

BEAM PARK STATION

PIPELINE RSK ASSESSMENT

October 2024



SUPPORTED BY

MAYOR OF LONDON

Beam Park – Railway Station Pipeline Risk Assessment Report



Project Details

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For and on behalf of Mendick Waring Ltd					

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2 Introduction

2.1 Scope

This technical note has been produced by Mendick Waring Ltd to outline the existing pipeline services on the phase 1 site and provide a statement of how risks associated with the pipelines will be dealt with during the surcharging and construction stages of works.

2.2 The site

The Beam Park masterplan is located in both the London Boroughs of Havering and Barking and Dagenham. The site is bordered to the north by A1306 New Road, to the east by industrial buildings and to the south by the Southend to London Fenchurch Street railway and to the west by Kent Avenue. The site was formerly owned by the Ford Motor Company and used as an assembly plant.

The railway station site is clear of structure and new services infrastructure has been provided as part of the Phase 1 construction works. It is noted that an existing High Pressure gas pipeline runs to the south of the station building, this has always been part of the master plan strategy and subject to discussions with the HSE. All building and construction restrictions associated with working in proximity to this pipeline are provided in section 4 of this report.

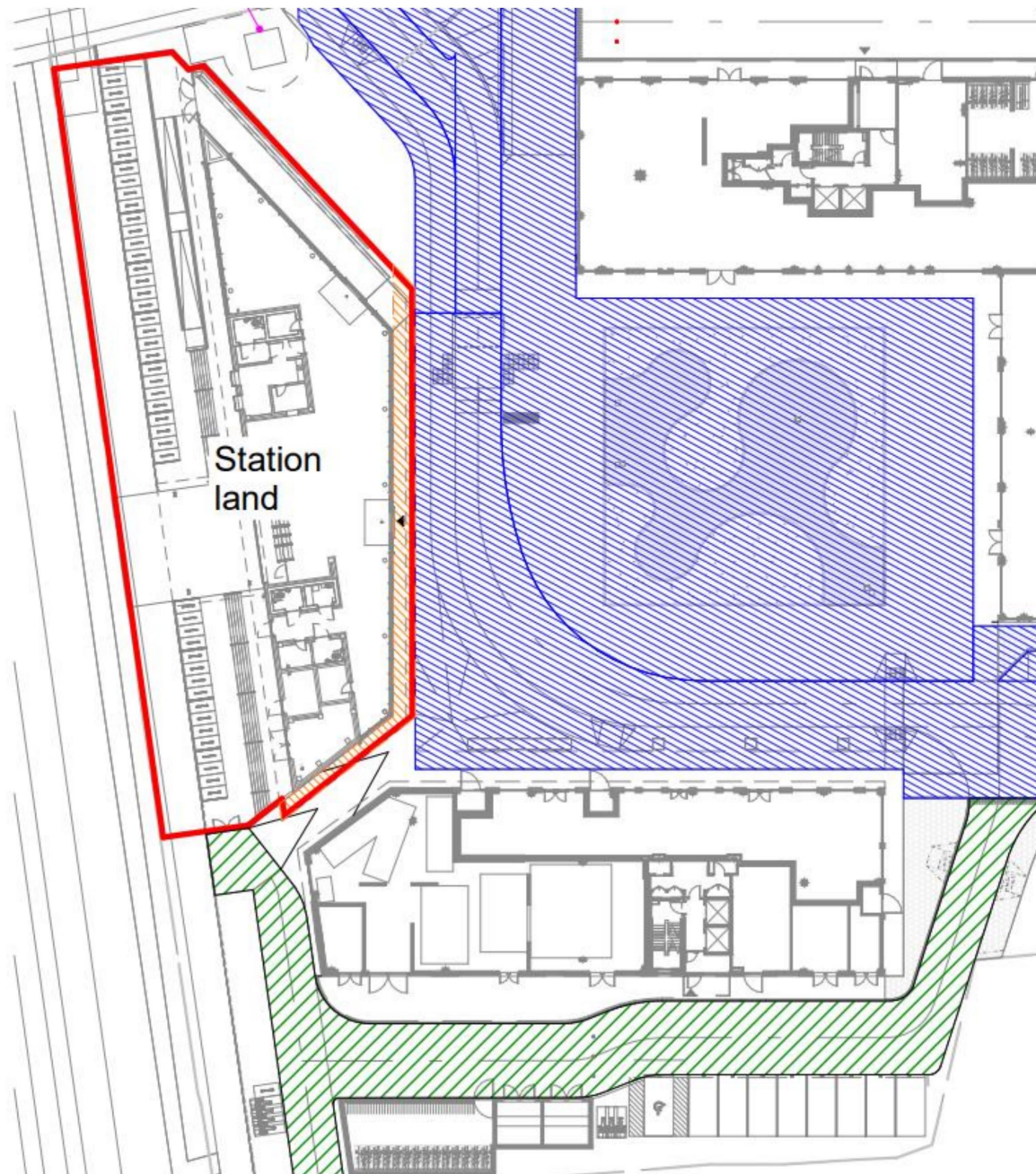


Figure 1: Site Location Plan – Phase 1 Railway Station

3 Existing Services

3.1 Introduction

Investigations to determine the extent of existing services have been carried out, this includes Statutory searches, review of pre-existing reports, on site liaison with utility companies, electronic tracing of services and slit trench investigations.

The following drawing extracts reflect the services installed as a result of these investigations and have allowed the scheme to be planned accordingly in terms of layout, costs and methodology.

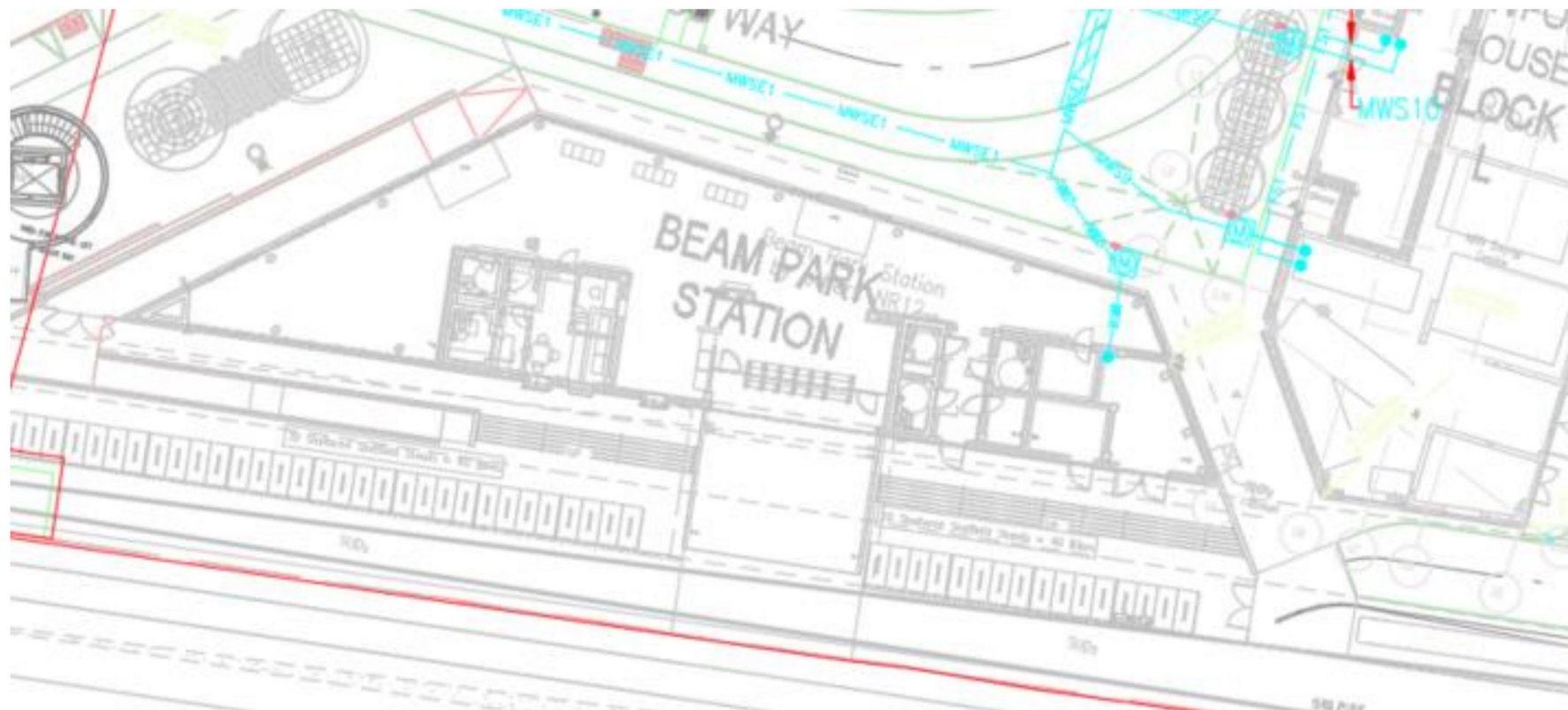


Figure 2: Water Services-Phase 1/Existing Services

3.1.1 Water Services

- As shown in figure 2 there is a mains water services which belong to Essex and Suffolk Water.
- According to the utility drawings received, there are no disconnections or diversions required and a mains connection has been provided for use by the Railway Station
- Based upon these records no additional measures, including diversions or protection of existing water services are required.

