

PRELIMINARY DRAWING
FOR PLANNING APPROVAL



EARTHWORKS

STORAGE VOLUMES

FILL VOLUME	660 ML
TOP BANK LEVEL	RL 240.30
TOP WATER LEVEL	RL 239.30
SURFACE AREA AT TWL	14.6ha
BORROW INVERT LEVEL	RL 233.50

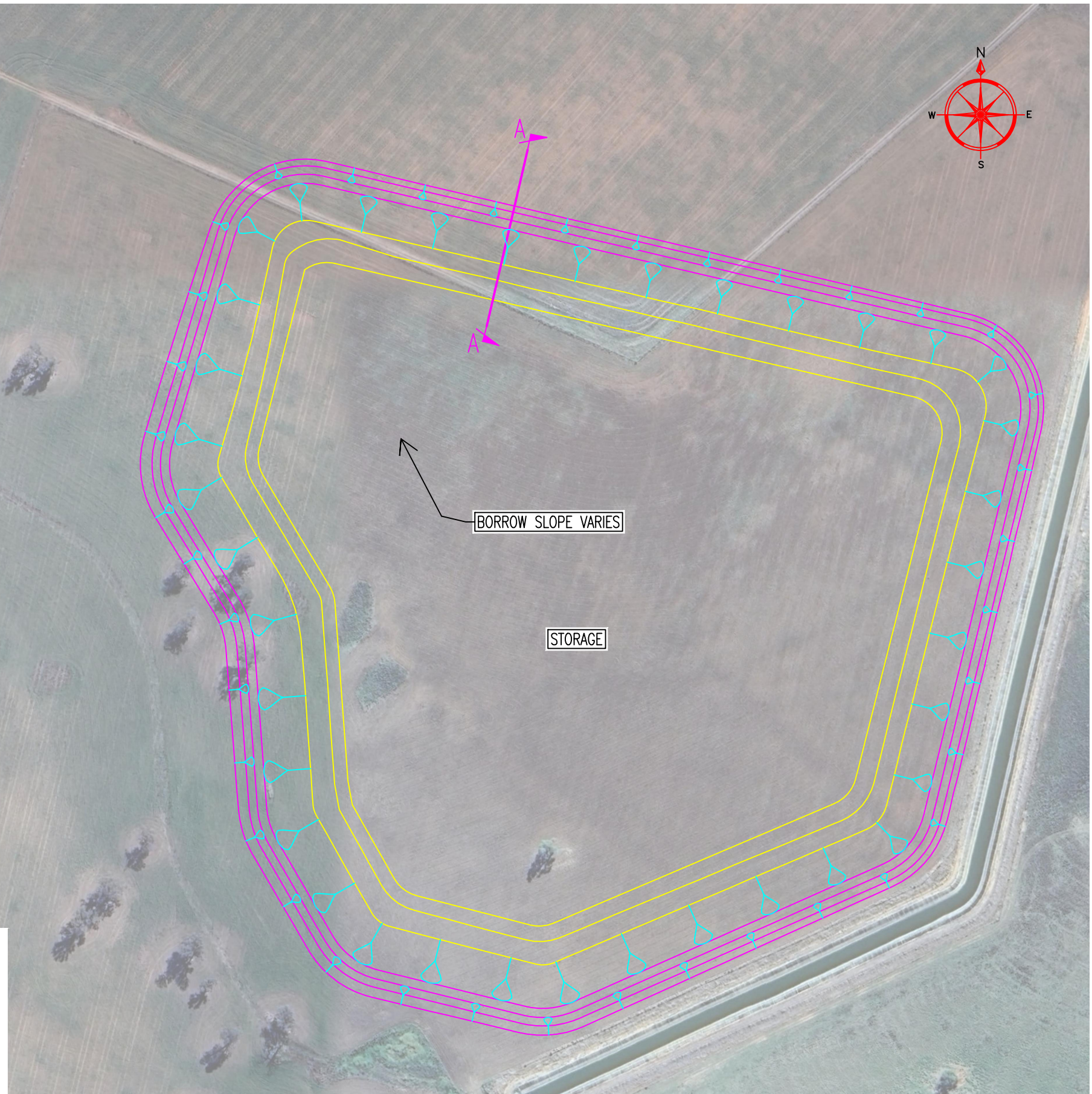
CONSTRUCTION VOLUMES

FILL IN EMBANKMENT	135,879m ³
CUT OFF TRENCH	4,152m ³
STRIPPING UNDER EMBANKMENT	7,866m ³
TOTAL EARTHWORK REQ'D	147,897m ³
BORROW AVAILABLE	170,042m ³

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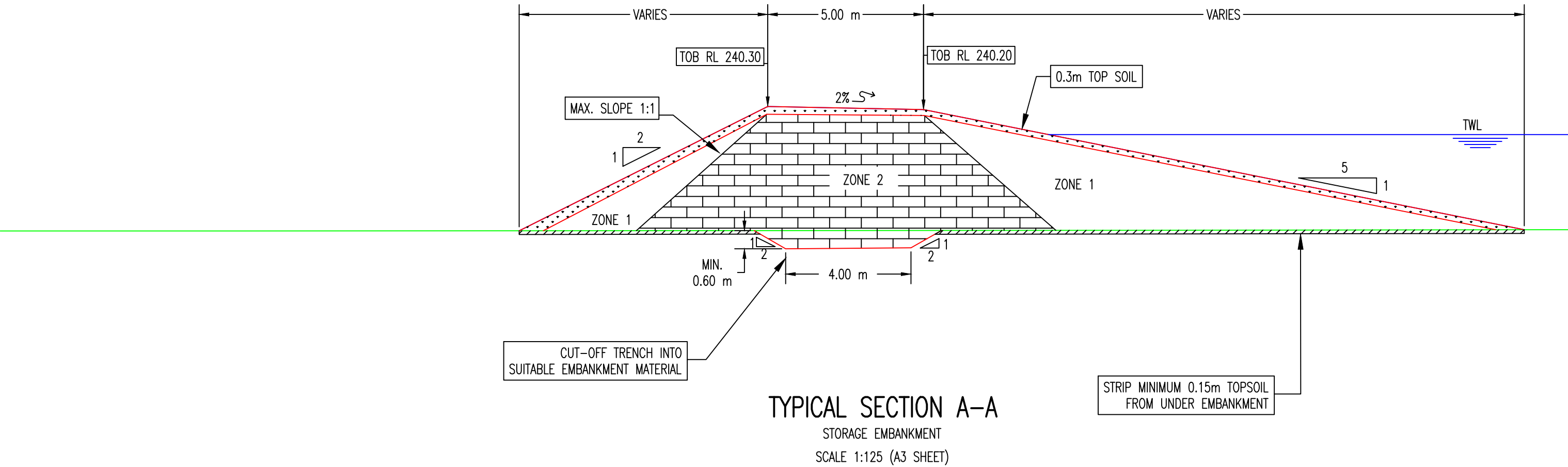
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CONSTRUCTION SPECIFICATION

Foundation Preparation
The area to be covered by the embankment shall be cleared of all trees, stumps, roots dead timber and rubbish. Particular care shall be taken with any stump holes that they are backfilled with sound, compacted moist fill. All organic matter and the upper layer of soil shall be stripped from the embankment area to a depth of at least 150mm. All water shall be drained or pumped away.

The cutoff trench will be excavated as shown to a minimum depth of 600mm. The bottom of the trench should have a clean uniform and moist surface before backfilling commences. The bottom of the trench and the foundation area shall be traversed with a sheepsfoot roller before backfilling commences. Ripping of the area under the embankment is not recommended.

