4.0m.
	6.	The outflow to the harbour/beach as they note that waste would accumulate in the areas.	6. Drainage designed and constructed as part of this project will ensure that the foul sewer and storm water will be kept separated and any outflows will be for storm water only; therefore, mitigating waste accumulating in any areas. However, it is proposed to move the outfall from this proposed location to ensure it is not a potential hazard to boats moored in this area. Refer to revised planning drawing KIFRS-C-210 PL6 for details.
	7.	That the bollard for mooring boats, which they quote as being a protected structure, is not noted as being protected on the drawings.	7. From a review of National Monuments Service Record of Monuments and Places online register and the Limerick City Development Plan it is concluded that the bollard in question is not a recorded monument or a protected structure. It is recognised that the mooring post is of importance at this location and therefore, while the mooring post will be removed in advance of works in the area to enable access for construction, it will be reinstated on completion. Additional mooring rings will also be installed along the quay wall for mooring of boats at this location as part of the scheme works.
St. Mary's Area Integrated	•	Support for application	No response required



JBA consulting

Submission received from	Key Issues Raised	Response
Development CLG 10 February 2020		
Maria Donoghue, Office of Regeneration, LCCC 13 February 2020	 Support for application in meeting Objective 2.6.4.13 of the Limerick Regeneration Framework Implementation Plan 2014 	No response required
Irish Water 14 February 2020	 The Board have received a submission from Irish Water and you are requested to address the matters raised as follows: Surface water drainage proposals include surface water connections and overflows to the Irish Water public foul network. It is Irish Water's policy not to accept surface water or storm water run-off into its network and current proposals are unacceptable to Irish Water. The applicant is required to engage with Irish Water in respect of alternative proposals. Irish Water records indicate the presence of water/waste infrastructure which may be impacted by the proposed development with further information required as follows: Applicant shall submit a division enquiry to IW as a significant number of water mains and foul sewers will be impacts by the proposed works and all necessary measures to protect and maintain access to IW infrastructure should be undertaken. Applicant shall submit a preconnection enquiry to IW to	 Irish Water observations have been addressed and a covering letter supporting same forms part of this further information response as included in Appendix C of this report. A summary of the 3nr observations is as follows: Connection and Overflows to Irish Water Foul Network As part of an overflow arrangement for storm flow when outfalls are surcharged, the drainage now proposes separation of storm flows on Creagh Lane and the lower section of Mary Street whereby storm runoff will discharge to the Abbey River in lieu of the Irish Water combined sewer during normal tidal conditions. Diversion Agreement (enquiry reference DIV20078) A confirmation of feasibility has been received from Irish Water in relation to the diversion of an existing foul sewer which accommodated the decommissioning of 3nr foul pumping stations in Merchants Quay Pre-Connection Enquiry for Athlunkard Boat Club We have received a confirmation of feasibility letter from Irish Water in relation to proposals to connect foul from Athlunkard Boat Club into the Irish Water foul network as included in Appendix C of this report.





Submission received from	Key Issues Raised	Response
	assess feasibility in respect of water and/or waste-water connections for Athlunkard Boat Club.	
Health Service Executive (HSE) February 2020	 Recommendation that 24 hours notice given in advance of critical phases of the works which may impact sensitive receptors. Recommendation that the pedestrian areas be accessible to wheelchairs, pushchairs, and mobility vehicles Consideration should be given to the provision of seating at the glass viewing areas for the benefit of physical and mental health Recommendation that the quality of drinking water from the Limerick City Public Water Supply serving King's Island is monitored during the construction phase, to be agreed with Irish Water, LCCC, and HSE EHS should be notified of results Recommendation that dust mitigation measures should be put in place to prevent contamination of food to food premises in proximity to the works Recommendation that the contractor should liaise with the organisers of any festivals which are due to be held during the construction nours should be Monday to Friday 08:00-20:00, Saturday 08:00-14:00, and Sunday and Bank Holidays – no noisy work permitted Recommendation to include a Pest Control Plan in the final CEMP 	 Pedestrian areas have been designed to be accessible to wheelchairs, pushchairs, and mobility vehicles. Break-out areas along the footpaths have been incorporated into the design for future installation of outdoor furniture, however this is not included as part of the flood relief scheme. The mitigation and monitoring recommendations have been included in the Schedule of Environmental Commitments in the Addendum to the EIAR as requested.
Inland Fisheries Ireland	The following recommendations are made:Quay wall vegetation below spring tide level should	 Quay wall vegetation below spring high tide level was not specifically surveyed. However, due to the influence of the Shannon Estuary, the





