

APPENDIX A - MAPS, PHOTOGRAPHS AND DESIGNS

APPENDIX A1 - MAPS

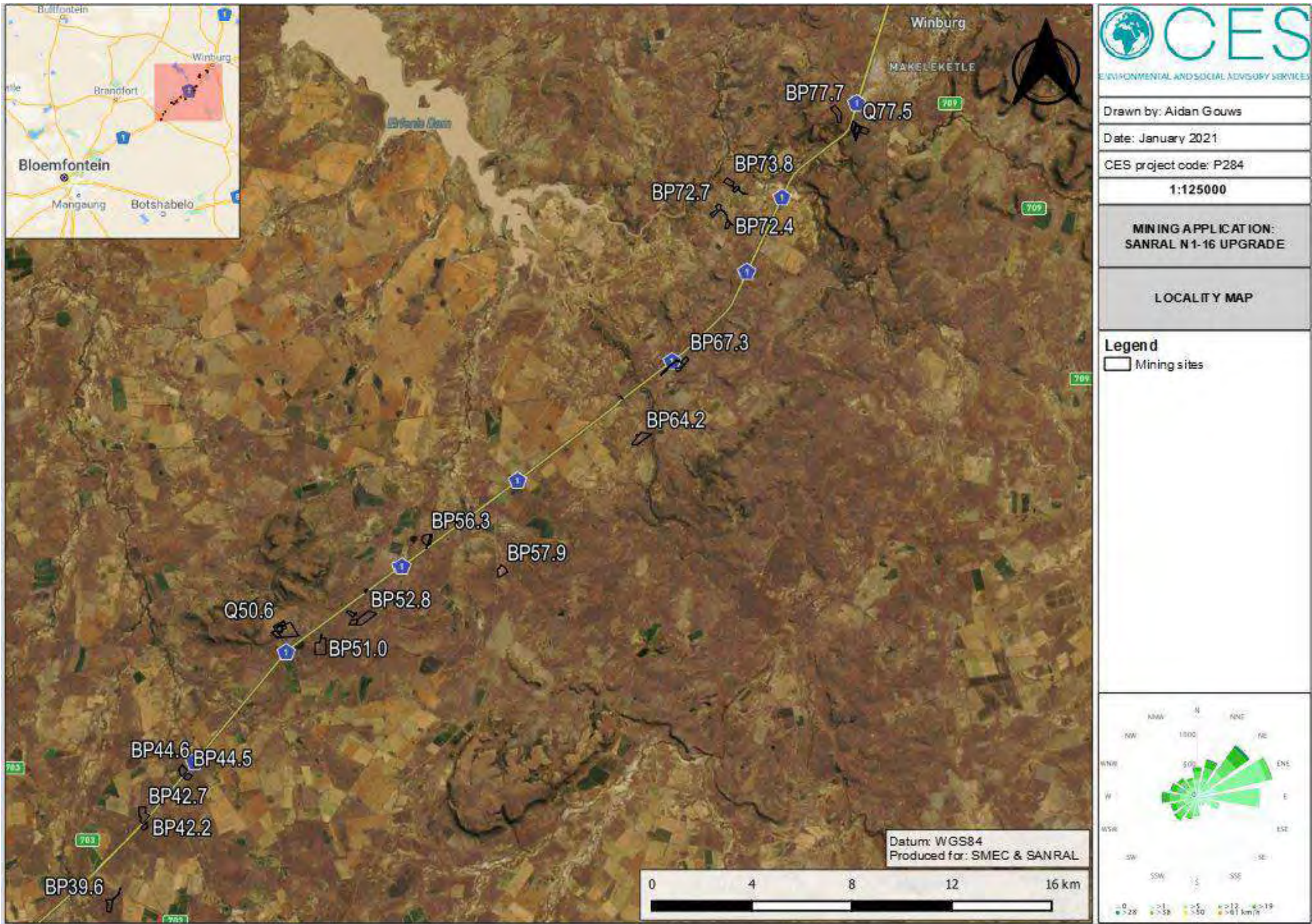


Figure 1: Project locality map of the proposed mining sites.

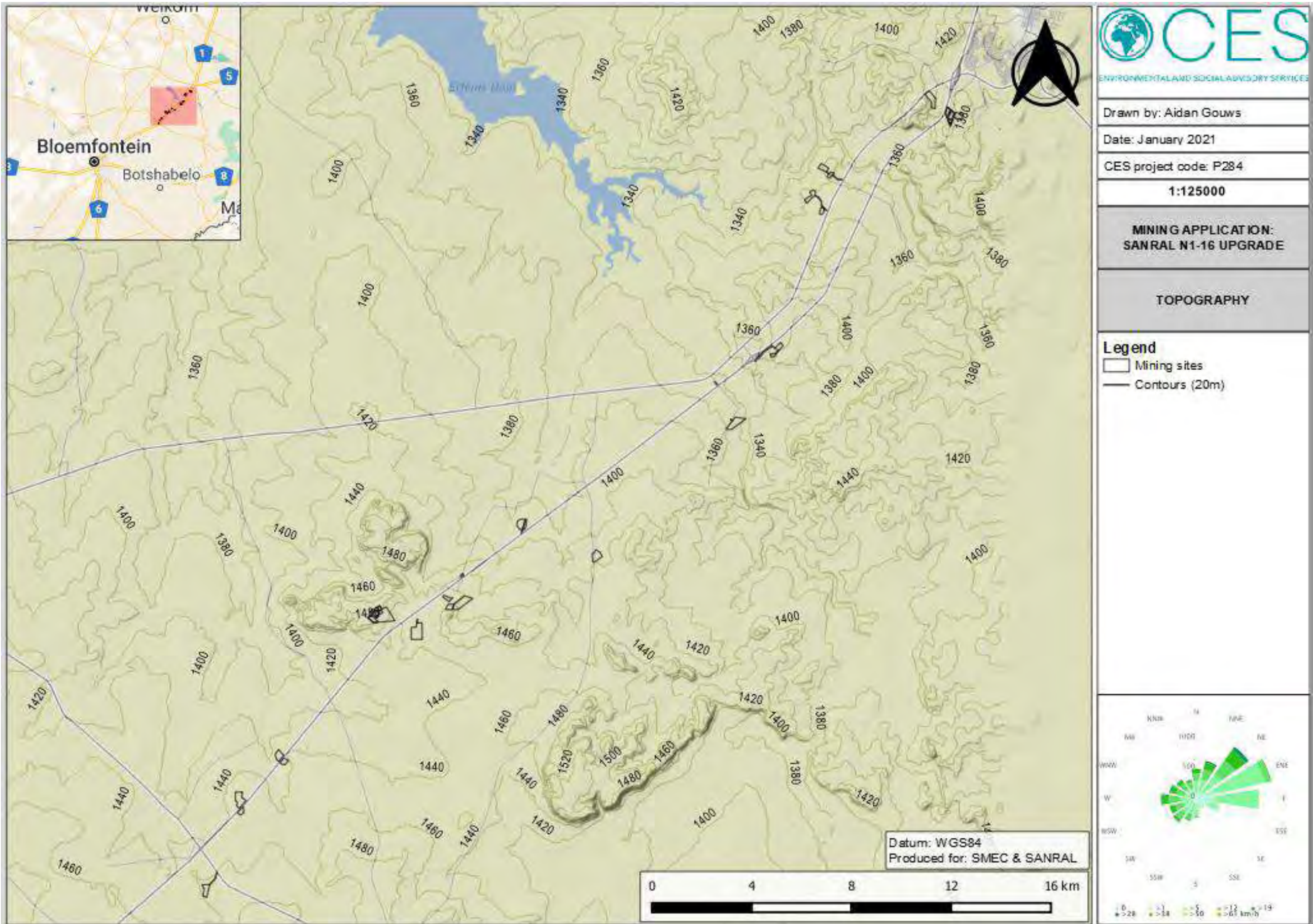


Figure 2: Topographical map of the proposed mining sites.

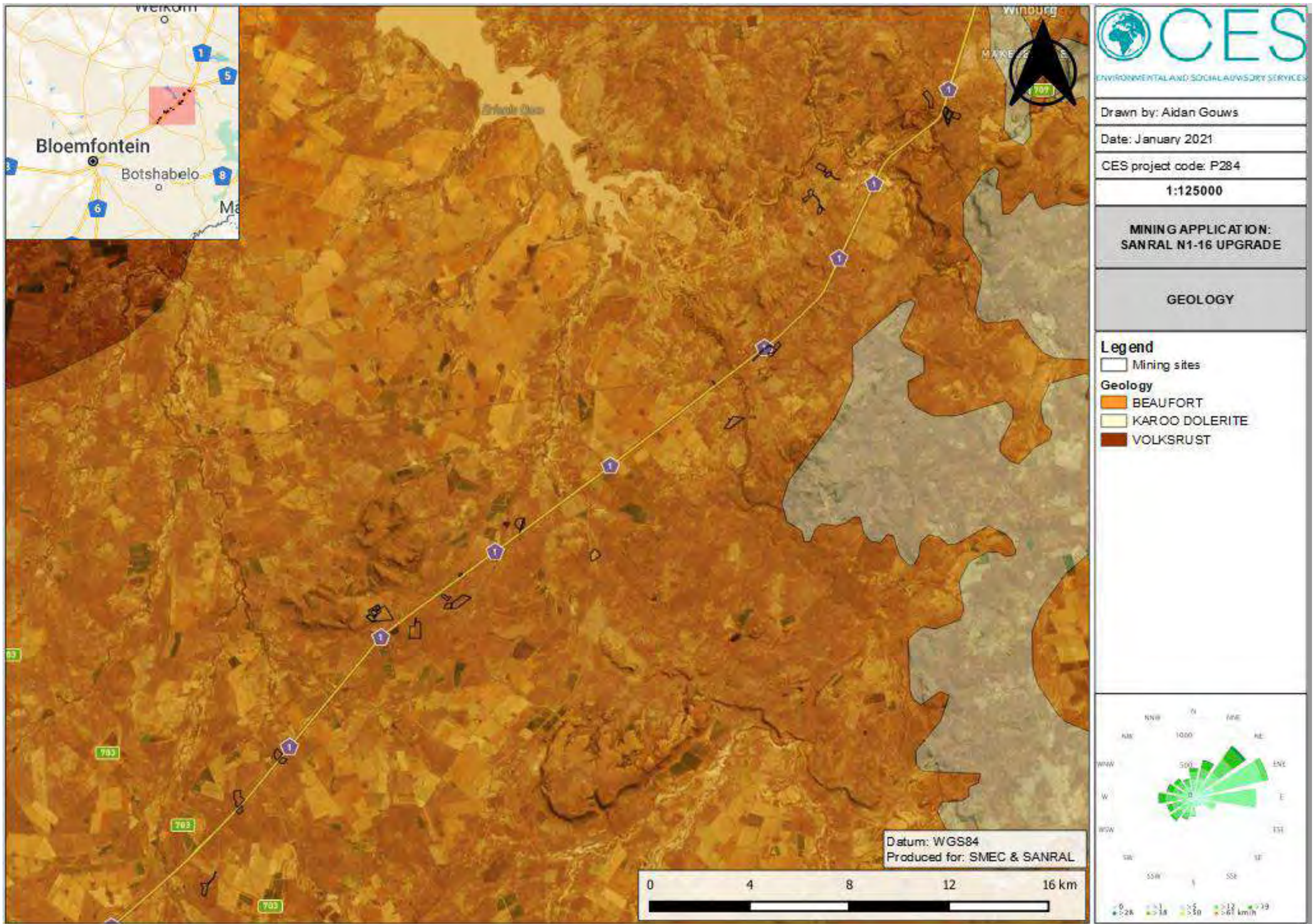


Figure 3: Geological map of the proposed mining sites.

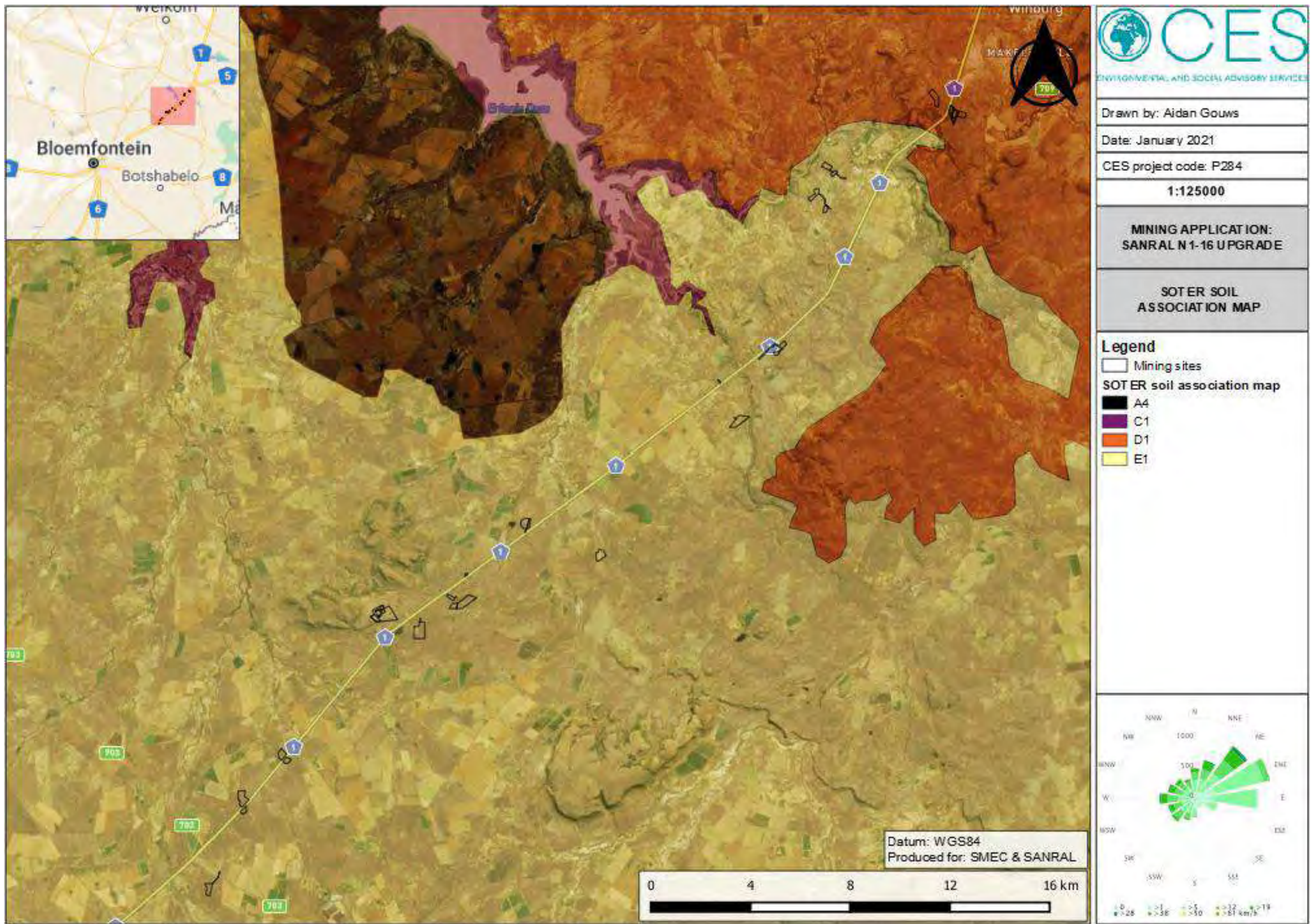


Figure 4: SOTER soil association map of the proposed mining sites.

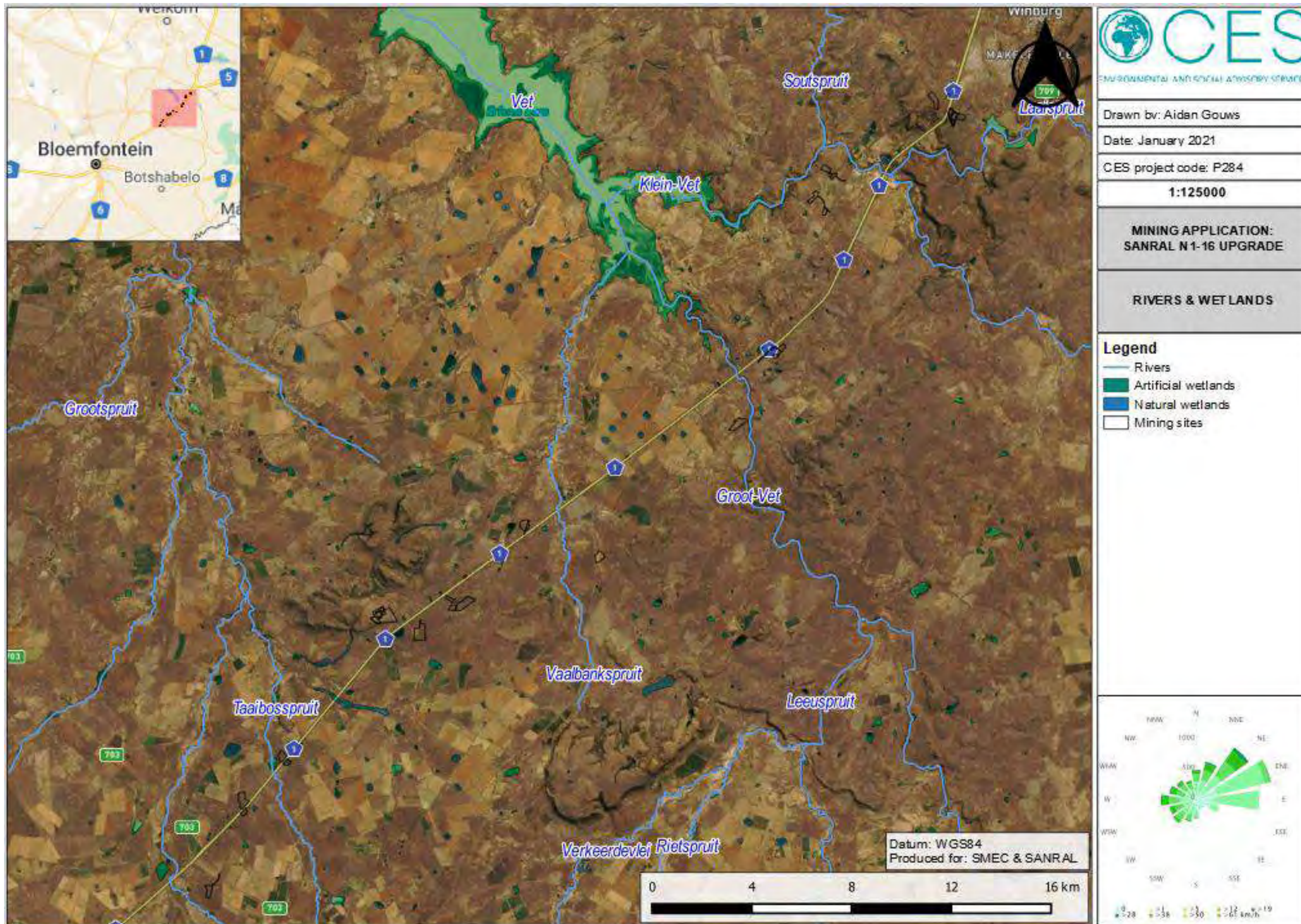


Figure 5: Wetland Types, Rivers and Drainage Lines map of the proposed mining sites.

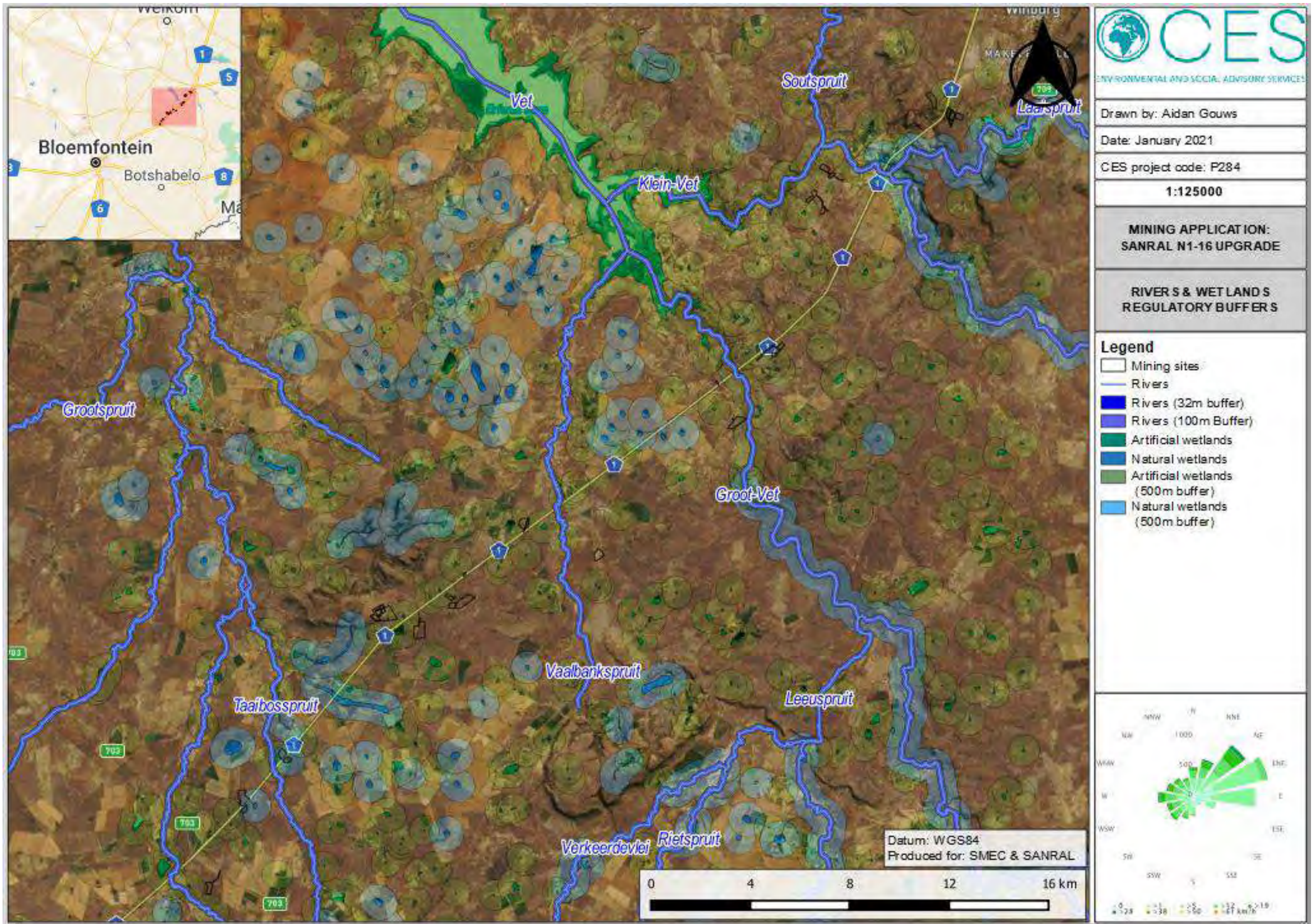


Figure 6: Wetland Types, Rivers and Drainage Lines, including regulatory buffers as per NEMA and NWA.

