Architectural Heritage Impact Assessment
Galbally Bridge, Moorabbey, Co. Limerick & Co. Tipperary
for Punch Consulting Engineers

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1.0	23.09.2025	PH / CO	KMc / GOC	KMc / GOC

Inspection

JCA Architects visited Galbally Bridge on the border of Co. Limerick and Co. Tipperary in September 2025. Use of digital, visual, photographic and measured surveying was conducted during these visits and used to form this assessment.

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1.0 Introduction

Jack Coughlan Architects were appointed by Punch Consulting Engineers to produce this Architectural Heritage Impact Assessment for the proposed repairs at Galbally Bridge, Moorabbey, which crosses the border between Co. Limerick and Co. Tipperary in response to a request for further information from An Coimisiún Pleanála dated 26/06/2025. This report will respond to Point 1, Built Heritage – Protected Structure, of that request.

This report was prepared by Paul Higgisson MRIAI (RIAI Architect Accredited in Conservation at Grade 3), Christopher Olden MRIAI (RIAI Architect Accredited in Conservation at Grade 3), and Gareth O'Callaghan MRIAI (RIAI Grade 1 Conservation Architect).

Figure 1: *Satellite View of Galbally Bridge with the Bridge Circled (Google Maps)*

1.1 Location and Heritage Protection Status

The bridge is located to the east of the town of Galbally, Co. Limerick and south of Moor Abbey, Co. Tipperary, a ruinous Franciscan friary. The bridge crosses the River Aherlow.

The bridge is listed on the Tipperary County Council's Record of Protected Structures (RPS Reg. No. TRPS1144) and is also included in the National Inventory of Architectural Heritage's survey for Tipperary (Registration Number 22207301). There it is a structure of Regional significance with Architectural and Technical special interest.

Figure 2: *Architectural Heritage Map indicating NIAH Structures (Blue Dots indicating Structures on the NIAH, Red Dots indicating Site & Monuments Record entries) (Heritage Maps)*

2.0 Historical Background

The bridge was constructed c. 1800 over the River Aherlow to the south of Moor Abbey. It appears on the earliest OS maps with Moor Abbey (A National Monument, Reg. No. 292) noted as being in ruins at that time also. The surviving ruins of the abbey date from around the 15th century having been burnt down in 1569. The 25 Inch map shows the river widening around the area of the bridge, but no cutwaters are displayed. The bridge has 4 no. arches with a 5th flood relief arch of a smaller size to the north.

