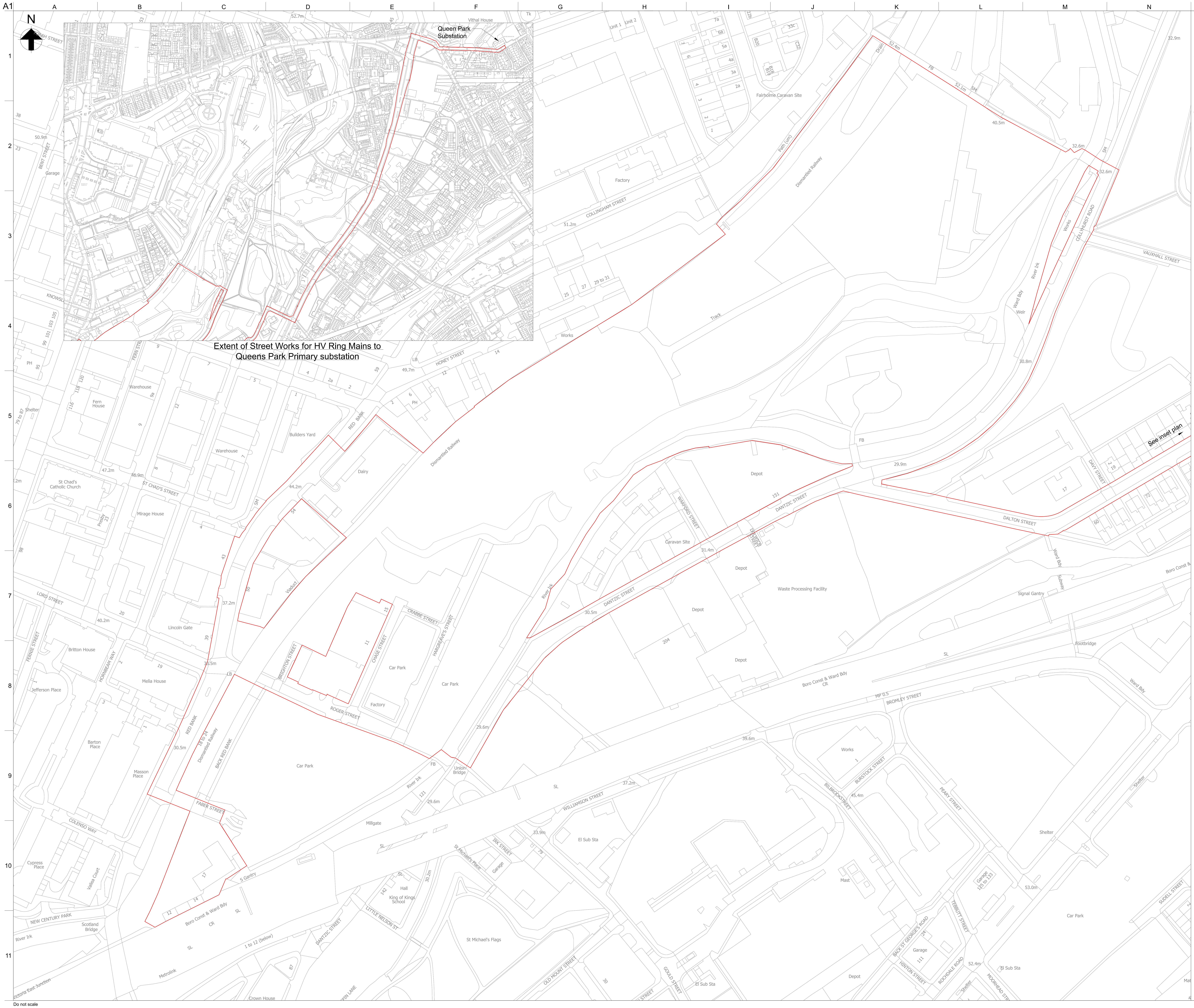


Do not scale

Notes

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Key

🟥 Extent of Infrastructure Works

P01	09/11/21		EC	EC	ME	---
P02	09/11/21	For Enabling Works Application	EC	EC	ME	---
P03	16/11/21	Updated redline boundary	EC	EC	ME	---
P04	10/12/21		RG	RG	RG	---
P05	04/02/22	For Information	RG	RG	RG	---
Rev	Date	Description	By	Chkd	Appd	Auth

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Client

MANCHESTER CITY COUNCIL

bam nuttall

Project Title
Victoria North HIF Infrastructure & Enabling Works

Drawing Title
HIF Infrastructure Study Area

Scale at A1	1:1250	Arup Job No	282022-00
Role	GIS & Land Surveyors		
Suitability	S3 - Issued for Review and Comment		

Rev	By	Chkd	Appd	
P05	RG	RG	RG	---
	Date 04/02/22	Date 04/02/22	Date 04/02/22	---

Name

VNIF	- ARP -	00	- YYY -	DR -	G -	0009
Project	Originator	Volume	Location	Type	Role	Number

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NOTES:
1. Do not scale from this drawing.
2. Always work to noted dimensions.
3. All dimensions are in millimetres unless otherwise stated.
4. All setting out, levels and dimensions to be agreed on site.
5. The dimensions of all materials must be checked on site before being laid out.
6. This drawing must be read with the relevant specification clauses and detail drawings.
7. Order of construction and setting out to be agreed on site.

KEY

ENABLING WORKS

Red Line Boundary

Revision	Date	Description	Drawn	Apprvd.
P01.01	03-09-21	First Issue	MS	MS

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T: 0145 360 7080

Client BAM Nuttall Ltd / Arup

Project Victoria North HIF Infrastructure

Drg Title Enabling Works Scheme Boundary

Created on	Created by	Approved by
03/09/21	MS	MS

Scale	Size	Workstage
1:1250	A1	Stage 2

Drg No. VNIF-PLA-00-YYY-DR-L-0001

Suitability S2

Revision P01.01

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A1

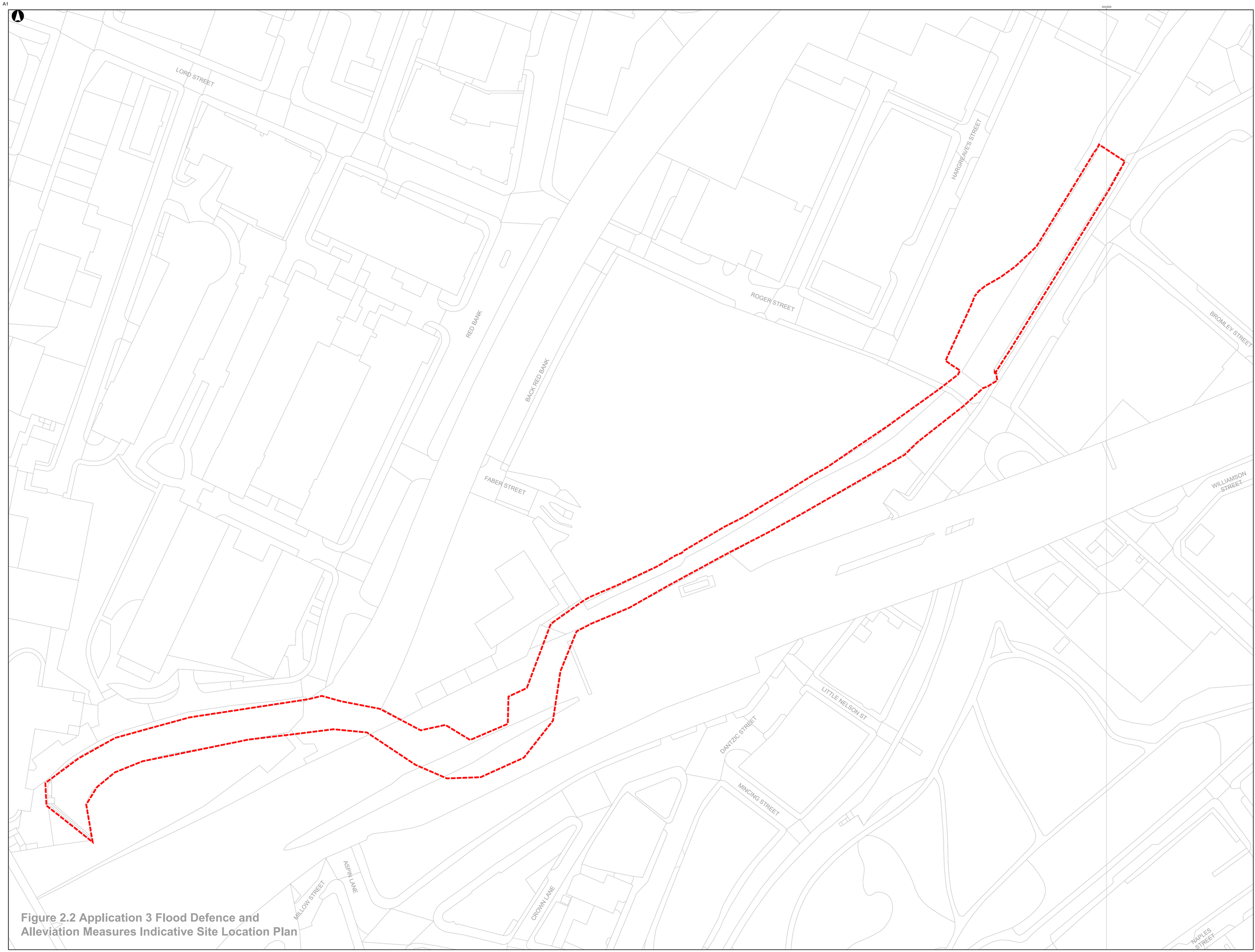


Figure 2.2 Application 3 Flood Defence and Alleviation Measures Indicative Site Location Plan



Figure 2.3: Indicative development area relating to Application 4: Red Bank Built Development (N.B. not definitive planning boundary)

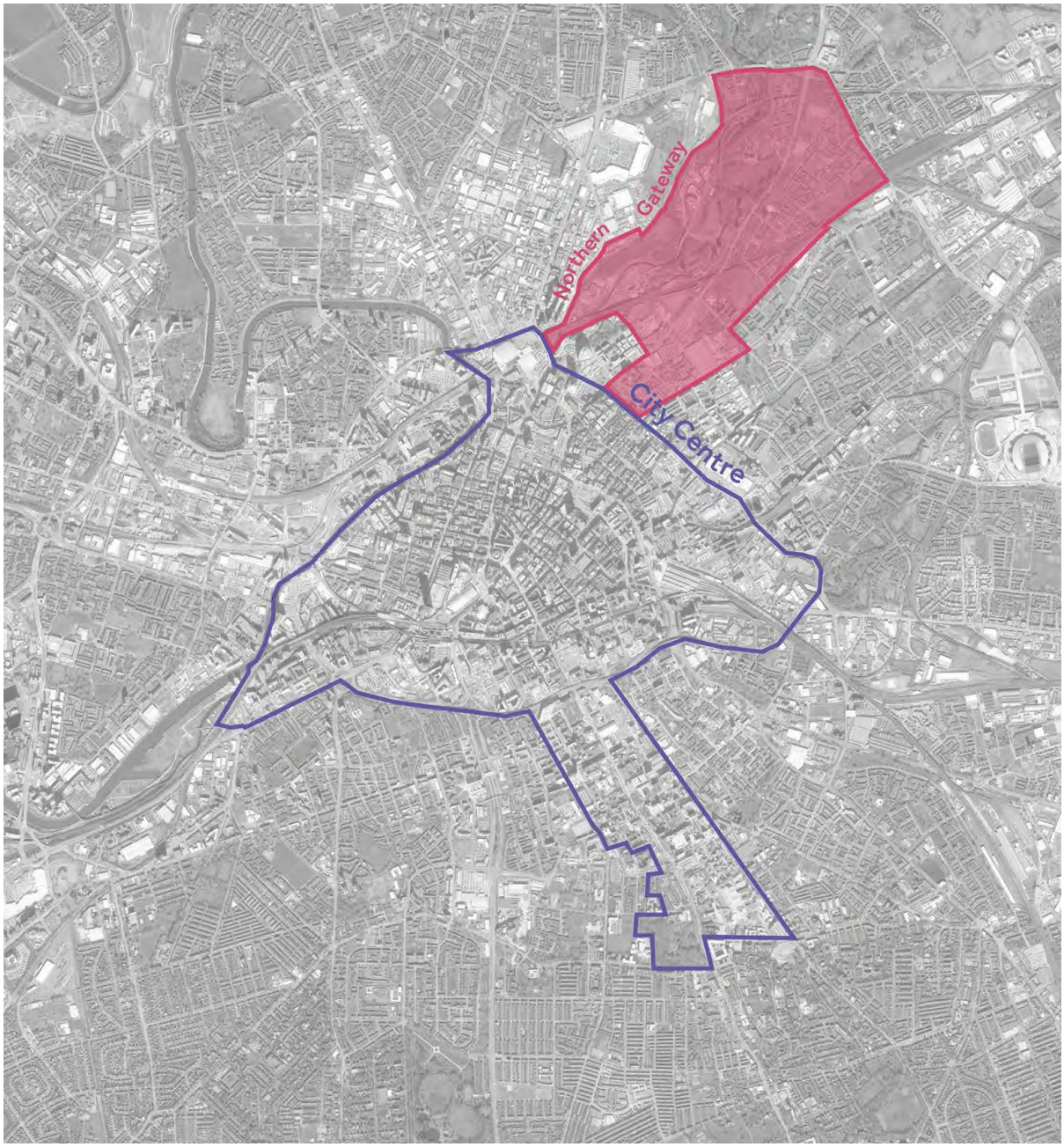


Figure 2.4: *Northern Gateway SRF Area, in the context of Manchester City Centre*

ILLUSTRATIVE MASTERPLAN

In response to the SRF-wide and neighbourhood design and development principles, an Illustrative Masterplan is presented for the entire Northern Gateway which shows how the residential-led neighbourhoods could be developed. The Masterplan is an accumulation of the Indicative Spatial Frameworks presented for each neighbourhood.

- Retained utilities
- Railway/Metrolink
- Existing towers
- Key surrounding landmarks
- SRF development areas
- Local assets
- Blocks with open space views
- Key active frontages
- Mix of commercial and residential uses
- Social and community uses
- Green space
- Green link
- Public realm enhancements to major road
- River Walk
- Stairs
- Enhancements to public realm
- Enhancements to existing bridge
- Key passage through viaduct
- Proposed bridge over River Irk
- Enhanced treatment and permeability of railway arches
- Potential access from Red Bank Viaduct to the Ring Road and Victoria Station
- Primary Retail and Service Hub
- Secondary Retail and Service Hub
- Integrated transport hub
- Opportunities for distinctive landmark buildings with a focus on height
- Opportunities for distinctive landmark buildings with a focus on architectural treatment

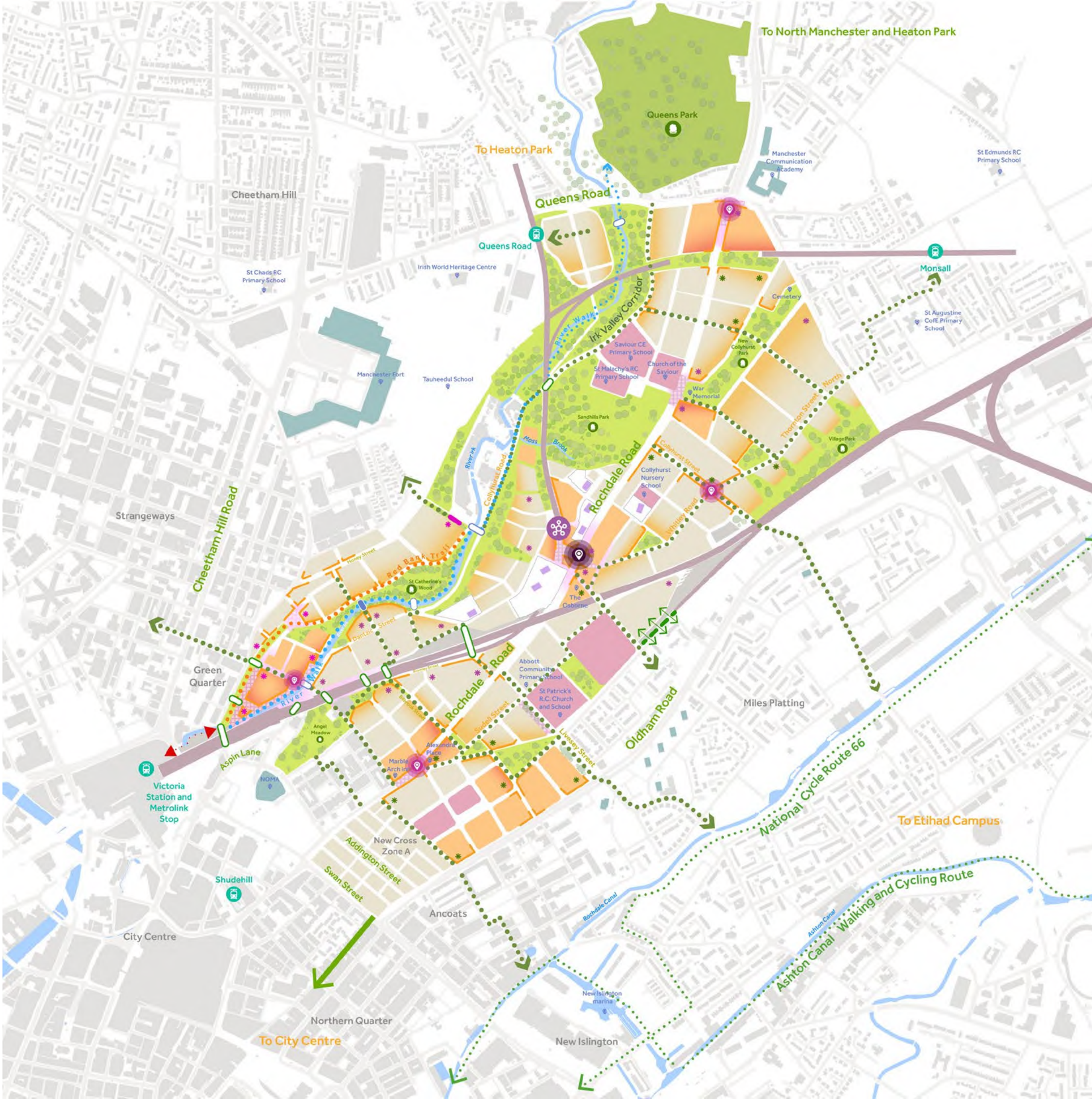


Figure 100 – Illustrative Masterplan

A1

KEY

SITE BOUNDARY

PROPOSED HARDWORKS

S1 CLAY PAVING
Location: to pedestrian public areas
Material: natural clay paving
Colour: two colour mixes in warm buff tones TBC
Size: 200 (l) x 65 (w) x 85 (d)mm
Finish: sanded/waterstruck TBC
Laid: stretcher/herringbone bond TBC

S2 TEMPORARY ASPHALT SURFACE (PERMEABLE)
Location: to vehicular carriageway on Red Bank Plateau
Material: permeable tarmacadam.
Spec: vehicular build up. TBC

S2.1 TEMPORARY ASPHALT SURFACE (PERMEABLE)
Location: to pedestrian routes sitewide
Material: permeable tarmacadam.
Spec: pedestrian build up. TBC

S3 NATURAL STONE SETTS
Location: to St Catherine's Wood entrance area
Material: natural granite setts
Colour: warm buff tones TBC
Size: 100 (l) x 100 (w) x 80 (d)mm
Finish: cropped sides, sawn top TBC
Laid: stretcher bond

S4 RESIN BONDED GRAVEL
Location: to St Catherine's Wood and viaduct paths
Material: resin bonded natural gravel stones
Colour: warm buff tones TBC

S5 GREEN GAP BLOCK PAVING
Location: to Union Bridge Waterfront
Material: opportunity to use reclaimed cobbles (to be developed further in RIBA Stage 4)
Colour: TBC
Size/finish: TBC
Laid: stretcher with gaps for planting/grass

S6 ELEVATED DECKING
Location: Red Bank Terraces and St Catherine's Wood
Spec: To meet required slip resistance standards
Finish: TBC

DECKING STEPS
Location: Red Bank Terraces and St Catherine's Wood
Spec: To meet required slip resistance standards
Finish: TBC

TACTILE HAZARD WARNING STRIPS
Location: Red Bank Terraces and St Catherine's Wood at top/bottom of step flights
Spec: TBC

S7 ELEVATED DECK
Location: to elevated walkway/cycle route in St. Catherine's Wood and Union Waterfront deck
Material: TBC
Colour: buff/natural tones
Finish: to meet required slip resistance

S8 PRE-CAST CONCRETE STEPS
Location: to Union Bridge Waterfront and Red Bank Terraces
Material: pre cast concrete
Colour: buff/natural tone
Finish: acid etched with contrasting nosings

S8.1 PRE-CAST CONCRETE SEATING STEPS
Location: to Union Bridge Waterfront and lower Red Bank Terraces
Material: pre-cast concrete
Colour: buff/natural tone
Finish: acid etched with contrasting nosings

S8.2 TACTILE CORDUROY HAZARD PAVING
Location: Red Bank Terraces and Union Waterfront wherever there are steps
Material: pre-cast concrete coundurory pavers
Colour: natural TBC
Size: 400 (l) x 400 (w) x 50 (d)mm
Finish: textured
Laid: stack bond

S9 TACTILE BLISTER HAZARD PAVING
Location: road crossings
Material: pre-cast concrete blister pavers
Colour: natural TBC
Size: 400 (l) x 400 (w) x 50 (d)mm
Finish: textured
Laid: stack bond

S10 TIMBER TOPPED SEATING STEPS
Location: to Red Bank Terraces and Union W-front
Material: gabion baskets (opportunity to fill rear with site won recycled material. Front faced in natural sandstone) with a timber top seat TBC
Colour: buff/natural tones TBC
Spec: TBC

S11 BARK CHIPPINGS
Location: to secondary pedestrian paths in St. Catherine's Wood
Material: high grade bark chippings
Colour: natural

TIMBER STEPS ALONG BARK PATH
Location: to informal tertiary routes within St Catherine's Wood
Material: FSC timber TBC
Colour: natural/treated timber TBC
Spec: TBC

S12 RUBBER BARK LOOK CHIPPINGS
Location: to St. Catherine's Wood Play Area
Material: Tiger Bark or similar and approved
Colour: natural

STEPPING STONE PATH
Location: to tertiary route within St Catherine's Wood
Material: natural stone TBC
Colour: buff/natural tones TBC
Size: TBC
Finish: to meet required slip resistance TBC
Laid: on concrete haunchings

PROPOSED SOFTWORKS

PROPOSED TREE PLANTING
Subject to further detailed design

EXISTING TREES RETAINED
Subject to further detailed design

M1 EXISTING WOODLAND ENHANCED
To St. Catherine's Wood
Refer to drawing for notes
Approx area: 12215m²

M2 WOODLAND MATRIX MIX
To St. Catherine's Wood
Refer to drawing for notes
Approx area: 5960m²

M3 WOODLAND EDGE MIX
To St. Catherine's Wood
Refer to drawing for notes
Approx area: 1265m²

M4 ORNAMENTAL PLANTING
To Red Bank Terraces
Refer to drawing for notes
Approx area: 3155m²

M5 ORNAMENTAL PLANTING
To Viaduct Linear Park
Refer to drawing for notes
Approx area: 1412m²

M6 AQUATIC MARGINAL VEGETATION
To Rivers Edge
Refer to drawing for notes
Approx area: 3690m²

HEDGE PLANTING
Mixed native species hedgerow mix to northern boundary
Approx area: 73m², Approx length: 50m

RB01
RB02
RB03
RB04
RB05a
RB05b
RB05c
RB06
RB07
RB08
RB09
RB11
RB12a
RB12b
RB16
RB17
NT01
NT02
NT03
NT04

NORTH STREET
PEEL LANE
COLLINGHAM STREET
ST HOMAS PLACE
STANLEY STREET
RED BANK
HONEY STREET
RICHARD STREET
WILLIAMSON STREET
BROMLEY STREET
RUBISTOCK STREET
GRANTHAM STREET
DALTON STREET
DAVIS STREET
Signal Gantry
Footbridge
Union Bridge

0 10 20 50 100
Scale bar (m)

Do not scale

NOTE: Future Plot Extents are Indicative Only

Rev	Date	Description	By	Chkd	Appd	Auth
P02.08	02.03.22	Final Draft Planning	CL	MS	GB	GB
P02.07	14.02.22	Draft Planning	CL	MS	GB	GB
P02.06	14.02.22	Draft Planning	BM	MS	GB	GB
P02	11.02.22	Draft Planning	BM	MS	GB	GB
P02.05	04.02.22	Draft Planning	BM	MS	GB	GB
P02.04	31.01.22	Draft Planning	SR	MS	GB	GB
P02.03	27.01.22	Draft Planning	BM	MS	GB	GB
P02.02	27.01.22	Draft Planning	BM	MS	GB	GB
P02.01	25.01.22	Draft Planning Issue	BM	MS	GB	GB
P01	17.12.21	Stage 3 Issue	SR	MS	GB	GB
P01.02	10.12.21	For Information	SR	MS	GB	GB
P01.01	07.12.21	For Information	SR	MS	GB	GB

Client

MANCHESTER CITY COUNCIL

bam nuttall

Project Title

Victoria North HIF Infrastructure

Key Plan

Drawing Title

Landscape General Arrangement
HIF Delivery Plan - *For Approval*

Scale at A1	Planit-IE Job No
1:500	2700

Role: Landscape Architect

Suitability: S4

Rev	By	Chkd	Appd
P02.08	SR	MS	MS
	Date	Date	Date
	17.12.21	17.12.21	17.12.21

Name

Project	Originator	Volume	Location	Type	Role	Number
VNIF	PLA	ZZ	YYY	DR	L	1011

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A1

RB05a
Units = 404
Population = 741
2026

RB05b
Units = 202
Population = 371
2026
8-25 Storeys

RB05c
Units = 202
Population = 371
2026
6-12 Storeys

RB04
Units = 388
Population = 713
2026
6-12 Storeys

RB03
Units = 256
Population = 470
2027
6-12 Storeys

RB02
Units = 261
Population = 479
2028
6-12 Storeys

RB01
Units = 166
Population = 306
2029
8-25 Storeys

RB12a
Units = 204
Population = 375
2029
6-12 Storeys

RB11 & RB12a
Units = 124
Population = 228
2026
6-12 Storeys

RB06
Units = 179
Population = 331
2026
25 Storeys

RB07
Units = 457
Population = 843
2027
30 Storeys

RB08
Units = 150
Population = 277
2026
30 Storeys

RB09
Units = 385
Population = 711
2026
30-35 Storeys

RB10
Units = 242
Population = 447
2032
50 Storeys

RB16
Units = 137
Population = 254
2030

RB17
Units = 172
Population = 318
2031

NT02
Units = 583
Population = 1077
2026
6-34 Storeys

NT03
Units = 392
Population = 724
2027
6-32 Storeys

NT04
Units = 432
Population = 799
2028
6-29 Storeys

5-32 Storeys

2No. 200PE

200PE

250PE

160PE

160PE

Likely 1 No. 200PE water main for cross connectivity (worst case 2 No. 200PE or 1 No. 400PE)

Easement required through parkland

Proposed utilities to cross proposed footbridge. Buried 'U-tube' trench crossing as potential alternative.

Tie in to existing 200mm PE distribution water main

Water main required for play feature (private supply)

Easement required along non-adopted road - mains positioned in carriageway

Likely 2 No. 200PE water mains (or 1 No. 400PE) - 2nd installed by HIF but only brought online in later phases

Connection to existing 36" CI trunk water main in Red Bank

Connection to existing 36" CI trunk water main in Red Bank

Existing water mains to be upsized to 160PE

Aim to tie into existing main prior to bridge, with no new river crossing required in this location, as these plots are to be supplied from Red Bank distribution mains.

Cross connection may be required in future, when the Dantzic Street plots and wider Victoria North plots are developed. Exact routing dependant on NT building footprints and UU upgrades of wider network. Not to be undertaken by HIF.

Key

- HIF Site Boundary
- Plot Boundary
- Indicative boundary between adjacent plots
- Future water main to improve resilience (outisde HIF)
- New water main
- Existing water mains to be replaced (up-sized or replaced due to cast iron material)
- Water main wayleave required
- HIF drainage and utility infrastructure networks sized to accommodate these plots, however geotechnical/remedial works to be designed and undertaken by the developer

Notes

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4. Layout is based on:
   • Landscape Architect masterplan drawing 2700-PLA-ZZ-YYY-DR-L-1011 Rev P02.06 dated 14/02/2022 by Planit.
   • Topographical Survey drawing PS-2158-TS by Paragon Surveys dated September 2021.
5. Plot boundaries developed in conversation with FEC Winter 2021/2 - boundaries between adjacent plots are indicative only and are subject to change as the FEC masterplan is developed.
6. Utility demands have been based on units and populations as per FEC's 'VN Housing Delivery Plan September 2021 v2' received 05-10-21. Occupation dates have been taken from v3 received 22-11-21. Non-FEC third party plot details have been assumed from the Northern Gateway SRF.
7. Extents of landscaping and new roads are based on WS3 designs.
8. WS3 HIF Utilities design developed in conjunction with FEC team discussions.
9. Future plot connections to the HIF network are to be undertaken by developers.

Rev	Date	Description	By	Chkd	Appd	Auth
P01	26/08/21		AS	AS	AS	---
P02	17/12/21		EC	RG	RG	---
P03	01/02/22		EC	EC	RG	---
P04	18/02/22	Amended for planning	EC	RG	RG	---

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Client

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Project Title

Victoria North HIF Infrastructure & Enabling Works

Drawing Title

Proposed HIF Potable Water Network Upgrade

Scale at A1	1:1250	Arup Job No	282022-00

Role: Consultant for Utilities

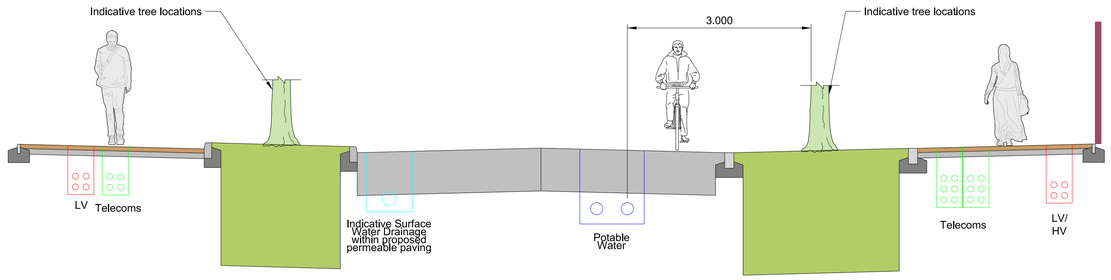
Suitability: S3 - Issued for Review and Comment

Rev	By	Chkd	Appd	
P04	EC	RG	RG	---
	Date 18/02/22	Date 18/02/22	Date 18/02/22	---

Name: VNIF - ARP - 00 - YYY - DR - CU - 1003
(Project - Originator - Volume - Location - Type - Role - Number)

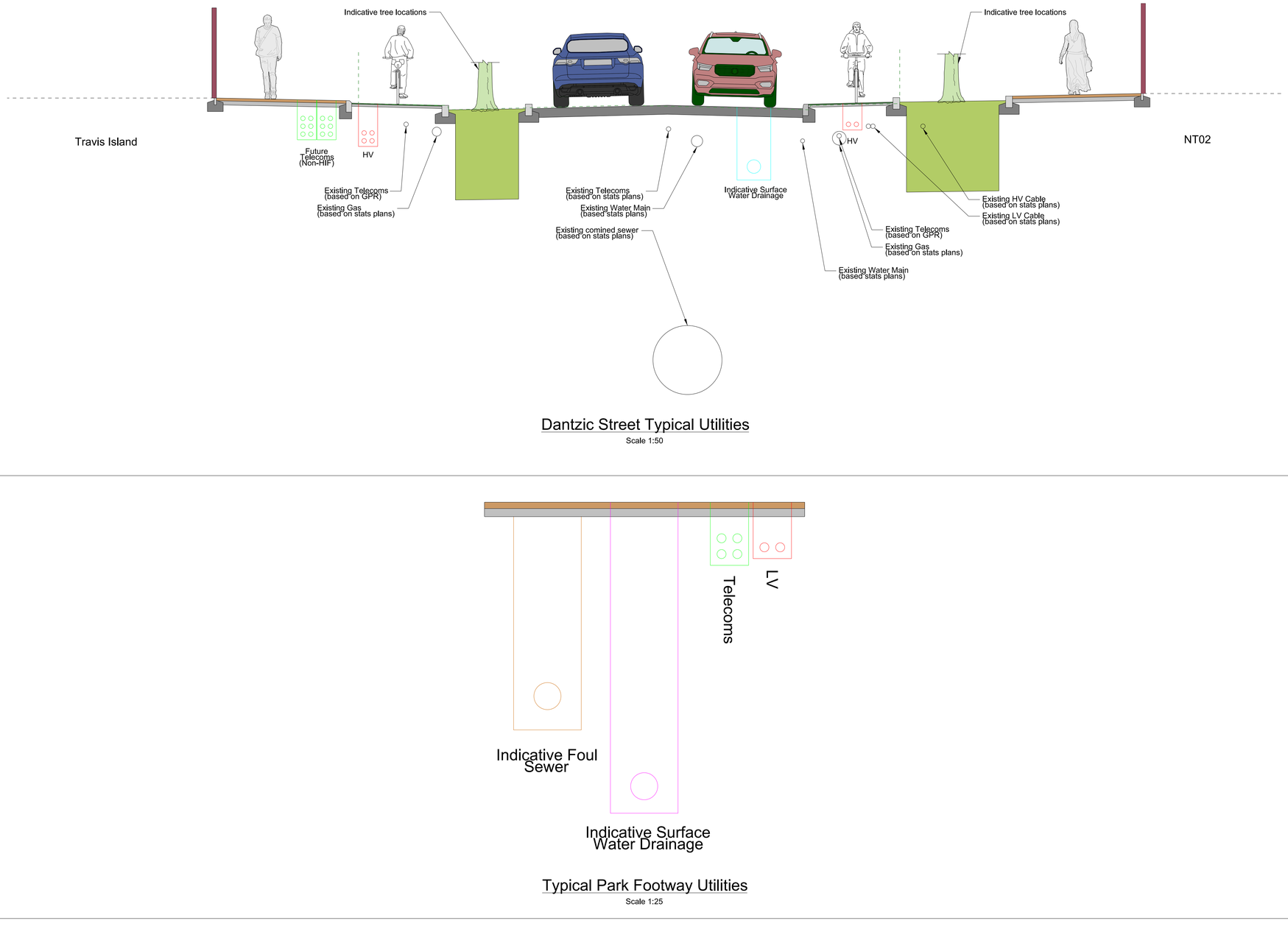
Do not scale

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Plateau Avenue Typical Utilities

Scale 1:50



Dantzic Street Typical Utilities

Scale 1:50

Typical Park Footway Utilities

Scale 1:25

Notes

1. All dimensions are in mm, all levels in mAOD, unless specified otherwise.
2. This drawing shall be read in conjunction with all relevant Engineer's drawing, specifications and reports.
3. Extents of landscaping and new roads are based on WS3 designs.
4. Existing Utilities based on the following information:
   - Utility Search Map drawing 97079 undertaken by Atkins dated 24/06/2021.
   - Street Works Guidance (NJUG) for non-GPR depths.
   - Partial GPR Survey drawing PUM-11943-U-DR-0001 Rev 01 undertaken by Precison Utility Mapping dated 11/11/2021.
5. Proposed telecoms installed on Dantzic Street as part of 'Aspirational Masterplan' works and are non-HIF funded, due to spatial constraints within the existing carriageway.