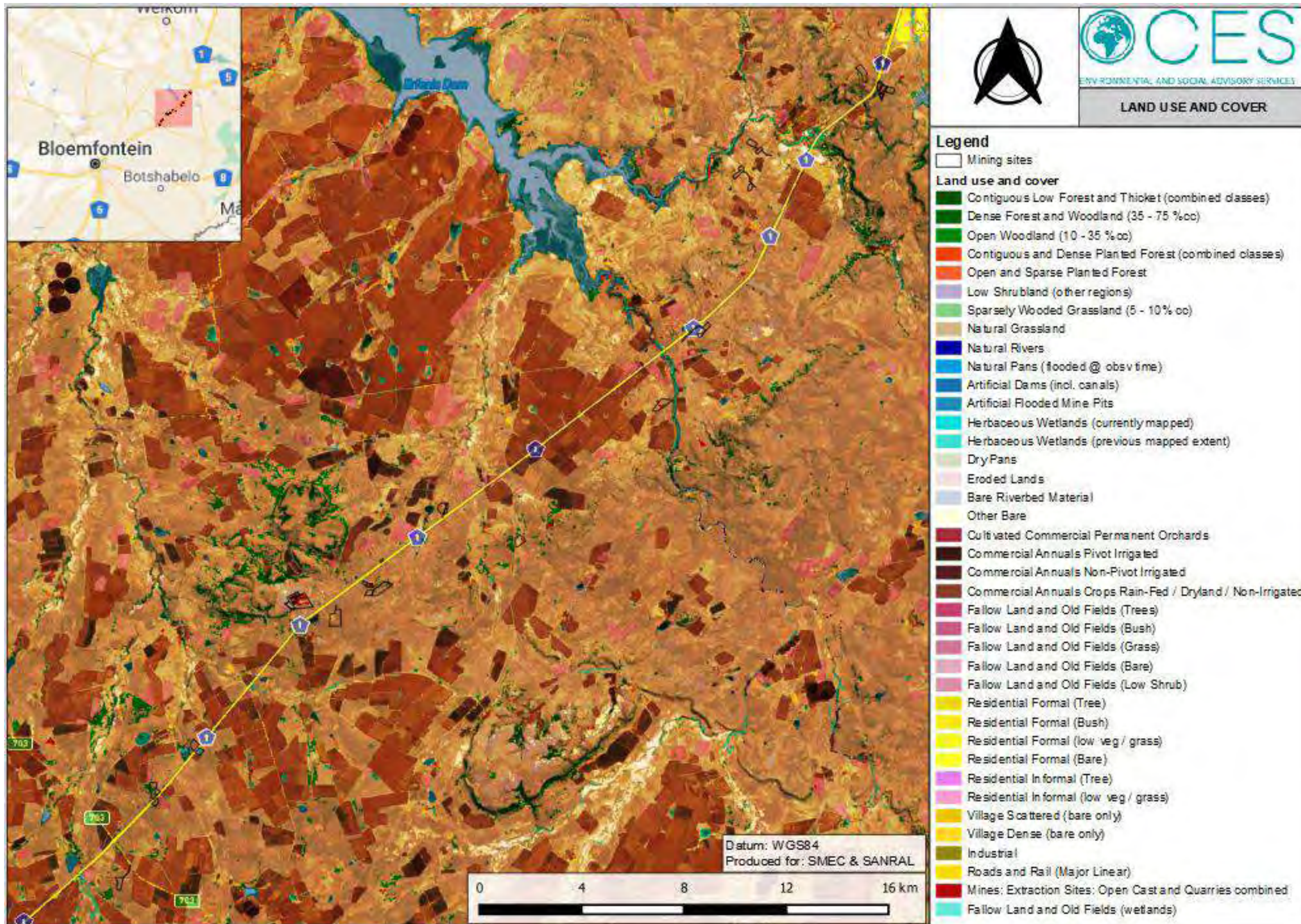


Figure 7: Land cover map of the proposed borrow pits and quarry sites.

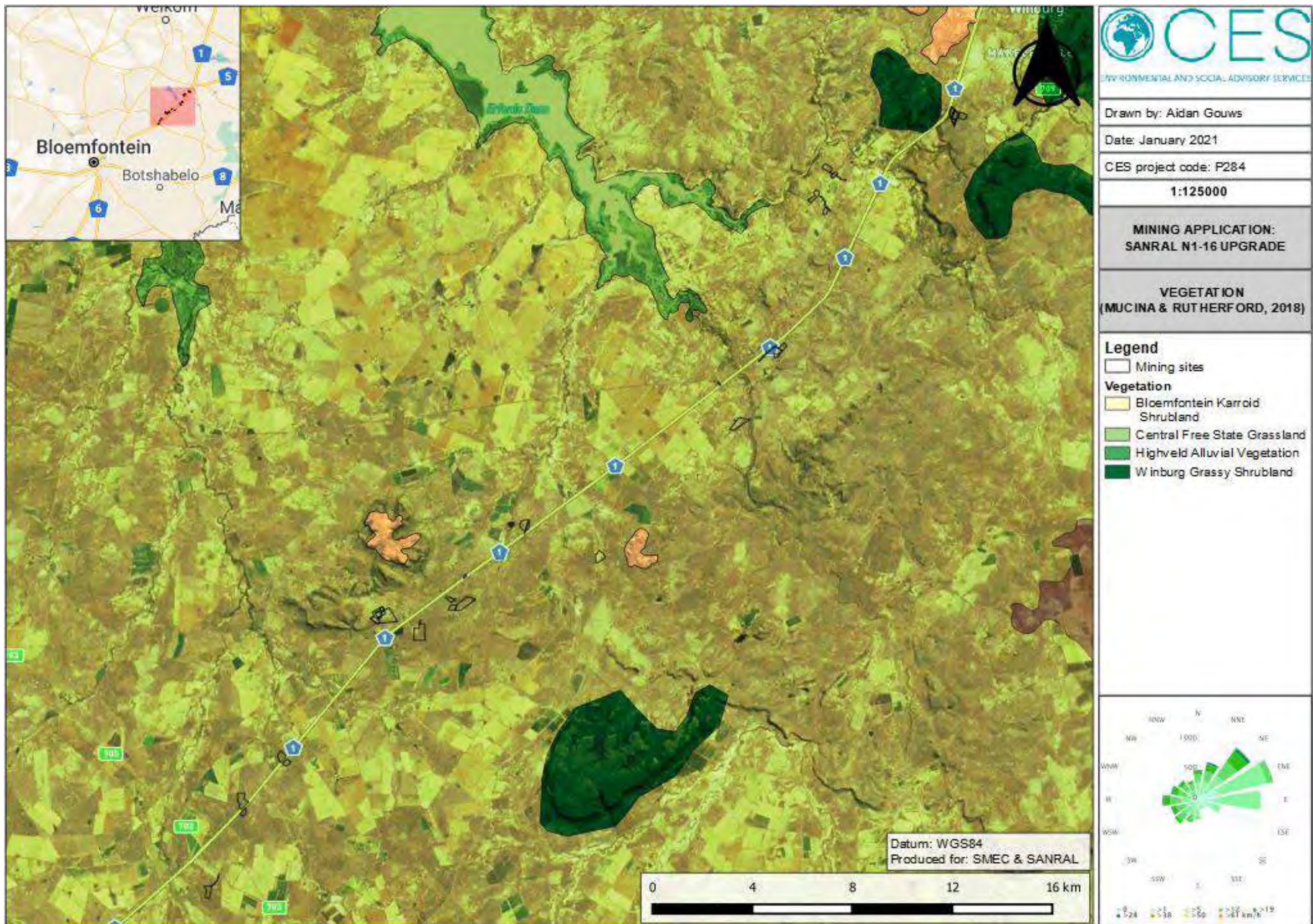


Figure 8: Mucina & Rutherford Vegetation map of the proposed mining sites.

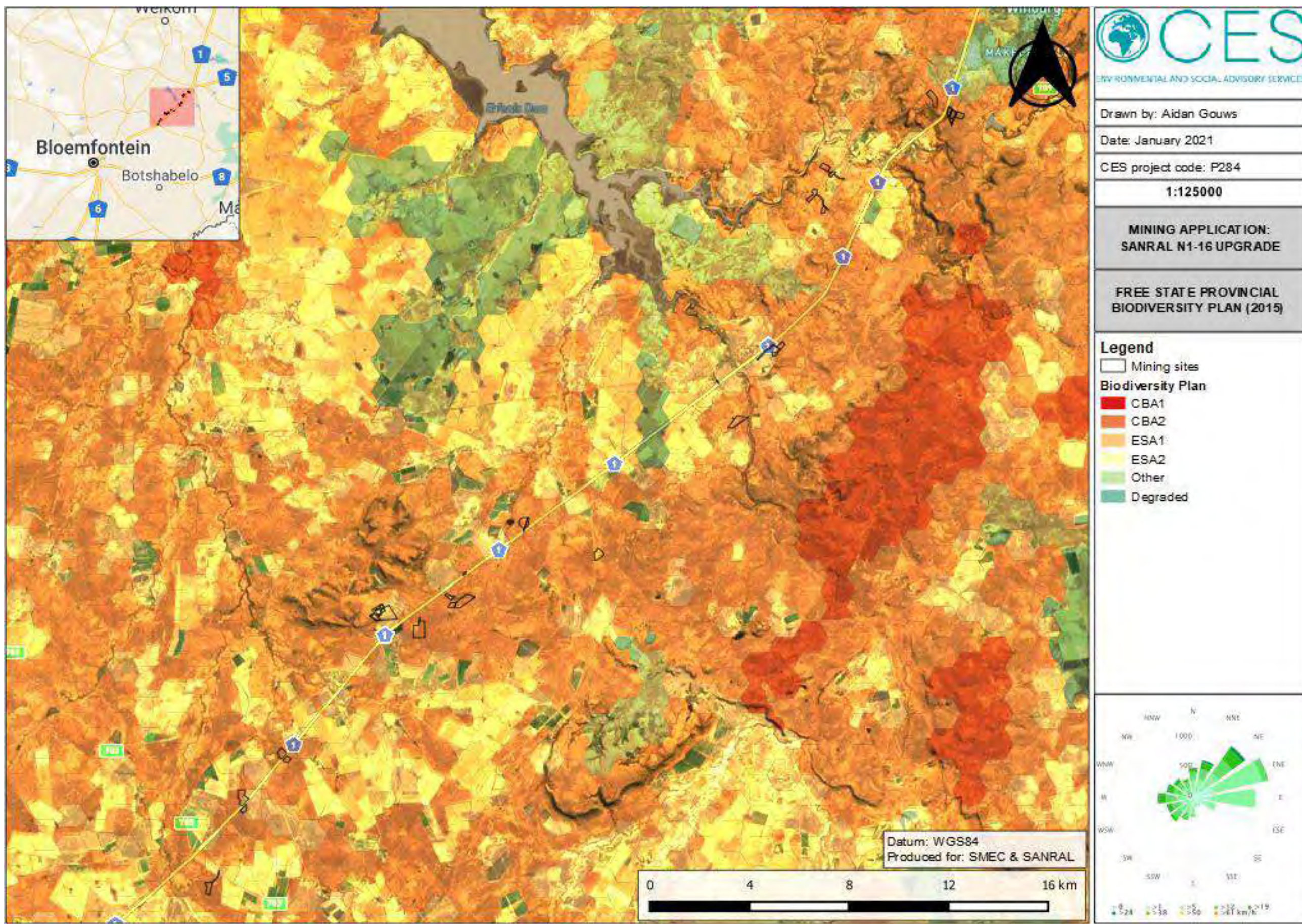


Figure 9: Free State Terrestrial Critical Biodiversity Areas (2015) map of the proposed mining sites.

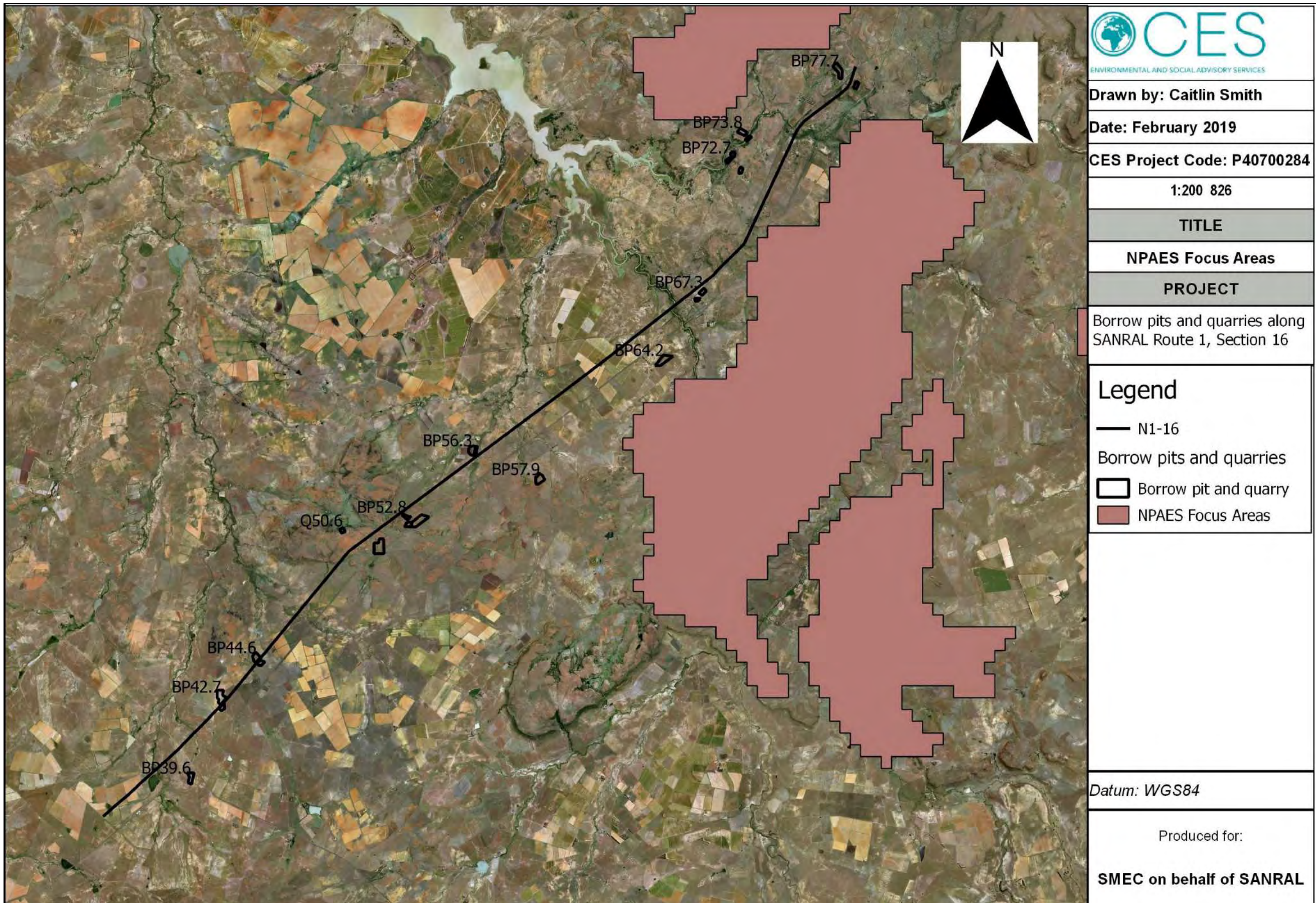


Figure 10: NPAES Focus Areas surrounding the proposed mining sites.

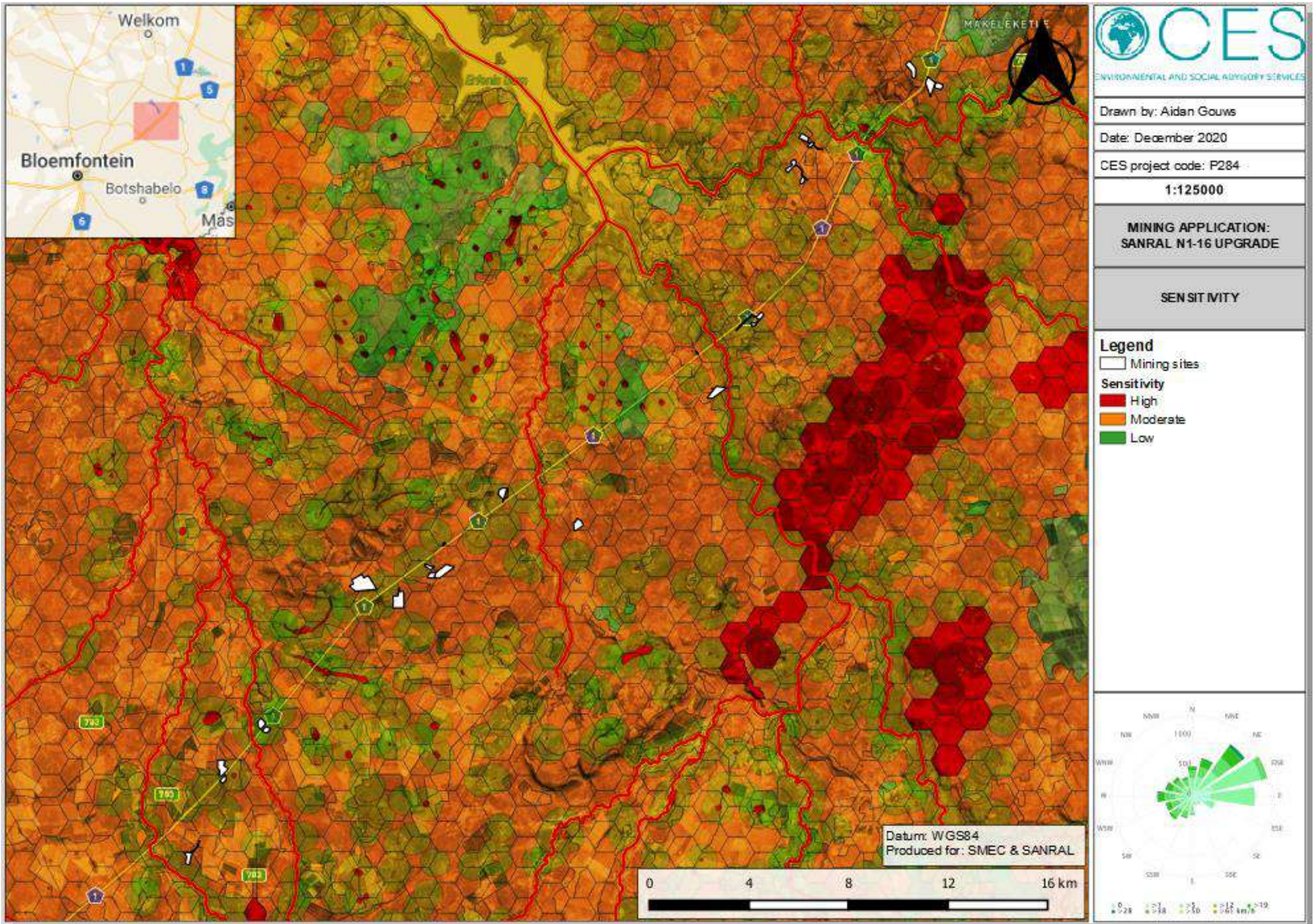


Figure 11: Sensitivities map of the proposed mining sites.

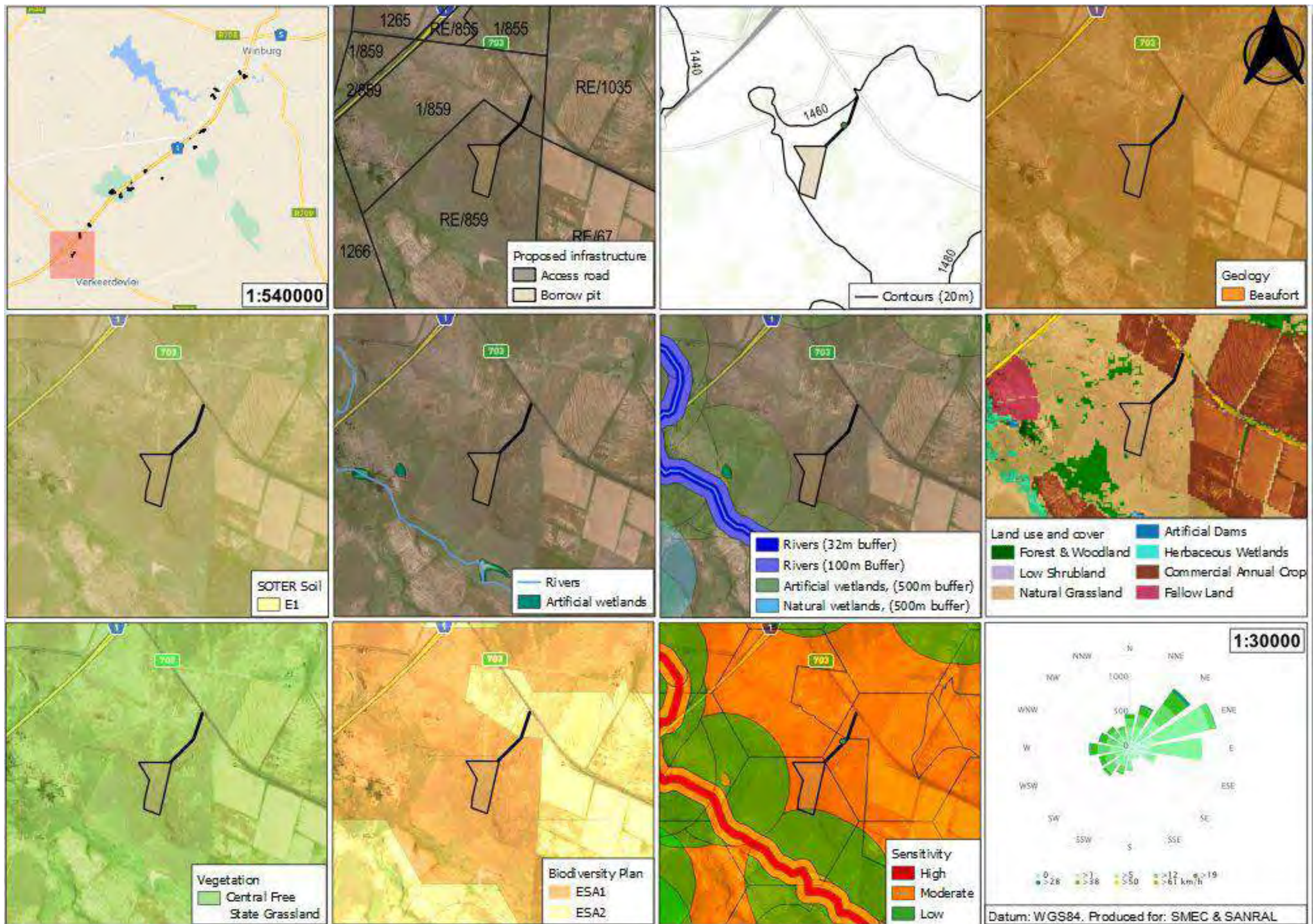


Figure 12: Site summary maps of proposed borrow pit 39.6.

