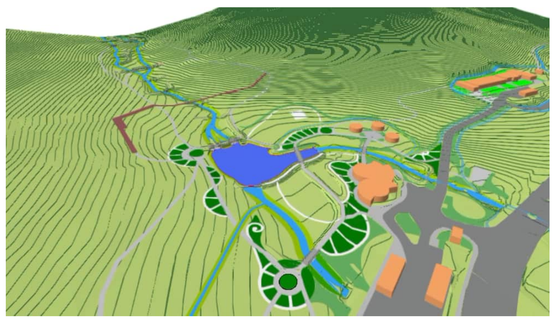


LEGEND:

- Existing paving
- Existing buildings
- New paving
- New permeable gravel paving
- Exaisting lawn/meadows
- Existing high vegetation
- Botanical gardens display plots
- Proposed new screening vegetation
- Proposed new lawn
- Seasonally flooded wetland area
- Retention pond (water level floctuation 0.5m)
- Detention ponds
- Stream banks reinforcement
- Stream floor reinforcement
- New swales
- Planted river banks for erosion control
- Bench
- Dam/weir
- Bench
- Existing boardwalk
- Existing contour lines



Botanical Gardens during typical weather conditions



Botanical Gardens during major flooding



Conceptual discharge dicipation using dams and boulder



Conceptual controlled discharge using calibrated dam opening

No.	Date	Issue Notes
D	21 Oct 2026	Issued for review
C	19 Oct 2026	Issued for Review
B	15 Oct 2026	Issued for coorcination

Client:

TRIPYRON INFRASTRUCTURE

Approved by:

Name:
Signature:
Date:

Design Firm:

SILVER HORNS CONSULTING

Project Title

Thohoyandou National Botanical Garden SANBI

Sheet Title

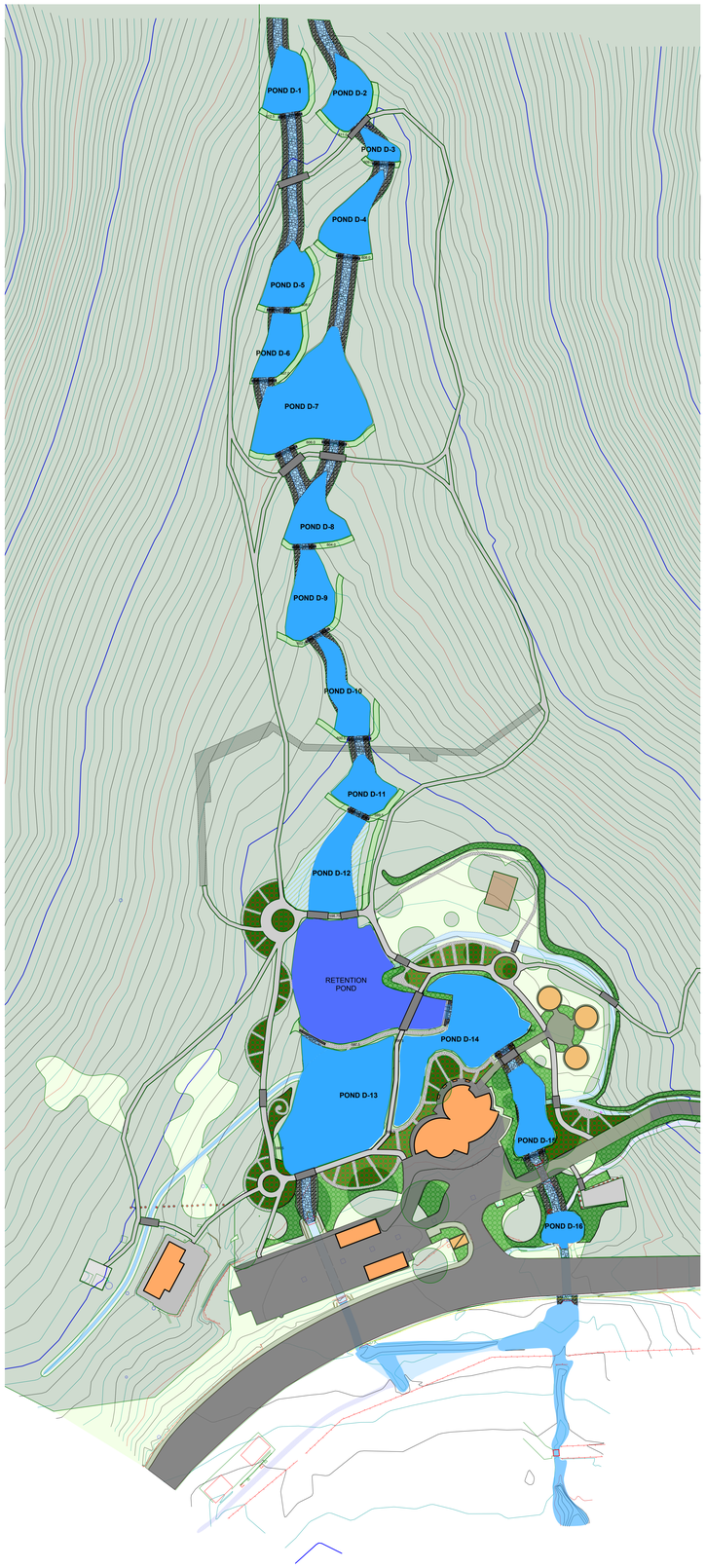
Masterplan

Scale	1:750
Drawn By	PMG
Date	20 Sept 2026
Project ID	2610

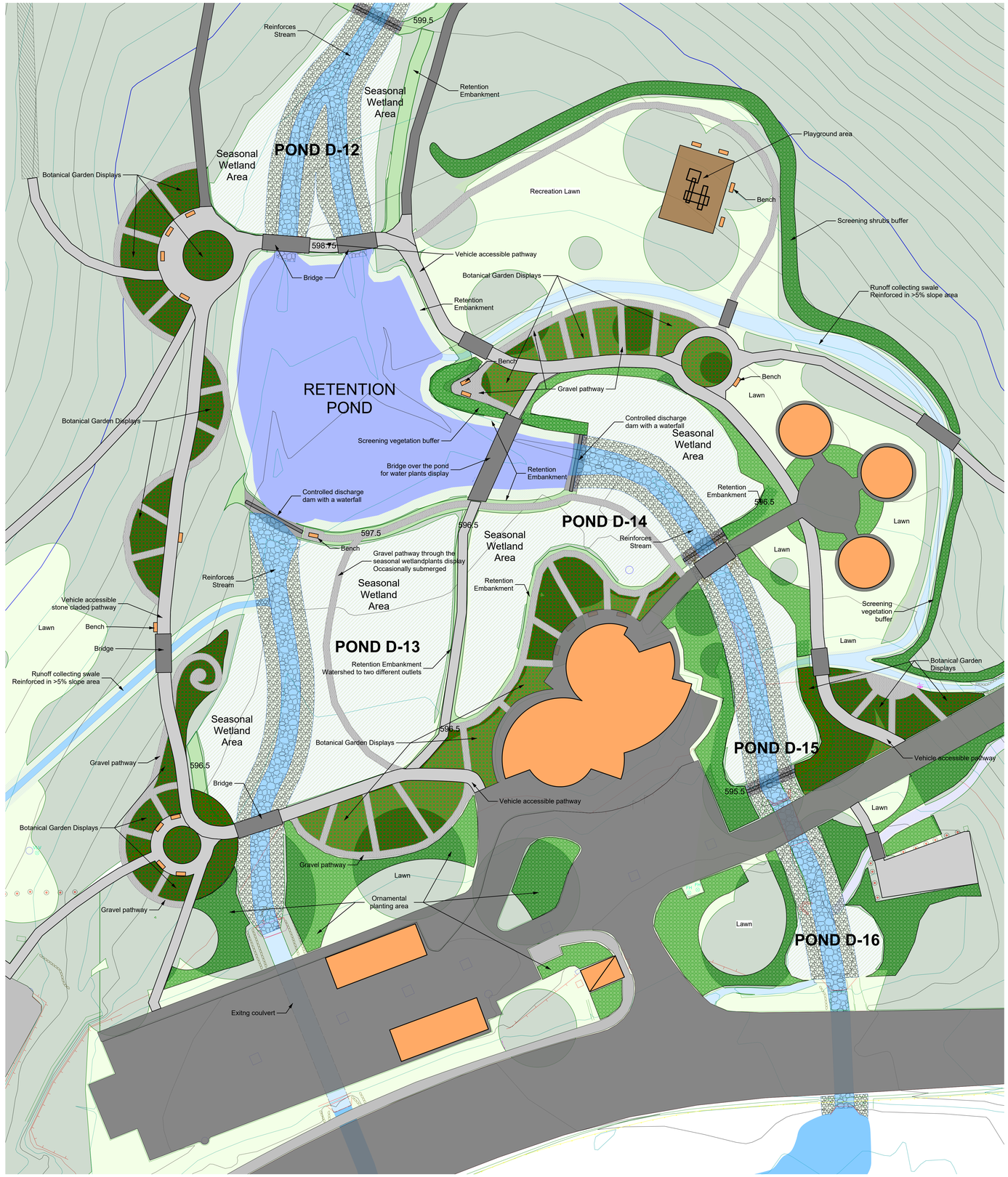
Sheet No.

L-6 of 10

File: 2610_SANBI_LA5_Detailed_Design.vwx



Extent of the flood ponds during major rain events
Scale 1:750



Enlargement of the main area of the Botanical Gardens
Scale 1: 250

LEGEND:

- Existing paving
- Existing buildings
- New paving
- New permeable gravel paving
- Exaisting lawn/meadows
- Existing high vegetation
- Botanical gardens display plots
- Proposed new screening vegetation
- Proposed new lawn
- Seasonally flooded wetland area
- Retention pond (water level flocfuation 0.5m)
- Detention ponds
- Stream banks reinforcement
- Stream floor reinforcement
- New swales
- Planted river banks for erosion control
- Bench
- Dam/weir
- Bench
- Existing boardwalk
- Existing contour lines

No.	Date	Issue Notes
D	21 Oct 2026	Issued for review
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Client:
TRIYRON INFRASTRUCTURE

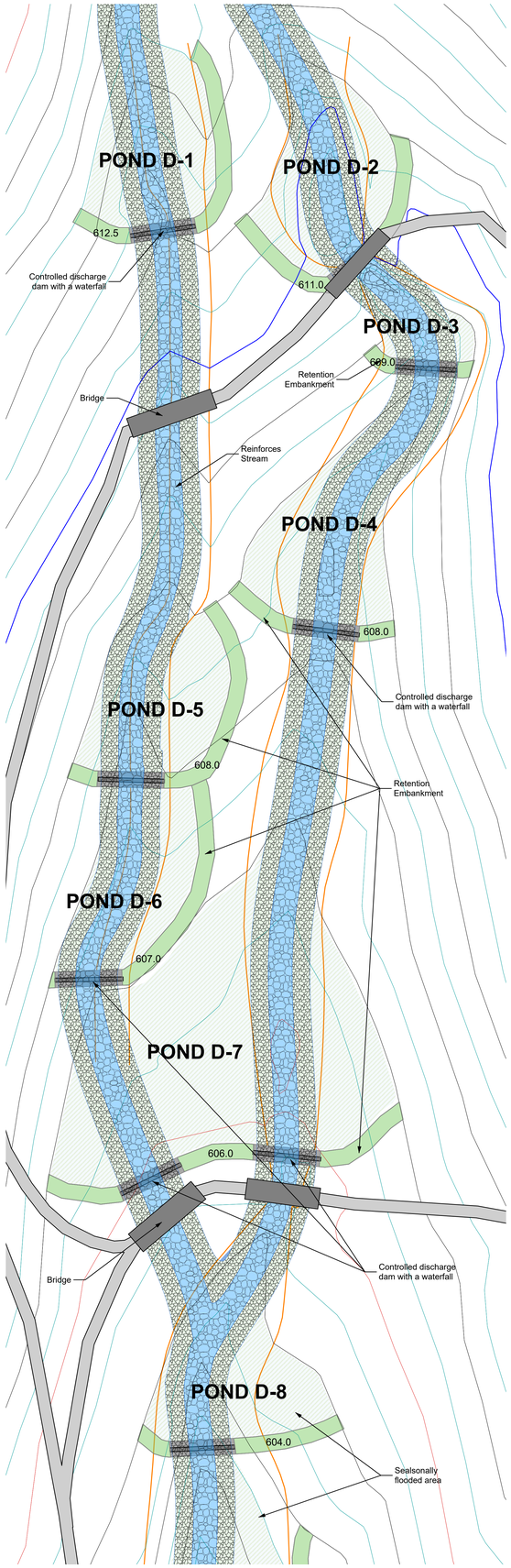
Approved by:
Name:
Signature:
Date:

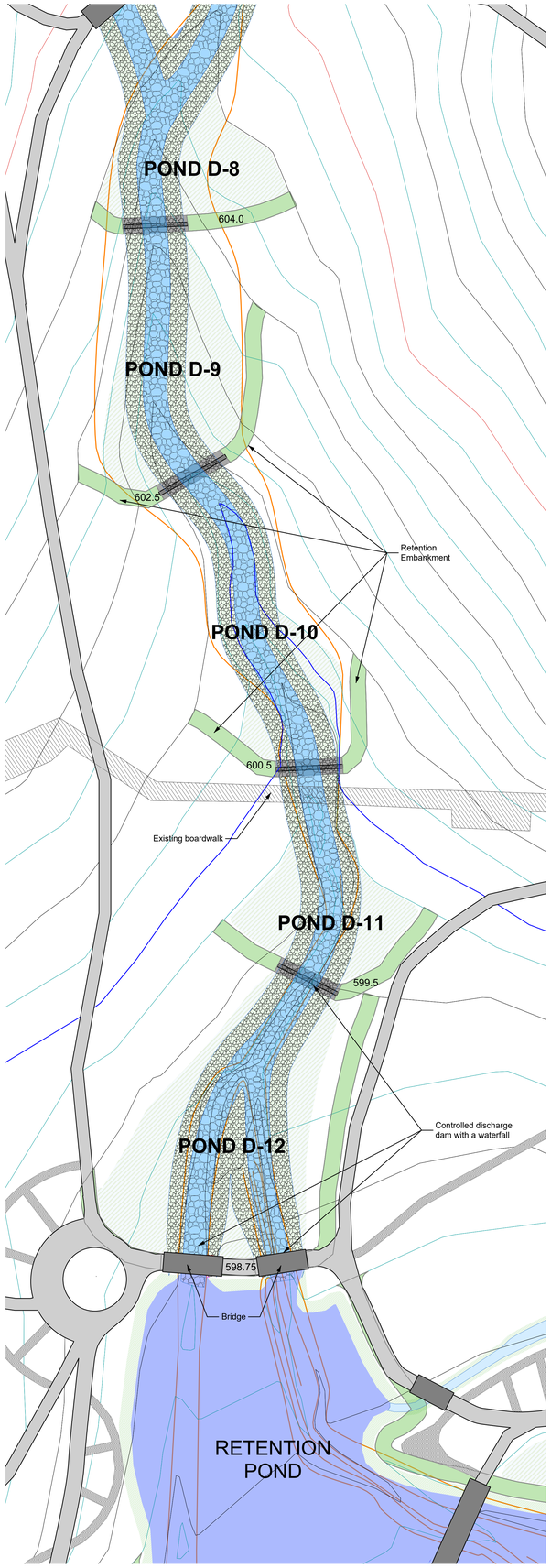
Design Firm:
SILVER HORNS CONSULTING

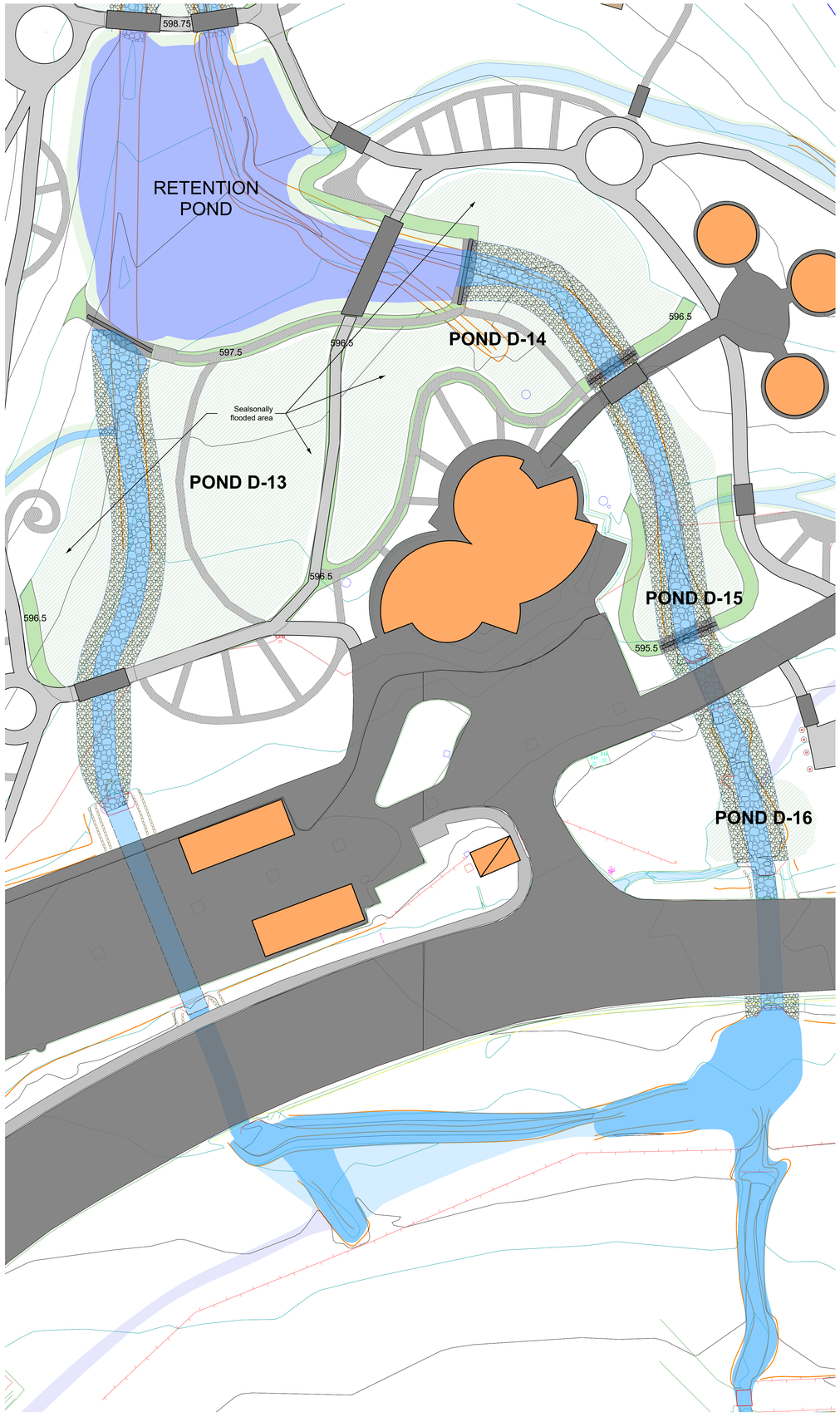
Project Title:
Thohoyandou National Botanical Garden
SANBI

Sheet Title:
Flood Ponds and Main Gardens Area

Scale	As Shown
Drawn By	PMG
Date	20 Sept 2026
Project ID	2610
Sheet No.	L-7 of 10
File	2610_SANBI_LAS_Detailed_Design.vwx







D	21 Oct 2026	Issued for review
C	19 Oct 2026	Issued for Review
B	15 Oct 2026	Issued for coorcination
No.	Date	Issue Notes

Client:

TRIVIRON INFRASTRUCTURE

Approved by:

Name:

Signature:

Date:

Design Firm:

SILVER HORNS CONSULTING

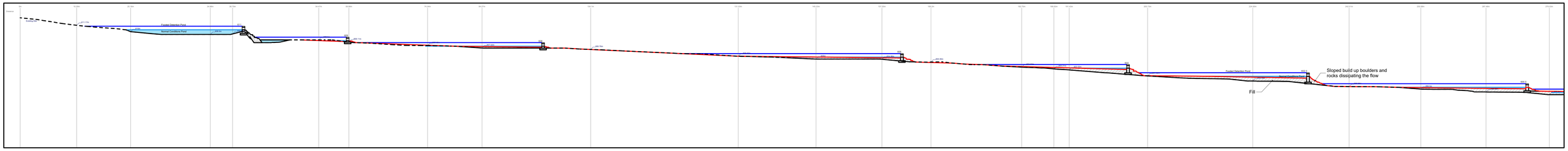
Project Title:

Thohoyandou National Botanical Garden SANBI

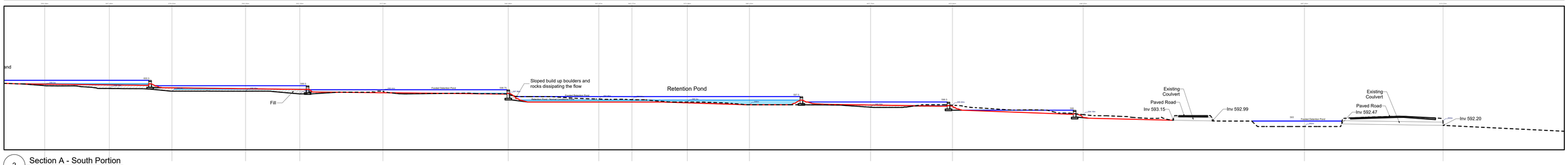
Sheet Title:

Proposed Stream Attenuiation

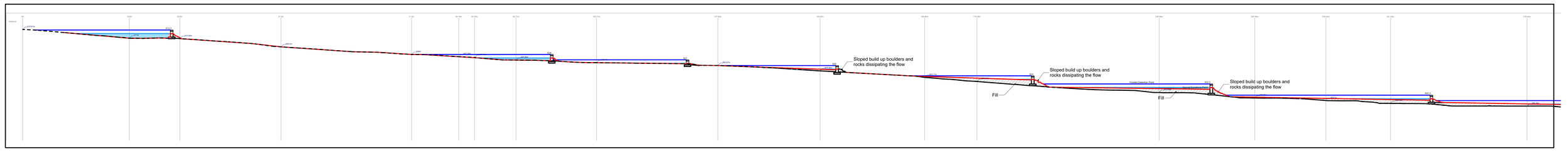
Scale: 1:250	Sheet No.: L-8 of 10
Drawn By: PMG	
Date: 20 Sept 2026	
Project ID: 2610	File: 2610_SANBI_LAS_Detailed_Design.vwx



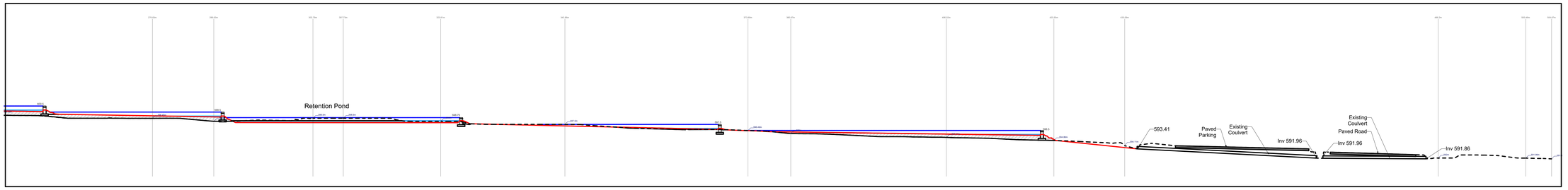
1 Section A - North Portion
Scale: 1:250



