



CDM REGULATIONS 2015 RESIDUAL HAZARDS
RESIDUAL HAZARDS IDENTIFIED

CONSTRUCTION

1. NO SIGNIFICANT OTHER HAZARDS BEYOND THOSE KNOWN TO AN EXPERIENCED CONTRACTOR.

FUTURE DEMOLITION

A. NO SIGNIFICANT OTHER HAZARDS BEYOND THOSE KNOWN TO AN EXPERIENCED CONTRACTOR.

THIS REGISTER IS A NON-EXHAUSTIVE LIST OF RESIDUAL HAZARDS RELATING TO THE WORKS SHOWN ON THIS DRAWING THAT HAVE BEEN IDENTIFIED DURING THE DESIGN STAGE.

IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A CONTRACTOR WITH THE APPROPRIATE SKILLS, KNOWLEDGE & EXPERIENCE, AND IF THEY ARE AN ORGANISATION, THE ORGANISATIONAL CAPABILITY NECESSARY TO FULFIL THE ROLE.

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J.C.White drawing 17/0053-02 titled 'Orthographic Aerial Image & Level Survey' dated April 2019 has been used to define the existing ground level surface profile.

BHD Architects drawing 2969-P0001-Rev E titled 'Site Plan' dated October 2015 has been used to define the proposed ground surface profile.

Various surfaces were developed from the survey and design information extracted from the above drawings, these are defined below:

EG
Existing ground level defined by the J.C.White survey data.

EG LESS PILES
Existing ground level excluding the apparent individual piles of material above surface.

ASL
No surface strip has been allowed for.

Proposed Finish
Finished surface level profile as defined by the BDH Architects drawing with additional points introduced to define the road profiles and car parks & garden levels interpolated between plots and roads.

Proposed Formation
Formation level (underside) of the permanent works defined by the proposed finished surface level reduced by an assumed 750mm construction thickness.

EG LESS PILES TO FORMATION AREA ?
Comparison between EG LESS PILES (existing ground level excluding apparent piles) and Proposed Formation surface reporting the total volume of cut and fill to achieve formation level but constrained to areas A, B, C & D.

PILE ?
Comparison between EG (existing ground level) EG LESS PILES reporting total volume of material in each of the apparent piles above the general existing surface.

Major contours displayed in light grey at 2.00m intervals and minor contours displayed in dark grey at 0.50m contours represent the current existing ground level.

Fill colours represent ranges of cut or fill depth in the transition from existing ground level to formation but excluding the 8no identifiable piles.

Colour ranges are shown in the table below.

Number	Minimum Elevation	Maximum Elevation	Color
1	-6.42	-2.40	Dark Red
2	-2.40	-1.49	Red
3	-1.49	-0.90	Dark Orange
4	-0.90	-0.53	Orange
5	-0.53	-0.10	Light Orange
6	-0.10	0.42	Yellow
7	0.42	1.05	Light Green
8	1.05	1.96	Green
9	1.96	3.60	Dark Green
10	3.60	6.94	Very Dark Green

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
EG LESS PILES TO FORMATION AREA A	1.000	1.000	8545.22sq.m	7120.20 Cu. M.	5272.06 Cu. M.	1848.14 Cu. M.<Cut>
EG LESS PILES TO FORMATION AREA B	1.000	1.000	15081.89sq.m	5753.92 Cu. M.	11930.07 Cu. M.	6176.15 Cu. M.<Fill>
EG LESS PILES TO FORMATION AREA C	1.000	1.000	12345.07sq.m	2044.87 Cu. M.	11374.59 Cu. M.	9329.72 Cu. M.<Fill>
EG LESS PILES TO FORMATION AREA D	1.000	1.000	2872.56sq.m	1742.45 Cu. M.	1413.49 Cu. M.	328.96 Cu. M.<Cut>
EG LESS PILES TO FORMATION AREA E	1.000	1.000	17067.97sq.m	30268.52 Cu. M.	182.89 Cu. M.	30085.62 Cu. M.<Cut>
EG LESS PILES TO FORMATION AREA F	1.000	1.000	9356.93sq.m	1.00 Cu. M.	36120.53 Cu. M.	36119.53 Cu. M.<Fill>
Totals			65469.63sq.m	46930.95 Cu. M.	66293.64 Cu. M.	19362.69 Cu. M.<Fill>

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
PILE 1	1.000	1.000	1285.37sq.m	1699.65 Cu. M.	0.00 Cu. M.	1699.65 Cu. M.<Cut>
PILE 2	1.000	1.000	479.05sq.m	610.02 Cu. M.	0.00 Cu. M.	610.02 Cu. M.<Cut>
PILE 3	1.000	1.000	356.42sq.m	131.92 Cu. M.	2.06 Cu. M.	129.85 Cu. M.<Cut>
PILE 4	1.000	1.000	1523.66sq.m	2834.91 Cu. M.	0.03 Cu. M.	2834.88 Cu. M.<Cut>
PILE 5	1.000	1.000	412.49sq.m	795.20 Cu. M.	0.00 Cu. M.	795.20 Cu. M.<Cut>
PILE 6	1.000	1.000	1732.77sq.m	3719.33 Cu. M.	90.90 Cu. M.	3628.43 Cu. M.<Cut>
PILE 7	1.000	1.000	389.94sq.m	18.35 Cu. M.	119.42 Cu. M.	101.07 Cu. M.<Fill>
PILE 8	1.000	1.000	4705.72sq.m	7948.27 Cu. M.	366.86 Cu. M.	7581.42 Cu. M.<Cut>
Totals			10885.41sq.m	17757.64 Cu. M.	579.28 Cu. M.	17178.36 Cu. M.<Cut>