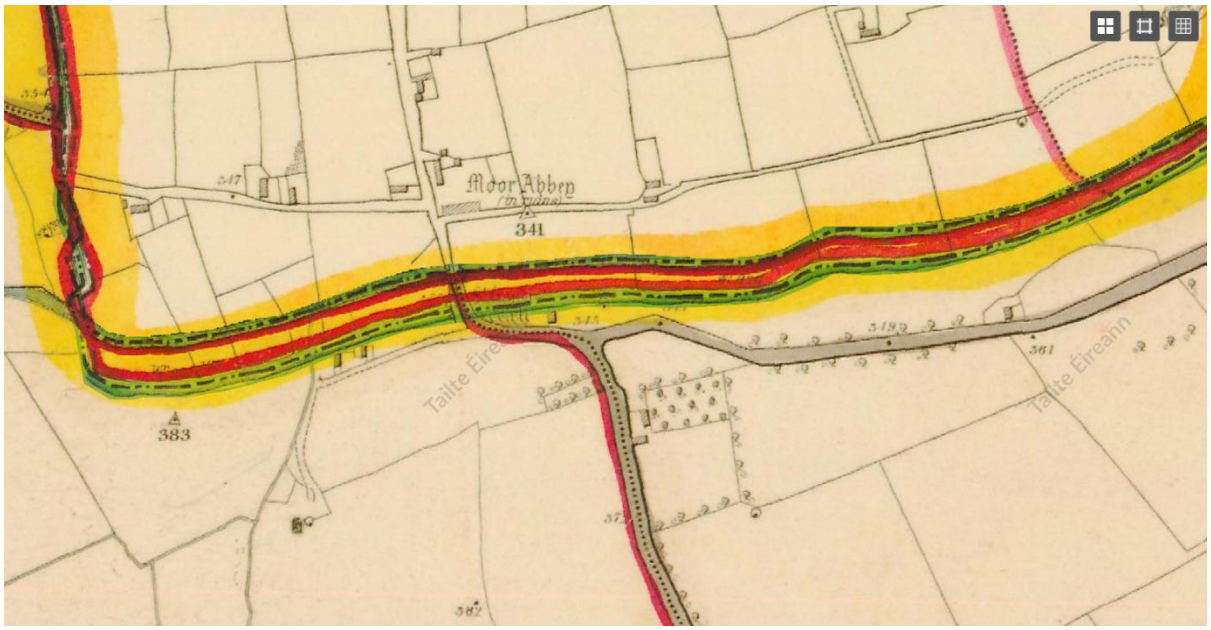

Figure 3: *OSi 6 Inch First Edition, TY073 Survey Date: 1839, Publication Date: 1843 (OSI). LK049 Survey Date: 1840, Publication Date: 1844 (OSI).*

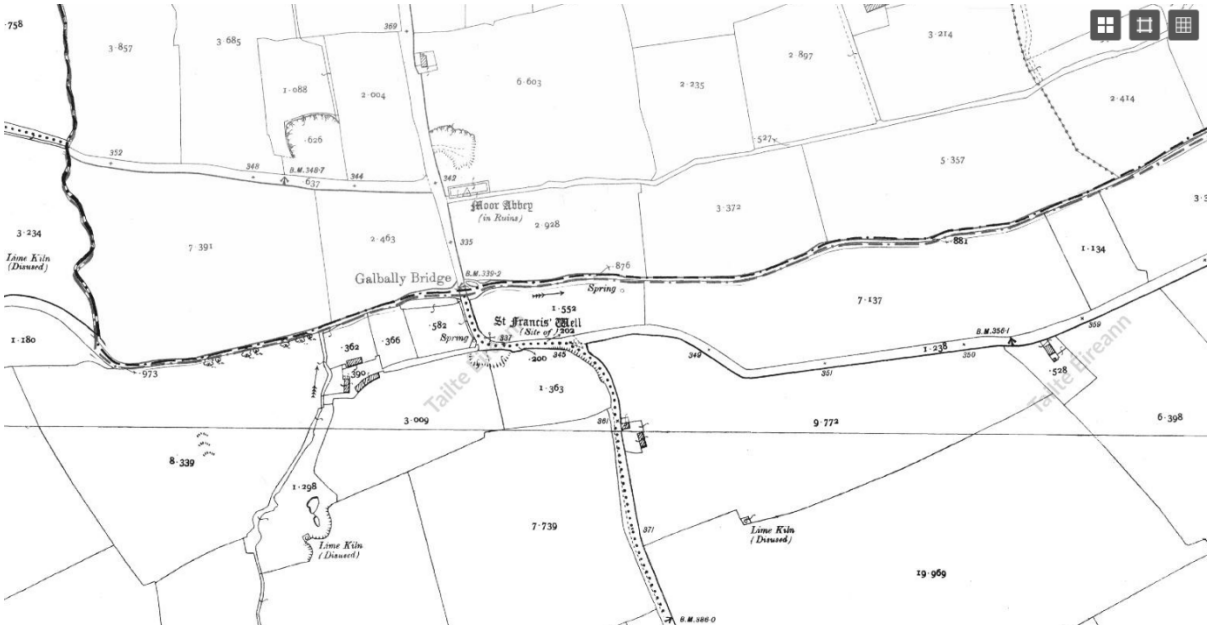

Figure 4: *OSi 25 Inch* *TY073-06 Survey Date: 1904, Publication Date: 1906 (OSI). LK049-04 Survey Date: 1902, Publication Date: 1903 (OSI).*

