

Barrow Hill Quarry, Mill Lane, Earl Shilton
Condition 16: Drainage Technical Note
August 2025
Our Ref: 26726-FLD-0104

INTRODUCTION

MEC Consulting Group Ltd, has been commissioned by AT Contracting and Plant Hire Ltd (hereafter referred to as 'the Client') to undertake flood risk and drainage work to support a discharge of conditions application for a proposed leisure development at Barrow Hill Quarry, Mill Lane, Earl Shilton (hereafter referred to as 'the Site').

Following the submission of the planning application (21/01390/FUL), Hinckley & Bosworth Borough Council have granted permission for the carrying out of the development, subject to conditions. This report aims to discharge Condition 16 which reads as follows:

No development shall take place until such time as a surface water drainage scheme has been submitted to, and approved in writing by the Local Planning Authority. The development must be carried out in accordance with these approved details and completed prior to first occupation on site.

Following the submission of the surface water drainage scheme to address the condition, Leicestershire County Council, acting as the Lead Local Flood Authority (LLFA) have requested further information prior to discharging the condition, including:

- *Cross-sectional details of the SuDS features, including the two attenuation basins, flow control chambers and details of the permeable paving*
- *A catchment area plan.*

This report and subsequent drawings should be read in conjunction with the information provided during the initial submission;

- Detailed Drainage Strategy Drawing (26726_01_230_02)
- Drainage Calculations (26726-CALC-0101)

The following documents have now been submitted to provide the additional information requested by the LLFA, and can also be found within the appendix of this note:

- A. 26726_01_230_03 Impermeable Areas Drawing
- B. 26726_01_230_04- Cross Sectional Details Basin 1
- C. 26726_01_230_05 Cross-Sectional Details Basin 2, including permeable paving details
- D. HydroInternational Hydro-Brake Details

REGISTRATION OF AMENDMENTS

Date	Rev	Comment	Prepared By	Checked By	Approved By
August 2025	-	First issue	Zoe Jordan BSc (Hons) Flood Risk Engineer	Jack Harriman BSc (Hons) Flood Risk Engineer	Ryan Chafer BSc (Hons) Principal Flood Risk Engineer

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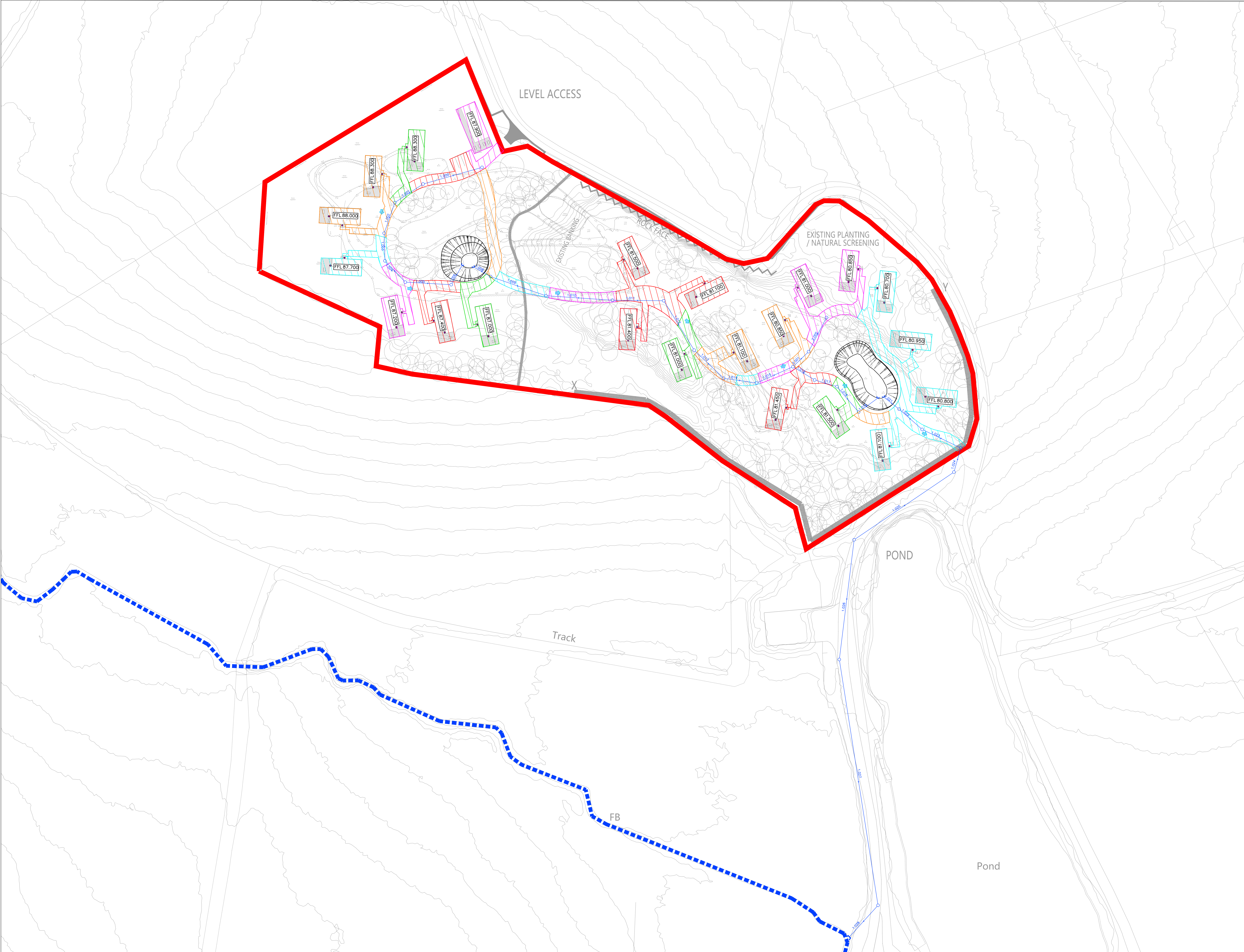


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APPENDICES



APPENDIX A



NOTES:

- DO NOT SCALE THIS DRAWING.
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT ENGINEERS, ARCHITECTS AND SPECIALIST DESIGN DRAWINGS AND DETAILS.
- ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE. ALL LEVELS ARE IN METRES UNLESS NOTES OTHERWISE.

