

- NOTES:**
- Refer to drawings TA007_02A Set-out points for reshaping.
 - Refer to drawings TA007_02B Set-out points of slag layer.
 - Refer to drawings TA007_02C Set-out points of capping layer.
 - Refer to drawings TA007_02D Set-out points of topsoil layer.
 - Refer to drawings TA007_03 Set-out points for Toe drain with topsoil layers.
 - Refer to drawing TA007_04 for typical rehabilitation sections.
 - Refer to drawings TA007_05 for Discharge details and sections.
 - Refer to drawings TA007_06 sections for construction details.
 - Refer to drawings TA007_07&08 for the set of sections of drain 01,02&03.
- CONSTRUCTION:**
- Rehabilitation of FeC: facility:
 - Extend under drainage discharge pipes.
 - Reshape to 1:5 slope on east side of dump by balance cut and fill.
 - Reshape top of dump at 5 % and 11% towards the west for the north and south area respectively.
 - Cover existing peripheral channel.
 - Place capping layers as follows:
 - 300 mm Slag as capillary layer over reshaped dump area.
 - Supply and install Geosynthetic clay liner (GCL) over prepared slag surface.
 - Load, haul and compact 300 mm cover soil over installed GCL.
 - Load, haul and place 300 mm topsoil layer for vegetation layer.
 - Set-out and construct toe drain and outer berms.
 - Drain 1&2: Load, haul and place 300 mm cover layer over constructed drain.
 - Drain 1&2: Load, haul and place 300 mm topsoil layer over compacted cover layer in channel.
 - Install stone pitching at discharge point of drain 3.
 - Drain 3: Load, haul and place 200 mm cover layer over constructed drain.
 - Drain 3: Load, haul and place 200 mm topsoil layer over compacted cover layer in channel.

LEGEND

	GRAVEL ROAD
	WATER DRAIN
	RESHAPE TOE LINE
	SLAG TOE LINE
	CAPPING TOE LINE
	TOPSOIL TOE LINE
	FENCE LINE

DRAWING NO TA007_01	DRAWING TITLE REHABILITATION PLAN FOR FeC TSE	CLIENT TRANSALLOYS	DRAWING SCALE AS INDICATED
GENERAL ARRANGEMENT: CURRENT SITUATION	DESIGNED BY R.J.W	PROJECT REHABILITATION PLAN FOR FeC TSE	ORIGINAL DRAWING SIZE A1
GENERAL ARRANGEMENT: DRAIN SET-OUT POINTS	DESIGN DATE 2022/01/18	TITLE GENERAL ARRANGEMENT: CURRENT SITUATION	REVISION NUMBER 0
SECTIONS & DETAILS: DRAIN 3 & DISCHARGE	DRAWN BY R.J.W	DRAWING NO TA007_01	DATE 04/10/2021
SECTION AND DETAILS: TOE DRAIN 01 & 02	DRAWN DATE 2022/01/20	ENGINEER D.P. van der Merwe	
SET OF SECTIONS TOE DRAIN 1	CHECKED BY H.J.W		
SET OF SECTION: TOE DRAIN 3&3	CHECK DATE 2022/01/21		

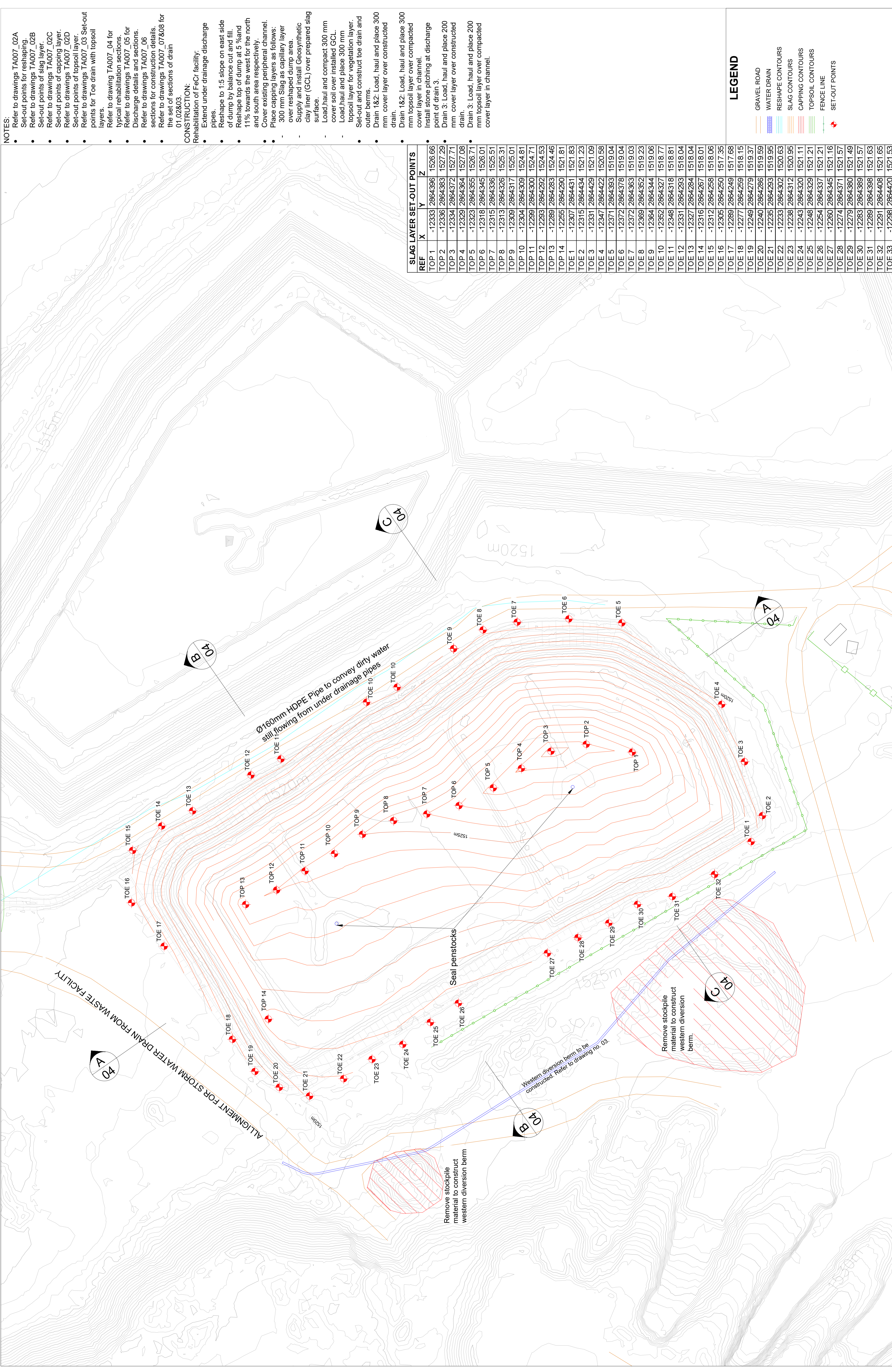
APPROVED BY	SIGNATURE	DATE
NAME D.P. van der Merwe		21/01/2022
QUALIFICATION & REG no Pr. Eng - 980132		

14 WILKES STREET, SUITE 9888 PO BOX 2541, PRETORIA 0001 C: 27 83 601 1428 F: 27 83 601 1428 F: 27 83 788 321 www.redco.co.za	redco
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CONTRACTOR'S LIABILITY	DATE
CONTRACTOR'S LIABILITY IS LIMITED TO THE PROVISION OF SERVICES IN ACCORDANCE WITH THE PROVISIONS OF THE ENGINEERING ACT AND THE PROVISIONS OF THE ENGINEERING BOARD OF SOUTH AFRICA.	21/01/2022

REVISIONS	DESCRIPTION	INT.	REF.	BENCHMARK DESCRIPTION	Y	X	Z
REV	DATE						

REFERENCE DRAWINGS	DRAWING TITLE	SURVEYOR INFORMATION
TA007_01 TA007_02 TA007_03 TA007_04 TA007_05 TA007_06 TA007_07 TA007_08	GENERAL ARRANGEMENT: CURRENT SITUATION GENERAL ARRANGEMENT: RESHAPE, SLAG CAPPING AND TOPSOIL LAYOUT GENERAL ARRANGEMENT: DRAIN SET-OUT POINTS GENERAL ARRANGEMENT: DRAIN SET-OUT POINTS AND TOPSOIL LAYER SECTIONS & DETAILS: DRAIN 3 & DISCHARGE SECTION AND DETAILS: TOE DRAIN 01 & 02 SET OF SECTIONS TOE DRAIN 1 SET OF SECTION: TOE DRAIN 3&3	From Client March 2021 052 955 9777 CONSTANTS Y 0m X 0m



- NOTES:**
- Refer to drawings TA007_02A
 - Set-out points for reshaping.
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CONSTRUCTION:
 Rehabilitation of FeCr facility:
 Extend under drainage discharge pipes.
 Reshape to 1:5 slope on east side of dump by balance cut and fill.
 Reshape top of dump at 5 %and 11% towards the west for the north and south area respectively.
 Cover existing peripheral channel.
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 Load,haul and place 300 mm topsoil layer for vegetation layer.
 Set-out and construct toe drain and outer berms.
 Drain 1&2: Load, haul and place 300 mm cover layer over constructed drain.
 Drain 1&2: Load, haul and place 300 mm topsoil layer over compacted cover layer in channel.
 Drain 3: Load, haul and place 200 mm cover layer over constructed drain.
 Drain 3: Load, haul and place 200 mm topsoil layer over compacted cover layer in channel.

REF	X	Y	Z
TOP 1	-12333	2864396	1526.66
TOP 2	-12336	2864383	1527.29
TOP 3	-12334	2864372	1527.71
TOP 4	-12329	2864364	1527.08
TOP 5	-12333	2864355	1526.71
TOP 6	-12318	2864345	1526.01
TOP 7	-12315	2864336	1525.51
TOP 8	-12313	2864326	1525.31
TOP 9	-12309	2864317	1525.01
TOP 10	-12304	2864309	1524.81
TOP 11	-12299	2864300	1524.71
TOP 12	-12293	2864292	1524.53
TOP 13	-12289	2864283	1524.46
TOP 14	-12255	2864290	1521.81
TOE 1	-12307	2864431	1521.83
TOE 2	-12315	2864434	1521.23
TOE 3	-12331	2864429	1521.09
TOE 4	-12347	2864422	1520.58
TOE 5	-12371	2864393	1519.04
TOE 6	-12372	2864378	1519.04
TOE 7	-12372	2864363	1519.03
TOE 8	-12369	2864352	1519.23
TOE 9	-12364	2864344	1519.06
TOE 10	-12352	2864327	1518.77
TOE 11	-12348	2864318	1518.81
TOE 12	-12331	2864293	1518.04
TOE 13	-12327	2864284	1518.04
TOE 14	-12316	2864267	1518.01
TOE 15	-12312	2864258	1518.06
TOE 16	-12305	2864250	1517.35
TOE 17	-12289	2864249	1517.68
TOE 18	-12277	2864259	1518.15
TOE 19	-12249	2864279	1519.37
TOE 20	-12240	2864286	1519.59
TOE 21	-12235	2864293	1519.95
TOE 22	-12233	2864302	1520.63
TOE 23	-12238	2864312	1520.95
TOE 24	-12243	2864320	1521.11
TOE 25	-12248	2864329	1521.21
TOE 26	-12254	2864337	1521.21
TOE 27	-12260	2864345	1521.16
TOE 28	-12274	2864371	1521.57
TOE 29	-12279	2864380	1521.49
TOE 30	-12283	2864389	1521.57
TOE 31	-12289	2864398	1521.63
TOE 32	-12291	2864408	1521.65
TOE 33	-12298	2864420	1521.53

- Gravel Road
- Water Drain
- Reshape Contours
- Slag Contours
- Capping Contours
- Topsoil Contours
- Fence Line
- Set-out Points

LEGEND

CLIENT	PROJECT	TITLE
TRANSALLOYS	REHABILITATION PLAN FOR FeCr TSF	GENERAL ARRANGEMENT: SLAG LAYER SET-OUT POINTS

DESIGNED BY	DESIGN DATE	DRAWN BY	DRAWN DATE	CHECKED BY	CHECK DATE	ENGINEER
R. J.V	2022/01/18	R. J.V	2022/01/20	H. J.V	2022/01/21	D.P. van der Merwe

APPROVED BY	DATE	SIGNATURE
Pt. Eng. - 980132	21/01/2022	[Signature]

REVISIONS	REV	DATE	DESCRIPTION

REFERENCE DRAWINGS	DRAWING TITLE
TA007_01	GENERAL ARRANGEMENT: CURRENT SITUATION
TA007_02	GENERAL ARRANGEMENT: RESHAPE, SLAG, CAPPING AND TOPSOIL LAYOUT
TA007_03	GENERAL ARRANGEMENT: TOE DRAIN LAYOUT
TA007_04	SECTIONS: RESHAPE, SLAG, CAPPING AND TOPSOIL LAYER
TA007_05	SECTIONS AND DETAILS: TOE DRAIN 01 & 02
TA007_06	SET OF SECTIONS: TOE DRAIN 02&03

BENCHMARK DESCRIPTION	INT.	REF.	DESCRIPTION

CONSTANTS	CONSTANTS
N	0m
X	0m

CLIENT	PROJECT	TITLE
TRANSALLOYS	REHABILITATION PLAN FOR FeCr TSF	GENERAL ARRANGEMENT: SLAG LAYER SET-OUT POINTS

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APPROVED BY	DATE	SIGNATURE
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TA007_05	SECTIONS AND DETAILS: TOE DRAIN 01 & 02
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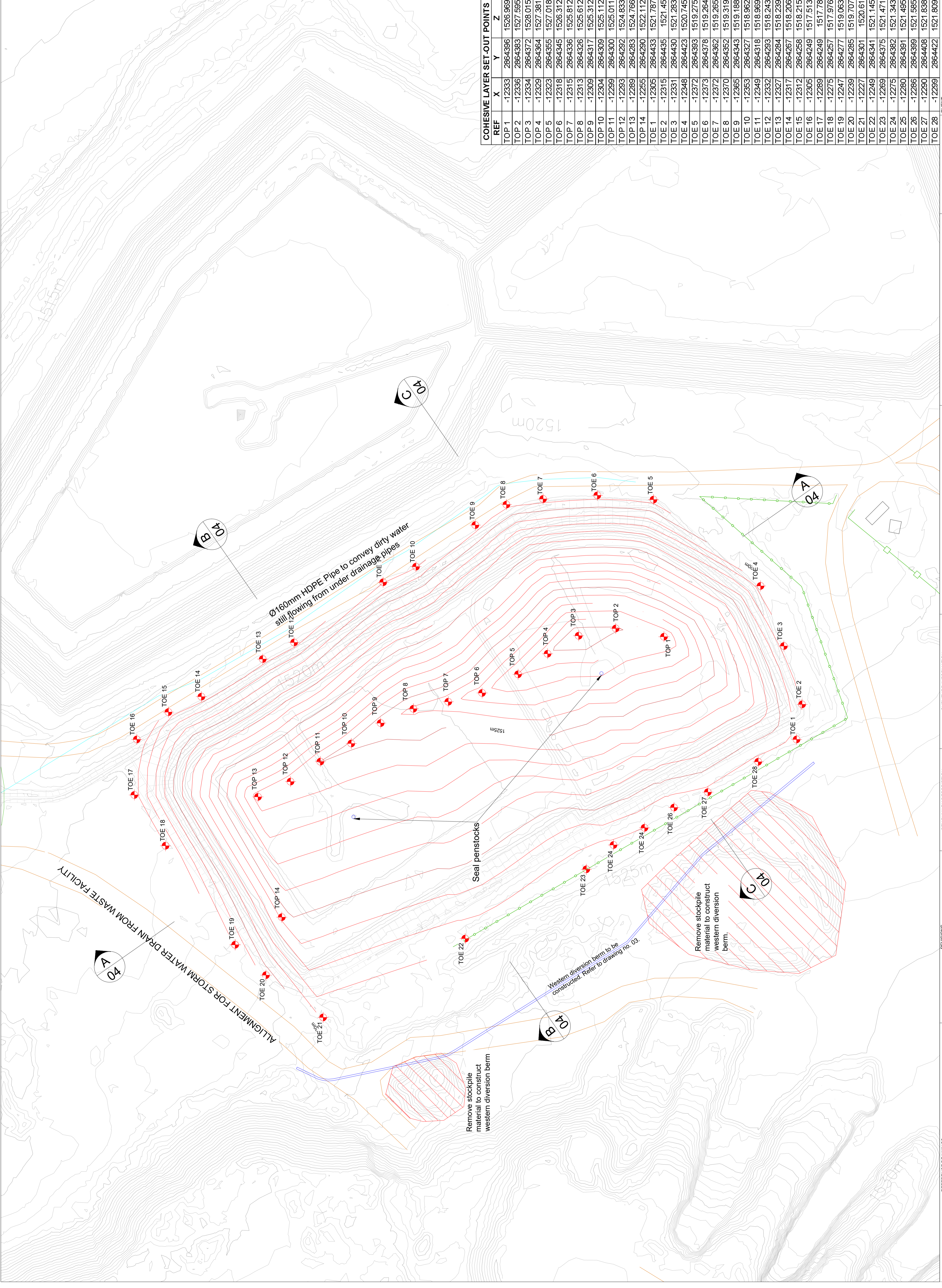
CONSTRUCTION:

- Rehabilitation of FeCr facility.
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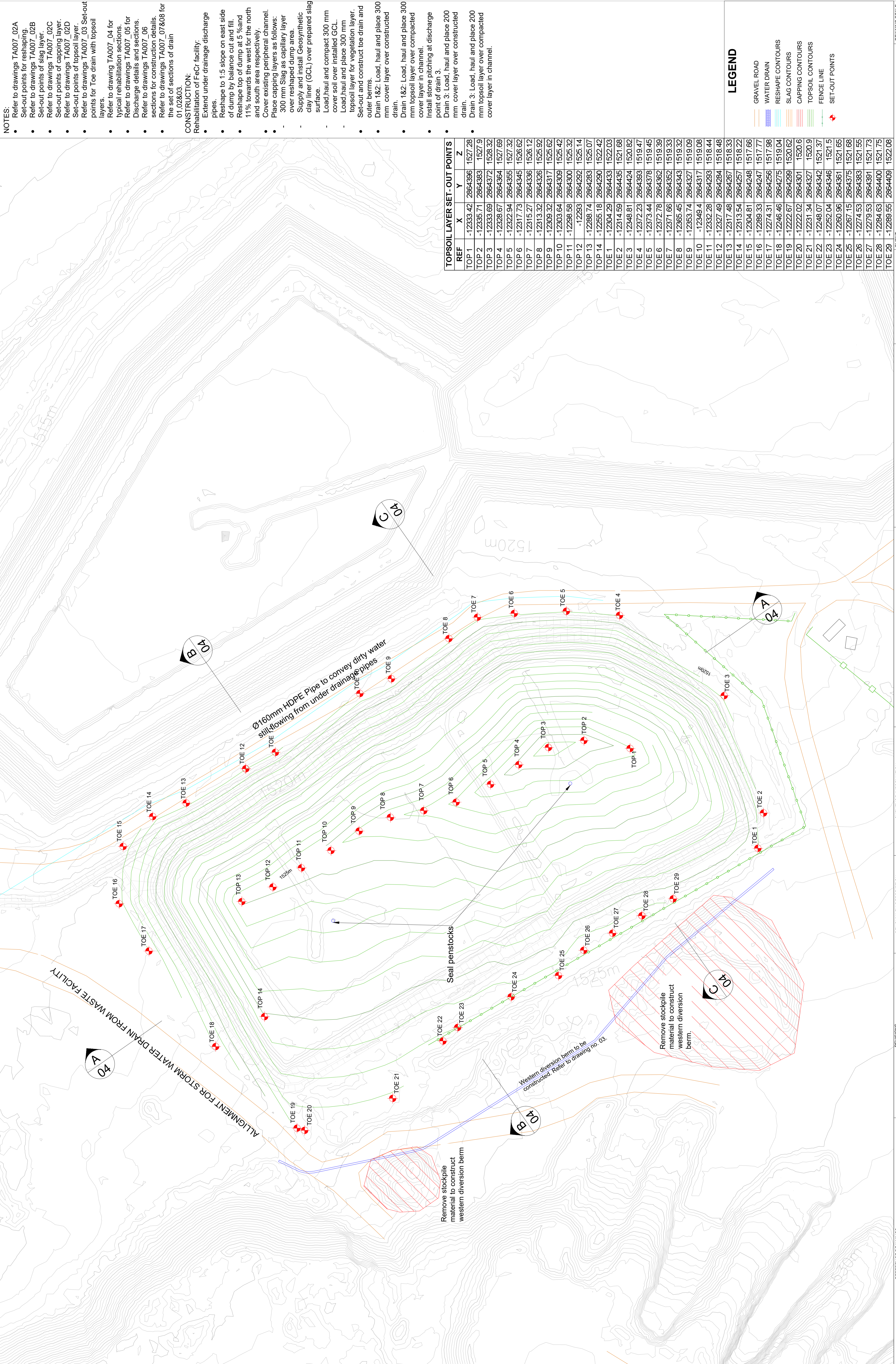
LEGEND

- GRAVEL ROAD
- WATER DRAIN
- RESHAPE CONTOURS
- SLAG CONTOURS
- CAPPING CONTOURS
- TOPSOIL CONTOURS
- FENCE LINE
- SET-OUT POINTS

REF	X	Y	Z
TOP 1	-12333	2864396	1526.969
TOP 2	-12336	2864383	1527.995
TOP 3	-12334	2864372	1528.015
TOP 4	-12329	2864364	1527.381
TOP 5	-12323	2864355	1527.018
TOP 6	-12318	2864345	1526.312
TOP 7	-12315	2864336	1525.812
TOP 8	-12313	2864326	1525.612
TOP 9	-12309	2864317	1525.312
TOP 10	-12304	2864309	1525.112
TOP 11	-12299	2864300	1525.011
TOP 12	-12293	2864292	1524.833
TOP 13	-12289	2864283	1524.766
TOP 14	-12255	2864290	1522.112
TOE 1	-12305	2864433	1521.787
TOE 2	-12315	2864435	1521.45
TOE 3	-12331	2864430	1521.283
TOE 4	-12348	2864423	1520.745
TOE 5	-12372	2864393	1519.275
TOE 6	-12373	2864378	1519.264
TOE 7	-12370	2864352	1519.319
TOE 8	-12365	2864343	1519.188
TOE 9	-12363	2864327	1518.962
TOE 10	-12349	2864318	1518.969
TOE 11	-12332	2864293	1518.243
TOE 12	-12327	2864284	1518.239
TOE 13	-12317	2864258	1518.215
TOE 14	-12305	2864249	1517.513
TOE 15	-12289	2864249	1517.78
TOE 16	-12275	2864257	1517.976
TOE 17	-12247	2864277	1519.063
TOE 18	-12239	2864285	1519.707
TOE 19	-12227	2864301	1520.61
TOE 20	-12249	2864341	1521.145
TOE 21	-12269	2864375	1521.471
TOE 22	-12275	2864382	1521.343
TOE 23	-12280	2864391	1521.495
TOE 24	-12286	2864399	1521.585
TOE 25	-12290	2864408	1521.838
TOE 26	-12290	2864408	1521.838
TOE 27	-12299	2864422	1521.809



<p>3 FABRIEK STREET, PARKS, 6665 PO BOX 2943, PARKS, 6665 T: +27 56 811 8338 F: +27 56 988 8321 www.redco.co.za</p>		<p>APPROVED BY P. Eng. - 980132</p>		<p>DATE 21/07/2022</p>																							
<p>NAME DP v.d. Merwe</p>		<p>QUALIFICATION & REG. NO. P. Eng. - 980132</p>		<p>SIGNATURE </p>																							
<p>PROJECT TEAM DESIGNED BY: R. JAV DESIGN DATE: 2022/01/18 DRAWN BY: R. JAV DRAWN DATE: 2022/01/20 CHECKED BY: H. JAV CHECK DATE: 2022/01/21 ENGINEER: D.P. van der Merwe</p>		<p>CLIENT TRANSALLOYS</p>		<p>DRAWING SCALE AS INDICATED</p>																							
<p>PROJECT REHABILITATION PLAN FOR FeCr TSP</p>		<p>TITLE GENERAL ARRANGEMENT: COVER LAYER SET-OUT POINTS</p>		<p>DRAWING No TA007_2C</p>																							
<p>REVISIONS</p> <table border="1"> <thead> <tr> <th>REV</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>		REV	DATE	DESCRIPTION				<p>BENCHMARK DESCRIPTION</p> <table border="1"> <thead> <tr> <th>INT</th> <th>REF</th> <th>X</th> <th>Y</th> <th>Z</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>		INT	REF	X	Y	Z						<p>SURVEYOR INFORMATION</p> <table border="1"> <thead> <tr> <th>From Client</th> <th> </th> </tr> </thead> <tbody> <tr> <td>March 2021</td> <td> </td> </tr> <tr> <td>082.053.6777</td> <td> </td> </tr> </tbody> </table>		From Client		March 2021		082.053.6777	
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<p>REFERENCE DRAWINGS</p> <table border="1"> <thead> <tr> <th>DRAWING No</th> <th>TITLE</th> </tr> </thead> <tbody> <tr> <td>TA007_01</td> <td>GENERAL ARRANGEMENT: CURRENT SITUATION</td> </tr> <tr> <td>TA007_02</td> <td>GENERAL ARRANGEMENT: RESHAPE, SLAG, CAPPING & TOPSOIL LAYOUT</td> </tr> <tr> <td>TA007_03</td> <td>GENERAL ARRANGEMENT: TOE DRAIN LAYOUT</td> </tr> <tr> <td>TA007_04</td> <td>SECTIONS: RESHAPE, SLAG, CAPPING, TOPSOIL LAYER</td> </tr> <tr> <td>TA007_05</td> <td>SECTIONS AND DETAILS: DRAIN OUTLET</td> </tr> <tr> <td>TA007_06</td> <td>SECTIONS AND DETAILS: TOE DRAIN 01 & 02</td> </tr> <tr> <td>TA007_08</td> <td>SET OF SECTIONS: TOE DRAIN 02&03</td> </tr> </tbody> </table>		DRAWING No	TITLE	TA007_01	GENERAL ARRANGEMENT: CURRENT SITUATION	TA007_02	GENERAL ARRANGEMENT: RESHAPE, SLAG, CAPPING & TOPSOIL LAYOUT	TA007_03	GENERAL ARRANGEMENT: TOE DRAIN LAYOUT	TA007_04	SECTIONS: RESHAPE, SLAG, CAPPING, TOPSOIL LAYER	TA007_05	SECTIONS AND DETAILS: DRAIN OUTLET	TA007_06	SECTIONS AND DETAILS: TOE DRAIN 01 & 02	TA007_08	SET OF SECTIONS: TOE DRAIN 02&03	<p>CONSTANTS</p> <table border="1"> <thead> <tr> <th> </th> <th> </th> <th> </th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>								<p>CO-ORDINATE SYSTEM HARTBEESPOORT COORDINATE SYSTEM UTM ZONE 36S</p>	
DRAWING No	TITLE																										
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TA007_08	SET OF SECTIONS: TOE DRAIN 02&03																										
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- NOTES:**
- Refer to drawings TA007_02A
 - Set-out points for reshaping.
 - Refer to drawings TA007_02B
 - Set-out points of slag layer.
 - Refer to drawings TA007_02C
 - Set-out points of capping layer.
 - Refer to drawings TA007_02D
 - Set-out points of topsoil layer.
 - Refer to drawings TA007_03 Set-out points for Toe drain with topsoil layers.
 - Refer to drawing TA007_04 for typical rehabilitation sections.
 - Refer to drawings TA007_05 for Discharge details and sections.
 - Refer to drawings TA007_06 sections for construction details.
 - Refer to drawings TA007_07&08 for the set of sections of drain 01,02&03.

- CONSTRUCTION:**
- Rehabilitation of FeCr facility:
 - Extend under drainage discharge pipes.
 - Reshape to 1:5 slope on east side of dump by balance cut and fill.
 - Reshape top of dump at 5% and 11% towards the west for the north and south area respectively.
 - Cover existing peripheral channel.
 - Place capping layers as follows:
 - 300 mm Slag as capillary layer over reshaped dump area.
 - Supply and install Geosynthetic clay liner (GCL) over prepared slag surface.
 - Load, haul and compact 300 mm cover soil over installed GCL.
 - Load, haul and place 300 mm topsoil layer for vegetation layer.
 - Set-out and construct toe drain and outer berms.
 - Drain 1&2: Load, haul and place 300 mm cover layer over constructed drain.
 - Drain 1&2: Load, haul and place 300 mm topsoil layer over compacted cover layer in channel.
 - Install stone pitching at discharge point of drain 3.
 - Drain 3: Load, haul and place 200 mm cover layer over constructed drain.
 - Drain 3: Load, haul and place 200 mm topsoil layer over compacted cover layer in channel.

TOPSOIL LAYER SET-OUT POINTS

REF	X	Y	Z
TOP 1	-12333.42	2864396	1527.28
TOP 2	-12335.71	2864363	1527.9
TOP 3	-12333.69	2864372	1528.32
TOP 4	-12328.67	2864364	1527.69
TOP 5	-12322.94	2864355	1527.32
TOP 6	-12317.73	2864345	1526.62
TOP 7	-12315.27	2864336	1526.12
TOP 8	-12313.32	2864326	1525.92
TOP 9	-12309.64	2864317	1525.62
TOP 10	-12303.64	2864309	1525.42
TOP 11	-12298.58	2864300	1525.32
TOP 12	-12293	2864292	1525.14
TOP 13	-12288.74	2864283	1525.07
TOP 14	-12285.18	2864290	1522.42
TOE 1	-12304.29	2864433	1522.03
TOE 2	-12314.59	2864435	1521.68
TOE 3	-12348.81	2864424	1520.82
TOE 4	-12372.23	2864378	1519.47
TOE 5	-12373.44	2864378	1519.45
TOE 6	-12372.78	2864362	1519.39
TOE 7	-12371.66	2864352	1519.33
TOE 8	-12365.45	2864343	1519.32
TOE 9	-12363.74	2864327	1519.09
TOE 10	-12349.4	2864317	1519.08
TOE 11	-12332.28	2864293	1518.44
TOE 12	-12327.49	2864284	1518.48
TOE 13	-12317.48	2864267	1518.33
TOE 14	-12313.54	2864257	1518.22
TOE 15	-12304.81	2864248	1517.66
TOE 16	-12289.33	2864247	1517.77
TOE 17	-12274.31	2864256	1517.98
TOE 18	-12246.46	2864275	1519.04
TOE 19	-12222.67	2864299	1520.62
TOE 20	-12222.02	2864301	1520.6
TOE 21	-12231.34	2864327	1520.9
TOE 22	-12248.07	2864342	1521.37
TOE 23	-12252.04	2864346	1521.5
TOE 24	-12260.96	2864361	1521.65
TOE 25	-12267.15	2864375	1521.68
TOE 26	-12274.53	2864383	1521.55
TOE 27	-12279.53	2864391	1521.73
TOE 28	-12284.63	2864400	1521.75
TOE 29	-12289.55	2864409	1522.08

- Load, haul and compact 300 mm cover soil over installed GCL.
- Load, haul and place 300 mm topsoil layer for vegetation layer.
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- Drain 1&2: Load, haul and place 300 mm cover layer over constructed drain.
- Drain 1&2: Load, haul and place 300 mm topsoil layer over compacted cover layer in channel.
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LEGEND

- GRAVEL ROAD
- WATER DRAIN
- RESHAPE CONTOURS
- SLAG CONTOURS
- CAPPING CONTOURS
- TOPSOIL CONTOURS
- FENCE LINE
- SET-OUT POINTS

DRAWING No. TA007_01		GENERAL ARRANGEMENT: CURRENT SITUATION		DRAWING TITLE		REHABILITATION PLAN FOR FeCr TSE		DRAWING SCALE		AS INDICATED	
DRAWING No. TA007_02		GENERAL ARRANGEMENT: RESHAPE, SLAG, CAPPING & TOPSOIL LAYOUT		PROJECT		REHABILITATION PLAN FOR FeCr TSE		DRAWING SIZE		A1	
DRAWING No. TA007_03		GENERAL ARRANGEMENT: TOE DRAIN LAYOUT		CLIENT		TRANSALLOYS		DRAWING NUMBER		0	
DRAWING No. TA007_04		SECTIONS: RESHAPE, SLAG, CAPPING & TOPSOIL LAYER		DESIGNED BY		R. JUV		REVISION NUMBER		0	
DRAWING No. TA007_05		SECTIONS AND DETAILS: DRAIN OUTLET		DESIGN DATE		2022/01/18		DRAWING No.		TA007_2D	
DRAWING No. TA007_06		SET OF SECTIONS: TOE DRAIN 02&03		DRAWN BY		R. JUV		DATE		21/01/2022	
				CHECKED BY		H. JUV		SIGNATURE		[Signature]	
				ENGINEER		D.P. van der Merwe		APPROVED BY		[Signature]	
				QUALIFICATION & REG. no.		Pt. Eng. - 980132		NAME		D.P. van der Merwe	
				SURVEYOR INFORMATION		From Client		DATE		21/01/2022	
				INT.		REF.		BENCHMARK DESCRIPTION			
				REV.		DATE		REVISIONS			
				DESCRIPTION							
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				CO-ORDINATE SYSTEM		HIRE/RELEASE INDEX: 04 LO: 20		COPYRIGHT IN THIS DRAWING RESTS IN REDCO, AND EXTENDS TO THE MAKING OF COPIES THEREOF IN WHOLE OR IN PART WITHOUT THE WRITTEN CONSENT OF THE COMPANY OR SUB-COMPANY.			
				REVISIONS				APPROVED BY		[Signature]	
				DESCRIPTION				NAME		D.P. van der Merwe	
				DATE				QUALIFICATION & REG. no.		Pt. Eng. - 980132	
				INT.		REF.		BENCHMARK DESCRIPTION			
				REV.		DATE		REVISIONS			
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3 FABRIEK STREET, PARKS, 6665
PO BOX 2943, PARKS, 6665
T: +27 56 811 8336
F: +27 56 808 8321
www.transalloys.co.za

