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WSP

Former Fole Dairy, Fole, Uttoxeter
Outline Utilities Assessment Report

Co-operative Group

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INTRODUCTION

WSP UK Ltd (WSP) has been commissioned by the Co-operative Group to provide a utilities assessment report to support a planning application for a development, off Uttoxeter Road, Fole, Staffordshire.

The proposed development comprises approximately 61 dwellings (2 to 4 bed), 1,000 square feet of new workshop and the conversion of the existing mill building to provide approximately 5,000 square feet of employment.

WSP has consulted utility operators known to be operating in the area to obtain record plans; identify existing apparatus and to obtain initial assessments of network capacity and potential diversion requirements.

ELECTRIC

Central Networks records indicate two existing sub-stations supplied by an overhead 11kv cable from west of the site, with associated cabling located within the site boundary.

There are two existing privately owned transformers on the site. It is understood that the one adjacent to Fole Chapel is decommissioned. The other transformer provides power to the existing private pumping station.

Central Networks has advised that there is capacity available from the Fole Dairy Sub-station (98148) to supply the proposed residential development of circa 60 dwellings, subject to works to install a local distribution transformer and low voltage network.

It is anticipated that the two existing private transformers would be de-commissioned whilst the pole-mounted sub-station supplying the Severn Trent Water pumping station (982763) would need to be retained or relocated, assuming foul sewer flows will continue to be pumped from the site.

GAS

National Grid has advised that the nearest suitable connection point to supply the site is located in the Village of Tean approximately 3.5km west of the site.

A budget cost estimate of £355,000 for off-site reinforcement works has been provided by Fulcrum. Further details are provided in the relevant section of this report.

WATER

Severn Trent Water (STW) records indicate a 90mm cast iron water main located in Uttoxeter Road.

STW has advised that that the existing main in Uttoxeter Road is capable of supplying the anticipated demand for the proposed development of circa 60 dwellings.

SEWERS

The Severn Trent Water records indicate a 150mm diameter foul sewer running from east to west along the northern boundary of the site, then south along the western boundary to a pumping station located in the south west corner of the site.

Foul flows are pumped via a 300mm rising main from the pumping station to the Checkley Sewerage Treatment Works to the west.

A minimum clearance of 15m is normally required from a pumping station to any habitable building.

Severn Trent Water has advised that the existing foul sewer network will have sufficient capacity to accept foul flows from the proposed development via a suitable connection close to the existing pumping station. It advises that surface water flows should be discharged to the local watercourse subject to Environment Agency approval.

TELECOMMUNICATIONS

British Telecom records indicate that BT plant is present in the vicinity of the site and shows two BT connections into the former dairy buildings.

Telecommunications connections to new developments are often provided free of charge where ducting, trenching and backfilling are undertaken by the developer. BT Openreach normally allow up to £3,400 per residential plot towards standard ADSL network reinforcement. Costs over and above this may need to be met by the developer.

1 Introduction

1.1 APPOINTMENT

1.1.1 WSP UK Ltd (WSP) has been commissioned by the Co-operative Group to provide a utilities assessment report to support a planning application for a development off Uttoxeter Road, Fole, Staffordshire.

1.2 PROJECT BACKGROUND

1.2.1 The site is currently occupied by the former Fole Dairy, comprising vacant buildings and associated hardstanding. A site location plan is provided in Appendix A.

1.2.2 The proposed development comprises approximately 61 dwellings (2 to 4 bed), 1,000 square feet of new workshop and the conversion of the existing mill building to provide approximately 5,000 square feet of employment.

1.2.3 A copy of the indicative development master plan and schedule is provided in Appendix B.

1.3 METHODOLGY

1.3.1 WSP has consulted utility operators known to be operating in the area to obtain record plans and identify existing apparatus and associated constraints.

1.3.2 Where apparatus is potentially affected utility operators have been asked to provide an initial assessment of potential diversion requirements.

1.3.3 An indicative load analysis has been prepared and utility operators consulted regarding the capacity of the existing networks and the ability to supply the proposed development.

