



Design Assumptions

- A typical 300mm Site Strip has been assumed for the whole site and is expected to comprise a variety of weathered materials and organics. Based on a works area of 11,112m², this provides a site strip volume of 3,333m³.
- As a further potential saving, the Contractor may assess and verify the suitability of reusing this material elsewhere (such in proposed landscaped areas) though any proposal must be in accordance with the BWB earthworks specification.
- In line with the BWB report 'Phase 2 Geo-Environmental Assessment KYR-BWB-ZZ-XX-RP-YE-0002', ground improvement is assumed across the site such that a minimum cbr of 15% is achieved and therefore will inform the following construction depths:
 - Building Slab = 775mm
 - Heavy Duty Construction Road = 400mm
 - Permeable Block Paving = 500mm
 - Service Yard Slab = 325mm
 - Asphalt Footpaths = 250mm
 - Block Paving Footpath = 250mm
 - Landscaping = 150mm
 - Substation = 325mm
- All material within the top 450mm of finished surface level in trafficked areas shall be non-frost susceptible. This depth may be included within any lime / cement stabilisation works.
- Cut/Fill volumes are between site strip and formation levels.
- No bulking factors have been taken into account in calculating the estimated earthworks quantities.
- The earthworks quantities have been provided by BWB for guidance only.
- It should be noted that the earthworks volumes provided by BWB are accurate to ±5%. This margin takes account of the variations that may result through the use of Civil 3D modelling software and variations in the topographic survey.
- Pre-construction survey to be undertaken to confirm the site strip assumptions and levels ahead of earthworks activities.

Bulk Cut/Fill Earthworks
Following the site strip, the bulk earthworks required to reach formation levels is anticipated to generate:

	Cut	Fill	Net
Total Net:	4,678	1,758	2,920 (Export)

Therefore the Overall Net Cut shall be taken as approx. 2,920m³ (Export)

Arisings
Construction arisings generated from drainage, foundations and services have been estimated [based on a rate of 0.075m³ per square metre of site area] at 792m³.

Summary

Topsoil		
Site Strip	3,333	(Export)
Total Topsoil	3,333m ³	(Export)
The site strip will generate a net surplus in topsoil material which is to be exported from site.		

Subsoil		
Bulk Earthworks	2,920	(Export)
Arisings	792	(Export)
Total Subsoil	3712m ³	(Export)
The bulk earthworks will generate a net surplus in sub-soil material.		

Important CDM / H&S note

The Designers would draw the readers attention to the key residual health and safety risks that have not been eliminated from the designs shown on this drawing by the design process. These key residual risks are identified below:

- Existing Drainage and Service Infrastructure / Utilities not to be compromised.
- Care to be taken around deep excavations and high embankments. Plant to be kept at safe distance.
- Moving plant. Care to be taken around site.
- Where temporary diversions are required for construction works, it is the duty of the Contractor to ensure diversions are in place and temporary signage to accommodate.
- HGV / Car / Pedestrian movements during operation stage of the buildings. Care to be taken during movements.

Any construction personnel including operatives intending to construct the designs shown on this drawing should ensure that they have been regularly and thoroughly briefed by the principal Contractor on all health and safety matters and have had sight of:

- The full Designers and Contractors risk assessments and risk registers.
- The developed construction health and safety plan.
- The Contractors construction method statements.

Hazards that are obvious to a competent Contractor are not shown, as are every day and low risk hazards.

PLOT R1

FFL:
148.500m

+RH circa 0.69m
Retaining wall
length circa. 22m
+RH circa 0.0m

+RH circa 1.63m
+RH circa 0.0m

PLOT Q

PLOT P1

Notes

- Do not scale this drawing. All dimensions must be checked/ verified on site. If in doubt ask.
- This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.
- All dimensions in millimetres unless noted otherwise. All levels in metres unless noted otherwise.
- Any discrepancies noted on site are to be reported to the engineer immediately.
- To be read in conjunction with the BWB drawing: 232081-BWB-INF-XX-D-C-0630_Proposed Finished Levels

Legend

- Planning Boundary
- Isopachyte Cut Contour (Range from 0.0m to -2.780m)
- Isopachyte Zero Cut/Fill Contour
- Isopachyte Fill Contour (Range from 0.0m to 1.816m)
- +RH circa 0.000m Retaining wall and retained height

PROPOSALS ARE SUBJECT TO
APPROVAL

PROPOSALS ARE SUBJECT TO
CHANGE DURING DETAILED
DESIGN AND PROJECT TEAM
REVIEW.

FFL's ARE SHOWN
INDICATIVELY AND MAY VARY
BY +/- 0.5M TO SUIT
CONTRACTOR'S PROPOSED
CONSTRUCTION METHODS

P02	10.05.24	Updated to show latest planning boundary	HW	RAD
P01	26.04.24	Planning Issue	HW	RAD
Rev	Date	Details of issue / revision	Drw	Rev

Issues & Revisions

	☐ Birmingham 0121 233 3322
	☒ Leeds 0113 233 8000
	☐ London 020 7407 3879
	☐ Manchester 0161 233 4260
	☐ Nottingham 0115 924 1100
	www.bwbconsulting.com

Client
**Wilson Bowden
Developments & Rochdale
Borough Council**

Project Title
**Plot R2, Atom Valley
Innovation Centre (AVIC)**

Drawing Title
Proposed Earthworks

Drawn:	H.Watts	Reviewed:	R. Duncan
BWB Ref:	232081	Date:	Apr '24
		Scale@A1:	1:350

Drawing Status

Planning

Project - Originator - Zone - Level - Type - Role - Number	Status	Rev
232081-BWB-INF-XX-D-C-0630	S8	P02