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Markievicz Bridge Refurbishment Works

Preliminary Traffic Management Plan
224138-PUNCH-XX-XX-RP-CS-0004

April 2025

Document Control

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A0	C01	Planning Issue	02/04/2025	JP Murray	K O'Riordan	K O'Riordan

Master report template last updated 02/01/2024

Table of Contents

1.0 Introduction

1.1 Purpose of Report

Sligo County Council (SCC) proposes to carry out bridge rehabilitation works on Markievicz Bridge in Sligo Town, Co. Sligo. PUNCH Consulting Engineers (PUNCH) have been engaged by SCC to assess and design repair works to the bridge piers and riverbed.

The bridge is located on Bridge Street, in the centre of Sligo Town and spans the River Garavogue. It was originally constructed in 1648 and is now listed as a protected structure. The bridge location is shown in Figure 1-1 below.

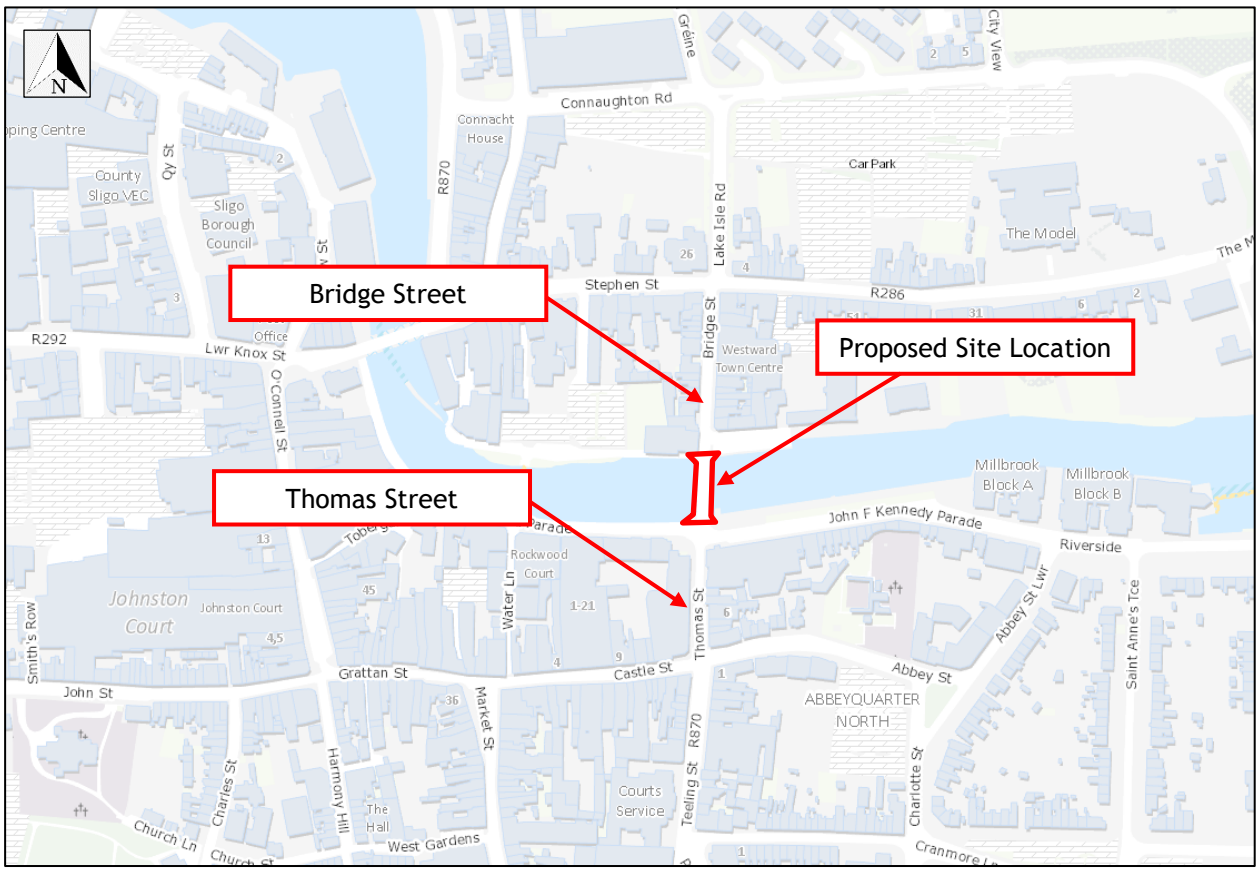


Figure 1-1: Site Location Plan (Ref: https://viewer.myplan.ie/)

1.2 Bridge Description

The National Inventory of Architectural Heritage provides the following description of Markievicz Bridge:

"Seven-arch bridge over river, built 1673. Repointed coursed rubble limestone walls centred on triangular cutwaters to piers to upriver (east) elevation on mass concrete bases having rendered pyramidal capping with margined tooled cut-limestone coping to benchmark-inscribed parapets. Series of seven segmental arches with margined tooled limestone ashlar block-and-start voussoirs (east) or rough hewn limestone voussoirs (west). Sited spanning Garvogue River."

The bridge carries two lanes of south bound traffic, as well as a pedestrian footpath on the west (downstream) side.

At the southernmost span (Span 7, refer Figure 1-3 below), a new raised height concrete base has been constructed such that the span will only allow passage of water in high water conditions. The upstream

side of the span has also been amended with the construction of a splayed wall with cast-in holes for water passage. This creates increased circulation space for pedestrians at bridge deck level and gives the appearance of a six-span bridge on the upstream elevation.

A longitudinal construction joint in the arch barrels indicate the bridge was widened in the upstream direction.

See upstream and downstream elevations in Figure 1-2 and Figure 1-3 below.

Figure 1-2: Markievicz Bridge upstream elevation © PUNCH

Figure 1-3: Markievicz Bridge downstream elevation © PUNCH

1.2.1 Bridge Structural Inspection

PUNCH carried out a structural inspection of the bridge in July 2021. The resulting Structural Inspection Report concluded that:

> "*Remediation of the riverbed damage (scour) is of the highest importance for this bridge. Minor localised masonry repointing as well as routine vegetation clearance are also recommended.*"

A subsequent decision was made to expand the project scope to include full vegetation clearance, masonry cleaning and repointing of the entire bridge.

1.3 Contractor's Construction Traffic Management Plan

This Construction Traffic Management Plan (CTMP) sets out the traffic management requirements that will apply to Contractors who are engaged in the remedial works of the Markievicz Bridge. The content of this report is preliminary only; the contractor must develop his own construction management plan to fully account for the proposed works.

The Contractor must adopt the requirements of this Construction Traffic Management Plan into his own Construction Traffic Management Plan and must agree same with SCC prior to commencement on site.

1.4 Background Documents

The requirements of the following documents must be adhered to in the formulation of the Contractor's Construction Management Plan.

- PUNCH drawings, included in Appendix A and Appendix B.
- "Guidelines for Managing Openings in Public Roads" Second Edition (Rev 1) issued by the Department of Transport, Tourism and Sport (2017).
- Chapter 8 of the Traffic Signs Manual (2019) "Temporary Traffic Measures and Signs for Roadworks".

1.5 Construction Contract

The Markievicz Bridge remediations works include:

- repair of the riverbed, piers and abutments due to scouring
- vegetation clearance
- masonry repointing

For details of the Works please refer to the Appendix A.

2.0 Construction Traffic Access to Markievicz Bridge

2.1 Existing Road Network

The Markievicz Bridge lies along the R870 crossing over the River Garavogue in Sligo Town, Co. Sligo. Currently, the bridge is a dual lane one-way carriageway with a footpath on one side of the carriageway and no existing designated cycle lanes. The junction of Bridge Street/Rockwood Parade/John F Kennedy Parade located on the southern side of the bridge is signalised with a pedestrian crossing.