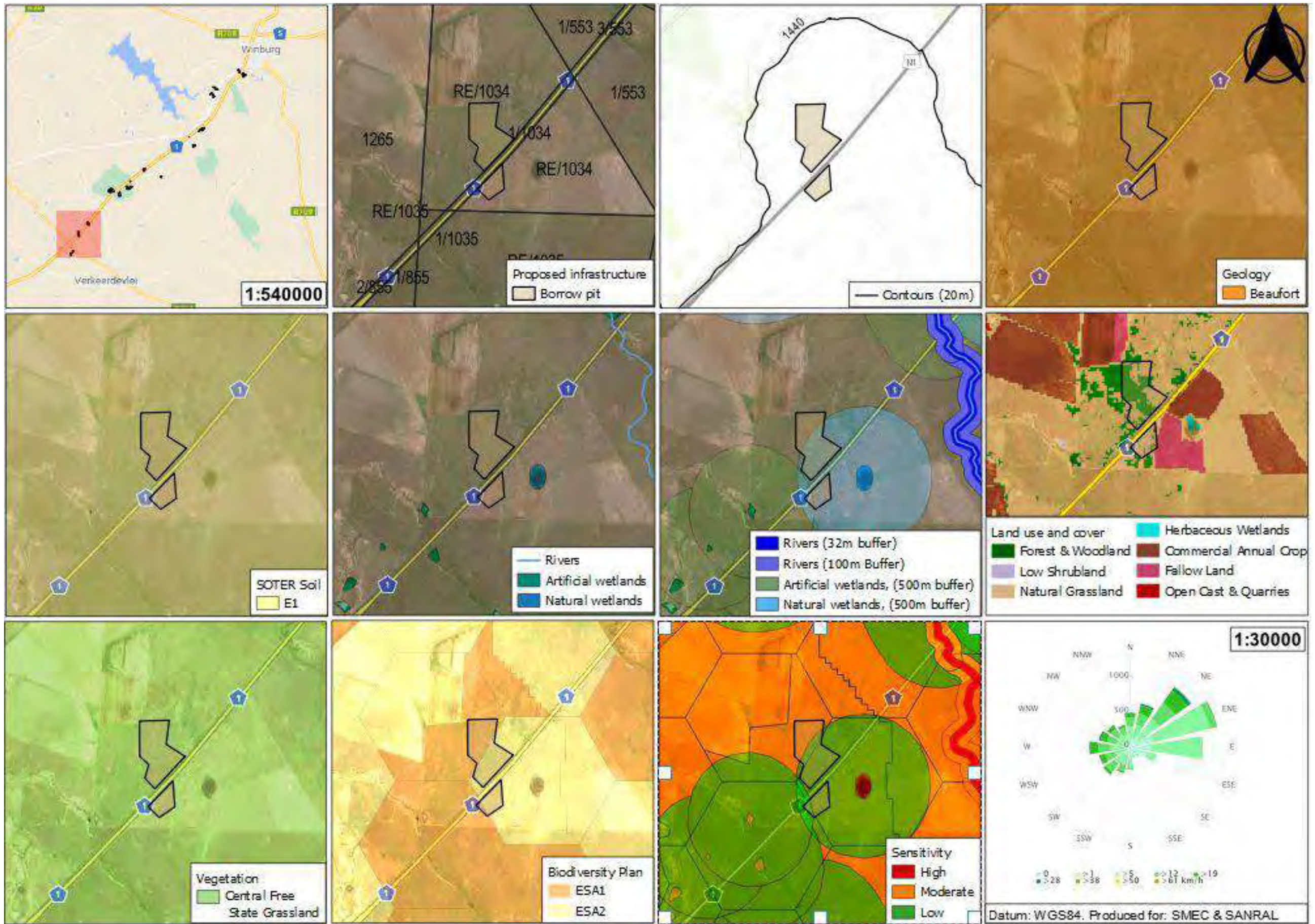


Figure 13: Site summary maps of proposed borrow pits 42.2 and 42.7.

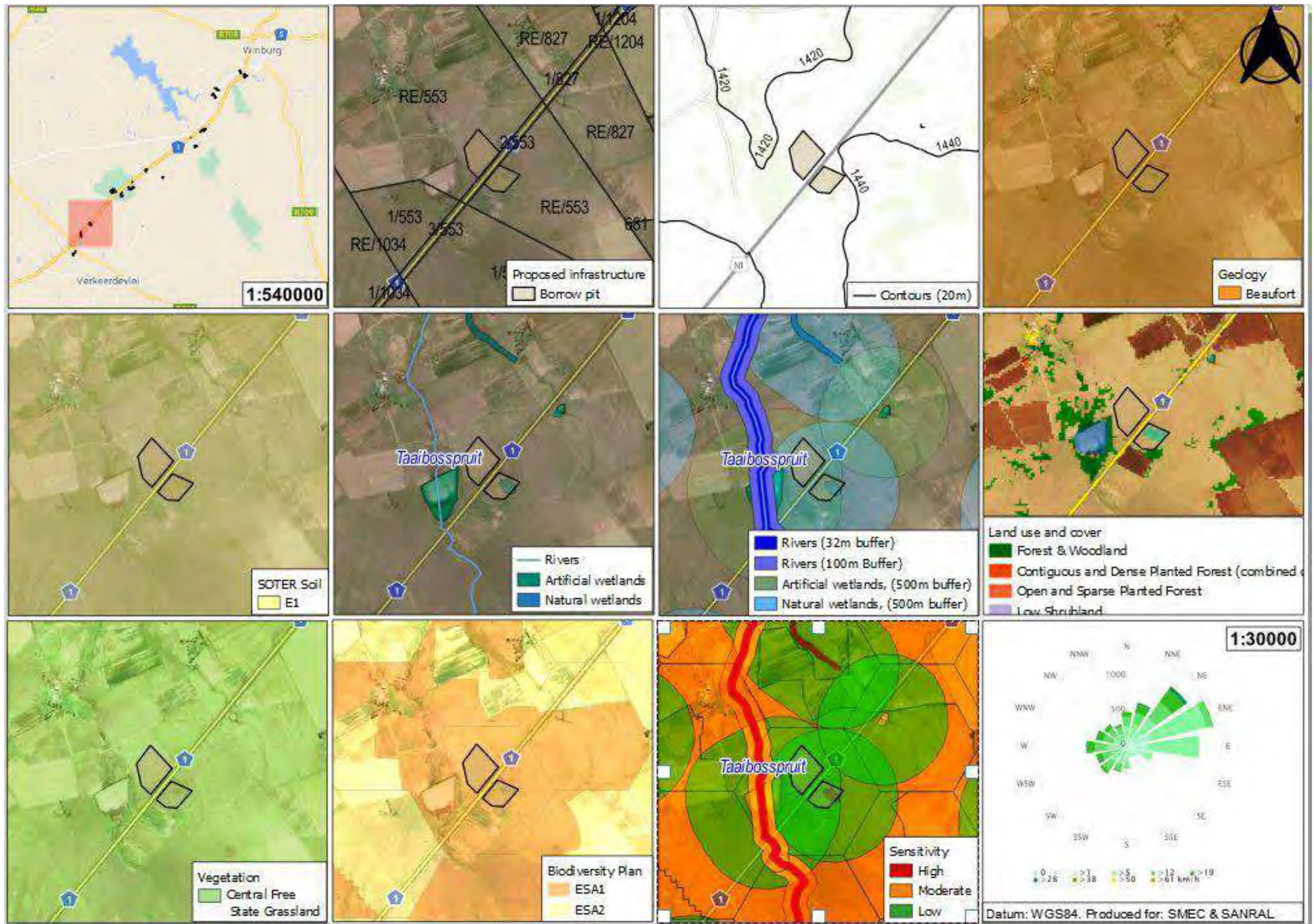


Figure 14: Site summary maps of proposed borrow pits 44.5 and 44.6.

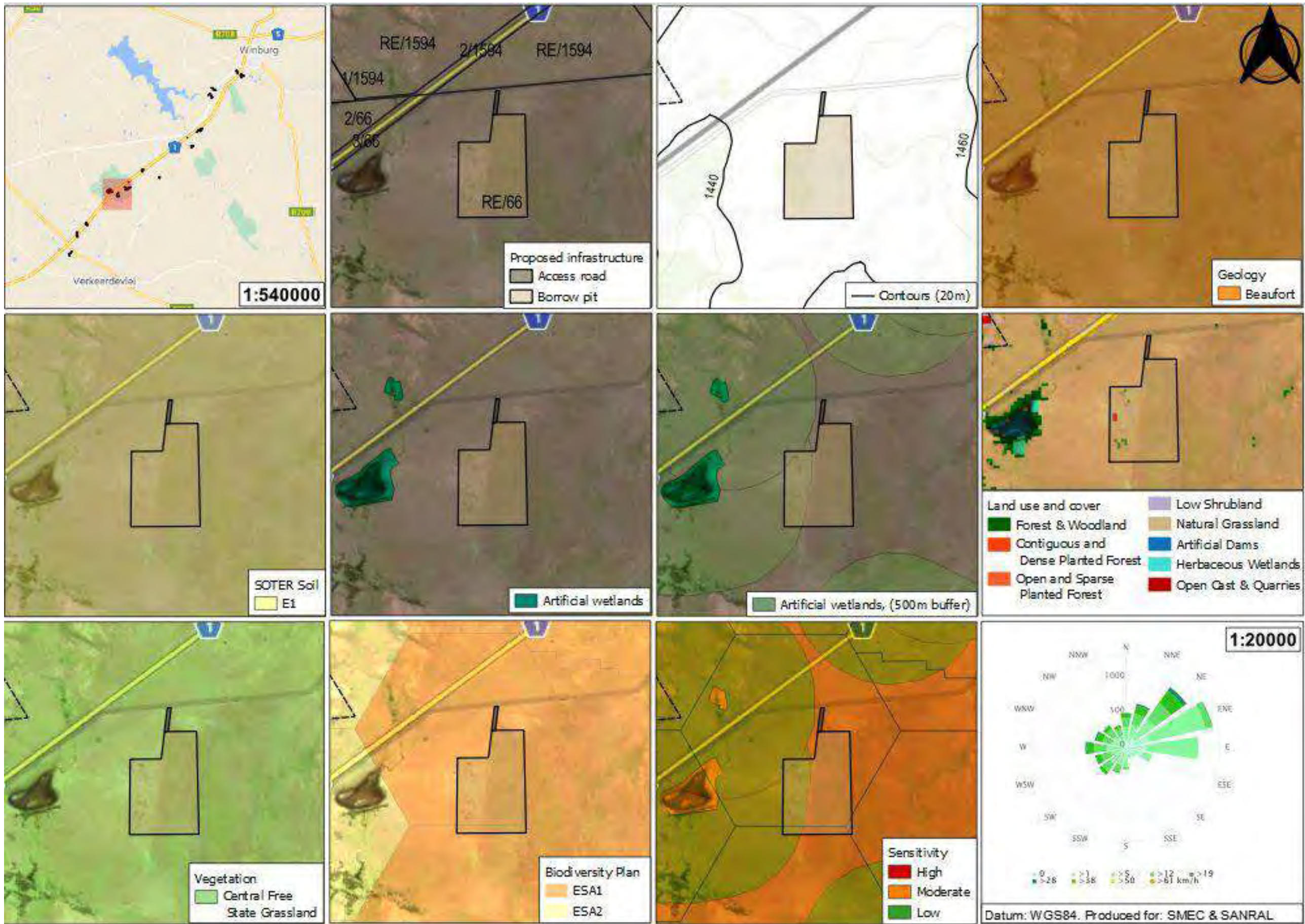


Figure 15: Site summary maps of proposed borrow pit 51.0.

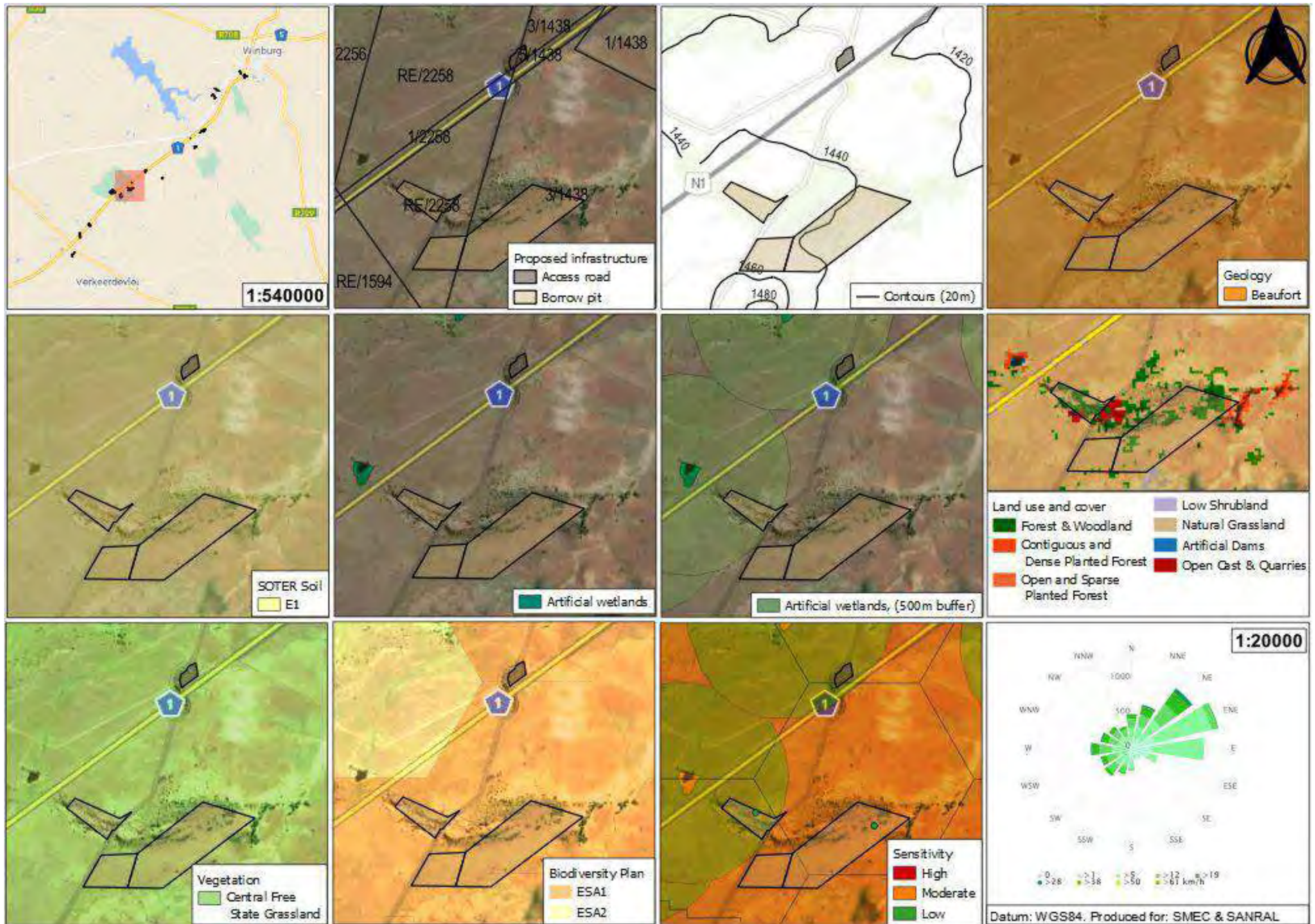


Figure 16: Site summary maps of proposed borrow pit 52.8.

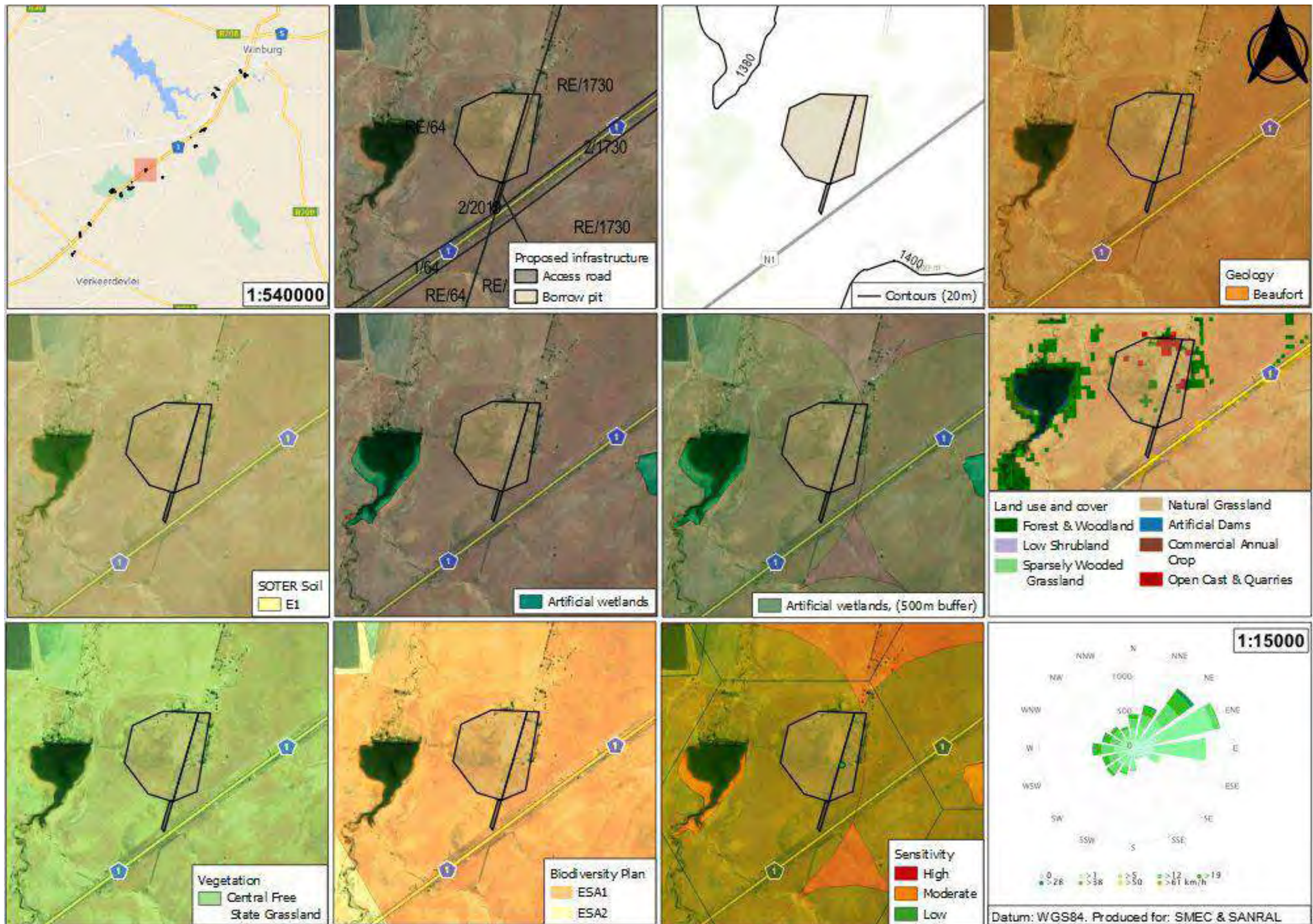


Figure 17: Site summary maps of proposed borrow pit 56.3.

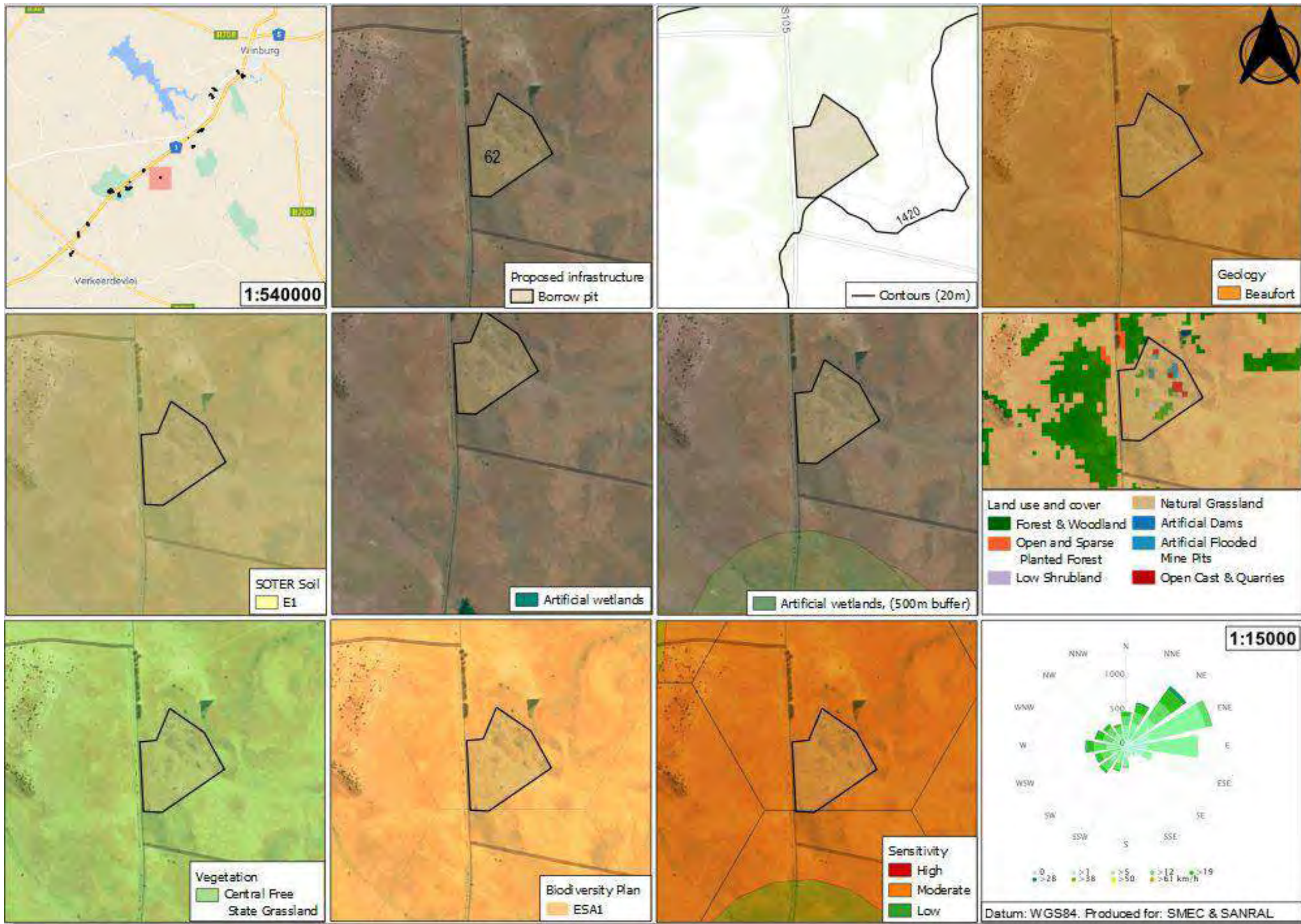


Figure 18: Site summary maps of proposed borrow pit 57.9.