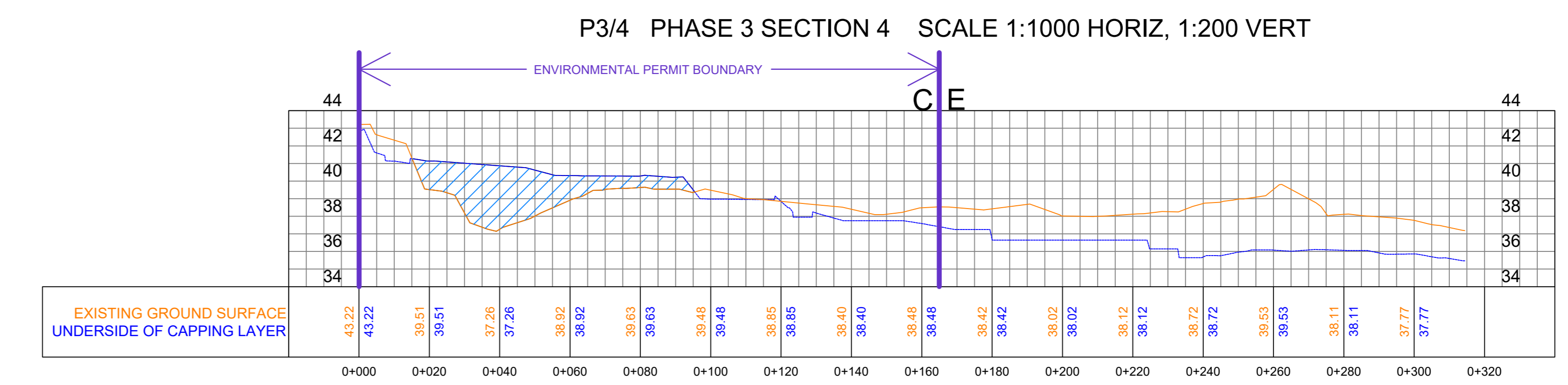
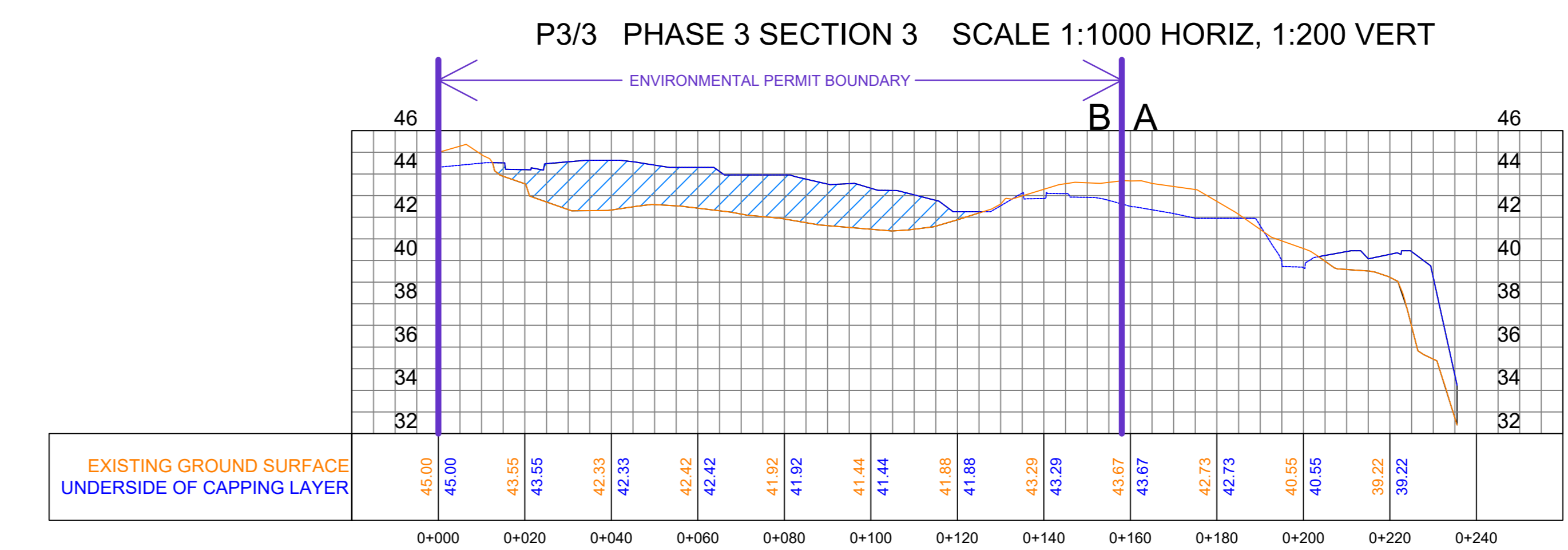
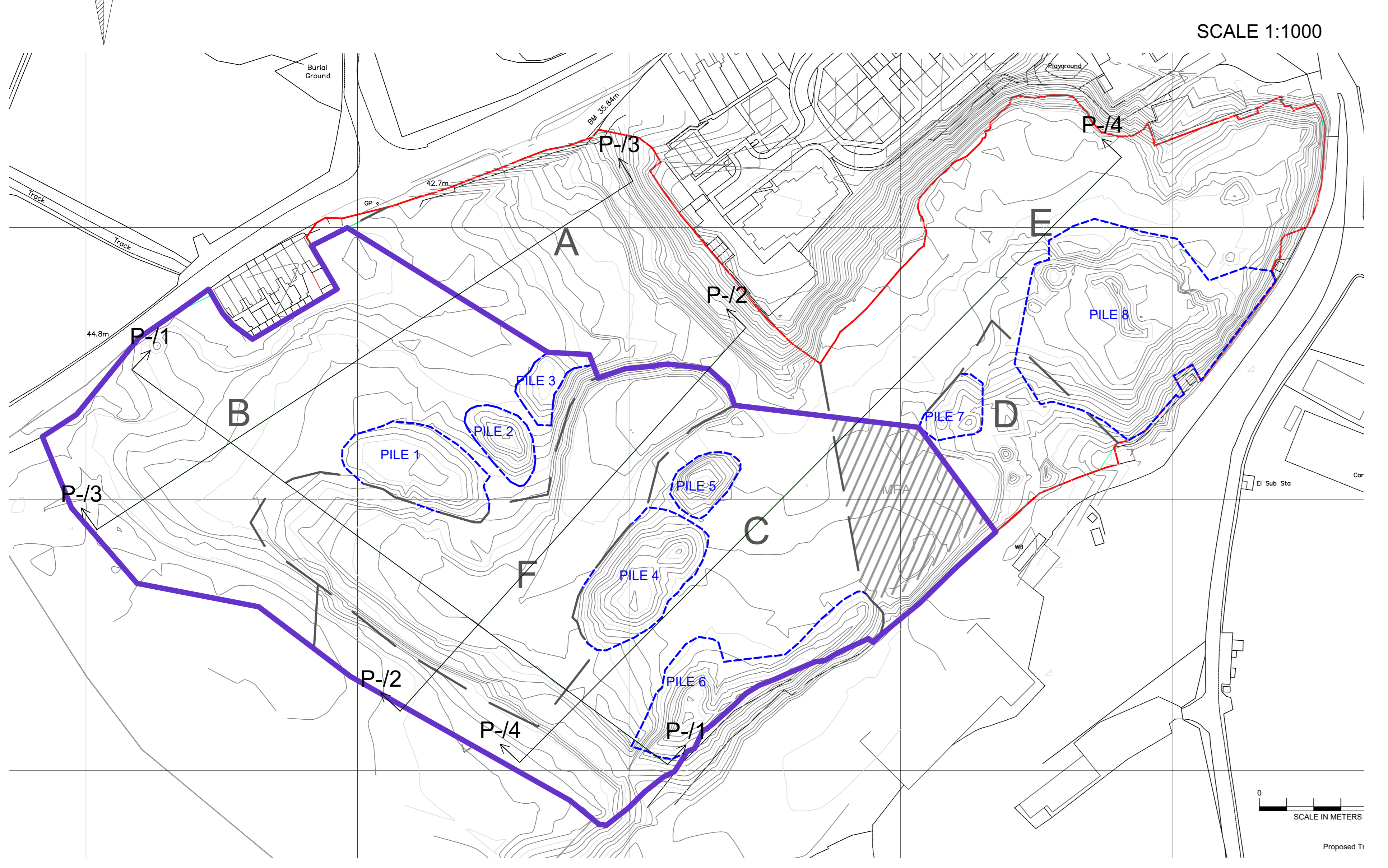
