

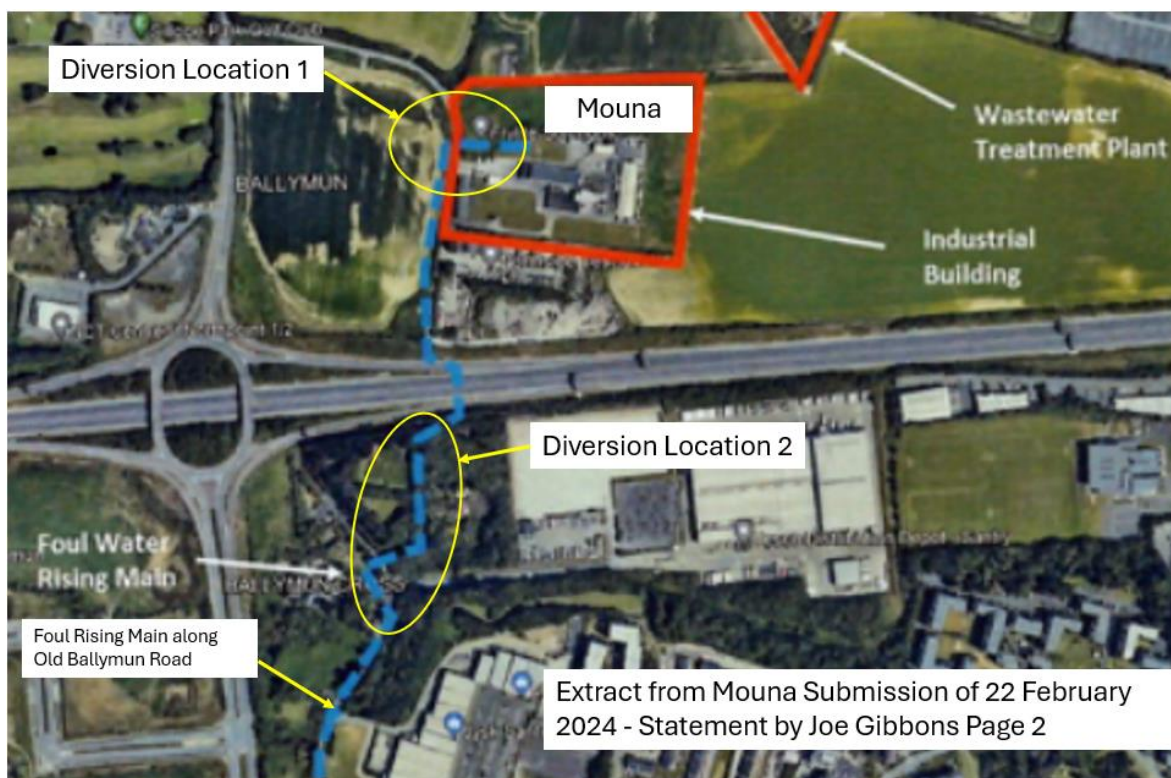
Metrolink / Mouna Private Rising Main Interface

Date: 4 March 2024
Project name: Dublin Metrolink
Project no: -
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Company: Jacobs
Prepared by: D.Shaw
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Document no: -
Revision no: -
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This technical note has been produced to clarify how the existing Mouna Private foul rising main at Dardistown will be diverted and maintained alongside the proposed MetroLink works. This matter was addressed in the EIAR, and this technical note provides further explanation on how this interface will be managed during the delivery of MetroLink.

The observer, Mouna's operation relies upon the continuance of the service and use of a rising foul main connecting their operation to a sewer at Old Ballymun Road. This rising main will be impacted at two locations by the MetroLink Works, and as a consequence the rising main must be diverted and then protected. The location of the rising main and proposed diversions is included below.



The observer, Mouna has raised concerns about the design in the EIAR and the Railway Order of the proposed diversions of two specific sections of this rising main and subsequent protection during construction which are addressed below:

