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Project name:
Bromborough Constraints Study

Project ref:
60534984

From:
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Reviewed by:
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Date:
20th April 2018

Technical Note

Subject: Bromborough – Constraints Study Summary

Introduction

AECOM have been commissioned to undertake a preliminary assessment of the constraints posed by the existing utilities within and surrounding the Bromborough site.

The site is located in Bromborough, approximately 1km off the southwest bank of the River Mersey, accessed via Welton Road to the east and west, and Caldbeck Road to the south. It is a currently unused plot of land surrounded predominantly by industrial estates and retail parks.

Utilities

Below is a summary of our findings from the desk study of the existing constraints at the Bromborough site. See the attached appendix for the existing utilities plan drawing number 60524984-SHT-10-0000-D-01.

The southern half of the site is free from utilities, however a number of utilities enter the site within the northern half. There is also a live substation located within the site, close to the northern boundary. There are a number of both existing and planned assets that border the site, outside the site boundary.

Assets that currently exist in close proximity to; or within the site include a live substation, HV and LV electric cables (Scottish Power), LP gas mains (Cadent and GTC), telecoms equipment (British Telecoms and Virgin Media), mains water supply (United Utilities) and various sewers (United Utilities). British Telecoms also highlighted a planned asset to be installed in close proximity to the site.

Electricity

A live Scottish Power substation is located close to the northern boundary of the site. This appears to feed some of the units within Croft Trade Park on the eastern side of Welton Road via LV cables.

The HV and LV electricity cables which exist within the site are connected to the existing substation at the northern end of the site. Some of the cables from this substation are shown to be currently out of use, though it is unclear if these are still live. There are live cables (both HV and LV) which run north-east from the substation, exit the eastern site boundary and run in both directions along Welton Road.

The substation will need to be relocated or remain in situ and be incorporated into the masterplan. If the substation was relocated then the live cables will require protection and/or diversion prior to commencement of any construction or excavation work. Scottish Power may give permission for the out of use cables to be removed and disposed of, provided they have been safely disconnected.

Gas

No Gas mains are known to be located within the site boundary. Cadent Gas plans show a 180mm LP gas main that is located in the footpath opposite the site on Welton Road to the east. There is also a 400mm LP gas main that is located in the footpath opposite the site on Caldbeck Road. GTC plans show a 90mm LP gas main which is connected to the Cadent Gas 180mm LP main in Welton Road and supplies some of the units in Croft Trade Park at the other side of Welton Road to the east. It is unlikely that the proposed works within the site will affect any gas infrastructure as none are located in the footpaths adjacent to the site.

Communications

Both British Telecoms (BT) and Virgin Media plans show existing assets within the roads which surround the site. BT's existing apparatus is located in the footpath opposite site on Welton Road to the east of site, and in the footpath opposite site on Caldbeck Road to the south. However there is a planned installation of BT apparatus along Welton Road to the west of site which will be located within the footpath adjacent to the site boundary. BT also has an existing distribution point on the proposed site, just within the eastern boundary. Virgin Media assets are located within the footpaths adjacent to site within Welton Road to the east and west, and Caldbeck Road to the south. Depending on the nature of any works that occur on the site, it is likely that the BT distribution point that exists within the site boundary and the services located within the footpaths adjacent to the site boundary will require protection or diversion. It is possible that this distribution point could be utilised for the proposed development.

Potable Water

United Utilities (UU) plans show a communication pipe which extends just within the site boundary in the north east corner of the site. This is fed from a 160mm distribution main which is located in the footpath opposite site on Welton Road. There is a 12" Trunk Main located within the footpath opposite site on Caldbeck Road. The communication pipe that exists within the boundary is likely to be available to use for future water supply to the site, however during any works on the site, it is expected that UU will require protection measures to be implemented to prevent any potential damage.

