

<b>Location: Cappamore, Co. Limerick</b>		<b>Unique ID: 250415</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: 176851</b>	<b>Northing: 151402</b>	
<b>River / Catchment / Sub-catchment</b>	<b>Bilboa River / Mulkear / Shannon</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>	
<p><b>1.1 Flood History (include review of Floodmaps.ie)</b></p>	<p><b>River Flow Path</b></p> <p>The Bilboa River and minor river tributaries flow through the village of Cappamore. The river meanders southward to its confluence with the Mulkear River approximately 3 kilometres away.</p> <p>The Bilboa River is crossed by the R505 (Doon Road) at the eastern boundary of the village.</p> <p><b>Flood Event Records</b></p> <p>Twenty-three flood records are listed in floodmaps.ie. Flooding seems to have been predominantly restricted to greenfield land north and east of the town itself.</p> <p>The area engineers meeting minutes state that a bypass channel has been constructed for the Bilboa River to flow around the village during flood conditions.</p>
<p><b>1.2 Relevant information on flooding issues from OPW and LA staff</b></p>	<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 and historical extents. FRS</i></p> <p><b>LA comments</b> <i>(am) OPW Scheme has resolved the flooding(pm) Scheme in place but future development pressure may occur All agree it is an APSR</i></p> <p><b>Meeting / discussion summary comments:</b></p> <p><b>OPW comments</b></p> <ul style="list-style-type: none"> <li>• Flood Relief Scheme in place: bypasses and flow restrictors. Drawings of this scheme available from the OPW.</li> <li>• Schemes constructed north and east of the town.</li> <li>• Properties that may still be at some risk of flooding are located on the local roads north of the town.</li> <li>• Embankments are in place d/s of the town. Michael Collins (OPW) is aware of some one-off house being built behind these embankments by the new bridge.</li> </ul> <p><b>LA comments</b></p> <ul style="list-style-type: none"> <li>• No known flooding problems since the operation of the OPW flood relief scheme.</li> </ul>

<b>1.4 PFRA Data</b>			
<b>1.4.1 PFRA hazard mapping</b>	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"/>
<b>1.4.2 Summary of Principal Receptors</b>	<b>Type</b>	<b>Number (approx.)</b>	<b>FRI score (if available)</b>
	Fire_Station	1	250
	Health_Centre	1	25
	Monument_LV	1	10
	<b>Total</b>		<b>769.1</b>
<b>1.7 Stage 1 Evaluation</b>	<b>Aspect</b>	<b>Clearly APSR</b>	<b>Uncertain</b>
	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	
<b>1.8 Proposed level of assessment for Stage 2 site visits</b>	<b>Level A Site Visit</b>		
	<b>Level B Site Visit</b>		X

<b>Stage 2: Site Inspection</b>		<b>Level B Assessment</b>	
<b>Date and Time of Inspection</b>		Date: 08/06/11	
		Time: 15:30	
<b>Names of inspection team (including OPW/LA staff if present)</b>		James Murray	
		Mathieu Valois	
<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>There is a large bypass channel on the River Bilboa which is believed to convey extreme flows around Cappamore. No major constrictions identified on the Bilboa or the bypass channel.</p> <p>On the tributary to the west there are two culverts which are unlikely to act as constrictions to flow.</p>		
<b>2.6 Defence Assets</b>			
<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 checked="" 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 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 checked="" type="checkbox"/>	Pipe culvert(s) <input checked="" 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 checked="" type="checkbox"/>	Arch Culvert(s) <input type="checkbox"/>
			Irregular Culvert(s) <input type="checkbox"/>
	<b>Walls and Embankments</b>		
	Embankment(s) <input checked="" 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 checked="" 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>  
<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 checked="" type="checkbox"/> Flood forecasting / warning <input 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 checked="" 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 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 checked="" type="checkbox"/> Asset maintenance <input checked="" type="checkbox"/> <b>Relocation of properties:</b> <input type="checkbox"/> <b>Improve existing defences:</b> <input type="checkbox"/> <b>(describe)</b>  <b>Other (describe):</b>

<b>Outcomes</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>	Cappamore was confirmed as an APSR following a desk based assessment, on the grounds that the OPW have completed a major flood risk management scheme for Cappamore. No on-site verification of this conclusion was required.



**Photo1:** Bypass channel to the Bilboa River



**Photo 2:** Bilboa River



**Photo 3:** Westerly Tributary to the Bilboa River



**Photo 4:** Easterly Tributary to the Bilboa River (Behind the Fire Station)