Figure 2-1: Markievicz Bridge (Looking South) © Google Maps

Figure 2-2: Markievicz Bridge (Looking North) © Google Maps

2.2 Infrastructure upgrades

A review of the Objectives Map provided as part of the Draft Sligo County Development Plan 2024-2030 was carried out. It can be seen that a Green Corridor is proposed and will pass through the proposed development site. While the proposed infrastruture has not commenced at this time, the contractor should be aware of changes to the current traffic layout. It may be neccesary to provide additional cycle lanes while works are ongoing, which would include a lane to traverse the bridge.

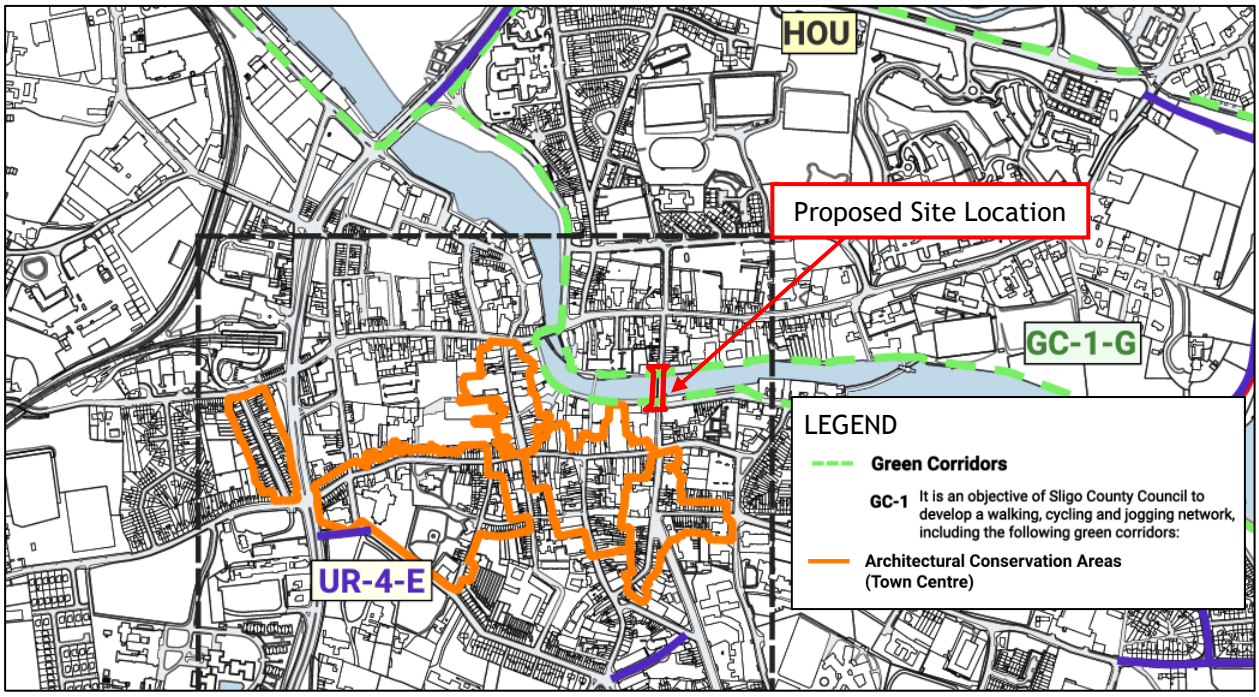


Figure 2-3: Extract from "Sligo Town Objectives Map" (Ref: Draft Sligo County Development Plan 2024-2030)

2.3 Location and access to the site

The management of construction traffic on the public road network both around and through Sligo Town is a critical part of the overall project and must be actively managed by the Contractor to the satisfaction of SCC.

The site compound is to be located to the south end of the bridge for the duration of the Works. Works construction vehicles will access the Markievicz Bridge site from the north via Bridge Street (R870), speed limit of 50km/h (blue route in). From there traffic will travel across the bridge, before travelling in a loop back to the south of the bridge along John F Kennedy Parade. Construction vehicles will egress from the site by travelling south across Abbey Street. The proposed Construction Route is shown in Figure 2-4.

For details of the temporary traffic management and site set up, refer to Appendix B.

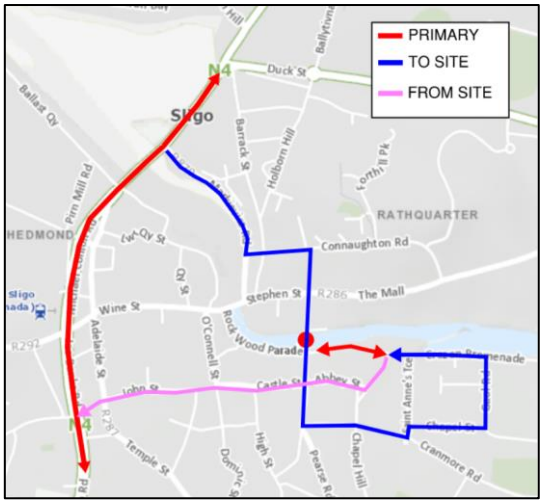


Figure 2-4: Contractor Route to and from site

2.4 Definition of Construction Traffic

Construction traffic means the following vehicles:

- Heavy commercial vehicles (HCVs) as set out in the RSA publication 'Guidelines on Maximum Weights and Dimensions of Mechanically Propelled Vehicles and Trailers, Including Manoeuvrability Criteria'
- Site machinery such as excavators, tippers, etc.
- Concrete trucks.

Smaller vehicles used by construction workers to access the site, such as cars and vans, are not deemed to be construction traffic.

2.5 Management of Construction Traffic

The Contractor is required to control the construction traffic in and around Markievicz Bridge. The Contractor must adhere to the following:

- Communicate clearly to all construction staff and subcontractors that they are bound by these restrictions.
- Schedule site traffic in advance to ensure that these restrictions are adhered to.
- Monitor construction traffic at key points remote from the site to check compliance.
- Details of the Contractor's management plan must be submitted to SCC in advance of construction and included as part of the Construction Management Plan.
- Vehicle movements associated with ancillary, maintenance and other non-essential activities will be minimised during the peak traffic hours on the public road in the vicinity of the site. These are the hours of 8:00-9:00AM in the morning and 17:00-18:00PM in the evening.
- Works outside this period are subject to approval from SCC and the relevant engagement with statutory third parties, e.g. emergency service operators, etc.
- Daily construction programmes will be planned to minimise the number of disruptions to surrounding streets by staggering HGV movements to avoid site queues.
- Management of the following public and private parking, and private businesses affected by the works, must be actively managed with direct engagement of the affected stakeholders.

- There will be limited site parking, sufficient only to serve those directly involved with the works.
- Construction vehicles will follow the road hierarchy as much as practicable - i.e. construction vehicles will be directed away from local or minor streets and roads and will be required to use designated primary national and regional routes for accessing the site.
- The Contractor will appoint a Temporary Traffic Operations Supervisor who will be responsible for the coordination of all traffic safety and traffic management matters. The Temporary Traffic Operations Supervisor will ensure that all traffic management requirements set-out in the CTMP are met.
- In the event that multiple contractors will be working on site, overall traffic management coordination will be required. This will include a review of the individual CTMPs prepared by different Contractors and provision of guidance to ensure consistency between them. An overall CTMP for the entire Markievicz Bridge site should be prepared and agreed with SCC in advance of commencement of works.

2.6 Proof of Compliance with Traffic Restrictions

The Contractor will track the transit of construction traffic in the Sligo Town area for the duration of the works.

The Contractor will control traffic movements using the following procedure:

- Develop a restrictions and rule adherence form that all lorry drivers and site operatives will sign.
- All traffic movements to and from site to be managed by the Contractor's transport manager in accordance with these restrictions.
- Appointed person to record all traffic entering and leaving site.
- Records to be reviewed periodically by the site manager.
- Prior to any new contractors starting, all persons must sign up to restrictions and prequalification forms.
- A Temporary Traffic Operations Supervisor (Signing, Lighting and Guarding at Roadworks CSCS card holder) must be present to coordinate the traffic entering and leaving the site.

