Client	TfNSW	**INSPECTION AND TEST PLAN FOR:**		**Work Area:**	
Contract No.#	21.0000139295.2145				
Contract	New Dubbo Bridge	**Rocks Gabions & Mattresses (R55)**		**Inspection and Test Plan**	
ITP prepared by	Henry Meyer			ITP 15	(ITC 15)
ITP approved by				**Lot No:**	

Legend:	W = Witness	H = Hold	S = Surveillance	ACPL = Abergeldie	S/C = Subcontractor

Activity No.#	Description	Requirements / Reference	Acceptance Criteria	Frequency	Inspection – Engineer to Sign & Date				Comments / Attachments / Records
					S/C	ACPL	Client	Date	
1	**Safety Review**	Project Safety Plan	• All site personnel inducted (includes environment and cultural) • Required Safe Work Method Statements completed and signed • Subcontractor's safety plan / procedure approved	Prior to commencing works		W	S		
2	**Environment**	Project Environment Plan	• Installation of soil erosion and sedimentation controls completed in accordance with Soil and Water Specs. • Air quality to be visually monitored for dust etc as a direct result of construction activities	Prior to commencing works		W	S		
4	**Gabions**	R55 Cl 2.1	• Gabions must be flexible, woven, galvanized wire mesh boxes of dimensions as shown on the Drawings conforming to ASTM A975-97. Where specified on the Drawings, the galvanized wire mesh must be coated with PVC. • The galvanizing coating must be a 95% Zinc, 5% Aluminium Mischmetal alloy conforming to the requirements of ASTM A975-97. The physical properties of the steel wire and PVC coating must conform to the requirements of ASTM A975-97.	During Installation		S	S		
5	**Mattresses**	R55 Cl 2.2	• Mattresses must be flexible, woven, galvanized wire mesh boxes of dimensions as shown on the Drawings conforming to ASTM A975-97. Where specified on the Drawings, the galvanized wire mesh must be coated with PVC. • The galvanizing coating must be a 95% Zinc, 5% Aluminium	During Installation		S	S		

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			Mischmetal alloy conforming to the requirements of ASTM A975-97. The physical properties of the steel wire and PVC coating must conform to the requirements of ASTM A975-97.						
6	**Selvedges**	R55 Cl 2.3	• All edges of the gabions, mattresses, diaphragms and end panels must be selvedged with a continuous wire in accordance with ASTM A975-97.	During Installation		S	S		
8	**Lacing And Connecting Wire**	R55 Cl 2.5	• Lacing and connecting wire must be supplied with the gabions, mattresses and mesh panels to perform all the wiring operations to be carried out in construction of the gabions or mattresses. Materials must conform to ASTM A975-97. The minimum diameter of the wire (or wire core in the case of PVC coated wires) must be 2.2 mm. • Alternative fastener systems such as “C” clips in place of lacing and connecting wire are permitted but must conform to the requirements of ASTM A975-97.	During Installation		S	S		
9	**Rockfill**	R55 Cl 2.6	• Rockfill must be dense, hard, durable and clean rock.	During Installation		S	S		
10	**Aggregate Wet/Dry Strength**	R55 Cl 2.6.1	• Rock from all sources must have a wet strength of at least 100 kN and a maximum wet/dry strength variation of 35% when tested in accordance with Test Method TfNSW T215. The rock may be crushed by the testing authority so as to produce material that is suitable for testing by Test Method TfNSW T215.	During Installation		S	S		If practical, recycle any unwanted guide posts. - Test results
11	**Size**	R55 Cl 2.6.2	• For gabions, the minimum and maximum rock size must be 100 mm and 250 mm respectively. • For mattresses, the minimum rock size must be 75 mm, and the maximum rock size must be two thirds of the thickness of the mattress or 250 mm, whichever is the lesser. • **HOLD POINT: Use of rockfill.** • Submit details regarding the properties and source of the rockfill.	During installation		H	H		**HOLD POINT**