DATE: 21/01/2022
SIGNATURE: [Signature]
D.P. van der Merwe

APPROVED BY: [Signature]
Pt. Eng. - 980132

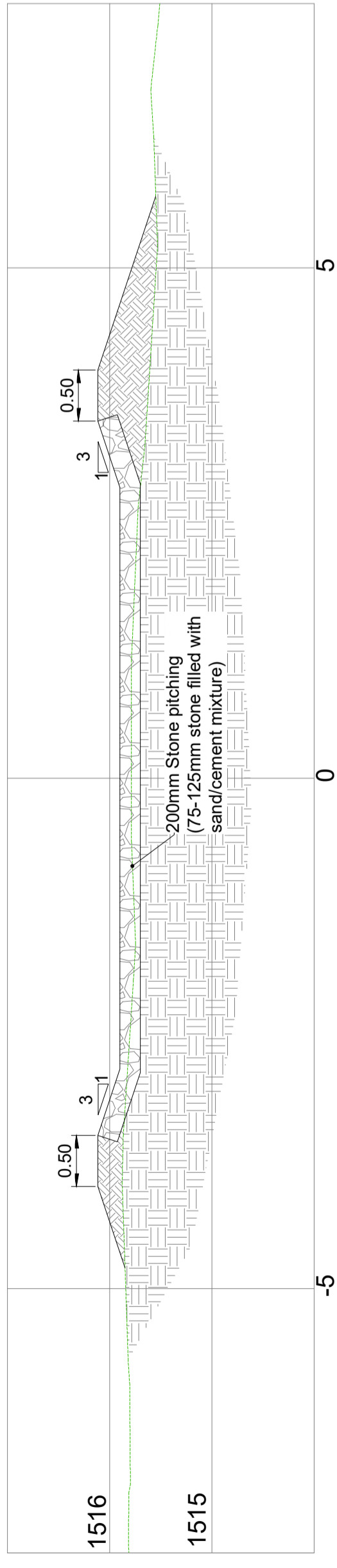
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DESIGN DATE: 2022/01/18
DRAWN BY: R. JUV
DRAWN DATE: 2022/01/20
CHECKED BY: H. JUV
CHECK DATE: 2022/01/21
ENGINEER: D.P. van der Merwe

PROJECT: TRANSALLOYS
CLIENT: TRANSALLOYS
PROJECT TITLE: REHABILITATION PLAN FOR FeCr TSE
GENERAL ARRANGEMENT: TOPSOIL LAYER
SET-OUT POINTS

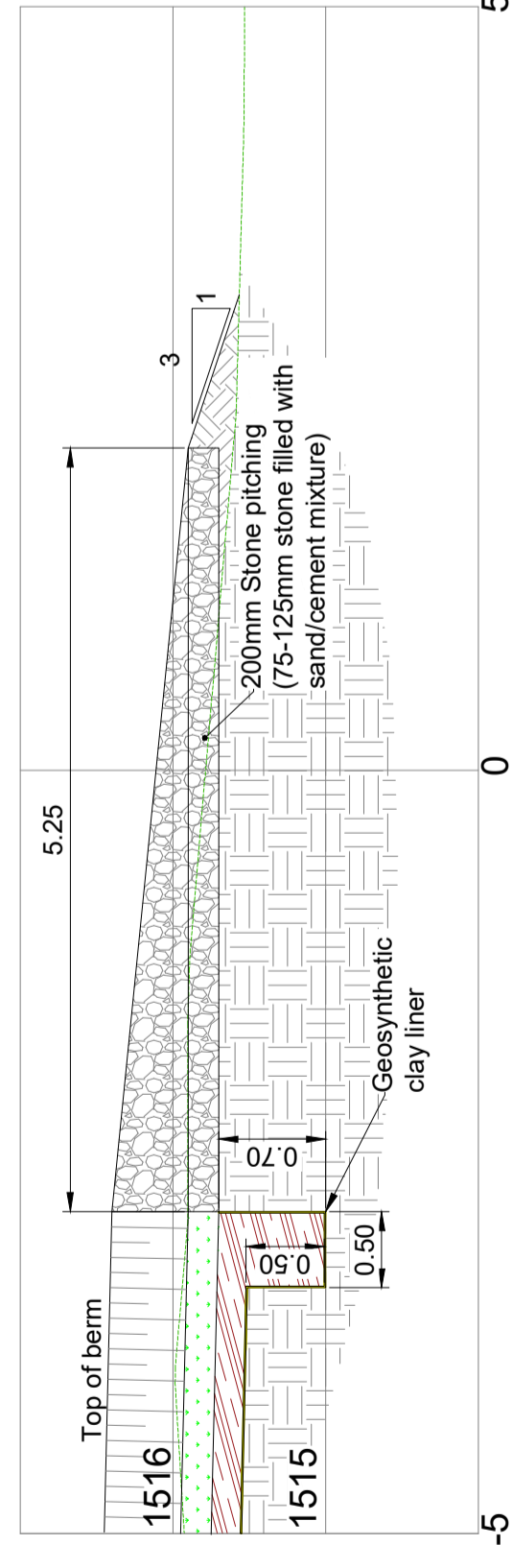
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REVISION NUMBER: 0
DATE PRINTED: 04/10/2021

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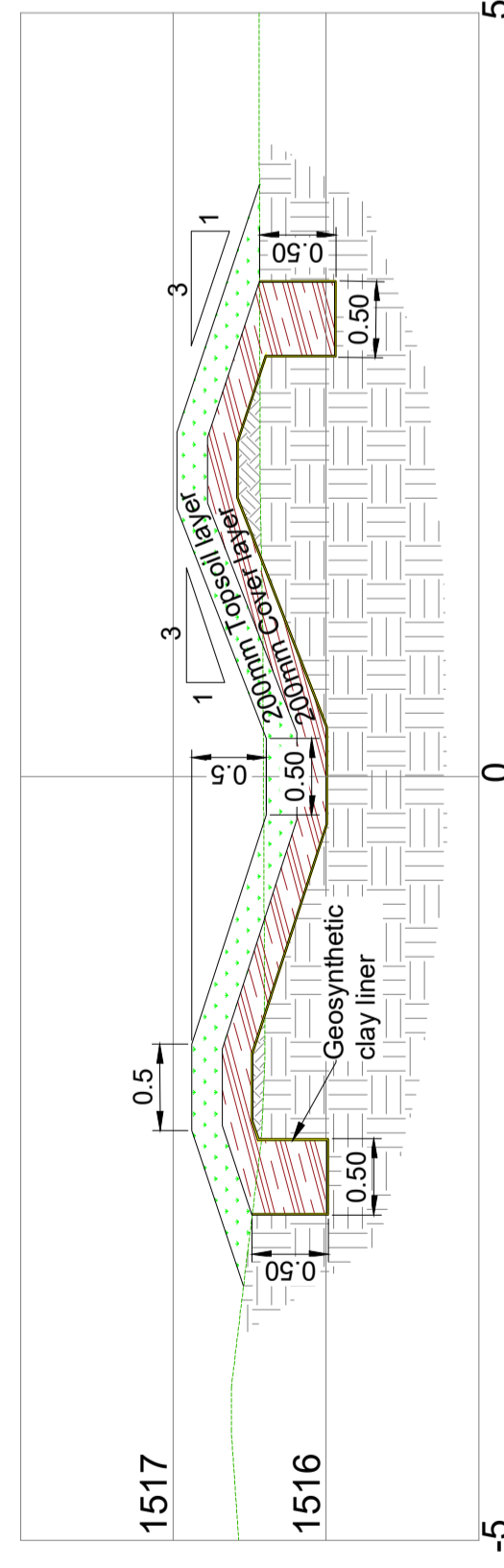
- Refer to drawings TA007_02A
 - Set-out points for reshaping.
 - Refer to drawings TA007_02B
 - Set-out points of slag layer.
 - Refer to drawings TA007_02C
 - Set-out points of capping layer.
 - Refer to drawings TA007_02D
 - Set-out points of topsoil layer.
 - Refer to drawings TA007_03 Set-out points for Toe drain with topsoil layers.
 - Refer to drawing TA007_04 for typical rehabilitation sections.
 - Refer to drawings TA007_05 for Discharge details and sections.
 - Refer to drawings TA007_06 sections for construction details.
 - Refer to drawings TA007_07&08 for the set of sections of drain 01,02&03
- CONSTRUCTION:**
- Rehabilitation of FeCr facility:
 - Extend under drainage discharge pipes.
 - Reshape to 1:5 slope on east side of dump by balance cut and fill.
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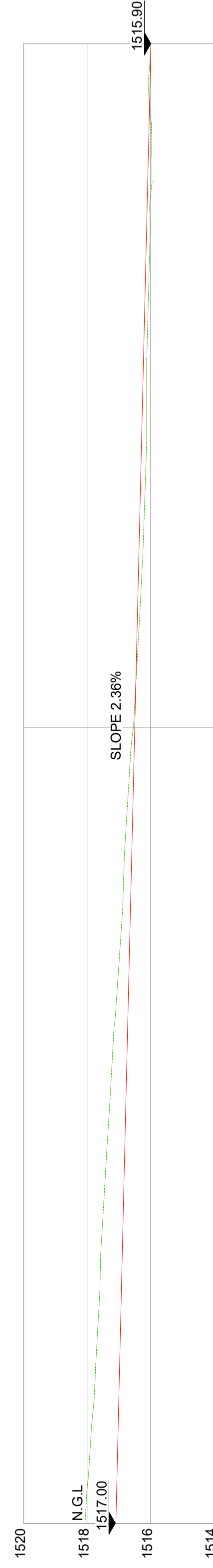
SECTION G-G: DRAIN 03
SCALE 1:50



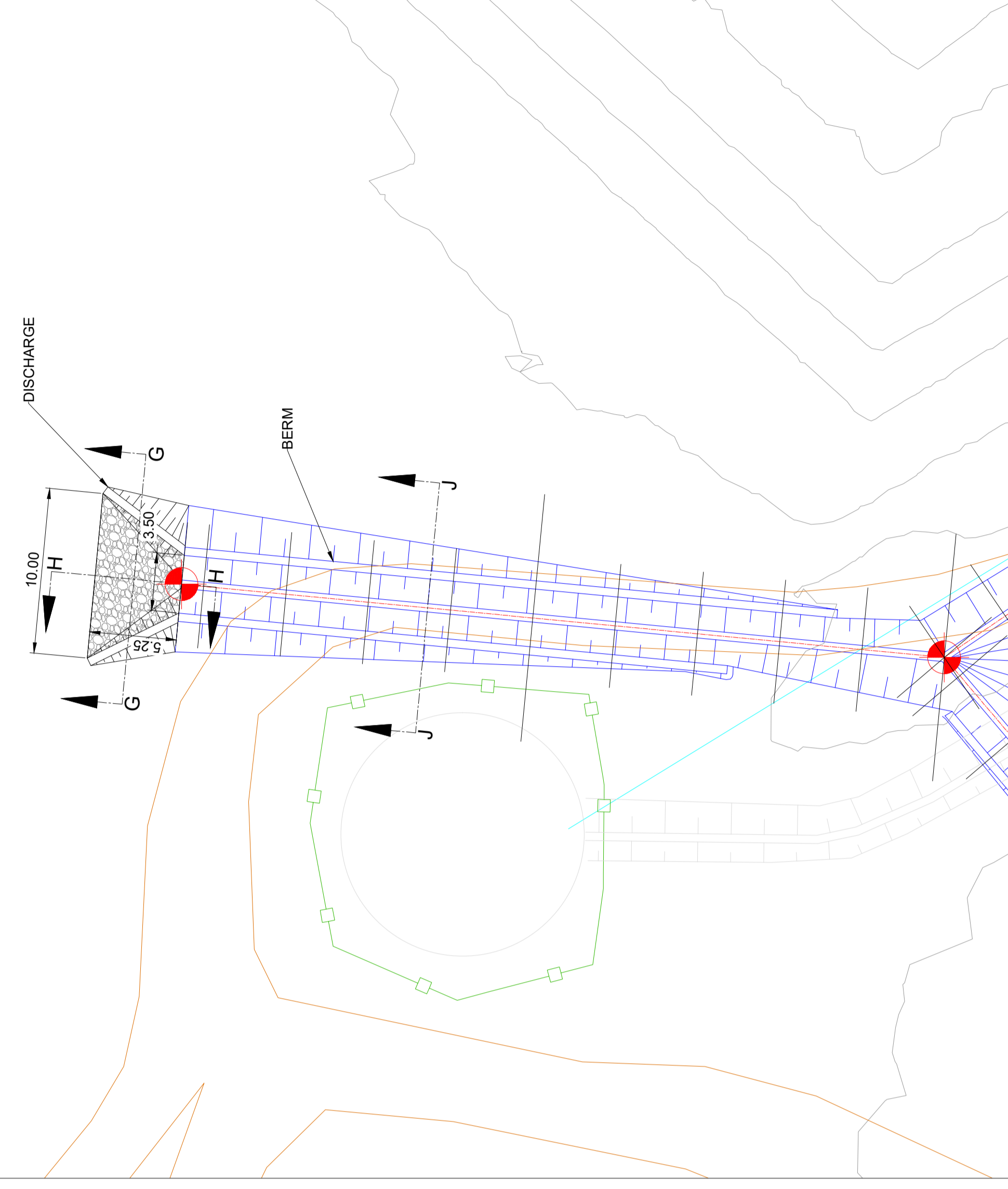
SECTION H-H: DISCHARGE
SCALE 1:50



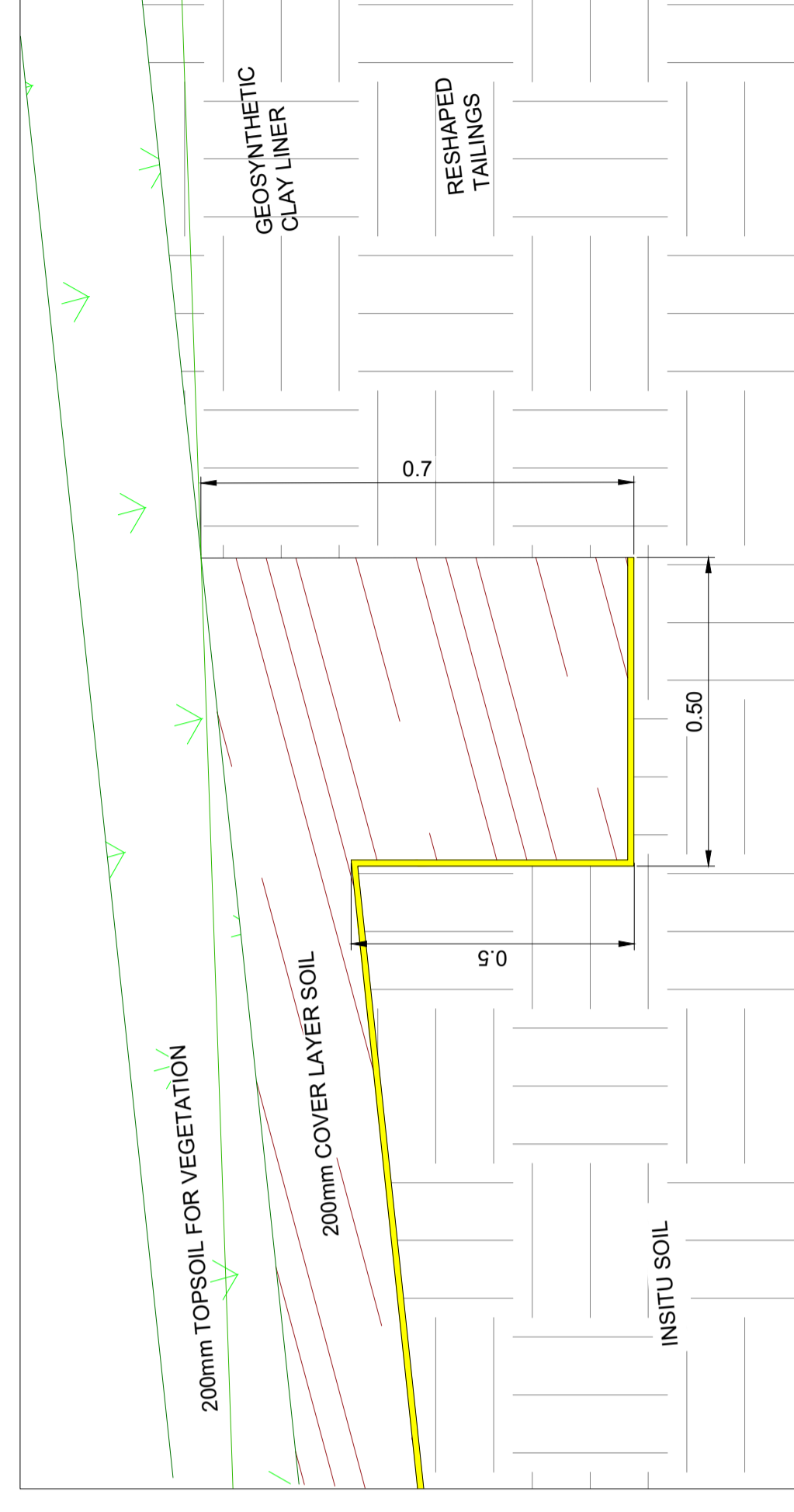
SECTION J-J: DRAIN 03
SCALE 1:50



L-SECTION: DRAIN 03
SCALE 1:250



PLAN VIEW: DRAIN 03
SCALE 1:250



DETAIL: ANCHOR TRENCH-DRAIN 03
SCALE 1:10

LEGEND

- CUT TAILINGS
- FILL TAILINGS
- COVER SOIL LAYER
- ENVIROFIX X800
- GEOSYNTHETIC CLAY LINER
- SLAG TO ACT AS CAPILLARY LAYER
- HISTORICAL SLIMES MATERIAL
- INSITU SOIL

