

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

DATE : 22/11/2021 08:27

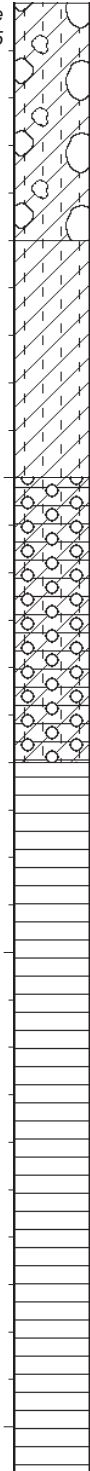
TEXT : ..RVASTESTPITPIPELINE.TXT

ELEVATION :

X-COORD : 33° 20' 43.72" S

Y-COORD : 19° 00' 39.71" E

Scale  
1:15



0.00 Moist, orange brown, firm, fissured, silty CLAY with sub-rounded to rounded cobbles: **Alluvium**.

0.50 Moist, orange brown, firm, fissured, silty CLAY: **Alluvium**.

1.00 Slightly moist, orange brown mottled light beige, stiff, slickensided, silty CLAY with scattered shale gravels: **Residual shale**.

1.60 Orange brown blotched grey, completely weathered, fine grained, thinly laminated, highly fractured, very soft rock with interbedded residual, **SHALE**.

3.10 **NOTES**

- 1) No water seepage.
- 2) Stable side walls.
- 3) No refusal.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

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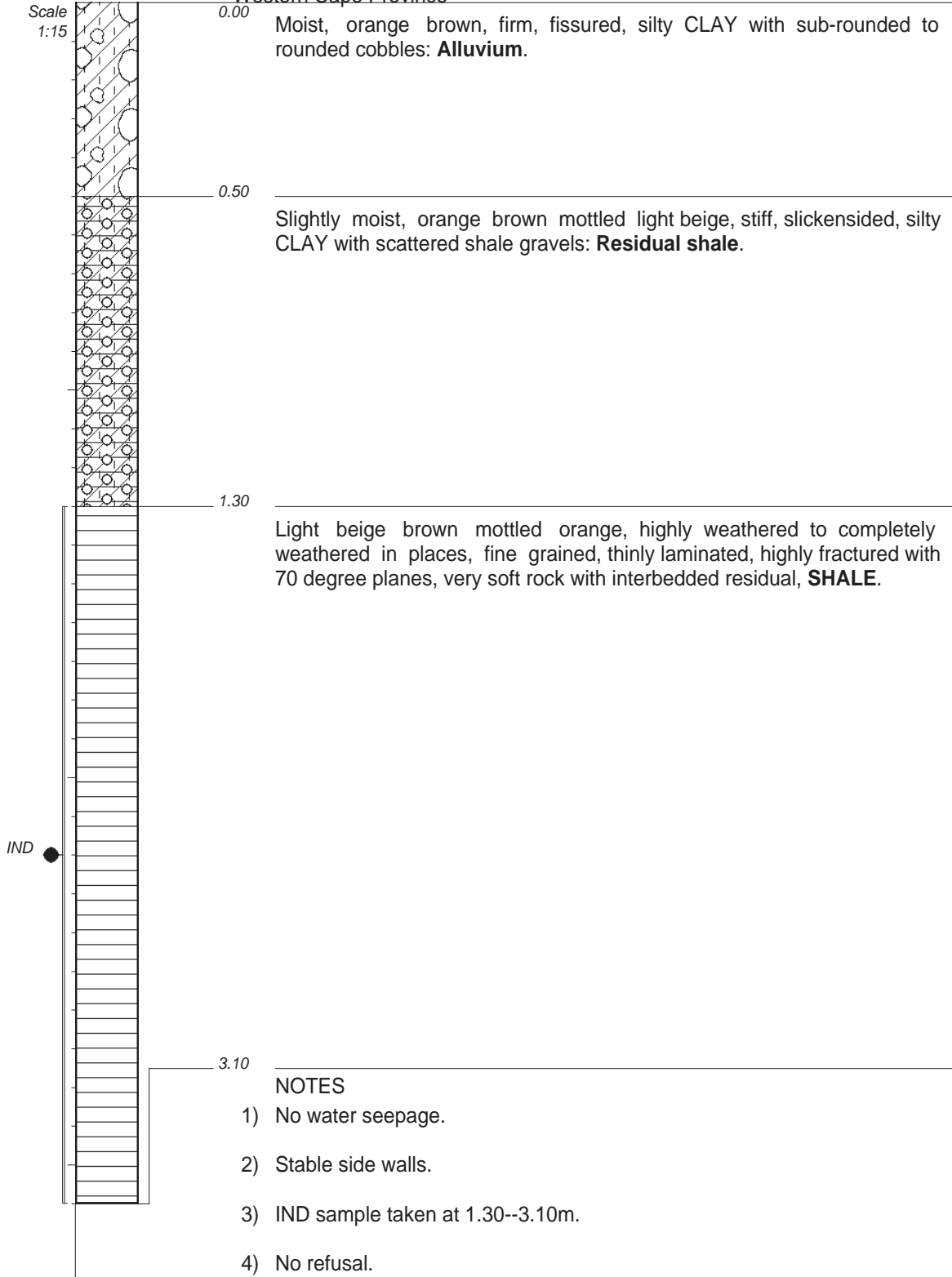
DATE : 22/11/2021 08:27

TEXT : ..RVASTESTPITPIPELINE.TXT

ELEVATION :

X-COORD : 33' 20'45.07"S

Y-COORD : 19' 00'47.16"E



CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

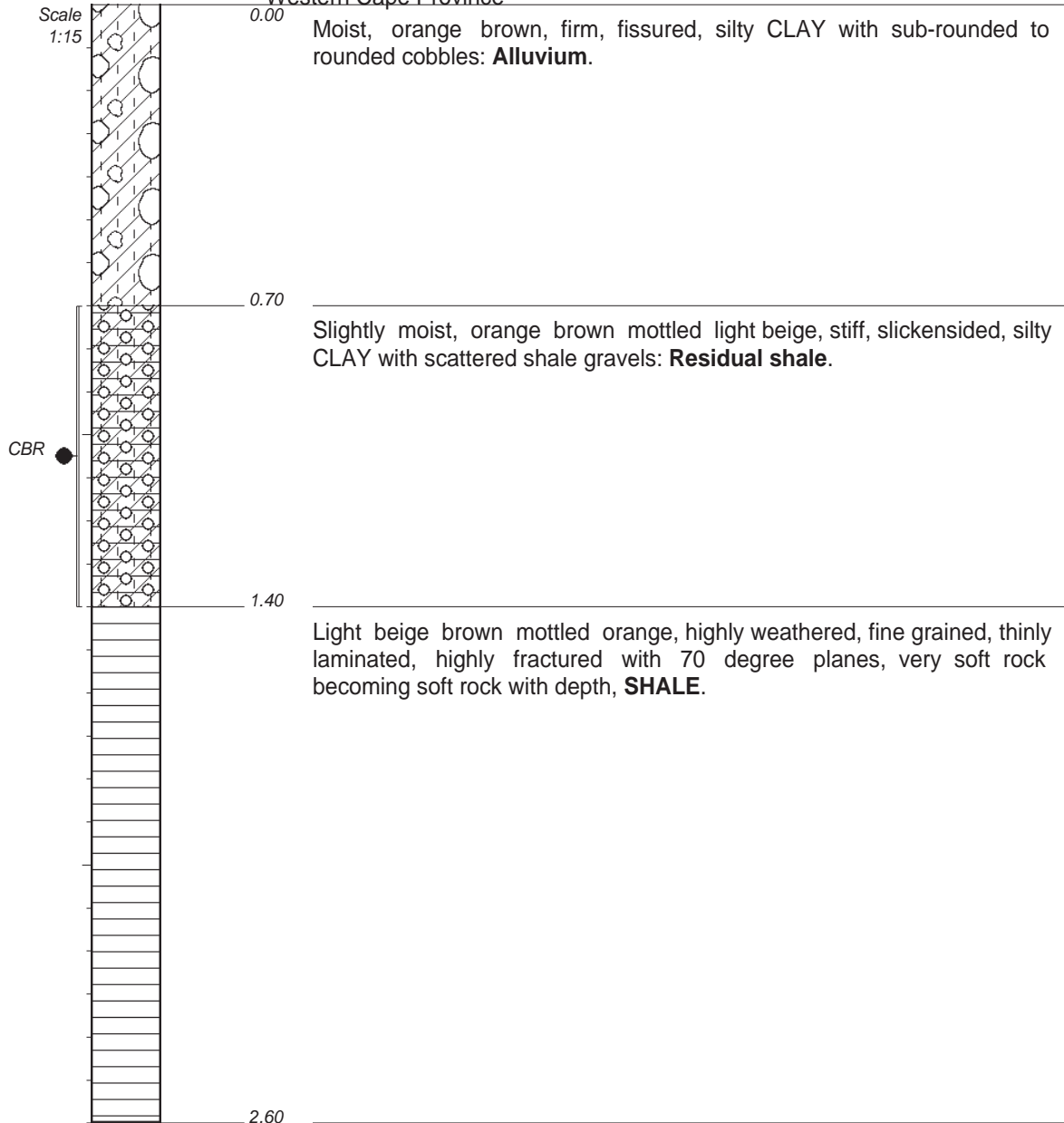
DATE : 22/11/2021 08:27

TEXT : ..RVASTESTPITPIPELINE.TXT

ELEVATION :

X-COORD : 33' 20'45.65"S

Y-COORD : 19' 00'54.87"E



**NOTES**

- 1) No water seepage.
- 2) Stable side walls.
- 3) CBR sample taken at 0.70--1.40m.
- 4) Refusal at 2.60m.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

DATE : 22/11/2021 08:27

TEXT : ..RVASTESTPITPIPELINE.TXT

ELEVATION :

X-COORD : 33' 20'46.22"S

Y-COORD : 19' 01'02.59"E

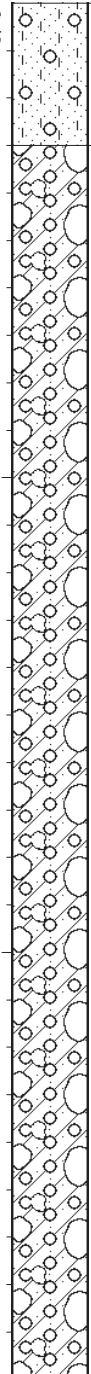


**Trans Caledon Tunnel Authority**  
Geotechnical Investigation  
Berg River Voelvlei Augmentation Scheme  
Riebeeck Kasteel  
Western Cape Province

**HOLE No: TPP23**  
*Sheet 1 of 1*

**JOB NUMBER: MK-21-614**

Scale  
1:15



0.00

Moist, orange brown, loose, intact, silty gravelly SAND: **Transported.**

0.30

Moist, orange brown mottled beige brown, soft, fissured, sandy gravelly CLAY with rounded gravels and cobbles: **Alluvium.**

2.90

**NOTES**

- 1) No water seepage.
- 2) Stable side walls.
- 3) No refusal.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

DATE : 22/11/2021 08:27

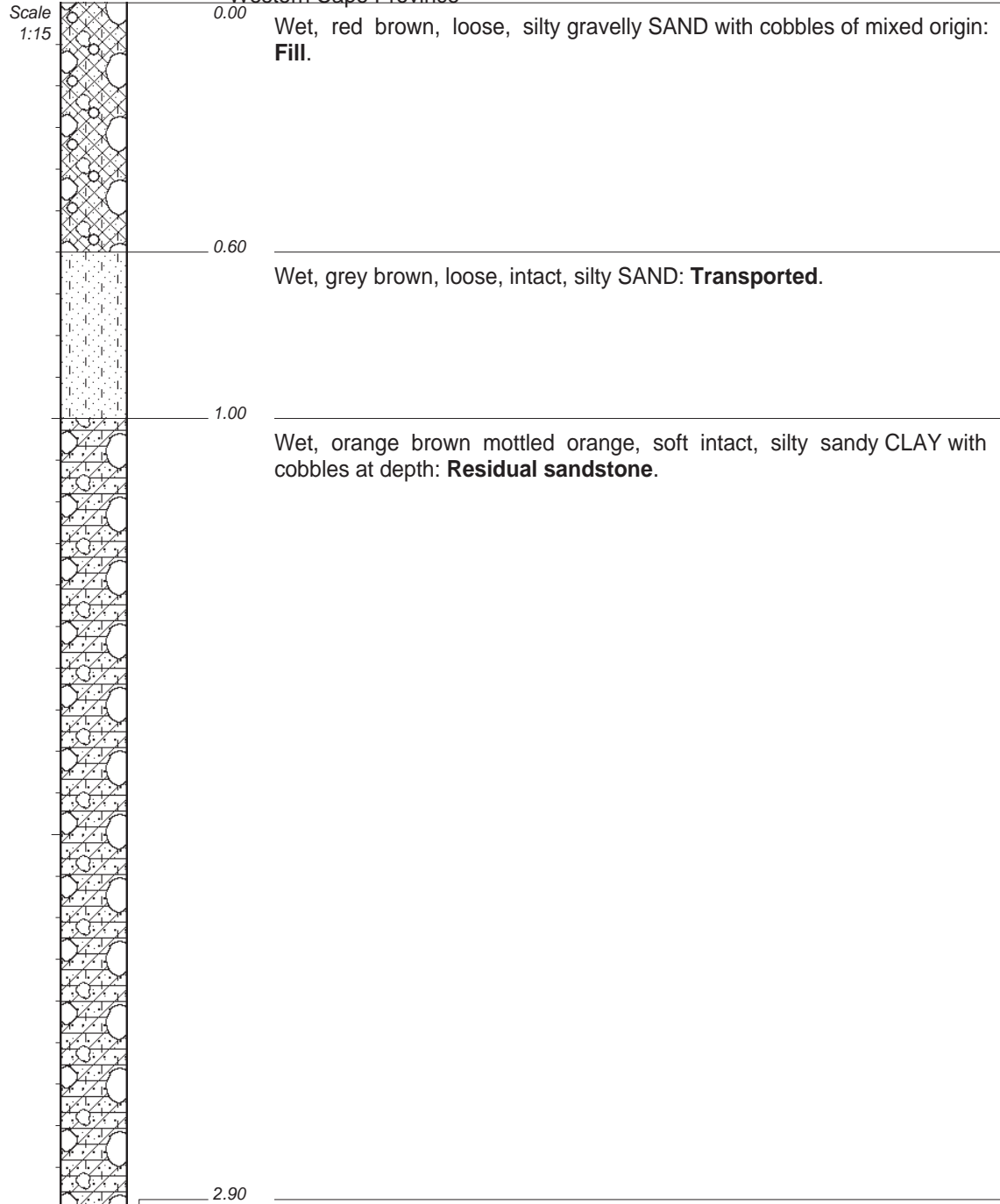
TEXT : ..RVASTESTPITPIPELINE.TXT

ELEVATION :

X-COORD : 33' 20'47.56"S

Y-COORD : 19' 01'09.39"E

**HOLE No: TPP23**



**NOTES**

- 1) Groundwater from 2.50m.
- 2) Stable side walls.
- 3) No refusal.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

DATE : 22/11/2021 08:27

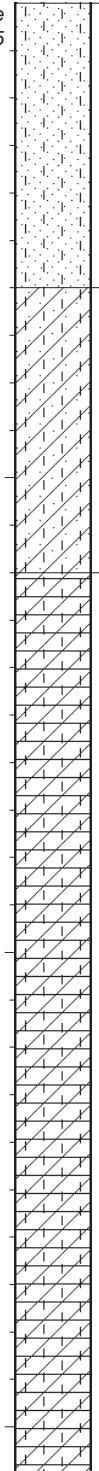
TEXT : ..RVASTESTPITPIPELINE.TXT

ELEVATION :

X-COORD : 33' 20'56.61"S

Y-COORD : 19' 01'18.92"E

Scale  
1:15



0.00 Wet, grey brown, loose, intact, silty SAND: **Transported.**

0.60 Wet, orange brown, soft intact, silty sandy CLAY: **Transported.**

1.20 Light beige brown mottled orange stained orange on joints, highly weathered fine grained, highly fractured with silty clay infilling, very soft rock becoming soft rock in places, **SHALE** with interbedded mica rich siltstone.

3.10 **NOTES**

- 1) No water seepage.
- 2) Stable side walls.
- 3) No refusal.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

DATE : 22/11/2021 08:27

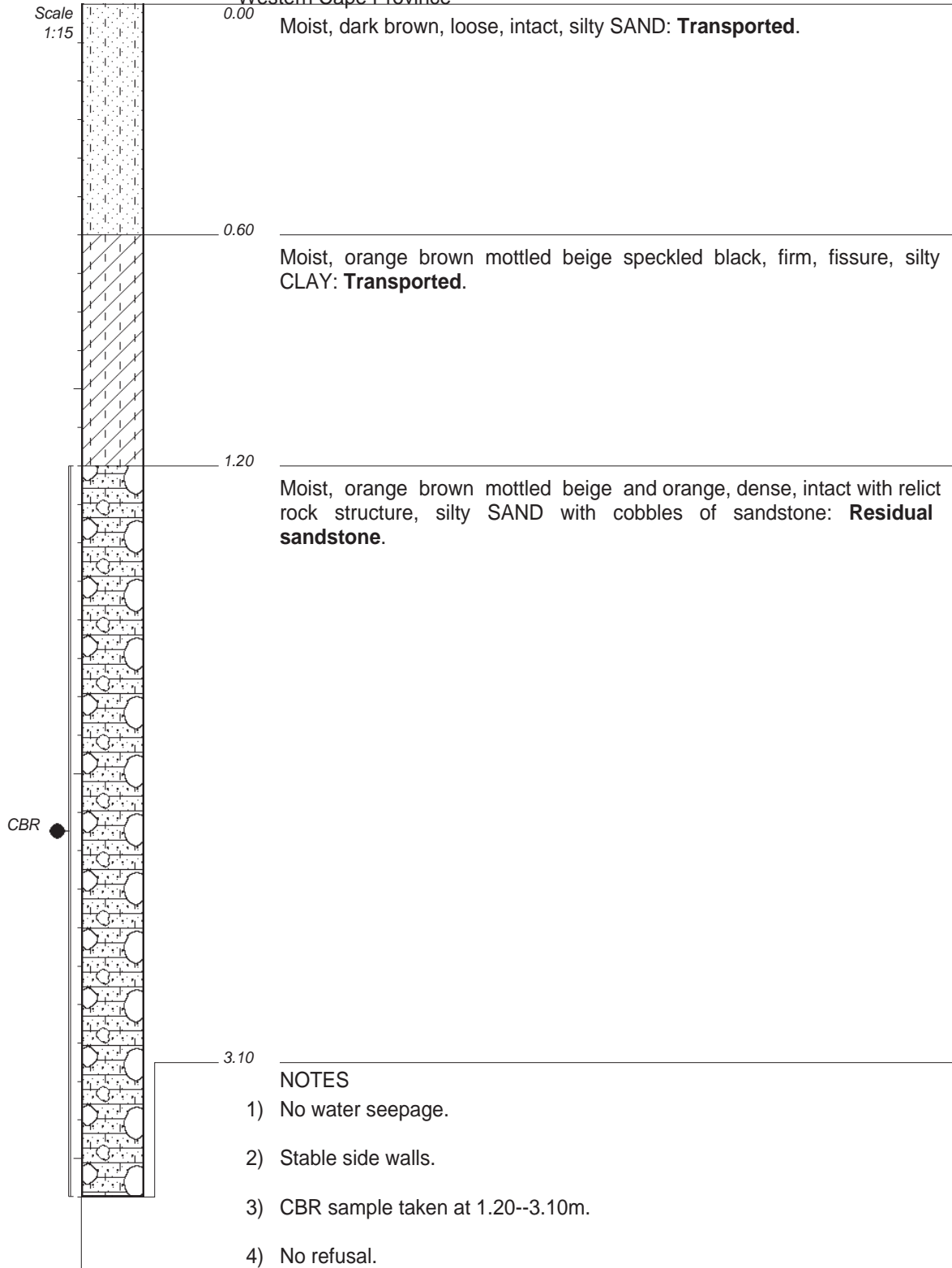
TEXT : ..RVASTESTPITPIPELINE.TXT

ELEVATION :

X-COORD : 33' 21'1.63"S

Y-COORD : 19' 01'19.21"E

**HOLE No: TPP26**



CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

DATE : 22/11/2021 08:27

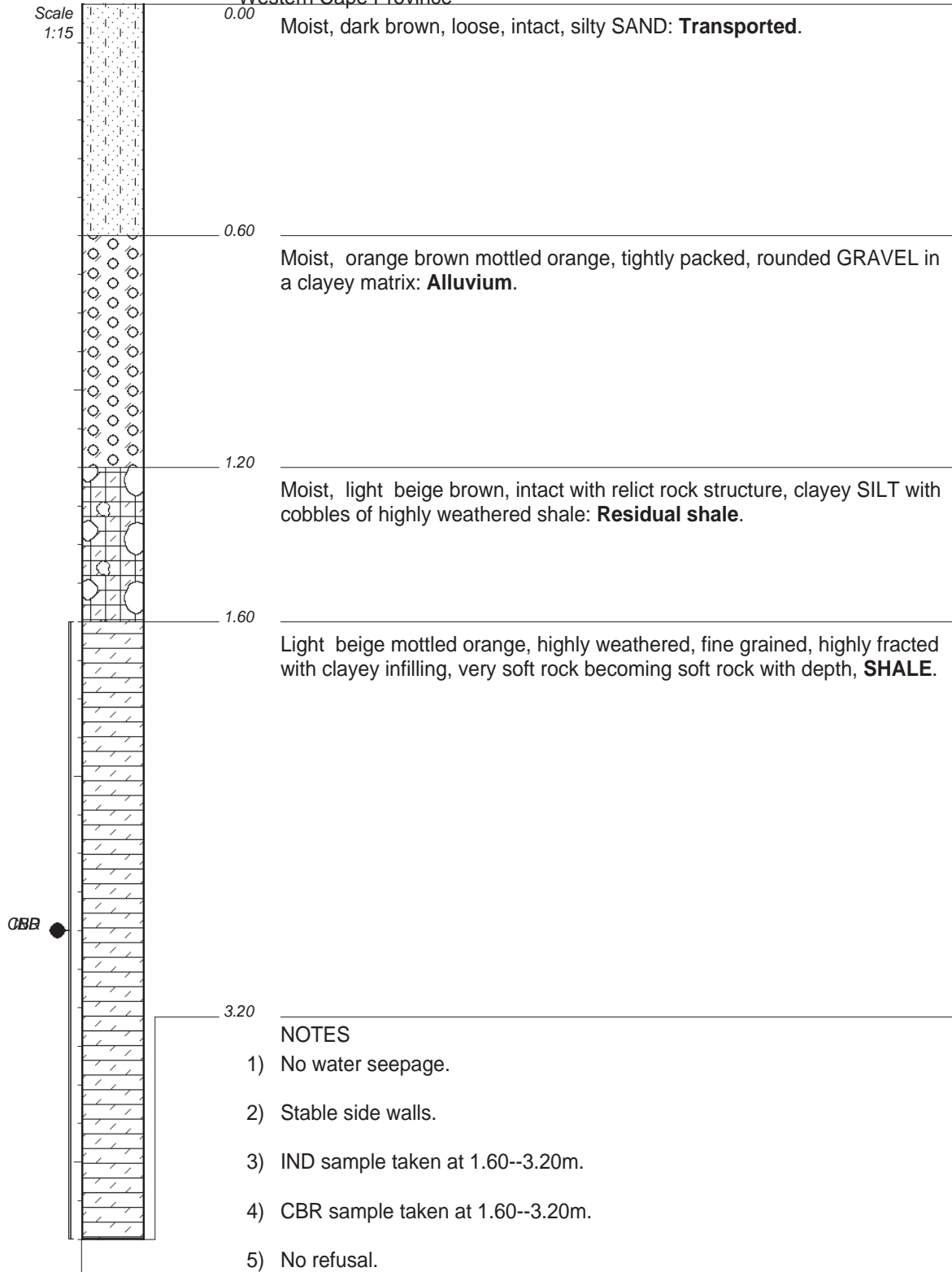
TEXT : ..RVASTESTPITPIPELINE.TXT

ELEVATION :

X-COORD : 33° 21' 8.26" S

Y-COORD : 19° 01' 19.28" E





CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

DATE : 22/11/2021 08:27

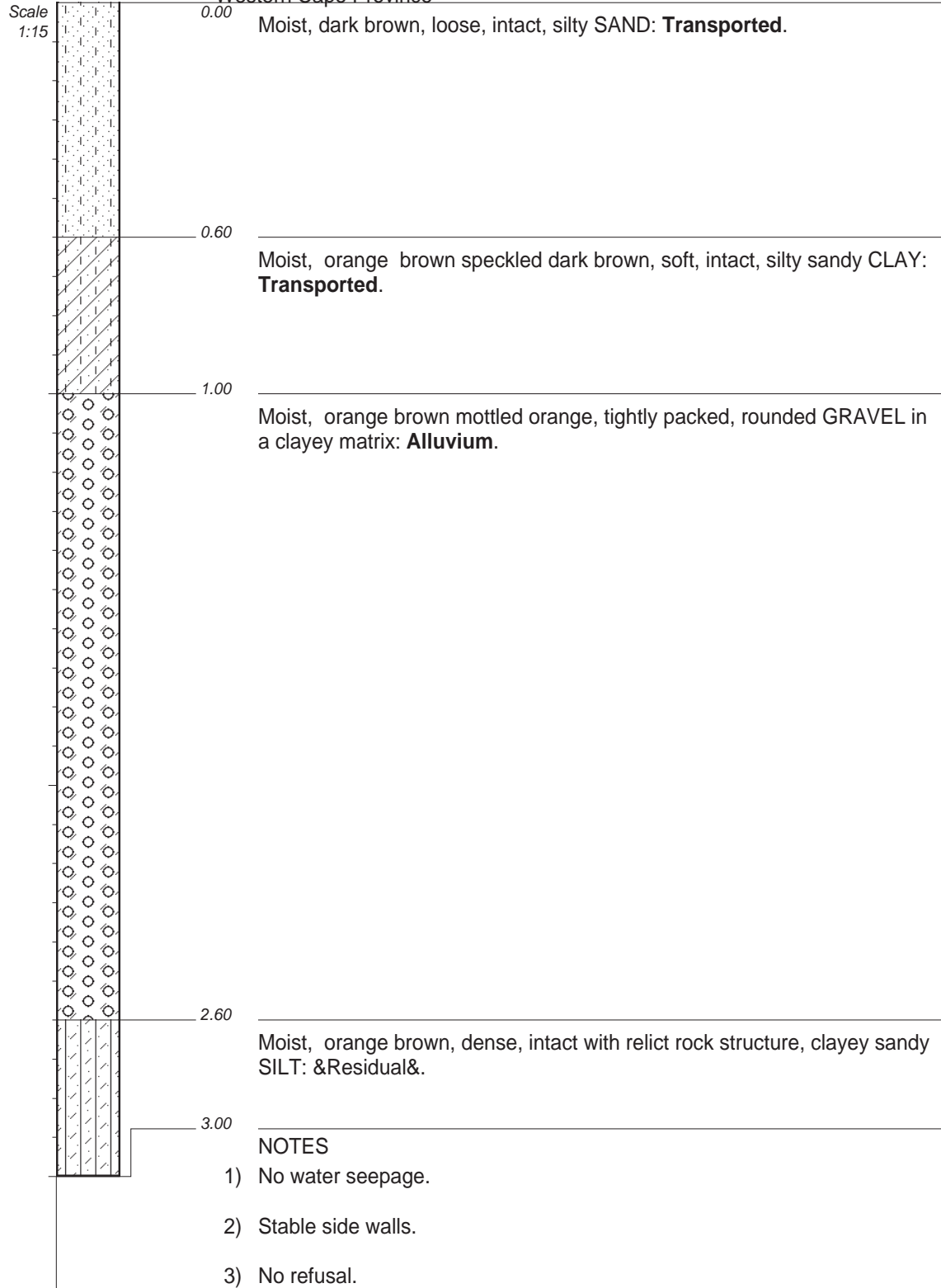
TEXT : ..RVASTESTPITPIPELINE.TXT

ELEVATION :

X-COORD : 33° 21' 14.70" S

Y-COORD : 19° 01' 19.31" E

**HOLE No: TPP28**



CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

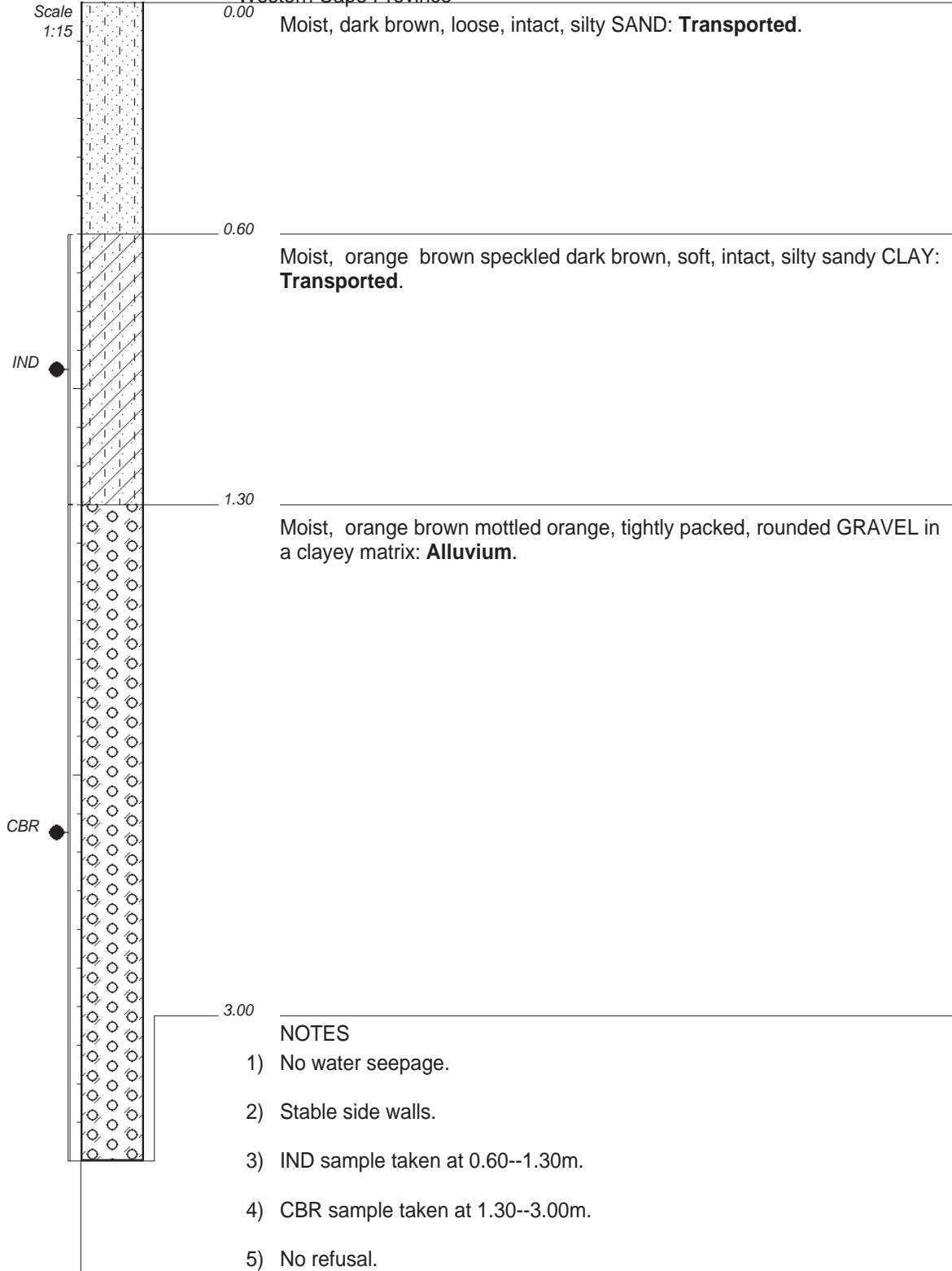
DATE : 22/11/2021 08:27

TEXT : ..RVASTESTPITPIPELINE.TXT

ELEVATION :