	IMPERMEABLE AREA (m ²)
1.000	250
1.001	160
1.002	200
1.003	370
1.004	200
1.005	230
1.006	240
1.007	220
1.008	200
1.009	0
1.010	100
1.011	120
1.012	690
1.013	230
1.014	240
1.015	40
2.000	420
2.001	200
1.016	60
1.017	230
1.018	250
1.019	60
1.020	0
1.021	1010
1.022	0
1.023	0
1.024	0
1.025	0
1.026	0
1.027	0
1.028	0
TOTAL	5720

KEY

- SITE BOUNDARY
- PROPOSED SURFACE WATER SEWER
- EXISTING DITCH NETWORK
- PROPOSED ATTENUATION BASIN
- PROPOSED OVERLAND FLOW ROUTES

REV.	AMENDMENTS	DRN	CHK	APP	DATE
1	FIRST ISSUE				28.08.22

PROJECT: BARROW HILL QUARRY, MILL LANE, EARL SHILTON

DRAWING TITLE: IMPERMEABLE AREAS PLAN

CLIENT: AT CONTRACTING AND PLANT HIRE LTD

DRAWING NUMBER: 26726_01_230_03

REVISION: - SHEET SIZE: A0 SCALE: 1:500

STATUS: FOR INFORMATION / APPROVAL

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Birmingham | Brighton | Leicester

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Email: group@mecc.co.uk
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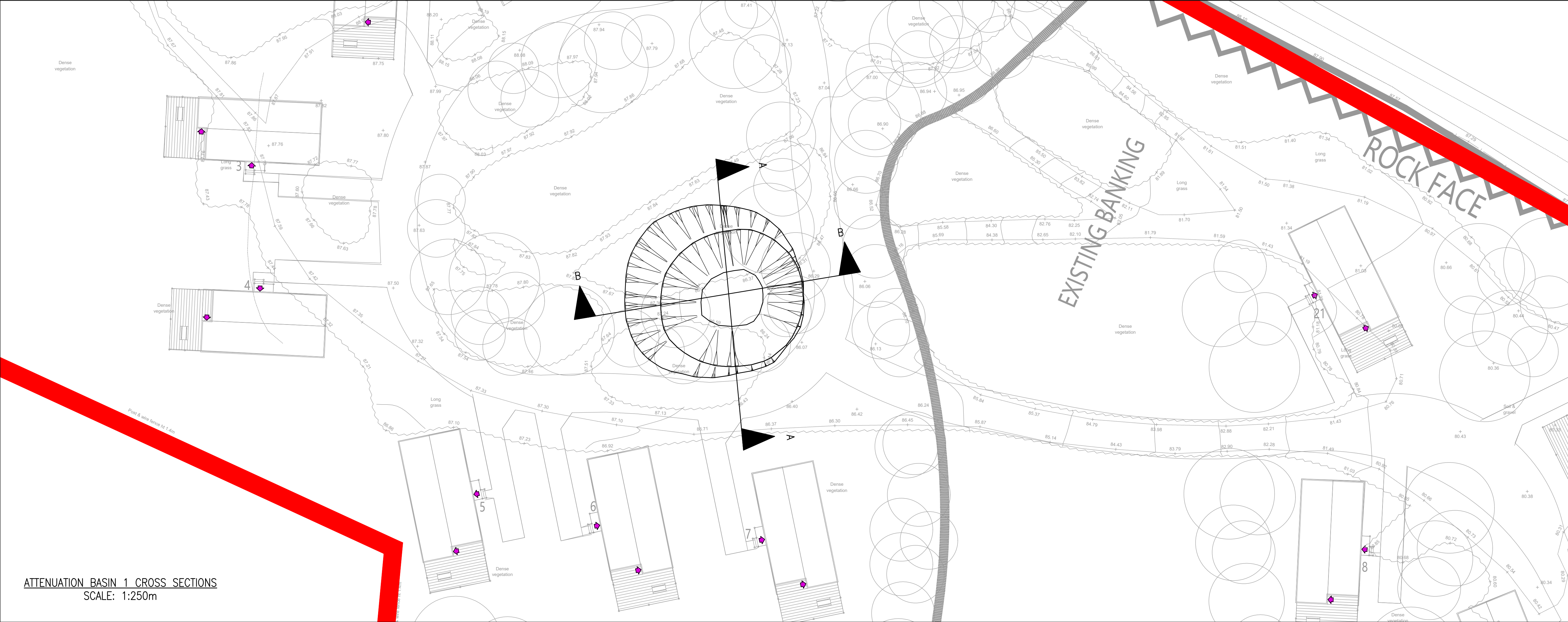


