



**MetroLink**

Transport Infrastructure Ireland

## **Additional Errata Relating to Chapter 20**

2024/03/26



**MetroLink**

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**Document history and status**

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## 1. Introduction

Chapter 20 addresses Geology and Soils within the EIAR.

It has become clear during the course of the oral hearing that, in error, borehole locations which appeared in an early drawing of proposed bore hole locations, and which did not form part of the Geotechnical Investigation (GI) scope, were included in error in the chapter presentation as follows:

- Figure 20.6 (Revised version attached)
- Appendix A20.1 (Summary of Supporting Ground Investigation Scope)
- Appendix A20.2 (Summary of Relevant Exploratory Hole Locations and Monitoring data)
- Appendix 20.8 (Appendix A Tables A1 to A4) and Figure 20.6.

No data was derived from these borehole locations, as they were not drilled. Accordingly, this error does not impact on the geotechnical assessment or any of the conclusions reached in the EIAR. Adequate geological data was available from the 42 borehole locations that were included in the Geotechnical Investigation (GI) scope and the data from 215 boreholes, comprising boreholes drilled for Old Metro North and Geological Survey of Ireland boreholes, for the purposes of preparing the EIAR and geotechnical assessment.

### 1.1 Nature of the EIAR Errata

Chapter 20 includes summaries of the ground investigation (GI) data used in development of the assessment as detailed above as well as a figure detailing the GI locations. An error has been identified whereby proposed borehole locations which were not actually drilled were included in the summary tables detailed above and Figure 20.6. These borehole locations were not drilled as they were not required. The proposed Phase 1 borehole references included in error are listed in Table 1.

**Table 1. Summary of Phase 1 Proposed GI Locations included in Error**

Phase 1 GI Location	AZ	Approximate Location
NBH70	AZ1	Estuary Park & Ride
NBH01	AZ1	North Portal
NBH02	AZ1	North Portal
NBH02A	AZ1	North Portal
NBH03	AZ1	North Portal
NBH09	AZ3	M50 Crossing
NBH10	AZ3	M50 Crossing
NBH11	AZ3	Northwood Station
NBH13	AZ4	Ballymun Station
NBH15/15A	AZ4	Collins Avenue Station
NBH16	AZ4	Collins Avenue Station
NBH83	AZ4	Glasnevin Station
NBH84	AZ4	Mater Station



Phase 1 GI Location	AZ	Approximate Location
NBH85	AZ4	Mater Station
NBH86	AZ4	Tara Station
NBH87	AZ4	Tara Station
NBH28	AZ4	St Stephen's Green Station
NBH90	AZ4	St Stephen's Green Station
NBH91	AZ4	St Stephen's Green Station
NBH92	AZ4	St Stephen's Green Station
NBH93	AZ4	Charlemont

## 1.2 Assessment of relevance

The inclusion of these proposed GI location references was mistaken, and it should be noted that boreholes at these proposed GI locations were not drilled. Consequently, there is no data associated with these proposed locations.

It should be noted that the baseline information used in the assessment is not altered by this error. A total of 257 drill holes from all site investigation stages have been utilised to define the ground model with a high level of accuracy for the MetroLink alignment. These include 215 Boreholes, comprising boreholes drilled for the purpose of Old Metro North, Geological Survey of Ireland boreholes, and 42 Boreholes executed in accordance with the framework of Additional Ground Investigations Phase 1 for MetroLink. Adequate geological data was available from these boreholes for the purposes of preparing the EIAR and geotechnical assessment.

A further 30 boreholes, in addition to the 257 bore holes initially drilled, were added during Phase 2 GI investigations and included in the geotechnical assessment.