Key

- Existing ground profile
- Proposed pavement/carriageway/ground level
- Proposed Planting area
- Existing utility
- Proposed Electricity (HV/LV)
- Proposed Telecoms
- Proposed Water mains
- Proposed surface water drainage
- Proposed foul sewer

Rev	Date	Description	By	Chkd	Appd	Auth
P01	26/08/21		AS	AS	AS	—
P02	17/12/21		EC	RG	RG	—
P03	01/02/22		EC	EC	RG	—

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Client

MANCHESTER CITY COUNCIL

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Project Title

Victoria North HIF Infrastructure & Enabling Works

Drawing Title

Proposed Utilities Sections

Scale at A1	NTS	Arup Job No	282022-00
Role	Consultant for Utilities		
Suitability	S3 - Issued for Review and Comment		
Rev	P03	By EC / Date 01/02/22	Chkd EC / Date 01/02/22
		Appd RG / Date 01/02/22	--- / ---

Name

VNIF - ARP - 00 - YYY - DR - CU - 1004

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

Do not scale

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A1

KEY

🟥 **SITE BOUNDARY**

PROPOSED HARDWORKS

- **S1** — **CLAY PAVING**
  Location: to pedestrian public areas
  Material: natural clay paving
  Colour: two colour mixes in warm buff tones TBC
  Size: 200 (l) x 65 (w) x 85 (d)mm
  Finish: sanded/waterstruck TBC
  Laid: stretcher/herringbone bond TBC
- **S2** — **TEMPORARY ASPHALT SURFACE (PERMEABLE)**
  Location: to vehicular carriageway on Red Bank Plateau
  Material: permeable tarmacadam.
  Spec: vehicular build up. TBC
- **S2.1** — **TEMPORARY ASPHALT SURFACE (PERMEABLE)**
  Location: to pedestrian routes sitewide
  Material: permeable tarmacadam.
  Spec: pedestrian build up. TBC
- **S3** — **NATURAL STONE SETTS**
  Location: to St Catherine's Wood entrance area
  Material: natural granite setts
  Colour: warm buff tones TBC
  Size: 100 (l) x 100 (w) x 80 (d)mm
  Finish: cropped sides, sawn top TBC
  Laid: stretcher bond
- **S4** — **RESIN BONDED GRAVEL**
  Location: to St Catherine's Wood and viaduct paths
  Material: resin bonded natural gravel stones
  Colour: warm buff tones TBC
- **S5** — **GREEN GAP BLOCK PAVING**
  Location: to Union Bridge Waterfront
  Material: opportunity to use reclaimed cobbles (to be developed further in RIBA Stage 4)
  Colour: TBC
  Size/finish: TBC
  Laid: stretcher with gaps for planting/grass
- **S6** — **ELEVATED DECKING**
  Location: Red Bank Terraces and St Catherine's Wood
  Spec: To meet required slip resistance standards
  Finish: TBC
- **S6.1** — **DECKING STEPS**
  Location: Red Bank Terraces and St Catherine's Wood
  Spec: To meet required slip resistance standards
  Finish: TBC
- **S6.2** — **TACTILE HAZARD WARNING STRIPS**
  Location: Red Bank Terraces and St Catherine's Wood at top/bottom of step flights
  Spec: TBC
- **S7** — **ELEVATED DECK**
  Location: to elevated walkway/cycle route in St. Catherine's Wood and Union Waterfront deck
  Material: TBC
  Colour: buff/natural tones
  Finish: to meet required slip resistance
- **S8** — **PRE-CAST CONCRETE STEPS**
  Location: to Union Bridge Waterfront and Red Bank Terraces
  Material: pre cast concrete
  Colour: buff/natural tone
  Finish: acid etched with contrasting nosings
- **S8.1** — **PRE-CAST CONCRETE SEATING STEPS**
  Location: to Union Bridge Waterfront and lower Red Bank Terraces
  Material: pre cast concrete
  Colour: buff/natural tone
  Finish: acid etched with contrasting nosings
- **S8.2** — **TACTILE CORDUROY HAZARD PAVING**
  Location: Red Bank Terraces and Union Waterfront wherever there are steps
  Material: pre-cast concrete courduroy pavers
  Colour: natural TBC
  Size: 400 (l) x 400 (w) x 50 (d)mm
  Finish: textured
  Laid: stack bond
- **S9** — **TACTILE BLISTER HAZARD PAVING**
  Location: road crossings
  Material: pre-cast concrete blister pavers
  Colour: natural TBC
  Size: 400 (l) x 400 (w) x 50 (d)mm
  Finish: textured
  Laid: stack bond
- **S10** — **TIMBER TOPPED SEATING STEPS**
  Location: to Red Bank Terraces and Union W-front
  Material: gabion baskets (opportunity to fill rear with site won recycled material. Front faced in natural sandstone) with a timber top seat TBC
  Colour: buff/natural tones TBC
  Spec: TBC
- **S11** — **BARK CHIPPINGS**
  Location: to secondary pedestrian paths in St. Catherine's Wood
  Material: high grade bark chippings
  Colour: natural
- **S11.1** — **TIMBER STEPS ALONG BARK PATH**
  Location: to informal tertiary routes within St Catherine's Wood
  Material: FSC timber TBC
  Colour: natural/treated timber TBC
  Spec: TBC
- **S12** — **RUBBER BARK LOOK CHIPPINGS**
  Location: to St. Catherine's Wood Play Area
  Material: Tiger Bark or similar and approved
  Colour: natural
- **S15** — **STEPPING STONE PATH**
  Location: to tertiary route within St Catherine's Wood
  Material: natural stone TBC
  Colour: buff/natural tones TBC
  Size: TBC
  Finish: to meet required slip resistance TBC
  Laid: on concrete haunchings

PROPOSED SOFTWORKS

- **PROPOSED TREE PLANTING**
  Subject to further detailed design
- **EXISTING TREES RETAINED**
  Subject to further detailed design
- **M1** — **EXISTING WOODLAND ENHANCED**
  To St. Catherine's Wood
  Refer to drawing for notes
  Approx area: 12215m²
- **M2** — **WOODLAND MATRIX MIX**
  To St. Catherine's Wood
  Refer to drawing for notes
  Approx area: 5960m²
- **M3** — **WOODLAND EDGE MIX**
  To St. Catherine's Wood
  Refer to drawing for notes
  Approx area: 1265m²
- **M4** — **ORNAMENTAL PLANTING**
  To Red Bank Terraces
  Refer to drawing for notes
  Approx area: 3155m²
- **M5** — **ORNAMENTAL PLANTING**
  To Viaduct Linear Park
  Refer to drawing for notes
  Approx area: 1412m²
- **M6** — **AQUATIC MARGINAL VEGETATION**
  To Rivers Edge
  Refer to drawing for notes
  Approx area: 2690m²
- **M7** — **HEDGE PLANTING**
  Mixed native species hedgerow mix to northern boundary
  Approx area: 73m², Approx length: 50m

NOTE: Future Plot Extents are Indicative Only



Rev	Date	Description	By	Chkd	Appd	Auth
P02.05	02.03.22	Final Draft Planning	CL	MS	GB	GB
P02.04	14.02.22	Draft Planning	CL	MS	GB	GB
P02.03	04.02.22	Draft Planning	BM	MS	GB	GB
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P01	17.12.21	Stage 3 Issue	SR	MS	GB	GB
P01.03	26.11.21	For Information	SR	MS	GB	GB
P01.02	10.11.21	For Information	SR	MS	GB	GB
P01.01	20.10.21	For Information	SR	MS	GB	GB

Client

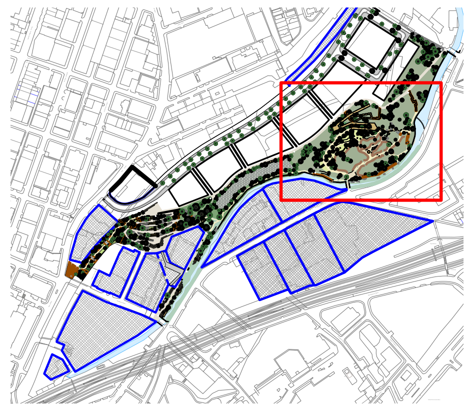
MANCHESTER CITY COUNCIL

bam nuttall

Project Title

Victoria North HIF Infrastructure

Key Plan



Drawing Title

St. Catherine's Wood
Detailed Area Plan - *For Approval*

Scale at A1	Planit-IE Job No
1:400	2700

Role
Landscape Architect

Suitability
S2

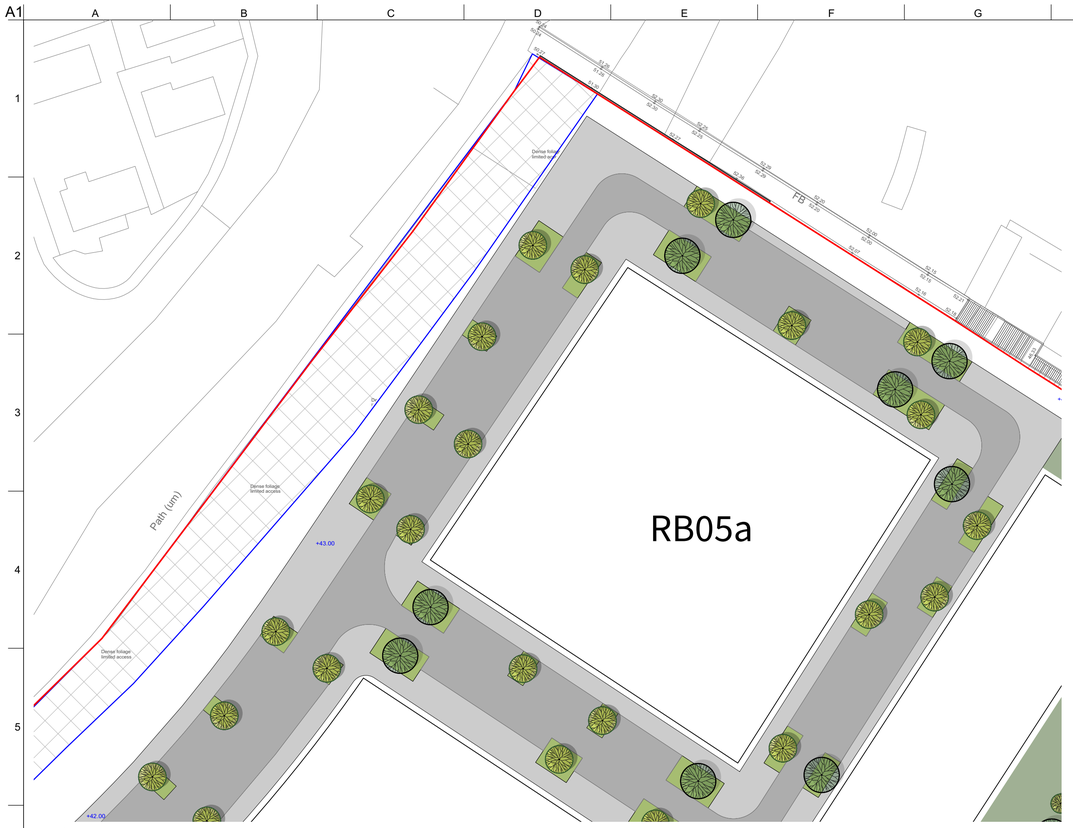
Rev	By	Chkd	Appd
P02.05	SR	MS	MS
	Date 17.12.21	Date 17.12.21	Date 17.12.21

Name

Project	Originator	Volume	Location	Type	Role	Number
VNIF	PLA	ZZ	YYY	DR	L	1002

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A1





KEY

SITE BOUNDARY

PROPOSED HARDWORKS

S1 CLAY PAVING
Location: to pedestrian public areas
Material: natural clay paving
Colour: two colour mixes in warm buff tones TBC
Size: 200 (l) x 65 (w) x 85 (d)mm
Finish: sanded/watertrack TBC
Laid: stretcher/herringbone bond TBC

S2 TEMPORARY ASPHALT SURFACE (PERMEABLE)
Location: to vehicular carriageway on Red Bank Plateau
Material: permeable tarmacadam.
Spec: vehicular build up. TBC

S2.1 TEMPORARY ASPHALT SURFACE (PERMEABLE)
Location: to pedestrian routes sitewide
Material: permeable tarmacadam.
Spec: pedestrian build up. TBC

S3 NATURAL STONE SETTS
Location: to St Catherine's Wood entrance area
Material: natural granite setts
Colour: warm buff tones TBC
Size: 100 (l) x 100 (w) x 80 (d)mm
Finish: cropped sides, sawn top TBC
Laid: stretcher bond

S4 RESIN BONDED GRAVEL
Location: to St Catherine's Wood and viaduct paths
Material: resin bonded natural gravel stones
Colour: warm buff tones TBC

S5 GREEN GAP BLOCK PAVING
Location: to Union Bridge Waterfront
Material: opportunity to use reclaimed cobbles (to be developed further in RIBA Stage 4)
Colour: TBC
Size/finish: TBC
Laid: stretcher with gaps for planting/grass

S6 ELEVATED DECKING
Location: Red Bank Terraces and St Catherine's Wood
Spec: To meet required slip resistance standards
Finish: TBC

S6.1 DECKING STEPS
Location: Red Bank Terraces and St Catherine's Wood
Spec: To meet required slip resistance standards
Finish: TBC

S6.2 TACTILE HAZARD WARNING STRIPS
Location: Red Bank Terraces and St Catherine's Wood at top/bottom of step flights
Spec: TBC

S7 ELEVATED DECK
Location: to elevated walkway/cycle route in St. Catherine's Wood and Union Waterfront deck
Material: TBC
Colour: buff/naturalstones
Finish: to meet required slip resistance

S8 PRE-CAST CONCRETE STEPS
Location: to Union Bridge Waterfront and Red Bank Terraces
Material: pre-cast concrete
Colour: buff/naturalstone
Finish: acid etched with contrasting nosings

S8.1 PRE-CAST CONCRETE SEATING STEPS
Location: to Union Bridge Waterfront and lower Red Bank Terraces
Material: pre-cast concrete
Colour: buff/naturalstone
Finish: acid etched with contrasting nosings

S8.2 TACTILE CORDUROY HAZARD PAVING
Location: Red Bank Terraces and Union Waterfront wherever there are steps
Material: pre-cast concrete courduroy pavers
Colour: natural TBC
Size: 400 (l) x 400 (w) x 50 (d)mm
Finish: textured
Laid: stack bond

S9 TACTILE BLISTER HAZARD PAVING
Location: road crossings
Material: pre-cast concrete blister pavers
Colour: natural TBC
Size: 400 (l) x 400 (w) x 50 (d)mm
Finish: textured
Laid: stack bond

S10 TIMBER TOPPED SEATING STEPS
Location: to Red Bank Terraces and Union W-front
Material: gabion baskets (opportunity to fill rear with site won recycled material. Front faced in natural sandstone) with a timber top seat TBC
Colour: buff/naturalstones TBC
Spec: TBC

S11 BARK CHIPPINGS
Location: to secondary pedestrian paths in St. Catherine's Wood
Material: high grade bark chippings
Colour: natural

S11.1 TIMBER STEPS ALONG BARK PATH
Location: to informal tertiary routes within St Catherine's Wood
Material: FSC timber TBC
Colour: natural/treated timber TBC
Spec: TBC

S12 RUBBER BARK LOOK CHIPPINGS
Location: to St. Catherine's Wood Play Area
Material: Tiger Bark or similar and approved
Colour: natural

S13 STEPPING STONE PATH
Location: to tertiary route within St Catherine's Wood
Material: natural stone TBC
Colour: buff/naturalstones TBC
Size: TBC
Finish: to meet required slip resistance TBC
Laid: on concrete haunchings

PROPOSED SOFTWORKS

PROPOSED TREE PLANTING
Subject to further detailed design

EXISTING TREES RETAINED
Subject to further detailed design

M1 EXISTING WOODLAND ENHANCED
To St. Catherine's Wood
Refer to drawing for notes
Approx area: 1221m²

M2 WOODLAND MATRIX MIX
To St. Catherine's Wood
Refer to drawing for notes
Approx area: 5960m²

M3 WOODLAND EDGE MIX
To St. Catherine's Wood
Refer to drawing for notes
Approx area: 1265m²

M4 ORNAMENTAL PLANTING
To Red Bank Terraces
Refer to drawing for notes
Approx area: 3155m²

M5 ORNAMENTAL PLANTING
To Viaduct Linear Park
Refer to drawing for notes
Approx area: 1412m²

M6 AQUATIC MARGINAL VEGETATION
To Rivers Edge
Refer to drawing for notes
Approx area: 2690m²

HEDGE PLANTING
Mixed native species hedgerow mix to northern boundary
Approx area: 73m², Approx length: 50m

Rev	Date	Description	By	Chkd	Appd	Auth
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P01.02	26.11.21	For Information	SR	MS	GB	GB
P01.01	10.11.21	For Information	SR	MS	GB	GB

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Client

MANCHESTER CITY COUNCIL

bam nuttall

Project Title

Victoria North HIF Infrastructure

Key Plan



Drawing Title

Red Bank Plateau - Detailed Area Plan

Scale at A1 1:500	Planit-IE Job No 2700
Role Landscape Architect	
Suitability S2	

Rev	By	Chkd	Appd	
P02.03	SR	MS	MS	
	Date	Date	Date	
	17.12.21	17.12.21	17.12.21	

Name

Project	Originator	Volume	Location	Type	Role	Number
VNIF	PLA	ZZ	YYY	DR	L	1005

Do not scale

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A1

KEY

SITE BOUNDARY

PROPOSED HARDWORKS

S1 **CLAY PAVING**
Location: to pedestrian public areas
Material: natural clay paving
Colour: two colour mixes in warm buff tones TBC
Size: 200 (l) x 65 (w) x 85 (d)mm
Finish: sanded/waterstruck TBC
Laid: stretcher/herringbone bond TBC

S2 **TEMPORARY ASPHALT SURFACE (PERMEABLE)**
Location: to vehicular carriageway on Red Bank Plateau
Material: permeable tarmacadam.
Spec: vehicular build up. TBC

S2.1 **TEMPORARY ASPHALT SURFACE (PERMEABLE)**
Location: to pedestrian routes sitewide
Material: permeable tarmacadam.
Spec: pedestrian build up. TBC

S3 **NATURAL STONE SETTS**
Location: to St Catherine's Wood entrance area
Material: natural granite setts
Colour: warm buff tones TBC
Size: 100 (l) x 100 (w) x 80 (d)mm
Finish: cropped sides, sawn top TBC
Laid: stretcher bond

S4 **RESIN BONDED GRAVEL**
Location: to St Catherine's Wood and viaduct paths
Material: resin bonded natural gravel stones
Colour: warm buff tones TBC

S5 **GREEN GAP BLOCK PAVING**
Location: to Union Bridge Waterfront
Material: opportunity to use reclaimed cobbles (to be developed further in RIBA Stage 4)
Colour: TBC
Size/finish: TBC
Laid: stretcher with gaps for planting/grass

S6 **ELEVATED DECKING**
Location: Red Bank Terraces and St Catherine's Wood
Spec: To meet required slip resistance standards
Finish: TBC

DECKING STEPS
Location: Red Bank Terraces and St Catherine's Wood
Spec: To meet required slip resistance standards
Finish: TBC

TACTILE HAZARD WARNING STRIPS
Location: Red Bank Terraces and St Catherine's Wood at top/bottom of step flights
Spec: TBC

S7 **ELEVATED DECK**
Location: to elevated walkway/cycle route in St. Catherine's Wood and Union Waterfront deck
Material: TBC
Colour: buff/natural tones
Finish: to meet required slip resistance

S8 **PRE-CAST CONCRETE STEPS**
Location: to Union Bridge Waterfront and Red Bank Terraces
Material: pre cast concrete
Colour: buff/natural tone
Finish: acid etched with contrasting nosings

S8.1 **PRE-CAST CONCRETE SEATING STEPS**
Location: to Union Bridge Waterfront and lower Red Bank Terraces
Material: pre-cast concrete
Colour: buff/natural tone
Finish: acid etched with contrasting nosings

S8.2 **TACTILE CONDUROY HAZARD PAVING**
Location: Red Bank Terraces and Union Waterfront wherever there are steps
Material: pre-cast concrete coundurory pavers
Colour: natural TBC
Size: 400 (l) x 400 (w) x 50 (d)mm
Finish: textured
Laid: stack bond

S9 **TACTILE BLISTER HAZARD PAVING**
Location: road crossings
Material: pre-cast concrete blister pavers
Colour: natural TBC
Size: 400 (l) x 400 (w) x 50 (d)mm
Finish: textured
Laid: stack bond

S10 **TIMBER TOPPED SEATING STEPS**
Location: to Red Bank Terrace, and Union W-front
Material: gabion baskets (opportunity to fill rear with site won recycled material. Front faced in natural sandstone) with a timber top seat TBC
Colour: buff/natural tones TBC
Spec: TBC

S11 **BARK CHIPPINGS**
Location: to secondary pedestrian paths in St. Catherine's Wood
Material: high grade bark chippings
Colour: natural

S11.1 **TIMBER STEPS ALONG BARK PATH**
Location: to informal tertiary routes within St Catherine's Wood
Material: FSC timber TBC
Colour: natural/treated timber TBC
Spec: TBC

S12 **RUBBER BARK LOOK CHIPPINGS**
Location: to St. Catherine's Wood Play Area
Material: Tiger Bark or similar and approved
Colour: natural

STEPPING STONE PATH
Location: to tertiary route within St Catherine's Wood
Material: natural stone TBC
Colour: buff/natural tones TBC
Size: TBC
Finish: to meet required slip resistance TBC
Laid: on concrete haunchings

PROPOSED SOFTWORKS

PROPOSED TREE PLANTING
Subject to further detailed design

EXISTING TREES RETAINED
Subject to further detailed design

M1 **EXISTING WOODLAND ENHANCED**
To St. Catherine's Wood
Refer to drawing for notes
Approx area: 12215m²

M2 **WOODLAND MATRIX MIX**
To St. Catherine's Wood
Refer to drawing for notes
Approx area: 5960m²

M3 **WOODLAND EDGE MIX**
To St. Catherine's Wood
Refer to drawing for notes
Approx area: 1265m²

M4 **ORNAMENTAL PLANTING**
To Red Bank Terraces
Refer to drawing for notes
Approx area: 3155m²

M5 **ORNAMENTAL PLANTING**
To Viaduct Linear Park
Refer to drawing for notes
Approx area: 1412m²

M6 **AQUATIC MARGINAL VEGETATION**
To Rivers Edge
Refer to drawing for notes
Approx area: 1690m²

HEDGE PLANTING
Mixed native species hedgerow mix to northern boundary
Approx area: 73m², Approx length: 50m

RB06

RB07

NT01

INSET AREA A

Landscape implemented as part of the plot design.

Landscape implemented as part of the plot design.

Existing bank cleared of fly tipped material and debris

Section of river wall removed

Drainage Outfall

Permeable green gap paving

Clay paving

Active edge/clear route for vehicular access, pedestrians & cyclists

Timber topped concrete benches

Planting terraces

Accessible lower route

Concrete seating terraces stepping down to lower level near rivers edge

Channel definition created using flow deflector D's created with staked timber backfilled with brash, soil and planted with native species

Section of river wall removed

Sunken landform for attenuation

Drainage Outfall

Resin bonded gravel path linking to St. Catherine's Wood

Section of river wall removed

CRABBE STREET

HARGREAVE STREET

WMF 1.8m

WMF 1.6m

Union Bridge

Tarmac

Conc

Ta

LP

GP

P

RS

B

NOTE: Future Plot Extents are Indicative Only

Rev	Date	Description	By	Chkd	Appd	Auth
P02.04	02.03.22	Final Draft Planning	CL	MS	GB	GB
P02.03	14.02.22	Draft Planning	CL	MS	GB	GB
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P02.01	28.01.22	Draft Planning	BM	MS	GB	GB
P01	17.12.21	Stage 3 Issue	SR	MS	GB	GB

Client

MANCHESTER CITY COUNCIL

bam nuttall

Project Title

Victoria North HIF Infrastructure

Key Plan

Drawing Title

Union Plaza - Detailed Area Plan
For Approval

Scale at A1	Planit-IE Job No
1:250	2700

Role: Landscape Architect

Suitability: S2

Rev	By	Chkd	Appd	
P02.04	SR	MS	MS	
	Date	Date	Date	
	17.12.21	17.12.21	17.12.21	

Name

Project	Originator	Volume	Location	Type	Role	Number
VNIF	PLA	ZZ	YYY	DR	L	1012

Do not scale

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A1

RB12b

RB01

RB12a

RB06

RB08

RB07

SUB.

Landscape implemented as part of the plot design.

Landscape implemented as part of the plot design.

Terraced seating walls

Seating wall overlooking terraces

Brick faced wall to match existing

Resin bonded path to existing viaduct

Gabion walls

Gabion walls

Timber top gabion wall seating terraces

Concrete steps with contrasting nosings

Concrete terraced plinths

Gabion walls

steel deck step links

Scale bar (m)

0 2 5 10 20 50

Do not scale

NOTE: Future Plot Extents are Indicative Only

KEY

SITE BOUNDARY

PROPOSED HARDWORKS

S1 CLAY PAVING
Location: to pedestrian public areas
Material: natural clay paving
Colour: two colour mixes in warm buff tones TBC
Size: 200 (l) x 65 (w) x 85 (d)mm
Finish: sanded/watersruck TBC
Laid: stretcher/herringbone bond TBC

S2 TEMPORARY ASPHALT SURFACE (PERMEABLE)
Location: to vehicular carriageway on Red Bank
Material: permeable tarmacadam.
Spec: vehicular build up. TBC

S2.1 TEMPORARY ASPHALT SURFACE (PERMEABLE)
Location: to pedestrian routes sitewide
Material: permeable tarmacadam.
Spec: pedestrian build up. TBC

S3 NATURAL STONE SETTS
Location: to St Catherine's Wood entrance area
Material: natural granite setts
Colour: mixed tones TBC
Size: 100 (l) x 100 (w) x 80 (d)mm
Finish: cropped sides, sawn top TBC
Laid: stretcher bond

S4 RESIN BONDED GRAVEL
Location to St Catherine's Wood and viaduct paths
Material: resin bonded natural gravel stones
Colour: warm buff tones TBC

S5 GREEN GAP BLOCK PAVING
Location to Union Bridge Waterfront
Material: opportunity to use reclaimed cobbles (to be developed further in RIBA Stage 4)
Colour: TBC
Size/finish TBC
Laid: stretcher with gaps for planting/grass

S6 ELEVATED DECKING
Location: Red Bank Terraces and St Catherine's Wood
Spec: To meet required slip resistance standards
Finish: TBC

S6.1 DECKING STEPS
Location: Red Bank Terraces and St Catherine's Wood
Spec: To meet required slip resistance standards
Finish: TBC

S6.2 TACTILE HAZARD WARNING STRIPS
Location: Red Bank Terraces and St Catherine's Wood at top/bottom of step flights
Spec: TBC

S7 ELEVATED DECK
Location: to elevated walkway/cycle route in St. Catherine's Wood and Union Waterfront deck
Material: TBC
Colour: buff/natural tones
Finish: to meet required slip resistance

S8 PRE-CAST CONCRETE STEPS
Location: to Union Bridge Waterfront and Red Bank Terraces
Material: pre-cast concrete
Colour: buff/natural tone
Finish: acid etched with contrasting nosings

S8.1 PRE-CAST CONCRETE SEATING STEPS
Location: to Union Bridge Waterfront and lower Red Bank Terraces
Material: pre-cast concrete
Colour: buff/natural tone
Finish: acid etched with contrasting nosings

S8.2 TACTILE CORDUROY HAZARD PAVING
Location: Red Bank Terraces and Union Waterfront wherever there are steps
Material: pre-cast concrete corduroy pavers
Colour: natural buff tones
Size: 400 (l) x 400 (w) x 50 (d)mm
Finish: textured
Laid: stack bond

S9 TACTILE BLISTER HAZARD PAVING
Location: road crossings
Material: pre-cast concrete blister pavers
Colour: natural TBC
Size: 400 (l) x 400 (w) x 50 (d)mm
Finish: textured
Laid: stack bond

S10 TIMBER TOPPED SEATING STEPS
Location: to Red Bank Terraces and Union W front
Material: gabion baskets (opportunity to fill rear with site won recycled material. Front faced in natural sandstone) with a timber top seat TBC
Colour: buff/natural tones TBC
Spec: TBC

S11 BARK CHIPPINGS
Location: to secondary pedestrian paths in St. Catherine's Wood
Material: high grade bark chippings
Colour: natural

S11.1 TIMBER STEPS ALONG BARK PATH
Location: to informal tertiary routes within St Catherine's Wood
Material: FSC timber TBC
Colour: natural/treated timber TBC
Spec: TBC

S12 RUBBER BARK LOOK CHIPPINGS
Location: to St. Catherine's Wood Play Area
Material: Tiger Bark or similar and approved
Colour: natural

S13 STEPPING STONE PATH
Location: to tertiary route within St Catherine's Wood
Material: natural stone TBC
Colour: buff/natural tones TBC
Size: TBC
Finish: to meet required slip resistance TBC
Laid: on concrete haunchings

PROPOSED SOFTWORKS

PROPOSED TREE PLANTING
Subject to further detailed design

EXISTING TREES RETAINED
Subject to further detailed design

M1 EXISTING WOODLAND ENHANCED
To St. Catherine's Wood
Refer to drawing for notes
Approx area: 1221m²

M2 WOODLAND MATRIX MIX
To St. Catherine's Wood
Refer to drawing for notes
Approx area: 5960m²

M3 WOODLAND EDGE MIX
To St. Catherine's Wood
Refer to drawing for notes
Approx area: 1265m²

M4 ORNAMENTAL PLANTING
To Red Bank Terraces
Refer to drawing for notes
Approx area: 315m²

M5 ORNAMENTAL PLANTING
To Viaduct Linear Park
Refer to drawing for notes
Approx area: 1412m²

M6 AQUATIC MARGINAL VEGETATION
To Rivers Edge
Refer to drawing for notes
Approx area: 2690m²

HEDGE PLANTING
Mixed native species hedgerow mix to northern boundary
Approx area: 73m², Approx length: 50m

Rev	Date	Description	By	Chkd	Appd	Auth
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P01	17.12.21	Stage 3 Issue	SR	MS	GB	GB

Client

MANCHESTER CITY COUNCIL

bam nuttall

Project Title

Victoria North HIF Infrastructure

Key Plan

Drawing Title

Red Bank Terraces - Detailed Area Plan
For Approval

Scale at A1	Planit-IE Job No
1:250	2700

Role: Landscape Architect

Suitability: S2

Rev	By	Chkd	Appd	
P02.04	SR	MS	MS	
	Date	Date	Date	
	17.12.21	17.12.21	17.12.21	

Name

Project	Originator	Volume	Location	Type	Role	Number
VNIF	PLA	ZZ	YYY	DR	L	1013

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A1

ASSOCIATED DOCUMENTS :

This Tree Constraints Plan should be read in conjunction with the Red Bank And Dantzic Street Manchester Tree Constraints Report (September 2021) produced by The Environmental Partnership which details tree/group condition, life expectancy and the contribution to amenity.

TREE WORKS NOTES:

All felling and tree surgery is to be carried out by an Arboricultural Association approved contractor. All operations are to be carried out in accordance with BS3998:2010 Recommendations for tree work and N.P.T.C certification guidelines.

METHOD STATEMENT:

Tree felling and surgery works are to be carried out prior to the commencement of main construction works. Once complete, approved hoarding is to be erected around the construction area.

Under no circumstances should materials, vehicles, equipment, diesel or spoil be stored within the canopy of retained trees. Similarly no excavations for services or other construction activities are to be carried out within the protected zone unless they are in accordance with the agreed Arboricultural Method Statement.

Note;-

- Tree felling should not be undertaken through the months of March to August unless agreed with the local planning authority due to the nesting birds season.

- If the program of works clashes with these dates then any trees in question should be heavily prunned to reduce the chance of nesting during the above months.

Extracted from BS 5837: 2012 Trees in relation to design, demolition and construction - Recommendations

This text has been extracted from the aforementioned guidance document and highlights the key factors when considering trees in relation to demolition and construction. For further information and conformation on protection measures contractors should familiarise themselves with the full document prior to any site works.

Section 3: Terms and definitions

3.5 Construction:
Site-based operations with the potential to affect existing trees.

3.6 Construction Exclusion Zone:
Area based on the Root Protection Area (3.7) from which access is prohibited or controlled for the duration of a project.

3.7 Root Protection Area (RPA):
Layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority.

Section 4: Feasibility: surveys and preliminary constraints:

4.6 For single stem trees, the RPA (see 3.7) should be calculated as an area equivalent to a circle with a radius 12 times the stem diameter. For trees with more than one stem, one of the two calculation methods below should be used. In all cases, the stem diameter(s) should be measured in accordance with Annex C, and the RPA should be determined from Annex D. The calculated RPA for each tree should be capped to 707 m2.

a) For trees with two to five stems, the combined stem diameter should be calculated as follows:

(stem diameter 1)2 + (stem diameter 2)2 ... + (stem diameter 5)2

b) For trees with more than five stems (not illustrated in Annex C), the combined stem diameter should be calculated as follows:

(mean stem diameter)2 × number of stems

6.1 Arboricultural Method Statement:

6.1.1 A precautionary approach towards tree protection should be adopted and any operations, including access, proposed within the RPA (or crown spread where this is greater) should be described within an Arboricultural Method Statement, in order to demonstrate that the operations can be undertaken with minimal risk of adverse impact on trees to be retained.

6.2 Barriers and ground protection:
6.2.1 General:
6.2.1.1 All trees that are being retained on site should be protected by barriers and/or ground protection before any materials or machinery are brought onto the site, and before any demolition, development or stripping of soil commences. Where all activity can be excluded from the RPA, vertical barriers should be erected to create a construction exclusion zone. Where, due to site constraints, construction activity cannot be fully or permanently excluded in this manner from all or part of a tree's RPA, appropriate ground protection should be installed (see 6.2.3).

6.2.2 Barriers:
6.2.2.1 Barriers should be fit for the purpose of excluding construction activity and appropriate to the degree and proximity of work taking place around the retained tree(s). Barriers should be maintained to ensure that they remain rigid and complete.

6.2.3 Ground protection during demolition and construction:

6.2.3.1 Where construction working space or temporary construction access is justified within the RPA, this should be facilitated by a set-back in the alignment of the tree protection barrier. In such areas, suitable hard surfacing routes should be installed to act as temporary ground protection during construction. The suitability of such surfacing for this purpose should be evaluated by the project arboriculturist (TEP) and civil engineer (Arup) as appropriate. All construction vehicles should keep to these routes in order to minimise any overrun of the tree RPA.

6.2.3.2 Where the set-back of the tree protection barrier would expose unmade ground to construction damage, new temporary ground protection should be installed as part of the implementation of physical tree protection measures prior to work starting on site.

6.2.3.3 New temporary ground protection should be capable of supporting any traffic entering or using the site without being distorted or causing compaction of underlying soil.

7.2 Avoiding physical damage to the roots during demolition or construction.

7.2.1 To avoid damage to tree roots, existing ground levels should be retained within the RPA. Intrusion into soil (other than for piling) within the RPA is generally not acceptable, and topsoil within it should be retained in situ. However, limited excavation within the RPA might be acceptable, subject to justification. Such excavation should be undertaken carefully, using hand-held tools and preferably by compressed air soil displacement. Where hand-held tools cannot be used, any machinery and mechanical tools should be agreed with the project arboriculturist (TEP).

7.3 Tree protection during demolition

7.3.1 Where demolition is proposed on a site where trees are to be retained, access facilitation pruning should be undertaken as necessary to prevent injurious contact between demolition plant and the tree(s). In some cases, working space may be provided by temporarily tying back tree branches. Pruning or tying should be undertaken in accordance with a specification prepared by an arboriculturist.
NOTE The local authority will be able to advise whether the trees are under statutory protection such that consent for tree works might be required.

7.3.2 When demolishing a structure (including underground structures) within what would otherwise be the RPA, barriers should be erected, and ground protection installed (see 6.2.3), to protect the underlying soil to the edge of the existing structure.

7.3.4 Where trees stand adjacent to structures to be removed, the demolition should be undertaken inwards within the footprint of the existing structure (often referred to as "top down, pull back").

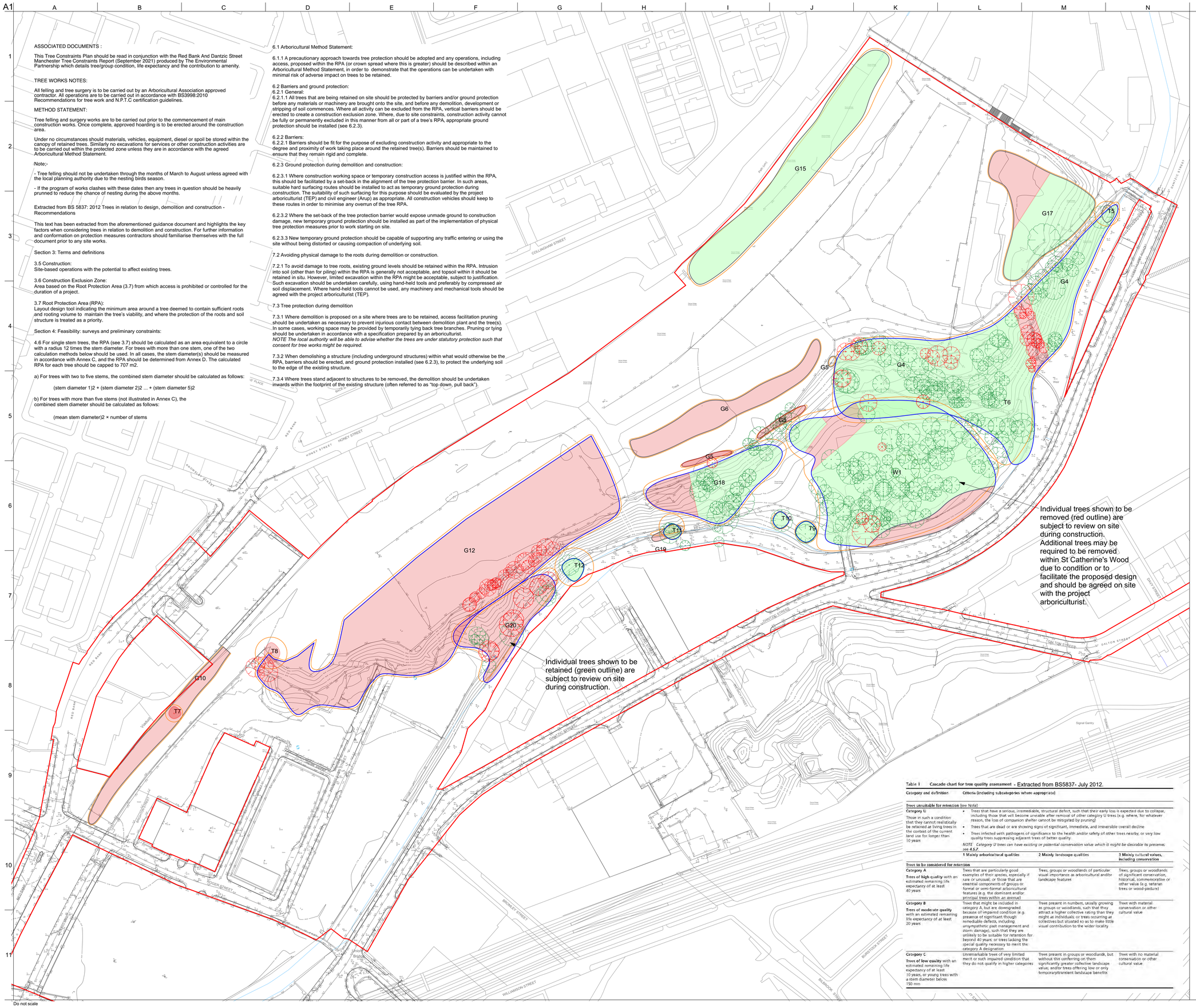


Table 1 Cascade chart for tree quality assessment - Extracted from BS5837- July 2012.

Category and definition	Criteria (including subcategories where appropriate)		
Trees unsuitable for retention (see Note)			
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	• Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) • Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline • Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality *NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.*		
	1 Mainly arboricultural qualities	**2 Mainly landscape qualities**	**3 Mainly cultural values, including conservation**
Trees to be considered for retention			
Category A **Trees of high quality** with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual, or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)
Category B **Trees of moderate quality** with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value
Category C **Trees of low quality** with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value

NOTE: Future Plot Extents are Indicative Only

BOUNDARIES
- Red Line Boundary

Existing tree /tree groups to be removed (red fill)
Refer to categories below (outline colour)
Approx Area: 6285m²

Existing trees/tree groups to be retained (green fill)
Refer to categories below (outline colour)
Approx Area: 19845m²

Root Protection Area

Rev	Date	Description	By	Chkd	Appd	Auth
P02.06	15.02.22	Final Draft Planning	CL	MS	GB	GB
P02.05	14.02.22	Final Draft Planning	CL	MS	GB	GB
P02.04	04.02.22	Draft Planning	BM	MS	GB	GB
P02.03	02.02.22	Draft Planning	CL	MS	GB	GB
P02.02	27.01.22	Draft Planning	BM	MS	GB	GB
P02.01	26.01.22	Draft Planning	BM	MS	GB	GB
P01	17.12.21	Stage 3 Issue	SR	MS	GB	GB
P01.03	01.12.21	For Information	SR	MS	GB	GB
P01.02	26.11.21	For Information	EKH	MS	GB	GB
P01.01	24.11.21	For Information	EKH	MS	GB	GB

Client

MANCHESTER CITY COUNCIL

bam nuttall

Project Title

Victoria North HIF Infrastructure

Drawing Title

Tree Retention and Removal Plan
For Approval

Scale at A1	Planit-IE Job No
1:1000	2700

Role: Landscape Architect

Suitability: S2

Rev	By	Chkd	Appd	
P02.06	EKH	MS	MS	
	Date	Date	Date	
	17.12.21	17.12.21	17.12.21	

Name

Project	Originator	Volume	Location	Type	Role	Number
VNIF	PLA	ZZ	YYY	DR	L	1006

Do not scale

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A1

NOTE: Future Plot Extents are Indicative Only

KEY

PROPOSED GRADIENT

+00.00 PROPOSED LEVEL

EXISTING GRADIENT

+00.00 EXISTING LEVEL

RB01
RB02
RB03
RB04
RB05a
RB05b
RB05c
RB06
RB07
RB08
RB09
RB11
RB12a
RB12b
RB16
RB17
NT01
NT02
NT03
NT04

Rev	Date	Description	By	Chkd	Appd	Auth
P02.04	02.03.22	Final Draft Planning	CL	MS	GB	GB
P02.03	14.02.22	Draft Planning	CL	MS	GB	GB
P02.02	04.02.22	Draft Planning	BM	MS	GB	GB
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P01.02	26.11.21	For Information	SR	MS	GB	GB
P01.01	24.11.21	For Information	EKH	MS	GB	GB

Client

MANCHESTER CITY COUNCIL

bam nuttall

Project Title

Victoria North HIF Infrastructure

Drawing Title

Proposed Levels General Arrangement Plan

For Approval

Scale at A1	Planit-IE Job No
1:1000	2700

Role: Landscape Architect

Suitability: S2

Rev	By	Chkd	Appd
P02.04	SR	MS	MS
	Date	Date	Date
	17.12.21	17.12.21	17.12.21

Name

Project	Originator	Volume	Location	Type	Role	Number
VNIF	PLA	ZZ	YYY	DR	L	1007

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NOTE: Extent of existing trees within St Catherine's Wood to be reviewed on site during Stage 4 due to limited topographical survey information in some areas. Proposed new trees subject to review, symbols shown on drawing are indicative only and do not represent the precise number of proposed new tree planting.