2 Section A - South Portion
Scale: 1:250



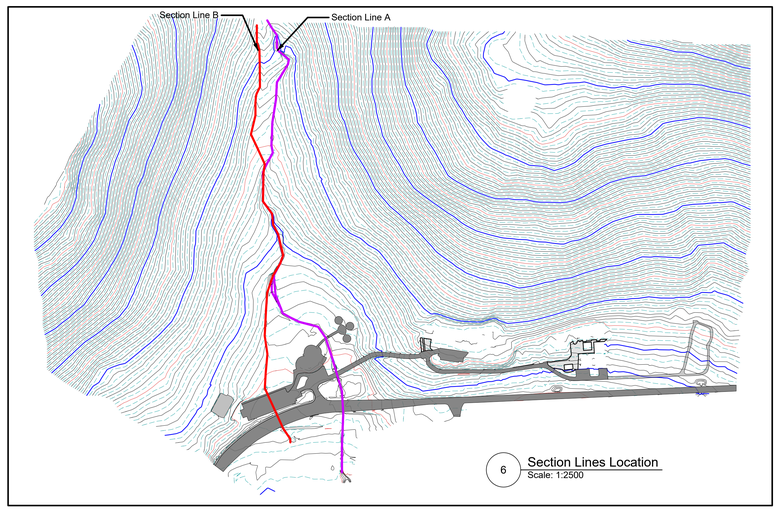
3 Section B - North Portion
Scale: 1:250



4 Section B - South Portion
Scale: 1:250

LEGEND:

- Existing grade
- Proposed grade
- Detention pond max. water level
- Water accumulation in normal conditions
- Fill in the stream bed
- Sloped build up boulders and rocks dissipating the flow
- Dam/Weir



6 Section Lines Location
Scale: 1:2500

No.	Date	Issue Notes
D	21 Oct 2026	Issued for review
C	19 Oct 2026	Issued for Review
B	15 Oct 2026	Issued for coorcination

Client:

TRIYRON INFRASTRUCTURE

Approved by:
Name:
Signature:
Date:

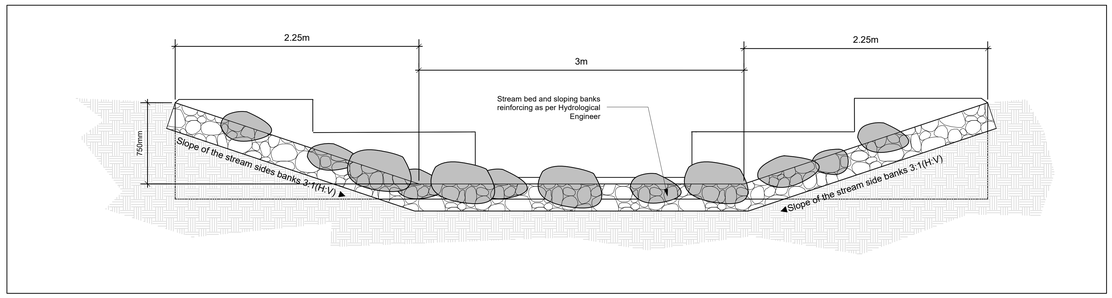
Design Firm:

SILVER HORNS CONSULTING

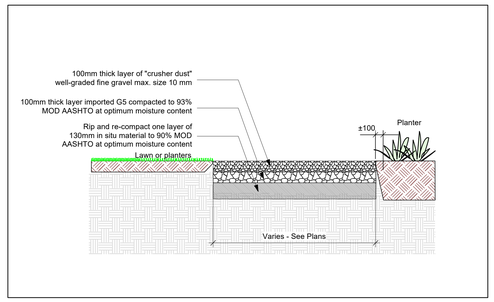
Project Title:
Thohoyandou National Botanical Garden
SANBI

Sheet Title:
Sections

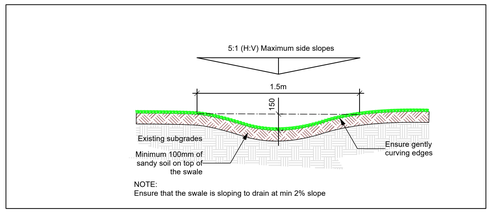
Scale: 1:750	Sheet No.: L-9 of 10
Drawn By: PMG	
Date: 20 Sept 2026	
Project ID: 2610	File: 2610_SANBI_LAS_Detailed_Design.vwx



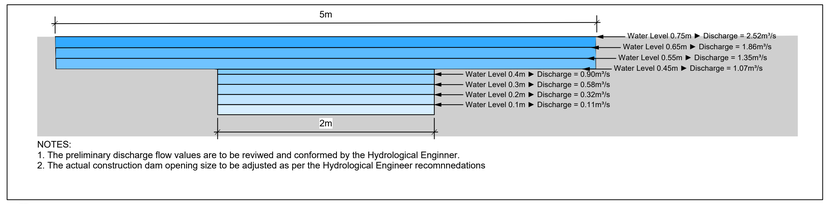
7 Section Through the Typical Reinforced Stream Bed
Scale: 1:20



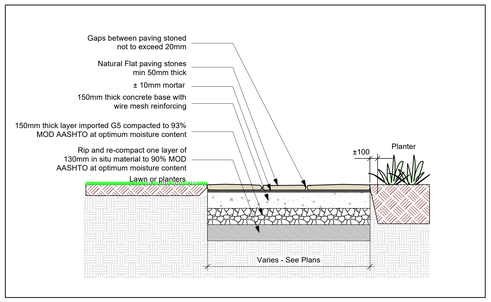
3 Gravel Pathway
Scale: 1:20



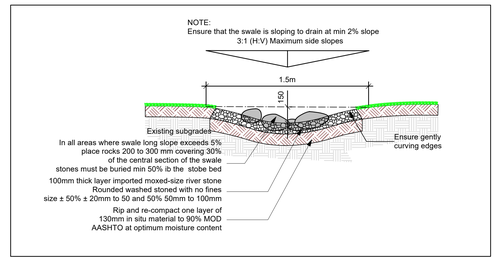
4 Not Reinforced Drainage Swale
Scale: 1:20



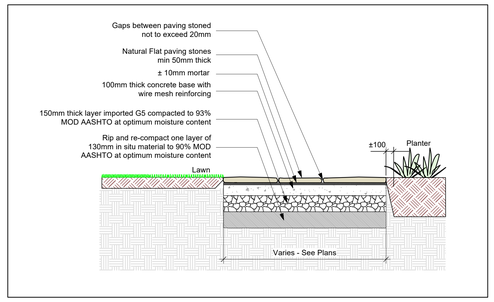
9 Preliminary Water Discharge Through the Detention Dam
Scale: 1:20



2 Vehicle Accessible Pahway with Stone Finish
Scale: 1:20



6 Reinforced Drainage Swale
Scale: 1:20



1 Pedestrian Pahway with Stone Finish
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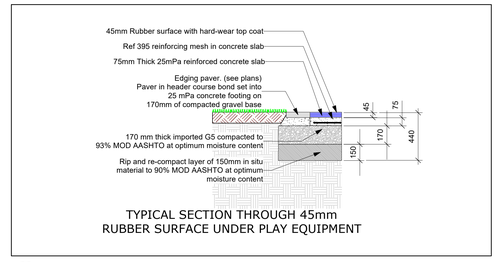
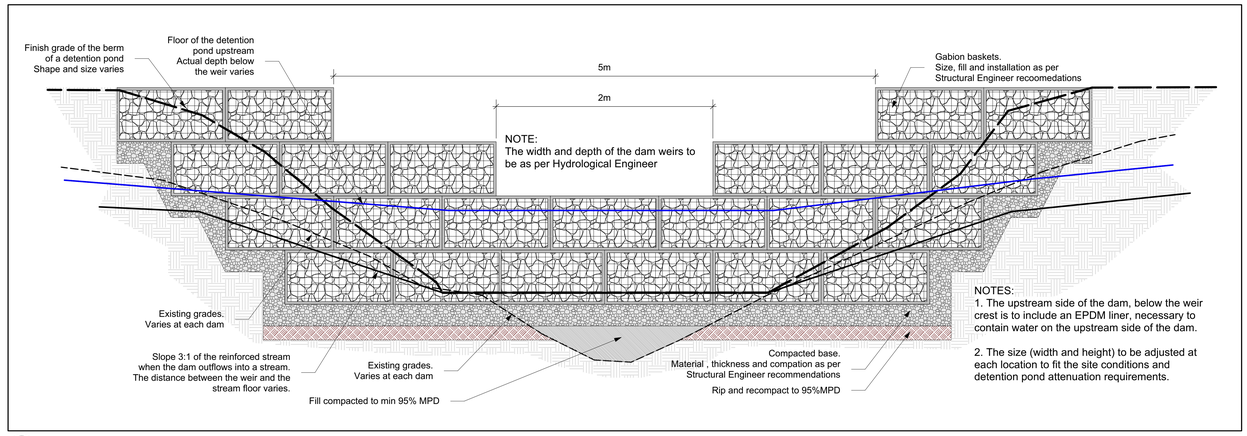


5 Edge of Ruberised Surface in Playground Area
Scale: 1:20



8 Gabion Basket Dam and Weir
Scale: 1:20

No.	Date	Issue Notes
D	21 Oct 2026	Issued for review
C	19 Oct 2026	Issued for Review
B	15 Oct 2026	Issued for coorcination

Client:

TRIYRON INFRASTRUCTURE

Approved by:

Name:

Signature:

Date:

Design Firm:

SILVER HORNS CONSULTING

Project Title

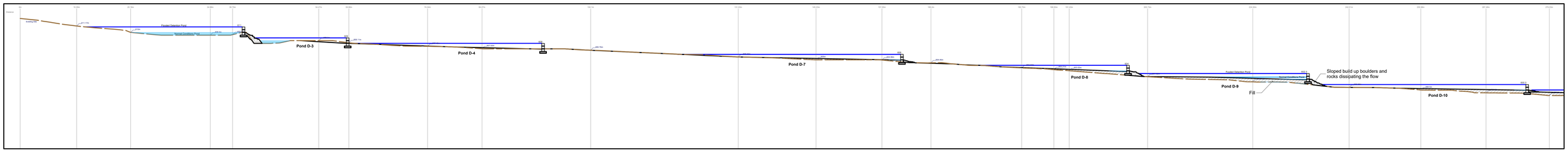
Thohoyandou National Botanical Garden SANBI

Sheet Title

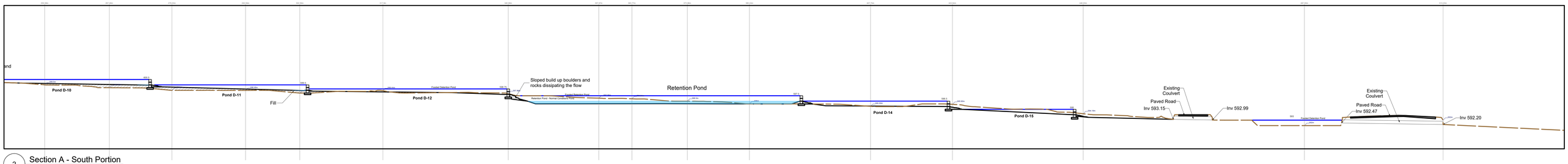
Details 1

Scale	1:750
Drawn By	PMG
Date	20 Sept 2026
Project ID	2610
Sheet No.	L-10 of 10

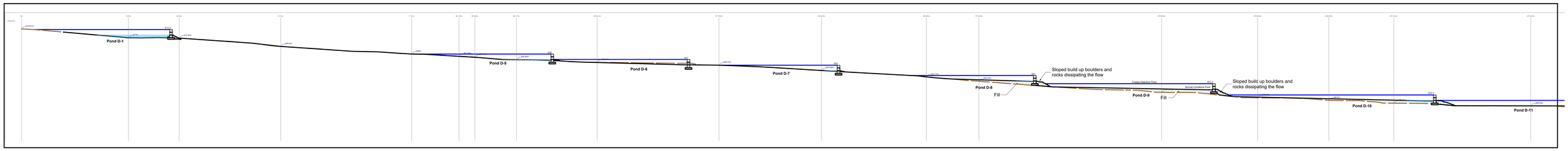
File: 2610_SANBI_LA5_Detailed_Design.vwx