3.0 Traffic Access to the Markievicz Bridge

3.1 Traffic Management Procedures / Generation

All deliveries will be booked into site at least one day before delivery. All drivers will contact the site co-ordinator 15 minutes before arrival on site.

All construction traffic will arrive from the R870 Road, to the north of the site. All deliveries will be off-loaded without delay by the most appropriate method and escorted off site.

The Traffic Co-ordinator will be responsible for ensuring that there is no conflict between pedestrians and vehicles / entering / exiting the site.

It is predicted that there will be an average of 8 personnel on site during peak construction activity. There could be in the order of 4 vehicles arriving and departing the site every day during peak construction activity. It is envisaged that working hours on site will be 08:00 hrs to 19:00 hrs Monday to Friday and 08:00 hrs to 16:30 hrs Saturday, therefore the peak movements in and out of the site should occur outside of the AM/PM rush hour traffic.

3.2 Traffic Management of Public Vehicles

Due to the remedial works associated with the bridge a portion of the road will have to be closed off to facilitate repairs. For the 'typical' works scenario, it is proposed to reduce traffic to a single lane one-way traffic system for the duration of the works.

Establishment of a works area and safety zone will be progressed, with advance signage on approaches to the bridge. A minimum 3.0m wide running lane width will be maintained for the active traffic lane. Temporary traffic management to be put in place to control vehicular and pedestrian movements. Temporary signalised traffic lights will be established to control the single lane one-way traffic system across Markievicz Bridge.

Temporary traffic management to control movements with priority as follows:

- Priority 1 – Pedestrians crossing on demand
- Priority 2 – Vehicular southbound and westbound

Note: Existing traffic lights located at the south end of the bridge to be disabled for the duration of the Works.

Please refer to Appendix B for illustration the proposed temporary traffic management measures.

Traffic calming measures would also be advised with reduced speed limits on the approach and over the bridge.

Due to the volume of traffic and the roads significance as a key route for local traffic it is suggested to maintain the road for the use of all traffic types (including HGV). It will also be used by light goods vehicles, cars and farm machinery.

3.3 Diversion of traffic

At this stage, the implementation of a diversion is envisaged only as a necessity due to the need to allow lifting of materials from road level to the in-stream works locations. These lifting operations are likely to require a full road closure due to the restricted width of the bridge, i.e. maintaining the operation of a suitable traffic lane may not be possible during these operations. The Contractor should seek to keep these full road closures to a minimum to ensure minimum disturbance to road users. Diversions to be scheduled for outside of peak commuter traffic times.

Alternative crossing points over the River Garavogue are located to the west on the R292 and N4.

Any planned diversions must be approved by SCC in advance and must also ensure any other statutory liaison, e.g. emergency services.

3.4 Traffic Management at interfaces with Pedestrian Paths

There is currently a pedestrian footpath on one side of the Markievicz Bridge. This footpath should be kept operational for pedestrians throughout the Works.

An existing uncontrolled pedestrian crossing is located to the north of the bridge and should be maintained for the duration of the Works. The existing controlled pedestrian crossing located to the south of the bridge will be disabled for the duration of the works. Temporary controlled pedestrian crossings will be required to the south end of the bridge for the duration of the Works.

Refer to Appendix B which shows all pedestrian routes within the Works area.

3.5 Traffic Management at interfaces with Cyclist Lanes

As noted in section 2.2 it may be necessary to cater for additional cycle lane(s).

3.6 Traffic management – Internal Site Extents

Site car parking is to be planned for by the Contractor within their site set up layout strategy

No unloading or blockages of access routes. Such vehicles will be immediately requested to move to avoid impeding works.

In accordance with this TTMP, the Contractor must appoint a Temporary Traffic Operations Supervisor responsible for the management of traffic management related activities on site.

The Contractor must carry out an auto-track analysis to ensure that adequate manoeuvring space is available on site. The auto-track must demonstrate how construction vehicles will go in and out of the site. Contractors must eliminate where possible the necessity for reversing of any construction or supply chain vehicle onsite.

Contractor is to note requirement for traffic management.

3.7 Traffic management coordination meetings

Logistics coordination will be undertaken where the traffic management strategy, traffic management coordination (and implementation of any required temporary traffic management schemes) will be discussed and agreed.

3.8 Construction Access Road required behaviours

The Contractor must adhere to established traffic management measures specified in the Construction Traffic Management Plan including:

- Queuing procedures outside the site for vehicles seeking to enter the site to prevent back-up along approach roads;
- Sign-in requirements;
- Visual PPE checks;

- Arrangements for infrequent visitors, e.g. project team, client visitors

All Contractors are deemed to have inspected and examined the site and its surroundings at tender stage and to have satisfied itself as to the nature and means of access to the site.

3.9 Loading/Unloading locations

Vehicles must be loaded and unloaded within the demised site area as indicated on drawings provided in Appendix B. This approach reduces the risk to the public, reduces congestion, and minimises disruption and risk to any passing vehicles on the highway. All deliveries and collections should be overseen and managed for the Contractor by a nominated competent person.

Contractors must consider and explain how to manage the impacts on cyclists, pedestrians, other road users, and any affected roadway infrastructure.

3.10 Emergency Access

Access for emergency vehicles to be facilitated at all times.

3.11 Asset Protection

The Contractor must take care to avoid damage to roads, footpaths, grass margins, and other surfaces and all walls including boundary walls, structures including protected structures and the associated curtilage, trees, lighting fixtures and all other street furniture within or outside of the site. They shall be liable for the cost of repairing / replacing all such damage caused by its operations to the satisfaction of the SCC.

Contractors must take precautions with the use of any tracked plant on road surfaces, suitably approved protective measures should be taken to safeguard the integrity of surfaces.

The Contractors Construction Management Plan must include specifications regarding the quality of temporary reinstatements and the timelines for permanent reinstatements of roads and pavements affected by the works.

Appendix A Typical Works Drawings

224138-PUNCH-XX-XX-DR-C-0051 Site Location

224138-PUNCH-XX-XX-DR-C-0100 Existing Bridge – Masonry Repairs

224138-PUNCH-XX-XX-DR-C-0201 Existing Structural Pier Scour Repairs

224138-PUNCH-XX-XX-DR-C-0202 Riverbed Scour Repairs

224138-PUNCH-XX-XX-DR-C-0203 Riverbed Scour Repair Sections

NOTE:

ALL LEVELS ARE RELATED TO THE ORDNANCE DATUM (O.D.) MALIN HEAD UNLESS NOTED OTHERWISE

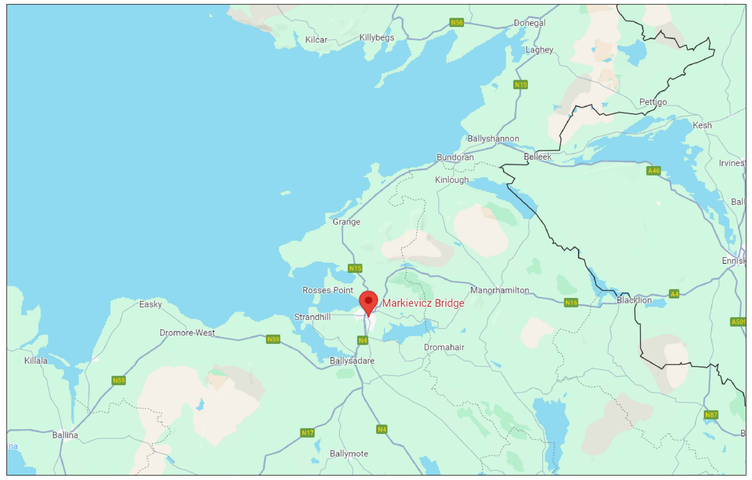
MALIN HEAD DATUM IS APPROXIMATELY 2.7m ABOVE THE POOLBEG LIGHTHOUSE DATUM
TO GET POOLBEG FROM MALIN HEAD ADD 2.7m
TO GET MALIN HEAD FROM POOLBEG SUBTRACT 2.7m
(SOURCE OSi)

