

# SMARTT SYNDICATE DAM

COORDINATES (degrees, minutes, seconds)

LATITUDE	LONGITUDE
30° 38' 25" S	23° 17' 19" E

## LOCATION

Smartt Syndicate Dam is located just west of Britstown, Northern Cape Province, South Africa, in quaternary D61M.

## DESCRIPTION

Smartt Syndicate Dam is an earth dam with a rock/soil foundation. It has a full supply level of 1,700 m. The dead storage level and bottom of the reservoir are at 1,671 m.

## PURPOSE

The dam is part of the Smart Syndicate Supply System, which supports 1,818 ha of irrigation. However, only approximately 16% of this area is supported, due to the low assurance of supply.

## PHYSICAL INFORMATION

Dam name	River	Quaternary catchment	FSC* (million m <sup>3</sup> )	FSA (km <sup>2</sup> )	Owner	DWA code	Wall height (m)	Wall length (m)
Smartt Syndicate	Ongers Brak	D61M	101	31.50	Smartt Irrigation Board	D6R002	28	2,082

\* Live full supply capacity (SANCOLD, 2009)



Smartt Syndicate Dam (source: SA Dept of Water Affairs)



## SMARTT SYNDICATE DAM

Year of completion	Demands/abstractions (million m <sup>3</sup> /a)			1:50 yield (million m <sup>3</sup> /a)	Maximum spillway capacity (m <sup>3</sup> /s)
	Domestic	Irrigation	Other		
1912	Unknown	12.60 †	Unknown	Unknown	1,420

† WRC, 2008

## AREA-CAPACITY RELATIONSHIP

Elevation (m)	Storage (million m <sup>3</sup> )	Surface area (km <sup>2</sup> )
1,705	121.32	34.10
1,700	101.10	31.37
1,696	80.88	27.44
1,690	60.66	23.09
1,680	40.44	18.10
1,675	20.22	11.94
1,671	0.00	0.00

## OPERATING RULE

The Smartt Syndicate and Victoria West dams are operated as a sub-system, known as the Ongers Sub-system. The operating rule for this sub-system allows the dams to supply the demands imposed upon them until the dams reach their respective minimum operating levels.

