

# BRYAN G HALL

CONSULTING CIVIL & TRANSPORTATION PLANNING ENGINEERS

<b>Project Name:</b>	23-184 - Huddersfield Bus Station Refurbishment				
<b>Client:</b>	Willmott Dixon Construction Limited				
<b>Subject:</b>	Discharge of Pre Commencement Planning Conditions				
<b>BGH Reference:</b>	HBS-BGH-ZO-XX-T-H-0023 P01				
<b>Date:</b>	19th January 2026				
<b>Prepared by:</b>	James Pointon	<b>Checked by:</b>	Viren Lad	<b>Overview by:</b>	Martin Crabtree

## Introduction

1. This Note has been prepared by Bryan G Hall (BGH) on behalf of Willmott Dixon Construction Limited (WDC) acting on behalf of West Yorkshire Combined Authority (WYCA). The purpose of this Note is to support the discharge of pre-commencement Conditions 12 (Surface Water/Drainage) and 32 (Construction Foundations), for the Phase 1 works as required under planning permission 2024/48/92302/W granted by Kirklees Council for the Huddersfield Bus Station refurbishment.
2. This Note will set out the surface water mitigation measures and the proposed management and maintenance arrangements as required by Condition 12. It will also set out details of any foundations and proximity to the underground tunnels as required by Condition 32.

## Condition 12 - Surface Water Drainage

3. Condition 12 states:

*“Prior to commencement of Phase 1, details of surface water mitigation measures, implementation timeframe, and management/maintenance arrangements must be submitted and approved by the Local Planning Authority.*

*Reason: To ensure sustainable drainage systems in accordance with Policy LP24 and the National Planning Policy Framework”.*

4. The Flood Risk Assessment prepared by Weetwoods, dated 13 June 2024, states that.

*“Given the low risk of flooding to the site, and that the finished floor level of the existing bus station building is approximately 210 - 280 mm above ground levels within the external bus stands, no specific flood risk mitigation measures are proposed.*

*Surface water runoff from the redeveloped site will continue to drain to sewer as existing, given that the proposed scheme does not introduce any additional impermeable area. New pipework, gullies and a new bypass separator are proposed within the redeveloped bus concourse to replace a silted channel drain and an existing oil interceptor, whilst providing a betterment in peak runoff rates”.*

5. The current surface water drainage design has been prepared in line with the Weetwoods Flood Risk Assessment. Phase 1 encompasses two areas: the Apron and Henry Street.
6. The Apron is to be drained via gullies into a new 525mm diameter surface water drain, reflecting proposed changes to the bus concourse and the removal of the existing silted Aco channel.
7. There are no changes to the Henry Street drainage system, as no development proposals affect it; however, existing surface water drains will be repaired as part of Phase 1.
8. The surface water proposals can be found on drawing numbers HBS-BGH-ZO-XX-D-C-0012 P08 & HBS-BGH-ZO-XX-D-H-0002 P06. Copies of these drawings can be found in **Appendix BGH1**.
9. It should be noted that the replacement of the petrol interceptor as stated is within Phase 2 of the planning permission and therefore does not form part of the surface water drainage proposals for Phase 1.

#### Design Standards

10. The details provided to discharge Condition 12 are required to satisfy Kirklees Local Plan Policy 24, which is related to sound design principles.
11. The surface water modelling undertaken by Weetwoods demonstrates that a 10% betterment is provided for the 1 in 2 year event and no flooding would occur in up to the 1 in 100 AEP event. Weetwoods do note that the proposed runoff rates are higher for the 1 in 30 and 1 in 100 year event albeit this is likely due to no ponding occurring as all the rainfall would be drained. This position has been accepted by Kirklees Council who are the Lead Local Flood Authority (LLFA).
12. Due to the requirement for the 525mm diameter surface water drain as part of the surface water strategy the surface water detailed design has been undertaken accordance with Water Sector Guidance Codes for Adoption as agreed with the LLFA.

#### Proposed Operation and Maintenance Arrangements

13. The proposed surface drainage operation and maintenance arrangements can be found in **Appendix BGH2**.

## Condition 32 – Construction Foundations

14. Condition 32 states:

*Prior to commencement of Phase 1, full details of construction foundations and their proximity to underground railway tunnels must be submitted and approved.*

*Reason: To confirm that new foundations do not adversely impact the existing railway tunnel*

15. Due to the location of existing railway tunnels underneath the existing bus station, as part of the refurbishment of the bus station concourse there will be no new structural foundations within the railway tunnel easement.

16. There is a requirement to construct concrete barriers for each new bus stand, these barriers form part of the hostile vehicle mitigation strategy. There is a requirement to excavate for the foundations required to place the concrete barrier bases within the existing concourse, however this is within the railway tunnel easement and not directly over the railway tunnels.

17. The current foundation proposals are to excavate to a depth of 1190mm and place 150mm type 1 sub base that will then be used as a foundation for the concrete barrier. Other foundations within the railway tunnel easement are only for the laying of new kerbs which will be at a depth of circa 300mm and will be 150mm type 1 sub base.

18. Details showing the typical construction details in the vicinity of the railway tunnels can be found at **Appendix BGH3**.

## Compliance Summary

Condition	Requirement	Proposed Solution	Supporting Evidence
12	Surface water mitigation, maintenance plan	New gullies, 525 mm drain, maintenance plan	Drawings ( <b>Appendix BGH1</b> ) and O&M ( <b>Appendix BGH2</b> )
32	Foundation details near tunnels	No structural foundations; Concrete barrier and kerb foundations only	Typical sections ( <b>Appendix BGH3</b> )

## Conclusion

19. The proposed measures as summarised in this Note fully comply with Conditions 12 and 32 of planning permission 2024/48/92302/W.
20. All works will be undertaken in accordance with approved details.

## Appendices

**Appendix BGH1** – Drawing numbers HBS-BGH-Z0-XX-D-C-0012 P08 &  
HBS-BGH-Z0-XX-D-H-0002 P06

**Appendix BGH2** – Proposed surface drainage operation and maintenance arrangements

**Appendix BGH3** – Typical Sections near railway tunnels

**Bryan G Hall Limited**

Registered in England & Wales  
Co No: 4104802  
VAT No: 399 4601 07

Website: [www.bryanghall.co.uk](http://www.bryanghall.co.uk)  
Email: [transportleeds@bryanghall.co.uk](mailto:transportleeds@bryanghall.co.uk)

