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PROJECT MANAGEMENT – ADVISORY - UTILITIES

Richborough Estates Limited, Michael Ensor Caton
and Andrew Norman Caton
Land off Orton Road-Phase 2
Warton, Warwickshire
Utilities Assessment Report

NORTH WARWICKSHIRE
BOROUGH COUNCIL

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Warton, Warwickshire
Utilities Assessment Report

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EXECUTIVE SUMMARY

This Utilities Assessment Report has been prepared by BWB Consulting Limited (BWB) on behalf of Richborough Estates Ltd Michael Ensor Caton and Andrew Norman Caton, for their proposed development on Land off Orton Rd, Warton, Warwickshire.

Its purpose is to describe the indicative locations of existing utilities apparatus on and within proximity of the Site. The report will provide an account of the viability of servicing the proposed development with suitable mains services infrastructure. The assessment also considers whether any services diversions are likely to be required because of the development proposals.

EXECUTIVE SUMMARY	
Electricity National Grid Electricity Distribution	<u>Existing</u> High Voltage and Low Voltage cables are shown to the north and east of the site. <u>Potential Diversions</u> No onsite diversionary work is required. Safe working around the existing cables, as they will remain in-situ. <u>Potential Supply</u> Supplies can be made from existing HV cable without reinforcement works. New onsite 11kV substation will be required.
Gas Cadent Gas	<u>Existing</u> No gas mains within site boundary. <u>Potential Diversions</u> No onsite diversionary works are required.
Clean Water Severn Trent Water	<u>Existing</u> No water mains within site boundary. <u>Potential Diversions</u> No onsite diversionary works are required. <u>Potential Supply</u>

	Supplies can be made from 4" water main in Church Road and no reinforcement works are required.
Sewerage Severn Trent Water	<u>Existing</u> No sewers within site boundary. <u>Potential Diversions</u> No onsite diversionary works are required.
Telecommunications Openreach	<u>Existing</u> No infrastructure within site. Cables present within Orton Rd and Church Rd. <u>Potential Diversions</u> No onsite diversionary works will be required. <u>Potential Supply</u> A new supply application can be submitted once at detailed design / planning consent received.
This summary should be read in conjunction with BWB's full report and reflects an assessment of the site based on information received by BWB at the time of production. A PAS128 Level B survey recommended to be undertaken to identify the accuracy of the infrastructure location and the depth of these services below ground.	

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1. INTRODUCTION

Instruction

- 1.1 BWB Consulting (BWB) was instructed by Richborough Estates Limited, Michael Ensor Caton and Andrew Norman Caton (the 'Client') to carry out a Utilities Assessment Report (UAR) to evaluate the potential impacts to the existing utility infrastructure in relation to their proposed development on land off Orton Road, Warton in Warwickshire. A *Site Location Plan* is included in **Appendix 1**.
- 1.2 The proposed residential development is for 97 dwellings with associated infrastructure.
- 1.3 The proposed vehicular site access onto site will be via the adjacent existing Bellway 'Cornfields' development (currently under construction) to the east of the site. The main access onto the Bellway development is further east of the site off Barn End Road. There are also proposed pedestrian accesses shown to the north of the site off Church Road and to the south off Orton Road.
- 1.4 A *Proposed Illustrative Masterplan* produced by Baily Garner for the proposed development is included in **Appendix 2**.
- 1.5 For the purpose of this assessment, BWB have identified any existing infrastructure that may constrain the development within and around the Site boundary, and a narrative is provided to identify a strategy for the delivery of future supplies to the Site. The assessment also considers whether any potential utility service diversion/disconnections are required to accommodate the development proposals.

Objectives

- 1.6 The objectives of the report are: -
 - To describe the location of existing services on and immediately adjacent to the site.
 - To determine whether there is likely to be any difficulty in providing strategic utility services to serve the proposed development.
 - To consider the impact of the development itself on the existing services infrastructure and the likelihood of any necessary diversions and or protective measures.