ALL WATER LEVELS TO BE CONFIRMED WITH WATERWAYS IRELAND

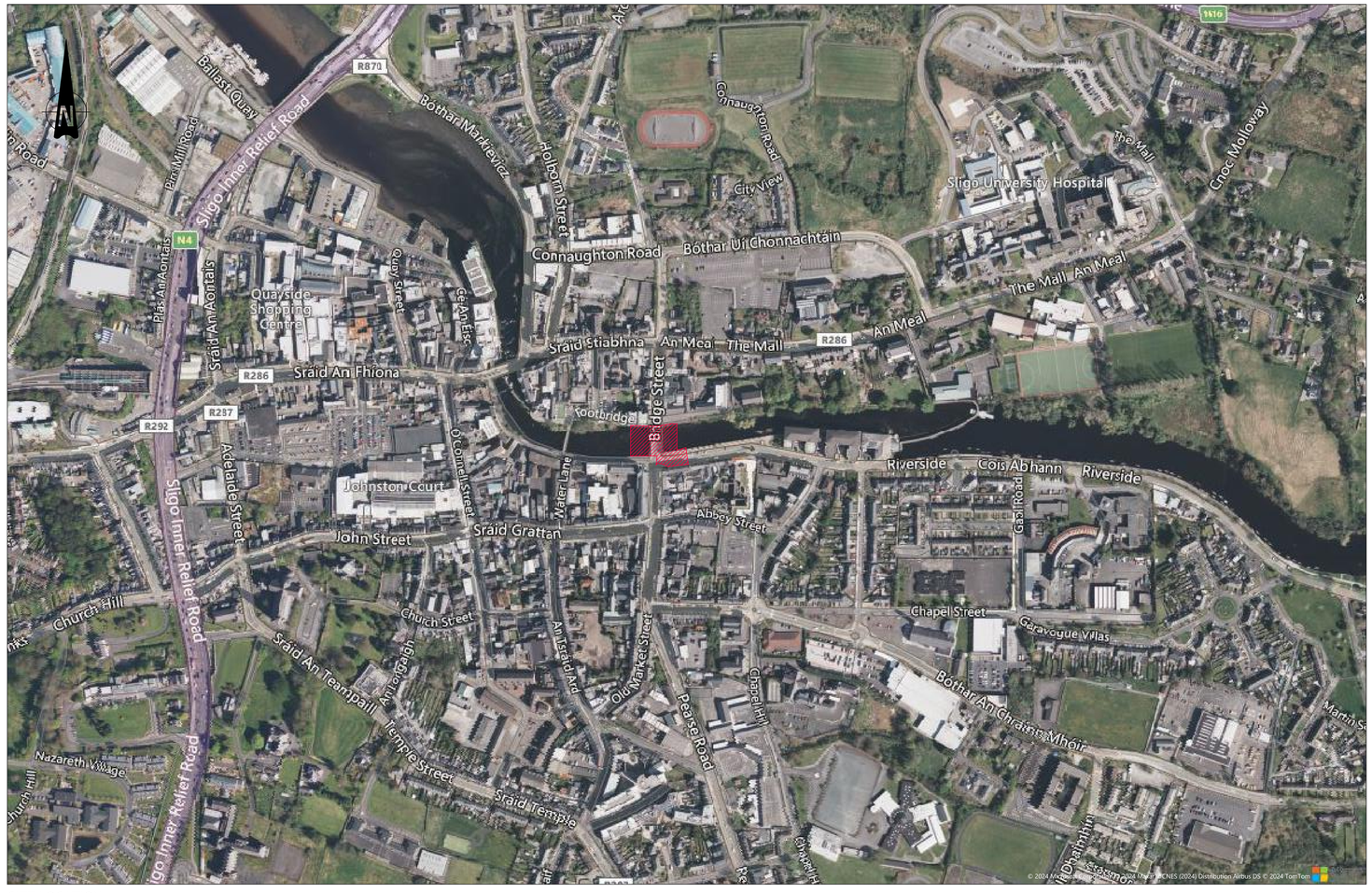
LEGEND

SITE BOUNDARY

MAP OF IRELAND LOCATION
N.T.S



MARKIEVICZ BRIDGE LOCATION
N.T.S



SITE LOCATION
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Client: SLIGO COUNTY COUNCIL

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Project: MARKIEVICZ BRIDGE REHABILITATION				
Title: SITE LOCATION				
Drawn: IF McGibbon	Date Created: December 2024	Technician Check: PJ Mulcahy	Engineer Check: Kevin O' Riordan	Approved: Kevin O' Riordan
Project No.: 224138	Originator: 224138-PUNCH-XX-XX-M2-C-0051	Drawing Status: A0 (Planning)		
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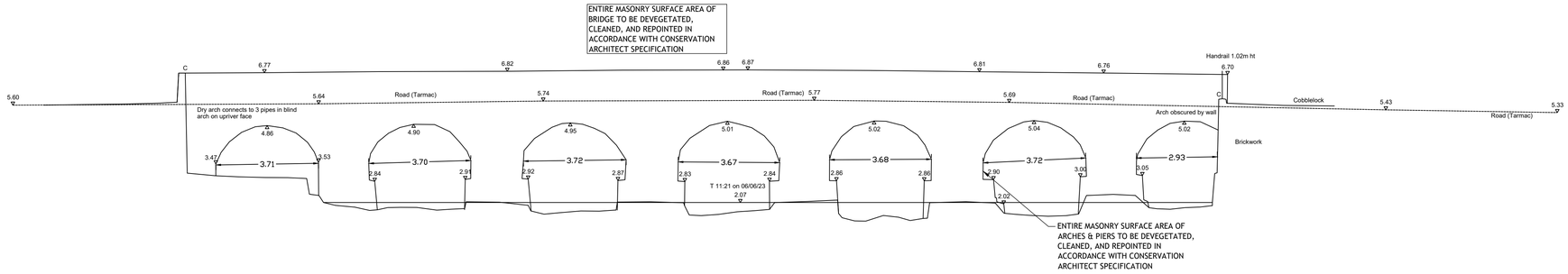

EXISTING DOWNSTREAM ELEVATIONS

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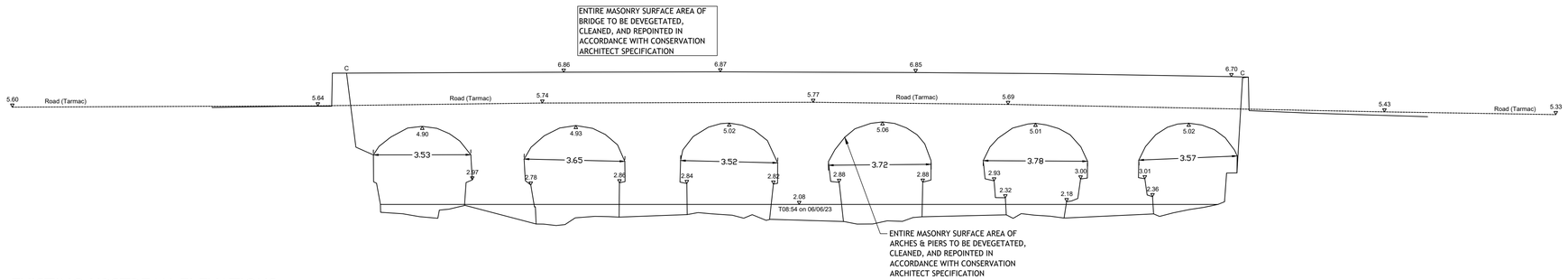

