



A78 90 St Fillan's – Anticipated Method Statement

**All SW Aluminium Parapet Upgrades Phase 2 –
A78 90 St Fillan's**

22/SW/1201/27 / MS01 / P01

May 26

Document Control Sheet

REPORT TITLE:	A78 90 St Fillan's – Anticipated Method Statement
REPORT NUMBER:	MS01
PROJECT NAME:	All SW Aluminium Parapet Upgrades Phase 2 – A78 90 St Fillan's
PROJECT NUMBER:	22/SW/1201/27

STATUS/AMENDMENT	PREPARED	REVIEWED	APPROVED
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1. Introduction

1.1. Introduction to the document

This anticipated method statement document has been created to support the Marine Licence Application for the A78 90 St Fillans Bridge refurbishment by Amey Consulting prior to the appointment of the Contractor for the works.

Disclaimer: This Anticipated Method Statement was written following completion of the preliminary design which requires further investigations to ensure the design is accurate for the requirements of the remedial measures to structures soffit. However, in accordance with the Construction (Design and Management) Regulations 2015 the way the works are completed, and the design of all temporary works will be the prerogative of the Principal Contractor. As a result, the type and layout of temporary works to create a safe working areas and to access the foreshore cannot be confirmed until the Contractor is appointed following the tender process. Following the creation of the Contractors method statements these can be shared with the Marine Directorate if required.

1.2. Project Background

A78 90 St Fillans bridge is a 5.8m long, 11.6m wide, single-span, simply supported reinforced concrete solid slab deck supported on mass concrete abutments clad in masonry. It carries the A78, a single carriageway road, over the Blackhouse Burn (Tidal watercourse).

A Principal Inspection undertaken by Amey in April 2022 concluded that the St Fillans bridge deck is in poor condition, with several spalled concrete areas with exposed reinforcement at the soffit level. It was recommended that a structural assessment and concrete repairs be carried out as a matter of very high priority.

To ensure accurate designs are produced and all structural defects addressed, concrete investigations have been proposed to gather the necessary information to accurately identify the repairs to be completed on site.

The A78 90 St Filans bridge is located at OS grid reference NS 191637, as indicated by the red boundary circle.



Figure : St Fillans bridge location (Source: ©Google Maps 2025)

1.3. Scope of works

The proposed scope of works include:

- **Concrete investigations (Summer 2026)**
 - Installation of temporary traffic management via single lane closure,
 - Installation of a small alloy scaffold tower on the underside of the structure during low tide to create safe access to the soffit.
 - Undertake a concrete testing survey
 - Visual and Hammer tapping survey of entire deck soffit
 - Half-cell potential testing
 - Concrete testing in localised test areas
 - Cover meter tests
 - Chloride Ion Profiling
 - Carbonation Testing
 - Surface Resistivity Testing
 - Concrete Coring
 - Removal of temporary access
 - Removal of traffic management

- **Concrete Repairs and Parapet upgrades (2027)**
 - Installation of temporary traffic management via single lane closure,
 - Installation of a temporary access to the full underside of the structure with impermeable surface and edge protection.
 - Concrete repairs:
 - Undertaking of concrete removal to deck soffit.
 - Reinforcement preparations, including replacement with new rebar and coupler if corrosion is substantial.
 - Anode fixings installed.
 - New concrete installed via hand-applied repair mortar or spray-applied mortar.
 - 7-day curing period.
 - Install ICCP components (mesh, ribbon, discrete anodes, cabling), apply conductive overlays.
 - Install local power system (surface level), connect and test.
 - Parapet plinth strengthening and Parapet upgrades:
 - Undertake parapet plinth removal.
 - Concrete breakout and removal of reinforcement in parapet plinth.
 - Installation of new reinforcement and installation of formwork for plinth widening.
 - New concrete installed via flowable concrete.
 - 7-day curing period.
 - Install new N2 parapet.
 - Repointing of masonry parapet walls on approach and departure
 - Switch TTM and repeat parapet plinth strengthening and upgrade works.
 - Removal of temporary access.
 - Removal of traffic management.

Before any individuals are able to undertake works, they will be required to undertake a site induction which includes tool box talk on the environmental risks highlighted, the mitigation controls in place and emergency procedures.

2. Method Statement

2.1. General methodology for working within / adjacent to tidal water

- To undertake these works, it is required to have direct access in which operatives can touch the underside of the structure to gather samples of the structure for testing.
- All temporary works shall be designed, certified and installed by the Contractor.
- Weather reports, tidal predictions and the tidal gauge stations shall be regularly reviewed and the Works planned around large tidal events. All necessary provisions shall be made by the Contractor to ensure ease of escape for site personnel should the need arise. The Contractor shall provide and implement all relevant provisions of safe working practices to all relevant legislation. During overtopping events, All Works shall be stopped, all site personnel and plant removed as necessary, until such time as the flood peak has passed and it is deemed safe to re-enter the area and commence Works.
- Where possible, individuals trained in water safety should be utilised.
- Lone working shall not be permitted.
- Appropriate Personal Protective Equipment such as buoyance aides and safety lines shall be used.
- An emergency plan must be in place in the event of someone falling into the watercourse / being washed off their feet.
- All equipment used in the watercourse shall be subject to appropriate biosecurity measures

Below is a photo of the structure which shows a scenario of low tide levels.