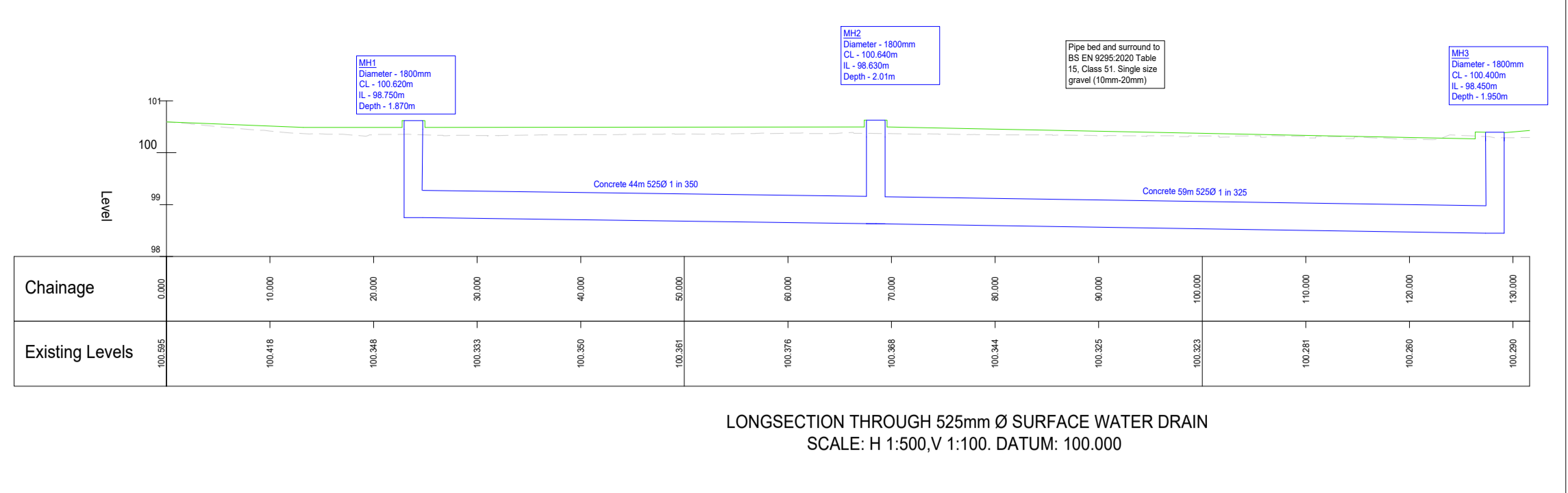
**Registered Office**

Suite E15, Joseph's Well  
Hanover Walk  
Leeds, LS3 1AB

☎ Leeds: 0113 246 1555  
☎ London: 0203 553 2336



# **APPENDIX BGH 1**



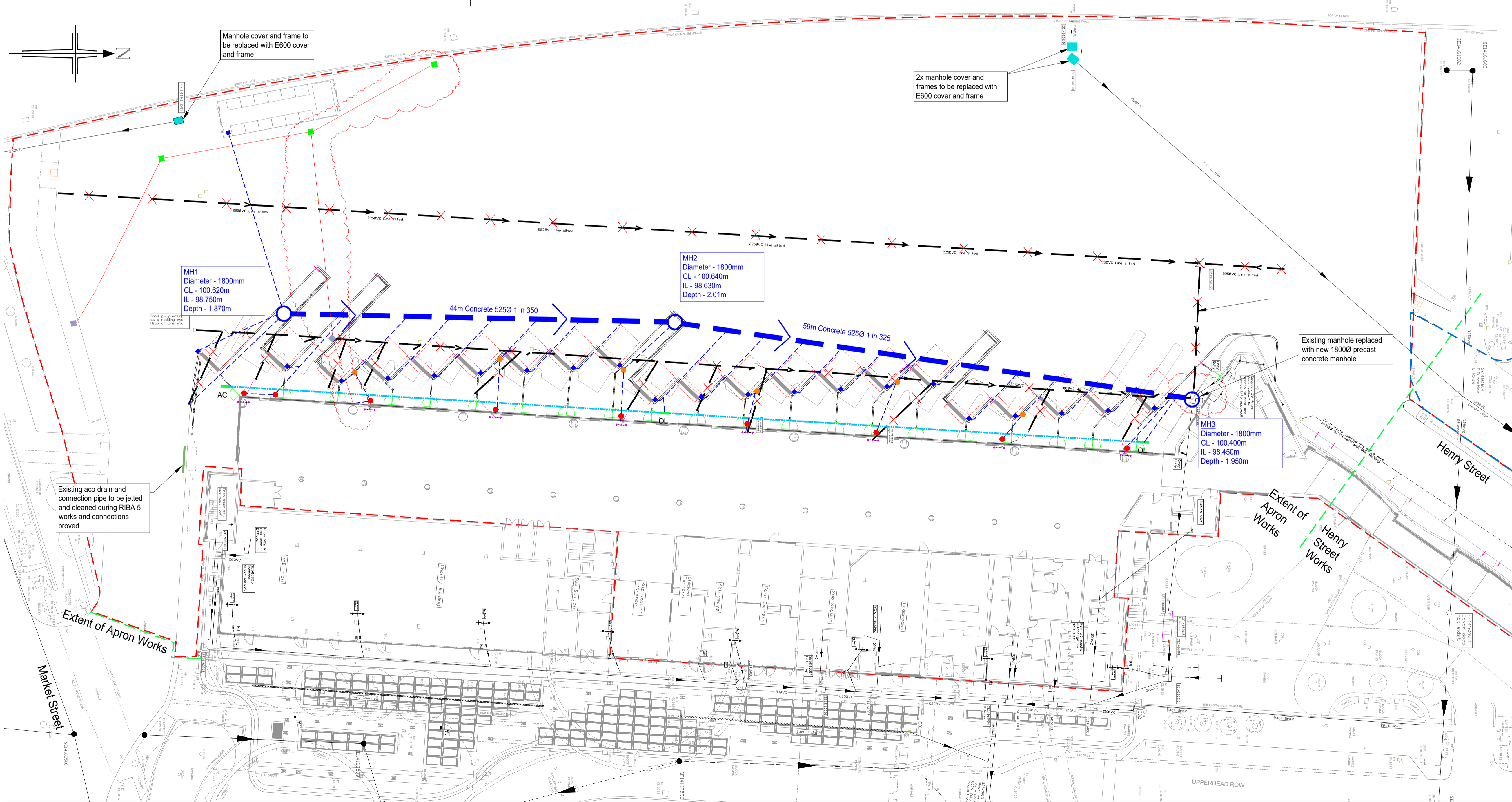
**THE BUS STATION LAYOUT SHOWN ON THIS PLAN IS TAKEN FROM AHR ARCHITECTS LTD PROPOSED GA FLOOR PLAN DRAWING REF. FloorPlan-20010-StructuralGridSettingOut. INFORMATION HAS ONLY BEEN PROVIDED IN ACAD (NO DRAWING BORDERS INCLUDED) INFORMATION RECEIVED 16/04/24**

**THE TOPOGRAPHICAL SURVEY SHOWN ON THIS PLAN IS TAKEN FROM MET GEO ENVIRONMENTAL REF. P23-00376-MET-EXT-XX-TOP-M2-G-1 REV 01 DATED 21/02/24**

- Notes:**
- All statutory undertakers equipment in footway and carriageway to be located and diverted before work commences.
  - A pedestrian route through the works shall be maintained at all times and clearly defined by suitable barriers and lights where necessary.
  - The contractor is obliged to obtain necessary road opening and/or sewer connection licence's prior to commencement of the works.
  - One vertical joint per course of brick work shall be left open to allow drainage during construction.
  - All statutory undertakers covers and frames to be adjusted to suit new carriageway levels prior to surfacing.
  - All existing gullies and drain runs to be cleaned of detritus and high pressure water jetted prior to commencement of works.
  - The existing sewers and culverts shown on this drawing are taken from various archives, drainage plans and sewer records. Some of this information is contradictory and the locations shown are interpreted using existing features and manhole locations shown on the survey. The exact depth and location should be verified on-site prior to commencing construction.
  - All surface water drainage works and material to be in accordance with Codes for Adoption and the Water Authorities requirements and Kitemarked.
  - Gullies should not be located in the area of dropped crossings.
  - Sewers to be laid in Class 'S' bedding (150mm granular bed and surround). Where depth of cover to top of the sewer is less than 1.2m in highways and verges (or less than 900mm in none vehicular access areas) then a concrete slab should be provided above granular bed and surround. Refer to Codes for Adoption for protection measures.
  - Granular bedding for pipes shall consist of aggregates from natural sources complying with the relevant provisions of BS 882 sized in accordance with the table above.
  - All pipes with a diameter larger or equal to 375mm shall be concrete. Pipes with a diameter less than 375mm shall be clay, ductile iron or plastic.
  - Vitrified clay pipes and fittings for sewers shall have flexible mechanical joints. Pipes for foul Sewers and Surface Water Sewers shall comply with relevant requirements of BS EN295 and BS 65 (surface water pipes only).
  - Filled ground must be filled and consolidated under the supervision and to the satisfaction of a highway engineer before any sewer works are carried out.
  - Sulphate Resistant cement (C20-DC2) and precast concrete products must be used or a laboratory report provided proving that such precautions are not necessary.
  - Drains must have 5.0m clearance from trees and hedges. (refer to Codes for Adoption for restrictions on tree planting adjacent to sewers).
  - All private work to be in accordance with current building regulations.
  - Drains passing through buildings to be protected with lintel cover.
  - No building to take place within 3.0m of an adoptable sewer.
  - No services to be sited over or within 1.0m of an adoptable sewer.
  - Private drainage connections not direct to manholes are to be made via a 45 degree junction and not saddles.
  - Bedding and backfill material to conform to the requirement of Water Industry Specification 4-08-02 (Table A2).
  - Any manholes covers which are being retained within the bus apron to be replaced with E600 covers and frame.
  - Downpipe to connect into proposed system. Exact detail to be confirmed at RIBA stage 5.
  - Please refer to the latest revision of BGH drawing reference HBS-BGH-ZO-XX-D-C-0012 for Drainage Standard Details.

**MANHOLE SCHEDULE**

Manhole Number	Cover Level	Connections	Pipe			Types		
			Code	Inverts	Diams Inv-soff	Manhole Size	Manhole	Cover
MH1	100.620		0	98.750	525	1800	B	D400
	Coordinates							
MH2	100.640		0	98.630	525	1800	B	D400
	Coordinates							
MH3	100.400		0	98.630	525	1800	B	D400
	Coordinates							



TWITTER, TWEET, RETWEET and the Twitter logo are trademarks of Twitter, Inc. or its affiliates.

LinkedIn, the LinkedIn logo, the IN logo and InMail are registered trademarks or trademarks of LinkedIn Corporation and its affiliates in the United States and/or other countries.

Bryan G Hall Ltd. Registered in England & Wales Co No. 4104802

This drawing is copyright and shall not be reproduced nor used for any other purpose without the written permission of the Bryan G Hall Ltd. This drawing must be read in conjunction with all other related drawings and documentation.

It is the contractors responsibility to ensure full compliance with the Building Regulations. Do not scale from this drawing, use figured dimensions only. It is the contractors responsibility to check and verify all dimensions on site. Any discrepancies to be reported immediately. IF IN DOUBT ASK.

Materials not in conformity with relevant British or European Standards/Codes of practice or materials known to be deleterious to health & safety must not be used or specified on this project.

Bryan G Hall Limited has not checked or verified, and shall therefore not be liable for any inaccuracies which may be attributable to any base plan's reports, data or information provided by the client, or purchased by the consultant on the client's behalf, that may have been utilised within this drawing.

Bryan G Hall Limited shall not be liable for the use of this or any associated document, for any purpose, by any person other than that for which they were provided.

It remains the client's and/or its appointed contractor's responsibility to check for any discrepancies. Any anomalies discovered must be reported immediately to Bryan G Hall Limited for verification.

The locations of utilities apparatus, if shown, have been reproduced from plans supplied to Bryan G Hall Limited. Although care has been taken when duplicating this information, these locations are approximate only. No guarantee can be given by Bryan G Hall Limited for their accuracy. It is the client's or its appointed agent/contractor's responsibility to verify the exact locations on site by appropriate means prior to mechanical excavation.

**Key:**

- Highway Boundary Taken from Kirklee's Registry Plan
- New PCC gully pot, grating and frames to be kitemarked, heavy duty ductile iron to EN124: Part 1 1995, non rock with captive hinge, 2 set on 2 courses of class B engineering brickwork bedded on class 1 mortar, min depth of gully frame 100mm. 150mm plastic gully lead to be provided.
- Existing apparatus to be remain
- Existing Surface Drain to be grouted with GEN 3 Concrete
- Proposed Surface Water Manhole and drain
- Marshalls Drexus Slot Drain outfall Unit or equivalent AC - Access Chamber - OL - Side Outfall
- Marshalls Drexus Slot Drain Channel with 100mm invert width or equivalent
- Existing manhole covers to be replaced with E600 manhole cover and frame
- 200mm diam or square top PVC underground rainwater downpipe gully - B125 spec to be placed on line of existing connection, or equivalent
- 350mmØ Reduced access Demarcation chamber
- Indicative location of Kaizon utility ducting and inspection chambers - refer to Kaizon drawing HBS-KZN-ZO-XX-D-U-1001 for details
- StrongBox Structural Access Chamber E600 - 600x600 - minimum depth 1.2m installed in accordance with manufacturers instructions, or equivalent
- Cubis Systems STAKKAbOX Modula footway inspection chamber 600x450 minimum depth 0.6m, installed in accordance with manufacturers instructions, or equivalent

