A1

Key

- Extent of Infrastructure Works in accordance with planning consent no.133143/VO/2022
- Trial Hole Location
- THXX Trial Hole Reference
- Existing assets
- Contructed Electricity Infrastructure
- As-Built HV Duct River Crossing Route
- As-Built Steel River Crossing
- Other As-built U-tube crossings - see relevant drawings

Safety, Health and Environmental Information

Notes below are additional to hazards/risks normally associated with this type of work. Numbers correspond to Risk Register references (document reference VNIF-ARP-ZZ-YYY-RE-WD-0002)

Construction (Location Specific)

- HAZ-UT-001 - Working adjacent to and within watercourse
- HAZ-SW-003 - Risk of drowning
- HAZ-SW-012 - Risk of waterborne illness

Construction (Site Wide)

The following hazards are considered to be a risk across the full design:
HAZ-SW-002 - Buried Services
HAZ-SW-006 - Asbestos
HAZ-SW-007 - Unexploded Ordnance (UXO)

N

As-built information interpolated from:
- cad survey data 'U Tube As Built Survey Completed' received 22-05-2025'.
- illustrative mark-ups 'Upstream Ducting Bends Plan and Section' received 22-01-2025 and 'VN - Carry Over Items' received 21-02-2025.
- Emails on construction methodology received 06-05-2025.

River Irk

Collyhurst Weir

Collyhurst Road

TH12

Additional assets identified in TH12 - unconfirmed ownership

Excavation Zone (1.5m x 3m) for HV Cable Pulling detail confirmed with ENWL (30/03/2023)

For extents of scour see drawing VNIF-ARP-00-YYY-DR-CG-0010

2 No. uPVC 150mmØ preformed straight duct (length 7.3m)

HAZ-UT-001
HAZ-SW-003
HAZ-SW-012

River crossing for others omitted from section.
For the OpenReach crossing refer to drawing VNIF-ARP-00-YYY-DR-CU-2009 and for 2nd ENWL duct crossing refer to drawing VNIF-ARP-00-YYY-DR-CU-2010

2 No. uPVC 150mmØ preformed bends (R1.2m 45°)

Pinch point where minimum separation between 2No. HV U-tubes reduces to 800mm.

Refer to Detail D for duct and trench arrangement

U-tube crossing pipe extends beyond river channel extents

1 No. uPVC 150mmØ preformed straight duct (length 11.37m)

Length of highlighted ducting where the minimum spacing is below that shown in Detail D. Typical separation is 100mm, minimum 87mm

2 No. uPVC 150mmØ preformed bends (R1.2m 45°)

2 No. uPVC 150mmØ preformed straight duct (length 1.85m)

2 No. uPVC 150mmØ preformed bends (R1.2m 45°)

2 No. uPVC 150mmØ preformed bends (R1.2m 22.5°)

300mm minimum external separation between Openreach U-tube pipe and ENWL U-tube pipe

908mm minimum external separation between 2No. HV U-tube pipes

1 No. uPVC 150mmØ preformed straight duct (length 11.49m)

2 No. uPVC 150mmØ preformed straight duct (length 5.24m)

2 No. uPVC 150mmØ preformed bends (R1.2m 45°)

Excavation Zone (1.5m x 3m) for HV Cable Pulling detail confirmed with ENWL (30/03/2023)

3450
8828
10250
5612
11370
16680
907
HV (1st U-tube)
BT (2nd U-tube)
HV (3rd U-tube)

Plan

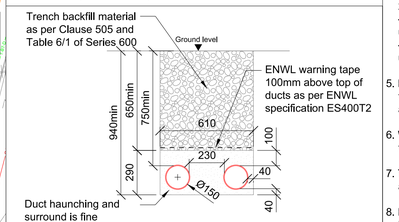
Scale 1:100

9. Utility linestyles have been used to reflect the level of accuracy as per PAS128 standard. The Located Service Classification table below gives a brief overview. For further details refer to document 'PAS 128:2014 Specification for underground utility detection, verification and location'.

Located Service Classification	Certainty/Risk
Type A Verification - Visual identification	Data
Type B Detection - Typically GPR and EML techniques are used	
Type C Site reconnaissance - Physical surface features identified	
Type D Desktop utility records search	

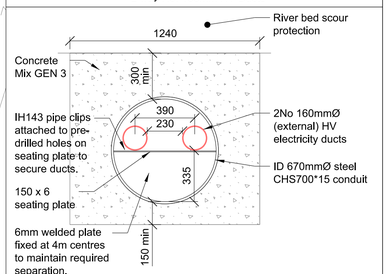
10. For utility diversions and information, see drawings and schedule:
- VNIF-ARP-00-YYY-DR-CU-1010, 1011, & 1012, HIF Lite Utilities, Drainage Diversions & Abandonments.
- VNIF-ARP-00-YYY-DR-CU-1007, Proposed HIF Lite Openreach Diversions.
- VNIF-ARP-00-YYY-DR-CU-1008, Proposed HIF Lite Gas Diversions.
- VNIF-ARP-ZZ-YYY-SH-CU-0001, Utilities Schedule.

