Location: Kilbeggan, Co. Westmeath

<table>
<thead>
<tr>
<th>Initial OPW Designation</th>
<th>APSR ✗</th>
<th>AFRR □</th>
<th>IRR □</th>
</tr>
</thead>
<tbody>
<tr>
<td>Co-ordinates</td>
<td>Easting: 233250</td>
<td>Northing: 235500</td>
<td></td>
</tr>
<tr>
<td>River / Catchment / Sub-catchment</td>
<td>Fluvial non-tidal ✗</td>
<td>Fluvial tidal □</td>
<td>Coastal □</td>
</tr>
</tbody>
</table>

Stage 1: Desktop Review

1.1 Flood History
(include review of Floodmaps.ie)

River Flow Path
The River Brosna flows through Kilbeggan and meanders south westerly to the river’s confluence with the River Shannon at Shannon Harbour.

Flood Event Records
Two flood records are listed in floodmaps.ie. Specific information about the events is not available; however the Area Engineers report identifies 23 areas prone to flooding in and around Kilbeggan.

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 and historical extents. Agree with APSR but make point that lots of extractions Predictive and some history - No wedges

**LA comments**
New housing estate, but outside the extent. New mixed use development at PO.Coola bridge properties – most derelict WWTW right beside river and within extent. Just off R436 – Coola Bridge could cause a hydraulic block also. Not so much of risk. River is low. If water is abstracted – River Brosna water extraction at Kirpatrick. Lough Ennell pump water out, pipe to canal. WI project / Westmeath County Council 2011

Meeting / discussion summary comments:

**OPW comments**
- The Brosna Drainage scheme runs through Kilbeggan. There are embankments upstream of Kilbeggan that provide flood protection. There is a mill race upstream of the town at Coola Bridge which floods into the river in heavy rainfall events.
- There is an industrial estate which may be below the level of the embankments in the village centre on the right bank. Dun Bia development downstream of the village may be at risk of flooding.
- The mill race in the centre of the village is a tourist attraction.

**LA comments**
- Westmeath County Council felt there was a significant flood risk at Kilbeggan, particularly at Coola Bridge.
- A WWTP may also be at risk.
# 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

<table>
<thead>
<tr>
<th>Type</th>
<th>FRI score (if available)</th>
</tr>
</thead>
<tbody>
<tr>
<td>UWWTP</td>
<td>2.5</td>
</tr>
<tr>
<td>Arch_Regional</td>
<td>53.2</td>
</tr>
<tr>
<td>Arch_National</td>
<td>0.25</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>808.25</strong></td>
</tr>
</tbody>
</table>

## 1.7 Stage 1 Evaluation

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Clearly APSR</th>
<th>Uncertain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flood History (1.1)</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>OPW / LA Information (1.2)</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>PFRA Evaluation (1.4)</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td><strong>Overall Desktop Evaluation</strong></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>(if any above aspect is uncertain then overall designation is uncertain)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## 1.8 Proposed level of assessment for Stage 2 site visits

<table>
<thead>
<tr>
<th>Level A Site Visit</th>
<th>Level B Site Visit</th>
<th>X</th>
</tr>
</thead>
</table>
### Stage 2: Site Inspection

**Level B Assessment**

| Date and Time of Inspection | Date: 14/04/11  
| Time: 14:00 |

| Names of inspection team  
(including OPW/LA staff if present) | Peter Smyth  
| James Murray |

#### 2.3 Local knowledge - on-site comments  
(OPW, LA and any info volunteered by local residents during visit)

The OPW maintained embankments were discussed with one local. He indicated that the embankments had not been breached in the last seven years, beyond which he had no knowledge of them. He also indicated that the drainage ditches have never risen significantly and do not pose a flood risk.

#### 2.4 Comments on hydraulic constrictions (bridges, etc.) and conveyance routes

The single span road bridge in the centre of Kilbeggan is a major constriction to flow, this is exacerbated at the mill race upstream. However, the road level is high through the town any would act as a natural barrier to flood flows, thus protecting properties downstream of the bridge.

The weir arrangement (at the head of the mill race) significantly controls levels upstream on the Brosna. Parallel drainage ditches are running at approximately 1.5 m lower than the main Brosna. OPW maintain earth embankments to avoid flooding of agricultural land upstream of weir.

### 2.6 Defence Assets

| 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  
| Box culvert(s)  
| Pipe culvert(s)  
| Arch 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*
### 2.8 Initial Potential Mitigation Measures

<table>
<thead>
<tr>
<th>Non-structural measures</th>
<th>Planning and Development control</th>
<th>Sustainable Urban Drainage Systems</th>
<th>Flood forecasting / warning</th>
<th>Change in Operating Procedures for water level control:</th>
<th>Public awareness campaign</th>
<th>Individual property protection</th>
<th>Land use management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structural measures</td>
<td>Strategic development management for floodplain development: (integration of measures into strategic development proposals)</td>
<td>Storage: On-line</td>
<td>Off-line</td>
<td>Flow diversion: Flood relief channel</td>
<td>Flood relief culvert</td>
<td>Increase conveyance: Bridge works</td>
<td>Channel works</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Flood defences: Walls</td>
<td>Embankments</td>
<td>Localised works: Defence raising</td>
<td>In-fill gaps</td>
<td>Maintenance works: Culvert / channel clearance</td>
<td>Asset maintenance</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Improve existing defences:</td>
<td>(describe)</td>
<td>Other (describe):</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Outcomes

<table>
<thead>
<tr>
<th>Recommended Designation</th>
<th>APSR</th>
<th>not an APSR</th>
<th>IRR</th>
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</thead>
</table>

**Summary Comments (if required)**

Kilbeggan has a long history of flooding. The PFRA mapping predicts an ongoing significant flood risk with this conclusion supported by both Local Authorities and the OPW. Kilbeggan was confirmed as an APSR following a desk based assessment, with no on-site verification required.
Photo 1: Coola Bridge at Kilbeggan, upstream face.

Photo 2: Weir downstream of Coola Bridge.

Photo 3: Mill downstream of weir.

Photo 4: Bridge downstream of weir, downstream face.
The PFRA Flood Extents shown are indicative. They have been developed using simple and cost-effective methods that are suitable for the PFRA. They should not be used for local decision-making or any other purpose without verification.