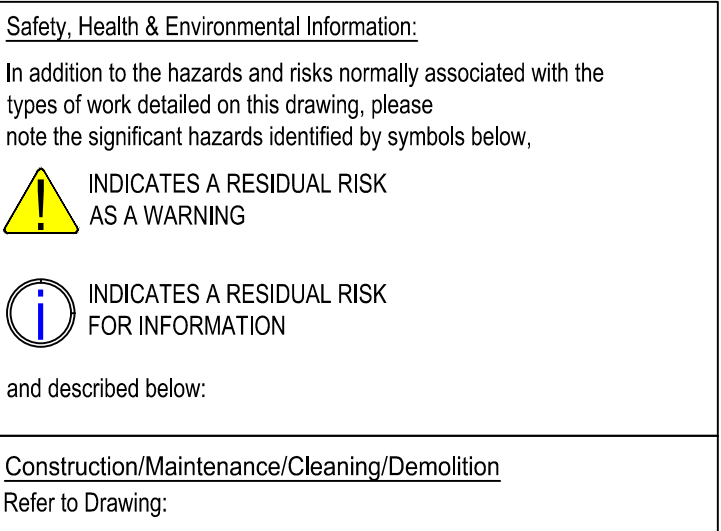
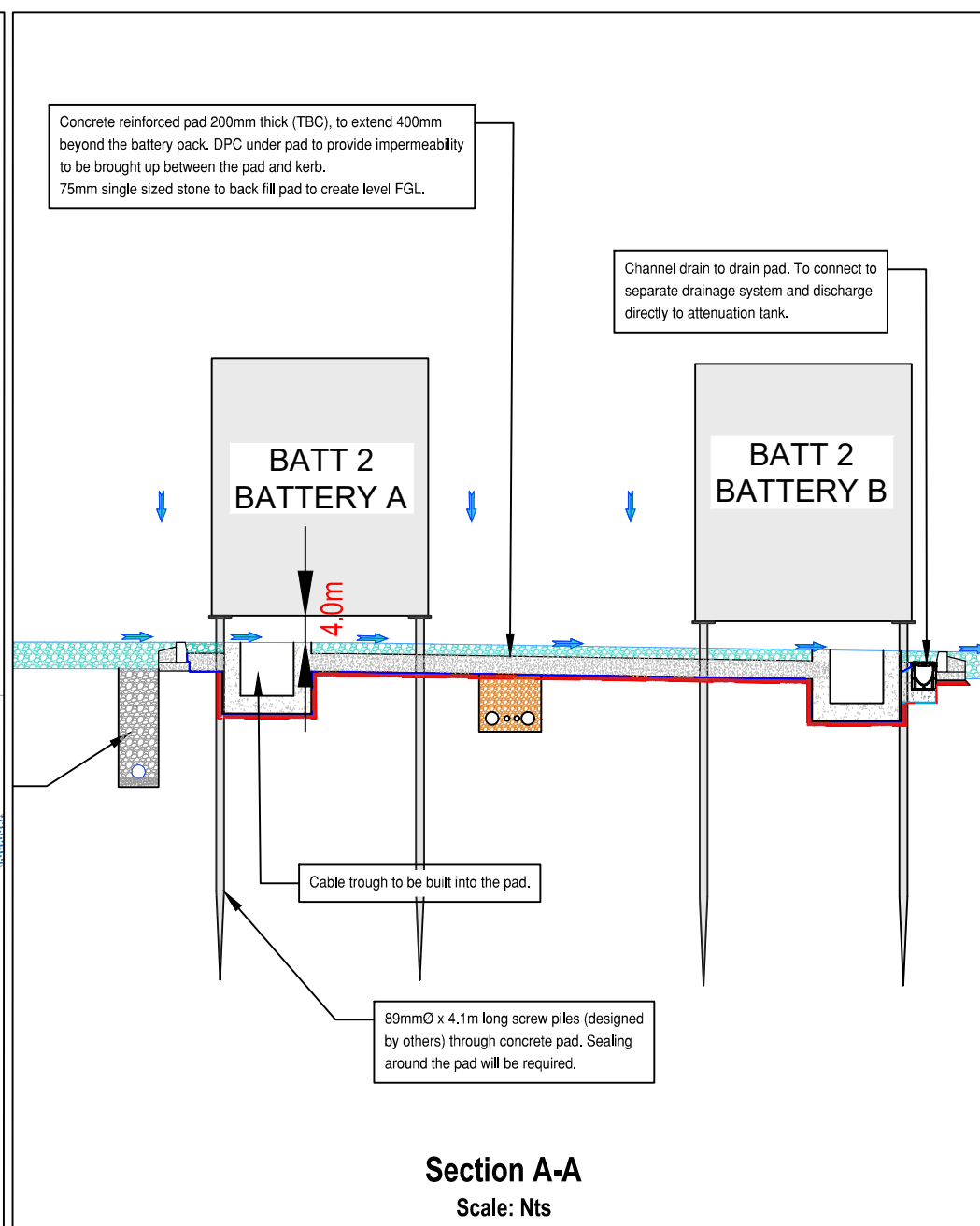