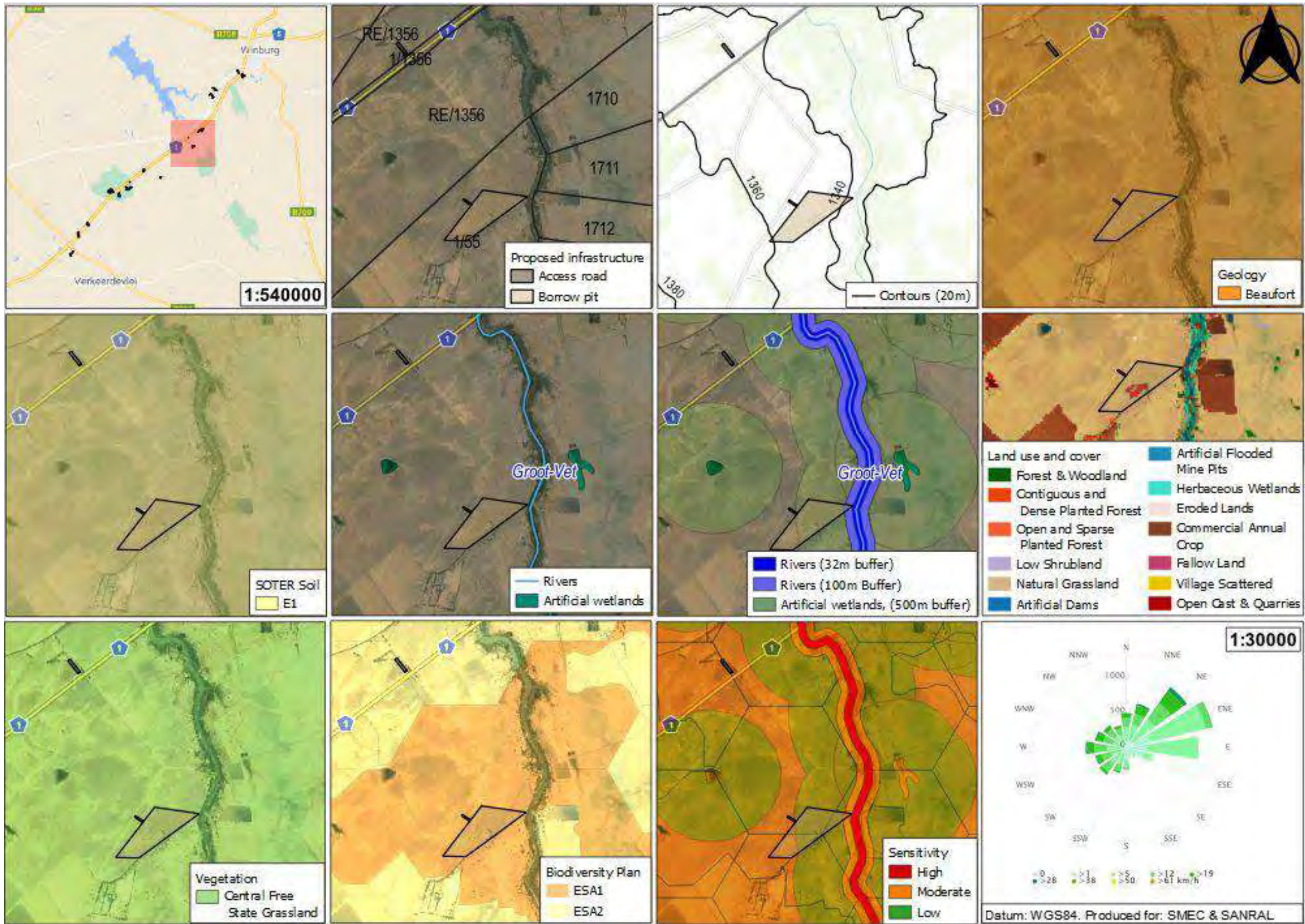


Figure 19: Site summary maps of proposed borrow pit 64.2.

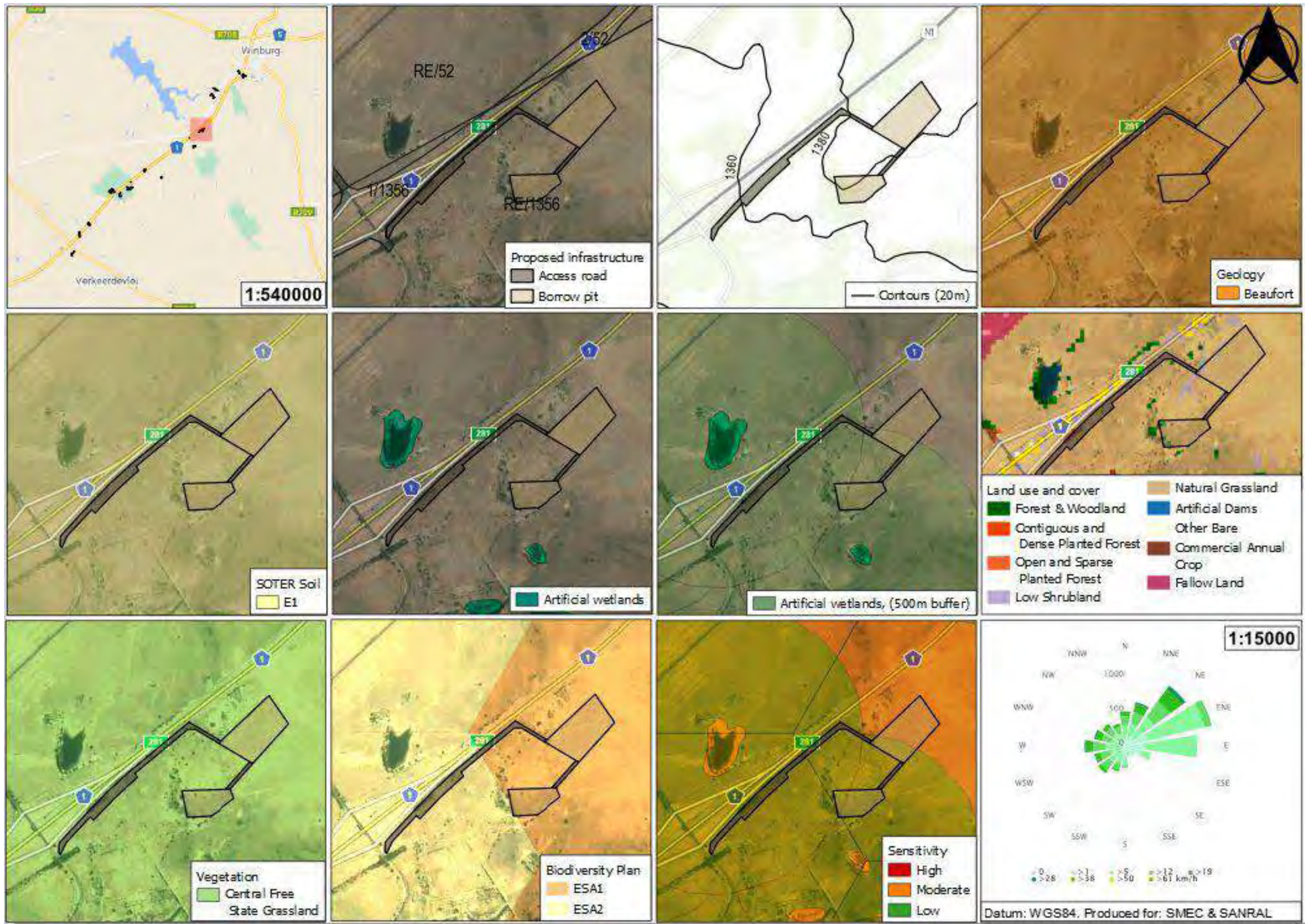


Figure 20: Site summary maps of proposed borrow pit 67.3.

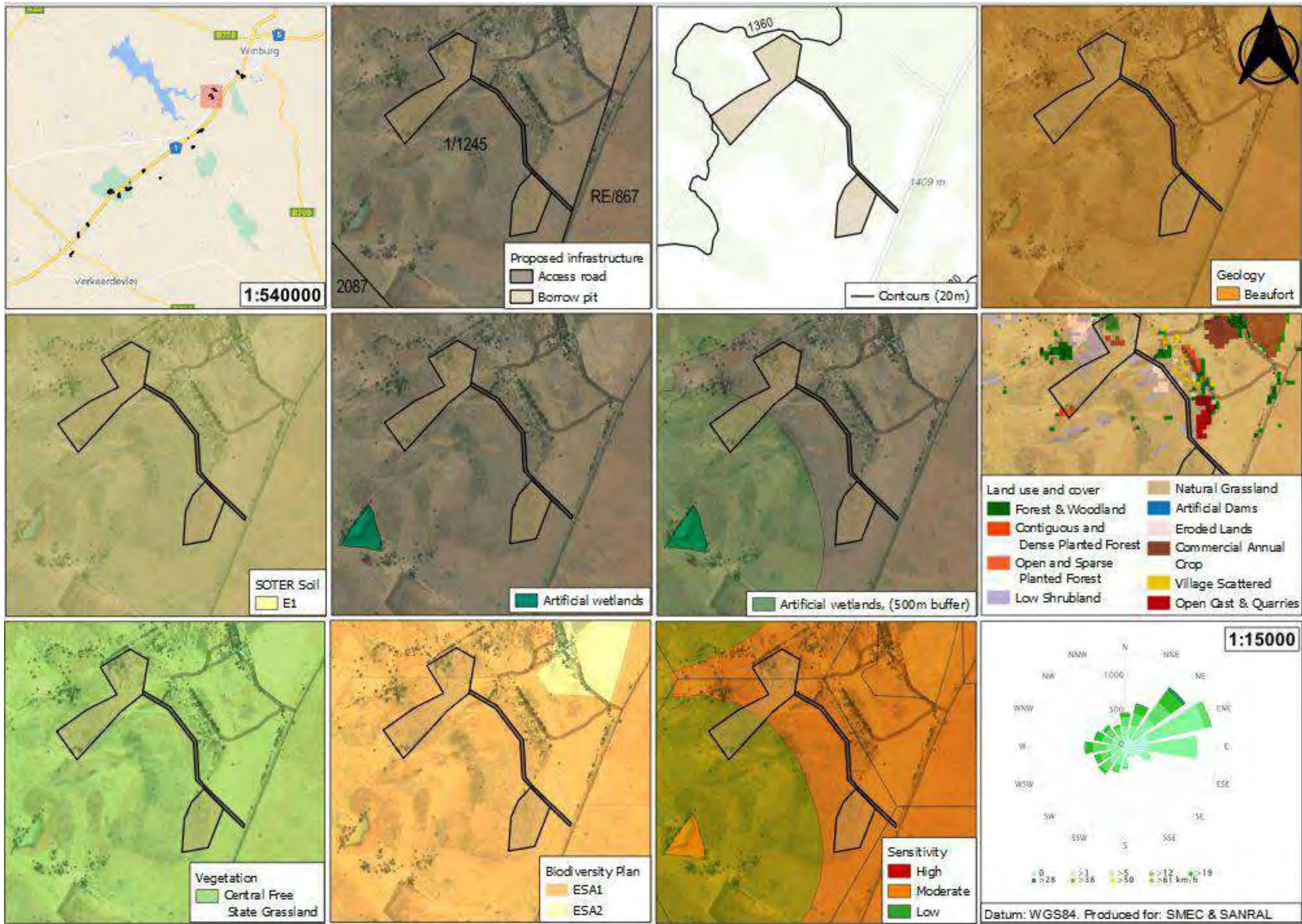


Figure 21: Site summary maps of proposed borrow pits 72.4 and 72.7.

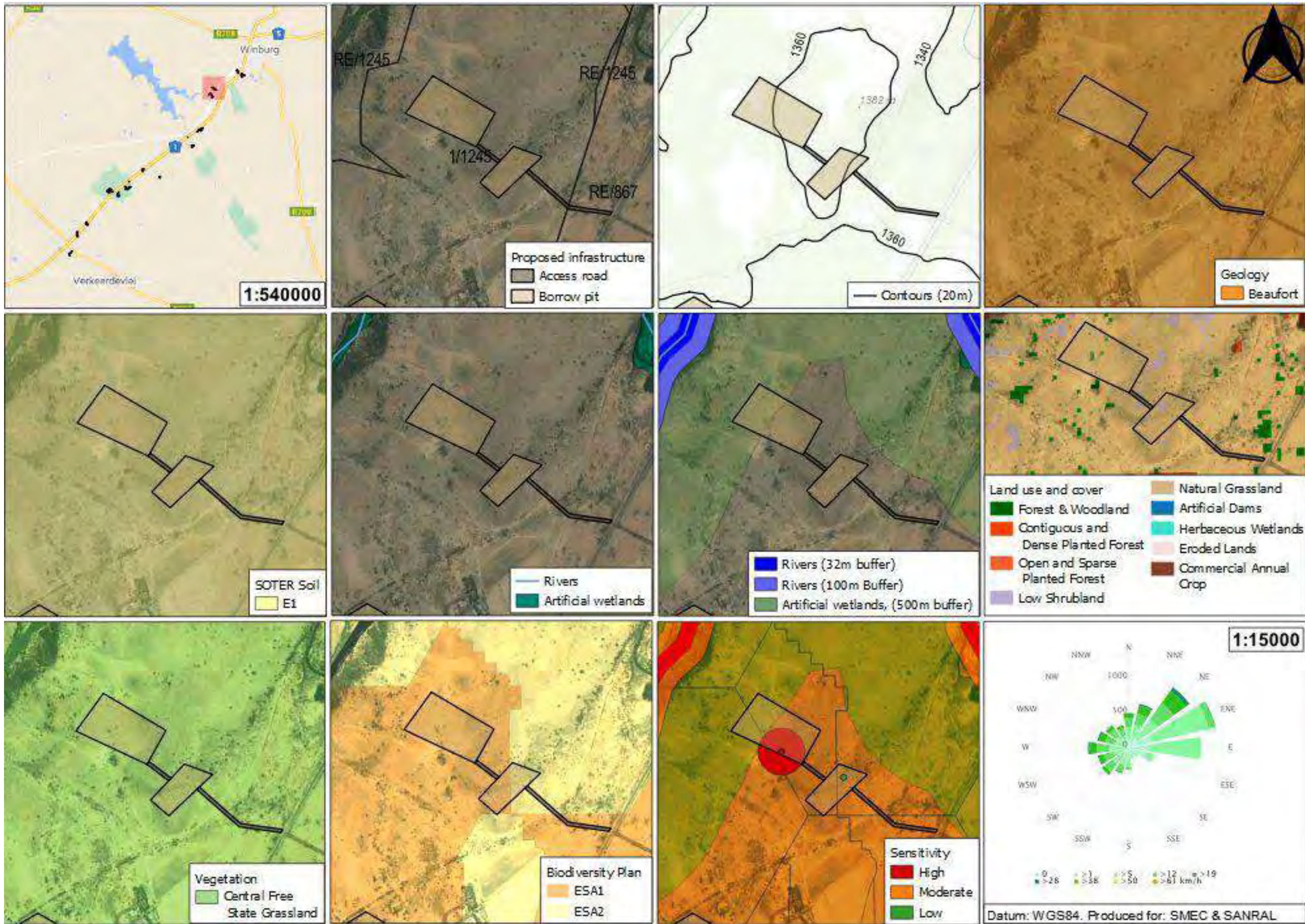


Figure 22: Site summary maps of proposed borrow pit 73.8.

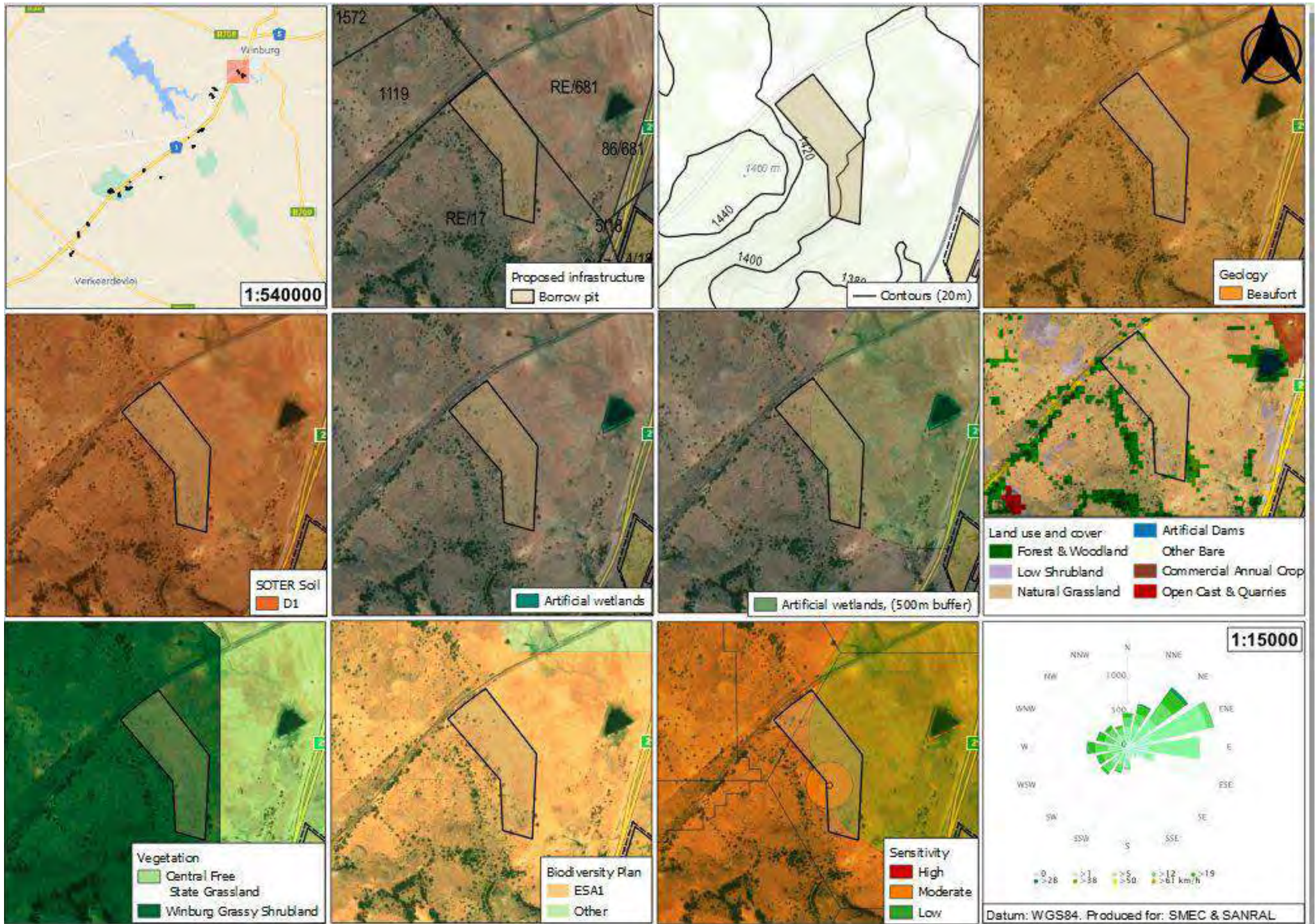


Figure 23: Site summary maps of proposed borrow pit 77.7.

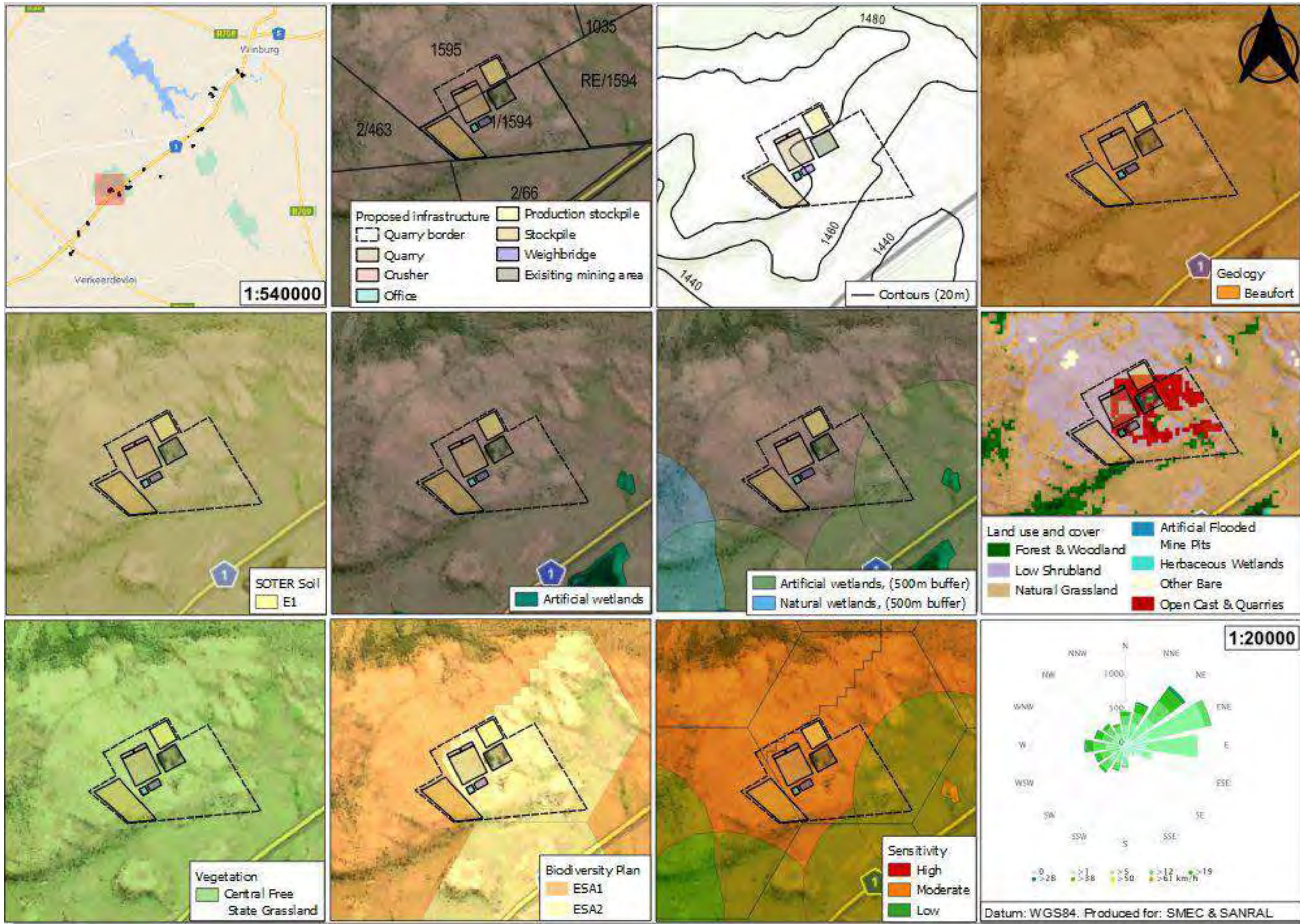


Figure 24: Site summary maps of proposed quarry 50.6.