Figure 1 Site photo and condition under structure.

Through early discussions with potential sub-contractors, the following is an example of an access tower that is suitable for in-water use during the concrete investigations due to its adjustable legs to compensate for the uneven riverbed. If works require multiple days this will be removed when works are not being undertaken.



Figure 2 Example Access Tower

During the concrete repair and ICCP installation works, a longer-standing temporary access system will be installed, either as a birdcage scaffold supported from the banks, a suspended scaffold or a scaffold system supported on spreaders supports directly on the riverbed. This will be fitted with an impermeable working surface and edge protection to prevent the incidental escape of waste into the watercourse below.

2.2. Plant requirements

The following outlines the anticipated plant requirements for both the concrete investigation works and the subsequent structure-refurbishment phase. The general items listed apply to both stages. This is not an exhaustive schedule, and the final plant selection may vary depending on the methodology adopted by the appointed subcontractor.

- General
 - Traffic management vehicles and portable signals
 - Temporary welfare cabin / mobile welfare unit
 - Small mobile crane
 - Dust extraction units
 - Spill kit
- Concrete testing
 - Small alloy scaffold tower
 - Half-cell potential testing kit
 - Cover meter
 - Testing kit, including drills
- Concrete Repairs and Parapet upgrades
 - Scaffold - birdcage or suspended
 - Water jetting equipment
 - Hiab / lorry-mounted crane for deliveries
 - Rebar cutting tools
 - Hand-applied mortar tools
 - Drilling equipment
 - Small electrical testing equipment
 - Formwork systems

2.3. General methodology for the prevention of watercourse pollution

- Biosecurity measures shall be taken, including the cleaning of all plant, temporary works materials and equipment required for the works prior to their arrival on-site.
- The use of aquatic friendly oils, grease, fuels shall be used where possible.
- All plant and equipment shall be refuelled in designated areas away from the water's edge, drains and any road gullies. Drip trays must be utilised.
- Spill kits shall be available at all times with all site personnel trained and competent in their use.
- All site personnel shall be briefed in water pollution prevention.
- Any storage of equipment or materials must be implemented at a suitable distance from the watercourse out with areas likely to flood.
- All works within proximity to waterbodies must follow best practice measures consistent with Scottish Environment Protection Agency's (SEPA), General Pollution Prevention (GPP) documentation, Silt Control Guidance and Engineering in the Water Environment Good Practice Guide documentation.
- Prior to works commencing, all operatives will be briefed on SEPA's Guidance for Pollution Prevention (GPP) documents (particularly GPP 1, GPP 2, GPP 5, PPG 6, GPP 8 and GPP 22).

2.4. Installation of temporary access

Temporary access components will be lowered from the top level using a controlled rope system, with each section delivered individually to maintain stability and reduce manual handling risks. Assembly will take place in the water, with technicians positioning and securing each part as it arrives.

Work will be scheduled during dry conditions and at low tide to minimise water depth and improve footing. Technicians will wear appropriate waterproof PPE, either waders or wellington boots, depending on tidal levels and site conditions. All personnel will maintain communication with the top-side team throughout the operation to ensure safe coordination during lifting and installation.

During concrete repairs and ICCP installation, access from the surface to the working platform shall be provided to mitigate the need for waterproof PPE by creating a dry working environment with suitable edge protection.

One option for the access scaffold system during the refurbishment works, is to install on support base on the riverbed using precast concrete blocks or timber sleepers. These components act as load-spreading pads, preventing point loading on the riverbed and helping to maintain scaffold stability throughout tidal fluctuations. Placement will be carried out by hand or via controlled lifting during low-tide windows to ensure accurate positioning on firm ground. This approach minimises disturbance by distributing loads over a wider footprint and avoids the need for driven supports or intrusive fixings. All support materials will be fully removed once the works are complete, with the riverbed returned to its pre-construction condition.

The alternative scaffold arrangements would involve supporting the access system from the embankments or directly from the structure itself. These solutions are technically feasible but come with significantly higher installation costs and greater temporary-works complexity. As such, they

would only be pursued if the riverbed support option is deemed environmentally unacceptable or if site conditions prevent safe installation at low tide.

2.5. Concrete testing

The following are mitigation methods considered necessary during concrete testing of bridge soffit.