3.2 Gas Services Phase 1

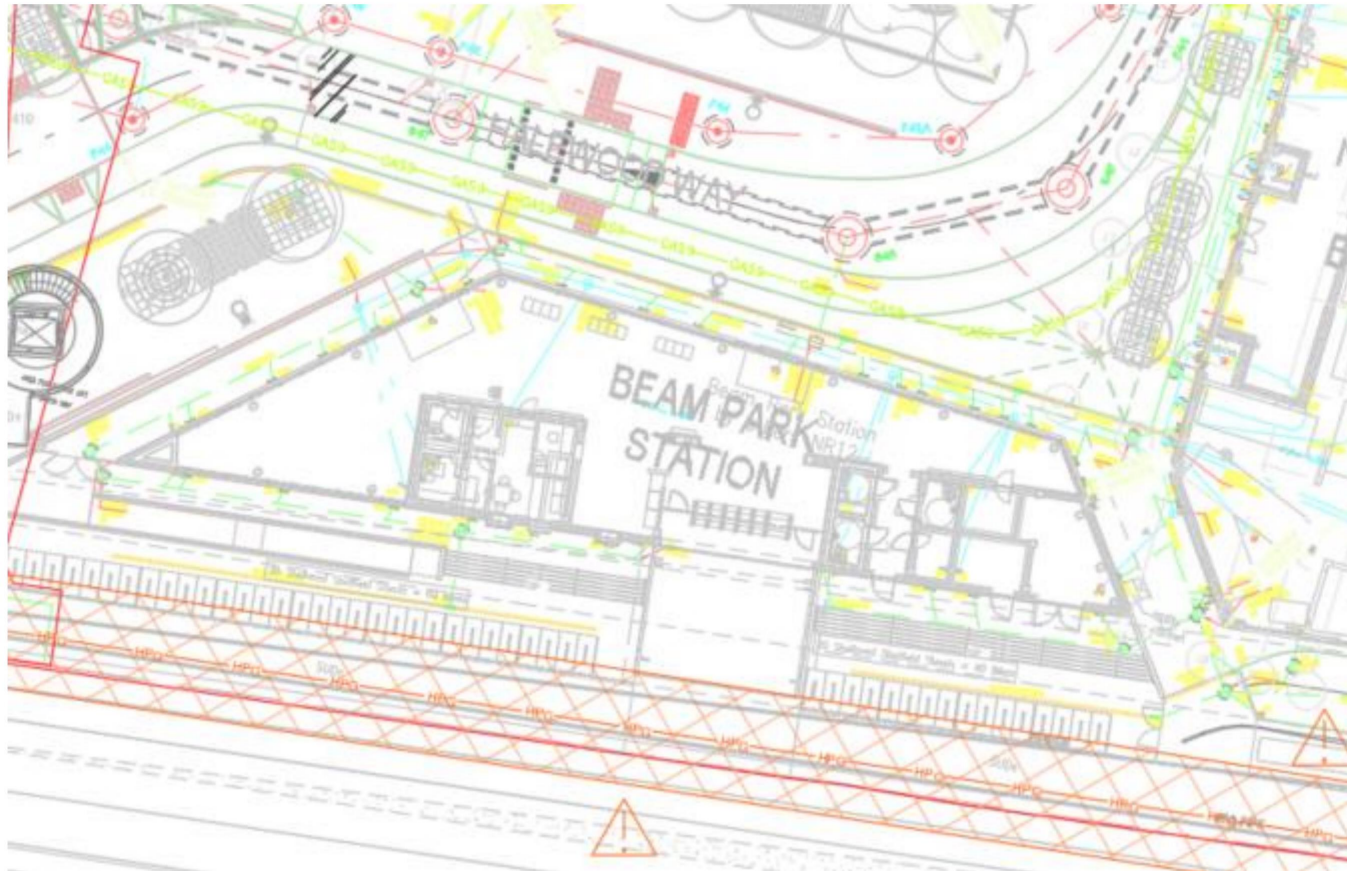


Figure 3: Gas Services- Railway Station

- As shown in figure 3 there are 2no. Gas Services which belong to National Grid.
- According to National Grid utility maps a High pressure gas pipelines (referenced as RBS - Romford to Baker St) cuts across east to west at the top of phase 1 and then north to south adjacent to Marshway, flyover before continuing east to west along the railway embankment.
- This high pressure pipeline has a 3meter inner PADHI zone associated with it, meaning no development can occur within the 3meter zone.
- A plot of all PADHI zones within the masterplan were provided to the applicant by the HSE, this includes the zone associated with the RBS pipeline running through the area of phase 1 railway.
- The masterplan and surcharging strategies have taken into consideration this pipeline and its associated restrictions, including PADHI zone, legal easement and BPD (building proximity distance). The scheme has been developed to leave the pipeline unaffected by the works.
- Further details as to liaison and actions regarding the pipeline can be found in the following sections of this report.

