

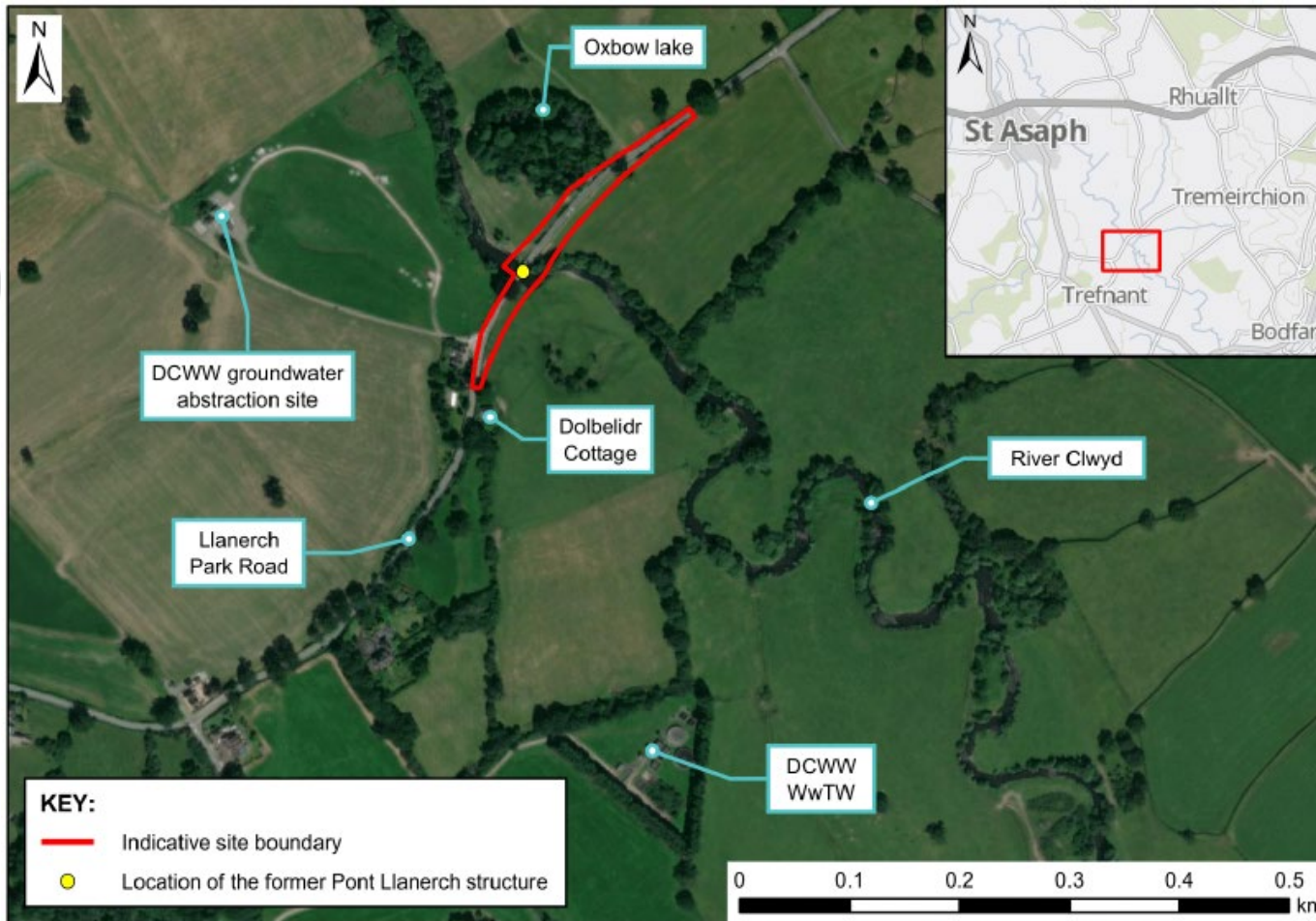
APPENDIX A

Partnerships Scrutiny Committee – 3 April 2025

Pont Llannerch - Appendix A



Pont Llanerch - Location



Source: Contains Esri, Maxar, Earthstar Geographics and GIS User Community data. Additional labels inserted by Mott MacDonald (2023).

