

Location: Askeaton, Co. Limerick		Unique ID: 240365 (from PFRA database)	
Initial OPW Designation	APSR <input checked="" type="checkbox"/>	AFRR <input type="checkbox"/>	IRR <input type="checkbox"/>
Co-ordinates	Easting: 134000	Northing: 150000	
River / Catchment / Sub-catchment	River Deel / Shannon Estuary		
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)	<p>River Flow Path</p> <p>River Deel flows through the centre of the town from south (Rathkeale) to north (Shannon River/Estuary).</p> <p>Flood event records</p> <p>One flood record (recurring). Flooding across the L1236 and Southern Chemicals (Aerobord) Factory. The Deel overflows on left bank upstream of Askeaton, and feeds into a stream to the west of the L1236. This overflows affecting the factory car park before re-entering the Deel. No premises flooded. Frequency one or two times per annum.</p>
1.2 Relevant information on flooding issues from OPW and LA staff	<p>PFRA database comments (<i>in italics</i>):</p> <p>OPW comments <i>Factory flooding</i></p> <p>LA comments <i>(am) OPW Constructed an embankment. Flooding occurred in 2008(pm) All agree it is an APSR</i></p> <p>Meeting / discussion summary comments:</p> <p>OPW comments</p> <ul style="list-style-type: none"> OPW has an embankment approximately 200 m long. This is upstream of the town to prevent flows coming out of the Deel and then flooding the town (at the Aerobord factory) via a small tributary flowing into the Deel from the west. <p>LA comments</p> <ul style="list-style-type: none"> The outdoor swimming pool d/s of the Main St bridge on the left bank regularly floods. The right bank immediately u/s and d/s of this bridge is known to flood every 1-3 years. Properties west of Aerobord's water channel u/s of the bridge used to have flooding issues, but not in recent years. Main influence at this site is tidal.

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)
	WTP		50
	Monuments		38.1 (LV)
	Total:		1101.46
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: 13/04/11	
		Time: 14:40	
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)	No on site comments		
2.4 Comments on hydraulic constrictions (bridges, etc.) and conveyance routes	Six-arch bridge in town centre with large piers / supports. Head loss across the bridge in high flows is significant. The castle island and tail race force most of the flow on the Deel to the right of the island.		
2.6 Defence Assets			
Formal and Informal Flood Defence Assets <i>(include effective and ineffective assets to inform asset survey and potential mitigation measures)</i>	Open Channel Watercourses		
	Man-made river channel <input type="checkbox"/>	Flood relief channel <input type="checkbox"/>	Canal <input type="checkbox"/>
	Mill leat <input checked="" type="checkbox"/>	Drainage channels / back drains <input type="checkbox"/>	
	Bridges and Culvert crossings		
	Single Arch bridge <input type="checkbox"/>	Multi-Arch bridge <input checked="" type="checkbox"/>	
	Single Span bridge <input type="checkbox"/>	Multi-Span bridge <input type="checkbox"/>	
	Box culvert(s) <input type="checkbox"/>	Pipe culvert(s) <input type="checkbox"/>	Arch Culvert(s) <input type="checkbox"/>
	Culverted Watercourses (culvert length is greater than just a crossing)		
	Box culvert(s) <input type="checkbox"/>	Pipe culvert(s) <input type="checkbox"/>	Arch Culvert(s) <input type="checkbox"/>
			Irregular Culvert(s) <input type="checkbox"/>
	Walls and Embankments		
	Embankment(s) <input checked="" type="checkbox"/>	Raised wall(s) <input checked="" type="checkbox"/>	Retaining wall(s) <input checked="" type="checkbox"/>
	Control Structures – weirs, gates, dams		
	Fixed crest weir <input checked="" type="checkbox"/>	Adjustable weir <input type="checkbox"/>	Dam / Barrage <input type="checkbox"/>
	Sluice gates <input checked="" type="checkbox"/>	Lock gates <input type="checkbox"/>	Radial gates <input type="checkbox"/>
Storage			
On-line storage (natural) <input type="checkbox"/>	On-line storage (artificial) <input type="checkbox"/>	Off-line storage <input checked="" type="checkbox"/>	
Outfalls			
Flapped outfall(s) into watercourse <input type="checkbox"/>		Unflapped outfall(s) into watercourse <input type="checkbox"/>	
<i>i.e. from smaller watercourses, drains etc. into river / estuary / sea</i>			
Tidal flap(s) <input type="checkbox"/>		Tidal sluice(s) <input type="checkbox"/>	
<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"/>	