3.3 HSE / National Grid

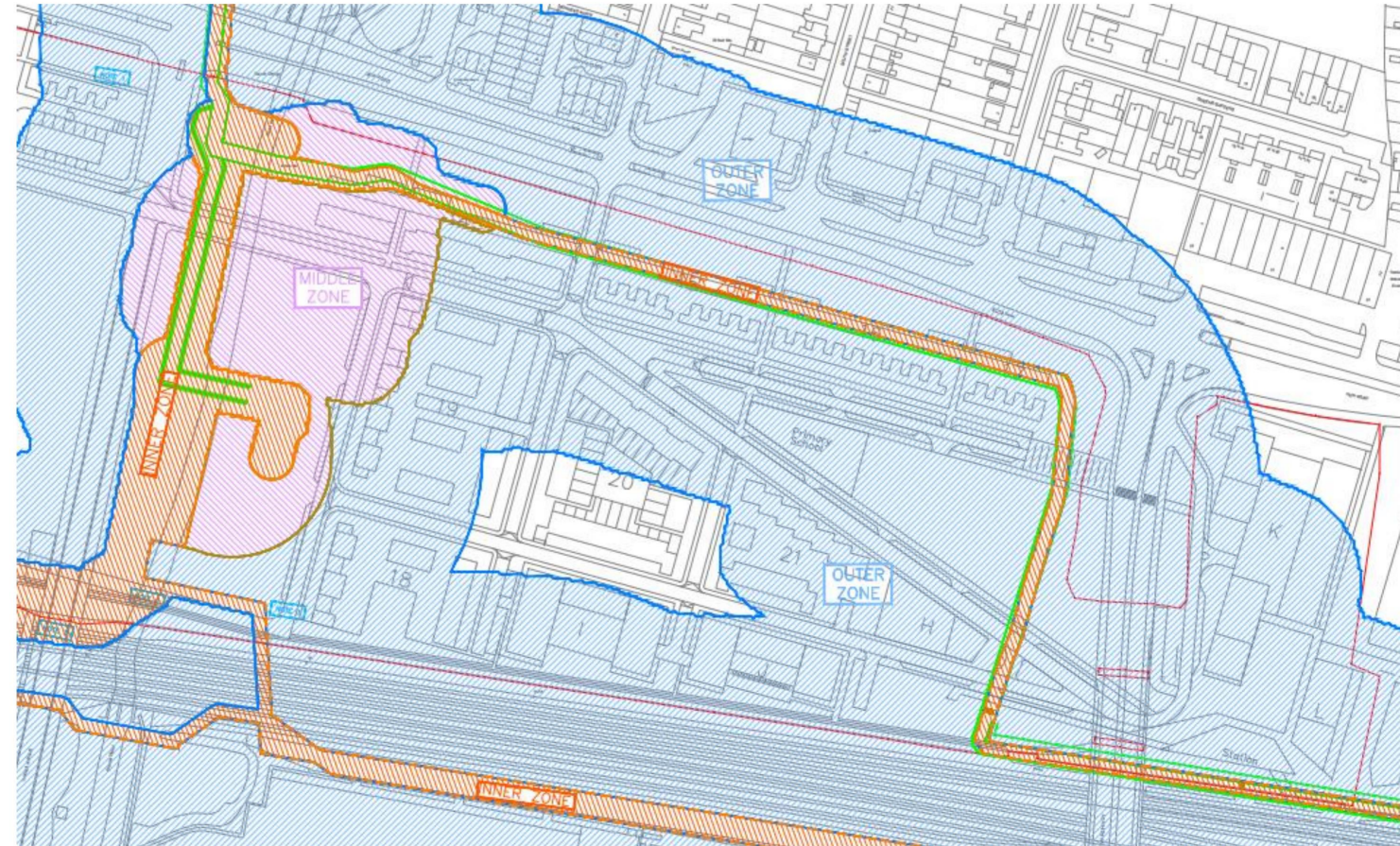


Figure 4: PADHI Zoning

- High pressure gas pipework and infrastructure is present on site; this is recorded on the utility maps received from National Grid and within reports as listed below;
- **AECOM – BEAM PARK & RAINHAM WEST PIPELINES CONSTRAINTS REPORT – November 2015**
- **AMEC ENTEC – MAJOR HAZARD PIPELINES REPORT – August 2010**
- The information within the above was used as the basis to carry out detailed analysis and liaison with HSE, National Grid and Ford UK. The following meetings took place, followed by subsequent site visits and email and phone correspondence
- **Meeting with National Grid - 29th February 2016**
- **Meeting with HSE / HSL – 22nd March 2016**
- **Meeting with National Grid – 28th April 2016**
- **Meeting with Ford UK – 21st July 2016**
- PADHI zones as shown on Figure 4 were issued to CPPLC by the HSE for inclusion on the site constraints plan and used to establish masterplan parameters, building locations and landscape.
- The intention of the masterplan was to avoid interference or alteration of the high-pressure gas pipelines, consideration was given to the proximity of the buildings, roadways and landscaped surfaces and features.
- Methodology for building within the assigned BPD (Building proximity Distances) has been discussed with National grid and incorporated into the construction methodology for the project. Prior to any works within the BPD areas detailed RAM's and method statements will be agreed with National Grid.
- The Master plan designs were sent to HSE on several occasions and their comments received incorporated. The latest correspondence confirms HSE are content with the scheme and would not Advice Against permission.

4 Conclusion/Actions

Countryside Properties have been involved in all discussions and liaison with National Grid and HSE in relation to the gas infrastructure and pipelines located on the Beam Park site, inclusive of the railway station

During the course of these liaisons, various options were discussed and assessed to establish the best course of action to deal with the pipelines and the hazard they represent. The conclusion Countryside and their team came to was to leave the pipelines in situ and develop the scheme around them in accordance with rules and guidance set by the HSE and National Grid.