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APPENDICES

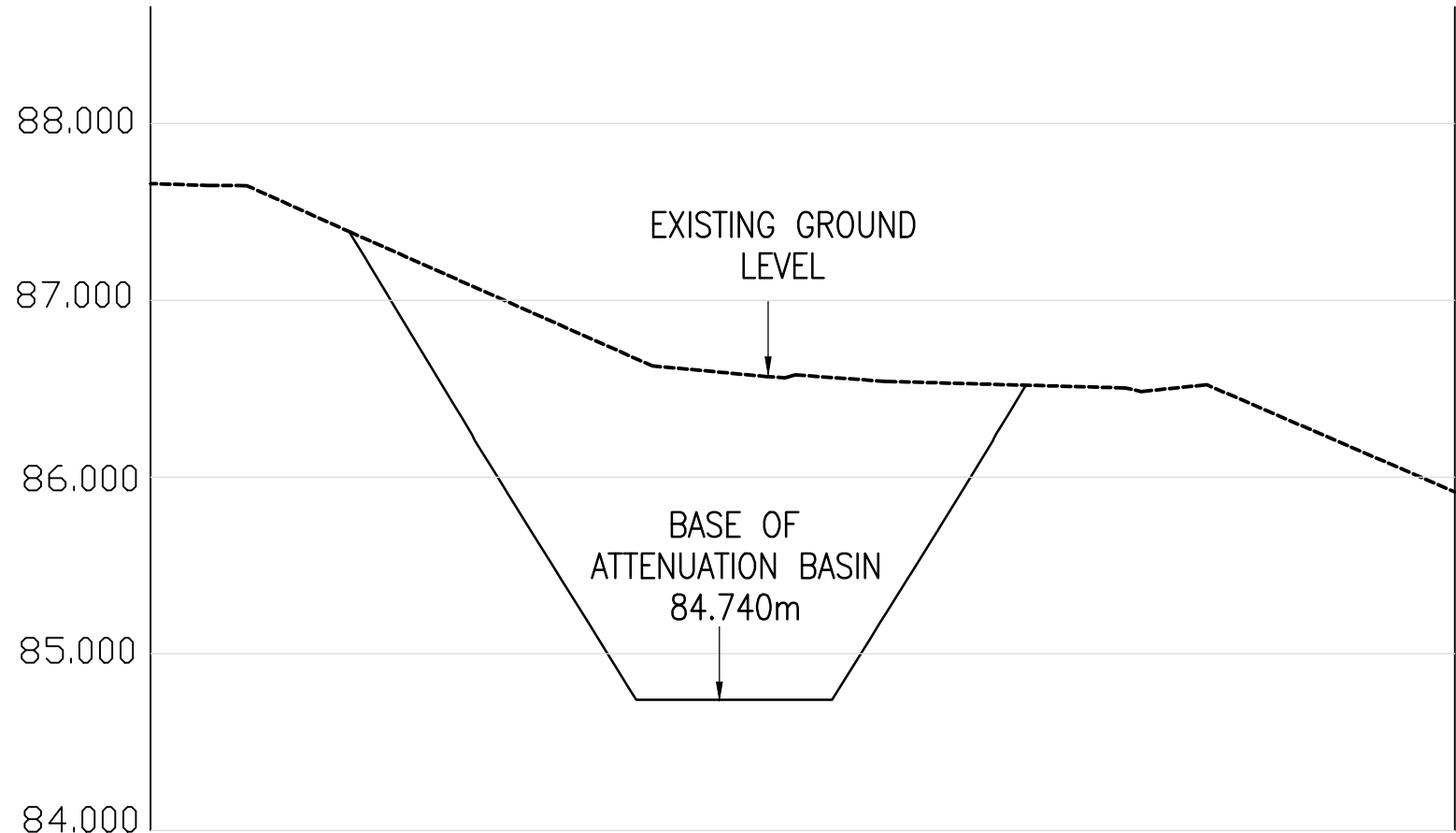


APPENDIX B



ATTENUATION BASIN 1 CROSS SECTIONS
SCALE: 1:250m

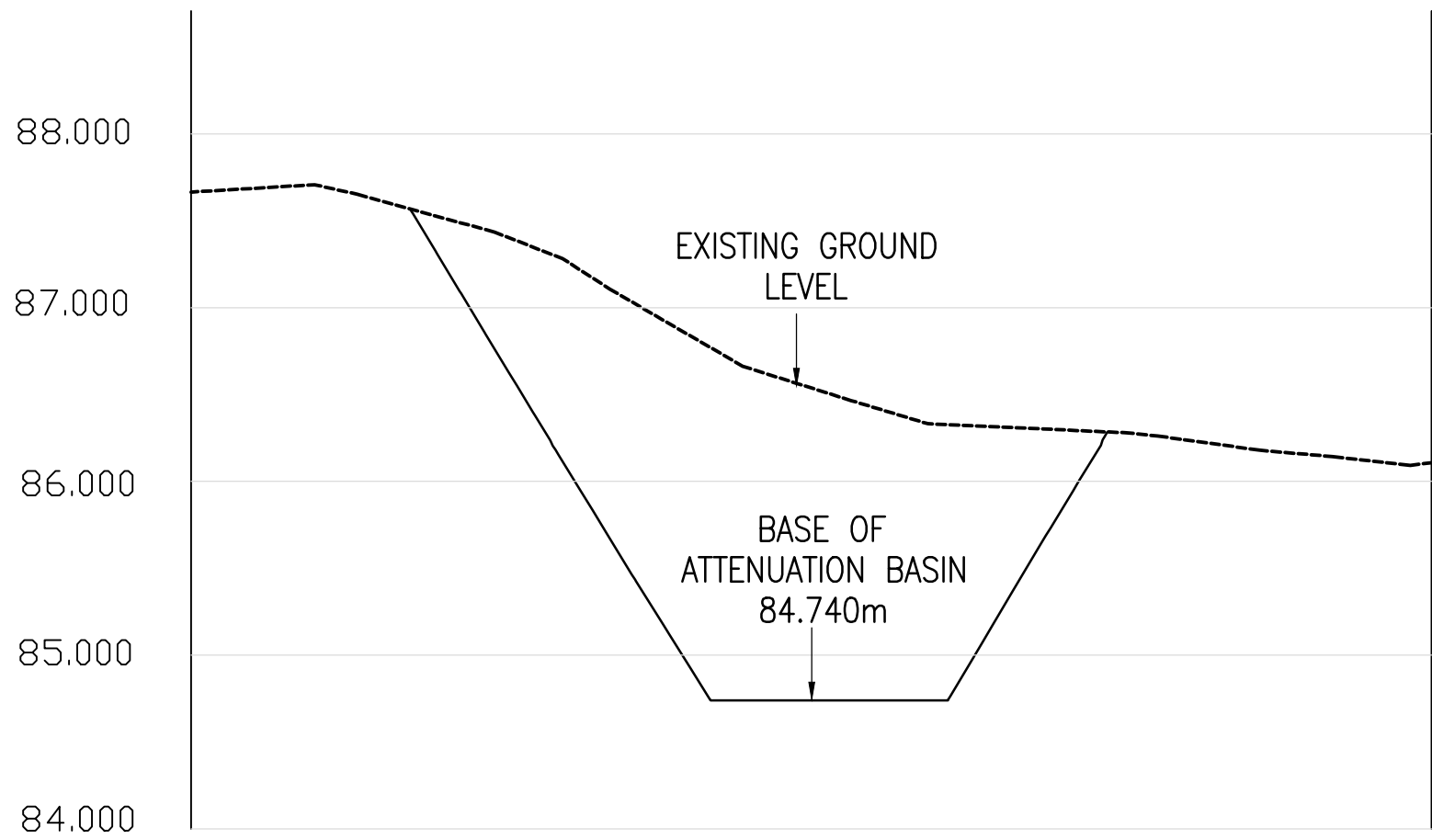
- NOTES:
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 - ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE. ALL LEVELS ARE IN METRES UNLESS NOTED OTHERWISE.
 - THIS DRAWING IS FOR STRATEGY PURPOSES ONLY AND IS NOT TO BE USED FOR CONSTRUCTION PURPOSES.
 - DESIGN BASED ON EXISTING LEVELS AND SUBJECT TO CHANGE WITH EXTERNAL WORKS DESIGN / CONFIRMATION OF FFLS.
 - DRAINAGE STRATEGY IS SUBJECT TO AGREEMENT WITH RELEVANT THIRD PARTIES, INCLUDING ENVIRONMENT AGENCY, LOCAL PLANNING AUTHORITY, LEAD LOCAL FLOOD AUTHORITY AND WATER AUTHORITY.
 - THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE DETAILED DRAINAGE STRATEGY 26726_01_230_02.