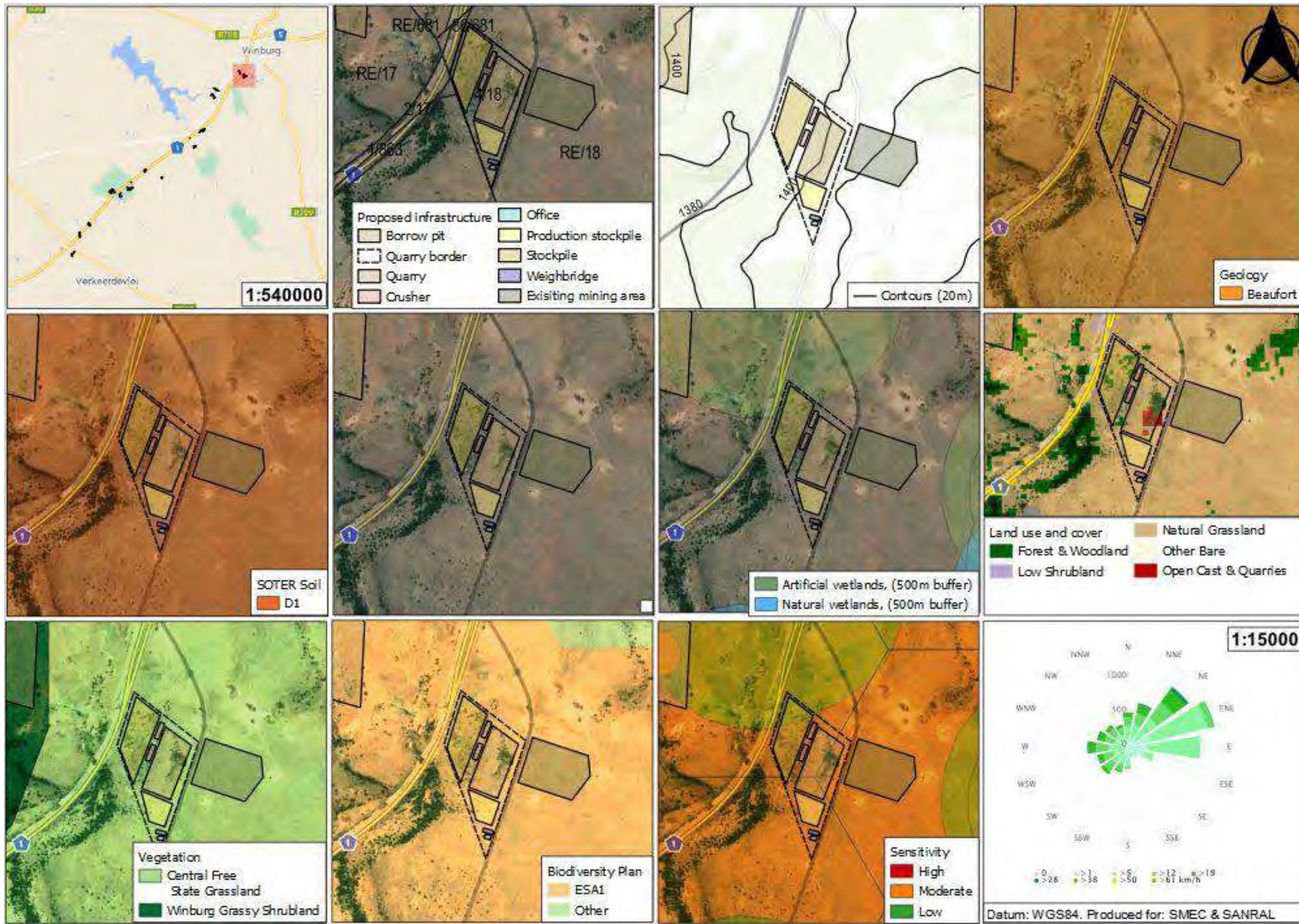


Figure 25: Site summary maps of proposed quarry 77.5.

APPENDIX A2 - SITE PHOTOGRAPHS

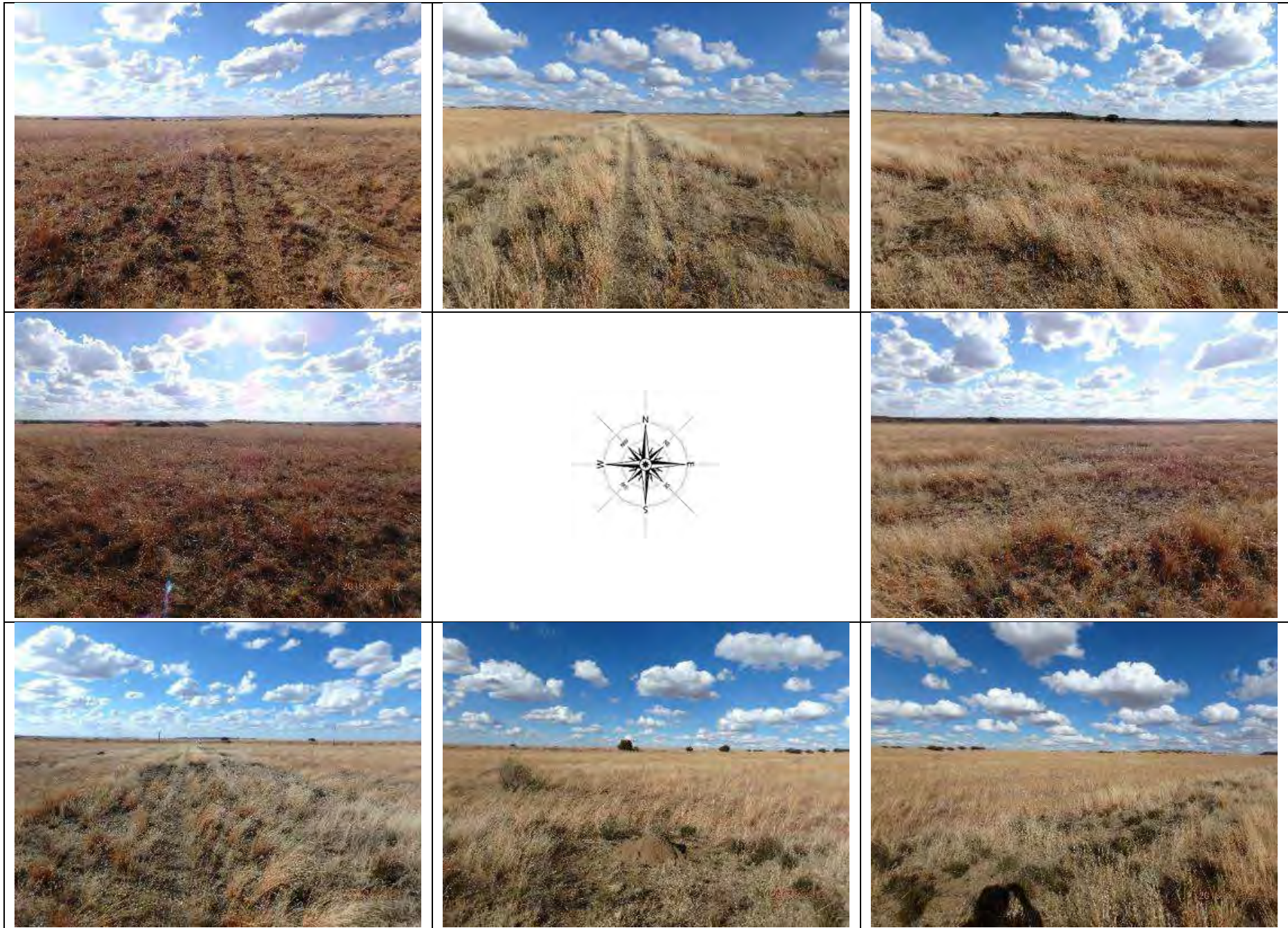


Plate 1: Site photographs for proposed borrow pit 39.6

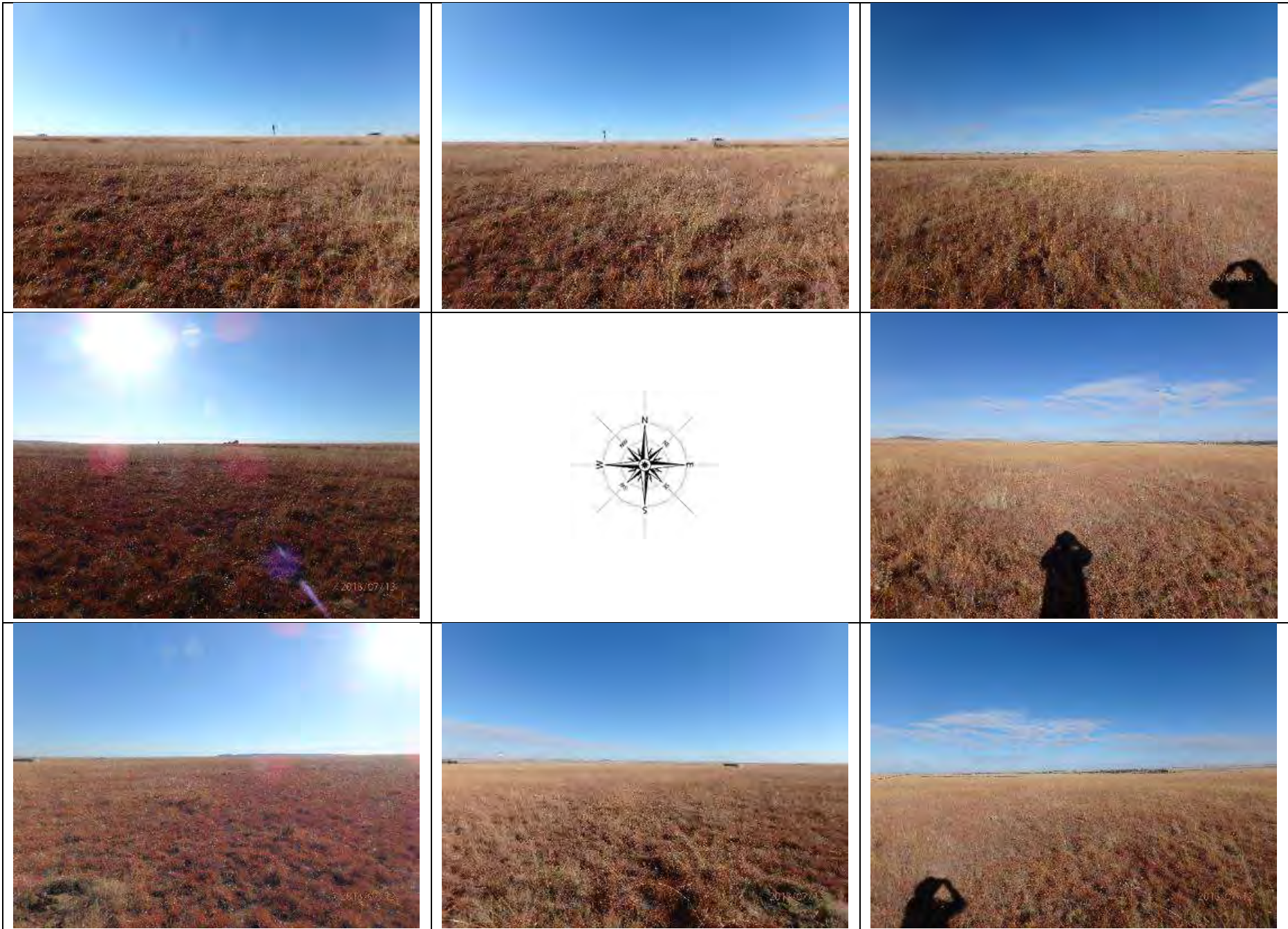


Plate 2: Site photographs for proposed borrow pit 42.2



Plate 3: Site photographs for proposed borrow pit 42.7

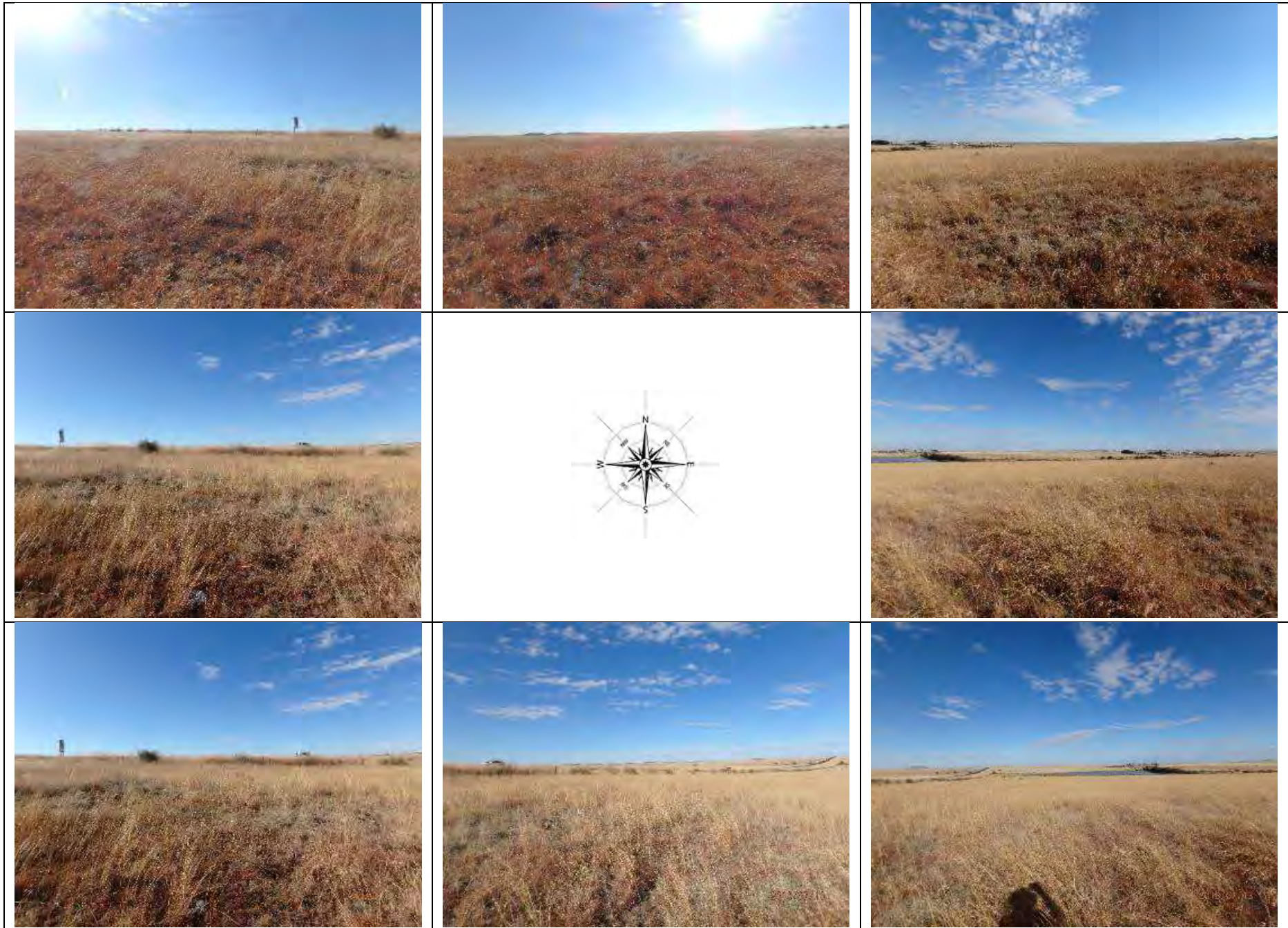


Plate 4: Site photographs for proposed borrow pit 44.5 and 44.6



Plate 5: Site photographs for proposed borrow pit 51.0



Plate 6: Site photographs for proposed borrow pit 52.8



Plate 7: Site photographs for proposed borrow pit 56.3



Plate 8: Site photographs for proposed borrow pit 57.9



Plate 9: Site photographs for proposed borrow pit 64.2



Plate 10: Site photographs for proposed borrow pit 67.3



Plate 11: Site photographs for proposed borrow pit 72.4 and 72.7



Plate 12: Site photographs for proposed borrow pit 73.8



Plate 13: Site photographs for proposed borrow pit 77.7

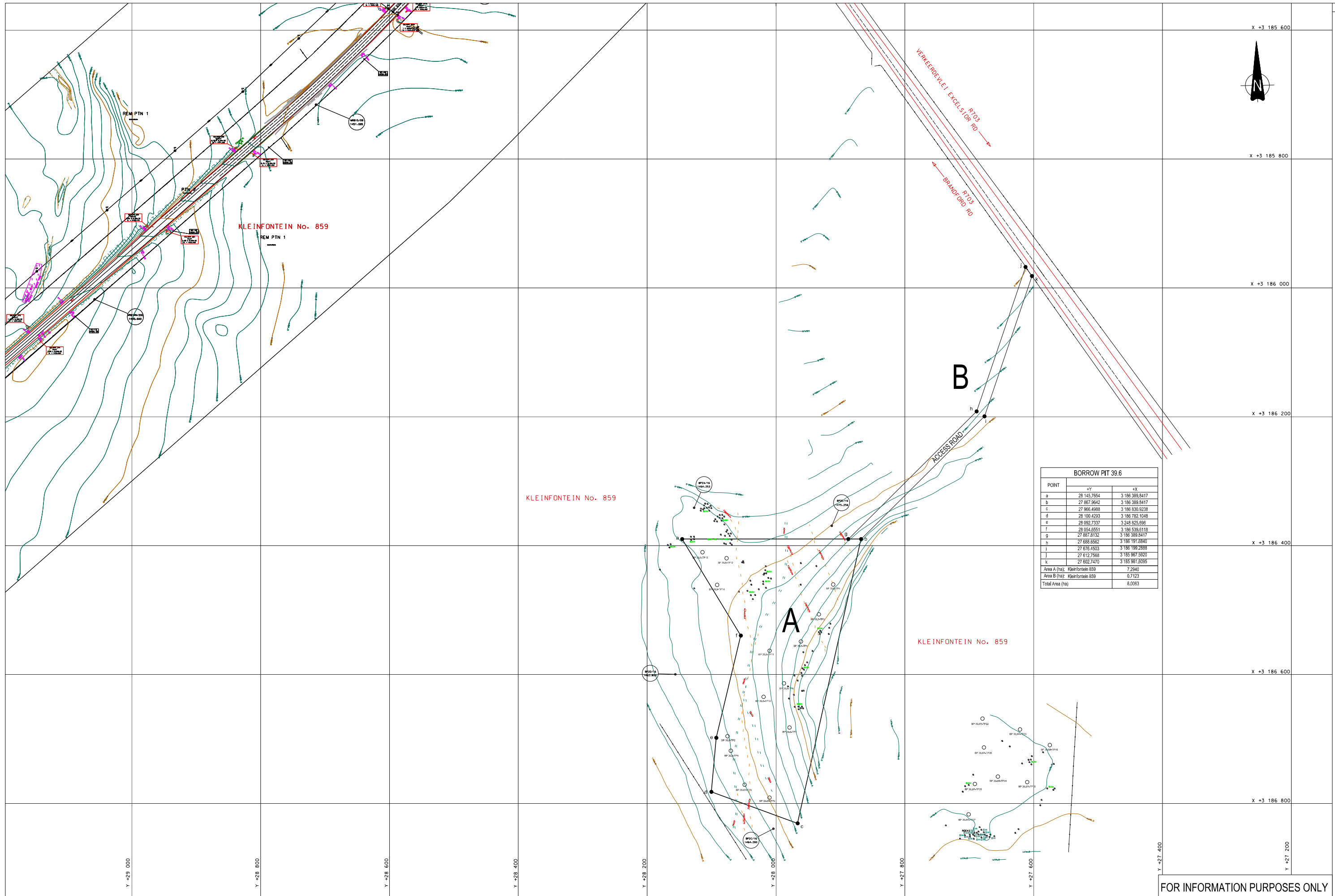


Plate 14: Site photographs for proposed quarry 50.6



Plate 15: Site photographs for proposed quarry 77.5

APPENDIX A3 - MINE LAYOUT DESIGNS



BORROW PIT 39.6		
POINT	+Y	+X
a	28 145,7854	3 186 588,8417
b	27 867,9642	3 186 588,8417
c	27 966,4988	3 186 630,9238
d	28 100,4293	3 186 782,1048
e	28 092,7337	3 248 825,696
f	28 054,6551	3 186 538,6119
g	27 887,8132	3 186 369,8417
h	27 688,6562	3 186 197,5640
i	27 676,4503	3 186 199,2888
j	27 612,7568	3 185 987,5820
k	27 602,7470	3 185 987,5820
Area A (ha): Kleinfontein 859	7,2940	
Area B (ha): Kleinfontein 859	0,7123	
Total Area (ha)	8,0063	

FOR INFORMATION PURPOSES ONLY

No.	DATE	REVISION	CONSULT. ENG.
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NAME		NAME	CB DU RAAN
Prof. Reg. No.		Prof. Reg. No.	970628
CHECKED BY		Date	
NAME		JANUARY 2017	
Prof. Reg. No.			