M4 - Ornamental Planting Mix;

Introduction of native (minimum 50%) and non native tree species including species bearing berries and nectar. Example species in mix include; Alder (Alnus glutinosa), Beech (Fagus sylvatica) , Silver Birch (Betula pendula), Elm (Ulmus procera), Hornbeam (Carpinus betulus), English Oak (Quercus robur) and Yew (Taxus baccata).

Mix of native & exotic planting species, providing year round interest and supporting a range of pollinator species. Example species in mix include; Lady's Mantle (Alchemilla mollis), Aster x frikartii 'Monch', Yarrows (Achillea sp.), Tussock Grass (Deschampsia cespitosa), Martin's Spurge (Euphorbia x martini), Lesser Catmint (Calamintha nepeta), Black-Eyed Susan (Rudbeckia fulgida var. deamii) & Purpletop Vervain (Verbena bonariensis)

M5 - Ornamental Viaduct Mix;

Mix of native & exotic species, providing an enhanced version of the pioneer habitat. Species suitable for growing in a gravel substrate, in dry conditions. Example species include; Oxeye Daisy (Leucanthemum vulgare), Eryngium sp., Calamagrostis x acutiflora 'Karl Foerster', Aquilegia alpine, Armeria maritima, Artemisia sp., Thymus vulgaris, Veronica spicata, Erigeron karvinskianus, Euphorbia sp., Sedum sp., Scabious sp.

M7 - Native Hedgerow Mix
Example species include; Hawthorn (Crataegus monogyna), Bird Cherry (Prunus padus), Alder (Alnus glutinosa), Field Maple (Acer campestre), Dog Rose (Rosa canina), Hazel (Corylus avellana), Blackthorn (Prunus spinosa

Regionally scarce Yellow Bird's-nest present in this area and to be retained where possible. Any loss of this population would be a significant adverse impact of high regional significance.

M3 - Woodland Edge Planting Mix;

Creation of clearings will allow for a rich woodland edge mix of native species to flourish. Example species in mix include; Foxgloves (Digitalis purpurea), Cow parsley (Anthriscus sylvestris), Primrose (Primula vulgaris), Red campion (Silene dioica), Male fern (Dryopteris filix-mas), Teasel (Dipsacus fullonum), Verbascum (Great Mullein) & Betony (Betonica officinalis)

M1 - Retain & enhance existing woodland

Selective retention of existing species (considering biological, cultural or aesthetic value) such as Ash, Oak, Sycamore, Field Maple, Silver Birch, Goat Willow and Elder, based on results from the Arboricultural survey.

Introduction of native tree species throughout the woodland to increase species diversity, including species bearing berries and nectar. Example species in mix include; Alder (Alnus glutinosa), Beech (Fagus sylvatica) , Silver Birch (Betula pendula), Elm (Ulmus procera), Hornbeam (Carpinus betulus), English Oak (Quercus robur) and Yew (Taxus baccata)

Selective rotational coppicing of species such as Common Hazel to create a broad, open habit with a light canopy and encourage growth of an understory layer. Selective thinning of smaller specimens will also create room for neighbouring specimens move room to grow.

Proposed shrub layer to create a varied vegetation structure of varying heights. Example species in mix include; Blackthorn (Prunus spinosa), Field maple (Acer campestre), Guelder rose (Viburnum opulus), Hawthorn (Crataegus monogyna), Holly (Ilex aquifolium), Rowan (Sorbus aucuparia) and Spindle (Euonymus europaeus)

Proposed field & ground layer. Example species in mix include; Field Rose (Rosa arvensis), Bluebells (Hyacinthoides non-scripta), Wood anemone (Anemone nemorosa), Wild garlic (Allium ursinum), Dog violet (Viola riviniana), Woodruff (Galium odoratum), Wood Spurge (Euphorbia amygdaloides), Honeysuckle (Lonicera periclymenum), Male fern (Dryopteris filix-mas) & Soft shield fern (Polystichum setiferum)

M2 - Woodland Matrix Mix;

Introduction of native tree species including species bearing berries and nectar. Example species in mix include; Alder (Alnus glutinosa), Beech (Fagus sylvatica) , Silver Birch (Betula pendula), Elm (Ulmus procera), Hornbeam (Carpinus betulus), English Oak (Quercus robur) and Yew (Taxus baccata). Addition of Black Poplar (Populus nigra) to support Greater Manchester Local Biodiversity Action Plan.

Proposed shrub layer to create a varied vegetation structure of varying heights. Example species in mix include; Blackthorn (Prunus spinosa), Field maple (Acer campestre), Guelder rose (Viburnum opulus), Hawthorn (Crataegus monogyna), Holly (Ilex aquifolium), Rowan (Sorbus aucuparia) and Spindle (Euonymus europaeus)

Proposed field & ground layer. Example species in mix include; Field Rose (Rosa arvensis), Bluebells (Hyacinthoides non-scripta), Wood anemone (Anemone nemorosa), Wild garlic (Allium ursinum), Dog violet (Viola riviniana), Woodruff (Galium odoratum), Wood Spurge (Euphorbia amygdaloides), Honeysuckle (Lonicera periclymenum), Male fern (Dryopteris filix-mas) & Soft shield fern (Polystichum setiferum)

M6 - Aquatic marginal vegetation.
Example species include; Iris Pseudacorus (Yellow Flag Iris), Veronica beccabunga (Brooklime), Lythrum salicaria (Purple Loosestrife), Mentha aquatica (Water Mint), Juncus effusus (Soft Rush), Carex acuta (Pond Sedge), Caltha palustris (Marsh Marigold)

Bats;
Trees that are greater than 50cm diameter and more than 120 years old are most likely to contain roosts, and whilst the majority of trees on site are unsuitable for bats, there are some substantial trees present which offer roosting opportunities for bats. Features include rot holes, woodpecker holes, loose/flaking bark or dense ivy.

Tree species that are favoured by roosting bats have been considered and should be planted across the masterplan. These include Ash, Beech, Elm, Oak, Scots Pine and Willow. Provision of artificial nesting opportunities in the form of boxes will also be attached to trees.
The River Irk is a key foraging habitat for bats. This will be further enhanced by proposals to naturalise the channel which will have a beneficial impact on in-stream invertebrates and therefore provide an enhanced food source for bats.

Birds;
Existing woodland in St.Catherine's Wood supports nesting & breeding birds, including Blackbird, Blackcap, Blue Tit, Bullfinch, Chaffinch, Goldcrest, Long-tailed Tit, Robin, Song Thrush, Treecreeper and Wren. These should be retained where possible, and a more varied woodland structure created with areas of denser scrub to provide further habitats for nesting birds.

The River Irk supports breeding Grey Wagtail, Mallard and Moorhen, and further upstream the Kingfisher & Dipper. The creation of bankside habitats and enhancing in-stream biodiversity will help support existing species, and provide additional opportunities for a wider range of birds associated with aquatic habitats.

The Black Redstart is a Schedule 1 species, adapted to live in urban areas. It is identified within the Greater Manchester Local Biodiversity Action Plan as a locally key species. It prefers 'rocky' habitat offered in towns, docklands and industrial areas, and usually on a building ledge or a hole in a wall. The masterplan can offer foraging opportunities to support local populations of the Black Redstart, in addition to song post locations.

NOTE: Future Plot Extents are Indicative Only

PROPOSED SOFTWORKS

- PROPOSED TREE PLANTING — Subject to further detailed design
- EXISTING TREES RETAINED — Subject to further detailed design
- M1 — EXISTING WOODLAND ENHANCED — To St. Catherine's Wood; Refer to drawing for notes; Approx area: 1221m²
- M2 — WOODLAND MATRIX MIX — To St. Catherine's Wood; Refer to drawing for notes; Approx area: 1960m²
- M3 — WOODLAND EDGE MIX — To St. Catherine's Wood; Refer to drawing for notes; Approx area: 1265m²
- M4 — ORNAMENTAL PLANTING — To Red Bank Terraces; Refer to drawing for notes; Approx area: 3150m²
- M3 — ORNAMENTAL PLANTING — To Viaduct Linear Park; Refer to drawing for notes; Approx area: 1412m²
- M6 — AQUATIC MARGINAL VEGETATION — To Rivers Edge; Refer to drawing for notes; Approx area: 2690m²
- HEDGE PLANTING — Mixed native species hedgerow mix to northern boundary; Approx area: 73m², Approx length: 50m

Rev	Date	Description	By	Chkd	Appd	Auth
P02.04	02.03.22	Final Draft Planning	CL	MS	GB	GB
P02.03	14.02.22	Draft Planning	CL	MS	GB	GB
P02.02	04.02.22	Draft Planning	BM	MS	GB	GB
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P01	17.12.21	Stage 3 Issue	SR	MS	GB	GB
P01.02	01.12.21	For Information	SR	MS	GB	GB
P01.01	26.11.21	For Information	SR	MS	GB	GB

Client: MANCHESTER CITY COUNCIL; bam nuttall

Project Title: Victoria North HIF Infrastructure

Key Plan

Drawing Title: Planting & Habitats Plan
For Approval

Scale at A1: 1:500	Planit-IE Job No: 2700
Role: Landscape Architect	
Suitability: S2	

Rev	By	Chkd	Appd
P02.04	SR	MS	MS
	Date: 17.12.21	Date: 17.12.21	Date: 17.12.21

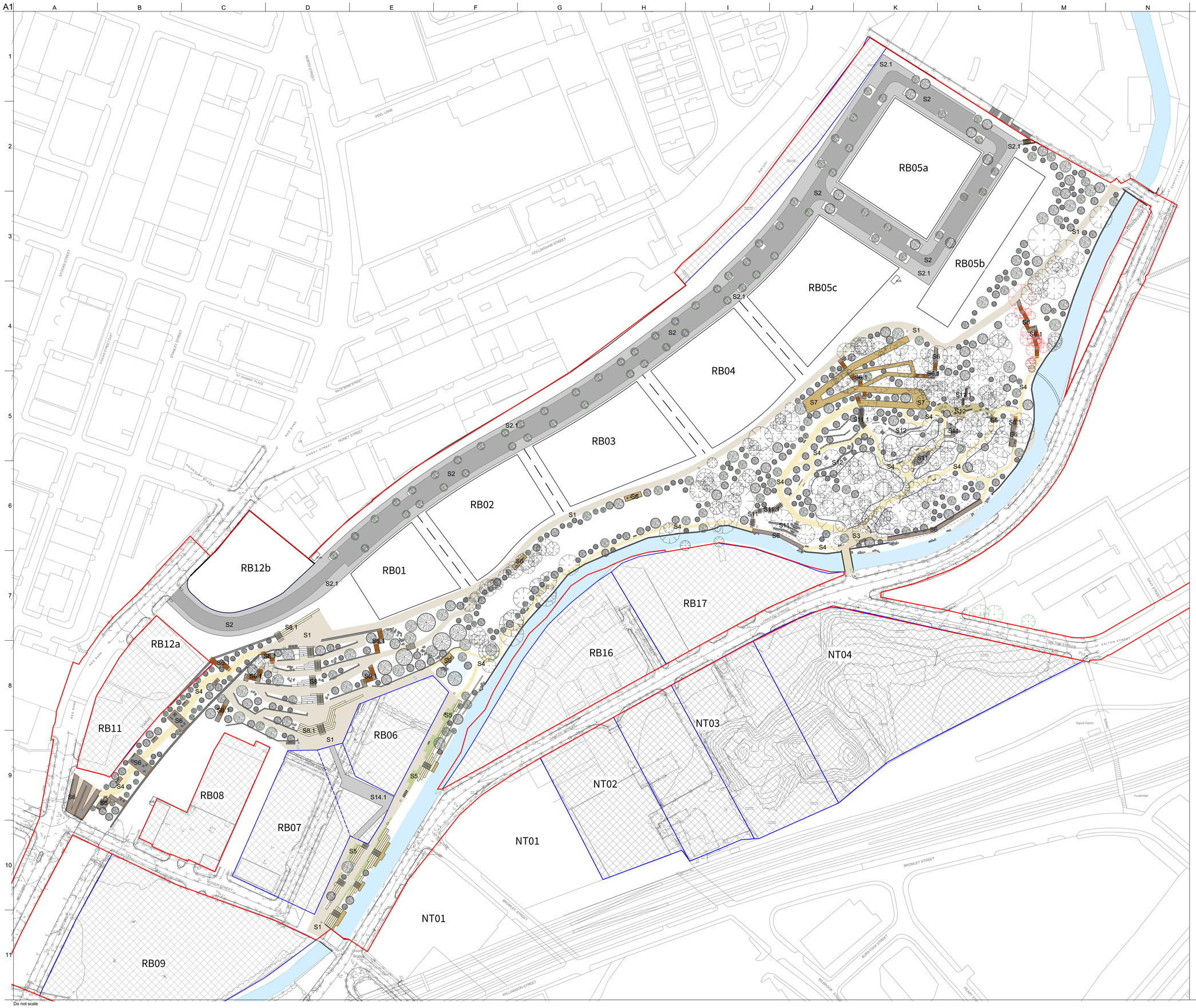
Name

Project	Originator	Volume	Location	Type	Role	Number
VNIF	PLA	ZZ	YYY	DR	L	1008

Do not scale

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A1



Do not scale

KEY

SITE BOUNDARY

PROPOSED HARDWORKS

S1 CLAY PAVING
Location: to pedestrian public areas
Material: natural clay paving
Colour: two colour mixes in warm buff tones TBC
Size: 200 (l) x 65 (w) x 85 (d)mm
Finish: sanded/wetsmtruck TBC
Laid: stretcher/herringbone bond TBC

S2 TEMPORARY ASPHALT SURFACE (PERMEABLE)
Location: to vehicular carriageway on Red Bank Plateau
Material: permeable tarmacadam.
Spec: vehicular build up. TBC

S2.1 TEMPORARY ASPHALT SURFACE (PERMEABLE)
Location: to pedestrian routes sidewide
Material: permeable tarmacadam.
Spec: pedestrian build up . TBC

S3 NATURAL STONE SETTS
Location: to St Catherine's Wood entrance area
Material: natural granite setts
Colour: warm buff tones TBC
Size: (200 (l) x 100 (w) x 80 (d)mm
Finish: cropped sides, sawn top TBC
Laid: stretcher bond

S4 RESIN BONDED GRAVEL
Location: to St Catherine's Wood and viaduct paths.
Material: resin bonded natural gravel stones
Colour: warm buff tones TBC

S5 GREEN GAP BLOCK PAVING
Location: to Union Bridge Waterfront
Material: opportunity to use reclaimed cobbles (to be developed further in RIBA Stage 4)
Colour: TBC
Size/finish: TBC
Laid: stretcher with gaps for planting/grass

S6 ELEVATED DECKING
Location: Red Bank Terraces and St. Catherine's Wood
Spec: To meet required slip resistance standards
Finish: TBC

S6.1 DECKING STEPS
Location: Red Bank Terraces and St. Catherine's Wood
Spec: To meet required slip resistance standards
Finish: TBC

S8 TACTILE HAZARD WARNING STRIPS
Location: Red Bank Terraces and St. Catherine's Wood at top/bottom of step flights
Spec: TBC

S7 ELEVATED DECK
Location: to elevated walkway/cycle route in St. Catherine's Wood and Union Waterfront deck
Material: TBC
Colour: buff/natural tones
Finish: to meet required slip resistance

S8.1 PRE-CAST CONCRETE STEPS
Location: to Union Bridge Waterfront and Red Bank Terraces
Material: pre cast concrete
Colour: buff/natural tone
Finish: acid etched with contrasting nosings

S8.1 PRE-CAST CONCRETE SEATING STEPS
Location to Union Bridge Waterfront and lower Red Bank Terraces
Material: pre-cast concrete
Colour: buff/natural tone
Finish: acid etched with contrasting nosings

S8.2 TACTILE CORDUROY HAZARD PAVING
Location: Red Bank Terraces and Union Waterfront wherever there are steps
Material: pre-cast concrete coundoury pavers
Colour: natural TBC
Size: 400 (l) x 400 (w) x 50 (d)mm
Finish: textured
Laid: stack bond

S9 TACTILE BLISTER HAZARD PAVING
Location: road crossings
Material: pre-cast concrete blister pavers
Colour: natural TBC
Size: 400 (l) x 400 (w) x 50 (d)mm
Finish: textured
Laid: stack bond

S10 TIMBER TOPPED SEATING STEPS
Location: to Red Bank Terraces and Union W front
Material: gabion baskets (opportunity to fill rear with site won recycled material. Front faced in natural sandstone) with a timber top seat TBC
Colour: buff/natural tones TBC
Spec: TBC

S11 BARK CHIPPINGS
Location: to secondary pedestrian paths in St. Catherine's Wood
Material: high grade bark chippings
Colour: natural

S6 TIMBER STEPS ALONG BARK PATH
Location: to informal/tertiary routes within St Catherine's Wood
Material: FSC timber TBC
Colour: natural/treated timber TBC
Spec: TBC

S12 RUBBER BARK LOOK CHIPPINGS
Location: to St. Catherine's Wood Play Area
Material: Tiger Bark or similar and approved
Colour: natural

S14.1 STEPPING STONE PATH
Location: to tertiary route within St Catherine's Wood
Material: natural stone TBC
Colour: buff/natural tones TBC
Size: TBC
Finish: to meet required slip resistance TBC
Laid: on concrete haunchings

Rev	Date	Description	By	Chkd	Appd	Auth
P02.04	02.03.22	Final Draft Planning	CL	MS	GB	GB
P02.03	14.04.22	Draft Planning	CL	MS	GB	GB
P02.02	02.04.22	Draft Planning	BM	MS	GB	GB
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P01	17.12.21	Stage 3 Issue	SR	MS	GB	GB
P01.01	03.12.21	For Information	CL	MS	GB	GB

Client

MANCHESTER CITY COUNCIL

bam nuttall

Project Title

Victoria North HIF Infrastructure

Key Plan

Drawing Title

Hardworks General Arrangement Plan
For Approval

Scale at A1	Planit-IE Job No
1:500	2700

Role: Landscape Architect

Suitability: S2

Rev	By	Chkd	Appd
P02.04	CL	MS	MS
	Date	Date	Date
	17.12.21	17.12.21	17.12.21

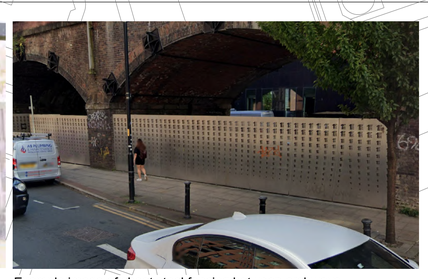
Name

Project	Originator	Volume	Location	Type	Role	Number
VNIF	PLA	ZZ	YYY	DR	L	1010

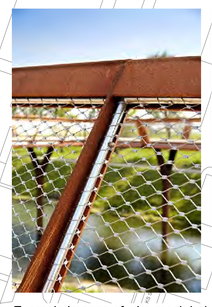
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Example image of laser cut sheet steel fencing



Example image of sheet steel fencing between archways





Example images of wire mesh balustrade fencing with steel supports

RB05a
RB05b
RB05c
RB04
RB03
RB02
RB01
RB12b
RB12a
RB11
RB08
RB07
RB06
RB09
RB16
RB17
NT04
NT03
NT02
NT01

River wall retained in areas with sections removed as part of the bank re-profiling

Proposed retaining structure cut into existing viaduct wall to accommodate new plateau road

COLUMBIUM STREET
ST THOMAS PLACE
RED BANK
HONEY STREET
ROGER STREET
BECTIVE STREET
WILLIAMSON STREET
BROMLEY STREET
BLUESTOCK STREET
BLUEBROOK STREET
PEARY STREET
DAVY STREET
DANTZIC STREET
DALTON STREET
DAYTON STREET
Viaduct
Signal Gantry
Footbridge
Union Bridge

NOTE: Future Plot Extents are Indicative Only

BOUNDARY TREATMENTS

EXISTING STRUCTURE RETAINED
- Existing walls at varying heights along north site boundary retained and viaduct edges.

LOWRY STEP STRUCTURE RETAINED / NEW STEEL FENCING TO EXISTING ARCHES
- Bespoke steel fencing/railing 2.4m height to arches/opening in existing structure. To include laser cut artwork in steel sheet (opportunity for historic and cultural referencing such as Lowry) - Situated between existing archways.

NEW STEEL FENCING TO VIADUCT
- Bespoke steel fencing/railing 2.4m height. To include laser cut artwork in steel sheet (opportunity for historic and cultural referencing such as Lowry) - Situated between area of viaduct to be re-landscaped as part of proposals and area left as is.

EXISTING RIVER WALL RETAINED
- Wall height varies, retained ends to be faced and made good.

PROPOSED FENCELINE
- Welded steel mesh fenceline at 1.8m height.
- Temporary fenceline/secure line prior to delivery of future building plots.

EXISTING FENCELINE
- Existing steel palisade fenceline to be retained.
- To be made good as required to maintain secure line where damaged or incomplete.
- Temporary fenceline/secure line prior to delivery of future building plots.

PROPOSED RETAINING STRUCTURE
Reclaimed brick wall tapered / stepped to maintain required height above footway level.

PROPOSED RIVERSIDE BALUSTRADE
- Stainless steel rope/mesh fencing with steel supports at 1.1m.

PROPOSED CYCLE BRIDGE RAILING
- Stainless steel rope/mesh fencing with illuminated railing and steel supports at 1.4m height.
- Situated on St Catherine's Bridge.

PROPOSED ACCESS CONTROL GATE
- Located at St Catherine's Wood bridge
- 1.4m height
- Bespoke steel fabrication, to include laser cut artwork in steel sheet (opportunity for historic and cultural referencing)

PROPOSED ACCESS CONTROL GATE
- Located at Red Bank junction
- 1.8m height
- Welded steel mesh fenceline at 1.8m height.
- Temporary fenceline/secure line prior to delivery of future building plots.

PROPOSED ACCESS CONTROL HOOPS/FRAMES
- Located at various locations to prevent access by motorbikes/dirtbikes
- Corten steel fabrication

Rev	Date	Description	By	Chkd	Appd	Auth
P02.03	02.03.22	Final Draft Planning	CL	MS	GB	GB
P02.02	14.02.22	Draft Planning	CL	MS	GB	GB
P02.01	04.02.22	Draft Planning	BM	MS	GB	GB
P01	17.12.21	Stage 3 Issue	SR	MS	GB	GB

Client

MANCHESTER CITY COUNCIL

bam nuttall

Project Title

Victoria North HIF Infrastructure

Drawing Title

Boundary Treatments Plan
For Approval

Scale at A1	Planit-IE Job No
1:1000	2700

Role: Landscape Architect

Suitability: S2

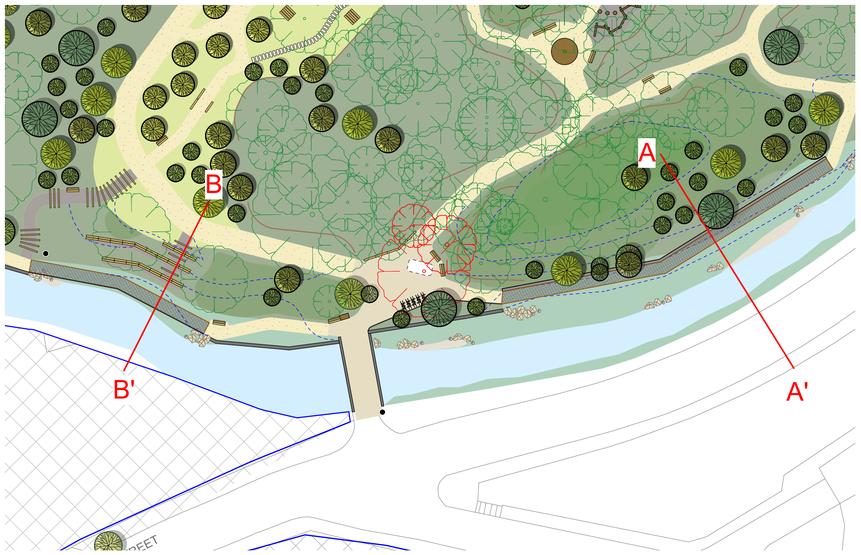
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	Date	Date	Date
	17.12.21	17.12.21	17.12.21

Name

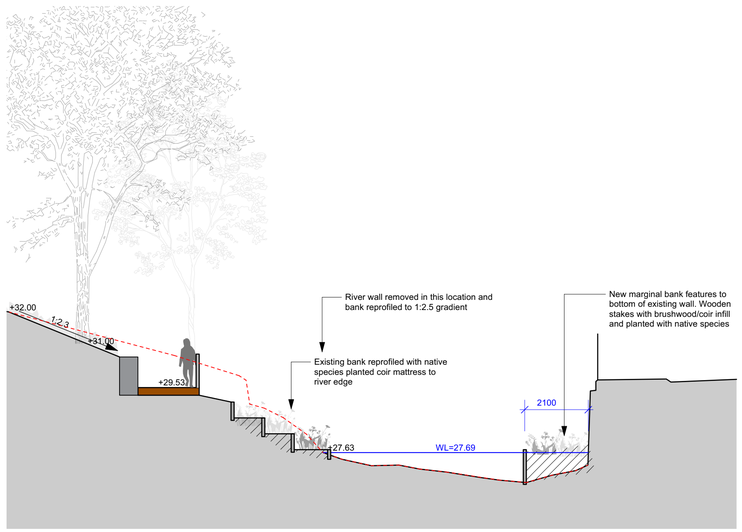
Project	Originator	Volume	Location	Type	Role	Number
VNIF	PLA	ZZ	YYY	DR	L	1014

Do not scale

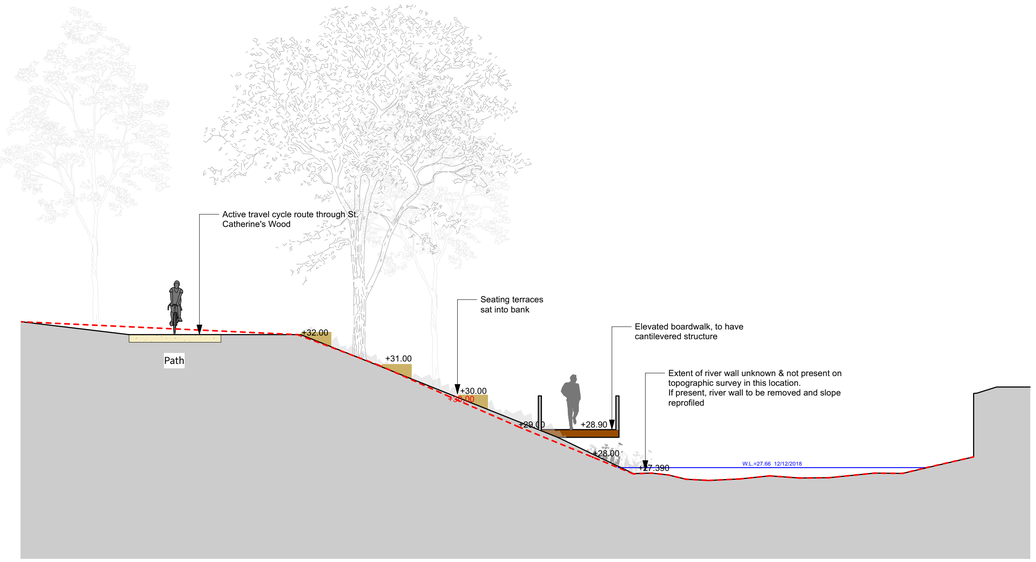
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LOCATION PLAN - 1:500



2 Section A-A'
Scale: 1:100



3 Section B-B'
Scale: 1:100

Rev	Date	Description	By	Chkd	Appd	Auth
P02.03	02.03.22	Final Draft Planning	CL	MS	GB	GB
P02.02	15.02.22	Draft Planning	CL	MS	GB	GB
P02.01	07.02.22	Draft Planning	BM	MS	GB	GB
P01	17.12.21	Stage 03	BM	MS	GB	GB

Client

MANCHESTER CITY COUNCIL

bam nuttall

Project Title

Victoria North HIF Infrastructure

Key Plan



Drawing Title

Riverside Sections 1 of 2

St Catherine's Wood - *For Approval*

Scale at A1	Planit-IE Job No
As Shown	2700

Role: Landscape Architect

Suitability: S2

Rev	By	Chkd	Appd	
P02.03	SR	MS	MS	
	Date	Date	Date	
	17.12.21	17.12.21	17.12.21	

Name

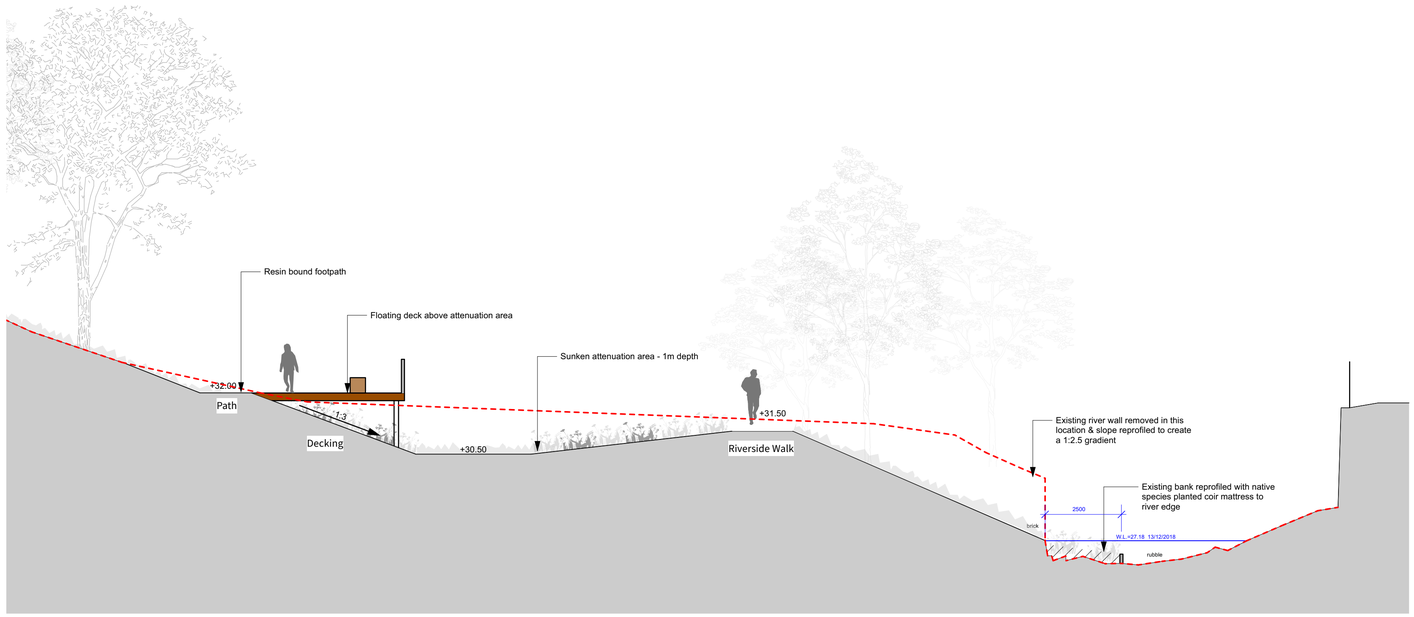
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VNIF	PLA	ZZ	YYY	DR	L	3001

Do not scale

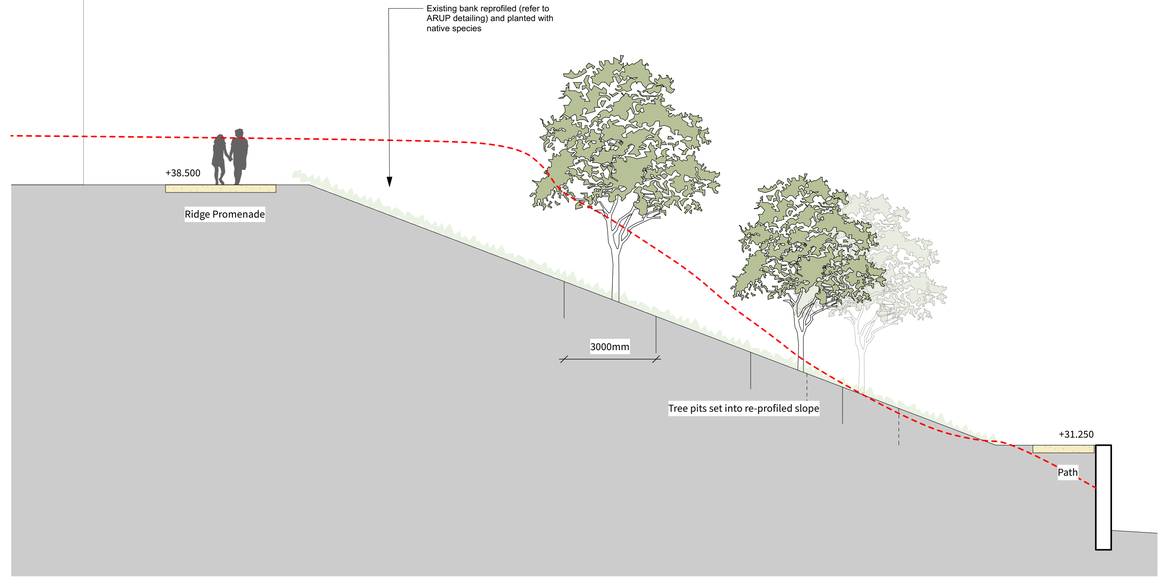
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LOCATION PLAN - 1:500



3 Section D-D'
Scale: 1:100



1 Section C-C'
Scale: 1:100

NOTE: Future Plot Extents are Indicative Only

Rev	Date	Description	By	Chkd	Appd	Auth
P02.03	02.03.22	Final Draft Issue	CL	MS	GB	GB
P02.02	15.02.22	Draft Issue	CL	MS	GB	GB
P02.01	07.02.22	Draft Issue	BM	MS	GB	GB
P01	17.12.21	Stage 3 Issue	BM	MS	GB	GB

Client

MANCHESTER CITY COUNCIL

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Project Title

Victoria North HIF Infrastructure

Key Plan



Drawing Title

Riverside Sections 2 of 2
St Catherine's Wood - *For Approval*

Scale at A1	Planit-IE Job No
As Shown	2700

Role: Landscape Architect

Suitability: S2

Rev	By	Chkd	Appd	
P02.03	SR	MS	MS	
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	17.12.21	17.12.21	17.12.21	

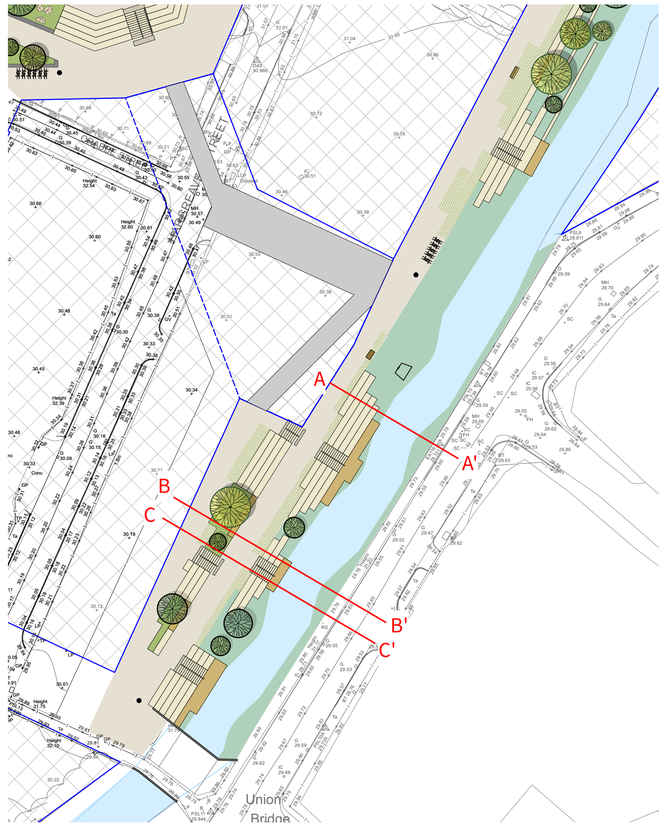
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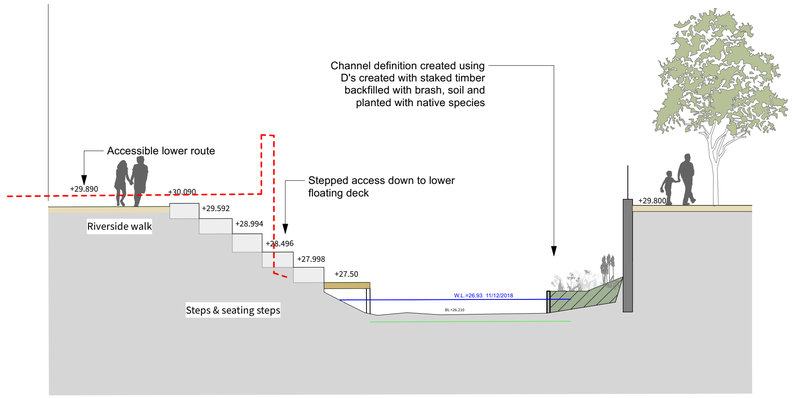
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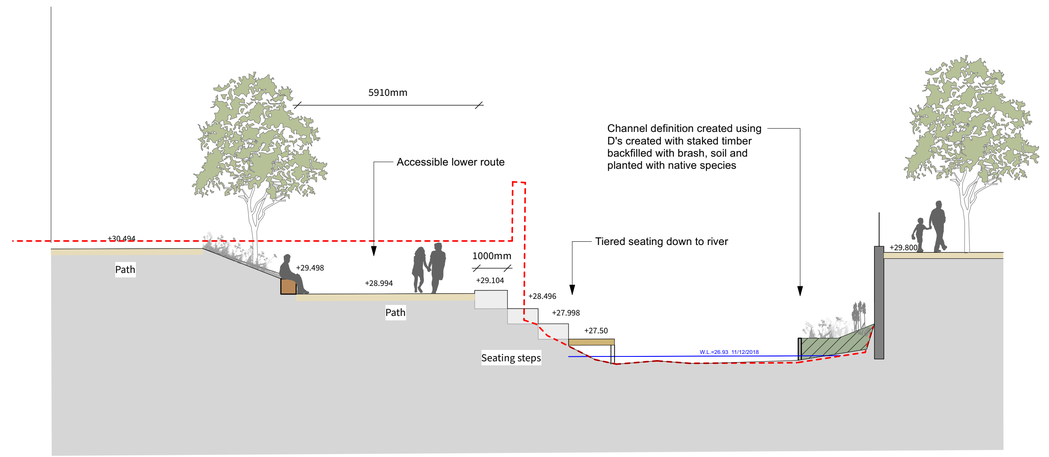
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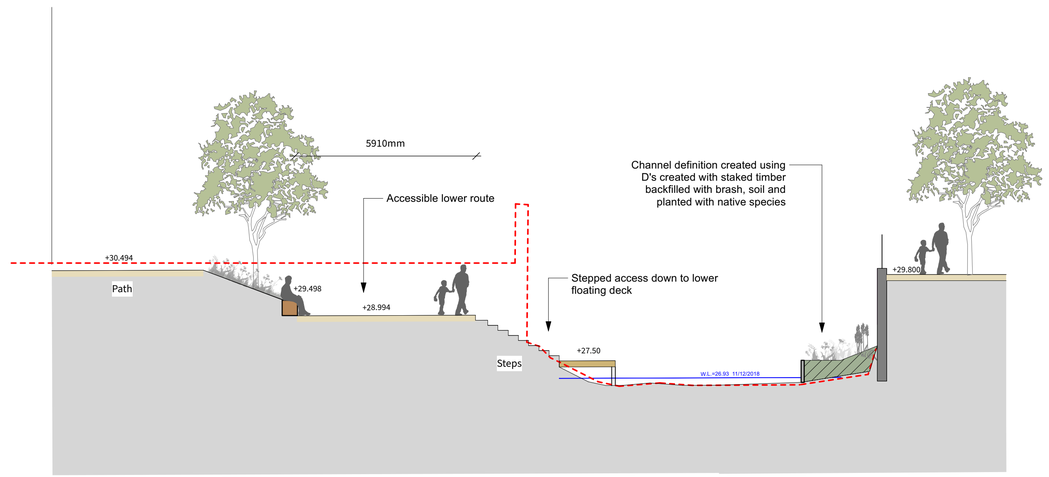
LOCATION PLAN - 1:500