Pont Llannerch

The early stages

Balfour Beatty

153+ SCAPE
projects completed

valued at £949M+, on time and to budget

£608M of total
project value

spent with supply chains within 40 miles

£404M social value

added to local communities



SCAPE is a public sector organisation, dedicated to creating efficiency and social value via the built environment.



Pont Llannerch

Optioneering – Preferred Option



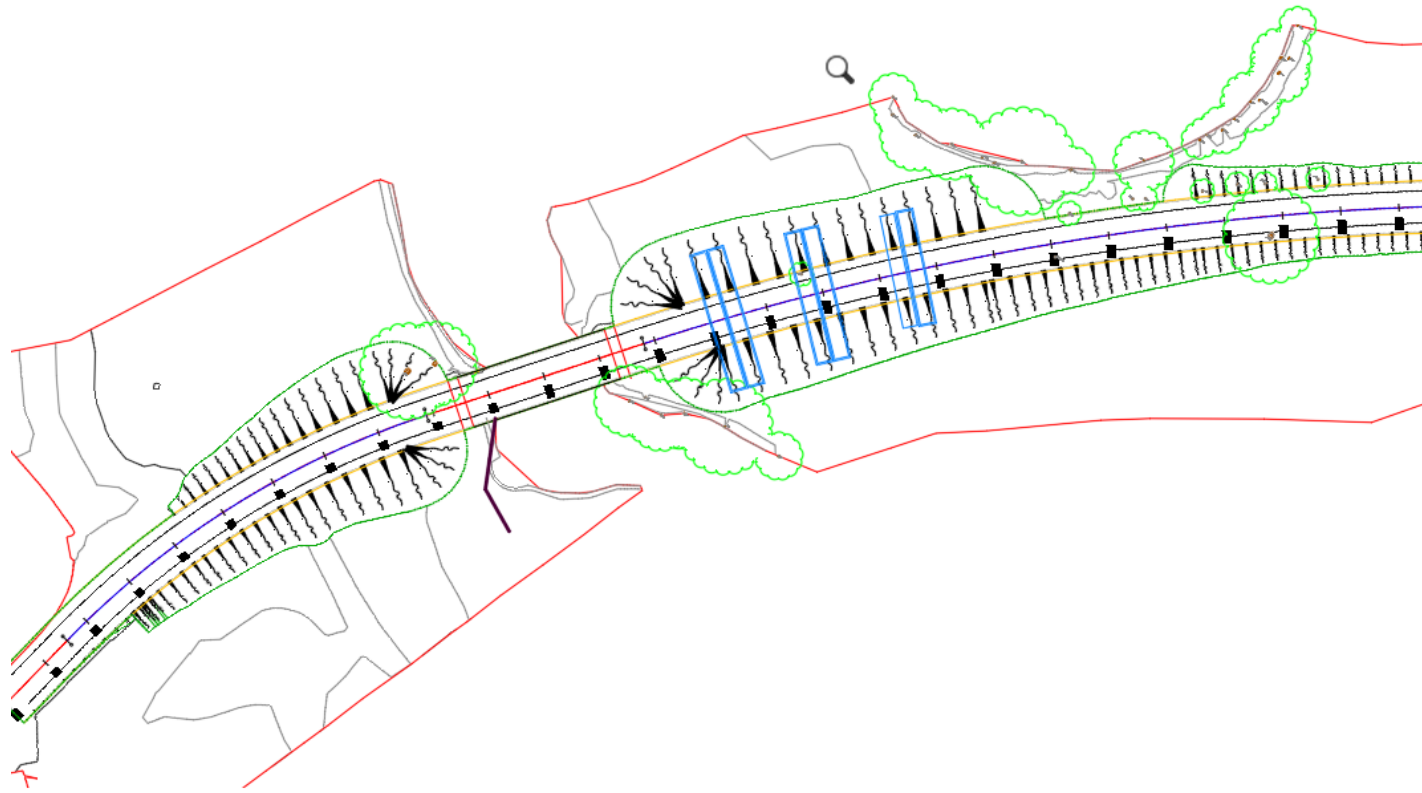
Pont Llannerch

Optioneering – Preferred Option



Pont Llannerch

Optioneering – Preferred Option

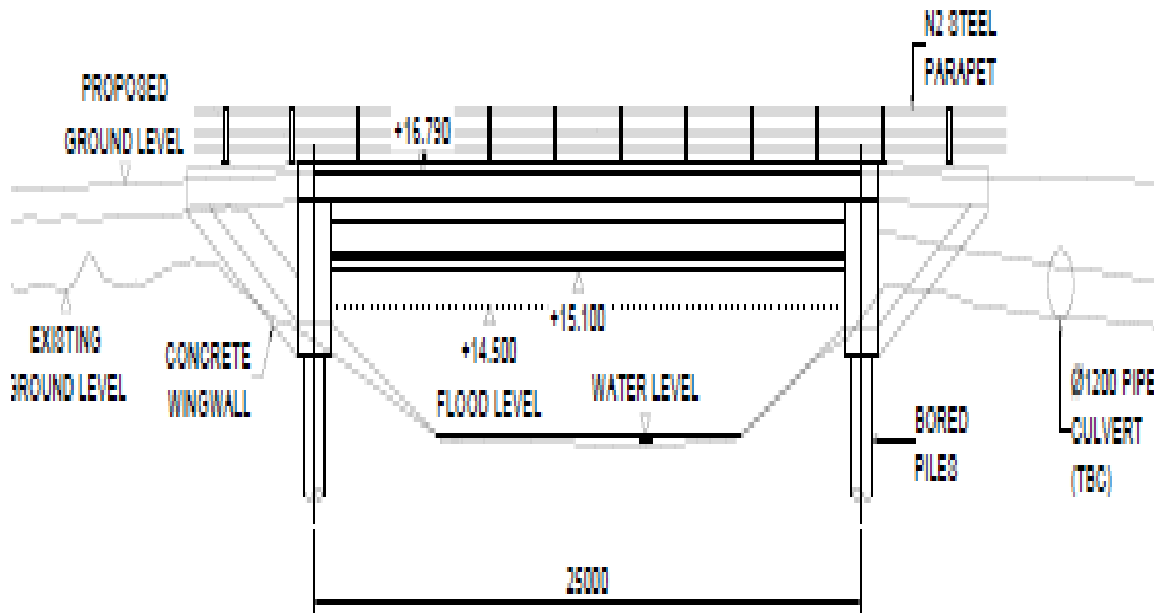


Pont Llannerch