11. For ENWL duct products and specifications, see specification ES400D4, Plastic Ducts, Conduits and Accessories.



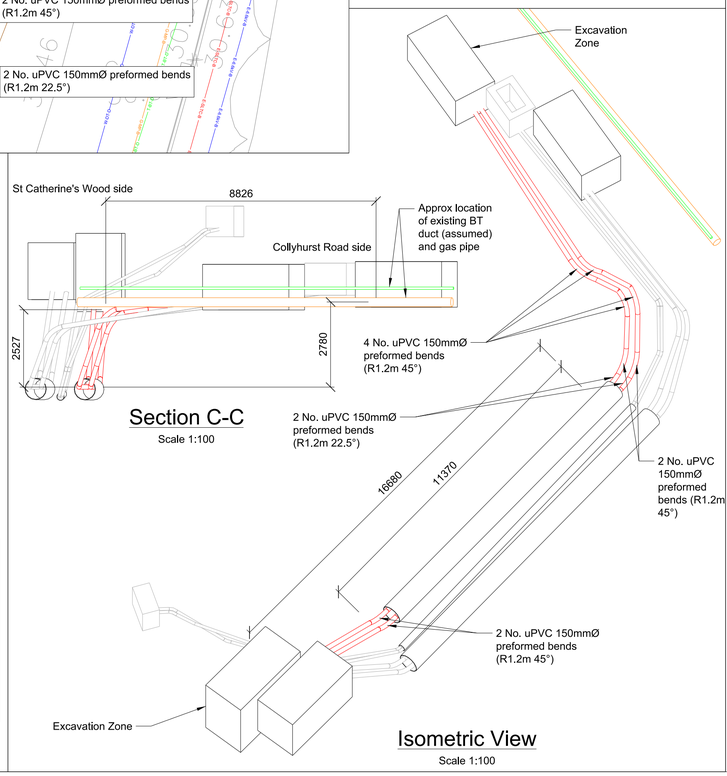
Detail D

2 way No. 150mm HV Ducts



Section B-B

(detail to be applied along river bed section)
Scale 1:20

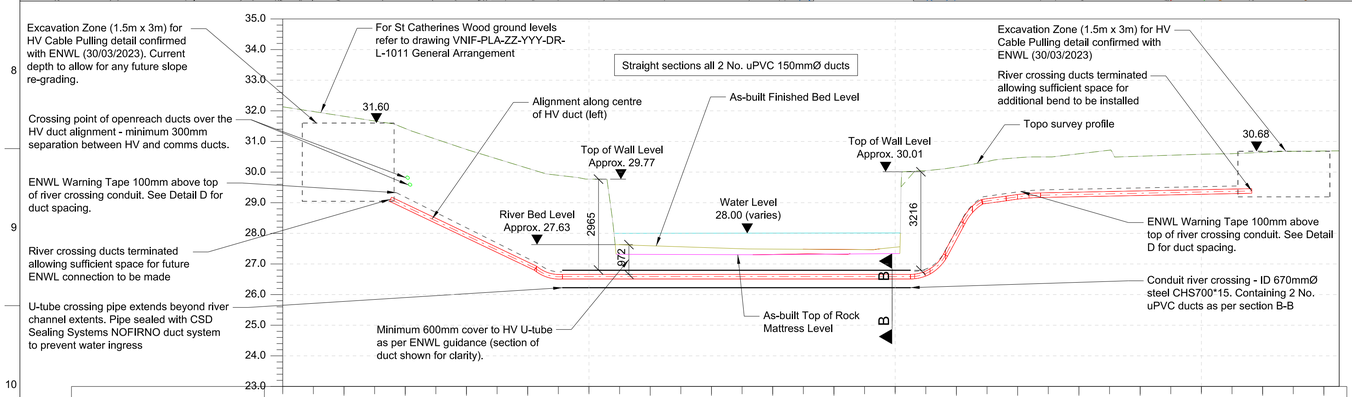


Section C-C

Scale 1:100

Isometric View

Scale 1:100



CHAINAGE	0.000	1.000	2.000	3.000	4.000	5.000	6.000	7.000	8.000	9.000	10.000	11.000	12.000	13.000	14.000	15.000	16.000	17.000	18.000	19.000	20.000	21.000	22.000	23.000	24.000	25.000	26.000	27.000	28.000	29.000	30.000	31.000	32.000	33.000	34.000
EXISTING ELEVATION	32.131	31.976	31.822	31.668	31.424	31.074	30.739	30.431	30.125	29.895	29.771	27.022	27.183	27.298	27.412	27.526	27.648	27.725	27.861	27.999	28.021	30.049	30.165	30.345	30.468	30.495	30.598	30.715	30.516	30.549	30.582	30.601	30.644	30.679	30.689
PROPOSED LEVEL	0.000	0.000	0.000	0.000	28.885	28.408	27.931	27.454	26.978	26.580	26.585	26.585	26.585	26.585	26.585	26.585	26.585	26.585	26.585	26.585	26.585	26.688	27.952	29.054	29.192	29.250	29.270	29.290	29.310	29.330	29.350	29.370	0.000	0.000	0.000

Section A-A

Scale 1:100

Notes

1. All dimensions are in mm, all levels in mAOD, unless specified otherwise.
2. This map is reproduced from Ordnance Survey Material with the permission of the Ordnance Survey on behalf of the Controller of Her Majesty's Stationery Office (c) Crown Copyright. License Number 100019568 (2021).
3. Background is based on:
 - Topographical Survey drawing PS-2158-TS by Paragon Surveys dated September 2021.
 - Landscape Architect masterplan drawing VNIF-PLA-ZZ-YYY-DR-L-1011 rev C08 dated 07/06/24 by Planit.
 - Collyhurst Wier Topo Survey drawing 2381331_XS_Collyhurst Weir by Central Alliance dated January 2022.
 - Riverbed Level surveyed by BAM May 2023 - sketch 240530 Utube bed section with additional levels August 2024.
 - Riverside retaining structure topographical survey by Bam dated 28/01/2025.
 - Topographical Survey by Bam dated 24/02/2025