3 Section A
Scale: 1:100



4 Section B
Scale: 1:100



1 Section C
Scale: 1:100

NOTE: Future Plot Extents are Indicative Only

Rev	Date	Description	By	Chkd	Appd	Auth
P02.03	02.03.22	Final Draft Issue	CL	MS	GB	GB
P02.02	15.02.22	Draft Issue	CL	MS	GB	GB
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P01	17.12.21	Stage 03	BM	MS	GB	GB

Client

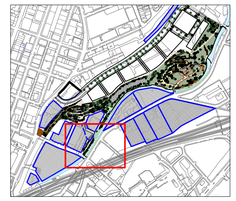
MANCHESTER CITY COUNCIL

bam nuttall

Project Title

Victoria North HIF Infrastructure

Key Plan



Drawing Title

Union Plaza Sections - *For Approval*

Scale at A1	Planit-IE Job No
As Shown	2700

Role: Landscape Architect

Suitability: S2

Rev	By	Chkd	Appd	
P02.03	SR	MS	MS	
	Date	Date	Date	
	17.12.21	17.12.21	17.12.21	

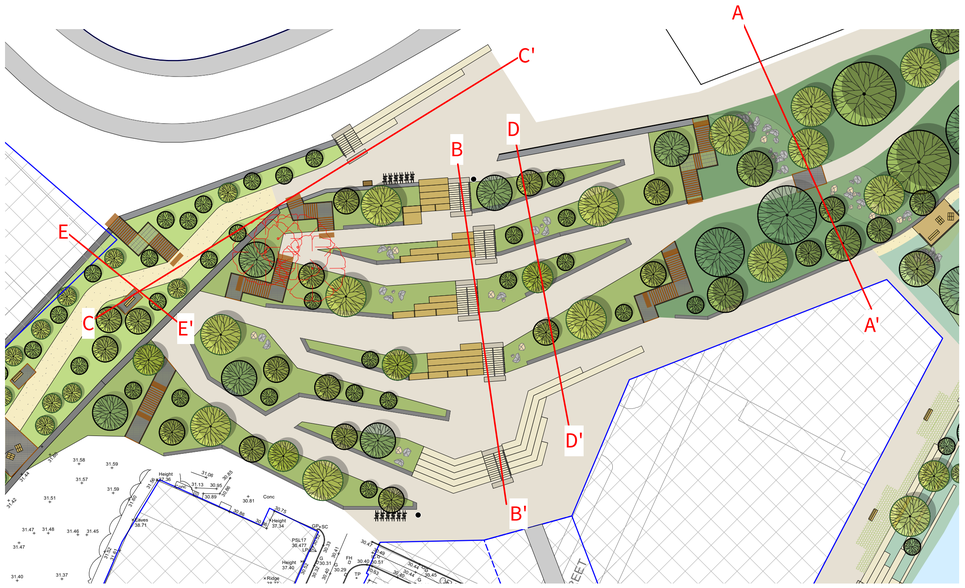
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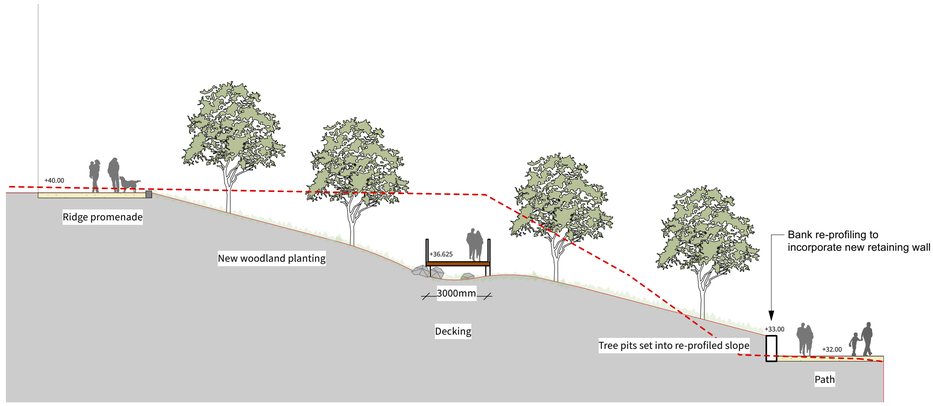
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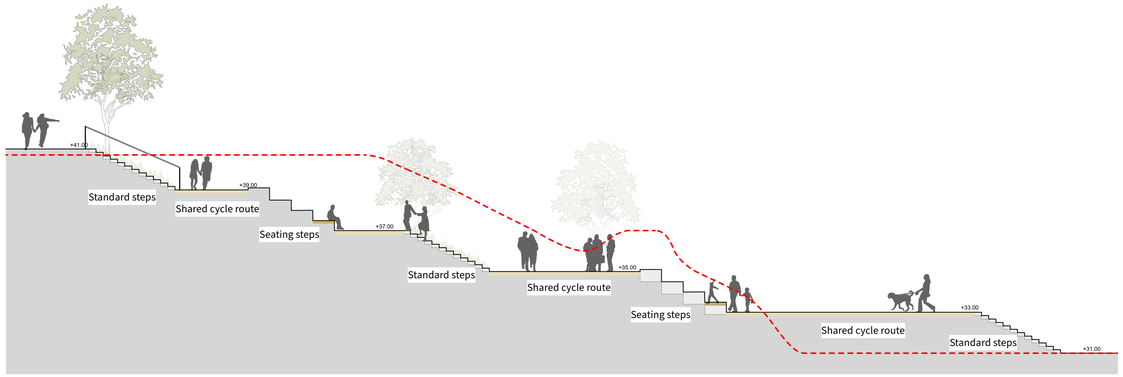
A1



LOCATION PLAN - 1:500



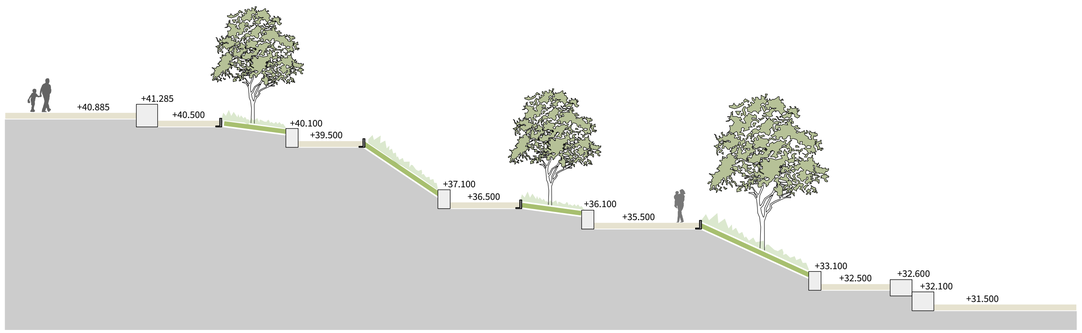
6 Section A
Scale: 1:150



5 Section B
Scale: 1:150



2 Elevation C
Scale: 1:150



1 Section D
Scale: 1:150

3 Section E
Scale: 1:150

NOTE: Future Plot Extents are Indicative Only

Rev	Date	Description	By	Chkd	Appd	Auth
P02.03	02.03.22	Final Draft Issue	CL	MS	GB	GB
P02.02	15.02.22	Draft Issue	CL	MS	GB	GB
P02.01	07.02.22	Draft Planning	BM	MS	GB	GB
P01	17.12.21	Stage 3 Issue	BM	MS	GB	GB

Client

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Project Title

Victoria North HIF Infrastructure

Key Plan



Drawing Title

Red Bank Sections
1 of 2 - *For Approval*

Scale at A1	Planit-IE Job No
As Shown	2700

Role: Landscape Architect

Suitability: S2

Rev	By	Chkd	Appd	
P02.03	SR	MS	MS	
	Date	Date	Date	
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Name

Project	Originator	Volume	Location	Type	Role	Number
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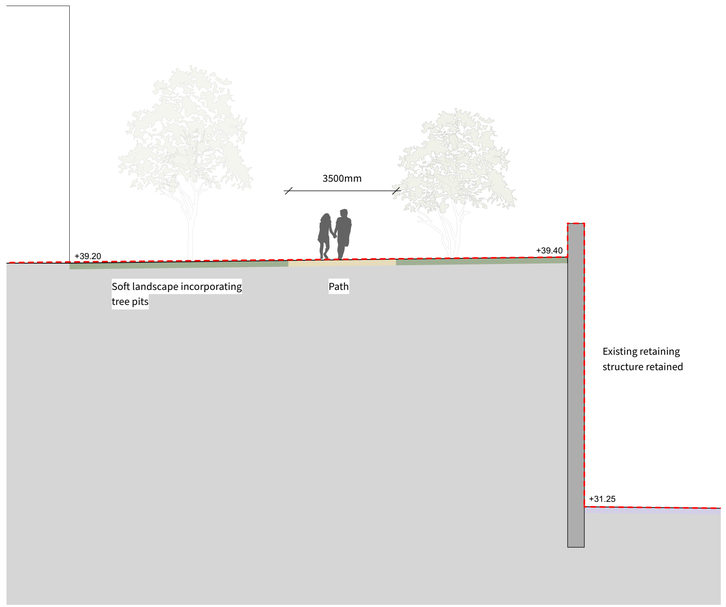
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A1



LOCATION PLAN - 1:500



2 Section D
Scale: 1:100



3 Section C
Scale: 1:100

NOTE: Future Plot Extents are Indicative Only

Rev	Date	Description	By	Chkd	Appd	Auth
P02.03	02.03.22	Final Draft Issue	CL	MS	GB	GB
P02.02	15.02.22	Draft Issue	CL	MS	GB	GB
P02.01	07.02.22	Draft Planning	BM	MS	GB	GB
P01	17.12.21	Stage 3 Issue	BM	MS	GB	GB

Client

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Project Title

Victoria North HIF Infrastructure

Key Plan



Drawing Title

Red Bank Sections

2 of 2 - *For Approval*

Scale at A1	Planit-IE Job No
As Shown	2700

Role: Landscape Architect

Suitability: S2

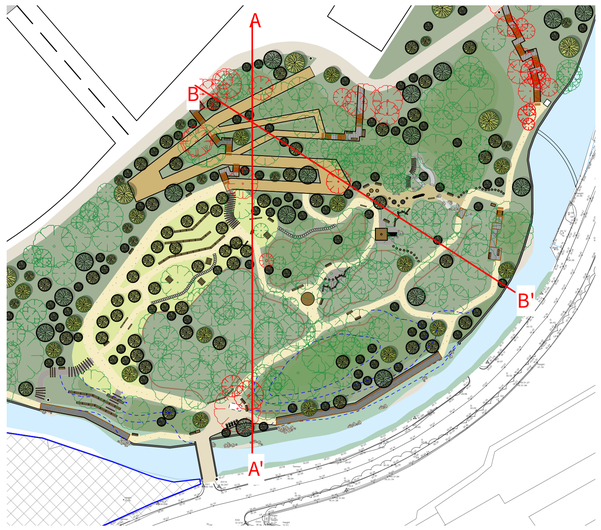
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Name

Project	Originator	Volume	Location	Type	Role	Number
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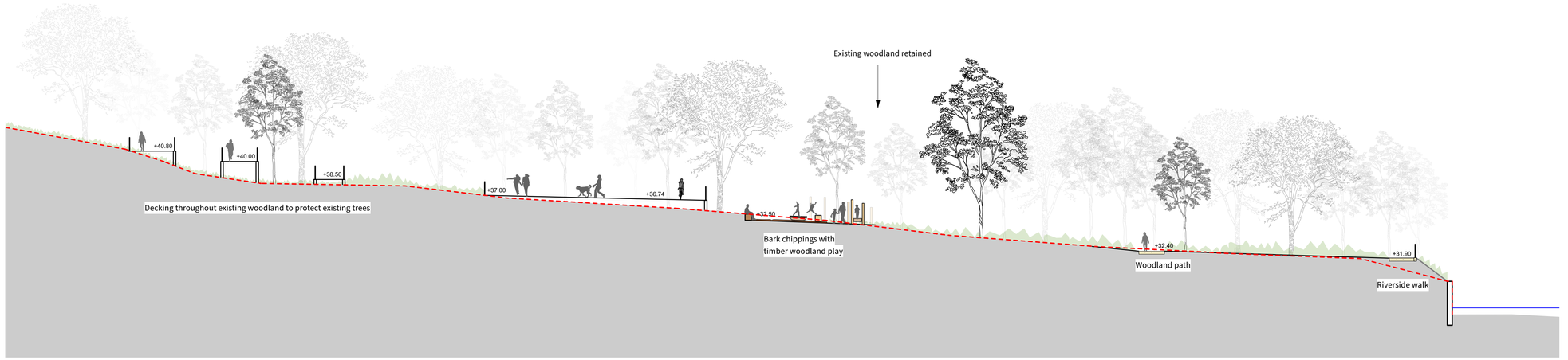
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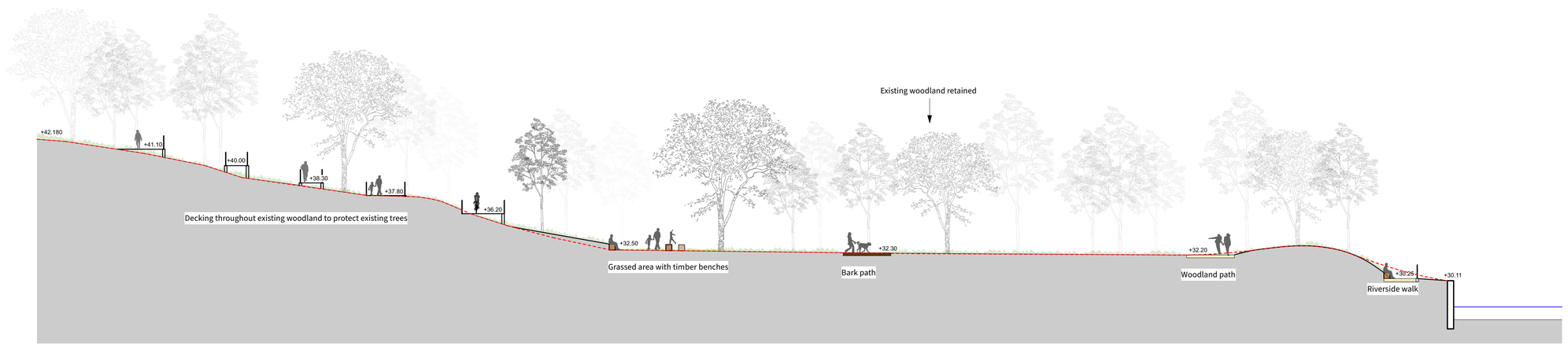


LOCATION PLAN
- 1:1000

3 Section B
Scale: 1:200



2 Section A
Scale: 1:200



Rev	Date	Description	By	Chkd	Appd	Auth
P02.03	02.03.22	Final Draft Issue	CL	MS	GB	GB
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P01	17.12.21	Stage 3 Issue	BM	MS	GB	GB

Client

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Project Title

Victoria North HIF Infrastructure

Key Plan



Drawing Title

St. Catherine's Wood Sections - *For Approval*

Scale at A1	Planit-IE Job No
As Shown	2700

Role: Landscape Architect

Suitability: S2

Rev	By	Chkd	Appd
P02.03	SR	MS	MS
	Date	Date	Date
	17.12.21	17.12.21	17.12.21

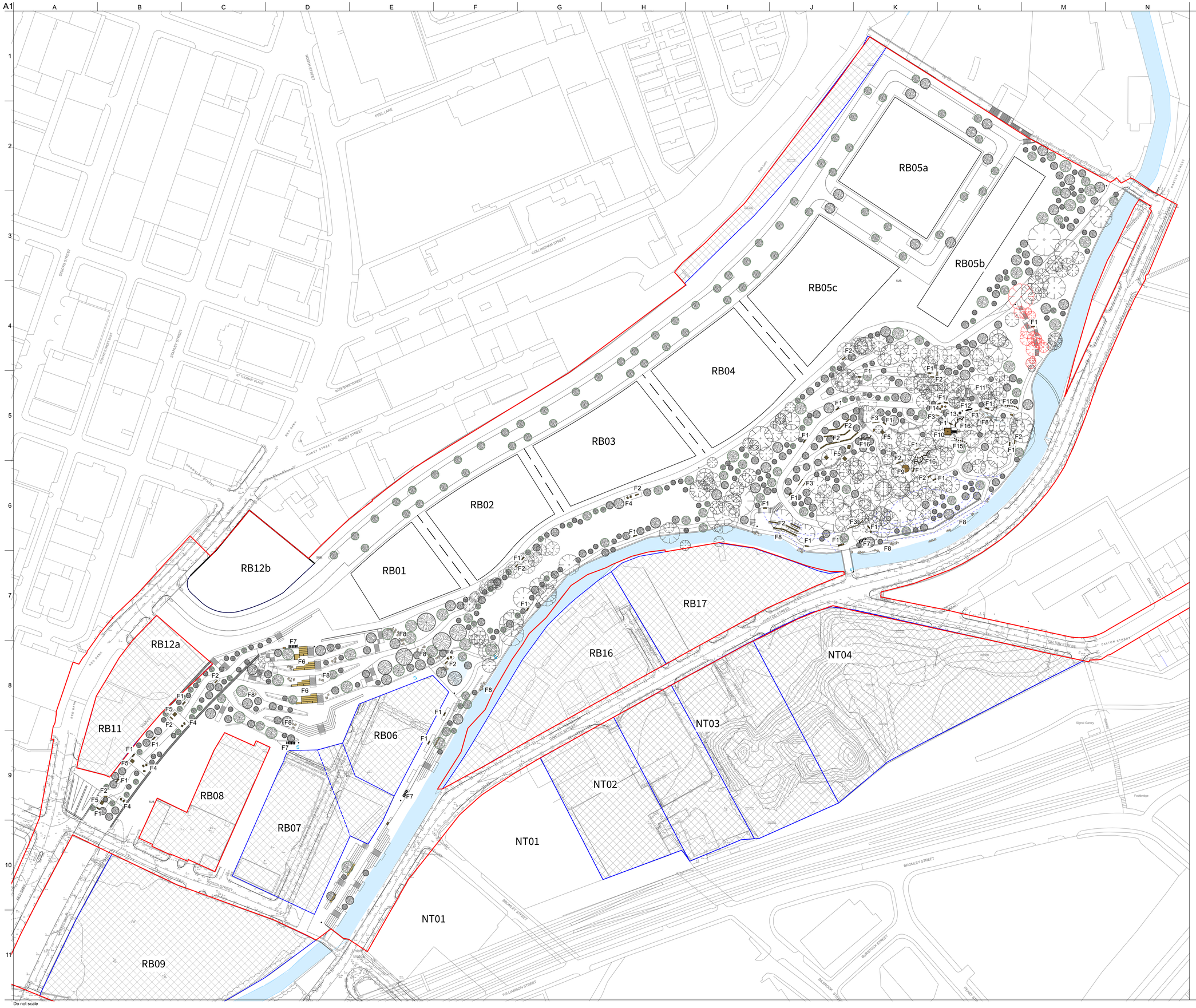
Name

Project	Originator	Volume	Location	Type	Role	Number
VNIF	PLA	ZZ	YYY	DR	L	3006

Do not scale

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A1



NOTE: Future Plot Extents are Indicative Only

KEY

SITE BOUNDARY

PROPOSED FURNITURE

TIMBER BENCHES WITH BACKREST
Location: sitewide
Material: reclaimed/FSC timber
Spec: TBC

TIMBER BENCHES WITHOUT BACKREST
Location: sitewide and to retaining terraces
Material: reclaimed/FSC timber
Spec: TBC

NARROW TIMBER BENCHES WITHOUT BACKREST
Location: sitewide
Material: reclaimed/FSC timber
Spec: TBC

TIMBER LOUNGE SEAT
Location: sitewide
Material: reclaimed/FSC timber
Spec: TBC

TIMBER PICNIC SET
Location: sitewide
Material: reclaimed/FSC timber
Spec: TBC

F6 **TIMBER TOP GABION SEATS**
Location: Red Bank Terraces
Material: FSC timber on gabions
Spec: TBC

BIKE STANDS
Location: sitewide
Spec: TBC

F4 **NATURAL STONE BOULDERS**
Placed as play and habitat creation features.
Sitewide

F9 **FEATURE ARTWORK**
Timber artwork placed within St Catherine's Wood

CF30 **TREEHOUSE/ELEVATED FEATURE PLAY**
Elevated timber play element within St Catherine's Woods. Specification TBC

F11 **SLIDES**
Slides within St Catherine's Wood play area; taking advantage of the topography. Specification TBC

WOBBLY BRIDGE OR SIMILAR
Timber play elements within the St Catherine's Wood play area. Specification TBC

F13 **GIANT SWINGS OR SIMILAR**
Timber play elements within the St Catherine's Wood play area. Specification TBC

WOBBLE BOARD OR SIMILAR
Timber play elements within the St Catherine's Wood play area. Specification TBC

TIMBER LOG STEPPING STONES
Timber play elements within the St Catherine's Wood play area. Specification TBC

TIMBER OBSTACLE COURSE ELEMENTS
Timber play elements within the St Catherine's Wood play area. Specification TBC

Rev	Date	Description	By	Chkd	Appd	Auth
P02.04	02.03.22	Final Draft Planning	CL	MS	GB	GB
P02.03	14.02.22	Draft Planning	CL	MS	GB	GB
P02.02	04.02.22	Draft Planning	BM	MS	GB	GB
P02.01	28.01.22	Draft Planning	BM	MS	GB	GB
P01	17.12.21	Stage 3 Issue	SR	MS	GB	GB
P01.01	03.12.21	For Information	CL	MS	GB	GB

Client

MANCHESTER CITY COUNCIL

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Project Title

Victoria North HIF Infrastructure

Key Plan

Drawing Title

Furniture Plan

For Approval

Scale at A1	Planit-IE Job No
1:500	2700

Role: Landscape Architect

Suitability: S2

Rev	By	Chkd	Appd
P02.04	CL	MS	MS
	Date	Date	Date
	17.12.21	17.12.21	17.12.21

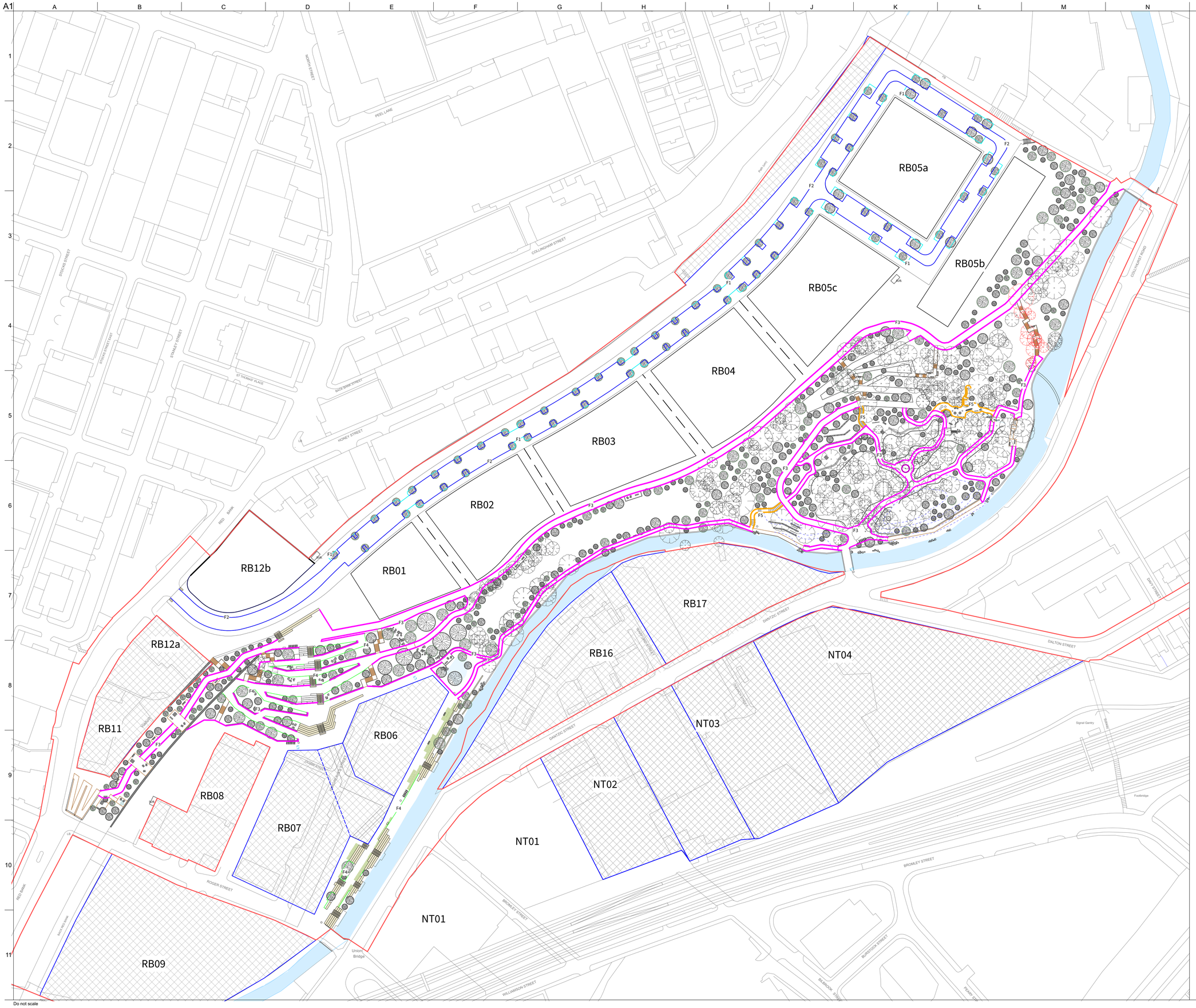
Name

Project	Originator	Volume	Location	Type	Role	Number
VNIF	PLA	ZZ	YYY	DR	L	4000

Do not scale

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A1



NOTE: Future Plot Extents are Indicative Only

KERBS AND EDGES

- F1 — **FLUSH CONCRETE KERB** Dims: 125mm(W)
- F2 — **UPSTAND CONCRETE KERB** Dims: 145mm (W) Upstand: 100mm
- F3 — **FLUSH METAL EDGE** Dims: 6mm (W)
- F4 — **UPSTAND METAL EDGING** Dims:6mm (W) Upstand: 100mm
- F5 — **TIMBER EDGING** Dims: 50mm (W) Upstand: 100mm

Rev	Date	Description	By	Chkd	Appd	Auth
P02.01	02.03.22	Final Draft Planning	CL	MS	GB	GB

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Client

MANCHESTER CITY COUNCIL

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Project Title

Victoria North HIF Infrastructure

Drawing Title

Kerbs and Edges Plan

For Approval

Scale at A1	Planit-IE Job No
1:1000	2700

Role: Landscape Architect

Suitability: S2

Rev	By	Chkd	Appd
P02.01	EKH	MS	MS
	Date	Date	Date
	17.12.21	17.12.21	17.12.21

Name

Project	Originator	Volume	Location	Type	Role	Number
VNIF	PLA	ZZ	YYY	DR	L	1009

Do not scale

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A1

RB03

RB02

RB01

RB17

RB16

Landscape implemented as part of the plot design.

Belt of larger trees (18-20cm) to form protective edge around young woodland matrix

Native woodland matrix planting - mix of whips, shrubs and ground cover planting

Indicative layout of woodland planting matrix

Tree group
+31.48

Tree T11 - Multi-stem Silver Birch
+29.39 TOW

Tree T12 - Multi-stem Goat Willow
+31.28

Existing Trees and associated ground levels retained

Existing bank cleared of fly tipped material and debris

Existing bank cleared of fly tipped material and debris

Resin bonded gravel path linking to St. Catherine's Wood

Sunken landform for attenuation

Drainage Outfall

Section of river wall removed

Regraded Slope 1:2.8

Regraded Slope 1:2.6

Regraded Slope 1:3.4

Regraded Slope 1:3.5

Regraded Slope 1:2.6

+38.50
+37.610
+33.00 ToW
+32.00
+31.50
+31.47
+27.17
+27.20
+27.18
+32.25
+31.09
+30.50
+30.43
+29.27
+29.92
+30.67
+31.13
+30.29
+30.05
+29.92
+29.80
+29.70
+29.45 TOW
+29.42 TOW
+30.23
+29.0 ?? TOW
+26.40
+27.33
+27.28
+27.34
+27.25
+27.12
+27.16
+30.30
+29.89
+30.65
+31.32
+31.20

1:37 1:24 1:24 1:32 1:21 1:21 1:33 1:58 1:27 1:52 1:35 1:60

NOTE: Future Plot Extents are Indicative Only

Rev	Date	Description	By	Chkd	Appd	Auth
P02.02	02.03.22	Final Draft Planning	BM	MS	GB	GB
P02.01	17.02.22	For Information	BM	MS	GB	GB

KEY

SITE BOUNDARY

PROPOSED HARDWORKS

S1 CLAY PAVING
Location: to pedestrian public areas
Material: natural clay paving
Colour: two colour mixes in warm buff tones TBC
Size: 200 (l) x 65 (w) x 85 (d)mm
Finish: sanded/watersruck TBC
Laid: stretcher/herringbone bond TBC

S2 TEMPORARY ASPHALT SURFACE (PERMEABLE)
Location to: vehicular carriageway on Red Bank Plateau
Material: permeable tarmacadam.
Spec: vehicular build up. TBC

S2.1 TEMPORARY ASPHALT SURFACE (PERMEABLE)
Location: to pedestrian routes sitewide
Material: permeable tarmacadam.
Spec: pedestrian build up. TBC

S3 NATURAL STONE SETTS
Location: to St Catherine's Wood entrance area
Material: natural granite setts
Colour: warm buff tones TBC
Size: 100 (l) x 100 (w) x 80 (d)mm
Finish: cropped sides, sawn top TBC
Laid: stretcher bond

S4 RESIN BONDED GRAVEL
Location: to St Catherine's Wood and viaduct paths
Material: resin bonded natural gravel stones
Colour: warm buff tones TBC

S5 GREEN GAP BLOCK PAVING
Location: to Union Bridge Waterfront
Material: opportunity to use reclaimed cobbles (to be developed further in RIBA Stage 4)
Colour: TBC
Size/finish: TBC
Laid: stretcher with gaps for planting/grass

S6 ELEVATED DECKING
Location: Red Bank Terraces and St Catherine's Wood
Spec: To meet required slip resistance standards
Finish: TBC

S7 DECKING STEPS
Location: Red Bank Terraces and St Catherine's Wood
Spec: To meet required slip resistance standards
Finish: TBC

S8 TACTILE HAZARD WARNING STRIPS
Location: Red Bank Terraces and St Catherine's Wood at top/bottom of step flights
Spec: TBC

S7 ELEVATED DECK
Location: to elevated walkway/cycle route in St. Catherine's Wood and Union Waterfront deck
Material: TBC
Colour: buff/natural tones
Finish: to meet required slip resistance

S8 PRE-CAST CONCRETE STEPS
Location: to Union Bridge Waterfront and Red Bank Terraces
Material: pre-cast concrete
Colour: buff/natural tone
Finish: acid etched with contrasting nosings

S8.1 PRE-CAST CONCRETE SEATING STEPS
Location: to Union Bridge Waterfront and lower Red Bank Terraces
Material: pre-cast concrete
Colour: buff/natural tone
Finish: acid etched with contrasting nosings

S8.2 TACTILE CORDUROY HAZARD PAVING
Location: Red Bank Terraces and Union Waterfront wherever there are steps
Material: pre-cast concrete coourdoruy pavers
Colour: natural TBC
Size: 400 (l) x 400 (w) x 50 (d)mm
Finish: textured
Laid: stack bond

S9 TACTILE BLISTER HAZARD PAVING
Location: road crossings
Material: pre-cast concrete blister pavers
Colour: natural TBC
Size: 400 (l) x 400 (w) x 50 (d)mm
Finish: textured
Laid: stack bond

S10 TIMBER TOPPED SEATING STEPS
Location: to Red Bank Terraces and Union W-front
Material: gabion baskets (opportunity to fill rear with site won recycled material. Front faced in natural sandstone) with a timber top seat TBC
Colour: buff/natural tones TBC
Spec: TBC

S11 BARK CHIPPINGS
Location: to secondary pedestrian paths in St. Catherine's Wood
Material: high grade bark chippings
Colour: natural

S11.1 TIMBER STEPS ALONG BARK PATH
Location: to informal tertiary routes within St Catherine's Wood
Material: FSC timber TBC
Colour: natural/treated timber TBC
Spec: TBC

S12 RUBBER BARK LOOK CHIPPINGS
Location: to St. Catherine's Wood Play Area
Material: Tiger Bark or similar and approved
Colour: natural

S13 STEPPING STONE PATH
Location: to tertiary route within St Catherine's Wood
Material: natural stone TBC
Colour: buff/natural tones TBC
Size: TBC
Finish: to meet required slip resistance TBC
Laid: on concrete haunchings

PROPOSED SOFTWORKS

PROPOSED TREE PLANTING
Subject to further detailed design

EXISTING TREES RETAINED
Subject to further detailed design

M1 EXISTING WOODLAND ENHANCED
To St. Catherine's Wood
Refer to drawing for notes
Approx area: 12125m²

M2 WOODLAND MATRIX MIX
To St. Catherine's Wood
Refer to drawing for notes
Approx area: 5960m²

M3 WOODLAND EDGE MIX
To St. Catherine's Wood
Refer to drawing for notes
Approx area: 1265m²

M4 ORNAMENTAL PLANTING
To Red Bank Terraces
Refer to drawing for notes
Approx area: 315m²

M5 ORNAMENTAL PLANTING
To Viaduct Linear Park
Refer to drawing for notes
Approx area: 1412m²

M6 AQUATIC MARGINAL VEGETATION
To Rivers Edge
Refer to drawing for notes
Approx area: 2690m²

HEDGE PLANTING
Mixed native species hedgerow mix to northern boundary
Approx area: 73m², Approx length: 50m

Client
MANCHESTER CITY COUNCIL
bam nuttall

Project Title
Victoria North HIF Infrastructure

Key Plan

Drawing Title
River Embankment - Detailed Area Plan

Scale at A1	Planit-IE Job No
1:250	2700

Role: Landscape Architect

Suitability: S2

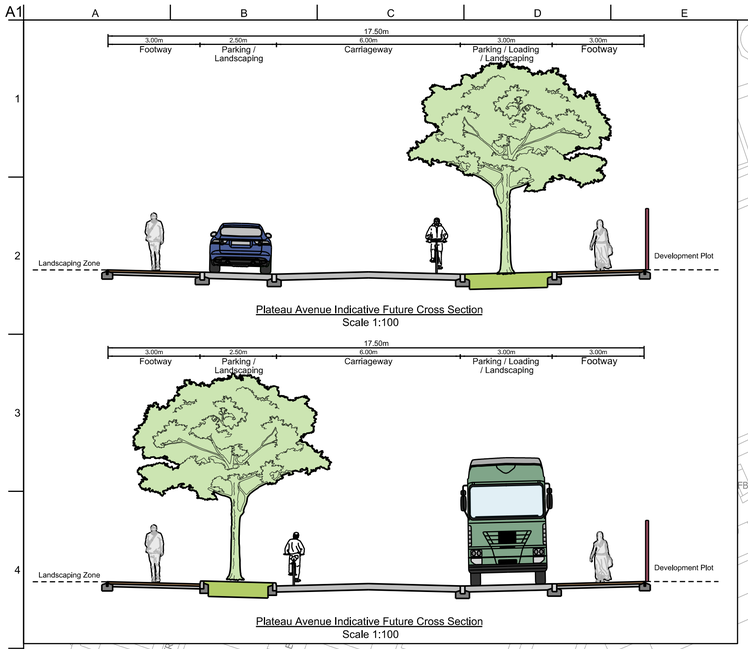
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P02.02	BM	MS	MS	
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	17.02.22	17.02.22	17.02.22	

Name

Project	Originator	Volume	Location	Type	Role	Number
VNIF	PLA	ZZ	YYY	DR	L	1015

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Plateau Avenue Indicative Future Cross Section
Scale 1:100

Plateau Avenue Indicative Future Cross Section
Scale 1:100

One-way system around RB05a due to bend radii and forward visibility.

Plateau Avenue

6m wide carriageway

7.3m carriageway width on entry to allow large vehicles to pass on low bend radius

New site access from Red Bank through dairy site.

New retaining wall from Creamline Dairies down to Red Bank Square.

No works to Chase Street, Crabbe Street or Hargreaves Street proposed as part of HIF works.

No works to Dantzic Street proposed as part of HIF works.

Existing access track from Packaging Products (Coatings) Ltd bridge maintained for emergency vehicle access.

RB01
RB02
RB03
RB04
RB05a
RB05b
RB05c
RB06
RB07
RB08
RB09
RB11
RB12a
RB12b
RB16
RB17
NT02
NT03
NT04

Notes:

1. Topograhical data based on Paragon Surveys Drawing No. PS-2158-TS Issue P.
2. Refer to drawing VNIF-ARP-00-YYY-DR-CH-0002 for Plateau Avenue General Arrangement.
3. Landscaping proposals based on Planit drawing VNIF-PLA-ZZ-YYY-DR-L-1011-HIF General Arrangement Plan Rev P02. Refer to Planit drawings for details of soft and hard landscaping.
4. Plot boundaries are indicative based on FEC masterplan.
5. Provision for 129 parking bays including 10% accessible bays has been allowed for in the design of Plateau Avenue based on Shultze Grassov drawing No RDB-SPG-XX-XX-SK-LA-8004 Rev B (26/10/2021).

