

<b>Location: Abbeyshrule, Co. Longford</b>		<b>Unique ID: 260,446</b> (from PFRA database)	
<b>Initial OPW Designation</b>	<b>APSR</b> <input checked="" type="checkbox"/>	<b>AFRR</b> <input type="checkbox"/>	<b>IRR</b> <input type="checkbox"/>
<b>Co-ordinates</b>	<b>Easting: 223,250</b>	<b>Northing: 260,250</b>	
<b>River / Catchment / Sub-catchment</b>	<b>River Inny / Owenacharra River / River Shannon (Lough Ree)</b>		
<b>Type of Flooding / Flood Risk</b> (identify all that apply)	<b>Fluvial non-tidal</b> <input checked="" type="checkbox"/>	<b>Fluvial tidal</b> <input type="checkbox"/>	<b>Coastal</b> <input type="checkbox"/>

<b>Stage 1: Desktop Review</b>	
<b>1.1 Flood History (include review of Floodmaps.ie)</b>	<p><b>River Flow Path</b> The River Inny flows through the township of Abbeyshrule on the eastern town boundary whilst the Royal Canal forms the perimeter on the western side. The village has a canal harbour with a boat slip.</p> <p><b>Flood Event Records</b> There are no records of flood events for Abbeyshrule on floodmaps.ie.</p>
<b>1.2 Relevant information on flooding issues from OPW and LA staff</b>	<p><b>PFRA database comments (<i>in italics</i>):</b></p> <p><b>OPW comments</b> <i>Designated APSR on the basis of predictive analysis.</i></p> <p><b>LA comments</b> <i>Inny Abbeyshrule - Potentially due to new development – twenty houses. Questioned the extent shown in the PFRA maps. Possibly not the experience but not to be ruled out. Should be compared to 2009 flood extent. Farmland.</i></p> <p><b>Meeting / discussion summary comments:</b></p> <p><b>OPW comments</b></p> <ul style="list-style-type: none"> <li>• There are no flood risk issues that they are aware of.</li> <li>• The land downstream is low and acts as floodplain.</li> <li>• New houses near the church may be at risk.</li> <li>• The airfield is not known to be at significant risk.</li> </ul> <p><b>LA comments</b></p> <ul style="list-style-type: none"> <li>• Farmland flooded during the November 2009 event.</li> <li>• A public water supply intake is located upstream of the village; this is the source for the regional water supply.</li> <li>• The airfield was just about operational during the 2009 floods. Longford CoCo obtained aerial photos taken from an aircraft which took off from there. At that point (2 days post-peak), parts of the runway were on the cusp of being flooded.</li> <li>• Main flooding risk is downstream of the village.</li> <li>• Would not expect flooding upstream of Webb’s Bridge. Water levels reached the bank crest in 2009 but did not overtop the banks near to the village.</li> <li>• Works were completed in 2009 to reprofile the river banks.</li> <li>• Unsure how the capacities of the canal aqueduct upstream of the village and Webb’s Bridge downstream compare.</li> <li>• Consider that the village should be an APSR due to the water intake alone.</li> </ul>

<b>1.4 PFRA Data</b>			
<b>1.4.1 PFRA hazard mapping</b>	<b>PFRA mapping available in GIS layer:</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
	<b>PFRA mapping included on FRR map:</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
<b>1.4.2 Summary of Principal Receptors</b>	<b>Type</b>	<b>FRI score (if available)</b>	
	WTP	25	
	Arch_Regional	31	
	Arch_National	25	
	Monument_LV	51	
	<b>TOTAL</b>	<b>402.4</b>	
<b>1.7 Stage 1 Evaluation</b>	<b>Aspect</b>	<b>Clearly APSR</b>	<b>Uncertain</b>
	<b>Flood History (1.1)</b>		<b>X</b>
	<b>OPW / LA Information (1.2)</b>	<b>X</b>	
	<b>PFRA Evaluation (1.4)</b>	<b>X</b>	
	<b>Overall Desktop Evaluation</b> (if any above aspect is uncertain then overall designation is uncertain)		<b>X</b>
<b>1.8 Proposed level of assessment for Stage 2 site visits</b>	<b>Level A Site Visit</b>	<b>X</b>	
	<b>Level B Site Visit</b>		

<b>Stage 2: Site Inspection</b>		<b>Level A Assessment</b>		
<b>Date and Time of Inspection</b>		<b>Date: 19/05/11</b>		
		<b>Time: 15:30</b>		
<b>Names of inspection team (including OPW/LA staff if present)</b>		<b>Alan Dew</b>		
		<b>James Murray</b>		
<b>2.1 Ground-truthing of Hazard Mapping</b>	<b>Fluvial non-tidal</b> <input checked="" type="checkbox"/> <b>Fluvial tidal</b> <input type="checkbox"/> <b>Coastal</b> <input type="checkbox"/> <b>Not available</b> <input type="checkbox"/>			
	Extent of potential flood risk shown on the PFRA mapping is reasonable.			
<b>2.2 Spot check ground-truthing of selected receptor vulnerability</b>  <b>(also note any key receptors noted during visit that are not identified by PFRA)</b>	<b>Receptor Type</b>	<b>Location description (if not obvious)</b>	<b>Exists?</b>	<b>Overall Vulnerability / Risk (L / M / H)</b>
	Residential properties	Right bank	Yes	M
	Commercial property	Airfield, left bank	Yes	M
	Water supply intake / WTP	Right bank,	Yes	M
<b>2.3 Local knowledge - on-site comments (OPW, LA and any info volunteered by local residents during visit)</b>	No on-site comments.			
<b>2.4 Comments on hydraulic constrictions (bridges, etc.) and conveyance routes</b>	<p>Webb's Bridge, downstream of the village, comprises a large double arch structure (~15m height), and is not considered to present a constraint to flow.</p> <p>The Royal Canal aqueduct upstream of the village comprises a 5 arch structure. The arch nearest to the right bank has silted up and was not in use at the time of inspection; the arch would however provide additional capacity at high flows. There is a low likelihood of the aqueduct's capacity being reached.</p>			

