

Location: Cranny, Co. Clare		Unique ID: 270473 (from PFRA database)	
Initial OPW Designation	APSR <input type="checkbox"/>	AFRR <input checked="" type="checkbox"/>	IRR <input type="checkbox"/>
Co-ordinates	Easting: 116750		Northing: 160500
River / Catchment / Sub-catchment	Cloon River / 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)	River Flow Path <p>The village of Cranny is located just east of the Cloon River, a tributary of Shannon Estuary North. The Kilfiddane also a tributary of Shannon converges with the Cloon River south of Cranny Village. The Cloon river is crossed by the Croony Bridge within the western boundary of the village.</p> Flood event records <p>There are 2 flood records listed 1 recurring and 1 singular event for the same location. One report dated 2005.</p> <ul style="list-style-type: none"> Cranny Bridge (Cloon River) - Road floods over 30-40 metres on average once per year. Last occurred on 07/01/05. However, the road is passable and no houses are affected. Duration of flooding is usually 3 to 4 hours. Cause is heavy rainfall/runoff and inadequate channel capacity.
1.2 Relevant information on flooding issues from OPW and LA staff	PFRA database comments (<i>in italics</i>): OPW comments <i>Possible Wedge - Discuss ESB Sub-station with ESB - Is Moneypoint an IRR?</i> LA comments <i>APSR Score of 2520, 2500 due to ESB Substation. There is a significant ESB Station approximately 2km south of the village which is part of the Money Point Power Infrastructure – Not an APSR</i> Meeting / discussion summary comments: OPW comments LA comments <ul style="list-style-type: none"> (PM) No previous history of flooding. Surprised that this is listed as an AFRR. Suggest that the identification of the ESB sub-station is checked to confirm that this is what it is. Is it possible that it is a sub-station either 2km south of Cranny or even 6km SSW of Cranny (marked on the OSi 1:50k map).

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)
	ESB_HV_Sub_Weighted_F_C		2500
	Total		2520
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: 07/06/11		
		Time: 19:20		
Names of inspection team (including OPW/LA staff if present)		Iain Blackwell		
		Lewis Maani		
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"/>			
	Flood hazard mapping appears reasonable. Flooding of the road on the left on left bank immediately downstream of Croony Bridge (near to the ESB substation) is feasible.			
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)	ESB substation (local distribution)	Approximately 30m away from river on left bank downstream off bridge.	Yes	M
	Single Residential property/House	Right bank downstream of bridge.	Yes	L
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	Croony bridge appears to provide adequate conveyance capacity. However, there is the potential for severe flood events to cause flood low lying areas on the left bank. Generally the valley sides are steep and there are no alternative conveyance routes during flood flows.			

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				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			
Total SVRS								60				

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 <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"/> Additional notes (if required):
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 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 type="checkbox"/> Asset maintenance <input 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:	
Site Ground-truthing of PFRA Assessment (hazard mapping and receptors)	High Confidence (good)	Uncertain	Low Confidence (poor)	Not available
	X			
Site Visit Review Score	60			
Recommended Designation	APSR <input type="checkbox"/> not an APSR <input checked="" type="checkbox"/> IRR <input type="checkbox"/>			

<p>Summary Comments (if required)</p>	<p>The only asset at risk in Cranny is a local ESB substation.</p> <p>The flood history suggests that road flooding occurs occasionally, but the ESB substation has not been affected. The substation is located approximately 30m away from watercourse on left bank.</p> <p>The ground level at the location of the assets within the substation compound has a ground level that is up to 0.4-0.5m above the adjacent road level.</p> <p>There is not a significant risk to the substation, but the low risk that there is could be minimised with minor improvements, for example, providing a raised curb or low bund around water-sensitive equipment. It is noted that there already a bund present around the transformer (assumed to be because it is an oil-filled transformer). This provides additional flood protection.</p> <p>Taking the above factors into account it is concluded that Cranny should not be designated as an APSR.</p>
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Photo 1: Bridge of the River Cloon in Cranny



Photo 2: Road on the left bank just downstream of the bridge.



Photo 3: ESB 38 kV Substation compound



Photo 4: Gravelled area in the foreground is the entrance to the ESB compound. River is located behind small embankment (near the telegraph pole).



Photo 5: Road with the compound entrance on the right, looking upstream towards the bridge.



Photo 6: ESB substation equipment



Photo 7: ESB substation equipment. Note the low bund around the transformer.



Photo 8: ESB substation equipment - control room