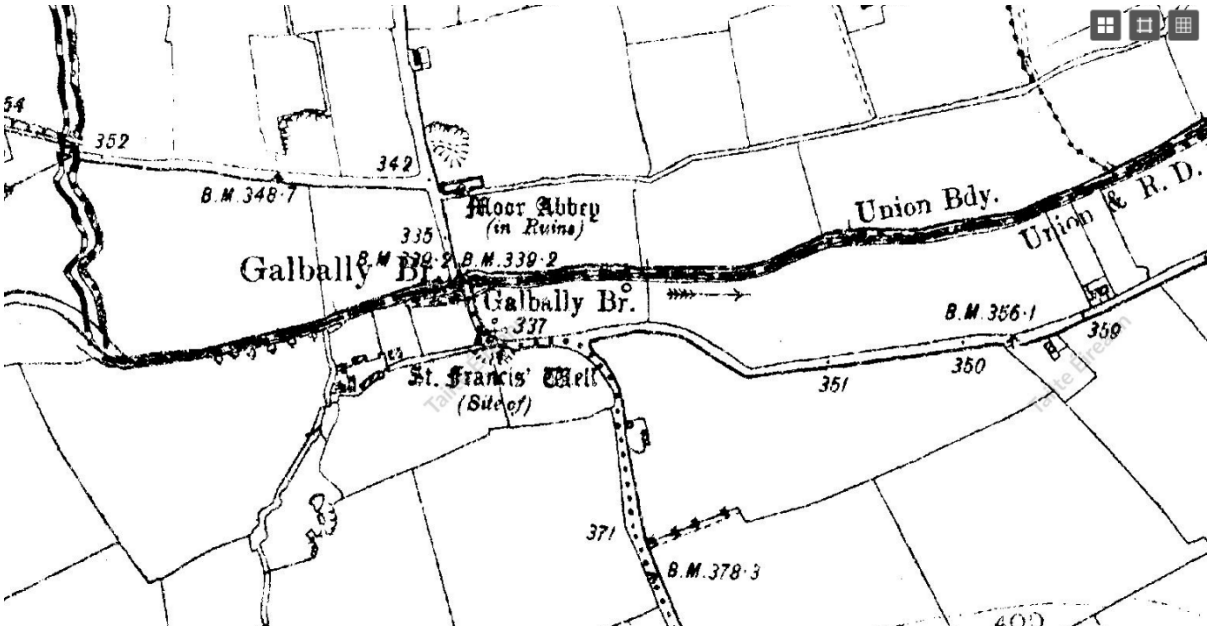

Figure 5: *Osi 6 Inch Last Edition* *TY073+073A Publication Date: 1906 (OSI). LK049 Levelled Date: 1924, Publication Date: 1928 (OSI).*

3.0 Current Description

The bridge is of rubble limestone construction with 4 no. arches with limestone voussoirs and 3 no. piers. A fifth arch is evident to the north of the bridge smaller in scale presumably for floor relief. The piers have cutwaters to the upstream elevations only which are in dressed limestone. They step back at their highest levels. The bridge is pointed in a cementitious mortar with sections having been cement rendered. The parapet walls are limestone with pointing lost throughout and vegetation growth occurring. The bridge has a concrete base to the river underneath.

The NIAH describes the bridge as follows:
Four-arch road bridge, built c. 1800, over River Aherlow, close to medieval Moor Abbey. Round arches with dressed limestone voussoirs. Random rubble and roughly coursed rubble limestone walls, having stepped dressed limestone V-cutwaters to west (up-stream) elevation. Smaller disused flood arch visible to north of east elevation.

Figure 6: *Flood relief arch to the North of the bridge*

4.0 Assessment Methodology

The site was visited by JCA Architects in September 2025 in specific relation to this project. Once information resulting from the historical analysis and physical inspection of the structures and site was compiled, the character of the historic structure and potential risks to its character were determined.

This impact assessment entails four stages:

1. A desk-top review of relevant documents relating to the site's history.
2. A field survey of the structure now surviving within the proposed development area.
3. An evaluation of the architectural heritage significance of this structure.
4. An assessment of the impact of the proposed development on the special heritage significance of the site.

1. Desktop Study

The historical aspects of the site's development were ascertained using primary sources including maps and historic photographs of the dwelling from various periods since its construction.

2. Field Survey

A full survey of the site was carried out by JCA Architects in September 2025. This entailed the examination, description and photographing of all relevant structures within the development site for three reasons: (1) to verify what was already known about its built heritage, (2) to update this information to take account of any physical alterations to the site's structures, and (3) to fill in any gaps in our knowledge of the site, such as previously unrecorded features.

4.1 Assessment of Impact Methodology

An evaluation was made of the likely impacts of the proposed development upon the heritage characteristics of the historic structure. Changes to the site's visual attributes could potentially arise from:

- Indirect disturbance to the historic visual context of the Protected Structure.
- Direct physical interventions to the existing structure, e.g. piecemeal demolitions, new extensions, and the replacement of existing fabric, fixtures and fittings.