2 Existing Conditions

2.1 EXISTING SITE

2.1.1 The site is currently occupied by the former Fole Dairy, comprising vacant buildings and associated hardstanding.

2.1.2 The site is bounded to the north by Uttoxeter Road (A522) and to the east and west by farmland. The River Tean bounds the site to the south. The site is accessed at one point off Uttoxeter Road and a number of points of the unclassified lane.

2.1.3 Utility companies operating in the area have been consulted to obtain records of their existing plant and apparatus. The table below lists the companies consulted and the responses received to date.

2.1.4 Copies of the utility operators' record plans received to date are included in Appendix C.

Table 2.1: Existing Utilities – Responses received to date

Utility Company	Plant / Apparatus	Location
Western Power Distribution - Central Networks	Electric cable and 2no. sub stations.	Sub-station and associated cables located within the site boundary. Cables are also located in Uttoxeter Road bounding the site.
Severn Trent Water - Water	90mm cast iron main	Located in Uttoxeter Road
Severn Trent Water - Sewers	Foul sewer and pumping station	Along northern and western boundary of the site
BT	Ducts, chambers and overhead line	Within site boundary and highway bounding the site
National Grid Gas	Response states no apparatus in the area	Nearest main is located in Checkley to the west.
Energetics	Response states no apparatus in the area	NA
Gas Transportation Co.	Response states no apparatus in the area	NA
ES Pipelines Ltd	Response states no apparatus in the area	NA
Linesearch.org	Response states no apparatus in the area	NA
Colt	Response states no apparatus in the area	NA
TATA	Response states no apparatus in the area	NA
KPN	Response states no	NA

	apparatus in the area	
Instalcom	Response states no apparatus in the area	NA
Fibrespan Network	Response states no apparatus in the area	NA
Interoute	Response states no apparatus in the area	NA
KCOM Group	Response states no apparatus in the area	NA
BSKYB	Response states no apparatus in the area	NA
Virgin Media	Response states no apparatus in the area	NA
Gamma Telecom	Response states no apparatus in the area	NA
Verizon Business	Response states no apparatus in the area	NA
Ofcom	Response states no apparatus in the area	NA
SSE Pipelines	Response states no apparatus in the area	NA
Futisu	Response states no apparatus in the area	NA
Trafficmaster	Response states no apparatus in the area	NA
Spectrum	Response states no apparatus in the area	NA
Envoy	Response states no apparatus in the area	NA
Cable & Wireless	Response states no apparatus in the area	NA
Vitesse Dark Fibre Network	Response states no apparatus in the area	NA

3 Estimated Utility Loads

3.1 INDICATIVE UTILITY LOAD ASSESSMENT

3.1.1 An indicative utility loads assessment has been prepared based upon the outline development schedule and is presented in Appendix D.

3.1.2 The load assessment is based upon the information available from the development schedule and typical loading requirements for the types of development proposed.

3.1.3 The assessed loads are indicative only to provide an indication of the order of magnitude of loadings which may be required, and may be subject to change as the scheme is developed.

3.1.4 The electric, gas, water and sewer operators have been consulted regarding the capacity of their existing networks and the ability to supply the proposed development.

3.1.5 Copies of the responses received to date are included in Appendix E.

4 Constraints and New Supplies

4.1 ELECTRIC

4.1.1 Central Networks records indicate two existing sub-stations supplied by an overhead 11kv cable from west of the site, with associated cabling located within the site boundary.

4.1.2 Fole Dairy sub-station (98148) located to the south west of the site provides power to the existing dairy site including the private drainage pumping station.

4.1.3 The second sub-station (982763) is a pole mounted transformer which provides power for a Severn Trent Water pumping station located in the south west corner of the site.

4.1.4 There are two existing privately owned transformers on the site. It is understood that the one adjacent to Fole Chapel is decommissioned. The other transformer provides power to the existing private pumping station.

