

Location: Kilcormac, Co. Offaly		Unique ID: 253051 (from PFRA database)	
Initial OPW Designation	APSR <input checked="" type="checkbox"/>	AFRR <input type="checkbox"/>	IRR <input type="checkbox"/>
Co-ordinates	Easting: 218372	Northing: 213942	
River / Catchment / Sub-catchment	Silver River / Brosna / Shannon		
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 The Silver River flows through the north of Kilcormac and heads west and then north until it turns into Island River before joining the River Brosna.</p> <p>The Silver River is crossed at two locations within the Kilcormac town boundary. One is by the N52 (Bridge Street) and the other by Bridge Street adjacent to the Kilcormac Main Street. A tributary to the Silver River is crossed by the Ballyboy Road situated southeast of the Kilcormac village centre.</p> <p>Flood Event Records Two flood records are listed in floodmaps.ie. Both are dated January 1995. Review of reports indicates that flooding was from a drainage ditch which flows into the Silver River. This ditch is east of the town centre and flows north towards the Silver River. Indications are that the ditch was under capacity resulting in flood water coming out of bank and flowing overland towards the town of Kilcormac.</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>Designated APSR on the basis of predictive analysis and LA comments. Historic (2 dated floods with property flooding) - Predictive mapping error</i></p> <p>LA comments <i>Housing estates by the river. Remove Fire Station score from PFRA analysis as it is closed.</i></p> <p>Meeting / discussion summary comments:</p> <p>OPW comments</p> <ul style="list-style-type: none"> Silver river flows through Kilcormac. Bord Na Mona houses upstream of the town on the left bank are potentially at risk of flooding. <p>LA comments</p> <ul style="list-style-type: none"> LA indicated that they were unaware of any flooding in Kilcormac.

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: 21/04/11		
		Time: 14:00		
Names of inspection team (including OPW/LA staff if present)		Peter Smyth		
		James Murray		
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"/> PFRA hazard mapping indicates no flood risk from the Silver river which appears to be an underestimate. Flood risk from the drainage ditch east of Kilcormac may also be underestimated – based on comments re: 1995 flooding.			
2.2 Spot check ground-truthing of selected receptor vulnerability (also note any key receptors noted during visit that are not identified by PFRA)	Receptor Type	Location description (if not obvious)	Exists?	Overall Vulnerability / Risk (L / M / H)
	Private dwellings	Properties upstream of Kilcormac on left bank, also on left bank immediately downstream of N52 road bridge. Housing south of town that previously flooded	Yes	Medium
	Petrol station	On right bank upstream of N52 road bridge	Yes	Medium
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	There are two main bridges in the town with reasonable expectation not to constrict flows. There is a further foot bridge in the town but it poses no hydraulic constriction as it would be bypassed in a flood event.			

2.5 SVRS Assessment Matrix												
Weightings: 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				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	X			500				1000			
Critical Infrastructure (national importance)	250				1000				2000			
Cultural Heritage Site	20	X			200				400			
Environmental Designated Site	20				200				400			
Hazardous Substances Site	50				500				1000			
Total SVRS									200			

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>	<p>Open Channel Watercourses</p> <p>Man-made river channel <input type="checkbox"/> Flood relief channel <input type="checkbox"/> Canal <input type="checkbox"/></p> <p>Mill leat <input type="checkbox"/> Drainage channels / back drains <input type="checkbox"/></p> <p>Bridges and Culvert crossings</p> <p>Single Arch bridge <input type="checkbox"/> Multi-Arch bridge <input type="checkbox"/></p> <p>Single Span bridge <input checked="" type="checkbox"/> Multi-Span bridge <input type="checkbox"/></p> <p>Box culvert(s) <input type="checkbox"/> Pipe culvert(s) <input type="checkbox"/> Arch Culvert(s) <input type="checkbox"/></p> <p>Culverted Watercourses (culvert length is greater than just a crossing)</p> <p>Box culvert(s) <input type="checkbox"/> Pipe culvert(s) <input type="checkbox"/> Arch Culvert(s) <input type="checkbox"/> Irregular Culvert(s) <input type="checkbox"/></p> <p>Walls and Embankments</p> <p>Embankment(s) <input type="checkbox"/> Raised wall(s) <input checked="" type="checkbox"/> Retaining wall(s) <input type="checkbox"/></p> <p>Control Structures – weirs, gates, dams</p> <p>Fixed crest weir <input type="checkbox"/> Adjustable weir <input type="checkbox"/> Dam / Barrage <input type="checkbox"/></p> <p>Sluice gates <input type="checkbox"/> Lock gates <input type="checkbox"/> Radial gates <input type="checkbox"/></p> <p>Storage</p> <p>On-line storage (natural) <input type="checkbox"/> On-line storage (artificial) <input type="checkbox"/> Off-line storage <input type="checkbox"/></p> <p>Outfalls</p> <p>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></p> <p>Tidal flap(s) <input type="checkbox"/> Tidal sluice(s) <input type="checkbox"/> <i>i.e. from main watercourse into estuary / sea</i></p>

	Other Pumping Station <input type="checkbox"/> Erosion Protection <input type="checkbox"/> Sand Dunes <input type="checkbox"/> Additional notes (if required):
2.8 Initial Potential Mitigation Measures	
Non-structural measures	Planning and Development control <input checked="" 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 checked="" 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 checked="" 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 checked="" type="checkbox"/> Floodplain <input type="checkbox"/> Flood defences: Walls <input checked="" type="checkbox"/> Embankments <input checked="" 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 checked="" type="checkbox"/> Relocation of properties: <input type="checkbox"/> Improve existing defences: <input type="checkbox"/> (describe) Other (describe):

Outcomes				
PFRA Designation	APSR <input checked="" type="checkbox"/> not an APSR <input type="checkbox"/> IRR <input type="checkbox"/>		FRI Score: Not scored	
Site Ground-truthing of PFRA Assessment (hazard mapping and receptors)	High Confidence (good)	Uncertain	Low Confidence (poor)	Not available
			X	
Site Visit Review Score	200			
Recommended Designation	APSR <input checked="" type="checkbox"/> not an APSR <input type="checkbox"/> IRR <input type="checkbox"/>			
Summary Comments (if required)	Kilcormac is recommended as an APSR on the historical evidence of flooding and the number of critical receptors significantly at risk from fluvial flooding.			



Photo1: Bridge over Silver River upstream of Kilcormac.



Photo 2: Silver River through Kilcormac.



Photo 3: Silver River through Kilcormac.



Photo 4: Bridge over Silver River downstream of Kilcormac.