- General
 - All testing to be undertaken from temporary access. No entering of water during investigation. Only during temporary access setup, only if required.
- Visual Inspection & Hammer Tapping
 - Hazards: Small fragments of concrete dislodging.
 - Gentle tapping techniques used — no excessive force.
 - Any loose material removed in a controlled manner and bagged immediately.
- Half-Cell Potential Testing and concrete cover meter survey
 - Non-intrusive testing of surface so no dislodging of material
- Carbonation, Chloride & Resistivity Testing
 - Hazards: Dust from drilling small pilot holes; loose particles.
 - Dust extraction tools are used where possible.
 - All drill dust collected on impermeable sheeting and bagged as controlled waste.
- Concrete Coring
 - Hazards: Wet slurry, concrete paste, and larger debris.
 - Rubber collar, bund, or temporary catch-tray fixed around the coring area.
 - **No slurry allowed to run or drip** toward the watercourse.
 - Cores removed and placed directly into labelled sample tubes.
 - All arisings collected and disposed of as controlled waste.

Emergency Response Measures

- Spill kits positioned at access points and near plant.
- In the event of accidental release into the burn:
 - Stop work immediately.
 - Contain using absorbent booms or pads (if safe).
 - Notify the Environmental Manager and Supervisor.
 - Record incident and follow escalation procedure.
- SEPA notified if required by the environmental manager

2.6. Concrete repairs, ICCP installation, Parapet plinth strengthening and parapet replacement

The following mitigation measures are required during concrete repair works, installation of the ICCP system on the bridge soffit, Parapet plinth strengthening and parapet replacement.

- General
 - All activities to be undertaken from temporary access. No entering of water during works, except for creating temporary access setup, only if required.
- Concrete Breakout and Removal

- Hazards: Falling debris, dust, vibration, and potential release of fragments toward the watercourse.
- All works carried out from a fully enclosed temporary access platform with impermeable decking.
- Breakout undertaken using light mechanical tools to minimise vibration and debris scatter.
- All loose material to be removed in a controlled manner and collected on the protection deck.
- Dust suppression and extraction to be used where appropriate.
- Arisings to be bagged immediately and removed as controlled waste.
- No materials permitted to fall or migrate toward the watercourse.

- Reinforcement Preparation (Cleaning, Coating, Replacement)
 - Hazards: Rust scale, small particles, dust.
 - Mechanical cleaning carried out within the encapsulated work zone.
 - Vacuum extraction to be used where possible.
 - All debris collected on impermeable sheeting and disposed of as controlled waste.
 - No materials permitted to fall or migrate toward the watercourse.

- Application of Repair Mortars / Micro-Concrete
 - Hazards: Wet mortar, splashes, washout water.
 - Mixing areas located away from the watercourse on a bunded surface.
 - No washout permitted on or near the scaffold; all washout collected in sealed containers.
 - Hand-applied or spray-applied mortars to be used only within full encapsulation.
 - Any overspray or drips captured by the protection deck and drip trays.
 - Curing compounds applied by brush/roller to avoid airborne droplets.

- ICCP Anode Installation (Mesh, Ribbon, Discrete Anodes)
 - Hazards: Drilling dust, small fragments, cable offcuts.
 - Drilling carried out with dust extraction where possible.
 - All drill dust captured on impermeable sheeting.
 - Anode materials stored in containers to prevent loss of small components.
 - All cable fixings, clips, and offcuts to be collected immediately and bagged.

- ICCP Power System Installation, Commissioning and Testing of ICCP System
 - Hazards: None affecting the watercourse (electrical only).
 - All works carried out from the bank or safe access platform.
 - No materials or liquids used that could enter the watercourse.
 - Baseline readings recorded and system settings adjusted by the ICCP specialist.

- Parapet plinth strengthening and parapet replacement
 - Hazards: Falling debris, dust, wet concrete and potential release of fragments toward water course
 - Edge protection installed with impermeable decking.
 - Existing parapet sections removed in small, controlled pieces using light mechanical tools to minimise vibration and debris scatter.
 - All breakout material collected immediately on the protection deck and bagged as controlled waste.
 - Drilling for dowels/anchors undertaken with dust extraction where possible; all dust captured on impermeable sheeting.
 - Formwork for plinth widening erected on the protected platform with no gaps that could allow material loss.

Emergency Response Measures

- Fuel and chemical spills
 - Spill kits positioned at access points and within the scaffold enclosure.
 - Absorbent booms and pads to be available on the banks (not placed in the water unless required).
 - In the event of accidental release toward the burn:
 - Stop work immediately.
 - Contain using absorbent materials if safe to do so.
 - Notify the Environmental Manager and Supervisor.
 - Record the incident and follow the escalation procedure.
 - SEPA notified if required by the Environmental Manager
- In the event of concrete, slurry, or debris falling toward the burn:
 - Stop work immediately.
 - Recover material if safe to do so.
 - Prevent further release using physical barriers or containment.
 - Notify the Environmental Manager and Supervisor.
 - Record the incident and follow the escalation procedure.
 - SEPA notified if required by the Environmental Manager