4. Existing Utilities layout based on the following information:
 - Utility Search Map drawing 97079 undertaken by Atkins dated 24/06/2021.
 - GPR Survey drawing PUM-11943-U-DR-0001 Rev 02 undertaken by Precison Utility Mapping dated 18/01/2022.
 - Trial hole model VNIF-BNL-ZZ-YYY-M3-W-0001 P01 undertaken by BAM dated 07/09/2022.
5. Positions of services on this drawing are indicative only and are taken from the sources listed above. No guarantee is given for the accuracy of information and it is intended for information only.
6. Where electricity and telecommunications cables are indicated there may be multiple cables present.
7. Telecommunications cables shown do not reflect that in some areas ducts are shared between companies.
8. For details of pipe clips refer to manufacturer's information shared by BAM on the 27/08/2024.

Rev	Date	Description	By	Chkd	Appd	Auth
P04	07/03/24	Amended to suit BAM/ENWL comments	EF	EF	EF	—
C02	04/06/24	Amended to suit BAM/ENWL comments	EF	EF	EF	LC
P05	29/07/24		AS	EF	EF	—
P06	30/08/24	3rd HV U-TUBE ADDED	AS	EC	EF	—
P07	06/09/24	WS3 Utube Design Issue	AS	EC	EF	—
C03	06/09/24	WS3 Utube Design Issue	AS	EC	EF	AL
P08	20/03/25	As-built Issue	AS	EF	EF	—
C04	20/03/25	As-built Issue	AS	EF	EF	AL
P09	30/05/25	As-Built Issue	OM	EC	ES	—
C05	03/06/25	As-Built Issue	OM	EC	ES	AL

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Client

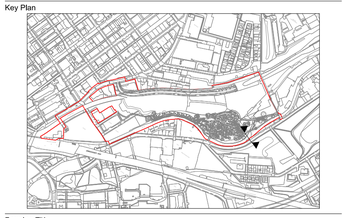
MANCHESTER CITY COUNCIL

bam nuttall

Project Title

Victoria North HIF Infrastructure & Enabling Works

Key Plan



Drawing Title

Proposed HIF Lite Utilities
ENWL Northern River Crossing
First U-tube

Scale at A1	AS SHOWN	Arup Job No	282022-00
Role	Consultant for Utilities		
Suitability	CR- Construction Record		

Rev	By	Chkd	Appd	
C05	OM	EC	ES	AL
	Date 30/05/25	Date 30/05/25	Date 30/05/25	03/06/25

Name

VNIF - ARP - 00 - YYY - DR - CU - 2007

Project | Originator | Volume | Location | Type | Role | Number

Do not scale

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