Submission received from	Key Issues Raised	Response
14 February 2020	 be left in-situ as smelt spawning substrate The EOP/CEMP and method statements for works in or near water should be agreed in advance with IFI The working platform of the jack-up rig should be sealed and have edge protection to ensure there is no loss of material to the river Timing for instream works is strictly July to September in any one year A number of mitigation measures during the construction period are recommended 	 distribution of vegetation is likely to be represented by a zonation pattern typical of intertidal (lichen and marine algae) and subtidal flora (marine algae). This community is thus highly unlikely to represent the Annexed Habitat 'subtype Bryophyte-rich streams and rivers'. Dr Joanne Denyer has been retained to complete these surveys and has reported on them in the Addendum to the NIS. Arup noted that the period of work where jack-up rigs are allowed is reasonably restrictive and that discussions should be held with IFI at a later stage to see if this window could be lengthened if possible The recommended mitigation measures are provided in the Schedule of Environmental Commitments in the Addendum to the EIAR as requested.
Hayes Solicitors/ Environmental Trust Ireland (Duplicate Submission) 13 February 2020	1. The submission states that the planning application was premature as the Archaeological Trial Trenching proposed should have been completed in advance of the submission.	1. A significant programme of archaeological test trenching was conducted from May to August 2020. The findings of the test trenching have resulted in minor alteration to some areas of the design underground but will not have a visual impact on the proposed scheme. Refer to the EIAR Addendum Report for further detail.
Hayes Solicitors/ Environmental Trust Ireland (Duplicate Submission) 13 February 2020 (cont')	2. Cumulative impacts of the Water Environment (Abstractions) Bill, which proposes construction of a pipeline for water abstraction from the River Shannon to supply Dublin's water supply, has not been considered in the submission. It is possible that this will reduce the threat of flooding in the catchment.	2. The content of the submission would appear to suggest a lack of understanding of the flood mechanism/regime for the subject area as the scheme is tidally dominated, and the scheme is designed for the 1 in 200 year coastal flood event. As such, flows in the River Shannon are not a major influence on the flooding extents for which this scheme is designed.
Hayes Solicitors/ Environmental Trust Ireland (Duplicate Submission) 13 February 2020 (cont')	3. The proposed embankments will result in a loss of marsh habitat within the SAC.	3. Marsh habitat both within and outside the River Shannon SAC will be disturbed to facilitate construction of the embankment. This habitat is not a qualifying interest of the SAC but it supports the Estuaries habitat within the Shannon River SAC. The cutting of sheet piling, if carried out from the marsh side of the piling, could also impact the marsh. There will be some loss of marsh habitat to the embankment (7,082 m ² or 5.85%) as agreed in consultation with NPWS, where this marsh area is above the flood level. This area of marsh is





Submission received from	Key Issues Raised	Response	
		relatively higher than the remaining lands, 2.4mOD against 1.8-2mOD and will not impact on the functioning of the marsh environment. The design of the proposed embankment will not impinge on the functioning of the floodplain but mitigation will be put in place during construction to prevent works extending into areas outside the embankment boundary.	
Hayes Solicitors/ Environmental Trust Ireland (Duplicate Submission) 13 February 2020 (cont')	4. There has been no assessment of the impact of poor drainage and groundwater flooding due to river flooding on the marsh vegetation.	4. There will be no change to the manner of flooding of the marsh, as existing openings will remain extant. This means that whether there is poor drainage or groundwater backup, there will be no significant change to marsh vegetation distribution, as the characteristics of the hydrological system will remain unchanged.	
Hayes Solicitors/ Environmental Trust Ireland (Duplicate Submission) 13 February 2020 (cont')	5. The quay walls which will be affected by the proposed development contain bryophyte communities which are qualifying interests of the Lower River Shannon SAC.	5. Additional surveys have been carried out by a bryophyte expert to characterise these communities where they exist on the quay walls. This work has been summarised in the Addendum to the NIS. The requirement to work on the walls is to protect them from further degradation. If works do not take place the walls will in time eventually succumb to erosion with subsequent loss of that tidal plant assemblage.	
Hayes Solicitors/ Environmental Trust Ireland (Duplicate Submission) 13 February 2020 (cont')	6. Species including European eel, salmon, sea and river lamprey, and smelt, will be adversely impacted by the use of electro-fishing to collect larvae during the construction phase, and during the dredging of the river bank.	 6. A detailed fisheries assessment was carried out within the NIS and EIA reports, and mitigation measures are proposed to protect sensitive fish species (e.g. European Eel, Salmon and lamprey) and water quality. The submission is incorrect in determining that dredging in the rivers will take place. There will be no dredging of the riverbed during the construction phase of the project and disturbance to the riverbed will be limited to the temporary placement of jack-up rig legs on top of substrate, with a total of 45 m² of substrate being affected by the footprint of the legs. Lamprey ammocoetes (larvae) were assessed as the qualifying interests (QI) most sensitive to this disturbance and this analysis was supported by NPWS and IFI. Prior to the 	





Submission received from	Key Issues Raised	Response	
		installation of jack-up rigs, lamprey larvae will be collected via electro-fishing, a methodology licenced and approved by Inland Fisheries Ireland and NPWS. Larvae will be translocated to suitable substrate within an approved timeline. The impacts on water quality and habitat quality have been addressed in the mitigation outlined in the EIA and NIS, see Section 7.5.2.2 Water quality controls (JBA, 2019).	
Hayes Solicitors/ Environmental Trust Ireland (Duplicate Submission) 13 February 2020 (cont')	7. A description of a range of the reasonable alternatives has not been provided in the EIAR.	7. Chapter 3 of the EIAR contains a description of the Alternatives Considered including a description of the methodology undertaken at the Options Assessment Phase. This phase assessed all possible options for the design of the scheme including structural and non-structural measures in light of the applicability to the subject area, as well as economic, environmental, social, and cultural constraints. This assessment is summarised in the EIAR and provided in detail in the Options Report, which is available to download on the King's Island FRS website (http://www.kingsislandfrs.ie/)	
Hayes Solicitors/ Environmental Trust Ireland (Duplicate Submission) 13 February 2020 (cont')	8. The impact of the proposed development on climate change and biodiversity loss has not been properly assessed.	7. The impact of the proposed development on biodiversity has been given in great detail in both the EIAR under Chapter 8 – Biodiversity, and the NIS Report for the proposed development. Sections 12.13 to 12.23 of the EIAR assess the scheme in relation to climate change in terms of the contribution to greenhouse gas emissions, as well as the scheme's vulnerability and adaptability to climate change. It is predicted that the greatest contribution of GHG emissions during the construction phase will be as a result of the movement of HGVs to and from the site for delivery of fill material and removal of waste. Emission of GHG will also occur as a result of the use of diesel-fuelled generators onsite, and operation of plant during the construction phase. Mitigation measures have been included to reduce greenhouse gas emissions during the construction phase. There will be negligible GHGs from maintenance when the proposed FRS is operational. As such, any cumulative impacts of the proposed development in combination with nearby developments is negligible.	
Hayes Solicitors/	9. An Appropriate Assessment (AA) Screening Report	9. A separate AA Screening assessment document has not been carried out.	