Key:

Red Line Boundary

Development Plot Boundaries

Rev	Date	Description	By	Chkd	Appd	Auth
P01	13/08/21		RS	.EE	.EE	---
P02	26/11/21		RS	RG	RG	---
P03	13/12/21	Issue for EIA	AR	RS	RG	---
P04	17/12/21		AR	RS	RG	---
P05	01/02/22		RG	RG	RG	---
P06	17/02/22	Amended for Planning Comments	RS	RG	RG	---

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Project Title

Victoria North HIF Infrastructure & Enabling Works

Drawing Title

Highway General Arrangement

Scale at A1	1:1000	Arup Job No	282022-00
Role	Civil - Highways		
Suitability	S3 - Issued for Review and Approval		

Rev	By	Chkd	Appd	
P06	RS	RG	RG	---
	Date 17/02/22	Date 17/02/22	Date 17/02/22	---

Name: VNIF - ARP - 00 - YYY - DR - CH - 0001
(Project | Originator | Volume | Location | Type | Role | Number)

Do not scale

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A1

RB05a
RB05b
RB05c
RB04
RB03
RB02
RB01
RB12b
RB12a
RB11
RB10
RB09
RB08
RB07
RB06
RB17
RB16
NT04
NT03
NT02

Provision for BT Openreach duct bank and Virgin Media and others (shared) duct bank

Proposed utilities to cross proposed footbridge, Buried 'U-Tube' Trench crossing as potential alternative

Tie in with existing Virgin Media and Openreach networks (subject to capacity and fibre routing)

Less/no HIF ducting may be possible along Red Bank subject to existing Virgin Media and Openreach networks (capacity and fibre routing)

Tie in with existing Virgin Media and Openreach networks (subject to capacity and fibre routing)

Buried 'U-Tube' trench crossing beneath riverbed for proposed utilities

Tie in with existing Openreach network (subject to capacity and fibre routing)

Tie in with existing Virgin Media network

Due to spatial constraints within the existing street, the proposed telecoms expansion along Dantzic Street will not be completed under HIF. This network expansion is proposed to be constructed within the new footways of the widened 'Full Aspirational' Dantzic Street proposal, as part of the FEC Developer Design (Application 4).

Notes

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   • Topographical Survey drawing PS-2158-TS by Paragon Surveys dated September 2021.
5. Plot boundaries developed in conversation with FEC Winter 2021/2 - boundaries between adjacent plots are indicative only and are subject to change as the FEC masterplan is developed.
6. Utility demands have been based on units and populations as per FEC's 'VN Housing Delivery Plan September 2021 v2' received 05-10-21. Occupation dates have been taken from v3 received 22-11-21. Non-FEC third party plot details have been assumed from the Northern Gateway SRF.
7. Extents of landscaping and new roads are based on WS3 designs.
8. WS3 HIF Utilities design developed in conjunction with FEC team discussions.
9. Future plot connections to the HIF network are to be undertaken by developers.

Key

- HIF Site Boundary
- Plot Boundary
- Indicative boundary between adjacent plots
- Primary Distribution Route (6 No. Ducts x2)
- Secondary Distribution Route (4 No. Ducts x2)
- Tertiary Distribution Route (4 No. Duct x1)
- Network Expansion (by provider)
- HIF drainage and utility infrastructure networks sized to accommodate these plots, however geotechnical/remedial works to be designed and undertaken by the developer

Rev	Date	Description	By	Chkd	Appd	Auth
P01	11/11/21		TW	TW	TW	---
P02	17/12/21		EC	RG	RG	---
P03	01/02/22		EC	EC	RG	---
P04	18/02/22	Amended for planning	EC	RG	RG	---

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Project Title

Victoria North HIF Infrastructure & Enabling Works

Drawing Title

Proposed HIF Telecoms Network

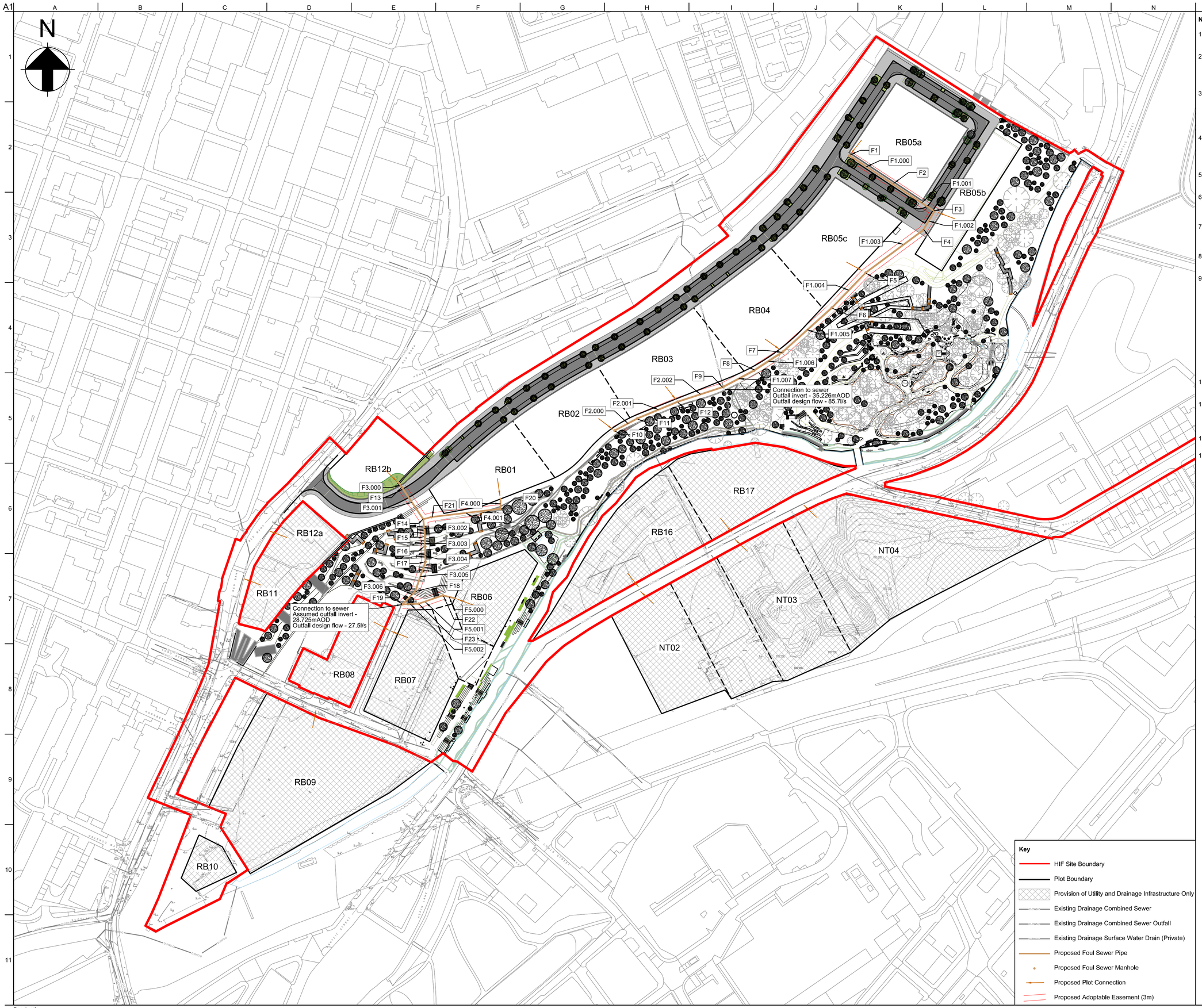
Scale at A1	1:1250	Arup Job No	282022-00
Role	Consultant for Utilities		
Suitability	S3 - Issued for Review and Comment		
Rev	By: EC; Chkd: RG; Appd: RG		---
P04	Date: 18/02/22; Date: 18/02/22; Date: 18/02/22		---

Name: VNIF - ARP - 00 - YYY - DR - CU - 1006
(Project | Originator | Volume | Location | Type | Role | Number)

Do not scale

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A1



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   • Topographical Survey drawing PS-2158-TS by Paragon Surveys dated September 2021.
4. No guarantee is given for the accuracy of the information contained herein, which is provided for general guidance only and must not be relied upon for excavation or detailed design until apparatus locations are verified / validated through further site investigation works.
5. Extents of road refurbishments, new roads, and street works are WIP based on WS3 Design.
6. Existing Drainage layout based on the following information:
   - Utility Search Map drawing 97079 undertaken by Atkins dated 24/06/2021.
7. For the Standard Drainage Specification refer to the "Design and Construction Guidance for foul and surface water sewers offered for adoption" - Rev 2.1 - dated 25th May 2021.
8. This drawing should be read with reference to the Arup Stage 3 Report and Drainage Strategy.
9. Utilities have been drawn to 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	
Type B Detection - Typically GPR and EML techniques are used	Depth
Type C Site reconnaissance + Physical surface features identified	
Type D Desktop utility records search	

10. A connection point has been provided for each plot within the HIF Boundary at a minimum depth of 2.0-2.5m as agreed with WSP.
11. Drainage construction materials, unless otherwise stated:
    - Drainage pipes - Polyethylene in accordance with BS 13476
    - Manholes - Precast Concrete
    - Inspection Chambers - Polypropylene in accordance with BS 7158
12. For drainage diversions and abandonments, refer to drawing VNIF-ARP-00-YYY-DR-CU-1001
13. The finalised location of trees is to be confirmed at the next design stage.

Key

- HIF Site Boundary
- Plot Boundary
- Provision of Utility and Drainage Infrastructure Only
- Existing Drainage Combined Sewer
- Existing Drainage Combined Sewer Outfall
- Existing Drainage Surface Water Drain (Private)
- Proposed Foul Sewer Pipe
- Proposed Foul Sewer Manhole
- Proposed Plot Connection
- Proposed Adoptable Easement (3m)

Rev	Date	Description	By	Chkd	Appd	Auth
P01	26/08/21		AS	AS	AS	---
P02	17/12/21		DH	RG	RG	---
P03	01/02/22		DH	RG	RG	---
P04	17/02/22	Amended for Planning Comments	DH	RG	RG	---

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Project Title

Victoria North HIF Infrastructure & Enabling Works

Drawing Title

Proposed Foul Drainage
General Arrangement

Scale at A1	Arup Job No
1:1250	282022-00

Role: Civil - Drainage

Suitability: S3 - Issued for Review and Approval

Rev	By	Chkd	Appd	
P04	DH	RG	RG	---
	Date 17/02/22	Date 17/02/22	Date 17/02/22	---

Name: VNIF - ARP - 00 - YYY - DR - CD - 0003
(Project | Originator | Volume | Location | Type | Role | Number)

Do not scale

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A1

Plot	Area (ha)	Catchment	30 year restriction (l/s)	100 year restriction (l/s)
RB06	0.247	1	3.4	5.4
RB07	0.376	1	5.2	8.3
RB10	1.011	1	14.1	22.2
NT02	0.771	4	10.8	16.9
NT03	0.537	4	7.5	11.8
NT04	1.012	4	14.1	22.2
RB16	0.537	4	7.5	11.8
RB17	0.461	4	6.4	10.1
RB01	0.288	1	4.0	6.3
RB02	0.326	1	4.5	7.2
RB03	0.403	5	5.4	8.9
RB04	0.415	5	5.5	9.1
RB05a	0.369	5	4.9	8.1
RB05b	0.237	5	3.2	5.2
RB05c	0.410	5	5.5	9.0
RB12(b)	0.235	1	3.3	5.2
RB08	0.444	1	6.2	9.8
RB09	0.009	1	0.1	0.2
RB11	0.156	1	2.2	3.4
RB12a	0.163	1	2.3	3.6

NOTE: Plot areas are subject to change and will be finalised during the next stage of design

See drawing VNIF-ARP-00-YYY-DR-0011 for Drainage GA 2

See drawing VNIF-ARP-00-YYY-DR-0010 for Drainage GA 1

See drawing VNIF-ARP-00-YYY-DR-0012 for Drainage GA Dantzic Street

RB05a
RB05b
RB05c
RB04
RB03
RB02
RB01
RB12b
RB12a
RB11
RB10
RB09
RB08
RB07
RB06
RB16
RB17
NT04
NT03
NT02

Key

- HIF Site Boundary
- Plot Boundary
- Provision of Utility and Drainage Infrastructure Only
- Existing Drainage Combined Sewer
- Existing Drainage Surface Water Drain (Private)
- Proposed Surface Water Pipe
- Proposed Adopted Surface Water Pipe
- Proposed Surface Water Manhole
- Proposed Adopted Surface Water Manhole
- Proposed Outfall to River
- Area of permable paving
- Area of Adopted Storage Feature
- Proposed Channel Drain
- Proposed Adoptable Easements (3m)

Notes

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   • Topographical Survey drawing PS-2158-TS by Paragon Surveys dated September 2021.
4. No guarantee is given for the accuracy of the information contained herein, which is provided for general guidance only and must not be relied upon for excavation or detailed design until apparatus locations are verified / validated through further site investigation works.
5. Extents of road refurbishments, new roads, and street works are WIP based on WS3 Design.
6. Existing Drainage layout based on the following information:
   - Utility Search Map drawing 97079 undertaken by Atkins dated 24/06/2021.
7. For the Standard Drainage Specification refer to the "Design and Construction Guidance for foul and surface water sewers offered for adoption" - Rev 2.1 - dated 25th May 2021.
8. This drawing should be read with reference to the Arup Stage 3 Report and Drainage Strategy.
9. Utilities have been drawn to 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	↓
Type B Detection - Typically GPR and EML techniques are used	Class
Type C Site reconnaissance - Physical surface features identified	
Type D Desktop utility records search	↑

10. A connection point has been provided for each plot within the HIF Boundary at a minimum depth of 2.0-2.5m as agreed with WSP.
11. Drainage construction materials, unless otherwise stated:
    - Drainage pipes - Polyethylene in accordance with BS 13476
    - Manholes - Precast Concrete
    - Inspection Chambers - Polypropylene in accordance with BS 7158
12. For pipe abandonments and diversions, refer to drawing VNIF-ARP-00-YYY-DR-CU-1001 and schedule VNIF-ARP-ZZ-YYY-SH-CU-0001
13. As RB09/10 are outside the HIF Red Line Boundary, it has been agreed that a connection to the River Irk will be provided/constructed as part of the Plot construction. Discharge rates are to be agreed as part of the HIF works.
14. The finalised location of trees is to be confirmed at the next design stage.

Rev	Date	Description	By	Chkd	Appd	Auth
P01	26/08/21		AS	AS	AS	—
P02	17/12/21		DH	RG	RG	—
P03	01/02/22		DH	RG	RG	—
P04	17/02/22	Amended for Planning Comments	DH	DH	RG	—
P05	28/02/22		DH	DH	RG	—

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Project Title

Victoria North HIF Infrastructure & Enabling Works

Drawing Title

Proposed Site Wide Surface Water Drainage

Scale at A1	1:1250	Arup Job No	282022-00
Role	Civil - Drainage		
Suitability	S3 - Issued for Review and Comment		

Rev	By	Chkd	Appd	
P05	DH	DH	RG	—
	Date 24/02/22	Date 24/02/22	Date 28/02/22	—

Name

VNIF - ARP - 00 - YYY - DR - CD - 0002

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

Do not scale

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A1

Plot	Area (ha)	Catchment	30 year restriction (l/s)	100 year restriction (l/s)
RB06	0.247	1	3.4	5.4
RB07	0.376	1	5.2	8.3
RB10	1.011	1	14.1	22.2
NT02	0.771	4	10.8	16.9
NT03	0.537	4	7.5	11.8
NT04	1.012	4	14.1	22.2
RB16	0.537	4	7.5	11.8
RB17	0.461	4	6.4	10.1
RB01	0.288	1	4.0	6.3
RB02	0.326	1	4.5	7.2
RB03	0.403	5	5.4	8.9
RB04	0.415	5	5.5	9.1
RB05a	0.369	5	4.9	8.1
RB05b	0.237	5	3.2	5.2
RB05c	0.410	5	5.5	9.0
RB12(b)	0.235	1	3.3	5.2
RB08	0.444	1	6.2	9.8
RB09	0.009	1	0.1	0.2
RB11	0.156	1	2.2	3.4
RB12a	0.163	1	2.3	3.6

NOTE: Plot areas may be subject to change and will be finalised during the next stage of design

See sheet 2 of 2

Notes

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   • Topographical Survey drawing PS-2158-TS by Paragon Surveys dated September 2021.
4. No guarantee is given for the accuracy of the information contained herein, which is provided for general guidance only and must not be relied upon for excavation or detailed design until apparatus locations are verified / validated through further site investigation works.
5. Extents of road refurbishments, new roads, and street works are WIP based on WS3 Design.
6. Existing Drainage layout based on the following information:
   - Utility Search Map drawing 97079 undertaken by Atkins dated 24/06/2021.
7. For the Standard Drainage Specification refer to the "Design and Construction Guidance for foul and surface water sewers offered for adoption" - Rev 2.1 - dated 25th May 2021.
8. This drawing should be read with reference to the Arup Stage 3 Report and Drainage Strategy.
9. Utilities have been drawn to 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. A connection point has been provided for each plot within the HIF Boundary at a minimum depth of 2.0-2.5m as agreed with WSP.
11. Drainage construction materials, unless otherwise stated:
   - Drainage pipes - Polyethylene in accordance with BS 13476
   - Manholes - Precast Concrete
   - Inspection Chambers - Polypropylene in accordance with BS 7158
12. As RB09/10 are outside the HIF Red Line Boundary, it has been areed that a connection to the River Irk will be provided/constructed as part of the Plot construction. Dischare Rates are to be agreed as part of the HIF works.
13. The finalised location of trees is to be confirmed at the next design stage.

Rev	Date	Description	By	Chkd	Appd	Auth
P01	17/12/21		DH	RG	RG	—
P02	01/02/22		DH	RG	RG	—
P03	17/02/22	Amended for Planning Comments	DH	DH	RG	—
P04	28/02/22		DH	DH	RG	—

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Project Title

Victoria North HIF Infrastructure & Enabling Works

Drawing Title

Proposed Surface Water Drainage
Sheet 1 of 2

Scale at A1	1:500	Arup Job No	282022-00
Role	Civil - Drainage		
Suitability	S3 - Issued for Review and Comment		

Rev	By	Chkd	Appd	
P04	DH	DH	RG	—
	Date 24/02/22	Date 24/02/22	Date 28/02/22	—

Name: VNIF - ARP - 00 - YYY - DR - CD - 0010
(Project | Originator | Volume | Location | Type | Role | Number)

Do not scale

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Plot	Area (ha)	Catchment	30 year restriction (l/s)	100 year restriction (l/s)
RB06	0.247	1	3.4	5.4
RB07	0.376	1	5.2	8.3
RB10	1.011	1	14.1	22.2
NT02	0.771	4	10.8	16.9
NT03	0.537	4	7.5	11.8
NT04	1.012	4	14.1	22.2
RB16	0.537	4	7.5	11.8
RB17	0.461	4	6.4	10.1
RB01	0.288	1	4.0	6.3
RB02	0.326	1	4.5	7.2
RB03	0.403	5	5.4	8.9
RB04	0.415	5	5.5	9.1
RB05a	0.369	5	4.9	8.1
RB05b	0.237	5	3.2	5.2
RB05c	0.410	5	5.5	9.0
RB12(b)	0.235	1	3.3	5.2
RB08	0.444	1	6.2	9.8
RB09	0.009	1	0.1	0.2
RB11	0.156	1	2.2	3.4
RB12a	0.163	1	2.3	3.6

NOTE: Plot areas are subject to change and will be finalised during the next stage of design

Key

- HIF Site Boundary
- Plot Boundary
- Provision of Utility and Drainage Infrastructure Only
- Existing Drainage Combined Sewer
- Existing Drainage Surface Water Drain (Private)
- Proposed Surface Water Pipe
- Proposed Adopted Surface Water Pipe
- Proposed Surface Water Manhole
- Proposed Adopted Surface Water Manhole
- Proposed Outfall to River
- Area of permable paving
- Area of Adopted Attenuation Basin
- Proposed Channel Drain
- Proposed Adoptable Easement (3m)

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5. Extents of road refurbishments, new roads, and street works are WIP based on WS3 Design.
6. Existing Drainage layout based on the following information:
   - Utility Search Map drawing 97079 undertaken by Atkins dated 24/06/2021.
7. For the Standard Drainage Specification refer to the "Design and Construction Guidance for foul and surface water sewers offered for adoption" - Rev 2.1 - dated 25th May 2021.
8. This drawing should be read with reference to the Arup Stage 3 Report and Drainage Strategy.
9. Utilities have been drawn to 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	
Type B Detection - Typically GPR and EML techniques are used	Data
Type C Site reconnaissance + Physical surface features identified	
Type D Desktop utility records search	

10. A connection point has been provided for each plot within the HIF Boundary at a minimum depth of 2.0-2.5m as agreed with WSP.
11. Drainage construction materials, unless otherwise stated:
   - Drainage pipes - Polyethylene in accordance with BS 13476
   - Manholes - Precast Concrete
   - Inspection Chambers - Polypropylene in accordance with BS 7158
12. The finalised location of trees is to be confirmed at the next design stage.

Rev	Date	Description	By	Chkd	Appd	Auth
P01	17/12/21		DH	RG	RG	—
P02	01/02/22		DH	RG	RG	—
P03	17/02/22	Amended for Planning Comments	DH	DH	RG	—
P04	28/02/22		DH	DH	RG	—

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Project Title

Victoria North HIF Infrastructure & Enabling Works

Drawing Title

Proposed Surface Water Drainage
Sheet 2 of 2

Scale at A1	1:500	Arup Job No	282022-00
Role	Civil - Drainage		
Suitability	S3 - Issued for Review and Comment		
Rev	P04		
By	DH	Chkd	DH
Appd	RG	—	—
Date	24/02/22	Date	24/02/22
Date	28/02/22	—	—

Name

VNIF - ARP - 00 - YYY - DR - CD - 0011
Project | Originator | Volume | Location | Type | Role | Number

Do not scale

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A1

RB04

Plot	Area (ha)	Catchment	30 year restriction (l/s)	100 year restriction (l/s)
RB06	0.247	1	3.4	5.4
RB07	0.376	1	5.2	8.3
RB10	1.011	1	14.1	22.2
NT02	0.771	4	10.8	16.9
NT03	0.537	4	7.5	11.8
NT04	1.012	4	14.1	22.2
RB16	0.537	4	7.5	11.8
RB17	0.461	4	6.4	10.1
RB01	0.288	1	4.0	6.3
RB02	0.326	1	4.5	7.2
RB03	0.403	5	5.4	8.9
RB04	0.415	5	5.5	9.1
RB05a	0.369	5	4.9	8.1
RB05b	0.237	5	3.2	5.2
RB05c	0.410	5	5.5	9.0
RB12(b)	0.235	1	3.3	5.2
RB08	0.444	1	6.2	9.8
RB09	0.009	1	0.1	0.2
RB11	0.156	1	2.2	3.4
RB12a	0.163	1	2.3	3.6

NOTE: Plot areas are subject to change and will be finalised during the next stage of design

RB06
RB16
RB17
NT02
NT03
NT04
Depot
Caravan Site
DANTZIC STREET
151
MSON STREET
37.2m
39.6m
Boro Const & Ward Bdy
CR
MP 0.5

Proposed outfall pipe to have non-return valve
Proposed Headwall
Proposed Outflow (1:100) - 86.2l/s
Proposed Outflow (1:30) - 53.9l/s
Proposed Outfall Level - 27.403mAOD

S7D
Hydrobrake
Design Head - 2.48m
Design Flow (1:100) - 86.2l/s
Design Flow (1:30) - 54.9l/s

S1.006 D
S11.000 D
S1.005 D
S10 D
S9.000 D
S1.004 D
S6 D
S7.000 D
S10.000 D
S8.000 D
S4.000 D
S5 D
S6.000 D
S1.003 D
S3 D
S1.002 D
S4 D
S1.001 D
S5.000 D
S1.000 D
S3.000 D
S2 D
S2.000 D

Key

- HIF Site Boundary
- Plot Boundary
- Provision of Utility and Drainage Infrastructure Only
- Existing Drainage Combined Sewer
- Existing Drainage Surface Water Drain (Private)
- Proposed Surface Water Pipe
- Proposed Adopted Surface Water Pipe
- Proposed Surface Water Manhole
- Proposed Adopted Surface Water Manhole
- Proposed Outfall to River
- Area of permable paving
- Area of Adopted Attenuation Basin

Notes

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3. Layout is based on:
   • Landscape Architect masterplan drawing VNIF-PLA-ZZ-YYY-DR-L-1011 Rev P02.06 dated 14/02/2022 by Planit.
   • Topographical Survey drawing PS-2158-TS by Paragon Surveys dated September 2021.
4. No guarantee is given for the accuracy of the information contained herein, which is provided for general guidance only and must not be relied upon for excavation or detailed design until apparatus locations are verified / validated through further site investigation works.
5. Extents of road refurbishments, new roads, and street works are WIP based on WS3 Design.
6. Existing Drainage layout based on the following information:
   - Utility Search Map drawing 97079 undertaken by Atkins dated 24/06/2021.
7. For the Standard Drainage Specification refer to the "Design and Construction Guidance for foul and surface water sewers offered for adoption" - Rev 2.1 - dated 25th May 2021.
8. This drawing should be read with reference to the Arup Stage 3 Report and Drainage Strategy.
9. Utilities have been drawn to 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	Class
Type B Detection - Typically GPR and EML techiques are used	
Type C Site reconnaissance - Physical surface features identified	
Type D Desktop utility records search	

10. A connection point has been provided for each plot within the HIF Boundary at a minimum depth of 2.0-2.5m as agreed with WSP.
11. Drainage construction materials, unless otherwise stated:
    - Drainage pipes - Polyethylene in accordance with BS 13476
    - Manholes - Precast Concrete
    - Inspection Chambers - Polypropylene in accordance with BS 7158
12. The finalised location of trees is to be confirmed at the next design stage.

Rev	Date	Description	By	Chkd	Appd	Auth
P01	17/12/21		DH	RG	RG	—
P02	01/02/22		DH	RG	RG	—
P03	17/02/22	Amended for Planning Comments	DH	DH	RG	—
P04	28/02/22		DH	DH	RG	—

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Project Title

Victoria North HIF Infrastructure & Enabling Works

Drawing Title

Proposed Surface Water Drainage
Dantzic Street

Scale at A1	1:500		Arup Job No	282022-00
Role	Civil - Drainage			
Suitability	S3 - Issued for Review and Comment			
Rev	By	Chkd	Appd	
P04	DH	DH	RG	—
	Date 24/02/22	Date 24/02/22	Date 28/02/22	—

Name

VNIF - ARP - 00 - YYY - DR - CD - 0012
Project | Originator | Volume | Location | Type | Role | Number

Do not scale

© Arup

A1



Key

- HIF Site Boundary
- Plot Boundary
- Provision of Utility and Drainage Infrastructure Only
- Exceedance Flow Path (Main Route)
- Exceedance Flow Path (Contributory Route)

Notes

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3. Layout is based on:
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   - Topographical Survey drawing PS-2158-TS by Paragon Surveys dated September 2021.
4. Extents of road refurbishments, new roads, and street works are WIP based on WS3 Design.
5. This drawing should be read with reference to the Arup Stage 3 Report and Drainage Strategy.
6. The purpose of this drawing is to show the exceedance flow paths for Surface Water in the event of system failure or an extreme storm event (> 100yr +40%cc)

Rev	Date	Description	By	Chkd	Appd	Auth
	01/02/22		DH	RG	RG	—
	01/02/22		DH	RG	RG	—
	18/02/22	Amended for Planning Comments	DH	DH	RG	—
P04	01/03/22		DH	DH	LS	—

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Project Title

Victoria North HIF Infrastructure & Enabling Works

Drawing Title

Proposed Exceedance Route Drawing
Sheet 1 of 2

Scale at A1	1:500	Arup Job No	282022-00
Role	Civil - Drainage		
Suitability	S3 - Issued for Review and Comment		

Rev	By	Chkd	Appd	
P04	DH	DH	LS	—
	Date 01/03/22	Date 01/03/22	Date 01/03/22	—

Name

VNIF - ARP - 00 - YYY - DR - CD - 0018

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

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A1



Key

- HIF Site Boundary
- Plot Boundary
- Provision of Utility and Drainage Infrastructure Only
- Exceedance Flow Path (Main Route)
- Exceedance Flow Path (Contributory Route)

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   - Topographical Survey drawing PS-2158-TS by Paragon Surveys dated September 2021.
4. Extents of road refurbishments, new roads, and street works are WIP based on WS3 Design.
5. This drawing should be read with reference to the Arup Stage 3 Report and Drainage Strategy.
6. The purpose of this drawing is to show the exceedance flow paths for Surface Water in the event of system failure or an extreme storm event (> 100yr +40%cc)

Rev	Date	Description	By	Chkd	Appd	Auth
P01	01/02/22		DH	RG	RG	—
P02	01/02/22		DH	RG	RG	—
P03	01/02/22		DH	RG	RG	—
P04	18/02/22	Amended for Planning Comments	DH	DH	RG	—
P05	01/03/22		DH	DH	LS	—

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Project Title

Victoria North HIF Infrastructure & Enabling Works

Drawing Title

Proposed Exceedance Route Drawing
Sheet 2 of 2

Scale at A1	1:500	Arup Job No	282022-00
Role	Civil - Drainage		
Suitability	S3 - Issued for Review and Comment		

Rev	By	Chkd	Appd	
P05	DH	DH	LS	—
	Date 01/03/22	Date 01/03/22	Date 01/03/22	—

Name

Project	Originator	Volume	Location	Type	Role	Number
VNIF	- ARP -	00	- YYY -	DR	- CD -	0019

Do not scale

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A1

Small batter from new road down to existing levels along northern boundary (approx. 0.5m).

RB05b set at 42.5m AOD. Where existing levels are lower than 42.5m levels are not to be raised due to proximity of slope.

1:3 batter from Plateau Avenue down to existing levels adjacent to Honey Street retaining wall.

Footpath maximum gradient 1:21

Existing slope regraded to 1:2.5

Slope locally modified to retain existing trees.

Slope locally modified to retain existing trees.

Plateau Avenue / RB05a
Cut: 0m³
Fill: 4,700m³
Balance: 4,700m³ (fill)

RB05b
Cut: 570m³
Fill: 0m
Balance: 570m³ (cut)

RB05c
Cut: 0m³
Fill: 948m³
Balance: 948m³ (fill)

RB04a
Cut: 380m³
Fill: 650m³
Balance: 290m³ (fill)

Plateau Avenue
Cut: 900m³
Fill: 10,700m³
Balance: 9,800m³ (fill)

RB03
Cut: 9600m³
Fill: 230m³
Balance: -9370m³ (cut)

RB02
Cut: 6675m³
Fill: 178m³
Balance: -6498³ (cut)

RB01
Cut: 700m³
Fill: 160m³
Balance: -540m³ (cut)

Slope Regrading
Cut: 7,900m³
Fill: 0m3
Balance: -7,900m³ (cut)

Active Travel Route
Cut: 2,000m³
Fill: 0m³
Balance: 2,000m³ (cut)

St. Catherine's Wood
Cut: 2,400m³
Fill: 500m³
Balance: -1,900m³ (cut)

Red Bank Terrace
Cut: 5,100m³
Fill: 4,300m³
Balance: -800m³ (cut)

Notes:

1. Topographical data based on Paragon Surveys Drawing No. PS-2158-TS Issue P.
2. All levels are in metres above Ordnance Datum.
3. Refer to Landscape Architect drawings for details of soft and hard landscaping in the development site.
4. Development masterplan based on Planit drawing VNIF-PLA-ZZ-YYY-DR-L-1011 Rev P02.
4. Plot boundaries are indicative based on FEC masterplan.
5. Earthworks quantities are approximate only and are subject to detailed design.
6. Earthworks quantities are based on level difference between existing and finished level and do not consider the requirement for imported engineered material for road construction etc.
7. Proposed plot levels are target levels and are subject to review on site based on analysis of excavated material and suitability for re-use.

Key:

- Red Line Boundary
- Local Earthworks Assessment Boundary
- Approximate Area of Cut
- Approximate Area of Fill
- Approximate Area at Grade
- Existing Tree to be Retained

Approximate Earthworks Quantities

Plot	Cut (m³)	Fill(m³)	Balance(m³)
RB01	700	160	- 540
RB02	6,675	178	- 6,498
RB03	9,600	230	- 9,370
RB04a	360	650	290
RB04b	-	948	948
RB05a / Plateau Avenue	-	4,700	4,700
RB05b	685	-	- 570
Plateau Avenue	900	10,700	9,800
Red Bank Terrace	5,100	4,300	- 800
Active Travel Route	2,000	-	- 2,000
Slope Regrading	7,900	-	- 7,900
St Catherine's Wood	2,400	500	- 1,900
Total	**36,320**	**22,365**	**- 13,955**

Rev	Date	Description	By	Chkd	Appd	Auth
P01	01/02/22	For Information	RG	RG	RG	---
P02	17/02/22	Amended for Planning Comments	RS	RG	RG	---

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Project Title

Victoria North HIF Infrastructure & Enabling Works

Drawing Title

Indicative Cut & Fill Volumes

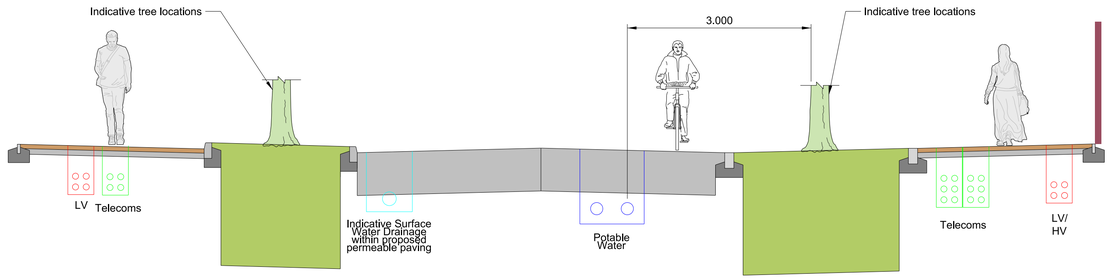
Scale at A1	1:1000	Arup Job No	282022-00
Role	Civil - Earth works and Geotechnics		
Suitability	S3 - Issued for Review and Approval		

Rev	By	Chkd	Appd	
P02	RS	RG	RG	---
	Date 17/02/22	Date 17/02/22	Date 17/02/22	---

Name: VNIF - ARP - 00 - YYY - DR - CE - 0003
(Project - Originator - Volume - Location - Type - Role - Number)

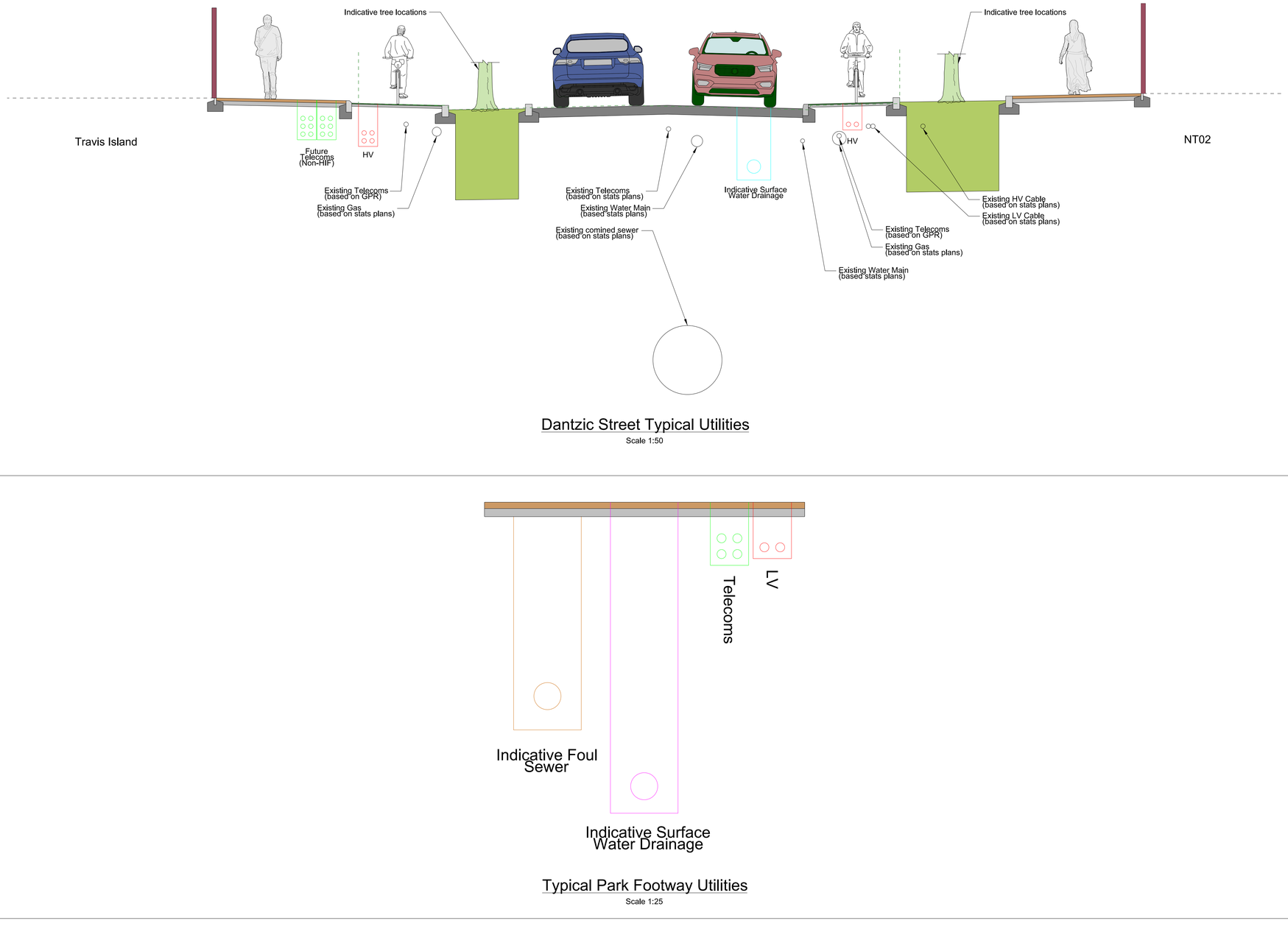
Do not scale

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Plateau Avenue Typical Utilities

Scale 1:50



Dantzic Street Typical Utilities

Scale 1:50

Typical Park Footway Utilities

Scale 1:25

Notes

1. All dimensions are in mm, all levels in mAOD, unless specified otherwise.
2. This drawing shall be read in conjunction with all relevant Engineer's drawing, specifications and reports.
3. Extents of landscaping and new roads are based on WS3 designs.
4. Existing Utilities based on the following information:
   - Utility Search Map drawing 97079 undertaken by Atkins dated 24/06/2021.
   - Street Works Guidance (NJUG) for non-GPR depths.
   - Partial GPR Survey drawing PUM-11943-U-DR-0001 Rev 01 undertaken by Precison Utility Mapping dated 11/11/2021.
5. Proposed telecoms installed on Dantzic Street as part of 'Aspirational Masterplan' works and are non-HIF funded, due to spatial constraints within the existing carriageway.

