INSPECTION AND TEST PLAN

Details							
ITP Activity:	RCP installation			**Project:**	EVA Copper	**Date Lot Opened:**	
ITP Number:	EVAMP001-THS-QA-ITP-0004	**Rev. No.**	A	**Contract Number:**		**Date Lot Closed:**	
Lot Number:				**Client:**	Harmony		
Location or Area:				**Client Reference:**		**JSA/SWMS Ref:**	
Chainage / Coordinates:				**Contractor / Subcontractor / Supplier:**		**SOP Reference:**	

No.	Inspection / Test Point	Responsibility	Method	Conformance Criteria	Specification Clause	Frequency	Verification from Thiess / Client (H/W/R/M)				Records or Comments
							THIESS (Initial)		Client (Initial)		
1	**Pre-Construction**										
1.	Drawings supplied most current IFC and transmitted through In Eight	ENG	Visual	Reviewed drawing register	Reviewed drawing register	Prior to works	HP		W		
2.	Define RCP ID	ENG	Visual	Allocate ID for reinforced concrete pipe, define work area	Lot register. EVAMP001-THS-CV-SPE-0001 EVAMP001-THS-CV-SPE-0002	Prior to works	HP		W		
3.	Lot Register/ WBS submitted and approved	ENG	Visual	Approved WBS	Approved WBS	Prior to works	WP		W		
4.	Underlying lot & ITP signed off and conforming	ENG	Visual	Subgrade prep ITP Signed	Approved QMP. Approved ITP	Prior to works	HP		W		

5.	Certificate of compliance for RCP Material	ENG	Written	Supplier to provide certificates indicating manufacturing processes, materials, thicknesses, classes, and diameters (Only culverts with materials & dimensions complying with the culvert schedule & specification to be used).	EVAMP001-THS-CV-SPE-0003	Per Pipe	HP		W		
6.	Inspect reinforced pipe culverts for damage	ENG/SV	Visual	Prior to installation, Pipes are checked for damages and accepted/rejected and documented on Incoming Goods Inspection form.	EVAMP001-THS-CV-SPE-0003	Per pipe	HP		W		
2	**Construction**										
7.	Trench Excavation	SV/SC	Visual	Trenches should be excavated to the required width and grade indicated on the IFC Drawings, with allowance made for benching for excavations greater than 1.5 meters. Excavations must be kept free from water until work below ground level is adequately set or protected.	EVAMP001-THS-CV-SPE-0003	As required	HP		W		

8.	Bedding	SV	Visual	Culverts shall be bedded as detailed on the Drawings. proposed	EVAMP001-THS-CV-SPE-0003 clause	As required	HP		HP		On-site verification sheet and survey
9.	RCP Installation	SV/SC	Written/ survey	Culverts are to be installed to the line, level, and grade shown on the IFC Drawings. Inlet and outlet invert levels shall be as shown in the Drawings plus or minus 10mm. Inverts shall be smooth and of uniform gradient throughout each culvert length. Tolerances: Vertical level: ± 10mm Horizontal Alignment: ± 25mm	EVAMP001-THS-CV-SPE-0003 clause 4.17	As required	HP		W		
10	Backfilling of culvert	ENG/ SV	Visual	Backfilling and compaction shall be carried out in horizontal layers of uniform thickness not exceeding 200 mm of uncompacted selected fill material for 300 mm all around the pipe or culvert. Compaction in this zone shall generally be by hand tampers to a minimum density of 95% of the standard maximum dry density at +/- 2%	EVAMP001-THS-CV-SPE-0003 clause 2.14	As required	HP		HP		On site verification/ NATA Test report

				optimum moisture content. Compaction of backfill in the remainder of the trench to subgrade level shall be to a minimum 98% modified MDD at +/- 2% OMC shall be advised.							
11	End Treatment – Headwall & Wingwalls (Reinforcement)	ENG/ SV	Visual	Reinforcement installed as per IFC design drawings.	EVAMP001-THS-CV-SPE-0003	V	HP		W		On-site verification sheet
12	End Treatment – Headwall & Wingwalls (Formwork)	ENG/SV	Visual/ Field survey	Formwork installed as per IFC design drawings. Tolerances: Variation in cross-sectional Dimensions: + 5mm Variation in overall dimensions: + 10mm Variation in surface level: + 5mm	EVAMP001-THS-CV-SPE-0003	Each inlet/Outlet	HP		W		On-site verification sheet
13	End Treatment – Headwall & Wingwalls (Concrete)	SC/ SV	Visual	Concrete placed and compacted to specified strength (N40) and slump (max100mm).	EVAMP001-THS-CV-SPE-0003	Each inlet/Outlet	HP		W		
14	Rock Protection	SC/ SV	Visual	Dimensions and class of rock protection shall be as specified in the Culvert Schedule and supplied IFC Drawings.	EVAMP001-THS-CV-SPE-0003	Each inlet/Outlet	HP		W		

3	Post Construction										
15	Works completed and update ITP/ Lot Register/ MDR	ENG	Visual	ITP closed. Approved MDR	- EVAMP001-THS-CV-SPE-0003 - EVA PMP	As required	HP		HP		
☐ **Conformance to Specification**		☐ **Requires Re-Work:** (Provide Details):				☐ **Non-Conformance**		**NCR No:**			

Approved by THIESS QA Representative		**Date**
Name (print):		
Signature:		

Approved by THIESS Project Manager		**Date**
Name (print):		
Signature:		

Approved by Client		**Date**
Name (print):		
Signature:		

RESPONSIBILITY		**METHOD**		**VERIFICATION TYPE**		**ITP REVISIONS**			
Symbol	**Legend**	**Symbol**	**Legend**	**Symbol**	**Legend**	**Rev No.**	**Amendment Details**	**Date**	**Approver**
C	Client	W	Written	HP	Hold				
SV	THIESS Supervisor	A	Application	W	Witness				
Eng	THIESS Engineer	D	Design	R	Review				
Surv	Surveyor	S	Survey Data	M	Monitor				
SC	Subcontractor	V	Visual						
PM	Project Manager	T	Test						
CM	Construction Manager	C	Certificate						
MC	Material Controller	TA	Test / Approval						
ENV	Enviro officer	M	Measure						

Please transfer information into THIESS Data System ‘Inspection and Test’ Register.