P08	12/12/25	Updated to WDC Comments	JL	VL	JP
Rev:	Date:	Amendment:	DRN	CHK	APR

**BRYAN G HALL**  
CONSULTING CIVIL & TRANSPORTATION PLANNING ENGINEERS

LEEDS T 0113 246 1555 LONDON T 0203 5532336

Suite E15 | Josephs Well  
Hanover Walk | LEEDS | LS3 1AB

W www.bryanghall.co.uk  
E transportleeds@bryanghall.co.uk

Client: Willmott Dixon Construction

Status: RIBA 4

Scale: 1:250  
Size: A1 - 841 x 594

Drawn: VL | Chkd: JP | Appvd: NB

Project: Huddersfield Bus Station

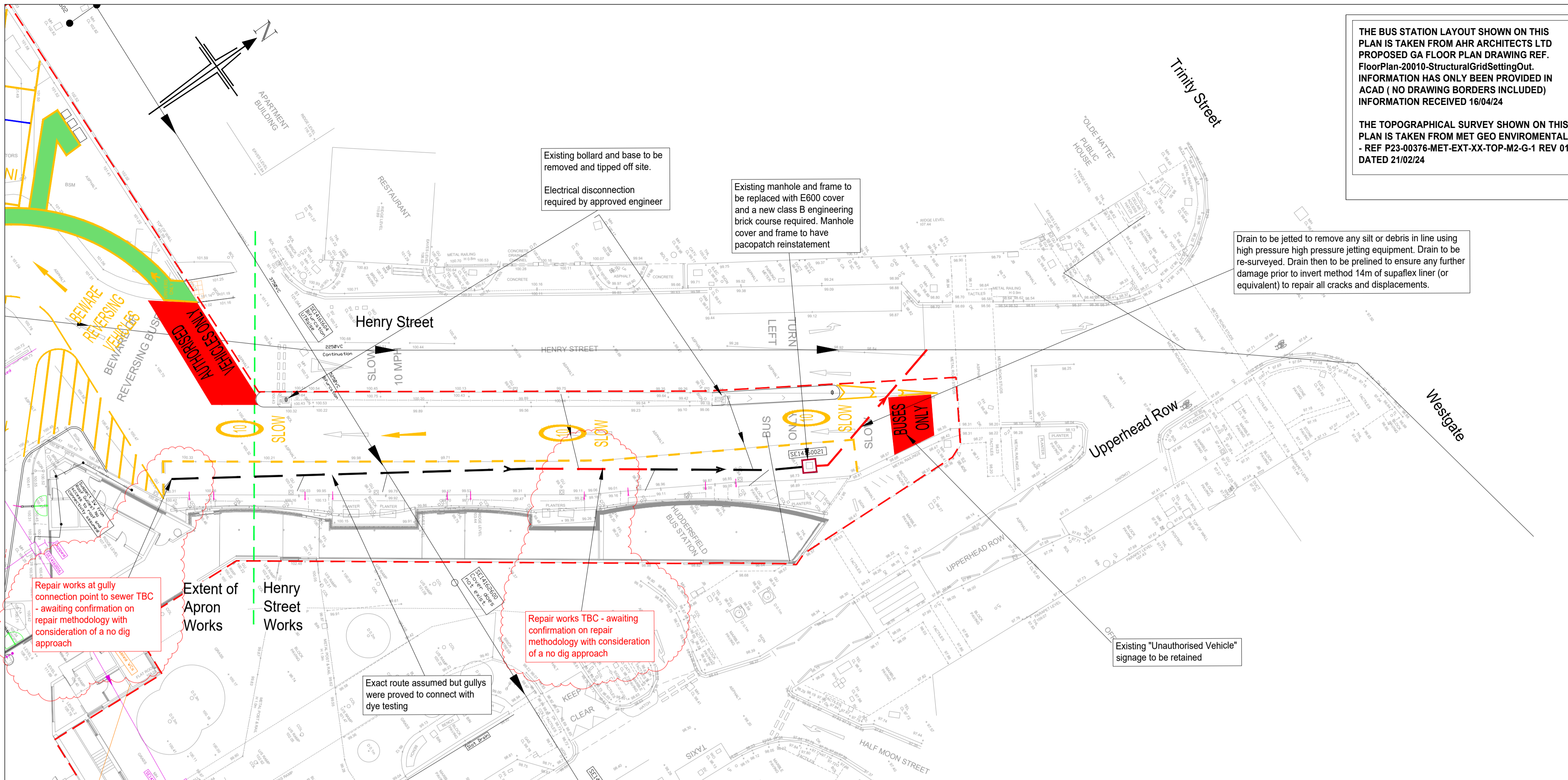
Title: Apron Layout Drainage

Drawing No: HBS-BGH-ZO-XX-D-C-0012  
Job No: 23-184

Revision: P08  
Date: 04/04/24

smas WORKSAFE CHAS twitter.com/Bryanghall1 Bryan G Hall

Copyright Reserved Bryan G Hall Ltd.



- Site Clearance and Drainage Notes:**
- All services should be located on site prior to any works being carried out.
  - The contractor is to hand dig any trial pits to locate any services which may be affected by the proposed works.
  - All existing electrical disconnection's and any works involving electrical equipment are to be carried out by a qualified approved electrical engineer.
  - All brick, Masonry and PCC Kerbs shall be taken away and recycled where possible.
  - Any signs which are to be taken down for re-use will require inspecting by the Engineer prior to re-erecting.
  - Where manhole covers are to be adjusted, an inspection shall be undertaken prior to work commencing to check on its condition and whether the minimum number of brickwork courses above the slab can be achieved.
  - All new cover and frames to be high PSV 'Grip Top' covers and be relocated out of the wheel track if possible.
  - All existing drain runs and gully/gully connection to be cleaned of detritus and high pressure water jetted prior to commencement of works.
  - The existing drains and culverts shown on this drawing are taken from various archives, drainage plans and sewer records. Some of this information is contradictory and the locations shown are interpreted using existing features and manhole locations shown on the survey. The exact depth and location should be verified on-site prior to commencing construction.
  - All sewer drain works and material to be in accordance with Codes for Adoption and the Water Authorities requirements and Kitemarked.
  - Sewers to be laid in Class 'S' bedding (150mm granular bed and surround). Where depth of cover to top of the sewer is less than 1.2m in highways and verges (or less than 900mm in none vehicular access areas) then a concrete slab should be provided above granular bed and surround. Refer to Codes for Adoption for protection measures.

TWITTER, TWEET, RETWEET and the Twitter logo are trademarks of Twitter, Inc. or its affiliates.

LinkedIn, the LinkedIn logo, the IN logo and InMail are registered trademarks or trademarks of LinkedIn Corporation and its affiliates in the United States and/or other countries.

Bryan G Hall Ltd. Registered in England & Wales Co No. 4104802

This drawing is copyright and shall not be reproduced nor used for any other purpose without the written permission of the Bryan G Hall Ltd. This drawing must be read in conjunction with all other related drawings and documentation.

It is the contractors responsibility to ensure full compliance with the Building Regulations. Do not scale from this drawing, use figured dimensions only. It is the contractors responsibility to check and verify all dimensions on site. Any discrepancies to be reported immediately. IF IN DOUBT ASK.

Materials not in conformity with relevant British or European Standards/Codes of practice or materials known to be deleterious to health & safety must not be used or specified on this project.

Bryan G Hall Limited has not checked or verified, and shall therefore not be liable for any inaccuracies which may be attributable to any base plan(s) reports, data or information provided by the client, or purchased by the consultant on the client's behalf, that may have been utilised within this drawing.

Bryan G Hall Limited shall not be liable for the use of this or any associated document, for any purpose, by any person other than that for which they were provided.

It remains the client's and/or its appointed contractor's responsibility to check for any discrepancies. Any anomalies discovered must be reported immediately to Bryan G Hall Limited for verification.

The locations of utilities apparatus, if shown, have been reproduced from plans supplied to Bryan G Hall Limited. Although care has been taken when duplicating this information, these locations are approximate only. No guarantee can be given by Bryan G Hall Limited for their accuracy. It is the client's or its appointed agent/contractor's responsibility to verify the exact locations on site by appropriate means prior to mechanical excavation.

**Key:**

- Proposed Red Line Boundary
- New Apron Construction - Plane off 130mm and Replace with New Surface Course and Binder  
40mm Surface Course BBA Certified Grouted Macadam (Hardcrete)  
90mm AC 20 Dense Bin 40/60  
Any areas of damaged base course that are discovered during planning are to be repaired locally by cold milled
- New Island Construction - RediPave Traffic Island  
Existing carriageway to be cold milled 300mm and replace with 300mm GEN1 Concrete to clause 2606
- For surfacing above concrete - Design to be carried out by Rediweild of other equivalent manufacturer
- Existing asphalt footway to be removed and replaced with flagged paving construction  
Paving Type / Surface - Refer to Landscape Architects drawing for details  
30mm Mortar Bed  
170mm Type 1 Sub Base
- Existing SWS Existing Surface Water Drain

**SITE CLEARANCE AND DRAINAGE**

- Pavement Notes:**
- All works shall be carried out in accordance with the drawings and specification unless otherwise instructed by the Engineer.
  - voids formed in the existing carriageway by removal of kerbs, etc from existing traffic islands shall be filled with concrete mix GEN3.
  - The vertical joint between existing and new surfacing shall be painted with 100 pen bitumen.
  - The edge of existing carriageway to be saw cut back 300mm to sound face or as directed by the Engineer.
  - The contractor is to provide and maintain a pedestrian route through the works at all times and absolutely defined by suitable barriers and lights where necessary.
  - The contractor is obliged to obtain necessary road opening notices or licenses prior to commencement of the works.
  - All statutory undertakers covers and frames to be lifted to suit new carriageway levels prior to surfacing.
  - All paving details to tie into existing.
  - Before proceeding with the construction work, the setting out lines are to be agreed with the Engineer.
  - Where carriageway widening is undertaken in widths less than 750mm concrete sub-base should be used in lieu of the sub-base and base course. Concrete specification to be in accordance with CHE 483/22 - MCHW series 2600, clause 2602 ST/GEN concretes.
  - No limestone aggregate to be used where binder course may form a temporary running lane to public vehicles.
  - Final surfacing should not be laid until all the works by Statutory Undertakers are complete.
  - Refer to Cura Terrae Landscape Architects information for further details of footway pavement surfacing materials and kerb types / materials.
  - All proposed paving areas to have self compacting slurry jointing mortar (Steintec or similar).
  - All asphalt, kerbs, reinforcement and pre-manufactured paving must be specified as having BES 6001 certification.