Countryside Properties have developed a Construction Method Statement/Management Plan which takes into account the requirements and hazards of working within the vicinity of these pipelines. Below are actions and restrictions imposed by the CPPLC construction Method Statement / Management Plan (separate submission document).

- Prior to any works commencing on site, Countryside Properties will locate and set up identification markers to the National Grid pipelines for the extent of the proximity zones and set up crossing points where necessary. National Grid will be kept fully informed with inspection where required being carried out. Any works carried out within the proximity zones will be in line with national grid guidance SSW22 and under National Grid supervision.
- A formalised process for design and construction methodology will be put in place and will ensure agreement and sign off with National Grid and HSE is sought at key stages. As designs are developed they will be submitted to each party to seek comments and approval.
- Any works in or around the area of gas infrastructure will be treated as high risk at all times and the CPPLC design and project team will manage this risk closely. All site risk assessments will include details of the gas services and signage will be provided at key locations.
- CPPLC operates a Permit to Dig System of Work for all excavations. No excavation works are to commence until the site manager or engineer has issued the Permit to the machine operator or the operative. This system of work ensures that the appropriate checks have to be made in accordance with the latest regulations and the Health and Safety at Work Act
- **National Grid advice shall be sought if piling activities will take place in the vicinity of less than 15 metres of the pipelines. No piling shall be allowed within 15 metres of a pipeline without an assessment of the vibration levels at the pipeline. The peak particle velocity at the pipeline shall be limited to a maximum level of 75 mm/sec. Where the peak particle velocity is predicted to exceed 50 mm/sec, the ground vibration shall be monitored by the contractor and the results made available to the National Grid responsible person at their request. Method statements and piling method to be provided to National Grid to assess.**
- Site facilities will not be placed within the vicinity of the gas pipework, the site will be arranged to ensure congregation of site operatives is avoided.
- Smoking will only be permitted in designated areas and these areas will not be within the vicinity of any gas pipework.