Embankment construction
Zone 2 is the core of the storage embankment. This zone shall be constructed with select material +2%/-3% of optimum moisture content and compacted using a sheepsfoot roller to a minimum of 98% of maximum dry density. It is expected that it will require 6 to 8 passes of a tamping roller.

Zones 1 and 3 should be compacted a minimum of three passes of a tamping roller and construction traffic at all practical opportunities.

The embankment shall be built in successive horizontal layers, with each successive layer being placed at the specified moisture content and compacted before the next layer is added. Each layer should be spread evenly and no thicker than 200mm loose. Any clods or lumps larger than 200mm shall be broken up or discarded before compaction occurs. The embankment must be free of lenses, pockets, streaks or layers of material that differ substantially from those surrounding.

Topsoil
A layer of topsoil 300mm thick shall be placed over the entire finished embankment to assist in protection of the moist compacted core. This topsoil material can be won from under the embankment and the borrow area. To avoid double handling of material this layer should be added as the embankment is constructed.

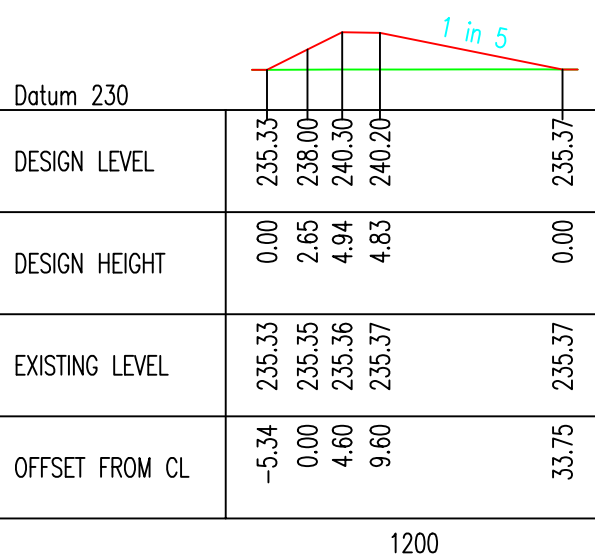
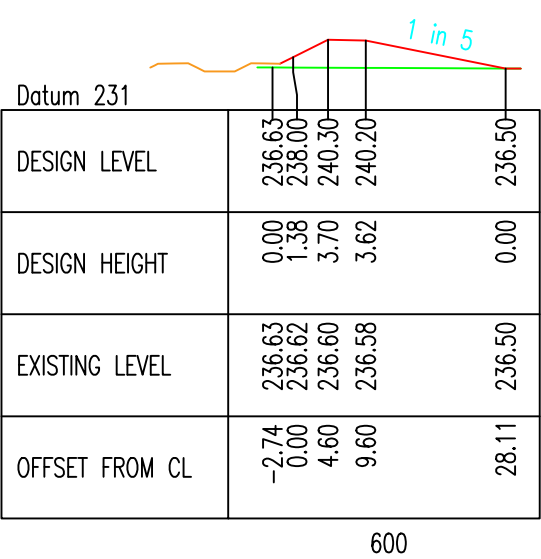
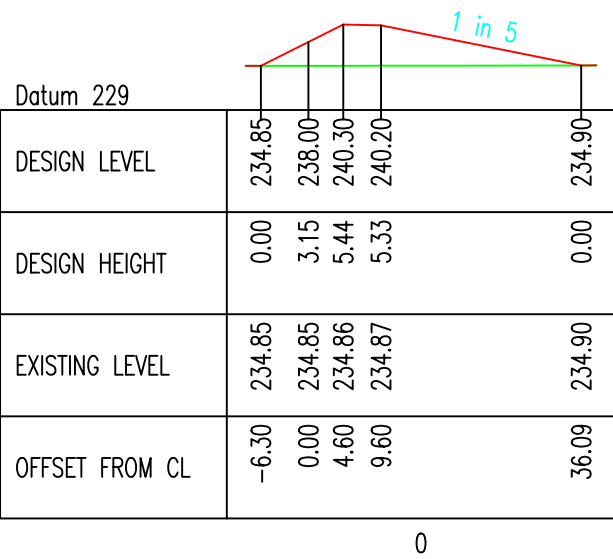
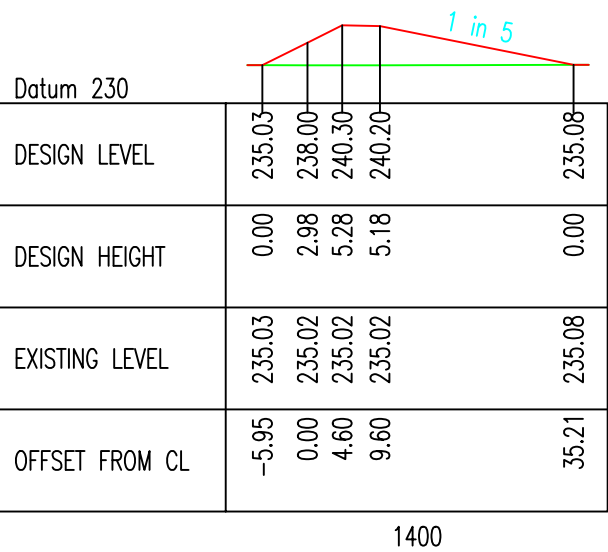
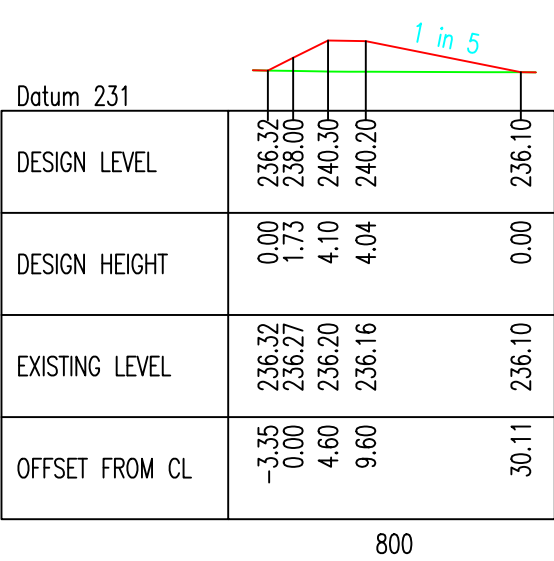
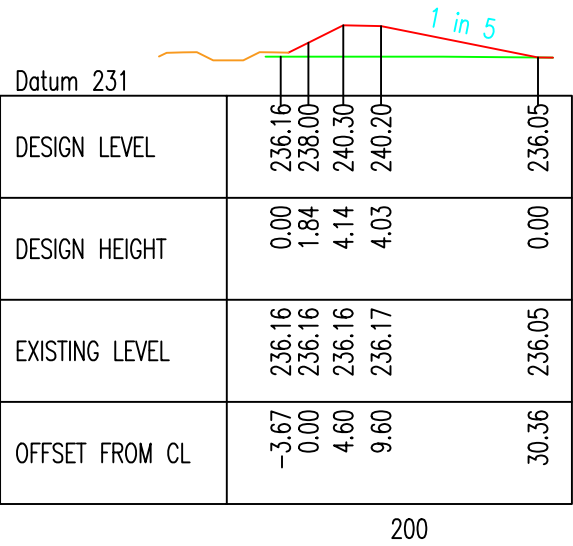
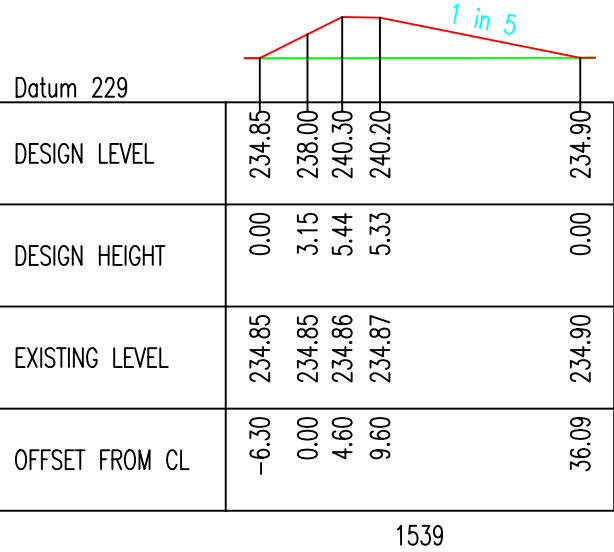
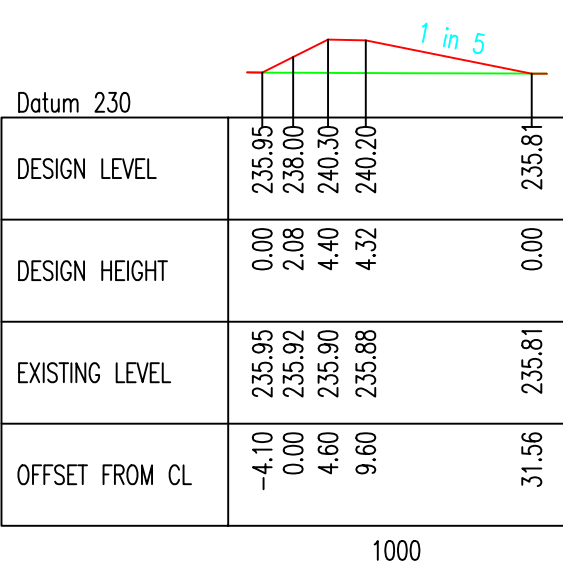
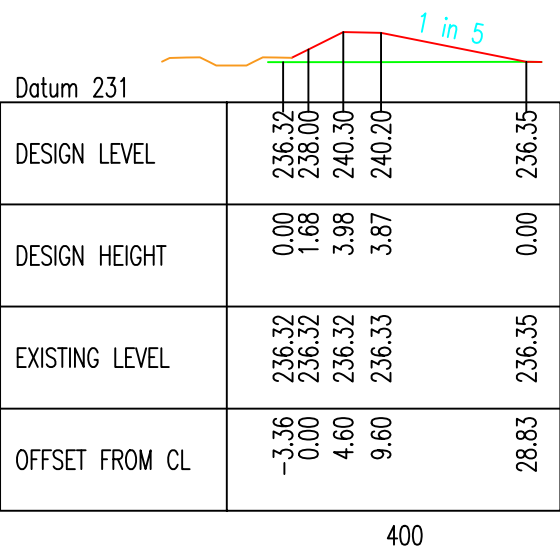
Borrow Area
Any unsuitable material uncovered in the borrow area shall be covered with a minimum of 500mm of moist, compacted select fill. The borrow area shall be maintained during construction so that any water will drain to a point where it can be pumped away with relative ease. The borrow area upon completion will drain to the outlet with a minimum slope of 1:5,000.

Pipeline
Any pipelines through the embankment should be installed before embankment construction in this area. Once the pipeline has been installed the embankment can be constructed over it. Heavy construction traffic should not traverse the pipeline until a minimum of 1000mm of compacted fill has been placed over pipe.

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DETAIL SECTIONS
MALLAWA STORAGE
SCALE 1:1000 (A3 SHEET)



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MALLAWA STORAGE
SCALE 1:5000 (A3 SHEET)

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				TCS/LiDAR				BRAD ANDERSON		MALLAWA DEVELOPMENT	
				DATUM:				MALLAWA		STORAGE	
				GDA94						LONG SECTION	
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