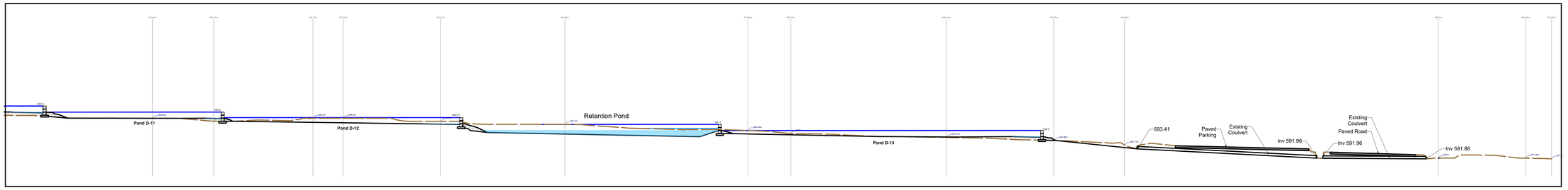
1 Section A - North Portion
Scale: 1:250



2 Section A - South Portion
Scale: 1:250



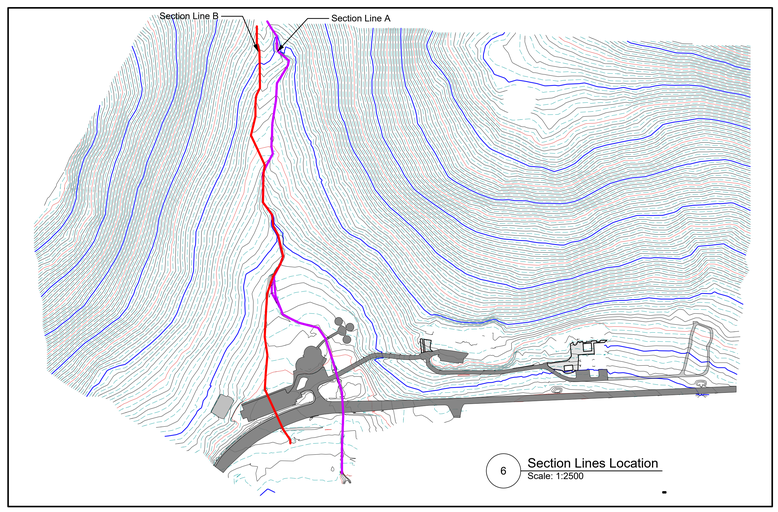
3 Section B - North Portion
Scale: 1:250



4 Section B - South Portion
Scale: 1:250

LEGEND:

- Existing grade
- Proposed grade
- Detention pond max. water level
- Water accumulation in normal conditions
- Fill in the stream bed
- Sloped build up boulders and rocks dissipating the flow
- Dam/Weir



6 Section Lines Location
Scale: 1:2500

No.	Date	Issue Notes
E	11 Nov 2026	Issued for Coordination
D	21 Oct 2026	Issued for review
C	19 Oct 2026	Issued for Review

Client:

TRITERON INFRASTRUCTURE

Approved by:
Name:
Signature:
Date:

Design Firm:

SILVER HORNS CONSULTING

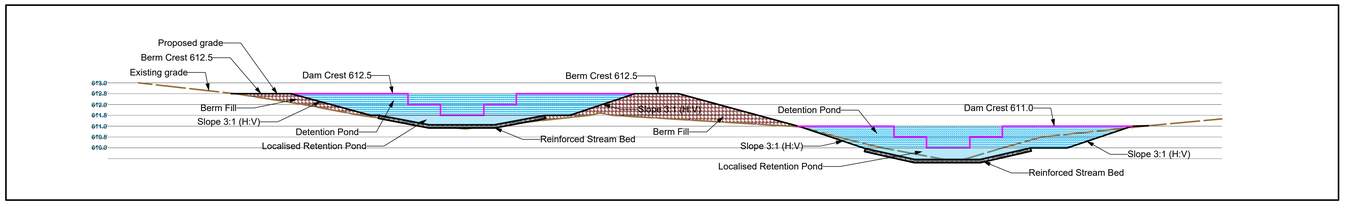
Project Title:
Thohoyandou National Botanical Garden
SANBI

Sheet Title:
Sections Stream

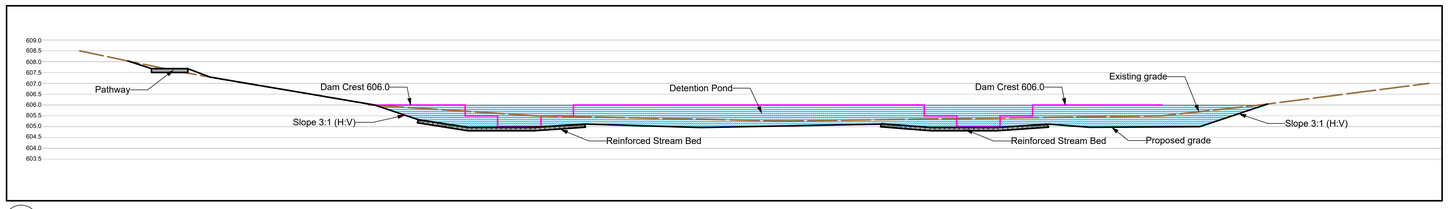
Scale	1:750
Drawn By	PMG
Date	20 Sept 2026
Project ID	2610

Sheet No.
L-9 of 11

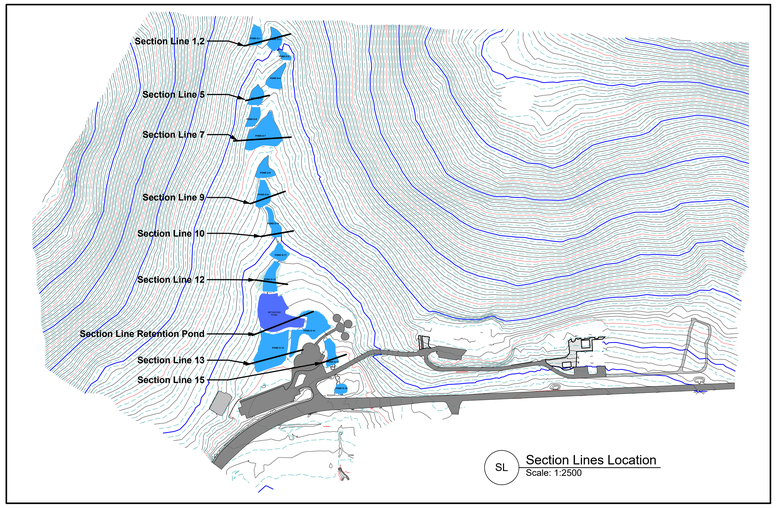
File: 2610_SANBI_LAS_Detailed_Design.vwx



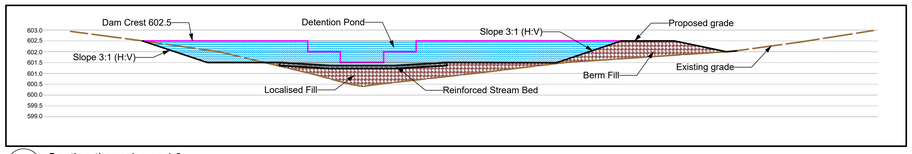
S 1-2 Section through ponds 1 and 2
Scale: 1:100



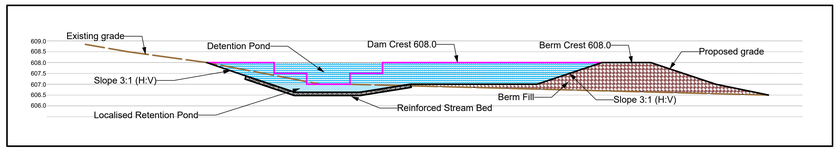
S-7 Section through pond 7
Scale: 1:100



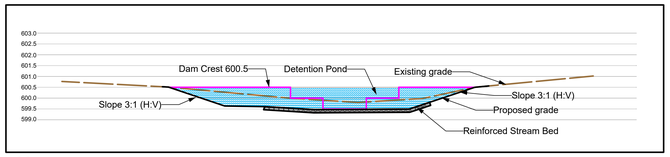
SL Section Lines Location
Scale: 1:2500



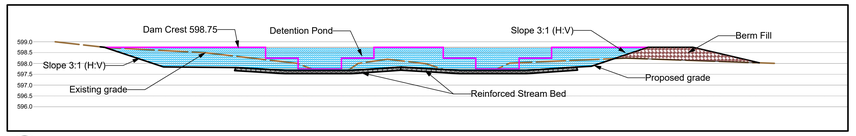
S-9 Section through pond 9
Scale: 1:100



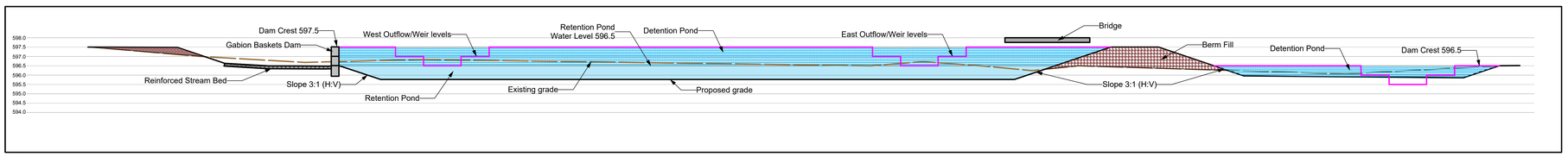
S-5 Section through pond 5
Scale: 1:100



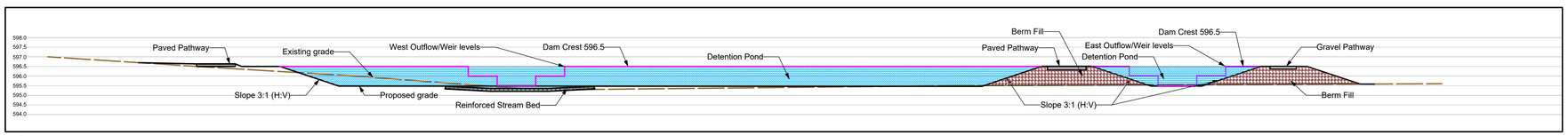
S-10 Section through pond10
Scale: 1:100



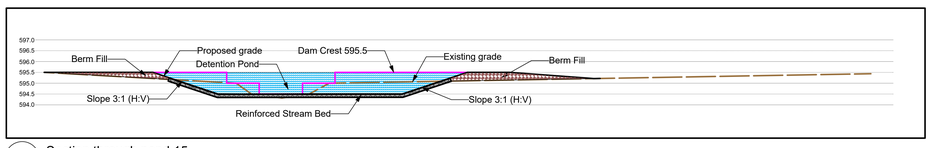
S-12 Section through pond 12
Scale: 1:100