- **Location No. 1, North of the M50 - Chainage 9+380:**
 - **Issue:** the proposed rising main diversion was included in the EIAR drawings but was located outside of the temporary landtake area which is required for the proposed MetroLink project. The drawings therefore needed to be updated to reflect this.
 - **Resolution:** Following Mouna's submission, we have updated the EIAR Drawings to reflect the correct location of the diverted rising main. The position of the proposed rising main diversion has now been updated to provide clearance over a 30m section from the area of construction (Metrolink at this location is a cut and cover construction) and is within the temporary landtake proposed under the Railway Order. The proposed rising main will be located at a sufficient distance of no less than 1.8m (over a 20 m length of the rising main) from the proposed Metrolink and will not be impacted by the Construction works. Impact mitigation is achieved through identification of utilities during construction, implementation of exclusion zones and careful detailed planning of the method of construction of Metrolink construction operations adjacent to the rising main.
- **Location No. 2, South of the M50 - Chainage 9+760 to 9+970:**
 - **Issue:** the proposed rising main diversion was included within the EIAR, but Mouna criticised this as lacking in detail.
 - **Resolution:** Following this submission, we have updated the EIAR Drawings to address their concerns, which (i) relate to details either side of the M50 (ii) that the impact of the MetroLink works have not been considered here and (iii) that the existing main is presented in an incorrect position south of the M50:
 - i. The drawings have been updated for the rising main either side of the M50.
 - ii. Impacts considered: We have considered that the rising main must be relocated away from the MetroLink Works, and following the diversion proposed at this location must be protected as the MetroLink Works are progressed. The existing rising main will be diverted away from the proposed embankment for the MetroLink south of the M50 where it first clashes with the proposed MetroLink Embankment and will be no less than 2m away from the toe of the embankment over the full length of the proposed diversion and reconnection to the remaining rising main located at Old Ballymun Road (Chainage 9+970). The proposed Metrolink embankment is at a sufficient distance from the proposed rising main to mitigate any loading from the Metrolink embankment, whilst also maintaining sufficient offset from the Metrolink to allow for future maintenance and operations on this main under the MetroLink access road. This means that the main will not be impacted by the MetroLink alignment and will remain accessible for maintenance on the completion of MetroLink.
 - iii. The position of the existing main: we have considered the position of the existing main south of the M50 and have adjusted our diversion to address the observations made by Mouna.

Following the observer's submissions, we have updated the below EIAR drawings to reflect the additional detail which the observer has provided, included within the appendix to this technical note:

- ML1-JAI-URD-ROUT_XX-DR-Y-01050 (rev. P07) – Location 1.
- ML1-JAI-URD-ROUT_XX-DR-Y-01052 (rev. P03) – Location 1.
- ML1-JAI-URD-ROUT_XX-DR-Y-01055 (rev. P06) – Location 2.
- ML1-JAI-URD-ROUT_XX-DR-Y-01056 (rev. P06) – Location 2.