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THE SOUTH AFRICAN NATIONAL
ROADS AGENCY
REG. NO. 19553/0006/02/03

EASTERN REGION
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Tel: (033) 392 8100

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THIS ACCEPTANCE IS FOR PROCEDURAL AND ADMINISTRATIVE REVIEW PURPOSES ONLY AND DOES NOT ATTRACT LEGAL LIABILITY OR LIABILITY OF ANY KIND FROM WHATSOEVER CAUSE OR HOWEVER ARISING
for CEO SA NATIONAL ROADS AGENCY LTD.
Date:

PROJECT DESCRIPTION
THE UPGRADING OF NATIONAL ROUTE 1
SECTION 16 FROM ZANDKRAAL (km 35,4) TO
WINBURG SOUTH (km 78,0)
DRAWING DESCRIPTION
PROPOSED MATERIAL SOURCES LOCALITY PLAN

PROJECT NUMBER	N001-160-2018/1F	
DRAWING LOCATION DATA	START	END
ROUTE	N1	N1
SECTION	16	16
DRAWING DISTANCE	35,4	78,0
DRAWING TYPE		
BRIDGE/STRUCTURE No.		
CONSULTANT DRAWING No.	IC	VER
SANRAL DOC #		V1

SCALE: SHEET OF

BORROW PIT 42.7		
POINT	+Y	+X
a	26 841,4993	3 183 717,2370
b	26 927,6156	3 183 629,4407
c	26 894,6262	3 183 514,7373
d	26 971,6009	3 183 446,4327
e	26 973,4371	3 183 149,1131
f	26 722,5389	3 183 142,2108
g	26 748,3579	3 183 344,3659
h	26 589,0905	3 183 444,2002
Area (ha) A: Die Pan 1034		13,0195

BORROW PIT 42.2		
POINT	+Y	+X
A	26 900,0137	3 183 866,9210
B	26 806,3216	3 183 958,5737
C	26 673,8243	3 183 867,8170
D	26 690,4944	3 183 662,3200
Area (ha) B: Die Pan 1034		3,4687

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			CONSULT. ENG.	

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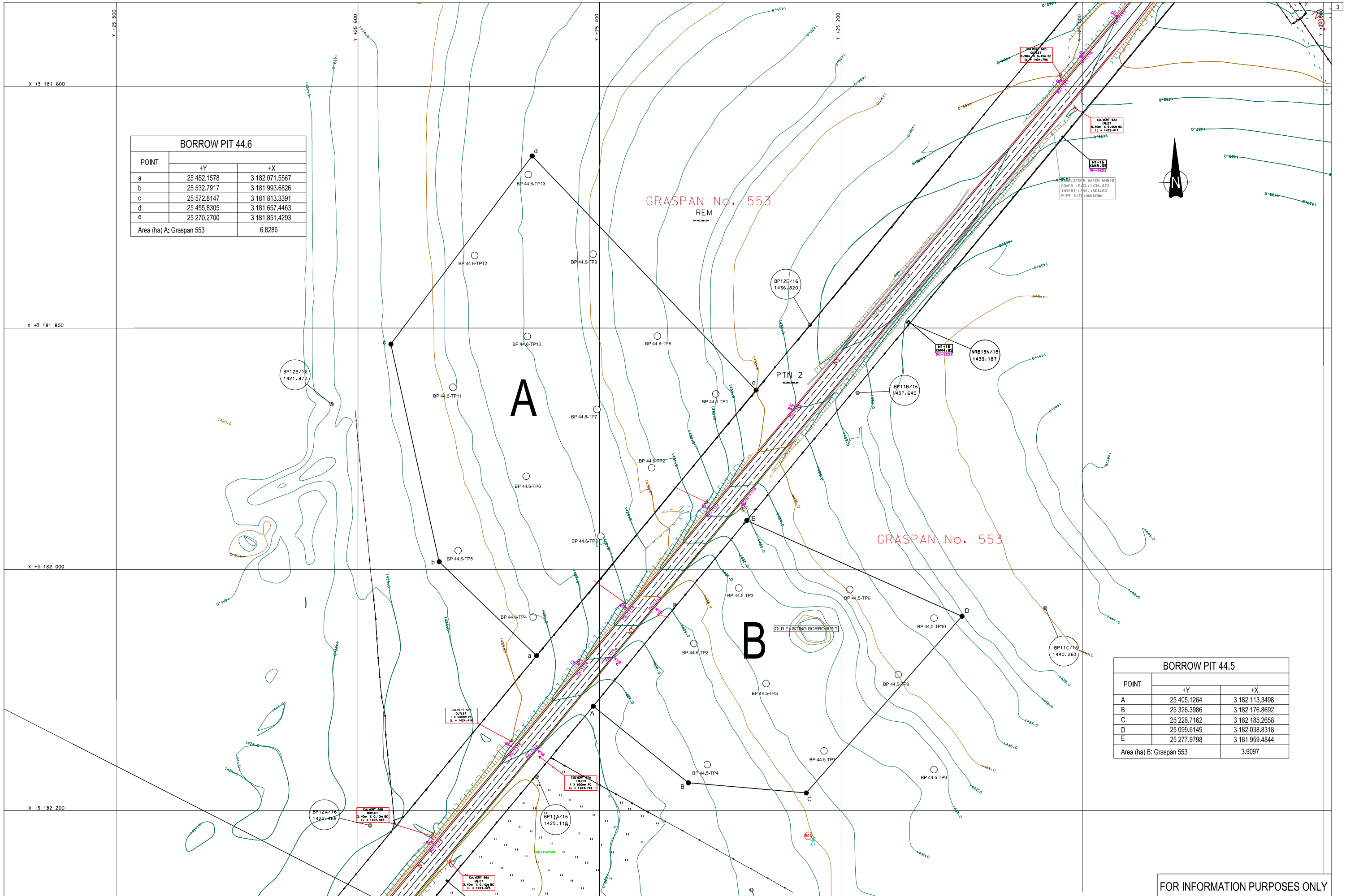
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DRAWING LOCATION DATA	START	END
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SECTION	16	16
DRAWING DISTANCE	35.4	78.0
DRAWING TYPE		
BRIDGE STRUCTURE No.		
CONSULTANT DRAWING No.	IC	
SANRAL DOC #		

SCALE: SHEET OF VER V1

BORROW PIT 44.6		
POINT	+Y	+X
a	25 452.1578	3 182 071.5567
b	25 532.7917	3 181 993.6826
c	25 572.8147	3 181 813.3391
d	25 455.8305	3 181 657.4463
e	25 270.2700	3 181 851.4293
Area (ha) A: Graspans 553		6.8286

BORROW PIT 44.5		
POINT	+Y	+X
A	25 405.1264	3 182 113.3498
B	25 326.3986	3 182 176.8692
C	25 228.7162	3 182 185.2658
D	25 099.6149	3 182 038.8318
E	25 277.9798	3 181 959.4844
Area (ha) B: Graspans 553		3.9097



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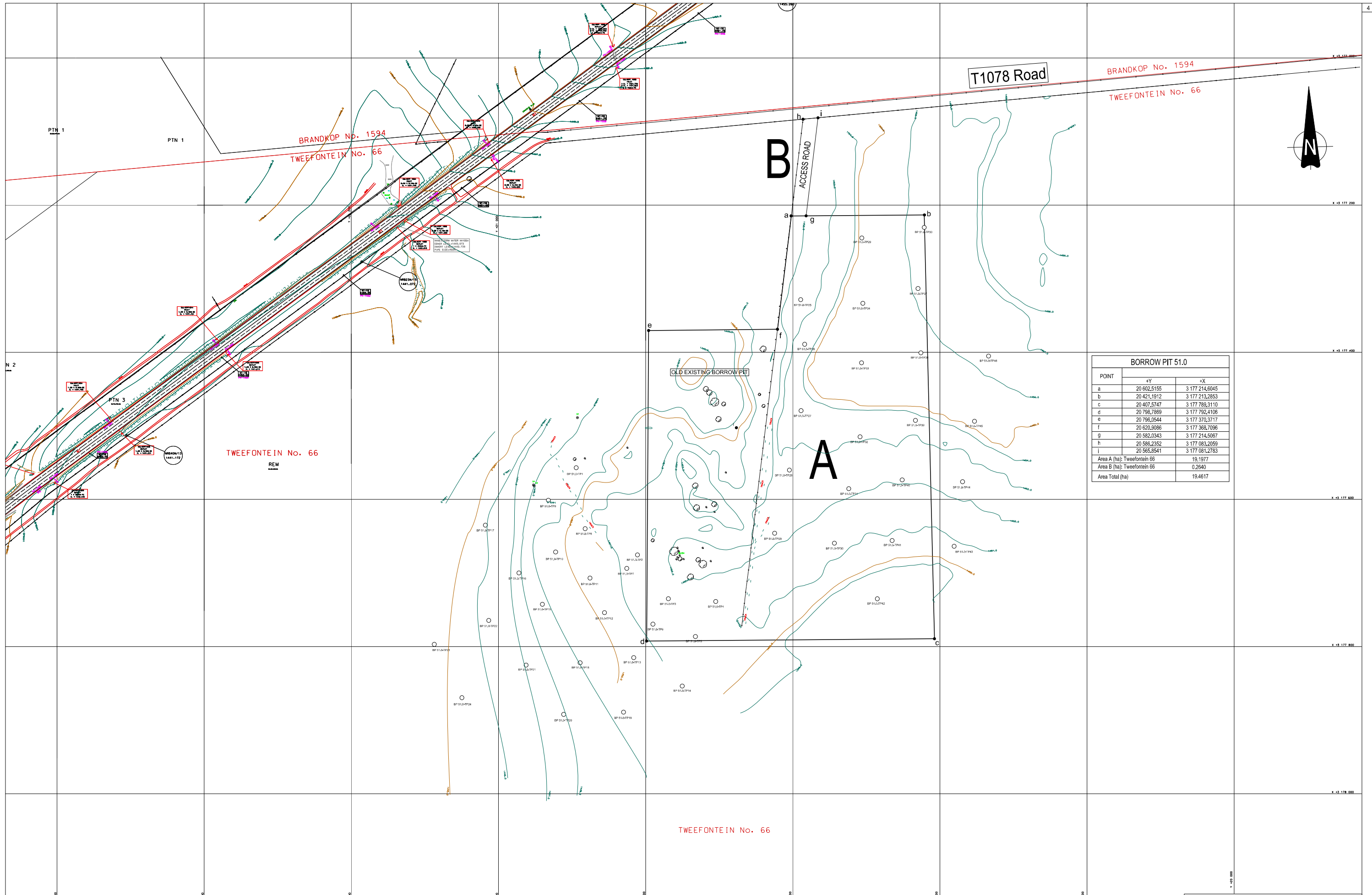


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SCALE: _____ **SHEET** _____ **OF** _____

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SECTION	16	16	
DRAWING DISTANCE	35,4	78,0	
DRAWING TYPE			
BRIDGE/STRUCTURE No.			
CONSULTANT DRAWING No.	IC	VER	
SANRAL DOC #	V1		



BORROW PIT 51.0		
POINT	+Y	+X
a	20 602,5155	3 177 214,6045
b	20 421,1912	3 177 213,2853
c	20 407,5747	3 177 789,3110
d	20 798,7869	3 177 792,4106
e	20 798,0544	3 177 370,3717
f	20 620,9086	3 177 368,7096
g	20 582,0343	3 177 214,5067
h	20 586,2352	3 177 083,2059
i	20 565,8541	3 177 081,2783
Area A (ha): Tweefontein 66	19,1977	
Area B (ha): Tweefontein 66	0,2840	
Area Total (ha)	19,4817	

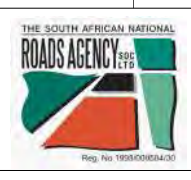
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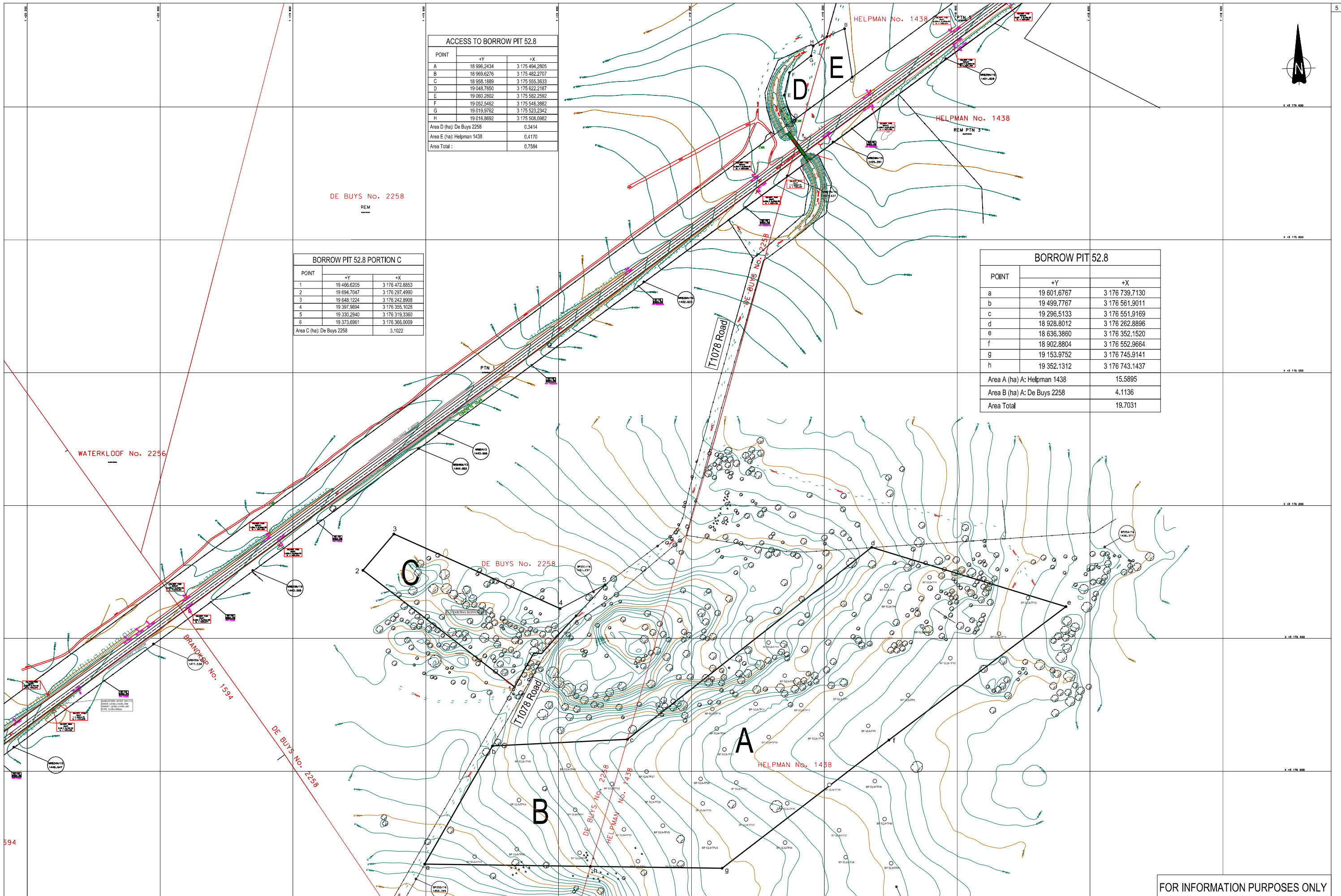
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DRAWING TYPE			
BRIDGE/STRUCTURE No.	IC	VER	
CONSULTANT DRAWING No.		V1	
SANRAL DOC #			

SCALE : SHEET OF

ACCESS TO BORROW PIT 52.8		
POINT	+Y	+X
A	18 996,2434	3 175 494,2805
B	18 969,6276	3 175 482,2707
C	18 958,1889	3 175 555,3633
D	19 048,7850	3 175 622,2187
E	19 060,2802	3 175 582,2592
F	19 052,5462	3 175 548,3882
G	19 019,9762	3 175 523,2342
H	19 016,8692	3 175 508,0982
Area D (ha): De Buys 2258		0,3414
Area E (ha): Helpman 1438		0,4170
Area Total :		0,7584

BORROW PIT 52.8 PORTION C		
POINT	+Y	+X
1	19 466,6205	3 176 472,8853
2	19 694,7047	3 176 297,4990
3	19 648,1224	3 176 242,8908
4	19 397,9894	3 176 355,1028
5	19 330,2940	3 176 319,3360
6	19 373,6961	3 176 368,0009
Area C (ha): De Buys 2258		3,1022

BORROW PIT 52.8		
POINT	+Y	+X
a	19 601,6767	3 176 739,7130
b	19 499,7767	3 176 561,9011
c	19 296,5133	3 176 551,9169
d	18 928,8012	3 176 262,8896
e	18 636,3860	3 176 352,1520
f	18 902,8804	3 176 552,9664
g	19 153,9752	3 176 745,9141
h	19 352,1312	3 176 743,1437
Area A (ha) A: Helpman 1438		15,5895
Area B (ha) A: De Buys 2258		4,1136
Area Total		19,7031



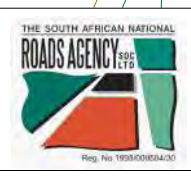
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CHECKED BY		DATE	
NAME		DATE	JANUARY 2017
Prof. Reg. No.			

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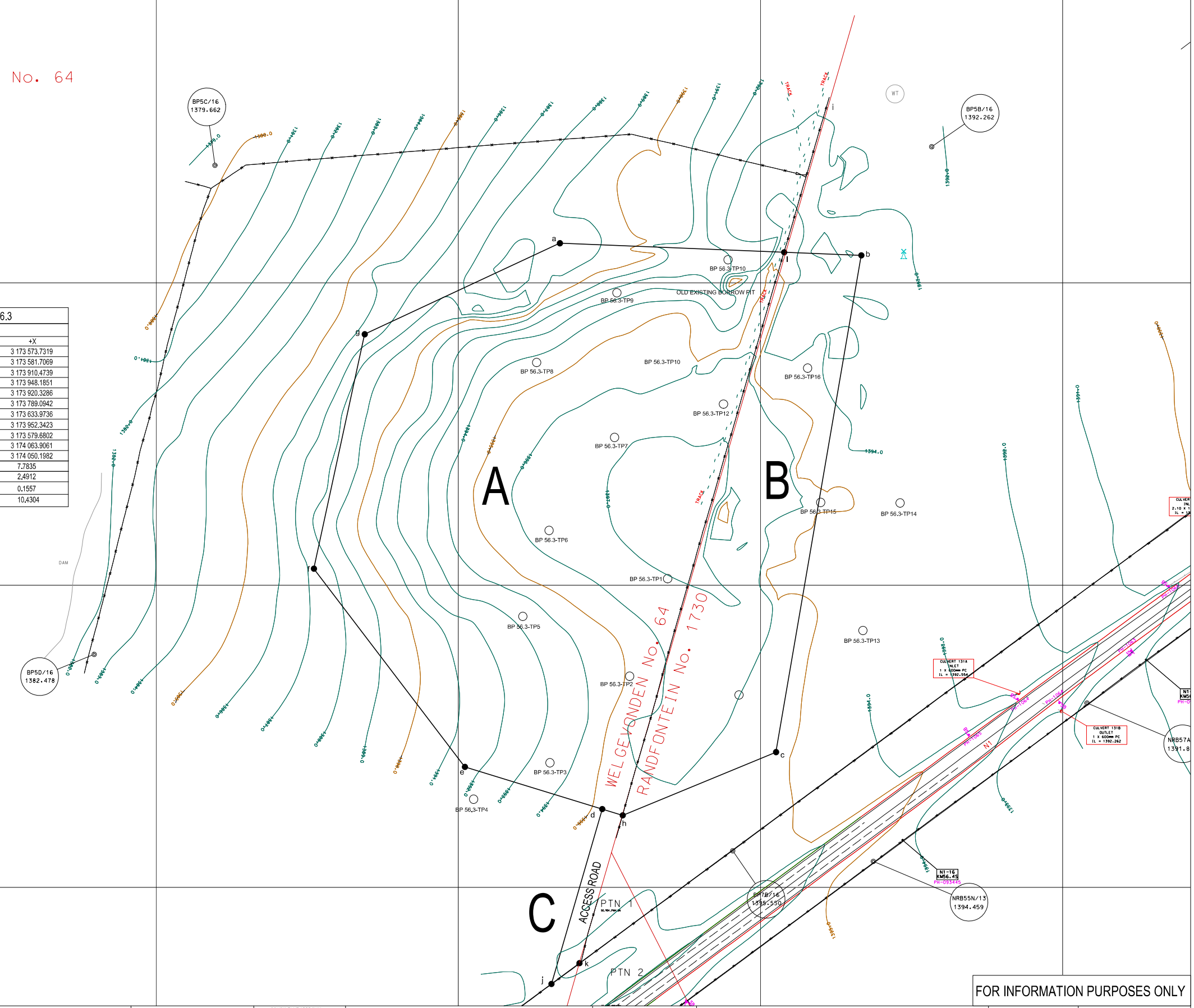
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DRAWING TYPE			
BRIDGE/STRUCTURE No.			
CONSULTANT DRAWING No.	IC	VER	
SANRAL DOC #		V1	



WELGEVONDEN No. 64

BORROW PIT 56.3		
POINT	+Y	+X
a	16 932.8088	3 173 573.7319
b	16 733.3325	3 173 581.7069
c	16 789.7690	3 173 910.4739
d	16 904.8037	3 173 948.1951
e	16 995.6511	3 173 920.3286
f	17 095.5849	3 173 789.0942
g	17 062.0055	3 173 633.9736
h	16 991.2572	3 173 952.3423
i	16 784.3804	3 173 579.6802
j	16 938.4044	3 174 063.9061
k	16 919.8459	3 174 050.1982
Area A (ha):	Welgevonden 62	7.7835
Area B (ha):	Randfontein 1730	2.4912
Area C (ha):	Welgevonden 62	0.1557
Tot Area (ha)		10.4304



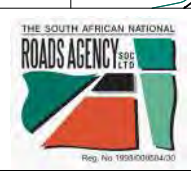
FOR INFORMATION PURPOSES ONLY

No.	DATE	REVISION	CONSULT. ENG.
V1	JAN 17	ORIGINAL VERSION	CB DU RAAN

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CHECKED BY		Date	JANUARY 2017
NAME			
Prof. Reg. No.			