P06	12/12/25	Updated to WDC Comments	JI	JP	VL
P05	26/09/25	Updated to WDC Comments	JI	JP	VL
P04	19/09/25	Updated to RIBA 4 VE / Change control	MM	VL	JP
P03	06/08/24	Drawing Numbering Updated	VL	JP	NB
P02	26/06/24	Updated to WYCA Comments	VL	JP	NB
P01	16/05/24	First Issue	VL	JP	NB
Rev:	Date:	Amendment:	DRN	CHK	APR

**BRYAN G HALL**  
CONSULTING CIVIL & TRANSPORTATION PLANNING ENGINEERS

LEEDS T 0113 246 1555 LONDON T 0203 5532336

Suite E15 | Josephs Well  
Hanover Walk | LEEDS | LS3 1AB

www.bryanhall.co.uk  
transportleeds@bryanhall.co.uk

Client: Willmott Dixon Construction

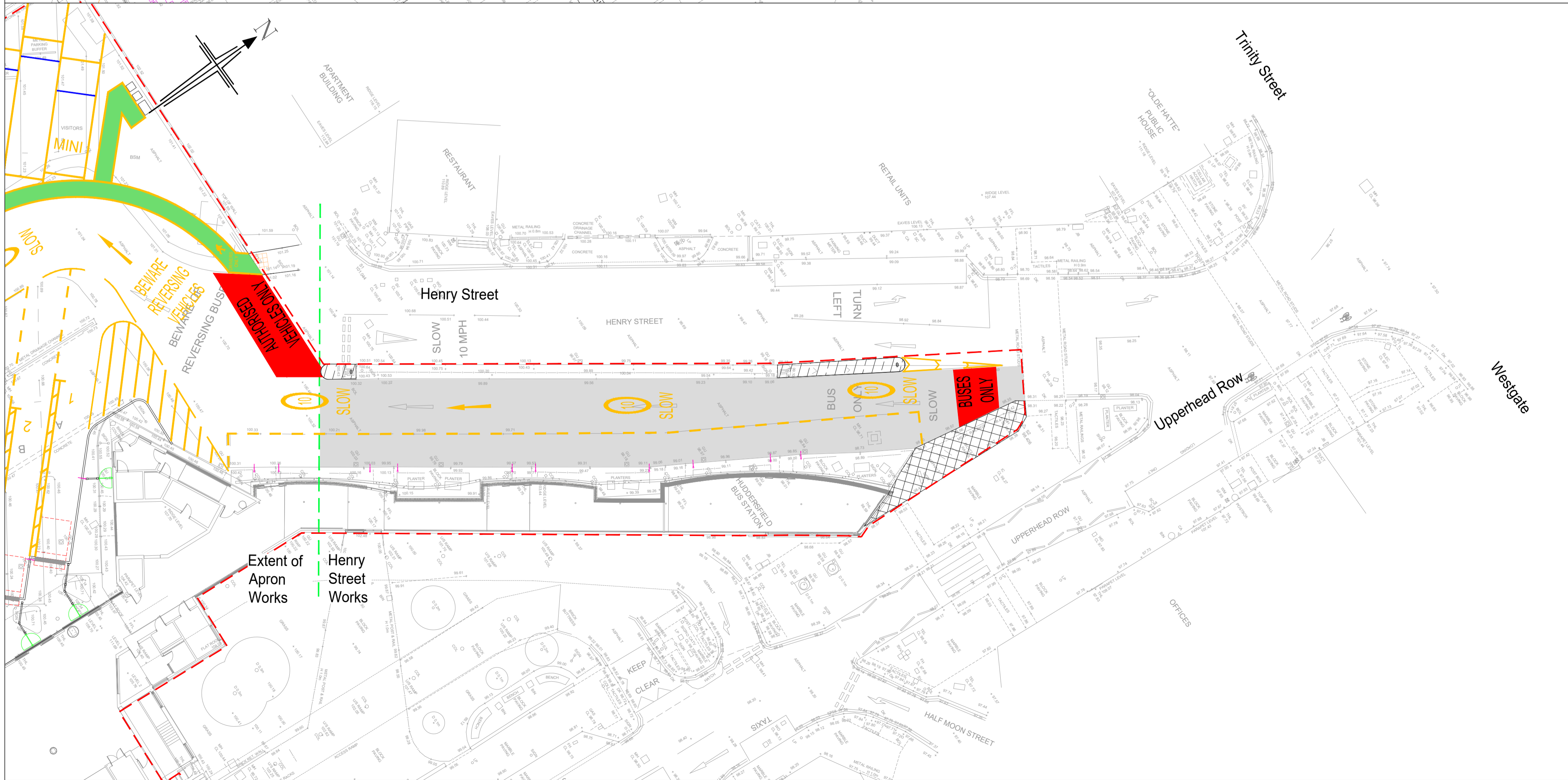
Status: RIBA 4

Scale: 1:250  
Size: A1 - 841 x 594  
Drawn: VL  
Chkd: JP  
Appvd: NB

Project: Huddersfield Bus Station

Title: Henry Street Works  
Site Clearance - Drainage - Pavements

Drawing No: HBS-BGH-Z0-XX-D-H-0002  
Job No: 23-184  
Revision: P06  
Date: 16/05/24



# **APPENDIX BGH 2**

## Operation and Maintenance Requirements - Gullies

Schedule	Required Action	Frequency
Regular maintenance	Gullies should be cleaned at regular intervals. Jet-washing and suction-borne methods are recommended, with the contents disposed of at a licenced waste facility.	Bi-annually
	Covers and frames should be inspected at regular intervals, particularly to check line and level, and to ensure integrity, security of hinges and to check line/level is within safe and workable tolerance.	Bi-annually
Remedial actions	Repair covers and frames if required.	As required
Monitoring	Inspect gullies and connections to ensure that they are in good condition and operating as designed	Annually and after large storms

## Operation and Maintenance Requirements - Inspection Chamber (manholes)

Schedule	Required Action	Frequency
Regular maintenance	Visual inspection of manholes and inspection chambers, to check for any siltation or obstruction to flow, should be undertaken at regular intervals, recommended not more than six months apart.	Bi-annually
	Covers and frames should be inspected at regular intervals, particularly to check line and level, and to ensure integrity, security of hinges and to check line/level is within safe and workable tolerance.	Bi-annually
Remedial actions	Repair covers and frames if required.	As required
Monitoring	Inspect inspection chambers and manholes to ensure that they are in good condition and operating as designed	Annually and after large storms

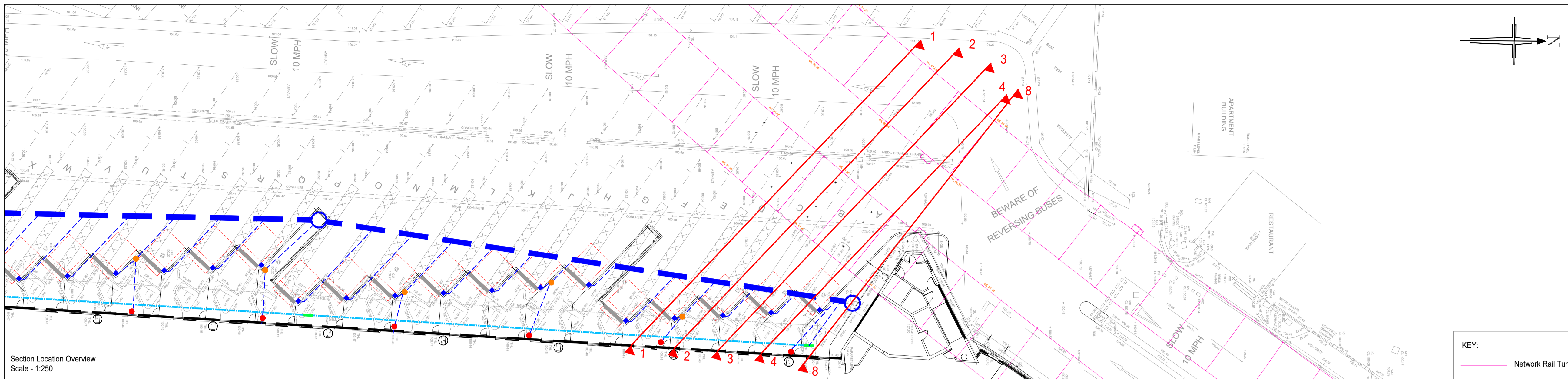
## Operation and Maintenance Requirements - Pipes, Sewers / Carrier Drains

Schedule	Required Action	Frequency
Regular maintenance	Carrier Drains should be cleaned at regular intervals. Jet-washing and suction-borne methods are recommended, with the contents disposed of at a licenced waste facility.	Bi-annually
Remedial actions	Repair in the event of damage.	As required
Monitoring	Inspect flow in Carrier Drains (via manholes) to ensure they are in good condition and operating as required	Annually and after large storms
	Conduct CCTV inspection to confirm pipe condition and confirm and requirements for remediation.	Every 3- 5 years

## Operation and Maintenance Requirements – Petrol Interceptor

Schedule	Required Action	Frequency
Refer to manufacturers instructions	Refer to manufacturers instructions	Refer to manufacturers instructions

# **APPENDIX BGH 3**



**Bryan G Hall Ltd. Registered in England & Wales Co No. 4104802**

This drawing is copyright and shall not be reproduced nor used for any other purpose without the written permission of the Bryan G Hall Ltd. This drawing must be read in conjunction with all other related drawings and documentation.

It is the contractors responsibility to ensure full compliance with the Building Regulations. Do not scale from this drawing, use figured dimensions only. It is the contractors responsibility to check and verify all dimensions on site. Any discrepancies to be reported immediately. **IF IN DOUBT ASK.**

Materials not in conformity with relevant British or European Standards/Codes of practice or materials known to be deleterious to health & safety must not be used or specified on this project.

Bryan G Hall Limited has not checked or verified, and shall therefore not be liable for any inaccuracies which may be attributable to any base plan(s) reports, data or information provided by the client, or purchased by the consultant on the client's behalf, that may have been utilised within this drawing.

Bryan G Hall Limited shall not be liable for the use of this or any associated document, for any purpose, by any person other than that for which they were provided.

It remains the client's and/or its appointed contractor's responsibility to check for any discrepancies. Any anomalies discovered must be reported immediately to Bryan G Hall Limited for verification.