REV	DATE	REVISIONS	DESCRIPTION	INT.	REF	BENCHMARK DESCRIPTION	BENCH	Y	X	Z	From Client	SURVEYOR INFORMATION
TA007_01			GENERAL ARRANGEMENT: CURRENT SITUATION									
TA007_02			GENERAL ARRANGEMENT: RESHAPE, SLAG, CAPPING & TOPSOIL LAYOUT								082 283 9777	
TA007_03			SECTIONS: RESHAPE SLAG, CAPPING - & TOPSOIL LAYER									
TA007_04			SECTIONS: RESHAPE SLAG, CAPPING - & TOPSOIL LAYER									
TA007_05			SECTIONS AND DETAILS: TOE DRAIN OUTLET									
TA007_07			SET OF SECTIONS: TOE DRAIN 01&02									
TA007_08			SET OF SECTIONS: TOE DRAIN 03&03									

DESIGNED BY	DESIGN DATE	DRAWN BY	DRAWN DATE	CHECKED BY	CHECK DATE	ENGINEER	DATE
R.J.V	2022/01/18	R.J.V	2022/01/20	H.J.W	2022/01/21	D.P. van der Merwe	21/01/2022

APPROVED BY	QUALIFICATION & REG No	SIGNATURE	DATE
	Pr. Eng. - 890132		21/01/2022

PROJECT TEAM	CLIENT	PROJECT	TITLE
		REHABILITATION PLAN FOR FeCr TSF	SECTIONS AND DETAILS: OUTLET STRUCTURE

DRAWING No	DRAWING SCALE	AS INDICATED	ORIGINAL DRAWING SIZE	REVISION NUMBER
TA007_05	A1			0

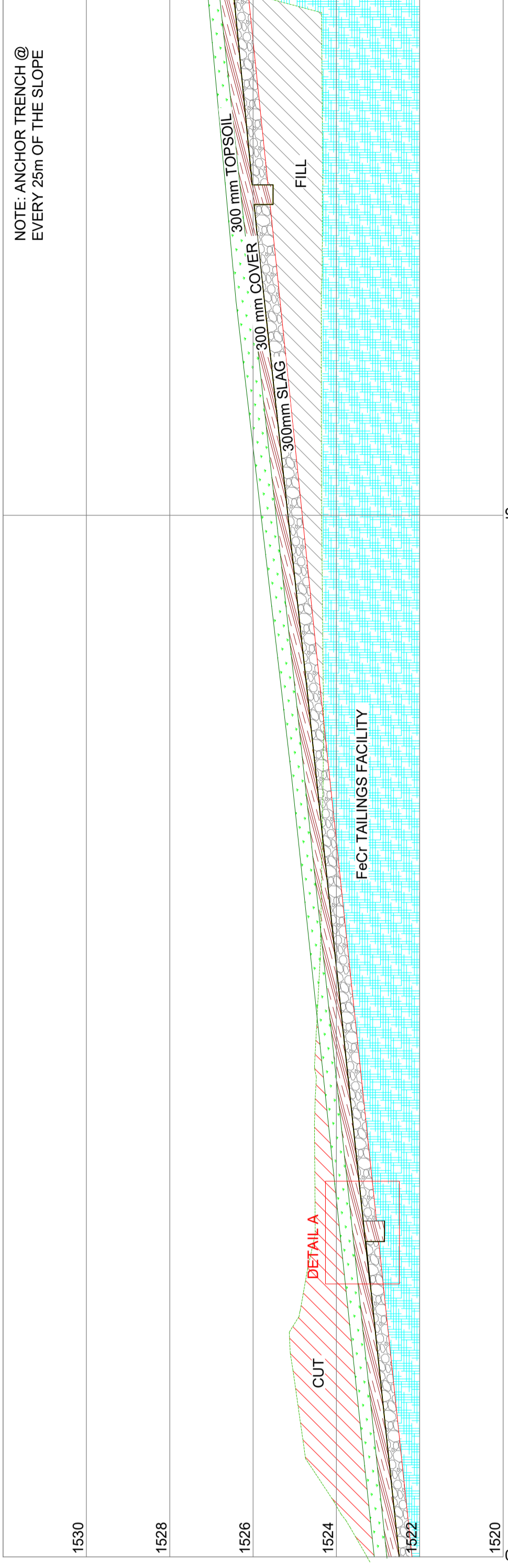


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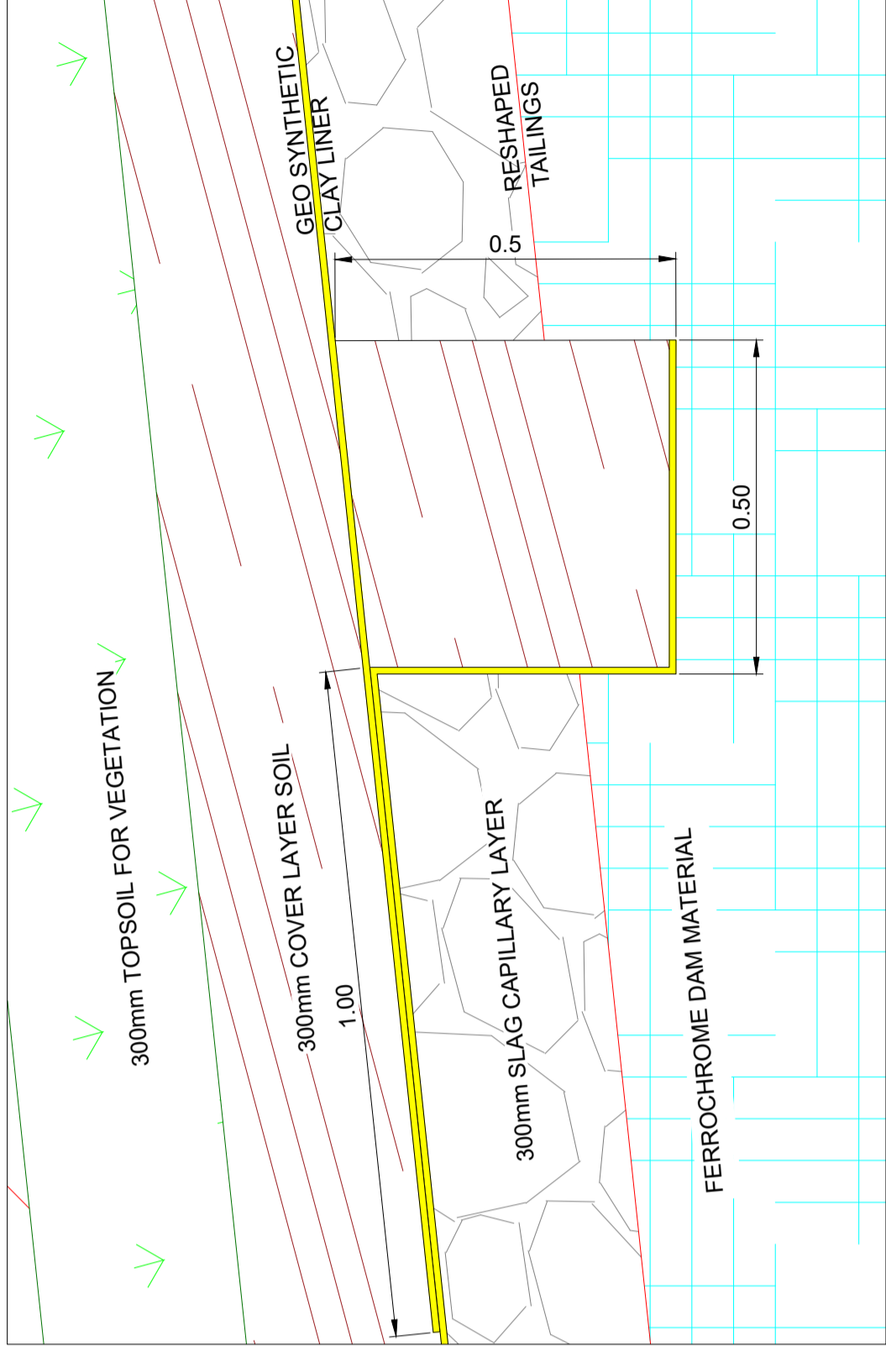
- Refer to drawings TA007_02A
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CONSTRUCTION:

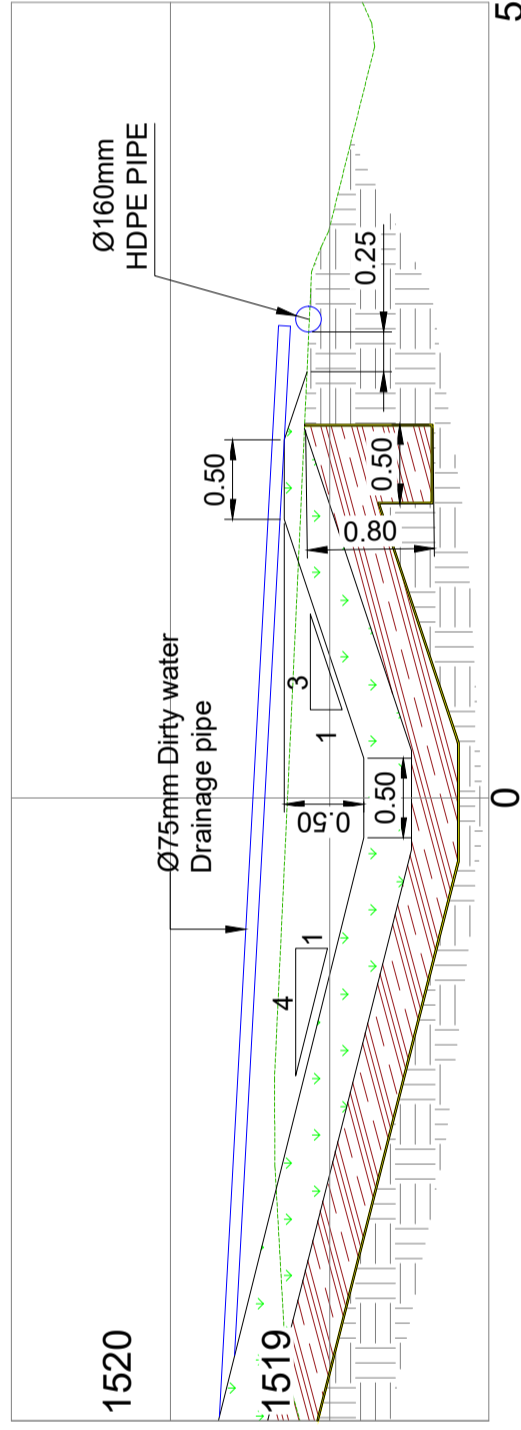
- Rehabilitation of FeC₂ facility:
 - Extend under drainage discharge pipes.
 - Reshape to 1:5 slope on east side of dump by balance cut and fill.
 - Reshape top of dump at 5% and 11% towards the west for the north and south area respectively.
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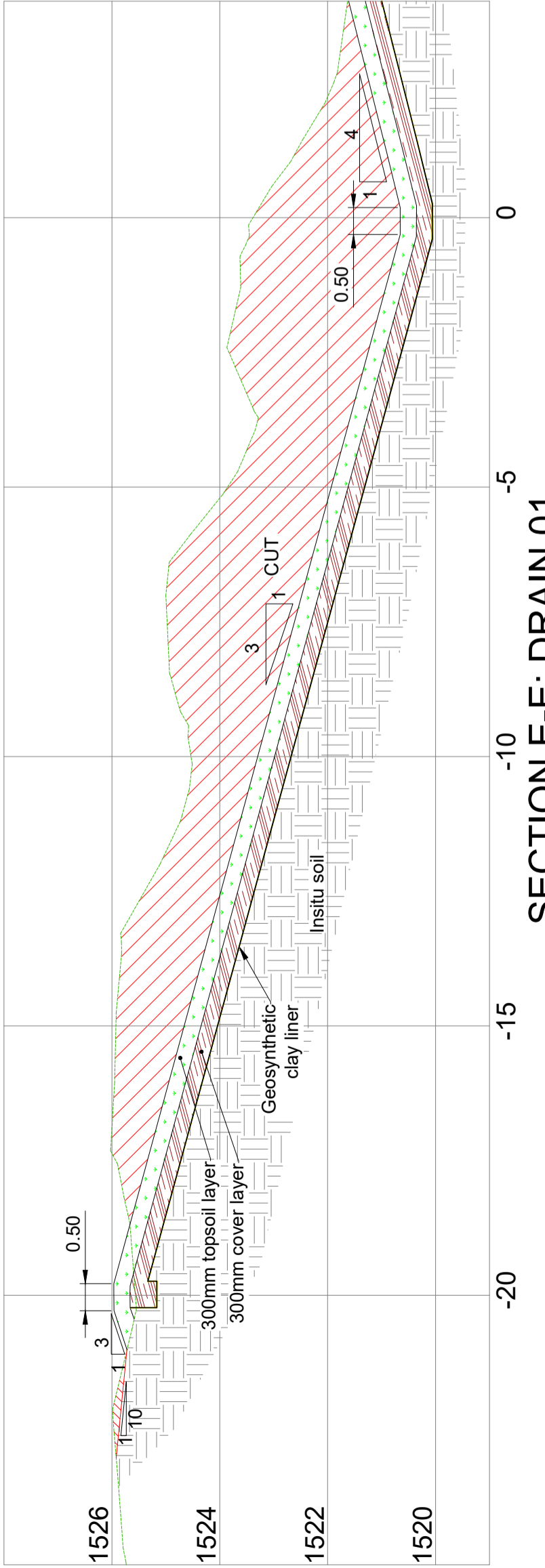
SECTION & DETAIL: ANCHOR DETAILS
SCALE 1:100