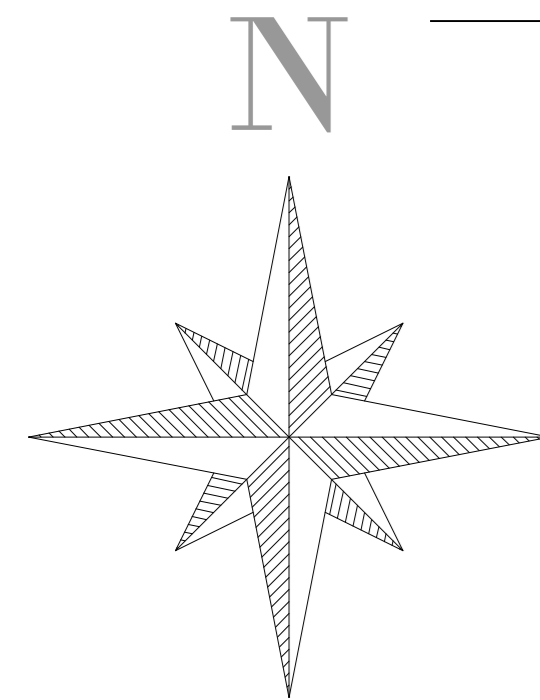
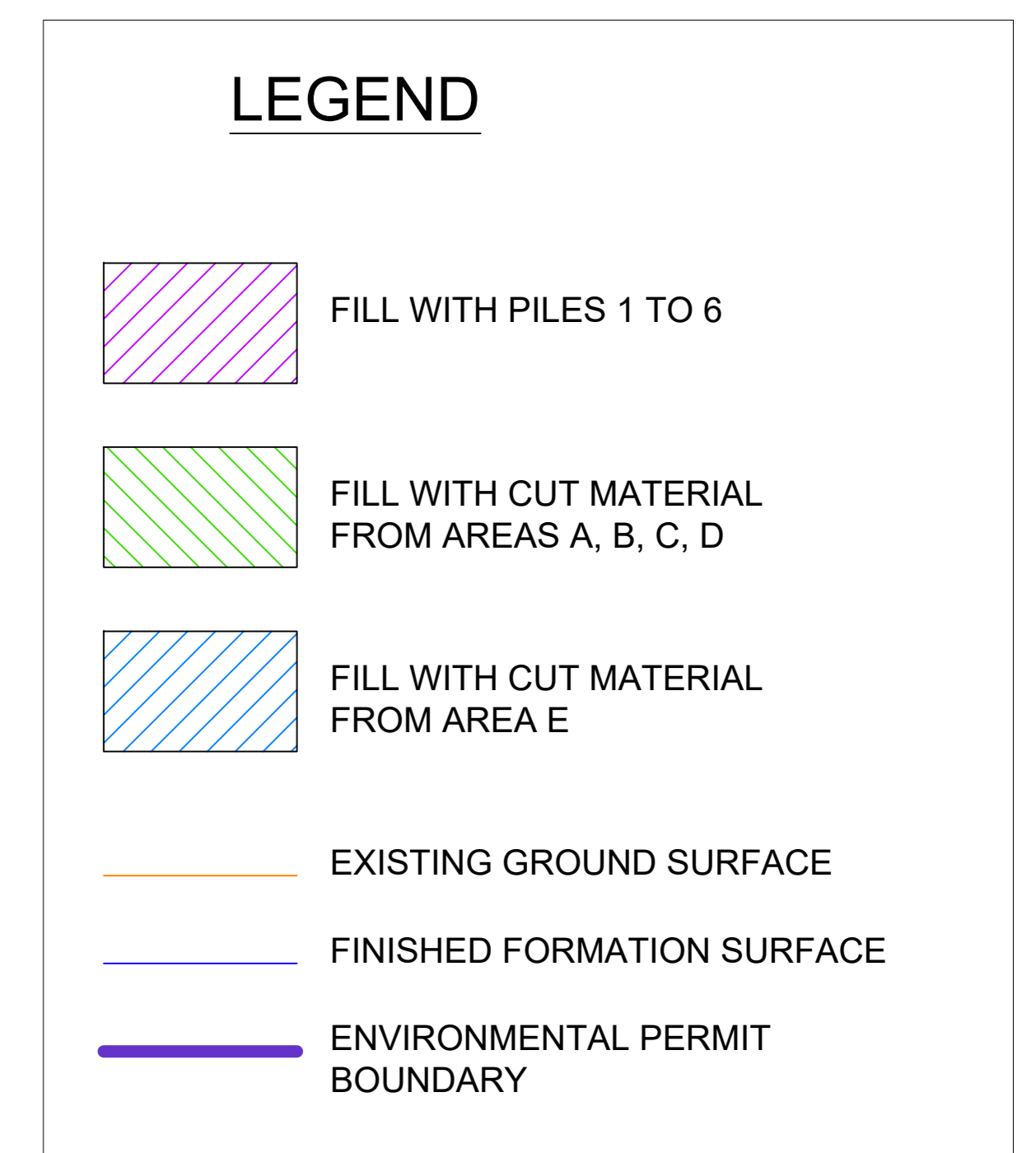
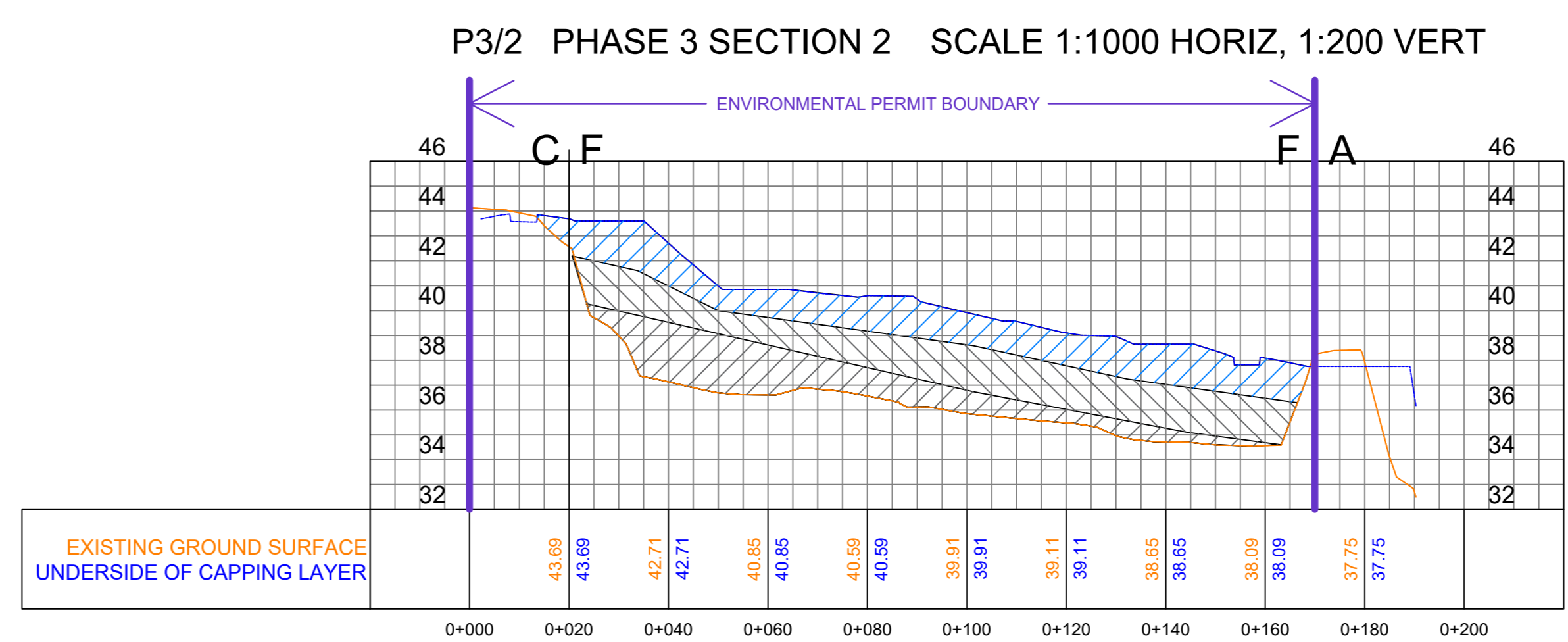
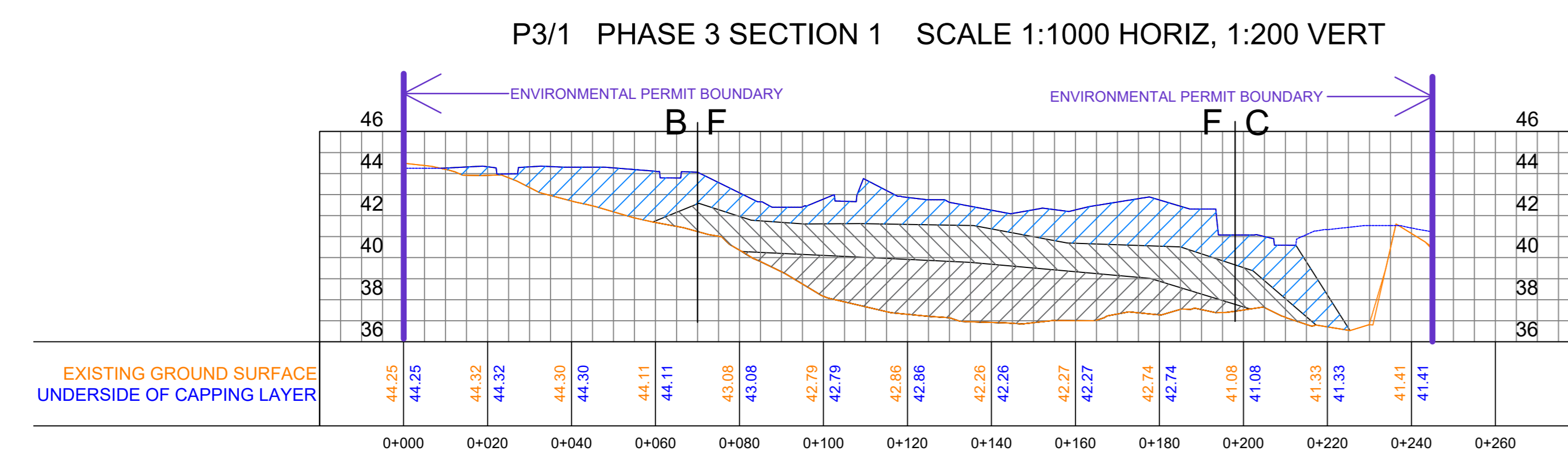