	<p>Additional notes (if required):</p> <p>There is a significant natural drop in the river bed adjacent to the Aerobord factory which is the site of a weir for the offtake to a mill head race. The flow along this head race is controlled by large vertical lift sluice gates.</p> <p>The main walls that may provide some defence are on the left bank of the mill tail race adjacent to the Aerobord factory.</p> <p>There is a quarry adjacent to the Aerobord factory which may be possible to use for flood storage.</p> <p>OPW has recently constructed an embankment at Foley's Farm, approximately 2-3km u/s of the Aerobord factory to prevent flows coming out of the Deel and feeding the stream that has historically led to flooding at the Aerobord factory.</p>
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2.8 Initial Potential Mitigation Measures

Non-structural measures	<p>Planning and Development control <input type="checkbox"/></p> <p>Sustainable Urban Drainage Systems <input type="checkbox"/></p> <p>Flood forecasting / warning <input checked="" type="checkbox"/></p> <p>Change in Operating Procedures for water level control: <input checked="" type="checkbox"/></p> <p>Public awareness campaign <input type="checkbox"/></p> <p>Individual property protection <input type="checkbox"/></p> <p>Land use management <input type="checkbox"/></p>
Structural measures	<p>Strategic development management for floodplain development: <input type="checkbox"/> (integration of measures into strategic development proposals)</p> <p>Storage: On-line <input checked="" type="checkbox"/> Off-line <input checked="" type="checkbox"/></p> <p>Flow diversion: Flood relief channel <input checked="" type="checkbox"/> Flood relief culvert <input type="checkbox"/></p> <p>Increase conveyance: Bridge works <input checked="" type="checkbox"/> Channel works <input type="checkbox"/> Floodplain <input type="checkbox"/></p> <p>Flood defences: Walls <input checked="" type="checkbox"/> Embankments <input checked="" type="checkbox"/></p> <p>Localised works: Defence raising <input type="checkbox"/> In-fill gaps <input checked="" type="checkbox"/> Trash screen <input type="checkbox"/></p> <p>Maintenance works: Culvert / channel clearance <input type="checkbox"/> Asset maintenance <input checked="" type="checkbox"/></p> <p>Relocation of properties: <input type="checkbox"/></p> <p>Improve existing defences: <input type="checkbox"/> (describe)</p> <p>Other (describe):</p> <p>The use of the mill race, with sluices open, may provide the basis for use as a flood relief channel.</p> <p>Note that while the main bridge presents a significant hydraulic restriction, any works to the bridge would need to be considered in relation to its cultural heritage value.</p>

Outcomes

Recommended Designation	<p>APSR <input checked="" type="checkbox"/> not an APSR <input type="checkbox"/> IRR <input type="checkbox"/></p>
Summary Comments (if required)	<p>Recent works on the Deel appear to have reduced the flood risk to Askeaton (embankment works by OPW upstream of the town). However, there is a residual flood risk in the town from the River Deel.</p>



