

Location: Ardfert, Co. Kerry		Unique ID: 232629 (from PFRA database)	
Initial OPW Designation	APSR <input type="checkbox"/>	AFRR <input checked="" type="checkbox"/>	IRR <input type="checkbox"/>
Co-ordinates	Easting: 78466		Northing: 120966
River / Catchment / Sub-catchment	Tyshe River / North Kerry Tralee Bay Catchment		
Type of Flooding / Flood Risk (identify all that apply)	Fluvial non-tidal <input checked="" type="checkbox"/> Fluvial tidal <input type="checkbox"/> Coastal <input type="checkbox"/>		

Stage 1: Desktop Review	
1.1 Flood History (include review of Floodmaps.ie)	River Flow Path The Tyshe River flows north of Ardfert, it does not enter the village. Flood event records There is one recurring OPW flood record from 2005, from the report; <i>"The R551 running through the village of Ardfert is flooded 3/4 times per year. 10 houses are affected. The cause of the problem is heavy rainfall and consequent surface water runoff from steep land at the south east of the village running onto road and lack of adequate drainage for this runoff. Improvements required are adequate drainage from village to the North/ North West."</i>
1.2 Relevant information on flooding issues from OPW and LA staff	PFRA database comments (in italics): OPW comments <i>None</i> LA comments <i>Flood risk in village. May be associated with inadequate storm sewers. LA asked it not be included.</i> Meeting / discussion summary comments: OPW comments <ul style="list-style-type: none"> Road flooding is thought to occur at one of the road bridge crossings north of Ardfert village. The drainage channels northwest of the village are part of the Banna DD scheme. These back up when the tide is in and when this system gets blocked. LA comments <ul style="list-style-type: none"> This is at upstream end of Arkeragh Drainage Scheme (u/s of Banna) Minor flooding of land just north of Ardfert. Properties not affected. Flooding in Ardfert is considered to be dominated by surface water problems due to inadequate storm sewers.

1.4 PFRA Data			
1.4.1 PFRA hazard mapping	PFRA mapping available in GIS layer:		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
	PFRA mapping included on FRR map:		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
1.4.2 Summary of Principal Receptors	Type		FRI score (if available)
	Receptors not considered as part of the PFRA process. FRI score not calculated in PFRA		
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	X	
	Level B Site Visit		

Stage 2: Site Inspection		Level A Assessment		
Date and Time of Inspection		Date: 24/05/11		
		Time: 17:00		
Names of inspection team (including OPW/LA staff if present)		Iain Blackwell		
		Kelly Kasperczyk		
2.1 Ground-truthing of Hazard Mapping	Fluvial non-tidal <input checked="" type="checkbox"/> Fluvial tidal <input type="checkbox"/> Coastal <input type="checkbox"/> Not available <input type="checkbox"/>			
2.2 Spot check ground-truthing of selected receptor vulnerability	Receptor Type	Location description (if not obvious)	Exists?	Overall Vulnerability / Risk (L / M / H)
(also note any key receptors noted during visit that are not identified by PFRA)	Residential only (1 property) within PFRA extents.		Y	M
2.3 Local knowledge - on-site comments (OPW, LA and any info volunteered by local residents during visit)	No on site comments			
2.4 Comments on hydraulic constrictions (bridges, etc.) and conveyance routes	Vegetation u/s of the single arch R551 bridge (next to house) is very overgrown and could block this arch. Masonry twin arch culvert at Tyshe Bridge.			