X-COORD : 33' 21'20.25"S

Y-COORD : 19' 01'22.55"E



CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

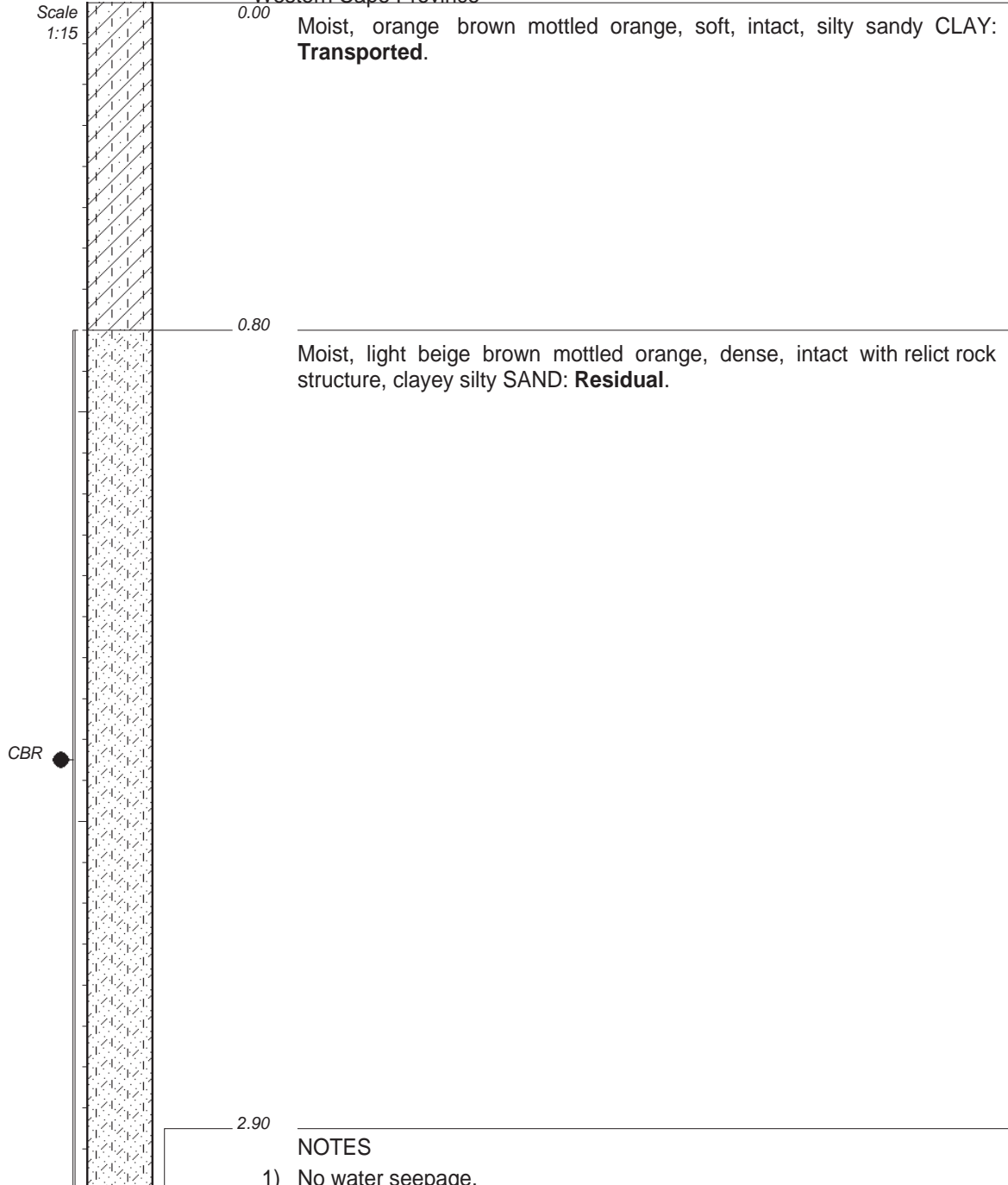
DATE : 22/11/2021 08:27

TEXT : ..RVASTESTPITPIPELINE.TXT

ELEVATION :

X-COORD : 33' 21'26.52"S

Y-COORD : 19' 01'24.58"E



**NOTES**

- 1) No water seepage.
- 2) Stable side walls.
- 3) CBR sample taken at 0.80--2.90m.
- 4) No refusal.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

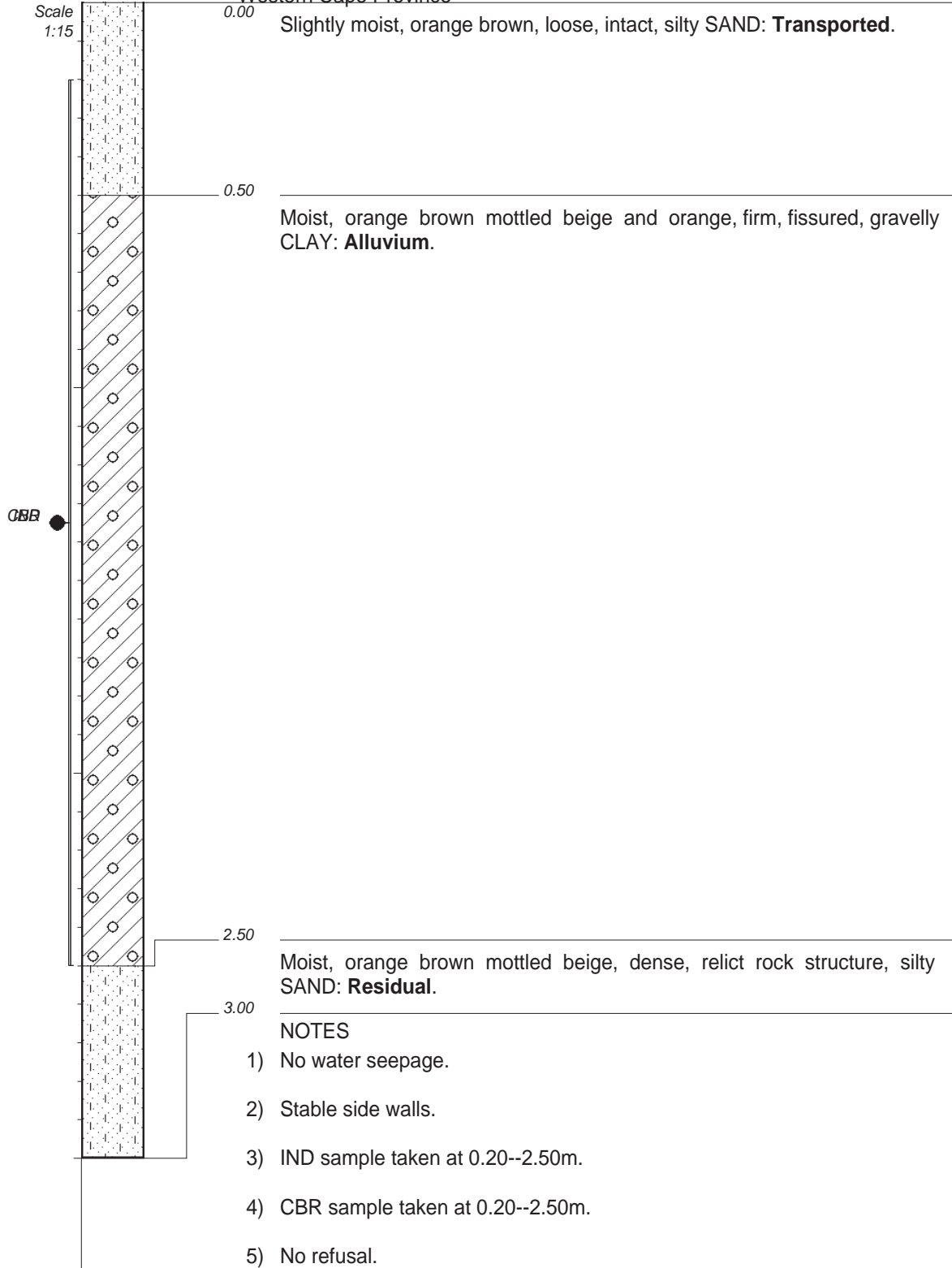
DATE : 22/11/2021 08:27

TEXT : ..RVASTESTPITPIPELINE.TXT

ELEVATION :

X-COORD : 33' 21'32.56"S

Y-COORD : 19' 01'26.72"E



CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

DATE : 22/11/2021 08:27

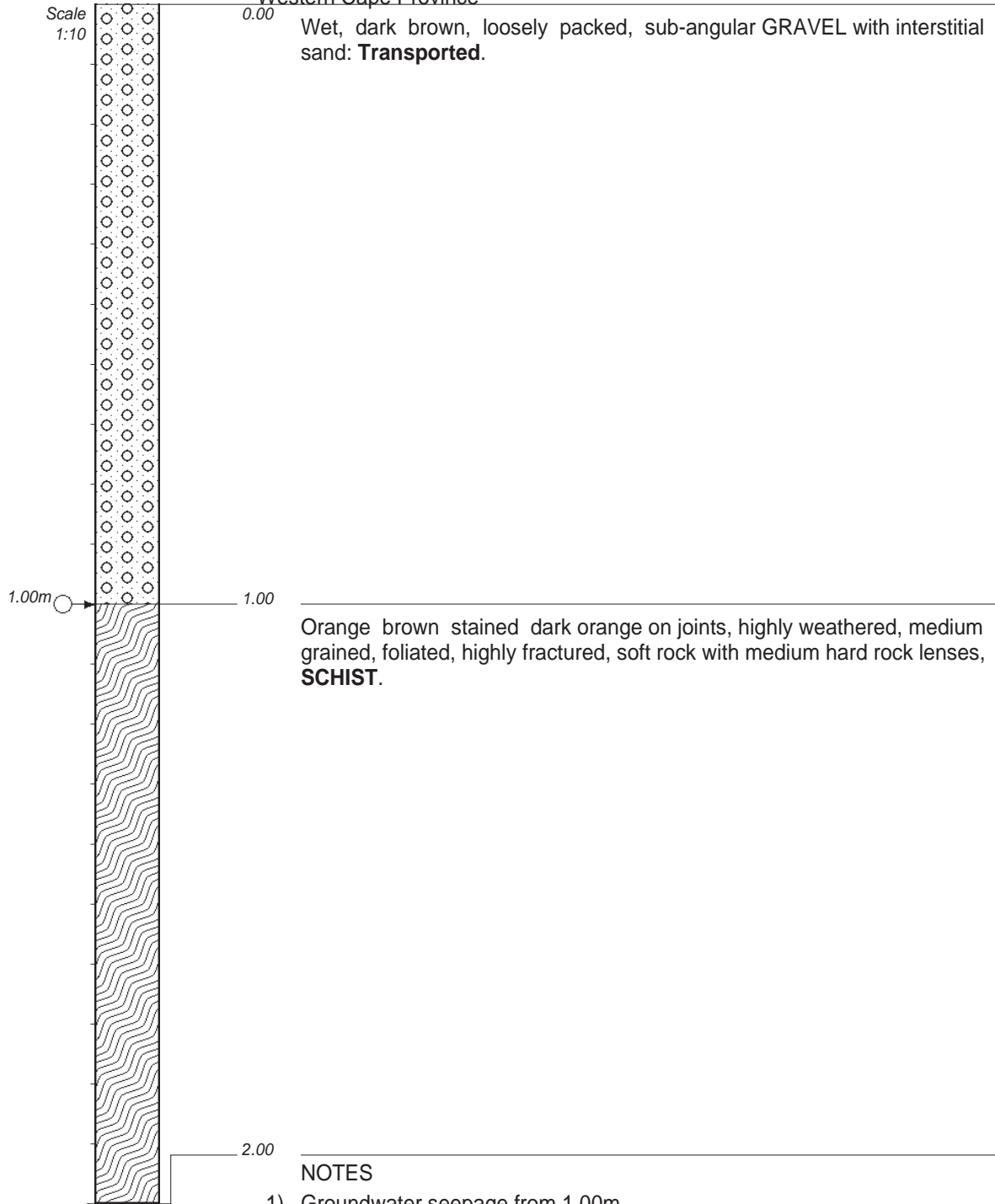
TEXT : ..RVASTESTPITPIPELINE.TXT

ELEVATION :

X-COORD : 33' 21'34.19"S

Y-COORD : 19' 01'34.20"E

**HOLE No: TPP32**



**NOTES**

- 1) Groundwater seepage from 1.00m.
- 2) Sidewall collapse from 1.00m.
- 3) No refusal but slow advance from 1.80m.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

DATE : 22/11/2021 08:27

TEXT : ..RVASTESTPITPIPELINE.TXT

ELEVATION :

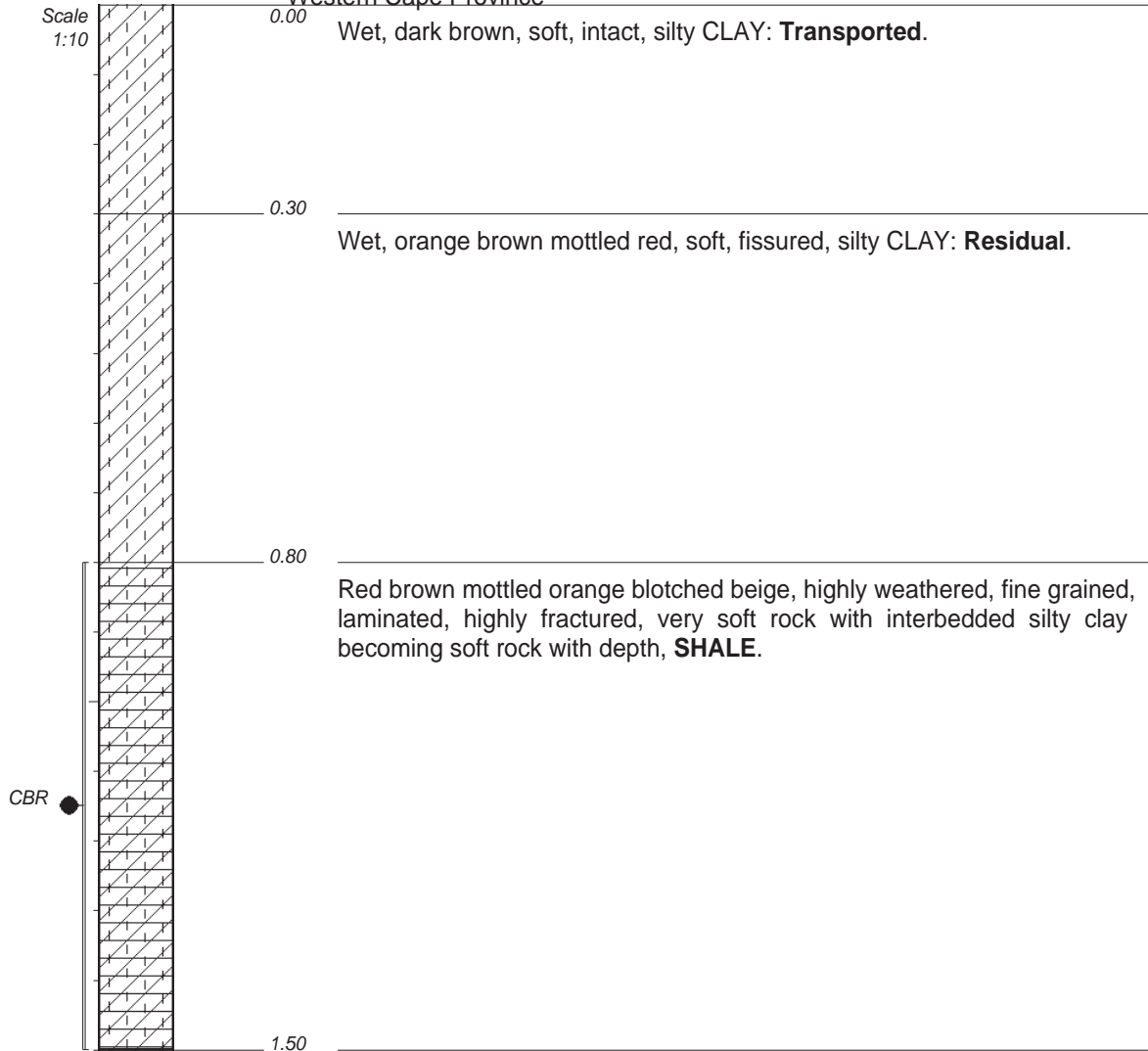
X-COORD : 33' 21'35.30"S

Y-COORD : 19' 01'39.21"E

# ROADS

## FARM ACCESS ROAD RIGHT BANK

### TESTPIT PROFILES



**NOTES**

- 1) No water seepage.
- 2) No sidewall collapse.
- 3) No Refusal.
- 4) CBR sample taken 0.80--1.50m.

CONTRACTOR : Mukona Consulting Engineers INCLINATION : Vertical

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

DATE : 22/11/2021 08:26

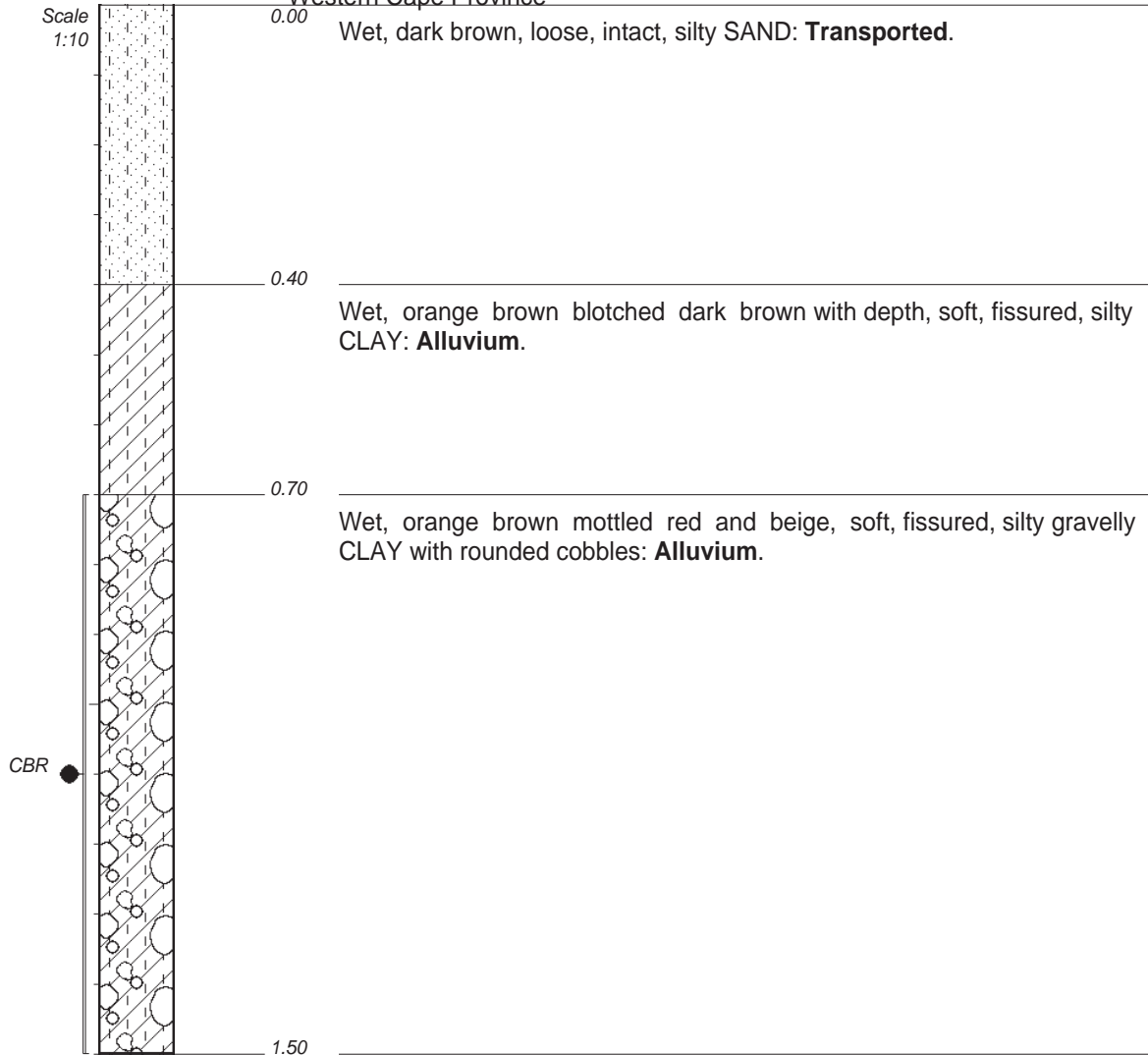
TEXT : ..614BRVASEMBANKMENTAR.TXT

ELEVATION :

X-COORD : 33' 19'37.12"S

Y-COORD : 18' 59'26.58"E





**NOTES**

- 1) No water seepage.
- 2) No sidewall collapse.
- 3) No Refusal.
- 4) CBR sample taken 0.70--1.50m.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

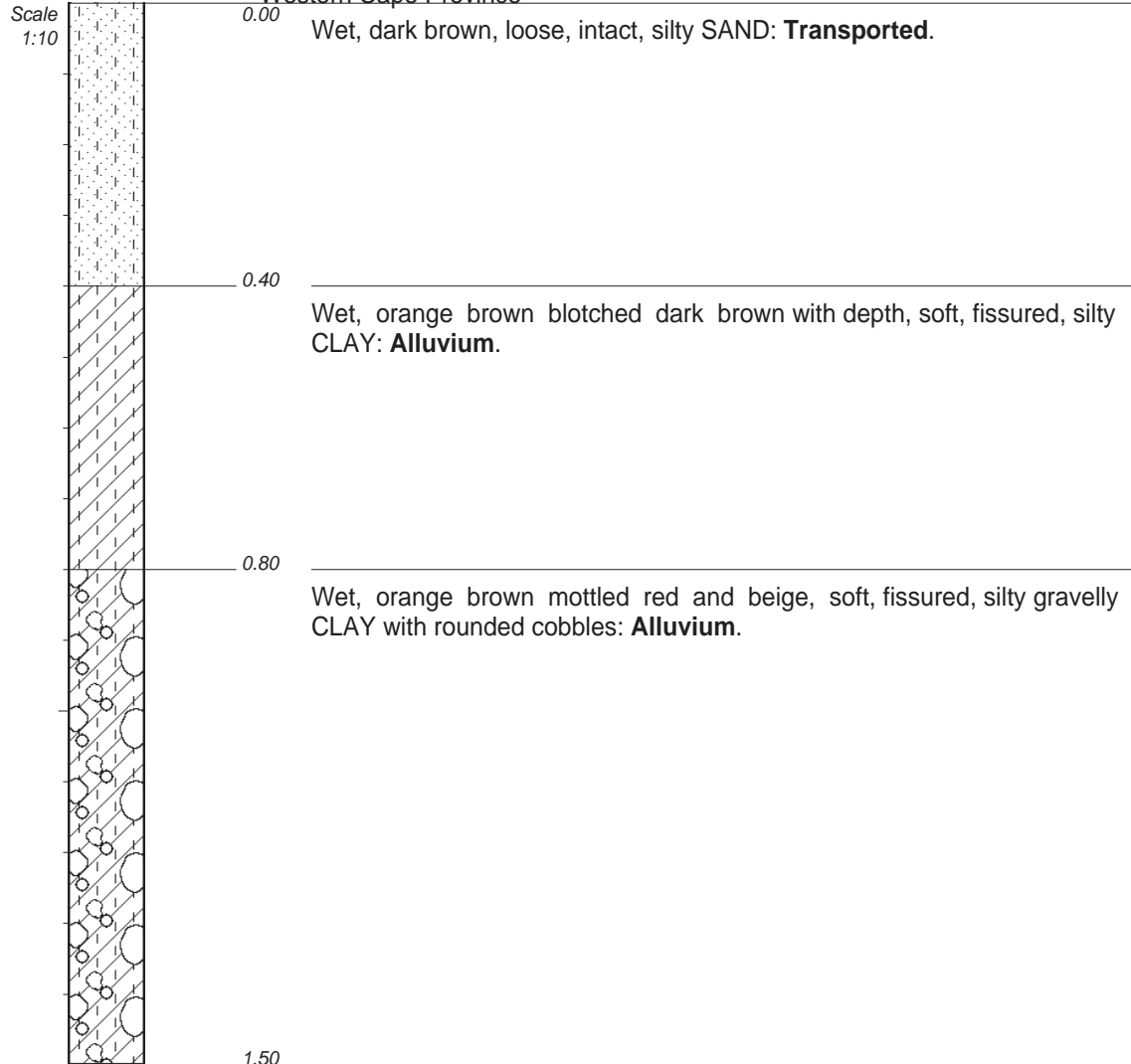
DATE : 22/11/2021 08:26

TEXT : ..614BRVASEMBANKMENTAR.TXT

ELEVATION :

X-COORD : 33' 19'37.20"S

Y-COORD : 18' 59'30.48"E



**NOTES**

- 1) No water seepage.
- 2) No sidewall collapse.
- 3) No Refusal.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

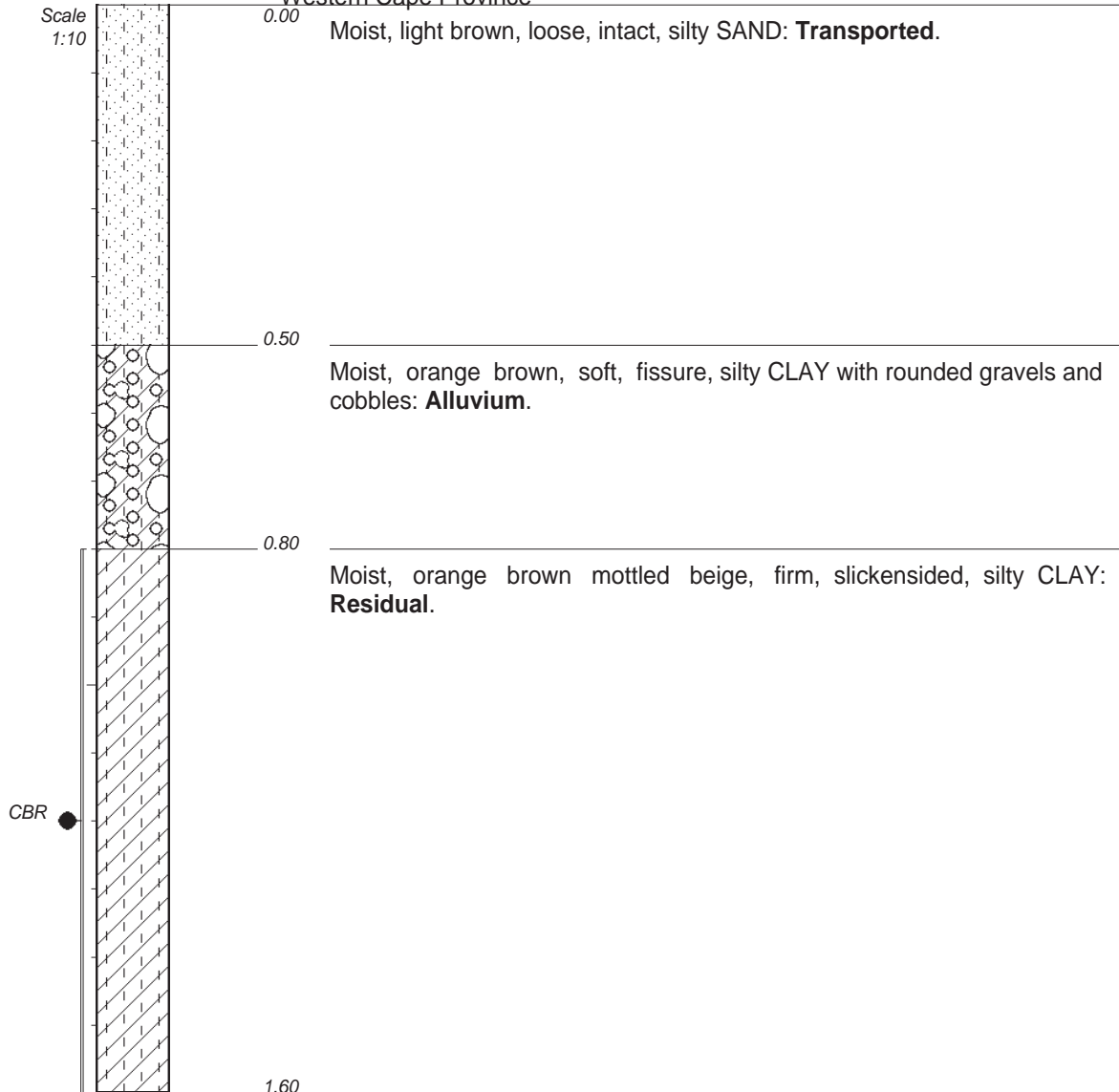
DATE : 22/11/2021 08:26

TEXT : ..614BRVASEMBANKMENTAR.TXT

ELEVATION :

X-COORD : 33' 19'37.34"S

Y-COORD : 18' 59'34.22"E



**NOTES**

- 1) No water seepage.
- 2) No sidewall collapse.
- 3) No Refusal.
- 4) CBR sample taken 0.80--1.60m.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

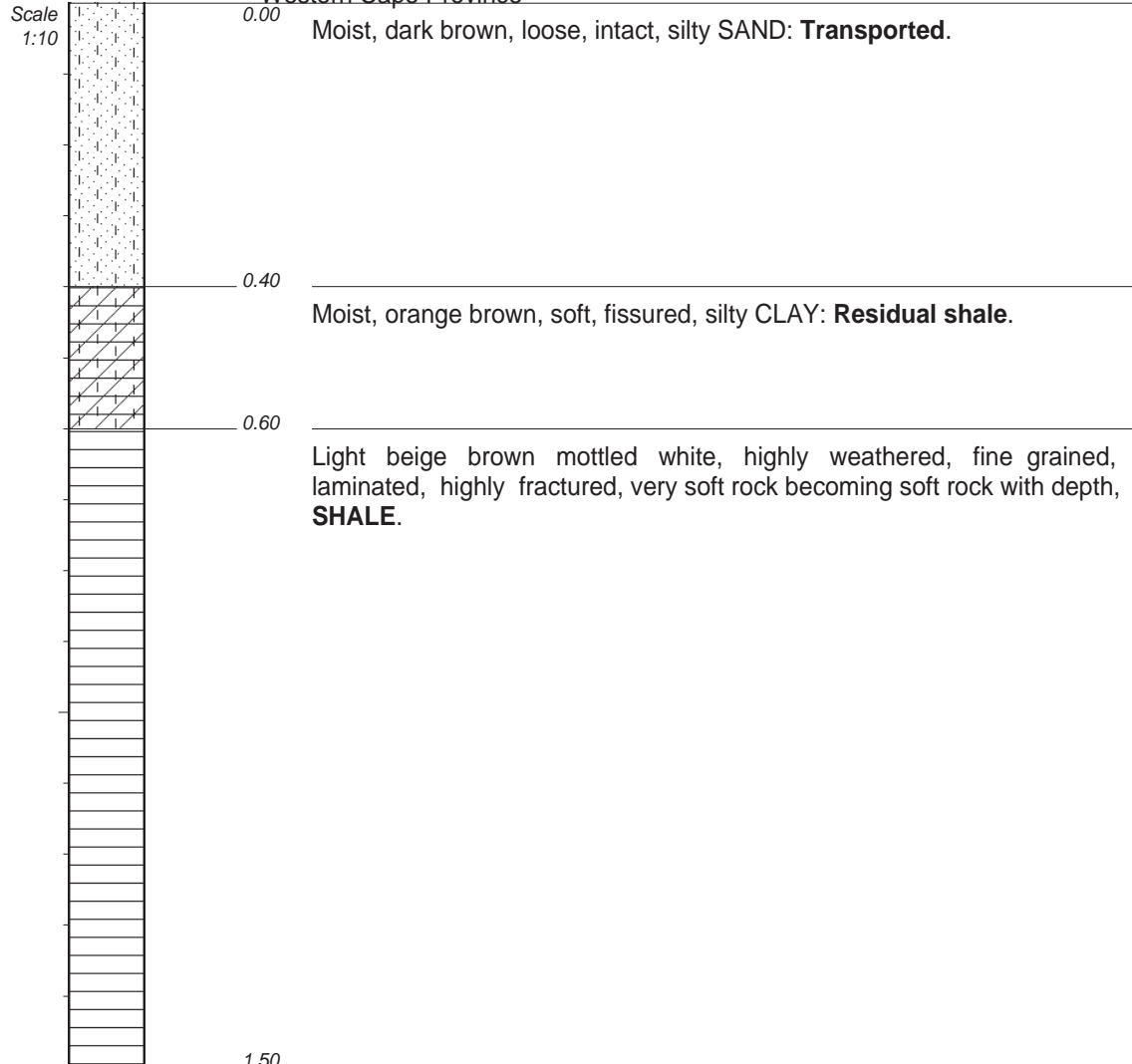
DATE : 22/11/2021 08:26

TEXT : ..614BRVASEMBANKMENTAR.TXT

ELEVATION :

