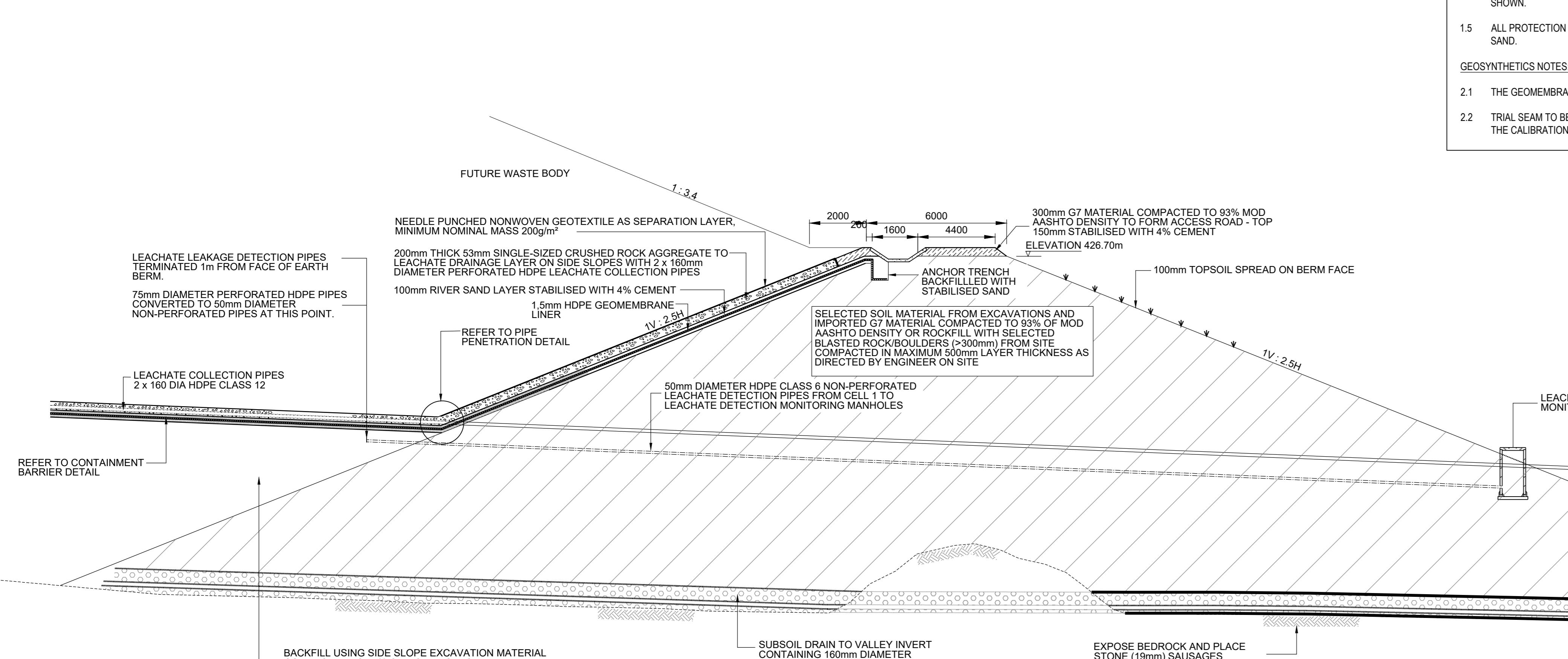


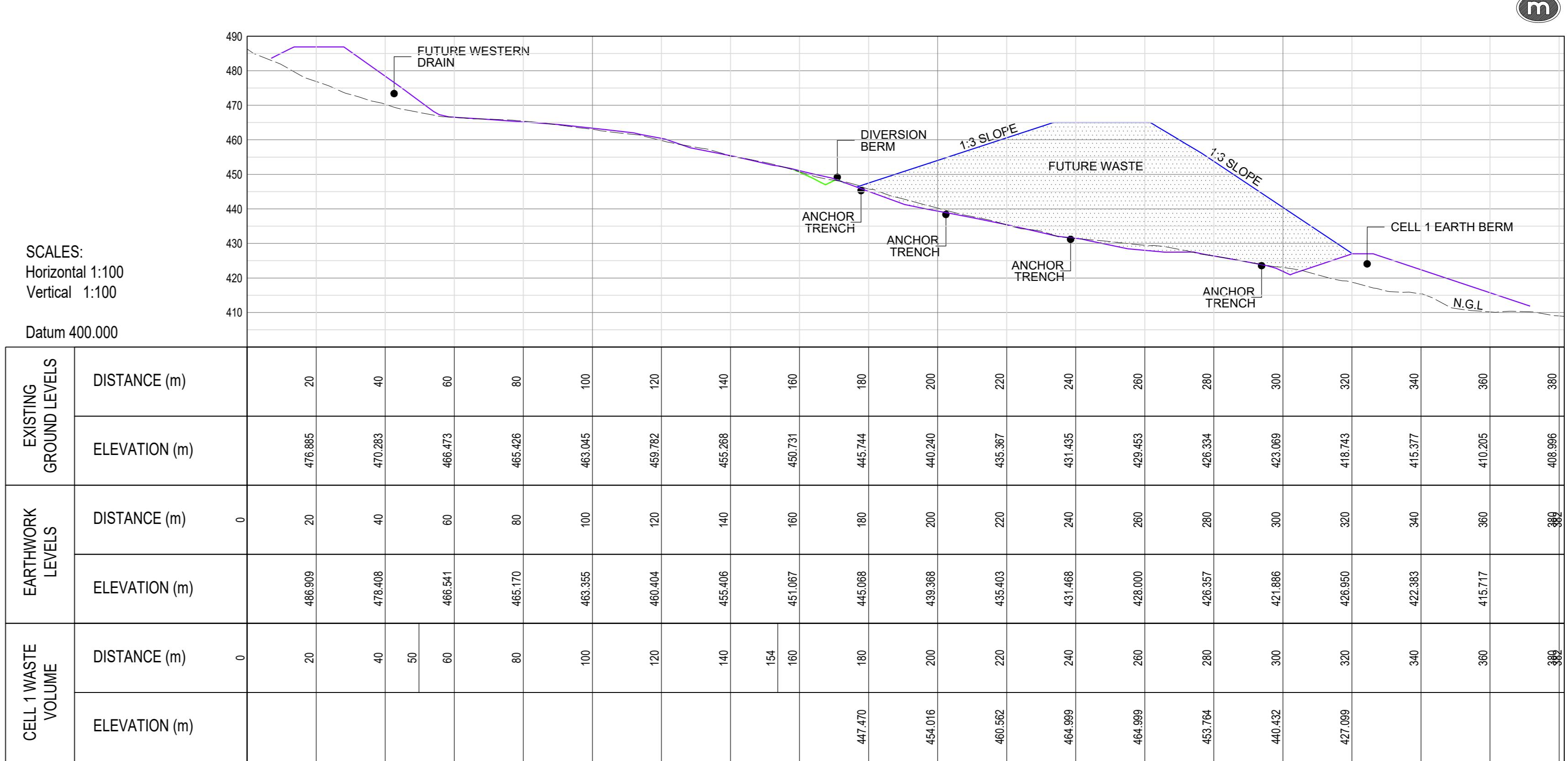
PROPOSED CELL 1 LAYOUT

SCALE 1:1000

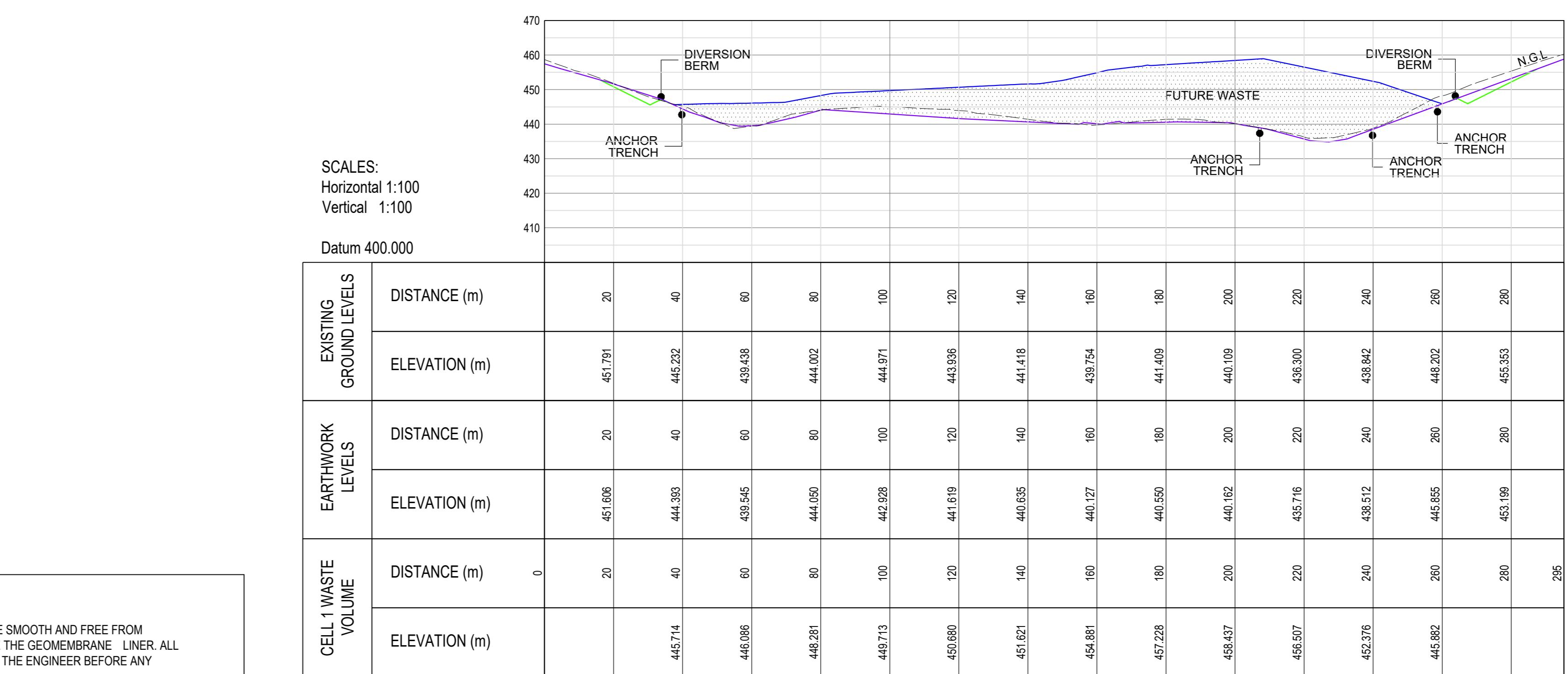


