



Engineering Hub

Site QA/QC checklists

04

Geomembrane liners

HDPE liners for lakes, channels and tanks: subgrade, seams, non-destructive testing and cover.

Systems

Geomembrane liners

Inspection record

Project	Location / area	Inspector	Date	Signature
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04.1 Before: surface acceptance

Check	Method or record	Acceptance	Remarks
☐ Subgrade compacted and even — no sharp stones, roots or standing water ◆ Hold point	Visual check; signed acceptance	Smooth, firm surface signed off before deployment	
☐ Cushion geotextile below, with the specified overlaps	Visual check; overlaps measured at random	Full cover; overlaps not below the specified width	
☐ Anchor trench to the dimensions on the drawings	Measured against the drawings	Dimensions as drawn; edges rounded	
☐ Panel layout and seam plan approved	The approved layout drawing on site	Panels numbered; seams run down the slope where possible	

04.2 During application

Check	Method or record	Acceptance	Remarks
☐ Trial seams at the start of each shift and whenever conditions change	Peel and shear tests on the trial seams	Trial seams pass before production welding starts	

☐	Double-wedge fusion seams; extrusion welds for details and repairs ◆ Hold point	Welder, machine and settings logged per seam	Continuous seams; no burns, wrinkles or dirt	
☐	Temporary ballast with sandbags; welding only within the allowed conditions	Weather and liner temperature logged per shift	No wind uplift; no welding outside the allowed conditions	
☐	Prefabricated boots welded around pipes and penetrations	Visual check; vacuum box on the welds	Every penetration sealed with a tested boot	

04.3 After: testing and handover

Check	Method or record	Acceptance	Remarks
☐ Air-pressure test of double seams; vacuum box on extrusion welds ◆ Hold point	ASTM D5820 · ASTM D5641	Pressure held or no bubbles over the test; failures repaired and re-tested	
☐ Seam samples for laboratory testing where specified	Samples cut, labelled and the holes patched	Laboratory results meet the specification	
☐ Every defect repaired, re-tested and numbered on the as-built plan	Repair log with the test results	Every repair tested and located on the as-built plan	
☐ Upper geotextile and cover or ballast placed without damaging the liner ◆ Hold point	Supervised placement	No equipment directly on the liner; no damage	
☐ Records: as-built panel and seam plan, and the test logs	The project quality file	Complete, signed and filed for handover	



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