Location: Tralee, Co. Kerry		Unique ID: 230361 (from PFRA database)	
Initial OPW Designation	**APSR** ☒	**AFRR** ☐	**IRR** ☐
Co-ordinates	**Easting: 82750**	**Northing: 114000**	
River / Catchment / Sub-catchment	**Lee River & Big River/ North Kerry Tralee Bay**		
Type of Flooding / Flood Risk (identify all that apply)	**Fluvial non-tidal** ☒ **Fluvial tidal** ☒ **Coastal** ☐		

Stage 1: Desktop Review

1.1 Flood History (include review of Floodmaps.ie)

River Flow Path

The Big River Corridor and its tributary, which comes from the northeast environs runs to the town centre. There are also a number of smaller tributaries of the River Lee, which flow broadly north into the Lee. The Lee itself flows west along the southern edge of the town, before entering an extensive tidal to the west.

There is a canal running from the town centre to Blennerville.

Flood Records

There are 14 flood event records 7 of which are recurring and 7 are singular flood events.

The recurring flood events are primarily in the centre of the town in proximity to the Mall area. There are also recurring flood events along the N86 south of the Tralee.

There are a number of detailed reports including maps dated from 1973 to 2011. The most recent flood records are from 2008, 2009 and 2011:

2008 - Caherweesheen TD, Ballyard, Tralee

- The source of the flood waters was general surface water run-off during exceptionally heavy rainfall and overflowing of river banks (hindered in part by inadequate pipe / culvert capacity along a section of stream).
- One house flooded with three at risk & Farm buildings flooded
- L 6516 flooded and was impassable

2009 Floods - Curragraigue TD, Blennerville, Tralee

- The source of the flood waters was general surface water run-off during exceptionally heavy rainfall (and the cause was an inadequate pipe / culvert capacity).
- Local GAA Clubhouse flooded to depth of 300mm

2011 Floods - Kearney's Road (L 6513) Blennerville

- The source of the flood waters was a tidal flooding in the River Lee estuary, Tralee Basin.
- Road – 200m of L6513 was flooded during high tide period

<table>
<tr><td>1.2 Relevant information on flooding issues from OPW and LA staff</td><td>PFRA database comments (in italics):

OPW comments
Town drainage scheme still significant risk due to diversion channel size and later development

LA comments
Big River (Worse Case)

Meeting / discussion summary comments:

OPW comments
• Long history of flooding and scheme constructed in 1980s.
• The OPW provided a Paper on Tralee Flood Defence Scheme.
• Flooding from the Big River and Lee River.
• Numerous bridge crossings and a river diversion.
• Lots of information on floodmaps.ie.
• Complex flooding problem.

LA comments
• Concern expressed that possibly, the river diversion from the Big River to the River Lee has meant that there is now less capacity in the River Lee, and hence there is possibly an increased flood risk on the east and south side of Tralee.</td></tr>
<tr><td colspan="2">1.4 PFRA Data</td></tr>
<tr><td>1.4.1 PFRA hazard mapping</td><td>PFRA mapping available in GIS layer: Yes ☒ No ☐
PFRA mapping included on FRR map: Yes ☒ No ☐</td></tr>
<tr><td>1.4.2 Summary of Principal Receptors</td><td><table>
<tr><th>Type</th><th>FRI score (if available)</th></tr>
<tr><td>Primary</td><td>1050</td></tr>
<tr><td>Post Primary</td><td>277.5</td></tr>
<tr><td>Fire</td><td>250</td></tr>
<tr><td>Garda</td><td>25</td></tr>
<tr><td>Civil</td><td>25</td></tr>
<tr><td>OPW (LV)</td><td>20.1</td></tr>
<tr><td>OPW (MV)</td><td>25</td></tr>
<tr><td>Nursing</td><td>50</td></tr>
<tr><td>Hospital</td><td>250</td></tr>
<tr><td>Health Centre</td><td>25.25</td></tr>
<tr><td>Exchange</td><td>11</td></tr>
<tr><td>Arch LW</td><td>64.2</td></tr>
<tr><td>Arch RW</td><td>1939.6</td></tr>
<tr><td>Arch NW</td><td>127.5</td></tr>
<tr><td>Total</td><td>49030.51</td></tr>
</table></td></tr>
</table>

