

Location: Moneypoint Power Station, Co. Clare		Unique ID: 275488 (from PFRA database)	
Initial OPW Designation	APSR <input type="checkbox"/>	AFRR <input type="checkbox"/>	IRR <input checked="" type="checkbox"/>
Co-ordinates	Easting: 103700	Northing: 151500	
River / Catchment / Sub-catchment	Shannon Estuary		
Type of Flooding / Flood Risk (identify all that apply)	Fluvial non-tidal <input type="checkbox"/> Fluvial tidal <input type="checkbox"/> Coastal <input checked="" type="checkbox"/>		

Stage 1: Desktop Review	
1.1 Flood History (include review of Floodmaps.ie)	River Flow Path <p>At this location the Shannon Estuary is several km wide, fully influenced by the tide rather than fluvial flows, and is therefore noted as being vulnerable to “coastal” flooding rather than “fluvial tidal” flooding.</p> <p>ESB Moneypoint has (1979) a coal burning station on the north side of the Shannon estuary with a deep water berthing facility.</p> Flood event records <p>There are no flood records listed for Moneypoint Power Station i.e. the townland of Carrowdotia South.</p>
1.2 Relevant information on flooding issues from OPW and LA staff	PFRA database comments (<i>in italics</i>): <p>OPW comments <i>In Shannon docs as IRR.</i></p> <p>LA comments <i>No comments</i></p> <p>Note: Moneypoint Power Station is listed in the PFRA database, but there is no score included in the database, and no further comments on flood risk.</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"/>		
Note: Whilst the PFRA mapping is available for the area (for fluvial flooding), there are no watercourses within the vicinity of the power station, and hence, there is no indicative flooded area shown on the FRR map.			
1.4.2 Summary of Principal Receptors	Type	FRI score (if available)	
	Note: Moneypoint power station has no score included in the PFRA database.		N/A
1.7 Stage 1 Evaluation	Aspect	Clearly IRR	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: 12:30		
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 type="checkbox"/> Fluvial tidal <input type="checkbox"/> Coastal <input type="checkbox"/> Not available <input checked="" type="checkbox"/>			
	No hazard mapping for coastal flooding for ground truthing.			
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)
	Coal fired power station	On northern shore of the Shannon Estuary	Y	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	Any potential flood risk is from the Shannon Estuary, and therefore there are no hydraulic constrictions or conveyance routes.			

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 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 checked="" type="checkbox"/> Sand Dunes <input type="checkbox"/></p> <p>Additional notes (if required): The site is very exposed to wave action, particularly from the west and southwest. There is erosion protection (rather than flood defences) on the shoreline along the frontage of the site comprising a rock revetment. However, the ground level at the site itself is well above the estuary high tide level.</p>
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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 type="checkbox"/> Land use management <input type="checkbox"/>
Structural measures	<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):</p>

Outcomes				
PFRA Designation	APSR <input type="checkbox"/> not an APSR <input type="checkbox"/> IRR <input checked="" type="checkbox"/>		FRI Score: N/A	
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)	There is no known historical evidence of flooding at Moneypoint Power Station. The site visit confirmed that the ground level at the lowest point on the site (the eastern end) is approximately 3.5m above high spring tide levels. Assets are located at even higher levels, and therefore there is not a significant flood risk at the site. The site is recommended NOT to be designated as an IRR (or an APSR).			



Photo 1: The eastern end of the site, with ground levels around 3.5m above high spring tide levels.



Photo 2: General view of Money point Power Station from the estuary frontage.



Photo 3: Rock armour along the frontage at the site. The high spring tide level (shown by the red line on the rock armour) is seen to be a few metres below the ground level at the site.



Photo 4: Aerial view of Moneypoint Power Station looking towards the east and northeast. The foreground shows the majority of the site is set well back from the estuary frontage, with the land rising inland.