Submission received from	Key Issues Raised	Response
Environmental Trust Ireland (Duplicate Submission) 13 February 2020 (cont')	should be completed in order to inform the screening determination of the Council as the Competent Authority.	However, sections 4 and 5 of the NIS document (pages 44-56) represent the information required to undertake the Appropriate Assessment Screening process whereby Natura 2000 sites within the zone of impact are highlighted and either screened in or out, depending on likelihood of deleterious effects on the respective Natura sites. This exercise serves to inform the competent authority who then undertake the AA screening 'proper' and decide on the necessity of carrying out a stage 2 Appropriate Assessment. In this case, and due to the proximity of the nearby SAC and SPA sites and obvious pathways for impact, it is clear that a stage 2 Appropriate Assessment is necessary.
Hayes Solicitors/ Environmental Trust Ireland (Duplicate Submission) 13 February 2020 (cont')	 There are two projects/plans that were omitted from the assessment of cumulative effects, namely: The Ardnacrusha Hydroelectric Plant Water Abstraction from the River Shannon 	 10. Arnacrusha hydro-electric power station has been in existence since 1929 and is seen as operating within the baseline conditions of the River Shannon. It is therefore not relevant to include it as a 'plan or project' that could have a cumulative impact with the proposed FRS at King's Island. The FRS is underway to protect Limerick City from the increasing level of risk from flooding over recent years. Ardnacrusha is also responding to these increasing volumes of water. Legislation for water abstraction from the River Shannon was given the go ahead on 17th December 2019. The EIA and NIS for King's Island were submitted within that same week in December and therefore due to the concurrent timelines, including it in the NIS as a cumulative impact was not possible. Irish Water has not yet prepared a planning application to An Bord Pleanála for the Water supply project, including an Environmental Impact Assessment Report and Natura Impact Statement (http://www.watersupplyproject.ie/). One would require these documents to have a basis on which to asses any potential cumulative impact with the proposed King's Island FRS. In any case the levels of the flood defences are governed by tidal considerations and not the flow. Any changes to the water abstraction would not impact on the nature of the flood defences.

PLANNING REPORT CONSERVATION OFFICE

LIMERICK CITY AND COUNTY COUNCIL

Date:	October 22, 2020		
Re:	King's Island Flood Relief Scheme		
Location:	King's Island, Limerick City Nat. Grid:		
A.C.A.:	N.A.		
Area:	LIMERICK CITY NORTH		
Site Visited:	YES - Several times over the past three years or so.		
Definition:	In considering this report and its contents, the reader is advised to bear in mind at all times that, in S. 2 of the Planning and Development Act, 2000, a Protected Structure is defined as follows:		
	times that, in S. 2 of the Planning and Development Act, 2000, a Protected Structure is defined as follows:		
	times that, in S. 2 of the Planning and Development Act, 2000, a Protected Structure is defined as follows: A "structure" means any building, structure, excavation, or other thing constructed or made on, in or under any land, or any part of a structure so defined, and-		
	times that, in S. 2 of the Planning and Development Act, 2000, a Protected Structure is defined as follows: A "structure" means any building, structure, excavation, or other thing constructed or made on, in or under any land, or any part of a structure so defined, and- (a) where the context so admits, includes the land on, in or under where the structure is situate, and		
	 times that, in S. 2 of the Planning and Development Act, 2000, a Protected Structure is defined as follows: A "structure" means any building, structure, excavation, or other thing constructed or made on, in or under any land, or any part of a structure so defined, and- (a) where the context so admits, includes the land on, in or under where the structure is situate, and (b) in relation to a protected structure or proposed protected structure, includes- (i) the interior of the structure, (ii) the land lying within the curtilage of the structure, (iii) any other structures lying within that curtilage and their interiors, and (iv) all fixtures and features which form part of the interior or exterior of any structure or structures referred to in <i>subparagraph (i)</i> or (<i>iii</i>)". 		

I have visited the location selected for protection on numerous occasions throughout the development of the proposed scheme. As well as participating in meetings and discussions with those designing the proposed interventions, I have consulted with colleagues in local authorities where similar projects have either been completed or are also in the course of preparation.

I wish to make the following comments and observations and have examined the documentation submitted in support of the application.

1.0 Area A1 – Existing stone wall along southern end of Verdant Place

- 1.1 The existing safety railing will be removed. The existing stone coping will be lifted and retained where structurally sound. A new course of stone with lime mortar (with appropriate additives) will be added to raise the wall approximately 275mm. The stone facing will be rough-hewn, squared limestone rubble to match the existing stone finish on the dry side. The contrast of this finish with the cropped facing on the wet side will make it possible to define the new section of the wall from the original. The structurally sound sections of the existing coping will be refitted on top of the new course of stone. Where necessary new stone coping with sawn faces will be fitted. A new 330mm high stainless-steel railing, with 2 lines of stainless steel tensioned wires between coping and railing, will then be added on top to bring the final height to the required guarding height of 1.1m above ground level. The uprights of the railing will be fitted through the join of the coping as far as possible.
- 1.2 Works to the 2017 flood defence wall along Verdant Place will be limited to painting the concrete coping a darker shade of grey to make it less visually obtrusive.