Scope of Works

- 1.7 The report will outline and assess the utilities issues in relation to the proposed development site and will identify the requirements for new utility infrastructure, potential upgrade/reinforcement works, and/or the need for further investigation/modelling.

1.8 The scope of the works include:

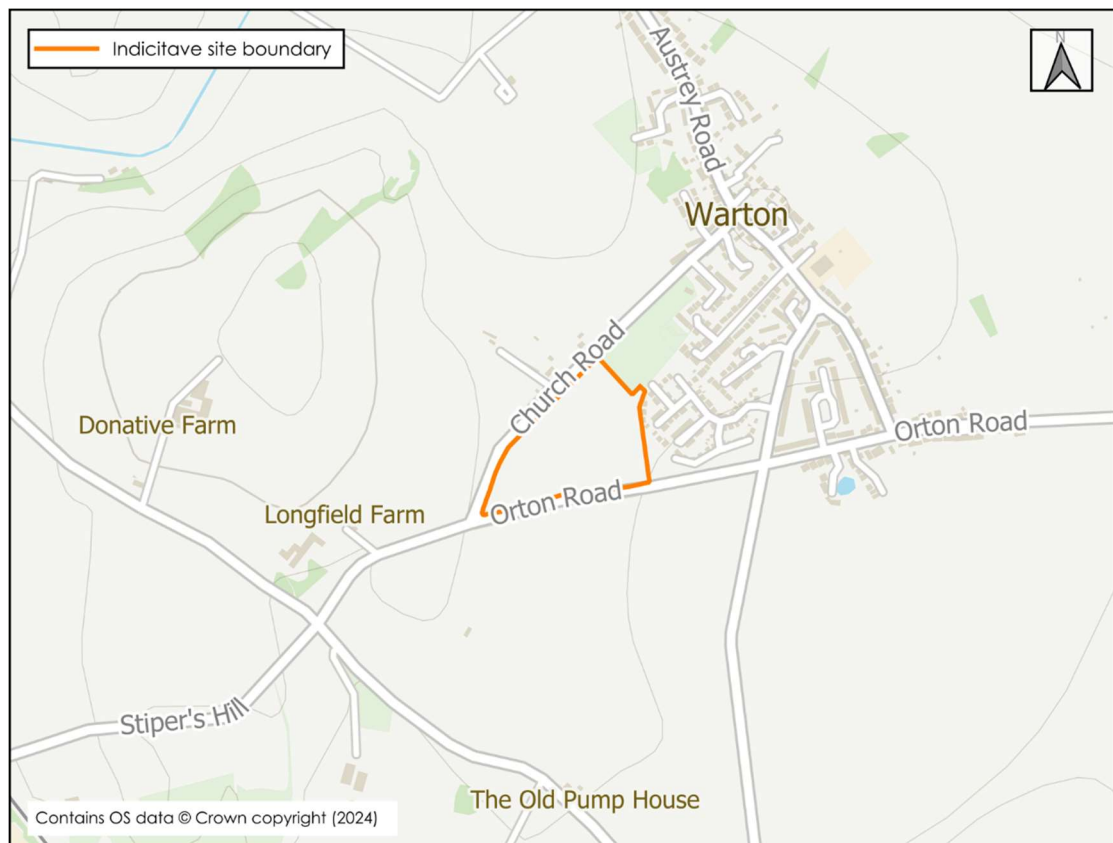
- Asset Records – review existing asset records showing the extents of existing statutory services present within the vicinity of the site and plot on topographical survey/OS background mapping to provide a Composite Services Plan (CSP),
- Diversion of existing services – undertake a review of the CSP against the proposed site layout to identify which utility assets may be required to be diverted or accounted for within the development layout proposal,
- New connections – Identify potential points of connection for the provision of new supplies.

2. THE SITE

Site Location

- 2.1 The site is located on the western edge of Warton village in North Warwickshire approximately 7km east of Tamworth. The site's location is illustrated in **Figure 2.1** and in **Appendix 1**.

