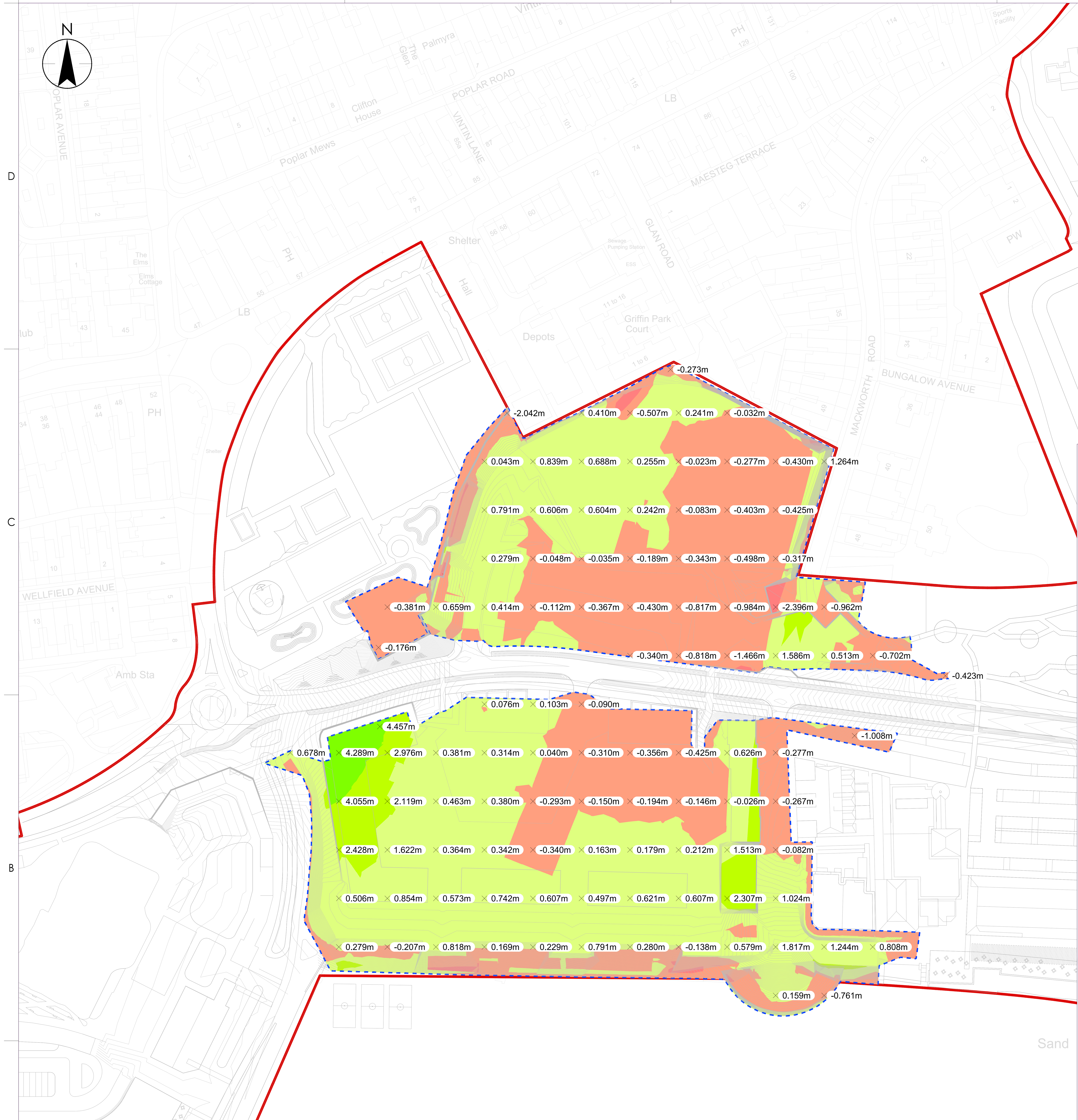
1 2 3 4 5

D C B A



SURFACE LEVEL DATA

MINIMUM LEVEL	MAXIMUM LEVEL	COLOUR	AREA	VOLUME
-12.000	-10.000		0m²	0m³
-10.000	-8.000		5m²	4m³
-8.000	-6.000		10m²	19m³
-6.000	-4.000		20m²	48m³
-4.000	-2.000		249m²	195m³
-2.000	0.000		17384m²	7968m³
0.000	2.000		21148m²	16265m³
2.000	4.000		1635m²	1980m³
4.000	6.000		490m²	161m³

Earthworks Assessment - Part 2, Coney Beach

SUMMARY FOR OUTLINE PLANNING STAGE

Objective:

The purpose of this preliminary assessment is to quantify the magnitude of the bulk earthworks "cut and fill" volumes that may be required to enable the construction of the development on the Coney Beach Bay plot. The objective is to demonstrate physical viability and to assist with the development budget work.