2.0 Area A2 – Verdant Place Steps and Crèche

- 2.1 As with Verdant Place, the exposed concrete sections of the 2017 flood defence wall will be painted to make them less visually obtrusive. The more temporary sections of concrete barrier to the north of the 'up-and-over' steps will be replaced with concrete walling to match the southern side of the 'up-and-over' steps. The wall on either side of the 'up-and-over' steps will be painted a darker shade of grey, however the 'up-and-over' steps will be left as they are to form a contrast with the wall.
- 2.2 To the north of Verdant Place Steps, a new flood defence wall will be constructed along the path to the west of the Crèche. This will be surfaced with a stone finish to match the 2017 flood defence wall to the south of the Verdant Place Steps. The wall will be finished on top with a concrete saddleback coping similar to the 2017 coping but of a smaller scale and also painted a darker shade of grey. This new wall will extend up the new embankment to the north and will conclude when it meets a ground level of 5.3m. It will be completed with a small pier to provide definition and a clear end to the wall.

3.0 Areas A3, A4 & A5 – North of Island

3.1 Works in these areas will involve the construction of a new embankment which will be graded out where possible, mainly on the dry side, to blend it into the surrounding landscape. This will ensure that new embankment does not just stand out as a new engineered structure within the landscape. The embankment will be sown with meadow grassland to ensure it appears visually as a naturalistic element within the landscape. A new 3m footpath will be provided along the top of the embankment with a number of new connections lining it with the streets and houses in the centre of the island.

4.0 Area A6 - Athlunkard Boat Club

4.1 The existing boundary along the eastern side of the Athlunkard Boat Club comprises cast concrete, concrete blockwork and metal railing following a stepped alignment. A new 2.7m high wall with a new gateway is to be constructed along the entire length of the western boundary of Athlunkard Boat Club. This will be stone faced on the dry side with random rubble limestone laid to courses

with a mortar coping incorporating rough racking. To the south of the Club House the wall will be stone faced on the wet side in the same way as the dry side. This respects the heritage nature of the Club House building and its *Regional* rating on the *National Inventory of Architectural Heritage*. As such the new wall will provide an improved setting to the building.

- 4.2 On the wet side the section of wall to the north of the Boat Club buildings will be left as exposed concrete. This will be in keeping with the boat yard nature of this space including the concrete Boat House building. The land to the north of the Boat House will be regraded, sloping upwards to an elevation of 5.3m AOD at the new gateway on the northwest corner. A new access route will come in along the northern and eastern edge of the Boat Club grounds. The extended riverside embankment will be sown with meadow grassland to blend it into the exiting riverbank.
- 4.3 The existing unfinished extension on the western side of the Club House will be demolished as part of the works.

5.0 Area A7 – Sir Harry's Mall

5.1 The existing wall is to be raised and strengthened where required. The new section of wall will be faced with random rubble limestone to match the existing wall but the pointed cope will be replaced with a flat one to allow people to lean on it whilst taking in the view of the river. As the increased height will result in a wall in excess of 1.5m high, the footpath along the southern stretch will be raised to maintain views out to the river. In order to achieve this the overall width of the footpath will be extended to provide a minimum 1.1m wide footpath along the road edge, with two 50cm deep steps leading up to the new upper footpath, which will also be a minimum width of 1.1m. A number of break out areas will be provided along the upper footpath to allow people to gather or pass one another. Accessibility ramps will also be provided at either end of this section. The new footpath will be surfaced to match the existing with PCC setts. New stainless steel railings will be provided to the ramps and break out areas.

6.0 Area A8 – Absolute Hotel Boardwalk

6.1 The only proposed change to this section is a slight raising of the access landings at either side of the boardwalk.

7.0 Area A9 – South of Absolute Hotel Boardwalk to Abbey Bridge

7.1 The existing railing and wall in this area will be replaced by a new wall. The new flood defence wall will be a minimum of 1.2m high and a maximum of 1.4m in height. The wall will tie into the existing pillar at the end of the boardwalk. The new wall will be faced on both sides with rough-hewn limestone in a snecked pattern laid to courses with a double chamfered rectangular sawn limestone coping. This singular treatment to the river edge in this small area will provide a less cluttered, more cohesive appearance.

8.0 Area A10 – Abbey Bridge to Baal's Bridge

8.1 The existing wall in this area will be replaced with a new, wider flood defence wall that meets both the flood defence level of 5.1m AOD and the guarding height of 1.1m. At its highest point the new wall will be 1.6m above ground level next to Abbey Bridge and reducing down to 1.1m towards Baal's Bridge. The existing wall is approximately 40cm, whilst the new wall will be approx. 60cm. The relationship between the wet side of the replacement parapet wall and the quay wall will remain the same. The original quay wall capping stones are currently located below ground level and as a result the new wall foundations can be located above them, avoiding the need for any

alteration to the quay wall stones. The front face of the quay wall will be cleaned and regrouted only where necessary to ensure that the flood proof grouting to the rear of the wall does not leak out. This will only be done where necessary to retain as much of the existing wall vegetation form both an ecology point of view and to retain the aged looked of the original quay wall.

