### CHECKLIST 16: Decanting earth bund (DEB)

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<th>Contractor:</th>
<th>Date:</th>
<th>Consent number:</th>
<th>Site:</th>
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<td>Time:</td>
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#### Construction checklist

Check back to 'Decanting earth bund (DEB)' section for full information. Also see the Figures over the page.

- Yes ✓ No ☒ (Add comments to explain)

- DEB is built along the contour to achieve the required volumes
- All vegetation is removed before construction
- DEB is keyed into the ground at least 0.3 m deep
- DEB is built with a clay-silt mix of suitable moisture content to achieve a reasonable compaction standard (90%). Track roll at 150–200 mm lifts
- There is good compaction around the outlet pipe that passes through the bund, to avoid seepage and potential failure
- A 150 mm diameter, non-perforated outlet pipe is installed through the bund and discharges to a stable erosion-proofed area or stormwater system
- A T-Bar decant is attached by a standard joint (glued and screwed)
  - The decant is 100 or 150 mm diameter PVC pipe, 0.5 m long with equally spaced holes of 10 mm diameter
  - It is fixed firmly to a waratah standard to achieve 0.3 litres/second/1,000 m² of contributing catchment
- A sealed PVC pipe (with endcaps) is placed on top of the decant to add buoyancy
- A flexible, thick rubber coupling connects the decant arm and the discharge pipe. The coupling is fastened by strap clamps, glue and screws
The decant is fastened to two waratahs by nylon cord, to the correct height to maintain dead water storage

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An emergency spillway goes to a stabilised outfall 100 mm freeboard height above the primary spillway. This can be a trapezoidal spillway with a minimum invert length of 2 m. It must be smooth, have no voids and be lined with a soft needle punched geotextile to the stabilised outfall. Pins secure the geotextile, spaced no further than 0.5 m apart

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The emergency spillway has at least freeboard of 250 mm, i.e., between the invert of the spillway to the lowest point of the top of the bund

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At the end of construction, an as-built assessment is done and any discrepancies with the design rectified

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DEB is checked before and after each storm. Inspections are recorded and dated, along with comments, to be available for compliance monitoring officers

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There are baffles across the width of the bund, level with the dead water level and made of porous open-mesh cloth

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Performance of the bund is monitored by water quality testing inflows and outflows. These records are stored in a retrievable location and can be produced for inspection

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Note: this is an on-site, self-check list for contractors to use. Keep your completed checklists to show Compliance Officers your set up, monitoring and maintenance, if requested.

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Decanting earth bund (DEB)

- **Spillway stabilised with geotextile**
- **150mm dia uPVC pipe through bund**
- **Stabilised outlet Cross-section**
- **150mm diameter riser**
- **Dead storage volume: 30% of total treatment volume**
- **250mm**
- **100mm**
- **Plan**
- **Anti-seep collar**
- **Baffles**
- **Emergency spillway to be sized to accommodate the 1% AEP event**
- **Geotextile secured firmly to the embankment face**
- **Rip-rap placed at pond outlet with geotextile placed underneath**
- **Geotextile should be laid into the pond to a depth of at least 500mm below the spillway invert**
- **Waratahs and strong nylon cord to control level of decant**
- **Anti-seep collar**
- **Primary spillway**
- **Decant**
- **String to decant**
- **Waratah stakes**
- **Baffles 1/3 & 2/3 of distance from inlet to outlet and top level with dead water level**
- **Live storage volume: 70% of total treatment volume**

**Checklist 16**

**Figures:**

- Decanting earth bund (DEB)
- Close up of decanting earth bund system *(Source: SouthernSkies)*