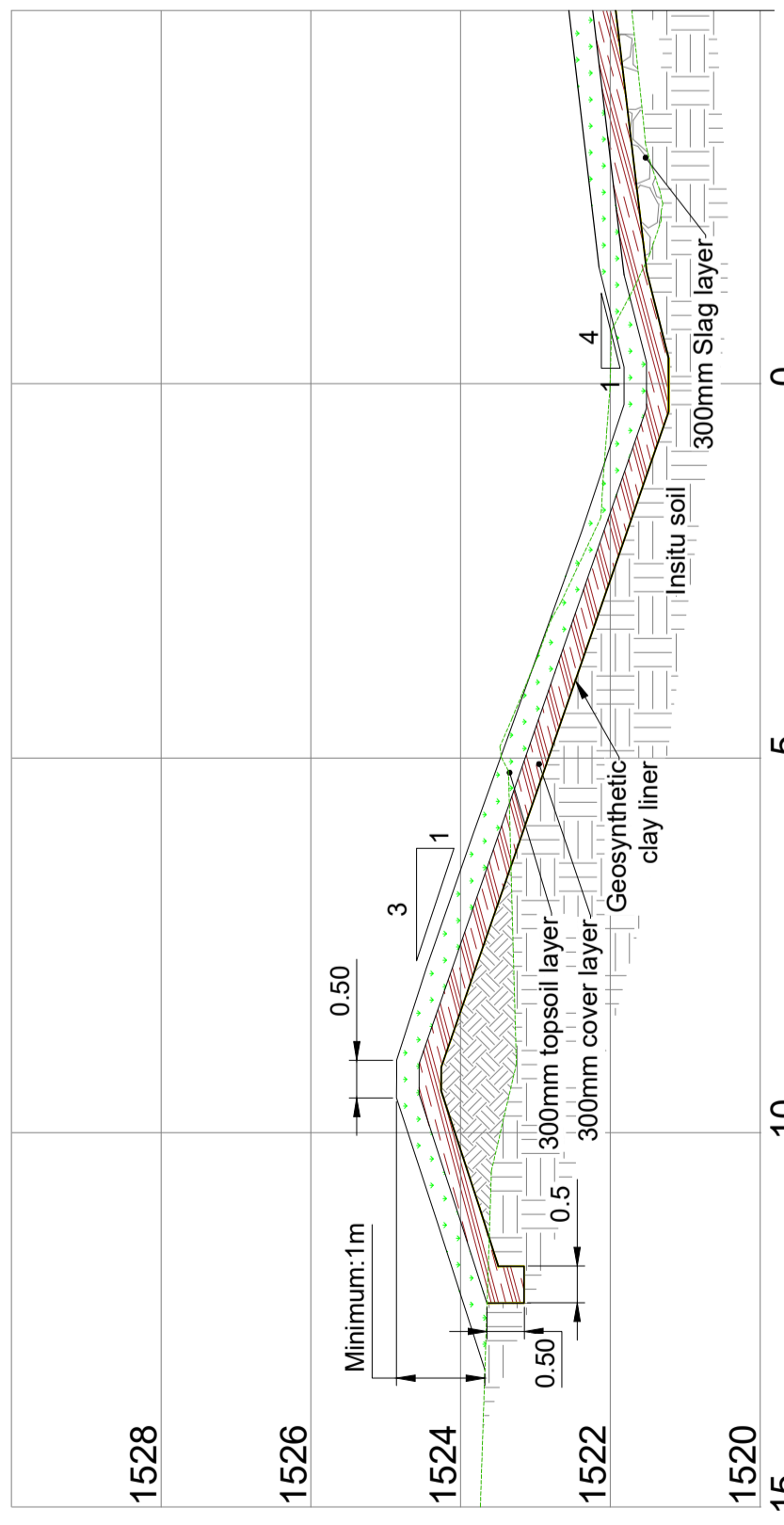
DETAIL A: INTERMEDIATE ANCHOR TRENCH
SCALE 1:10



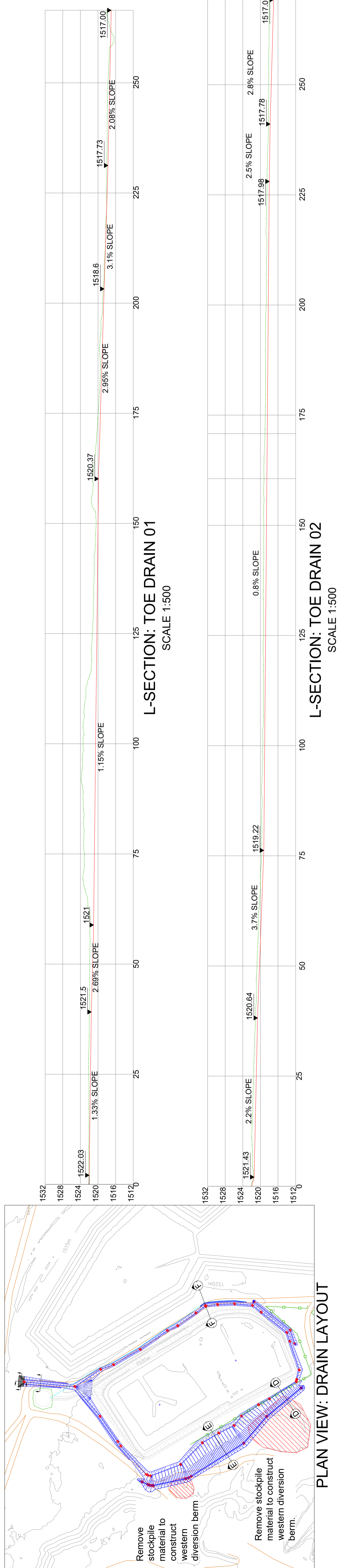
SECTION F-F: DRAIN 02
SCALE 1:50



SECTION E-E: DRAIN 01
SCALE 1:100



SECTION D-D: DRAIN 01
SCALE 1:100



PLAN VIEW: DRAIN LAYOUT

LEGEND

- CUT TAILINGS
- FILL TAILINGS
- COVER SOIL LAYER
- ENVIROFIX X800
- GEO SYNTHETIC CLAY LINER
- SLAG TO ACT AS CAPILLARY LAYER
- HISTORICAL SLIMES MATERIAL
- INSITU SOIL

REV	DATE	DESCRIPTION	INT.	REF.	BENCHMARK DESCRIPTION	SURVEYOR INFORMATION	APPROVED BY	ENGINEER	DATE	QUALIFICATION & REG. NO.	NAME	DP. v.d. Merwe
TA007_01		GENERAL ARRANGEMENT CURBBERM & TOPSOIL LAYOUT										
TA007_02		GENERAL ARRANGEMENT RESHAPE, SLAG, CAPPING & TOPSOIL LAYOUT										
TA007_03		GENERAL ARRANGEMENT TOE DRAIN LAYOUT										
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TA007_07		SET OF SECTIONS: TOE DRAIN 01										
TA007_08		SET OF SECTIONS: TOE DRAIN 02&03										

DESIGNING No.	PROJECT	CLIENT	PROJECT TEAM	DESIGNED BY	DESIGN DATE	DRAWN BY	DRAWN DATE	CHECKED BY	CHECK DATE	ENGINEER	DATE	QUALIFICATION & REG. No.	NAME	DP. v.d. Merwe
TA007_08	REHABILITATION PLAN FOR FeC ₂ TSF	TRANSALLOYS	R.J.V.	R.J.V.	2022/01/18	R.J.V.	2022/01/20	H.J.W.	2022/01/21	D.P. van der Merwe	21/01/2022	21/01/2022	Pt. Eng. - 980132	

DRAWING No.	PROJECT	CLIENT	PROJECT TEAM	DESIGNED BY	DESIGN DATE	DRAWN BY	DRAWN DATE	CHECKED BY	CHECK DATE	ENGINEER	DATE	QUALIFICATION & REG. No.	NAME	DP. v.d. Merwe
TA007_08	REHABILITATION PLAN FOR FeC ₂ TSF	TRANSALLOYS	R.J.V.	R.J.V.	2022/01/18	R.J.V.	2022/01/20	H.J.W.	2022/01/21	D.P. van der Merwe	21/01/2022	21/01/2022	Pt. Eng. - 980132	

REVISIONS	DATE	DESCRIPTION	INT.	REF.	BENCHMARK DESCRIPTION	SURVEYOR INFORMATION	APPROVED BY	ENGINEER	DATE	QUALIFICATION & REG. No.	NAME	DP. v.d. Merwe
TA007_01		GENERAL ARRANGEMENT CURBBERM & TOPSOIL LAYOUT										
TA007_02		GENERAL ARRANGEMENT RESHAPE, SLAG, CAPPING & TOPSOIL LAYOUT										
TA007_03		GENERAL ARRANGEMENT TOE DRAIN LAYOUT										
TA007_04		SECTIONS RESHAPE, SLAG, CAPPING & TOPSOIL LAYER										
TA007_05		SECTIONS & DETAILS: DRAIN OUTLET										
TA007_06		SECTIONS & DETAILS: TOE DRAIN 01 & 02										
TA007_07		SET OF SECTIONS: TOE DRAIN 01										
TA007_08		SET OF SECTIONS: TOE DRAIN 02&03										

NOTES:

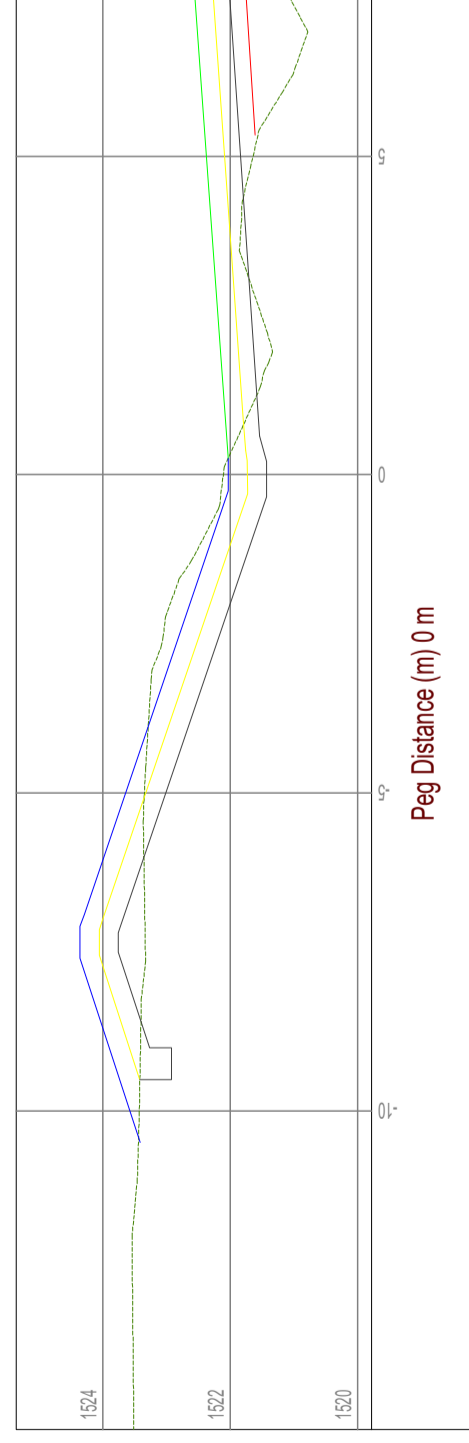
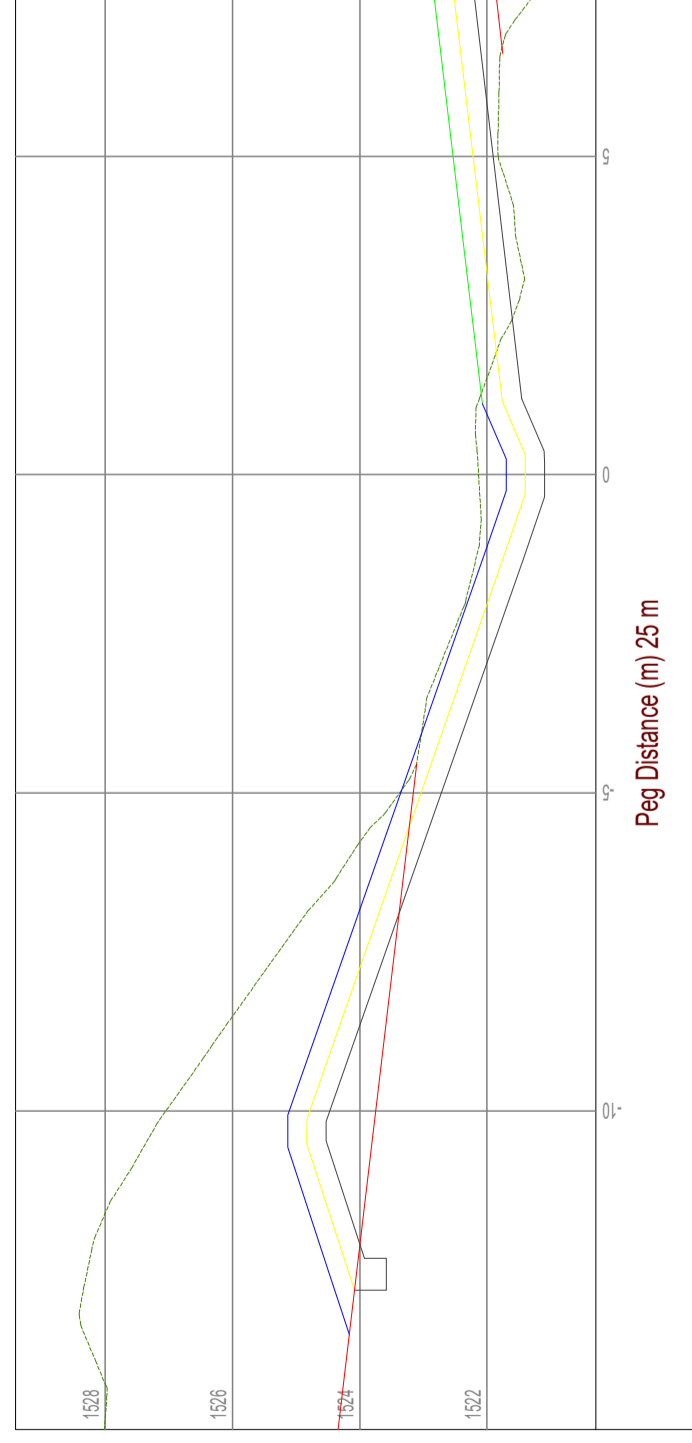
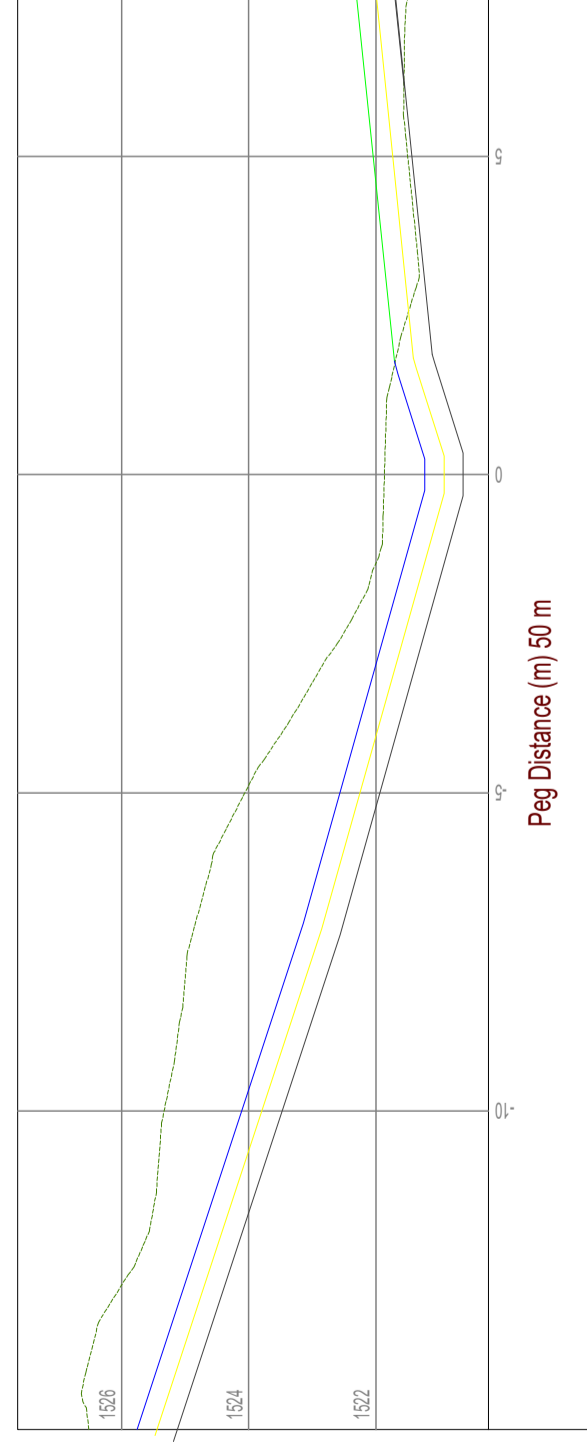
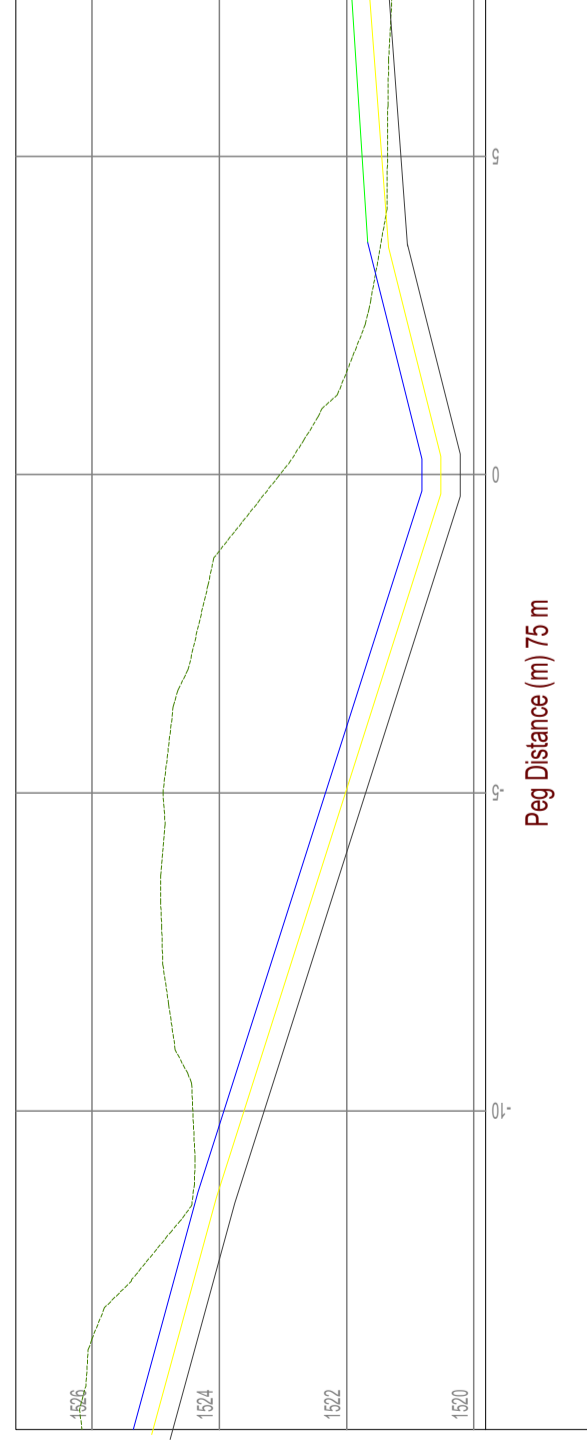
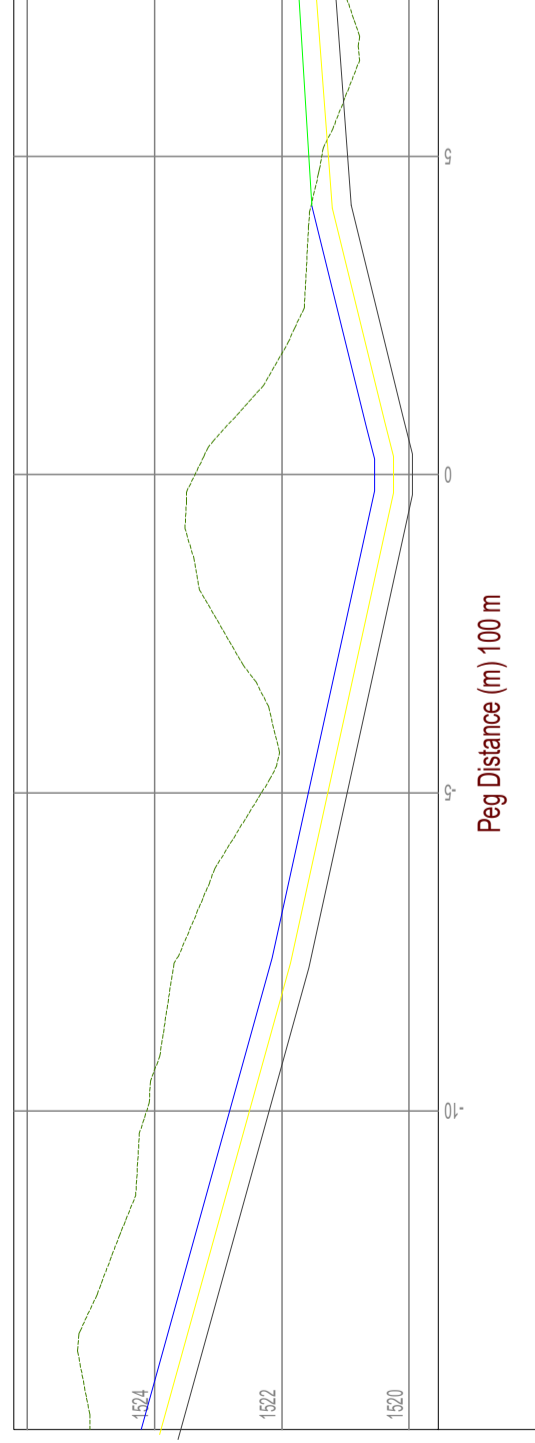
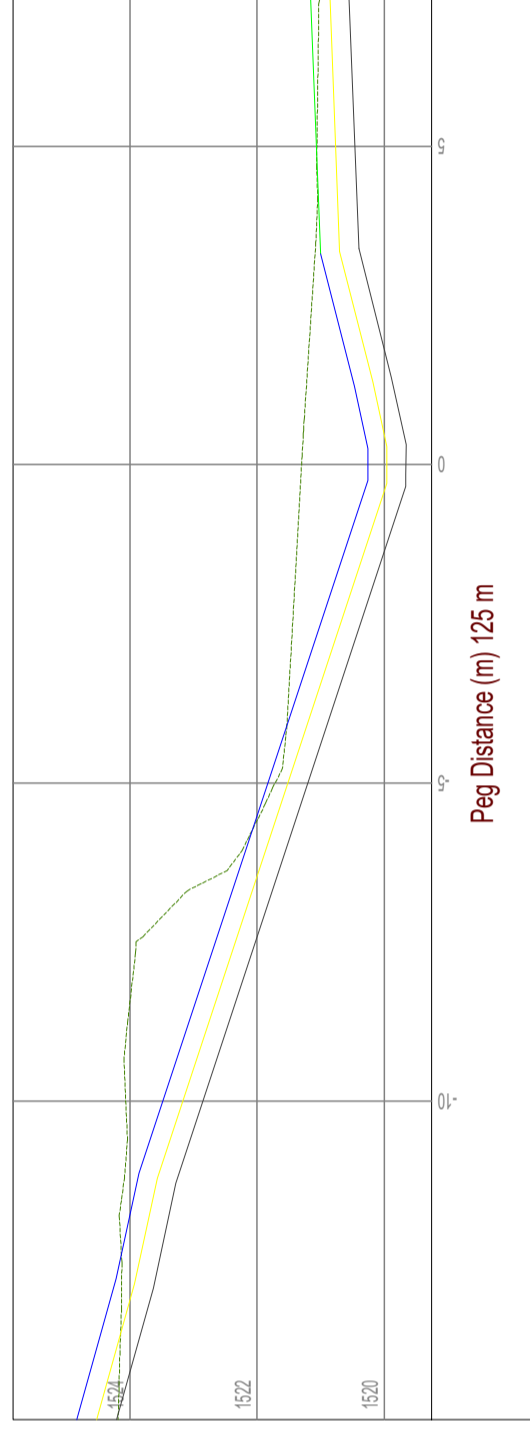
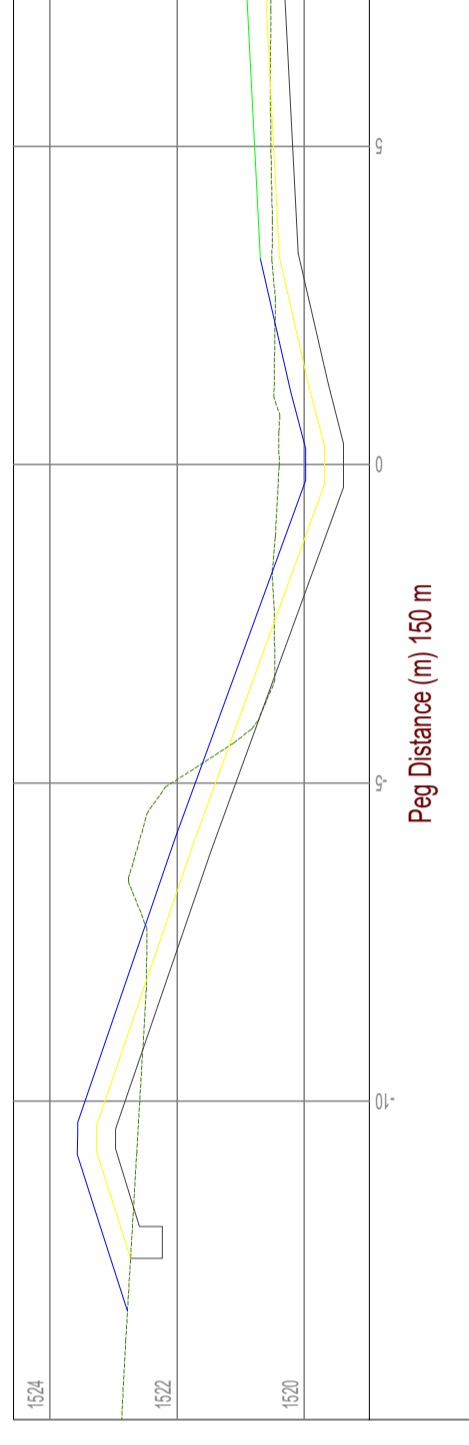
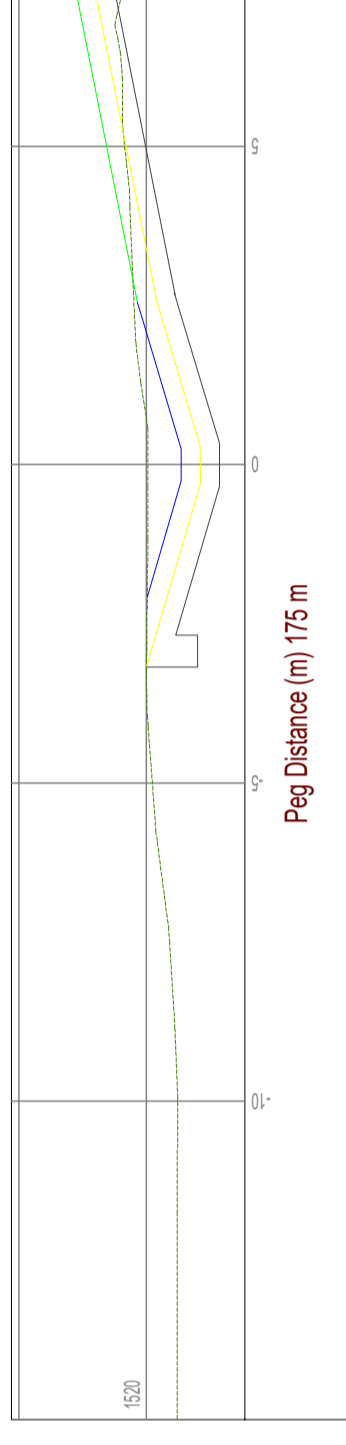
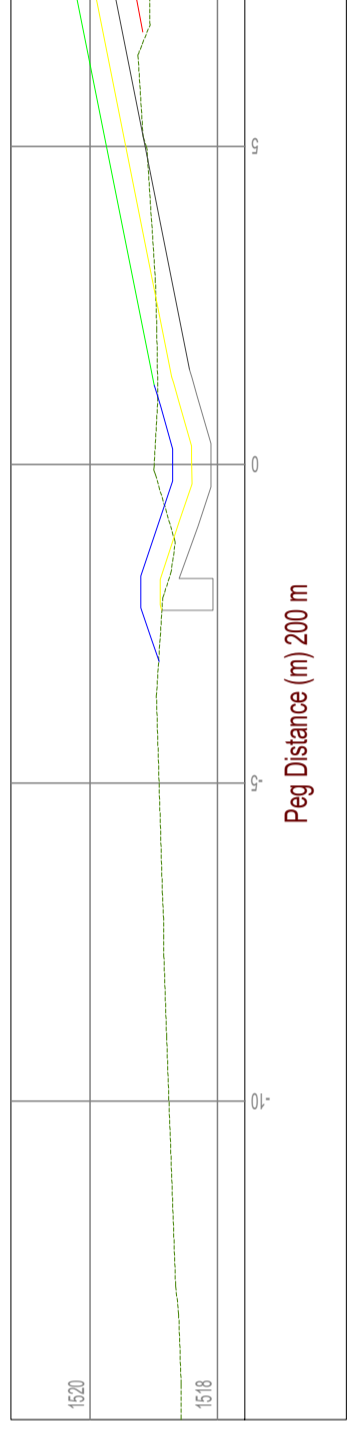
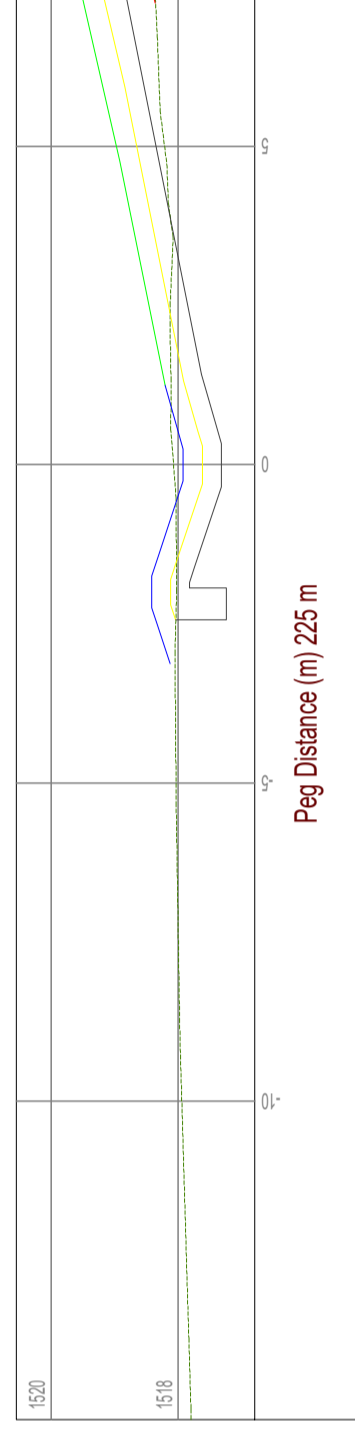
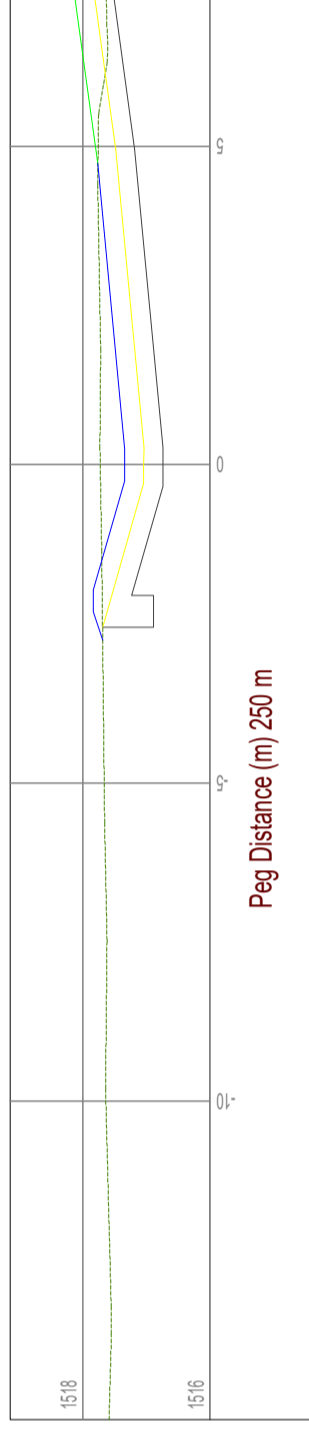
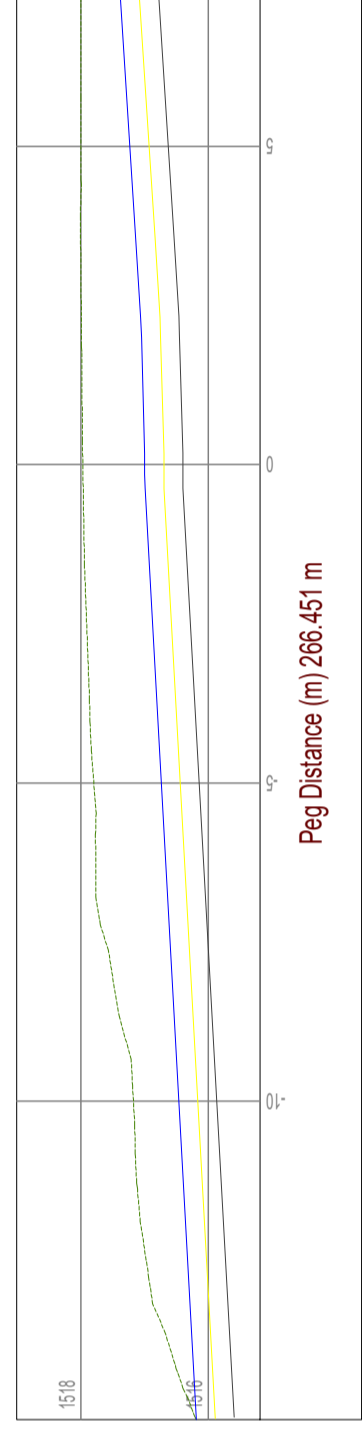
- Refer to drawings TA007_02A
- Set-out points for reshaping.
- Refer to drawings TA007_02B
- Set-out points of slag layer.
- Refer to drawings TA007_02C
- Set-out points of capping layer.
- Refer to drawings TA007_02D
- Set-out points of topsoil layer
- Refer to drawings TA007_03 Set-out points for Toe drain with topsoil layers.
- Refer to drawing TA007_04 for typical rehabilitation sections.
- Refer to drawings TA007_05 for Discharge details and sections.
- Refer to drawings TA007_06 sections for construction details.
- Refer to drawings TA007_07&08 for the set of sections of drain 01,02&03.