- 8.2 The eastern half of the new wall will be faced with rough-hewn limestone in a snecked pattern laid to courses with lime mortar (with appropriate additives). The coping will be a double chamfered rectangular sawn, limestone coping as per the proposals for the other side of Abbey Bridge (Area A9).
- 8.3 A new pier is proposed to define the change between the eastern and western sections of this wall. This provides a better definition to the change in character of the two wall types. This is especially so when viewed from the opposite side of the river. The pier will be a smaller version of those on the ends of the adjacent Baal's Bridge. As such it will comprise rectangular limestone blocks with a split, stugged finish and squared edges on the west side and sawn, stugged finish on the dry side. The cap stones will have a pecked finish with perpendicular chiselled edges all around.
- 8.4 The western stretch of this section of wall will be finished to resemble the existing wall but wider. Accordingly, it will be faced with rectangular and squared limestone of various sizes with a sawn and then stugged finish and lime mortar (with appropriate additives). The new wider limestone coping will resemble the existing coping in style and overall shape and will have a pecked finish.
- 8.5 Where the new wider wall meets the existing pier of Baal's Bridge, the dry side of the wall will be stepped out from the existing pier. This will provide a clear definition between the old and new sections of wall. This pier has also lost its top cap stone and part of the secondary capping stone. The lower secondary capping stone appears to be lying on the river floor below the pier. If possible, this will be recovered and replaced along with the top capping stone if it can also be located. If this is not possible new capping stones will be created and fitted. The new capping stones would have a sawn, pecked finish with perpendicular chiselled edges to match the existing but would also have the date chiselled into them so that it is clear they are replacement stones.
- 8.6 A replacement drainage outlet will be located within this section. This will be located underneath the new pier between the two wall styles to make it less visually obvious by tying it in with other features within the quay wall. The outlet will be of the inline type and recessed back from the quay wall to further minimise the visual impact. A number of existing quay wall stones will be removed to install the new outlet. Upon installation the stones will be replaced with those around the outlet itself being cut to fit before replacing. Two existing outlets in this area will be decommissioned as part of the works. These will be infilled with new square cut stones, with a pecked finish and perpendicular chiselled edges.
- 8.7 The two existing Elm trees in this area were assessed as being of poor condition in the Tree Survey and recommended for removal due to over pruning and replacement with appropriate species. As such they will be removed to facilitate works and replaced with new Sorbus aucuparia 'Fastigiata' (Fastigiate Rowan) trees. This species is smaller in size and should therefore not require the same scale of pruning to keep it to the required size.

9.0 Areas B1 & B2 – George's Quay

- 9.1 The existing wall along George's Quay will be replaced with a new slightly wider flood defence wall. The height of the wall will be raised to ensure it provides the required guarding height of 1.1m along the length. The existing wall is for the most part between 300mm and 400mm wide whilst the new wall will be approximately 550mm wide. The existing section of railing at the eastern end will also be removed as part of the works.
- 9.2 The existing pier at the edge of Baal's Bridge has damaged capping stones. The top capping stone and the eastern half of the lower secondary capping stone will be replaced as part of the works. There are also a number of the capping stones to the bridge parapet that have been lost and infilled with concrete. As part of the works these will also be replaced with appropriate limestone capping stones. The new capping stones will have a sawn, pecked finish with perpendicular chiselled edges to match the existing but will also have the date chiselled into them so that it is clear they are replacement stones.
- 9.3 The majority of this stretch of existing wall is faced with render to resemble natural stone. The new flood defence wall will therefore be faced to resemble the existing section of actual stone wall in the east of this area, adjacent to Baal's Bridge. Accordingly, it will be faced with squared, split, limestone rubble of various sizes and laid to courses with lime mortar (with appropriate additives). The new wider limestone coping will resemble the existing coping in style and overall shape and will have a pecked finish.
- 9.4 The angular wall to the wet side of the eastern steps within this area will be extended upwards until it meets the new height of the replacement flood defence wall. A glass flood defence panel will then be located across the entrance to the steps to open back up the visual relationship with the access to the river. The replacement wall will then extend from here towards the access to the pontoon. The wall will step out around the raised pavement to the access with a set of up-and-over steps provided at the western side of this area. The wall then continues to the step in of the quay wall around the western set of steps. At this location, the glass flood defence wall is used again to open up the visual relationship with the access steps to the river.
- 9.5 From the western side of access steps, the wall resumes for a short stretch until it meets the easternmost of the three existing openings in the wall. The glass flood defence panels will then replace the wall for the full length containing the existing three openings. The wall will then resume before joining in with the existing parapet wall to Matthew Bridge.
- 9.6 The relationship between the wet side of the replacement parapet wall and the quay wall will remain the same. The original quay wall capping stones are currently located below ground level and as a result the new wall foundations can be located above them, avoiding the need for any alteration to the quay wall stones. The front face of the quay wall will be cleaned and regrouted only where necessary to ensure that the flood proof grouting to the rear of the wall does not leak out. This will only be done where necessary to retain as much of the existing wall vegetation form both an ecology point of view and to retain the aged looked of the original quay wall.
- 9.7 The two easternmost existing quay wall drainage outlets within this section will be decommissioned. These will be replaced with one new outlet just to the west of them. A further new drainage outlet will be created in the quay wall in front of the Limerick School of Art and Design and to the east of the western set of steps. The outlets will be of the inline type and recessed back

from the quay wall to further minimise the visual impact. A number of existing quay wall stones will be removed to install the new outlets. Upon installation the stones will be replaced with those around the outlets themselves being cut to fit before replacing. The decommissioned outlets will be infilled with new square cut stones, with a pecked finish and perpendicular chiselled edges.

- 9.8 All the trees in this area will be retained to maintain the character of the area. Three new trees are also proposed in front of the Limerick School of Art and Design. These new trees will ensure that the treed character of the street is retained as the older trees are lost in years to come.
- 9.9 The bollards along the footpath edge will all be removed and replaced with a singular standard style of a simple stainless steel bollard. These will tie in with the stainless steel railings around the scheme and the stainless steel frames of the glass flood defence walls.