Proposed Design & Construction

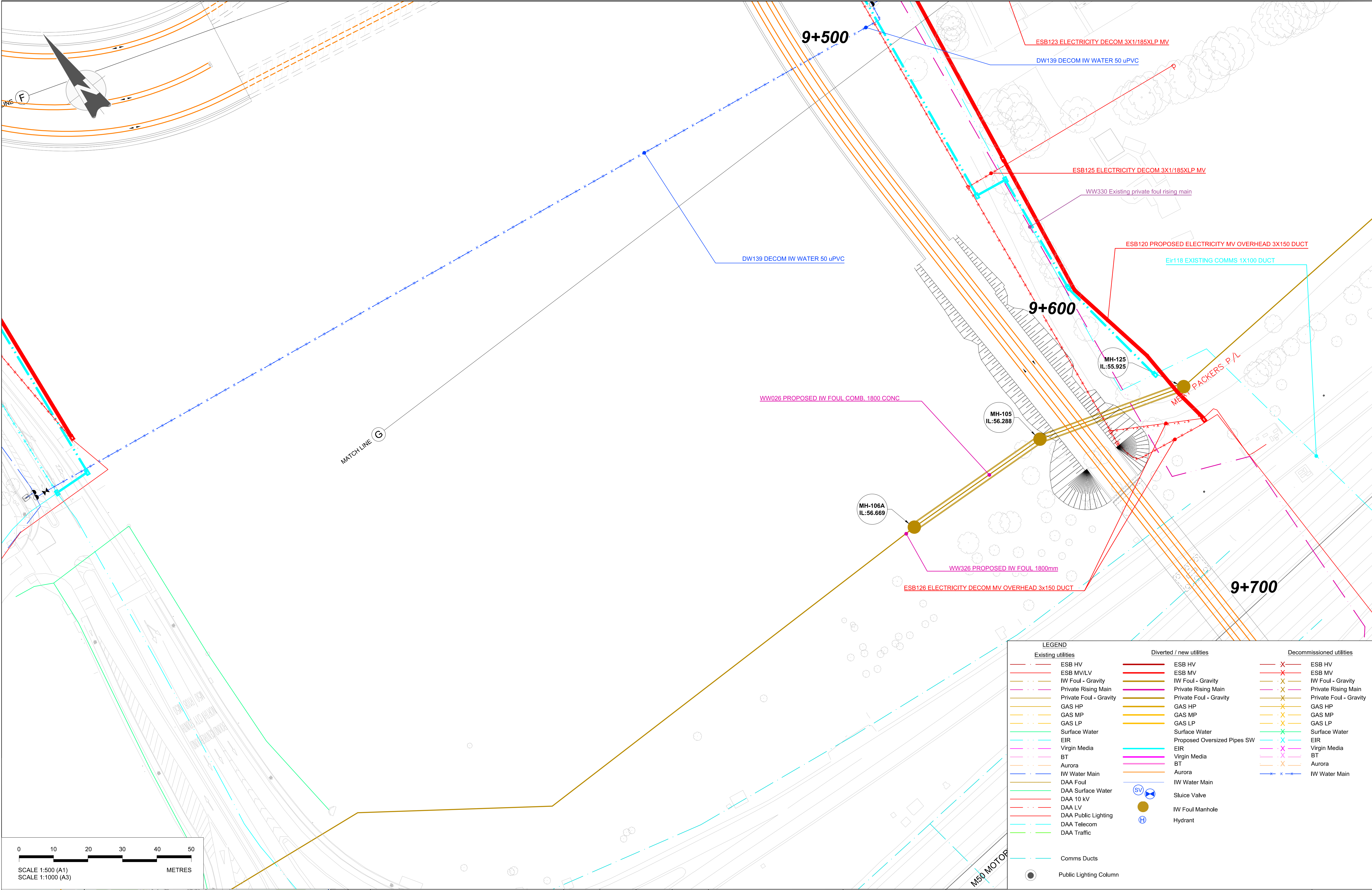
Diversion of the Rising Main: The design for these diversions is currently being undertaken by the Advance Enabling Works (AEW) design team. The design will be passed to the TII Appointed AEW Contractor who will carefully verify the rising main location through a series of slit trench excavations. The AEW Contractor will survey and confirm the location of the rising main through the MetroLink Works areas before it will be diverted outside of the permanent footprint of the MetroLink Alignment and within the lands temporarily acquired under the Railway Order application.

Main Works around the diverted Rising Main: Following the completion of these diversion works, the location of the rising main will be confirmed and protected by the appointed TII Main Works Contractor as their works are progressed through both of these locations.

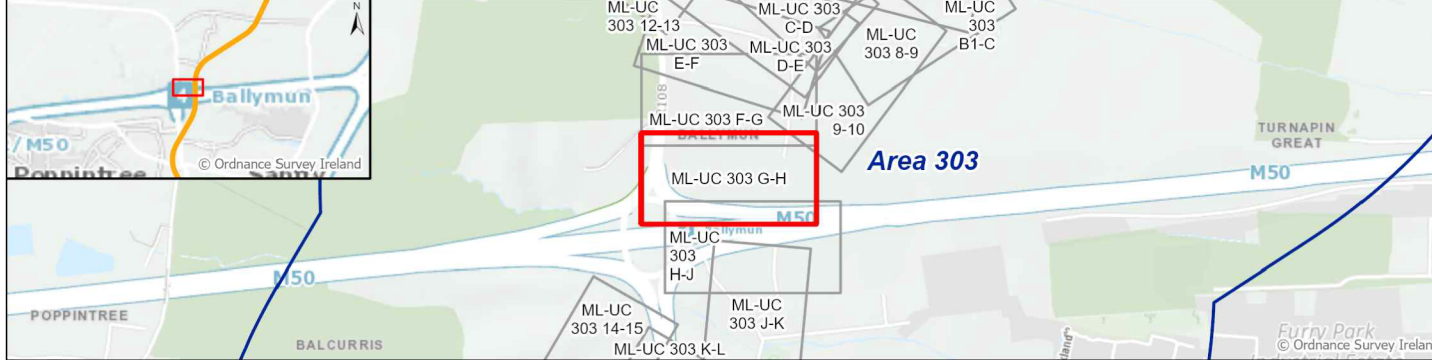
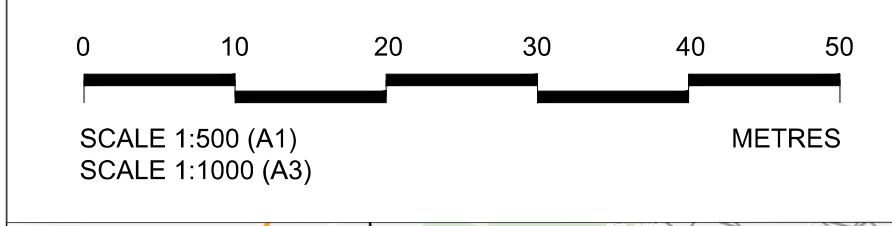
Protection Measures