CHAINAGE	0.000	5.000	10.000	15.000	20.000	24.777	25.000	30.000	35.000	36.918
EXISTING LEVEL	87.661	87.445	87.001	86.614	86.553	86.519		86.514	86.082	85.916
BASIN LEVEL		87.390	85.943	84.740	84.967	86.520				

A-A

ATTENUATION BASIN CROSS
SECTION (A-A)
SCALE: 1:200m
1:500V, 1:100H



CHAINAGE	0.000	5.000	6.299	10.000	15.000	20.000	25.000	26.372	30.000	35.000
EXISTING LEVEL	87.666	87.641		87.336	86.764	86.405	86.298		86.201	86.095
BASIN LEVEL		87.569		86.345	84.740	84.740	85.820	86.285		

B-B

ATTENUATION BASIN CROSS
SECTION (B-B)
SCALE: 1:200m
1:500V, 1:100H

REV:	FIRST ISSUE	ZJ	JH	RC	27.08.25
AMENDMENTS:	DRN:	CHK:	APP:	DATE:	
PROJECT:	BARROW HILL QUARRY, MILL LANE, EARL SHILTON				
DRAWING TITLE:	ATTENUATION BASIN 1 CROSS SECTIONS				
CLIENT:	AT CONTRACTING AND PLANT HIRE LTD				
DRAWING NUMBER:	26726_01_230_04				
REVISION:	-	SHEET SIZE:	A1	SCALE:	AS SHOWN
STATUS:	FOR INFORMATION / APPROVAL				
MEC Consulting Group Birmingham Brighton Leicester			Telephone: 01530 284 753 Email: group@mec.co.uk Website: www.m-ec.co.uk ORDNANCE SURVEY © CROWN COPYRIGHT 2015. ALL RIGHTS RESERVED. LICENCE NUMBER 100055865.		