10.0 Area B3 – Potato Market and Curragower Boat Club

- 10.1 At the Bridge Street junction adjacent to the Potato Market it is proposed to raise the ground levels locally to 5.1m AOD. The existing wall along the river's edge will be repaired and repointed where necessary to ensure it provides the required flood defence capabilities. Two existing drainage outlets are to be decommissioned within this wall. The existing outlet openings within the wall will be infilled with new stones cut to fit and faced to match the existing quay wall edge.
- 10.2 The cantilever at the viewing opening is to be removed and the existing railings replaced with glass flood defence panels. This will retain the open character of the opening and views to the water.
- 10.3 A flood wall with stepped and ramped access is proposed within the Potato Market at the access to the Sylvester O'Halloran bridge. This will be offset 1.5m from the existing building edge to allow access to the building frontage. The ramps have been designed to a 1 in 16 slope with 2m wide landings every approximately 4m. The outer walls of the ramps and steps will be faced with limestone in a snecked pattern laid to courses to resemble the adjacent building and minimise the visual intrusion as far as possible. A squared limestone coping will top the walls off. The existing mesh fence opening on the western side, within the access to the bridge will be blocked in and rendered. The alignment of the ramp has been designed to ensure access to doorway in the western end of the existing building is maintained.
- 10.4 A new flood defence wall will be built adjacent to the existing boundary wall with Curragower Boat Club. The overall height of the wall will be approximately 2.8m. This overall height ensures that the top of the new wall will relate to the section of coping on the southern edge of the former gateway in the wall. When the wall meets the large pier forming the start of the boundary railings it will drop in height to the required flood defence level of 5.3m AOD. This is within 10cm of the top height of the existing wall below the railings. The new flood defence wall will extend along the inside of the Potato Market railings for approximately 5m before turning to the west and passing through the boundary wall and railings.
- 10.5 This will be done in such a way to minimise any alteration to the existing boundary wall and railings. For example the coping will be laid so that there is a join along the alignment of the railings with holes cut on the ends of the coping so that the railing is not altered in any way. The wall will be faced with rough hewn stone in a snecked pattern laid to courses with a rounded, pecked limestone cope to match the existing coping stone on the existing boundary wall.

- 10.6 Outside the gates to Curragower Boat Club an approximately 30cm high raised table will be installed along with an automatic flood barrier and back-up demountable barrier. These elements are located so as to let the Boat Club gates open outwards but so that they are as far as possible from the setting of the Courthouse. A new 1.2m high rendered wall then extends northwards along the quay wall edge finishing with a small pier where the quay wall edge turns and heads westwards. This wall will be rendered, painted and finished with a thin flat cope to tie in with the existing entrance walls to Curragower Boat Club. The wall will be set back in from the quay edge so as not to alter the existing quay capping stones.
- 10.7 Glass flood panels then extend westwards along the quay wall edge but set back once again so as not to alter the existing quay capping stones. This replaces the existing railings whilst maintaining the visual permeability of the area. A new drainage outlet is to be located within the quay wall edge along this stretch. The outlet will be of the inline type and recessed back from the quay wall to further minimise the visual impact. A number of existing quay wall stones will be removed to install the new outlet. Upon installation the stones will be replaced with those around the outlet itself being cut to fit before replacing.

11.0 B3 – Courthouse

- 11.1 The existing privacy railing around the southwestern and northwestern façades of the Courthouse will be realigned inwards. A stretch of approximately 16.6m will be retained along the northern end of the northwestern façade. As a result a triangular cantilever is proposed at the corner of the quay wall along the north western edge of the Courthouse with the quay wall to the north to retain a continuous pedestrian route.
- 11.2 The minimum distance along the remaining northwestern façade will be a minimum of 1.3m as far as the southernmost prisoners access, reducing to 1m beyond. The distance between the railing and the building along the southwestern façade will be reduced to a minimum of 1m. Privacy film will be applied to the lower half of those Courthouse windows that do not already have them.
- 11.3 The existing cantilever boardwalk will be removed and replaced with a new narrower 50cm cantilever. This will help to open up visibility of the historic quay wall whilst providing a minimum path width of 2.4m to the realigned privacy railing. The proposed glass panels will be aligned along the outer edge of the new cantilever. This will provide the required flood defence level, the safety guarding height and maintain open views to the water as well as open views to the Courthouse from the opposite side of the river.

12.0 B3 – Civic Buildings

- 12.1 The glass flood defence panels extend northwards towards the steps adjacent to the fountain. Once again, the glass flood defence panels will extend across the opening to the steps to retain the visual permeability with them. The glass flood panels then switch to a flood defence wall which extends northwards until it meets the quay wall edge along the southern side of the northern set of steps. An alignment for this wall has been chosen here that is informed by the constraints of the underground archaeology.
- 12.2 The existing section of wall returning to the top of the steps will be replaced with a new wider flood defence wall. The wet side of the new wall will be aligned with the existing quay wall edge as with the existing wall. The wall will be faced on both sides with rough-hewn, squared, limestone rubble and lime mortar (with appropriate additives) with a rounded pecked, limestone coping to resemble

the existing coping, but wider to fit the new wall. The section of wall across the top of the steps will be removed and replaced with a glass flood defence wall with a short new return wall framing the steps. From here glass flood defence panels extend along the remaining length before tying into the retaining wall to the south of King John's Castle, but not forming part of the Castle.

- 12.3 Along the southern and western sides of the area of land now located on the wet side of the flood defences, a new stainless steel railing will be located similar to that along the Quays further down the River. The remaining existing section of wall along the northern edge of this area will be raised in height to form the 1.1m guarding height. This will be achieved using the stone form the existing eastern end of this wall, that has been replaced with the new flood defence wall, and fresh lime mortar (with appropriate additives).
- 12.4 The three existing drainage outlets in this area are to be retained but upsized. In order to do this a number of existing quay wall stones will be removed to install the new larger outlets. Upon installation the stones will be replaced with those around the outlets themselves being cut to fit the larger opening before replacing.
- 12.5 The existing lights in this area will be retained with the relocation of two columns to fit the new flood defence layout. The columns supporting the lights are from a former mill in the area and were changed into lighting columns especially for this area and are therefore of important architectural heritage.