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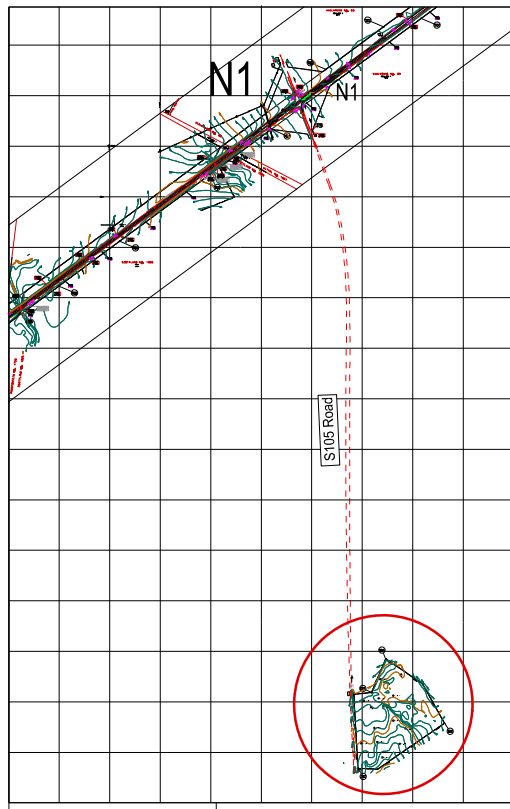


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ACCEPTANCE
 THIS ACCEPTANCE IS FOR PROCEDURAL AND ADMINISTRATIVE REVIEW PURPOSES ONLY AND DOES NOT ATTRACT LEGAL LIABILITY OR LIABILITY OF ANY KIND FROM WHATSOEVER CAUSE OR HOWSOEVER ARISING.
 SANRAL
 16 SEP 2017

PROJECT DESCRIPTION
 THE UPGRADING OF NATIONAL ROUTE 1 SECTION 16 FROM ZANDKRAAL (km 35.4) TO WINBURG SOUTH (km 78.0)
DRAWING DESCRIPTION
 PROPOSED MATERIAL SOURCES LOCALITY PLAN
 SCALE: SHEET OF

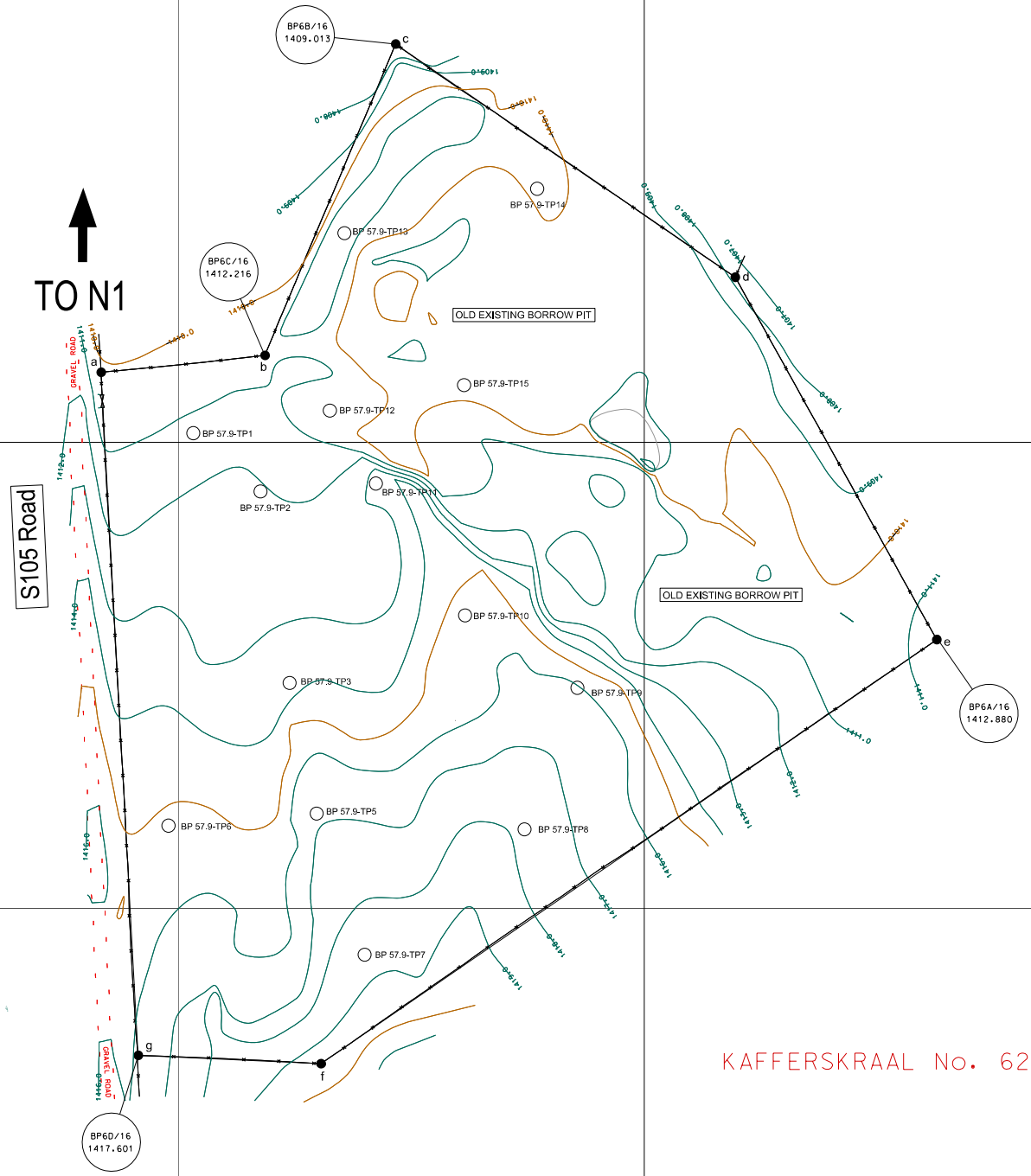
PROJECT NUMBER		N001-160-2018/1F	
DRAWING LOCATION DATA	START	END	
ROUTE	N1	N1	
SECTION	16	16	
DRAWING km DISTANCE	35,4	78,0	
DRAWING TYPE			
BRIDGE/STRUCTURE No.			
CONSULTANT DRAWING No.			
SANRAL DOC #		IC	VER
			V1



KAFFERSKRAAL No. 62



BORROW PIT 57.9		
POINT	+Y	+X
	a	14 433.1910
b	14 362.8240	3 174 762.6990
c	14 306.7253	3 174 629.0742
d	14 160.9182	3 174 729.1411
e	14 074.4040	3 174 884.7750
f	14 338.7784	3 175 066.7855
g	14 417.2551	3 175 063.2333
Area (ha): Kafferskraal 62		9.4353



KAFFERSKRAAL No. 62

FOR INFORMATION PURPOSES ONLY

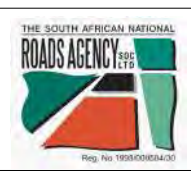
No.	DATE	REVISION	CONSULT. ENG.
V1	JAN '17	ORIGINAL VERSION	CB DU RAAN

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DESIGNED BY	
NAME	
Prof. Reg. No.	
CHECKED BY	
NAME	
Prof. Reg. No.	

CONSULTANT APPROVAL	
Name	: CB DU RAAN
Prof. Reg. No.	: 970628
Date	: JANUARY 2017

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 Date:

PROJECT DESCRIPTION
 THE UPGRADING OF NATIONAL ROUTE 1
 SECTION 16 FROM ZANDKRAAL (km 35.4) TO
 WINBURG SOUTH (km 78.0)
DRAWING DESCRIPTION
 PROPOSED MATERIAL SOURCES LOCALITY PLAN

PROJECT NUMBER		N001-160-2018/1F	
DRAWING LOCATION DATA	START	END	
ROUTE	N1	N1	
SECTION	16	16	
DRAWING km DISTANCE	35,4	78,0	
DRAWING TYPE			
BRIDGE/STRUCTURE No.			
CONSULTANT DRAWING No.	IC		
SANRAL DOC #			

SCALE : SHEET OF

VER V1



BORROW PIT 64.2		
POINT	+Y	+X
a	9 402.1411	3 169 996.6547
b	9 023.4601	3 170 050.0376
c	9 533.8923	3 170 423.1988
d	9 730.6301	3 170 419.0588
e	9 503.2841	3 170 126.7139
f	9 493.8184	3 170 114.5420
g	9 565.5629	3 170 066.6705
h	9 573.9162	3 170 079.1294
Area A (ha):		12.6517
Area B (ha):		0.1302
Total Area (ha)		12.7819

WELKOM No. 55

REM

WELKOM No. 52

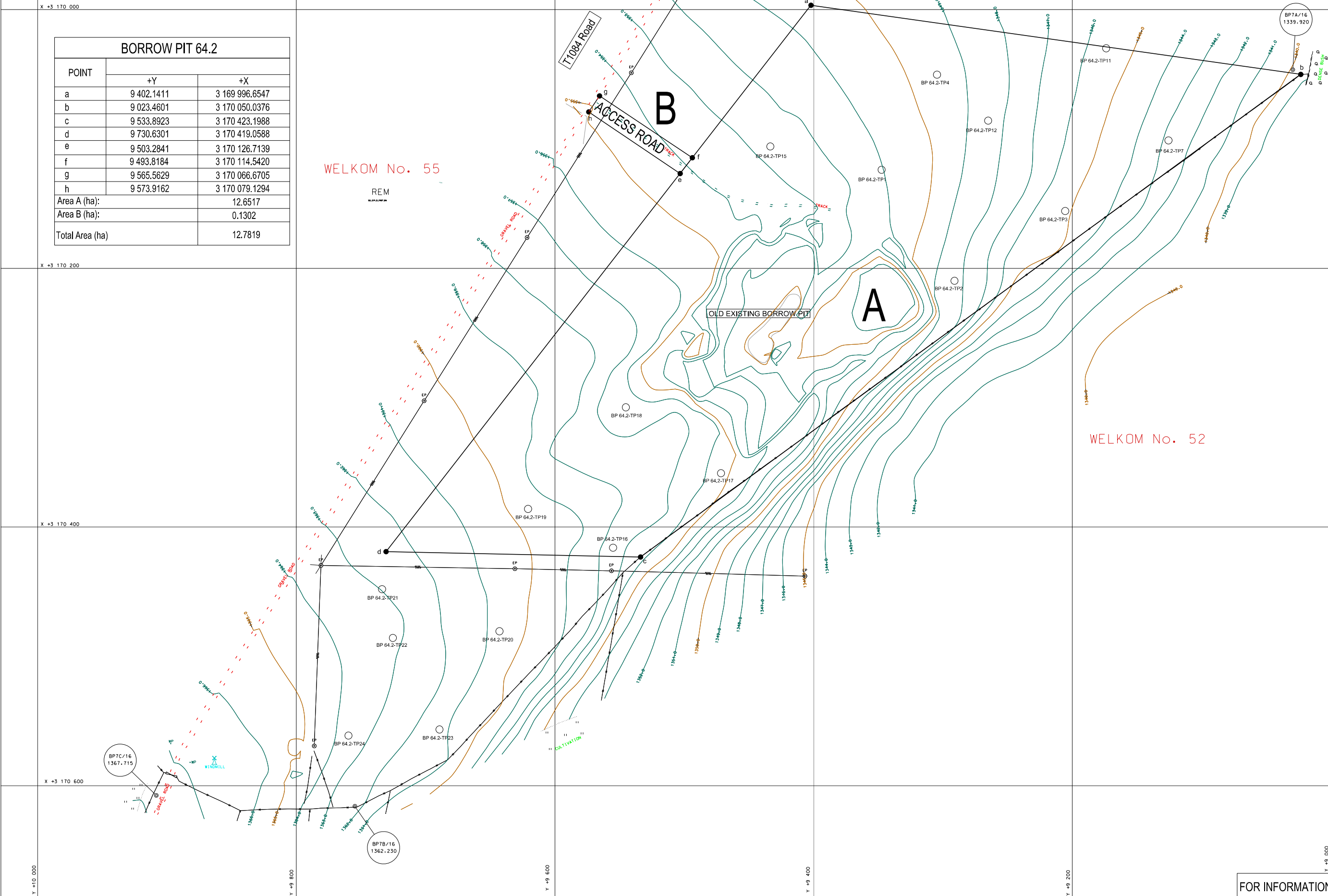
OLD EXISTING BORROW PIT

T1084 Road

ACCESS ROAD

B

A



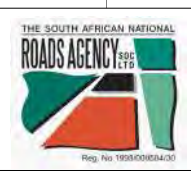
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V1	JAN '17	ORIGINAL VERSION	CB DU RAAN

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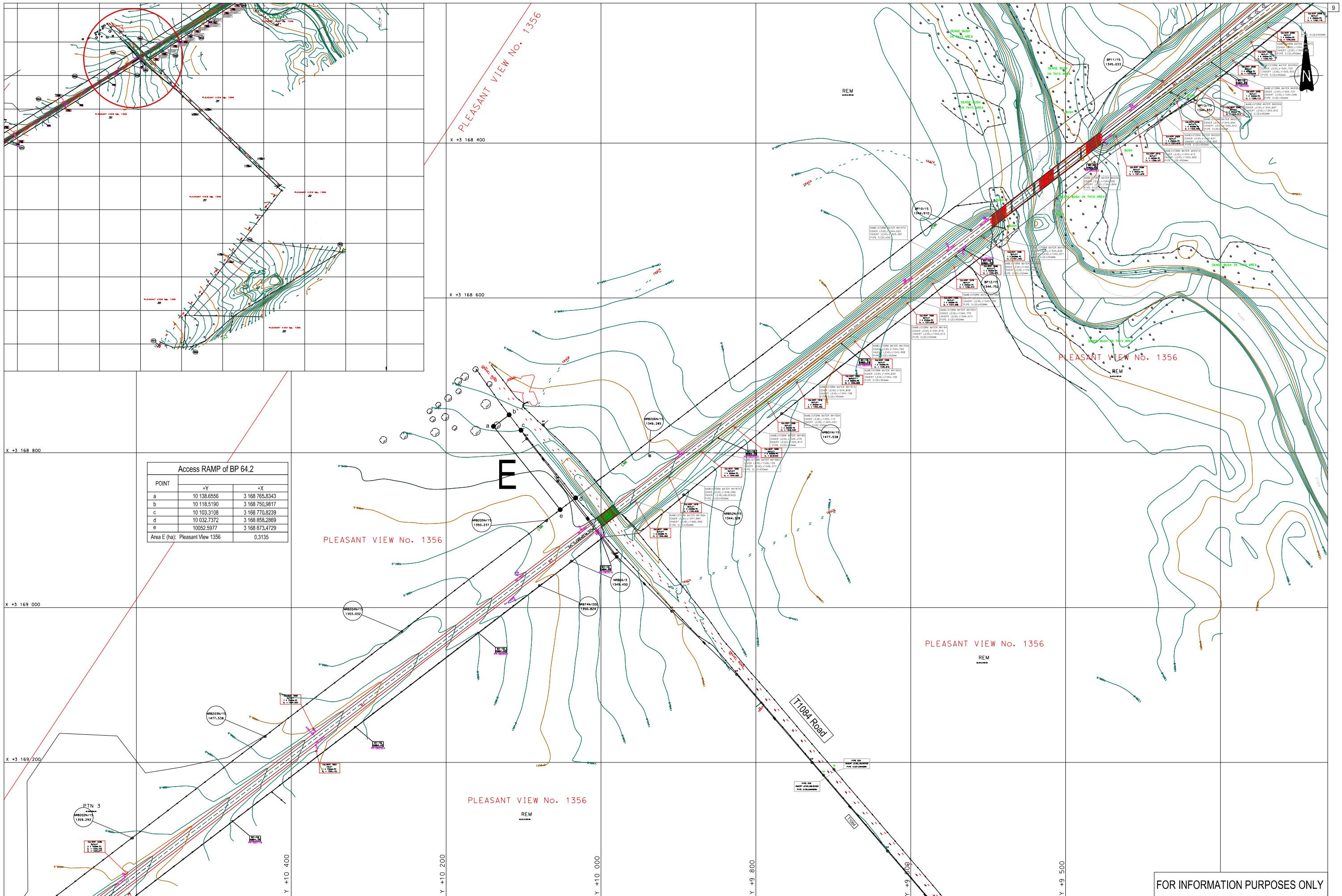


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 Date:

PROJECT DESCRIPTION
 THE UPGRADING OF NATIONAL ROUTE 1 SECTION 16 FROM ZANDKRAAL (km 35.4) TO WINBURG SOUTH (km 78.0)
DRAWING DESCRIPTION
 PROPOSED MATERIAL SOURCES LOCALITY PLAN
 SCALE : SHEET OF

PROJECT NUMBER		N001-160-2018/1F	
DRAWING LOCATION DATA	START	END	
ROUTE	N1	N1	
SECTION	16	16	
DRAWING km DISTANCE	35,4	78,0	
DRAWING TYPE			
BRIDGE/STRUCTURE No.	IC	VER	
CONSULTANT DRAWING No.	IC	V1	
SANRAL DOC #			



Access RAMP of BP 64.2

POINT	+Y	+X
a	10 138.6556	3 168 765.8343
b	10 118.5190	3 168 750.9817
c	10 103.3108	3 168 770.8239
d	10 032.7372	3 168 858.2869
e	10052.5977	3 168 873.4729

Area E (ha): Pleasant View 1356 0,3135

X +3 168 800

X +3 169 000

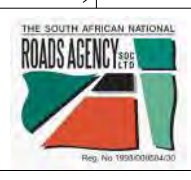
X +3 169 200

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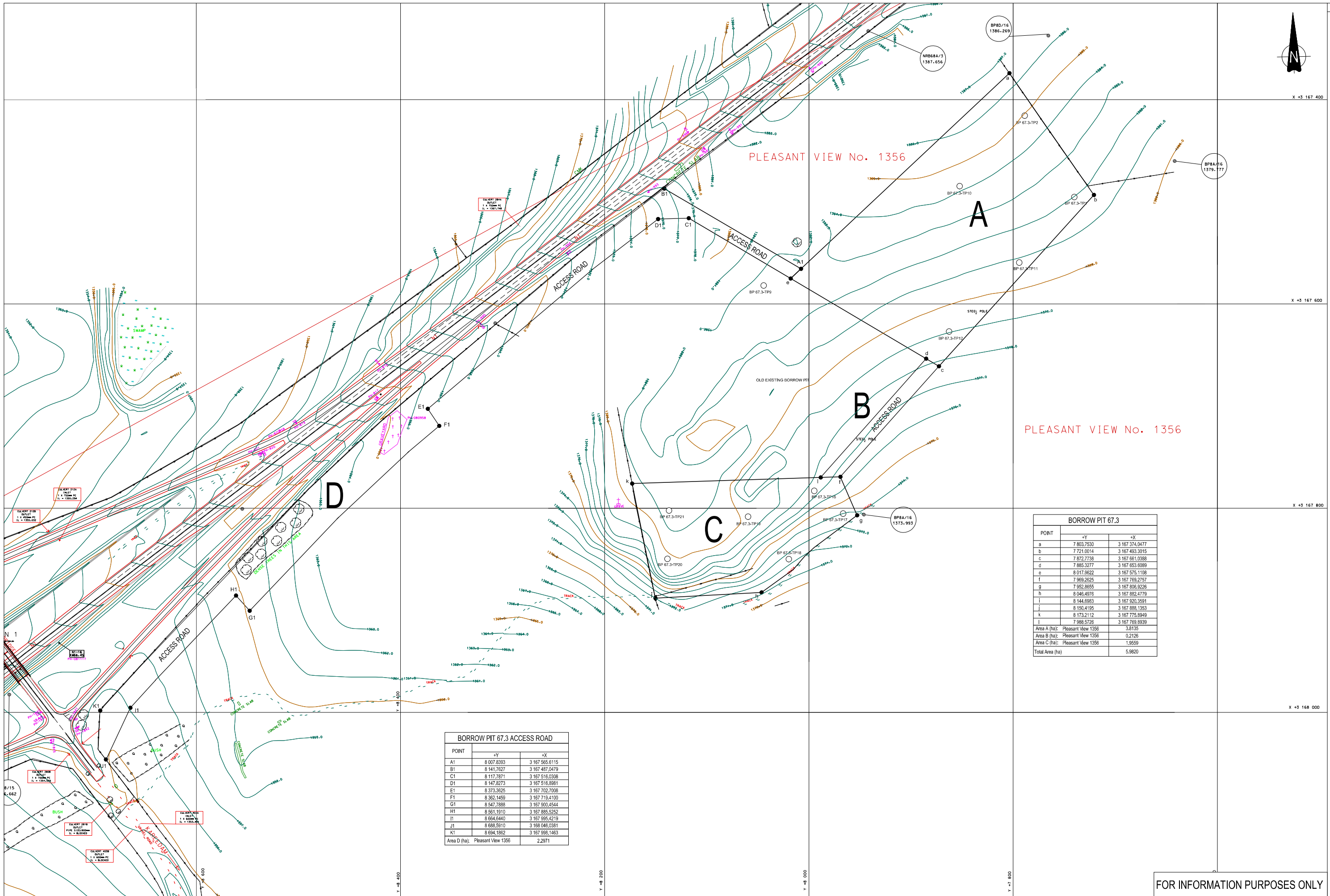


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 PROPOSED MATERIAL SOURCES LOCALITY PLAN

FOR INFORMATION PURPOSES ONLY			
PROJECT NUMBER	N001-160-2018/1F		
DRAWING LOCATION DATA	START	END	
ROUTE	N1	N1	
SECTION	16	16	
DRAWING km DISTANCE	35,4	78,0	
DRAWING TYPE			
BRIDGE/STRUCTURE No.			
CONSULTANT DRAWING No.	IC		
SANRAL DOC #			
SCALE :	SHEET OF		
			VER V1



BORROW PIT 67.3		
POINT	+Y	+X
a	7 803,7530	3 167 374,0477
b	7 721,0014	3 167 453,3015
c	7 872,7738	3 167 661,0388
d	7 865,3277	3 167 653,6089
e	8 017,9622	3 167 575,1108
f	7 969,2625	3 167 789,2757
g	7 952,8655	3 167 806,9226
h	8 046,4976	3 167 892,4779
i	8 144,6983	3 167 920,3591
j	8 150,4195	3 167 888,1353
k	8 173,2112	3 167 775,8949
l	7 988,5726	3 167 769,8939
Area A (ha):	Pleasant View 1356	3,8135
Area B (ha):	Pleasant View 1356	0,2126
Area C (ha):	Pleasant View 1356	1,9559
Total Area (ha)		5,9820

BORROW PIT 67.3 ACCESS ROAD		
POINT	+Y	+X
A1	8 007,8393	3 167 565,6115
B1	8 141,7627	3 167 487,0479
C1	8 117,7871	3 167 516,0398
D1	8 147,9273	3 167 516,9981
E1	8 373,3625	3 167 702,7008
F1	8 362,1459	3 167 719,4100
G1	8 547,7888	3 167 900,4544
H1	8 561,1910	3 167 885,5252
I1	8 664,8440	3 167 995,4219
J1	8 688,5910	3 168 046,0381
K1	8 694,1862	3 167 998,1463
Area D (ha):	Pleasant View 1356	2,2971