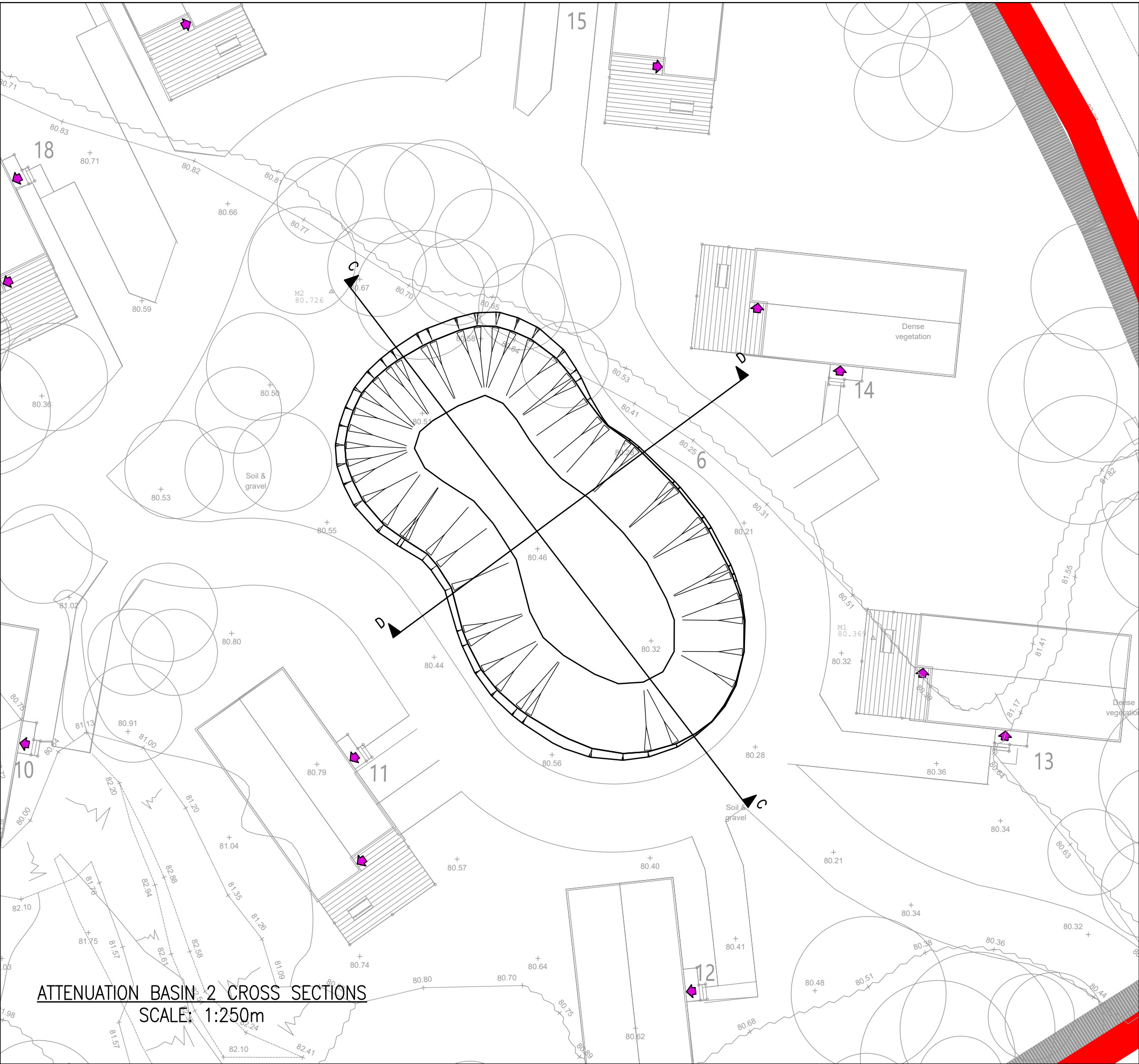


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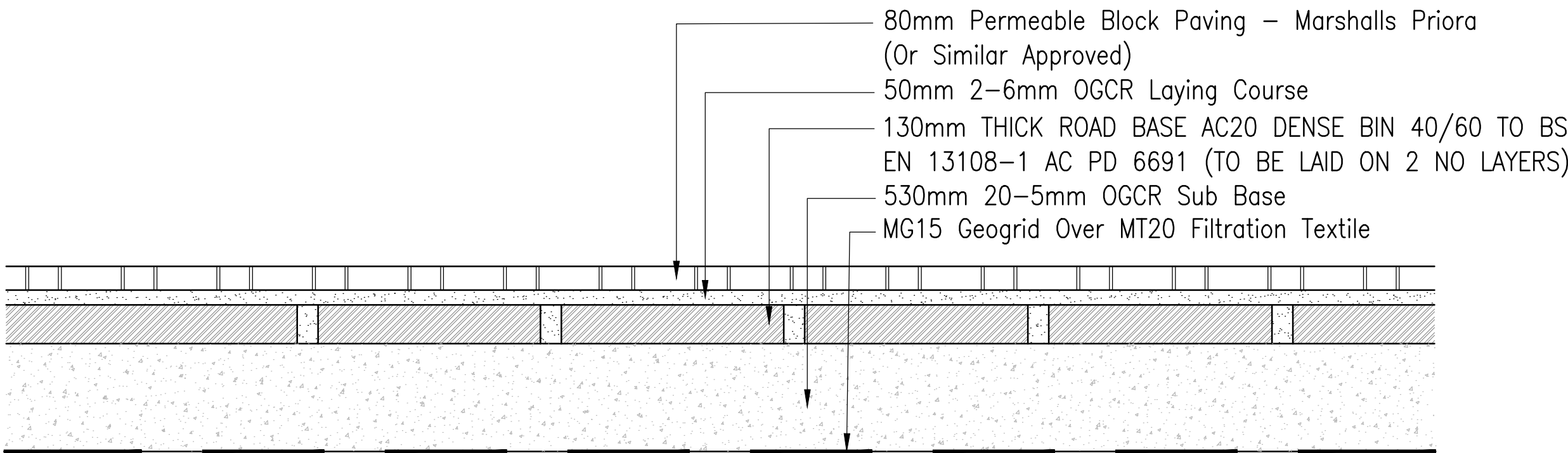
APPENDICES