The magnitude of these impacts can range from 'major' in the case of drastic alterations or demolitions, to 'negligible' or 'none' where little or no change will ensue as a result of the impact. Such impacts can either be 'beneficial' or 'adverse' depending on whether the heritage character of the feature being impacted upon is enhanced or degraded as a result. A 'neutral' impact will be neither beneficial nor adverse.

- **Major:**
  Beneficial - Large scale or major improvement of resource quality; extensive restoration or enhancement; major improvement of attribute quality.
  Adverse - Loss of resource and/or quality and integrity of resource; severe damage to key attributes.

- **Moderate:**
  Beneficial - Benefit to, or addition of, key attributes; improvement of attribute quality.
  Adverse - Loss of resource but not adversely affecting integrity; partial loss of/damage to key attributes.

- **Minor:**
  Beneficial - Minor benefit to, or addition of, one or several key attributes; some beneficial impact on attribute or a reduced risk of negative impact occurring.
  Adverse - Some measurable change in attributes, quality or vulnerability; minor loss of, or alteration to, one or several key attributes.

- **Negligible:**
  Beneficial - Very minor benefit to or positive addition of one or more attributes.
  Adverse - Very minor loss or detrimental alteration to one or more attributes.

- **None:**
  No loss or alteration of attributes; no observable impact, i.e. neither beneficial nor adverse.

The significance of an impact will depend on its magnitude and the heritage value of the feature being impacted upon. It can range from 'neutral', through 'moderate' to 'very large'. Thus, a major negative impact on a feature of very high heritage value will have a significantly large adverse effect, whereas the same impact on a feature of negligible value will be relatively insignificant. For the purposes of this analysis, the levels of impact significance are defined as follows:

- **Very large:**
  Only very adverse effects are normally assigned this level of significance. They are generally, but not exclusively, associated with sites of international, national or regional importance that are likely to suffer a most damaging impact and loss of integrity. However, a major change in a site or feature of local importance is not precluded from this category.
- **Large:**
  These beneficial or adverse effects are considered to be very important considerations and are likely to be material in the planning process.
- **Moderate:**
  These beneficial or adverse effects may be important but are not likely to be key factors in the planning process. Their cumulative effects may, however, be relevant if they lead to an increase in the overall adverse effect on a particular feature.
- **Slight:**
  These beneficial or adverse effects may be raised as local factors but are unlikely to be a critical issue in the planning process.
- **Neutral:**
  No effects or those that are beneath levels of perception, within normal bounds of variation or within the margin of forecasting error.

The duration of the impact is also of relevance. Short-term impacts upon a site's built heritage may arise during the construction phase of a development. There is likely to be long-term residual impacts as well once the development is completed and the site operational. The various permutations of 'magnitude of impact' and 'heritage value' will result in the following impact significances:

Heritage Value	Magnitude of Impact				
	None	Negligible	Minor	Moderate	Major
Very High	Neutral	Slight	Moderate/ Large	Large/Very Large	Very Large
High	Neutral	Slight	Slight/Moderate	Moderate/Large	Large/Very Large
Medium	Neutral	Neutral/ Slight	Slight	Moderate	Moderate/Large
Low	Neutral	Neutral/Slight	Neutral/ Slight	Slight	Slight/Moderate
Negligible	Neutral	Neutral	Neutral/ Slight	Neutral/ Slight	Slight

5.0 Assessment of Significance of Existing Site

The NIAH appraisal of the bridge as follows:
This bridge is a reminder of the engineering achievements and the quality of local craftsmanship in the early nineteenth century. The bridge is of solid rubble limestone construction, with finely executed voussoirs.

6.0 The Proposed Development

As evidenced in the attached Photographic Record the bridge is displaying normal signs of aging with minor flaws developing. These primarily are as a result of lost and inappropriate cementitious pointing which is contributing to vegetation growth. It is proposed to remove and treat the vegetation growth and repoint the bridge in more appropriate lime based mortars. Grouting will also be done using lime based mortars.

In terms of structural repairs structural stitching using stainless steel and pattress plates are proposed. Stitching will be bedded using lime mortars while the pattress plates are surface mounted.

The concrete base to the riverbed is displaying deep scours underneath and it is proposed to be underpinned in concrete. A concrete saddle is proposed to Cutwater 1.