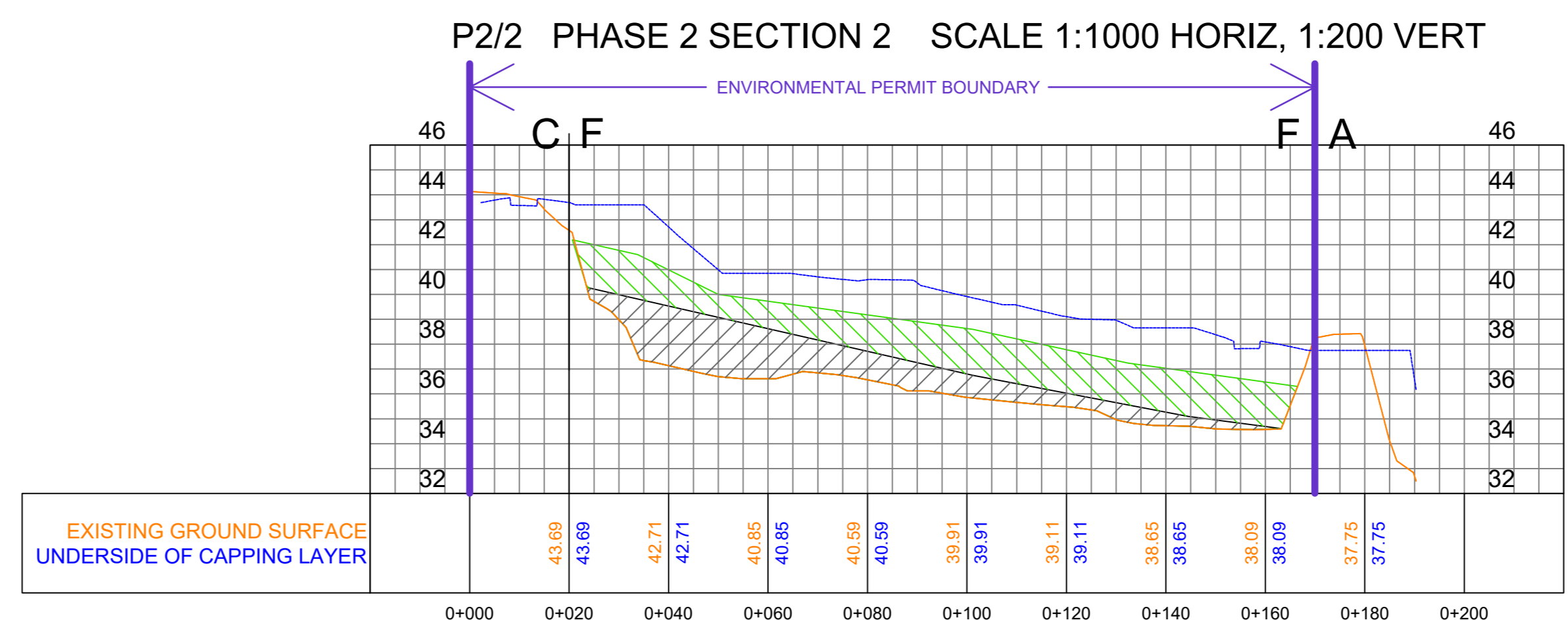
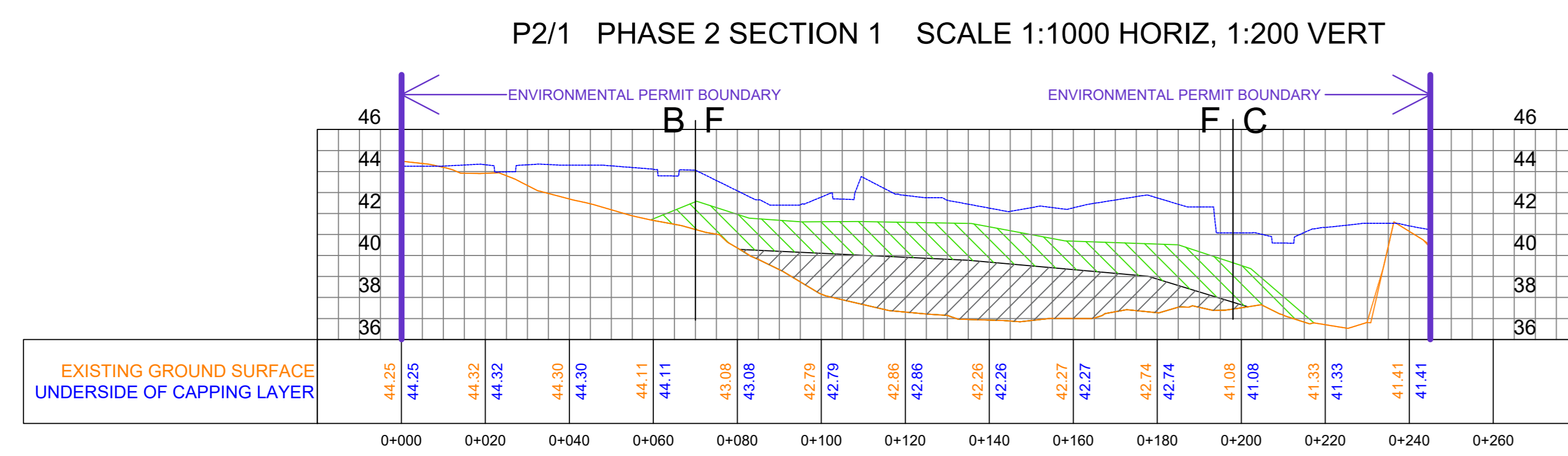
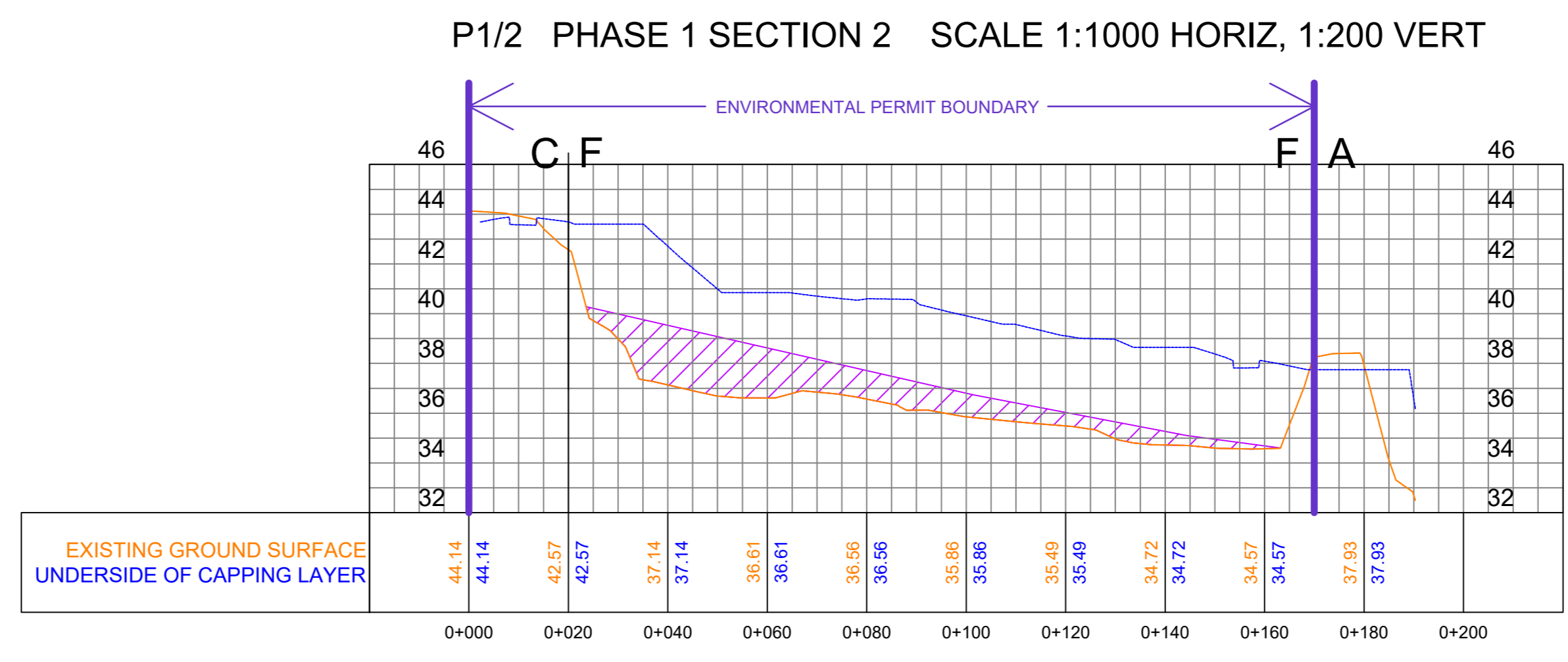