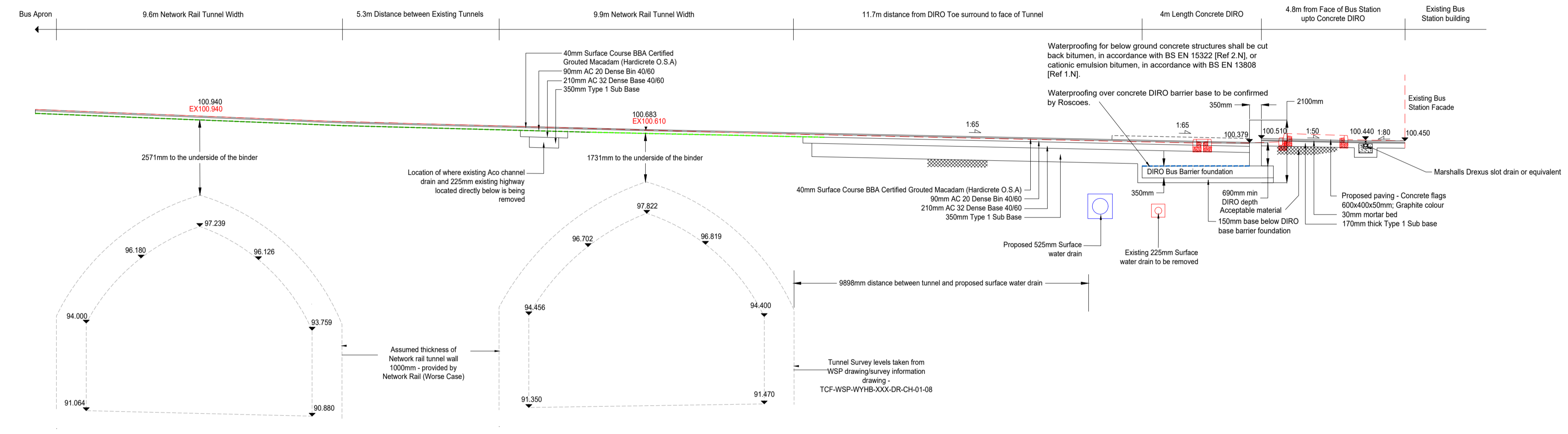
The locations of utilities apparatus, if shown, have been reproduced from plans supplied to Bryan G Hall Limited. Although care has been taken when duplicating this information, these locations are approximate only. No guarantee can be given by Bryan G Hall Limited for their accuracy. It is the client's or its appointed agent/contractor's responsibility to verify the exact locations on site by appropriate means prior to mechanical excavation.

**NOTES:**

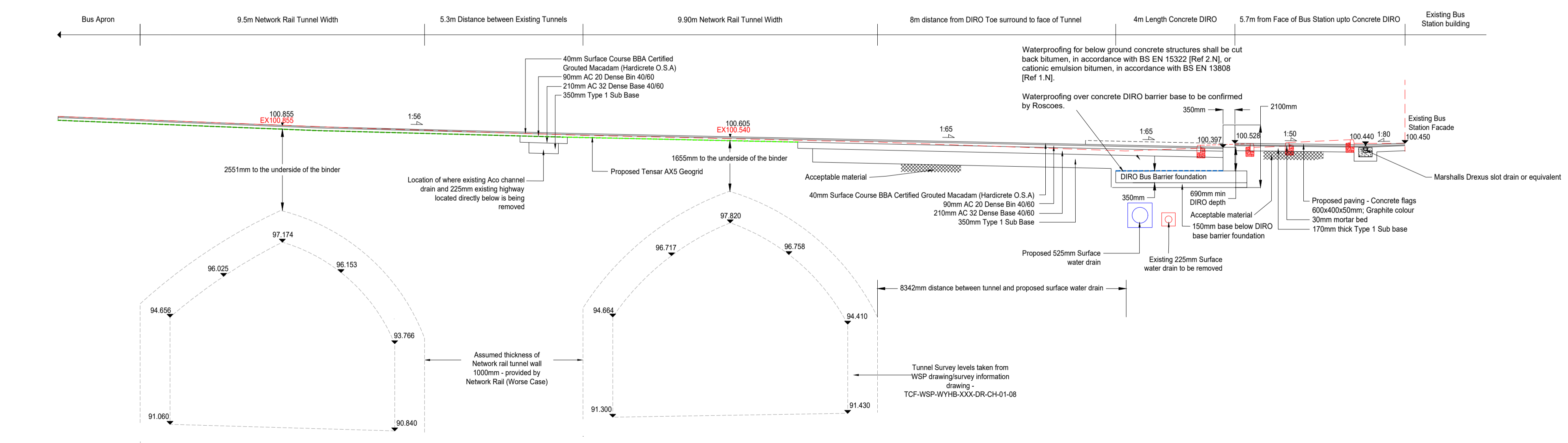
- Topographical survey for the externals taken from Met Geo Environmental drawing number P23-00376-MET-EXT-XX-TOP-MS-G-1-3D. Drawing produced Feb 2024.
- Before proceeding with the construction work, the setting out lines are to be agreed with the Engineer.
- Any discrepancies with regards to setting out information should be reported to Bryan G Hall Limited immediately.
- Drawing to be read in conjunction with drawings HBS-BGH-Z0-XX-D-C-0038 P02 - Network Rail Typical Sections Sheet 2 and HBS-BGH-Z0-XX-D-C-0040 P02 - Network Rail Typical Sections Sheet 4

Section Location Overview  
Scale - 1:250

KEY:  
— Network Rail Tunnel



Section 1-1  
(Through Bus Bay 4)  
Scale 1:100



Section 2-2  
(Through Bus Bay 3)  
Scale 1:100

KEY:  
— Existing profile  
— Proposed profile

P02	09/12/25	Updated to Clients Comments	VL	JP	BR
Rev:	Date:	Amendment:	DRN	CHK	APR

**BRYAN G HALL**  
CONSULTING CIVIL & TRANSPORTATION PLANNING ENGINEERS

LEEDS T 0113 246 1555 LONDON T 0203 5532336

Suite E15 | Josephs Well | www.bryanghall.co.uk  
Hanover Walk | LEEDS | LS3 1AB | E transportleeds@bryanghall.co.uk

Client: WILLMOTT DIXON CONSTRUCTION

Status: FOR INFORMATION

Scale: AS SHOWN | Drawn: MM | Chkd: VL | Appvd: JP  
Size: A1 - 841 x 594

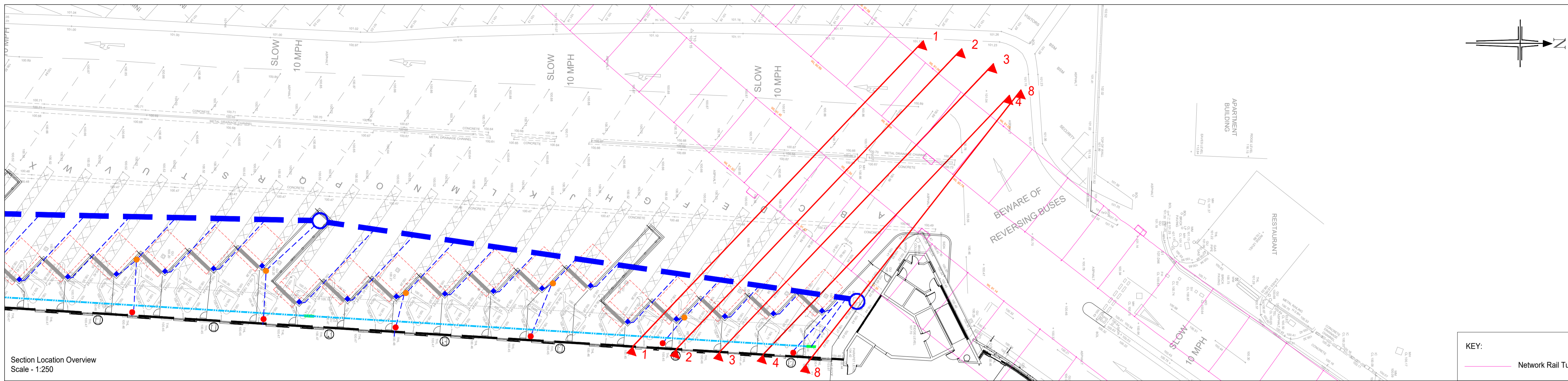
Project: HUDDERSFIELD BUS STATION

Title: NETWORK RAIL TYPICAL SECTIONS SHEET 1

Drawing No: HBS-BGH-Z0-XX-DR-C-0037 | Revision: P02  
Job No: 23-184 | Date: 10/10/25

smas WORKSAFE | X.com/Bryanghall1 | Bryan G Hall

Copyright Reserved Bryan G Hall Ltd.



KEY:  
 Network Rail Tunnel

**Bryan G Hall Ltd. Registered in England & Wales Co No. 4104802**

This drawing is copyright and shall not be reproduced nor used for any other purpose without the written permission of the Bryan G Hall Ltd. This drawing must be read in conjunction with all other related drawings and documentation.

It is the contractors responsibility to ensure full compliance with the Building Regulations. Do not scale from this drawing, use figured dimensions only. It is the contractors responsibility to check and verify all dimensions on site. Any discrepancies to be reported immediately. **IF IN DOUBT ASK.**

Materials not in conformity with relevant British or European Standards/Codes of practice or materials known to be deleterious to health & safety must not be used or specified on this project.

Bryan G Hall Limited has not checked or verified, and shall therefore not be liable for any inaccuracies which may be attributable to any base plan(s) reports, data or information provided by the client, or purchased by the consultant on the clients behalf, that may have been utilised within this drawing.

Bryan G Hall Limited shall not be liable for the use of this or any associated document, for any purpose, by any person other than that for which they were provided.

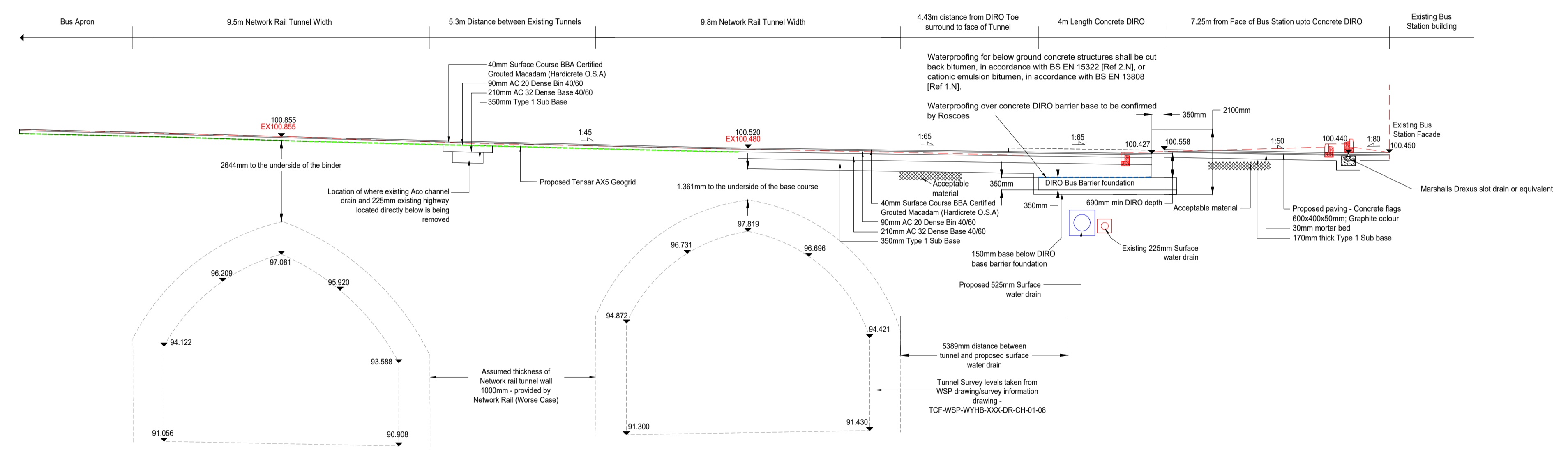
It remains the clients and/or its appointed contractor's responsibility to check for any discrepancies. Any anomalies discovered must be reported immediately to Bryan G Hall Limited for verification.