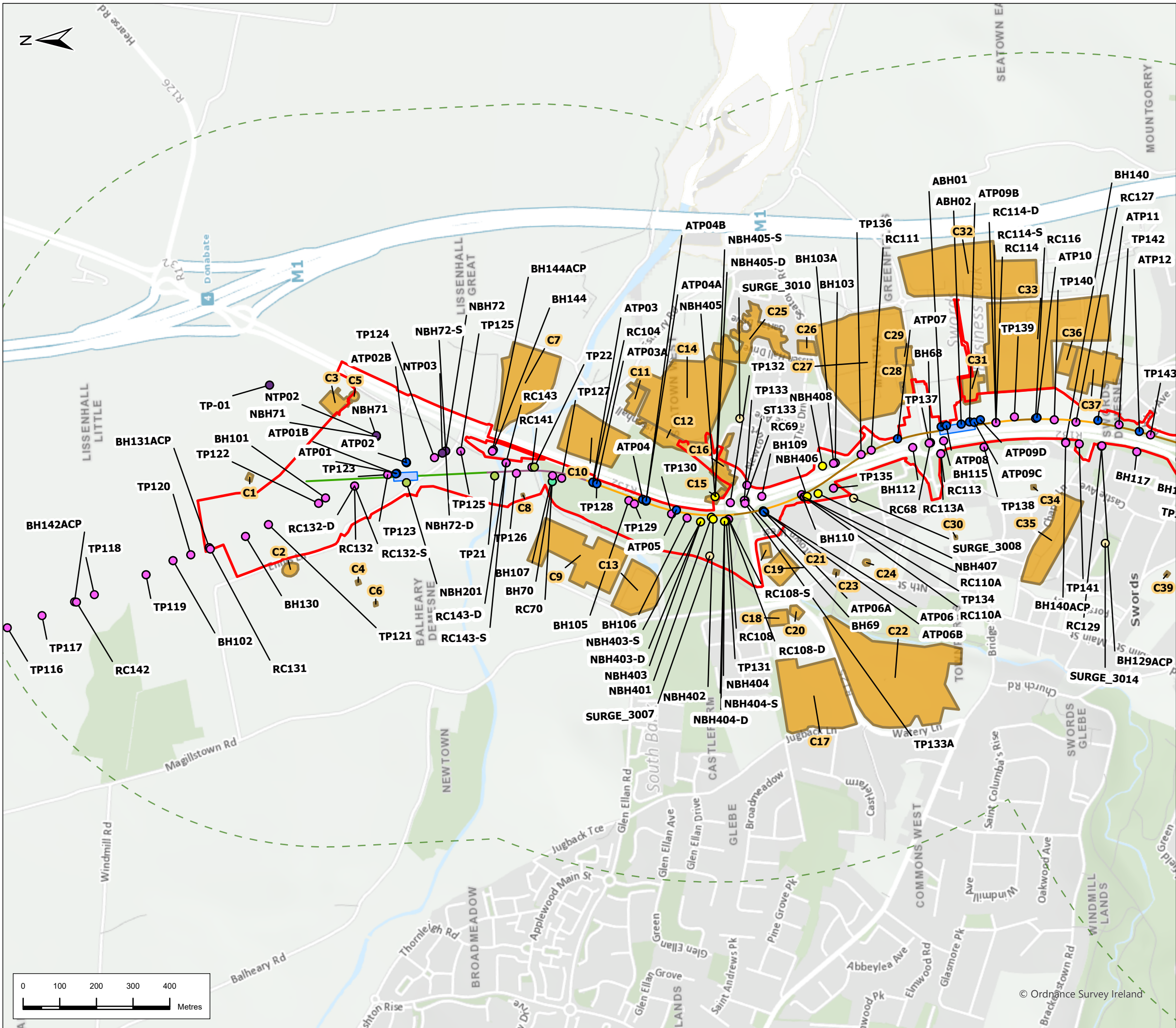
For design purposes, Eurocode 7 recommends the following regarding the density and depth of site investigations: "...for linear structures such as roads, railways, channels, pipelines, dikes, tunnels, and retaining walls, a spacing of 20 m to 200 m...". Based on the number of investigations used to define the MetroLink ground model (287), and considering a total alignment length of 19km, the average distance between investigations would be approximately 66m. This spacing comes well within the recommended spacing of 20m to 200m for linear structures and the distribution is more than adequate for geological interpretation along the route.