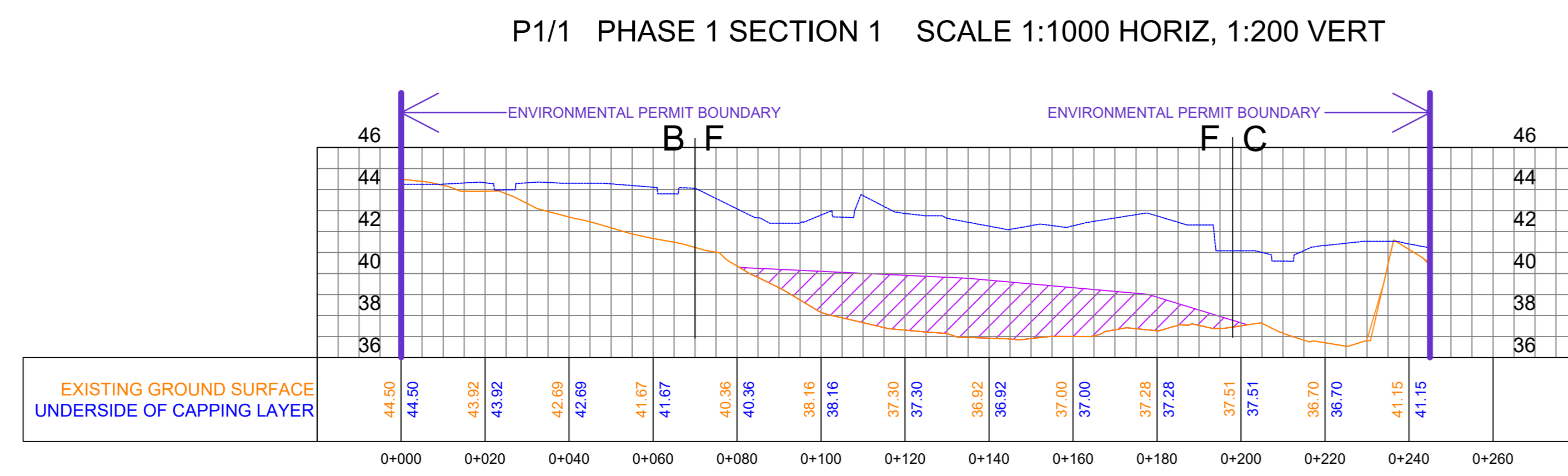
Rev	Date	Description	By
B	24.10.2020	Colour shading changed	MJW
A	24.10.2020	Factors removed from vols	MJW

