

Location: Moneycashen, Co. Kerry		Unique ID: 232679 (from PFRA database)	
Initial OPW Designation	APSR <input type="checkbox"/>	AFRR <input checked="" type="checkbox"/>	IRR <input type="checkbox"/>
Co-ordinates	Easting: 85964	Northing: 137951	
River / Catchment / Sub-catchment	River Cashen / Feale Catchment		
Type of Flooding / Flood Risk (identify all that apply)	Fluvial non-tidal <input type="checkbox"/> Fluvial tidal <input checked="" type="checkbox"/> Coastal <input checked="" type="checkbox"/>		

Stage 1: Desktop Review	
1.1 Flood History (include review of Floodmaps.ie)	<p>General Area</p> <p>Moneycashen is a small settlement area along the coast at the mouth of the River Cashen. The estuary at this location is several hundred metres wide, although it narrows to the west at the entrance to the Shannon.</p> <p>Flood event records</p> <p>There are 2 flood records one recurring and one singular for the same areas. The flood events are associated with the Cashen Seawall.</p> <p><i>“Cashen village on the L6038 at the mouth of the Cashen River is flooded 2 to 3 times annually. The cause is the sea wall being overtopped by high tide, wind and waves. 3/4 houses are flooded and road is impassable. OPW is responsible for the sea defences or part of them. “</i></p>
1.2 Relevant information on flooding issues from OPW and LA staff	<p>PFRA database comments (<i>in italics</i>):</p> <p><i>OPW comments</i> <i>Predictive < 150 - History: 1 dated flood with 12 properties reported as flooding - No Strong LA Support as APSR</i></p> <p><i>LA comments</i> <i>Risk of tidal flooding at Moneycashen Village</i></p> <p>Meeting / discussion summary comments:</p> <p>OPW comments</p> <ul style="list-style-type: none"> • A lot of sediment deposition in this area. Local residents are calling for increased dredging activities to help alleviate flooding. However, this is not considered to be an appropriate measure. • Flood mechanism is tidal. There is a surface water issue when water overtopping the defences can get trapped, however, this is still a tidal issue. • Need to determine why water is being trapped. • This flooding occurs at the properties and road at the western edge of Moneycashen. • There may be a small/low gap in the defences near this location. <p>LA comments</p> <ul style="list-style-type: none"> • Flooding problem is linked to road flooding perhaps once a year, most likely to be due to surface water flows flowing north and getting trapped behind the flood defence wall.

1.4 PFRA Data			
1.4.1 PFRA hazard mapping	PFRA mapping available in GIS layer:		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
	PFRA mapping included on FRR map:		Yes <input type="checkbox"/> No <input checked="" 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: 13/05/11		
		Time: 14:00		
Names of inspection team (including OPW/LA staff if present)		Mathieu Valois		
		Kelly Kasperczyk		
2.1 Ground-truthing of Hazard Mapping	Fluvial non-tidal <input type="checkbox"/> Fluvial tidal <input type="checkbox"/> Coastal <input checked="" type="checkbox"/> Not available <input type="checkbox"/>			
	Coastal mapping was not available at time of the review			
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)	Fishing business/assets	At pier	Y	High
	Local road		Y	High
	Houses		Y	Moderate
2.3 Local knowledge - on-site comments (OPW, LA and any info volunteered by local residents during visit)	Nurse at Riverside Nursing Home, Abbeydorney (lives in Moneycashen) <ul style="list-style-type: none"> Waves overtop the seawall and water cannot return to the river as debris blocks the drains. Properties at extreme end of sea wall are prone to flood; properties east of these don't really flood. Houses further east – water reaches up onto the grass at the front of these properties. Water also damages roads (pot holes). Photos of the flood waters are available. 			
2.4 Comments on hydraulic constrictions (bridges, etc.) and conveyance routes	No hydraulic restrictions noted. Not relevant to this area being considered for coastal flood risk.			

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		X		200			
Property (small retail or business)	20		X		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				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									300			

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 ☐

	<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> <p>Other</p> <p>Pumping Station <input type="checkbox"/> Erosion Protection <input type="checkbox"/> Sand Dunes <input type="checkbox"/></p> <p>Additional notes (if required):</p> <p>Sea wall starts at Knoppoge junction at the sand dunes and extends west to the pier where there is a gap providing access to fishing pots/traps stored here. Gap is approx 3m long. The sea wall then extends towards the second last house to the west.</p>
2.8 Initial Potential Mitigation Measures	
Non-structural measures	<p>Planning and Development control <input type="checkbox"/></p> <p>Sustainable Urban Drainage Systems <input type="checkbox"/></p> <p>Flood forecasting / warning <input checked="" type="checkbox"/></p> <p>Change in Operating Procedures for water level control: <input type="checkbox"/></p> <p>Public awareness campaign <input type="checkbox"/></p> <p>Individual property protection <input type="checkbox"/></p> <p>Land use management <input type="checkbox"/></p>
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 checked="" type="checkbox"/> Embankments <input type="checkbox"/></p> <p>Localised works: Defence raising <input checked="" type="checkbox"/> In-fill gaps <input checked="" 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> <p>Improve surface water drainage system to alleviate trapped water after wave overtopping, allowing water to drain through the sea wall.</p> <p>The gap in the defences at the west end (approx. 3m) is required for fishing related activities. Could consider a gate or removable flood boards / stoplogs at this location to avoid interfering with fishing / quay activities.</p>