Figure 2.1: Site Location Plan



Site Description

- 2.2 The site is bound to the north and west by Church Road and Orton Road to the south, beyond which are agricultural fields. The east of the site is bound by a Recreation Ground/Play Area and a new residential development (Bellway 'Cornfields'), which is currently under construction.
- 2.3 The site is shown to generally fall in an easterly direction with levels ranging between approximately 79m Above Ordnance Datum (AOD) in the east to approximately 89m AOD in the west.
- 2.4 The site is greenfield in nature, comprising agricultural land. There is a small pond located in the east of the site, between the open field and the Bellway development which can be seen on the *Site Location Plan* in **Appendix 1**.

3. UTILITY PROVIDERS

- 3.1 BWB has, for the purpose of this report, made initial utility search enquiries to the statutory undertakers to ascertain existing utilities infrastructure within and adjacent to the proposed development site.
- 3.2 The statutory undertakers who have assets within the Site or within proximity of the proposed development site are listed in **Table 3.1** below:

Table 3.1: Utility Undertakers

UTILITY	PROVIDER	EXISTING INFRASTRUCTURE
Electricity	National Grid Electricity Distribution	Close to site
Gas	Cadent Gas	Close to site
Electricity & Gas (Embedded Network)	GTC	Close to site
Clean Water	Severn Trent Water	Close to site
Wastewater	Severn Trent Water	Close to site
Telecommunications	Openreach	Close to site

- 3.3 From a review of the existing asset records obtained, a Composite Services Plan (CSP) has been prepared, illustrating the indicative extent of the existing utility infrastructure, within and adjacent to the proposed development site boundary. The CSP is contained within **Appendix 3**.
- 3.4 The information offered within this report is derived from data provided by the core main public utility companies. No information has been provided in relation to "private" infrastructure that might be present within or adjacent to the proposed development site.
- 3.5 It should be noted that all asset records obtained have a validity period and the result of these consultations undertaken with the statutory undertakers, may be subject to future alteration by network operators.
- 3.6 Until confirmed otherwise, it should always be assumed that assets are present, and caution should be exercised when planning or conducting further work.

4. ELECTRICITY INFRASTRUCTURE

Existing Electricity Infrastructure

- 4.1 The proposed development site lies within National Grid Electricity Distribution (NGED) area of operation. A network of low voltage (LV) and high voltage (HV) apparatus is shown near the site, servicing the surrounding residential areas.
- 4.2 There is an 11kV HV cable located along Church Rd, adjacent to the north and west of the site boundary.
- 4.3 A pole mounted transformer (PMT) is shown in close proximity to the north-eastern boundary of the development.
- 4.4 Furthermore, there is an embedded network, owned by GTC, shown present beyond the east of the site and serves the new residential development.

Diversionsary Works

- 4.5 No diversionsary works are anticipated. It is assumed that the PMT is at a sufficient distance from the development footprint and can remain in-situ.

Electrical Vehicle Charging (EVC) Demand

- 4.6 The government have announced their intention to withdraw the internal combustion engine from road transport by 2040, which will drive a shift towards electric vehicles, and alternative technologies.
- 4.7 One of the key challenges is going to be electricity, and how to respond to the potential huge volume, at present due to the uncertainty surrounding the potential uptake and use of Electrical Vehicle Charging Points (EVCP). The load demand profile discussed with NGED has considered the potential demand required for EVCPs.
- 4.8 It is advised that further consultation is undertaken with the Local Authority to advise on any future energy plans, which will likely require a percentage of the development to facilitate for electric vehicles to meet Net Zero requirements.

Proposed Electricity Infrastructure

- 4.9 BWB made an enquiry with NGED for the electrical supply of the proposed development from the closest point of connection to the site. NGED have confirmed 2no points of connection (POC) will be required to provide a looped, and therefore secure, supply to the site.
- 4.10 The first POC is from the 11kV cable located in Church Rd, to the north of the site. The second POC is from the newly installed substation, known as 'Barn End Road', within the new housing development adjacent to the east of the site boundary.