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12	**Installation - General**	R55 Cl 3	• Assemble and install all gabions and mattresses in accordance with the requirements of this specification and the manufacturer's recommendations. • Carry out the excavation shown on the Drawings prior to the installation of the gabions, mattresses and/or Terramesh panels. • Use the excavated material for the construction of embankments, or dispose of it to spoil in accordance with Specification TfNSW R44.	During installation		S	S		
13	**Stretching**	R55 Cl 4.3	• **HOLD POINT: Filling of gabions.** • Provide verification that the gabion units have been supplied and assembled in accordance with specification requirements.	During Installation		H	H		**HOLD POINT**
14	**Filling**	R55 Cl 4.4	• Carry out filling of the gabion boxes only while the gabion boxes are under tension. • Place the rocks at the front face, and all other faces which will be exposed in the completed structure, by hand packing so as to produce a neat face free from excessive bulges, depressions and voids. • Provide internal bracing wires prevent distortion of the gabion units during filling and in the completed structure. • Mechanical filling equipment may be used provided that adequate precautions are taken to protect any PVC coating from abrasion during filling operations. • Release the tension on the gabion boxes only when fully laced and sufficiently full to prevent the mesh from slackening.	During Installation		S	S		
15	**Final Lacing**	R55 Cl 4.5	• Closing and lacing down of lids must proceed as soon as practicable after the filling operations particularly where there is a likelihood of storm or flood during construction. • Stretch the lids tightly over the filling with suitably designed closing tools and lace down securely through each mesh	During Installation		S	S		

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			along all edges, ends and diaphragms before commencing work on the next layer of gabion.						
16	**Installation Of Mattresses**	R55 Cl 5.1	• Prior to assembly, open the wire mesh out flat on the ground and stretch it to remove all kinks and bends. • Assemble the mattresses individually, by raising the sides, ends and diaphragms, ensuring that all creases are in the correct position and that the tops of all four sides and the diaphragms are even. • Maintain tightness of the mesh and wiring at all times.	During Installation		S	S		
17	**Erection**	R55 Cl 5.2	• Only assembled mattress or groups of mattresses may be positioned in the structure, with each mattress being securely laced to the surrounding ones along the perimeter. • When the mattress is laid on a slope steeper than 1(V) in 1.5(H), secure the upper edge by galvanized star pickets driven at 1 m centres a minimum of 900 mm into the ground, or as shown on the Drawings. • **HOLD POINT: Filling of mattresses** • Provide verification that the mattress units have been supplied and assembled in accordance with specification requirements. The Principal will inspect the installed mattresses prior to authorising the release of the Hold Point.	During Installation		H	H		**HOLD POINT**
18	**Filling**	R55 Cl 5.3	• Mechanical filling equipment may be used provided that adequate precautions are taken to protect any PVC coating from abrasion during filling operations. • Redistribute the filling materials by hand to ensure that all diaphragm compartments are fully filled and to produce a neat and level top surface. • Mattress units must be overfilled by 25 mm to 50 mm to allow for subsequent settlement.	During Installation		S	S		
19	**Final Lacing**	R55 Cl 5.4	• Closing and lacing down of lids must proceed as soon as practicable after the filling operations have been completed. • Stretch the lids tightly over the filling with suitably designed	During Installation		S	S		

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			closing tools and lace down securely through each mesh along all edges, ends and diaphragms. The ends of all lacing wires must be turned into the mattress on completion of all lacing operations.						
20	**Geotextile For Gabions And Mattresses**	R55 Cl 6	• Before laying out gabions or mattresses, place the geotextile between the wire cage and the material being protected or retained. The geotextile must be a non-woven type meeting the requirements of Geotextile Strength Class C and Filtration Class 2 in accordance with Specification TfNSW R63.	During Installation		S	S		

REVIEW BY PROJECT ENGINEER						
Any non-conformances?	☐ YES	☐ NO	Nos:	Closed Out	☐ YES	☐ NO
Other QA details – NCRs, CARs, Identified Records etc						
All work has been satisfactorily completed.	☐ YES		☐ NO			
Name		Signature		Date		

List of Identified Records

2.6.2 Details of the properties and source of the rock fill

4.3 Conformity records for the supply and assembly of gabion units

5.2 Conformity records for the supply and assembly of mattress units