PROPOSED CELL 1: TYPICAL EARTH BERM AND PIPEWORK DETAILS

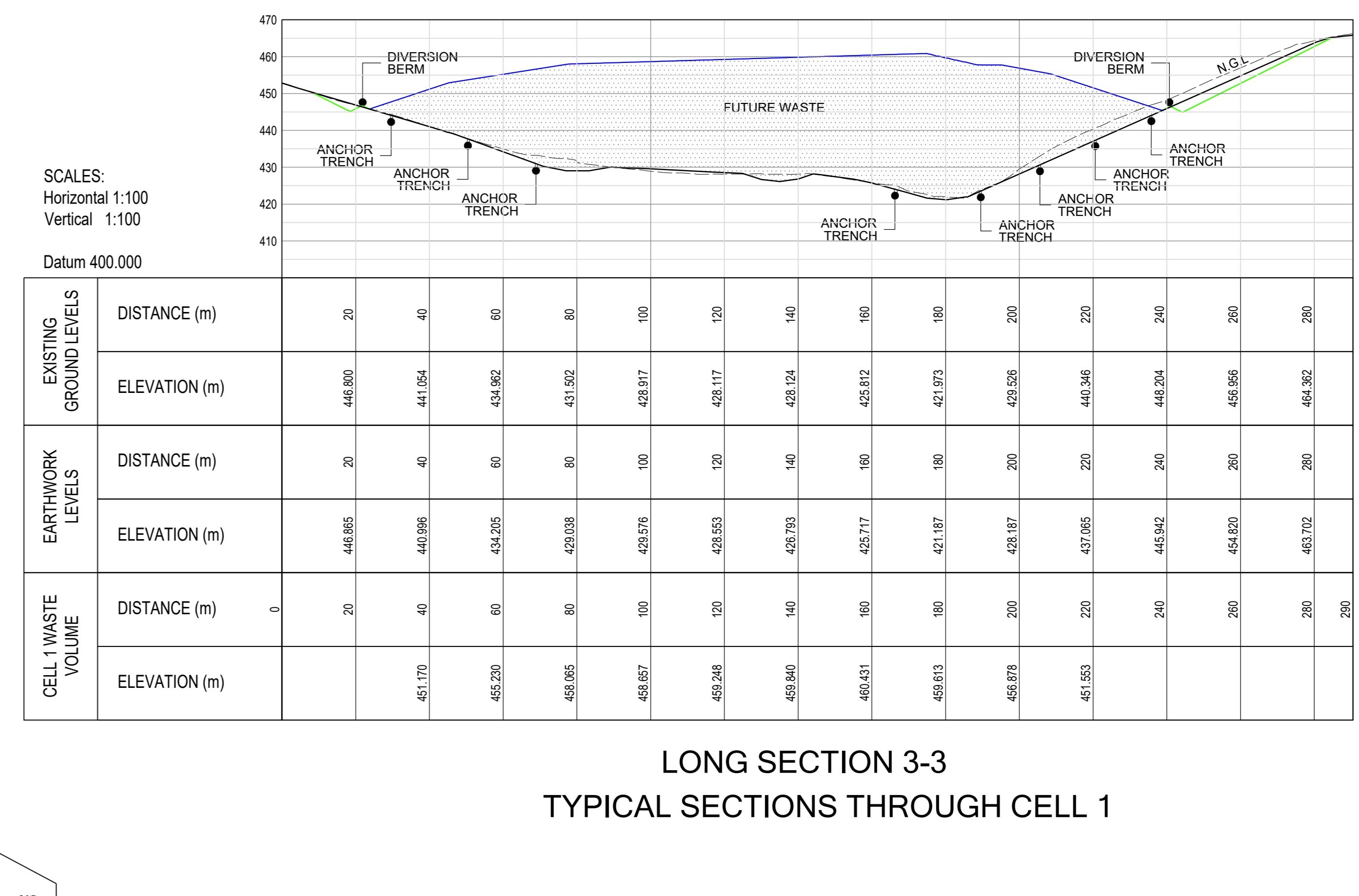
FOR PIPE, MANHOLE AND HEADWALL CONFIGURATION AND LAYOUT,
REFER TO TYPICAL DETAILS DRAWINGS
NOT TO SCALE



