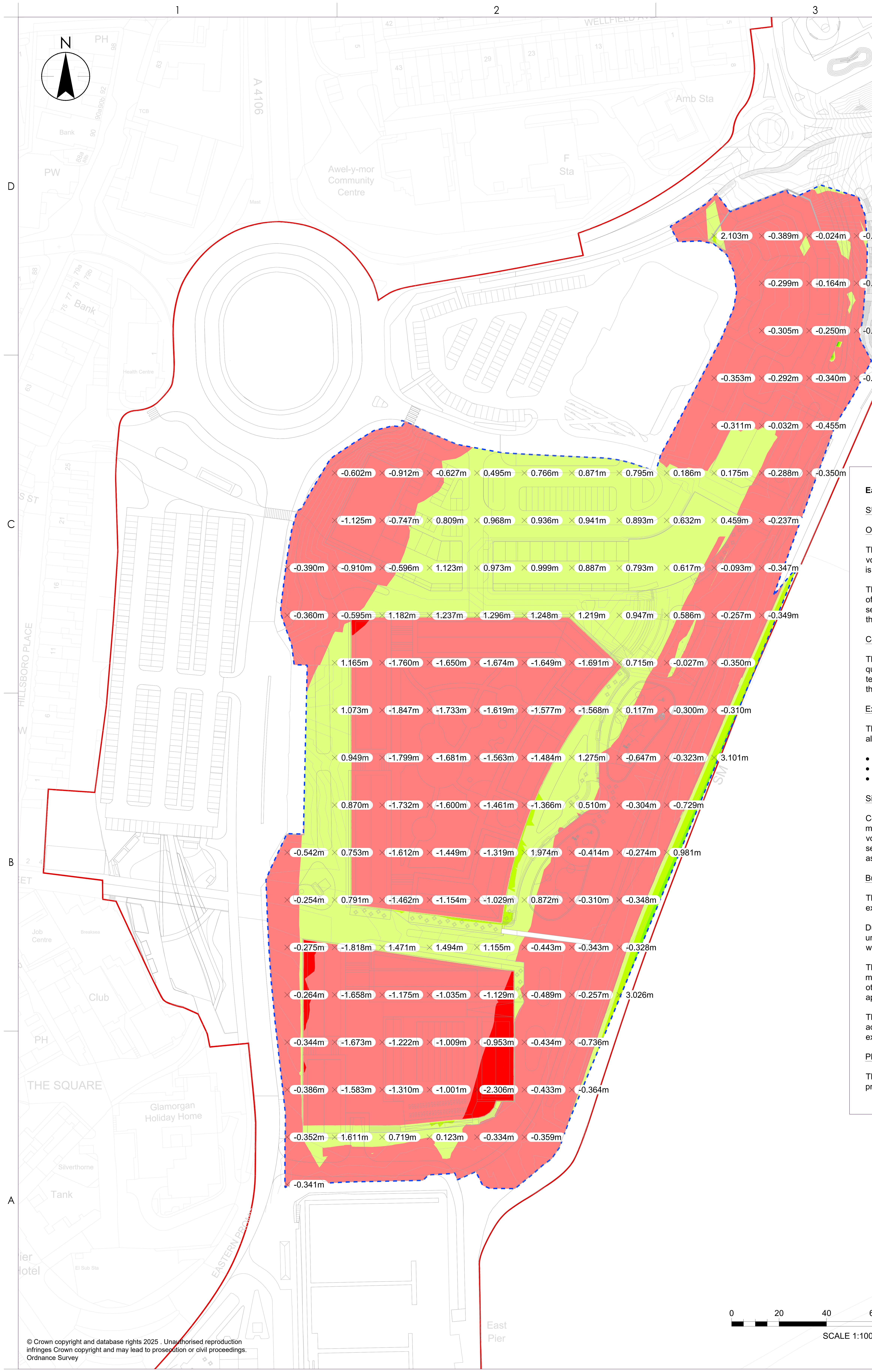

SURFACE LEVEL DATA

MINIMUM LEVEL	MAXIMUM LEVEL	COLOUR	AREA	VOLUME
-4.000	-2.000		5645m²	1712m³
-2.000	0.000		28273m²	26882m³
0.000	2.000		24087m²	27651m³
2.000	4.000		1221m²	761m³
4.000	6.000		132m²	61m³
6.000	8.000		1m²	1m³

Earthworks Assessment - Part 3, Salt Lake

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 Salt Lake 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 Salt Lake plot is underlaid by an infilled dock, which poses risk and constraints relating to the quality and usability of excavated ground and environmental factors. While this does not adversely affect the technical viability of the proposed development, it does 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

Site Strip:

Considering the mix of grass, gravel and hard (road) surfacing across the plot the general average depth of material to be removed during a site strip exercise is 150mm. The preliminary assessment shows an anticipated volume of 8900m³ being generated during this exercise, 75% of this is deemed to be surplus topsoil that does not serve a useful filling purpose within the proposed Salt Lake development proposals. The remainder may be useful as general fill within this phase.

Bulk Earthworks Summary:

The comparison of the stripped and formation level surfaces shows that a excavated (cut) volume of 35,000m³ is expected to be generated. This predominantly associated with the two large basements.

Due to the historic filling of the dock with low quality material, the majority of the excavated material is likely to be unsuitable as suitable fill and will likely need to be removed from site. There is a higher likelihood that this material will be classed as hazardous, which will need to be considered within the development budget.

There is an anticipated filling volume of around 16500m³, which will need to be using whatever limited suitable material is won from the cut exercise, supplemented by suitable fill material from other earlier phases, or from other sites and other sources. Any removal and import of material must be undertaken in accordance with the appropriate legislation, standards and validation.

Therefore the surplus material volume will be in the order of 35,000m³. 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 removed from the site.

Phasing;

There is potential to move surplus suitable fill material from earlier phases to the Salt Lake phase for re-use, providing processes are following on materials management and consents.

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 150mm 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

PORTHCAWL WATERFRONT - CUT AND FILL PART 3 - SALT LAKE

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	59358.293	0.150	8903.744
SITE STRIP TOTAL			**59358.293**		**8903.744**

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	59358.293	0.500	35503.100	16419.000	19084.100	CUT
FORMATION TOTAL	**1.000**	**1.000**	**59358.293**		**35503.100**	**16419.000**	**19084.100**	**CUT**

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KEY

- SITE BOUNDARY
- CUT AND FILL BOUNDARY
- PROPOSED CONTOUR (0.1m INTERVALS)
- × 0.186m CUT AND FILL DEPTH

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

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

Issue Status

S2 - FOR INFORMATION

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Client/Project
BRIDGEND COUNTY BOROUGH COUNCIL

PORTHCAWL WATERFRONT

Title
CUT AND FILL - PART 3
SALT LAKE

Project No. 333700659
A1 Scale 1:1000

Revision P01
Drawing No. 32485-STN-XX-XX-DR-C-1203