The locations of utilities apparatus, if shown, have been reproduced from plans supplied to Bryan G Hall Limited. Although care has been taken when duplicating this information, these locations are approximate only. No guarantee can be given by Bryan G Hall Limited for their accuracy. It is the clients or its appointed agent/contractor's responsibility to verify the exact locations on site by appropriate means prior to mechanical excavation.

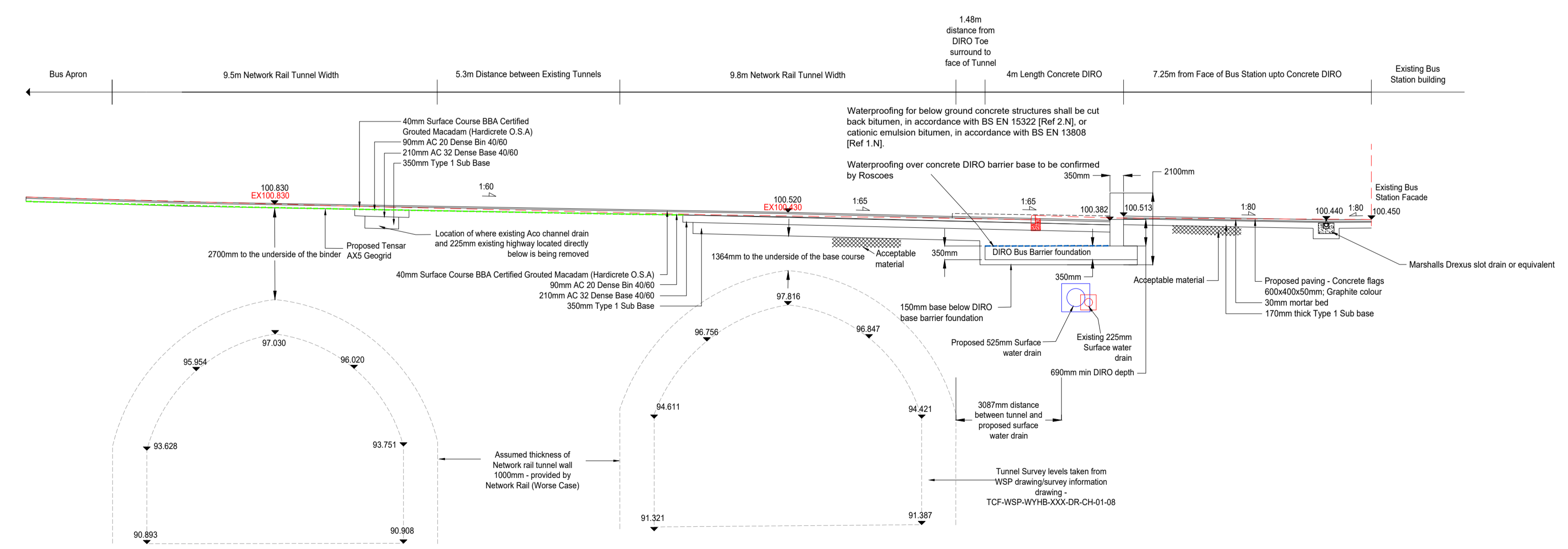
NOTES:

1. Topographical survey for the externals taken from Met Geo Environmental drawing number P23-00376-MET-EXT-XX-TOP-M3-G-1-30. Drawing produced Feb 2024.
2. Before proceeding with the construction work, the setting out lines are to be agreed with the Engineer.
3. Any discrepancies with regards to setting out information should be reported to Bryan G Hall Limited immediately.
4. Drawing to be read in conjunction with drawings HBS-BGH-Z0-XX-D-C-0037 P02 - Network Rail Typical Sections Sheet 1 and HBS-BGH-Z0-XX-D-C-0040 P02 - Network Rail Typical Sections Sheet 4.

Section Location Overview  
 Scale: 1:250



Section 3-3  
 (Through Bus Bay 2)  
 Scale: 1:100



Section 4-4 (Through Bus Bay 1)  
 Scale: 1:100

KEY:  
 Existing profile  
 Proposed profile

P02	09/12/25	Updated to Clients Comments	VL	JP	BR
Rev:	Date:	Amendment:	DRN	CHK	APR

**BRYANGHALL**  
 CONSULTING CIVIL & TRANSPORTATION PLANNING ENGINEERS

LEEDS T 0113 246 1555 LONDON T 0203 5523336

Suite E15 | Josephs Well  
 Hanover Walk | LEEDS | LS3 1AB

W [www.bryanghall.co.uk](http://www.bryanghall.co.uk)  
 E [transportleeds@bryanghall.co.uk](mailto:transportleeds@bryanghall.co.uk)

Client: WILLMOTT DIXON CONSTRUCTION

Status: FOR INFORMATION

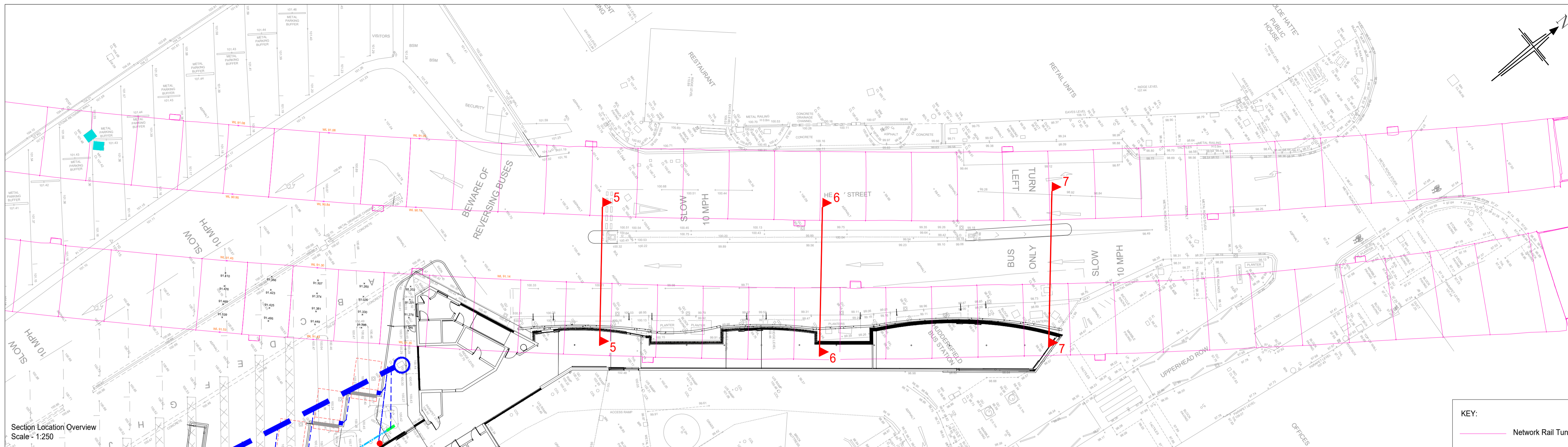
Scale: AS SHOWN Drawn: MM Chkd: VL Appvd: JP  
 Size: A1 - 841 x 594

Project: HUDDERSFIELD BUS STATION

Title: NETWORK RAIL TYPICAL SECTIONS SHEET 2

Drawing No: HBS-BGH-Z0-XX-DR-C-0038 Revision: P02  
 Job No: 23-184 Date: 10/10/25

Copyright Reserved Bryan G Hall Ltd.



Bryan G Hall Ltd. Registered in England & Wales Co No. 4104802

This drawing is copyright and shall not be reproduced nor used for any other purpose without the written permission of the Bryan G Hall Ltd. This drawing must be read in conjunction with all other related drawings and documentation.

It is the contractors responsibility to ensure full compliance with the Building Regulations. Do not scale from this drawing, use figured dimensions only. It is the contractors responsibility to check and verify all dimensions on site. Any discrepancies to be reported immediately. **IF IN DOUBT ASK.**

Materials not in conformity with relevant British or European Standards/Codes of practice or materials known to be deleterious to health & safety must not be used or specified on this project.

Bryan G Hall Limited has not checked or verified, and shall therefore not be liable for any inaccuracies which may be attributable to any base plan(s) reports, data or information provided by the client, or purchased by the consultant on the client's behalf, that may have been utilised within this drawing.

Bryan G Hall Limited shall not be liable for the use of this or any associated document, for any purpose, by any person other than that for which they were provided.

It remains the client's and/or its appointed contractor's responsibility to check for any discrepancies. Any anomalies discovered must be reported immediately to Bryan G Hall Limited for verification.