EXISTING UPSTREAM ELEVATIONS

SCALE 1:100

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Project: MARKIEVICZ BRIDGE REHABILITATION				
Title: EXISTING BRIDGE - MASONRY REPAIRS				
Drawn: Foxx McGibbon	Date drawn: December 2024	Technician Check:	Engineer Check: Kevin D O'Riordan	Approved: Kevin D O'Riordan
Project No: 224138	Model Ref: 224138-PUNCH-XX-XX-M2-C-0100		Drawing Status: A0 (Planning)	
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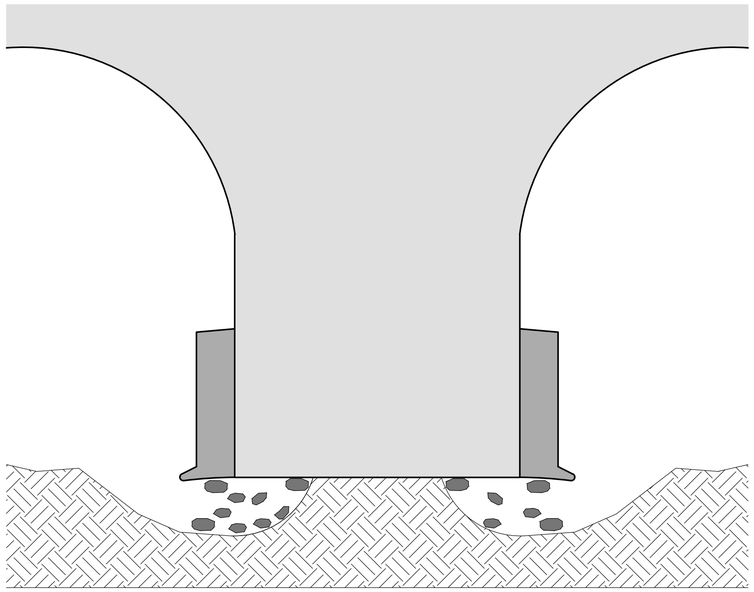
LEGEND

- MASONRY PIER
- CONCRETE SKIRT
- EXTENT OF SCOUR



EXISTING PIER
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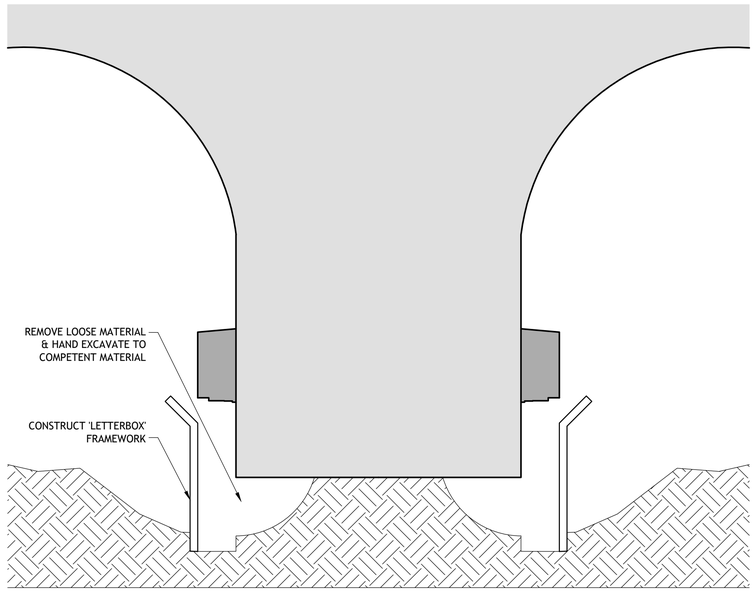

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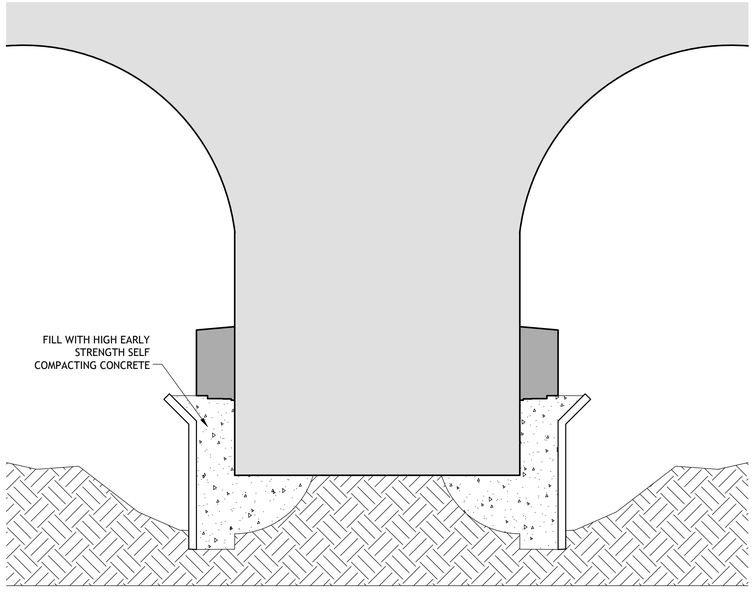

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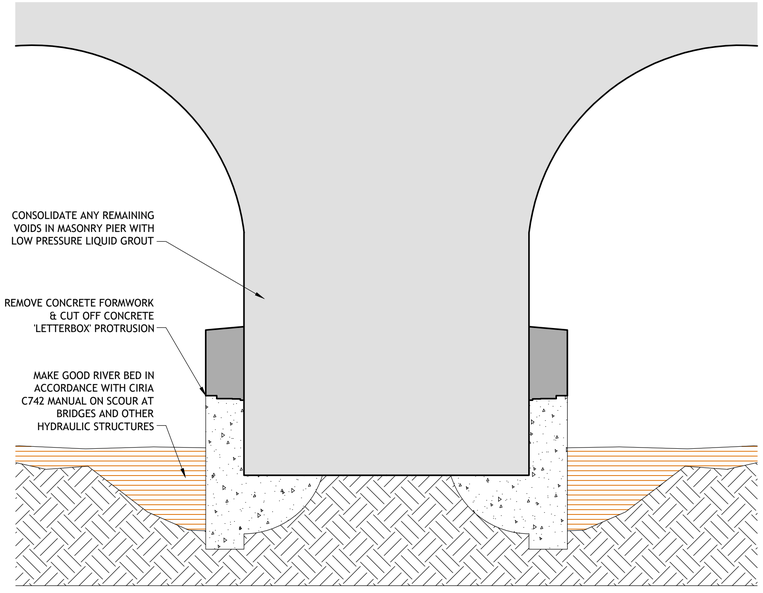

PROPOSED STEP 3
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EXISTING PIER LAYOUT
SCALE 1:20