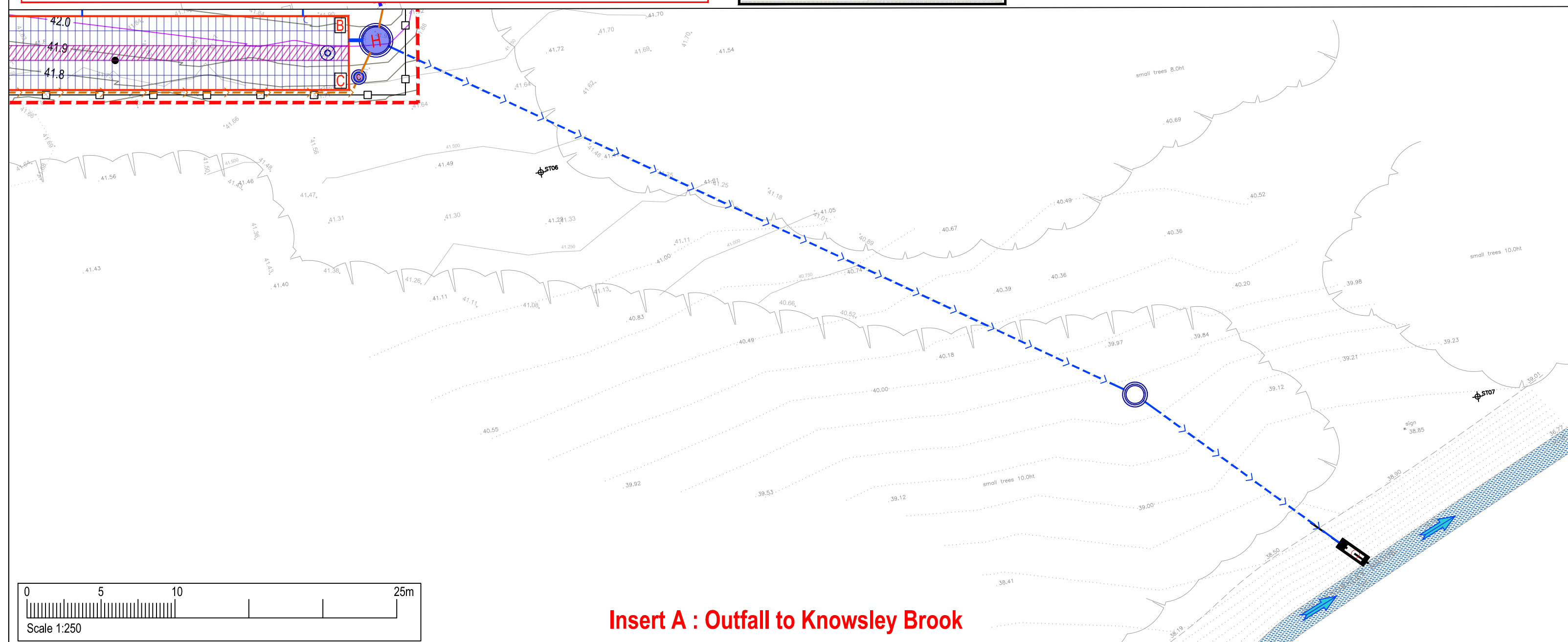