In addition to boreholes, sub-surface characteristics were determined based on in Situ Tests for:

- Variable head permeability tests (#87 tests), packer and variable head permeability tests (#118 tests).
- High Pressure Dilatometer (HPD) (#26 tests).
- Laboratory geotechnical analysis of soils samples (#1,635 tests).
- Laboratory geotechnical analysis of rock samples (#3,354 tests).
- The hydrogeology assessment considers numerous other additional boreholes within a 500m radius of the route to determine groundwater flow direction and aquifer characteristics.

- Laboratory geochemical analysis of #582 soil samples
- Laboratory geochemical analysis groundwater samples from #87 locations.

The geological cross sections included within the EIAR were developed on the basis of the GI locations actually completed and, as such, are not affected. The resulting interpretation of geology included in Chapter 20 (Soils and Geology) and Chapter 19 (Hydrogeology) is unchanged.



# Legend

## Alignment

- Cut & Cover
- Retained Cut
- Surface
- Viaduct
- Station Locations
- Project Boundary

## Geographic Split

- AZ1 Northern Section

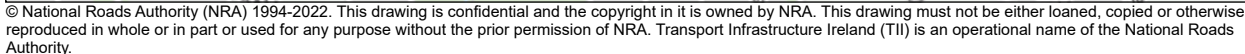
## GI Locations

- IGSL,2007
- IGSL,2008
- GSI,2009
- Causeway Phase 1, 2019
- Causeway Phase 2, 2019
- Causeway Phase 3, 2020
- Causeway Phase 4, 2020
- Causeway Phase 5, 2021
- Potential land contamination sources within 250m of the Works Area and/or alignment