FOR INFORMATION PURPOSES ONLY

No.	DATE	REVISION	CONSULT. ENG.
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 for CEO SA NATIONAL ROADS AGENCY LTD.
 Date:

PROJECT DESCRIPTION
 THE UPGRADING OF NATIONAL ROUTE 1 SECTION 16 FROM ZANDKRAAL (km 35,4) TO WINBURG SOUTH (km 78,0)
DRAWING DESCRIPTION
 PROPOSED MATERIAL SOURCES LOCALITY PLAN

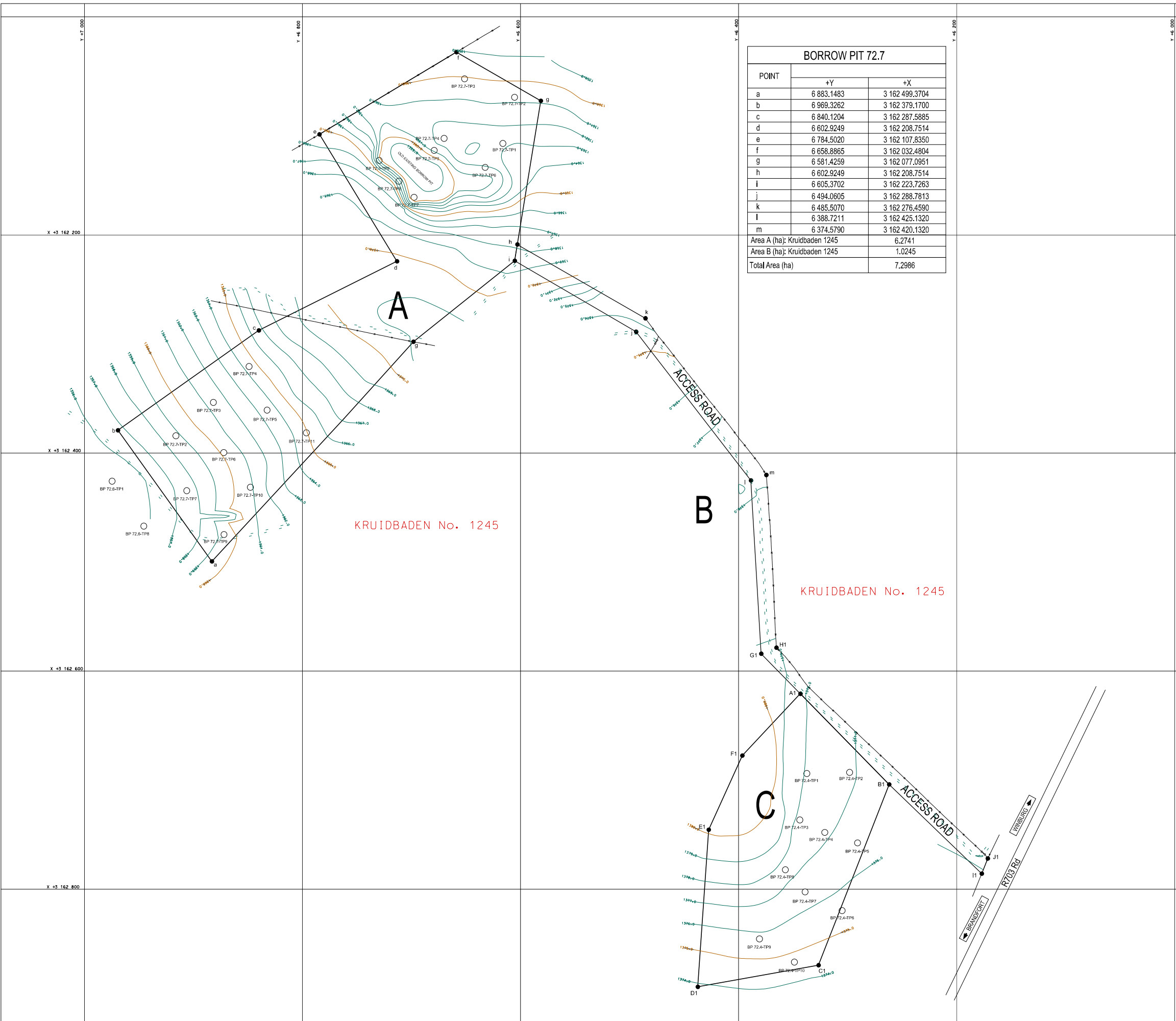
PROJECT NUMBER		N001-160-2018/1F	
DRAWING LOCATION DATA	START	END	
ROUTE	N1	N1	
SECTION	16	16	
DRAWING km DISTANCE	35,4	78,0	
DRAWING TYPE			
BRIDGE/STRUCTURE No.			
CONSULTANT DRAWING No.	IC		
SANRAL DOC #			

SCALE : SHEET OF VER V1



BORROW PIT 72.7		
POINT	+Y	+X
a	6 883.1483	3 162 499.3704
b	6 969.3262	3 162 379.1700
c	6 840.1204	3 162 287.5885
d	6 602.9249	3 162 208.7514
e	6 784.5020	3 162 107.8350
f	6 658.8865	3 162 032.4804
g	6 581.4259	3 162 077.0951
h	6 602.9249	3 162 208.7514
i	6 605.3702	3 162 223.7263
j	6 494.0605	3 162 288.7813
k	6 485.5070	3 162 276.4590
l	6 388.7211	3 162 425.1320
m	6 374.5790	3 162 420.1320
Area A (ha): Kruidbaden 1245	6.2741	
Area B (ha): Kruidbaden 1245	1.0245	
Total Area (ha)	7.2986	

BORROW PIT 72.4		
POINT	+Y	+X
A1	6 343.3304	3 162 620.7347
B1	6 261.9257	3 162 703.8667
C1	6 326.6961	3 162 869.5768
D1	6 437.3493	3 162 889.4192
E1	6 427.4175	3 162 745.3964
F1	6 396.5985	3 162 677.3712
G1	6 379.2887	3 162 584.0135
H1	6 365.3490	3 162 578.4740
I1	6 176.9808	3 162 785.6451
J1	6 171.4500	3 162 771.7020
Area C (ha): Kruidbaden 1245	2.9760	



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Prof. Reg. No.			

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 Date:

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 THE UPGRADING OF NATIONAL ROUTE 1 SECTION 16 FROM ZANDKRAAL (km 35.4) TO WINBURG SOUTH (km 78.0)

DRAWING DESCRIPTION
 PROPOSED MATERIAL SOURCES LOCALITY PLAN

SCALE: _____

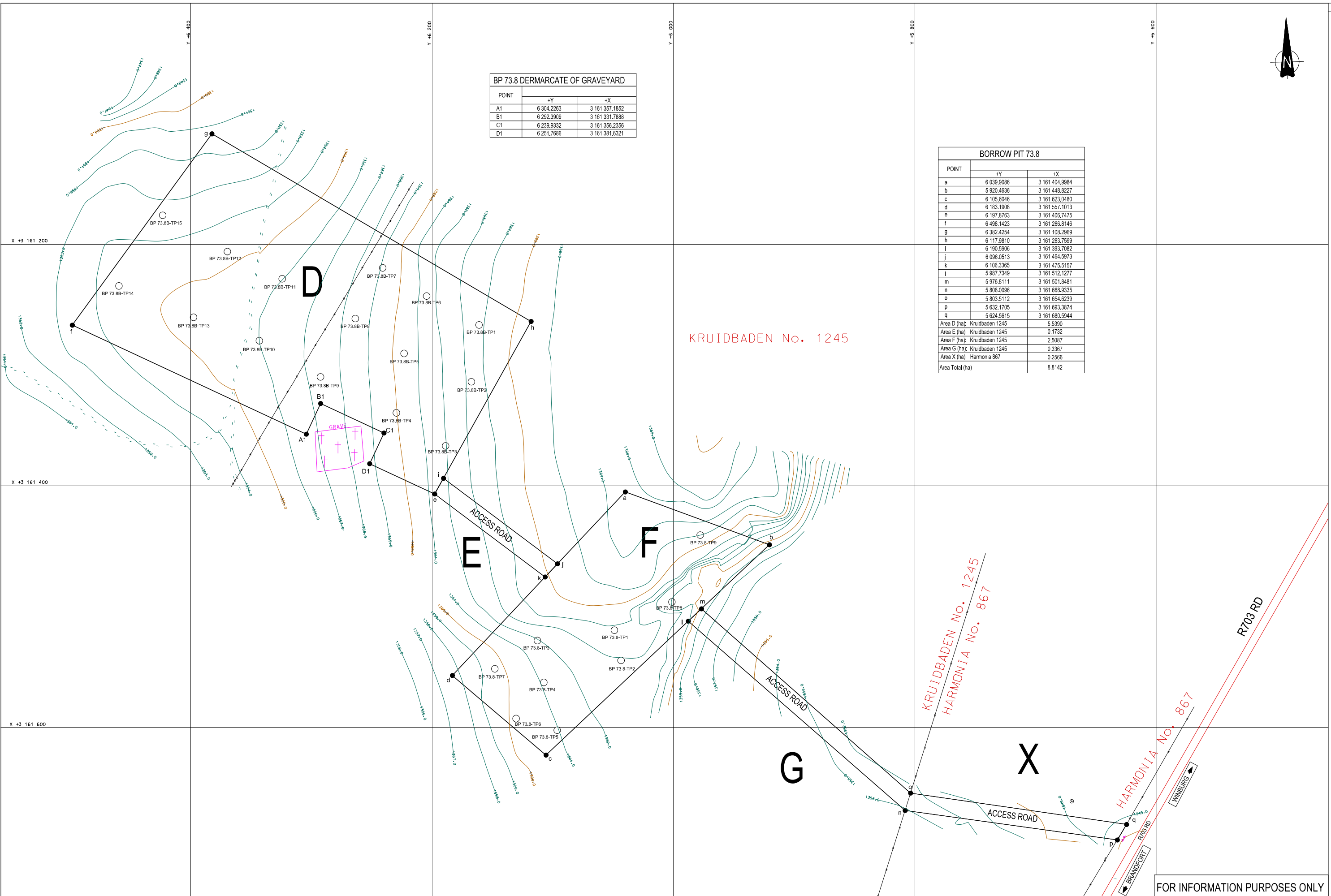
SHEET _____ **OF** _____

PROJECT NUMBER		N001-160-2018/1F	
DRAWING LOCATION DATA	START	END	
ROUTE	N1	N1	
SECTION	16	16	
DRAWING km DISTANCE	35,4	78,0	
DRAWING TYPE			
BRIDGE/STRUCTURE No.			
CONSULTANT DRAWING No. IC			
SANRAL DOC #			
			VER V1



BP 73.8 DERMARCATÉ OF GRAVEYARD		
POINT	+Y	+X
A1	6 304,2263	3 161 357,1852
B1	6 292,3909	3 161 331,7888
C1	6 239,9332	3 161 356,2356
D1	6 251,7686	3 161 381,6321

BORROW PIT 73.8		
POINT	+Y	+X
a	6 039,9086	3 161 404,9984
b	5 920,4636	3 161 448,8227
c	6 105,6046	3 161 623,0480
d	6 183,1908	3 161 557,1013
e	6 197,8763	3 161 406,7475
f	6 498,1423	3 161 266,8146
g	6 382,4254	3 161 108,2969
h	6 117,9810	3 161 263,7599
i	6 190,5906	3 161 393,7082
j	6 096,0513	3 161 464,5973
k	6 106,3365	3 161 475,5157
l	5 987,7349	3 161 512,1277
m	5 976,8111	3 161 501,8481
n	5 808,0096	3 161 668,9335
o	5 803,5112	3 161 654,6239
p	5 632,1705	3 161 693,3874
q	5 624,5615	3 161 680,5944
Area D (ha):	Kruidbaden 1245	5,5390
Area E (ha):	Kruidbaden 1245	0,1732
Area F (ha):	Kruidbaden 1245	2,5087
Area G (ha):	Kruidbaden 1245	0,3367
Area X (ha):	Harmonia 867	0,2566
Area Total (ha)		8,8142



KRUIDBADEN No. 1245

KRUIDBADEN No. 1245
HARMONIA No. 867

HARMONIA No. 867

R703 RD

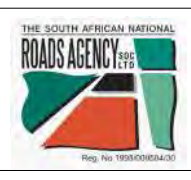
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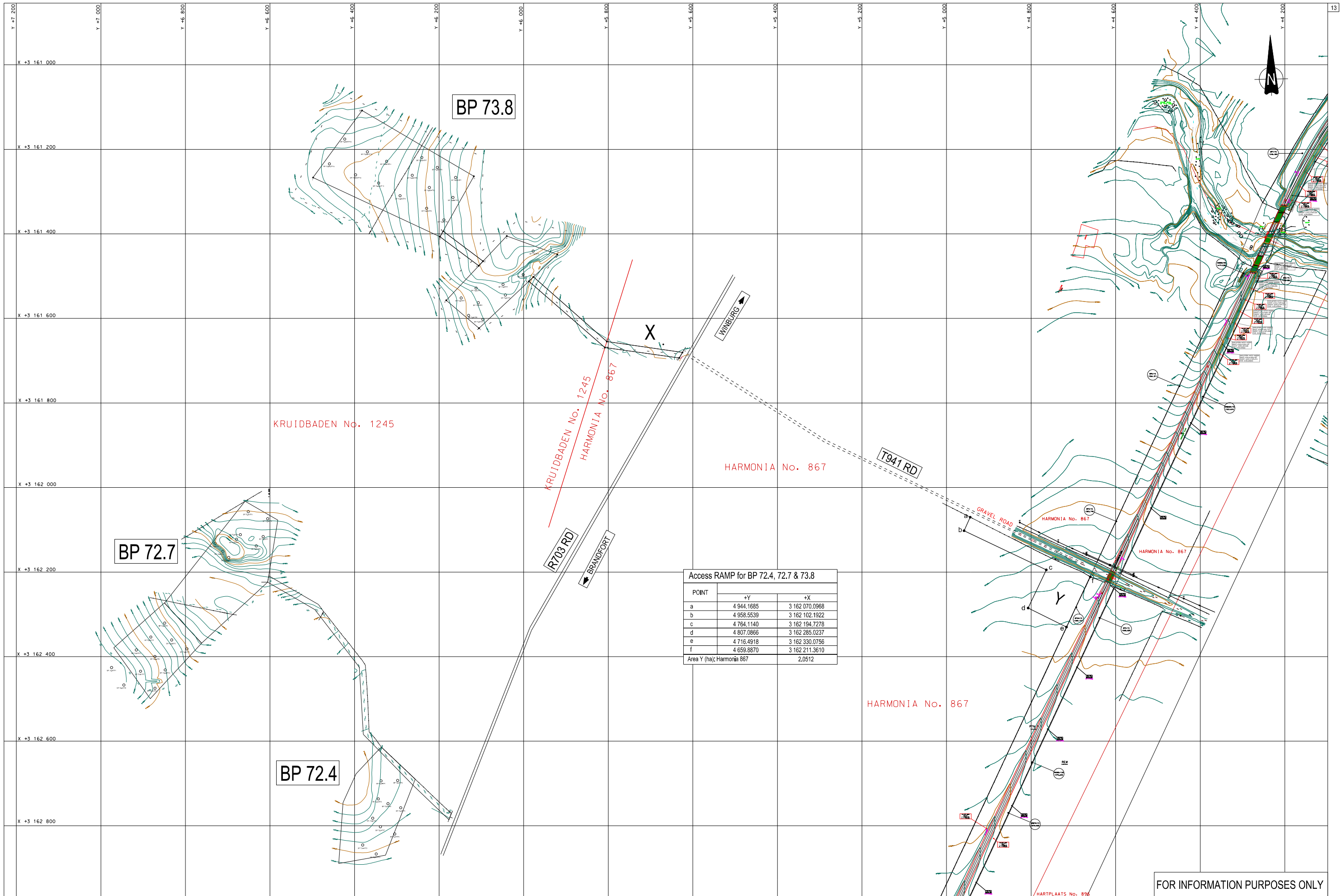


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PROJECT DESCRIPTION
THE UPGRADING OF NATIONAL ROUTE 1 SECTION 16 FROM ZANDKRAAL (km 35,4) TO WINBURG SOUTH (km 78,0)
DRAWING DESCRIPTION
PROPOSED MATERIAL SOURCES LOCALITY PLAN
SCALE: SHEET OF

PROJECT NUMBER		N001-160-2018/1F	
DRAWING LOCATION DATA	START	END	
ROUTE	N1	N1	
SECTION	16	16	
DRAWING km DISTANCE	35,4	78,0	
DRAWING TYPE			
BRIDGE/STRUCTURE No.			
CONSULTANT DRAWING No.			
SANRAL DOC #		IC	VER
			V1



Access RAMP for BP 72.4, 72.7 & 73.8

POINT	+Y	+X
a	4 944.1685	3 162 070.0968
b	4 958.5539	3 162 102.1922
c	4 764.1140	3 162 194.7278
d	4 807.0866	3 162 285.0237
e	4 716.4918	3 162 330.0756
f	4 659.8870	3 162 211.3610

Area Y (ha); Harmonia 867: 2,0512

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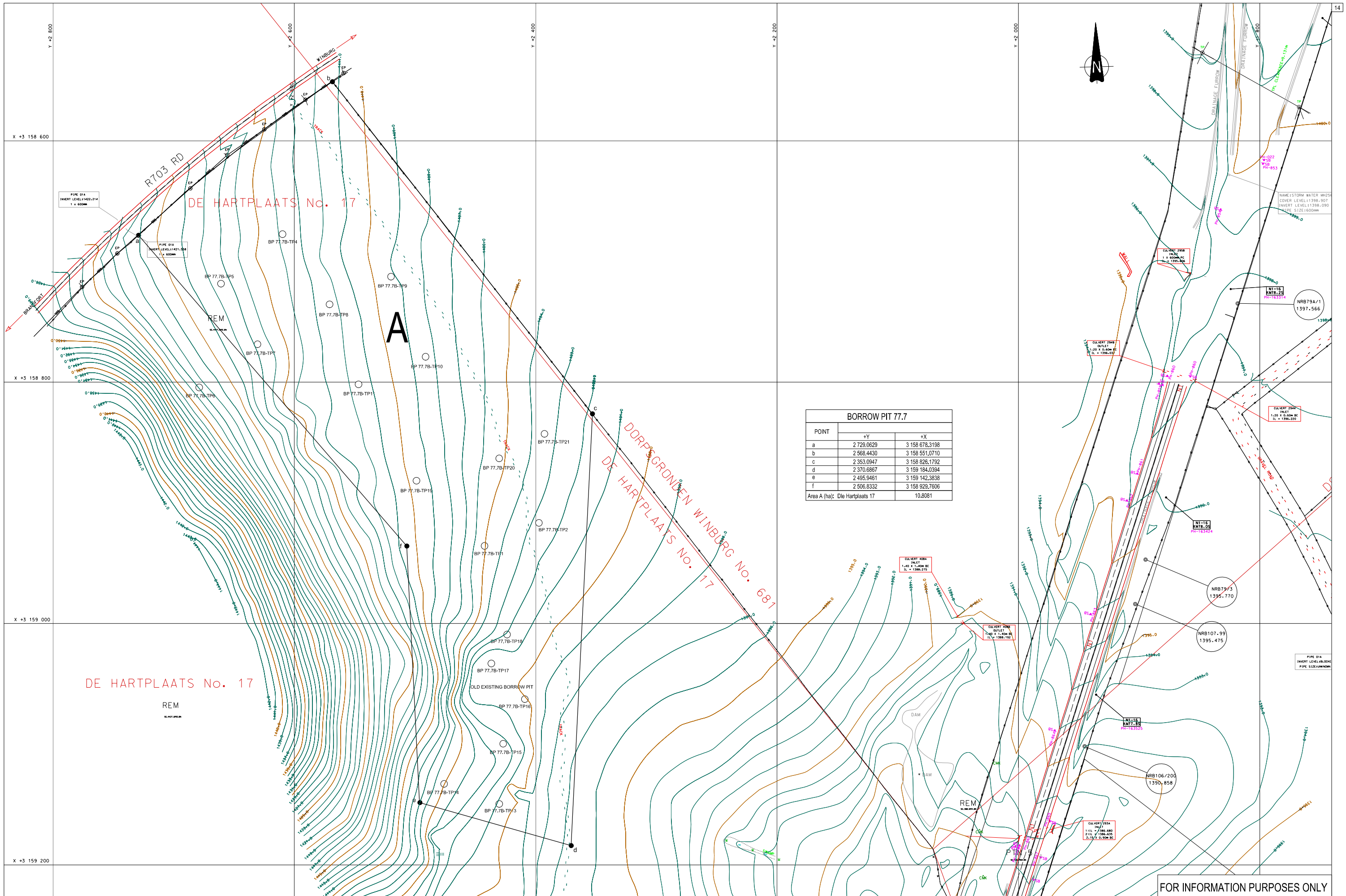
ACCEPTANCE
THIS ACCEPTANCE IS FOR PROCEDURAL AND ADMINISTRATIVE REVIEW PURPOSES ONLY AND DOES NOT ATTRACT LEGAL LIABILITY OR LIABILITY OF ANY KIND FROM WHATSOEVER CAUSE OR HOWSOEVER ARISING
for CEO SA NATIONAL ROADS AGENCY LTD.
Date:

PROJECT DESCRIPTION
THE UPGRADING OF NATIONAL ROUTE 1
SECTION 16 FROM ZANDKRAAL (km 35,4) TO
WINBURG SOUTH (km 78,0)

DRAWING DESCRIPTION
PROPOSED MATERIAL SOURCES LOCALITY PLAN

SCALE: SHEET OF

PROJECT NUMBER		N001-160-2018/1F	
DRAWING LOCATION DATA	START	END	
ROUTE	N1	N1	
SECTION	16	16	
DRAWING km DISTANCE	35,4	78,0	
DRAWING TYPE			
BRIDGE/STRUCTURE No.	IC	VER	
CONSULTANT DRAWING No.	IC	V1	
SANRAL DOC #			



BORROW PIT 77.7		
POINT	+Y	+X
a	2 729.0629	3 158 678.3198
b	2 568.4430	3 158 551.0710
c	2 353.0947	3 158 826.1792
d	2 370.6867	3 159 184.0394
e	2 495.9461	3 159 142.3838
f	2 506.8332	3 158 929.7606
Area A (ha): Die Hartplaas 17	10,8081	

FOR INFORMATION PURPOSES ONLY

No.	DATE	REVISION	CONSULT. ENG.
V1	JAN '17	ORIGINAL VERSION	CB DU RAAN

DESIGNED BY	CONSULTANT APPROVAL
NAME	Name : CB DU RAAN
Prof. Reg. No.	Prof. Reg. No. : 970628
CHECKED BY	Date : JANUARY 2017
NAME	
Prof. Reg. No.	

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SCALE : SHEET OF