LONG SECTION 1-1



LONG SECTION 2-2

LONG SECTION 3-3
TYPICAL SECTIONS THROUGH CELL 1Design Consultants
iX Wilson & Pass Inc JV

iX engineers Infrastructure Excellence
INTERDISCIPLINARY CONSULTING ENGINEERS
Westend Office Park | The Boulevard | Westville | Durban | 3630
Tel: +27 31 246 5788 | Fax: +27 31 246 5788
www.iwpx.co.za

Wilson & Pass Inc
P.O Box 641 | Westville | 3630 | SA
Email: info@iwpx.co.za
Tel: +27 82 463 1127

B 27/10/2023 FOR TENDER ONLY
A 06/03/2023 FOR APPROVAL
Revision Date Description

NOTE: No construction work to commence until land and services have been completed
Acquisitions completed
DATE: _____
NORTH POINT

DATE: _____
UNDERGROUND SERVICES CHECKED
SERVICES DATE SIGNATURE
S.W.DRAINS _____
SEWERS _____
WATER MAINS _____
G.P.CABLES _____
ELECTRIC CABLES _____
S.A.R. CABLES _____
E.S.C. CABLES _____
NOTE: Only underground services affected by new construction work are to be disturbed. Care must be taken when working for road foundations, trenches etc. to avoid damage to underground services such as sewers, drains, cables, water mains and connections. Wherever possible these must be located before work proceeds.