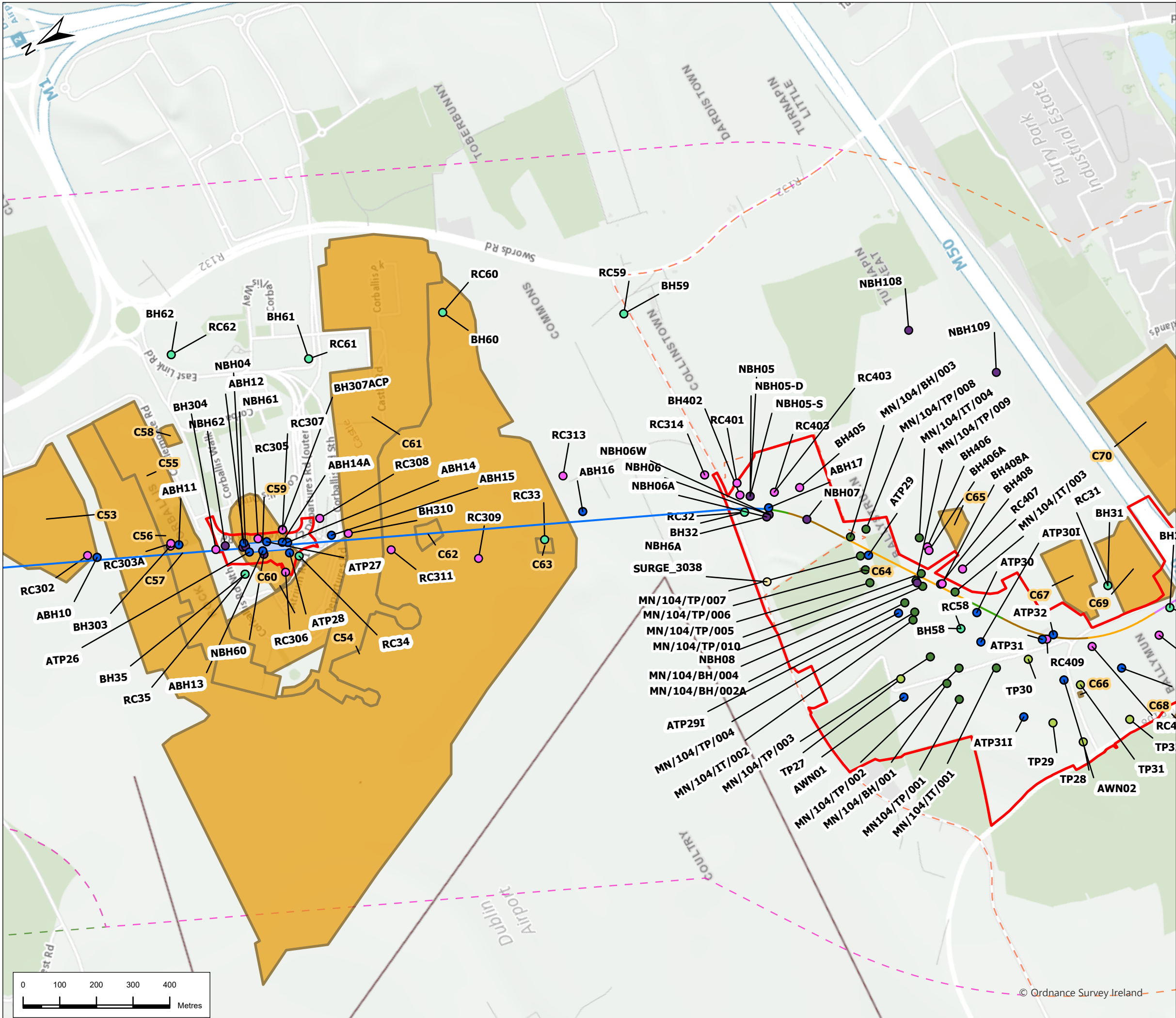


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### Legend

**Alignment**

- Cut & Cover
- Incline
- Retained Cut
- Surface
- Tunnel

**Station Locations**

- Station Locations

**Project Boundary**

- Project Boundary

**Geographic Split**

- AZ1 Northern Section
- AZ2 Airport Section
- AZ3 Dardistown to Northwood

**GI Locations**

- IGSL,2007
- IGSL,2008
- GSI,2009
- Soil Mechanics,2011
- Causeway Phase 1, 2019
- Causeway Phase 2, 2019
- Causeway Phase 5, 2021
- Potential land contamination sources within 250m of the Works
- Area and/or alignment

