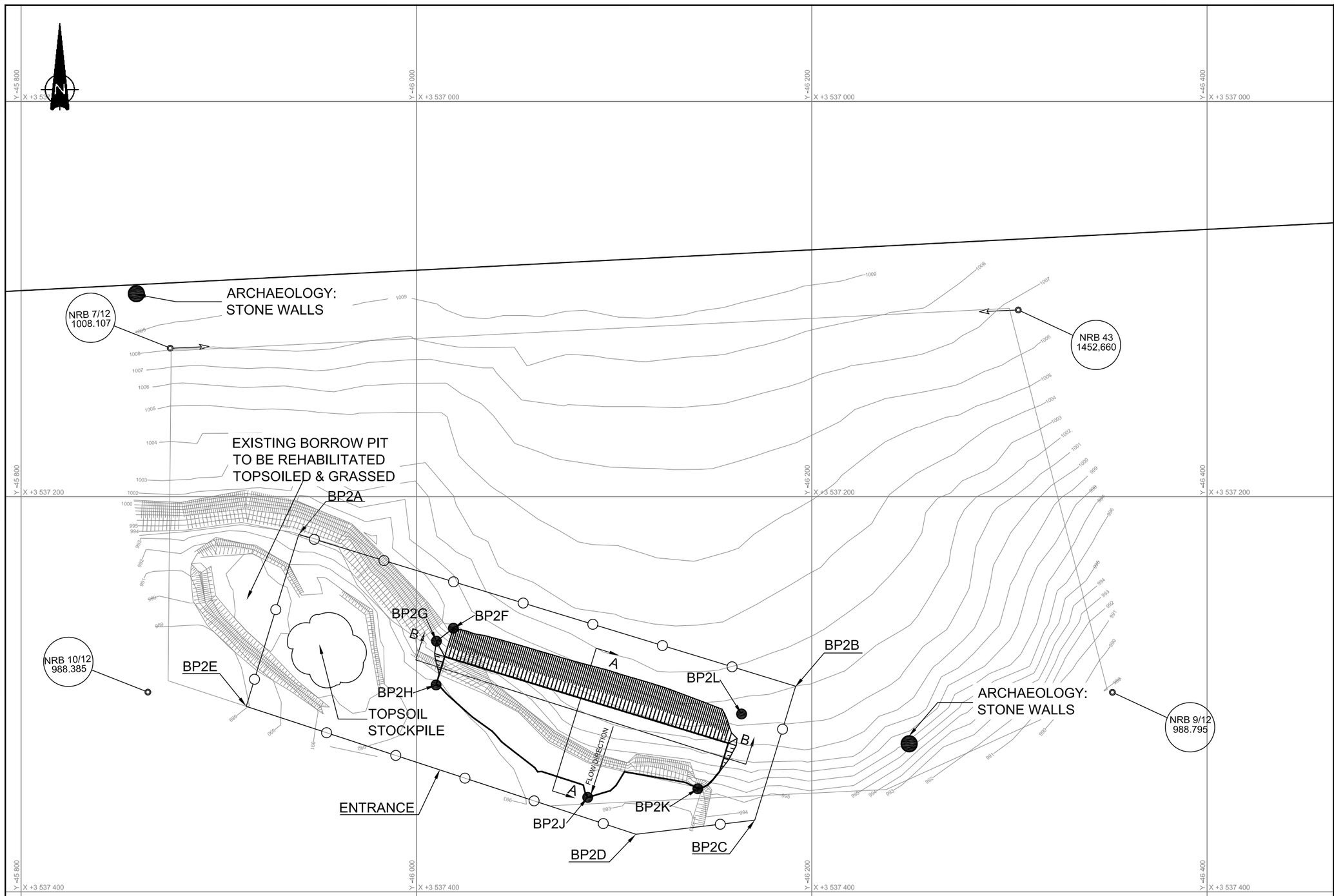
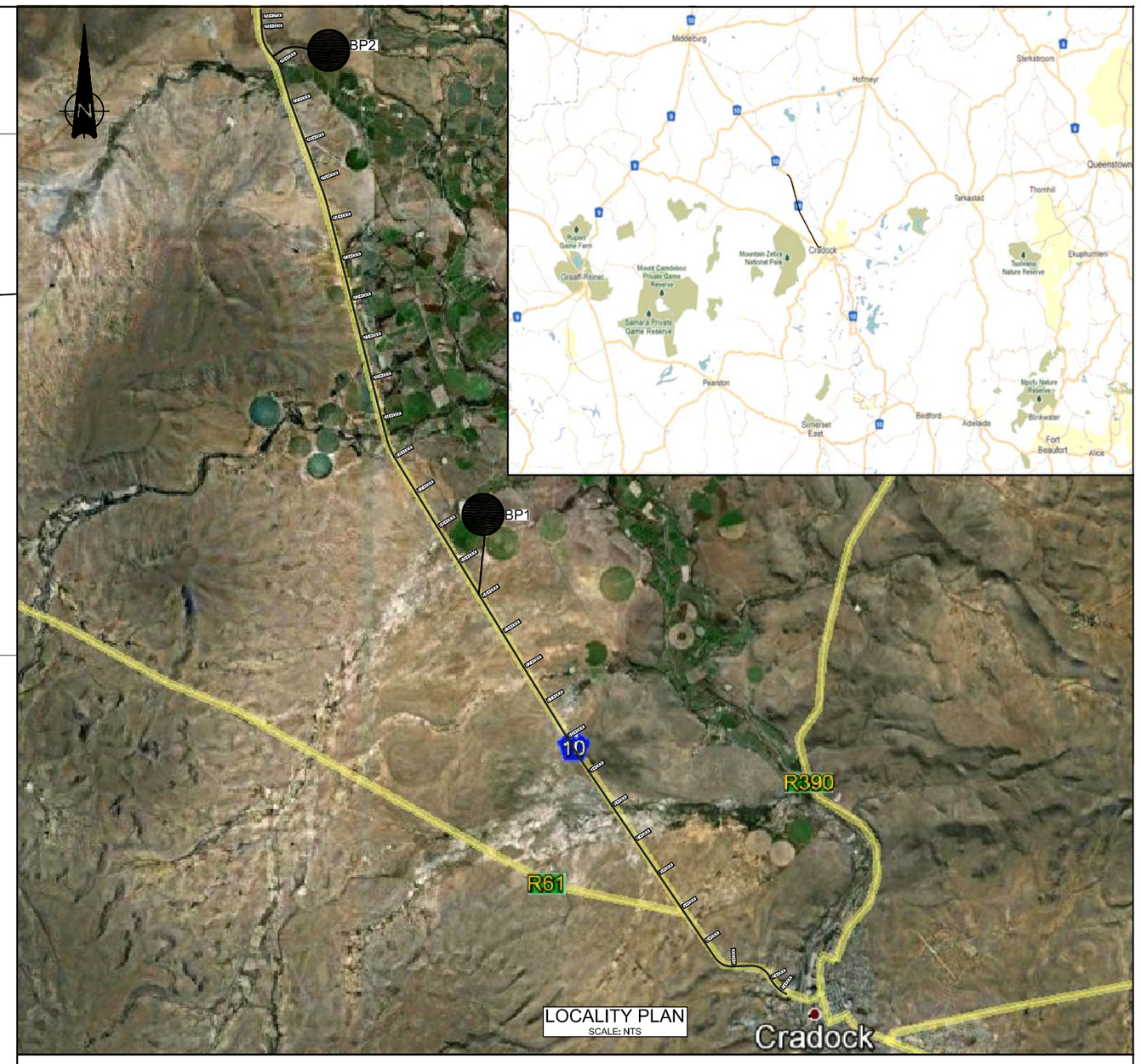
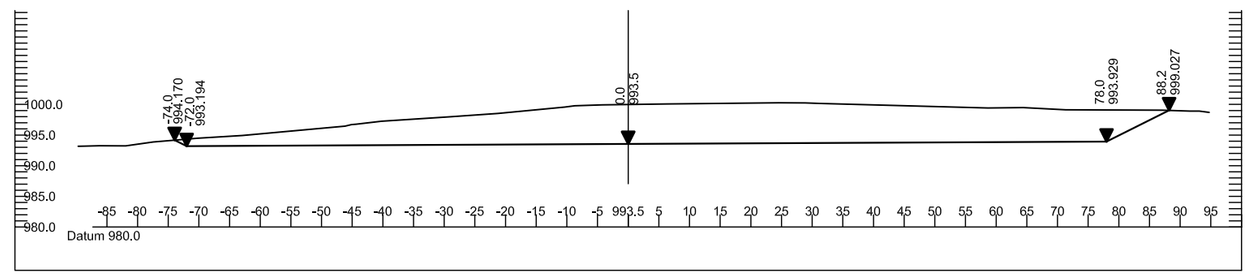