2.5 SVRS Assessment Matrix

Weightings:

A - x1 - reasonable expectation of flooding

B - x2 - high expectation of flooding
or flooding is tidal (any risk)

C - x5 - risk to life

Approx. Number	1 to 4				5 to 20				>20			
Weighting		A	B	C		A	B	C		A	B	C
Property (domestic)	10		X		100				200			
Property (small retail or business)	20				200				400			
Property (large retail or business)	50				500				1000			
Road or Rail Infrastructure	30		X		300				600			
Critical Infrastructure (local) [hospital, school, police/fire/ambulance station, substation, WTW/WWTW, gov bldg, other (specify)]	50				500				1000			
Critical Infrastructure (national importance)	250				1000				2000			
Cultural Heritage Site	20				200				400			
Environmental Designated Site	20				200				400			
Hazardous Substances Site	50				500				1000			
Total SVRS									80			

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>i.e. from main watercourse into estuary / sea</i> Other Pumping Station <input type="checkbox"/> Erosion Protection <input type="checkbox"/> Sand Dunes <input type="checkbox"/> Additional notes (if required): Informal defence walls at R551 bridge crossing – only right bank, defending road only.	
2.8 Initial Potential Mitigation Measures		
Non-structural measures	Planning and Development control <input type="checkbox"/> Sustainable Urban Drainage Systems <input type="checkbox"/> Flood forecasting / warning <input type="checkbox"/> Change in Operating Procedures for water level control: <input type="checkbox"/> Public awareness campaign <input type="checkbox"/> Individual property protection <input checked="" type="checkbox"/> Land use management <input type="checkbox"/>	
Structural measures	Strategic development management for floodplain development: <input type="checkbox"/> <i>(integration of measures into strategic development proposals)</i> Storage: On-line <input type="checkbox"/> Off-line <input type="checkbox"/> Flow diversion: Flood relief channel <input type="checkbox"/> Flood relief culvert <input type="checkbox"/> Increase conveyance: Bridge works <input type="checkbox"/> Channel works <input type="checkbox"/> Floodplain <input type="checkbox"/> Flood defences: Walls <input checked="" type="checkbox"/> Embankments <input type="checkbox"/> Localised works: Defence raising <input type="checkbox"/> In-fill gaps <input type="checkbox"/> Trash screen <input type="checkbox"/> Maintenance works: Culvert / channel clearance <input checked="" type="checkbox"/> Asset maintenance <input type="checkbox"/> Relocation of properties: <input type="checkbox"/> Improve existing defences: <input type="checkbox"/> (describe) Other (describe): If required, a defence wall could be constructed on the left bank u/s of the R551 bridge to protect the single property.	

Outcomes				
PFRA Designation	APSR <input type="checkbox"/> not an APSR <input checked="" type="checkbox"/> IRR <input type="checkbox"/>		FRI Score: N/A	
Site Ground-truthing of PFRA Assessment (hazard mapping and receptors)	High Confidence (good)	Uncertain	Low Confidence (poor)	Not available
	X			
Site Visit Review Score	80			
Recommended Designation	APSR <input type="checkbox"/> not an APSR <input checked="" type="checkbox"/> IRR <input type="checkbox"/>			
Summary Comments (if required)	R551 Bridge (northwest of the village): The left bank u/s of this bridge rises up higher than the right. The right bank at the road edge is walled (approx 1m high) and there is a single property at risk on the left bank behind this wall, immediately u/s of the bridge. Tyshe Bridge (northeast of the village) is understood to be the location of regular minor road flooding. No properties are at risk at this location – the road rises steeply up towards the village. The main flooding problem in Ardfert (where properties are affected) is confirmed as being a surface water / drainage problem in the village centre.			



Photo 1: Property adjacent to the R551 Bridge (NW of the village). This is the only property potentially at risk of fluvial flooding