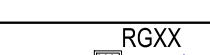
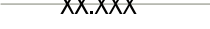


1. Do not scale from this drawing.
2. All dimensions are in meters (m), all levels in metres (m) unless noted otherwise.
3. Discrepancies or omissions are to be reported to the Engineer prior to work commencing.
4. Materials and workmanship are to comply in all respects with current British Standard Specifications, Codes of Practice, and Building Regulations Approved Documents.
5. The copyright of this drawing is vested in the Engineer and must not be copied or reproduced without written consent.
6. The Contractor is to check and verify all building and site dimensions, levels and sewer invert levels at connection points before work commences.
7. This drawing is to be read in conjunction with all relevant specifications and drawings issued by the Engineer, Architect and other Specialists.
8. Details and locations of existing services are based on the Topographical Survey and Utility Records received from Third Parties and Service Providers respectively, and should be considered indicative and approximate only. The existing services shown on Series 2700 drawings may not be exhaustive. The Contractor shall use Trial Pits and other approved methods to accurately locate and verify the positions and depths of all existing services before commencement of works on site.

1. The proposed drainage strategy is inherently flood resilient, with no flooding occurring on site for all modelled storm events up to and including the 1 in 1000 year event with 0% CC allowance.
2. The InfoDrainage simulations indicate very limited and localized flooding during the 1 in 1000 year + 40% CC - 15-minute summer storm event, occurring in the vicinity of manholes S23 and S06, as shown on the drainage layout. Please note that these two manholes are located close to the site boundary away from the battery units.
3. The predicted flood volumes associated with this extreme event are minor, resulting in maximum flood depths of approximately 50–75 mm. Proposed site levels and contours demonstrate that any exceedance flows would be directed away from critical infrastructure (battery units), with flows from S06 conveyed towards the brook and flows from S23 directed towards the adjacent green verges. As the site falls away from the battery units, there is no risk of flooding to the BES3 infrastructure.
4. There is no third-party infrastructure located between the site and the receiving brook, and therefore the limited, shallow exceedance flooding predicted during this extreme event poses no risk to off-site assets.
5. In the unlikely event of blockage within pipes, chambers or outlet structures, the proposed site contours and granular fill ensure that exceedance flows would be directed from the north-eastern corner of the site towards the south-west and western boundaries, safely discharging towards the brook and adjacent green verges. This arrangement ensures floodwaters are conveyed away from the battery units and site infrastructure, maintaining site safety under all credible scenarios.
6. The battery units are proposed to be installed on raised concrete pads, fixed to the ground using screw piles. Each pad will be underlain by 75 mm thick single-sized stone backfill, with a minimum vertical clearance of 400 mm between the underside of the battery units and the gravel surface. This configuration provides additional flood resilience, ensuring that in the unlikely event of drainage system failure due to pipe, chamber or outfall blockages, any floodwater would safely pass beneath the battery units, flowing from the north-east towards the south-west and western boundaries, as illustrated on Section A-A detail.

Depth < (mm)	Hazard Rating <	Lower Colour	Upper Colour
0	0.00	Not Drawn	
50	0.75		
125	1.50		
300	2.50		
>			



	Site Boundary
	Highway Boundary
	Proposed fencing surrounding the site
	Proposed Stormwater Drainage (not perforated)
	Proposed Stormwater pipe (To be encased in concrete, refer to drawing
	Proposed Stormwater Chamber
	Proposed Ridgistorm Separate Catchpit
	Proposed Stormwater Hydro-brake Flow Control Chamber with Penstock Valve
	ACO RoadDrain PD200F 30.1 Schedule or similar approved, refer to Table B for details
	Proposed Road Gully (refer to Table C for details)
	ACO Multidrain MD-M200D-10.0 with ACO Universal gully and sump unit at end complete with Naylor Passive Filter.
	Proposed Rodding Eye
	Proposed Perforated pipes laid underneath permeable paving
	Proposed Althon 225mm Headwall Outlet to existing watercourse
	Designed Contour Level Major
	Designed Contour Level Minor
	Flood Flow Direction
	Flood Prone Areas

P01	IW/AM	03/02/2026	Preliminary Issue
Rev	By / Chk'd	Date	Description

PRELIMINARY DRAWING
This drawing is not to be used for construction

Client  High Voltage
Grid
Services

Unit C Hambrook Business
Park | The Stream |
Hambrook | Bristol |
BS16 1RQ
www.hvgs.co.uk

BarnsleyMarshall Limited
485 Prior Wharf
Harris Business Park, Hanbury Rd
Stoke Prior, Bromsgrove
B604FG
Tel: 01905 330550
Email: design@barnsleymarshall.co.uk
Web: www.barnsleymarshall.co.uk



Project
Battery Energy Storage System,
Kirkby Substation, Coopers Lane,
Liverpool, L33 7TT

Drawing

Flood Flow Analysis
1000 Year + 40%CC 15 Min Summer
Storm Event

By	SHNUJ	Date	29/08/2024
Drawing No.		Revision	
KIRK-BML-XX-XX-DR-C-0550		P01	
BML Job No.		Status	
1126-01		-	
Drawing Scale at A1: 1:250			
CAD Filename: 1_Proposal112641-Delta-Process-Integrator-Modeling-Information-010529awg0004-BML-03-10-2024-002-Final-New-Model.dwg			