S-R Section through the retention pond
Scale: 1:100



S-13 Section through pond 13
Scale: 1:100



S-15 Section through pond 15
Scale: 1:100

	INPUTS				RESULTS							
Pond ID	Water surface area (m²)	Perimeter at water level (m) - optional	Depth, water surface to flat base (m)	Shore slope 1 (H in H:V)	Perimeter used (m)	Average slope (H:V)	Corner factor used	Bottom area (m²)	Bottom as % of surface	Volume (m³)	Volume (ML)	Mean depth (m)
Pond D 1	290.0	67.0	1.00	3.0	67.0	3.00	3.140	117.3	40.4%	198.9	0.199	0.69
Pond D 2	301.0	72.0	1.00	3.0	72.0	3.00	3.140	113.3	37.6%	202.4	0.202	0.67
Pond D 3	100.0	43.0	0.98	3.0	43.0	3.00	3.140	0.7	0.7%	44.9	0.045	0.45
Pond D 4	350.0	86.0	1.00	3.0	86.0	3.00	3.140	120.3	34.4%	230.4	0.230	0.66
Pond D 5	303.0	69.0	1.00	3.0	69.0	3.00	3.140	124.3	41.0%	208.9	0.209	0.69
Pond D 6	266.0	69.0	1.00	3.0	69.0	3.00	3.140	87.3	32.8%	171.9	0.172	0.65
Pond D 7	1,092.0	141.0	1.00	3.0	141.0	3.00	3.140	697.3	63.9%	889.9	0.890	0.81
Pond D 8	324.0	80.0	1.00	3.0	80.0	3.00	3.140	112.3	34.6%	213.4	0.213	0.66
Pond D 9	400.0	82.0	1.00	3.0	82.0	3.00	3.140	182.3	45.6%	286.4	0.286	0.72
Pond D 10	316.0	92.0	1.00	3.0	92.0	3.00	3.140	68.3	21.6%	187.4	0.187	0.59
Pond D 11	271.0	63.0	1.00	3.0	63.0	3.00	3.140	110.3	40.7%	185.9	0.186	0.69
Pond D 12	444.0	97.0	1.00	3.0	97.0	3.00	3.140	181.3	40.8%	307.9	0.308	0.69
Retention Pond	1,548.0	178.0	1.00	3.0	178.0	3.00	3.140	1,042.3	67.3%	1,290.4	1.290	0.83
Pond D 13	1,400.0	160.0	1.00	3.0	160.0	3.00	3.140	948.3	67.7%	1,169.4	1.169	0.84
Pond D 14	995.0	192.0	1.00	3.0	192.0	3.00	3.140	447.3	45.0%	716.4	0.716	0.72
Pond D 15	341.0	84.0	1.00	3.0	84.0	3.00	3.140	117.3	34.4%	224.4	0.224	0.66
Pond D 16	150.0	48.0	1.00	3.0	48.0	3.00	3.140	34.3	22.8%	87.4	0.087	0.58
Total	**10,205.2**							**4,798.6**		**7,988.4**	**7.988**	

Preliminary water detention volume calculations

LEGEND:

- Water temporarily accumulating in detention ponds
- Water prtmanently accumulating in retention ponds
- Relocated fill from cut area to form berms or required fills
- Reinforced stream bed as per Hydrological and/or Structural Eng
- Evelation of the associated dam/weir shown for orientation only
- Proposed grades
- Existing grades
- Adjacent paving or structures

NOTES:

1 The estimated volume of water that can be temporarily stored within the detention ponds has been calculated based on the following assumptions:
- All pond side slopes are constructed at an approximate gradient of 3H:1V.
- Gabion dam/weir walls will be installed to allow temporary water storage up to 1.0 m above the crest level of the lower 2m wide weir of the detention dam.
- Pond excavations will be undertaken to maximise the available detention storage volume.
- Dam berms will be constructed to safely accommodate water detention to a minimum level of 1.0 m above the crest of the lower 2m wide weir of the detention dam.

2. All gabion walls, weirs, and stream reinforcement works shall be designed and constructed in accordance with the recommendations and specifications of:
- The Hydrological Engineer; and
- The Structural Engineer.

3. The dimensions of the weir openings may be adjusted by the Hydrological Engineer as required to ensure that discharge rates through the dams comply with the design flow criteria and prevent overtopping of the dam or berm crests.

4. The detention ponds shall be planted with vegetation suitable for periodic inundation and temporary submersion.

5. The detention pond design assumes that:
- Existing culverts beneath roads and parking areas have been adequately sized to accommodate the required stormwater flows; and
- Existing downstream drainage infrastructure located south of the road is capable of safely conveying the maximum anticipated site discharge.

6. The retention pond is intended to provide a permanent water body with a normal operating water depth of approximately 0.5 m to 1.0 m.

No.	Date	Issue Notes
E	11 Nov 2026	Issued for Coordination
D	21 Oct 2026	Issued for review
C	19 Oct 2026	Issued for Review

Client: TRIYRON INFRASTRUCTURE

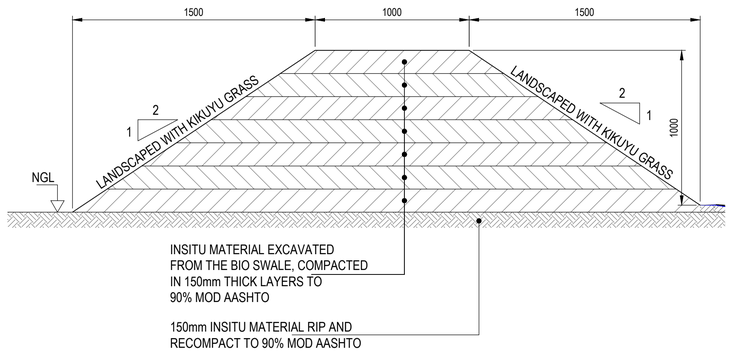
Approved by:
Name:
Signature:
Date:

Design Firm: SILVER HORNS CONSULTING

Project Title: Thohoyandou National Botanical Garden SANBI

Sheet Title: Sections Ponds

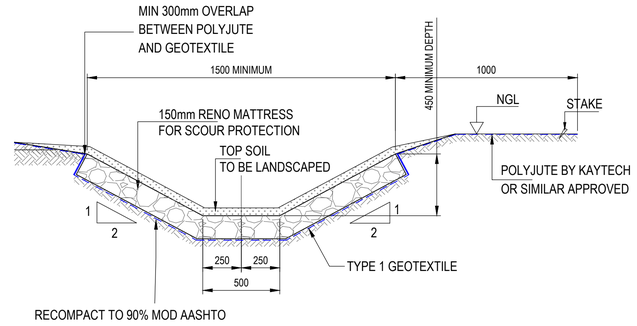
Scale: 1:750
Drawn By: PMG
Date: 20 Sept 2026
Project ID: 2610
Sheet No.: L-10 of 11
File: 2610_SANBI_LAS_Detailed_Design.vwx



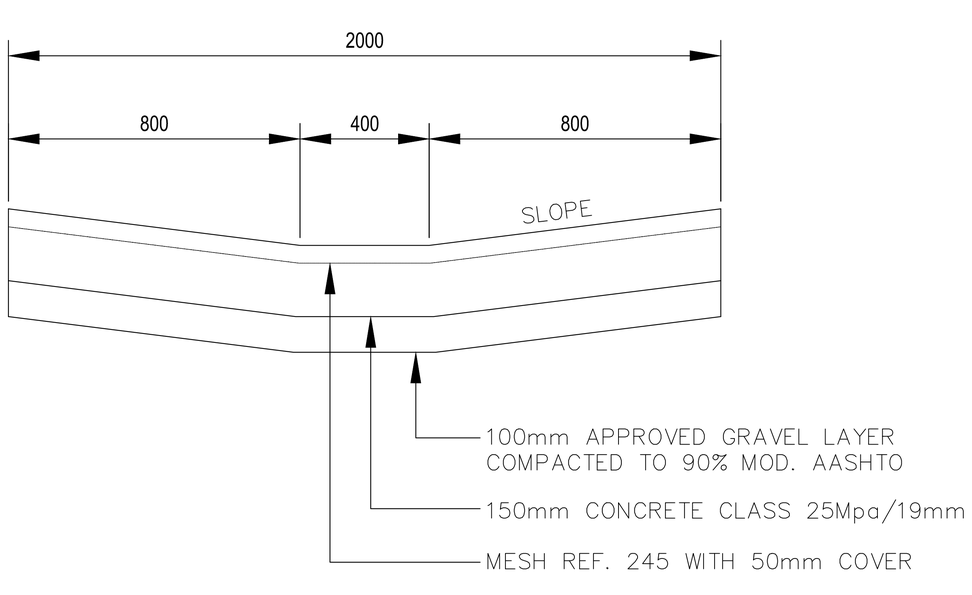
TYIPICAL SECTION
EARTH BERM
SCALE 1:25

NOTE:

1. ALL MATERIALS TO BE IN ACCORDANCE WITH SABS 675 AND SABS 1580
2. ALL CONSTRUCTION METHODS USED ARE TO BE IN ACCORDANCE WITH SABS 1200DK AND AFRICAN GABIONS SPECIFICATIONS



TYIPICAL SECTION
BIO SWALE
SCALE 1:25



TYPE	W	SLOPE
A 2.0	2000	1:8
A 2.8	2800	1:8
A 2.4	2400	1:8
A 2.5	2500	1:12
A 3.0	3000	1:12

CONCRETE CHANNEL TYPE A AND H
SCALE 1:20

IF IN DOUBT ASK

NOTES AND SPECIFICATIONS

GENERAL

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2. ALL DIMENSIONS ARE IN MILLIMETERS (UNLESS OTHERWISE SPECIFIED).
3. DO NOT SCALE FROM THIS DRAWING.
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7. THE CONSULTANT REMAINS RESPONSIBLE TO ENSURE THAT ALL THE GUIDELINES, STANDARD DRAWINGS, STANDARDS AND SPECIFICATIONS OF THE WATER AND SANITATION DEPARTMENT OF THE CITY OF TSHWANE ARE COMPLIED WITH.
8. FINAL POSITION OF SERVICES TO BE DETERMINED ON SITE.

NOTES

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2. ALL LEVELS SHOWN ARE BULK EARTHWORKS LEVELS UNLESS OTHERWISE AGREED.
3. BATTER SLOPES TO BE 2:1 UNLESS OTHERWISE AGREED
4. ALL FILL TO BE COMPACTED TO MINIMUM 93% MOD AASHTO UNLESS OTHERWISE NOTED.
5. SETTING OUT DIMENSIONS TO BE CONFIRMED ON SITE.
6. CONTRACTOR TO ENSURE THAT ALL SITE ACTIVITIES ARE IN ACCORDANCE WITH OSH ACT. 1993 CONSTRUCTION REGULATIONS 2003.
7. ALL WORKS TO COMPLY WITH THE REQUIREMENTS OF SABS 1200D.
8. ACCURACY OF WORK TO COMPLY WITH SABS 1200D DEGREE OF ACCURACY Ⅱ.
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   b) SETS OF DENSITY TEST TO COMPRISE:
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      SELECTED LAYERS 4 TESTS PER 1500m²
      SUB - BASE 4 TESTS PER 1000m²
   c) ACCEPTANCE CRITERIA REFER TO TABLE 2 SABS 1200DM
10. NOTE EXISTING PAVING BLOCKS TO BE REMOVED AND BASE MATERIAL TO BE RIPPED AND RECOMPACTED TO 95% MOD. AASHTO

LEGEND

AMENDMENTS

ALPHABETICAL LETTERS (A,B,C...) - FOR INFORMATION ONLY.
NUMERIC NUMBERS (1,2,3...) - FOR CONSTRUCTION.