Photo 1: The River Deel d/s south of Askeaton



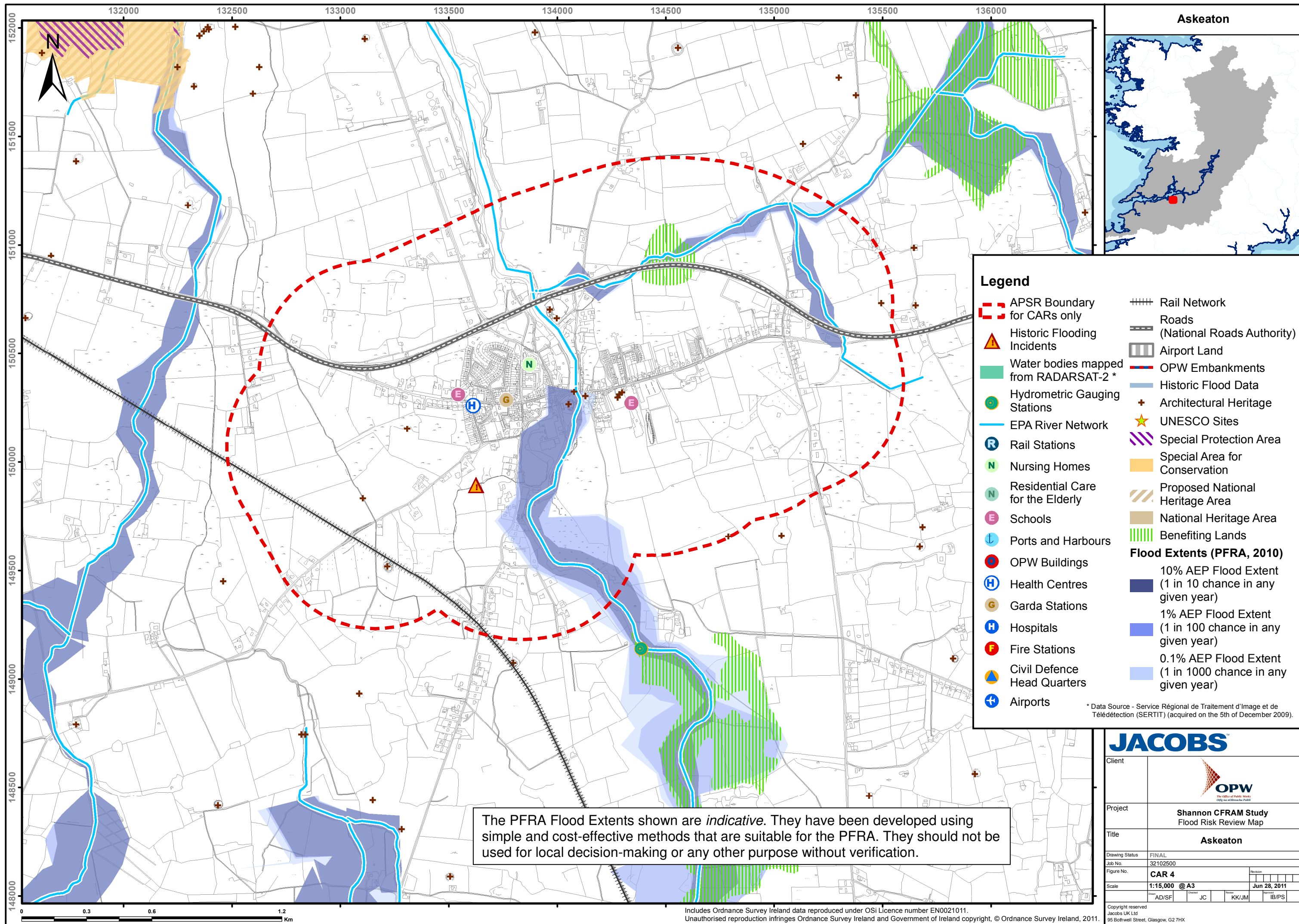
Photo 2: Mill head race u/s at the Aeroboard factory




Photo 3: The Six-arch bridge in town centre u/s looking south



Photo 4: The River Deel d/s looking north



JACOBS	
Client	 The Office of Public Works OPW ne réitíneann na Páilí
Project	Shannon CFRAM Study Flood Risk Review Map
Title	Askeaton
Drawing Status	FINAL
Job No.	32102500
Figure No.	CAR 4
Scale	1:15,000 @ A3
Drawn	AD/SF
Checked	JC
Reviewed	KK/JM
Approved	IB/PS
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