4.1.5 Central Networks has advised that there is capacity available from the Fole Dairy Sub-station (98148) to supply the proposed residential development of circa 60 dwellings, subject to works to install a local distribution transformer and low voltage network. A copy of Central Networks' response is provided in Appendix E.

4.1.6 It is anticipated that the two existing private transformers would be de-commissioned whilst the pole-mounted sub-station supplying the Severn Trent Water pumping station (982763) would need to be retained or relocated, assuming foul sewer flows will continue to be pumped from the site.

4.2 GAS

4.2.1 National Grid records indicate that there are no gas mains serving the site or Fole village.

4.2.2 National Grid has advised that the nearest suitable connection point to supply the site is located in the Village of Tean approximately 3.5km west of the site.

4.2.3 A budget cost estimate for the on-site and off-site works has been obtained from Fulcrum. The total budget cost based upon the connection point advised by National Grid is £398,900. Approximately £355,000 of this amount is for the off-site connection works.

4.3 WATER

4.3.1 Severn Trent Water (STW) records indicate a 90mm cast iron water main located in Uttoxeter Road.

4.3.2 STW has advised that that the existing main in Uttoxeter Road is capable of supplying the anticipated demand for the proposed development of circa 60 dwellings.

4.3.3 STW have provided a budget cost estimate of £130,500 exc VAT for the on-site and off-site works. The estimated budget contribution from the developer is £35,000 exc VAT. A copy of STW response and budget cost estimate is provided in Appendix E.

4.4 SEWERS

4.4.1 The Severn Trent Water (STW) records indicate a 150mm diameter foul sewer running from east to west along the northern boundary of the site, then south along the western boundary to a pumping station located in the south west corner of the site. An easement of 5m (2.5m either side of the centreline) typically applies to a sewer of this diameter.

4.4.2 The records indicate that the 150mm sewer serves properties within Fole village, north of Uttoxeter Road, as well as properties to the east.

4.4.3 Foul flows are pumped via a 300mm rising main from the pumping station to the Checkley Sewerage Treatment Works to the west.

4.4.4 STW has advised that the existing foul sewer network will have sufficient capacity to accept foul flows from the proposed development via a suitable connection close to the existing pumping station. It advises that surface water flows should be discharged to the local watercourse subject to Environment Agency approval. The surface water drainage strategy for the development is based upon establishing a separate surface water system which will treat and attenuate flows in accordance with SUDS principles before discharging to the river Tean.

4.4.5 Site records indicate that the site is currently drained by a combined system to the public sewer. Where the existing system is to be retained as part of the surface water drainage system care should be taken to ensure any residual organic content is not discharged to the watercourse. Refer to the Flood Risk Assessment and Drainage Strategy document for further details of the surface water drainage proposals.

4.4.6 Due to the existing site levels it is anticipated that the proposed foul flows may need to be pumped from the lower portion of the site to the existing pumping station. Details of the proposed foul drainage arrangements are provided in the Flood Risk Assessment and Drainage Strategy document.

4.4.7 Sewers for Adoption states a minimum clearance of 15m is normally required from a pumping station to any habitable building. This would not appear to impose insurmountable constraint on the proposed development. However if deemed necessary, relocation of the existing pumping station may be possible subject to agreement with Severn Trent Water.

4.4.8 A copy of STW response is provided in Appendix E.

4.5 TELECOMMUNICATIONS

4.5.1 British Telecom records indicate that BT plant is present in the vicinity of the site and shows two BT connections into the former dairy buildings.

4.5.2 New BT connections will be required for all residential and commercial units. Telecommunications connections to new developments are often provided free of charge where ducting, trenching and backfilling are undertaken by the developer. BT Openreach normally allow up to £3,400 per residential plot towards standard ADSL network reinforcement. Costs over and above this may need to be met by the developer.

4.6 OTHER PRIVATE PLANT AND EQUIPMENT

4.6.1 A large aboveground filter treatment tank is located in the south west corner of the site adjacent to the STW pumping station.