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1:20
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Project: MARKIEVICZ BRIDGE REHABILITATION				
Title: EXISTING STRUCTURAL PIER SCOUR REPAIRS				
Drawn: F McGibbon	Date drawn: NOVEMBER 2024	Technician Check: PJ Mulcahy	Engineer Check: Kevin D O'Riordan	Approved: Kevin D O'Riordan
Project No: 224138	Model Ref: 224138-PUNCH-XX-XX-M2-C-0201		Drawing Status: A0 (Planning)	
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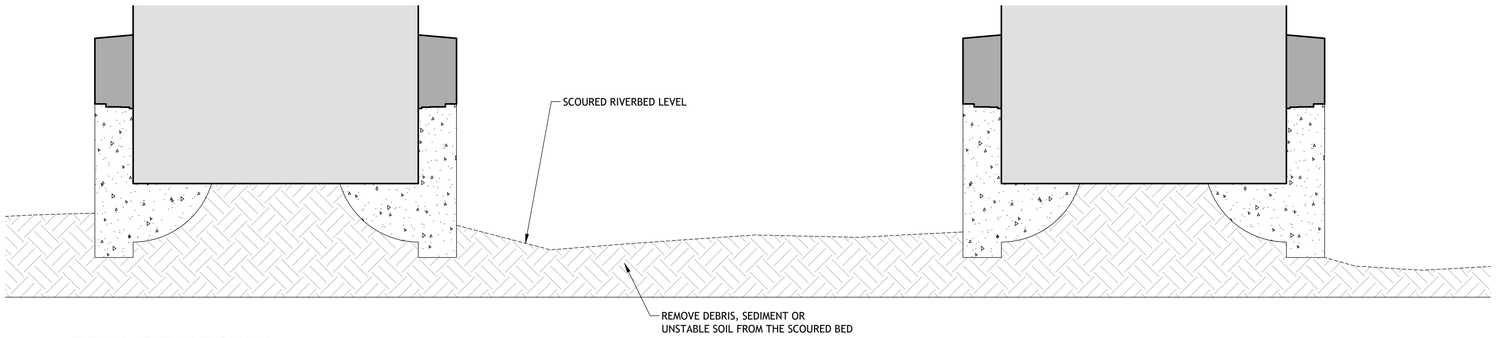
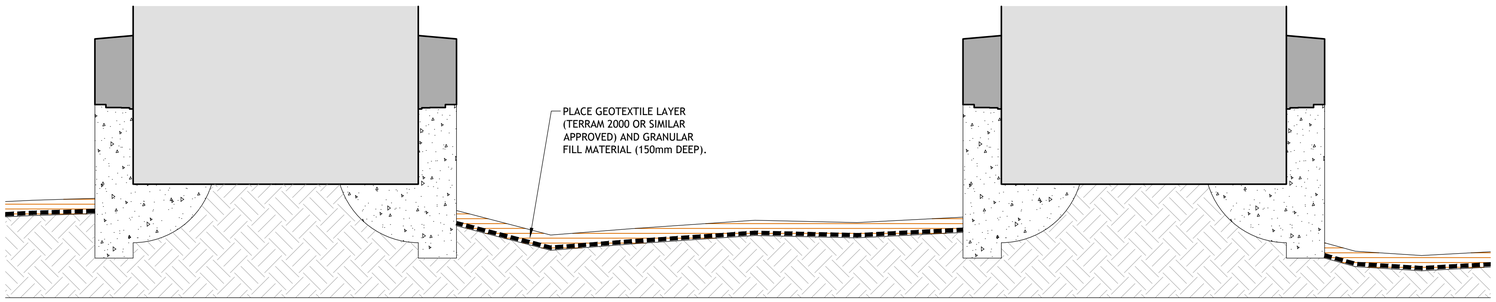


TYPICAL SECTION THROUGH
RIVERBED SCOUR REPAIR WORKS
- PROPOSED STEP 1

SCALE 1:20



TYPICAL SECTION THROUGH
RIVERBED SCOUR REPAIR WORKS
- PROPOSED STEP 2

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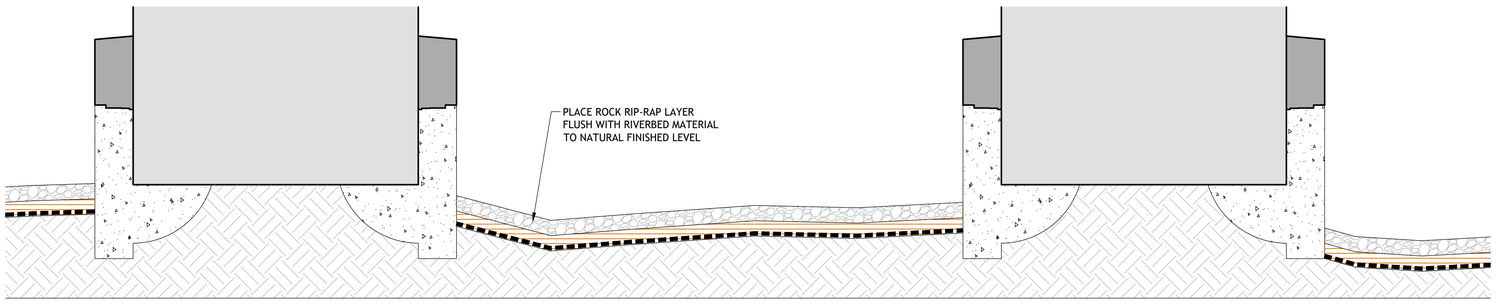

TYPICAL SECTION THROUGH
RIVERBED SCOUR REPAIR WORKS
- PROPOSED STEP 3

SCALE 1:20

REQUIREMENTS FOR BEDDING GRAVEL	
GRADINGS	d50 = 50mm
SHAPE	≤ 3.0
PROPORTION OF CRUSHED OR BROKEN SURFACES	≤ 50%
PARTICLE DENSITY	2.5
PLASTICITY INDEX	NON PLASTIC
LOS ANGELES COEFFICIENT	LA ≤ 35% (PER IS EN 1097-2)
SLAKE DURABILITY	> 90%
RESISTANCE TO WEAR	60 TO 80%

REQUIREMENTS FOR ROCK ARMOUR	
GRADINGS	d50 = 250mm
SHAPE	≤ 2.5
PROPORTION OF CRUSHED OR BROKEN SURFACES	90%
PARTICLE DENSITY	2.5
PLASTICITY INDEX	NON PLASTIC
LOS ANGELES COEFFICIENT	LA ≤ 35% (PER IS EN 1097-2)
SLAKE DURABILITY	>90%
RESISTANCE TO WEAR	60 TO 80%

NOTES:

1. ALL DIMENSIONS IN METERS UNLESS NOTED OTHERWISE.
2. DO NOT SCALE FROM THIS DRAWING, USE FIGURED DIMENSIONS ONLY.
3. USE NON-WOVEN GEOTEXTILE WITH A MINIMUM TENSILE STRENGTH OF [X] kN/m AND PERMEABILITY OF [Y] M/S.
4. OVERLAP ADJACENT GEOTEXTILE SHEETS BY A MINIMUM OF 0.5M AND SECURE IN PLACE BEFORE PLACING THE GRANULAR LAYER.
5. GEOTEXTILE SHALL BE TERRAM 2000 OR SIMILAR APPROVED.
6. THE GEOTEXTILE FABRIC SHALL BE PLACED DIRECTLY ON THE PREPARED RIVERBED, FREE OF DEBRIS AND SHARP OBJECTS.
7. GRANULAR FILL MATERIAL TO BE PLACED ON THE GEOTEXTILE IN A LAYER 150MM DEEP.
8. THE GRANULAR FILL LAYER SHALL BE PLACED EVENLY OVER THE GEOTEXTILE TO PREVENT PUNCTURING AND PROVIDE A STABLE BEDDING FOR THE RIPRAP.
9. GRANULAR FILL MATERIAL TO MEET SPECIFICATION REQUIREMENTS SHOWN IN BOX 1.
10. RIPRAP SHALL BE LAID ONTO OF THE GRANDULAR FILL MATERIAL TO A DEPTH MATCHING THE SURROUNDING RIVER BED LEVELS.
11. RIPRAP TO MEET SPECIFICATION REQUIREMENTS SHOWN IN BOX 2.
12. RIPRAP SHALL BE PLACED GRADUALLY, AVOIDING FREE FALL TO PREVENT DAMAGE TO UNDERLYING LAYERS
13. SCOUR HOLES LESS THAN 400MM DEEP TO BE FILLED WITH GRANULAR FILL MATERIAL ONLY. SURROUNDING GRAVEL MATERIAL WITHIN THE RIVERBED CAN BE USED WHERE POSSIBLE.