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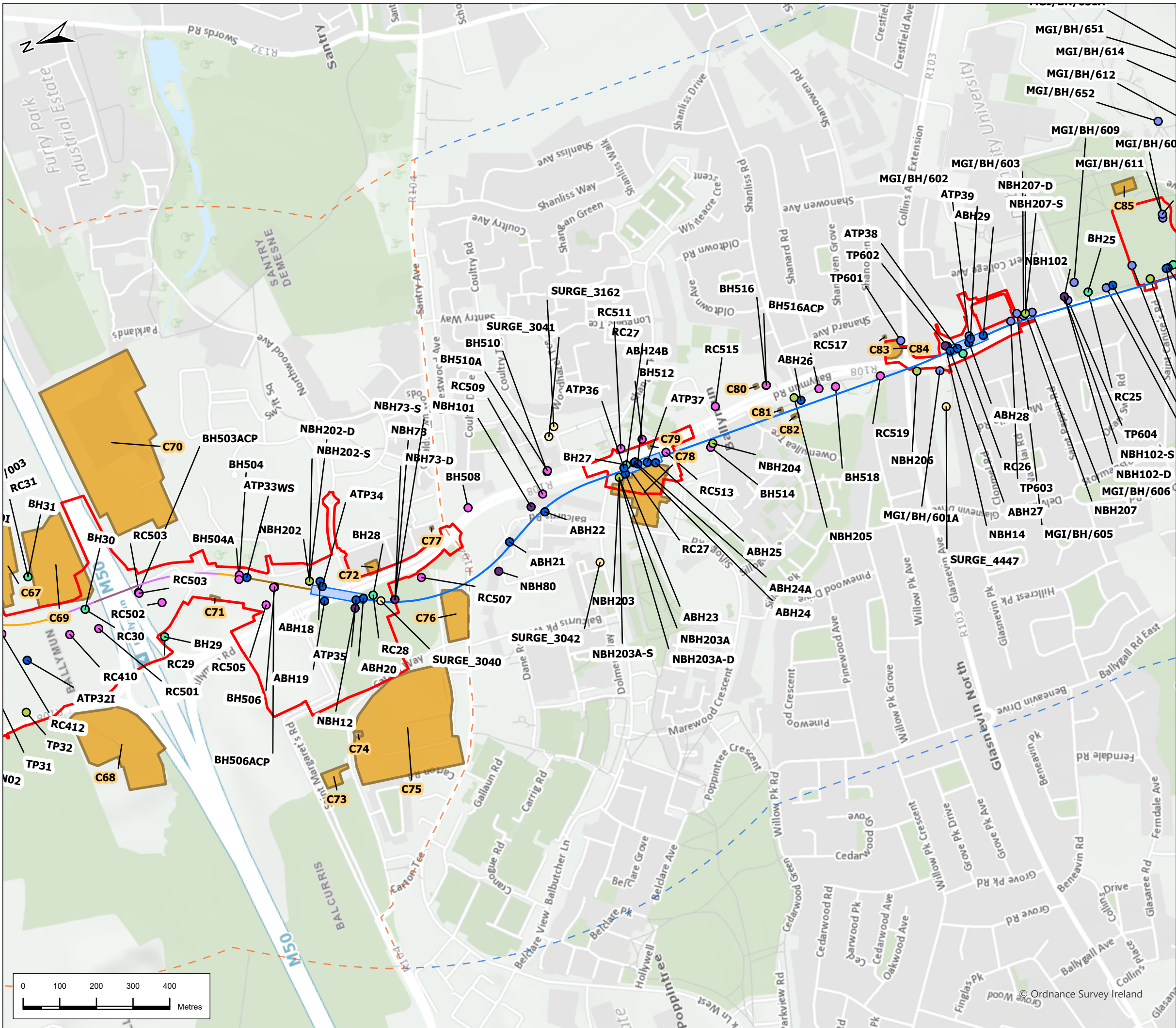
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## Legend

**Alignment**

- Cut & Cover
- Incline
- Retained Cut
- Tunnel
- Viaduct

**Station Locations**

- Station Locations

**Project Boundary**

- Project Boundary

**Geographic Split**

- AZ3 Dardistown to Northwood
- AZ4 Northwood to Charlemont

**GI Locations**

- IGSL,2007
- IGSL,2008
- Norwest Holst,2008
- GSI,2009
- Causeway Phase 1, 2019
- Causeway Phase 2, 2019
- Causeway Phase 5, 2021
- Potential land contamination sources within 250m of the Works Area and/or alignment

