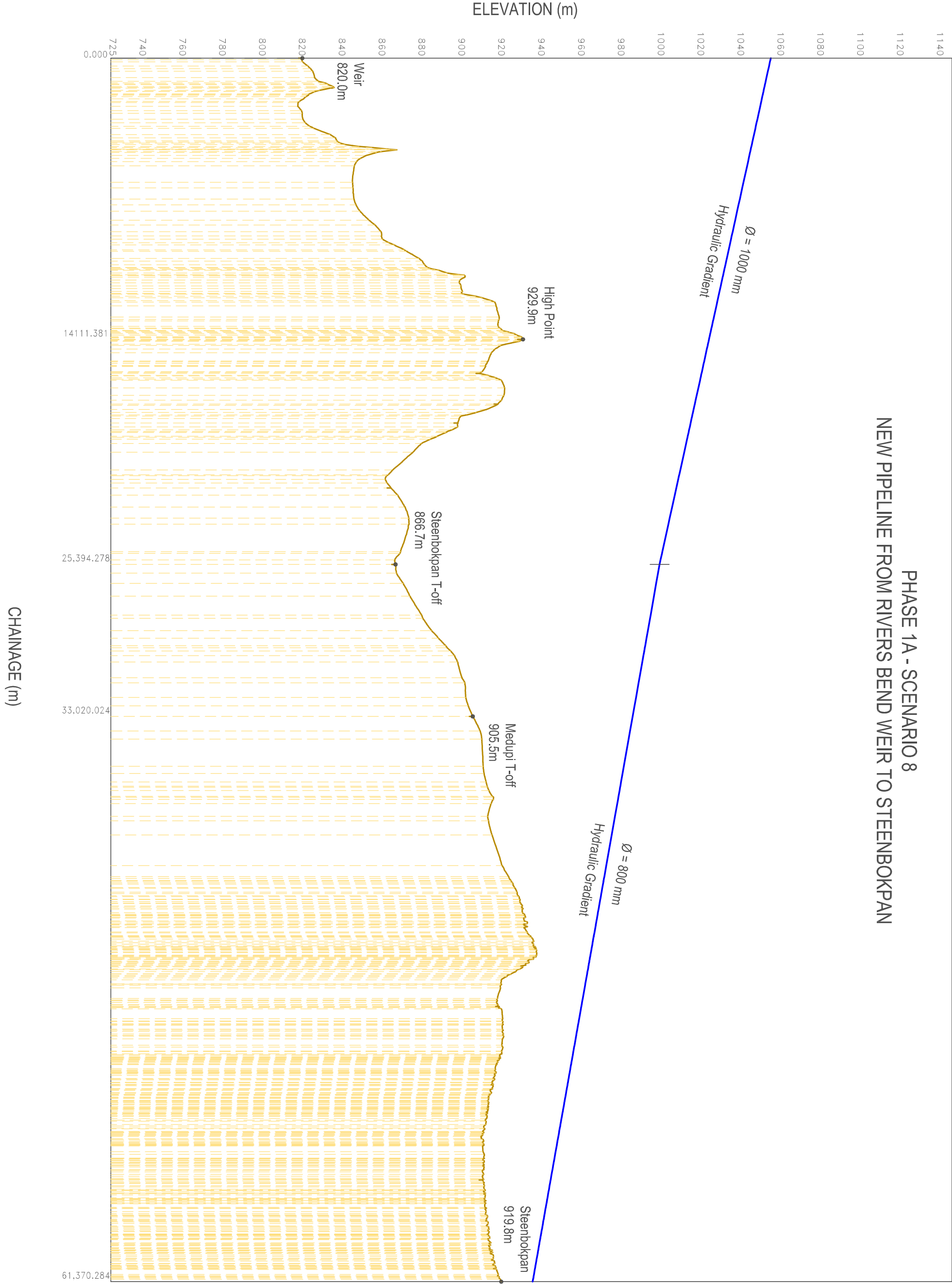
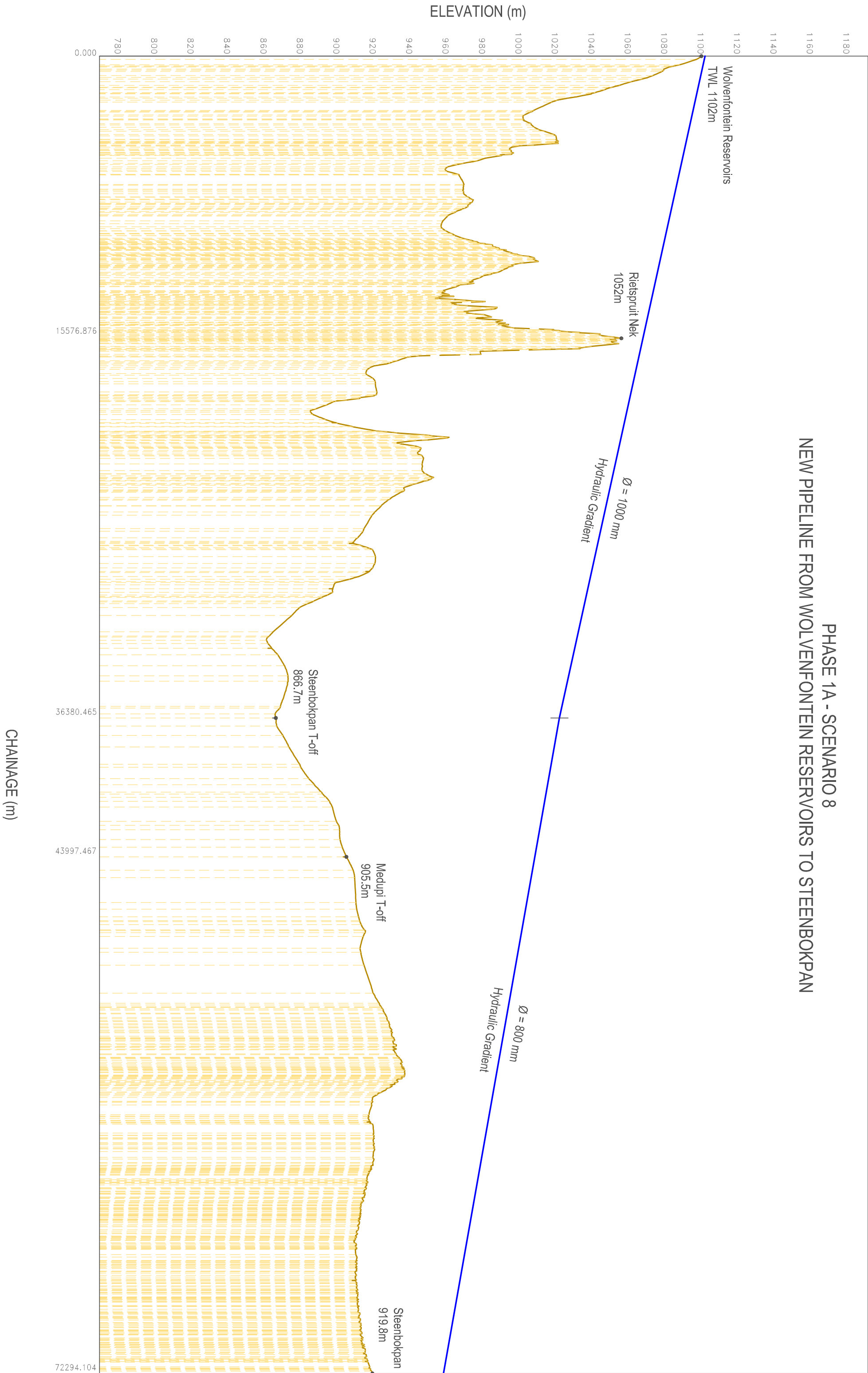