6.1 Proposed Scope of Works

1.0 Stone Cleaning & Vegetation Removal.

1.1 Carefully remove vegetation and organic build up from the masonry bridge, ensuring damaging root structures of heavier growth are fully removed, this may require local dismantling of and rebuilding of existing stonework. Sporadic lighter growth to be handpicked. Apply approved biocide / herbicide treatment.

1.2 Low pressure steam wash, DOFF System or equivalent to remove any Debris and Loose Organic Growth may be considered.

2.0 **Stone Pointing**

Minor and Local Pointing Repairs to be carried out where mortar has been lost or damaged.

2.1 Selective and localised areas of repointing to be carried out with lime mortars. The existing mortar will act as a guide for the new mortars.

2.2 Raking out will commence mid-joint and work outward toward the arrises. Joints shall be raked out to a minimum depth of 25 mm or 1½ times the width of the joint, whichever is greater.

2.3 All debris and dust are to be removed from the raked joints with stiff bristle brushes. A small engraving tool is to be used to remove any remaining mortar not removed by the pneumatic tools. All joints must be squared to ensure a good contact between the repointing mortar and surrounding stone.

2.4 Pointing style will be a struck flush joint. Strap pointing or recessed styles should not be used.

2.5 The mortar repair specification, if not based on historic mortar analysis (ie any surviving early mixes), should be prepared using hydraulic lime NHL 2 or 3.5. 1 part lime to 2 ½ parts aggregate. The aggregate should be a mixture of clean sharp sand and 6mm grit (graded 5mm downwards).

2.6 Pinning stones: allow for approx. 3 no. per sqm. across all areas to be repointed. This is preferable to packing out / building out a wide joint with mortar.

2.7 All raked joints shall be wetted prior to repointing. The repointing mortar is to be well compacted into the joints using a suitable pointing iron.

2.8 The joint is to be finished to a flush finish where arises are sharp and in good condition.

3.0 Stitching

3.1 Stainless steel stitching to be bedded in lime based mortars.

7.0 Method Statement

Generally, the bridge is undergoing repairs that are necessary in its maintenance and preservation. These will be done to conservation best practice using repair techniques over replacement where possible. Established principles of Conservation Philosophy and Conservation Best Practice are fundamental to the proposed retention and repair of existing fabric. A principle of minimum intervention will be followed regarding the existing fabric. The emphasis will be on the repair of existing fabric rather than replacement or removal with the below intent.

1. To maintain the character, setting and material quality of the building.
2. To repair and retain all historic fabric of importance.
3. To protect the structure's character as a living structure by maintaining its usage.
4. To preserve the constructional efficiency of the building. More structures and details may be preserved and retained using historic techniques combined with simple, modern, informed repair.
5. To adapt the building with minimum intervention and a maximum of conservation over restoration, under the guidance of the ICOMOS Venice Charter.
6. To spend wisely in terms of investment. Less money may be spent on minimal adaptation of the structure to new use which adds to the buildings economic value by not diminishing its historic value.
7. A principle of minimum intervention should be followed with regard to the existing building fabric. The emphasis will be on the repair of existing fabric rather than replacement.
8. Every effort should be made to match existing building technologies. This should extend to the use of traditional materials which will contribute to the long-term preservation of the remaining structure.
9. Where original finishes have been lost to the building and now modern finishes exist it may be allowed to make new interventions and finishes in a contemporary style sympathetic to the original intent.
10. The insertion of services will follow existing lines and voids to avoid the unnecessary drilling of existing fabric.
11. Where fabric is not original, a decision may be made to retain as existing as long as they broadly follow historic profiles and are deemed to be structurally sound and in reasonable condition.
12. All work will be undertaken under the supervision of a conservation specialist. All works to the building will be documented as they proceed.
13. The use of salvaged materials during restoration will be carefully documented.
14. Periodic recording of the work as it progresses should be undertaken as part of the conservation exercise, with this report updated and the final chapter produced on completion of works.

8.0 Physical and Visual Impacts of the Proposed Development on the Protected Structure

Conservation Repairs
Proposed conservation repairs to the bridge will be carried out to best practice. The majority of these repairs will see the removal of vegetation and concrete pointing which are not original or appropriate to the bridge. The replacement of pointing with lime based mortars will be a slight positive physical and visual impact.