CONSTRUCTION:

- Rehabilitation of FeCr facility:
 - Extend under drainage discharge pipes.
 - Reshape to 1:5 slope on east side of dump by balance cut and fill.
 - Reshape top of dump at 5 % sand and south area respectively.
 - Cover existing peripheral channel.
 - Place capping layers as follows:
 - 300 mm Slag as capillary layer over reshaped dump area.
 - Supply and install Geosynthetic clay liner (GCL) over prepared slag surface.
 - Load,haul and compact 300 mm cover soil over installed GCL.
 - Load,haul and place 300 mm topsoil layer for vegetation layer.
 - Set-out and construct toe drain and outer berms.
 - Drain 1&2: Load, haul and place 300 mm cover layer over constructed drain.
 - Drain 1&2: Load, haul and place 300 mm topsoil layer over compacted cover layer in channel.
 - Initial stone pitching at discharge point of drain 3.
 - Drain 3: Load, haul and place 200 mm cover layer over constructed drain.
 - Drain 3: Load, haul and place 200 mm topsoil layer over compacted cover layer in channel.

LEGEND

- N.G.L
- RESHAPE
- SLAG LAYER
- COVER LAYER
- TOPSOIL LAYER
- DRAIN



DRAWING No		REFERENCE DRAWINGS		REVISIONS		BENCHMARK DESCRIPTION		SURVEYOR INFORMATION		PROJECT TEAM		CLIENT		TRANSALLOYS		DRAWING SCALE			
TA007_01	GENERAL ARRANGEMENT CURRENT SITUATION	REV	DATE	DESCRIPTION	INT.	REF	Y	X	Z	DESIGNED BY	R.J.V	PROJECT	REHABILITATION PLAN FOR FeCr TSF	AS INDICATED		ORIGINAL			
TA007_02	GENERAL ARRANGEMENT RESHAPE, SLAG, CAPPING & TOPSOIL LAYOUT									DESIGN DATE	2022/01/18	TITLE	SET OF SECTIONS: DRAIN 01	AS INDICATED		ORIGINAL			
TA007_03	SECTIONS RESHAPE, SLAG, CAPPING & TOPSOIL LAYER									DRAWN BY	R.J.V							A1	
TA007_04	SECTIONS AND DETAILS: DRAIN OUTLET									DRAWN DATE	2022/01/20								
TA007_05	SECTIONS & DETAILS: TOE DRAIN 01 & 02									CHECKED BY	H.J.W								
TA007_07	SET OF SECTIONS: TOE DRAIN 01									CHECK DATE	2022/01/21								
TA007_08	SET OF SECTIONS: TOE DRAIN 03&03									ENGINEER	D.P. van der Merwe								
										APPROVED BY		NAME	D.P. van der Merwe	QUALIFICATION & REG No	Pr. Eng. - 980132	DATE	21/01/2022	REVISION NUMBER	0

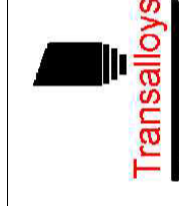
NOTES:

- Refer to drawings TA007_02A
 - Set-out points for reshaping.
 - Refer to drawings TA007_02B
 - Set-out points of slag layer.
 - Refer to drawings TA007_02C
 - Set-out points of capping layer.
 - Refer to drawings TA007_02D
 - Set-out points of topsoil layer.
 - Refer to drawings TA007_03 Set-out points for Toe drain with topsoil layers.
 - Refer to drawing TA007_04 for typical rehabilitation sections.
 - Refer to drawings TA007_05 for Discharge details and sections.
 - Refer to drawings TA007_06 sections for construction details.
 - Refer to drawings TA007_07&08 for the set of sections of drain
- CONSTRUCTION:**
- Rehabilitation of FeCr facility:
 - Extend under drainage discharge pipes.
 - Reshape to 1:5 slope on east side of dump by balance cut and fill.
 - Reshape top of dump at 5 %and 11% towards the west for the north and south area respectively.
 - Cover existing peripheral channel.
 - Place capping layers as follows:
 - 300 mm Slag as capillary layer over reshaped dump area.
 - Supply and install Geosynthetic clay liner (GCL) over prepared slag surface.
 - Load,haul and compact 300 mm cover soil over installed GCL.
 - Load,haul and place 300 mm topsoil layer for vegetation layer.
 - Set-out and construct toe drain and outer berms.
 - Drain 1&2: Load, haul and place 300 mm cover layer over constructed drain.
 - Drain 1&2: Load, haul and place 300 mm topsoil layer over compacted cover layer in channel.
 - Install stone pitching at discharge point of drain 3.
 - Drain 3: Load, haul and place 200 mm cover layer over constructed drain.
 - Drain 3: Load, haul and place 200 mm topsoil layer over compacted cover layer in channel.

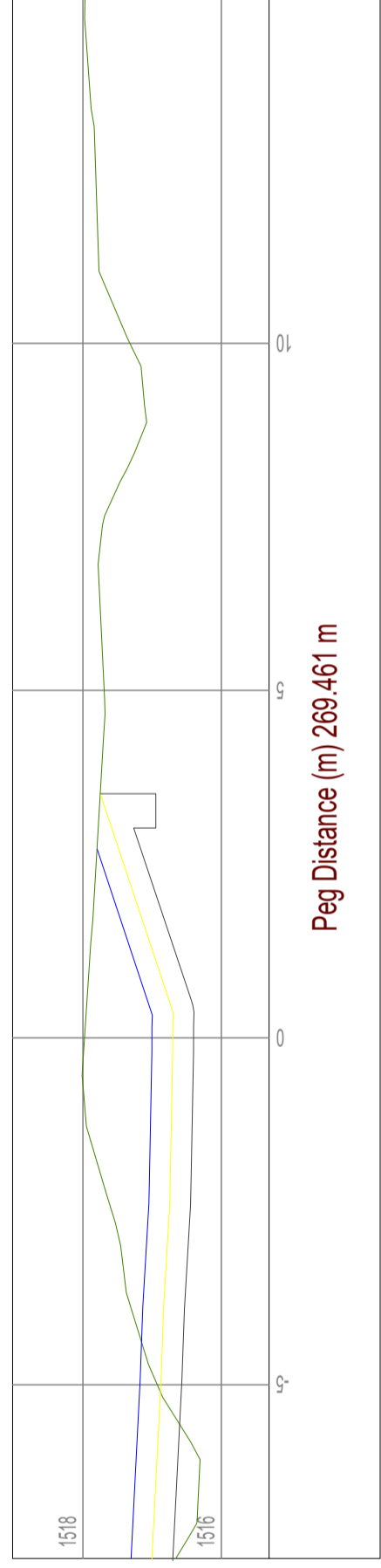
LEGEND

- N.G.L
- RESHAPE
- SLAG LAYER
- COVER LAYER
- TOPSOIL LAYER
- DRAIN

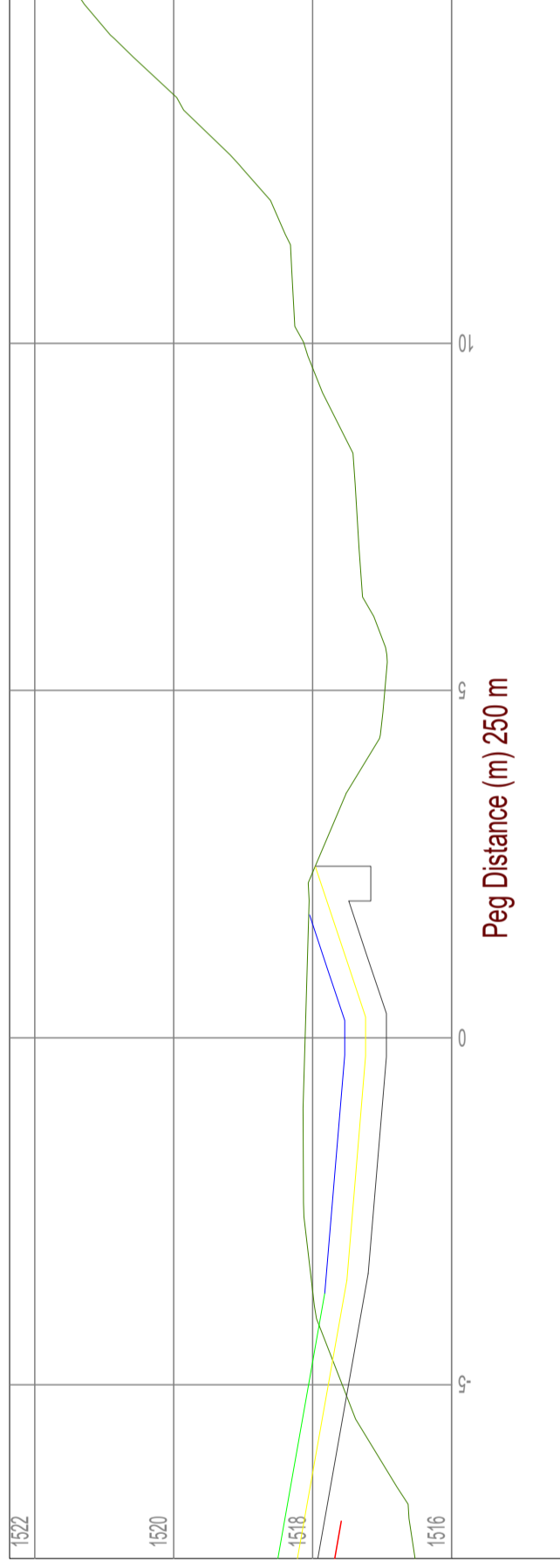
DRAWING No		REFERENCE DRAWINGS		REVISIONS		BENCHMARK DESCRIPTION		SURVEYOR INFORMATION		PROJECT TEAM		CLIENT		TRANSALLOYS		DRAWING SCALE	
TA007_01	GENERAL ARRANGEMENT CURBWORK SITUATION	REV	DATE	DESCRIPTION	INT.	REF	Y	X	Z	From Client	DESIGNED BY	PROJECT	AS INDICATED	REHABILITATION PLAN FOR FeCr TSF	ORIGINAL DRAWING SIZE	A1	
TA007_02	GENERAL ARRANGEMENT: RESHAPE, SLAG, CAPPING & TOPSOIL LAYOUT									082 283 9777	R.J.W	REHABILITATION PLAN FOR FeCr TSF					
TA007_03	SECTIONS: RESHAPE, SLAG, CAPPING & TOPSOIL LAYER										R.J.W	SET OF SECTIONS: DRAIN 02/03					
TA007_04	SECTIONS AND DETAILS: DRAIN OUTLET										R.J.W	SET OF SECTIONS: DRAIN 02/03					
TA007_05	SECTIONS & DETAILS: TOE DRAIN 01 & 02										R.J.W	SET OF SECTIONS: DRAIN 02/03					
TA007_06	SET OF SECTIONS: TOE DRAIN 01										R.J.W	SET OF SECTIONS: DRAIN 02/03					
TA007_07	SET OF SECTIONS: TOE DRAIN 02										R.J.W	SET OF SECTIONS: DRAIN 02/03					
TA007_08	SET OF SECTIONS: TOE DRAIN 03										R.J.W	SET OF SECTIONS: DRAIN 02/03					
CONSTANTS		CO-ORDINATE SYSTEM		DATE		SIGNATURE		APPROVED BY		ENGINEER		DRAWING No		REVISION NUMBER			
Y	0m	HARTERESTHEEK 84	Y	0m	21/01/2022	DP-van der Merwe	DP-van der Merwe	21/01/2022	DP-van der Merwe	0	TA007_08	0					