L. Moodley Deputy Head: Cleaning & Solid Waste - DSW

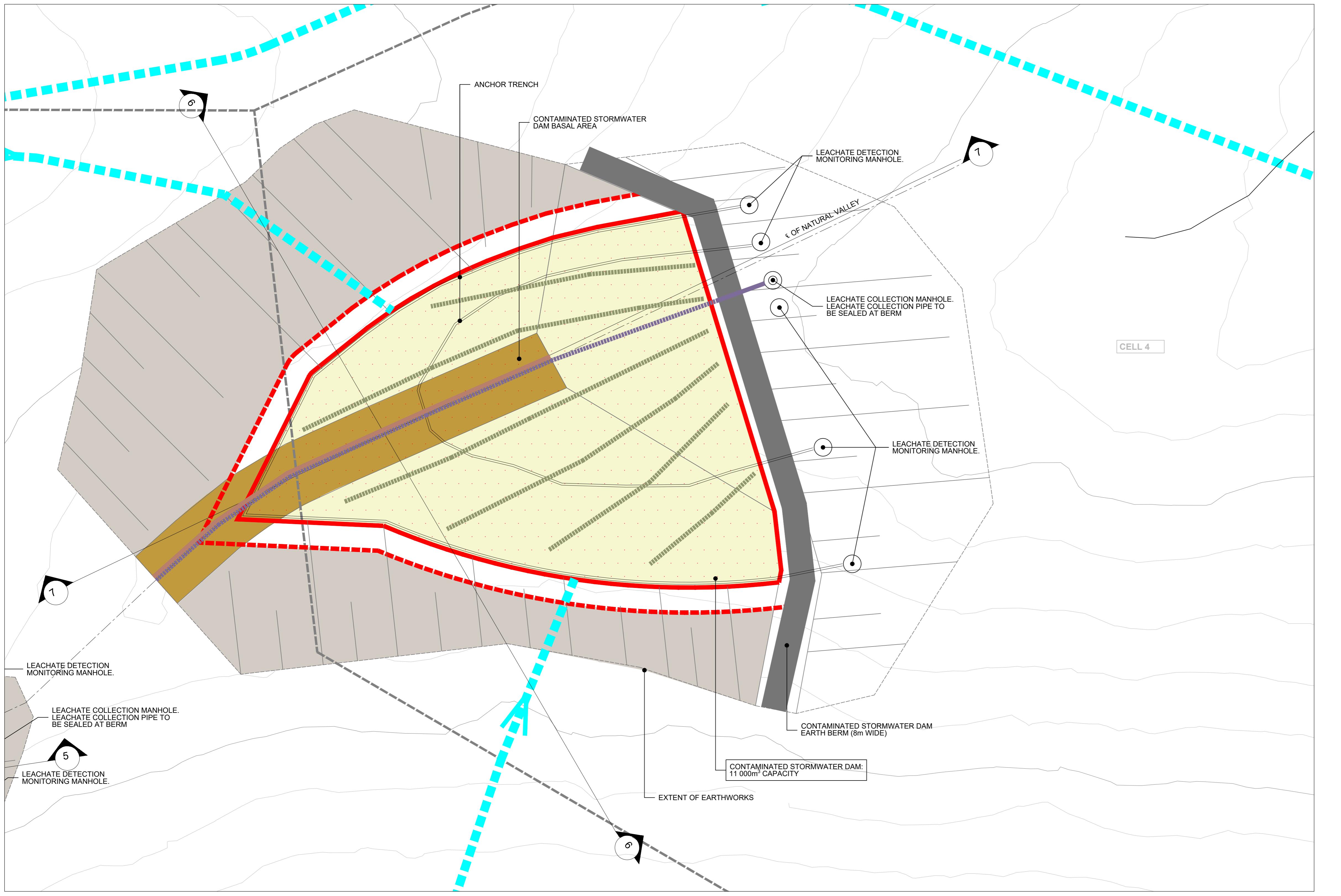
PSC 2015/010

Contract No. _____
Status _____
FOR TENDER

Project Title
WESTERN WASTE MANAGEMENT FACILITY (SHONGWENI)
Drawing Title

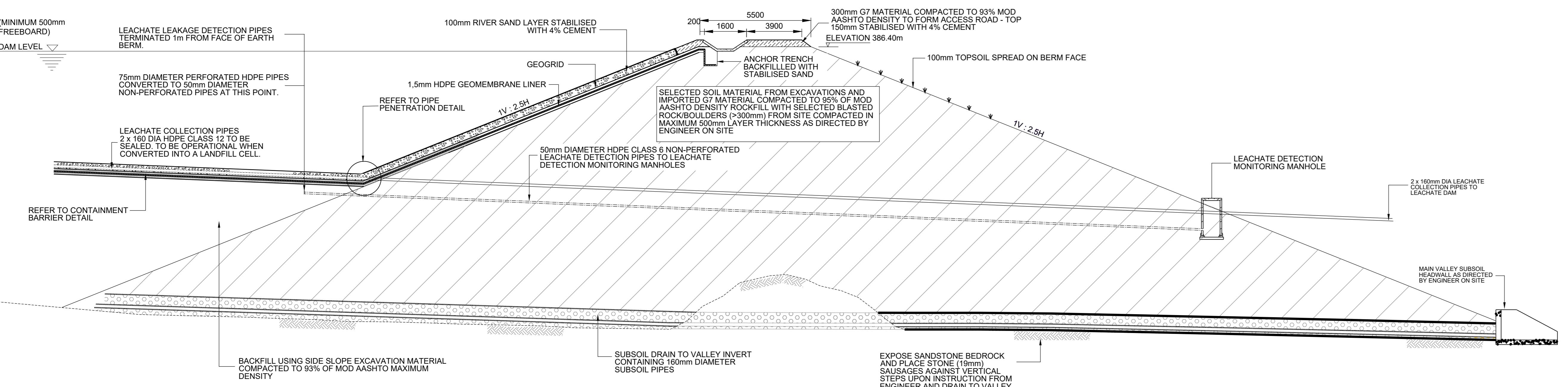
LANDFILL CELL 1 LAYOUT & SECTIONS

Scales AS SHOWN Reference
Designed N. DOOKHIIJ. PASS Date 06/03/2023
Checked M. RICHMOND Drawn by L. DU PLESSIS
Reviewed Drawing No 301837-02-WS-LA-001-002 Revision B



PROPOSED CONTAMINATED STORMWATER DAM LAYOUT

SCALE 1:50



CONTAMINATED STORMWATER DAM EARTH BERM AND PIPEWORK DETAILS

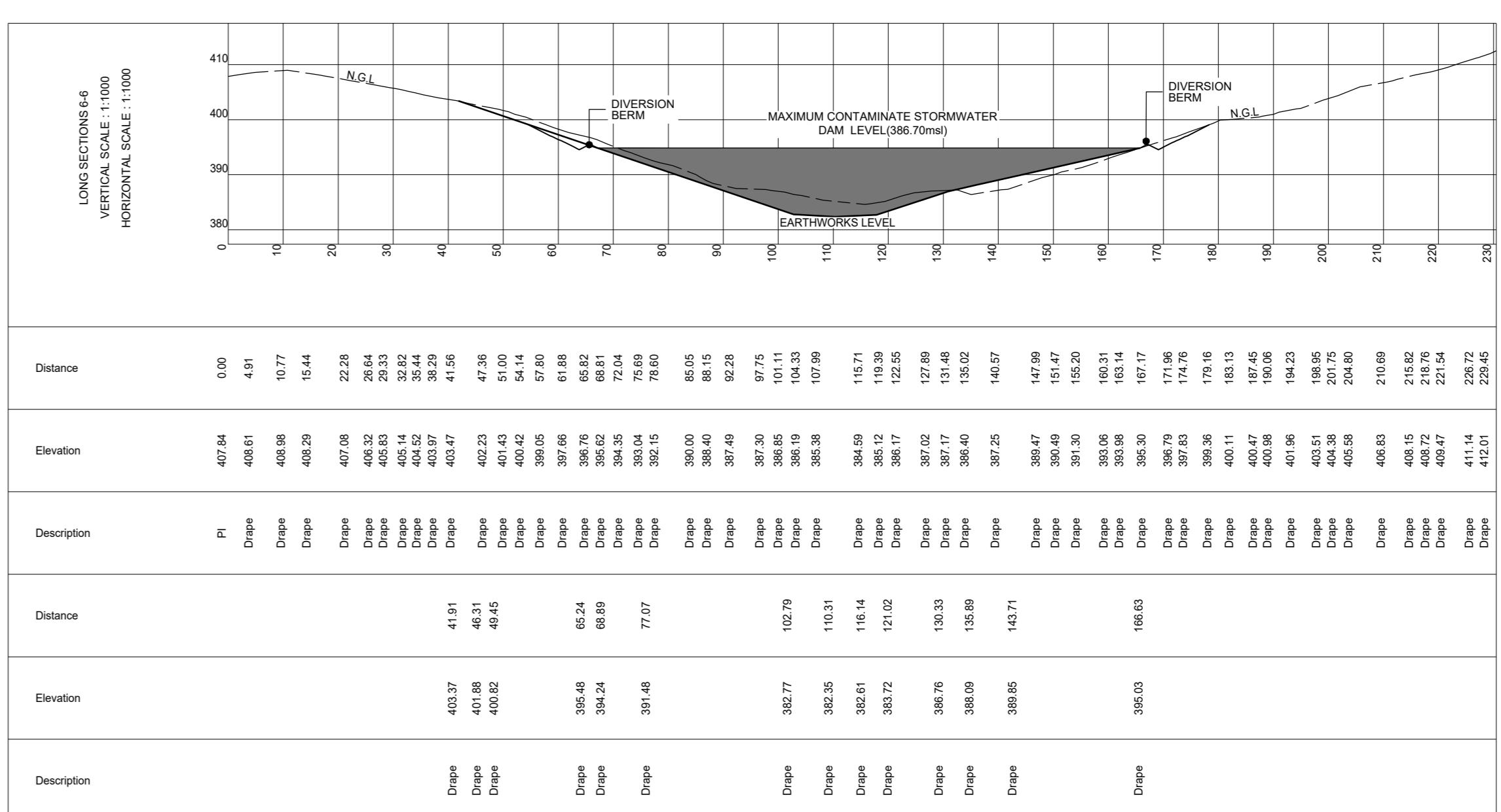
FOR PIPE, MANHOLE AND HEADWALL CONFIGURATION AND LAYOUT,
REFER TO TYPICAL DETAILS DRAWINGS
NOT TO SCALE

