Location: Ballinasloe, Co. Galway		Unique ID: 260451 (from PFRA database)	
Initial OPW Designation	**APSR** ☒	**AFRR** ☐	**IRR** ☐
Co-ordinates	**Easting: 184,750**	**Northing: 231,999**	
River / Catchment / Sub-catchment	**Bunowen River & Deer Park River / River Suck**		
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 Bunowen and Deer Park Rivers confluence with the River Suck immediately north of Ballinasloe, which then flows through Ballinasloe in a south-easterly direction. River tributaries are also located within the town's boundary.

The River Suck has historically been re-directed to flow to the east of the town centre, away from its original course which passed to the immediate east of the town centre. The former course of the River Suck, which is now a much smaller watercourse, is crossed by the R446 (Church Street), the R446 (Bridge Street), the R348 (Bridge Street), road near St Michael's Square and by a railway line to the north.

Flood Event Records
There are records of 13 flood events in the vicinity of the town, including events in 1954, 1995, 1999, 2002, 2005 and 2009.

1.2 Relevant information on flooding issues from OPW and LA staff

PFRA database comments *(in italics)*:

OPW comments
Designated APSR on the basis of predictive analysis. (Combined score 315.2 + 172.2 = 487.4.)

LA comments
100 premises flooded-People evacuated-Scheme planned-N18 flooded-November 2009, 2006 (Not to

Meeting / discussion summary comments:

OPW comments

- The town flooded in November 2009
- A Heritage Report has been developed by the County Council, which proposes that the sluice gates on the old N6 road bridge be retained for Industrial Heritage reasons. These sluice gates significantly reduce the conveyance capacity of the old N6 bridge.
- Minor works have been completed, comprising the construction of a bypass route along the old mill race. Also new culverts are proposed beneath the old N6, funding has been granted for this work.
- The main responsibility for maintenance works etc. would lie with the Sub-Drainage Committee.

	LA comments • A Minor Works scheme is currently nearing completion in the upper section of the River Suck corridor within the town. This area has suffered repeated flooding for the past 25 years. The area benefiting from the scheme is upstream of the railway line on the right bank, where risk comes from both Deer Park River and River Suck. The height of the proposed flood defences are the November 2009 flood levels plus freeboard allowance. • The middle section of the River Suck corridor (downstream of the railway bridge on the right bank) flooded in 2009. However, there is not a sufficient economic case for undertaking works here immediately. • The lower section, including the town centre, also flooded in November 2009. Flooding was sourced from the River Suck, which backed up along the former route of the river, flooding St Michael's Square and rising up to the threshold level of the Galway CoCo building. The cause of the flooding was the restriction of flows under the old N6. Since 2009, a bypass channel has been reintroduced along the route of an old mill race, including the cleaning out of old relief culverts under the old N6. Two further new relief culverts (6.00m width x 2.00m height) are currently proposed by Galway CoCo beneath the old N6, an application to OPW has been made for funding for these works. As a 1.00m head loss was observed across the old N6 during the 2009 event, and that backing up from the N6 was the primary cause of flooding here in 2009; the Local Authority is hoping to obtain funding to complete these works as a priority.

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)**
	WTP_Loc	2.5
	Monument_LV	13
	TOTAL	**487.4**

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	
	Level B Site Visit	**X**

Stage 2: Site Inspection	Level B Assessment
Date and Time of Inspection	**Date: 26/05/11** **Time: 12:30**
Names of inspection team (including OPW/LA staff if present)	**Alan Dew** **Peter Smyth**

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	The sluice gates on the old N6 bridge significantly reduce conveyance capacity during high flows. The railway line upstream of the town centre may provide constraint to high flows. There are 2 Armco culverts beneath the roadway adjacent to Galway CoCo building along route of original River Suck which may provide a constraint at times of high flows.

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 ☐ Erosion Protection ☐ Sand Dunes ☐ **Additional notes (if required):** Flood defence walls and embankments are currently construction (OPW funded scheme in the upper section of the town).
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	
Recommended Designation	**APSR** ☒ **not an APSR** ☐ **IRR** ☐
Summary Comments (if required)	Ballinasloe has a history of flooding. The PFRA mapping predicts an ongoing significant flood risk with this conclusion supported by both the Local Authority and the OPW. Ballinasloe was confirmed as an APSR following a desk based assessment, with no on-site verification required.

Photo1: Looking downstream of the road bridge adjacent to the OPW flood alleviation scheme (nearing completion) in the upper section of Ballinasloe.

Photo 2: Old N6 road bridge over the River Suck from the upstream left bank. Note the sluice gates beneath the bridge parapets.

Photo 3: Flood relief channel for the River Suck constructed along the former mill race, looking towards the old N6 from upstream.

Photo 4: Former course of the River Suck looking upstream.