Key

- Existing ground profile
- Proposed pavement/carriageway/ground level
- Proposed Planting area
- Existing utility
- Proposed Electricity (HV/LV)
- Proposed Telecoms
- Proposed Water mains
- Proposed surface water drainage
- Proposed foul sewer

Rev	Date	Description	By	Chkd	Appd	Auth
P01	26/08/21		AS	AS	AS	—
P02	17/12/21		EC	RG	RG	—
P03	01/02/22		EC	EC	RG	—

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Project Title

Victoria North HIF Infrastructure & Enabling Works

Drawing Title

Proposed Utilities Sections

Scale at A1	NTS	Arup Job No	282022-00
Role	Consultant for Utilities		
Suitability	S3 - Issued for Review and Comment		
Rev	P03	By EC / Date 01/02/22	Chkd EC / Date 01/02/22
		Appd RG / Date 01/02/22	--- / ---

Name

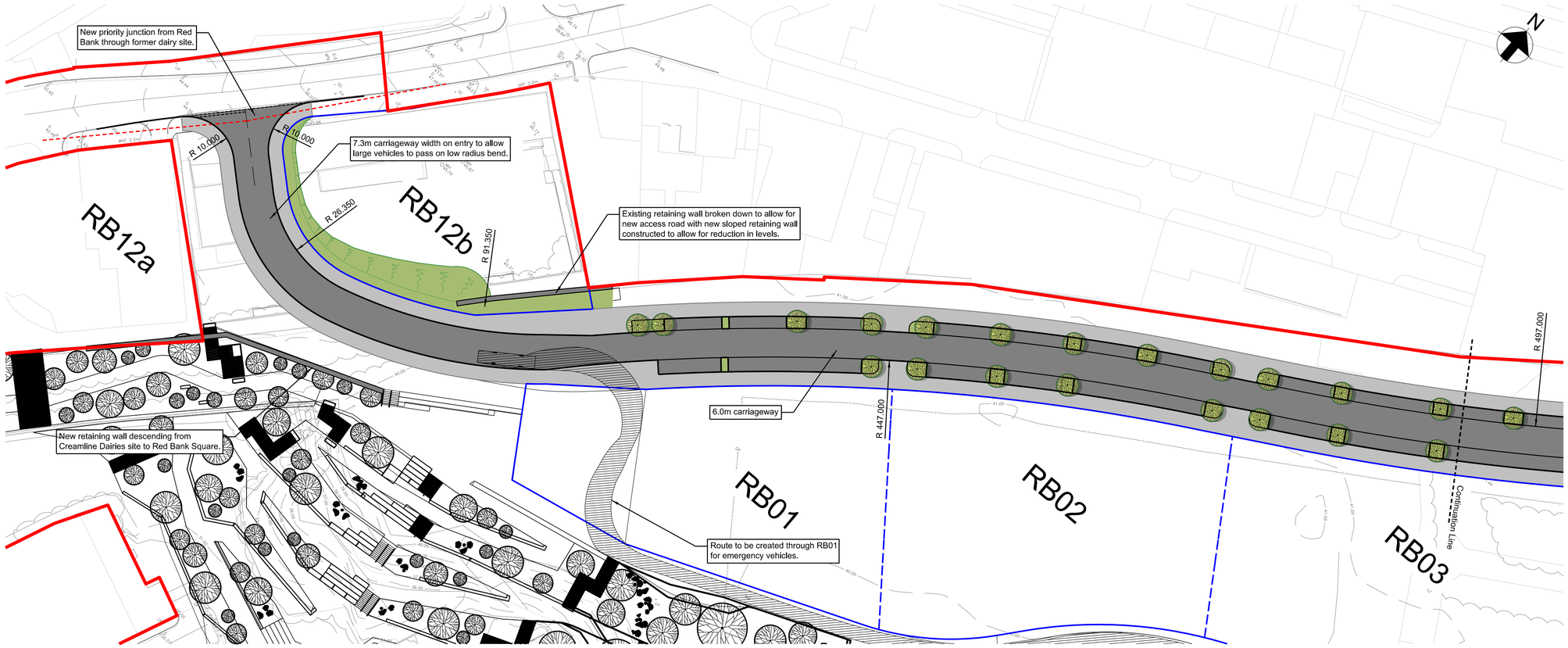
VNIF - ARP - 00 - YYY - DR - CU - 1004

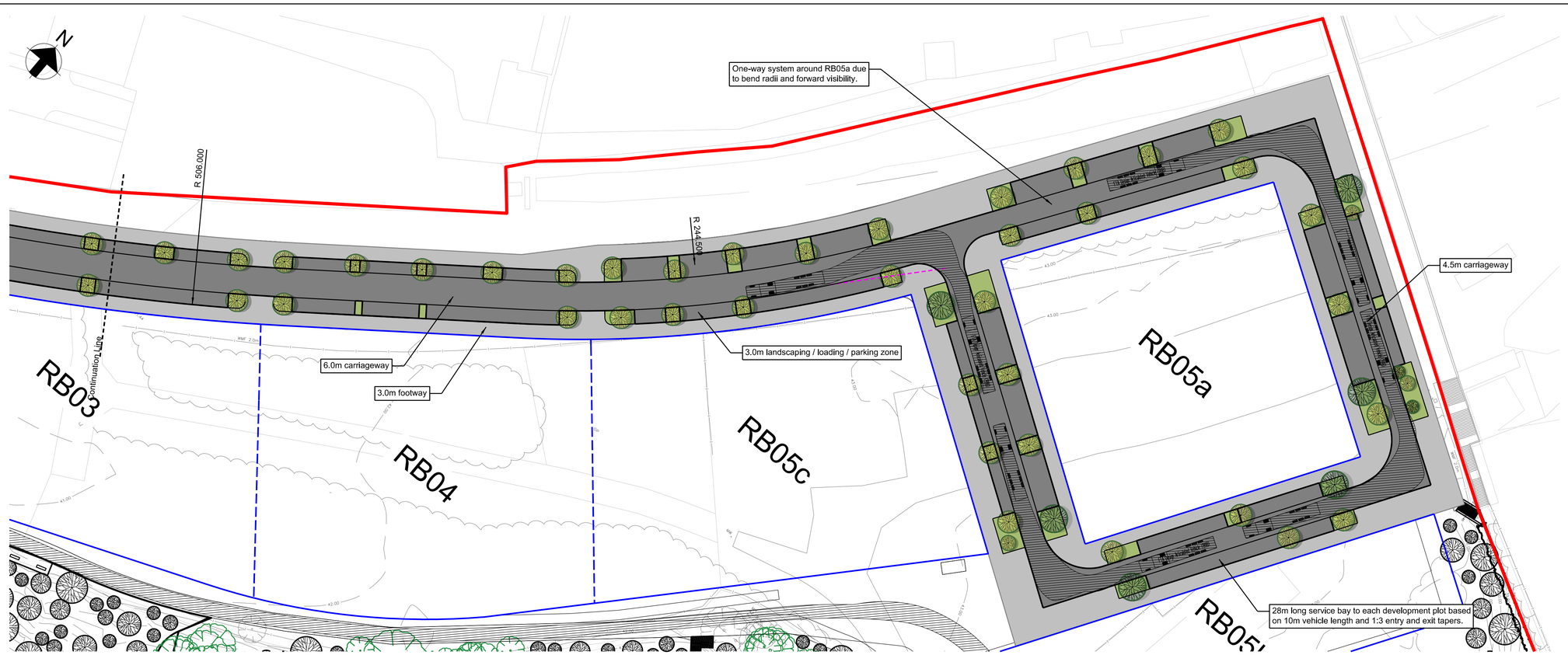
Project | Originator | Volume | Location | Type | Role | Number

Do not scale

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A1





Notes:

1. Topographical data based on Paragon Surveys Drawing No PS-2158-TS Issue P.
2. Refer to drawing VNIF-ARP-00-YYY-DR-CH-0001 for site highway General Arrangement including Plateau Avenue typical sections.
3. Refer to Landscape Architect drawings for details of soft and hard landscaping in the development site.
4. Plot boundaries are indicative based on FEC masterplan.
5. A total of 129 parking bays including 10% accessible bays has been allowed for on Plateau Avenue based on Shultze Grassov drawing No RDB-SPG-XX-XX-SK-LA-8004 Rev B (26/10/2021).
6. The carriageway width on entry has been designed to allow two FTA design rigid HGVs to pass. However, the bendis not suitable for a FTA rigid HGV and a FTA articulated HGV to pass. The likelihood of this occurence is considered to be low, and should this happen one vehicle would be expected to wait for the other to traverse the bend.
7. Vehicle swept paths based on 20mph design speed on entry and 10mph around plot RB05a.
8. The Specification shall be The Specification for Highway Works.
9. Pavement designs subject to confirmation at Stage 4 based on Landscape Architect hard landscaping proposals.

Parking Summary:

Standard parking spaces	114
Disabled parking spaces	15
Total Parking Spaces	129
Loading / service bays	7

Key:

- HIF Works Red Line Boundary
- Development Plot Boundary
- 43m junction visibility splay at 2.4m set-back based on Manual for Streets guidance (30mph design speed)
- 25m junction visibility splay at 2.4m set-back based on Manual for Streets guidance (20mph design speed).

Rev	Date	Description	By	Chkd	Appd	Auth
P01	26/11/21		RS	RG	RG	---
P02	13/12/21		AR	RS	RG	---
P03	17/12/21		RS	RS	RG	---
P04	01/02/22		RG	RG	RG	---
P05	17/02/22	Amended for Planning Comments	RS	RG	RG	---

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Project Title

Victoria North HIF Infrastructure & Enabling Works

Drawing Title

Plateau Avenue General Arrangement

Scale at A1	1:1000		Arup Job No	282022-00
Role	Civil - Highways			
Suitability	S3 - Issued for Review and Approval			
Rev	By	Chkd	Appd	
P05	RS	RG	RG	---
	Date	Date	Date	
	17/02/22	17/02/22	17/02/22	---

Name

VNIF - ARP - 00 - YYY - DR - CH - 0002

Project | Orlginator | Volume | Location | Type | Role | Number

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A1

Retaining wall to be demolished

Retaining wall to be demolished

Retaining wall to be demolished

Key:

- Red Line Boundary
- Retainign Wall to be Demolished

Notes:

1. Development plot boundaries are as presented in the HIF Development Brief. Amendments to boundaries will need to be made during Stage 3 to suit highway and landscaping boundaries.

Rev	Date	Description	By	Chkd	Appd	Auth
P01	10/12/21		RG	RG	RG	—
P02	20/12/21		OM	RG	RG	—

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Project Title

Victoria North HIF Infrastructure & Enabling Works

Drawing Title

Planning Application 2 Demolition Plan

Scale at A1	1:1000	Arup Job No	282022-00
Role	Structural Engineers		
Suitability	S2 - Issued for Information		

Rev	By	Chkd	Appd	
P02	OM	RG	RG	—
	Date 20/12/21	Date 20/12/21	Date 20/12/21	—

Name

VNIF - ARP - 00 - YYY - DR - CS - 0002

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

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3. Layout is based on:
   - Topographical Survey drawing PS-2158-TS by Paragon Surveys dated September 2021.

4. Existing Utilities layout based on the following information:
   - Utility Search Map drawing 97079 undertaken by Atkins dated 24/06/2021.
   - Partial GPR Survey drawing PUM-11943-U-DR-0001 Rev 01 undertaken by Precison Utility Mapping dated 11/11/2021.

5. No guarantee is given for the accuracy of the information contained herein, which is provided for general guidance only and must not be relied upon for excavation or detailed design until apparatus locations are verified / validated through further site investigation works.

6. Where electricity and telecommunications cables are indicated there may be multiple cables present.

7. Communications cables shown do not reflect that in some areas ducts are shared between companies.

8. Utilities have been drawn to 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	
Type B Detection - Typically GPR and EML techniques are used	Class
Type C Site reconnaissance - Physical surface features identified	
Type D Desktop utility records search	

9. Refer to schedule VNIF-ARP-ZZ-YYY-SH-CU-0001 for diversion/abandonment lengths and further asset information.

HIF Site Boundary
Telecoms BT
Telecoms Vodafone Duct
Telecoms Virgin Media Duct
Gas Low Pressure Main
Gas Medium Pressure Main
Electricity Low Voltage
Electricity 6-6.6kV
Electricity 33kV
Electricity 132kV
MCC Street Lighting and Control Ducting
Water Trunk Main
Water Distribution Main
Drainage Combined Sewer
Drainage Combined Sewer Outfall
Drainage Surface Water Drain (Private)
XXX Asset ID Reference

Rev	Date	Description	By	Chkd	Appd	Auth
P01	26/08/21		AS	AS	AS	---
P02	17/12/21		EC	RG	RG	---
P03	01/02/22		EC	EC	RG	---
P04	18/02/22	Amended for planning	EC	RG	RG	---

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Project Title
Victoria North HIF Infrastructure & Enabling Works

Drawing Title
Existing Site Wide HIF Utilities & Drainage

Scale at A1	1:1250	Arup Job No	282022-00
Role	Consultant for Utilities		
Suitability	S3 - Issued for Review and Comment		

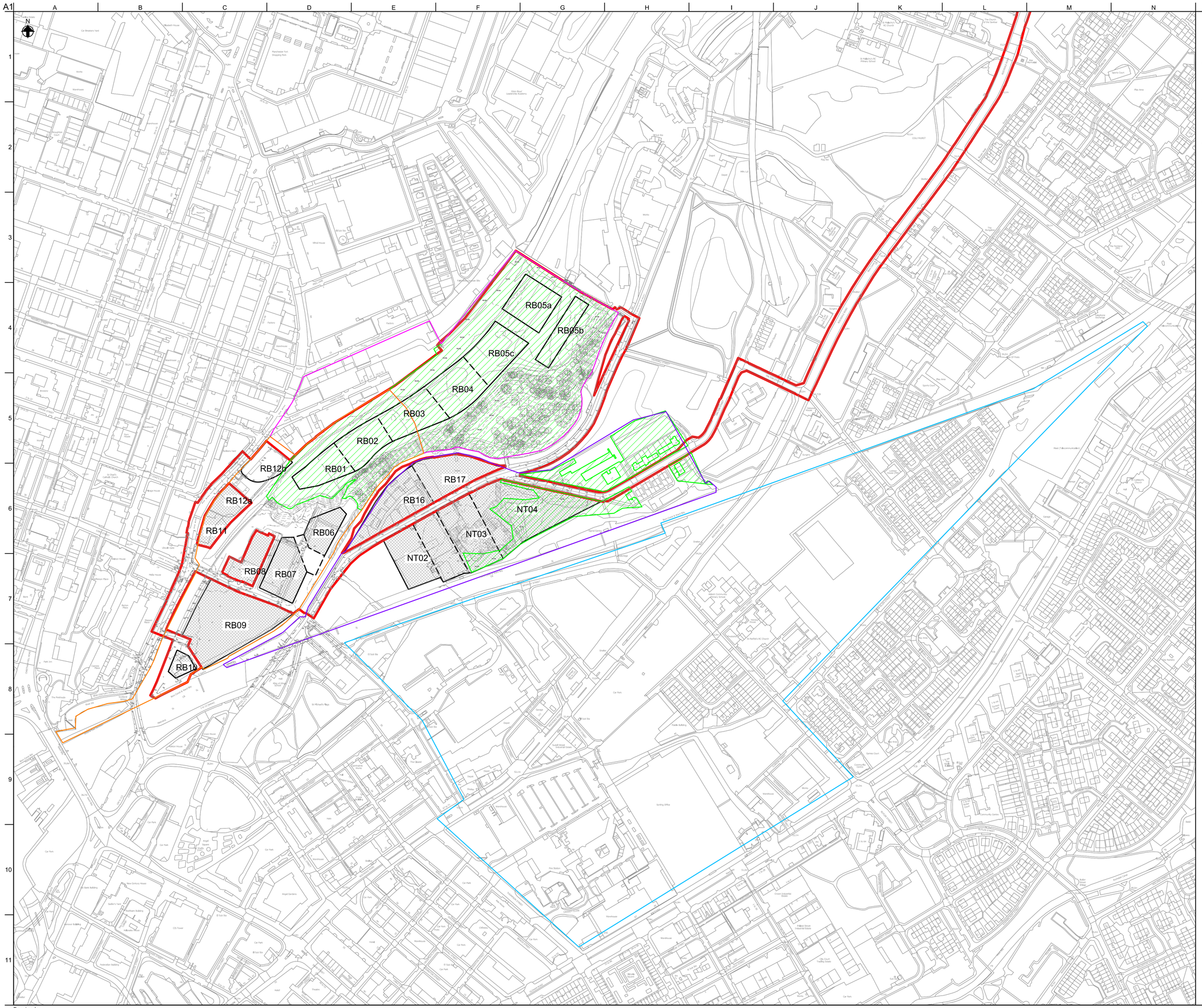
Rev	By	Chkd	Appd	
P04	EC	RG	RG	---
	Date 18/02/22	Date 18/02/22	Date 18/02/22	---

Name
VNIF - ARP - 00 - YYY - DR - CU - 0001
Project | Originator | Volume | Location | Type | Role | Number

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   - Topographical Survey drawing PS-2158-TS by Paragon Surveys dated September 2021.
4. No guarantee is given for the accuracy of the information contained herein, which is provided for general guidance only and must not be relied upon for excavation or detailed design until apparatus locations are verified / validated through further site investigation works.
5. This drawing should be read with reference to VNIF-ARP-ZZ-YYY-CS-CD-0001 stage 3 drainage calculations
6. Greenfield assumed as areas which are not positively drained.
7. Greenfield extents are shown to catchment boundaries only.

Key

- HIF Site Boundary
- Plot Boundary
- Greenfield Extents
- Drainage Catchment 1
- Drainage Catchment 3
- Drainage Catchment 4
- Drainage Catchment 5

Rev	Date	Description	By	Chkd	Appd	Auth
P01	26/08/21		AS	AS	AS	---
P02	17/02/22	Amended for Planning Comments	DH	RG	RG	---

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Project Title

Victoria North HIF Infrastructure & Enabling Works

Drawing Title

HIF Existing Surface Water Catchments

Scale at A1	1:1250	Arup Job No	282022-00

Role: Civil - Drainage

Suitability: S3 - Issued for Review and Approval

Rev	By	Chkd	Appd	
P02	DH	RG	RG	---
	Date 17/02/22	Date 17/02/22	Date 17/02/22	---

Name: VNIF - ARP - 00 - YYY - DR - CD - 0001
(Project | Orlginator | Volume | Location | Type | Role | Number)

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Timing of abandonment of exisiting utility assets in Hargreaves Street dependent on FEC demolition phasing. These works may be undertaken by FEC in the future if existing land uses are retained beyond the HIF timeframe.

Diversion of exisitng utilities in western footway due to proposed bridge/utility trench crossing

Diversion of exisitng utilities in eastern footway due to proposed 'u-tube' trench crossing chamber

RB01 RB02 RB03 RB04 RB05a RB05b RB05c RB06 RB07 RB08 RB09 RB10 RB11 RB12a RB12b RB16 RB17 NT02 NT03 NT04

T01 T09 T10 T11 W06 W07 W08 D13 D19 E01 E02 E09 E18 E19 E21 G03 G07 G08 G10

Notes

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3. Layout is based on:
   - Plot boundaries developed in conversation with FEC Winter 2021/2 - boundaries between adjacent plots are indicative only and are subject to change as the FEC masterplan is developed.
   - Topographical Survey drawing PS-2158-TS by Paragon Surveys dated September 2021.
   - Landscape Architect masterplan drawing 2700-PLA-ZZ-YYY-DR-L-1011 Rev P02.06 dated 14/02/2021 by Planit.
4. Existing Utilities layout based on the following information:
   - Utility Search Map drawing 97079 undertaken by Atkins dated 24/06/2021.
   - Partial GPR Survey drawing PUM-11943-U-DR-0001 Rev 01 undertaken by Precison Utility Mapping dated 11/11/2021.
5. No guarantee is given for the accuracy of the information contained herein, which is provided for general guidance only and must not be relied upon for excavation or detailed design until apparatus locations are verified / validated through further site investigation works.
6. Where electricity and telecommunications cables are indicated there may be multiple cables present.
7. Communications cables shown do not reflect that in some areas ducts are shared between companies.
8. Utilities have been drawn to 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	Certainty
Type B Detection - Typically GPR and EML techniques are used	
Type C Site reconnaissance - Physical surface features identified	Risk
Type D Desktop utility records search	

9. Refer to schedule VNIF-ARP-ZZ-YYY-SH-CU-0001 for diversion/abandonment lengths and further asset information.

- HIF Site Boundary
- Plot Boundary
- Provision of Utility and Drainage Infrastructure Only
- Telecoms BT
- Telecoms Vodafone Duct
- Telecoms Virgin Media Duct
- Gas Low Pressure Main
- Gas Medium Pressure Main
- Electricity Low Voltage
- Electricity 6-6.6kV
- Electricity 33kV
- Electricity 132kV
- MCC Street Lighting and Control Ducting
- Water Trunk Main
- Water Distribution Main
- Drainage Combined Sewer
- Drainage Combined Sewer Outfall
- Drainage Surface Water Drain (Private)
- XXX Asset ID Reference
- x x Asset to be abandoned
- // // Asset to be diverted
- Proposed diversion route
- Utilities to be lowered (Plateau Avenue Junction)

Rev	Date	Description	By	Chkd	Appd	Auth
P01	26/08/21		AS	AS	AS	---
P02	17/12/21		EC	RG	RG	---
P03	14/01/22		TW	TW	TW	---
P04	01/02/22		EC	EC	RG	---
P05	18/02/22	Amended for planning	EC	RG	RG	---

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Client: MANCHESTER CITY COUNCIL; bam

Project Title: Victoria North HIF Infrastructure & Enabling Works

Drawing Title: HIF Utilities & Drainage Diversions Site Wide

Scale at A1	Arup Job No
1:1250	282022-00

Role: Consultant for Utilities

Suitability: S3 - Issued for Review and Comment

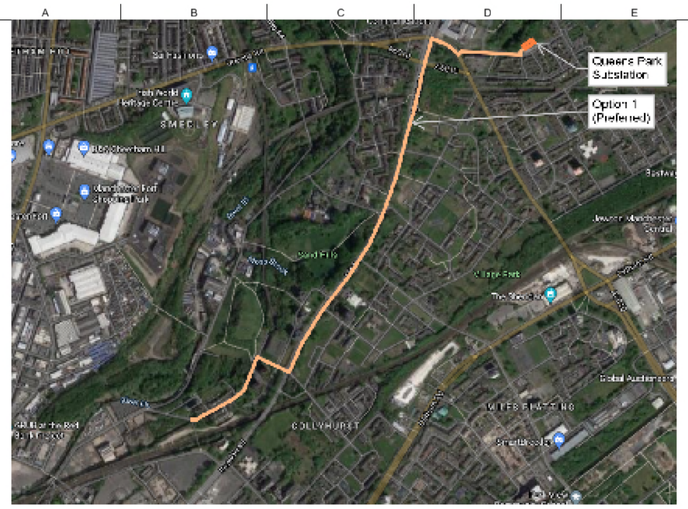
Rev	By	Chkd	Appd	
P05	EC	RG	RG	---
	Date 18/02/22	Date 18/02/22	Date 18/02/22	---

Name: VNIF - ARP - 00 - YYY - DR - CU - 1001
(Project - Originator - Volume - Location - Type - Role - Number)

Do not scale

© Arup

A1



Extent of Street Works for HV Ring Mains to Queens Park Primary Substation

Scale NTS

N

Secondary substation loctions tbc with FEC team. Capacity tbc - assumed 0.5MVA.

19.22MVA site total

EV Charging RB05 0.22MVA 2026

RB05a 1.24MVA 2026

RB05b 0.62MVA 2026

RB05c 0.62MVA 2026

EV Charging RB01-4 & 12(b) 0.34MVA 2028

Ducting provision for future LV feed for street lighting and EV charging

RB04 1.29MVA 2026

RB03 0.78MVA 2027

Park 0.25MVA 2024

RB02 0.80MVA 2028

Proposed utilities to cross proposed footbridge. Buried 'U-Tube' trench crossing as a potential alternative

Proposal that the 4th (green) ring main has HIF ducting but future ENWL/Developer cable pulling - due to occupation dates and loads. Flexibility is offered with the proposed ring mains that if phasing of plots changes in future, early plots will be able to connect to the energised ring main.

Secondary substation for 4th ring main to be developer funded and installed when & where required.

0.64MVA 2029 RB12b

RB01 0.55MVA 2029

Extent of HIF ducting for 4th ring main. Due to Queens Park primary capacity exceeding demand required by HIF and Collyhurst, this ring main may connect to the future VN primary substation (location unconfirmed).

RB17 0.69MVA 2031

0.55MVA 2030 RB16

NT04 1.56MVA 2028

RB12a

RB11 & 12a 0.43MVA 2026

RB11

Secondary substation loctions tbc with FEC team. Capacity tbc - assumed 0.5MVA.

RB06 0.61MVA 2026

NT03 1.52MVA 2027

Route proving for 3No. ring mains beyond the HIF site back to Queens Park primary substation to be undertaken by the contestable works undertaker (Utilities subconsultant / ENWL)

NT02 2.20MVA 2026

0.60MVA 2026 RB08

RB07 1.51MVA 2027

Proposed electricity routing aims to avoid diversion requirements in the 'Full Aspiration' to widen Dantzic Street within the FEC Developer Design (Application 4) - dependant on full GPR results, utility trail hole findings and extent of 'Full Aspiration' drainage infrastructure to be installed by HIF

RB09 1.38MVA 2026

Buried 'U-Tube' trench crossing beneath river bed for proposed utilities

RB10 0.63MVA 2032

Key

- HIF Site Boundary
- Plot Boundary
- Ring 1 - 5.28MVA total demand, 4.3km length (HIF funded)
- Ring 2 - 4.75MVA total demand, 5.0km length (HIF funded)
- Ring 3 - 5.01MVA total demand, 5.5km length (HIF funded)
- Ring 4 - 4.18MVA total demand, 1.6km length (HIF ducting only)
- 6.6kV Secondary (HIF funded)
- 6.6kV Secondary (future developer funded)
- Ring 1 - LV cables (HIF funded)
- Ring 2 - LV cables (HIF funded)
- Ring 3 - LV cables (HIF funded)
- Ring 4 - LV cables (HIF ducting only)
- HIF drainage and utility infrastructure networks sized to accommodate these plots, however geotechnical/remedial works to be designed and undertaken by the developer

Notes

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2. This drawing shall be read in conjunction with all relevant Engineer's drawing, specifications and reports.
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4. Layout is based on:
   - Landscape Architect masterplan drawing 2700-PLA-ZZ-YYY-DR-L-1011 Rev P02.06 dated 14/02/2022 by Planit.
   - Topographical Survey drawing PS-2158-TS by Paragon Surveys dated September 2021.
5. Plot boundaries developed in conversations with FEC Winter 2021/2 - boundaries between adjacent plots are indicative only and are subject to changes as the FEC masterplan is developed.
6. Utility demands have been calculated base on parking, residential and non-residential numbers, as per FEC's 'VN Housing Delivery Plan September 2021 v2' received 05-10-21. Occupation dates have been taken from v3 received 22-11-2021. Non-FEC third party plot details have been assumed from the Northern Gateway SRF.
7. Extents of landscaping and new roads are based on WS3 designs.
8. Geo-environmental and geotechnical assessments will address the areas within the red line boundary (excluding grey hatched developer plots).
9. WS3 HIF Utilities design developed in conjunction with FEC team discussions.
10. Due to H&S hazards associated with cables being energised far ahead of need, and the later plots likely requiring capacity from a future new primary substation, not all cables and ducting will be provided by HIF. This strategy has been developed in discussion with ENWL.
11. HV and LV to ducted, due to HIF programme constraints.
12. Future plot connections to the HIF network are to be undertaken by developer.

Rev	Date	Description	By	Chkd	Appd	Auth
P01	26/08/21		AS	AS	AS	---
P02	17/12/21		EC	RG	RG	---
P03	01/02/22		EC	EC	RG	---
P04	18/02/22	Amended for planning	EC	RG	RG	---

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Client

MANCHESTER CITY COUNCIL

bam nuttall

Project Title

Victoria North HIF Infrastructure & Enabling Works

Drawing Title

Proposed Electrical Demands & 6.6kV Circuits

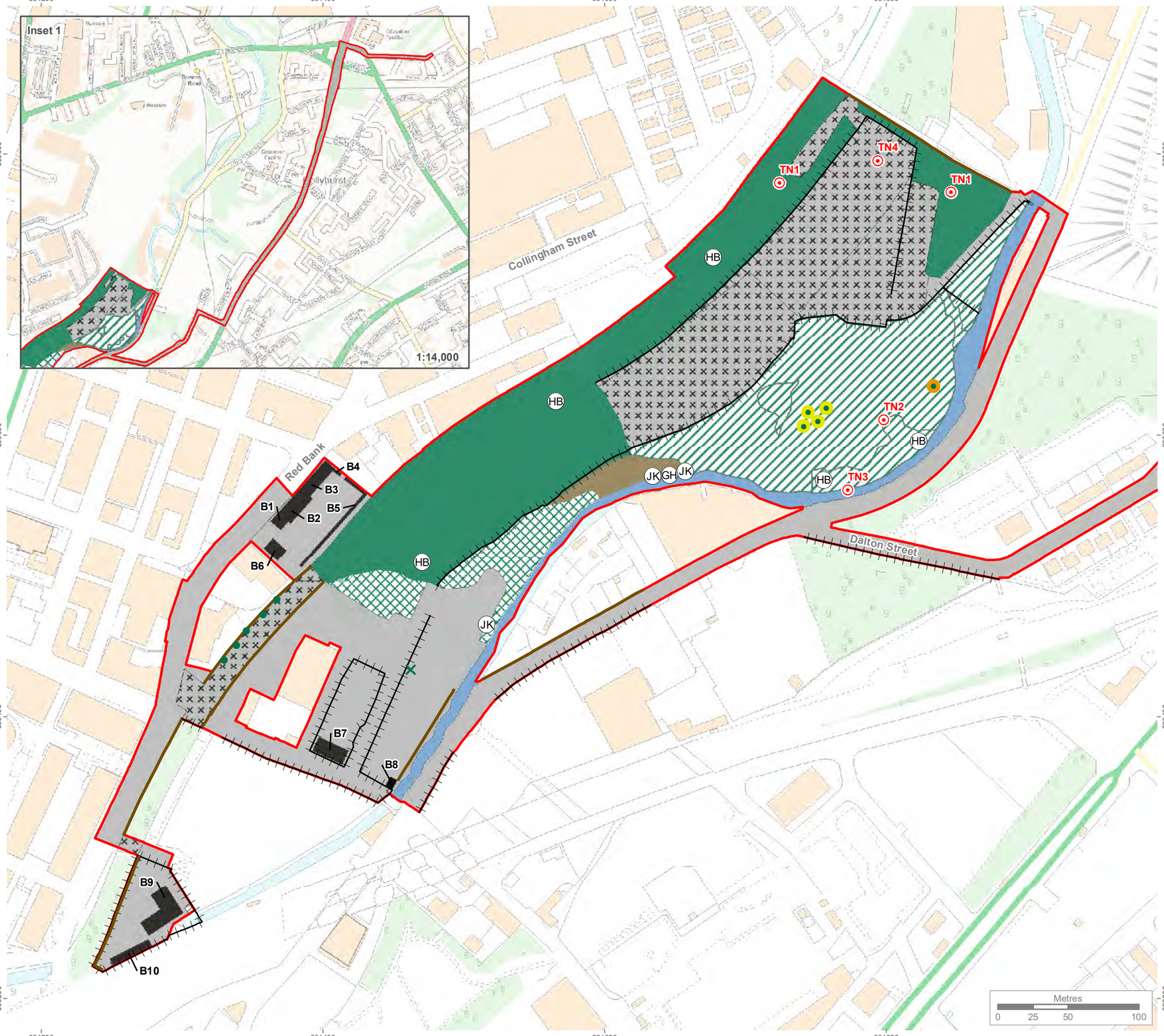
Scale at A1	1:1250	Arup Job No	282022-00
Role	Consultant for Utilities		
Suitability	S3 - Issued for Review and Comment		

Rev	By	Chkd	Appd	
P04	EC	RG	RG	---
	Date 18/02/22	Date 18/02/22	Date 18/02/22	---

Name: VNIF - ARP - 00 - YYY - DR - CU - 1002
(Project | Originator | Volume | Location | Type | Role | Number)

Do not scale

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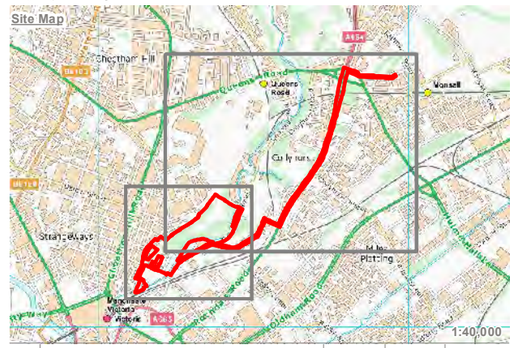
KEY

- Site boundary
- Target note
- Giant hogweed (GH)
- Himalayan balsam (HB)
- Japanese knotweed (JK)
- Scattered scrub
- Scattered broad-leaved tree
- Broad-leaved tree with low bat suitability
- Broad-leaved tree with moderate bat suitability
- Fence
- Wall
- Semi-natural broad-leaved woodland
- Plantation broad-leaved woodland
- Dense/continuous scrub
- Continuous bracken
- Running water
- Hardstanding with ephemeral/short perennial
- Introduced shrub
- Building
- Hardstanding

Note:
The locations of habitats and habitat features are indicative.

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Rev	Description	Drawn	Approved	Date
A	Red line boundary update.	MK	SD	17/02/2022

TEP THE ENVIRONMENT PARTNERSHIP

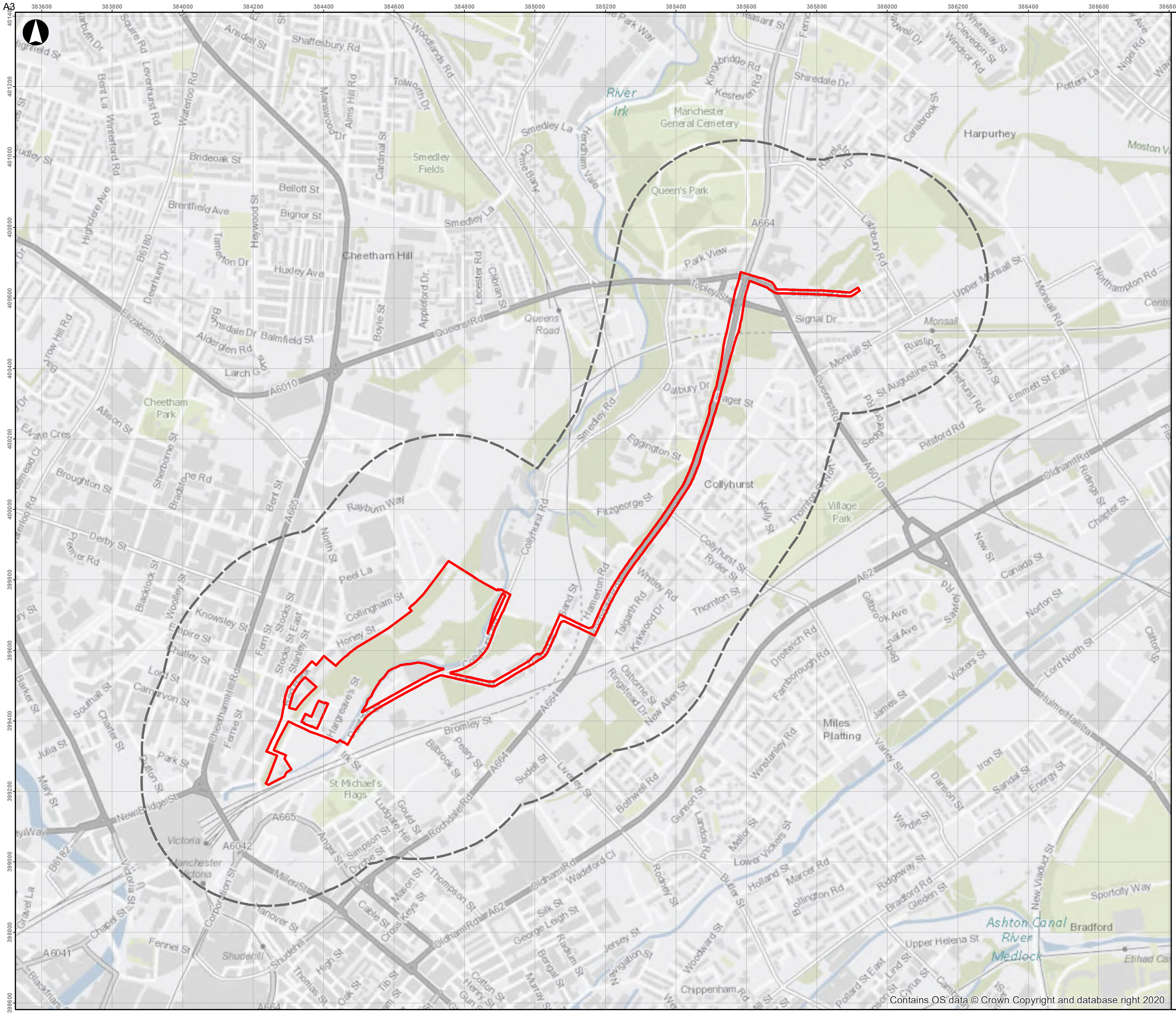
Genesis Centre, Birchwood Science Park, Warrington WA3 7BH
Tel 01925 844004 e-mail tep@tep.uk.com www.tep.uk.com