EARTHWORKS NOTES:

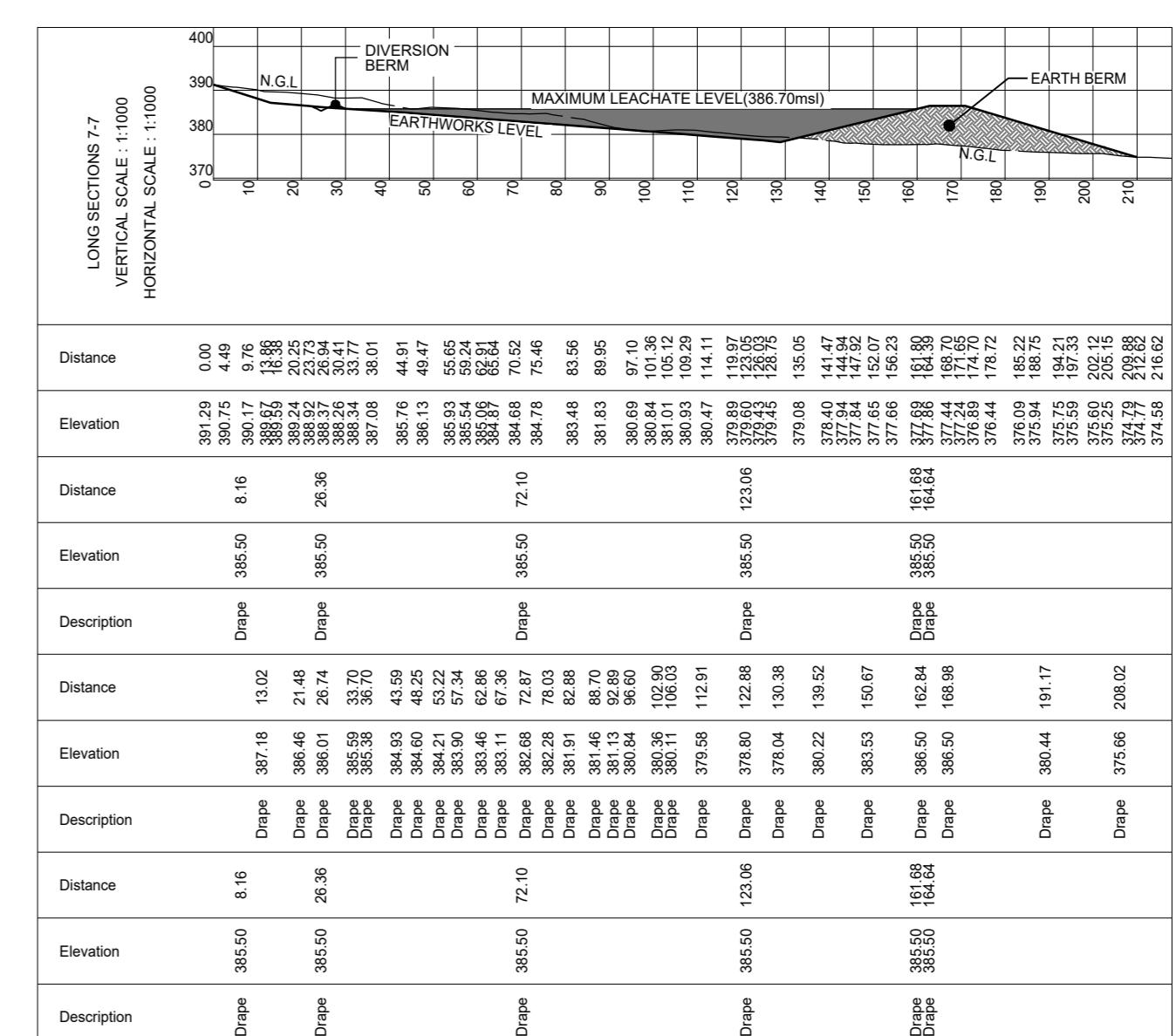
- 1.1 FINISHED BULK EARTHWORKS SHALL BE SMOOTH AND FREE FROM PROTRUSIONS THAT COULD PUNCTURE THE GEOMEMBRANE LINER. ALL EARTHWORKS SHALL BE APPROVED BY THE ENGINEER BEFORE ANY GEOSYNTHETICS ARE LAID.
- 1.2 BASE PREPARATION SHALL INCLUDE SCARIFYING AND CCOMPACTING INSITU MATERIAL TO 93% OF MoD - AASHTO MAXIMUM DENSITY.
- 1.3 UNLESS OTHERWISE SPECIFIED ELSEWHERE, ALL EMBANKMENT FILL MATERIAL SHALL BE SOIL MATERIAL CLASSIFYING AS G9 COMPACTED TO 93% OF MoD - AASHTO MAXIMUM DENSITY IN LAYERS NOT EXCEEDING 150mm THICK.
- 1.4 ALL TYPE 2 GEOSYNTHETICS ANCHOR TRENCHES SHALL BE BACKFILLED AS SHOWN.
- 1.5 ALL PROTECTION LAYERS ON TOP OF BERMS AND IN DRAINS SHALL BE STABILISED SAND.

GEOSYNTHETICS NOTES:

- 2.1 THE GEOMEMBRANE TO BE CLEAN AND DRY BEFORE SEAMING COMMENCES.
- 2.2 TRIAL SEAM TO BE DONE BEFORE THE MAJOR WORKS COMMENCE TO CHECK THE CALIBRATION OF THE EQUIPMENT.



LONG SECTION 6-6



LONG SECTION 7-7

eThekewini Municipality CLEANSING & SOLID WASTE

DSW

REDUCED PLAN USE SCALE BELOW

0 10 20 30 40 50 60 70
70mm ON ORIGINAL PLAN

Design Consultants

iX / Wilson & Pass Inc JV

iX engineers: Eastwood Office Park | Protea House
270 Lynnwood Service Road | Lynnwood Ridge
Pretoria | 0081 | Tel: +27 12 745 2000
Local Manager Tel: +27 31 254 5700

Approved

201070022

PR No. 06/03/2023

Date

iX engineers

Infrastructure Excellence

CK No. 2016/275143/07

MULTIDISCIPLINARY CONSULTING ENGINEERS

Westend Office Park | 21 The Boulevard | Westville | Durban | 3630

Tel: +27 31 254 5700 | Fax 086 537 7353

www.ixengineers.co.za

Wilson & Pass Inc

P O Box 641 | Westville | 3630 | SA

email: jon.pass@pixie.co.za

Tel: +27 82 463 1127

Project Title

Status

FOR TENDER

Drawing Title

**WESTERN WASTE
MANAGEMENT FACILITY
(SHONGWENI)**

Project Title

**CONTAMINATED
STORMWATER DAM
LAYOUT & SECTIONS**

Drawing Title

Scales

AS SHOWN

Designed

N. DOOKHI/J. PASS

Checked

M. RICHMOND

Drawing No.