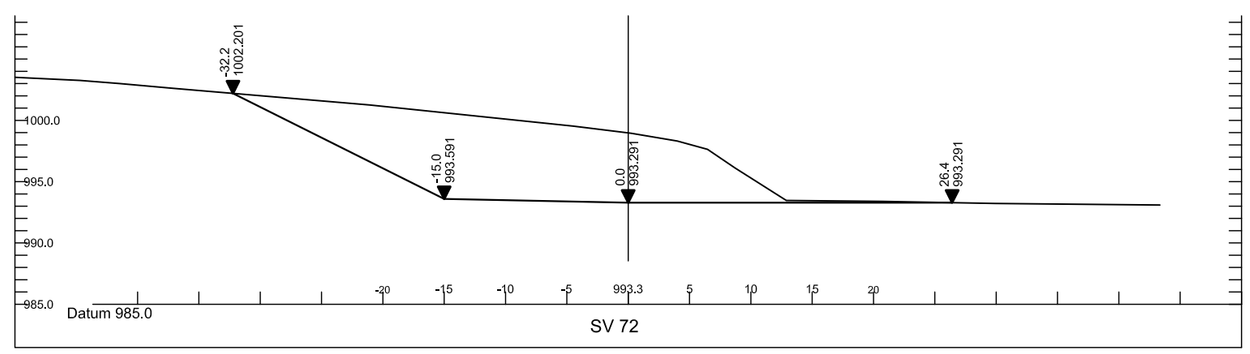

BORROW PIT 2 MINING PLAN
SCALE: 1:500




LOCALITY PLAN
SCALE: NTS




SECTION B-B
VERTICAL SCALE: 1:1000
HORIZONTAL SCALE: 1:1000




SECTION A-A
VERTICAL SCALE: 1:500
HORIZONTAL SCALE: 1:500

| BP2 FENCE & FOOTPRINT CO ORDINATES | | |
|---|---|---|
| NAME | X | Y |
| BP2A | 3537219.172 | -46940.482 |
| BP2B | 3537295.932 | -46191.903 |
| BP2C | 3537363.721 | -46171.204 |
| BP2D | 3537370.865 | -46111.070 |
| BP2E | 3537306.121 | -46913.937 |
| BP2F | 3537266.575 | -46018.738 |
| BP2G | 3537273.143 | -46010.179 |
| BP2H | 3537295.312 | -46009.964 |
| BP2J | 3537352.195 | -46098.698 |
| BP2K | 3537347.823 | -46142.403 |
| BP2L | 3537309.995 | -46164.523 |

| National Road Beacon Coordinate List<br>Lo System : WGS84 Lo25 | | | | |
|---|---|---|---|---|
| Name | X | Y | Z | Description |
| NRB3/12 | 3548878.815 | -46913.452 | 935.311 | 16mm steel peg in concrete |
| NRB4/12 | 3548527.827 | -46958.356 | 934.413 | 16mm steel peg in concrete |
| NRB5/12 | 3548500.030 | -46765.269 | 935.297 | 16mm steel peg in concrete |
| NRB6/12 | 3548653.382 | -46718.693 | 935.755 | 16mm steel peg in concrete |
| NRB7/12 | 3537124.902 | -45875.468 | 1008.107 | 16mm steel peg in concrete |
| NRB8/12 | 3537105.544 | -46304.484 | 1006.862 | 16mm steel peg in concrete |
| NRB9/12 | 3537299.045 | -46352.122 | 988.795 | 16mm steel peg in concrete |
| NRB10/12 | 3537298.939 | -45864.162 | 988.385 | 16mm steel peg in concrete |

Terrace Volume
==========
Terrace Volume for Borrow Pit 2

The unadjusted volumes are :-
22614,91 cu.m. total Cut.
0,05 cu.m. total Fill.
7329,40 sq.m. total area in Cut.
4,10 sq.m. total area in Fill.