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Project: MARKIEVICZ BRIDGE REHABILITATION				
Title: RIVERBED SCOUR REPAIRS				
Drawn: F McGibbon	Date drawn: NOVEMBER 2024	Technician Check: PJ Mulcahy	Engineer Check: Kevin D O'Riordan	Approved: Kevin D O'Riordan
Project No: 224138	Model Ref: 224138-PUNCH-XX-XX-M2-C-0202		Drawing Status: A0 (Planning)	
Scale @ A1: AS SHOWN	Document No: 224138-PUNCH-XX-XX-DR-C-0202			Revision No: C01

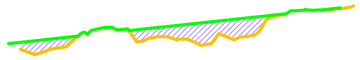
NOTES:
1. ALL DIMENSIONS IN METERS UNLESS NOTED OTHERWISE.
2. DO NOT SCALE FROM THIS DRAWING, USE FIGURED DIMENSIONS ONLY.

LEGEND:

DENOTES EXTENT OF FILL MATERIAL

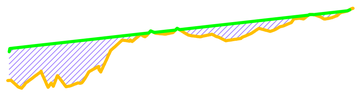
DENOTES BRIDGE PIER / ABUTMENT

FILL LEGEND				
MINIMUM LEVEL	MAXIMUM LEVEL	COLOUR	AREA	VOLUME
0.00	0.20		262.241m2	67.184m3
0.20	0.40		138.524m2	30.165m3
0.40	0.60		56.842m2	11.536m3
0.60	0.80		27.575m2	3.012m3
0.80	1.00		4.287m2	0.198m3



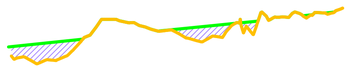
Proposed Levels	1.539	1.754	1.869	2.152
Existing Levels		1.697	1.675	2.152
Chainage	00.000	10.000	20.000	28.154

SECTION A



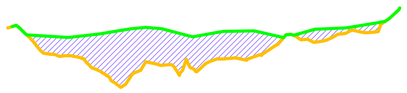
Proposed Levels	1.459	1.678	1.901	2.115
Existing Levels	0.935	1.594	1.721	2.115
Chainage	00.000	10.000	20.000	28.179

SECTION B



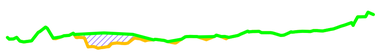
Proposed Levels	1.418	1.815	1.834	2.051
Existing Levels	1.272	1.815	1.632	2.051
Chainage	00.000	10.000	20.000	27.263

SECTION C



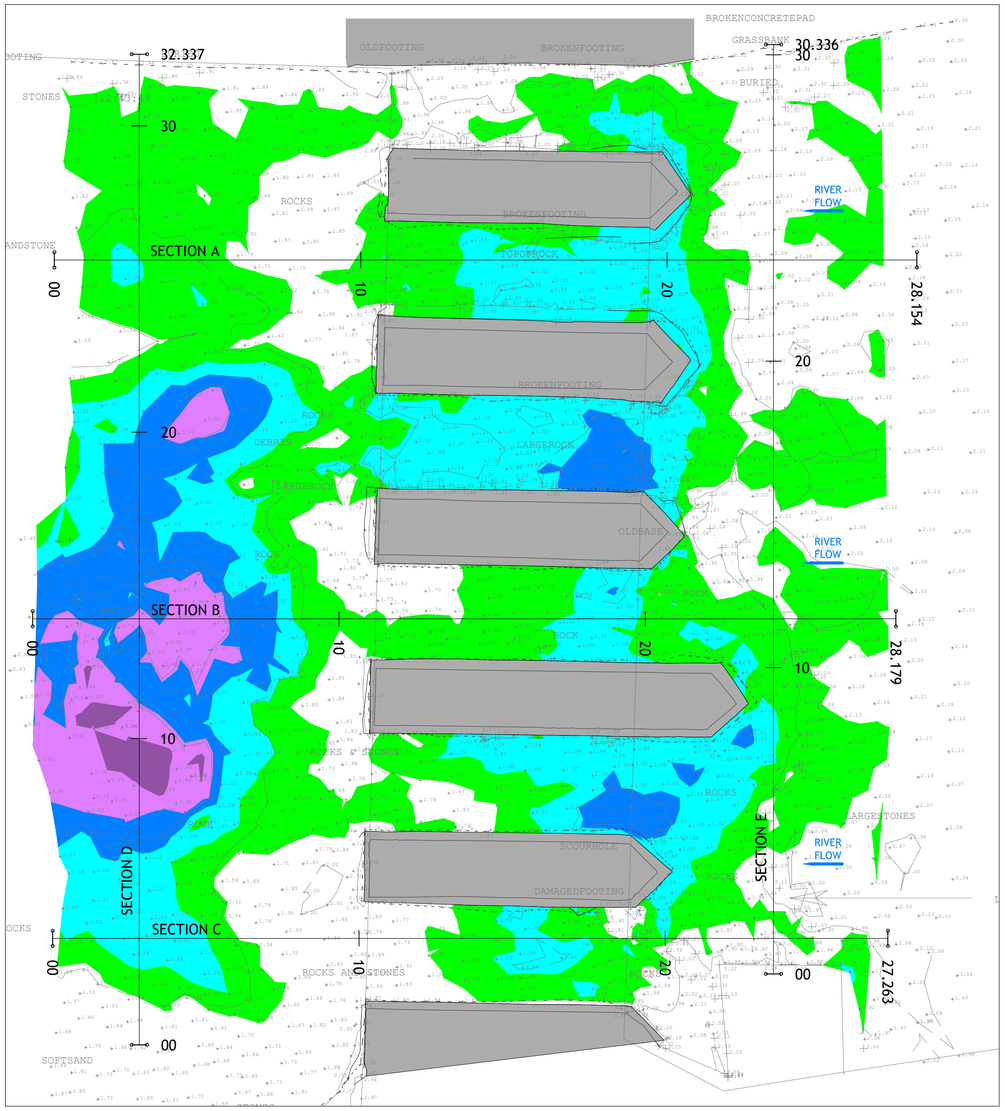
Proposed Levels	1.616	1.600	1.567	1.694	1.940
Existing Levels	1.616	0.809	1.137	1.550	1.940
Chainage	00.000	10.000	20.000	30.000	32.337

SECTION D



Proposed Levels	1.929	2.054	2.092	2.388
Existing Levels	1.929	1.901	2.092	2.388
Chainage	00.000	10.000	20.000	30.336

SECTION E



RIVERBED SCOUR LAYOUT
SCALE 1:100

1:100
2m 0 2m 4m 6m 8m 10m

1:250
5m 0 5m 10m 15m 20m 25m

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BUILDING INFORMATION MODELLING (BIM) I.S EN ISO 19650-2:2018 NSAI Certified