X-COORD : 33' 19'37.49"S

Y-COORD : 18' 59'38.34"E



**NOTES**

- 1) No water seepage.
- 2) No sidewall collapse.
- 3) No Refusal.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

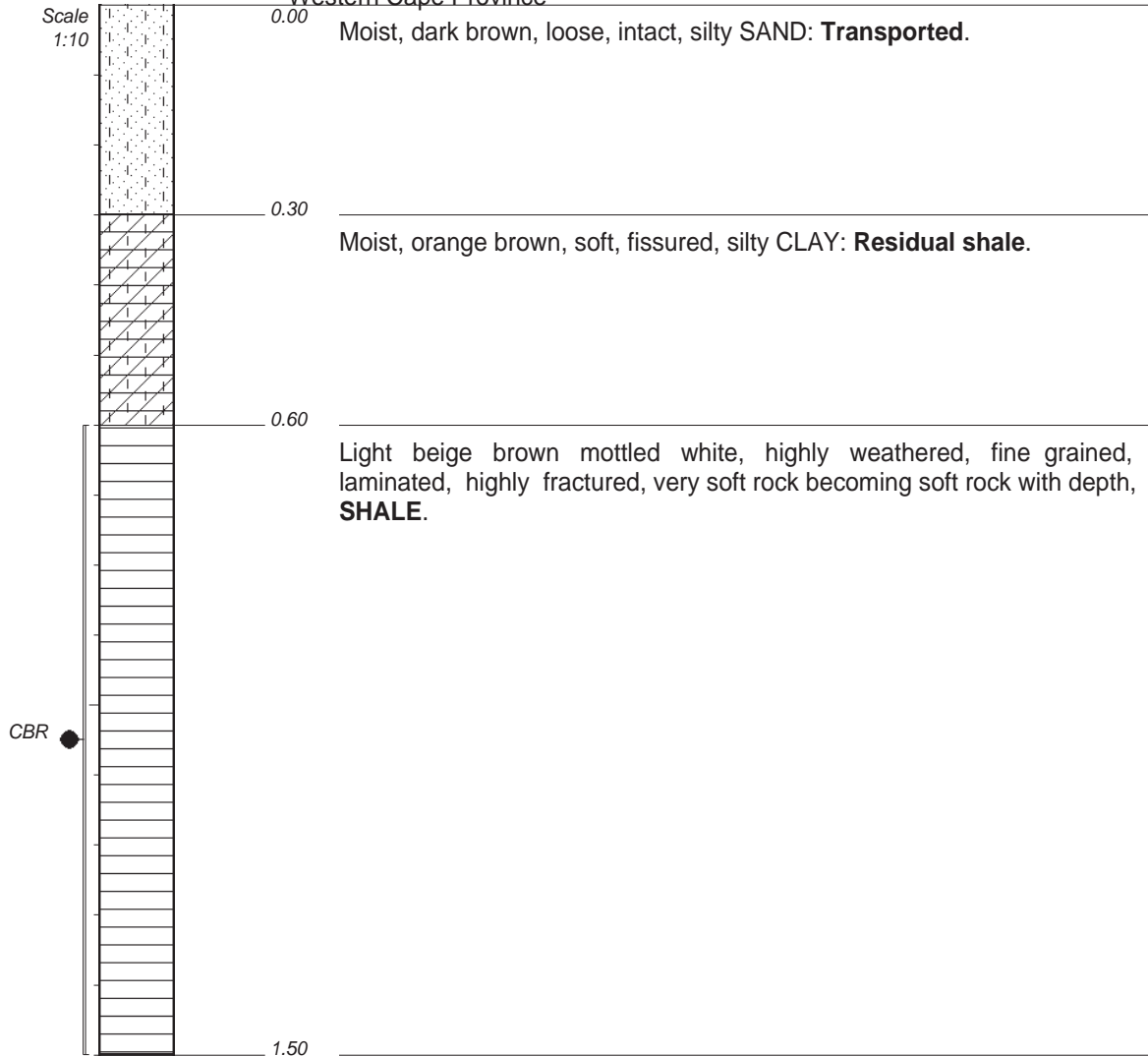
DATE : 22/11/2021 08:26

TEXT : ..614BRVASEMBANKMENTAR.TXT

ELEVATION :

X-COORD : 33' 19'37.74"S

Y-COORD : 18' 59'42.16"E



**NOTES**

- 1) No water seepage.
- 2) No sidewall collapse.
- 3) No Refusal.
- 4) CBR sample taken 0.60--1.50m.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

DATE : 22/11/2021 08:26

TEXT : ..614BRVASEMBANKMENTAR.TXT

ELEVATION :

X-COORD : 33° 19'37.77"S

Y-COORD : 18° 59'44.86"E

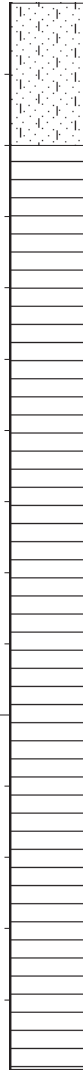


**Trans Caledon Tunnel Authority**  
Geotechnical Investigation  
Berg River Voelvlei Augmentation Scheme  
Riebeeck Kasteel  
Western Cape Province

**HOLE No: TPRE07**  
**Sheet 1 of 1**

**JOB NUMBER: MK-21-614**

Scale  
1:10



0.00

Moist, orange brown, loose, intact, silty SAND: **Transported.**

0.20

Light beige brown, highly weathered, fine grained, laminated, highly fractured, very soft rock becoming soft rock with depth, **SHALE.**

1.50

**NOTES**

- 1) No water seepage.
- 2) No sidewall collapse.
- 3) No Refusal.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

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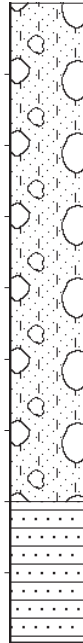
ELEVATION :

X-COORD : 33' 19'37.76"S

Y-COORD : 18' 59'46.44"E

**HOLE No: TPRE07**

Scale  
1:10



0.00

Moist, orange brown, loose, intact, silty SAND with sub-rounded cobbles of mixed origin: **Alluvium**.

0.70

Light orange brown mottled red, highly weathered, highly fractured, soft rock becoming medium hard rock at depth, **SANDSTONE**.

0.90

**NOTES**

- 1) No water seepage.
- 2) No sidewall collapse.
- 3) Refusal at 0.90m.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

DATE : 22/11/2021 08:26

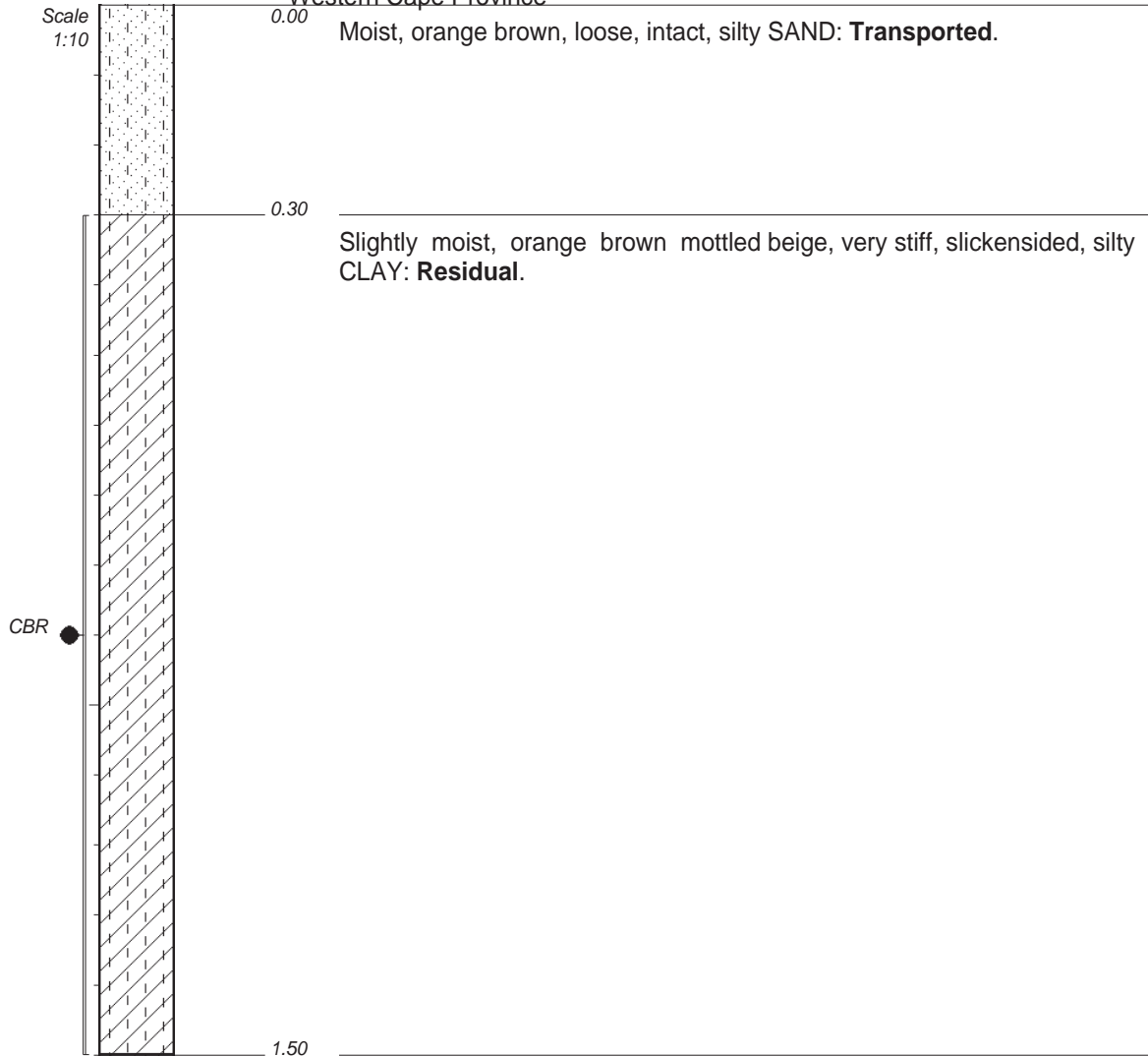
TEXT : ..614BRVASEMBANKMENTAR.TXT

ELEVATION :

X-COORD : 33' 19'37.97"S

Y-COORD : 18' 59'50.14"E

**HOLE No: TPRE08**



**NOTES**

- 1) No water seepage.
- 2) No sidewall collapse.
- 3) No Refusal.
- 4) CBR sample taken 0.30--1.50m.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

DATE : 22/11/2021 08:26

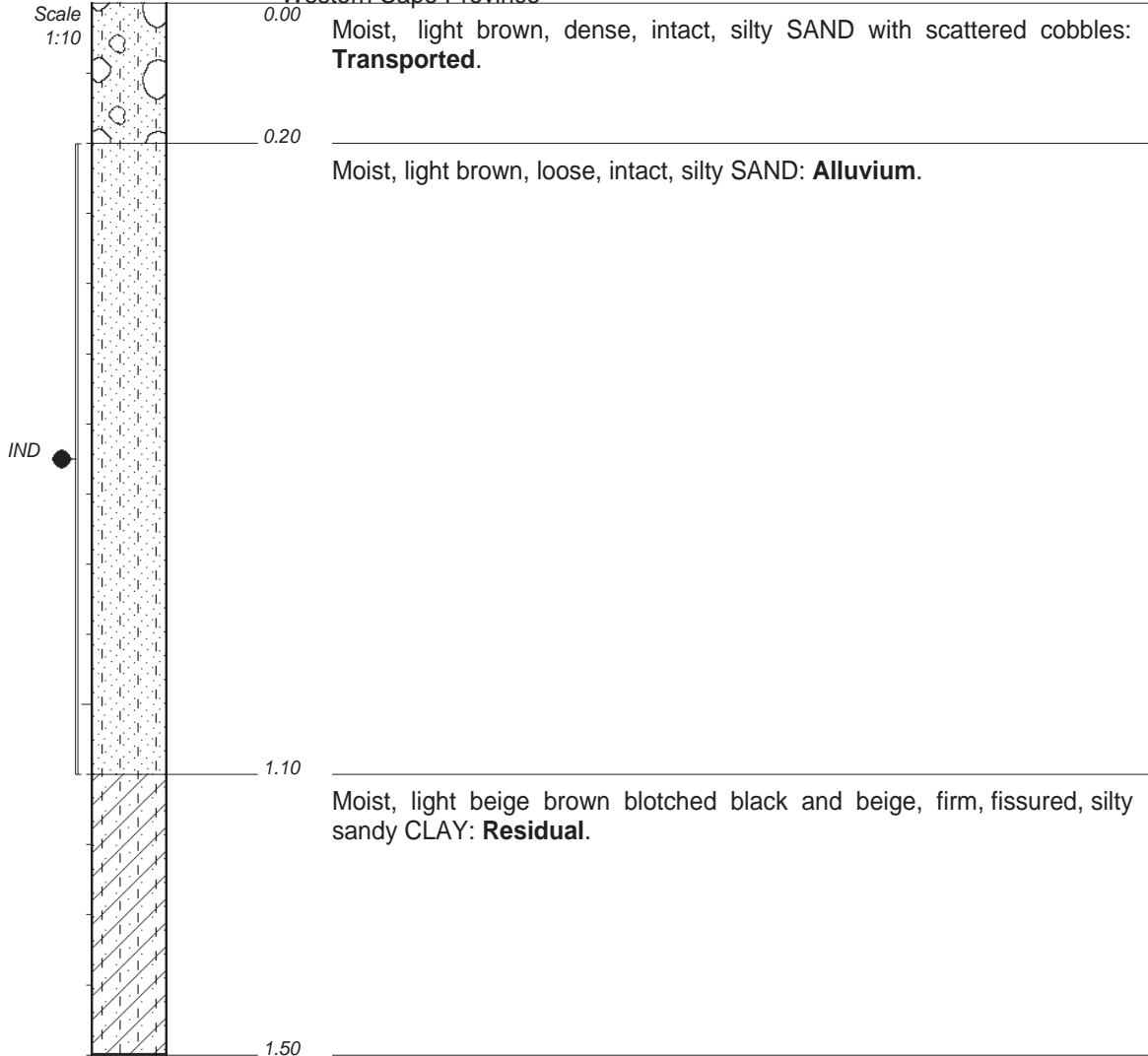
TEXT : ..614BRVASEMBANKMENTAR.TXT

ELEVATION :

X-COORD : 33° 19'38.11"S

Y-COORD : 18° 59'54.05"E





**NOTES**

- 1) No water seepage.
- 2) No sidewall collapse.
- 3) No Refusal.
- 4) IND sample taken 0.20--1.10m.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

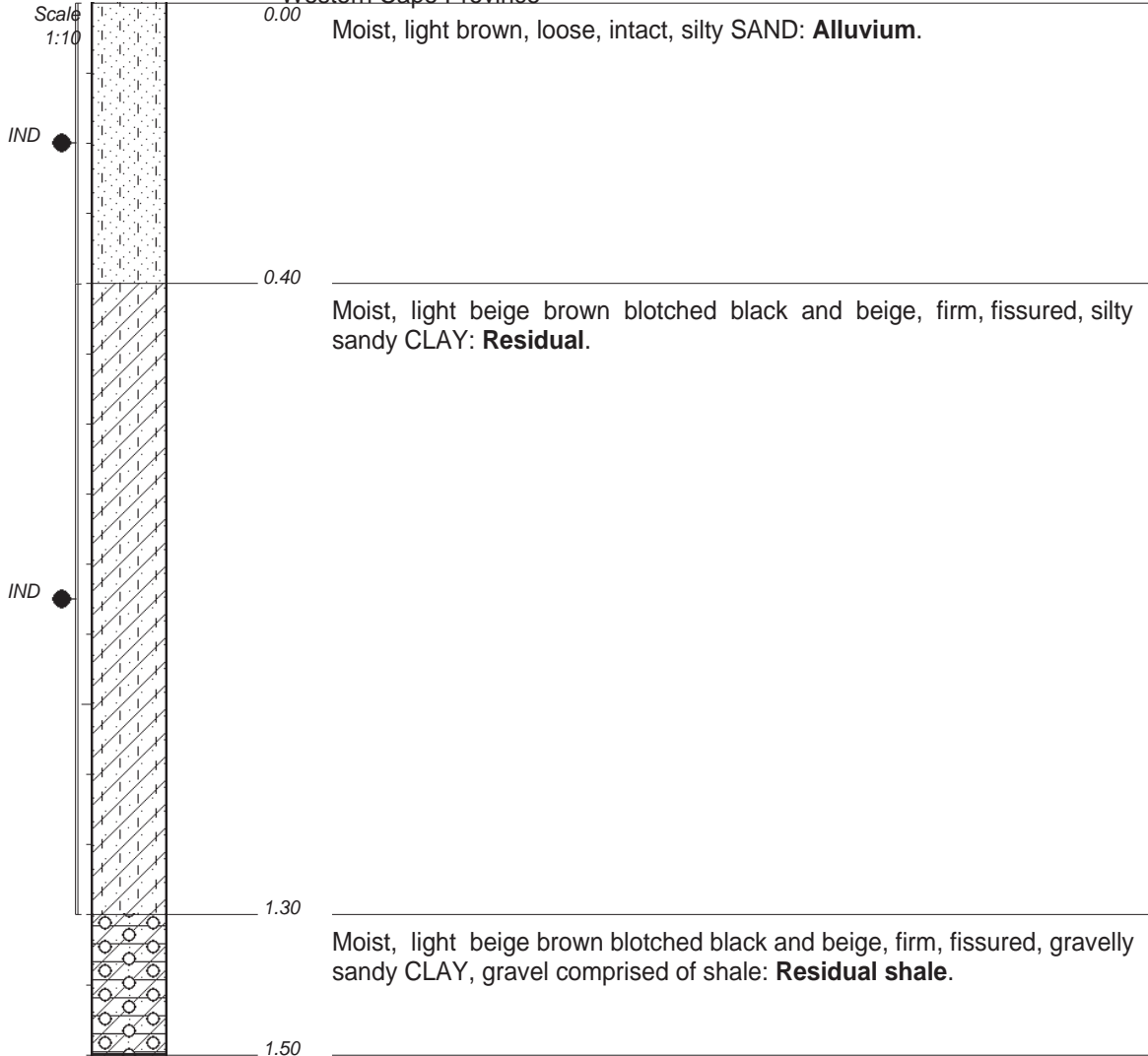
DATE : 22/11/2021 08:26

TEXT : ..614BRVASEMBANKMENTAR.TXT

ELEVATION :

X-COORD : 33' 19'38.25"S

Y-COORD : 18' 59'57.91"E



**NOTES**

- 1) No water seepage.
- 2) No sidewall collapse.
- 3) No Refusal.
- 4) IND sample taken 0.00--0.40m.
- 5) IND sample taken 0.40--1.30m.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

DATE : 22/11/2021 08:26

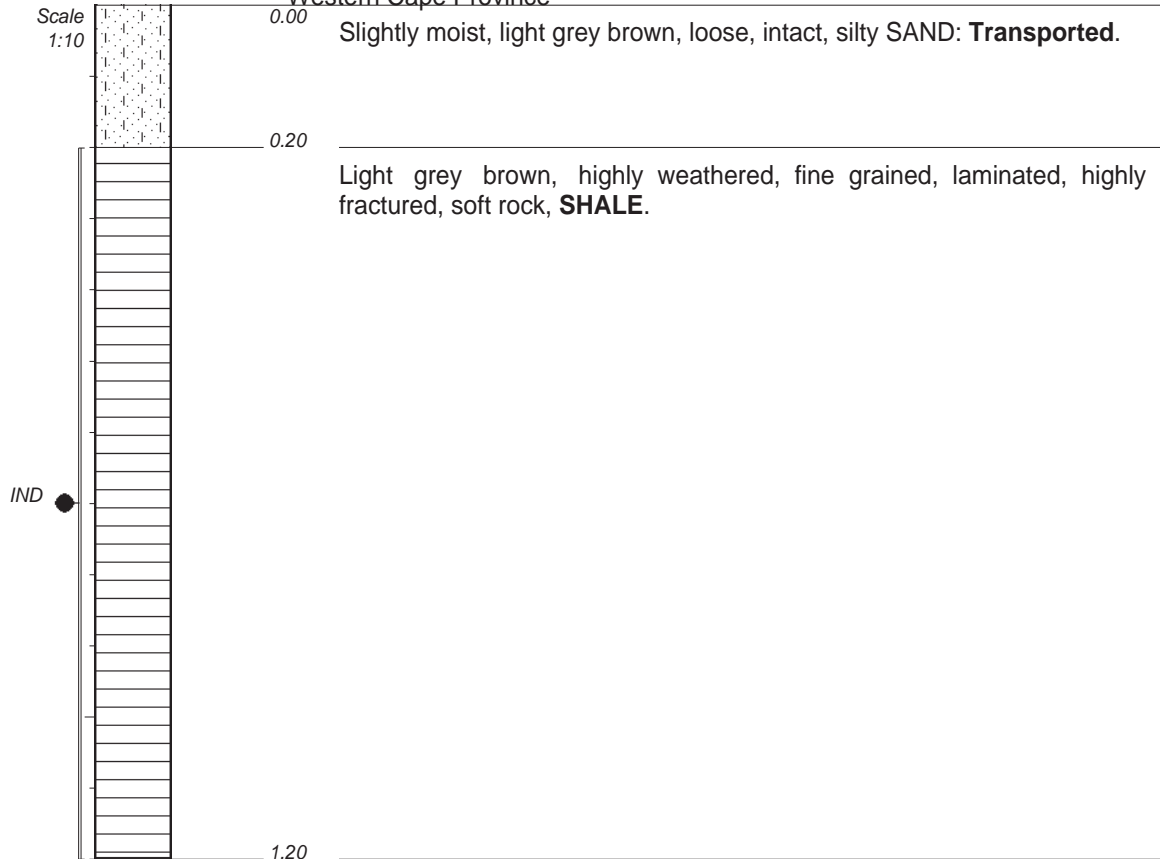
TEXT : ..614BRVASEMBANKMENTAR.TXT

ELEVATION :

X-COORD : 33' 19'38.37"S

Y-COORD : 19' 00'00.80"E

**HOLE No: TPRE11**



**NOTES**

- 1) No water seepage.
- 2) No sidewall collapse.
- 3) Refusal at 1.20m.
- 4) IND sample taken 0.20--1.20m.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

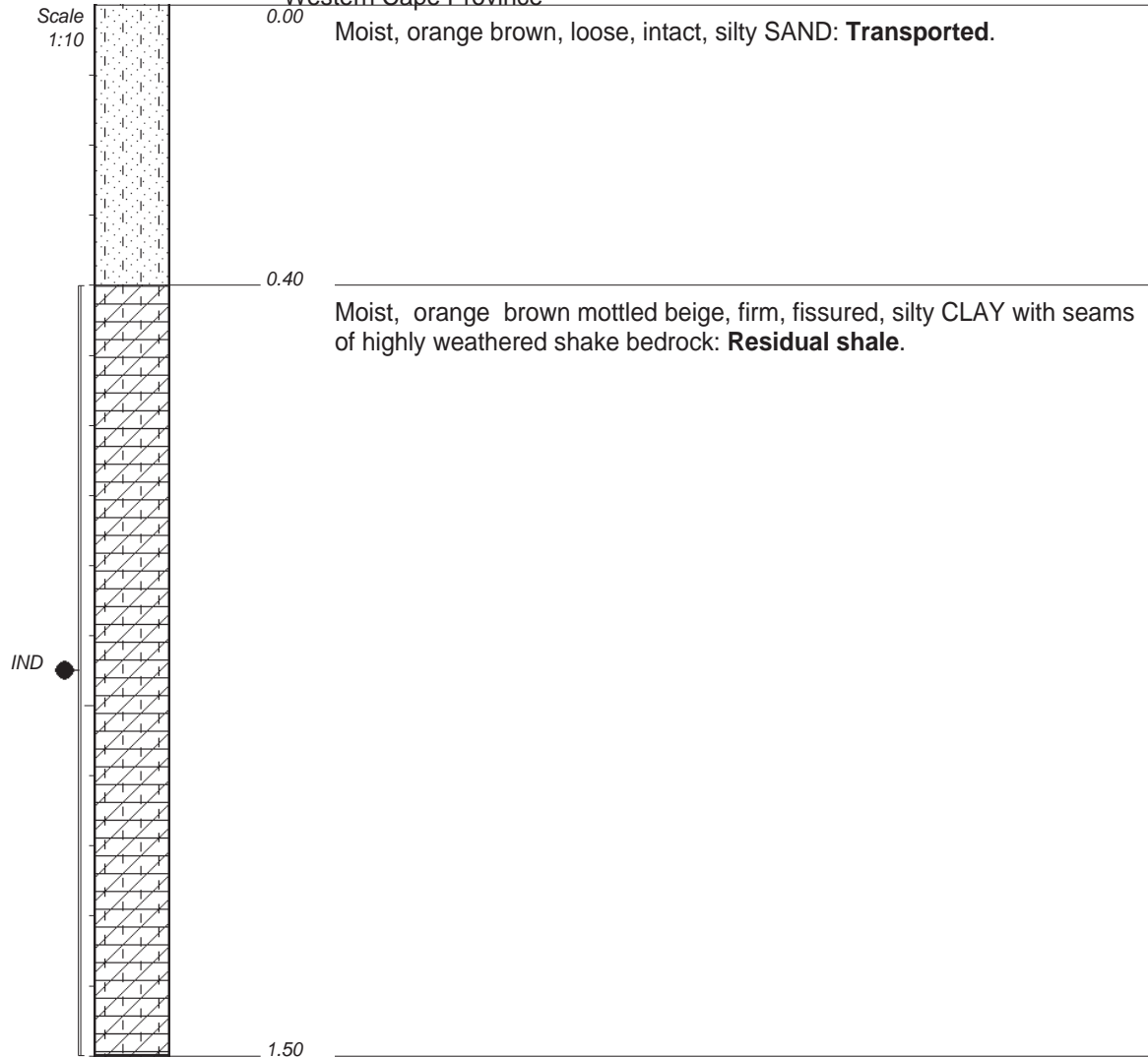
DATE : 22/11/2021 08:26

TEXT : ..614BRVASEMBANKMENTAR.TXT

ELEVATION :

X-COORD : 33' 19'54.63"S

Y-COORD : 19' 00'01.31"E



**NOTES**

- 1) No water seepage.
- 2) No sidewall collapse.
- 3) No Refusal.
- 4) IND sample taken 0.40--1.50m.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

DATE : 22/11/2021 08:26

TEXT : ..614BRVASEMBANKMENTAR.TXT

ELEVATION :

X-COORD : 33' 20'10.66"S

Y-COORD : 18' 59'59.33"E



**Trans Caledon Tunnel Authority**  
Geotechnical Investigation  
Berg River Voelvlei Augmentation Scheme  
Riebeeck Kasteel  
Western Cape Province

**HOLE No: TPRE14**  
**Sheet 1 of 1**

**JOB NUMBER: MK-21-614**

Scale  
1:10



0.00

Moist, orange brown, loose, intact, silty SAND: **Transported.**

0.40

Light beige brown mottled red, highly weathered, fine grained, laminated, highly fractured, soft rock, **SHALE.**

1.30

**NOTES**

- 1) No water seepage.
- 2) No sidewall collapse.
- 3) Refusal at 1.20m.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

DATE : 22/11/2021 08:26

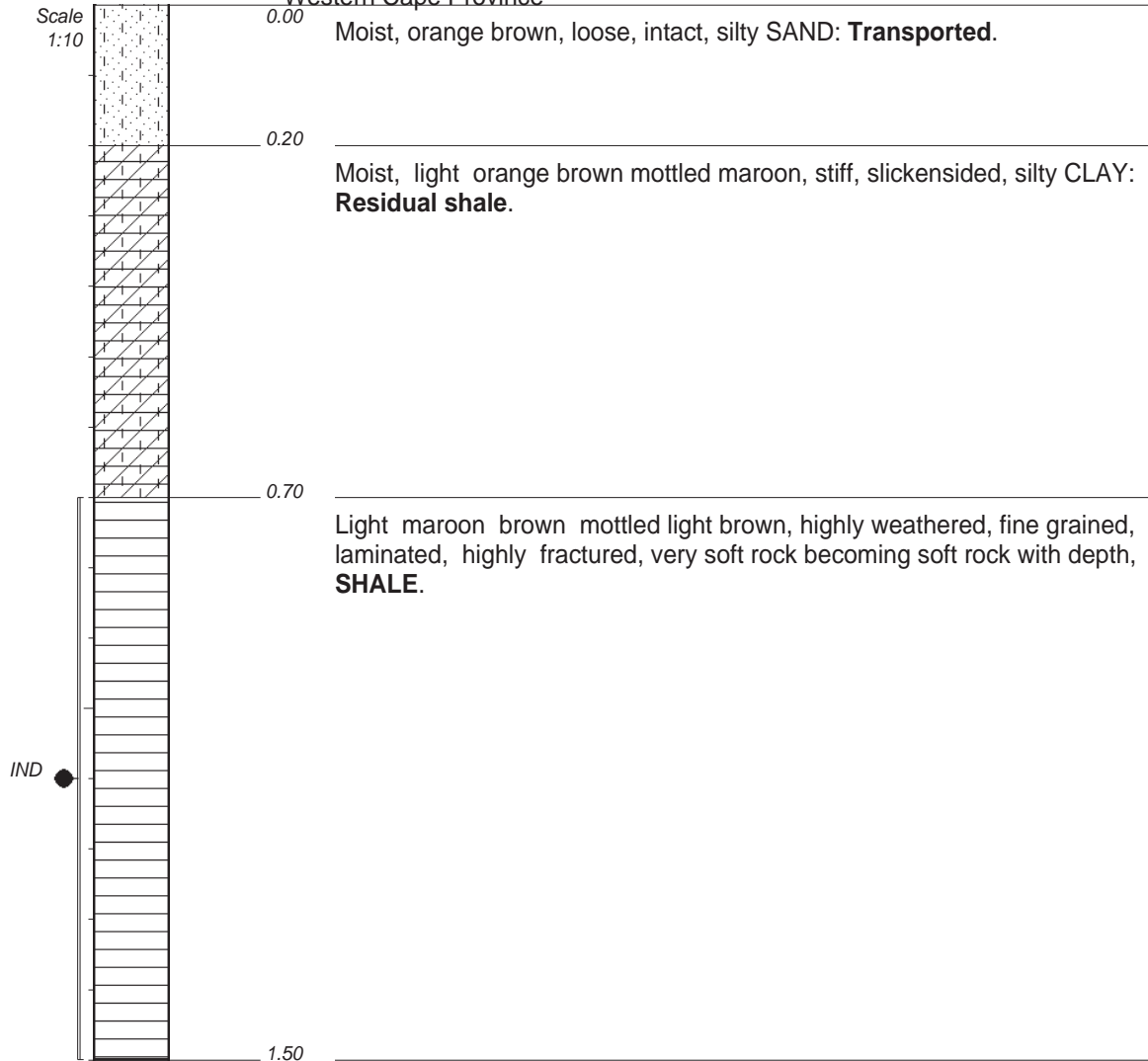
TEXT : ..614BRVASEMBANKMENTAR.TXT

ELEVATION :