301837-02-WS-LA-001-003

Revision

B

Reference

Date

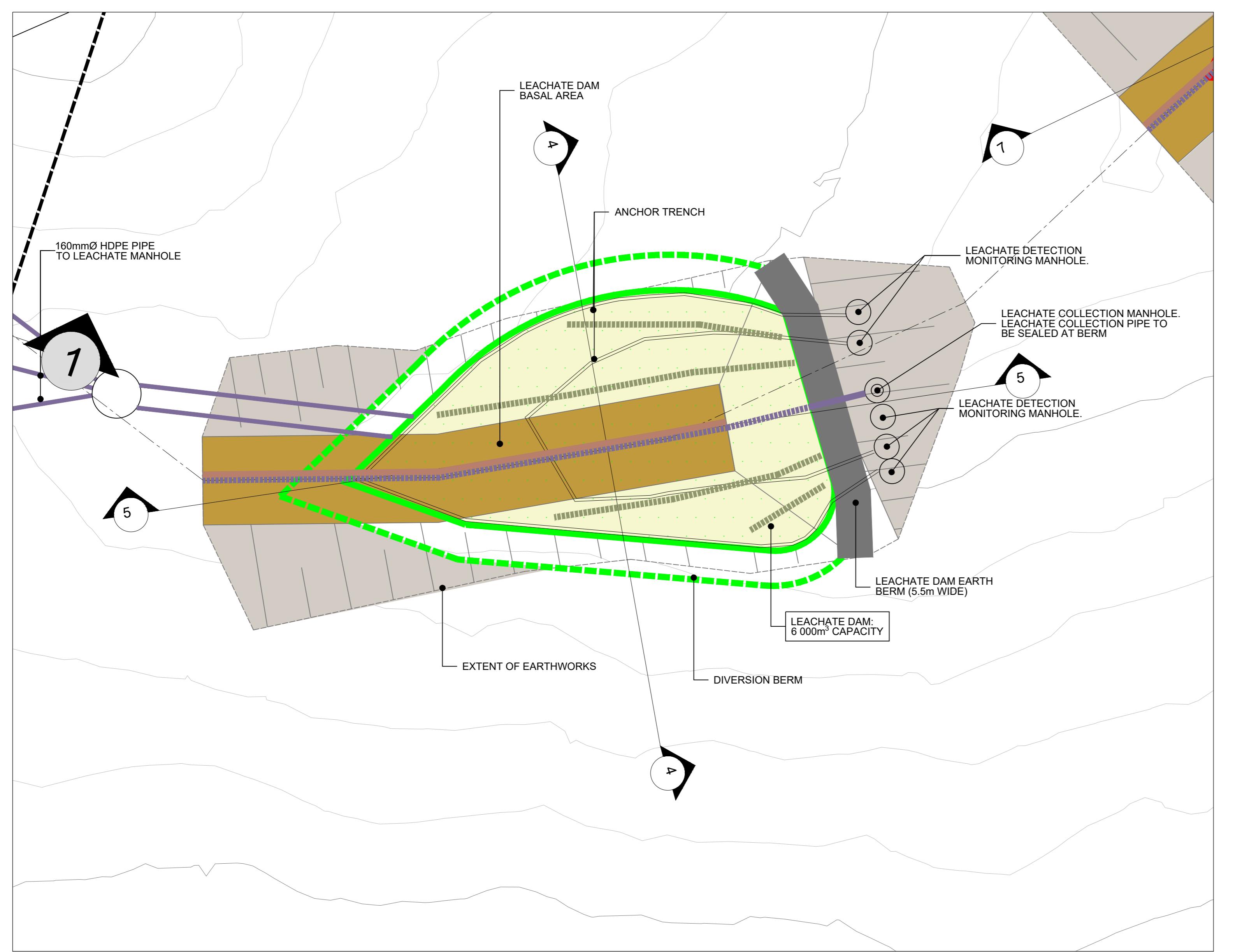
06/03/2023

Drawn by

L. DU PLESSIS

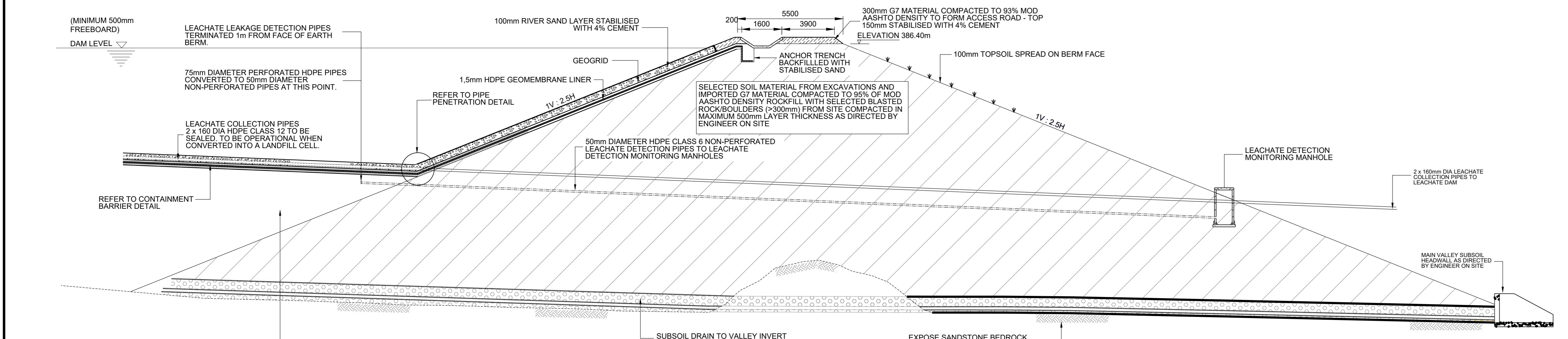
Signature

REDUCED PLAN USE SCALE BELOW
0 10 20 30 40 50 60 70
70mm ON ORIGINAL PLAN



PROPOSED LEACHATE DAM LAYOUT

SCALE 1:500



LEACHATE DAM: TYPICAL EARTH BERM AND PIPEWORK DETAILS

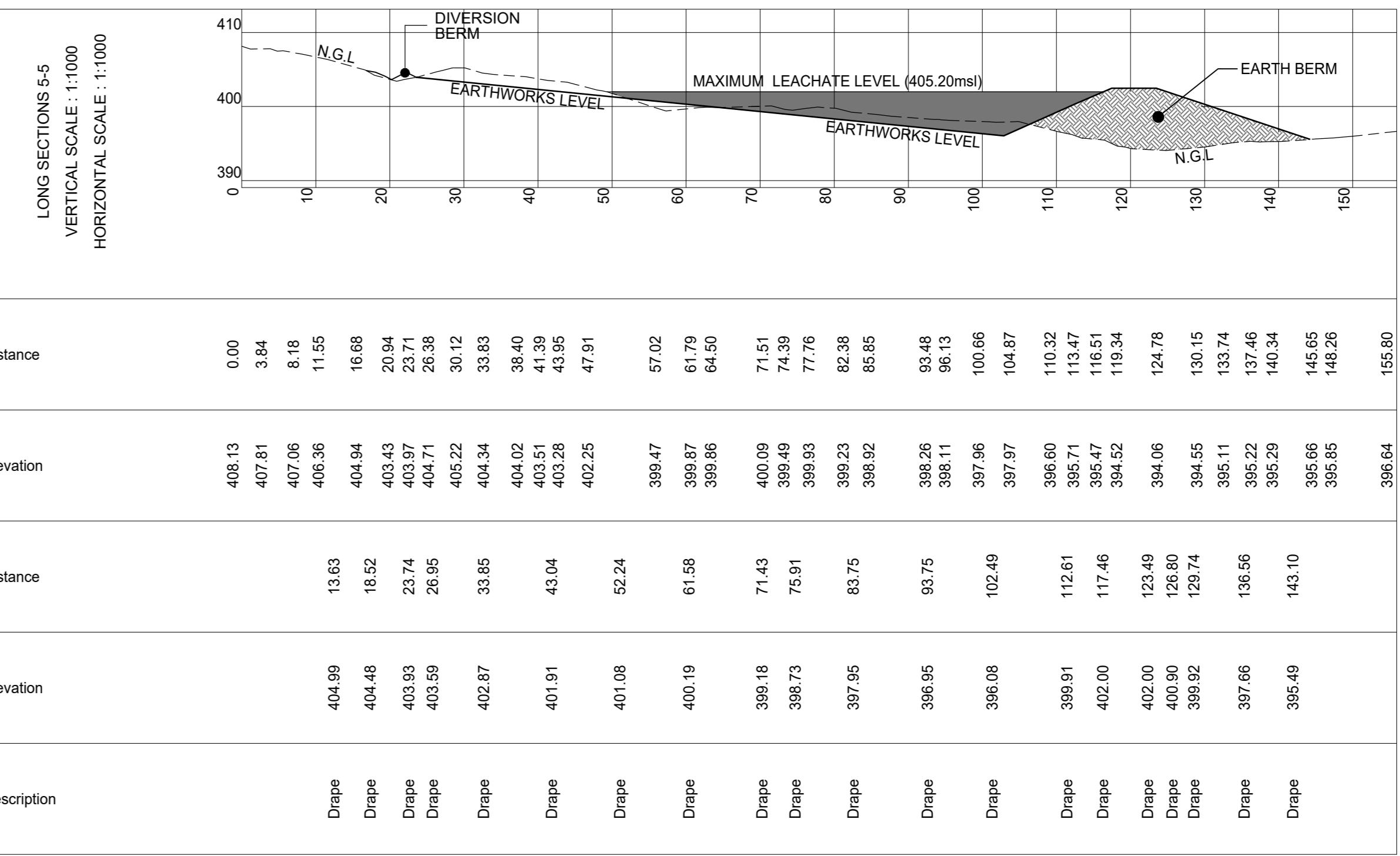
FOR PIPE, MANHOLE AND HEADWALL CONFIGURATION AND LAYOUT,
REFER TO TYPICAL DETAILS DRAWINGS
NOT TO SCALE

EARTHWORKS NOTES:

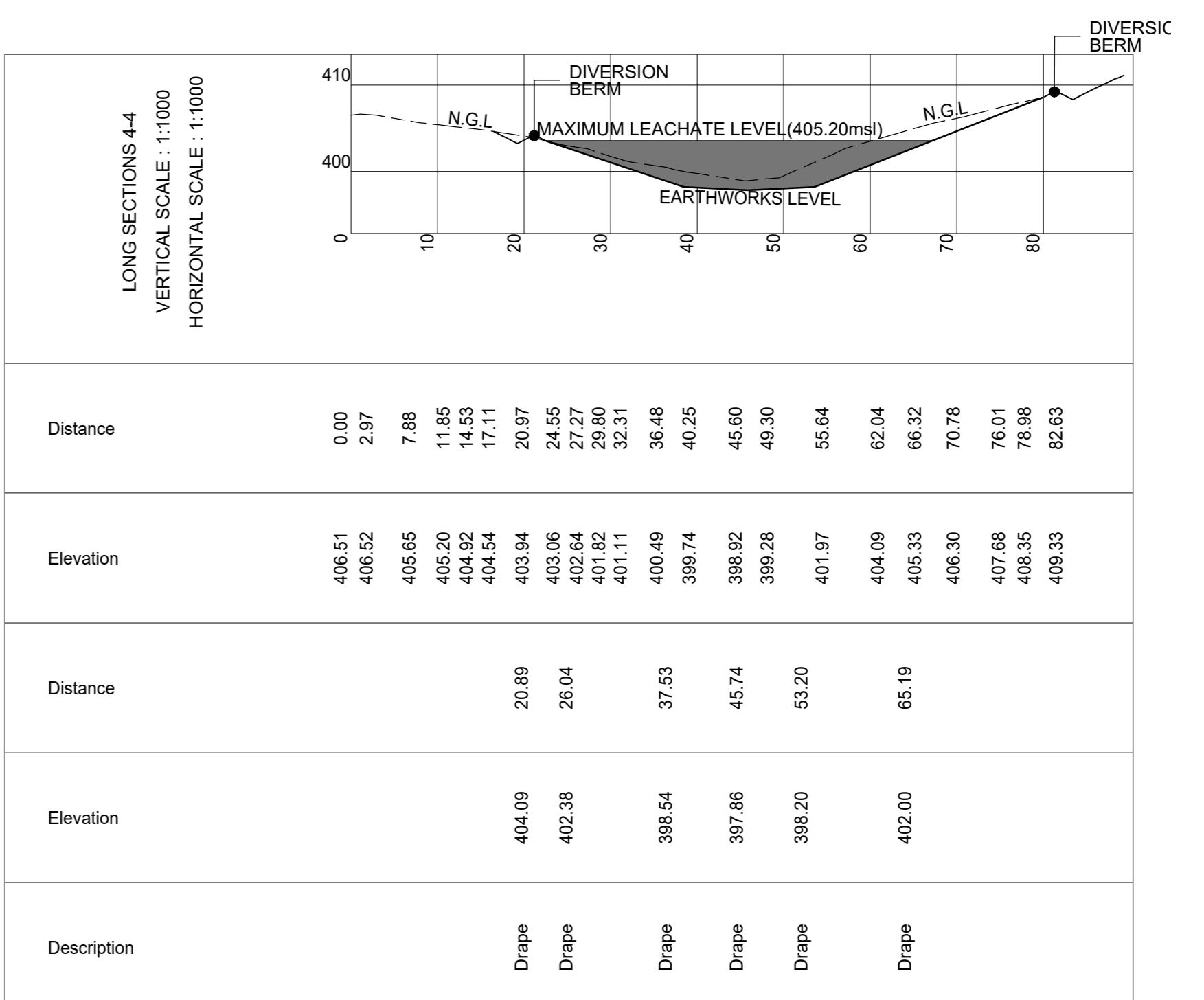
- 1.1 FINISHED BULK EARTHWORKS SHALL BE SMOOTH AND FREE FROM PROTRUSIONS THAT COULD PUNCTURE THE GEOMEMBRANE LINER. ALL EARTHWORKS SHALL BE APPROVED BY THE ENGINEER BEFORE ANY GEOSYNTHETICS ARE LAID.
- 1.2 BASE PREPARATION SHALL INCLUDE SCARIFYING AND COMPACTING INSITU MATERIAL TO 93% OF MOD ASHTO MAXIMUM DENSITY.
- 1.3 UNLESS OTHERWISE SPECIFIED ELSEWHERE, ALL EMBANKMENT FILL MATERIAL SHALL BE SOIL MATERIAL CLASSIFYING AS G COMPACTED TO 93% OF MOD ASHTO MAXIMUM DENSITY IN LAYERS NOT EXCEEDING 150mm THICK.
- 1.4 ALL TYPE 2 GEOSYNTHETICS ANCHOR TRENCHES SHALL BE BACKFILLED AS SHOWN.
- 1.5 ALL PROTECTION LAYERS ON TOP OF BERMS AND IN DRAINS SHALL BE STABILISED SAND.