APPENDIX C

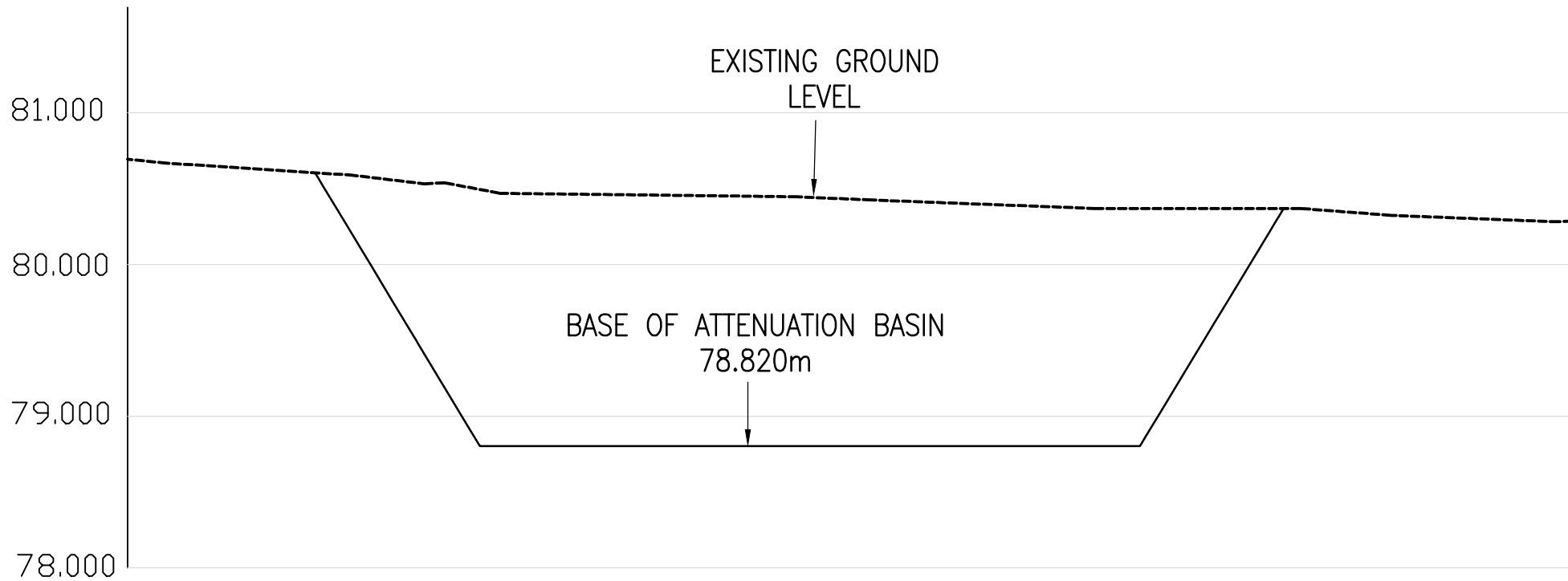


ATTENUATION BASIN 2 CROSS SECTIONS
SCALE: 1:250m



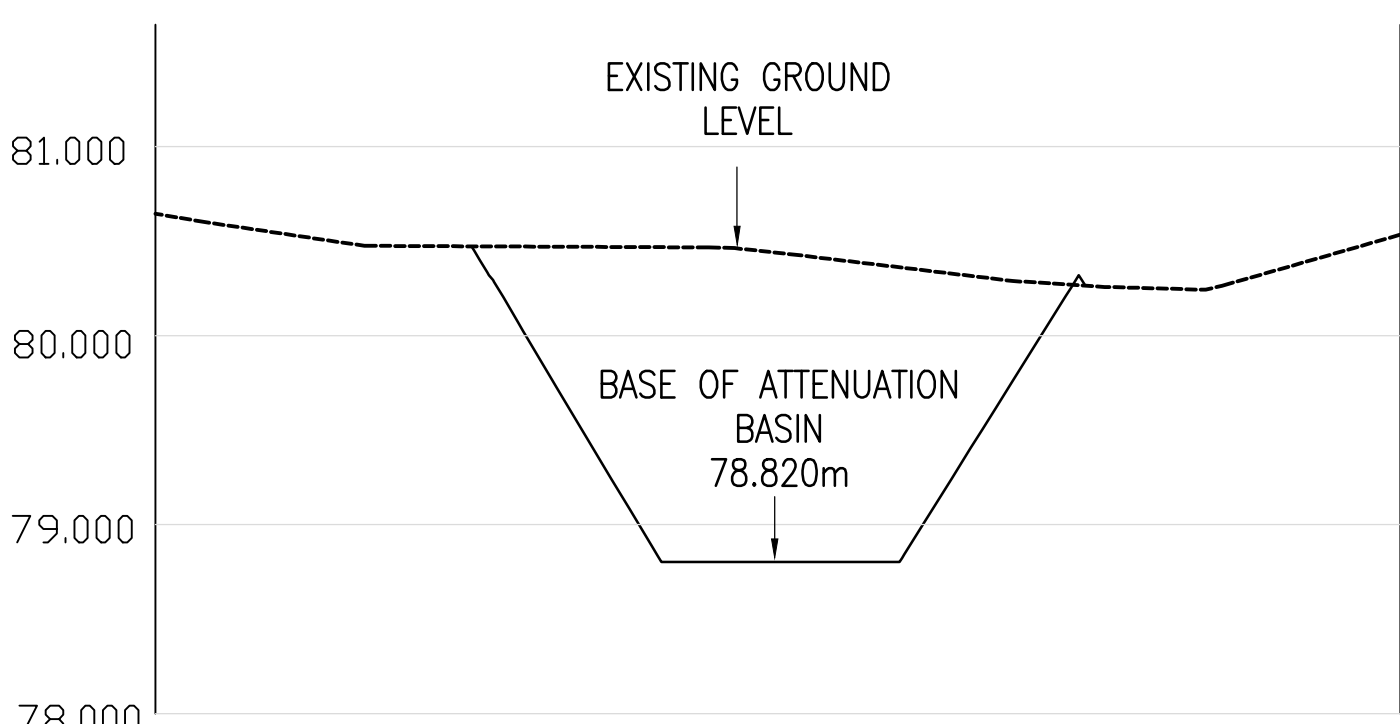
TYPICAL PERMEABLE CONSTRUCTION SECTION –
(TO BE INSTALLED TO MANUFACTURERS SPECIFICATION)
NOT TO SCALE

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CHAINAGE	0.000	5.000	6.175	10.000	15.000	20.000	25.000	30.000	35.000	38.089	40.000	45.000	47.530
EXISTING LEVEL	80.694	80.620		80.534	80.463	80.452	80.422	80.384	80.370	80.349		80.298	80.285
BASIN LEVEL		80.605		79.335	78.802	78.802	78.802	78.802	79.348	80.370			

C–C
ATTENUATION BASIN CROSS
SECTION (C–C)
SCALE: 1:200m
1:500V, 1:100H



CHAINAGE	0.000	5.000	8.360	10.000	15.000	20.000	24.588	30.000	32.933
EXISTING LEVEL	80.645	80.491		80.471	80.464	80.353	80.259	80.366	80.534
BASIN LEVEL			80.472	79.931	78.802	78.903	80.264		

D–D
ATTENUATION BASIN CROSS
SECTION (D–D)
SCALE: 1:200m
1:500V, 1:100H

- FIRST ISSUE		ZJ	JH	RC	27.08.25
REV:	AMENDMENTS:	DRN:	CHK:	APP:	DATE:
PROJECT: BARROW HILL QUARRY, MILL LANE, EARL SHILTON					
DRAWING TITLE: ATTENUATION BASIN 2 & PERMEABLE PAVING CROSS SECTIONS					
CLIENT: AT CONTRACTING AND PLANT HIRE LTD					
DRAWING NUMBER: 26726_01_230_05					
REVISION: -		SHEET SIZE: A1		SCALE: AS SHOWN	
STATUS: FOR INFORMATION / APPROVAL					
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APPENDICES