Morgan Thacker LTD

Project: CUT AND FILL ANALYSIS
PILES CONSIDERED INDIVIDUALLY

Project: P J BURKE
TOVIL

On by: MJW Date: 24th October 2020 Scale: 1:500 @ A0 Sheet number: 1 of 4
Drawing number: MTL-127-28 Revision: B



D	09.11.2020	Permit boundary added	plan	MJW
C	08.11.2020	Boundary thickened		MJW
B	08.11.2020	Env. permit boundary added		MJW
A	07.11.2020	Boundaries added		MJW

Rev Date Description By

Morgan Thacker LTD

PHASED FILL SECTIONS

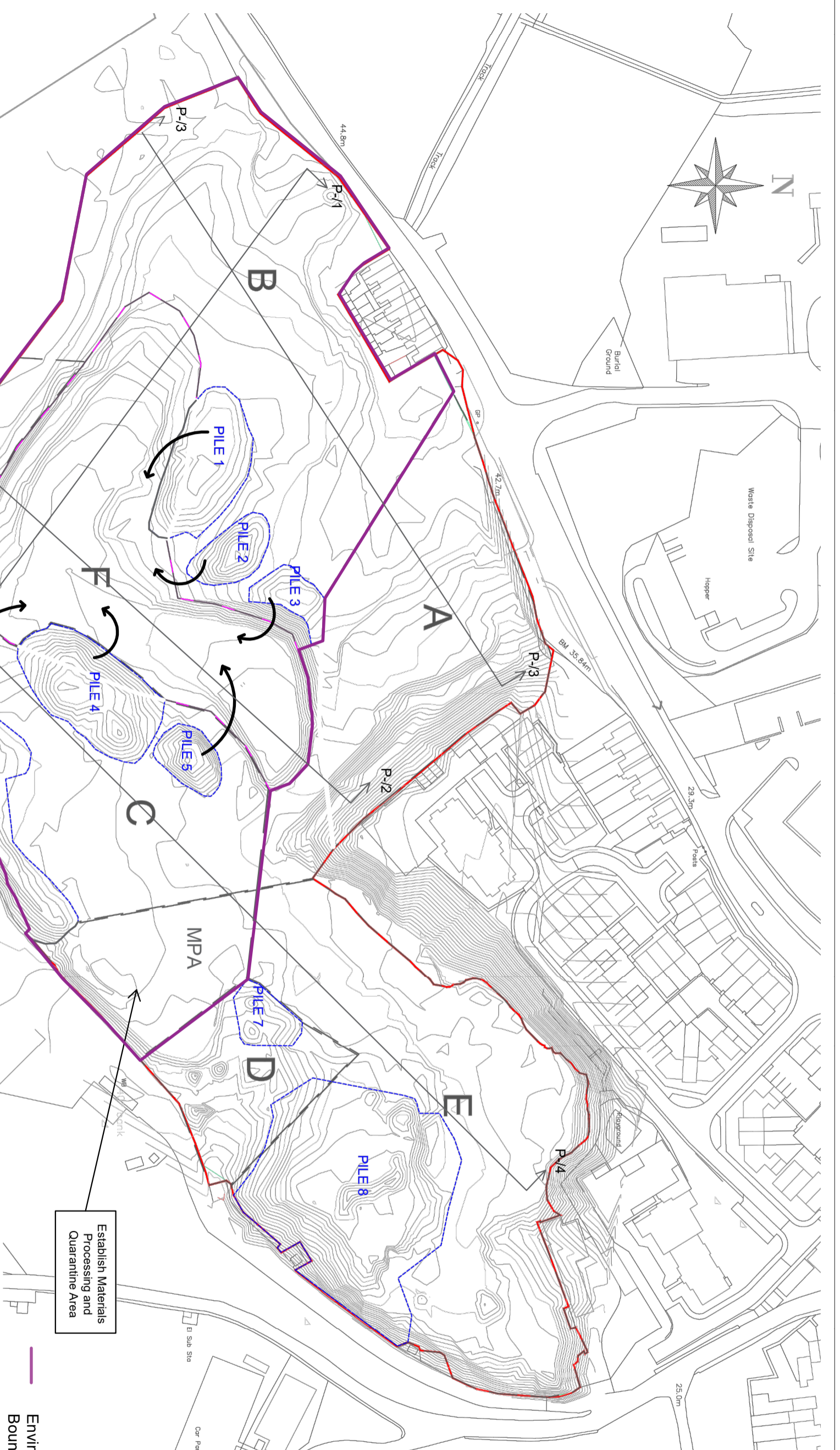
Project: P J BURKE TOVIL

On by: MJW Date: 7th November 2020 Scale: AS NOTED @ A0 Sheet number: 1 of 1

Drawing number: MTL-127-29 Revision: D



Tovil Phasing Proposals
 W9031
 Phase 1
 1



Establish Materials Processing and Quarantine Area

Environmental Permit Boundary

PHASE 1
 Establish Materials Processing and Quarantine Area. Piles 1 to 6 as protruding above existing ground level cut and placed and compacted into Area F