X-COORD : 33' 20'26.93"S

Y-COORD : 18' 59'59.44"E

**HOLE No: TPRE14**



**NOTES**

- 1) No water seepage.
- 2) No sidewall collapse.
- 3) No Refusal.
- 4) IND sample taken 0.70--1.50m.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

DATE : 22/11/2021 08:26

TEXT : ..614BRVASEMBANKMENTAR.TXT

ELEVATION :

X-COORD : 33' 20'43.80"S

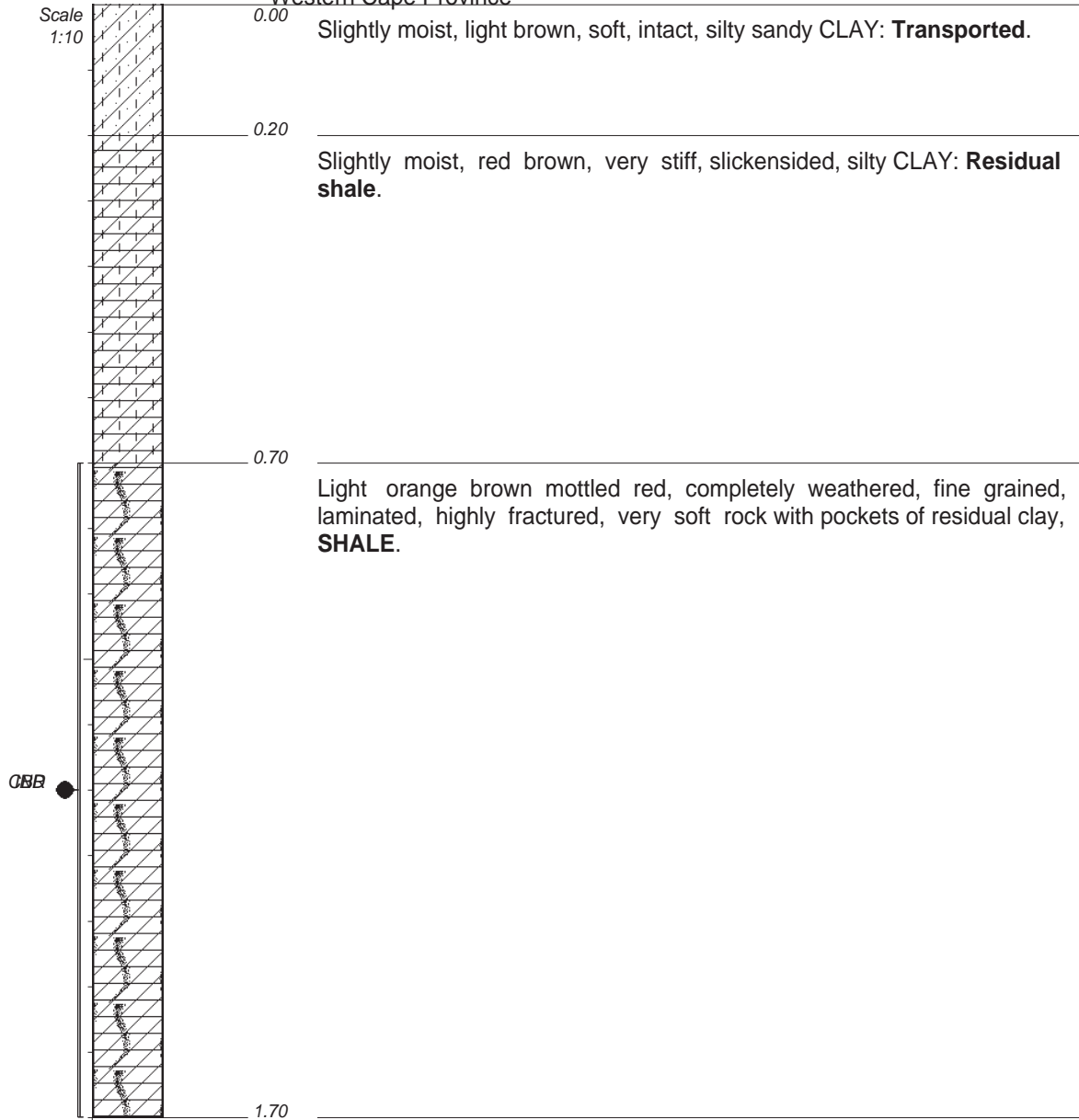
Y-COORD : 18' 59'59.45"E

**HOLE No: TPRE15**

# ROADS

## FARM ACCESS ROAD LEFT BANK

### TESTPIT PROFILES



**NOTES**

- 1) No water seepage.
- 2) No sidewall collapse.
- 3) No Refusal.
- 4) IND sample taken 0.70--1.70m.
- 5) CBR sample taken 0.70--1.70m.

CONTRACTOR : Mukona Consulting Engineers INCLINATION : Vertical

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

DATE : 22/11/2021 08:19

TEXT : ..TPITSBRITZACCESSROAD.TXT

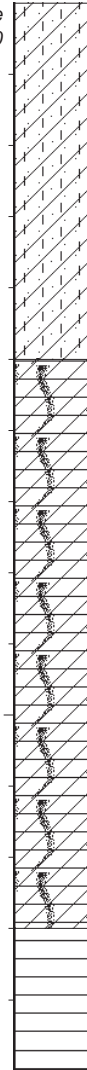
ELEVATION :

X-COORD : 33' 19'24.62"S

Y-COORD : 18' 57'53.15"E



Scale  
1:10



0.00 Moist, dark brown, firm, intact, silty sandy CLAY: **Transported.**

0.50 Light beige brown stained black, completely weathered, fine grained, laminated, highly fractured, very soft rock with pockets of residual clay, **SHALE.**

1.30 Light beige brown stained black, highly weathered, fine grained, laminated, highly fractured, very soft rock, **SHALE.**

1.50

**NOTES**

- 1) No water seepage.
- 2) No sidewall collapse.
- 3) No Refusal.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

DATE : 22/11/2021 08:19

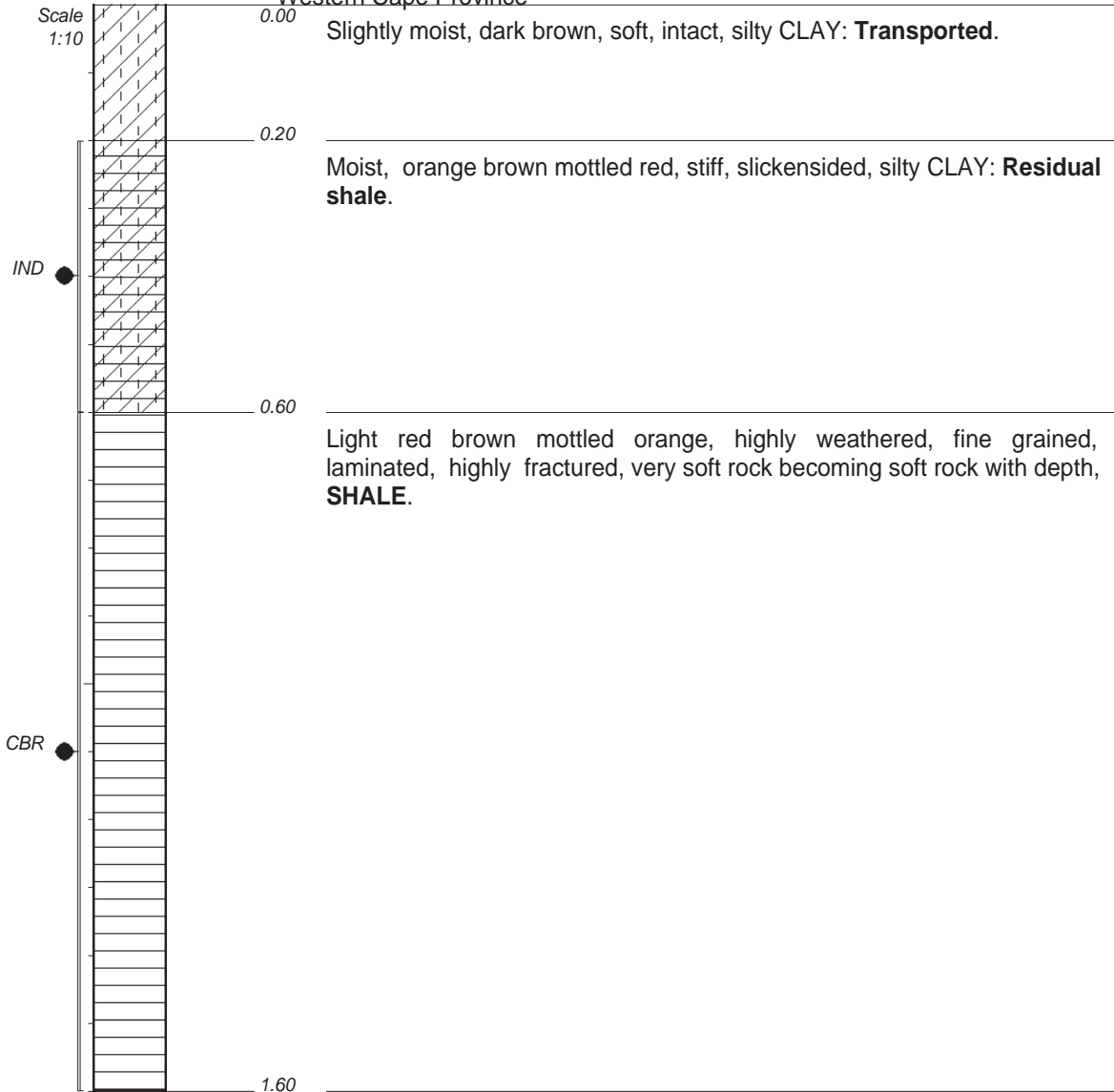
TEXT : ..TPITSBRITZACCESSROAD.TXT

ELEVATION :

X-COORD : 33' 19'25.24"S

Y-COORD : 18' 57'57.28"E

**HOLE No: TPR02**



**NOTES**

- 1) No water seepage.
- 2) No sidewall collapse.
- 3) No Refusal.
- 4) IND sample taken 0.20--0.60m.
- 5) CBR sample taken 0.60--1.60m.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

DATE : 22/11/2021 08:19

TEXT : ..TPITSBRITZACCESSROAD.TXT

ELEVATION :

X-COORD : 33' 19'25.74"S

Y-COORD : 18' 58'1.33"E

**HOLE No: TPR03**

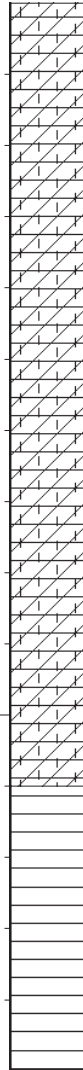


**Trans Caledon Tunnel Authority**  
Geotechnical Investigation  
Berg River Voelvlei Augmentation Scheme  
Riebeeck Kasteel  
Western Cape Province

**HOLE No: TPR04**  
*Sheet 1 of 1*

**JOB NUMBER: MK-21-614**

Scale  
1:10



0.00

Moist, orange brown, firm, fissured, silty CLAY: **Residual shale.**

1.10

Red brown mottled maroon, highly weathered, fine grained, laminated, highly fractured, very soft rock, **SHALE.**

1.50

**NOTES**

- 1) No water seepage.
- 2) No sidewall collapse.
- 3) No Refusal.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

DATE : 22/11/2021 08:19

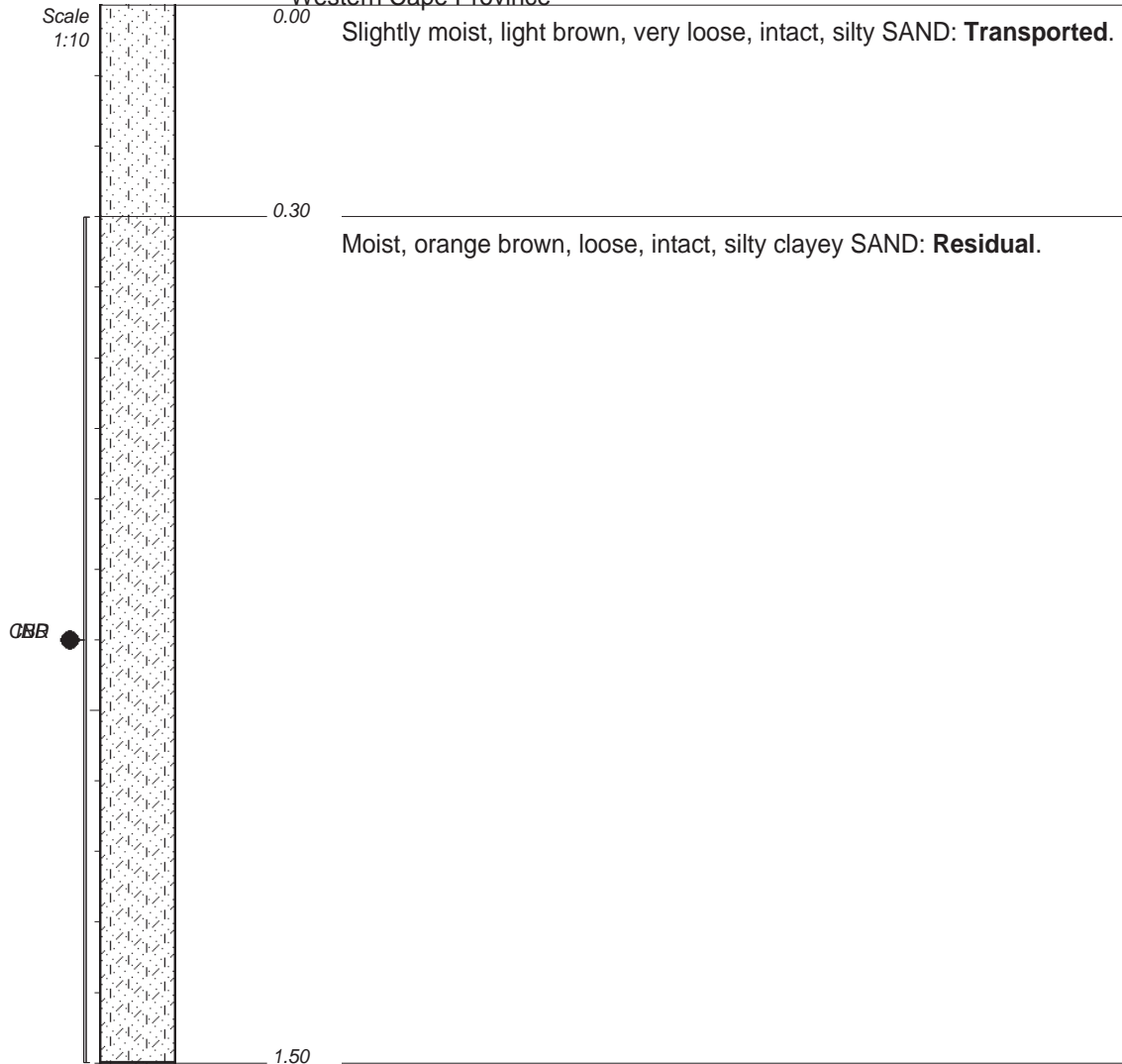
TEXT : ..TPITSBRITZACCESSROAD.TXT

ELEVATION :

X-COORD : 33' 19'26.31"S

Y-COORD : 18' 58'5.20"E

**HOLE No: TPR04**



**NOTES**

- 1) No water seepage.
- 2) No sidewall collapse.
- 3) No Refusal.
- 4) IND sample taken 0.30--1.50m.
- 5) CBR sample taken 0.30--1.50m.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

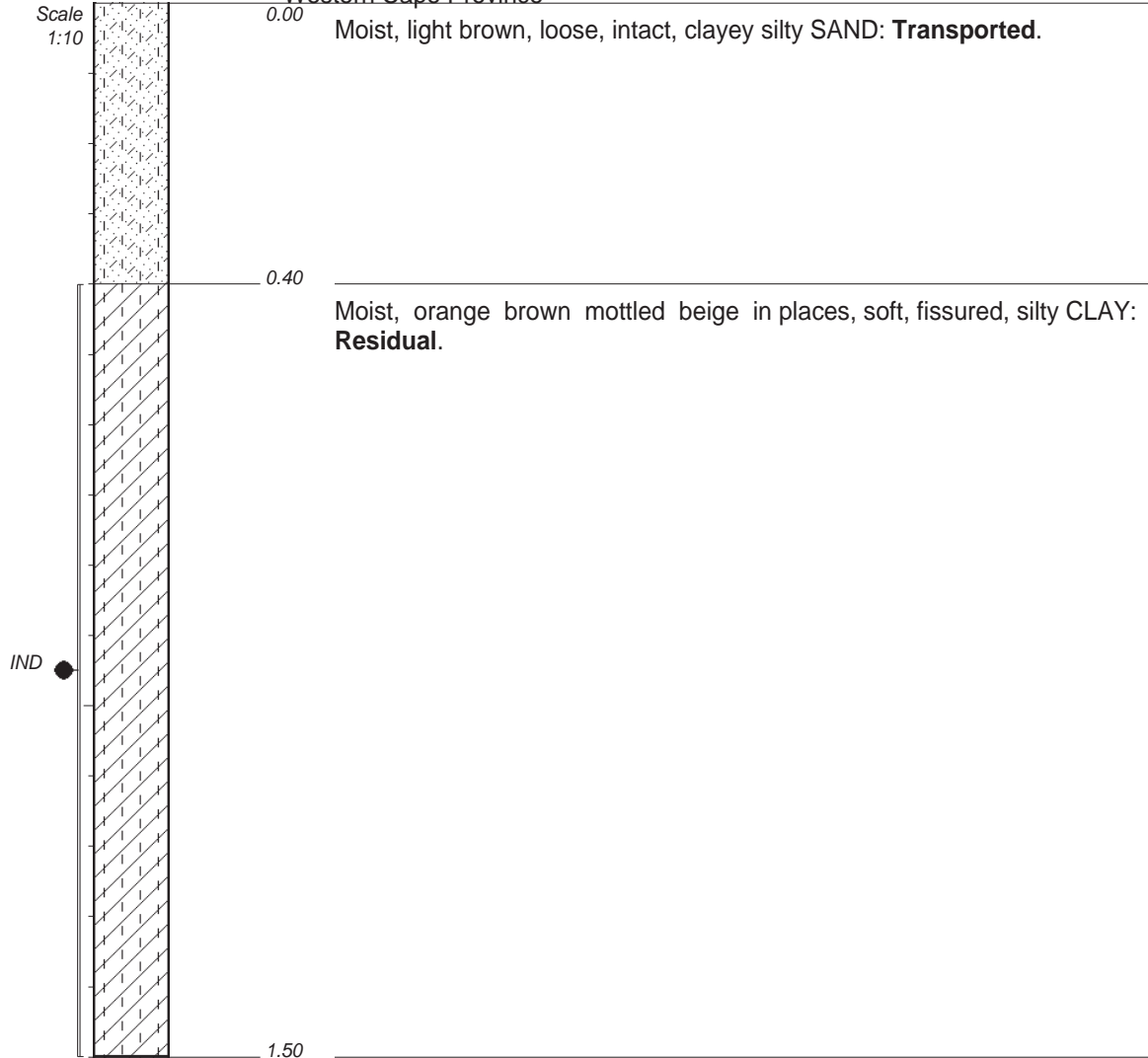
DATE : 22/11/2021 08:19

TEXT : ..TPITSBRITZACCESSROAD.TXT

ELEVATION :

X-COORD : 33' 19'26.81"S

Y-COORD : 18' 58'8.95"E



**NOTES**

- 1) No water seepage.
- 2) No sidewall collapse.
- 3) No Refusal.
- 4) IND sample taken 0.40--1.50m.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

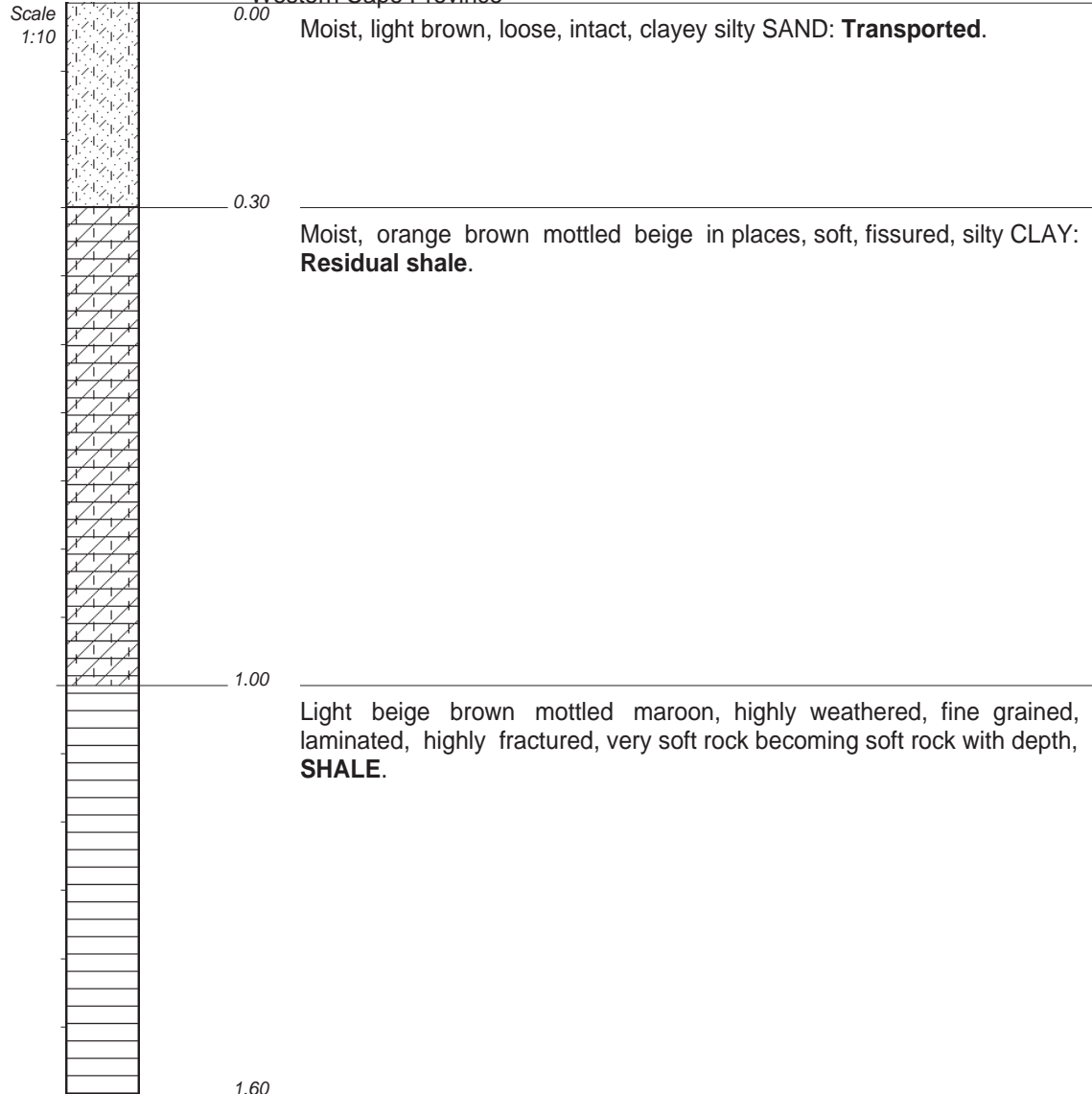
DATE : 22/11/2021 08:19

TEXT : ..TPITSBRITZACCESSROAD.TXT

ELEVATION :

X-COORD : 33' 19'27.51"S

Y-COORD : 18' 58'13.68"E



**NOTES**

- 1) No water seepage.
- 2) No sidewall collapse.
- 3) No Refusal.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

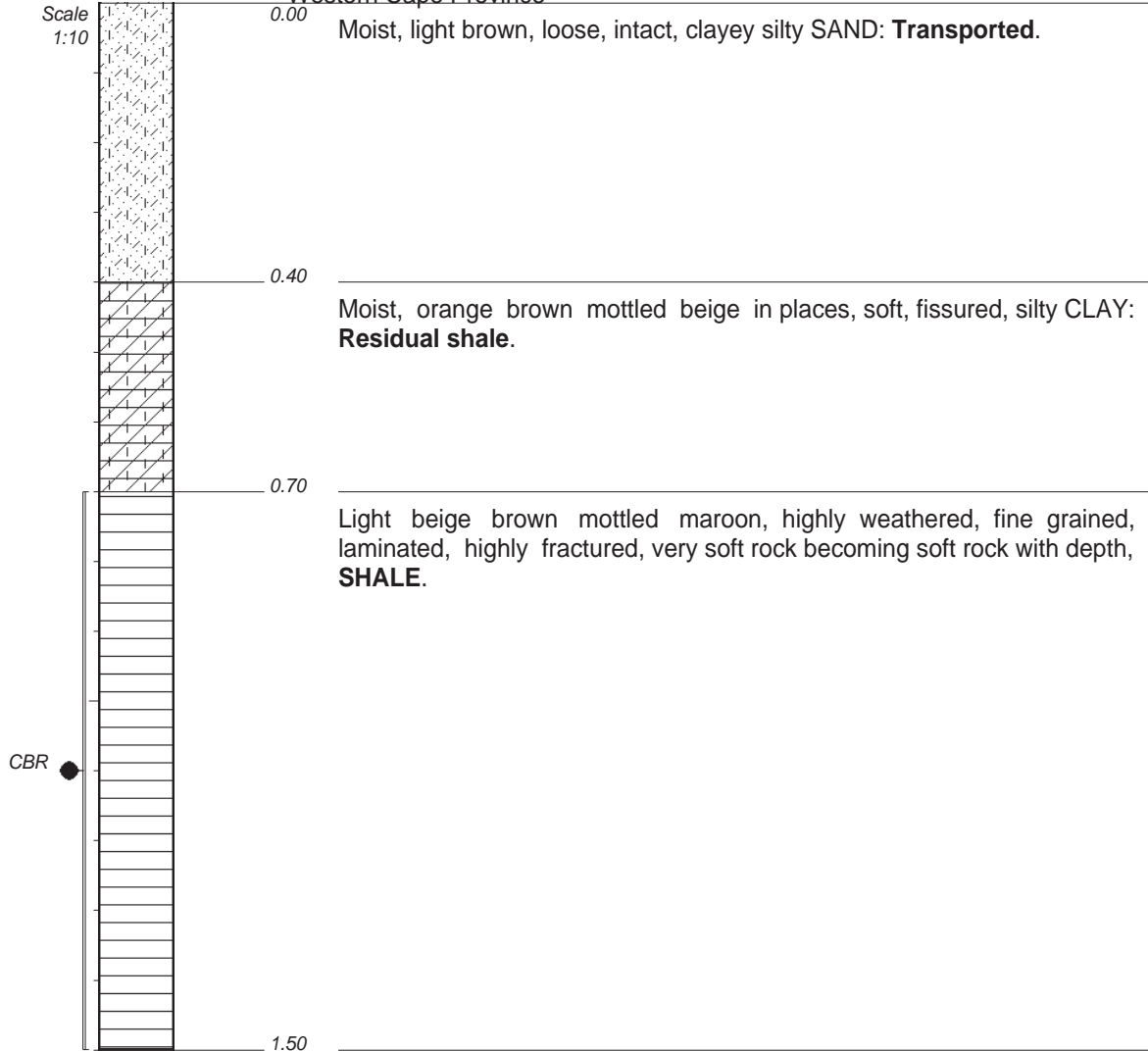
DATE : 22/11/2021 08:19

TEXT : ..TPITSBRITZACCESSROAD.TXT

ELEVATION :

X-COORD : 33' 19'27.98"S

Y-COORD : 18' 58'17.15"E



**NOTES**

- 1) No water seepage.
- 2) No sidewall collapse.
- 3) No Refusal.
- 4) CBR sample taken 0.70--1.50m.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

DATE : 22/11/2021 08:19

TEXT : ..TPITSBRITZACCESSROAD.TXT

ELEVATION :

X-COORD : 33' 19'28.55"S

Y-COORD : 18' 58'21.14"E

**HOLE No: TPR08**

Scale  
1:10



0.00 Moist, light brown, loose, intact, clayey silty SAND: **Transported.**

0.30 Moist, orange brown mottled beige in places, soft, fissured, silty CLAY:  
**Residual shale.**

0.80 Light beige brown mottled maroon, highly weathered, fine grained, laminated, highly fractured, very soft rock with pockets of residual clay becoming soft rock with depth, **SHALE.**

1.50

**NOTES**

- 1) No water seepage.
- 2) No sidewall collapse.
- 3) No Refusal.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

