Location: Springfield Co. Clare

<table>
<thead>
<tr>
<th>Unique ID: Not in PFRA</th>
</tr>
</thead>
<tbody>
<tr>
<td>(from PFRA database)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Initial OPW Designation</th>
<th>APSR □</th>
<th>AFRR ☒</th>
<th>IRR □</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Co-ordinates</th>
<th>Easting: 162750</th>
<th>Northing: 161850</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>River / Catchment / Sub-catchment</th>
<th>River Shannon / Shannon</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Type of Flooding / Flood Risk (identify all that apply)</th>
<th>Fluvial non-tidal ☒ Fluvial tidal □ Coastal □</th>
</tr>
</thead>
</table>

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Stage 1: Desktop Review

1.1 Flood History (include review of Floodmaps.ie)

River Flow Path
The River Shannon flows from north to south past Springfield, before turning west towards the Shannon Estuary in Limerick. Springfield is comprised of a number of dispersed dwellings located approximately 1.5 kilometres west of the River Shannon.

Flood Event Records
Five flood records are listed in floodmaps.ie. The flood risk in the area is from the River Shannon.

1.2 Relevant information on flooding issues from OPW and LA staff

PFRA database comments (in italics):
Site not identified in the PFRA database

Meeting / discussion summary comments:

OPW comments

LA comments
- Should be included as an APSR.
- Flooded extensively in 2009.
- Pro-active and vocal community.

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
Receptors not considered as part of the PFRA process.
FRI score not calculated in PFRA.
### 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>N/A</td>
<td></td>
</tr>
</tbody>
</table>

**Overall Desktop Evaluation**  
(if any above aspect is uncertain then overall designation is uncertain)  

The overwhelming evidence of significant flood risk outweighs the PFRA conclusion.

### 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>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>
## Stage 2: Site Inspection

### Level B Assessment

#### Date and Time of Inspection

- **Date:** 27/06/2011
- **Time:** 15:00

#### Names of inspection team (including OPW/LA staff if present)

**James Murray**

### 2.3 Local knowledge - on-site comments

**OPW, LA and any info volunteered by local residents during visit**

The following is a summary of the points raised by local residents during the flood risk review:

Residents provided their understanding of the key dates and statistics as far back as the commissioning of Ardnacrusha in 1929.

Residents indicated that there is no known flood history in Springfield pre-1995. Since then there has been flooding in 1995, 1999, 2000, 2006 and 2009.

Residents indicated that the flood extent was reduced following works carried out in the Plassey area (channel widening works). Residents expressed a strong desire to see these works expanded on, to further reduce the flood risk.

Residents want:

- Accountability from OPW (Waterways Ireland), ESB and County Council
- Leadership from OPW
- Judicious management of opening of the sluice gates on the old Shannon River

A PowerPoint presentation was provided by the local residents to support the above comments.

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

It is clear from the site visit and review of maps that immediately downstream of the confluence of the Shannon and Mulkear Rivers there is a significant narrowing of the Shannon River which may have the potential to limit the pass forward flow and hence increase upstream levels.

### 2.6 Defence Assets

#### Open Channel Watercourses

<table>
<thead>
<tr>
<th>Type</th>
<th>Open Channel Watercourses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Man-made river channel</td>
<td>☐</td>
</tr>
<tr>
<td>Flood relief channel</td>
<td>☒</td>
</tr>
<tr>
<td>Canal</td>
<td>☐</td>
</tr>
<tr>
<td>Mill leat</td>
<td>☐</td>
</tr>
<tr>
<td>Drainage channels / back drains</td>
<td>☒</td>
</tr>
</tbody>
</table>

#### Bridges and Culvert crossings

<table>
<thead>
<tr>
<th>Type</th>
<th>Bridges and Culvert crossings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Arch bridge</td>
<td>☐</td>
</tr>
<tr>
<td>Multi-Arch bridge</td>
<td>☐</td>
</tr>
<tr>
<td>Single Span bridge</td>
<td>☐</td>
</tr>
<tr>
<td>Multi-Span bridge</td>
<td>☐</td>
</tr>
<tr>
<td>Box culvert(s)</td>
<td>☐</td>
</tr>
<tr>
<td>Pipe culvert(s)</td>
<td>☐</td>
</tr>
<tr>
<td>Arch Culvert(s)</td>
<td>☐</td>
</tr>
</tbody>
</table>

#### Culverted Watercourses (culvert length is greater than just a crossing)

<table>
<thead>
<tr>
<th>Type</th>
<th>Culverted Watercourses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Box culvert(s)</td>
<td>☐</td>
</tr>
<tr>
<td>Pipe culvert(s)</td>
<td>☐</td>
</tr>
<tr>
<td>Arch Culvert(s)</td>
<td>☐</td>
</tr>
<tr>
<td>Irregular Culvert(s)</td>
<td>☐</td>
</tr>
</tbody>
</table>

#### Walls and Embankments

<table>
<thead>
<tr>
<th>Type</th>
<th>Walls and Embankments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Embankment(s)</td>
<td>☐</td>
</tr>
<tr>
<td>Raised wall(s)</td>
<td>☐</td>
</tr>
<tr>
<td>Retaining wall(s)</td>
<td>☐</td>
</tr>
</tbody>
</table>
### 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):

No assets within the APSR boundary were identified. The flood relief channel is downstream of the confluence of the Mulkear and Shannon Rivers well outside the APSR boundary.

### 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):
<table>
<thead>
<tr>
<th>Outcomes</th>
<th>APSR</th>
<th>not an APSR</th>
<th>IRR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommended Designation</td>
<td>APSR</td>
<td></td>
<td>IRR</td>
</tr>
<tr>
<td>Summary Comments (if required)</td>
<td>Springfield has repeatedly flooded over recent years. The PFRA mapping does not predict a significant flood risk; however the historic flooding evidence indicates that the mapping is underestimating flood risk in the area, with this conclusion supported by both Local Authorities and the OPW. Springfield is recommended to be designated as an APSR.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Photo 1:** View of flood relief channel downstream of the Mulkear / Shannon confluence

**Photo 2:** View of flood relief channel downstream of the Mulkear / Shannon confluence
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.