- 4.11 For the proposed demand of 892kVA, NGED have advised that a 1MVA distribution substation will need to be installed. It should be noted that this substation should ideally be centrally located and have 24/7 unhindered access for future maintenance by NGED.
- 4.12 A network of LV cables will emanate from the 11kV distribution substation, which will carry supplies to each proposed residential dwelling.
- 4.13 NGED have provided an overall cost of £307,107 for these works. This is broken down into £304,665, which is contestable works and £2,442, which is non-contestable works.
- 4.14 It is advised that early consultation with NGED is undertaken to secure appropriate capacity within their network. Progression to the Connection Offer stage will include a more detailed network study to finalise design of the connection works (and any associated reinforcement works), and provide a Connection Offer detailing the works required, the associated costs, timescales, payment terms and conditions for the connection.

5. GAS INFRASTRUCTURE

Existing Gas Infrastructure

- 5.1 The proposed development lies within the area of operation of Cadent Gas and GTC also operate an embedded network. There is no gas infrastructure shown within the site boundary.
- 5.2 Asset records received from Cadent Gas and GTC show low pressure (LP) gas mains beyond the eastern boundary of the site. GTC gas assets serve the adjacent new residential development, whilst the nearest Cadent Gas assets shown are 63mm PE mains within Ivycroft Road to the east of the Recreation Ground/Play Area.

Diversiory Works

- 5.3 The site is free of any gas apparatus and no diversionary work is anticipated.

Proposed Gas Infrastructure

- 5.4 In line with government guidance that no new residential developments will be able to connect to the gas network from 2025, as part of the Future Homes Standard, no gas supply connections have been considered for the proposed development.

6. CLEAN WATER INFRASTRUCTURE

Existing Clean Water Infrastructure

- 6.1 The proposed development lies within Severn Trent Waters (STW) area of operation. There is no clean water infrastructure shown within the site boundary.
- 6.2 A 6" PVC water main is present within Orton Road, beyond the southern boundary of the site. Additionally, there is a 4" CI water main located within Church Rd, to the north of the development.
- 6.3 The adjacent residential units being constructed to the east of the site is shown to have a network of water mains within their highway (Red Marl Way), which will supply the new development.

Diversiory Works

- 6.4 As noted, STW plans do not show any assets within the site boundary and therefore, it is not anticipated that diversiory / disconnection works will be required to facilitate the proposed development.

Proposed Clean Water Infrastructure

- 6.5 STW have assessed the current available capacity and have confirmed that a connection can be made to their network without any reinforcement requirements.
- 6.6 STW have confirmed that there is currently capacity to supply the proposed development (for up to 100 units), from a Connection Point to the existing 6" water main, located within Church Rd, to the immediate north of the site. Alternatively, a connection could be made to the 125mm water main located in Red Marl Way.
- 6.7 STW have provided various options for the client to install the new water mains required to facilitate the development. The first option is for STW to undertake all the works, and this would cost £93,750. Alternatively, STW provide a lay-only option of £75,700, which would mean the client's civils contractor would do all excavations.
- 6.8 However, if the developer chooses to utilise a Self-Lay Provide, then STW would only undertake the non-contestable works, which would amount to £9,700.

Water Infrastructure Charge

- 6.9 STW have provided the following associated infrastructure charge for a total of 100 household plot connections and income offset discount:
- Infrastructure Charge = £38,536.00 (inc VAT)
 - Environmental Component = £6,064.00 (inc VAT)

- 6.10 A detailed cost breakdown will be provided on receipt of a formal application for a new water mains connection.

