

Dam: Thornlea

Country South Africa

River Mlazi

29°48'6.61"S 30°28'38.47"E

-29.801836 30.477352

Owner/Client Umlaas Irrigation Board

Designer/Engineer Bradford, Conning and Partners

Contractor Cyclone Construction

Purpose (code) I

Site start 01.06.1990

RCC start 01.10.1990

RCC completion 31.12.1990

Site completion 28.02.1991

Height (m) 17

Length (m) 135

Volume of RCC (m³x10³) 16

Total volume (m³x10³) 17

Reservoir capacity (m³x10⁶) 3

Upstream slope V

Forming of upstream face (code) (1)

Downstream slope 0.90

Forming of downstream face (code) (3) *

Spillway slope 0.90

Forming of spillway face (code) (1)

Depth of layers (mm) 170

Depth of lifts (mm) 170

Cement content (kg/m³) 38

Pozzolan content (kg/m³) 87

Code for pozzolan (S)

RCCDAM Unique Serial No. RCCDAM0077

Completed Dam



RCCDAM0077CD

Google Earth



RCCDAM0077GE

Guide to Abbreviations

Purpose

- E Environmental
- F Flood control
- G Groundwater recharge
- H Flood control
- I Irrigation
- N Navigation
- P Pollution control
- R Recreation
- W Water supply

Facing method

- (1) Traditional concrete against formwork
- (2) Traditional concrete against formwork with external geomembrane
- (3) RCC against formwork
- (4) RCC against formwork with external geomembrane
- (5) Traditional concrete against precast concrete panels
- (6) Traditional concrete against precast concrete panels with geomembrane
- (7) RCC against precast concrete panels
- (8) RCC against precast concrete panels with geomembrane
- (9) RCC against precast concrete panels with hot poured membrane
- (10) RCC against precast concrete blocks
- (11) Reinforced conventional concrete cast before RCC placement
- (12) Reinforced conventional concrete cast after RCC placement
- (13) Reinforced concrete cast against precast units or slip-formed facing elements
- (14) Slip-formed/extruded facing elements
- (15) RCC supported by fill shoulders
- (16) Mechanically compacted unformed face of RCC
- (17) Unformed face of RCC
 - ' GEVR/GE-RCC
 - * Stepped face

Pozzolans

- (-) No Pozzolan Used
- (C) High-lime flyash (ASTM Class C)
- (F) Low-lime flyash (ASTM Class F)
- (M) Milled sand
- (N) Natural pozzolan (ASTM Class N)
- (R) ROLAC (mixture of flyash and slag with or without limestone fines)
- (S) Ground-granulated blast-furnace slag
- (L) Mixture of GGBFS and limestone fines