DATE : 22/11/2021 08:19

TEXT : ..TPITSBRITZACCESSROAD.TXT

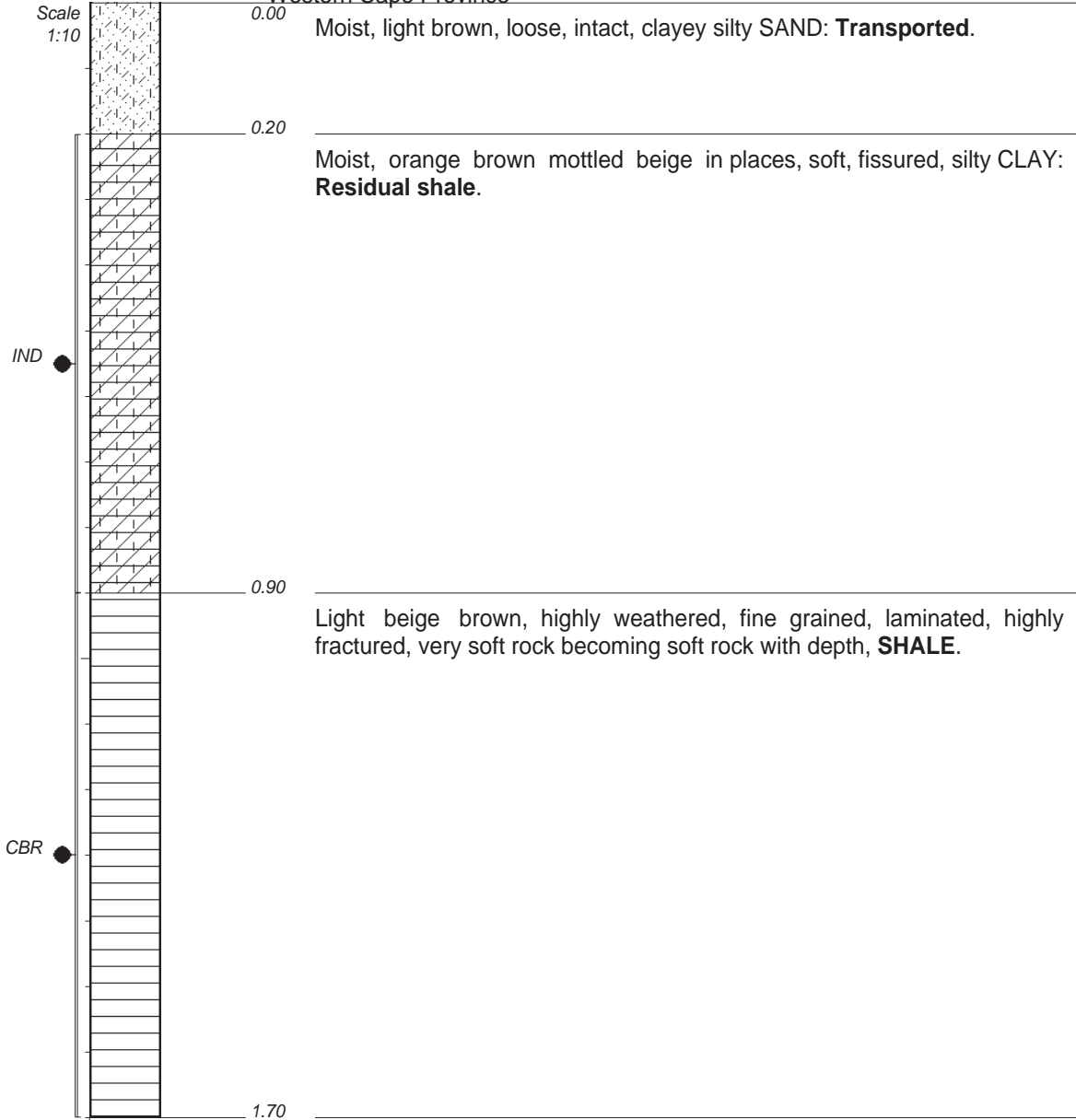
ELEVATION :

X-COORD : 33' 19'29.04"S

Y-COORD : 18' 58'25.00"E

**HOLE No: TPR09**





**NOTES**

- 1) No water seepage.
- 2) No sidewall collapse.
- 3) No Refusal.
- 4) IND sample taken 0.20--0.90m.
- 5) CBR sample taken 0.90--1.70m.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

DATE : 22/11/2021 08:19

TEXT : ..TPITSBRITZACCESSROAD.TXT

ELEVATION :

X-COORD : 33' 19'29.54"S

Y-COORD : 18' 58'28.89"E



**Trans Caledon Tunnel Authority**  
Geotechnical Investigation  
Berg River Voelvlei Augmentation Scheme  
Riebeeck Kasteel  
Western Cape Province

**HOLE No: TPR11**  
*Sheet 1 of 1*

**JOB NUMBER: MK-21-614**

Scale  
1:10



0.00

Moist, light brown, loose, intact, clayey silty SAND: **Transported.**

0.30

Moist, orange brown mottled beige in places, soft, fissured, silty CLAY:  
**Residual shale.**

0.80

Light beige brown mottled maroon, highly weathered, fine grained,  
laminated, highly fractured, very soft rock becoming soft rock with depth,  
**SHALE.**

1.50

**NOTES**

- 1) No water seepage.
- 2) No sidewall collapse.
- 3) No Refusal.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

DATE : 22/11/2021 08:19

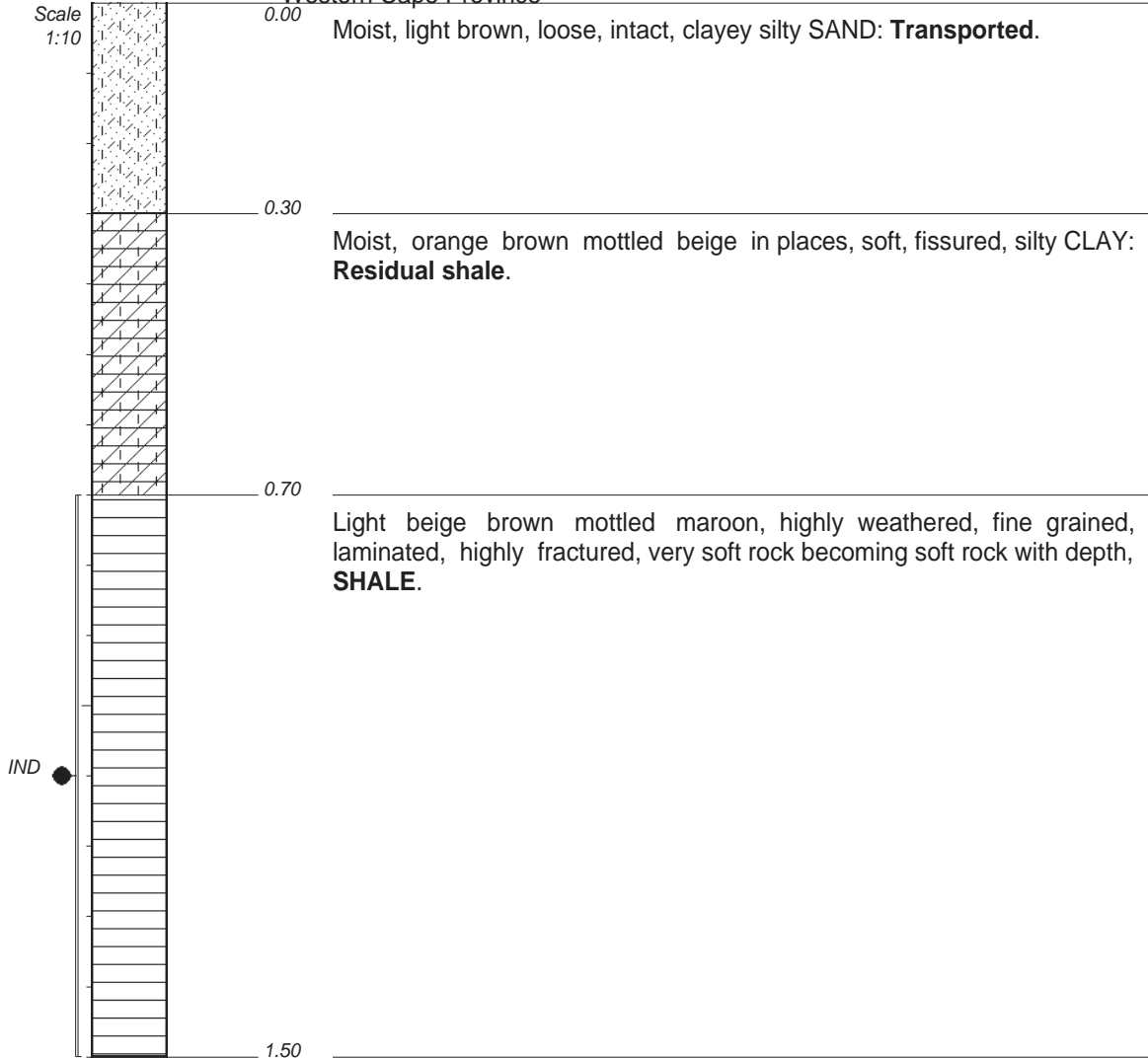
TEXT : ..TPITSBRITZACCESSROAD.TXT

ELEVATION :

X-COORD : 33' 19'30.16"S

Y-COORD : 18' 58'32.84"E

**HOLE No: TPR11**



**NOTES**

- 1) No water seepage.
- 2) No sidewall collapse.
- 3) No Refusal.
- 4) IND sample taken 0.70--1.50m.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

DATE : 22/11/2021 08:19

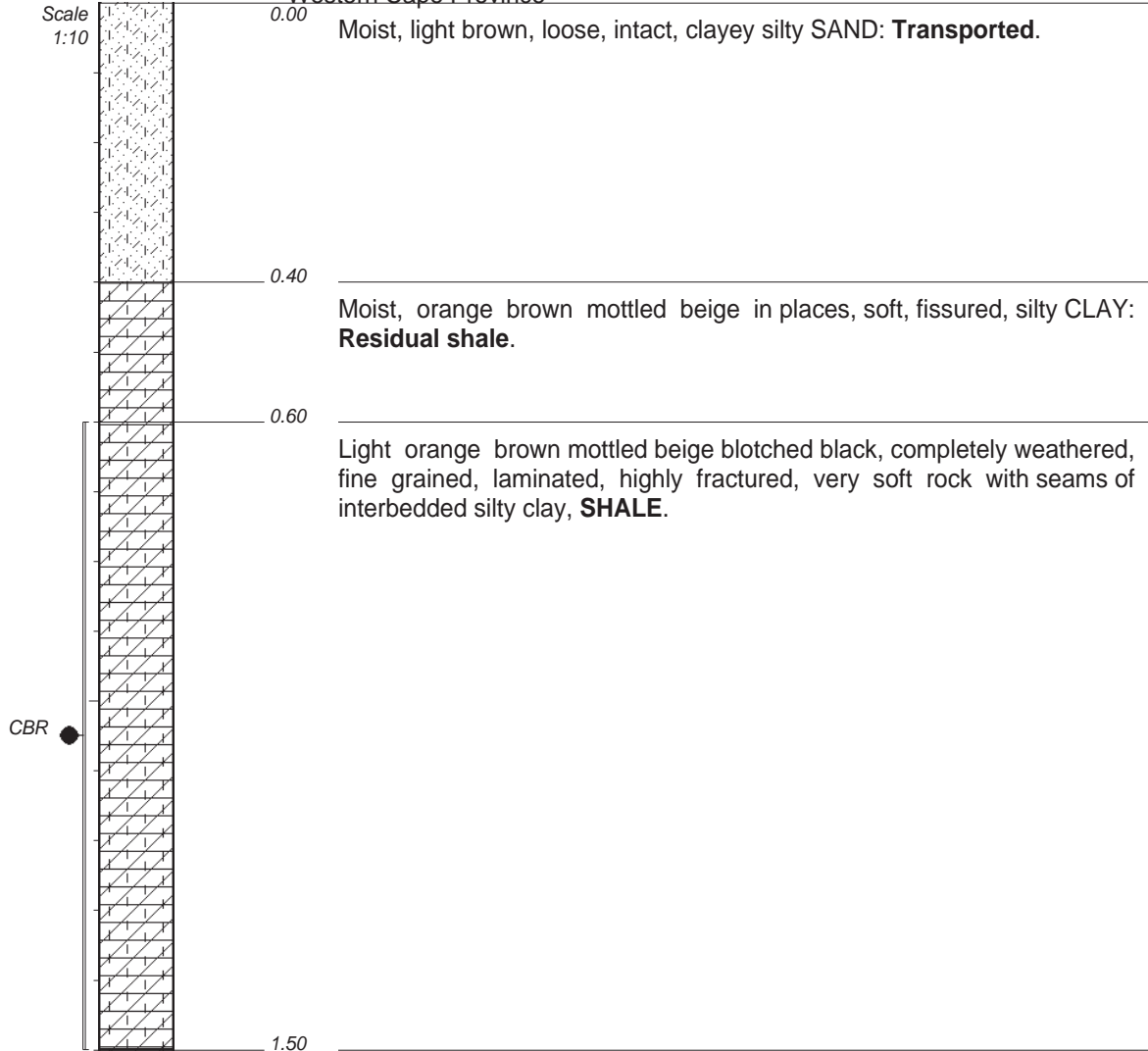
TEXT : ..TPITSBRITZACCESSROAD.TXT

ELEVATION :

X-COORD : 33' 19'30.66"S

Y-COORD : 18' 58'36.70"E

**HOLE No: TPR12**



**NOTES**

- 1) No water seepage.
- 2) No sidewall collapse.
- 3) No Refusal.
- 4) CBR sample taken 0.60--1.50m.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

DATE : 22/11/2021 08:19

TEXT : ..TPITSBRITZACCESSROAD.TXT

ELEVATION :

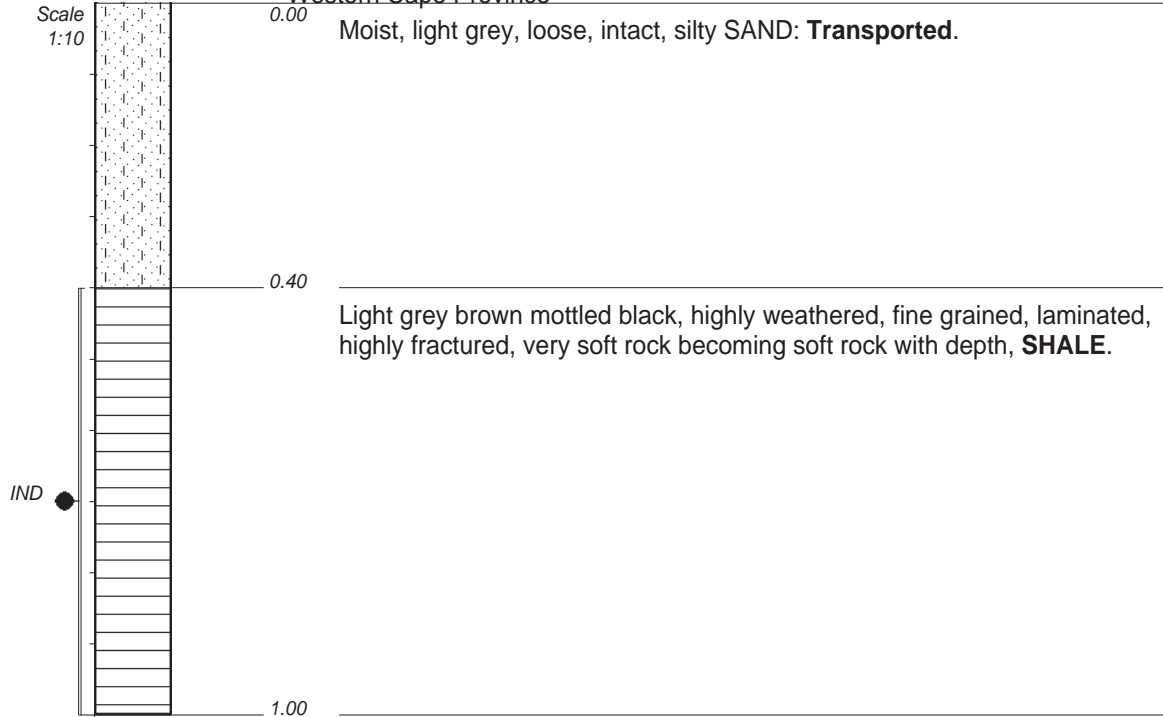
X-COORD : 33' 19'31.27"S

Y-COORD : 18' 58'40.43"E

# ROADS

## PUBLIC ACCESS ROADS

## TESTPIT PROFILES



**NOTES**

- 1) No water seepage.
- 2) No sidewall collapse.
- 3) Refusal at 1.00m.
- 4) IND sample taken 0.40--1.00m.

CONTRACTOR : Mukona Consulting Engineers INCLINATION : Vertical

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

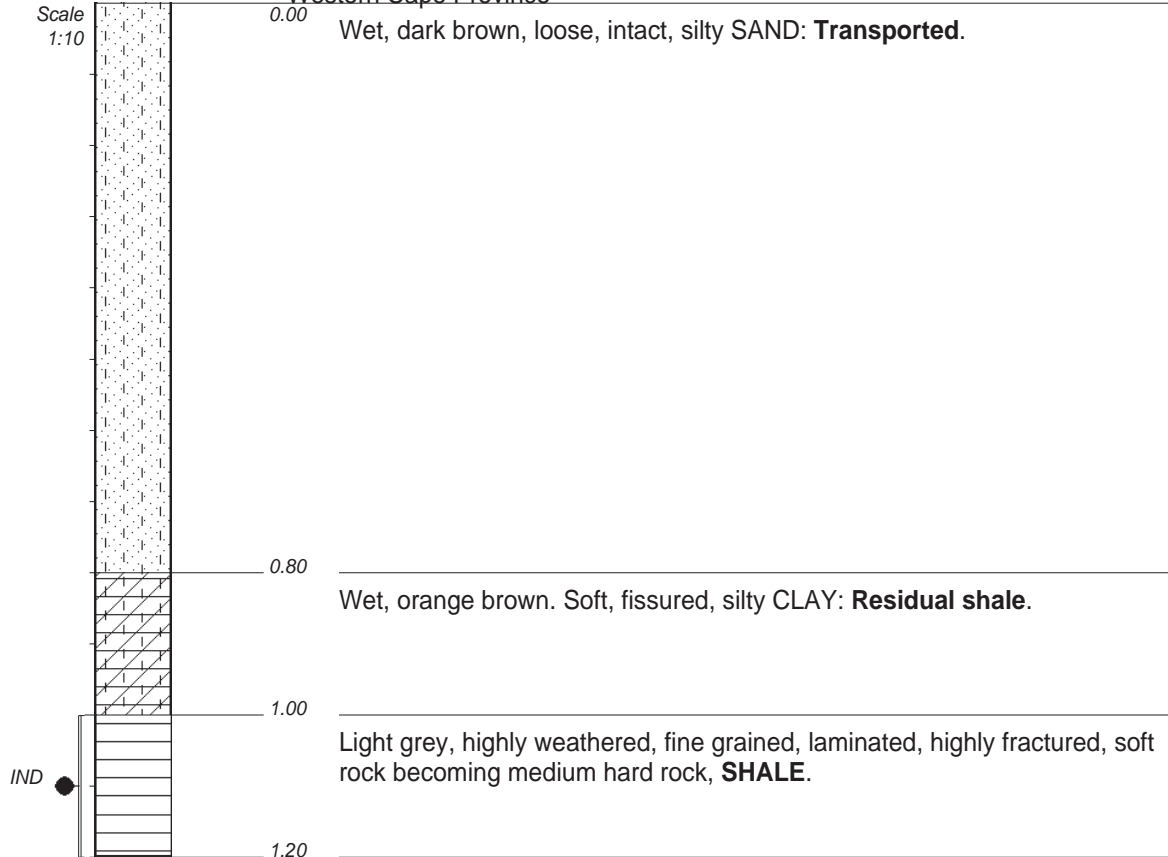
DATE : 22/11/2021 08:26

TEXT : ..LDER\WK21614BRV\SPAR.TXT

ELEVATION :

X-COORD :

Y-COORD :



**NOTES**

- 1) No water seepage.
- 2) No sidewall collapse.
- 3) Refusal at 1.20m.
- 4) IND sample taken 1.00--1.20m.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

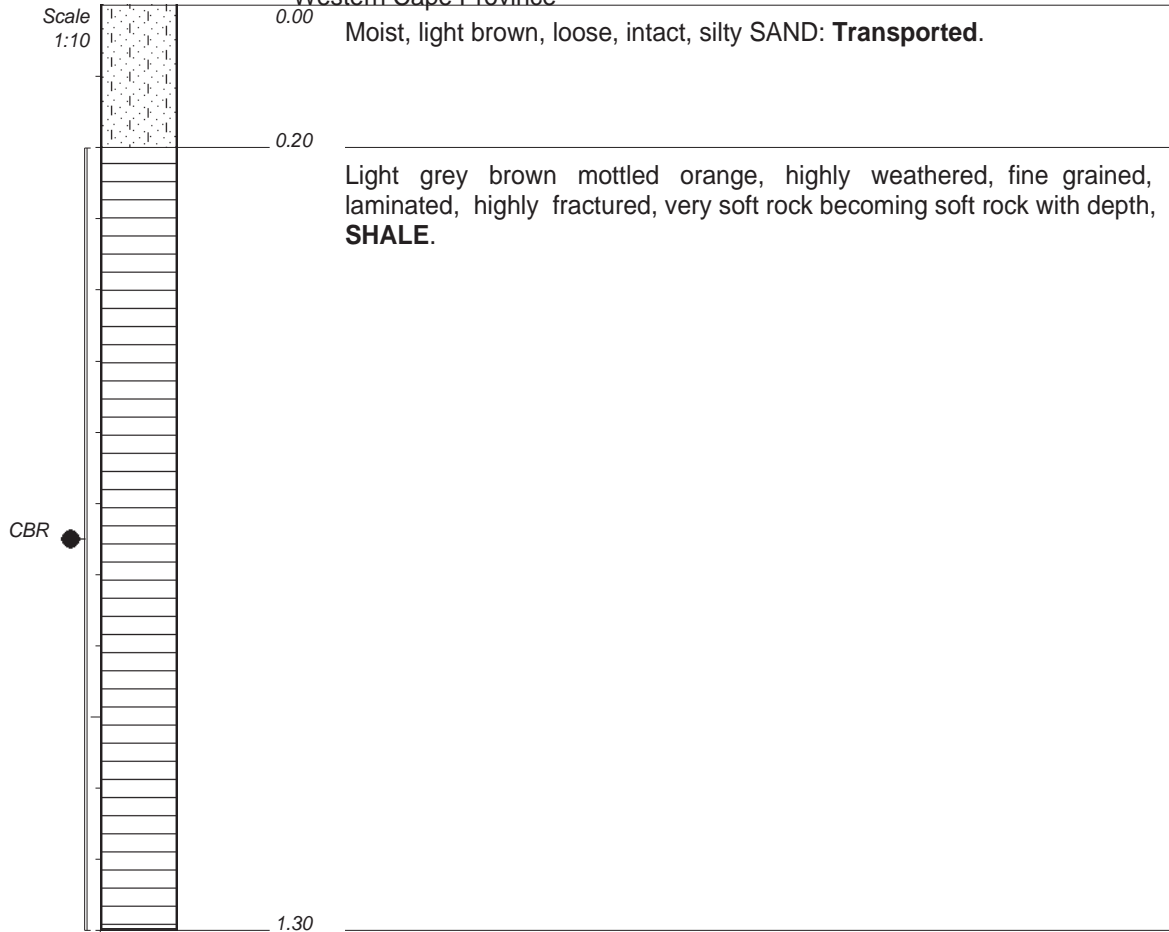
DATE : 22/11/2021 08:26

TEXT : ..LDERWMK21614BRVASPAR.TXT

ELEVATION :

X-COORD :

Y-COORD :



**NOTES**

- 1) No water seepage.
- 2) No sidewall collapse.
- 3) Refusal at 1.30m.
- 4) CBR sample taken 0.20--1.30m.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

DATE : 22/11/2021 08:26

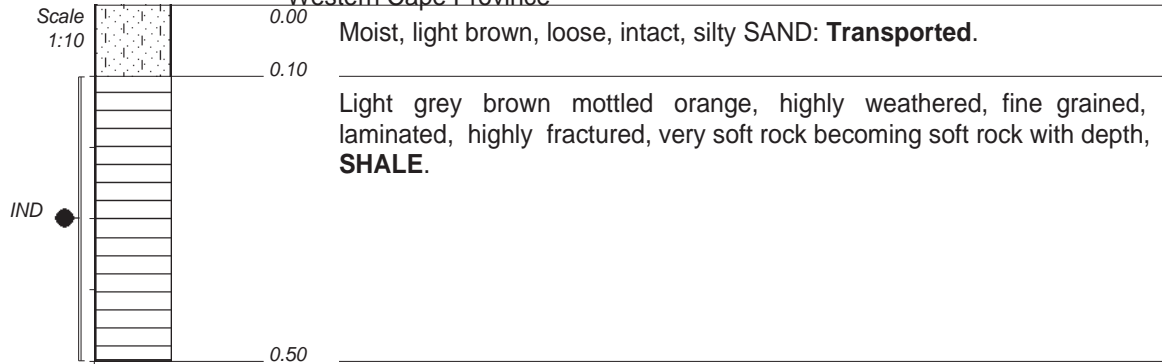
TEXT : ..LDERWMK21614BRVASPAR.TXT

ELEVATION :

X-COORD :

Y-COORD :





**NOTES**

- 1) No water seepage.
- 2) No sidewall collapse.
- 3) Refusal at 0.50m.
- 4) IND sample taken 0.10--0.50m.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

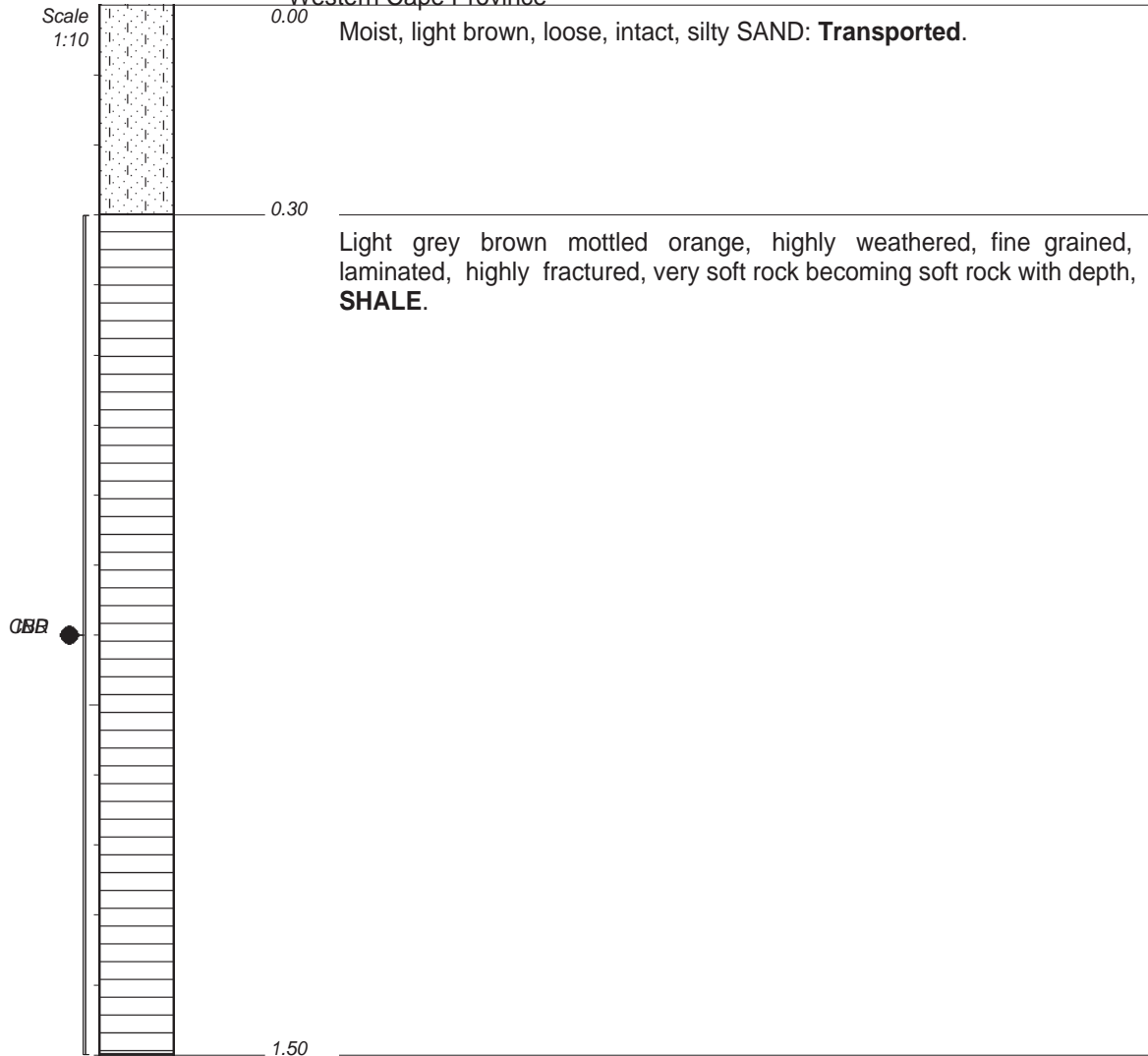
DATE : 22/11/2021 08:26

TEXT : ..LDER\WK21614BRVASPAR.TXT

ELEVATION :

X-COORD : 33' 20'49.75"S

Y-COORD : 18' 56'32.69"E



**NOTES**

- 1) No water seepage.
- 2) No sidewall collapse.
- 3) No Refusal.
- 4) IND sample taken 0.30--1.50m.
- 5) CBR sample taken 0.30--1.50m.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

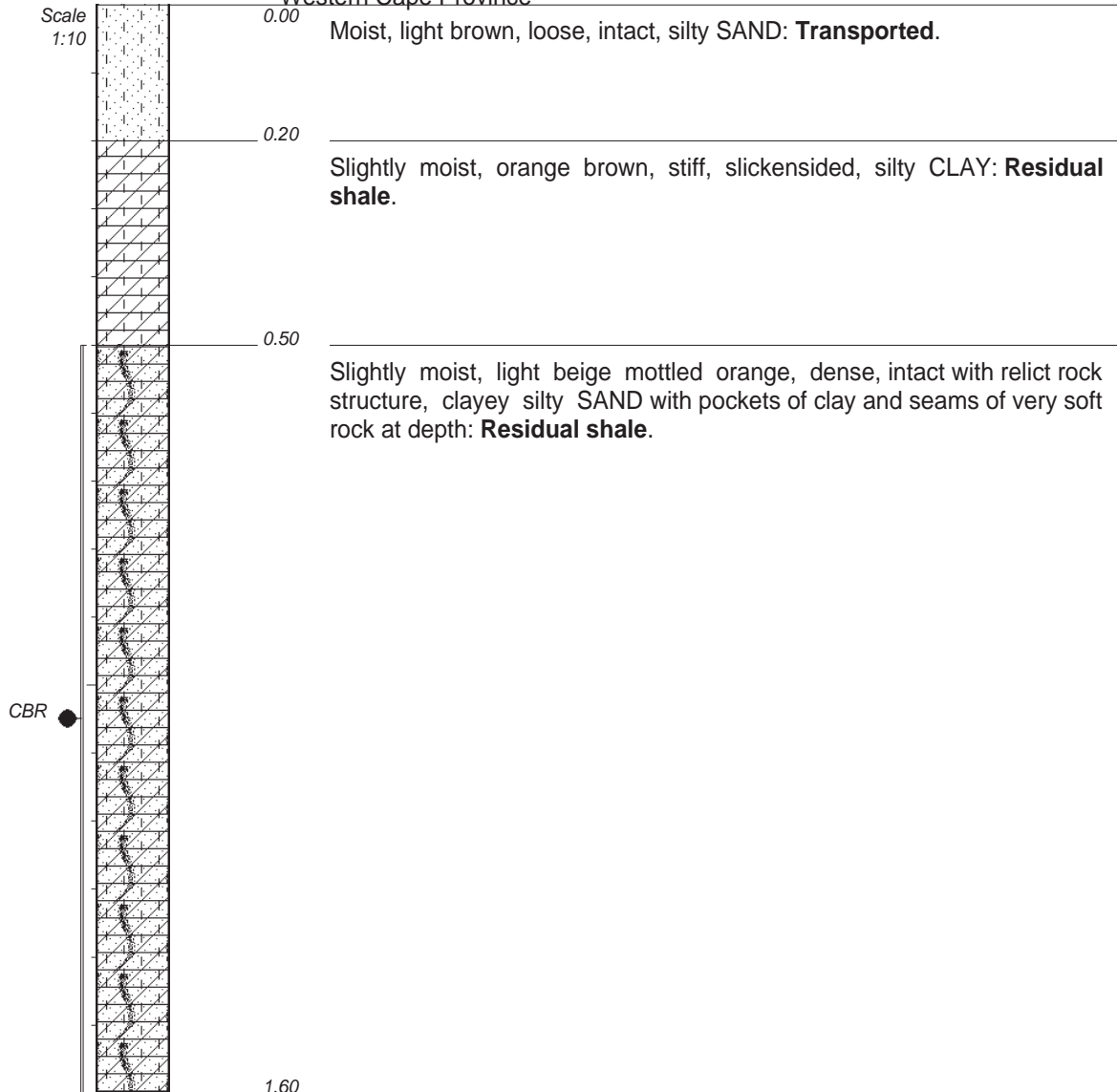
DATE : 22/11/2021 08:26

TEXT : ..LDERMK21614BRVASPAR.TXT

ELEVATION :