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Figure 20.6 Land Contamination  
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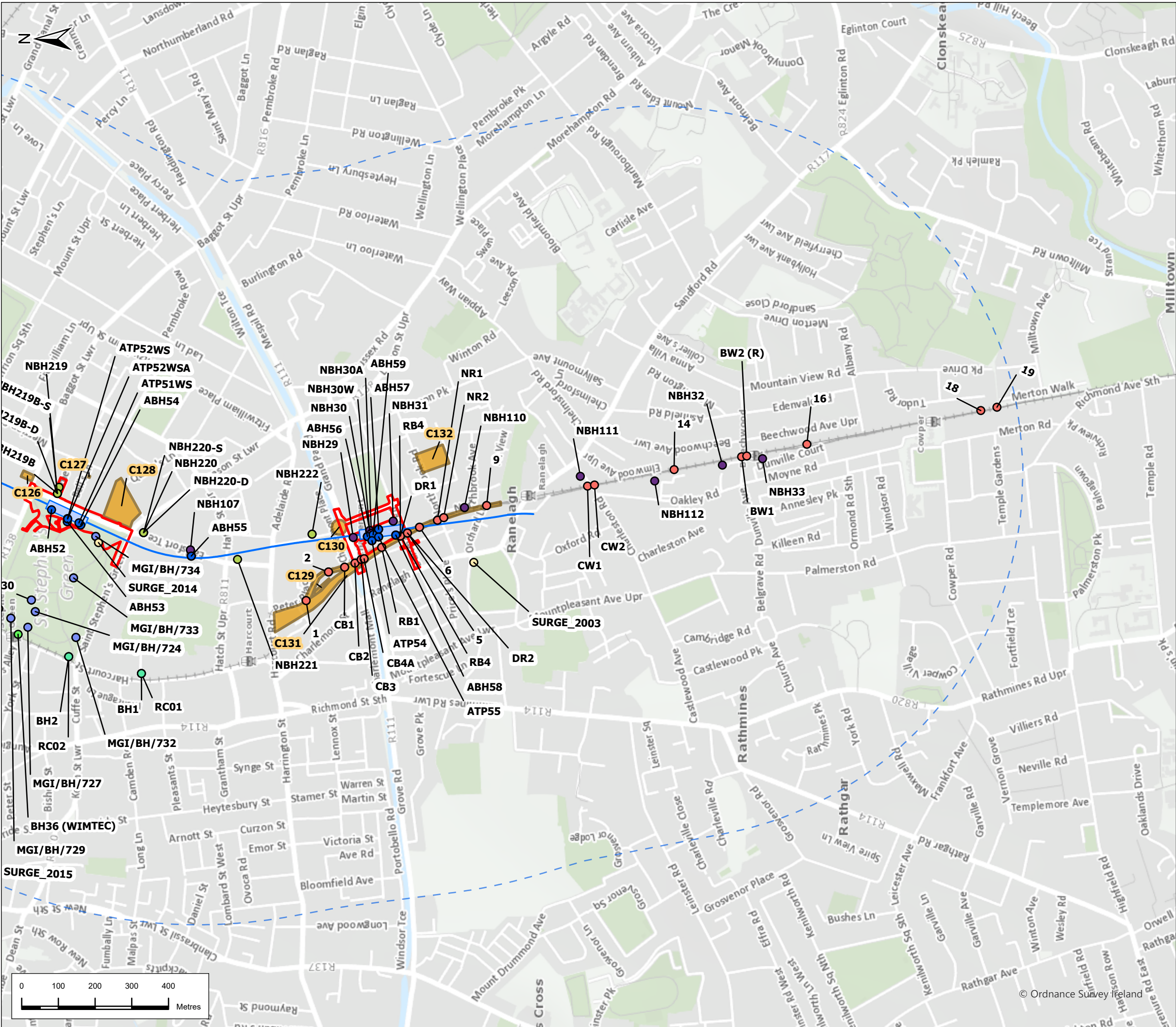












## Legend

### Alignment

- Tunnel
- Station Locations
- Project Boundary

### Geographic Split

- AZ4 Northwood to Charlemont

### GI Locations

- Wimtec,2000
- IGSL,1995
- IGSL,2007
- Norwest Holst,2008
- GSI,2009
- Causeway Phase 1, 2019
- Causeway Phase 2, 2019
- Causeway Phase 5, 2021
- Potential land contamination sources within 250m of the Works Area and/or alignment



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