4.6.2 The tank is understood to treat surface water runoff from the dairy site before discharging to the STW pumping station. The surface water drainage strategy for the development is intended to remove the requirement for the filter tank. It will therefore be disconnected and removed prior to development of the site.

5 Summary and Recommendations

5.1 CONSTRAINTS

5.1.1 The following utility constraints and have been identified.

Table 5.1 – Utility Constraints	
Utility	**Description**
Electric – Central Networks	Existing Fole Dairy sub-station (98148) located within the site boundary - It is anticipated this sub-station will be retained and amended to serve the proposed development. Existing pole mounted transformer (982763) serving STW pumping station - Power supply to the pumping station will need to be retained unless agreement is reached with STW to relocate the pumping station. Two existing private transformers and private HV cabling - to be decommissioned and removed.
Gas – National Grid	Records indicate no plant in the vicinity
Water – Severn Trent Water	Records indicate a 90mm main located in Uttoxeter Road
Sewers – Severn Trent Water	Public sewer and pumping station located within the site boundary – A 5m easement (2.5m either side of the centreline) typically applies to sewers up to 300mmm diameter. Sewers for Adoption requires a minimum clearance of 15m from habitable buildings. Surface water flows may not be connected to the sewer - separate surface water system which will treat and attenuate flows in accordance with SUDS principles before discharging to the river Tean
Telecoms - BT	BT ducts, champers and overhead cables are present on site – it is anticipated these can be decommissioned and removed
Filter Tank	It is anticipated that the existing filter tank will no longer be required and may be disconnected and removed.

5.2 NEW SUPPLIES AND REINFORCEMENT

5.2.1 The information received regarding the capacity of existing utility networks and the ability to supply the proposed development is as follows.

Table 5.2 – Reinforcement Works	
Utility	**Description**
Electric – Central Networks	Central Networks has indicated that the existing Fole Dairy sub-station (98148) should have sufficient capacity to supply the development although works will be required to install a local distribution transformer and associated low voltage network.

Gas – National Grid	National Grid has advised that the nearest suitable connection point is a medium pressure main located in Tean 3.5km west of the site. A budget cost estimate of £355,000 for off-site reinforcement works has been provided by Fulcrum.
Water – Severn Trent Water	STW has advised that that the existing main in Uttoxeter Road is capable of supplying the anticipated demand for 60 units. STW have provided a budget cost estimate of £130,500 exc VAT for the on-site and off-site works. The estimated budget contribution from the developer is £35,000 exc VAT.
Sewers – United Utilities	Severn Trent Water has advised that foul flows may be connected into the sewer close to the pumping station within the site. A separate surface water drainage system will be required to treat, attenuate and discharge runoff to the river Tean.
Telecommunications	Telecommunications connections to new developments are often provided free of charge where ducting, trenching and backfilling are undertaken by the developer. BT Openreach normally allow up to £3,400 per residential plot towards standard ADSL network reinforcement. Costs over and above this may need to be met by the developer.

5.3 RECOMMENDATIONS

5.3.1 The minimum clearances, easements and other utility constraints identified in this report should be used to inform the development of the site master plan layout.

5.3.2 This should include allowance for the sewer easement and 15m clearance from the existing pumping station to the nearest habitable building.

5.3.3 The findings of this assessment are based upon the record plans obtained from the various utility companies. A utilities survey using ground penetrating radar (GPR) techniques and trial holes should be undertaken at an early stage to confirm the location and depth of the utilities known to be present and to identify the presence of any services not identified by the record searches such as uncharted services and private connections.

5.3.4 This should include a survey to confirm the line and level of the 150mm sewer located within the site boundary. In the event of a clash with the proposed dwellings or highway access, minor amendment to the layout or diversion of the 150mm sewer may be required.

5.3.5 Formal applications should be made to the relevant utility service providers at the appropriate time to obtain confirmation of the scope and cost of works required to supply the development. This will require submission of detailed supply and phasing requirements.

5.3.6 Further discussions should be held at an early stage with any utilities companies whose apparatus it is intended to relocate or divert.

Appendices, Figures & Tables