Outcomes				
PFRA Designation	APSR <input type="checkbox"/> not an APSR <input checked="" type="checkbox"/> IRR <input 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	300			
Recommended Designation	APSR <input checked="" type="checkbox"/> not an APSR <input type="checkbox"/>		IRR <input type="checkbox"/>	

<p>Summary Comments (if required)</p>	<p>The combination of:</p> <ul style="list-style-type: none"> • the presence of the sea wall; • overtopping of the wall • water becoming trapped behind the defences • properties becoming isolated when the road is flooded, and • sea level rise <p>suggest that this location is potentially at significant risk of flooding, and this is only likely to get worse with climate change related impacts – primarily sea level rise and increased storminess.</p> <p>It is concluded that this location should be designated as an APSR.</p>
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Photo 1: Sea wall protecting properties from wave overtopping



Photo 2: Gap in the seawall defence



Photo 3: Location of potential road flooding at Cloghane



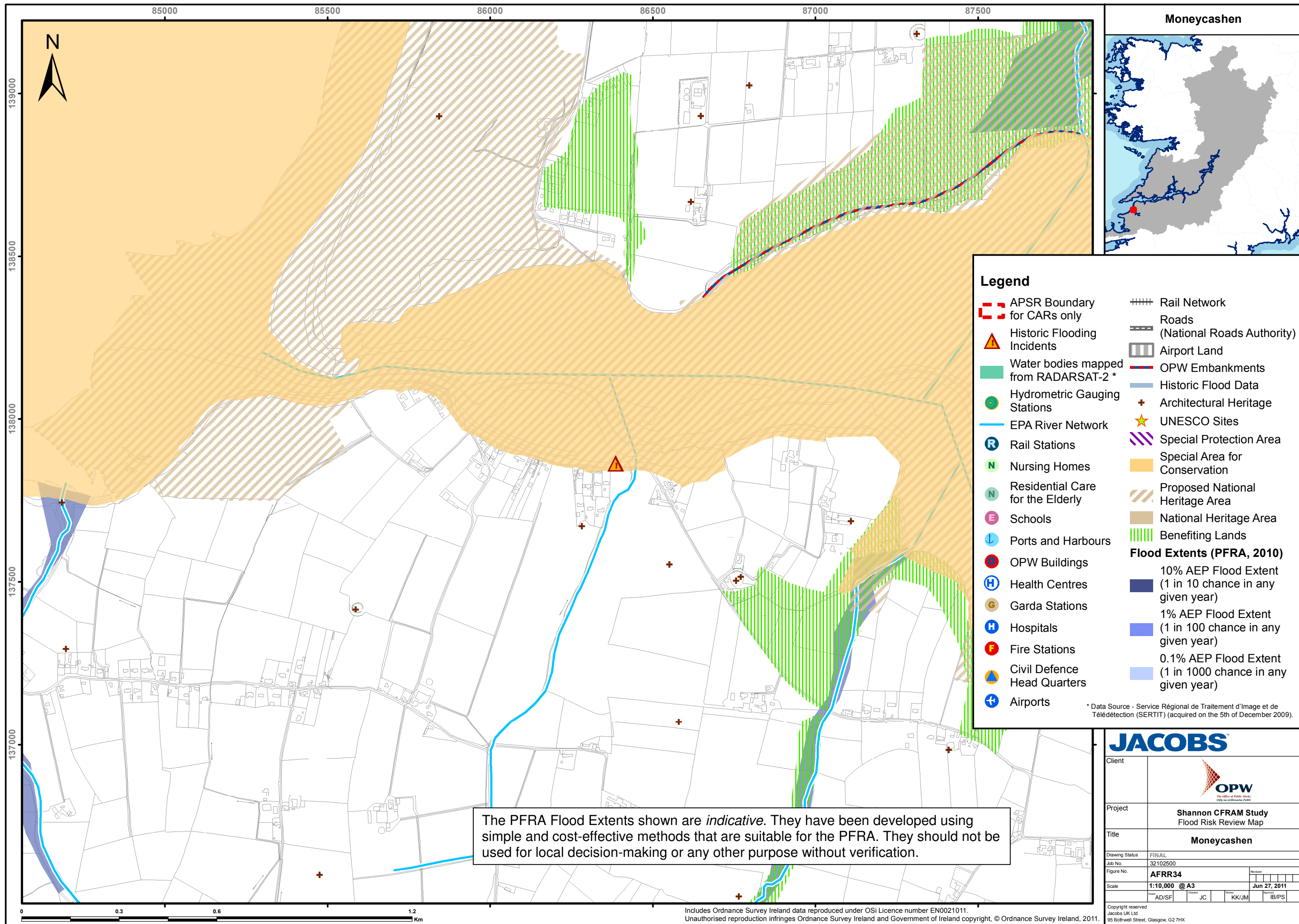
Photo 4: Looking west, start of elevated properties behind the sea wall




Photo 5: Sea wall height, properties higher in the background



Photo 6: Looking west the road runs along the length of the sea wall near Knoppoge. This road has previously flooded as water becomes trapped behind the sea wall



JACOBS	
Client	
Project	Shannon CFRAM Study Flood Risk Review Map
Title	Moneycashen
Drawing Status	FINAL
Job No.	32102500
Figure No.	AFRR34
Scale	1:10,000 @ A3
Drawn	AD/SF
Checked	JC
Reviewed	KK/JM
Approved	IB/PS
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