APPENDIX D

Technical Specification

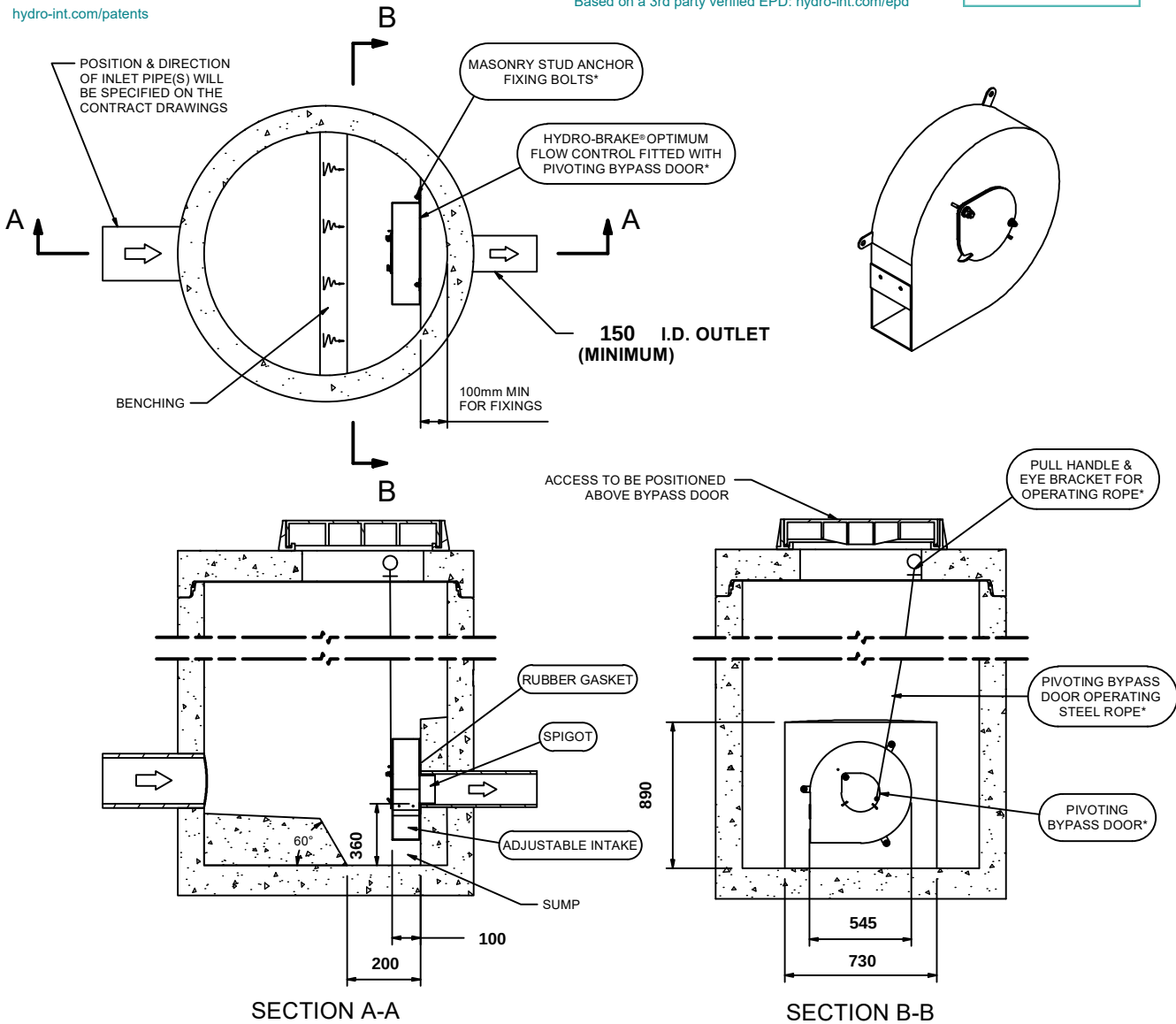
Control Point	Head (m)	Flow (l/s)
Primary Design	1.300	4.000
Flush-Flo™	0.388	3.992
Kick-Flo®	0.796	3.192
Mean Flow		3.508

hydro-int.com/patents

This Hydro-Brake® Optimum includes:

- All in 3 mm Grade 304L stainless steel
- Integral pivoting by-pass door allowing clear line of sight through to outlet, c/w operating rope
- Media blasted for corrosion resistance
- Variable flow rate post installation via adjustable inlet (if necessary)
- Indicative Weight: 20 kg
- Product Carbon Footprint: 68.14 kgCO2e

Based on a 3rd party verified EPD: hydro-int.com/epd



IMPORTANT: ○ LIMIT OF HYDRO INTERNATIONAL SUPPLY
THE DEVICE WILL BE HANDED TO SUIT SITE CONDITIONS
FOR SITE SPECIFIC DETAILS AND MINIMUM CHAMBER SIZE REFER TO HYDRO INTERNATIONAL
ALL CIVIL AND INSTALLATION WORK BY OTHERS
* WHERE SUPPLIED
HYDRO-BRAKE® IS A REGISTERED TRADEMARK FOR FLOW CONTROLS DESIGNED AND MANUFACTURED EXCLUSIVELY BY
HYDRO INTERNATIONAL

THIS DESIGN LAYOUT IS FOR ILLUSTRATIVE PURPOSES ONLY. NOT TO SCALE.

