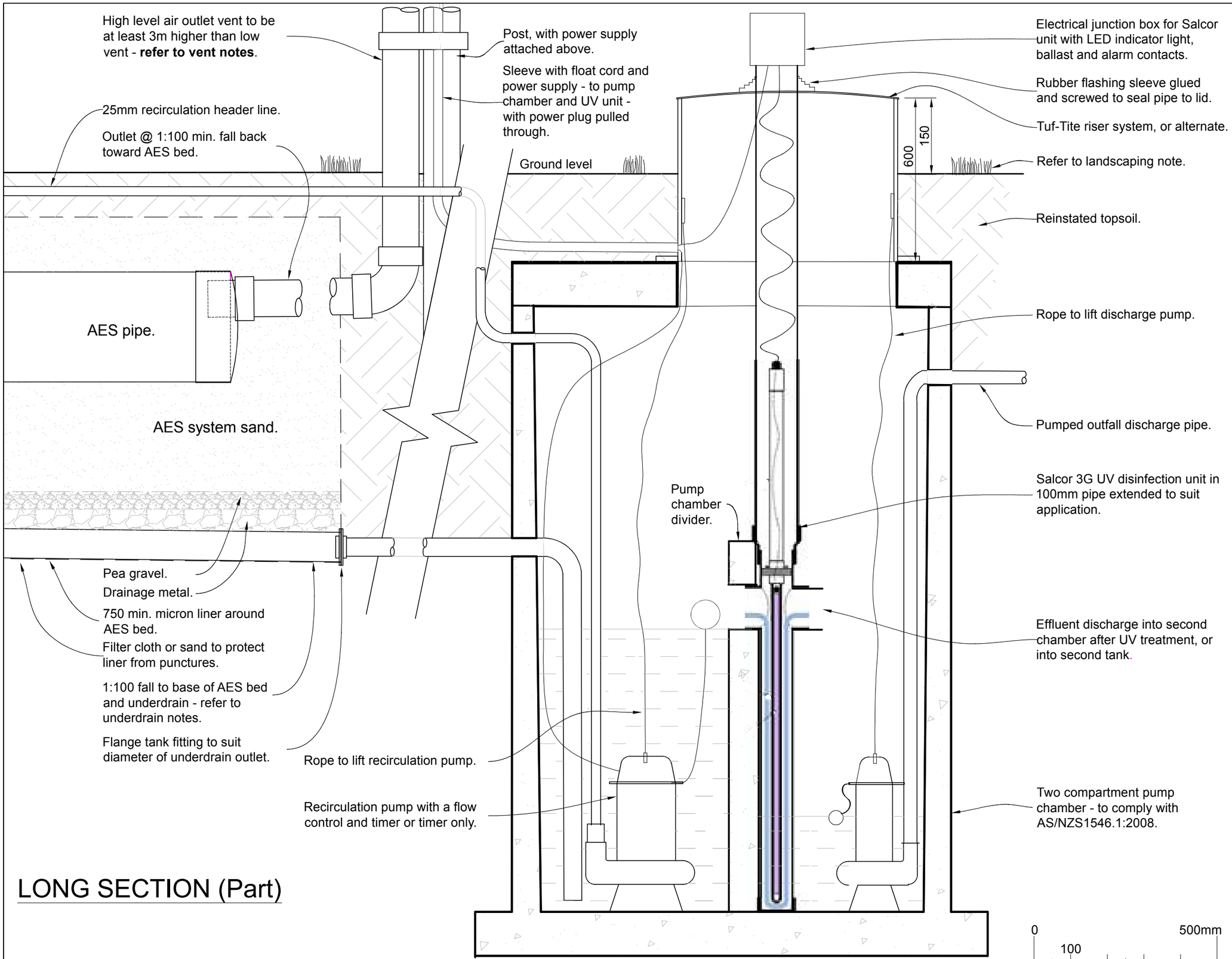

LONG SECTION (Part)

NOTES

General

· Advanced Enviro-Septic (AES) pipes, fittings and bed to be constructed/installed in accordance with the AES Installation Manual.
· AES pipes and fittings are supplied by Environment Technology Ltd, Et.
· All associated pipework to comply with NZ Building Code G13, Foul Water, Acceptable Solutions, relevant standards and local/regional council requirements.
· Unless otherwise stated all dimensions are in millimetres and all dimensions are minimums except pipe diameters and fittings.

Venting of AES Pipework - to Maintain Aerobic Internal Conditions

· The high level air exhaust vent to be 100, 80, or 65mm diameter DWV pipe, suitably supported on an adjacent building or post, to be 3m vertically elevated above the air entry vent. 2 x 50mm DWV pipe can be used in internal building framing. Support to be provided to 1 meter below the top of the DWV vent pipe.
· The low level air entry vent to be 100mm DWV, positioned as close as practical to the AES bed and isolated with respect to air passage wherever practical from upstream influent pipework. Refer to the specific design of each project.
· The location of air entry and exit vents can be remote from the AES bed with additional pipework to suit topography, building structures or landscaping. Air exit vents should be positioned considering potential downdrafts or adjacent disturbed air flows.

AES Bed Construction

· An areal extension to the AES bed may be required to suit the permeability of the receiving soil in passive installations. These extensions may be on any or all sides of the bed. Refer to the AES bed dimensions noted on the specific design. N/A or not applicable denotes an extension is not required in this design.
· A minimum of 50mm of fall is required between the septic tank outlet invert and the invert of the inlet to the AES bed or distribution box.
· Trees/large shrubs cannot be planted on the AES bed.
· AES bed 'System Sand' specification is usually met with within the local concrete sand specification. Refer ET website www.et.nz/system-sand-suppliers/ for Et tested AES System Sand suppliers. Et offers cost free sand sieve analysis upon receipt of a two cupful size sample.

Lined AES Beds and Underdrains

· Designer to specify the proposed construction detail incorporating:
· Specification of the lining membrane incorporating a minimum 25 year design life. Minimum standard of 750micron LDPE required.
· Detail of protection of the membrane from perforation by the surrounding ground utilising a minimum of Bidim A14 non-woven filter cloth or equivalent.
· Minimum 1:100 fall to collection pipe on bed base.
· Minimum 50mm diameter collection pipe as DWV or PN10 and detail of collection perforations at 4 and 8 o'clock at 300mm centres as 10mm diameter holes or 100mm long horizontal 3mm wide saw cuts.
· The collection pipe preferably enclosed in suitable larger diameter perforated 'draincoil'.
· The up grade end of the collection pipe brought to the surface of the bed and capped with a suitable vent cap.
· Detail of the flanged connection sealing the perforation of the lining membrane.
· Pea metal drainage media from base of AES sand bed to collection pipework. If crushed pea metal drainage media used further A14 material placed over lining membrane to the edge of the collection bed.
· If 'Draincoil' screening is not provided then nominal 20mm drainage metal surrounding the collection pipe.

Pump Chamber

· Sensitive installations may require twin pumps and alternate duty pump controllers.
· Pump installations should detail simple replacement procedures using weather proof 3 pin plugs and sockets in suitable sized ducts for easy owner replacement.

Scale @A3	1:10
Scale @A4	1:20
Dwg: AES PCRPD	
Version: 01	

Environmenttechnology
sustainable wastewater treatment
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