X-COORD : 33' 20'34.31"S

Y-COORD : 18' 56'26.52"E



**NOTES**

- 1) No water seepage.
- 2) No sidewall collapse.
- 3) No Refusal.
- 4) CBR sample taken 0.50--1.60m.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

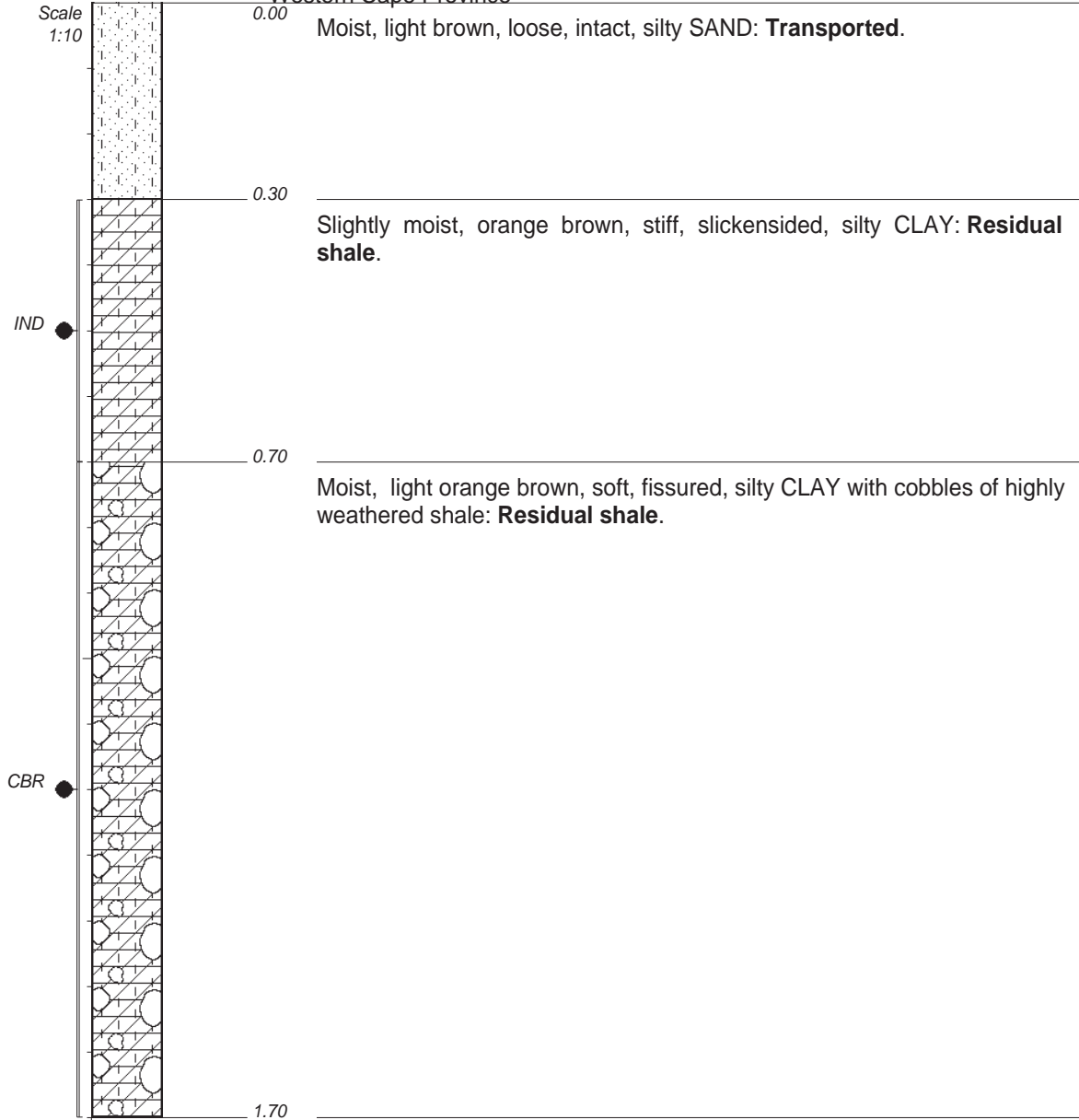
DATE : 22/11/2021 08:26

TEXT : ..LDER/MK21614BRVASPAR.TXT

ELEVATION :

X-COORD : 33' 20'24.49"S

Y-COORD : 18' 56'10.92"E



**NOTES**

- 1) No water seepage.
- 2) No sidewall collapse.
- 3) No Refusal.
- 4) IND sample taken 0.30--0.70m.
- 5) CBR sample taken 0.70--1.70m.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

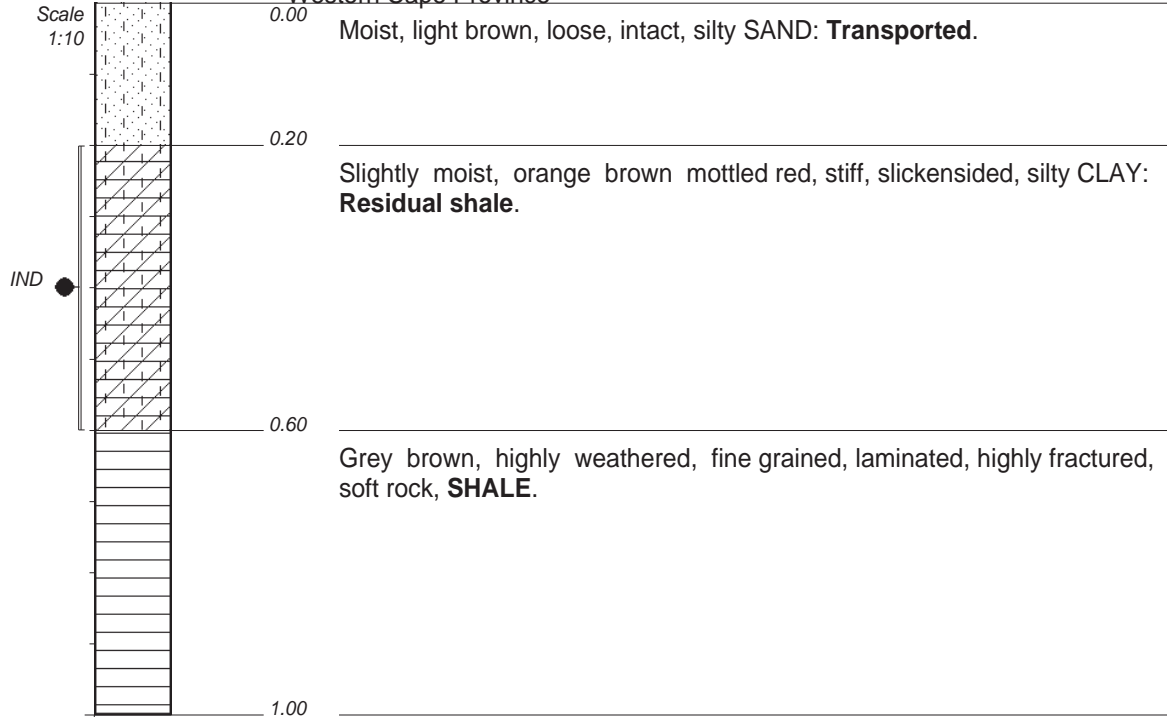
DATE : 22/11/2021 08:26

TEXT : ..LDER\WK21614BRVASPAR.TXT

ELEVATION :

X-COORD : 33' 20'8.88"S

Y-COORD : 18' 56'5.86"E



**NOTES**

- 1) No water seepage.
- 2) No sidewall collapse.
- 3) Refusal at 1.00m.
- 4) IND sample taken 0.20--0.60m.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

DATE : 22/11/2021 08:26

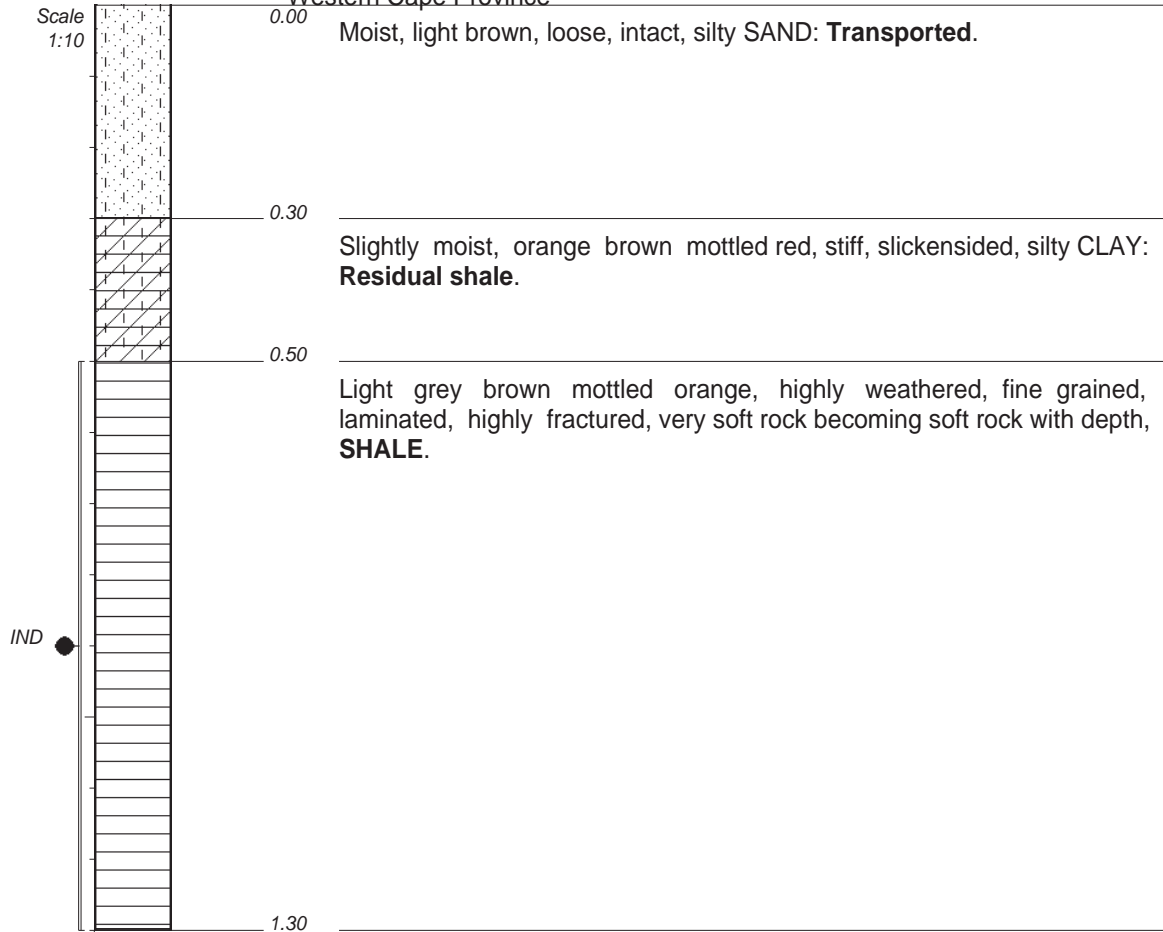
TEXT : ..LDER\WK21614BRVASPAR.TXT

ELEVATION :

X-COORD : 33' 19'53.57"S

Y-COORD : 18' 56'13.10"E

**HOLE No: TPRA08**



**NOTES**

- 1) No water seepage.
- 2) No sidewall collapse.
- 3) Refusal at 1.30m.
- 4) IND sample taken 0.50--1.30m.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

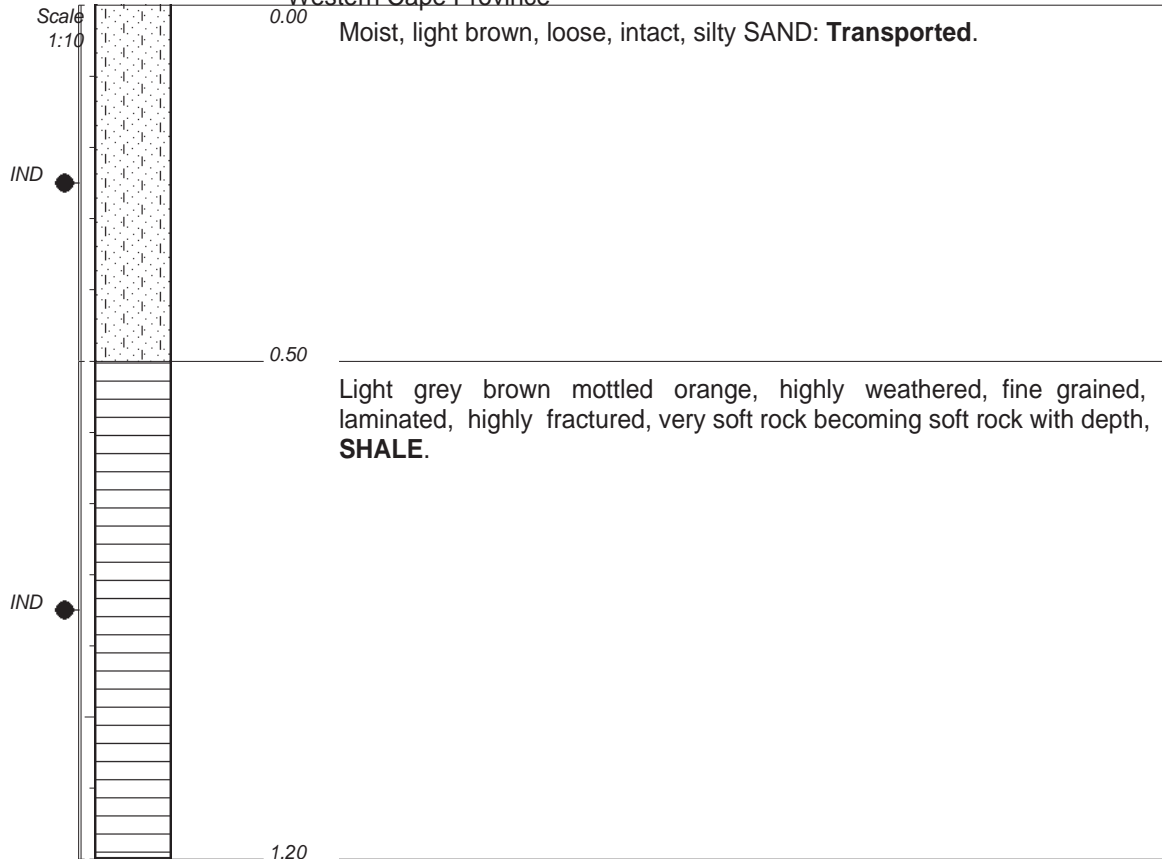
DATE : 22/11/2021 08:26

TEXT : ..LDER\WK21614BRVASPAR.TXT

ELEVATION :

X-COORD : 33' 19'38.76"S

Y-COORD : 18' 56'22.80"E



**NOTES**

- 1) No water seepage.
- 2) No sidewall collapse.
- 3) Refusal at 1.20m.
- 4) IND sample taken 0.00--0.50m.
- 5) IND sample taken 0.50--1.20m.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

DATE : 22/11/2021 08:26

TEXT : ..LDERWMK21614BRVASPAR.TXT

ELEVATION :

X-COORD : 33' 19'27.94"S

Y-COORD : 18' 56'37.18"E

**HOLE No: TPRA10**

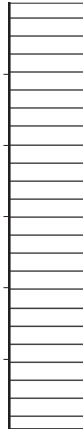


**Trans Caledon Tunnel Authority**  
Geotechnical Investigation  
Berg River Voelvlei Augmentation Scheme  
Riebeek Kasteel  
Western Cape Province

*HOLE No: TPRA11*  
*Sheet 1 of 1*

*JOB NUMBER: MK-21-614*

Scale  
1:10



0.00

Light grey mottled brown, highly weathered, fine grained, laminated, highly fractured, soft rock becoming medium hard rock, **SHALE**.

0.60

**NOTES**

- 1) No water seepage.
- 2) No sidewall collapse.
- 3) Refusal at 0.60m.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

DATE : 22/11/2021 08:26

TEXT : ..LDERMK21614BRVASPAR.TXT

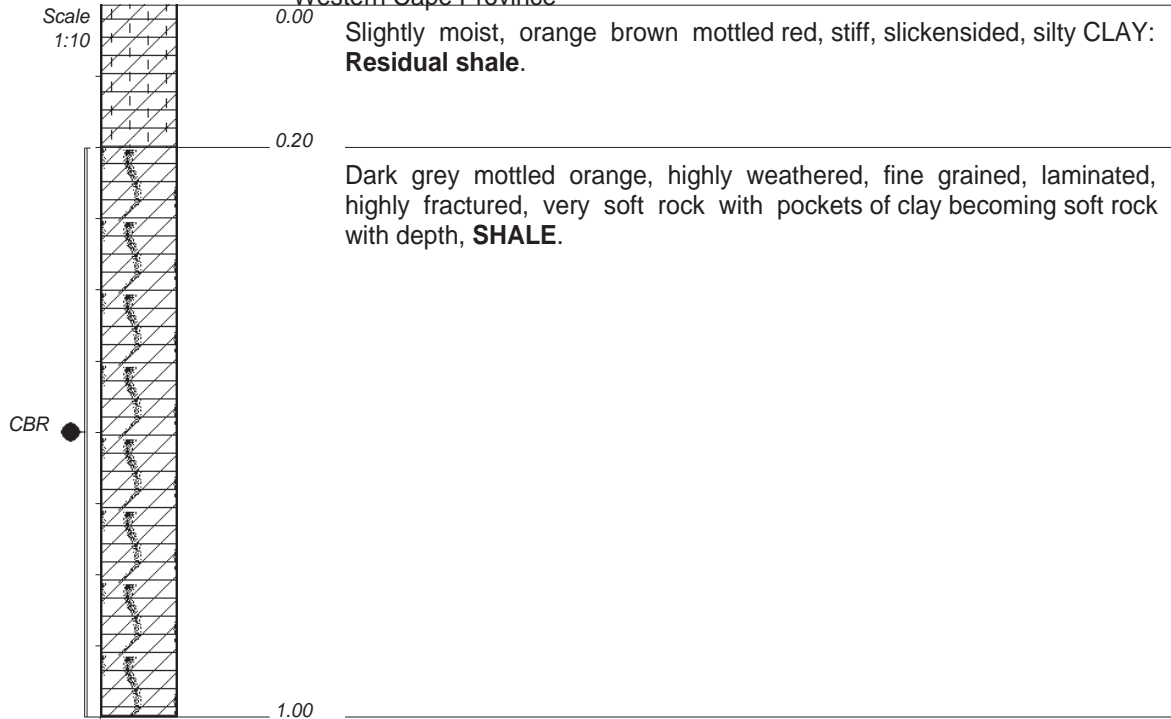
ELEVATION :

X-COORD : 33' 19'26.05"S

Y-COORD : 18' 56'57.53"E

*HOLE No: TPRA11*





**NOTES**

- 1) No water seepage.
- 2) No sidewall collapse.
- 3) Refusal at 1.00m.
- 4) CBR sample taken 0.20--1.00m.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

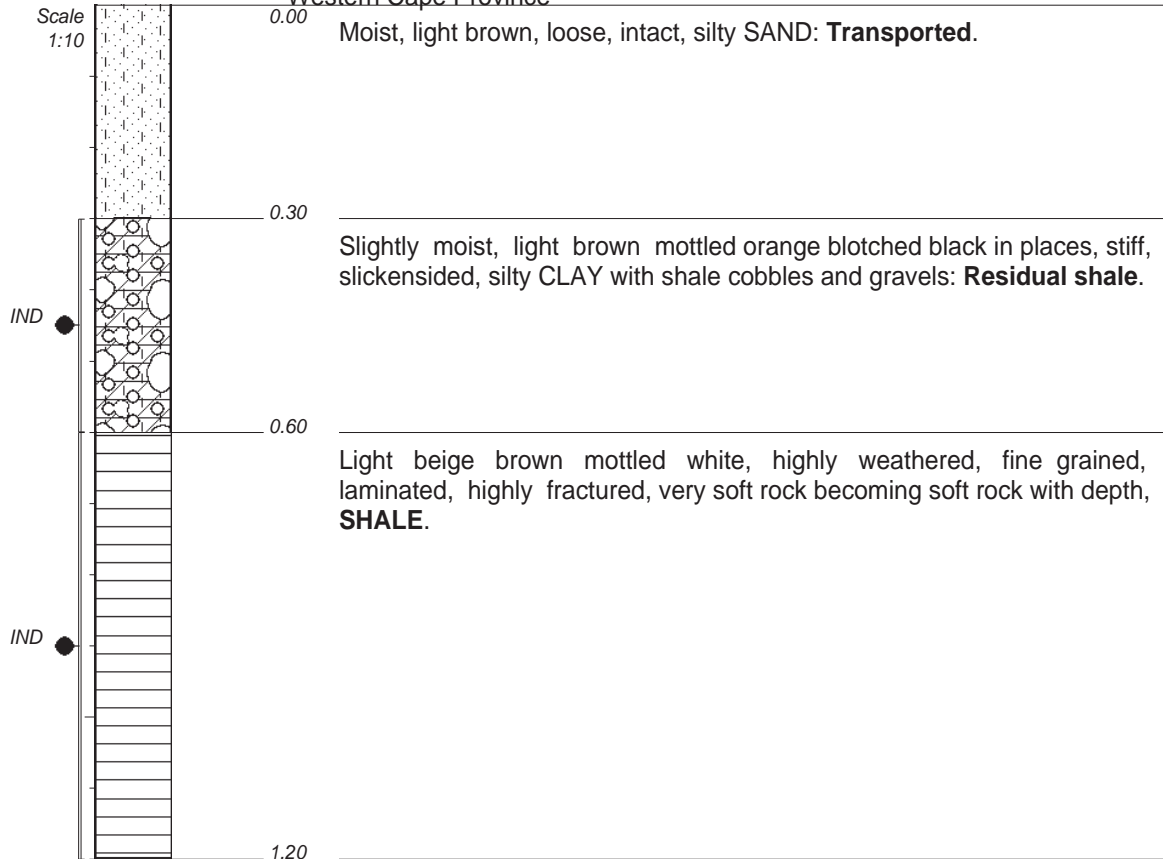
DATE : 22/11/2021 08:26

TEXT : ..LDER\WK21614BRVASPAR.TXT

ELEVATION :

X-COORD : 33° 19' 32.91" S

Y-COORD : 18° 57' 15.07" E



**NOTES**

- 1) No water seepage.
- 2) No sidewall collapse.
- 3) Refusal at 1.20m.
- 4) IND sample taken 0.30--0.60m.
- 5) IND sample taken 0.60--1.20m.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

DATE : 22/11/2021 08:26

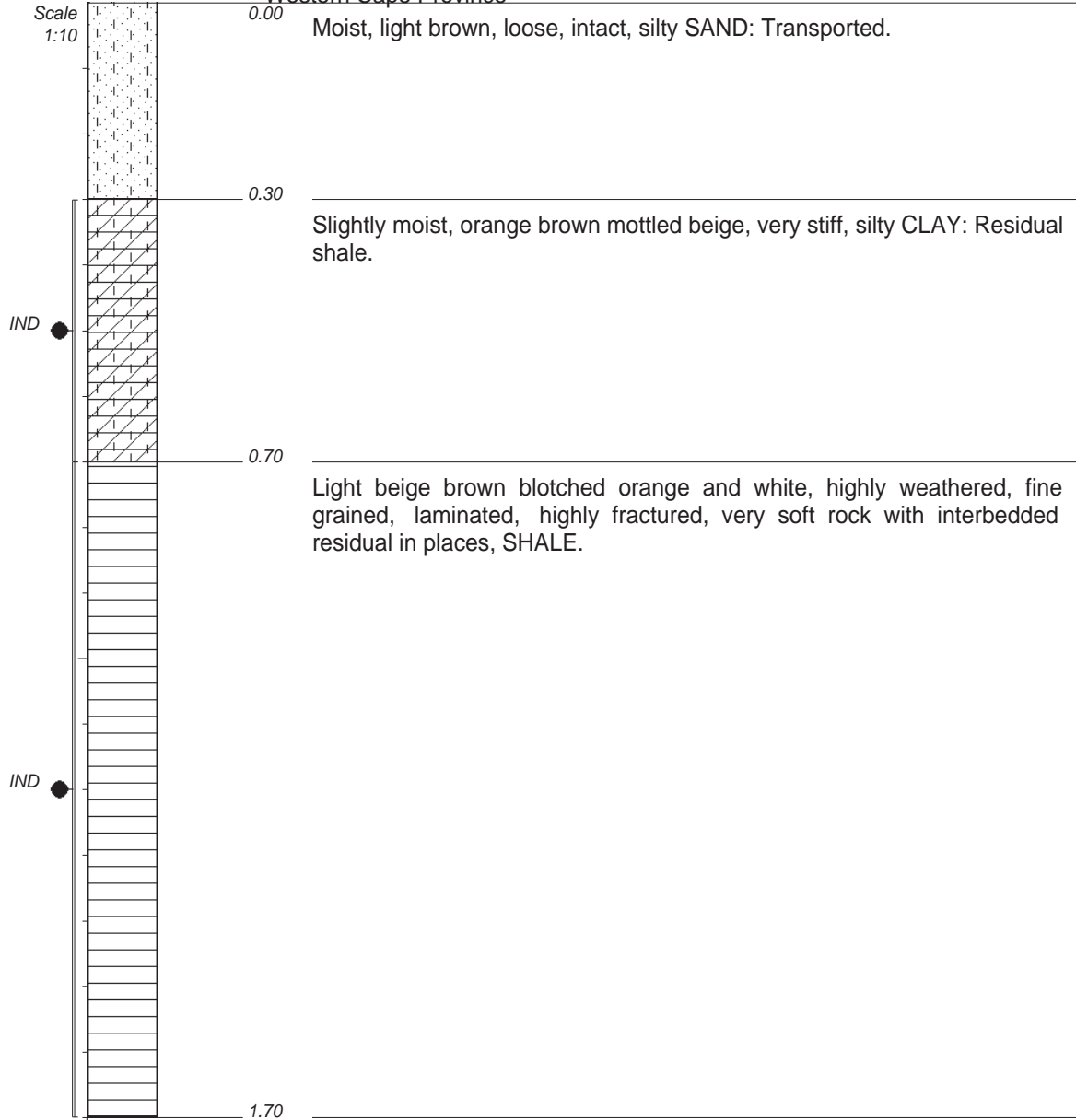
TEXT : ..LDER\WK21614BRVASPAR.TXT

ELEVATION :

X-COORD : 33' 19'27.94"S

Y-COORD : 18' 57'33.76"E

**HOLE No: TPRA13**



**NOTES**

- 1) No water seepage.
- 2) No sidewall collapse.
- 3) Refusal at 1.20m.
- 4) IND sample taken 0.30--0.70m.
- 5) IND sample taken 0.70--1.70m.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

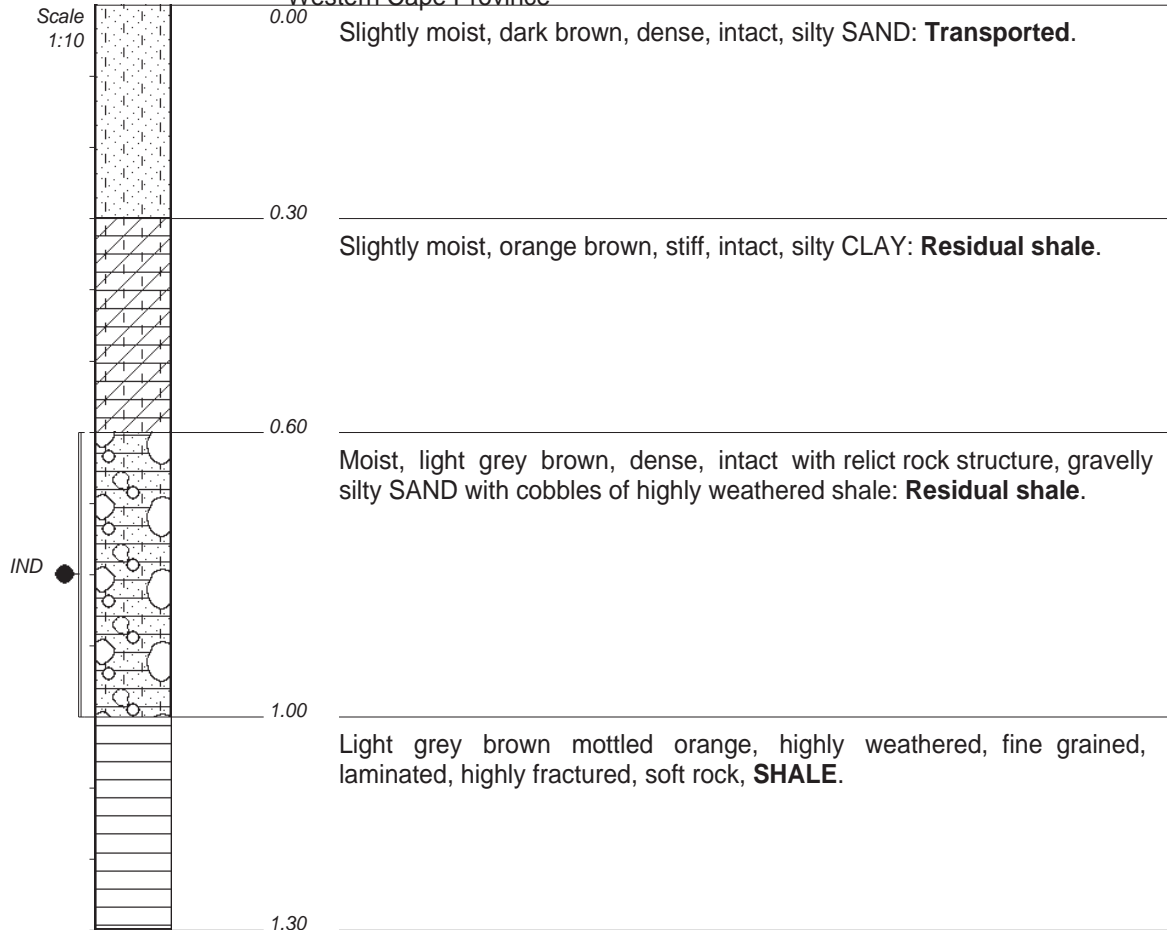
DATE : 22/11/2021 08:26

TEXT : ..LDER\WK21614BRVASPAR.TXT

ELEVATION :

X-COORD : 33' 19'24.31"S

Y-COORD : 18' 57'50.20"E



**NOTES**

- 1) No water seepage.
- 2) No sidewall collapse.
- 3) Refusal at 1.30m.
- 4) IND sample taken 0.60--1.00m.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