Recommendations

Mindful of one of our Development Plans containing an injunction that all of our own projects involving built heritage assets should be conducted to the highest standard, and bearing in mind the lessons learnt from other similar developments, and the issue of 'mission creep', and aware of the Department of Heritage's comments, I wish to make the following recommendations-

1 That a Grade 1 Conservation Architect, with appropriate experience, be engaged to detail final specifications and methodologies, particularly where the project interfaces with built heritage assets, be they of architectural, artistic, archaeological, historical, cultural, social, technical, and/or scientific interest.

2 Appropriate records must be kept of all works undertaken. These records should include: Archival Standard Photographs taken before, during, and after the completion of each stage of the work; Specifications; Schedule of Works undertaken; Difficulties encountered and their resolution; Modifications to Method Statements, and so forth. Two Copies of the final report, including photographs and records, are to be submitted to Limerick City and County Council (one to the Development Control Section of the Planning Department, the second to the Conservation Office) and a copy, along with the photograph negatives, lodged with the Irish Architectural Archive upon completion of the work.

Reason – To protect and record the architectural heritage in the interests of the common good and the proper planning and sustainable development of the area.

Tom Cassidy, Architectural Conservation Officer.





C Letters of Consent/Agreement

C.1 List of Letters

Letter of Consent from Shannon Heritage (submitted to An Bord Pleanála with the original planning application file in December 2019)

Letter of Consent from Star Rovers Football Club (submitted to An Bord Pleanála with the original planning application file in December 2019)

Letter of Consent from Athlunkard Football Club (submitted to An Bord Pleanála with the original planning application file in December 2019)

Letter of Consent from Athlunkard Boat Club (submitted to An Bord Pleanála with the original planning application file in December 2019)

Letter of Consent from Kings Island Development Ltd (submitted to An Bord Pleanála with the original planning application file in December 2019)

Letter of Consent from Limerick Market Trustees (submitted to An Bord Pleanála in February 2020)

Letter of Consent from Courts Service (signed 18 November 2019 - submitted to An Bord Pleanála with the original planning application file in December 2019)

Letter of Consent from Courts Service (signed 14 October 2020 - new submission to An Bord Pleanála forming part of the planning application file)

Letter of Agreement from Irish Water (dated 14 October 2020 - new submission to An Bord Pleanála forming part of the planning application file)

Letter of Confirmation of Feasibility from Irish Water (dated 14 April 2020 - new submission to An Bord Pleanála forming part of the planning application file)



To whom it may concern,

King's Island Flood Relief Scheme Letter of support to lodge planning application with An Bord Pleanála

Dear Sir/Madam,

Shannon Heritage is the operator of King John's Castle and advises that there is an emergency exit at Castle Lane which exits directly onto proposed site of works named above. Shannon Heritage has been in discussion with Limerick City and County Council and has agreed with the Council that this emergency exit will be maintained at all times during the construction of the Flood Defence Scheme. Shannon Heritage very much welcomes the King's island Flood Protection Scheme as a key project for the protection of residential and business community in the immediate area.

Shannon Heritage supports the King's Island Flood Relief Scheme planning application to An Bord Pleanála.

Name Position Niall O'Callaghan Managing Director

Signature Date

Niel O'Callaghan.

23/10/2019

CGA Oidhreacht na Sionainne Caisleán & Daonpháirc Bhun Raite, Bun Raite, Co. an Chláir, Éire, V95 WP63 Shannon Heritage DAC Bunratty Castle & Folk Park, Bunratty, Co. Clare, Ireland, V95 WP63 t: +353 61 711 200 f: +353 61 472 523 e: sales@shannonheritage.com shannonheritage.com Oifig Chláraithe: Caisleán & Daonpháirc Bhun Raite, Bun Raite, Co. an Chláir, Uimhir Chláraithe: 115397 Eire Registered office: Bunratty Castle & Folk Park, Bunratty Co Clare, Registered Number: 115397 Ireland An Bord Stiúrthóirí I The Board of Directors: Mary Considine, Ray O'Driscol, Niall O'Callaghan



Comhairle Cathrach & Contae Luimnigh

Limerick City & County Council Seirbhísí Dearaidh agus Soláthair, Comhairle Cathrach agus Contae Luimnigh, Cé na gCeannaithe, Luimneach V94 EH90

> Design and Delivery Services, Limerick City and County Council, Merchants Quay, Limerick, V94 EH90

> > t: +353(0)61557180

An Bord Pleanála, 64 Marlborough Street, Dublin 1. D01 V902

14th February 2020

By email sids@pleanala.ie bord@pleanala.ie

ABP Case Number: ABP-306270-19 Re: Flood protection measures around King's Island. King's Island, Limerick

Dear Sir/Madam,

I refer to Limerick City and County Council's application, under Section 226 of the Planning and Development Act (as amended), for approval of a proposed flood defence scheme at King's Island, Limerick. Please find enclosed a letter of consent from Limerick Market Trustees to carry out works in Potato Market, Merchant's Quay, Limerick.

Yours faithfully,

Seamus Hanrahan, A/Director Capital Investment

tel: +353 (0) 61 556000



LIMERICK MARKET TRUSTEES

To whom it may concern

King's Island Flood Relief Scheme Application of Limerick City and County Council to An Bord Pleanála

Dear Sir/Madam,

The Limerick Market Trustees Company owns The Potato Market at Merchant's Quay, as shown outlined in blue on the attached drawing. The Limerick Market Trustees consent to the application by Limerick City and County Council to An Bord Pleanála under reference APB-306270-19.