The observer has requested detail of the proposed protection measures for the proposed diverted rising main in the forementioned locations. In acknowledgement of the observer's concerns the diverted rising main will be surrounded in concrete where its alignment is within 3m of the proposed structure or toe of the embankment. In addition where any works have the potential to encroach within 5m of the diverted alignment of the rising main, the appointed main works contractors will be required to notify Mouna prior to these works being undertaken.

Appendix - Drawings

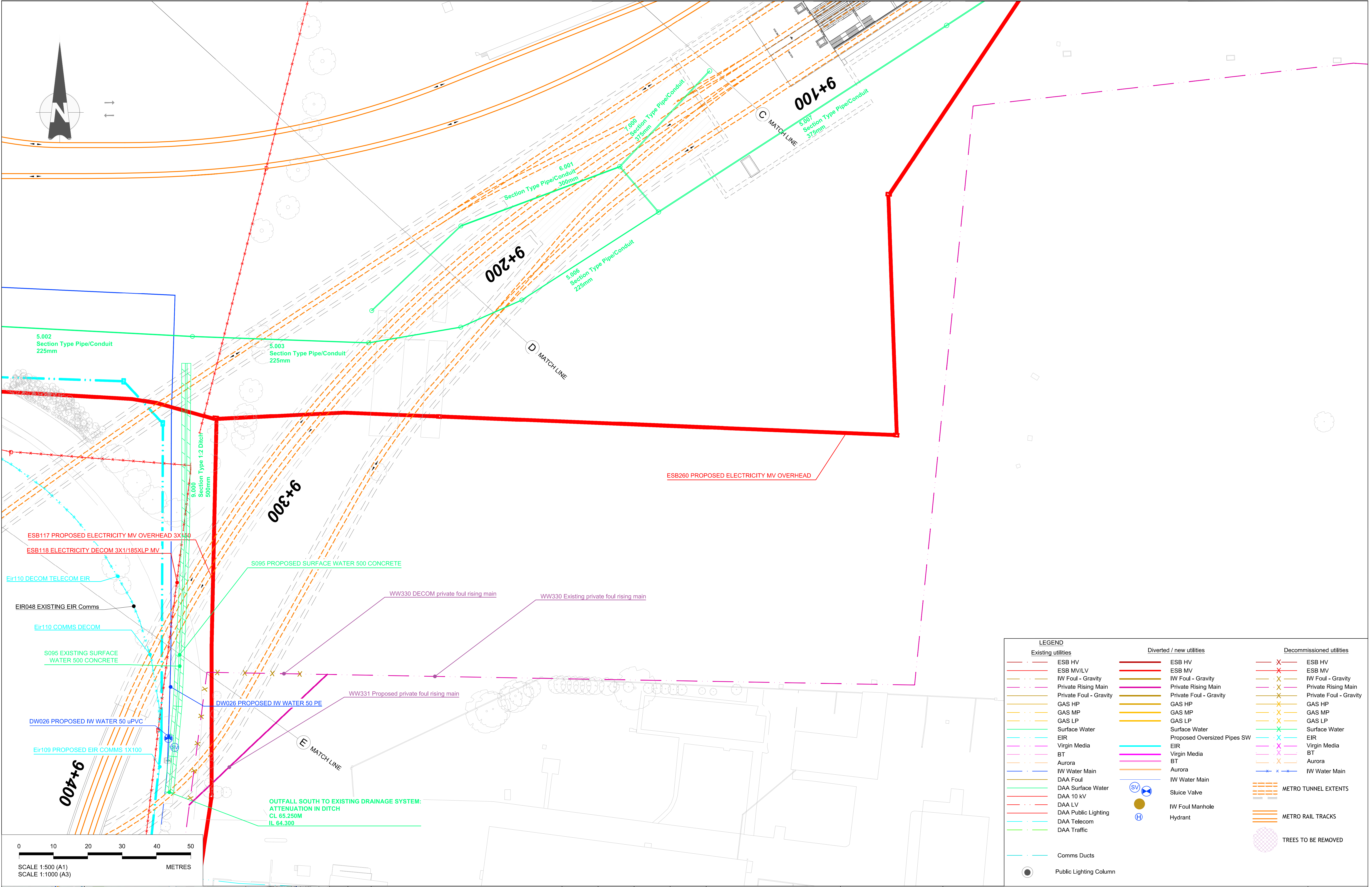


LEGEND		
Existing utilities	Diverted / new utilities	Decommissioned utilities
ESB HV	ESB HV	ESB HV
ESB MV/LV	ESB MV	ESB MV
IW Foul - Gravity	IW Foul - Gravity	IW Foul - Gravity
Private Rising Main	Private Rising Main	Private Rising Main
Private Foul - Gravity	Private Foul - Gravity	Private Foul - Gravity
GAS HP	GAS HP	GAS HP
GAS MP	GAS MP	GAS MP
GAS LP	GAS LP	GAS LP
Surface Water	Surface Water	Surface Water
EIR	Proposed Oversized Pipes SW	EIR
Virgin Media	Virgin Media	Virgin Media
BT	BT	BT
Aurora	Aurora	Aurora
IW Water Main	IW Water Main	IW Water Main
DAA Foul	Sluice Valve	
DAA Surface Water	IW Foul Manhole	
DAA 10 kV	Hydrant	
DAA LV		
DAA Public Lighting		
DAA Telecom		
DAA Traffic		
Comms Ducts		
Public Lighting Column		



P04	13/04/23	Preliminary Design	BM	DS	DS	PB
P05	10/10/23	GDD alignment updated as per drawing ref 7556-2102 rev D02 received from IW	BM	DS	DS	PB
P06	11/10/23	GDD alignment updated as per drawing ref 7556-2102 rev D02 received from IW	BM	DS	DS	PB
P07	05/03/24	Proposed rising main layout updated	MP	DS	DS	PB
REV.	DATE	Description	DRAWN BY	CHECKED BY	REVIEWED BY	APPROVED BY
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Client	Project	Drawing Title	Drawing Status
TII Transport Infrastructure Ireland NTA Udarás Náisiúnta Iompair National Transport Authority	METROLINK	METRO LINK - UTILITY DIVERSION BALLYMUN (SHEET 7 OF 11)	S4
Consultant	Drawing N°	Plan Drawing N°	
JACOBS IDOM	ML1-JAI-URD-SC01_XX-DR-Y-01050	ML-UC 303 G- H	
	Scales Original Size A1 1:500		Sheet 7 of 11