No.	DATE	ISSUED BY	DESCRIPTION
0	09/10/2026	S.M	ISSUED FOR INFORMATION

ASSOCIATED DRAWINGS

DRAWING NUMBER	DRAWING TITLE

CLIENT

SANBI Biodiversity for Life
South African National Biodiversity Institute
2 CUSSONIA AVENUE
BRUMMERIA
PRETORIA
0001
TEL: +27 12 843 5000
FAX: +27 12 804 3211
Website: www.sanbi.org

CONSULTANT

TRIVIRON INFRASTRUCTURE
TRIVIRON HOUSE
WHITBY MANOR OFFICE ESTATE
167 14th ROAD
NOORDWYK
MIDRAND, 1687
TEL: +27 11 318 8393
FAX: +27 86 677 8643
E-mail: pmadmin@triviron.co.za

PROJECT TITLE :

THOHOYANDOU BOTANICAL GARDEN

DRAWING TITLE

STORMWATER CHANNEL TYPICAL DETAILS

ENGINEER (CONSULTANT)

INITIALS AND SURNAME	SIGNATURE	Pr. Reg No.	DATE
			09/10/2026

CLIENT REPRESENATIVE

INITIALS AND SURNAME	SIGNATURE	DESIGNATION	DATE
			09/10/2026

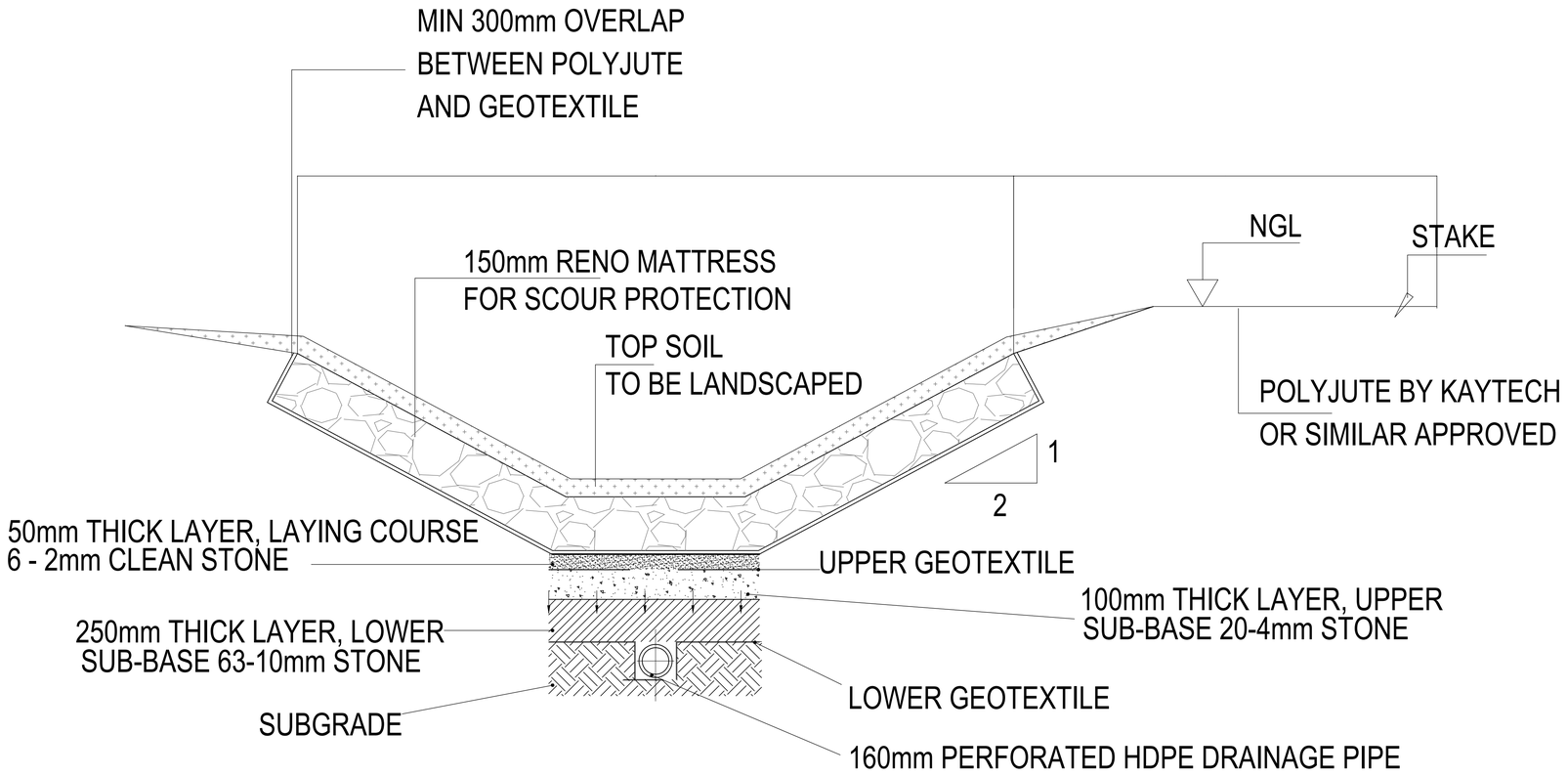
DESIGNED	DESIGN APPROVED	DRAWN	DRAWING CHECKED
S.M	A.B	S.M	A.B

DATE	SHEET NUMBER	SCALE
09/10/2026	SHEET 1 OF 1	AS SHOWN

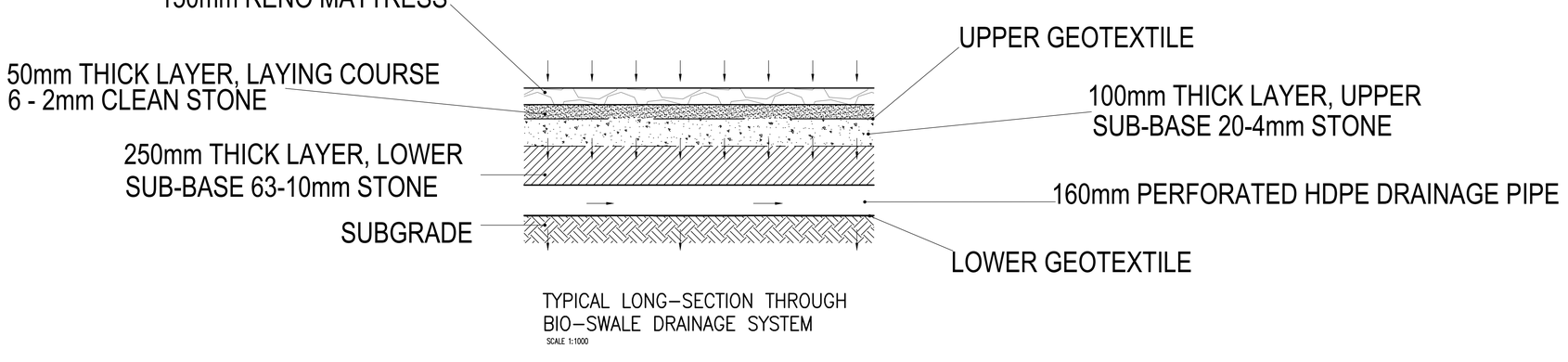
ISSUED FOR	PROJECT NUMBER	PAPER SIZE
INFORMATION	TPM006-2026	A1

DRAWING NUMBER	REVISION
TPM006-2026-SW01	0

I:\Server\Triviron Serv 2016\TRIVIRON HOLDINGS - 2018\TPM - Civil and Structural Engineering\TPM2005 - SANBI\3. Project Stage\Design - Drawings\Working Drawings\04. Stormwater\TM26006 - TYPICAL DETAILS.dwg | SPHIWE MAHLANGU | 2026/11/12 10:37:37



TYPICAL CROSS–SECTION THROUGH
BIO–SWALE DRAINAGE SYSTEM
SCALE 1:10



TYPICAL LONG–SECTION THROUGH
BIO–SWALE DRAINAGE SYSTEM
SCALE 1:1000

IF IN DOUBT ASK

NOTES AND SPECIFICATIONS

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0	09/10/2026	S.M	ISSUED FOR INFORMATION

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CLIENT

SANBI
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South African National Biodiversity Institute

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0001
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FAX: +27 12 804 3211
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CONSULTANT

TRIVIRON
INFRASTRUCTURE

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TEL: +27 11 318 8393
FAX: +27 86 677 8643
E-mail: pmadmin@triviron.co.za

PROJECT TITLE :

THOHOYANDOU BOTANICAL GARDEN

DRAWING TITLE

SUBSOIL DRAINAGE TYPICAL DETAIL

ENGINEER (CONSULTANT)

INITIALS AND SURNAME	SIGNATURE	Pr. Reg No.	DATE
			09/10/2026

CLIENT REPRESENTATIVE

INITIALS AND SURNAME	SIGNATURE	DESIGNATION	DATE
			09/10/2026

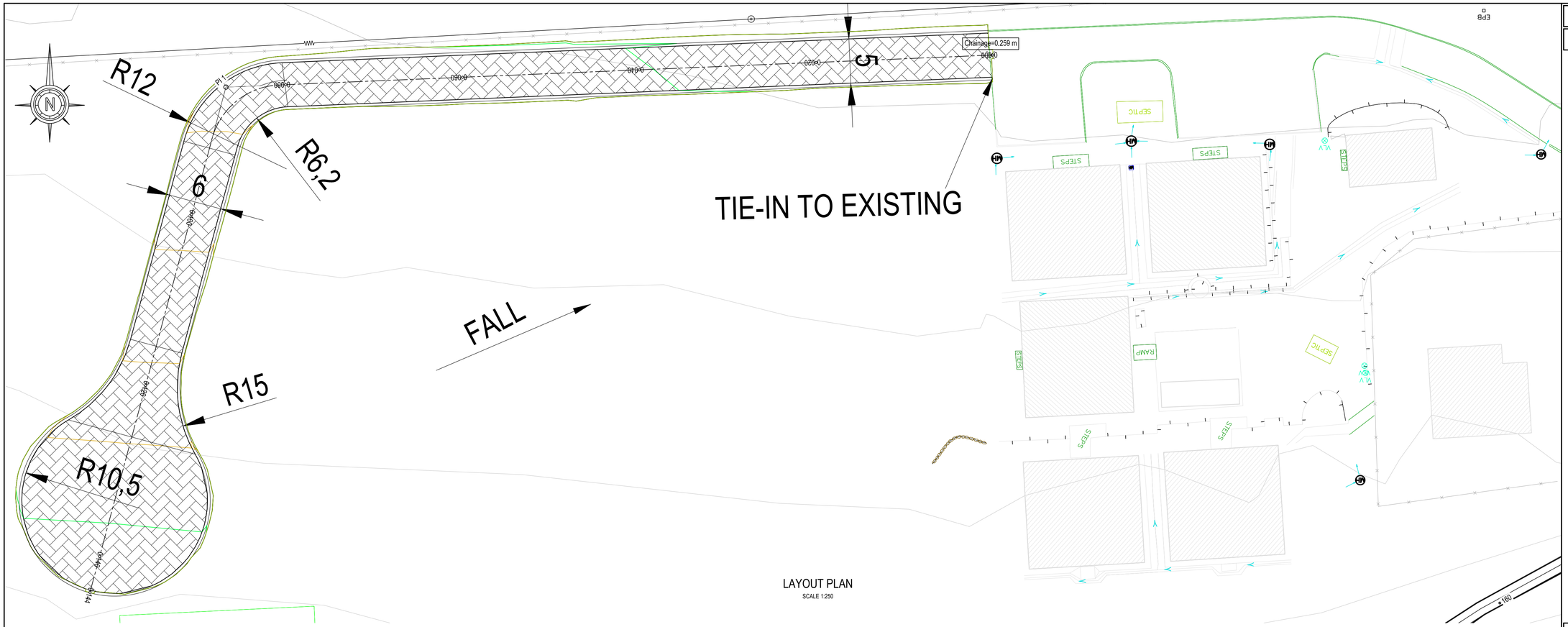
DESIGNED	DESIGN APPROVED	DRAWN	DRAWING CHECKED
S.M	A.B	S.M	A.B

DATE	SHEET NUMBER	SCALE
09/10/2026	SHEET 1 OF 1	1:1000

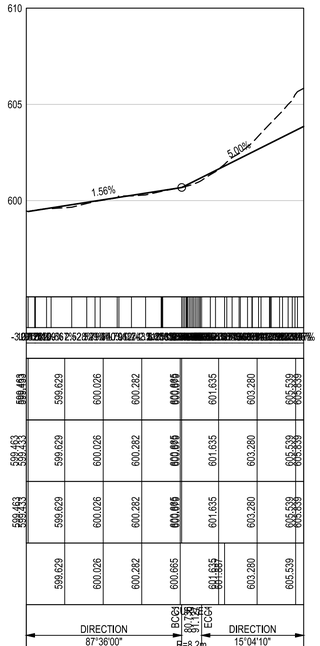
ISSUED FOR	PROJECT NUMBER	PAPER SIZE
INFORMATION	TPM006-2026	A1

DRAWING NUMBER	REVISION
TPM006-2026-SW01	0

\\Tsknvfw\Triviron Serv 2018\TRIVIRON HOLDINGS - 2018\TPM - Civil and Structural Engineering\TPM26005 - SANBI\5. Project Stage\Design - Drawings\Working Drawings\04. Stormwater\TM26006 - TYPICAL DETAILS.dwg | SPHIWE MAHLANGU | 2026/11/12 10:45:21