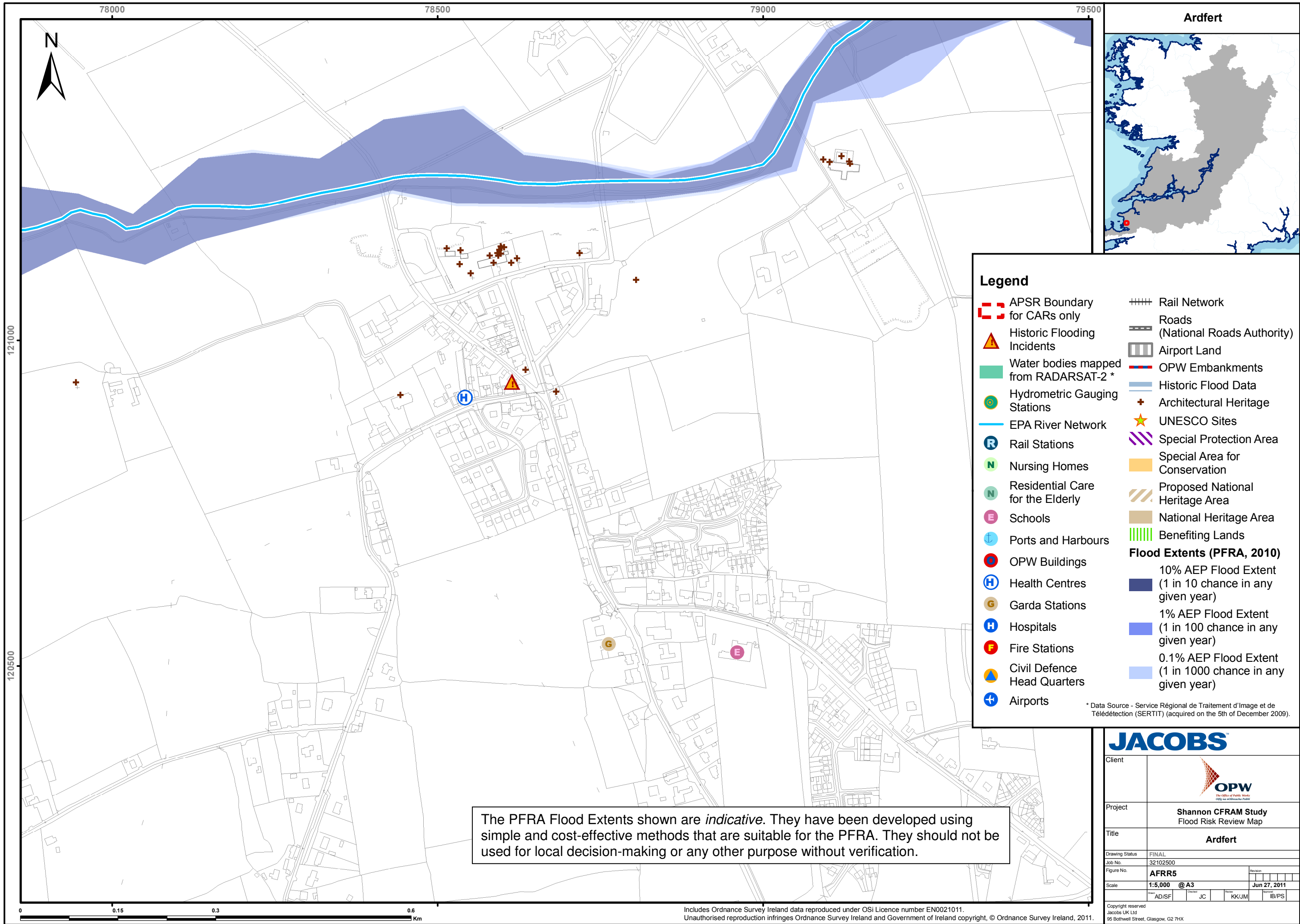
Photo 2: Tyshe River at the R551




Photo 3: Tyshe Bridge (NE of the village) on the local road running north from the village



Photo 4: Tyshe Bridge looking west downstream. The village is located high up to the south (left of picture)



JACOBS

Client			
Project	Shannon CFRAM Study Flood Risk Review Map		
Title	Ardfert		
Drawing Status	FINAL		
Job No.	32102500		
Figure No.	AFRR5		
Scale	1:5,000 @ A3		
Drawn	AD/SF	Checked	JC
Drawn	KK/JM	Checked	IB/PS
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