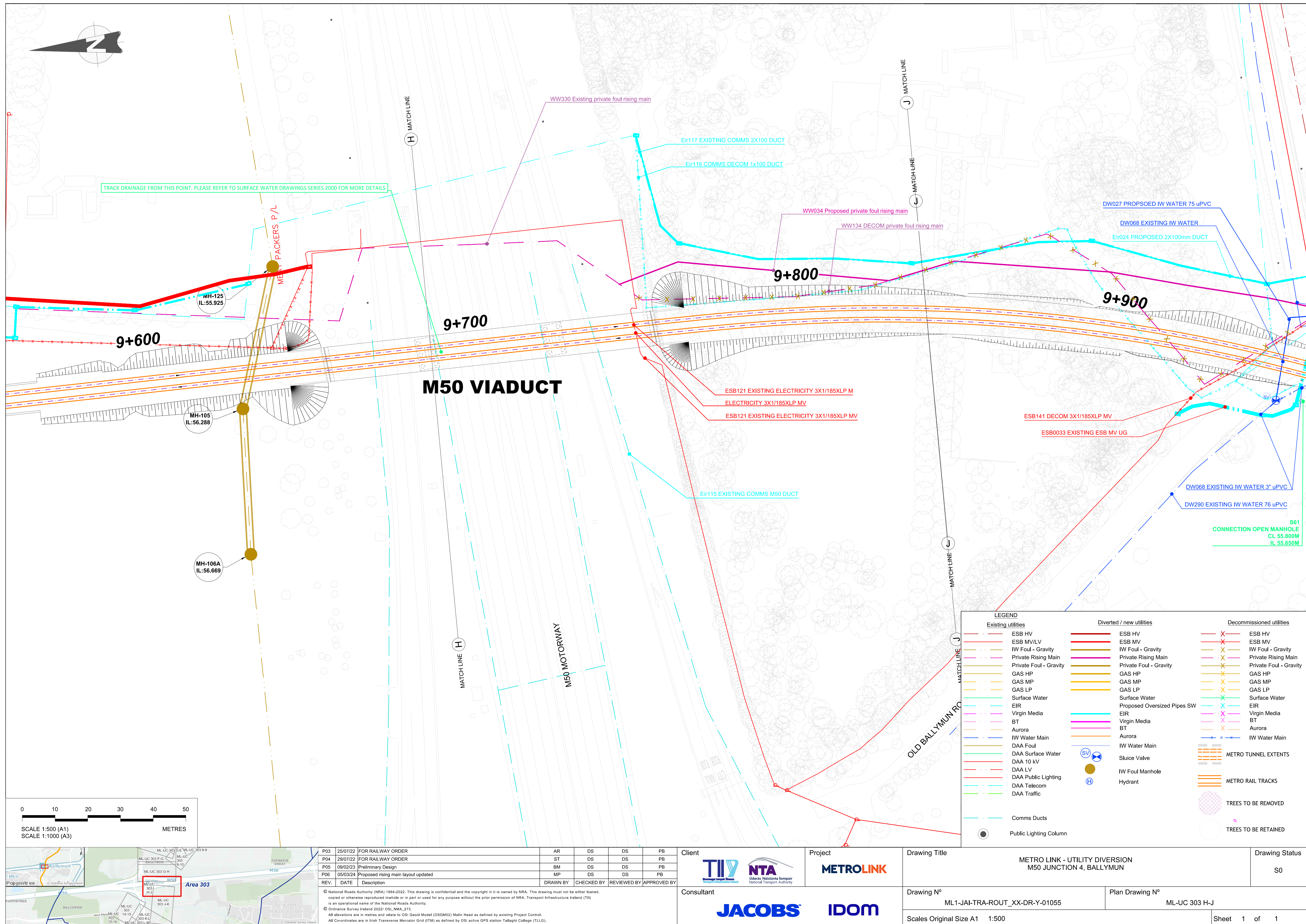


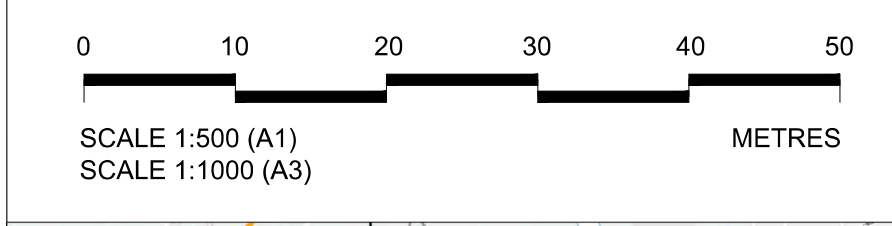
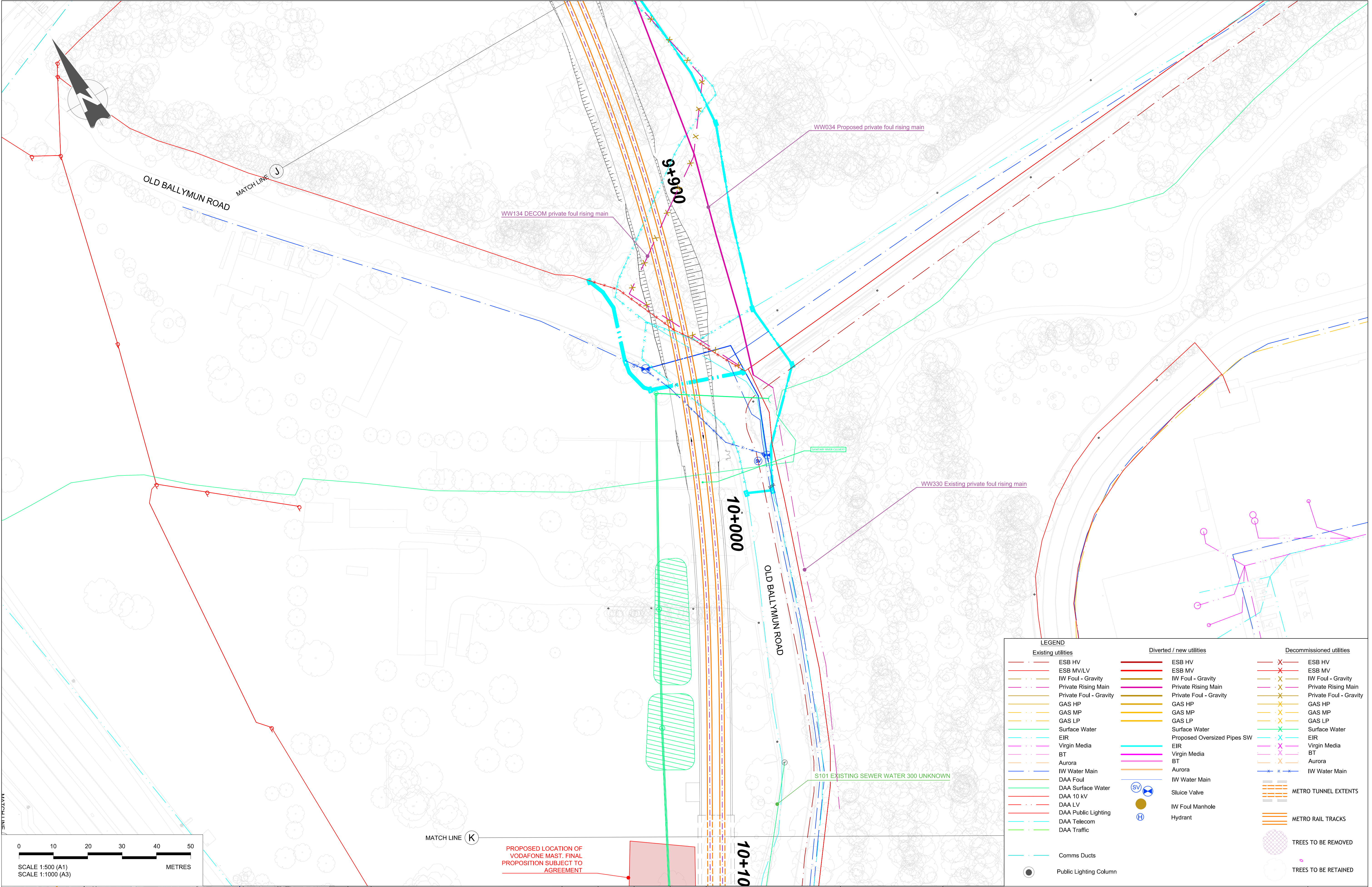
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GAS HP	GAS HP	GAS HP
GAS MP	GAS MP	GAS MP
GAS LP	GAS LP	GAS LP
Surface Water	Surface Water	Surface Water
EIR	Proposed Oversized Pipes SW	EIR
Virgin Media	Virgin Media	Virgin Media
BT	BT	BT
Aurora	Aurora	Aurora
IW Water Main	IW Water Main	IW Water Main
DAA Foul	DAA Foul	DAA Foul
