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1 EARTHWORKS

1.1 PURPOSE

- 1.1.1. This Appendix defines the formation-level earthworks parameters for the CEMP Works within the CEMP Land. It is intended to provide a clear set of requirements so that controlling procedures in the CEMP Main Body can be implemented consistently.

1.2 SCOPE

- 1.2.1. The earthworks covered by this Appendix establish formation levels only. Final finished ground levels will be achieved through subsequent phases of detailed construction, landscaping and infrastructure works, all of which will be the subject of future CEMPs.
- 1.2.2. This Appendix applies to the CEMP Works within the CEMP Land only.
- 1.2.3. Earthworks associated with structural backfill/infill to permanent structures (e.g. retaining walls, abutments, and similar features) are treated as construction works and are not relied upon as mass grading outcomes for the purposes of this Appendix.

1.3 OBJECTIVES OF THE EARTHWORKS

- 1.3.1. The objectives of the earthworks / mass grading are to:
- Achieve a balanced cut and fill approach to minimise the need for material import and export;
 - Limit export of surplus material and import of engineering fill material;
 - Establish coherent formation levels ahead of detailed construction and final grading;
 - Create a stable landform that interfaces appropriately with future roads, development parcels, landscape areas and sustainable drainage features; and
 - Ensure surface water runoff is directed towards the temporary surface water management measures and established drainage pathways for the CEMP Works, and does not adversely affect sensitive receptors.

1.4 LEVELS, SLOPES AND CONSTRUCTION TOLERANCES

- 1.4.1. Earthworks will be delivered to the planned formation levels for the CEMP Works.
- 1.4.2. The maximum side slopes / embankment gradients created by the earthworks will not exceed 1 in 3.
- 1.4.3. The following limits of deviation apply to formation levels to provide construction tolerance:
- Vertical limit of deviation: $\pm 500\text{mm}$
 - Horizontal limit of deviation: $\pm 1500\text{mm}$
- 1.4.4. The limits of deviation will not be used to:
- Exceed maximum side slopes / embankment gradients (not exceeding 1 in 3);
 - Invert net cut/fill (areas shown as net fill cannot become net cut, and vice versa);
 - Increase material import/export beyond the stated caps; or

- Alter drainage flow directions or worsen flood risk outcomes compared with the drainage routing principles adopted for the CEMP Works.

1.5 INTERFACES AND PRE-CONDITIONS (SUMMARY REQUIREMENTS)

- 1.5.1. Earthworks will be planned and executed having regard to the applicable interface constraints and enabling controls relevant to the CEMP Land, including ecological, archaeological, lighting and contamination-related constraints where applicable to the work area.

1.6 IMPLEMENTATION, ASSURANCE AND RECORDS

- 1.6.1. The Contractor will implement the earthworks in accordance with the parameters in this Appendix and the controls/procedures in the CEMP Main Body.
- 1.6.2. Compliance will be assured through appropriate supervision, inspection and record keeping, including confirmation that:
- Formation levels, slopes and tolerances are being achieved; and
 - Drainage routing principles are maintained and surface water is directed towards the temporary surface water management measures and established drainage pathways.
- 1.6.3. Any non-conformance against these parameters will be recorded and corrective actions implemented under the CEMP management and audit processes.