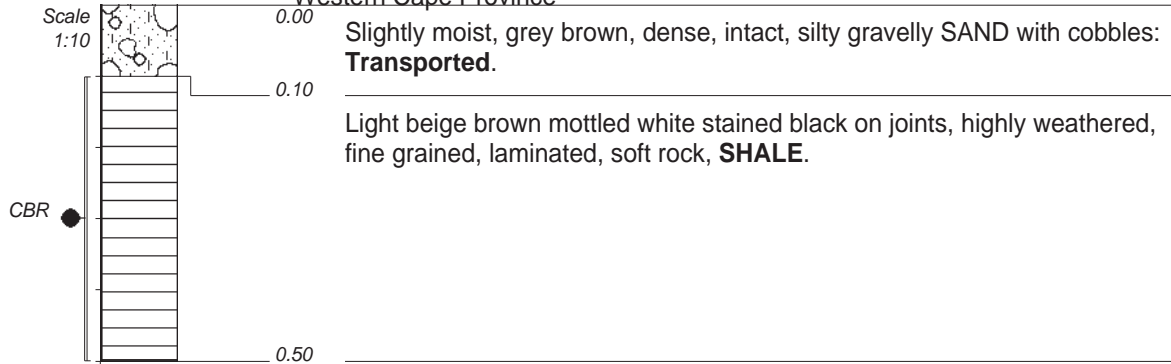
DATE : 22/11/2021 08:26

TEXT : ..LDER\WK21614BRVASPAR.TXT

ELEVATION :

X-COORD : 33' 19'37.48"S

Y-COORD : 18' 56'21.54"E



**NOTES**

- 1) No water seepage.
- 2) No sidewall collapse.
- 3) Refusal at 0.50m.
- 4) CBR sample taken 0.10--0.50m.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

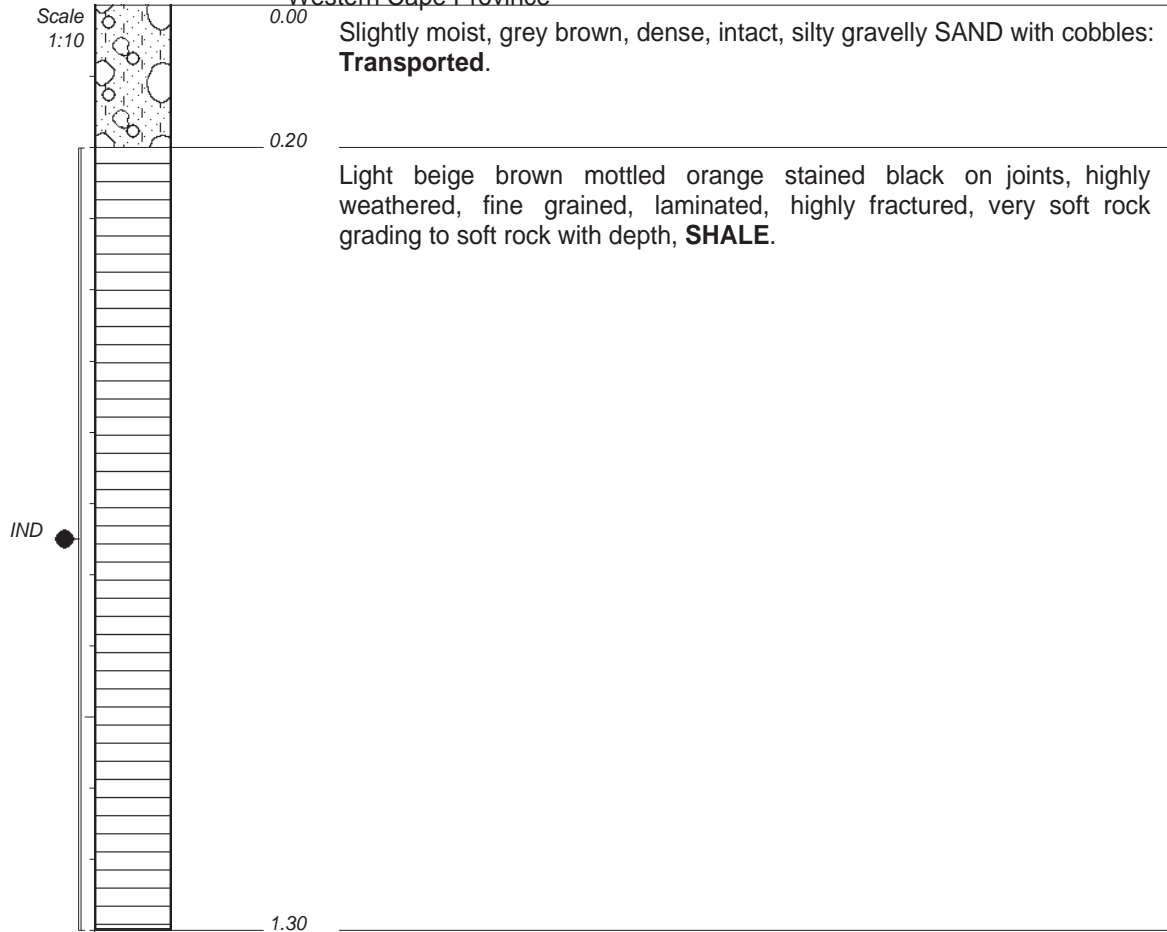
DATE : 22/11/2021 08:26

TEXT : ..LDER\WK21614BRVASPAR.TXT

ELEVATION :

X-COORD : 33' 19'37.29"S

Y-COORD : 18' 56'2.01"E



**NOTES**

- 1) No water seepage.
- 2) No sidewall collapse.
- 3) Refusal at 1.30m.
- 4) IND sample taken 0.20--1.30m.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

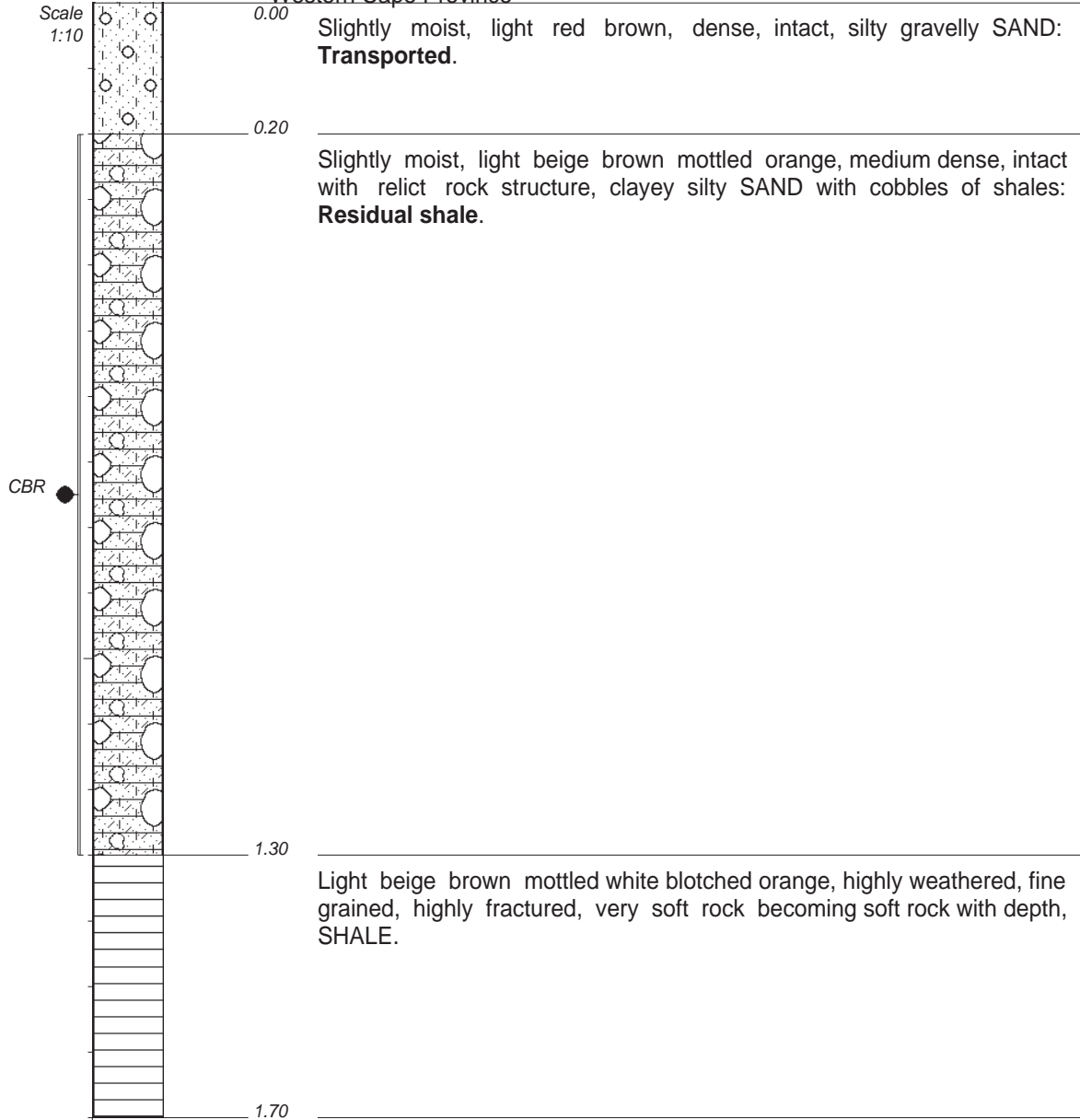
DATE : 22/11/2021 08:26

TEXT : ..LDER\MK21614BRVASPAR.TXT

ELEVATION :

X-COORD : 33' 19'37.49"S

Y-COORD : 18' 55'42.59"E



**NOTES**

- 1) No water seepage.
- 2) No sidewall collapse.
- 3) No refusal.
- 4) CBR sample taken 0.20--1.30m.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

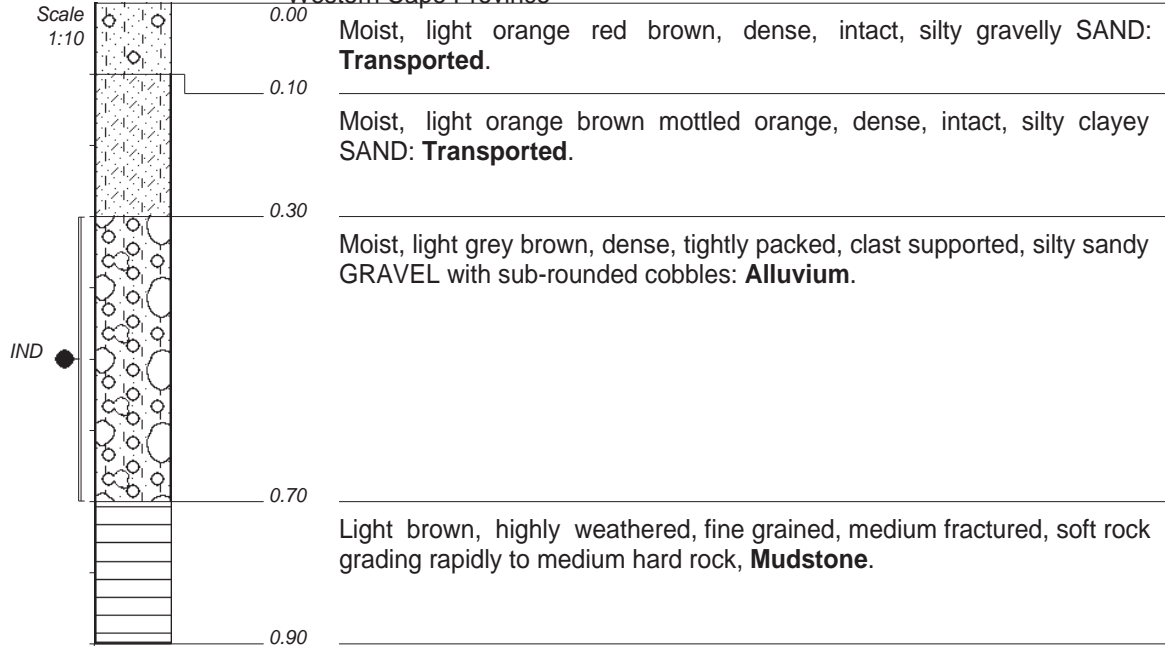
DATE : 22/11/2021 08:26

TEXT : ..LDER\WK21614BRVASPAR.TXT

ELEVATION :

X-COORD : 33° 19'36.48"S

Y-COORD : 18° 55'23.18"E



**NOTES**

- 1) No water seepage.
- 2) No sidewall collapse.
- 3) Refusal at 0.90m.
- 4) IND sample taken 0.30--0.70m.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

DATE : 22/11/2021 08:26

TEXT : ..LDERWMK21614BRVASPAR.TXT

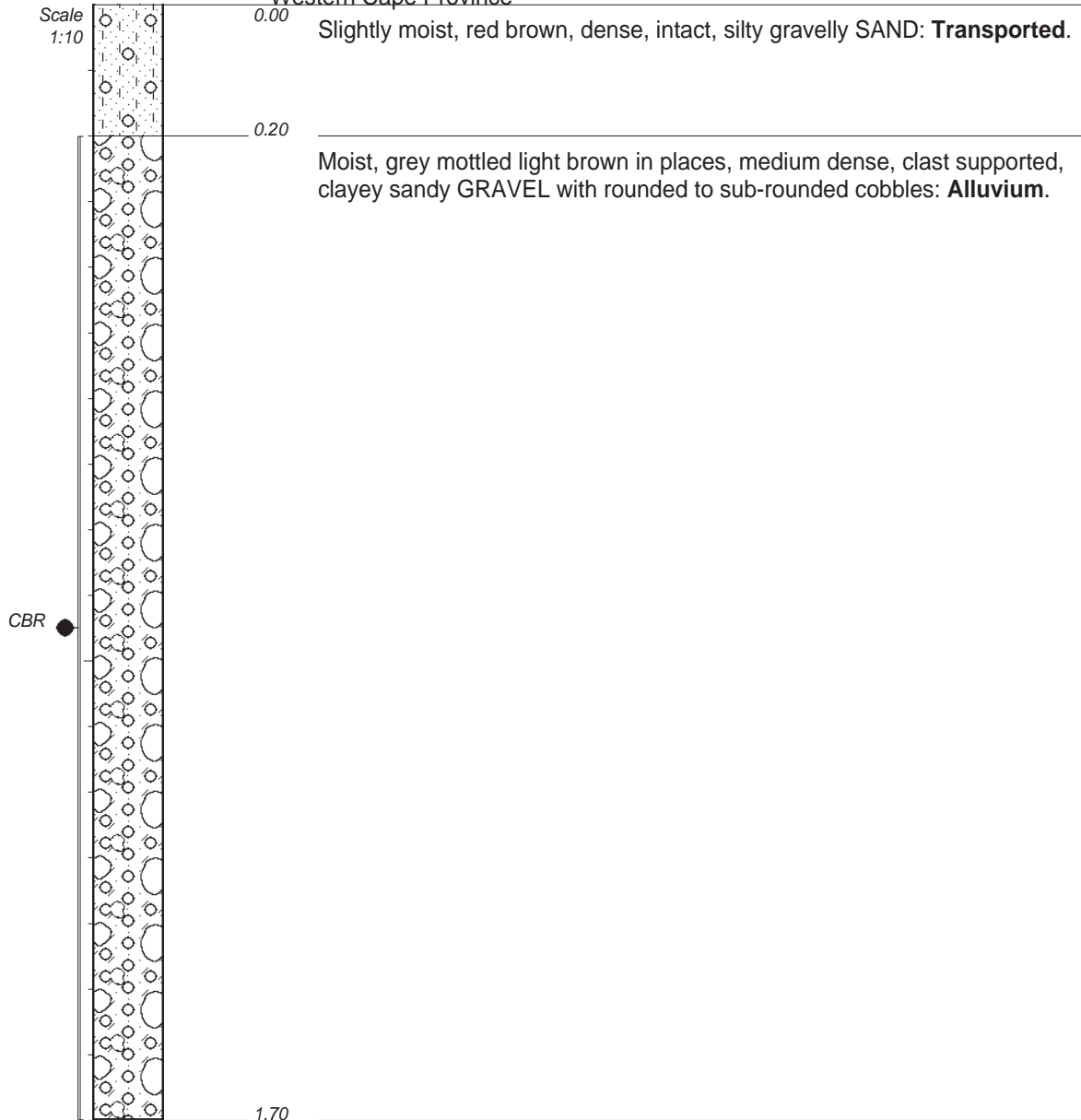
ELEVATION :

X-COORD : 33' 19'33.30"S

Y-COORD : 18' 55'4.02"E

**HOLE No: TPRA19**





**NOTES**

- 1) No water seepage.
- 2) No sidewall collapse.
- 3) No refusal.
- 4) CBR sample taken 0.20--1.70m.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

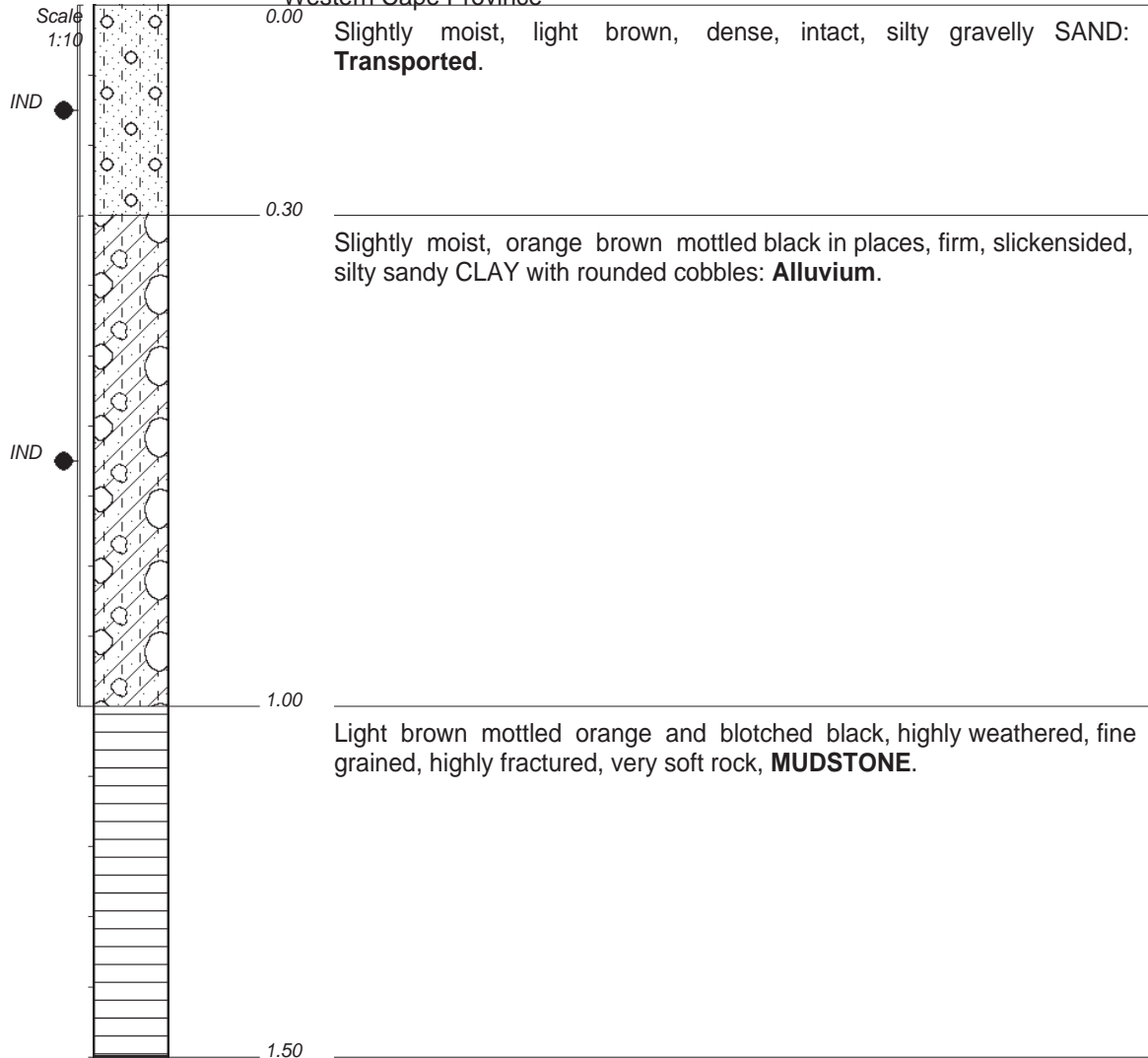
DATE : 22/11/2021 08:26

TEXT : ..LDER\MK21614BRVASPAR.TXT

ELEVATION :

X-COORD : 33' 19'35.85"S

Y-COORD : 18' 54'44.77"E



**NOTES**

- 1) No water seepage.
- 2) No sidewall collapse.
- 3) No refusal.
- 4) IND sample taken 0.00--0.30m.
- 5) IND sample taken 0.30--1.00m.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

DATE : 22/11/2021 08:26

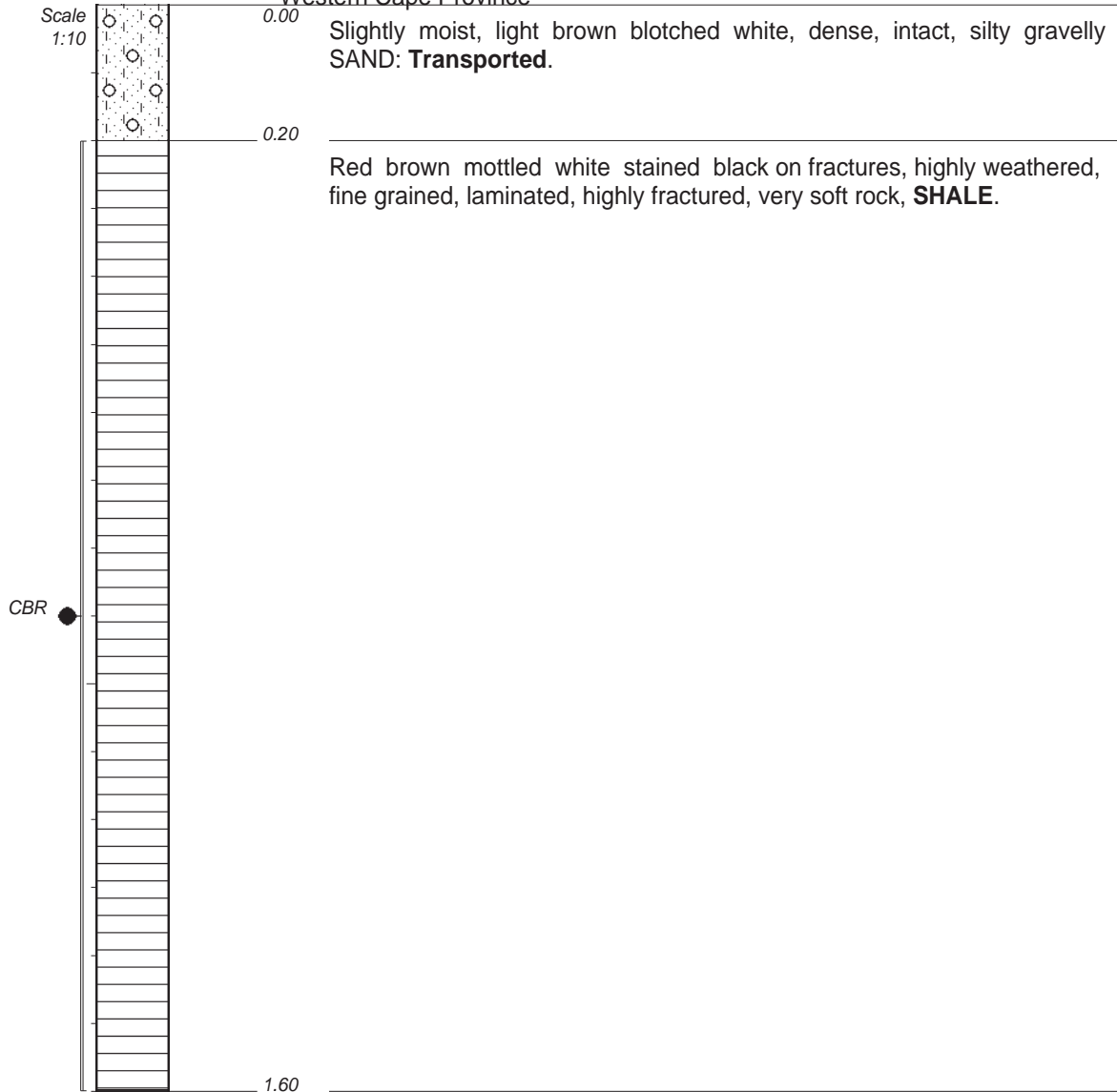
TEXT : ..LDER\WK21614BRVASPAR.TXT

ELEVATION :

X-COORD : 33' 19'34.26"S

Y-COORD : 18' 54'25.40"E

**HOLE No: TPRA21**



**NOTES**

- 1) No water seepage.
- 2) No sidewall collapse.
- 3) No refusal.
- 4) CBR sample taken 0.20--1.60m.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

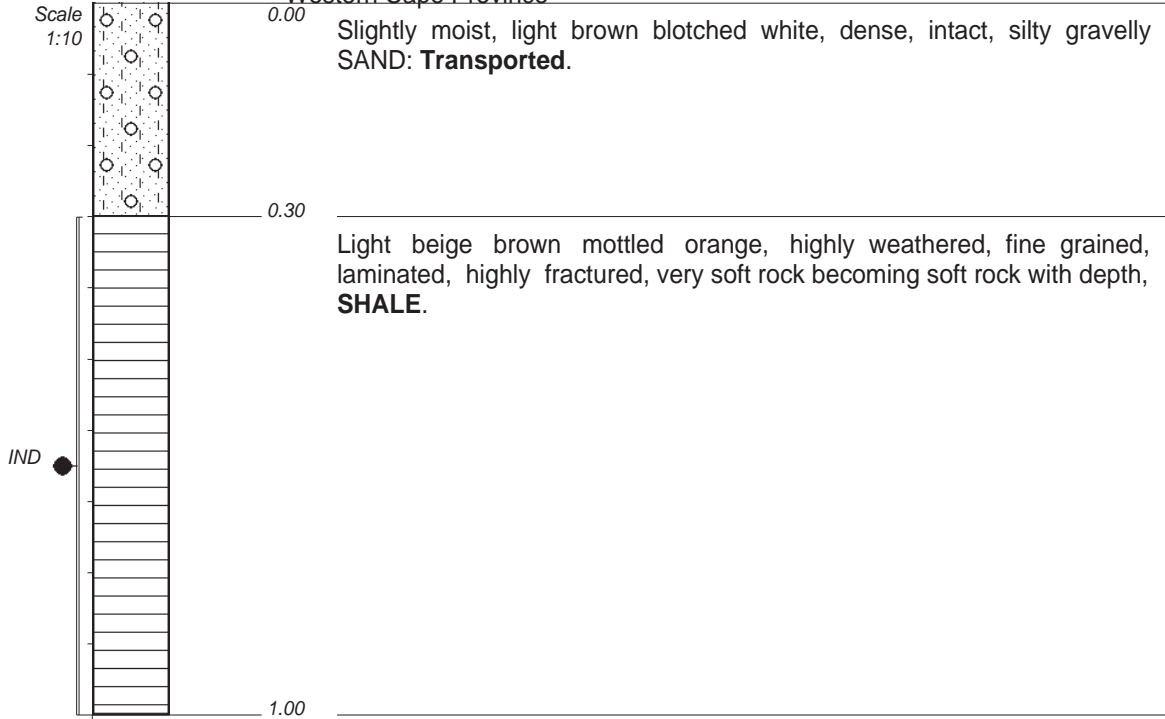
DATE : 22/11/2021 08:26

TEXT : ..LDERMK21614BRVASPAR.TXT

ELEVATION :

X-COORD : 33' 19'30.46"S

Y-COORD : 18' 54'6.61"E



**NOTES**

- 1) No water seepage.
- 2) No sidewall collapse.
- 3) Refusal at 1.00m.
- 4) IND sample taken 0.30--1.00m.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

DATE : 22/11/2021 08:26

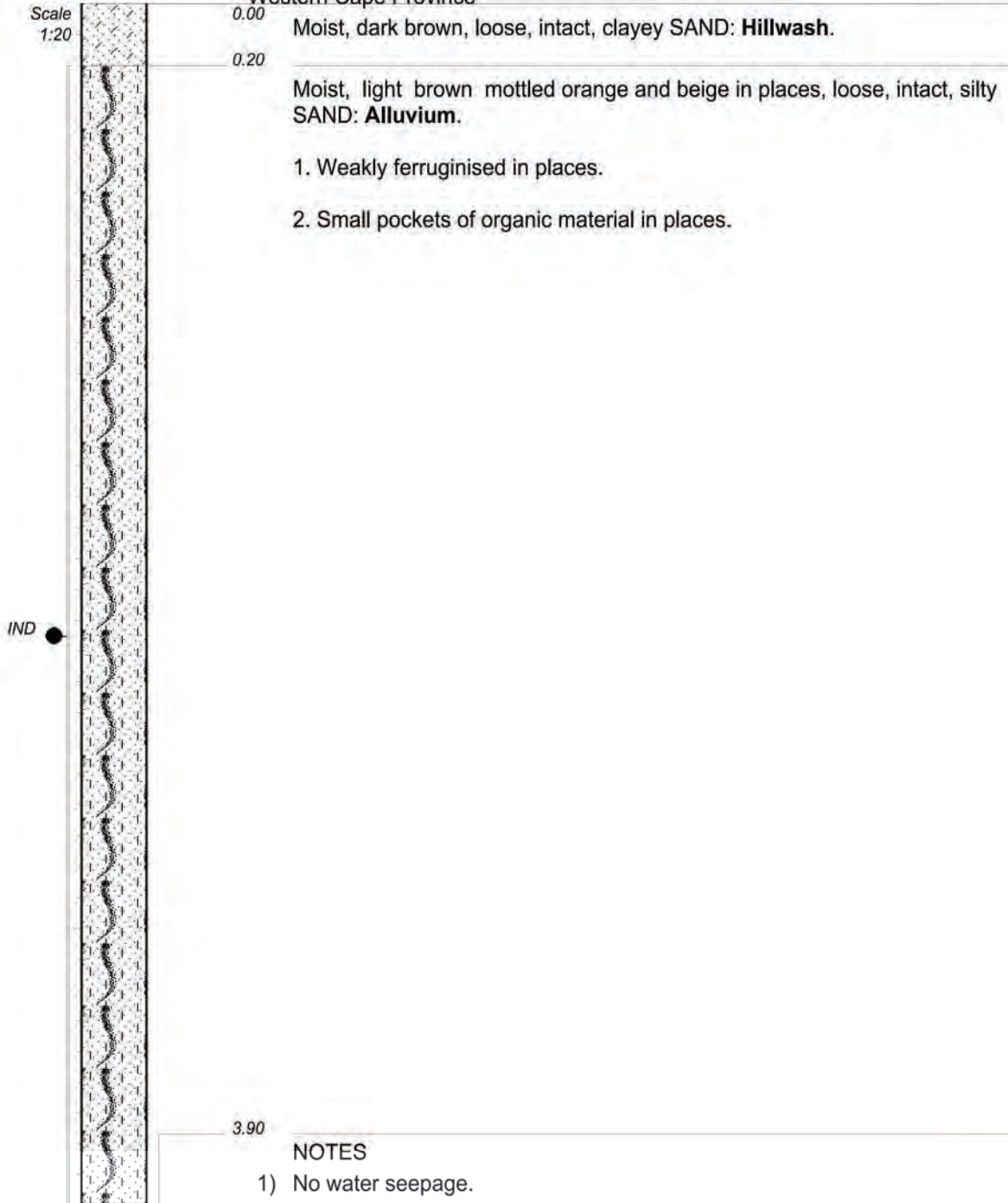
TEXT : ..LDER\WK21614BRVASPAR.TXT

ELEVATION :

X-COORD : 33' 19'20.56"S

Y-COORD : 18' 53'51.55"E

# CROSSINGS TESTPIT PROFILES



**NOTES**

- 1) No water seepage.
- 2) No sidewall collapse.
- 3) IND sample taken at 0.20--3.90m.
- 4) No Refusal.