DAA Surface Water	DAA Surface Water	DAA Surface Water
DAA 10 kV	DAA 10 kV	DAA 10 kV
DAA LV	DAA LV	DAA LV
DAA Public Lighting	DAA Public Lighting	DAA Public Lighting
DAA Telecom	DAA Telecom	DAA Telecom
DAA Traffic	DAA Traffic	DAA Traffic
Comms Ducts	Comms Ducts	Comms Ducts
Public Lighting Column	Sluice Valve	METRO TUNNEL EXTENTS
	IW Foul Manhole	METRO RAIL TRACKS
	Hydrant	TREES TO BE REMOVED



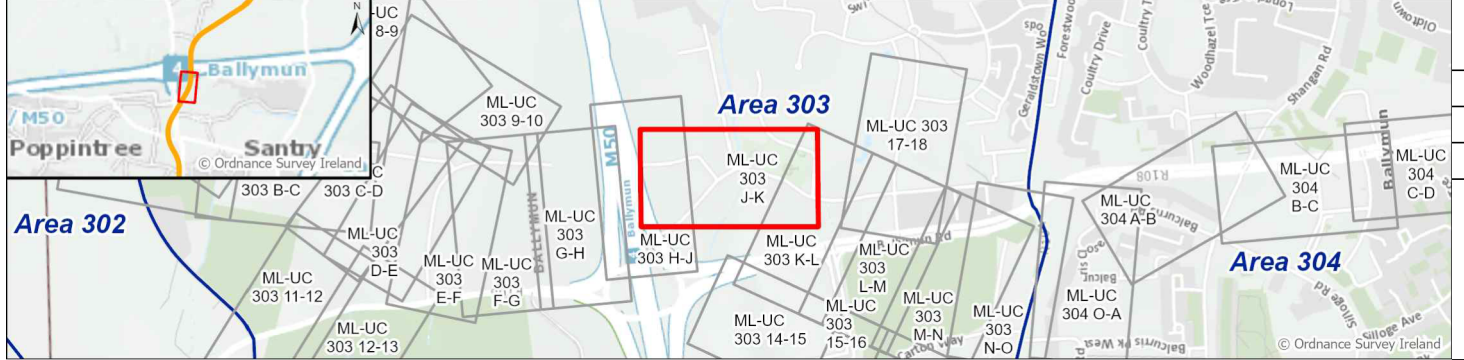
REV.	DATE	Description	DRAWN BY	CHECKED BY	REVIEWED BY	APPROVED BY
P01	25/05/22	FOR RAILWAY ORDER	AR	DS	DS	PB
P02	13/04/23	Preliminary Design	KP	DS	DS	PB
P03	05/03/24	Proposed rising main layout updated	MP	DS	DS	PB
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Client 	Project 	Drawing Title METRO LINK - UTILITY DIVERSION BALLYMUN (SHEET 9 OF 11)		Drawing Status S0
		Drawing N° ML1-JAI-URD-ROUT_XX-DR-Y-01052	Plan Drawing N° ML-UC 303 9 - 10	
		Scales Original Size A1 1:500	Sheet 9 of 11	