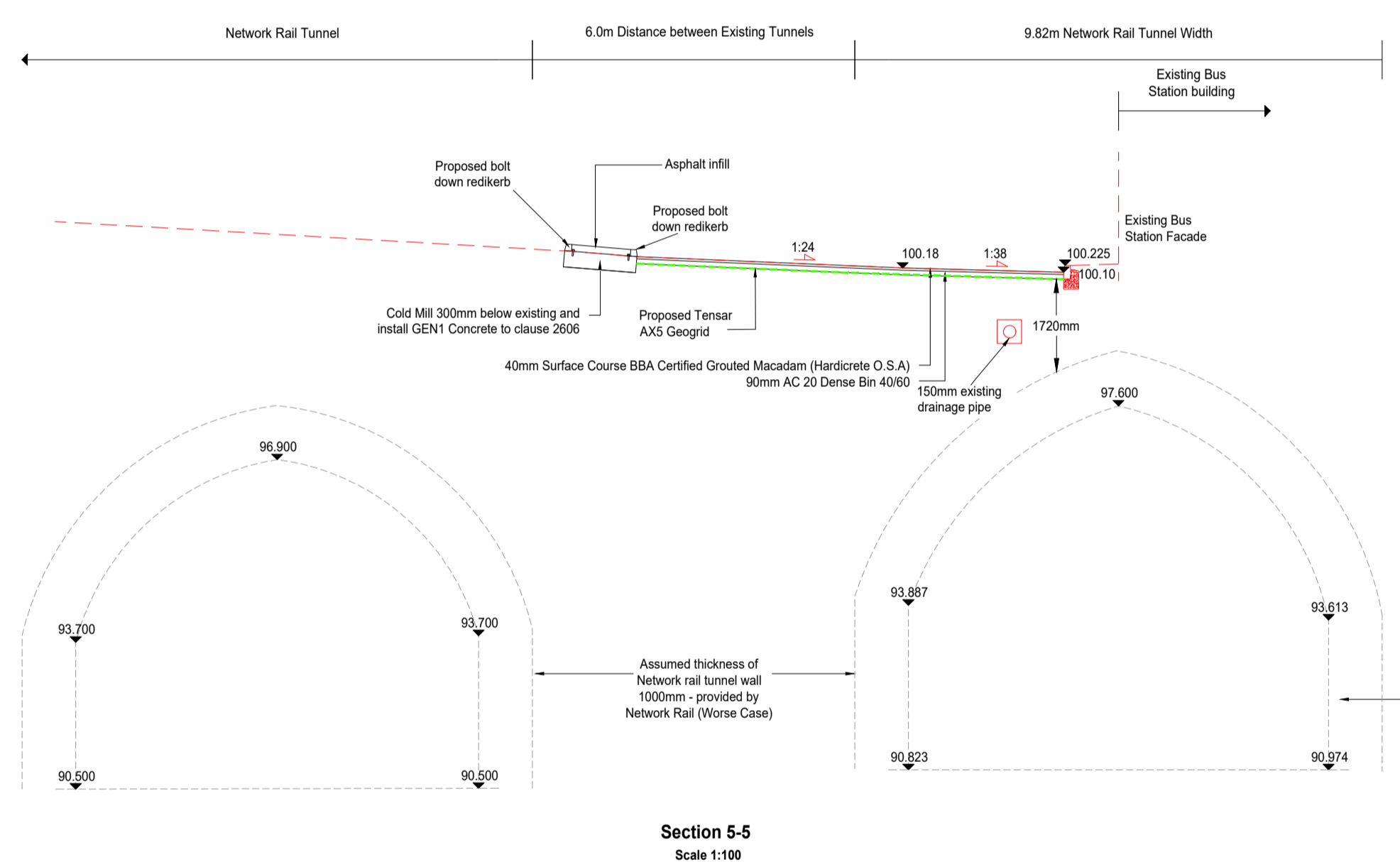
The locations of utilities apparatus, if shown, have been reproduced from plans supplied to Bryan G Hall Limited. Although care has been taken when duplicating this information, these locations are approximate only. No guarantee can be given by Bryan G Hall Limited for their accuracy. It is the client's or its appointed agent/contractor's responsibility to verify the exact locations on site by appropriate means prior to mechanical excavation.

NOTES:

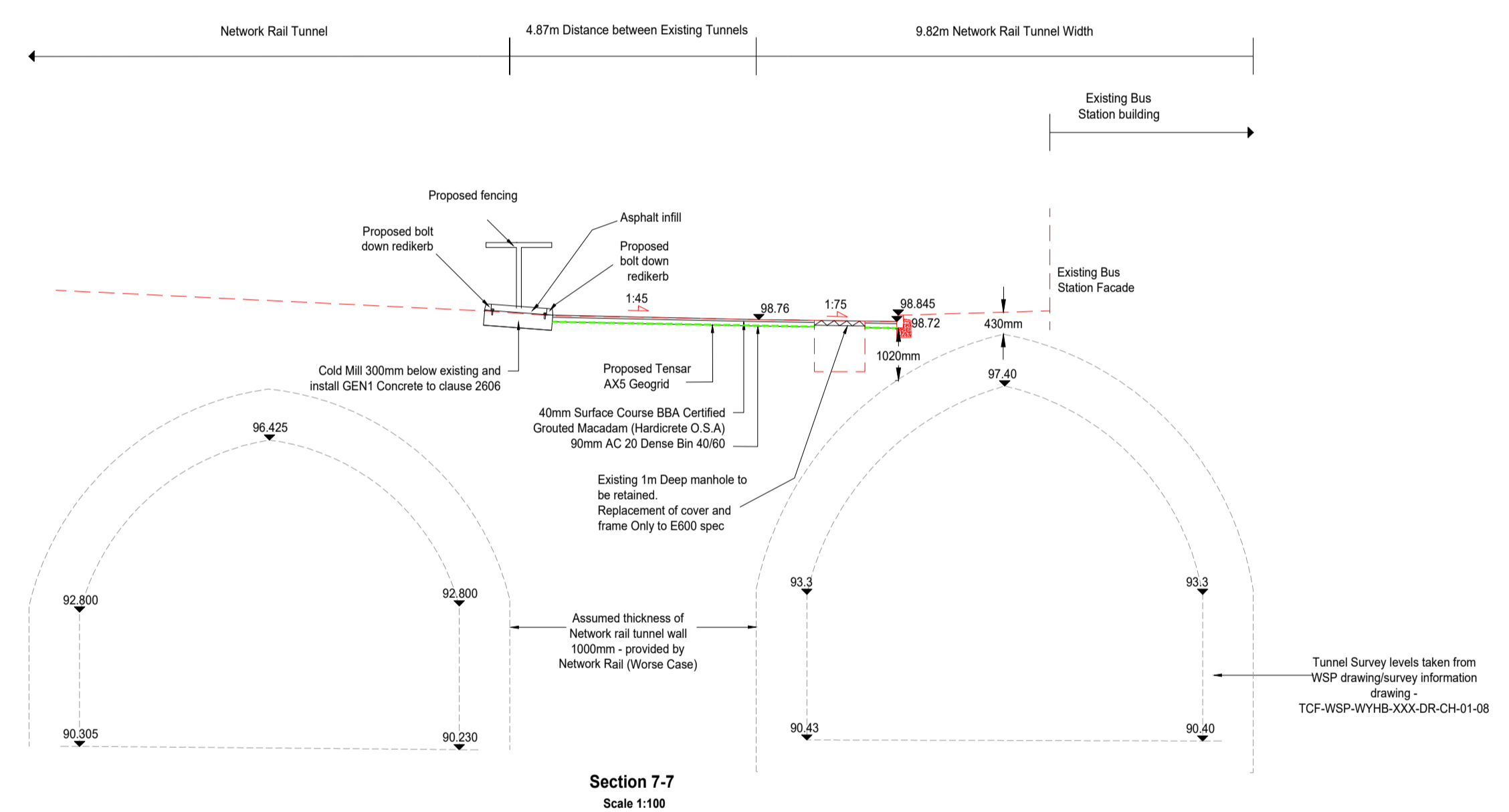
- Topographical survey for the external taken from Met Geo Environmental drawing number P23-00376-MET-EXT-XX-TOP-M3-G-1-3D. Drawing produced Feb 2024.
- Before proceeding with the construction work, the setting out lines are to be agreed with the Engineer.
- Any discrepancies with regards to setting out information should be reported to Bryan G Hall Limited immediately.

Section Location Overview Scale 1:250

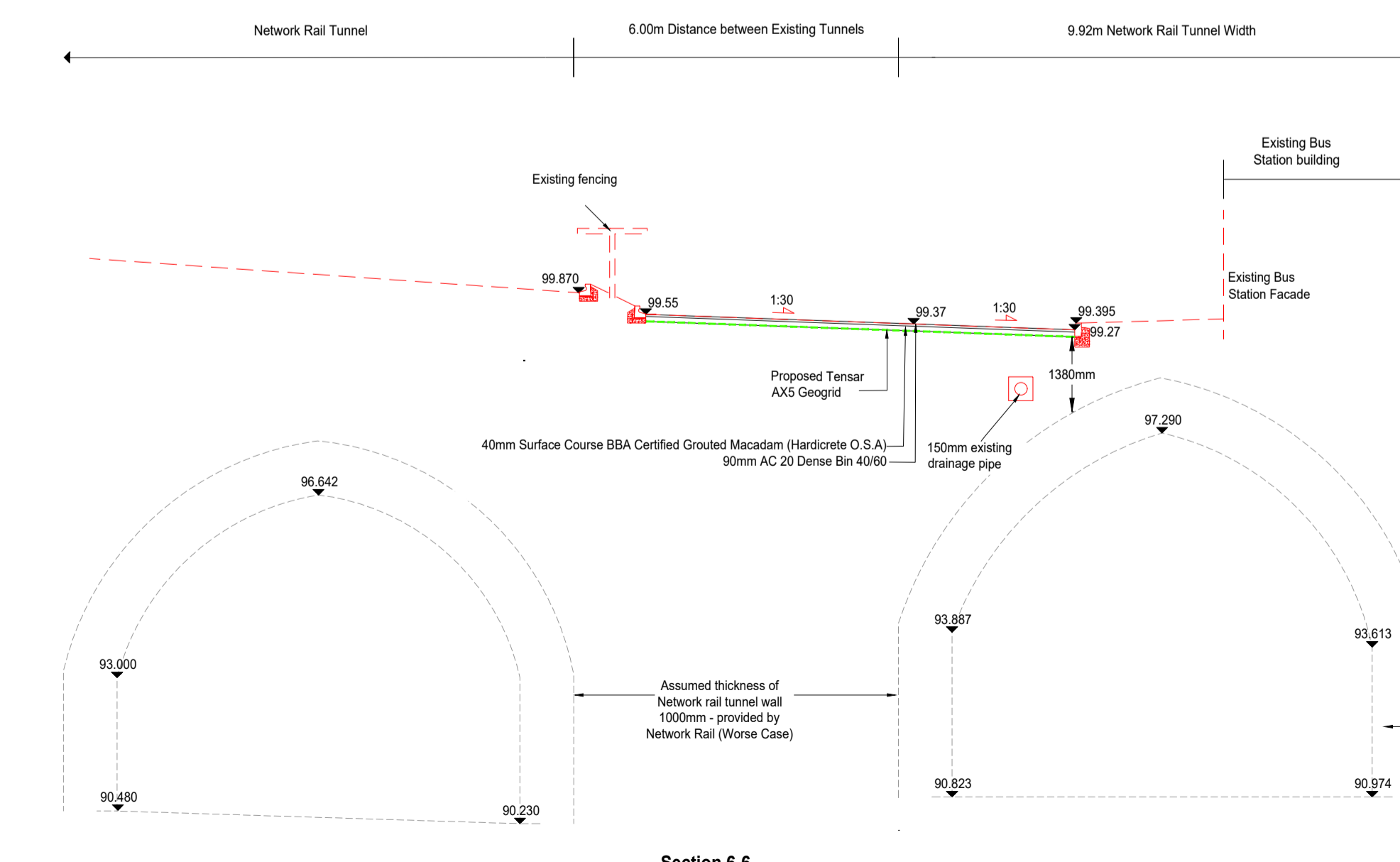
KEY:  
 Network Rail Tunnel



Section 5-5 Scale 1:100



Section 7-7 Scale 1:100



Section 6-6 Scale 1:100

KEY:  
 Existing profile  
 Proposed profile

P02	09/12/25	Updated to Clients Comments	VL	JP	BR
Rev.	Date:	Amendment:	DRN	CHK	APR