The volume assessment has been carried out by comparing the level "surfaces" between the existing site stripped of its top surface layer (e.g. topsoil, hard surfacing and gravel) and the "formation" level surface, which has been set at a general average depth of 500mm below the proposed ground level. This is appropriate for this stage of the project.

Constraints:

The majority of the Coney Beach plot is expected to be underlain by made ground, which has both limitations and potential to be used as general fill in the right conditions. There may be constraints relating to the quality and usability of excavated ground and some limited environmental factors. This does not adversely affect the technical viability of the proposed development and it will need to be considered within the development budget and the planning of the physical construction works.

Exclusions:

This preliminary assessment does not include the following excavations, which are not expected to significantly alter the outcome of the strategy and the conclusions made.

- Foundations (based on structures being piled)
- Drainage & Utilities (and diversions)
- Removal of near surface obstructions

This assessment does not cover geotechnical or geo-environmental aspects of the earthworks exercise, foundations, ground water, geotechnical design, settlement control, materials management, licensing and consents - all of which will be required at the appropriate later stage of the development and can be phased to suit the development programme.

Site Strip:

Considering the general hard surfacing coverage across this plot, the general average depth of material to be removed during a site strip exercise is 100mm. The preliminary assessment shows an anticipated volume of 4100m³ being generated during this exercise, 50-60% of this could potentially be useful for future filling works within this plot, with the remainder potentially needing to be moved off site. Demolition waste could also potentially be used as suitable fill.

Bulk Earthworks Summary:

The preliminary comparison of the stripped and formation level surfaces shows that a total filling volume of 18,500m³ is expected to be required.

The comparison of the stripped and formation level surfaces shows that an excavated (cut) volume of 8,200m³ is expected to be generated. 30-50% of this material could potentially be useful for future filling works within this plot, with the remainder potentially needing to be moved off site due to the made ground risk. The need to transfer or import further materials from other phases, sites or suppliers is a requirement for this plot and will inform the next stage of engineering design and the cost plan. Any removal and import of material must be undertaken in accordance with the appropriate legislation, standards and validation.

Therefore the preliminary estimate of additional fill material required to be brought to site is in the order of 12,400m³ (18,500-8200/2-4100/2). During the developed design stage, adjustments to the overall development levels can be made to reduce the cut volume, but the conclusion is still expected to be that there is a significant of material to be brought into the site.

As an initial test, a general drop in proposed levels of around 300mm is expected to result in a closer cut and fill balance volume relationship. Implications on the engineering strategy will need to be determined through the next stage of design to determine the full feasibility of this improvement.

Phasing;

There is potential to move surplus suitable fill material from earlier enabling works phases to the Sandy Bay phase for re-use, providing processes are followed on materials management and consents.

PORTHCAWL WATERFRONT - CUT AND FILL PART 2B - CONEY BEACH

SITE STRIP SUMMARY TABLE

	CUT FACTOR	FILL FACTOR	2D AREA (m^2)	STRIP DEPTH (m)	STRIP VOLUME (m^3)
SITE STRIP VARIOUS MATERIAL	1.000	1.000	40940.323	0.100	4094.032
SITE STRIP TOTAL			**40940.323**		**4094.032**

SUBSOIL EARTHWORKS SUMMARY TABLE (SITE STRIP TO FORMATION LEVEL)

	CUT FACTOR	FILL FACTOR	2D AREA (m^2)	CONSTRUCTION DEPTH (m)	CUT (m^3)	FILL (m^3)	NET (m^3)	CUT OR FILL
FORMATION SITE WIDE	1.000	1.000	40940.323	0.500	8235.700	18406.100	10170.400	FILL
FORMATION TOTAL	**1.000**	**1.000**	**40940.323**		**8235.700**	**18406.100**	**10170.400**	**FILL**

NOTES:

1. DRAWING TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT PROJECT DRAWINGS AND PHASE 1 GEOTECHNICAL AND GEOENVIRONMENTAL DESK STUDY REPORT.
2. THIS BULK EARTHWORKS EXERCISE PRODUCED FOR OUTLINE PLANNING PURPOSES AND INDICATES THE POTENTIAL FINAL EARTHWORKS RESULT BASED ON A SIMPLIFIED SURFACE COMPARISON BASIS ONLY. IT IS SUBJECT TO DETAILED DESIGN AND FULL REASSESSMENT AGAINST PROPOSED FORMATION LEVELS DURING THE NEXT STAGE.
3. THIS PLAN SHOWS A CUT AND FILL VOLUME COMPARISON BETWEEN THE FOLLOWING TWO SURFACES,
   (SITE STRIP MODEL) & (PROPOSED FORMATION MODEL)
   WHICH IS THEN SPLIT IN A SUMMARY TABLE.
4. TOPSOIL AND NEAR SURFACE MATERIAL REMOVAL IS SEPARATED OUT AS A BULK VOLUME FIGURE IN THE SUMMARY TABLE.
5. THIS IS GEOMETRIC VOLUME ANALYSIS AND THEREFORE NO ALLOWANCE HAS BEEN MADE FOR BULKING AND SHRINKING OF ANY MATERIAL OR GEOTECHNICAL SUITABILITY OF MATERIAL REUSE IN THE FINAL CONSTRUCTION. CONTRACTOR TO CONSULT THE GROUND INVESTIGATION AND INSTRUCT A DETAILED EARTHWORKS STRATEGY AND MATERIALS MANAGEMENT PLAN, BASED ON THE FINAL CUT AND FILL VOLUME ASSESSMENT TO DETERMINE FINAL SOLUTION.
6. OTHER THAN A GENERAL REFERENCE AND CONSIDERATION FOR THE OVERALL PRINCIPLES OF THE GEOTECHNICAL AND GEOENVIRONMENTAL PHASE 1 DESK STUDY, NO DETAILED REFERENCE HAS BEEN MADE TO SPECIFIC INTERPRETATIVE OR FACTUAL GROUND INVESTIGATION AND NO CONSIDERATION HAS BEEN MADE IN RELATION TO THE GEOTECHNICAL ACCEPTABILITY OF EXISTING EXCAVATED MATERIALS FOR REUSE IN FILL AREAS
7. CUT FILL VOLUMES HAVE BEEN DERIVED VIA A DIRECT VOLUMETRIC COMPARISON BETWEEN THE SITE STRIP MODEL (ASSUMED 100mm BELOW E.G.L.) AND THE PROPOSED FORMATION MODEL (ASSUMED UNIFORMLY 500mm BELOW P.G.L.) THIS EXERCISE TAKES NO ALLOWANCE FOR DEMOLITION OR ANY OTHER CONSTRUCTION VOLUMES (INCLUDING BUT NOT LIMITED TO FEATURES SUCH AS SOFT SPOTS, BURIED OBSTRUCTIONS, FOUNDATIONS, DRAINAGE, ARISING ETC)
8. ALL EXCAVATED MATERIALS SHOULD BE DISPOSED OF BY A SUITABLY LICENSED WASTE CARRIER WITH APPROPRIATE TESTING. IF EXCAVATED MATERIALS ARE TO BE RE-USED ON SITE THEN A MATERIALS MANAGEMENT PLAN MIGHT BE REQUIRED.

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0 20 40 60 80 100m

SCALE 1:1000

Plotted: 06.11.2025 2025.11.06 9:52:07 AM By: Nightingale, Elliott
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KEY

SITE BOUNDARY

CUT AND FILL BOUNDARY

PROPOSED CONTOUR (0.1m INTERVALS)

× 0.186m CUT AND FILL DEPTH

		By	Appd	DD.MM.YYYY
P01	FIRST ISSUE FOR PAC	MPC	RB	07/11/2025

Issued/Revision

Dwn.	Dsgn.	Chkd.	DD.MM.YYYY
MPC	MPC	RB	21/10/2025

Issue Status

S2 - FOR INFORMATION

This document is suitable only for the purpose noted above.
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Client/Project Logo

Client/Project
BRIDGEND COUNTY BOROUGH COUNCIL

PORTHCAWL WATERFRONT

Title
CUT AND FILL - PART 2B
CONEY BEACH

Project No. 333700659

A1 Scale 1:1000

Revision P01

Drawing No. 32485-STN-XX-XX-DR-C-1202