Rev	Amendment	By	Date
C01	ISSUED FOR PLANNING	CS	2025-04-01

Client: SLIGO COUNTY COUNCIL

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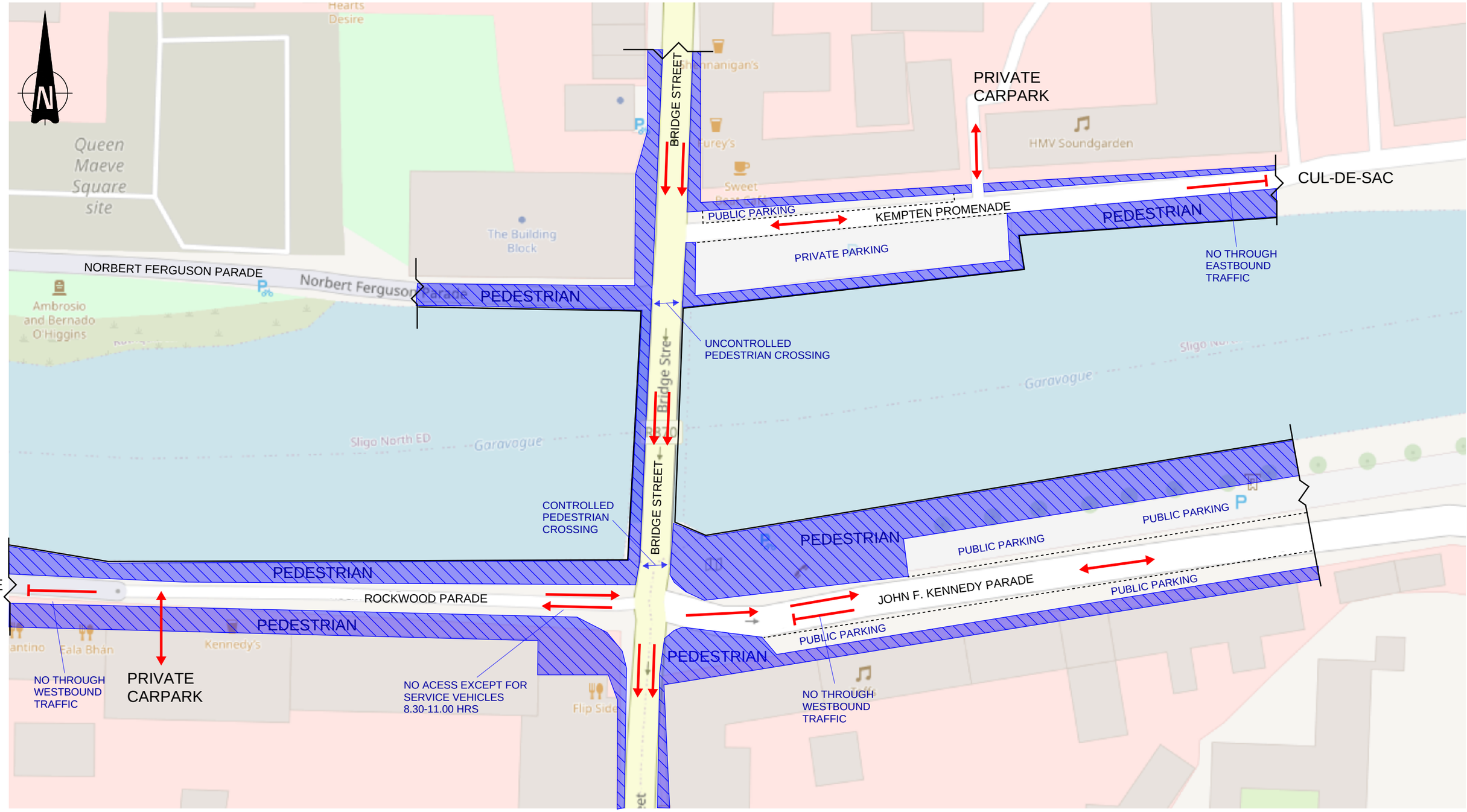
Project: MARKIEVICZ BRIDGE REHABILITATION				
Title: RIVERBED SCOUR REPAIR SECTIONS				
Drawn: F McGibbon	Date drawn: NOVEMBER 2024	Technician Check:	Engineer Check: Kevin D O'Riordan	Approved: Kevin D O'Riordan
Project No: 224138	Model Ref: 224138-PUNCH-XX-XX-M2-C-0203		Drawing Status: A0 (Planning)	
Scale @ A1: AS SHOWN	Document No: 224138-PUNCH-XX-XX-DR-C-0203			Revision No: C01

Appendix B Traffic Drawings

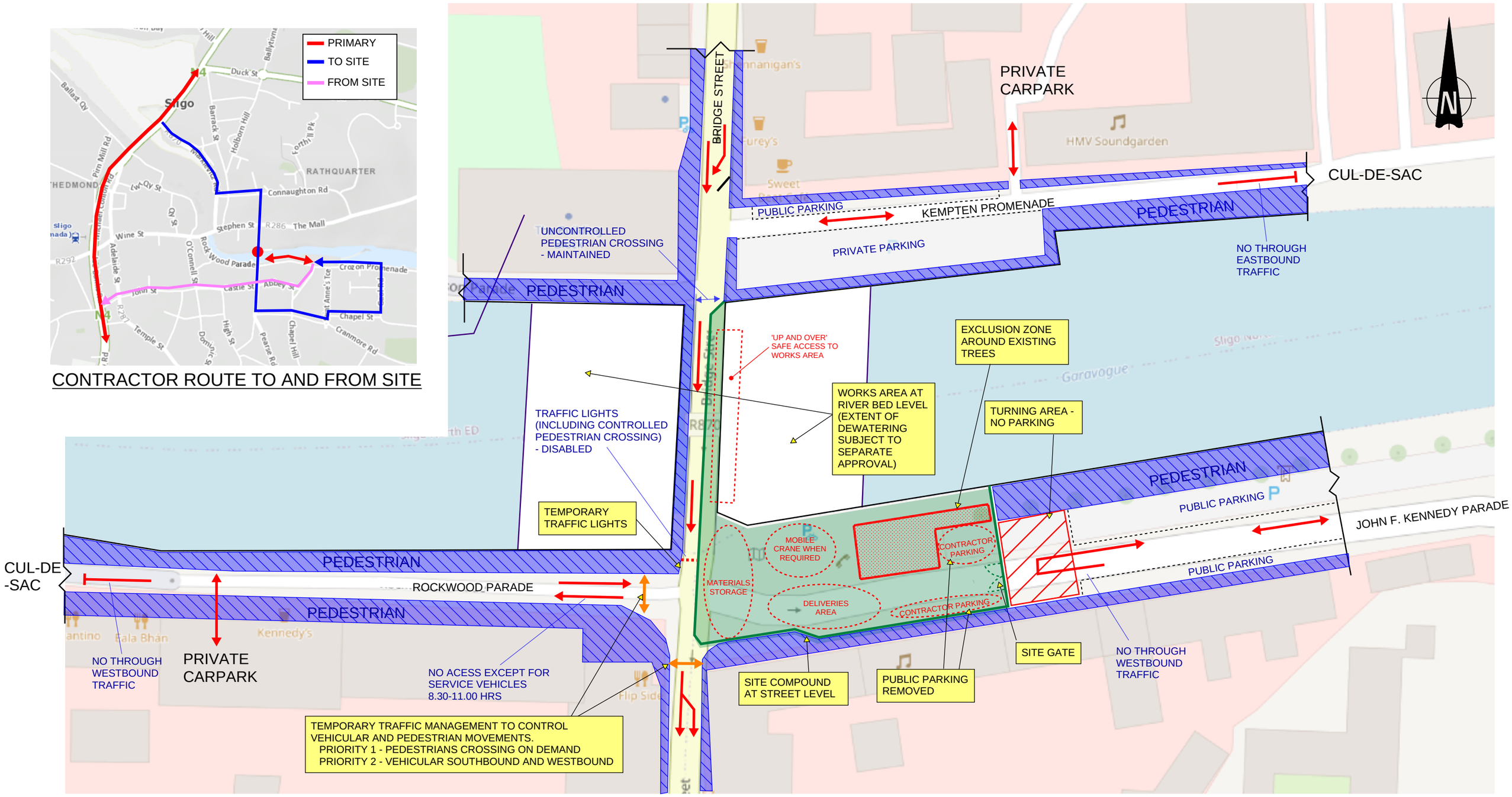
224138-PUNCH-XX-XX-SK-CS-0005 Existing Traffic

224138-PUNCH-XX-XX-SK-CS-0006 Construction Traffic



PROJECT:	224138 MARKIEVICZ BRIDGE REPAIRS		
SKETCH TITLE:	EXISTING TRAFFIC		
SKETCH NO.	2224138-PUNCH-XX-XX-SK-CS-0005		
DESIGNER:	KOR	DATE:	18/11/2023

CONTRACTOR ROUTE TO AND FROM SITE



TEMPORARY TRAFFIC MANAGEMENT AND SITE SETUP

PUNCH consulting engineers	PROJECT:	224138 MARKIEVICZ BRIDGE REPAIRS	
	SKETCH TITLE:	CONSTRUCTION TRAFFIC	
	SKETCH NO.	2224138-PUNCH-XX-XX-SK-CS-0006	
	DESIGNER:	KOR	DATE: 18/11/2024