Replacement of Missing Stone
Lost sections of stonework will be rebuilt using salvaged original stone in possible. This intervention will have a slight positive physical and visual impact.

Structural Repairs / Pattress Plates / Concrete Arch
The majority of repairs that are structural in nature will result in a neutral physical and visual impact and will be conducted to conservation best practice. Lime based mortars will be used throughout. The two exceptions to this are the addition of pattress plates and a concrete arch to cutwater 01. The pattress plates will have a slight negative visual impact. Their impact is mitigated by their reversibility due to their surface mounting. The concrete arch will have a very slight negative physical impact due to the loss of material in excavation, however, this will generally be fill material and its envisioned visual impact is neutral.

Appendix 01 - Photographic Record

Figure 7
Galbally Bridge View from the North.

Figure 8
Galbally Bridge View from the South

Figure 9
View to North along modern bridge surface.

Figure 10
View to South along modern bridge surface.

Figure 11
Internal face of Masonry Parapet

Figure 12
Section of modern masonry wall and concrete footpath.

Figure 13
Internal face of concrete wall.

Figure 14
Gap between masonry wall and bridge parapet.

Figure 15
Upstream Ashlar Cutwater (CW-03) with cement render.

Figure 16
Upstream Ashlar Cutwater (CW-02) with cement render.

Figure 17
Upstream Ashlar Cutwater (CW-01).

Figure 18
Upstream Bridge Abutment with vegetation growth.

Figure 19
Upstream Bridge Abutment Wall with vegetation growth.

Figure 20
Upstream Bridge wing wall with vegetation growth and section with cement render. View North.

Figure 21
Upstream Bridge wing wall with vegetation growth and section with cement render. View South.

Figure 22
Downstream Bridge Wing Wall.

Figure 23
Flood relief arch to the North of the bridge

Figure 24
Flood relief arch to the North of the bridge with silt build-up.

Figure 25
Downstream Arche elevation.

Figure 26
Underside of Arch 1 viewed from Downstream embankment.

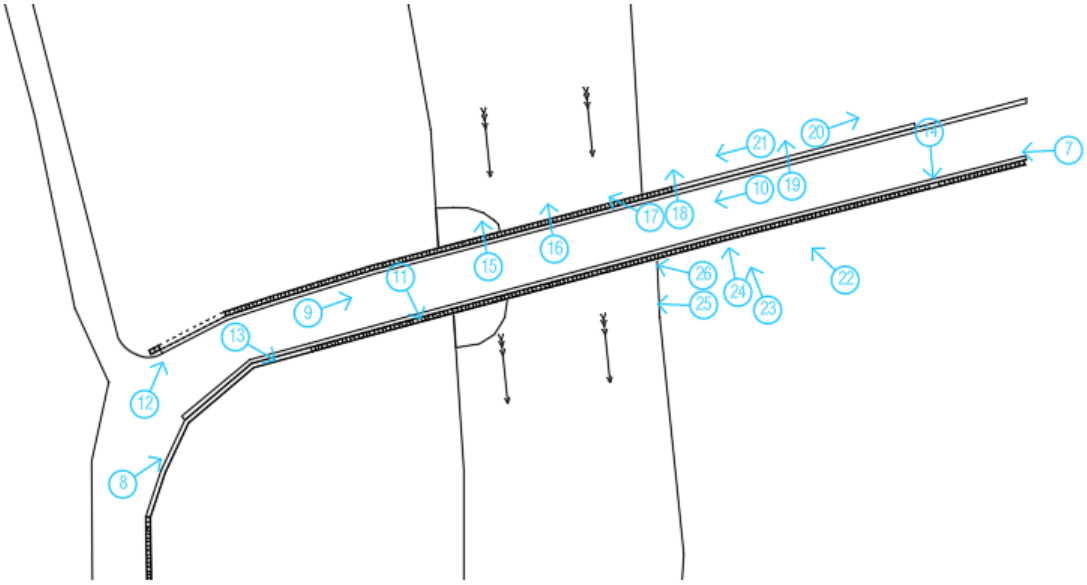

Figure 27: *Locations of Photographic Record Figures with direction of View.*

Appendix 02 -Drawing Register

SY 100 Galbally Bridge Condition Survey (Plans, Elevations Sections) Scale 1:100 @ A2