1.7 Stage 1 Evaluation	**Aspect**	**Clearly APSR**	**Uncertain**
	Flood History (1.1)	**X**	
	OPW / LA Information (1.2)	**X**	
	PFRA Evaluation (1.4)	**X**	
	Overall Desktop Evaluation (if any above aspect is uncertain then overall designation is uncertain)	**X**	
1.8 Proposed level of assessment for Stage 2 site visits	**Level A Site Visit**		
	Level B Site Visit	**X**	

Stage 2: Site Inspection	Level B Assessment
Date and Time of Inspection	**Date: 25/05/2011** **Time: 16:00**
Names of inspection team (including OPW/LA staff if present)	**Iain Blackwell** **Kelly Kasperczyk**

2.3 Local knowledge - on-site comments **(OPW, LA and any info volunteered by local residents during visit)**	**Bateman's Green Resident (d/s of the Big River diversion)** • No known issues of flooding at this location (bridge crossing of the Big River at Chesnut Drive, east of the N69 (Oakpark Road)). The road into Bateman's Green (right bank) was partially collapsing at one stage and residents arranged for some remedial works – rock bank protection is now in place on the right bank (approx 10m in length). • Fly tipping is a problem at the river banks.
2.4 Comments on hydraulic constrictions (bridges, etc.) and conveyance routes	Single arch bridge of the Big River east of Killeen and the Oakpark Road (N69): Both banks are heavily vegetated. Fly tipping at u/s of single arch bridge at Bateman's Green: Both banks are heavily vegetated. The R551 bridge north of Ashe Street has a rope extending from the right to left bank – this is catching debris. This is a single arch bridge. Single arch bridge of a tributary of the Lee (Hillard's Bridge) on Kearney's Road (L6513) south west of the town. The road at this location is known to flood. U/s of the Lee adjacent to the AquaDome, the Lee is first crossed by a single span rail bridge, then by a single span bridge (Ballyard Road). Low box bridges on a tributary of the Lee, west of the town along the N21. The outfall of the Big River diversion (high flows) is recorded to be u/s of these crossings. This was not identified during the site visit (no access possible).

2.6 Defence Assets

Formal and Informal Flood Defence Assets
(include effective and ineffective assets to inform asset survey and potential mitigation measures)

Open Channel Watercourses

Man-made river channel	☐	Flood relief channel	☒	Canal	☒
Mill leat	☐	Drainage channels / back drains			☐

Bridges and Culvert crossings

Single Arch bridge	☒	Multi-Arch bridge	☒		
Single Span bridge	☒	Multi-Span bridge	☐		
Box culvert(s)	☒	Pipe culvert(s)	☒	Arch Culvert(s)	☐

Culverted Watercourses (culvert length is greater than just a crossing)

Box culvert(s)	☐	Pipe culvert(s)	☒	Arch Culvert(s)	☒	Irregular Culvert(s)	☐

Walls and Embankments

Embankment(s)	☐	Raised wall(s)	☐	Retaining wall(s)	☐

Control Structures – weirs, gates, dams

Fixed crest weir	☐	Adjustable weir	☐	Dam / Barrage	☐
Sluice gates	☐	Lock gates	☐	Radial gates	☐

Storage

On-line storage (natural) ☐ On-line storage (artificial) ☐ Off-line storage ☐

Outfalls

Flapped outfall(s) into watercourse ☐ Unflapped outfall(s) into watercourse ☐
i.e. from smaller watercourses, drains etc. into river / estuary / sea

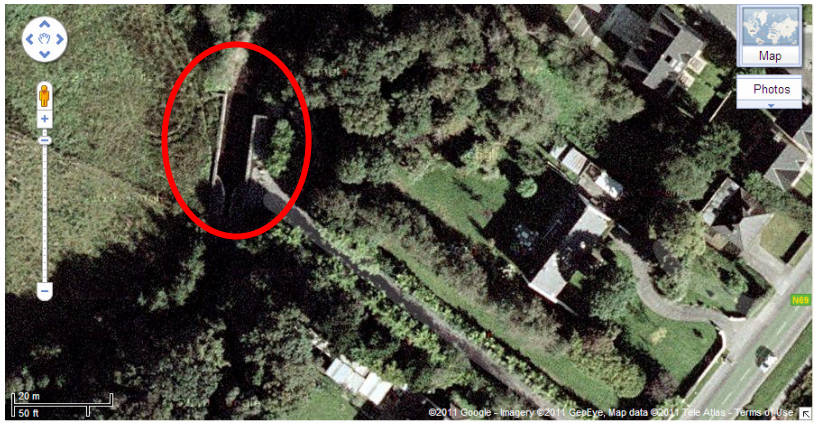
Tidal flap(s) ☐ Tidal sluice(s) ☐
i.e. from main watercourse into estuary / sea