Name

Liam Flannery

Position

CHAIRMAN -- Limerick Market Trustees

Signature

14th Fatering 2020

Limerick Market Trustees, Milk Market House, The Milk Market, Limerick V94 TX29

Date





STAR ROVERS AFC

King's Island Flood Relief Scheme Letter of consent to lodge planning application with An Bord Pleanála

Dear Sir/Madam,

Star Rovers Football Club is a leaseholder of lands from Limerick City and County Council at St. Mary's Park, as shown outlined in blue on the attached drawing. Star Rovers Football Club has been in discussions with Limerick City and County Council over the optimum design of the flood defence scheme as it affects the astra turf and grass playing pitches. The proposed embankment design, layout and reorganisation of the pitches is agreed between Star Rovers and Limerick City and County Council as the optimum solution.

Star Rovers Football Club consents to Limerick City and County Council lodging a planning application to An Bord Pleanála on these lands.

Name Position Signature Date

MARTIN OBRIGN

Existing pitch relocated and enlarged slightly to – 90m x 60m plus 4m run off at either end and additional 6m at one end to allow for moving of the pitch to avoid excessive wear in certain areas

_Kickabout or warm up area.

of pitch or moving sideways

Connecting to existing

outer walkway

Also allows potential for widening

3.00

+ 3.30

Existing drainage ditch retained

Paladin security fencing along-bottom of the embankment

Boundary fence ties in with the relocated astroturf fence

Existing astroturf training pitch-moved south-westwards. Potential to reuse portion of existing subbase in overlap area.

Loss of 6 parking spaces and storage area

U

A1|

2m high boundary fence to Star Rovers set back 3m where feasible

-Slopes of embankment



Athlunkard FC Headed Notepaper with Organisation Name

To whom it may concern

King's Island Flood Relief Scheme Letter of consent to lodge planning application with An Bord Pleanála

Dear Sir/Madam,

Athlunkard Football Club is a leaseholder of lands from Limerick City and County Council and operates a football pitch in St. Mary's Park, as shown outlined in blue on the attached drawing. Athlunkard Football Club has been in discussion with Limerick City and County Council over the optimum design of the flood embankment as it affects the playing pitch. The proposed embankment design and layout is agreed between Athlunkard Football Club and Limerick City and County Council as the optimum solution.

Athlunkard Football Club consents to Limerick City and County Council lodging a planning application to An Bord Pleanála on these lands.

Print Name: Dr. James Ring Position: Athlunkard Vice Chairman

916

Signature: Date: 9th November 2019





King's Island Flood Relief Scheme Letter of consent to lodge planning application with An Bord Pleanála

Dear Sir/Madam,

Athlunkard Boat Club is the owner of lands at Athlunkard Street, Limerick as shown outlined in blue on the attached drawing. Athlunkard Boat Club has been in discussions with Limerick City and County Council over the optimum design of the King's Island flood defence scheme. These works include the construction of a flood defence wall/boundary wall along the west side of the site, relocation of vehicular entrance and provision of new gates, construction of internal access road and yard, provision of new foul sewer connection, refurbishment of meeting room in clubhouse and individual property protection to both buildings. These works are agreed between Athlunkard Boat Club and Limerick City and County Council as the optimum design solution.

Athlunkard Boat Club consents to Limerick City and County Council lodging planning application to An Bord Pleanála on Athlunkard Boat Club lands.

Name Position Signature Date

Print I	Vame	MIKE KIELY
Print Title HON SECRETARY		
W	Da	- Kiely
29	10	12019
	1	

Design & Delivery

0 1 NOV 2019



Do not scale

© Arup

Kings Island Developments Ltd 1 Northbrook Road, Ranelagh.

Dublin 6.

Telephone: 4962955

E-mail: info@oraltd.com

To whom it may concern

King's Island Flood Relief Scheme Letter of consent to lodge planning application with An Bord Pleanála

Dear Sir/Madam,

Kings Island Development Ltd, 1 Northbrook, Ranelagh, Dublin 6 is the owner of the site opposite the Absolute Hotel on Sir Harry's Mall and lands at Grove Island, as shown outlined in blue on the attached drawing. The company has been in discussions with Limerick City and County Council over the optimum design of the King's Island flood defence scheme as it impacts the Absolute Hotel. Kings Island Development Ltd hereby consents to:-

- (i) provision of access to lands at Grove Island to facilitate launching of barge and piling rig into Abbey River
- (ii) provision of portion of lands at the corner of Sir Harry's Mall opposite Absolute Hotel, to provide for setting back of footpath and carriageway, to facilitate provision of bus parking and traffic turning movements at the corner

These works has been agreed between Kings Island Development Ltd and Limerick City and County Council as the optimum design solution.

Kings Island Development Ltd consents to Limerick City and County Council lodging planning application to An Bord Pleanála on these lands.

Name

Jerry O'Reilly

Position

Signature

Company Director 23/10/2019

Date





To whom it may concern

King's Island Flood Relief Scheme Letter of Consent and Support to lodge planning application with An Bord Pleanála

Dear Sir/Madam,

The Courts Service occupies the Courthouse at Merchant's Quay, outlined in blue on the attached drawing and the area between the Courthouse and the railings around the Courthouse. The Courts Service has been in discussions with Limerick City and County Council over the optimum design of flood protection measures around the Courthouse. The Courts Service is in agreement with the proposed layout, which includes vehicular access for prison van to north side of Courthouse, repositioning of railings along the north and west sides of the Courthouse and the decommissioning of foul sewer pumping station to a new gravity sewer.

The Courts Service has in the past been impacted by flooding in this area and would support any measures to mitigate/eradicate the possibility of flooding in this area in the future.

Name Position Signature Date

Eamonn Kiely **Regional Manager** 18th of November 2019