Generated file by QChecklists
https://quollnet.com

Install retaining wall drainage: weepholes, pipes, outlets

Install retaining wall drainage using an interactive checklist covering weepholes, collector pipes, geocomposites, and outlets; commentable and ready to export as PDF/Excel for verifiable site records.

Project:	
Date:	
Filled by:	

Pre-Installation Verification	
1	Confirm drainage layout, inverts, and outlet points match latest drawings; benchmark with an auto/laser level. Acceptance: inverts within ±10 mm of plan. Evidence: marked photos and survey notes tied to site datum.
2	Verify materials: perforated pipe Ø100–150 mm, geocomposite type, and non-woven geotextile per approved submittals. Acceptance: datasheets match approvals. Evidence: delivery tickets, product labels, batch/lot numbers photographed.
3	Set control benchmarks and proposed outlet inverts; confirm achievable fall ≥1% from high point to discharge. Tool: laser level, staff. Acceptance: continuous gradient. Evidence: level readings logged with chainage.
4	Confirm discharge path is unobstructed to approved outfall (daylight, swale, or storm inlet). Method: walkdown and probe. Acceptance: clear path, no ponding risk. Evidence: route photos and authority approval reference.
5	Install temporary diversions to keep excavation dry during works. Method: berms, pumps, tarps. Acceptance: no standing water at installation areas. Evidence: pre-install photos and daily log.

Weepholes Installation	
6	Mark weephole spacing 1.2–1.5 m horizontally, elevation 150–300 mm above finished grade. Tools: tape, chalk. Acceptance: spacing within ±50 mm, consistent elevation. Evidence: layout photos with measurements.
7	Core or sleeve Ø75–100 mm openings with 2% outward fall. Tools: core drill, digital level. Acceptance: fall 2% ±0.5%, clean edges. Evidence: level readings and diameter verification.
8	Install non-woven geotextile filter behind weepholes, shingle-lapped ≥100 mm. Method: cut to size, adhesive/pins. Acceptance: full coverage, no tears or gaps. Evidence: close-up photos and geotextile tag.
9	Fit corrosion-resistant insect/rodent screens at weephole faces. Materials: stainless mesh, anchors. Acceptance: secure fit, unobstructed opening. Evidence: close-up photos after installation.

Collector Pipe Installation	
10	Lay perforated PVC/HDPE Ø100–150 mm collector along wall base at designed invert. Tool: laser level. Acceptance: continuous fall ≥1% to outlet. Evidence: slope readings at 5 m intervals.
11	Orient perforations at 4 and 8 o'clock. Method: alignment marks on pipe. Acceptance: orientation within ±10°. Evidence: photo showing marks and orientation.
12	Provide 200 mm envelope of 10–20 mm washed aggregate around pipe or use geotextile sock. Method: controlled placement. Acceptance: no fines contamination. Evidence: aggregate delivery tickets and photos.
13	Install cleanouts every 15–20 m and at bends using tee risers with caps. Acceptance: caps accessible and labeled. Evidence: locations recorded on as-built, photos of each cleanout.
14	Join pipes with compatible couplers; solvent-weld PVC or use gasketed fittings for HDPE. Acceptance: watertight joints, no misalignment. Evidence: joint photos and visual leak check during flow test.

Geocomposite Drain Installation	
15	Fix geocomposite drain boards vertically from base to top of backfilled height. Method: approved adhesive/pins. Acceptance: full contact, no buckling. Evidence: progress photos every 3 m.
16	Overlap geocomposite seams ≥100 mm, shingled downward. Tools: tape, knife. Acceptance: lap tolerance ±10 mm, fabric intact. Evidence: tape-measure photos at laps.
17	Create sealed cutouts to direct geocomposite flow into weepholes or collector via connectors. Materials: couplers, sealant. Acceptance: no bypass gaps. Evidence: close-up photos of each connection.
18	Protect geocomposite from UV and damage; backfill within 14 days of exposure. Method: scheduling and temporary covers. Acceptance: no torn fabric or crushed cores. Evidence: site diary and condition photos.

Outlets and Discharge	
19	Construct outlet to daylight, headwall, or chamber per approved project specifications and authority requirements. Acceptance: stable structure, no undermining risk. Evidence: photos and supervisor sign-off.
20	Set outlet invert above receiving water. Tool: level. Acceptance: ≥150 mm freeboard unless specified otherwise. Evidence: survey notes tied to benchmark.
21	Install rodent guard, debris screen, and splash apron/energy dissipation (e.g., riprap). Acceptance: secure fixings, unobstructed flow. Evidence: close-up photos and materials tags.
22	Flow-test system by introducing low-flow water at the upstream end. Acceptance: continuous discharge at outlet within 5 min per 20 m reach. Evidence: video, time-stamped log, and observations.

Backfill and Filter Media	
23	Place free-draining aggregate 10–20 mm to a minimum 300 mm thickness behind wall. Method: chute/loader. Acceptance: uniform thickness ±20 mm. Evidence: sectional photos with scale.
24	Install non-woven geotextile separator between drainage aggregate and native soil; lap ≥300 mm. Acceptance: no fines intrusion. Evidence: lap photos and tag of fabric grade.
25	Compact backfill in ≤200 mm lifts using a plate compactor; keep heavy plant ≥1 m from wall. Acceptance: firm set without wall displacement. Evidence: compaction log and inspection photos.
26	Keep weephole faces and outlet openings free of mortar, soil, or debris during backfilling. Method: temporary caps/covers. Acceptance: clear openings. Evidence: removal photos before handover.

Comments:

Filled by:

Signature:

Introduction	How to use this checklist
Install retaining wall drainage to control hydrostatic pressure and extend wall life. This field-ready checklist focuses on weepholes, collector drains, geocomposite drains, and discharge outlets only—no footing checks or structural verification included. By setting predictable falls, using clean drainage aggregate, and providing filtered outlets, you prevent backfill saturation, freeze–thaw damage, staining, and unexpected movement. The guide supports site engineers, inspectors, and foremen with measurable tolerances and evidence capture so performance is auditable and repeatable. You will verify weephole spacing, pipe diameters and slopes, geocomposite laps and connections, and outlet freeboard and protections. Practical cues—photos, level readings, batch numbers, and as-built notes—streamline sign-off and reduce rework. Use the interactive checklist to tick, comment, attach images, and export PDF/Excel via QR code.	1. Preparation: gather drawings, laser level, tape measures, core drill, perforated PVC/HDPE pipe, geocomposite drains, non-woven geotextiles, washed aggregate, screens/guards, PPE, and approvals for discharge locations. 2. Open the checklist in interactive mode; assign responsible persons for weepholes, collector pipe, geocomposite, and outlets; set project, chainage, and benchmark references. 3. Tick items as completed, record measurements (e.g., slopes, overlaps), attach time-stamped photos and videos, and tag GPS or chainage for each activity. 4. Use comments to flag nonconformances, request clarifications, and document corrective actions. Link comments to specific items and attach before/after evidence. 5. Export progress or completion reports as PDF/Excel for daily briefings and inspections. The QR code authenticates the version and field evidence. 6. Sign-off: capture digital signatures from contractor, inspector, and owner’s rep; distribute final reports; archive with as-built sketches and flow-test logs.