Optioneering – Preferred Option

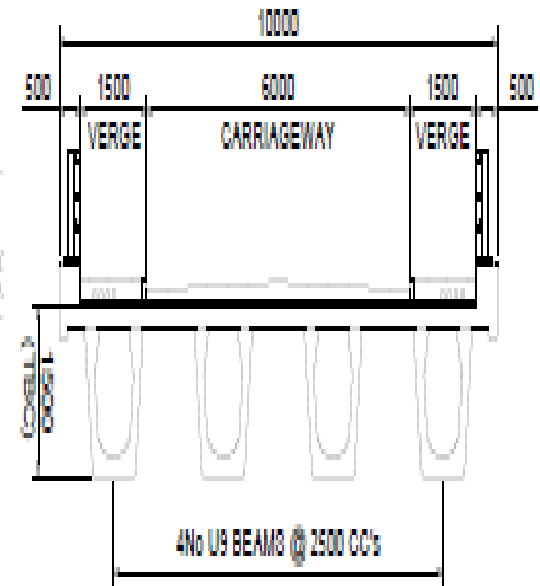
OPTION 1 - PRECAST CONCRETE INTEGRAL BRIDGE

Scale 1:200



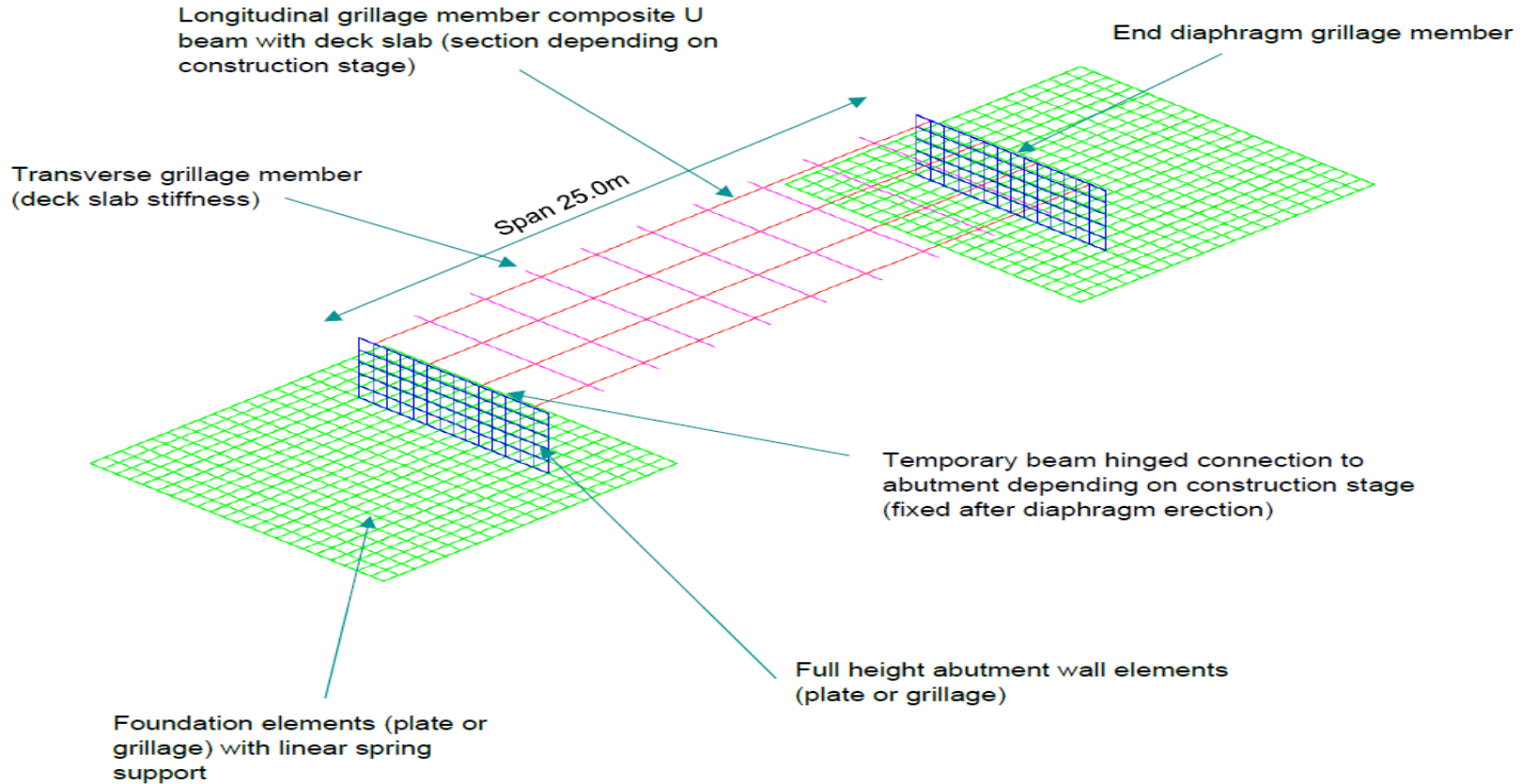
OPTION 1a - CROSS-SECTION

Scale 1:100

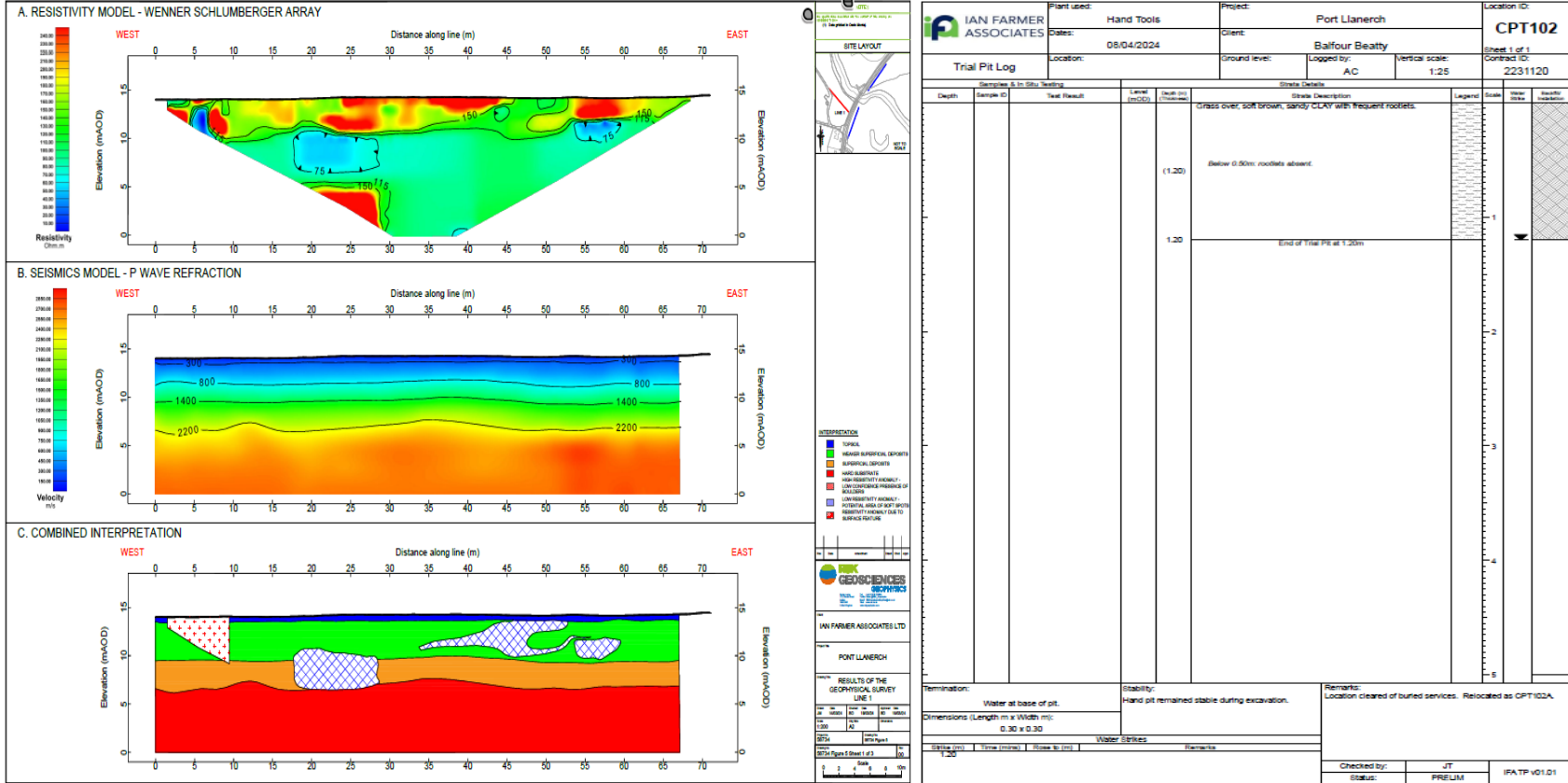


Pont Llannerch

Detailed Design - Foundations



Pont Llannerch Ground Investigations



Pont Llannerch

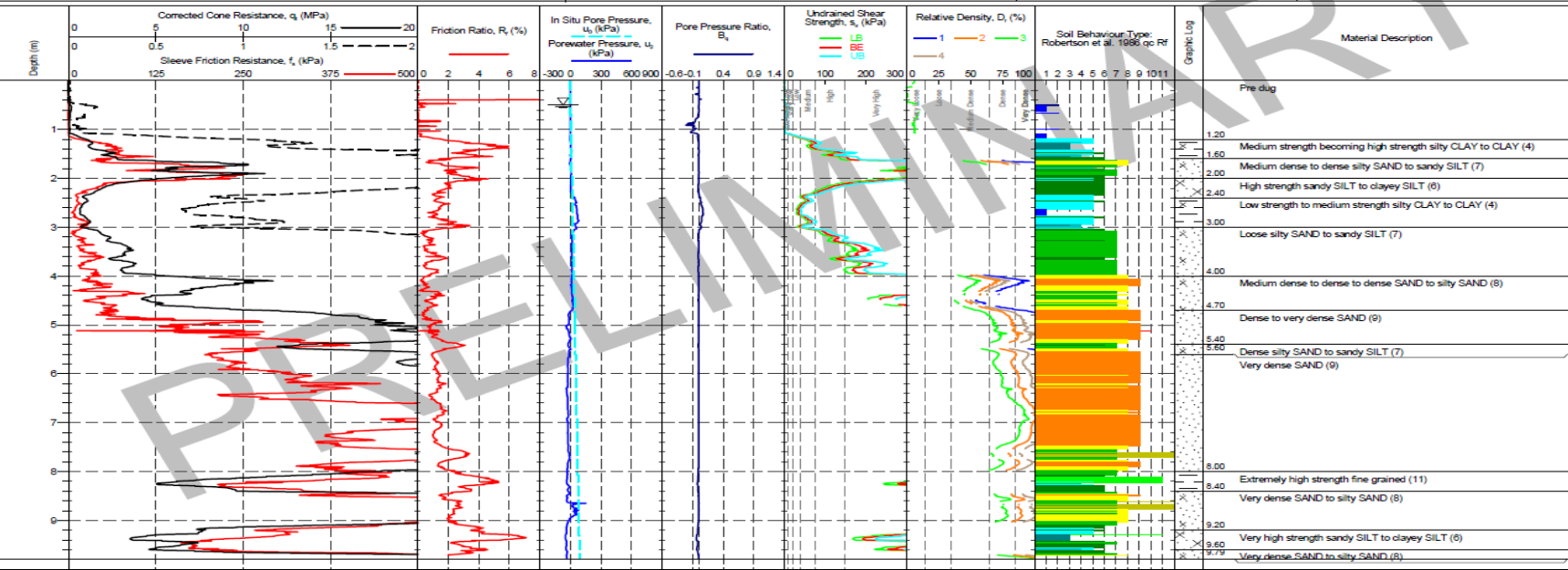
Ground Investigations

IN SITU

SITE INVESTIGATION Working with:

PointID	CPT105
CLIENT : Ian Farmer	Remark: Test refused on tip resistance.
PROJECT: Pont Llannerch GI	SHEET : 1 OF 2
LOCATION : St Asaph	STATUS : Final