PHASE 1A - SCENARIO 8
NEW PIPELINE FROM RIVERS BEND WEIR TO STEENBOKPAN





Lephalale/Steenbokpan delivery layout
Phase 1A - Pipeline from Rivers Bend Weir
Scenario 8 - 2014

2014 DEMANDS (from Mokolo Dam)

Demand Centre	Demand	Losses	PF	Q (Mm³/a)	Q (l/s)
Zeeland	10.143	2%	1.2	12.42	393.68
Matimba	3.600	2%	1.2	4.41	139.73
Exarro	8.845	2%	1.2	10.83	343.30
Medupi	9.400	2%	1.2	11.51	364.84
Steenbokpan	18.414	2%	1.2	22.54	714.70
	50.402				1956.24

Steenbokpan

18.414 m3/a
715 l/s

AAD (m3/a): 18.41
Design flow (l/s): 715
Diameter (mm): 800
Length (m): 5 103
Velocity (m/s): 1.41
Head loss (m): 9.03

AAD (m3/a): 18.414
Design flow (l/s): 715
Diameter (mm): 800
Length (m): 8 696
Velocity (m/s): 1.41
Head loss (m): 15.39

AAD (m3/a): 18.414
Design flow (l/s): 715
Diameter (mm): 800
Length (m): 14 551
Velocity (m/s): 1.41
Head loss (m): 25.75

AAD (m3/a): 18.414
Design flow (l/s): 715
Diameter (mm): 800
Length (m): 7 624
Velocity (m/s): 1.41
Head loss (m): 13.49

Matimba

8.845 + 9.4 m3/a
708 l/s

AAD (m3/a): 18.245
Design flow (l/s): 708
Diameter (mm): 800
Length (m): 1 860
Velocity (m/s): 1.40
Head loss (m): 3.23

Legend

18.414 Design flow incl peaks & losses (l/s)
715 Annual Average Demand (m3/a)

7.43 Pressure at node (bar)
919.81 Elevation at node (m)



Dams/Weirs



Pipe node #



Pipe section #



Delivery pipeline

PIPE LENGTHS	
800 mm	37 834 m
1000 mm	25 394 m
Total length	63 228 m

Flow in existing pipeline from Mokolo Dam

Demand from Zeeland and Matimba

10.1 + 3.6 = 13.7 million m³/s AAD

Flow in new pipeline from Mokolo Dam

Demand (Steenbokpan, Medupi, Exxaro)

36.7

Q (Mm³/a) with losses and PF

44.87

Q (l/s)

1423

Groottegeluk Mine

38 --- 8B

37A

11.36
880.07

8A

37

STEENBOKPAN T- OFF

12.98
866.79

7

36

14.04
864.46

6

35

11.45
897.97

5

34

9.68
918.10

4

33

10.90
909.08

18

Highest point

18

42

23.04
820.04

Mokolo River Bend Weir