Project
Red Bank Neighbourhood Infrastructure Works- Application 2

Title
Phase 1 Habitat Survey

Drawing Number
G9082.014A

Drawn	Checked	Approved	Scale	Date
JK	CW	SD	1:2,750 @ A3	17/02/2022



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Rev	Date	By	Chkd	Appd	Authd

Metres

0 137.5 275 550

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Client

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Job Title

Proposed HIF Infrastructure Works Victoria North, Manchester

Drawing Title

Figure 7.1: Site Location

Scale at A3

1:10,000

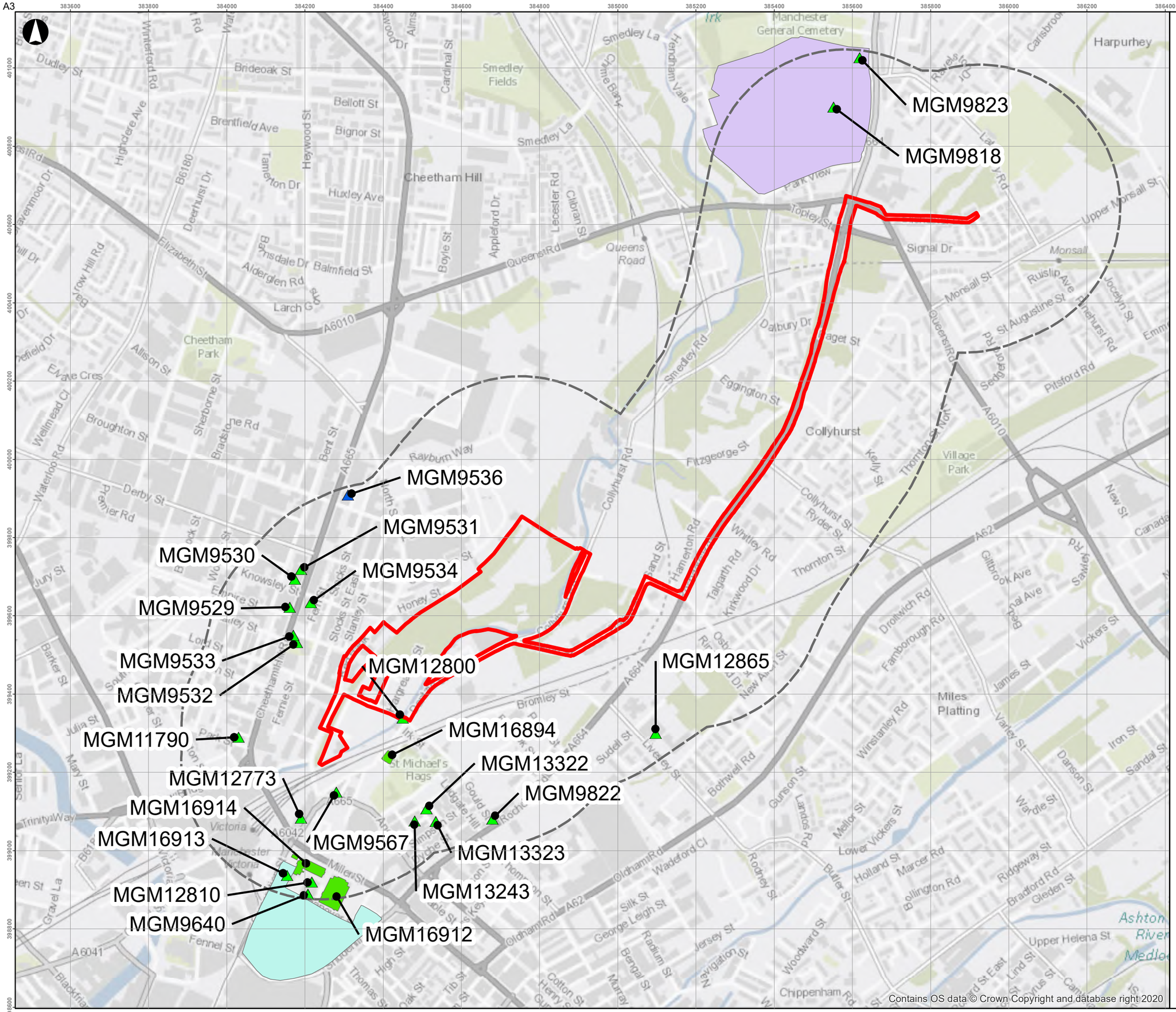
Drawing Status

Draft

Job No	Drawing No	Rev
282022-00	**001**	**P1**

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A3



Legend

- Site Boundary
- Study Area (350m)
- Grade II* Listed Building
- Grade II Listed Building
- Shudehill Conservation Area
- Queen's Park RPG

oRev	oDate	oBy	oChkd	oAppd	oAuthd
Rev	Date	By	Chkd	Appd	Authd

Metres
0 120 240 480

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Proposed HIF Infrastructure Works Victoria North, Manchester

Drawing Title
Figure 7.2 : Designated Heritage Assets

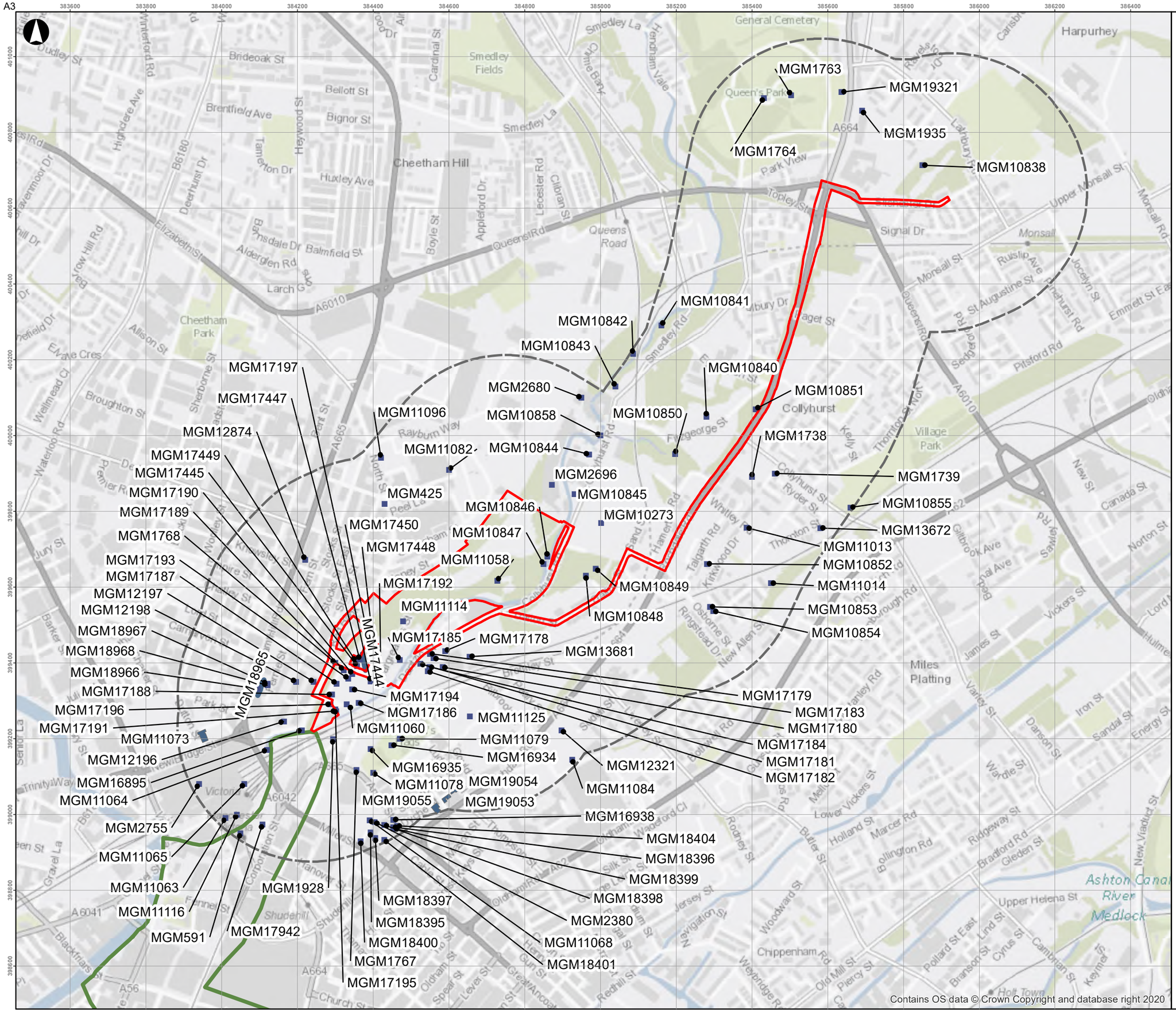
Scale at A3
1:9,000

Drawing Status
Draft

Job No	Drawing No	Rev
282022-00	**001**	**P1**

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Job Title

Proposed HIF Infrastructure Works
Victoria North, Manchester

Drawing Title

Figure 7.3 : Non-Designated Heritage Assets

Scale at A3

1:9,300

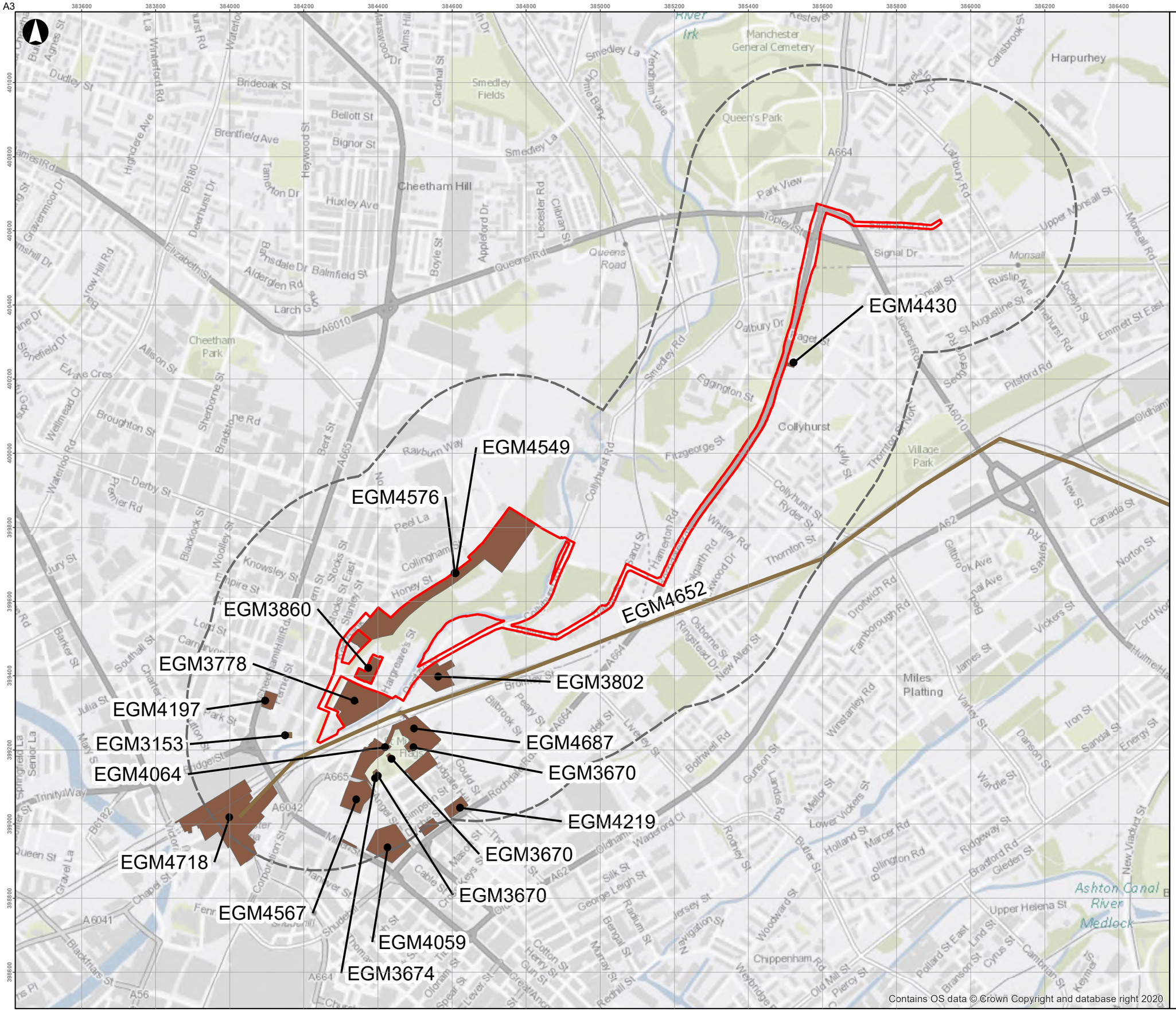
Drawing Status

Draft

Job No	Drawing No	Rev
282022-00	**001**	**P1**

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A3



Legend

- Site Boundary
- Study Area (350m)
- GMHER Event Point
- GMHER Event Line
- GMHER Event Polygon

oRev	oDate	oBy	oChkd	oAppd	oAuthd
Rev	Date	By	Chkd	Appd	Authd

Metres
0 130 260 520

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Job Title
Proposed HIF Infrastructure Works Victoria North, Manchester

Drawing Title
Figure 7.4 : Previous Archaeological Investigations (Events)

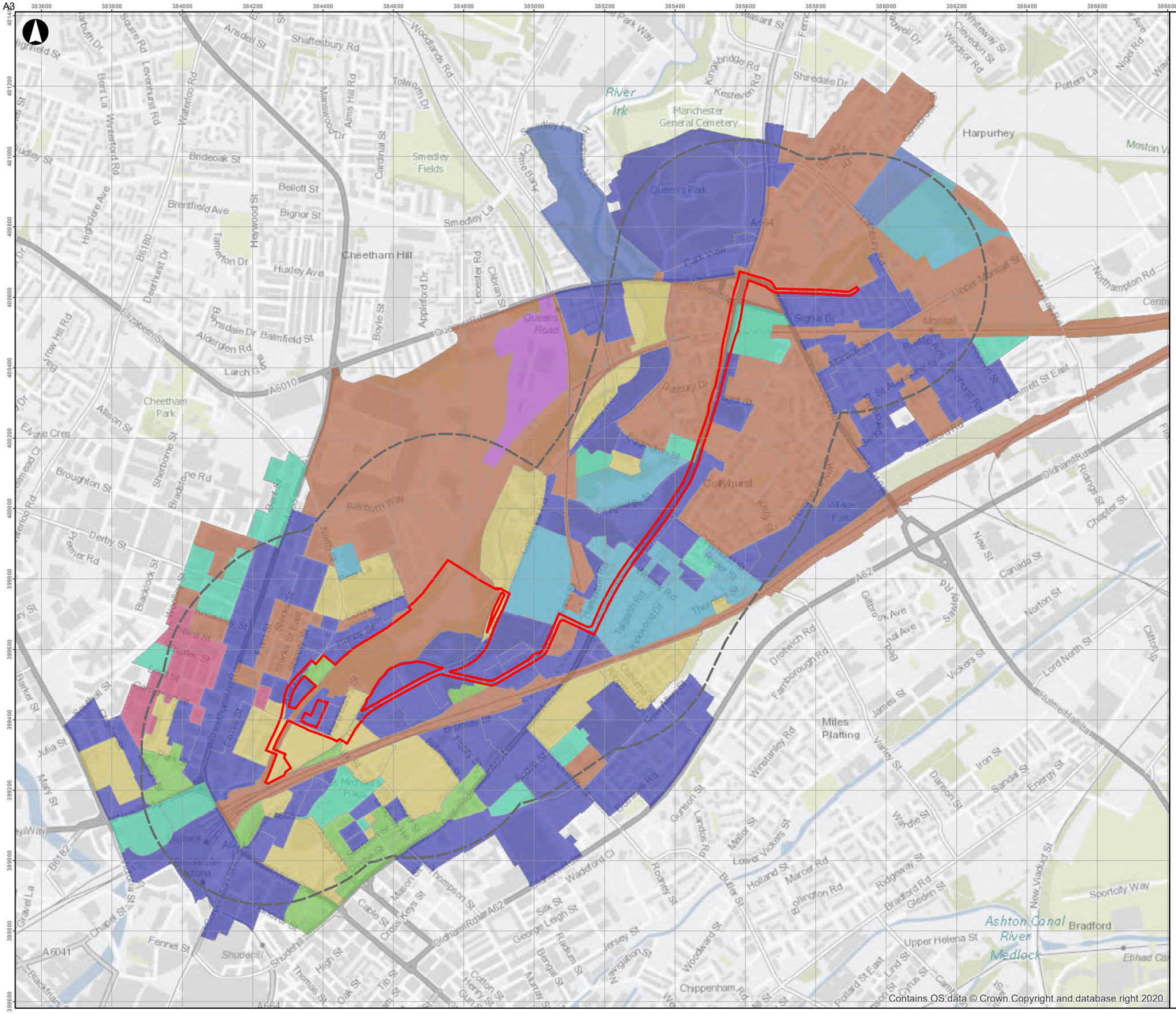
Scale at A3
1:9,500

Drawing Status
Draft

Job No	Drawing No	Rev
282022-00	**001**	**P1**

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A3



Legend

- Site Boundary
- Study Area (350m)
- Commercial
- Communications
- Enclosed Land
- Extractive
- Horticulture
- Industrial
- Institutional
- Ornamental, Parkland and Recreational
- Residential
- Water Bodies

oRev	oDate	oBy	oChkd	oAppd	oAuthd
Rev	Date	By	Chkd	Appd	Authd

Metres

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Proposed HIF Infrastructure Works Victoria North, Manchester

Drawing Title

Figure 7.5: Historic Land Characterisation, from Redhead 2012

Scale at A3

1:10,000

Drawing Status

Draft

Job No	Drawing No	Rev
282022-00	**001**	**P1**

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A3

384200 384400 384600 384800 385000

399600 399400 399200

Red Bank Plateau

St. Catherine's Wood

Creamline Dairies

Red BankViaduct

Key

HIF Infrastructure Boundary

Area of filling to create plateau

Issue	Date	By	Chkd	Appd
P0	2022-01-05	DH	DH	JL

Metres

0 30 60 120

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Key Site Areas

Scale at A3

1:2,500

Arup Job No	Suitability
282022-00	**Preliminary**

Name	Rev
Figure 8.1	**P0**

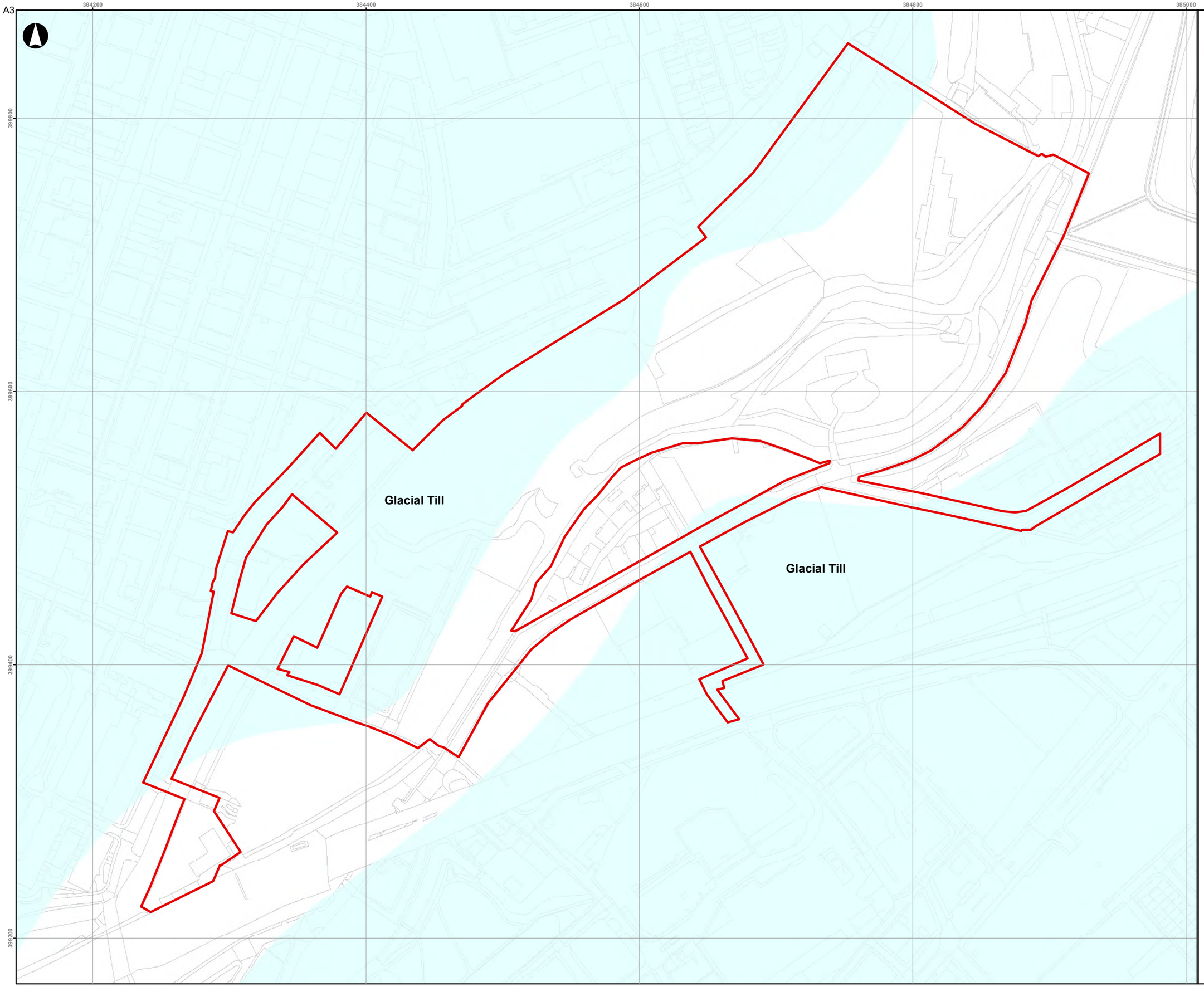
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A3

384200 384400 384600 384800 385000

399600 399400 399200



Key

HIF Infrastructure Boundary

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Issue	Date	By	Chkd	Appd
P0	2022-01-05	DH	DH	JL

Metres
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Project Title
Victoria North

Drawing Title
British Geological Survey
1:50,000 Scale Superficial Geology

Scale at A3
1:2,500

Arup Job No	Suitability
282022-00	**Preliminary**

Name	Rev
Figure 8.2	**P0**

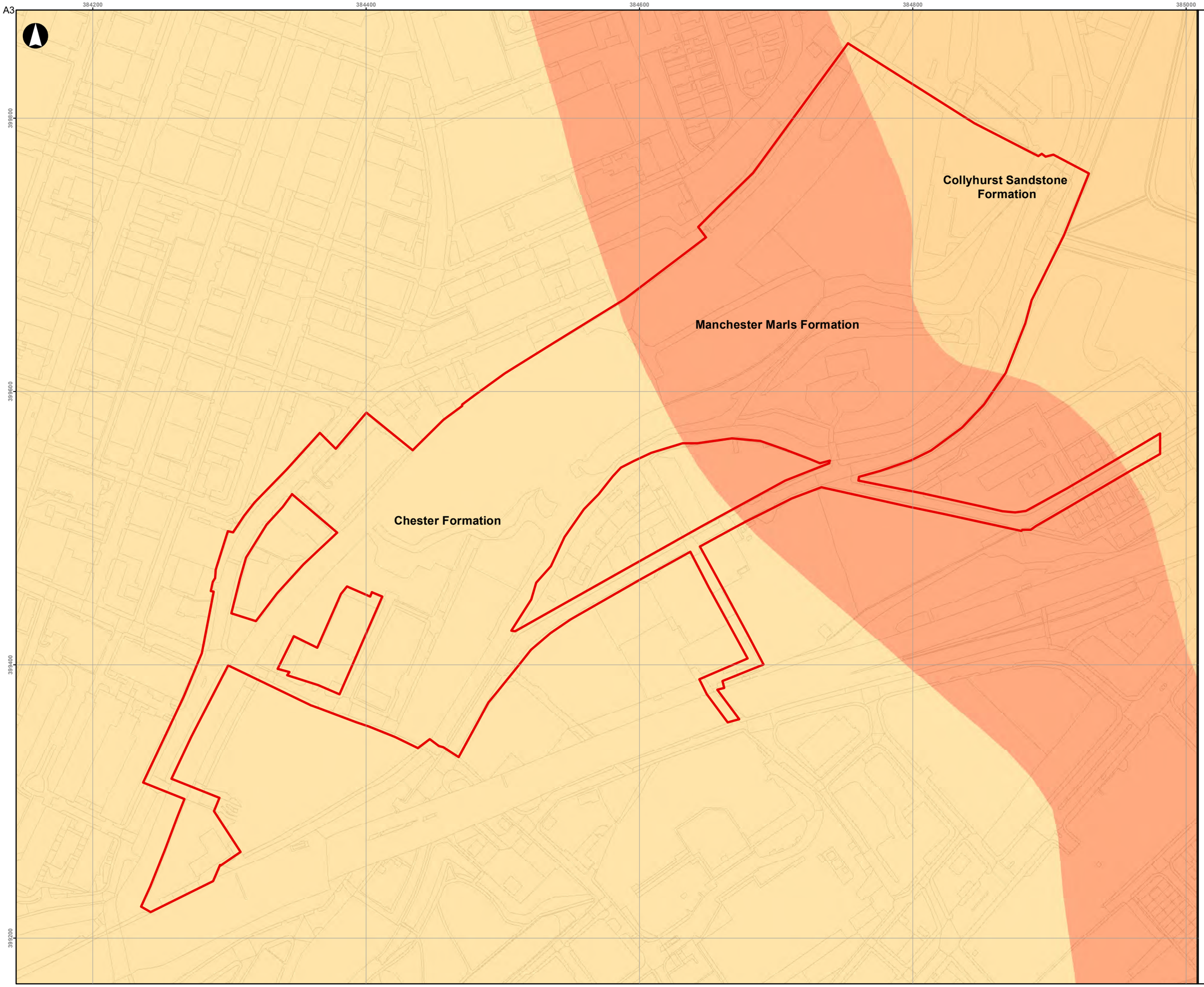
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A3

384200 384400 384600 384800 385000

399600 399400 399200



Key

HIF Infrastructure Boundary

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Issue	Date	By	Chkd	Appd
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Metres
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Project Title
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Drawing Title
British Geological Survey
1:50,000 Scale Bedrock Geology

Scale at A3
1:2,500

Arup Job No	Suitability	Rev
282022-00	**Preliminary**	**P0**

Name
Figure 8.3

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A3

384200 384400 384600 384800

399800 399600 399400 399200

Line of geological long section

Key

HIF Infrastructure Boundary

Exploratory Hole Locations

Type

- Concrete Core
- Cable Percussive
- Cable Percussive and Rotary
- Trial Pit
- Window Sample

Issue	Date	By	Chkd	Appd
P0	2022-01-05	DH	DH	JL

Metres

0 30 60 120

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Project Title

Victoria North

Drawing Title

Ground Investigations (2019 and 2021)

Scale at A3

1:2,500

Arup Job No	Suitability
282022-00	**Preliminary**

Name	Rev
Figure 8.4	**P0**

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A3

384200 384400 384600 384800

399800 399600 399400 399200

Key

HIF Infrastructure Boundary

Bomb Strike Locations

Issue	Date	By	Chkd	Appd
P0	2022-01-05	DH	DH	JL

Metres

0 30 60 120

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Project Title

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Drawing Title

Recorded Bomb Strikes

Scale at A3

1:2,500

Arup Job No	Suitability
282022-00	**Preliminary**

Name	Rev
Figure 8.5	**P0**

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Distance along baseline (m)

0 100 200 300 400 500 600 700 800 900

SW NE

Elevation (mOD)

60 55 50 45 40 35 30 25 20

Historical Mill race

54_TP26A (10.6)
Alluvium
54_TP22 (8.3)
54_TP19 (-21.9)
54_BH101 (19.3)
54_WS105A (-10.0)
GEO_BH214 (25.9)
01_TP122 (-11.0)
GEO_TP219 (-18.7)
01_TP120 (-8.1)
GEO_BH213 (-12.5)
01_BH104 (-29.7)
GEO_BH207 (5.6)
01_TP109 (-7.8)
GEO_WS205 (-10.5)
GEO_BH206 (8.4)
01_TP107 (4.3)
GEO_TP203 (17.1)
01_TP104 (-0.4)
01_TP103 (0.3)
GEO_TP207 (18.9)
01_BH101 (-29.1)
GEO_TP209 (-7.6)

Made Ground
?
Glacial Till
?
Solid Strata

TOPO SURVEY

SCALE 1:222V 1:2500H @ A3-L

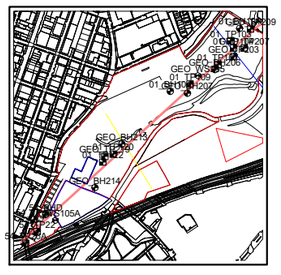
LEGEND

Hole offset is +ve to the RIGHT of the baseline

HoleID (Offset) N20*

SPT N value, * denotes N extrapolated by gINT:
* from main blows
** from seating blows

PLAN



COLOUR LEGEND

- Made Ground [MG]
- Alluvium [ALV]
- Glacial Till Deposits [GTD]
- Chester Formation [CHES]
- Manchester Marls Formation [MM]
- Collyhurst Sandstone Formation [CS]

MATERIALS

- Fill (MADE GROUND)
- Clayey SAND
- SANDSTONE
- Sandy gravelly CLAY
- SAND
- CLAY
- Gravelly SAND
- Sandy CLAY
- MUDSTONE
- Clayey gravelly SAND
- Silty sandy gravelly CLAY
- Silty sandy CLAY
- Silty SAND
- SAND and GRAVEL

- Ground level from 2021 Topographical survey
- Interpreted ground level from exploratory hole records
- Soil boundary
- Rock boundary

ARUP

Job Title
Victoria North

Figure Title
Interpretative Geological Long section

Job No
282022

Figure No
Figure 8.6

ARUP gINT v10.00.01.07. Made by Jonny Tyrer on 1-Nov-21

Library: arup_uklib_4-a-002_Report 2.1.0f SECTION WITH WATER & SPT (A3)
Database: c:\gints\victoria north\stage 3\gir graphs\282022_victoria_north_stage 3 data.gpj ReviP1.1 (SO - Work in progress)

A3

384200 384400 384600 384800 385000

399800 399600 399400 399200

Gas Works
Dye works
Infilled Channel
Corn Mill
Infilled Water Body
Print and Dye Works
Timber Yard
Dye works
Infilled Water Body
Print and Dye Works
Tank
Tank
Soil stockpiles
Forge, Print and Dye works
Dye Works
Dye works and tannery
Gas Works

Key

HIF Infrastructure Boundary

Historic_Landfill_Sites

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Issue	Date	By	Chkd	Appd
P0	2022-02-07	DH	DH	JL

Metres
0 40 80 160

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Project Title
Victoria North

Drawing Title
Key features identified on mapping

Scale at A3
1:3,000

Arup Job No
282022-00

Suitability
Preliminary

Name
Figure 8.7

Rev
P0

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A3



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Coordinate System: WGS 1984 Web Mercator Auxiliary Sphere

Metres

0 62.5 125 250

Rev	Date	By	Chkd	Appd
F1	2022-02-09	FM	MB	DH

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Project Title
Victoria North HIF Infrastructure Works

Drawing Title
Proposed Site Boundary with Associated Watercourses and Drains

Scale at A3
1:5,000

Role

Suitability
For Issue

Arup Job No
282022-55

Rev
F1

Name
001

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

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REFERENCE
2700

PROJECT

VICTORIA NORTH
APPLICATION 2: HIF INFRASTRUCTURE WORKS

DOCUMENT

TVIA FIGURES

CLIENT	STATUS	DATE
MCC	**DRAFT**	**13/01/22**

DOCUMENT CONTROL

FILE NAME

2700-ID-001-01 APPENDIX 10.3 APP. 2 VICTORIA NORTH TVIA FIGURES

PREPARED BY (INITIALS) **LK GW**	
CHECKED BY (INITIALS) **JW**	

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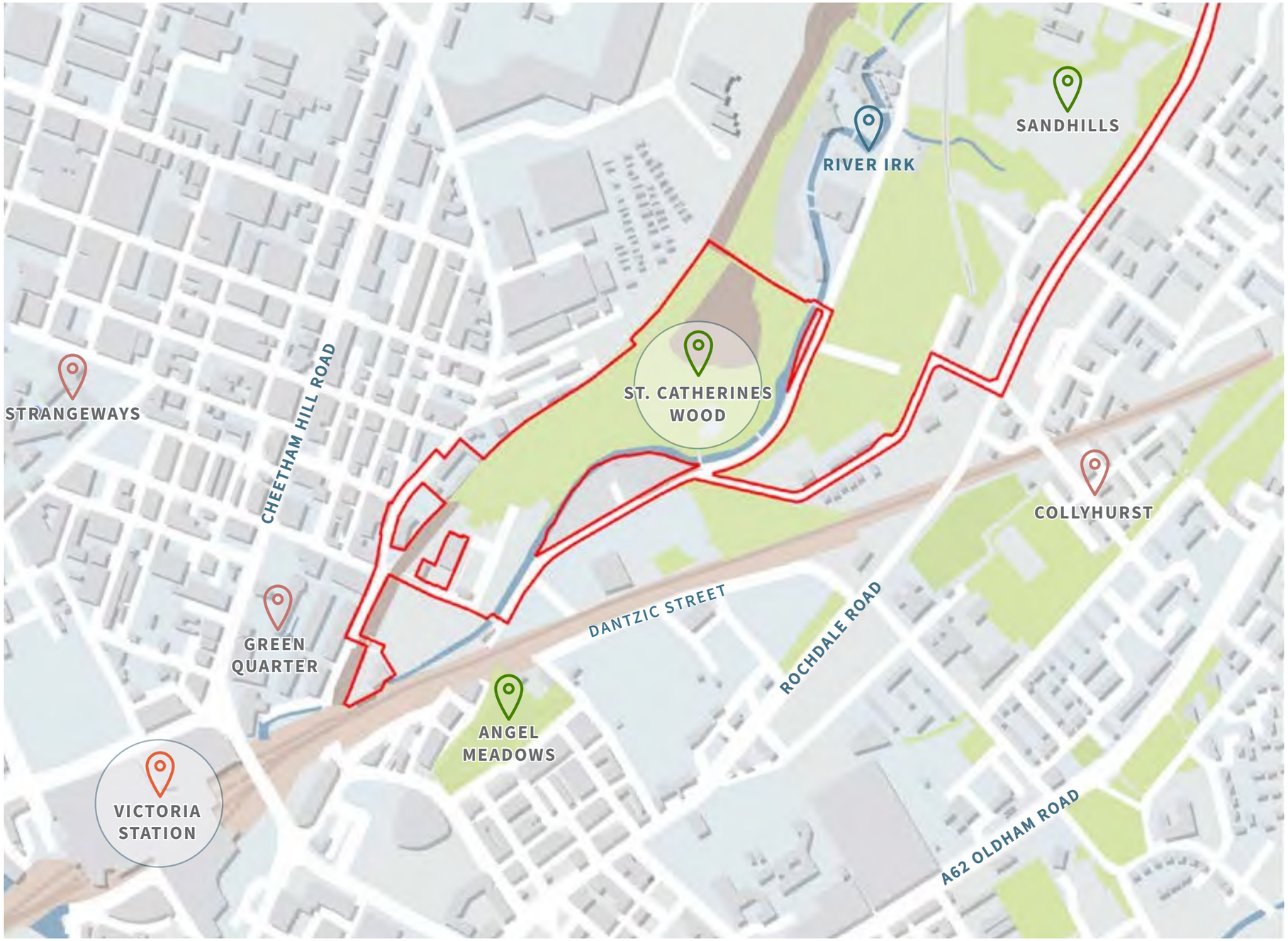


FIGURE 10.1: SITE LOCATION

KEY

Site Boundary



1850

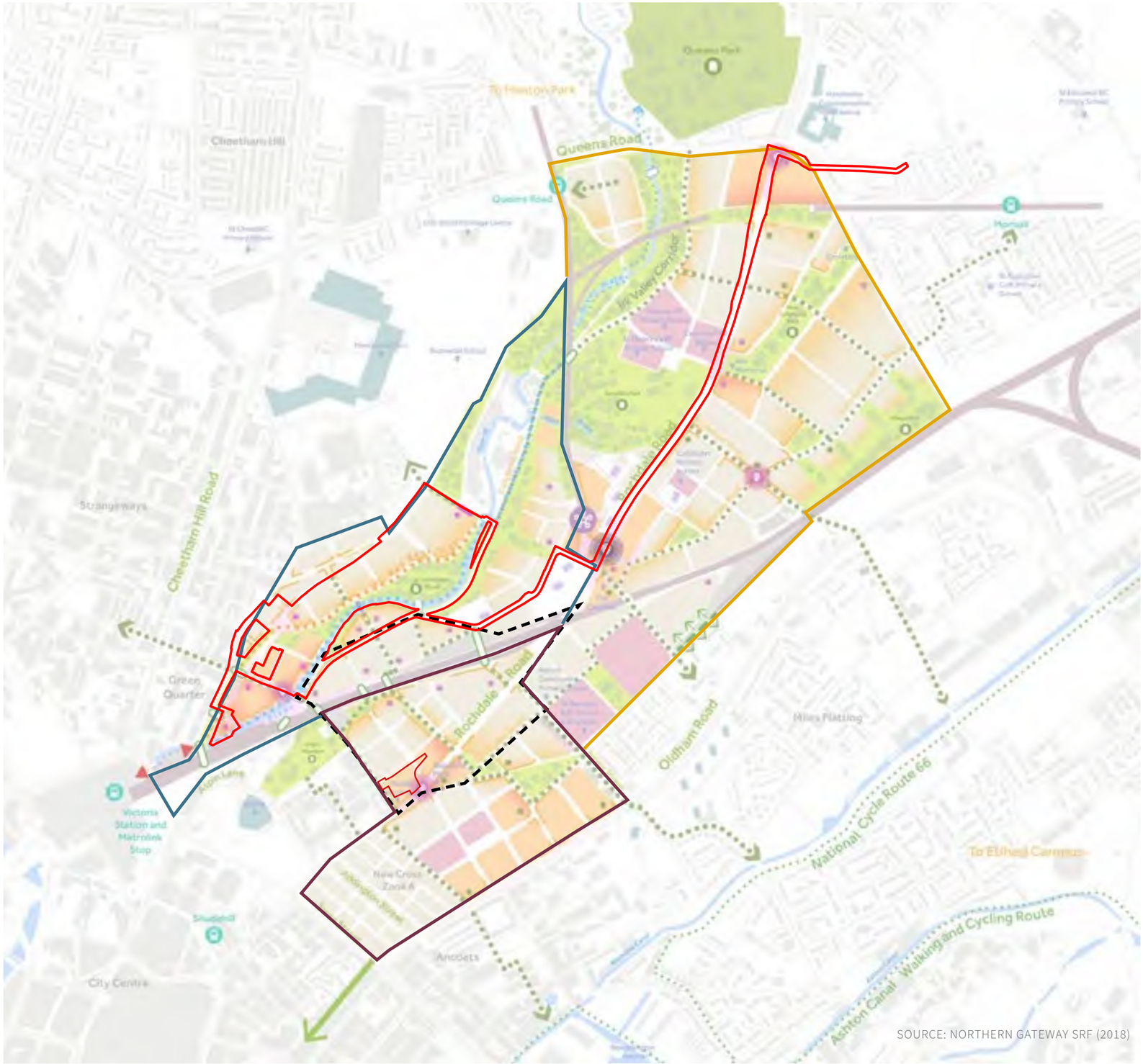


1892



1971

FIGURE 10.2: HISTORICAL DEVELOPMENT



SOURCE: NORTHERN GATEWAY SRF (2018)

FIGURE 10.3: NORTHERN GATEWAY/IRK VALLEY

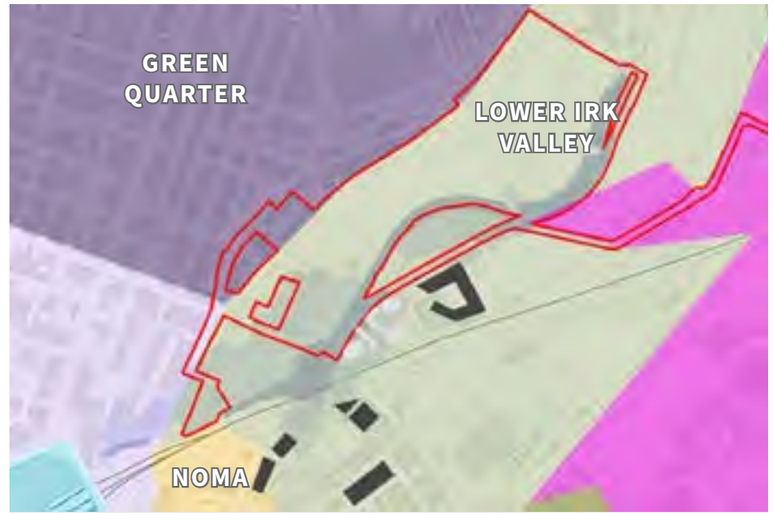
KEY

- Application site boundary
- New Town Character Area (Northern Gateway SRF)