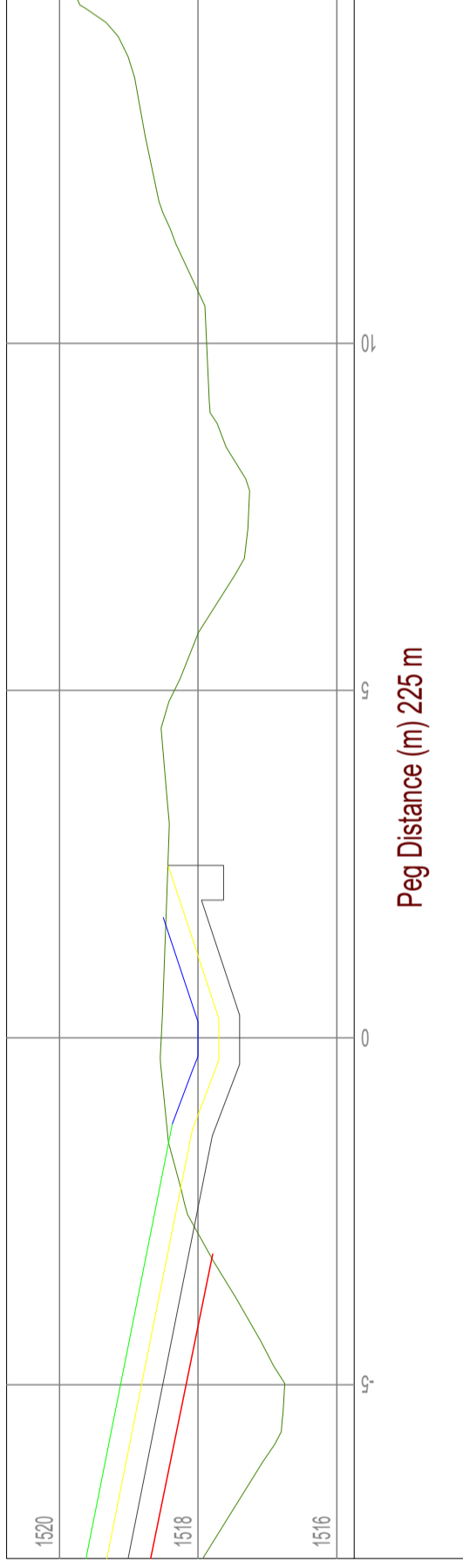
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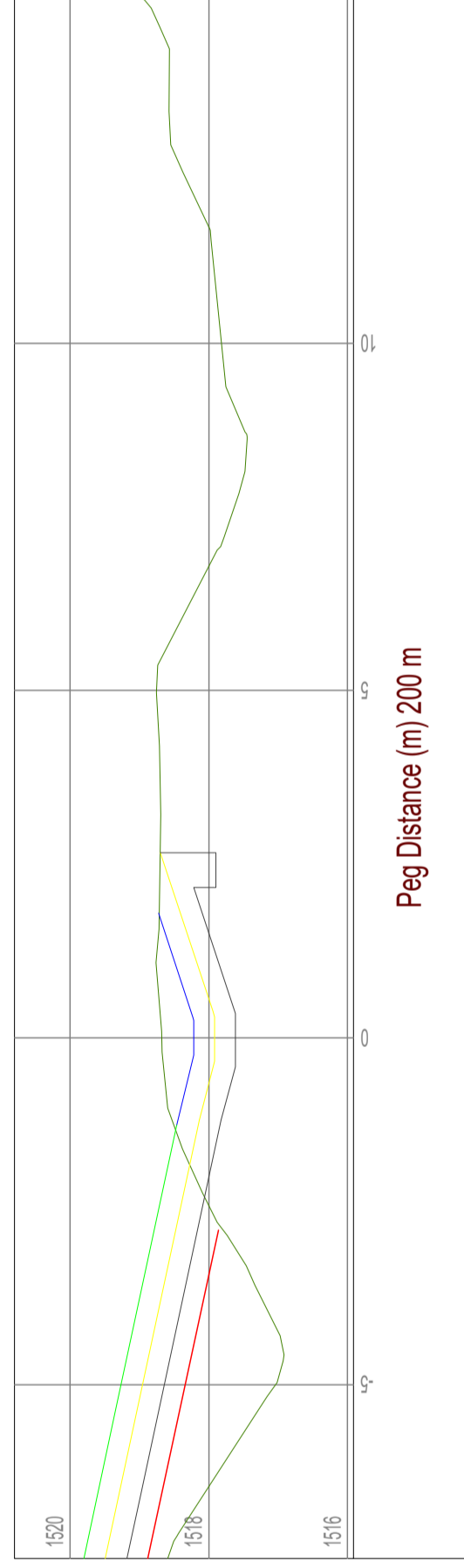
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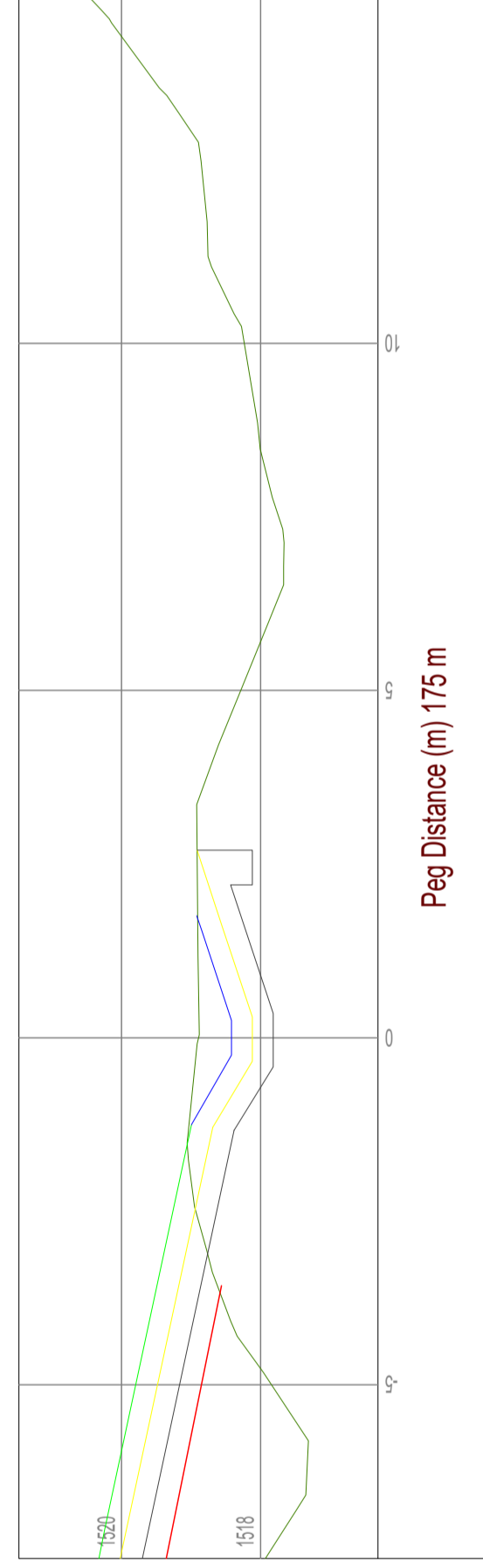
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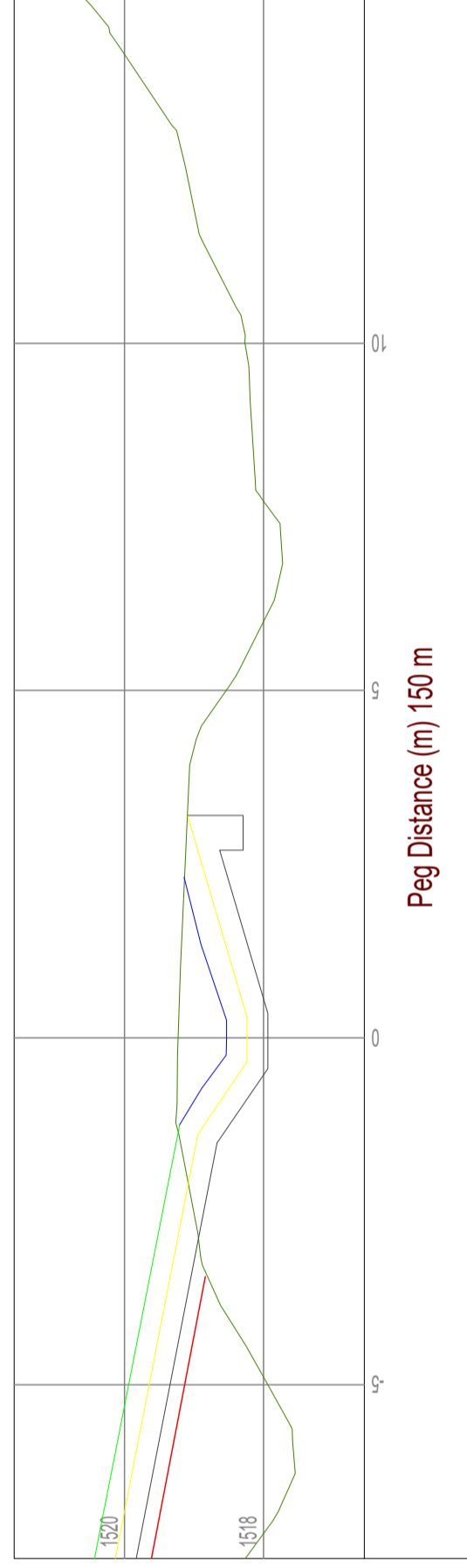
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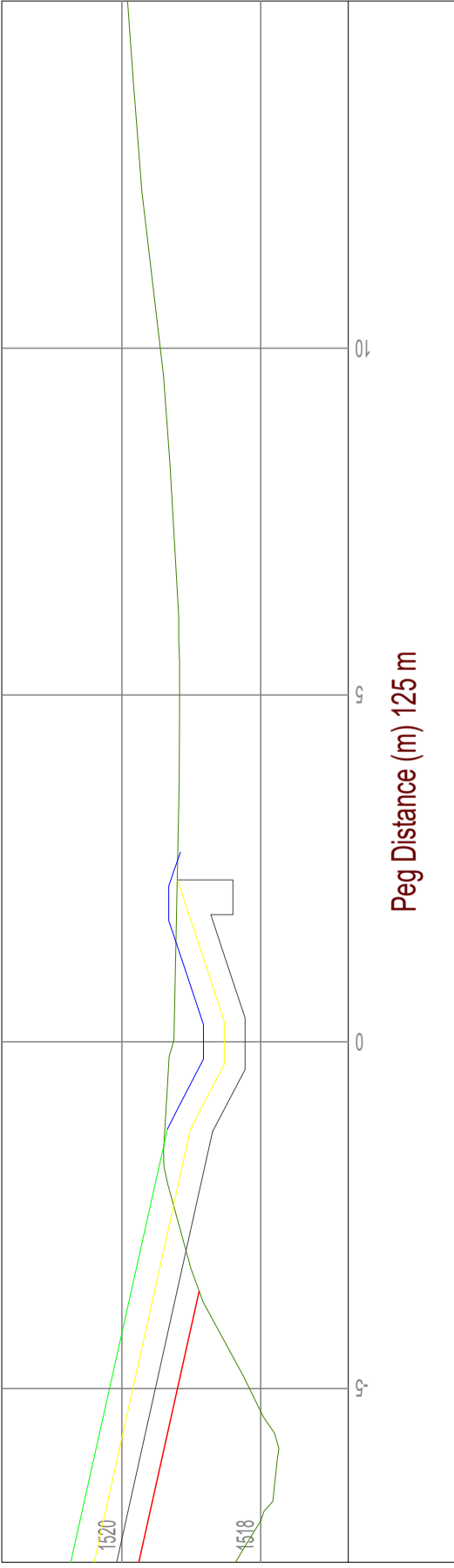
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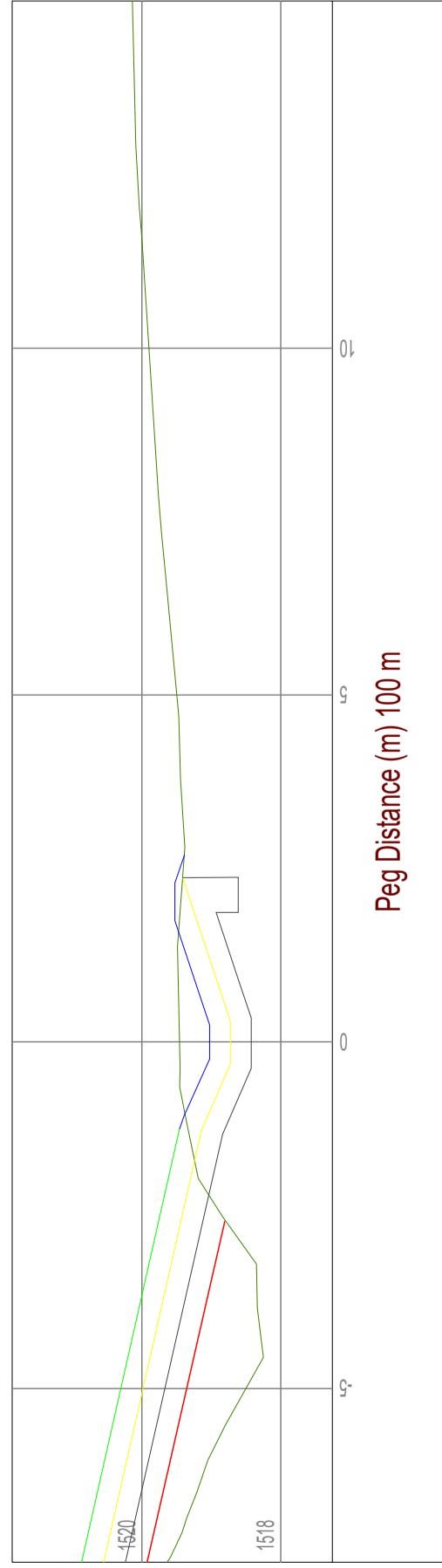
Peg Distance (m) 175 m



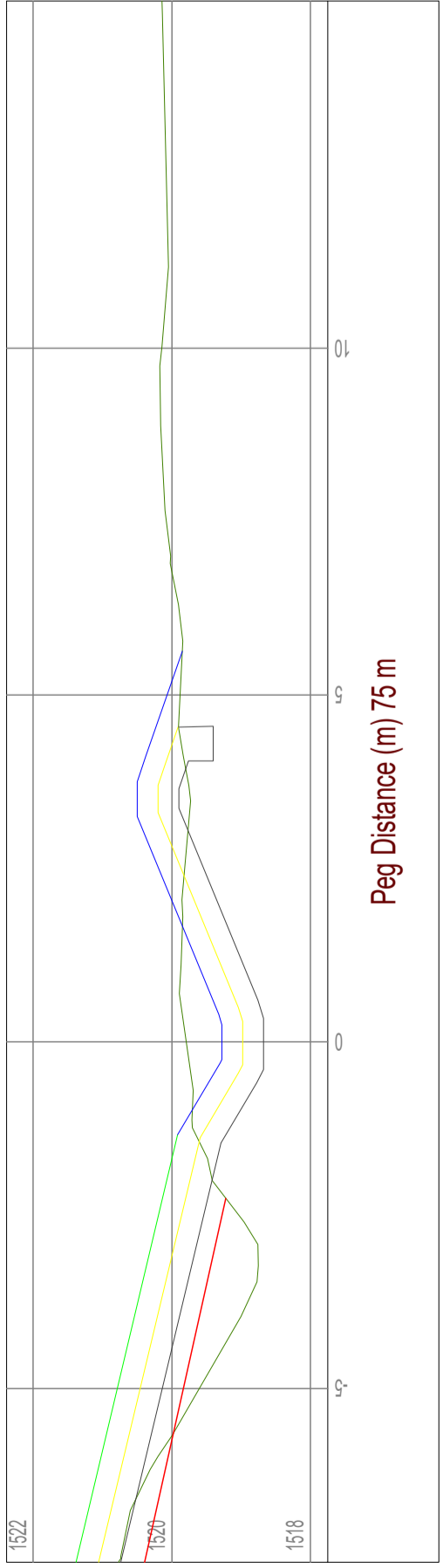
Peg Distance (m) 150 m



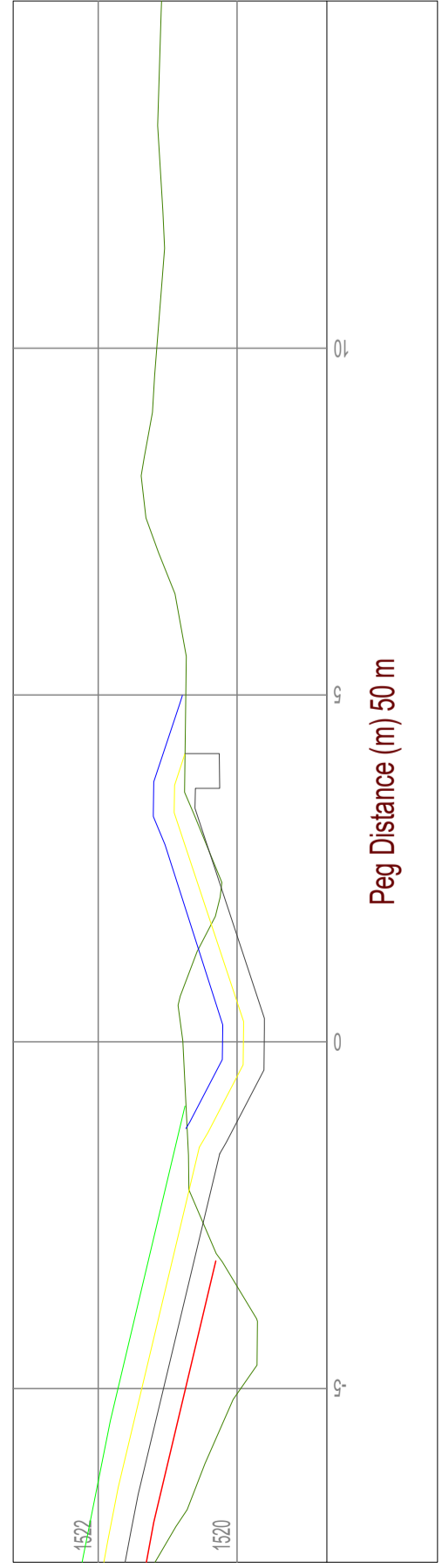
Peg Distance (m) 125 m



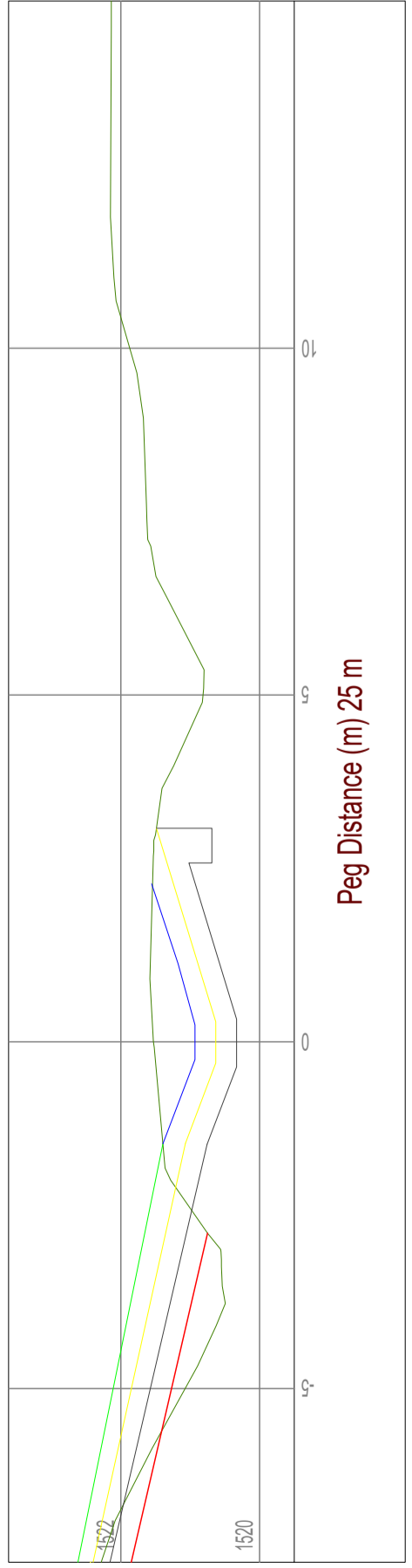
Peg Distance (m) 100 m



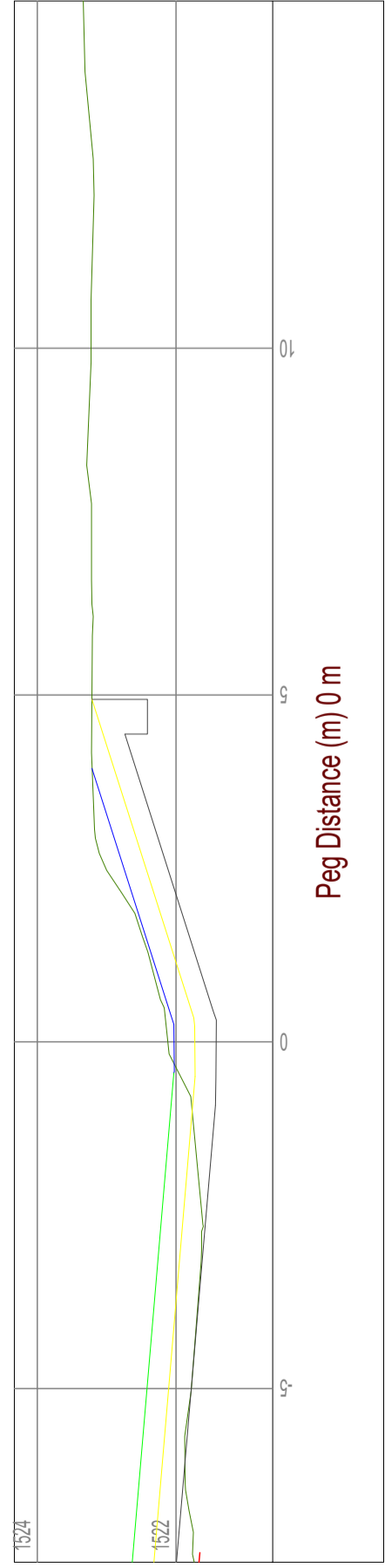
Peg Distance (m) 75 m



Peg Distance (m) 50 m



Peg Distance (m) 25 m



Peg Distance (m) 0 m

SET OF SECTIONS: DRAIN 03

SET OF SECTIONS: DRAIN 02