Drainage

UU plans show an existing 1200mm diameter combined sewer running diagonally across the north-western corner of the site. A connection to the combined sewer is shown located within the site boundary. This connection is made by a 300mm diameter foul water sewer which runs through the site from Welton Road to the east, parallel to the northern boundary, turns 90 degrees south and is located within the footpath adjacent to site on Welton Road. Another 225mm foul water sewer is located in the footpath adjacent to site on Caldbeck Road.

A surface water sewer is located adjacent to the foul water sewer within the footpath adjacent to site on Welton Road and varies from 225mm to 450mm in diameter. Another surface water sewer is located within the footpath adjacent to site on Caldbeck Road.

The sewers located within the site will pose a constraint to the development, in particular the large combined sewer cutting the north-west corner. It is highly likely that the combined water and foul water sewers running within the site boundary would require a diversion prior to any works. It is possible that a strict easement could be observed as an alternative, if agreed with UU, prior to any works – this would heavily depend on the type of development proposed for the site.

Flood Risk

In terms of local watercourses, the nearest main watercourse to the site is Dibbinsdale Brook as seen in Figure 1 below, approximately 500m west of the site, which runs north and eventually discharges out into the River Mersey. The River Mersey itself is located approximately 1km to the east of the site. The location of the site relative to these watercourses means they do not impose any constraints on its development. The site also has an extremely low (less than 1 in 1000 annual probability) risk of flooding in the long term according to the Environment Agency, with the flood zone map indicating the area is in Flood Zone 1.