Existing Neighbourhoods

- New Cross
- Lower Irk Valley
- Collyhurst

SOURCE: MANCHESTER CITY COUNCIL



TOWNSCAPE CHARACTER AREAS

N

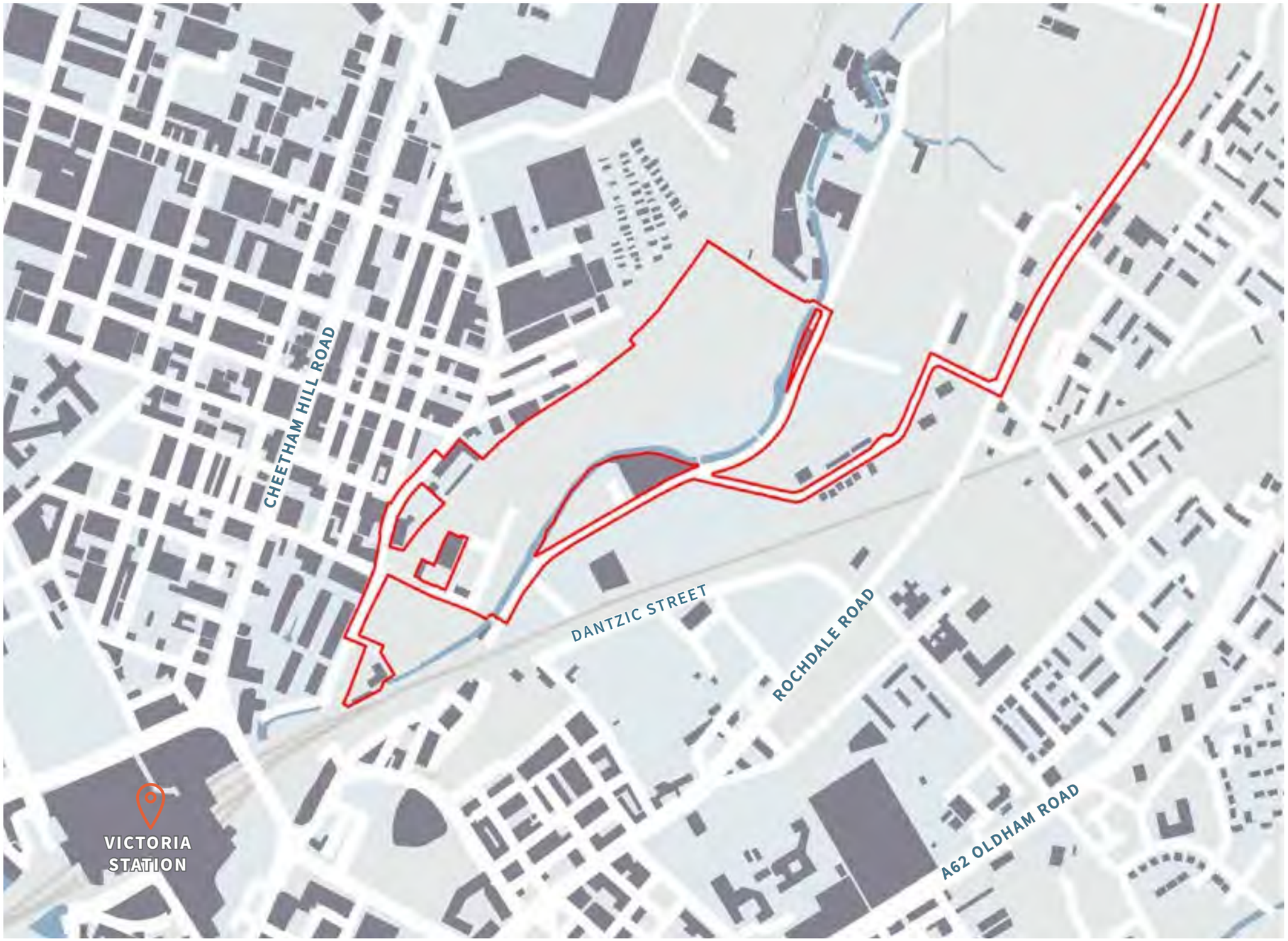


FIGURE 10.4: URBAN GRAIN | EXISTING

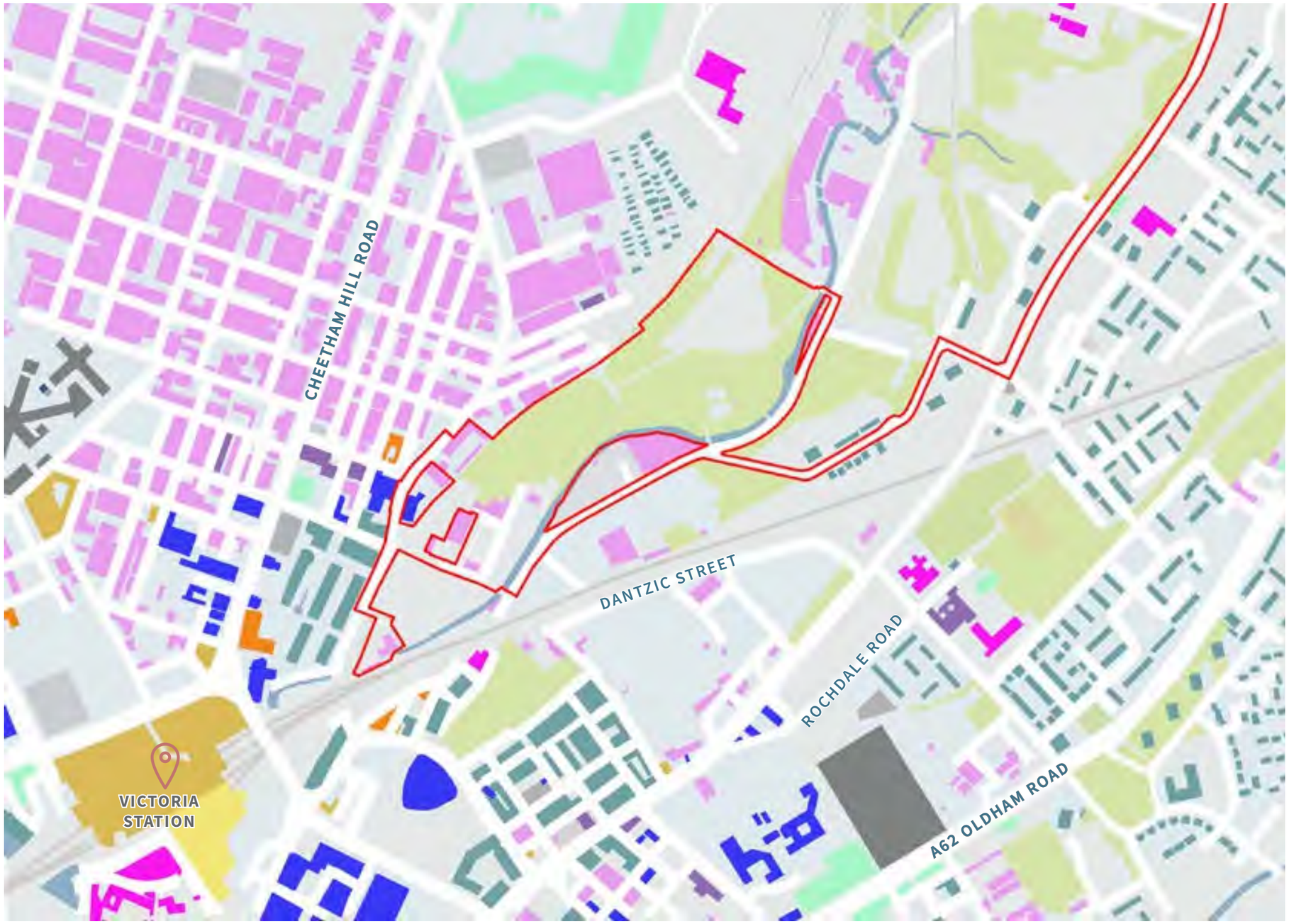


FIGURE 10.5: LAND USE | EXISTING



FIGURE 10.6: LAND USE | PROPOSED



FIGURE 10.7: OPEN SPACE NETWORK | EXISTING



FIGURE 10.8: OPEN SPACE NETWORK | PROPOSED



KEY

- Site Boundary
- Main Route
- Secondary Route
- Cycle Route
- Poor Quality cycle route
- Train Line
- Bus Route
- Bus Stops
- MetroLink
- Viaduct Archway Access
- Poor Quality Access
- Pedestrian Green Access
- Railway forming a barrier between North/South
- Lack of formal Access around site
- Public park

FIGURE 10.9: MOVEMENT AND LINKAGES | EXISTING



KEY

- Site Boundary
- River Irk
- Proposed Pedestrian routes
- Train Line
- Improved Viaduct Archway Access
- Improved Quality Access
- Proposed Vehicular Access
- Retained Bridge Access
- Proposed Active Travel Route
- Proposed Bridge Access
- Improved River edge
- Potential Views from elevated points on site
- Proposed hard surfacing
- Public Park
- Proposed Woodland
- Improved Redbank Viaduct

FIGURE 10.10: MOVEMENT AND LINKAGES | PROPOSED



KEY

- Site Boundary
- Green space
- Woodland
- Woodland beyond site
- Unmanaged Woodland
- Views
- Retaining wall/Lack of
- 5m Drop
- Barney Bridge
- Public right of way
- Creamline Dairies
- River Irk
- Low Quality Waters edge
- Low Quality view
- Cleared Woodland
- Car Park
- Low Quality/unmanaged hardscape

FIGURE 10.11: SITE CHARACTER | EXISTING



KEY

- Site Boundary
- Green space
- Proposed Woodland
- Proposed Public Open Space
- Potential Views from raised areas
- Barney Bridge Retained
- River Irk
- Activated river's edge
- Retained exisiting bridge access
- Proposed new bridge access
- Vehicular/pedestrian access
- Redbank Viaduct improved
- Proposed improved Pedestrian routes/access
- Proposed improved Active Travel Route
- Proposed hard surfacing

FIGURE 10.12: SITE CHARACTER | PROPOSED



KEY

1. 128248/FO/2020 The Gasworks. 9 buildings (8 to 34 storeys). 1202 residential apartments and ground floor commercial uses, associated car parking/public realm/landscape.

2. 116366/FO/2017 Angel Meadows. 4 residential buildings (9-40 storeys). 756 residential apartments, ground floor commercial uses, associated car parking, landscaping, amenity areas, new public realm.

3. 118120/FO/2017 Land bounded by Rochdale Road, **Thompson Street and Bendix Street.** 7- 15 storeys. 155 residential apartments with ground floor commercial uses, associated car parking, access arrangements and other associated works.

4. 127537/FO/2020 25 ROCHDALE ROAD. 11 storey 229 bedroom hotel with ancillary ground floor bar/restaurant, associated public realm and other associated works.

5. 124973/FO/2019 3 Angel Square. 11- 12 storey with plant rooms above to form a mixed use development comprising. Office use and commercial units, and associated works.

6. 111777/FO/2016/C1 New Victoria. two residential buildings of a maximum 21 and 26 storeys. 520 apartments. eight storeys office accommodation. Ground floor commercial use and associated development.

7. 126944/FO/2020 Victoria Riverside. Residential-led mixed use development. 3 no. towers (6-37 storeys). 634 apartments and townhouses, commercial with associated development and landscape.

8. 114860/FO/2016 Land To The South Of Dantzic Street. 6-24 storeys. 415 apartments, commercial use and associated works.

9. 131708/FO/2021 87 Rochdale Road. 11-13 storeys. Apartments and 3 storey townhouses. 237 residential homes. Commercial floospace and associated works.

FIGURE 10.13: SURROUNDING COMMITTED DEVELOPMENTS

MANCHESTER

2 Back Grafton Street
Altrincham,
WA14 1DY
+44 (0)161 928 9281

LONDON

Waterside, 44-48 Wharf Road
London,
N1 7UX
+44 (0)207 253 5678

LIVERPOOL

Tempest 5.3, 12 Tithebarn Street,
Liverpool,
L2 2DT
+44 (0)151 363 1230

STANDISH

Standish Gatehouse, Stonehouse,
Gloucestershire,
GL10 3BZ
+44 (0)145 360 7080

LEEDS

No.1 Aire Street, Leeds Station
Leeds,
LS1 4PR
+44 (0)113 824 6413

Figure 12.1: Local AQMA locations

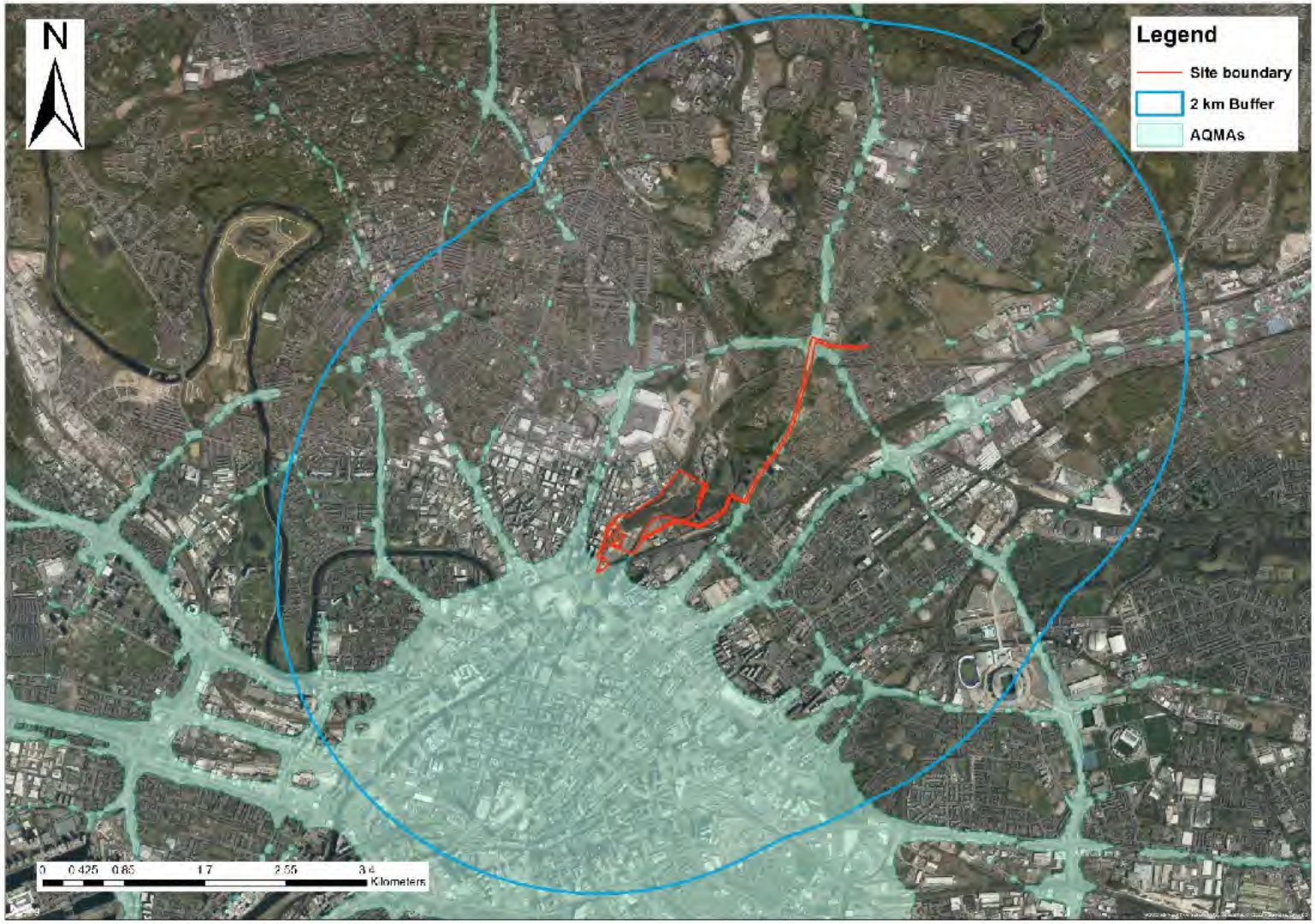


Figure 12.2: Local authority monitoring sites within 2 km of the Site

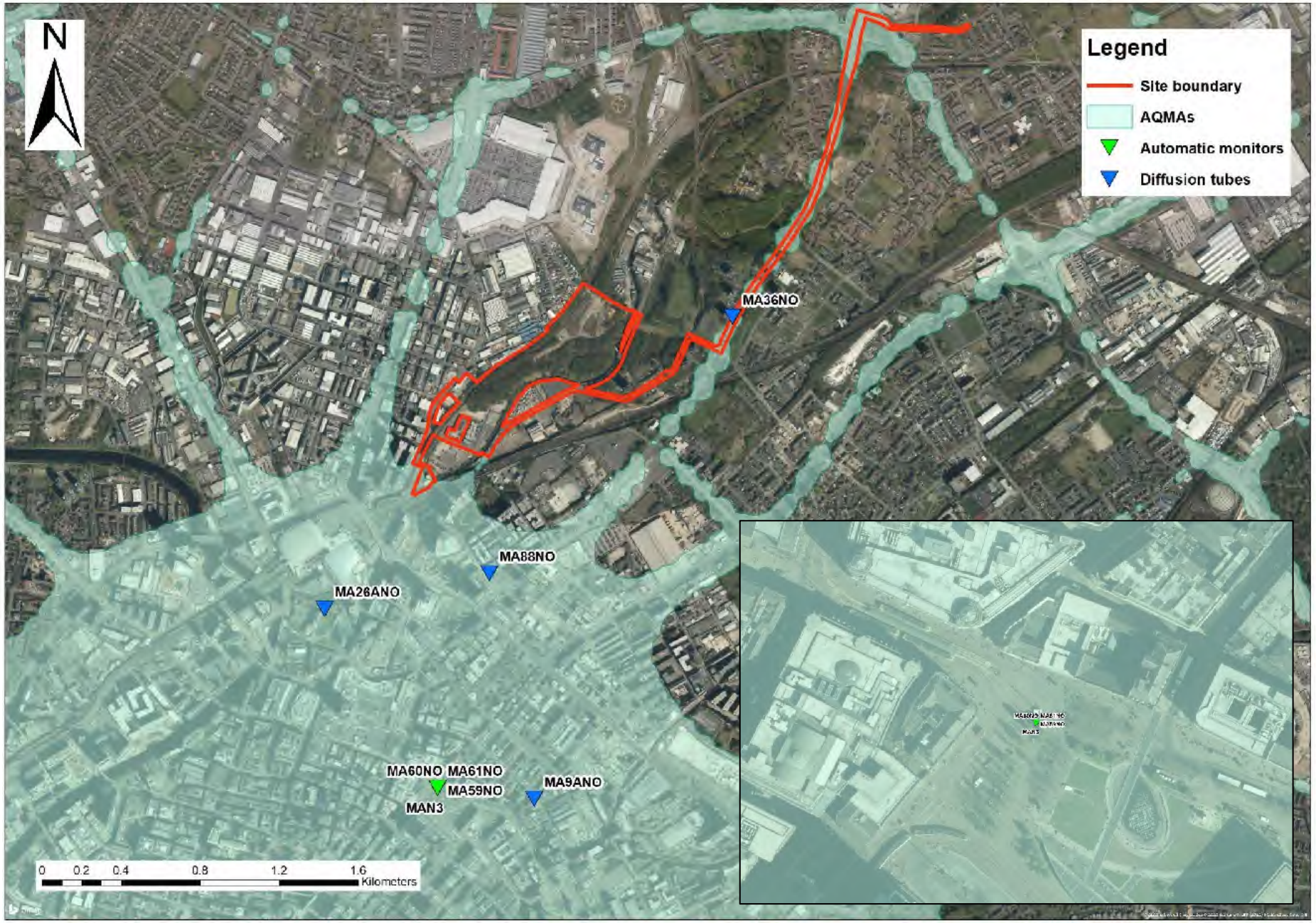


Figure 12.3: Construction dust buffers

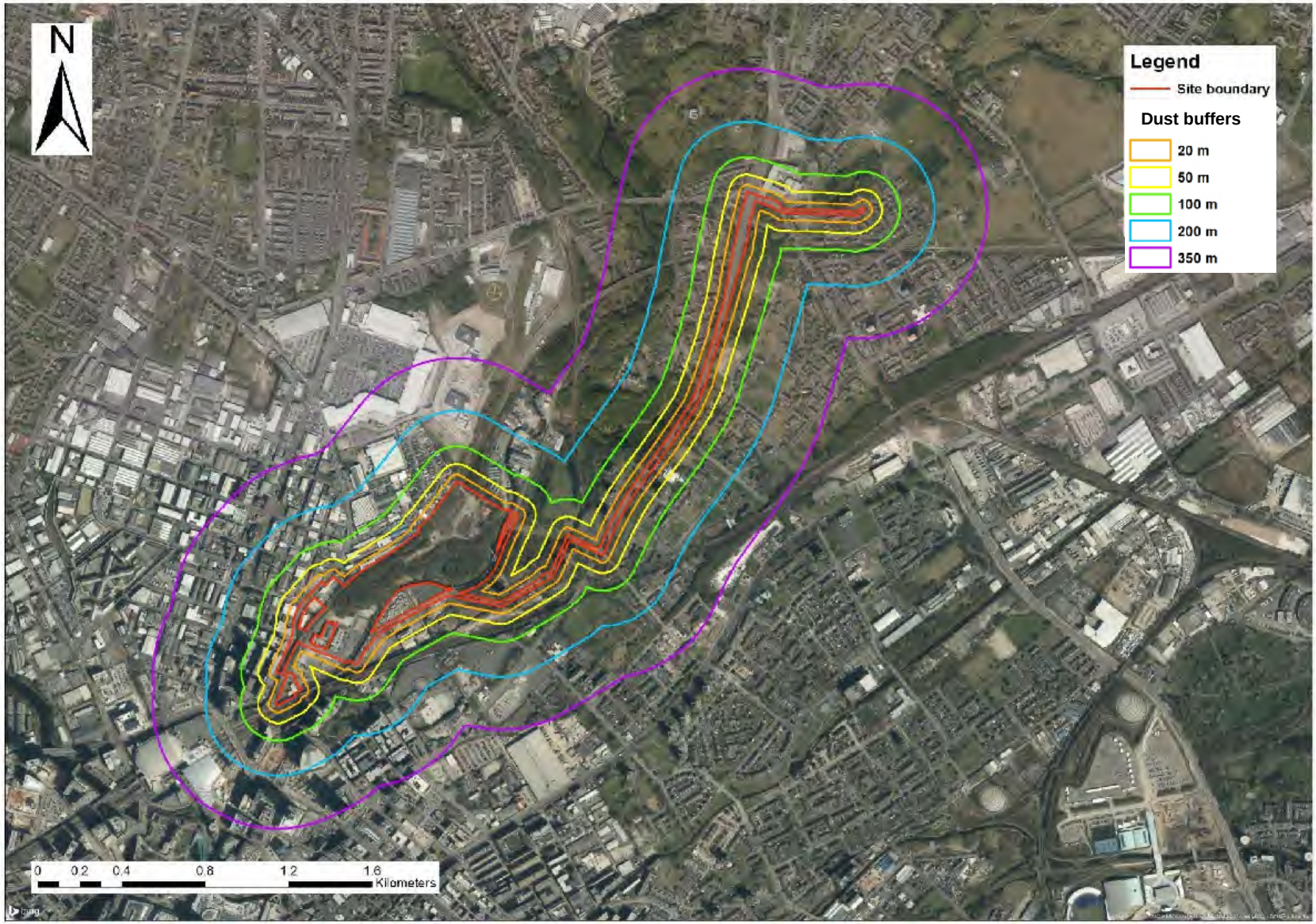


Figure 12.4: Modelled road network



Figure 12.5: Sensitive receptor locations

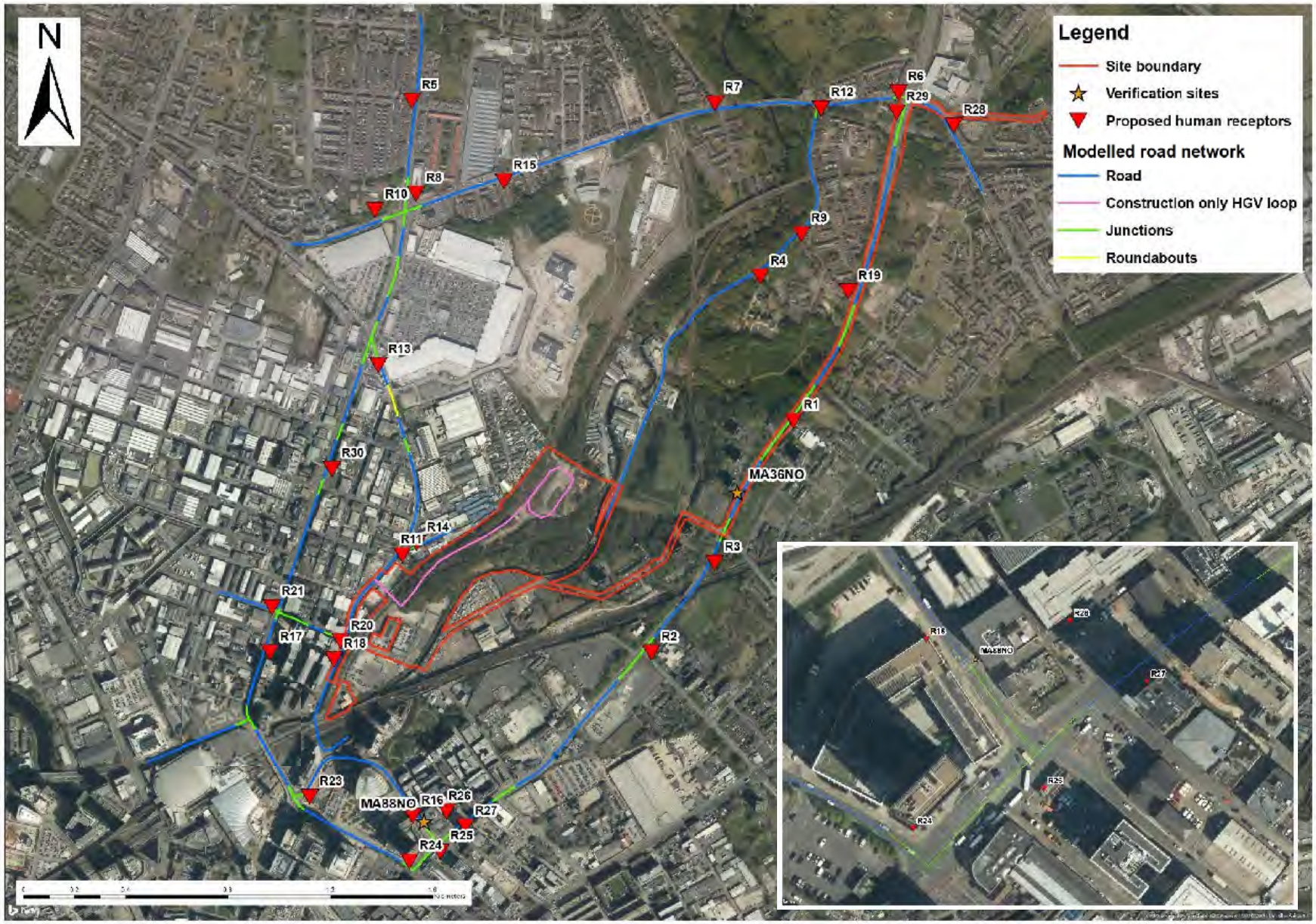


Figure 12.6: Manchester airport wind rose for 2018

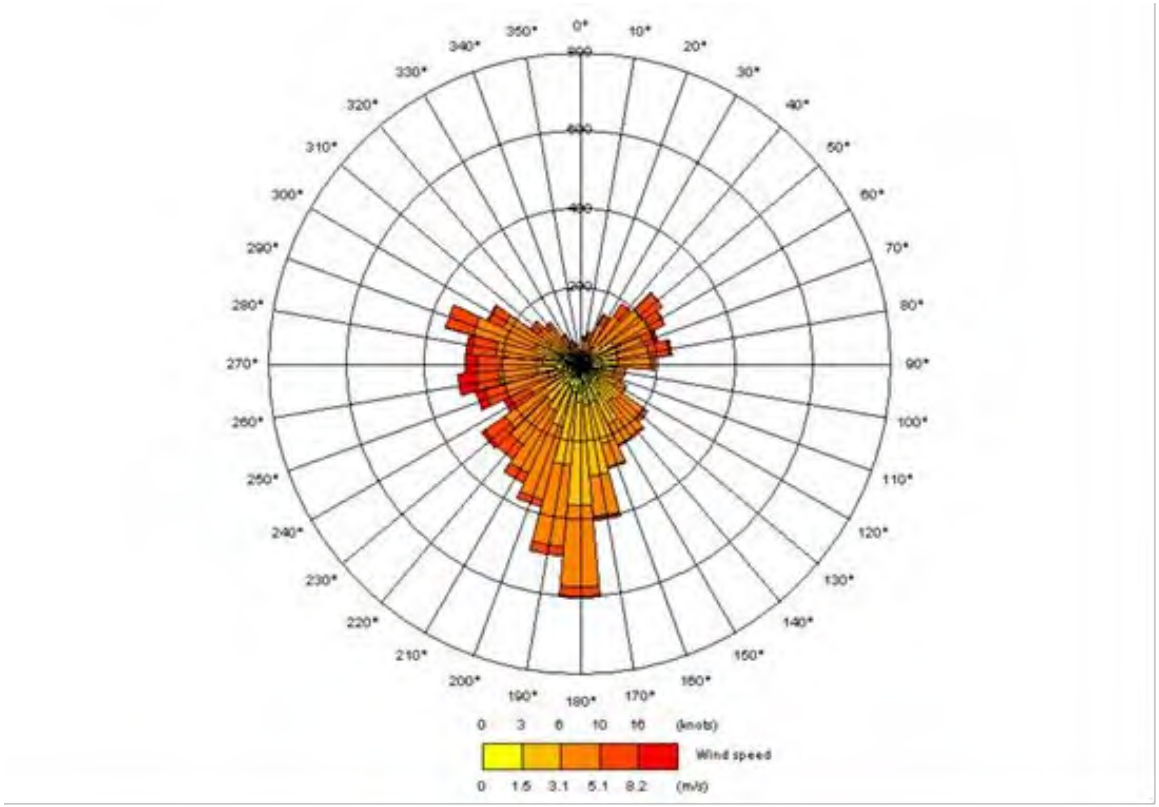
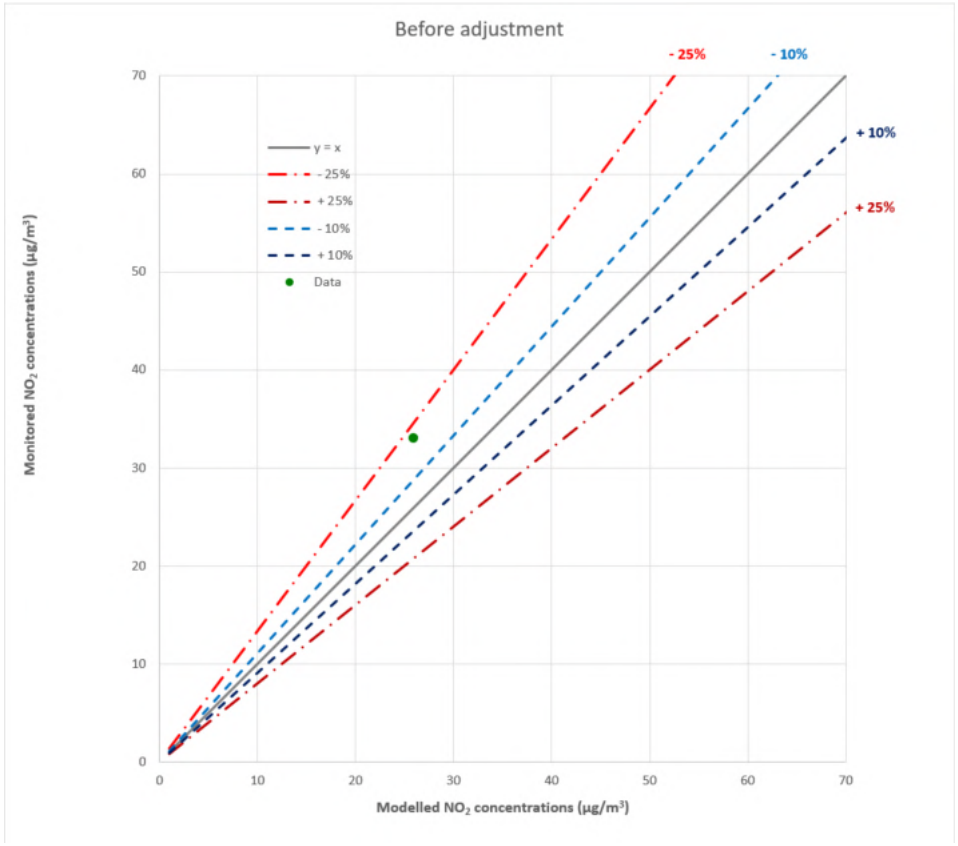
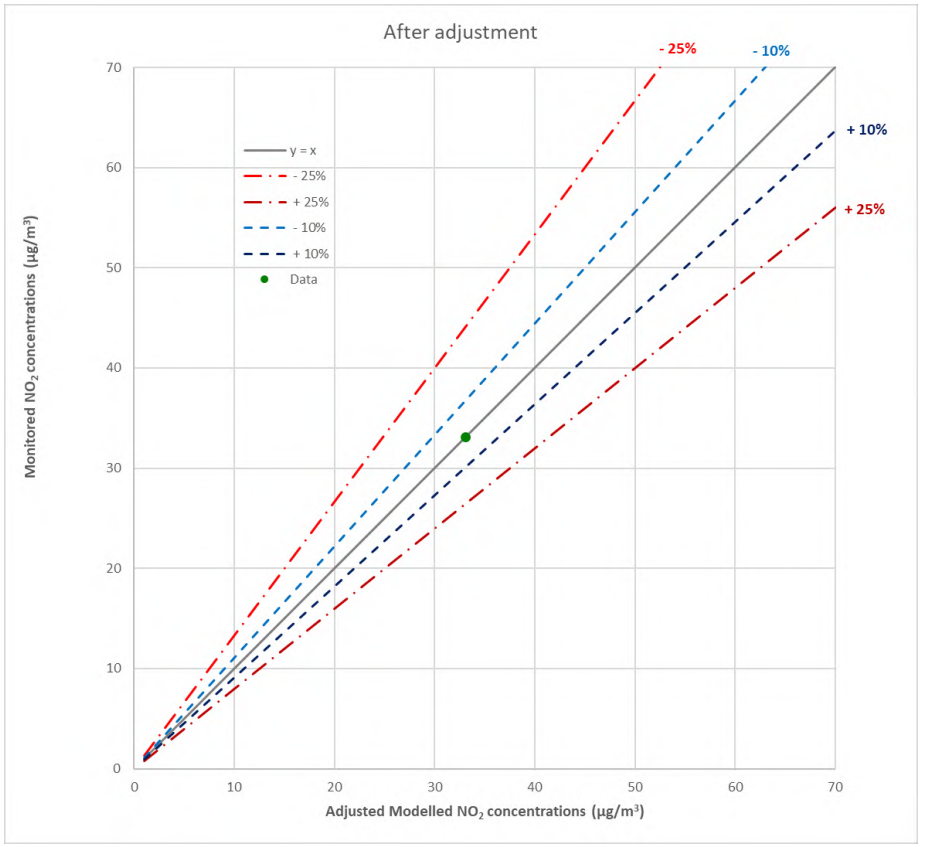
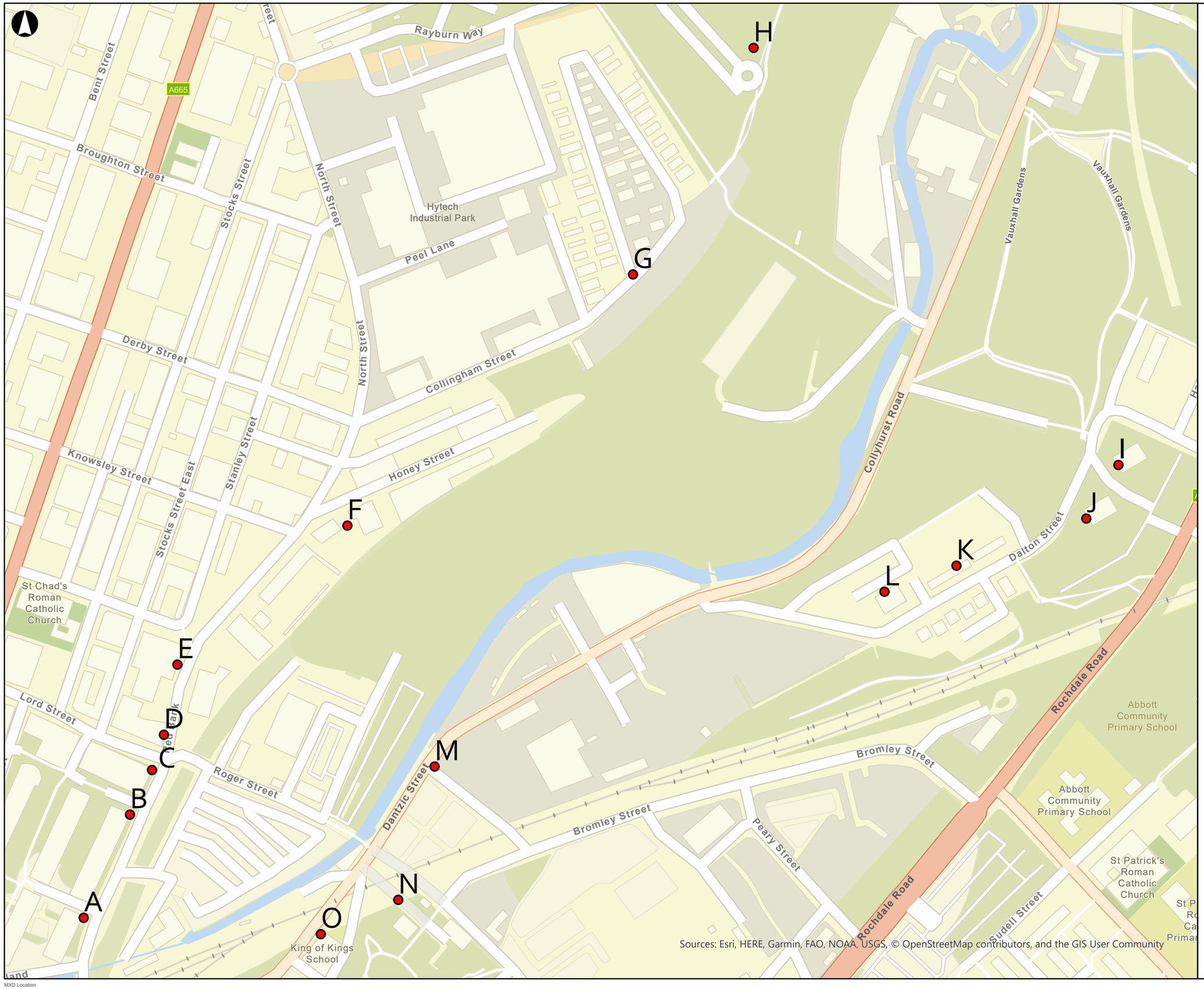


Figure 12.7: Monitored and modelled annual mean NO_2 concentrations





A3



Legend

- Receptors

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Issue	Date	By	Chkd	Appd
P1	14/01/2022	SP	TM	DH

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0 65 130 260

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Client

MCC

Job Title

Victoria North HIF Infrastructure Works

Figure 13.1 Noise and Vibration Receptor Locations

Scale at A3

1:5,000

Job No	Drawing Status
282022	**Draft**

Drawing No	Issue
12.1	**P01**

MXD Location

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