**BRYAN G HALL**  
 CONSULTING CIVIL & TRANSPORTATION PLANNING ENGINEERS  
 LEEDS T 0113 246 1555 LONDON T 0203 5532336  
 Suite E15 | Josephs Well | www.bryanghall.co.uk  
 Hanover Walk | LEEDS | LS3 1AB | E transportleeds@bryanghall.co.uk

Client: WILLMOTT DIXON CONSTRUCTION

Status: FOR APPROVAL

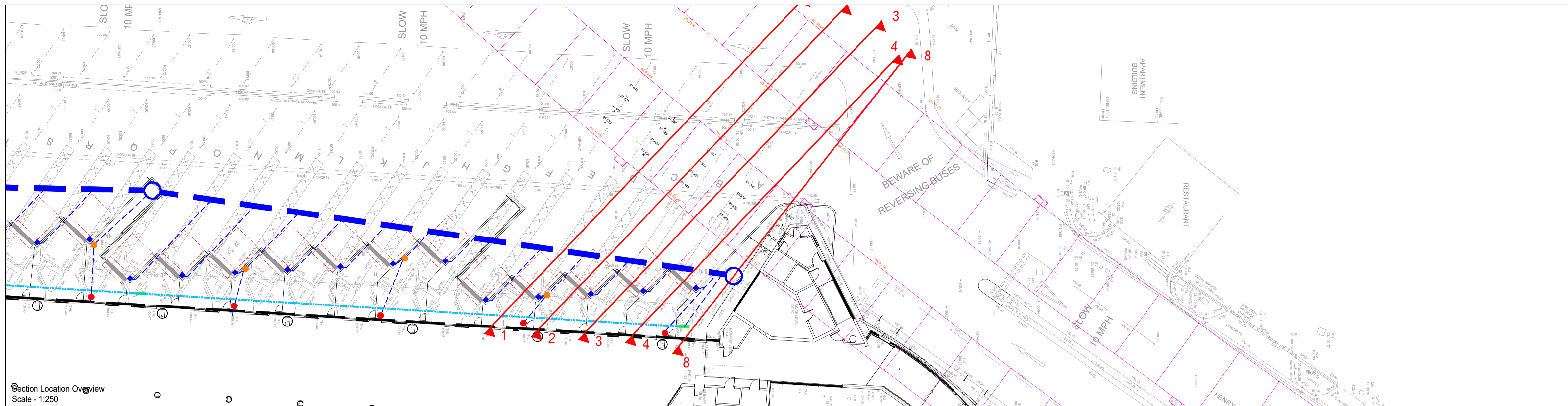
Scale: AS SHOWN | Drawn: MM | Chkd: VL | Appvd:  
 Size: A1 - 841 x 594

Project: HUDDERSFIELD BUS STATION

Title: NETWORK RAIL TYPICAL SECTIONS SHEET 3

Drawing No: HBS-BGH-Z0-XX-DR-C-0039 | Revision: P02  
 Job No: 23-184 | Date: 10/10/25

smas WORKSAFE X.com/Bryanghall1  
 Bryan G Hall  
 Copyright Reserved Bryan G Hall Ltd.



**Bryan G Hall Ltd. Registered in England & Wales Co No. 4104802**

This drawing is copyright and shall not be reproduced nor used for any other purpose without the written permission of the Bryan G Hall Ltd. This drawing must be read in conjunction with all other related drawings and documentation.

It is the contractors responsibility to ensure full compliance with the Building Regulations. Do not scale from this drawing, use figured dimensions only. It is the contractors responsibility to check and verify all dimensions on site. Any discrepancies to be reported immediately.

**IF IN DOUBT ASK.**

Materials not in conformity with relevant British or European Standards/Codes of practice or materials known to be deleterious to health & safety must not be used or specified on this project.

Bryan G Hall Limited has not checked or verified, and shall therefore not be liable for any inaccuracies which may be attributable to any base plan(s) reports, data or information provided by the client, or purchased by the consultant on the client's behalf, that may have been utilised within this drawing.

Bryan G Hall Limited shall not be liable for the use of this or any associated document, for any purpose, by any person other than that for which they were provided.

It remains the client's and/or its appointed contractor's responsibility to check for any discrepancies. Any anomalies discovered must be reported immediately to Bryan G Hall Limited for verification.

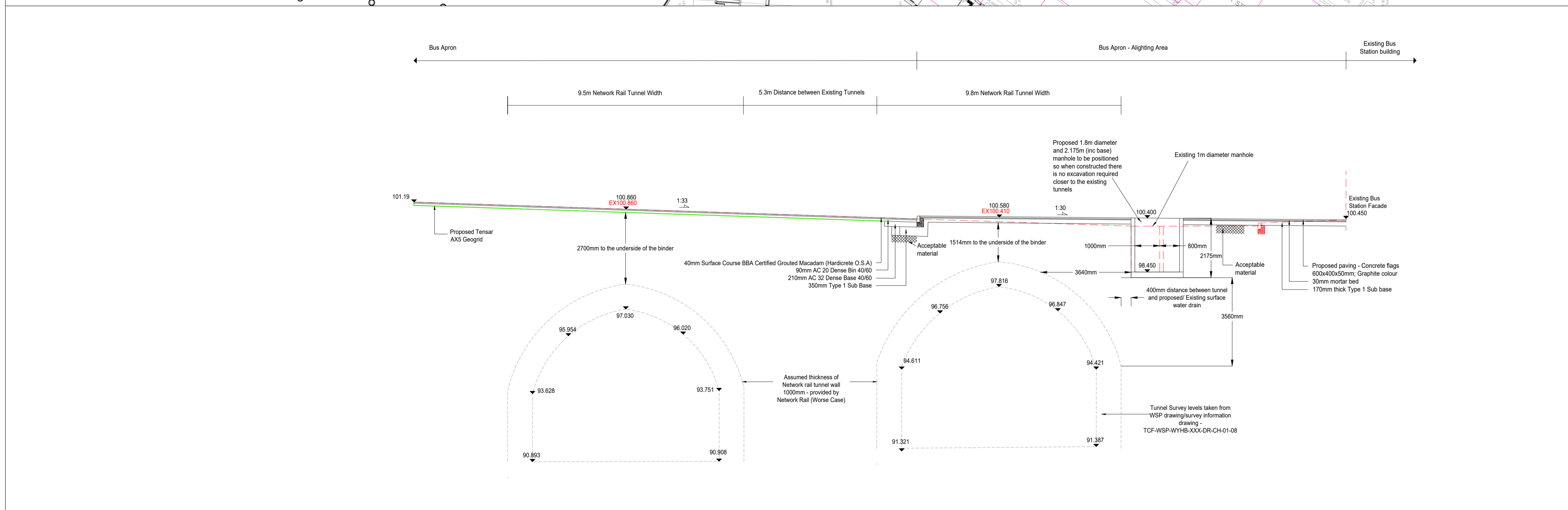
The locations of utilities apparatus, if shown, have been reproduced from plans supplied to Bryan G Hall Limited. Although care has been taken when duplicating this information, these locations are approximate only. No guarantee can be given by Bryan G Hall Limited for their accuracy. It is the client's or its appointed agent/contractor's responsibility to verify the exact locations on site by appropriate means prior to mechanical excavation.

**NOTES:**

- Topographical survey for the externals taken from Met Geo Environmental drawing number P23-00376-MET-EXT-XX-TOP-MS-G-1-3D. Drawing produced Feb 2024.
- Before proceeding with the construction work, the setting out lines are to be agreed with the Engineer.
- Any discrepancies with regards to setting out information should be reported to Bryan G Hall Limited immediately.
- Drawing to be read in conjunction with drawings HBS-BGH-Z0-XX-D-C-0037 P02 - Network Rail Typical Sections Sheet 1 and HBS-BGH-Z0-XX-D-C-0036 P02 - Network Rail Typical Sections Sheet 2.

**KEY:**

- Network Rail Tunnel



Section 8-8 (Through Bus Apron Manhole)  
Scale 1:100

**KEY:**

- Existing profile
- Proposed profile
- - - Proposed Geogrid

P02	09/12/25	Updated to Clients Comments	JL	VL	JP
Rev:	Date:	Amendment:	DRN	CHK	APR

**BRYAN G HALL**  
CONSULTING CIVIL & TRANSPORTATION PLANNING ENGINEERS

LEEDS T 0113 246 1555 LONDON T 0203 5532336

Suite E15 | Josephs Well | W www.bryanghall.co.uk  
Hanover Walk | LEEDS | LS1 1AB | E transportleeds@bryanghall.co.uk

Client: WILLMOTT DIXON CONSTRUCTION

Status: FOR INFORMATION

Scale: AS SHOWN  
Size: A1 - 841 x 594 | Drawn: VL | Chkd: JP | Appvd:

Project: HUDDERSFIELD BUS STATION

Title: NETWORK RAIL TYPICAL SECTIONS SHEET 4

Drawing No: HBS-BGH-Z0-XX-DR-C-0040 | Revision: P02  
Job No: 23-184 | Date: 25/11/25