

Inspection and Test Plan

ITP No: HA0423-ELE-003 - C



Client: AIAL	Subcontractor: Omexom	Work Area: Substructure Headhouse
Project Name: Domestic Jet Terminal	Job No: HA0423	Subcontractor Representative: N Lovell

1. ITP Element : Underground Ducts below slab

2. Revision Records

Rev No.	Revision Description	Name of Author	Authorised by:	Date
A	For Approval	N Lovell		15/05/2025
B	For Approval following comments from Mott Mac-CAN-000783	N Lovell		17/06/2025
C	For Approval following comments from Mott Mac-CAN-000939			26/06/2025

3. Relevant Documents

Doc No.	Specification/ Drwgs/ Standards	Additional Info	Document No.	Specification/ Drwgs/ Standards	Additional Info
1	Mott Macdonald Containment Layout Zone Drawings	Zones 33 to 46	6	DP001-HAW-DRW-CIV-B-H0141_C	
2	DP001-MMD-SPC-EL-Z-Z-0001	Domestic Processor – Buildings Electrical Specification	7	DP001-HAW-DRW-CIV-B-H0142_C	
3	DP001-MMD-SPC-CV-Z-Z-0001	Section 12	8	DP001-HAW-DRW-CIV-B-H0145_B	
4	DP001-HAW-DRW-CIV-B-H0134_B		9	DP001-HAW-DRW-CIV-B-H0146_B	
5	DP001-HAW-DRW-CIV-B-H0140_B				

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4. Process

No.	Description Inspection / test	Frequency	Spec/standard	Acceptance Criteria	Measuring Devices	Reporting Format	Inspected by*			Hold Points Sign off	Remarks
							HCL	SC	Consult		
01	Delivery inspection of HDPE ducts and fittings	Each delivery	AS/NZS 4130 / Manufacturer CoC 7.3.3.3 12.3.3, 12,3.4	Correct SDR, diameter and undamaged	Visual and CoC	Delivery slip / CoC	R.	Sub	R	N/A	Material CoC matches spec; no damage No damaged packing material.
02	Welder qualification check	Before work start	NZ Certifications; standards and industry training	Accept / reject	Document review	Welder Qualification	R	I	R	Hold Point	Welder certification reviewed and approved prior works Hawkins- ITP-000061
03	Trenches and routes inspections	Per section	Drawings Spec 4.23.2 /7.3.4.5/7.3.4.8	Installed as per project drawings and specifications	Visual	Site coordination	I	I	S		Suitable route and bend allowances
04	Duct alignment check	Per section	Project drawings / layout 4.23.2	Installed as per drawing	Visual	NA	M	I	R		No excessive bends or misalignments
05	Inspection of duct cleanliness and joint	Before welding	ISO 13954 5.10.3	Ends scraped, dry, and clean	Visual	OMX Quality check sheet	M	I	R		Free of debris, scratches, moisture
06	Fusion setup – pipe end scraping, machine check	Each weld	ISO 13954 / ISO 13955	Scraping complete, scan barcode	Scraper / EF machine	OMX Quality check sheet	M	M	R		Pre-weld approved by supervisor before fusion

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07	Electrofusion weld execution	Each weld	ISO 13955 12.4.6. 12.5.2	Parameters met; uniform bead	EF machine logger	Fusion log / OMX Quality check sheet	M	Sub	R		Fusion data logged and bead visually compliant Weld number time and date next to weld.
08	Post Weld visual inspection and cooling	Each weld	ISO 13955 / 13956	Bead uniform, cooled per spec	Visual	OMX Quality check sheet	s	R Sub	R		Cooling time respected; weld integrity confirmed.
09	Weld traceability and documentation	Each weld	7.3.4.9	Barcode and weld ID logged	Log Sheet	OMX Quality Check sheet	S	Sub	R		Log completed and ID matched field location
10	Post Weld inspection	Project Scope	DP001-MMD-SPC- EL-Z-Z-001 12.5.2	CCTV footage of below ground ducting, duct contains no debris or penetrations that could damage cable sheath when pulled	CCTV	Video	S	Sub	R		Submission of CCTV footage before handover
11	Electro fusion welder calibration	Project Scope	As per manufactures specification	Electro fusion welder calibration certificate	Calibration certificate	Certificate	S	Sub	R		Submission of calibration certificate before handover
12	Draw Cord	Each conduit	12.3.8	5 kn	N/A	QC checklist/ photograph	M	Sub	R		
13	Hot Bending of HDPE Ducts	Direction change	DP001-MMD-SPC- EL-Z-Z-001 7.3.4.5	Minimum bending radius of 2m	Measuring tape	QC checklist	I				Heat apply using controlled hot air: duct support during bending. Cool down in place to retain shape

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14	Installation of tracer wire	Each installed duct	DP001-MMD-SPC-EL-Z-Z-001 7.3.3.11	Wire securely fixed on top of duct, continuous, accessible at both ends		QC checklist Photograph	M	T	R		Tracer wire to be installed above duct, secured at 3m intervals. Ends terminated in accessible pits or boxes
15	Installation of Warning Tape and Polymeric Cover (Mag slab) during Backfilling	Each installed duct	AS/NZ3000.2018	Install 300mm above top of duct.	Tape measure, visual check	. QA checklist / photograph	M	W	S	removed	Materials supplied by Omexom, installation by civil contractor. Hold point required prior to backfilling. Supplier to verify delivery and provide installation guidance. Coordination required to ensure correct placement and documentation.
16	Pit to Duct Jointing Process	Each duct at each pit	DP001-MMD-SPC-EL-Z-Z-001 7.3.3.12	Manufacturer's installation guidelines and project specifications	Secure, watertight connection between duct and pit; no gaps or misalignment	Visual check, QA checklist / photograph	S	R	S		
17	Coordination with Waterproofing and Concrete Encasing	At each interface with waterproofing or encasement	MMD DP Buildings Elec Spec July 2024 7.3.3.12	IFC drawings and Sika Details (by others)	N/A	By others	S	R	R		By others

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5. Document Deliverables *(The documents listed below shall be completed and compiled during the course of the construction)*

Delivery Slip / Certificate of Conformance (CoC) For delivery inspection of HDPE ducts and fittings.	Calibration Certificates For electrofusion welder calibration.
Welder qualification checks.	Log Sheets For weld traceability and documentation.
Site Coordination Reports For trenches and routes inspections.	CCTV Footage For post-weld inspection.
QA Reports For duct alignment checks.	

6. Distribution Records

Name	Position	Company	Date
TBA		Mott McDonalds	
TBA		BECA	
TBA		AIAL	

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- Inspect (I) – To visually examine or measure an item or contracted work operation to verify its conformance to predetermined quality requirements
- Review (R) – To examine any form of documentation to establish its acceptability against specified requirements
- Surveillance (S) – To observe in-process activities to the degree necessary to be assured that they comply with the established criteria
- Test (T) – To subject a component, structure, or system to a controlled set of physical, chemical, environmental or operational conditions to determine or verify its capability to meet specified requirements
- Witness (W) – To watch over, observe or visually examine a specific work operation or test performed by others under Contractor supervision
- Monitor (M) – General oversight of work in progress with no need to document formally.
- Submission (Sub) – Submission of a document