DESIGN ADVICE 	The head/flow characteristics of this SHE-0090-4000-1300-4000 Hydro-Brake® Optimum Flow Control are unique. Dynamic hydraulic modelling evaluates the full head/flow characteristic curve. The use of any other flow control will invalidate any design based on this data and could constitute a flood risk.		 SHE-0090-4000-1300-4000 Hydro-Brake® Optimum
	DATE	27/08/2025 11:12	
	SITE	Barrow Hill Quarry	
	DESIGNER	Zoe Jordan	
	REF	26726	

Technical Specification

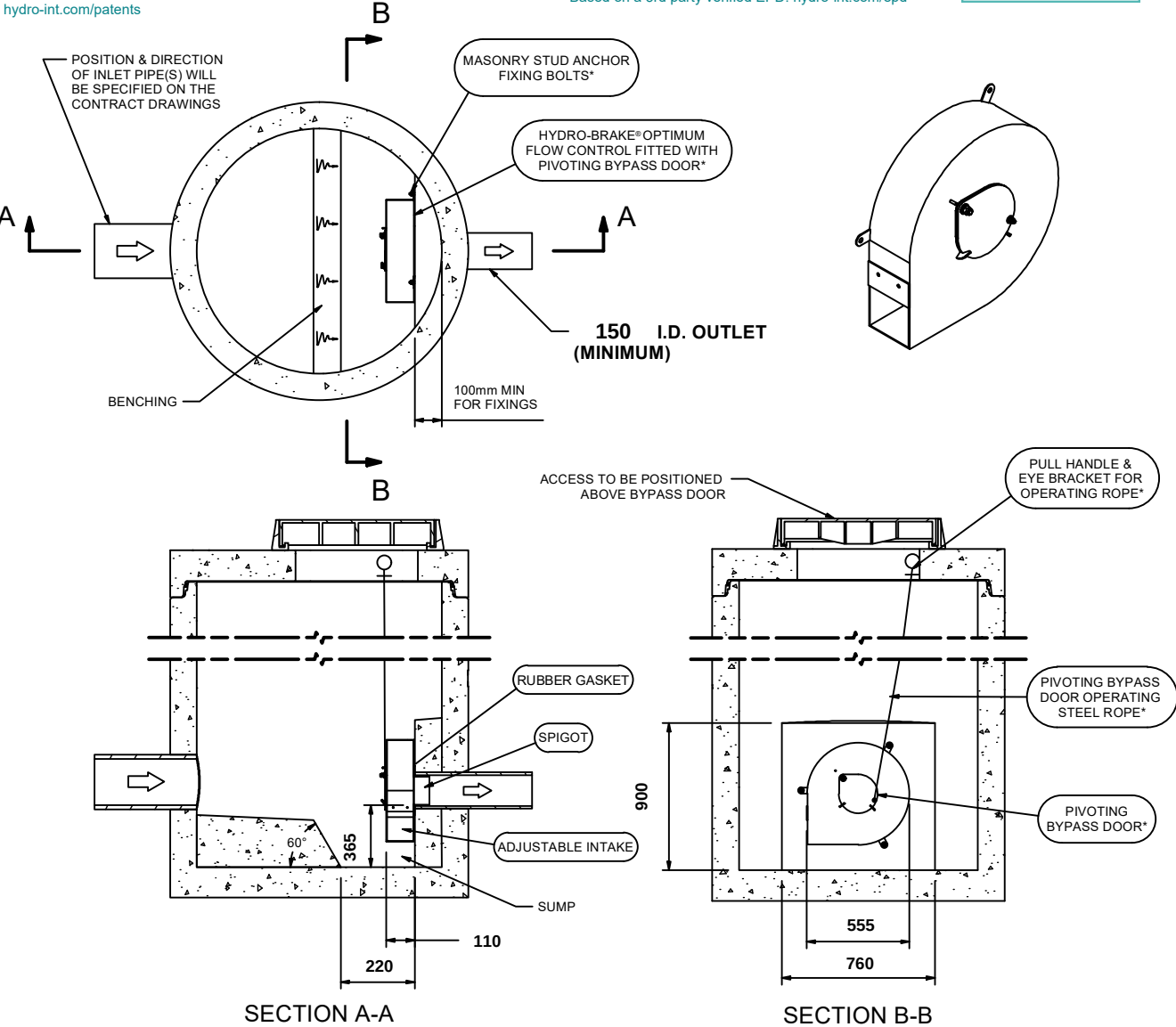
Control Point	Head (m)	Flow (l/s)
Primary Design	1.218	5.000
Flush-Flo™	0.362	4.987
Kick-Flo®	0.756	4.010
Mean Flow		4.367

hydro-int.com/patents

This Hydro-Brake® Optimum includes:

- All in 3 mm Grade 304L stainless steel
- Integral pivoting by-pass door allowing clear line of sight through to outlet, c/w operating rope
- Media blasted for corrosion resistance
- Variable flow rate post installation via adjustable inlet (if necessary)
- Indicative Weight: 20 kg
- Product Carbon Footprint: 72.41 kgCO2e

Based on a 3rd party verified EPD: hydro-int.com/epd



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HYDRO INTERNATIONAL

THIS DESIGN LAYOUT IS FOR ILLUSTRATIVE PURPOSES ONLY. NOT TO SCALE.

DESIGN ADVICE 	The head/flow characteristics of this SHE-0102-5000-1218-5000 Hydro-Brake® Optimum Flow Control are unique. Dynamic hydraulic modelling evaluates the full head/flow characteristic curve. The use of any other flow control will invalidate any design based on this data and could constitute a flood risk.		 SHE-0102-5000-1218-5000 Hydro-Brake® Optimum
	DATE	27/08/2025 11:22	
	SITE	Barrow Hill Quarry	
	DESIGNER	Zoe Jordan	
	REF	26726	



CIVIL ENGINEERING



TRANSPORT



FLOOD RISK & DRAINAGE



STRUCTURES



GEO-ENVIRONMENTAL



ACOUSTIC AIR



UTILITIES



GEOMATICS



LIGHTING



EXPERT WITNESS



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