LEGEND		
Existing utilities	Diverted / new utilities	Decommissioned utilities
<div><div></div>ESB HV</div> <div><div></div>ESB MV/LV</div> <div><div></div>IW Foul - Gravity</div> <div><div></div>Private Rising Main</div> <div><div></div>Private Foul - Gravity</div> <div><div></div>GAS HP</div> <div><div></div>GAS MP</div> <div><div></div>GAS LP</div> <div><div></div>Surface Water</div> <div><div></div>EIR</div> <div><div></div>Virgin Media</div> <div><div></div>BT</div> <div><div></div>Aurora</div> <div><div></div>IW Water Main</div> <div><div></div>DAA Foul</div> <div><div></div>DAA Surface Water</div> <div><div></div>DAA 10 kV</div> <div><div></div>DAA LV</div> <div><div></div>DAA Public Lighting</div> <div><div></div>DAA Telecom</div> <div><div></div>DAA Traffic</div>	<div><div></div>ESB HV</div> <div><div></div>ESB MV</div> <div><div></div>IW Foul - Gravity</div> <div><div></div>Private Rising Main</div> <div><div></div>Private Foul - Gravity</div> <div><div></div>GAS HP</div> <div><div></div>GAS MP</div> <div><div></div>GAS LP</div> <div><div></div>Surface Water</div> <div><div></div>Proposed Oversized Pipes SW</div> <div><div></div>EIR</div> <div><div></div>Virgin Media</div> <div><div></div>BT</div> <div><div></div>Aurora</div> <div><div></div>IW Water Main</div> <div><div></div>DAA Surface Water</div> <div><div></div>DAA 10 kV</div> <div><div></div>DAA LV</div> <div><div></div>DAA Public Lighting</div> <div><div></div>DAA Telecom</div> <div><div></div>DAA Traffic</div>	<div><div></div>ESB HV</div> <div><div></div>ESB MV</div> <div><div></div>IW Foul - Gravity</div> <div><div></div>Private Rising Main</div> <div><div></div>Private Foul - Gravity</div> <div><div></div>GAS HP</div> <div><div></div>GAS MP</div> <div><div></div>GAS LP</div> <div><div></div>Surface Water</div> <div><div></div>EIR</div> <div><div></div>Virgin Media</div> <div><div></div>BT</div> <div><div></div>Aurora</div> <div><div></div>IW Water Main</div> <div><div></div>METRO TUNNEL EXTENTS</div> <div><div></div>METRO RAIL TRACKS</div> <div><div></div>TREES TO BE REMOVED</div> <div><div></div>TREES TO BE RETAINED</div>



REV.	DATE	Description	DRAWN BY	CHECKED BY	REVIEWED BY	APPROVED BY
P03	25/07/22	FOR RAILWAY ORDER	AR	DS	DS	PB
P04	31/07/22	FOR RAILWAY ORDER	KP	DS	DS	PB
P05	13/04/23	Preliminary Design	BM	DS	DS	PB
P06	05/03/24	Proposed rising main layout updated	MP	DS	DS	PB

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Client	Project	Drawing Title	Drawing Status
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Consultant	Drawing N°	Plan Drawing N°	Sheet
	ML1-JAI-URD-ROUT_XX-DR-Y-01056	ML-UC 303 J - K	1 of 1
Scales Original Size A1 1:500			