NOTE: Volume table is calculated in bands

| Depth (m) | Cut (cu.m.) | Fill (cu.m.) |
|---|---|---|
| 0,000 to 0,000 | 0,000 | 0,000 |
| 0,000 to 1,000 | 5867,841 | 0,050 |
| 1,000 to 2,000 | 4856,913 | 0,000 |
| 2,000 to 3,000 | 4123,877 | 0,000 |
| 3,000 to 4,000 | 3363,295 | 0,000 |
| 4,000 to 5,000 | 2456,837 | 0,000 |
| 5,000 to 6,000 | 1435,429 | 0,000 |
| 6,000 to 7,000 | 503,710 | 0,000 |
| 7,000 to 8,000 | 7,006 | 0,000 |
| 8,000 to 9,000 | 0,000 | 0,000 |
| Over 9,000 | 0,000 | 0,000 |
| | 22614,907 | 0,050 |

Volumes adjusted for 100,00% compaction and 0,50m topsoil stripping :-
18950,21 cu.m. Cut available for Fill
2,10 cu.m. of Fill is required giving:-
18948,11 cu.m. of excess Cut and>
3666,75 cu.m. of Topsoil to be stripped

| No. | DATE | REVISION | CONSULT. ENG. |
|---|---|---|---|
| V1 | 31/05/2012 | FOR APPROVAL | P.J. LOMBARD |

PDNA
PD NAIDOO & ASSOCIATES

PD Naidoo & Associates (Pty) Limited Reg. No. 97/4139/07
63 Mangold Street, Newton Park
Port Elizabeth, 6001
P.O. Box 27708,
Greenacres, PE, 6057
Tel: 27 41 397 3900
Fax: 27 41 397 3930
e-mail: port.elizabeth@pdna.co.za

| DESIGNED BY | |
|---|---|
| NAME | P.J. LOMBARD |
| Prof. Reg. No. | 800320 |
| CHECKED BY | |
| NAME | G.VENTER |
| Prof. Reg. No. | 704648 |

CONSULTANT APPROVAL
Name : P.J. LOMBARD
Prof. Reg. No. : 800320
Date : 31 / 05 / 2012
THE ABOVE SIGNATORY CERTIFIES THAT THE DESIGNER AND CHECKER HAVE CONSENTED TO THEIR NAMES BEING INSERTED ON THIS DRAWING AND THAT THEY HAVE SEEN AND APPROVED THE DRAWING.

HEAD OFFICE
48 Tambotie Avenue
Val de Grace Pretoria
0184
PO Box 415
Pretoria 0001
South Africa
Tel: (012) 426 6000

THE SOUTH AFRICAN NATIONAL ROADS AGENCY (SOC) LTD

SOUTHERN REGION
NRA House
Southern Life Gardens
70 Second Avenue
Newton Park
Port Elizabeth
6045
PO Box 27230
Greenacres
6057
Tel: (041) 398 3200

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 HOWEVER ARISING
for CEO: SA NATIONAL ROADS AGENCY (SOC) LTD
Date:

**PROJECT DESCRIPTION**
REHABILITATION OF NATIONAL ROUTE N10 SECTION 4: FROM CRADOCK (KM 1.60) TO KNUTSFORD (KM 29.20)

**DRAWING NAME**
BORROW PIT 2 LAYOUT PLAN

SCALE : 1:500 SHEET 1 OF 1

| PROJECT NUMBER | NRA N.010-040-2004/2F | |
|---|---|---|
| DRAWING LOCATION DATA | START | END |
| ROUTE | N10 | N10 |
| SECTION | 4 | 4 |
| DRAWING km DISTANCE | | |
| DRAWING TYPE | ROADS | |
| BRIDGE/STRUCTURE No. | | |
| CONSULTANT DRAWING No. | FA 110338 / D / 2007 / A | VER |
| SANRAL DOC # | | V1 |