

Location: Lumcloon Power Station Co. Offaly		Unique ID: 250403 (from PFRA database)	
Initial OPW Designation	APSR <input type="checkbox"/>	AFRR <input type="checkbox"/>	IRR <input checked="" type="checkbox"/>
Co-ordinates	Easting: 213500	Northing: 219000	
River / Catchment / Sub-catchment	Silver River / 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</p> <p>The Silver river runs from south to north past the proposed site, which is situated to the west of the river. The river continues north and then north west towards its confluence with the Brosna at Ferbane.</p> <p>Flood Event Records</p> <p>No flood records are listed in floodmaps.ie.</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>Not designated APSR. Included as IRR. In Shannon docs as a IRR powerstation GP 10/2/11 Need to identify this as part of other APSR - List in Shannon CFRAM Docs specifically as being part of other APSR. Included as IRR.</i></p> <p>LA comments <i>School next to river. New gas fire power station just outside mapping. New Power Station. Request by Offaly Co Co to be an IRR. Is an IRR in the Shannon document.</i></p> <p>Meeting / discussion summary comments:</p> <p>OPW comments No comments</p> <p>LA comments No comments</p>

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)	
	<p>Note: Lumcloon power station has no score included in the PFRA database.</p> <p>There is a total score from Lumcloon of 360.1. However, this is not relevant for the assessment of Lumcloon Power Station as an IRR. Lumcloon itself was not considered in the Flood Risk Review.</p> <p>Total</p>	<p>N/A</p> <p>N/A</p>	
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: 07/09/11		
		Time: 16:00		
Names of inspection team (including OPW/LA staff if present)		Iain Blackwell		
		Peter Smyth		
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"/> The mapping shows some large “wedges” over the right bank, and further upstream just to the south of the site which do not represent a realistic flood outline. However, the general site observation that the left bank is higher than the right bank is reflected in the PFRA mapping, with the site itself NOT shown as being flooded.			
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)
	Power station	Site is on the south side of the R357 just east of Lumcloon village. The power station has not been constructed.	N	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	There is a bridge crossing adjacent to the site which may give a backwater influence under high flows. Conveyance would be around the bridge and over the R357 in extreme flows, with flooding occurring over the lower right (eastern) bank first.			

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				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				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								0				
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 type="checkbox"/> Drainage channels / back drains <input type="checkbox"/>											
	Bridges and Culvert crossings Single Arch bridge <input checked="" type="checkbox"/> Multi-Arch bridge <input 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 type="checkbox"/> Raised wall(s) <input type="checkbox"/> Retaining wall(s) <input type="checkbox"/>											
	Control Structures – weirs, gates, dams 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"/>											
	Storage On-line storage (natural) <input type="checkbox"/> On-line storage (artificial) <input type="checkbox"/> Off-line storage <input type="checkbox"/>											

	<p>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></p> <p>Other Pumping Station <input type="checkbox"/> Erosion Protection <input type="checkbox"/> Sand Dunes <input type="checkbox"/></p> <p>Additional notes (if required): The site is located on slightly raised ground immediately west of the Silver River. However, there are no flood defence assets associated with the IRR as it has not yet been built.</p>
<p>2.8 Initial Potential Mitigation Measures</p>	
<p>Non-structural measures</p>	<p>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 type="checkbox"/> Land use management <input type="checkbox"/></p>
<p>Structural measures</p>	<p>Strategic development management for floodplain development: <input type="checkbox"/> <i>(integration of measures into strategic development proposals)</i></p> <p>Storage: On-line <input type="checkbox"/> Off-line <input type="checkbox"/></p> <p>Flow diversion: Flood relief channel <input type="checkbox"/> Flood relief culvert <input type="checkbox"/></p> <p>Increase conveyance: Bridge works <input type="checkbox"/> Channel works <input type="checkbox"/> Floodplain <input type="checkbox"/></p> <p>Flood defences: Walls <input type="checkbox"/> Embankments <input type="checkbox"/></p> <p>Localised works: Defence raising <input type="checkbox"/> In-fill gaps <input type="checkbox"/> Trash screen <input type="checkbox"/></p> <p>Maintenance works: Culvert / channel clearance <input type="checkbox"/> Asset maintenance <input type="checkbox"/></p> <p>Relocation of properties: <input type="checkbox"/></p> <p>Improve existing defences: <input type="checkbox"/> (describe)</p> <p>Other (describe): Potential mitigation measures are inappropriate to identify at this stage as the power station has not been built.</p>

Outcomes				
PFRA Designation	APSR <input type="checkbox"/> not an APSR <input type="checkbox"/> IRR <input checked="" type="checkbox"/>			FRI Score: None
Site Ground-truthing of PFRA Assessment (hazard mapping and receptors)	High Confidence (good)	Uncertain	Low Confidence (poor)	Not available
		x		
Site Visit Review Score	0			
Recommended Designation	APSR <input type="checkbox"/> not an APSR <input checked="" type="checkbox"/> IRR <input type="checkbox"/>			
Summary Comments (if required)	<p>There is no known historical evidence of flooding at the Lumcloon site. The PFRA deals with the Lumcloon area with 250 points (out of the total of 360.1) on the FRI score attributed to a primary school. The power station itself has no score in the PFRA. This is likely due to the fact that the station is not currently built but is still in the planning stage.</p> <p>The potential issue at Lumcloon is the significance that would be associated with a major flood event affecting nationally important infrastructure.</p> <p>However, the site visit confirmed that the ground level at the site (on the left bank) is elevated compared to the right bank. As there is no power station yet constructed, it is not appropriate to consider flood risk and mitigation measures at this stage as the finished floor level of the proposed power station can not be determined.</p> <p>The site is recommended NOT to be designated as an IRR (or an APSR).</p>			



Photo 1: Sign for Lumcloon Power Station located at the site on the R357.



Photo 2: Entrance to the site, currently with no construction activity.



Photo 3: Silver River located immediately east of the proposed site of the power station.

