

Location: Dromod, Co. Leitrim		Unique ID: 263,661 (from PFRA database)	
Initial OPW Designation	APSR <input type="checkbox"/>	AFRR <input checked="" type="checkbox"/>	IRR <input type="checkbox"/>
Co-ordinates	Easting: 205,362	Northing: 289,756	
River / Catchment / Sub-catchment	River Eslin / Shannon (Lough Bofin)		
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 River Eslin flows through Dromod and meanders southwards to the river's confluence with Lough Bofin. The town of Dromod extends to the shores of the Lough and has an associated marina. The River Eslin is crossed by the R371 (Station Road).</p> <p>Flood Event Records There are records of 2 flood events on floodmaps.ie in the vicinity of Dromod as a result of flooding from the River Shannon / Lough Bofin. In addition there are records of recurring flooding of the N4 south of Dromod from the River Eslin.</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>None</i></p> <p>LA comments <i>None</i></p> <p>Meeting / discussion summary comments:</p> <p>OPW comments</p> <ul style="list-style-type: none"> • There is a flood history at Dromod. • There has been a scheme on the River Eslin, the maintenance of which is covered by the local Drainage District. However, the watercourse had fallen into disrepair leading to a minor works application. OPW provided funding for works to minor tributary only; otherwise the river is funded via Drainage District and therefore does not qualify for additional funding. <p>LA comments</p> <ul style="list-style-type: none"> • Flooding recorded during November 09 event. • Water levels during 2009 flood were recorded by Brian Kenny of Leitrim CoCo near Dromod Harbour. • House possibly flooded along harbour front. • Pumping station flooded on far side of car park from quay wall and wastewater treatment at harbour flooded. • Properties noted to be at risk of flooding from River Eslin to the north of the railway station.

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: 19/05/11		
		Time: 11:30		
Names of inspection team (including OPW/LA staff if present)		Alan Dew		
		James Murray		
		Brian Kenny, Leitrim CoCo (briefly present on arrival)		
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 mapping is generally good; however risk of flooding is slightly underestimated adjacent to the Lough shore.			
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)
	Restaurant	Quayside	Yes	M
	Public toilet	Quayside	Yes	M
	WWTW / Pumping Station	Quayside	Yes	M
	Residential properties	Quayside	Yes	M
	Railway station	River Eslin	Yes	M
	Properties adjacent to railway station	River Eslin	Yes	M
2.3 Local knowledge - on-site comments (OPW, LA and any info volunteered by local residents during visit)	Brian Kenny, Leitrim CoCo, whilst on a joint site visit: <ul style="list-style-type: none"> Flooding recorded during November 09 event. Water levels during 2009 flood were recorded by Brian Kenny of Leitrim CoCo near Dromod Harbour. House possibly flooded along harbour front. Pumping station flooded on far side of car park from quay wall and wastewater treatment at harbour flooded. Properties noted to be at risk of flooding from River Eslin to the north of the railway station. 			
2.4 Comments on hydraulic constrictions (bridges, etc.) and conveyance routes	Station Rd bridge over River Eslin noted to be a constraint to flow, as the soffit of the bridge is lower than bank level (~5m width). This bridge would also constrain any water backing up from River Shannon. Properties south-east and south-west of the bridge may potentially be at risk, it is noted that many of these properties are not occupied at present.			

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	X			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									170			

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 ☐ Unflapped outfall(s) into watercourse ☐
i.e. from smaller watercourses, drains etc. into river / estuary / sea
Tidal flap(s) ☐ Tidal sluice(s) ☐
i.e. from main watercourse into estuary / sea

	Other Pumping Station <input checked="" type="checkbox"/> Erosion Protection <input type="checkbox"/> Sand Dunes <input type="checkbox"/> Additional notes (if required): <ul style="list-style-type: none"> Quay wall (Lough Bofin)
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 checked="" type="checkbox"/> Public awareness campaign <input checked="" type="checkbox"/> Individual property protection <input 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 checked="" 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 checked="" type="checkbox"/> In-fill gaps <input checked="" 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): <ul style="list-style-type: none"> Raise quay wall level and tie into other defences on Lough shore.

Outcomes				
PFRA Designation	APSR <input type="checkbox"/> not an APSR <input checked="" 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	170			
Recommended Designation	APSR <input checked="" type="checkbox"/> not an APSR <input type="checkbox"/> IRR <input type="checkbox"/>			
Summary Comments (if required)	The reasons for the recommendation of Dromod as an APSR are as follows: <ul style="list-style-type: none"> Dromod has a history of flooding including the November 2009 event; and There are sufficient critical receptors at significant risk of fluvial flooding. 			



Photo1: Dromod harbour wall



Photo 2: Housing adjacent to Dromod harbour



Photo 3: Recent development on left bank of River Eslin, downstream of the railway station.



Photo 4: The River Eslin (on the left) as viewed from the footbridge at Dromod Railway Station.