Other

Pumping Station ☐ Erosion Protection ☐ Sand Dunes ☐

Additional notes (if required):

A control structure is in place u/s of the town to divert high flows from the Big River through a culvert southeast of the town, through Ratass and towards a tributary of the Lee. This structure could not be accessed during the site visit (locked access gate), but is conveyed in the images below.



2.8 Initial Potential Mitigation Measures	
Non-structural measures	Planning and Development control ☒ Sustainable Urban Drainage Systems ☒ Flood forecasting / warning ☐ Change in Operating Procedures for water level control: ☐ Public awareness campaign ☐ Individual property protection ☐ Land use management ☐
Structural measures	**Strategic development management for floodplain development:** ☐ *(integration of measures into strategic development proposals)* **Storage:** On-line ☐ Off-line ☒ **Flow diversion:** Flood relief channel ☐ Flood relief culvert ☐ **Increase conveyance:** Bridge works ☒ Channel works ☐ Floodplain ☐ **Flood defences:** Walls ☒ Embankments ☒ **Localised works:** Defence raising ☐ In-fill gaps ☐ Trash screen ☐ **Maintenance works:** Culvert / channel clearance ☐ Asset maintenance ☒ **Relocation of properties:** ☐ **Improve existing defences:** ☐ **(describe)** **Other (describe):**

Outcomes	
Recommended Designation	**APSR** ☒ **not an APSR** ☐ **IRR** ☐
Summary Comments (if required)	Tralee is complex hydraulically, with a diversion from the Big River to the Lee River, as well as tidal influences on the Lee River. There are also significant culverted sections through the centre of the town.

Photo 1: Crossing of the River Lee west of Tralee centre

Photo 2: West of Tralee looking u/s on the River Lee

Photo 3: Looking u/s on the river diversion east of Tralee

Photo 4: Crossing of the Big River NE of Tralee looking d/s

Photo 5: Looking u/s of the Big River in the northern centre of Tralee

Photo 6: Looking d/s on the River Lee south of Tralee, property at same level as river bank

80500 81000 81500 82000 82500 83000 83500 84000 84500 85000 85500 86000 86500 87000 87500 88000

117500 117000 116500 116000 115500 115000 114500 114000 113500 113000 112500 112000 111500

N

Tralee

Legend

- APSR Boundary for CARs only
- Historic Flooding Incidents
- Water bodies mapped from RADARSAT-2 *
- Hydrometric Gauging Stations
- EPA River Network
- Rail Stations
- Nursing Homes
- Residential Care for the Elderly
- Schools
- Ports and Harbours
- OPW Buildings
- Health Centres
- Garda Stations
- Hospitals
- Fire Stations
- Civil Defence Head Quarters
- Airports
- Rail Network
- Roads (National Roads Authority)
- Airport Land
- OPW Embankments
- Historic Flood Data
- Architectural Heritage
- UNESCO Sites
- Special Protection Area
- Special Area for Conservation
- Proposed National Heritage Area
- National Heritage Area
- Benefiting Lands

Flood Extents (PFRA, 2010)

- 10% AEP Flood Extent (1 in 10 chance in any given year)
- 1% AEP Flood Extent (1 in 100 chance in any given year)
- 0.1% AEP Flood Extent (1 in 1000 chance in any given year)

* Data Source - Service Régional de Traitement d'Image et de Télédétection (SERTIT) (acquired on the 5th of December 2009).

The PFRA Flood Extents shown are *indicative*. They have been developed using simple and cost-effective methods that are suitable for the PFRA. They should not be used for local decision-making or any other purpose without verification.

0 0.5 1 2 Km

JACOBS

Client	OPW The Office of Public Works Oifig na nOibreacha Poiblí
Project	**Shannon CFRAM Study** Flood Risk Review Map
Title	**Tralee**
Drawing Status	FINAL
Job No.	32102500
Figure No.	**CAR 56**
Revision	
Scale	**1:25,000 @A3**
	Jun 27, 2011
Drawn	AD/SF
Checked	JC
Review	KK/JM
Approved	IB/PS