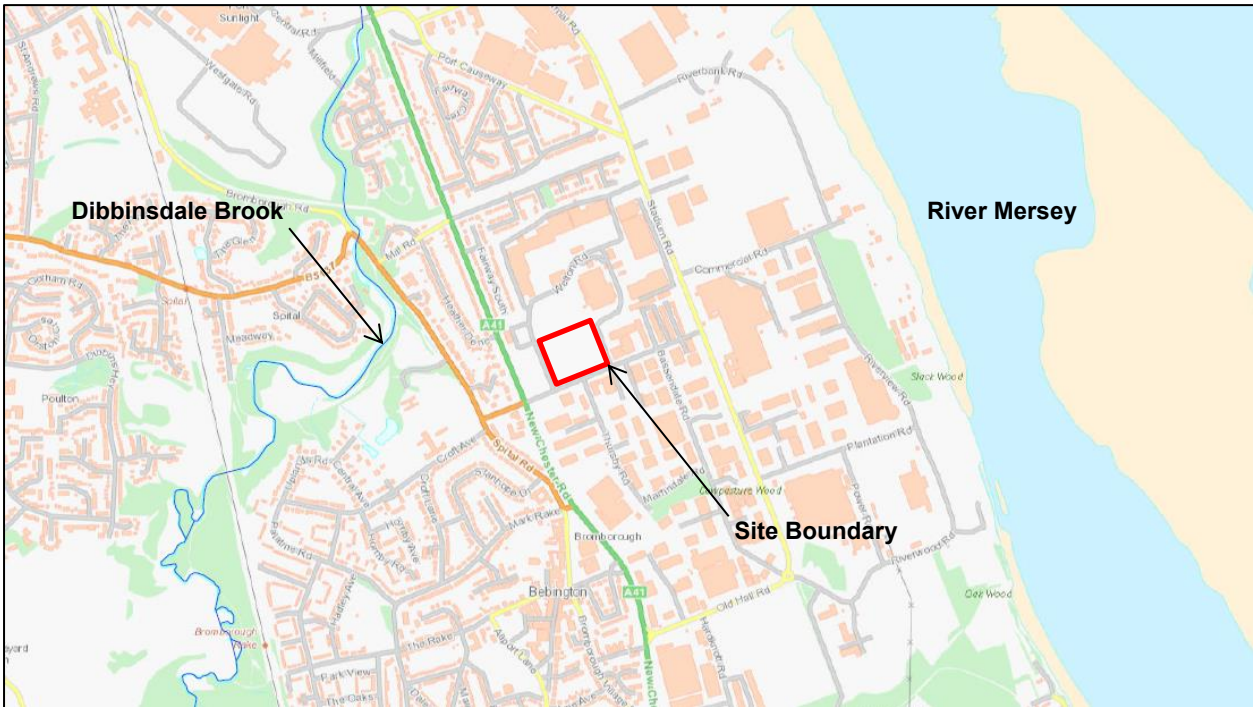


Figure 1 – EA Main Watercourses

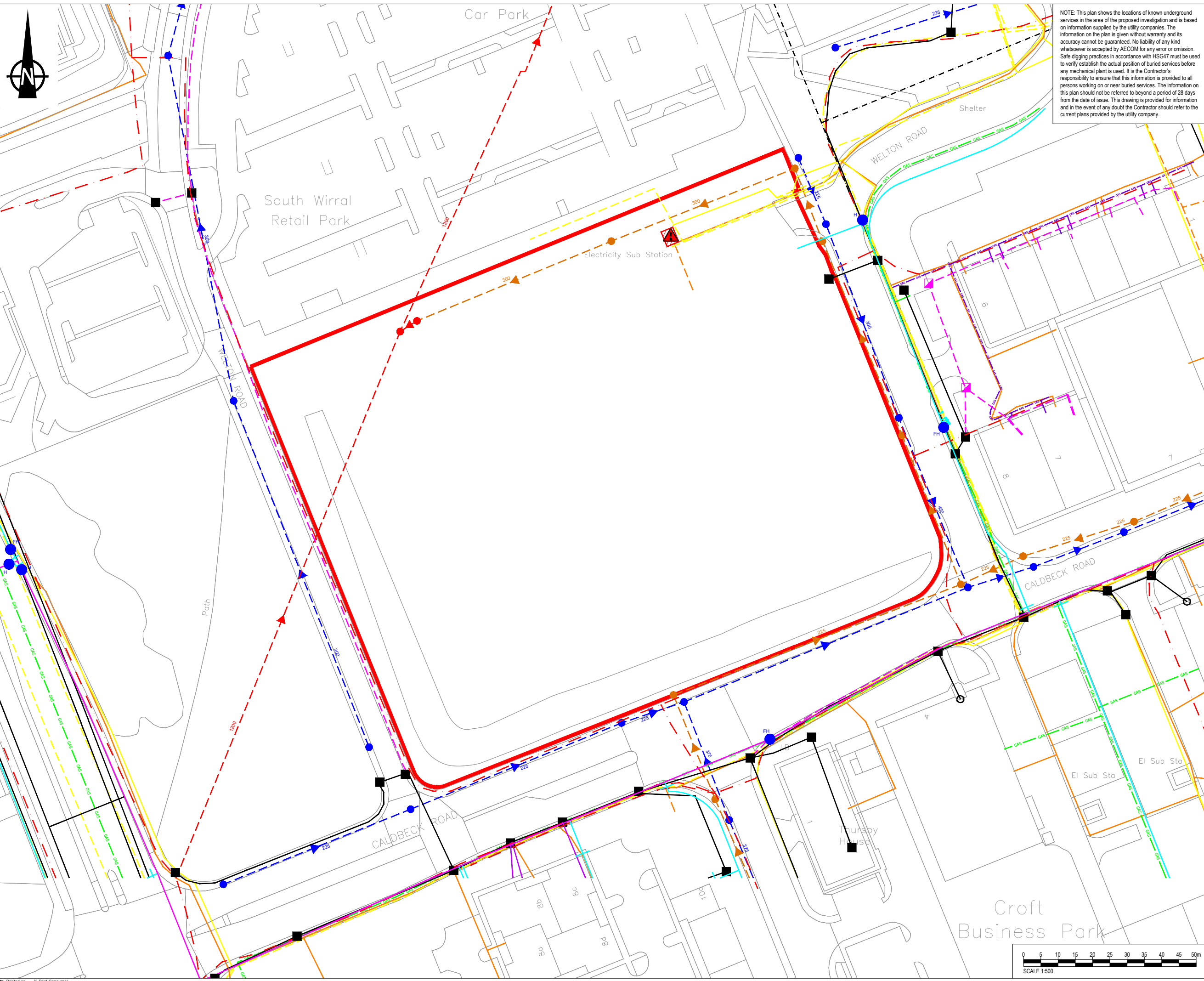
Summary

The existing assets likely to be of the most concern in terms of development constraints are the combined and foul water sewers, the live substation and HV and LV electric cables and the BT distribution point (and associated cabling), all of which are located within the northern half of the site. All of these are likely to require diversion before any construction or excavation works can be carried out on site. C3 diversion estimates should be requested from the various Utilities companies for further information and costs for diverting these services. It is expected that the potable water communication pipe, also within the northern half of the site, will require protection measures as opposed to diversion, with temporary removal of the pipe also a potential option.

The remaining services which exist within close proximity to the site boundary, including the United Utilities foul and surface water sewers and the Virgin Media cable routes, might potentially require protective measures and/or specific easements to be observed. The appropriate statutory undertakers should be contacted for these details if it is likely that any future construction on site may breach any standard easements that may be in place on these assets.

Finally, it is recommended that BT should be kept up-to-date on any development plans for the site, as the information they provided has shown a planned asset installation very close to the western site boundary. Therefore in order to avoid any development issues, it is expected that some collaboration will be required between BT and any future developers.

ISO A1 594mm x 841mm
 Approved: BMS
 Designer: TB
 Project Management Initials:
 Filename: X:\CURRENT JOB FOLDERS\60534984 BROMBOROUGH CONSTRAINTS STUDY\08-BIM_CAD\08.1-1\WIP DRAWINGS\08.1.3-CIVSTRUCT\60534984-SHT-10-0000-D-01 - EXISTING UTILITIES PLAN.DWG Last saved by: THOMAS,BELLAS Last Plotted: 2018-04-20