Excavation Area	Cut Volume	Fill Area	Residual Fill Volume Available in Area F (cu.m)
Pile1	1700	F	36120
Pile2	610	F	34420
Pile 3	132	F	33810
Pile4	2835	F	33678
Pile5	795	F	30843
Pile 6	3719	F	30048
TOTAL	9791	F	26329

- NOTES**
- AREAS A, D & E are "No Fill" zones in terms of waste recovery AREA F is the area of deepest filling with a void of 36120 cu.m and has no cut requirement**
- Plans and Volumes derived from Morgan Tracker Drawing MTL_127_288. Volumes measured to Formation level defined as 750mm below Finished Surface approved under Planning. Sections shown on MTL_127_29D
 - Volumes are measured 'in the solid' from surveys. It is recognised that material will be subject to both volume bulking on excavation and volume shrinkage on compaction (particularly from looser piles). The net effect is likely to be slight shrinkage on compaction, such that fill volumes occupied may be slightly smaller and residual volumes available slightly larger due to the net effects of compaction
 - Cut and fill volumes quoted excludes Piles 7 and 8. Pile 7 = 17cum of tarmac scal prings to be incorporated into subsequent road and handstanding constructions above Formation level, subject to testing. Pile 8 = 7948cum of topsoil and soils to be used in landscape or garden areas above formation level, subject to testing



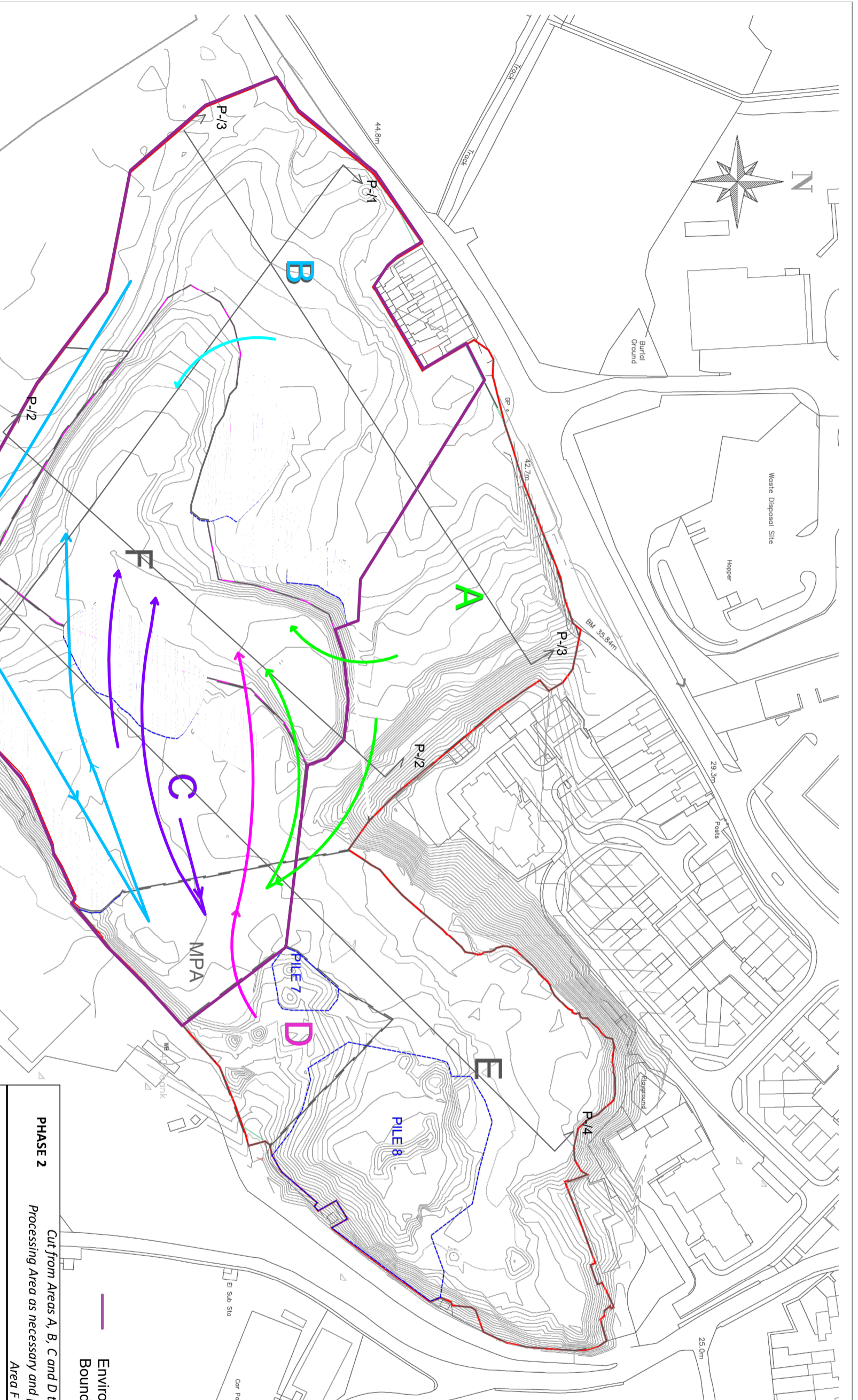
SOCOTEC

Toxil Phasing Proposals

W9031

Phase 2

2



PHASE 2
Cut from Areas A, B, C and D taken through Materials Processing Area as necessary and placed and compacted into Area F

Excavation Area Cut Volume Fill Area Residual Fill Volume Available in Area F (cu.m)

Excavation Area	Cut Volume	Fill Area	Residual Fill Volume Available in Area F (cu.m)
A	7120	F	26329
B	5754	F	19209
C	2045	F	13455
D	1742	F	11410
TOTAL	16661	F	9668

(See Notes 1 and 2)

NOTES

AREAS A, D & E are "No Fill" zones in terms of waste recovery AREA F is the area of deepest filling with a void of 36120 cu.m and has no cut requirement

1 Plans and Volumes derived from Morgan Thacker Drawing MTL_127_288. Volumes measured to Formation Level defined as 750mm below Finished Surface approved under Planning. Sections shown on MTL_127_29D