PROJECT No. : 1240160	TEST DATE : 12/04/2024
	PLOT DATE : 15/04/2024
	METHOD : ISO 22476-1:2022

EASTING : 0.000 m
NORTHING : 0.000 m
ELEVATION : 0.000 m OD
CHECKED BY : DW
TERMINATION REASON : Refusal



CONE ID : S15-CFIP.2176 CONE MODEL : Subtraction CONE AREA : 15cm ² CONE AREA RATIO : 0.79 FILTER POSITION : u2 FILTER TYPE : HDPE	TEST TYPE : TE2 APPLICATION CLASS : 2 RIG : CPT 017 - Griffen OPERATOR : DHo FRICTION REDUCER : None WEATHER : Raining & Mild	Transducer Pre 280 mV Tip 290 mV Sleeve 258 mV Pore Pressure 2 258 mV	CPTU ZERO VALUES Post 253 mV Difference -0.081 MPa -0.005 kPa -0.005 kPa	METHOD: Robertson et al. 1986 qc Rf 1 - Sensitive fine grained material 2 - Organic material 3 - CLAY 4 - Silty CLAY to CLAY	5 - Clayey SILT to silty CLAY 6 - Sandy SILT to clayey SILT 7 - Silty SAND to sandy SILT 8 - SAND to silty SAND 9 - SAND 10 - Gravely SAND to SAND 11 - Very stiff fine grained 12 - SAND to clayey SAND
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Ground Investigation / Detailed Design - Outcome

- By the end of the ground investigation process it was discovered that the depth of the river gravels is roughly 10m on one side of the river and 11m on the other.
 - Beneath the river gravels we have been able to establish where the weathered section of sandstone is.
-

Ground Investigations / Detailed Design - Outcome

- However...we do not know, and it cannot be known how deep the weathered section is, where any fissures are, or how they are interconnected.
 - This means we do not know where the aquifer water that forms the abstraction is under the bridge location.
-

Ground Investigations / Detailed Design - Outcome

- The raft foundation concept is the most suitable solution.
- To avoid the new bridge failing due to future predicted scour levels we need to drive the cofferdam pile into the weathered section of sandstone.