NOTE: This plan shows the locations of known underground services in the area of the proposed investigation and is based on information supplied by the utility companies. The information on the plan is given without warranty and its accuracy cannot be guaranteed. No liability of any kind whatsoever is accepted by AECOM for any error or omission. Safe digging practices in accordance with HSG47 must be used to verify establish the actual position of buried services before any mechanical plant is used. It is the Contractor's responsibility to ensure that this information is provided to all persons working on or near buried services. The information on this plan should not be referred to beyond a period of 28 days from the date of issue. This drawing is provided for information and in the event of any doubt the Contractor should refer to the current plans provided by the utility company.



PROJECT
 Bromborough
 Constraints Study

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LEGEND:

- SITE BOUNDARY
- BRITISH TELECOMS (BT)**
- EXISTING APPARATUS
- EXISTING JOINT BOX
- - - PLANNED APPARATUS
- PLANNED JOINT BOX

CADENT GAS

- LP MAIN

GTC GAS

- LP MAIN

SCOTTISH POWER

- HV CABLE
- - - OUT OF USE HV CABLE
- LV CABLE
- - - OUT OF USE LV CABLE
- SUBSTATION

UNITED UTILITIES - MAINS

- DISTRIBUTION MAIN
- TRUNK MAIN
- HYDRANT / FIRE HYDRANT
- - - OUT OF USE MAIN

UNITED UTILITIES - SEWERS

- - - COMBINED WATER SEWER
- - - FOUL WATER SEWER
- - - SURFACE WATER SEWER

VIRGIN MEDIA

- - - EXISTING APPARATUS

ISSUE/REVISION

NO	DATE	DESCRIPTION
P1	20.04.2018	FOR INFORMATION
J/R	DATE	DESCRIPTION

Proj Mgr: VB
 Date Created: 20.04.2018 Scale: 1:500

PROJECT NUMBER
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SHEET TITLE
 BROMBOROUGH CONSTRAINTS
 EXISTING UTILITIES PLAN

SHEET NUMBER
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