2 Volumes are measured 'in the solid' from surveys. It is recognised that material will be subject to both volume bulking on excavation and volume shrinkage on compaction (particularly from looser piles). The net effect is likely to be slight shrinkage on compaction, such that fill volumes occupied may be slightly smaller and residual volumes available slightly larger due to the net effects of compaction

3 Cut and fill volumes quoted excludes Piles 7 and 8. Pile 7 = 17cum of farmac scalings to be incorporated into subsequent road and hardstanding constructions above Formation Level, subject to testing. Pile 8 = 7948cum of topsoil and soils to be used in landscape or garden areas above Formation Level, subject to testing

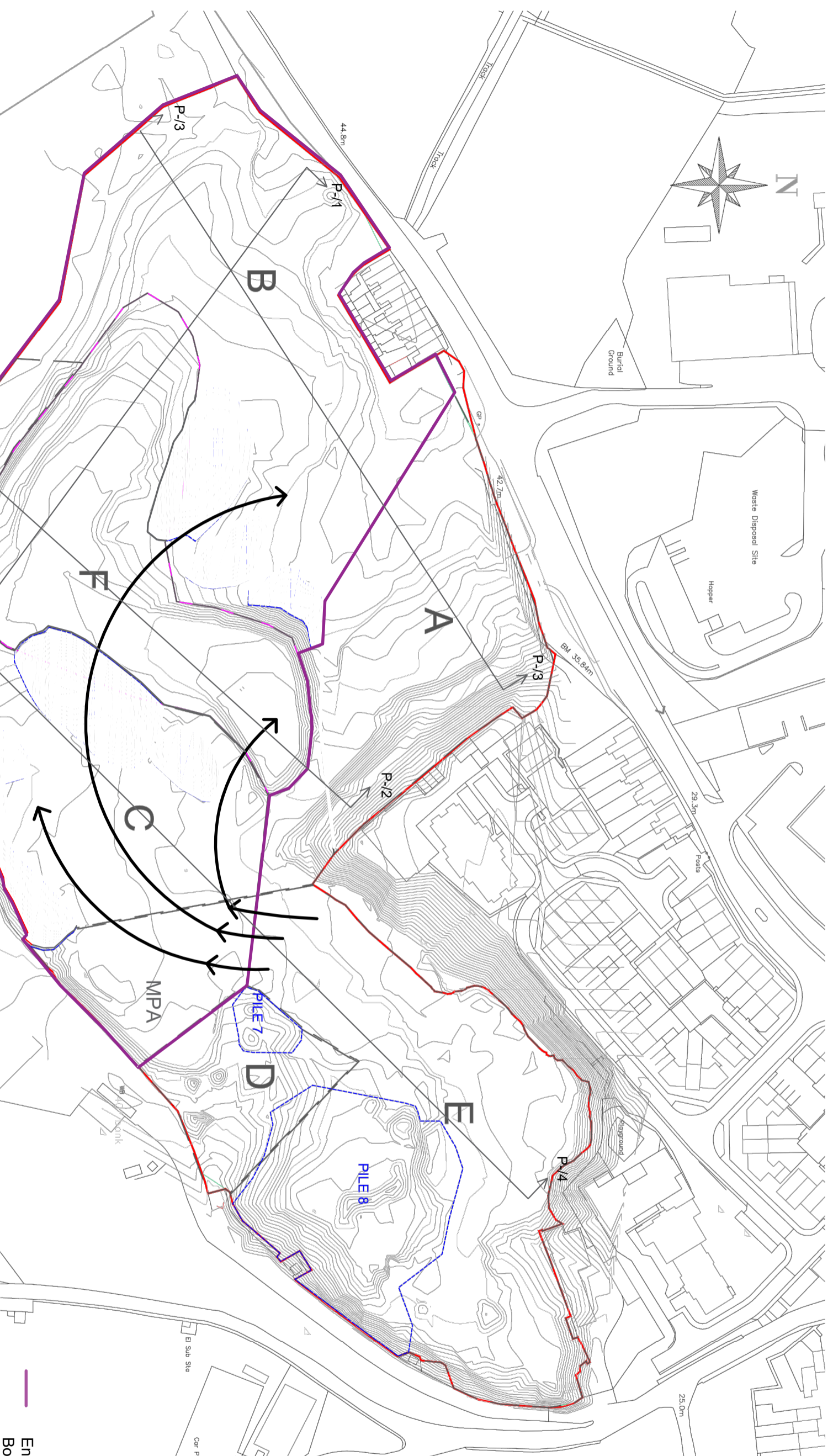


Tovil Phasing Proposals

W9031

Phase 3

3



— Environmental Permit Boundary

PHASE 3 *Cut from Area E taken through Materials Processing Area as necessary and placed and compacted into areas B, C and F. Waste recovery complete and remaining void below Formation Level to be filled using imported material*

Excavation Area	Cut Volume (cu.m)	Fill Volumes Achieved from waste recovery (cu.m)	going to Fill Area	Fill Volume Requirements for the whole Site, by Area (cu.m)	Residual Fill Volume Required by Import (cu.m)
E only	30269	30269	B, C, F only	A (import only)	5272
Piles ABCD	9791	9791	F	B	11930
Pile 7	16661	16661	F	C	11375
Pile 8	(see Note 3)	(see Note 3)		D (import only)	1413
				E (import only)	183
				F	36120
TOTAL	56721	56721		TOTAL	66293
					9572

- NOTES**
- AREAS A, D & E are "No Fill" zones in terms of waste recovery AREA F is the area of deepest filling with a void of 36120 cu.m and has no cut requirement
Piles and Volumes derived from Morgan Thacker Drawing MTL_127_288. Volumes measured to Formation Level defined as 750mm below Finished Surface approved under Planning. Sections shown on MTL_127_29D
 - Volumes are measured 'in the solid' from surveys. It is recognised that material will be subject to both volume bulking on excavation and volume shrinkage on compaction (particularly from looser piles). The net effect is likely to be slight shrinkage on compaction, such that fill volumes occupied may be slightly smaller and residual volumes available slightly larger due to the net effects of compaction
 - Cut and fill volumes quoted excludes Piles 7 and 8. Pile 7 = 17cu.m of tarmac scalings to be incorporated into subsequent road and hardstanding constructions above Formation Level, subject to testing. Pile 8 = 7948cu.m of topsoil and soils to be used in landscape or garden areas above Formation Level, subject to testing
 - The residual fill volume quoted is for the whole site following waste recovery Phase completions. It is up to Formation Level only (750mm below Finished Surface), assuming Piles 7 and 8 will be utilised above Formation Level or exported from site. If considered unsuitable for any reason, Fill volumes in red for Areas A, D and E will be serviced entirely by material import, the remainder of the shortfall required to fill to Formation Level with imported material will be deposited in Areas B, C and/or F as required by the developer (5972-5272-1413-183 = 2704cu.m)