Location: Carhoonaknock, Co. Kerry		Unique ID: 230346 (from PFRA database)	
Initial OPW Designation	**APSR** ☐	**AFRR** ☒	**IRR** ☐
Co-ordinates	**Easting: 96500**	**Northing: 137750**	
River / Catchment / Sub-catchment	**The Galey River / Feale Catchment**		
Type of Flooding / Flood Risk (identify all that apply)	**Fluvial non-tidal** ☒ **Fluvial tidal** ☐ **Coastal** ☐		

Stage 1: Desktop Review

1.1 Flood History (include review of Floodmaps.ie)

River Flow Path

The Galey River flow south on the boundary of the townland and a tributary of this river flows through Carhoonaknock.

Flood event records

There is 1 recurring flood event record from 2005 (report and photos) this is located just outside the townland of Carhoonaknock West and occurs in the townland Coolard.

- *"The L6029 floods and is impassable once or twice each year. Cause is a drain feeding the Galey River overflows. 4 no. houses are at risk. One house has been flooded. Problem could possibly be alleviated by maintaining drains".*

1.2 Relevant information on flooding issues from OPW and LA staff

PFRA database comments *(in italics)*:

OPW comments
Investigate first under risk review - Wedge D/S of road - Possible Minor Works

LA comments
LA - not sure why this location is included .There may be some flooding of lands near Shrone Bridge on the Galey River, but more significant flooding occurs around Ballyline and Aghanagran LoLAr closer to Ballylongford on the R552.

Meeting / discussion summary comments:

OPW comments
- Attendees are not aware of any significant issues in this area or requests for minor works in this area.
- The tributary of the Galey river that runs next to the school is not part of OPW's scheme in this area.

LA comments
- Not aware of any flooding issue.

1.4 PFRA Data			
1.4.1 PFRA hazard mapping	**PFRA mapping available in GIS layer:** Yes ☒ No ☐ **PFRA mapping included on FRR map:** Yes ☒ No ☐		
1.4.2 Summary of Principal Receptors	**Type**		**FRI score (if available)**
	Primary_Weighted_F_S		250
	Total		**290**
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: 26/05/11** **Time: 16:00**
Names of inspection team (including OPW/LA staff if present)	**Iain Blackwell** **Kelly Kasperczyk**

2.1 Ground-truthing of Hazard Mapping	**Fluvial non-tidal ☒ Fluvial tidal ☐ Coastal ☐ Not available ☐**			
	The flood extents look reasonable, including at critical locations observed on site in relation to possible flooding of the road next to the school (but not the school) and flooding of the GAA sports field on the right bank downstream of the road at the school. The flood outline for the Galey close to Shrone Bridge also appears reasonable.			
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)**
	School		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	Twin culverts present at Garryard (not on the watercourse of primary concern). Single arch bridge adjacent to the school. This could cause a constriction during high flows. Once water goes out of bank at this location, it would spill over the right bank first, between the bridge and the school, and would flow to the southwest away from the school, towards the GGA sports field and local road to the southwest. Water would then either continue along the road or would flow back into the watercourse downstream of the bridge.			

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 race ☐ 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 ☐ Erosion Protection ☐ Sand Dunes ☐ **Additional notes (if required):** It is assumed that Shrone Bridge is a single span bridge – access was difficult on the day of the site visit. It is emphasised that this does not present any flood risk to Carhoonaknock. The School grounds are walled, but there are two access gates with openings.
2.8 Initial Potential Mitigation Measures	
Non-structural measures	Planning and Development control ☐ Sustainable Urban Drainage Systems ☐ Flood forecasting / warning ☐ Change in Operating Procedures for water level control: ☐ Public awareness campaign ☐ Individual property protection ☒ Land use management ☐
Structural measures	**Strategic development management for floodplain development:** ☐ *(integration of measures into strategic development proposals)* **Storage:** On-line ☐ Off-line ☐ **Flow diversion:** Flood relief channel ☐ Flood relief culvert ☐ **Increase conveyance:** Bridge works ☐ Channel works ☐ Floodplain ☐ **Flood defences:** Walls ☐ Embankments ☐ **Localised works:** Defence raising ☐ In-fill gaps ☐ Trash screen ☐ **Maintenance works:** Culvert / channel clearance ☐ Asset maintenance ☐ **Relocation of properties:** ☐ **Improve existing defences:** ☐ **(describe)** **Other (describe):**

Outcomes				
PFRA Designation	**APSR ☐ not an APSR ☒ IRR ☐**		**FRI Score: 290**	
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 ☐**	**not an APSR ☒**	**IRR ☐**	

Summary Comments (If required)	The cross-roads at the school lie in a natural basin/valley. The lands surrounding the school and GAA grounds are flat, but the school is elevated above the flood plain level. The flow path at this location indicates that flood waters would be directed away from the school, to the d/s side of the cross-roads towards the river and the GAA playing field. The school is noted in section 2.5 as having a “reasonable” expectation of flooding. This is really to acknowledge that the school is there (as it is the main part of the FRI score), but the flood risk is considered to be **low.** No significant risk was identified at Shrone Bridge on the River Galey. The location is not considered to be at potentially significant risk and is therefore recommended that it should NOT be designated as an APSR.

Photo 1: Looking NW at Carhoonaknock School, on the right bank of the river the road slopes up to the school

Photo 2: D/s side of the single arch bridge southeast of the school

Photo 3: Looking SE with the school on the left of the road, can see the slope of the road towards the school with a slight dip in the road at the bridge crossing

Photo 4: Looking towards the school, out of bank flows on the right bank u/s of the bridge will flow along the road between the school and the river then southwest towards the GAA sports field across the road from the school

Photo 5: Looking southeast with the school to the left and GAA sports field to the right