GEOSYNTHETICS NOTES:

- 2.1 THE GEOMEMBRANE TO BE CLEAN AND DRY BEFORE SEAMING COMMENCES.
- 2.2 TRIAL SEAM TO BE DONE BEFORE THE MAJOR WORKS COMMENCE TO CHECK THE CALIBRATION OF THE EQUIPMENT.




LONG SECTION 5-5



LONG SECTION 4-4

NOTE: No construction work to commence until land and servitudes have been completed	Acquisitions completed	
DATE	EXPIRED	
UNDERGROUND SERVICES CHECKED		
SERVICES	DATE	SIGNATURE
S.W.DRAINS		
SEWERS		
WATER MAINS		
G.P.O.CABLES		
ELECTRIC CABLES		
S.A.R. CABLES		
E.S.C. CABLES		
TELEPHONE LINE		
NOTE: Only underground services affected by new construction work are listed. Call must be taken to avoid damage to underground services such as sewers, drains, cables, water mains and connectors. Wherever possible these must be located before work proceeds.		
L. Moodley		DATE
Deputy Head: Cleaning & Solid Waste - DSW		
Contract No.		
PSC 2015/010		
Status FOR TENDER		
Project Title		
WESTERN WASTE MANAGEMENT FACILITY (SHONGWENI)		
Drawing Title		
LEACHATE DAM LAYOUT & SECTIONS		
Scales		Reference
AS SHOWN		
Designed	Date	
N. DOOKHIIJ. PASS	06/03/2023	
Checked	Drawn by	
M. RICHMOND	L. DU PLESSIS	
Drawing No		Revision
301837-02-WS-LA-001-004		B

LEGEND	
PROPOSED LANDFILL CELL 1	---
PROPOSED FUTURE CELL 2	- - -
PROPOSED FUTURE CELLS	---
LEACHATE DAM	—
CONTAMINATED STORMWATER DAM	—
EARTH BERM	—
RIVER	—
LEAKAGE DETECTION MANHOLE	◎
LEAKAGE COLLECTION MANHOLE	○
EXTENT OF EARTHWORKS CELL 1	■■■■■
COLLECTION PIPE PERFORATED	······
COLLECTION PIPE NON-PERFORATED	—
DETECTION PIPE PERFORATED	······
DETECTION PIPE NON-PERFORATED	—
SUBSOIL PIPE	—



Design Consultants

iX / Wilson & Pass Inc JV

Approved 20/02/2022 PR No. 06/03/2023 Date

iX engineers Infrastructure Excellence CIVIL MULTIDISCIPLINARY CONSULTING ENGINEERS Weston Office Park | The Boulevard | Westville | Durban | 3630 Tel: +27 31 204 5100 | Fax: +27 31 204 5100 | www.ixe.com.za

Wilson & Pass Inc P.O Box 641 | Westville | 3630 | SA Tel: +27 31 204 5100 | Fax: +27 31 204 5100

B 27/10/2023 FOR TENDER ONLY
A 06/03/2023 FOR APPROVAL

Revision Date Description

NOTE: No construction work to commence until land and servitudes have been completed

Acquisitions completed

North Point

DATE	EXPIRED
UNDERGROUND SERVICES CHECKED	
SEWERS	
S.W.DRAINS	
SEIVERS	
WATER MAINS	
G.P.CABLES	
ELECTRIC CABLES	
S.A.R. CABLES	
E.S.C. CABLES	
E.S.C. LINE	

NOTE: Only underground services affected by new construction work are to be checked. Care must be taken during earthworks for road foundations, trenches etc. to avoid damage to underground services such as sewers, drains, cables, water mains and connectors. Wherever possible these must be located before work proceeds.

L. Moodley DATE
Deputy Head: Cleaning & Solid Waste - DSW

Contract No.

Status

FOR TENDER

Project Title

WESTERN WASTE
MANAGEMENT FACILITY
(SHONGWENI)

Drawing Title

STORMWATER
LEACHATE COLLECTION
AND DETECTION
LAYOUT

Scales

1: 1500

Reference

Designed 06/03/2023

Checked 06/03/2023

Drawn by L. DU PLESSIS

Drawing No 301837-02-WS-LA-001-005

Revision B