LAYOUT PLAN
SCALE 1:250

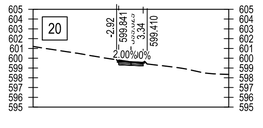


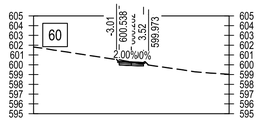
SCALES:
Horizontal 1:1000
Vertical 1:100

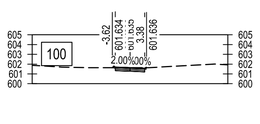
DATUM 595.000

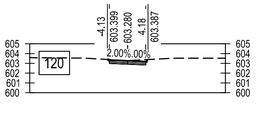
VERTICAL PROFILE GRADES									
FINAL DESIGN ROAD LEVELS	LEFT EDGE (HL)	599.463	599.629	600.026	600.282	600.695	601.635	603.280	605.539
	CENTRE LINE (CL)	599.463	599.629	600.026	600.282	600.695	601.635	603.280	605.539
	RIGHT EDGE (HR)	599.463	599.629	600.026	600.282	600.695	601.635	603.280	605.539
GROUND LEVELS ON CL			599.629	600.026	600.282	600.665	601.635	603.280	605.539
HORIZONTAL ALIGNMENT			DIRECTION 87°36'00"			BC 80.139 EC 80.317 R=8.2m l=51°20'10"	EC 80.317	DIRECTION 15°04'10"	
DISTANCE (m)		20	40	60	80	100	120	140	

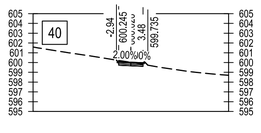
LONGSECTION NEW ROAD
FROM 0.000 TO 144.207

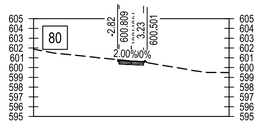


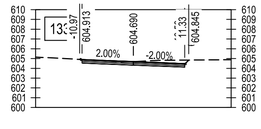


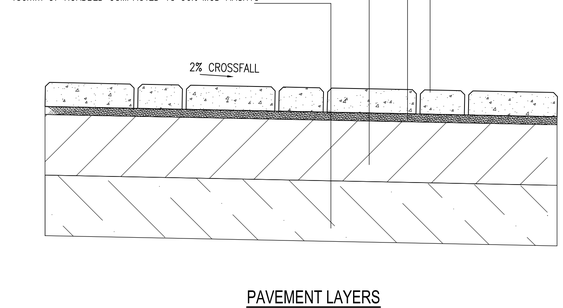




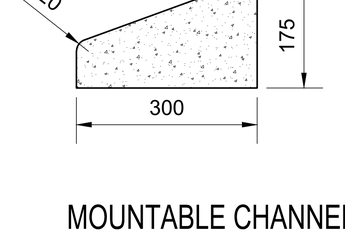








PAVEMENT LAYERS
SCALE: NTS



MOUNTABLE CHANNEL KERB

SABS (FIG. 3/8b)

IF IN DOUBT ASK

NOTES AND SPECIFICATIONS

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AMENDMENTS

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NUMERIC NUMBERS (1,2,3...) - FOR CONSTRUCTION

No.	DATE	ISSUED BY	DESCRIPTION
A	28/04/2021	T.N.	ISSUED FOR INFORMATION
0	27/01/2021	T.N.	ISSUED FOR CONSTRUCTION

ASSOCIATED DRAWINGS

DRAWING NUMBER	DRAWING TITLE

CLIENT

SANBI Biodiversity for Life
South African National Biodiversity Institute
2 CUSSONIA AVENUE
BRUMMERIA
PRETORIA
0001
TEL: +27 12 843 5000
FAX: +27 12 804 3211
Website: www.sanbi.org

CONSULTANT

TRIVIRON INFRASTRUCTURE
TRIVIRON HOUSE
WHITBY MANOR OFFICE ESTATE
167 14th ROAD
NOORDWYK
MIDRAND, 1687
TEL: +27 11 318 8393
FAX: +27 86 677 8643
E-mail: pmadmin@triviron.co.za

PROJECT TITLE :

THOHOYANDOU BOTANICAL GARDEN

DRAWING TITLE

PROPOSED ROAD LAYOUT AND DETAILS

ENGINEER (CONSULTANT)

INITIALS AND SURNAME	SIGNATURE	Pr. Reg No.	DATE

CLIENT REPRESENATIVE

INITIALS AND SURNAME	SIGNATURE	DESIGNATION	DATE

DESIGNED	DESIGN APPROVED	DRAWN	DRAWING CHECKED
S.M	A.B	S.M	S.M

DATE	SHEET NUMBER	SCALE
12/11/2026	SHEET 1 OF 1	AS SHOWN

ISSUED FOR	PROJECT NUMBER	PAPER SIZE
INFORMATION	TPM006-2026	A1

DRAWING NUMBER	REVISION
TPM006-2026- RD01	0

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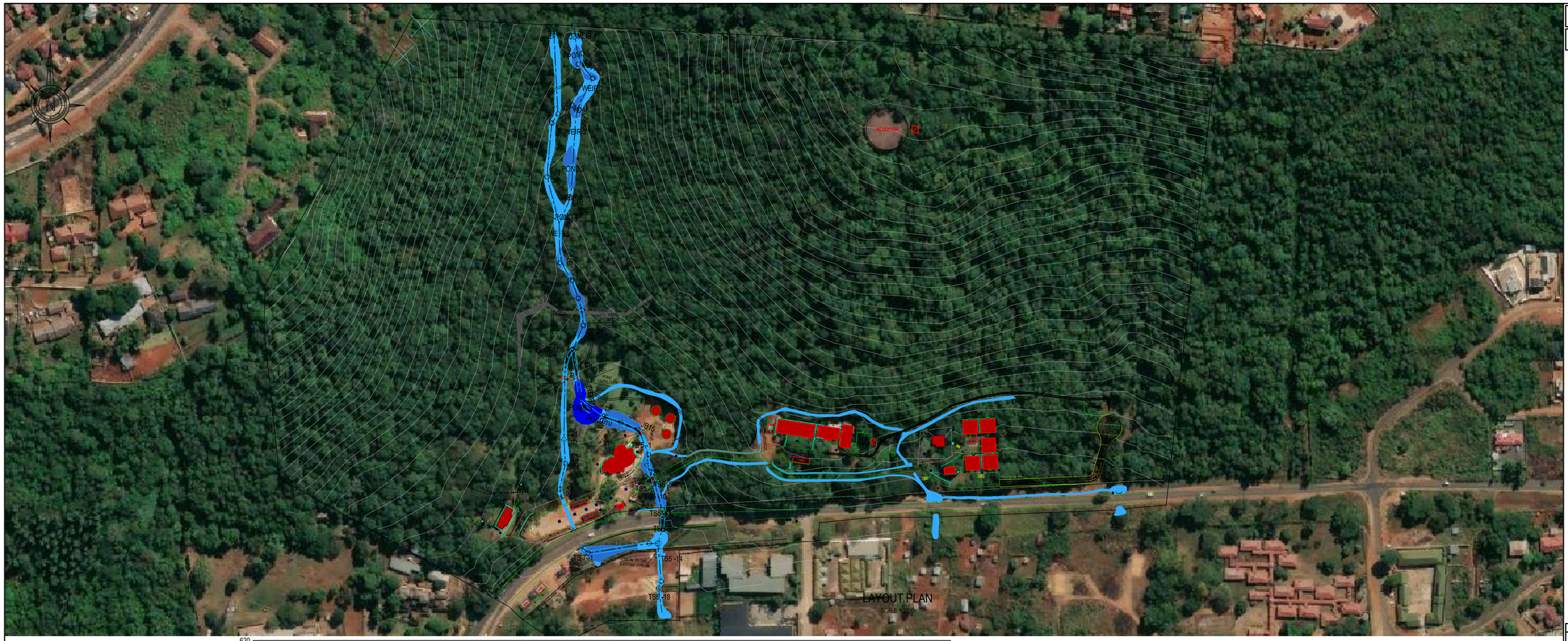

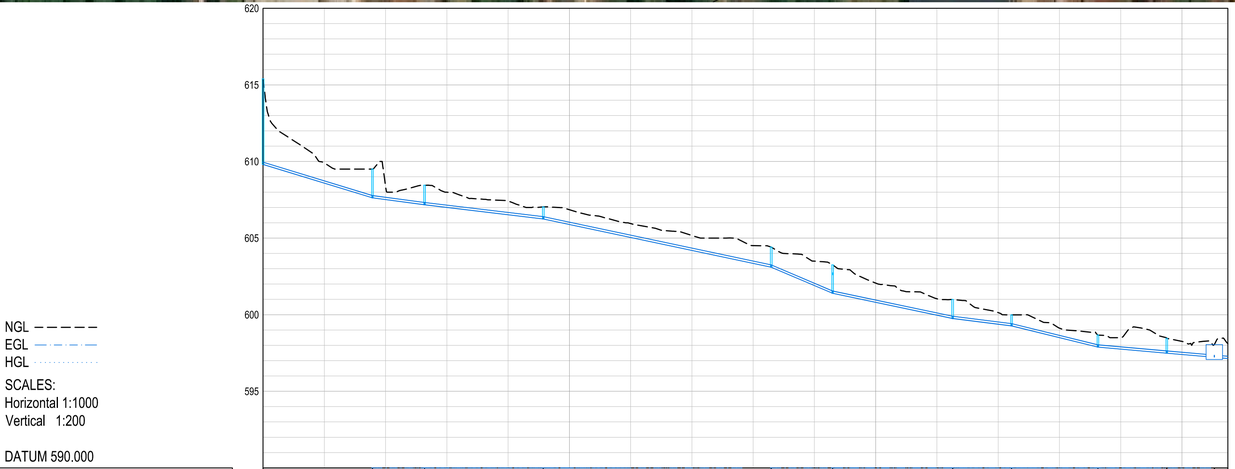

NGL – – – – –
EGL — · — · —
HGL · · · · · · · · ·

SCALES:
Horizontal 1:1000
Vertical 1:200

DATUM 590.000

REFERENCE	JB1	Ø160 450	JB2	Ø160 450	JB3	Ø160 450	JB4	Ø160 450	JB5	Ø160 450	JB6	Ø160 450	JB7	Ø160 450	JB8	Ø160 450	JB9	Ø160 450	JB10	Ø160 450	MAIN POND	Ø160 450
DISTANCE (m)	0.000		35.718		52.726		91.481		165.902		185.958		225.131		244.357		272.555		295.040		310.570	351.210
GROUND LEVEL	615.397		609.500		608.449		607.040		604.411		603.254		600.993		599.984		598.673		598.456		598.052	
PIPE INVERT LEVEL	609.814		607.634	607.634	607.182	607.182	606.256	606.256	603.106	603.106	601.401	601.401	599.756	599.756	599.275	599.275	597.889	597.889	597.493	597.493	597.223	597.223
SLOPE / LENGTH		6.10% 1:16,4 35.72m		2.66% 1:37.6 17.01m		2.39% 1:41.9 38.76m		4.23% 1:23,6 74,42m		8.50% 1:11.8 20.06m		4.20% 1:23.8 39,17m		2.50% 1:40,0 19.23m		4.92% 1:20,3 28.20m		1.76% 1:56,7 22.49m		1.74% 1:57.6 15.53m		1.79% 1:55.8 40.64m