CONTRACTOR : Mukona Consulting Engineers INCLINATION : Vertical

MACHINE : JCB 3 CX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 06/12/2021-09/12/2021

DATE : 13/01/2022 14:06

TEXT : ..VASTESTPITPIPELINE2.TXT

ELEVATION :

X-COORD : 33° 19' 54.90"S

Y-COORD : 18° 59' 21.40"E

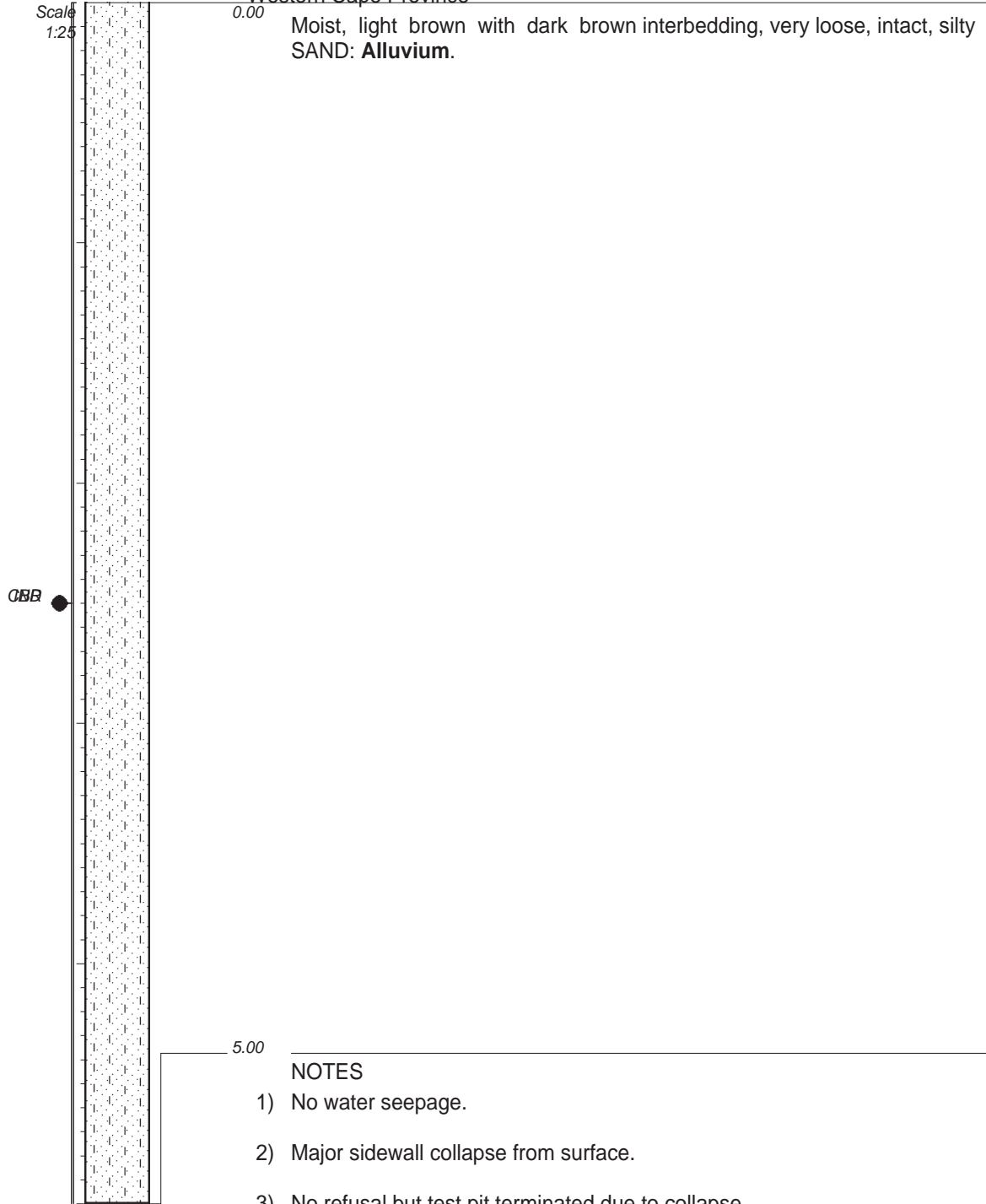
HOLE No: TPC01



**Trans Caledon Tunnel Authority**  
Geotechnical Investigation  
Berg River Voelvlei Augmentation Scheme  
Riebeeck Kasteel  
Western Cape Province

**HOLE No: TPC04**  
Sheet 1 of 1

**JOB NUMBER: MK-21-614**



**NOTES**

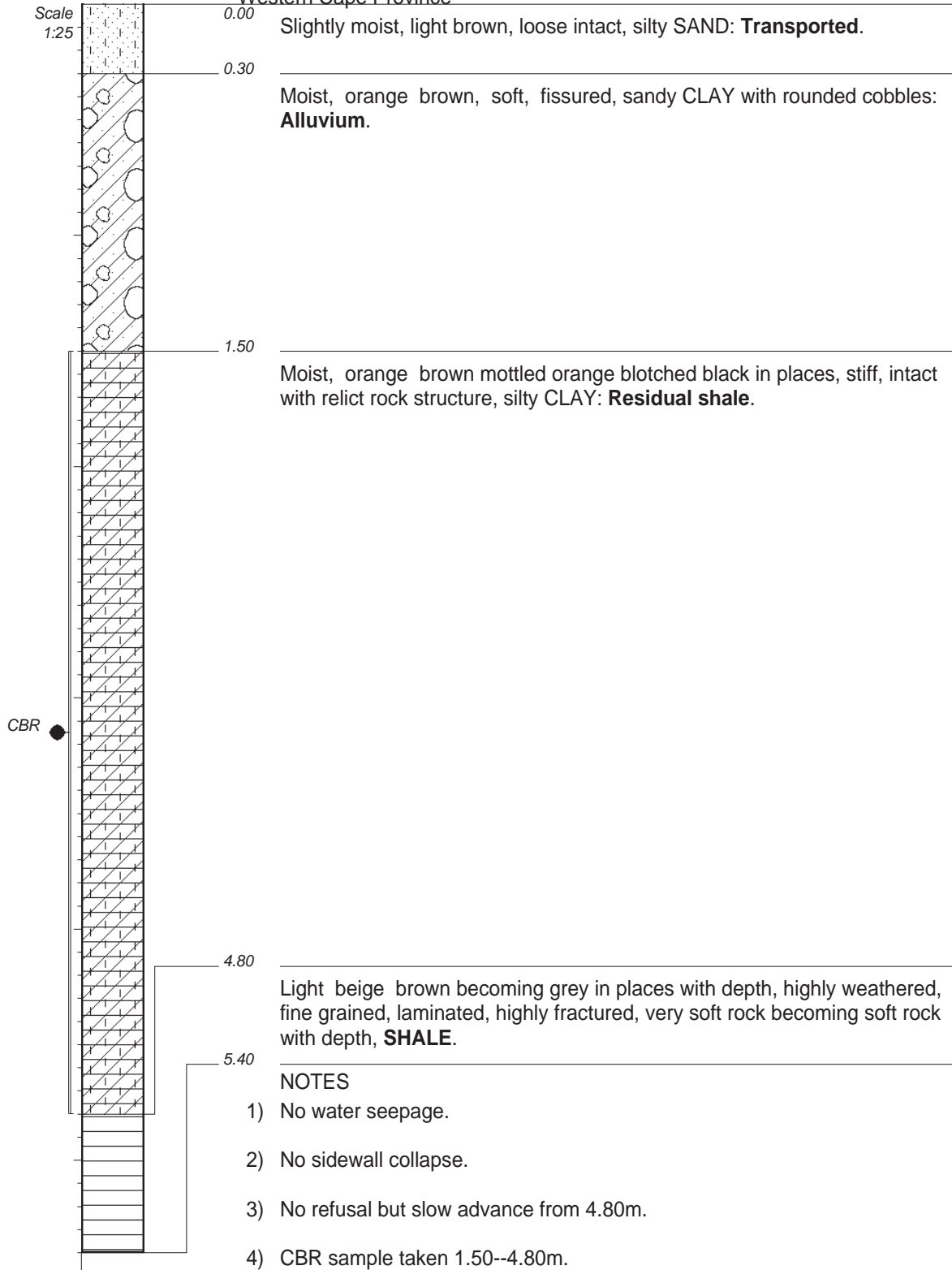
- 1) No water seepage.
- 2) Major sidewall collapse from surface.
- 3) No refusal but test pit terminated due to collapse.
- 4) IND sample taken 0.00--5.00m.
- 5) CBR sample taken 0.00--5.00m.

CONTRACTOR : Mukona Consulting Engineers INCLINATION : Vertical  
MACHINE : Hitachi 220EX  
DRILLED BY : Ronald  
PROFILED BY : K Naidoo  
TYPE SET BY : KN  
SETUP FILE : STANDARD.SET

DIAM :  
DATE :  
DATE : 16/09/21-30/09/21  
DATE : 22/11/2021 08:17  
TEXT : ..VASTESTPITSCROSSINGS.TXT

ELEVATION :  
X-COORD : 33' 19'55.43"S  
Y-COORD : 18' 59'25.75"E

**HOLE No: TPC04**



CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : Hitachi 220EX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

DATE : 22/11/2021 08:17

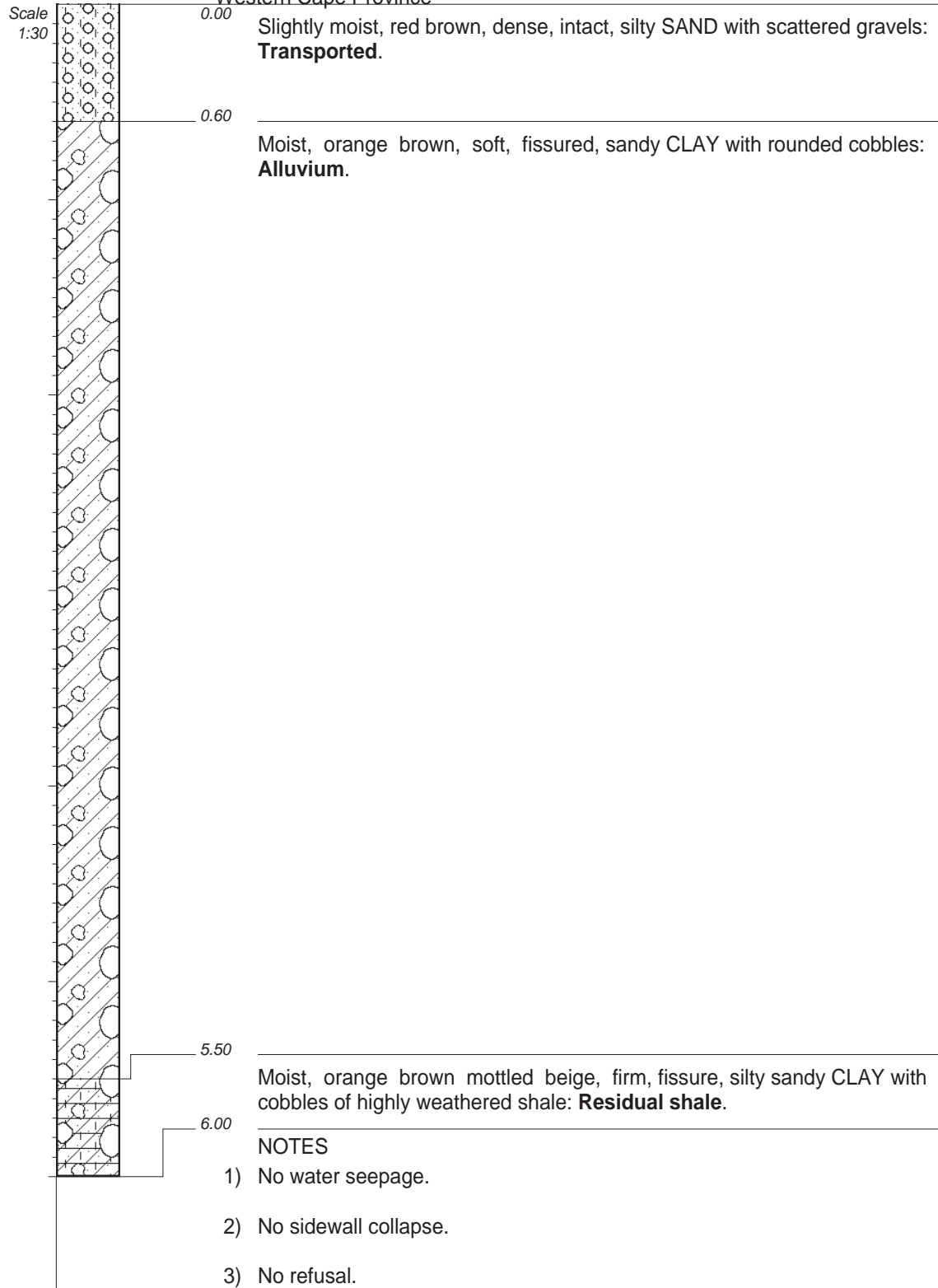
TEXT : ..VASTESTPITSCROSSINGS.TXT

ELEVATION :

X-COORD : 33' 20'46.10"S

Y-COORD : 19' 01'07.63"E





CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : Hitachi 220EX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

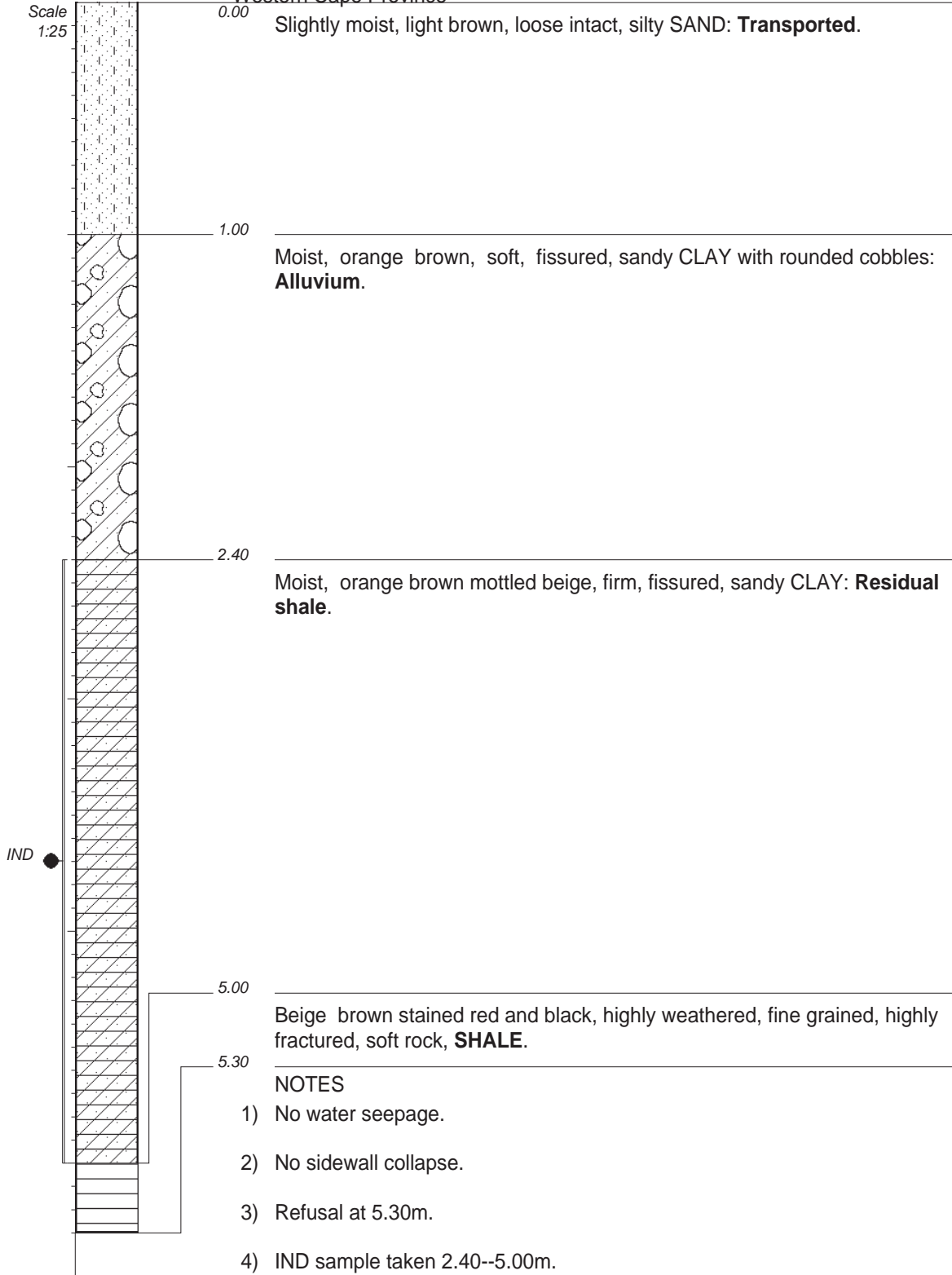
DATE : 22/11/2021 08:17

TEXT : ..VASTESTPITSCROSSINGS.TXT

ELEVATION :

X-COORD : 33' 20'46.67"S

Y-COORD : 19' 01'07.93"E



CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : Hitachi 220EX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

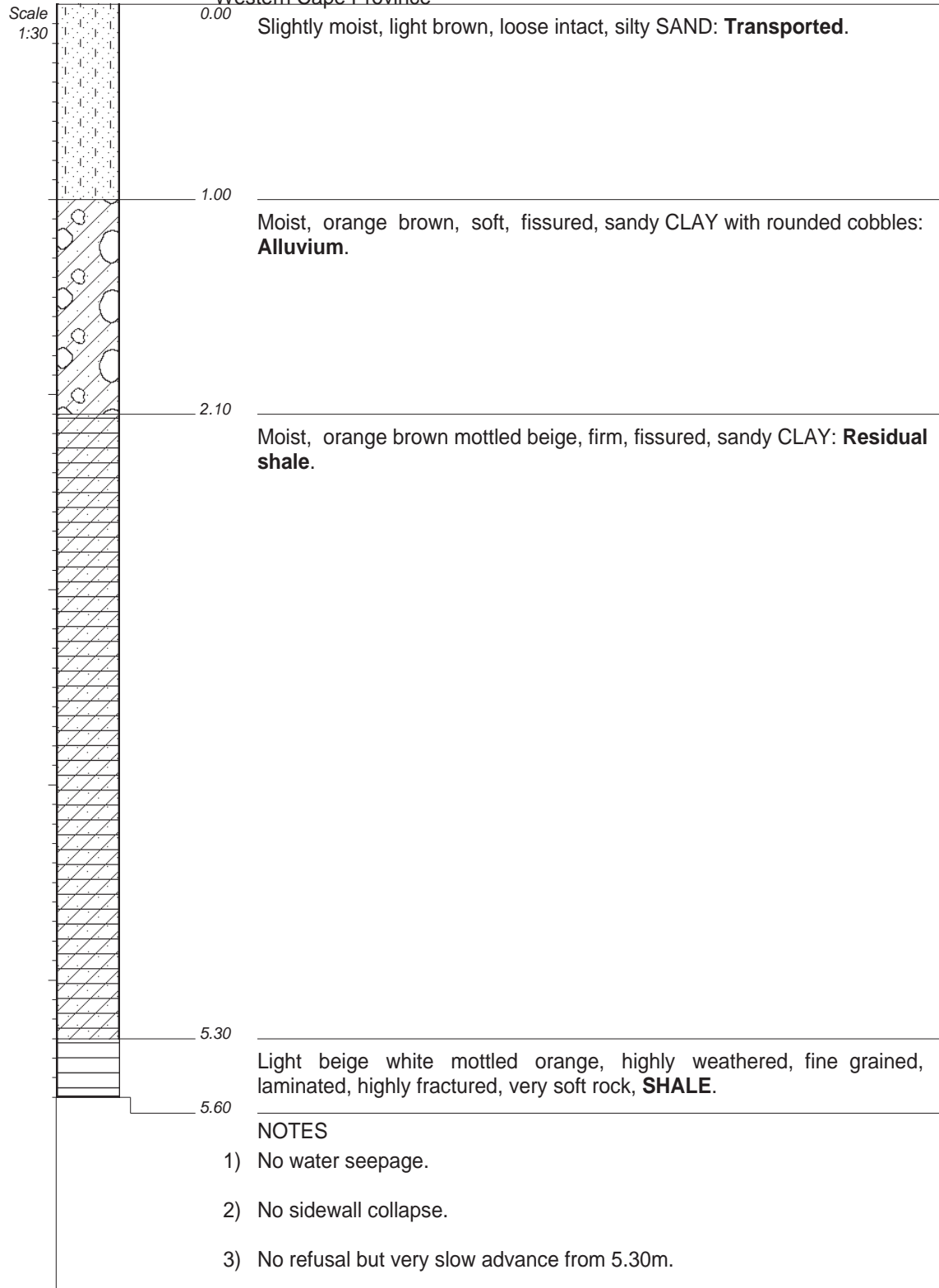
DATE : 22/11/2021 08:17

TEXT : ..VASTESTPITSCROSSINGS.TXT

ELEVATION :

X-COORD : 33° 20'49.19"S

Y-COORD : 19° 01'10.06"E



CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : Hitachi 220EX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

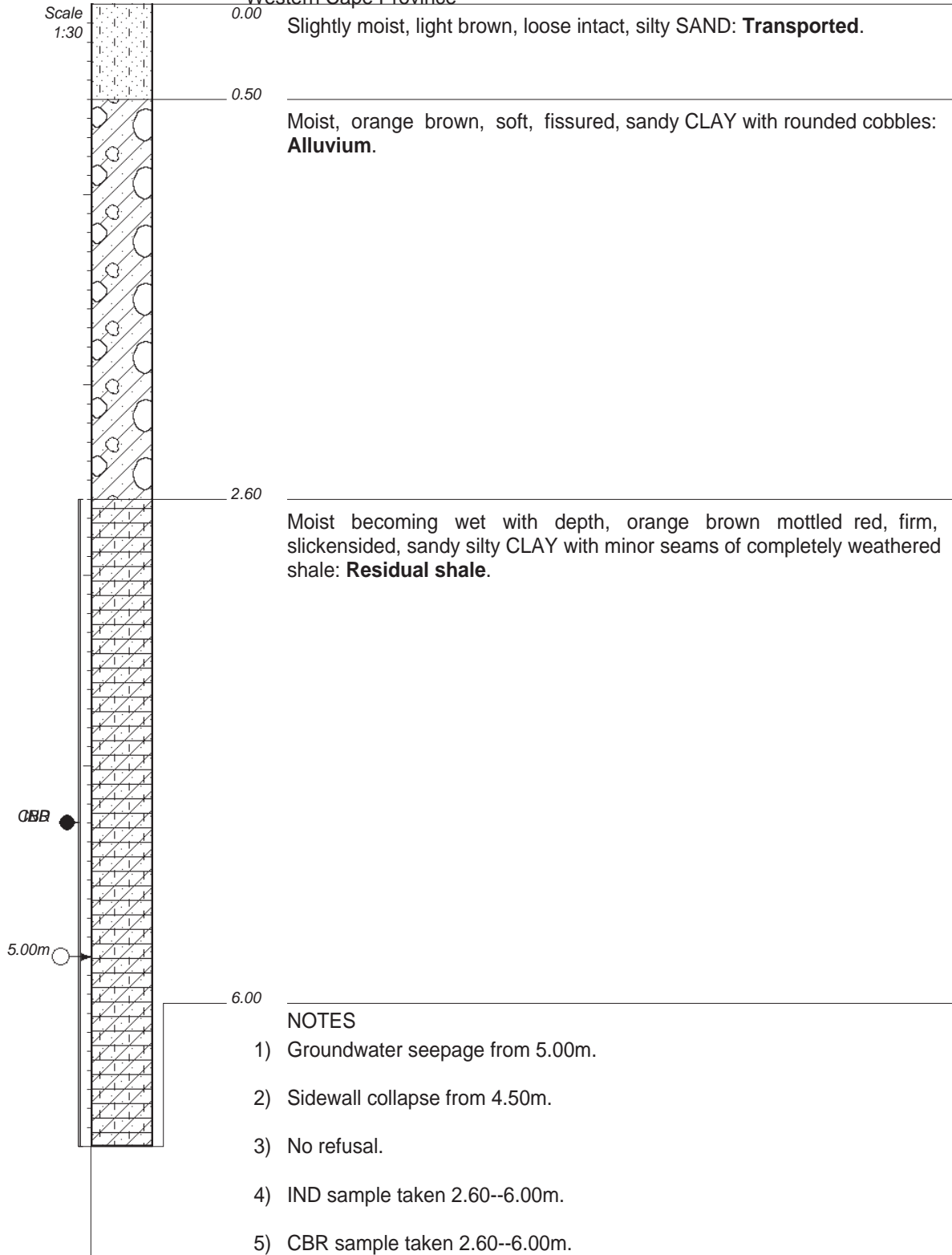
DATE : 22/11/2021 08:17

TEXT : ..VASTESTPITSCROSSINGS.TXT

ELEVATION :

X-COORD : 33' 20'49.57"S

Y-COORD : 19' 01'11.61"E



CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : Hitachi 220EX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

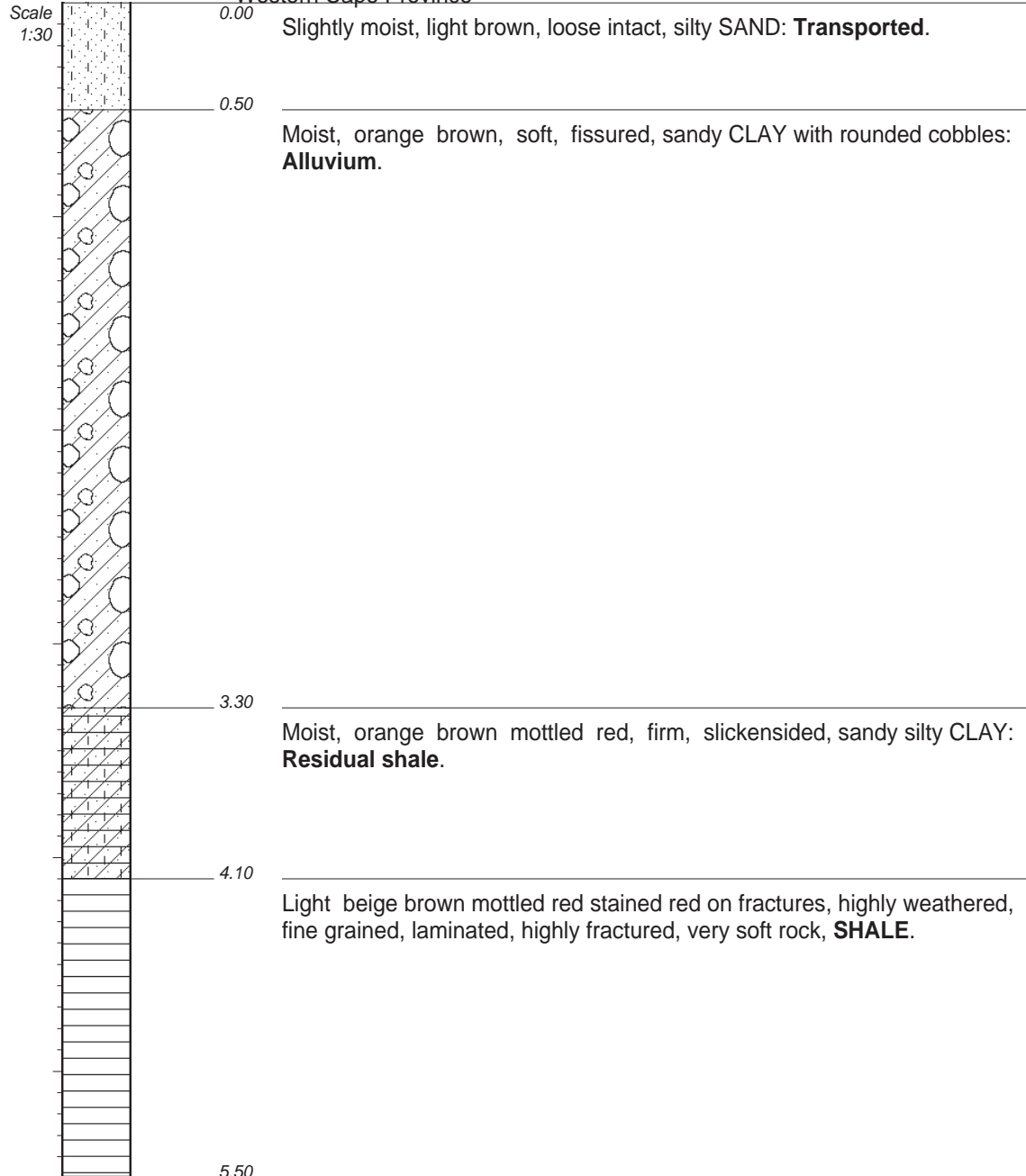
DATE : 22/11/2021 08:17

TEXT : ..VASTESTPITSCROSSINGS.TXT

ELEVATION :

X-COORD : 33' 20'50.35"S

Y-COORD : 19' 01'16.27"E



**NOTES**

- 1) No water seepage.
- 2) No sidewall collapse.
- 3) Refusal at 5.50m.

CONTRACTOR : Mukona Consulting Engineers INCLINATION :

MACHINE : Hitachi 220EX

DRILLED BY : Ronald

PROFILED BY : K Naidoo

TYPE SET BY : KN

SETUP FILE : STANDARD.SET

DIAM :

DATE :

DATE : 16/09/21-30/09/21

DATE : 22/11/2021 08:17

TEXT : ..VASTESTPITSCROSSINGS.TXT

ELEVATION :

X-COORD : 33° 20'50.95"S








Y-COORD : 19° 01'17.57"E



**Trans Caledon Tunnel Authority**  
 Geotechnical Investigation  
 Berg River Voelvlei Augmentation Scheme  
 Riebeek Kasteel  
 Western Cape Province

**LEGEND**  
*Sheet 1 of 1*

**JOB NUMBER: MK-21-614**

	SAND	{SA04}
	SANDY	{SA05}
	SILT	{SA06}
	SILTY	{SA07}
	CLAY	{SA08}
	CLAYEY	{SA09}
	DISTURBED SAMPLE	{SA38}

Name ●

CONTRACTOR :  
 MACHINE :  
 DRILLED BY :  
 PROFILED BY :

INCLINATION :  
 DIAM :  
 DATE :  
 DATE :

ELEVATION :  
 X-COORD :  
 Y-COORD :

TYPE SET BY : KN  
 SETUP FILE : STANDARD.SET

DATE : 22/11/2021 08:23  
 TEXT : ..OLDERMK21614BRVASEE.TXT

**LEGEND**  
**SUMMARY OF SYMBOLS**

# WEIR TESTPIT PHOTOGRAPHS



Figure 1: TPD01 Profile





Figure 2: TPDE01 Profile



Figure 3: TPDE02 Profile



Figure 4: TPD03 Profile



Figure 5: TPDE03Profile



Figure 6: TPD04 Profile



Figure 7: TPDE04A Profile



Figure 8: TPDE04B Profile

# EARTH EMBANKMENT DAM TESTPIT PHOTOGRAPHS





Figure 9: TPD05 Profile



Figure 10: TPDE05A Profile



Figure 11: TPD06 Profile



Figure 12: TPD07 Profile



Figure 13: TPD08 Profile



Figure 14: TPD09 Profile



Figure 15: TPD10 Profile



Figure 16: TPD11 Profile





Figure 17: TPD12 Profile

# SADDLE DAM TESTPIT PHOTOGRAPHS



Figure 18: TPE01Profile



Figure 19: TPE02 Profile