2.5 SVRS Assessment Matrix												
<b>Weightings:</b> A - x1 - reasonable expectation of flooding B - x2 - high expectation of flooding 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				100	X			200			
Property (small retail or business)	20				200				400			
Property (large retail or business)	50	X			500				1000			
Road or Rail Infrastructure	30				300				600			
Critical Infrastructure (local) [hospital, school, police/fire/ambulance station, substation, WTW/WWTW, gov bldg, other (specify)]	50	X			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			
<b>Total SVRS</b>									<b>200</b>			
2.6 Defence Assets												
<b>Formal and Informal Flood Defence Assets</b> <i>(include effective and ineffective assets to inform asset survey and potential mitigation measures)</i>	<b>Open Channel Watercourses</b>											
	Man-made river channel <input type="checkbox"/> Flood relief channel <input type="checkbox"/> Canal <input type="checkbox"/>											
	Mill leat <input type="checkbox"/> Drainage channels / back drains <input type="checkbox"/>											
	<b>Bridges and Culvert crossings</b>											
	Single Arch bridge <input checked="" 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"/>											
	<b>Culverted Watercourses</b> (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"/>											
	<b>Walls and Embankments</b>											
	Embankment(s) <input type="checkbox"/> Raised wall(s) <input type="checkbox"/> Retaining wall(s) <input type="checkbox"/>											
	<b>Control Structures – weirs, gates, dams</b>											
Fixed crest weir <input type="checkbox"/> Adjustable weir <input type="checkbox"/> Dam / Barrage <input type="checkbox"/>												
Sluice gates <input type="checkbox"/> Lock gates <input type="checkbox"/> Radial gates <input type="checkbox"/>												
<b>Storage</b>												
On-line storage (natural) <input type="checkbox"/> On-line storage (artificial) <input type="checkbox"/> Off-line storage <input type="checkbox"/>												
<b>Outfalls</b>												
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>												

<b>Other</b> Pumping Station <input type="checkbox"/> Erosion Protection <input type="checkbox"/> Sand Dunes <input type="checkbox"/> <b>Additional notes (if required):</b> Regional water supply intake	
<b>2.8 Initial Potential Mitigation Measures</b>	
<b>Non-structural measures</b>	Planning and Development control <input checked="" type="checkbox"/> Sustainable Urban Drainage Systems <input type="checkbox"/> Flood forecasting / warning <input checked="" type="checkbox"/> Change in Operating Procedures for water level control: <input type="checkbox"/> Public awareness campaign <input checked="" type="checkbox"/> Individual property protection <input type="checkbox"/> Land use management <input type="checkbox"/>
<b>Structural measures</b>	<b>Strategic development management for floodplain development:</b> <input type="checkbox"/> <i>(integration of measures into strategic development proposals)</i> <b>Storage:</b> On-line <input checked="" type="checkbox"/> Off-line <input type="checkbox"/> <b>Flow diversion:</b> Flood relief channel <input type="checkbox"/> Flood relief culvert <input type="checkbox"/> <b>Increase conveyance:</b> Bridge works <input type="checkbox"/> Channel works <input type="checkbox"/> Floodplain <input type="checkbox"/> <b>Flood defences:</b> Walls <input checked="" type="checkbox"/> Embankments <input checked="" type="checkbox"/> <b>Localised works:</b> Defence raising <input type="checkbox"/> In-fill gaps <input type="checkbox"/> Trash screen <input type="checkbox"/> <b>Maintenance works:</b> Culvert / channel clearance <input type="checkbox"/> Asset maintenance <input type="checkbox"/> <b>Relocation of properties:</b> <input type="checkbox"/> <b>Improve existing defences:</b> <input type="checkbox"/> (describe)  <b>Other (describe):</b>

<b>Outcomes</b>				
<b>PFRA Designation</b>	<b>APSR</b> <input checked="" type="checkbox"/> <b>not an APSR</b> <input type="checkbox"/> <b>IRR</b> <input type="checkbox"/>		<b>FRI Score:</b> 402.4	
<b>Site Ground-truthing of PFRA Assessment (hazard mapping and receptors)</b>	<b>High Confidence (good)</b>	<b>Uncertain</b>	<b>Low Confidence (poor)</b>	<b>Not available</b>
	<b>X</b>			
<b>Site Visit Review Score</b>	<b>200</b>			
<b>Recommended Designation</b>	<b>APSR</b> <input checked="" type="checkbox"/> <b>not an APSR</b> <input type="checkbox"/> <b>IRR</b> <input type="checkbox"/>			
<b>Summary Comments (if required)</b>	<p>The River Inny is a significant watercourse and its extensive natural floodplain in the area is indicative of the extent of any likely major flood extents.</p> <p>The developments in the low lying areas of Abbeyshrule are at risk of flooding, which could be extensive in a major flood event. There are sufficient critical receptors, including the regional water supply intake, at risk of flooding to warrant designation as an APSR.</p>			



**Photo1:** Whiteworth Aqueduct viewed from the upstream right bank of the River Inny.



**Photo 2:** Road bridge downstream of the village viewed from the upstream right bank



**Photo 3:** River Inny looking downstream from the airfield access bridge



**Photo 4:** New housing development viewed from the right bank of the River Inny.