LONGSECTION SUBSOIL INFLOW
FROM 0.000 TO 315.000

CATCHMENT TABLE	
CATCHMENT	AREA (ha)
1	29.304
3	3.781
4	4.010
5	1.246
6	2.963
7	0.527
8	1.800
10	6.567
11	2.438
14	1.834
16	1.743

IF IN DOUBT ASK

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2. ALL LEVELS SHOWN ARE BULK EARTHWORKS LEVELS UNLESS OTHERWISE AGREED.
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4. ALL FILL TO BE COMPACTED TO MINIMUM 93% MOD AASHTO UNLESS OTHERWISE NOTED.
5. SETTING OUT DIMENSIONS TO BE CONFIRMED ON SITE.
6. CONTRACTOR TO ENSURE THAT ALL SITE ACTIVITIES ARE IN ACCORDANCE WITH OSH ACT. 1993 CONSTRUCTION REGULATIONS 2003.
7. ALL WORKS TO COMPLY WITH THE REQUIREMENTS OF SABS 1200D.
8. ACCURACY OF WORK TO COMPLY WITH SABS 1200D DEGREE OF ACCURACY Ⅱ.
9. TESTING
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   b) SETS OF DENSITY TEST TO COMPRISE:
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      SELECTED LAYERS 4 TESTS PER 1500m²
      SUB - BASE 4 TESTS PER 1000m²
   c) ACCEPTANCE CRITERIA REFER TO TABLE 2 SABS 1200DM
10. NOTE EXISTING PAVING BLOCKS TO BE REMOVED AND BASE MATERIAL TO BE RIPPED AND RECOMPACTED TO 95% MOD. AASHTO

LEGEND

STORMWATER FLOW DIRECTION

PROPOSED ROAD

PROPOSED CHANNEL

AMENDMENTS

ALPHABETICAL LETTERS (A,B,C..) - FOR INFORMATION ONLY.
NUMERIC NUMBERS (1,2,3..) - FOR CONSTRUCTION

No.	DATE	ISSUED BY	DESCRIPTION
0	09/10/2026	S.M	ISSUED FOR INFORMATION

ASSOCIATED DRAWINGS

DRAWING NUMBER	DRAWING TITLE

CLIENT

SANBI Biodiversity for Life
South African National Biodiversity Institute

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CONSULTANT

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FAX: +27 86 677 8643
E-mail: pmadmin@triviron.co.za

PROJECT TITLE :

THOHOYANDOU BOTANICAL GARDEN

DRAWING TITLE

PROPOSED STORMWATER LAYOUT AND PIPE NETWORK

ENGINEER (CONSULTANT)

INITIALS AND SURNAME	SIGNATURE	Pr. Reg No.	DATE
			09/10/2026

CLIENT REPRESENTIVE

INITIALS AND SURNAME	SIGNATURE	DESIGNATION	DATE
			09/10/2026

DESIGNED	DESIGN APPROVED	DRAWN	DRAWING CHECKED
S.M	A.B	S.M	A.B

DATE	SHEET NUMBER	SCALE
09/10/2026	SHEET 1 OF 1	AS SHOWN

ISSUED FOR	PROJECT NUMBER	PAPER SIZE
INFORMATION	TPM006-2026	A1

DRAWING NUMBER	REVISION
TPM006-2026-SW01	0

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SCALES:
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Vertical 1:200

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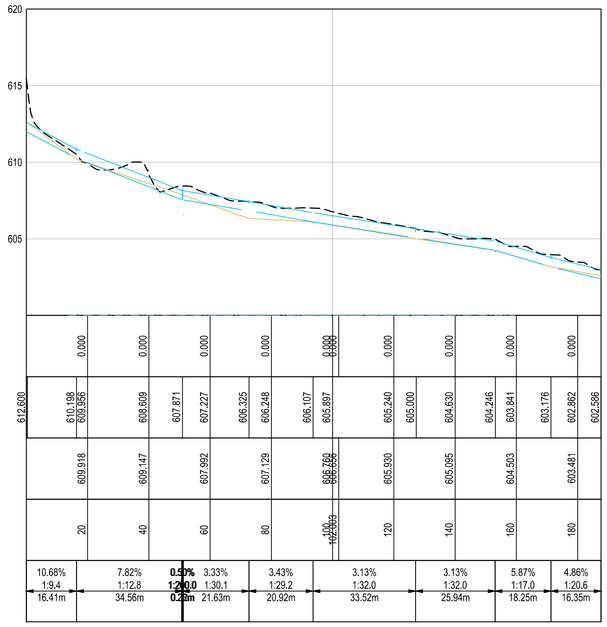

LAYOUT PLAN
SCALE 1:2000

LONGSECTION CHANNEL 1
FROM 0.000 TO 187.647

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INVERT ———

SCALES:
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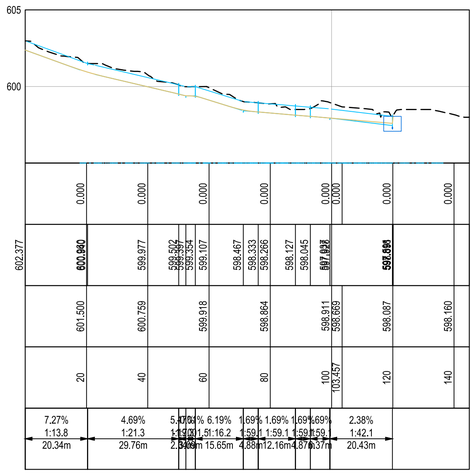

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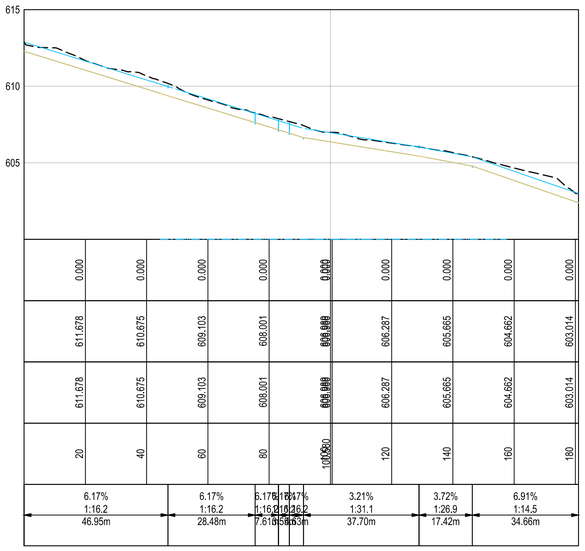

LONGSECTION CHANNEL 2
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INVERT ———

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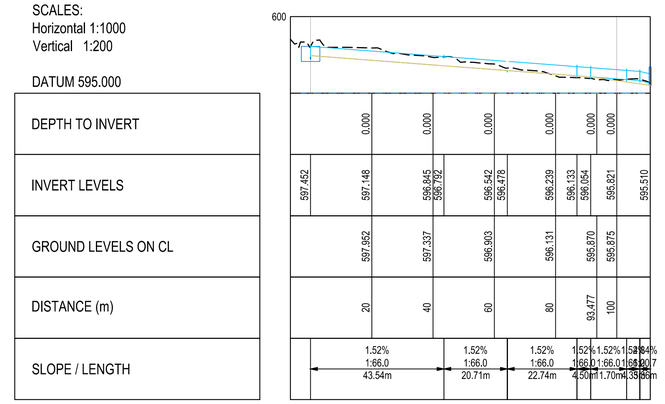
Vertical 1:200

DATUM 595.000



LONGSECTION CHANNEL 4
FROM -6.569 TO 110.891

IF IN DOUBT ASK

NOTES AND SPECIFICATIONS

GENERAL

1. ALL MATERIAL AND WORKMANSHIP MUST COMPLY WITH THE REQUIREMENTS OF THE LATEST RELEVANT SABS REQUIREMENTS.
2. ALL DIMENSIONS ARE IN MILLIMETERS (UNLESS OTHERWISE SPECIFIED).
3. DO NOT SCALE FROM THIS DRAWING.
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5. ALL CONSTRUCTION TO BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR MUNICIPAL CIVIL ENGINEERING WORKS,
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AMENDMENTS

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ASSOCIATED DRAWINGS

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CLIENT

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E-mail: pmadmin@triviron.co.za

PROJECT TITLE :

THOHOYANDOU BOTANICAL GARDEN

DRAWING TITLE

STORMWATER LONGITUDINAL SECTIONS

ENGINEER (CONSULTANT)
INITIALS AND SURNAME | SIGNATURE | Pr. Reg No. | DATE 09/10/2026

CLIENT REPRESENTATIVE
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INFORMATION	TPM006-2026	A1

DRAWING NUMBER: TPM006-2026-SW01
REVISION: 0

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NGL
INVERT

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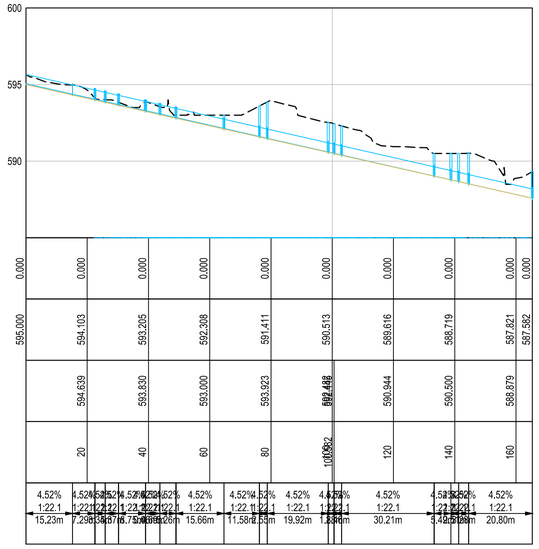
Vertical 1:200

DATUM 585.000



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NGL
INVERT

SCALES:
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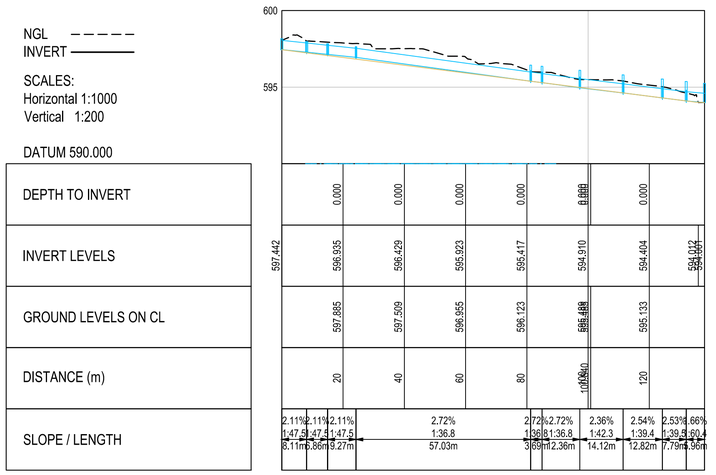
Vertical 1:200

DATUM 590.000



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NGL
INVERT

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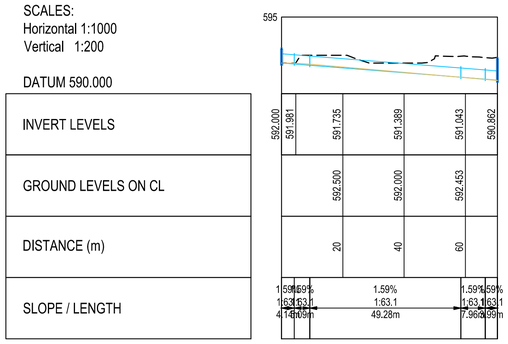
Vertical 1:200

DATUM 590.000



LONGSECTION CHANNEL 7
FROM 0.000 TO 70.474

IF IN DOUBT ASK

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