7. SEWERAGE INFRASTRUCTURE

Existing Foul and Surface Water Infrastructure

- 7.1 Severn Trent Water (STW) also operate the sewerage infrastructure for the area surrounding the site. There is no sewer infrastructure shown within the site boundary.
- 7.2 A 225mm foul rising main is present within Orton Road, beyond the southern boundary of the site.
- 7.3 A S104 sewer network is also shown within the adjacent residential units being constructed to the east of the site within their highways (Red Marl Way), which will service the new development.

Diversionsary Works

- 7.4 No diversionsary works are anticipated as there is no sewerage infrastructure crossing the development footprint.

8. TELECOMMUNICATIONS INFRASTRUCTURE

Existing Telecommunications Infrastructure

- 8.1 Asset records show a well-established Openreach network present to the north along Church Road and to the south of the site along Orton Road. There is also new Openreach infrastructure serving the surrounding residential areas including the adjacent new development.
- 8.2 No Openreach apparatus is shown within the site boundary.

Diversionsary Works

- 8.3 The site is free of any telecommunications infrastructure and no diversionsary works are anticipated onsite.

Proposed Telecommunications Infrastructure

- 8.4 A new supply application can be submitted upon the detailed design stage and planning consent is received.
- 8.5 Openreach normally provide telephone and broadband services to all new developments free of charge, with the end user ultimately paying for the connection costs. All civils works will typically be undertaken by the developer using free issue Openreach ducts and Openreach specified duct boxes. Openreach to confirm design.

- 8.6 Further investigations should be made with alternative broadband providers in order to obtain superfast broadband for the development.

9. CONCLUSION AND RECOMMENDATIONS

Conclusions

- 9.1 The site is shown to be clear of any existing utility assets and therefore no diversionary works are required onsite.
- 9.2 The site can be served by the existing electricity, water, sewer and telecommunications networks without the need for any reinforcement works. However, an onsite 11kV distribution substation will be required to supply the electricity on site.

Recommendations

- 9.3 The proposed development site will benefit from a PAS128 Level B survey (and if requested by the utility companies, a hand dug trial hole investigation), to identify the accuracy of the infrastructure locations shown on the CSP and the depth of these services below ground. This will also inform the likely requirement for further discussion with the asset owners to allow for an appropriate diversion and/or protection strategy to be fixed, where necessary. Obtaining this level of information can potentially mitigate any need for diversionary work to the existing utility infrastructure.
- 9.4 Following on from the above and once at the detailed design stage, BWB Consulting Ltd recommend early engagement with the main utility providers to ensure capacity can be secured and should further network modelling be required at the time then this will identify any potential constraints and highlight the need for reinforcement works.

APPENDICES

APPENDIX 1: Site Location Plan

(Drawing No. WTN-SLP-01A Warton PH2 Rev A)



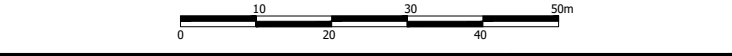
- Site Boundary
- Land Within Land Owners Control (30cm wide Strip)



Project
**LAND OFF ORTON ROAD,
WARTON**

Drawing Title
SITE BOUNDARY PLAN

Date	Scale	Drawn by	Check by
30.01.25	1:1,000@A1 1:2,000@A3	J.W.	T.L.
Project No	Drawing No	Revision	
333101884	STN-GEN-SW-DR-MP-01	K	



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APPENDIX 2: Proposed Illustrative Masterplan

(Ref: 30032 Drawing No.2)



The scaling of this drawing cannot be assured

Revision	Date	Dwn	Ckd
N	27.03.25	J.W.	T.L.

Site Boundary Update

- Site Boundary
- Proposed Residential Development
- Proposed Open Space and Paths
- Proposed Highway
- Proposed Sustainable Drainage
- Existing Recreation Ground
- Proposed Access/Egress for All Modes
- Proposed Access/Egress for Pedestrians
- Existing Landscape



Project
**LAND OFF ORTON ROAD,
WARTON**

Drawing Title
ILLUSTRATIVE FRAMEWORK PLAN

Date	Scale	Drawn by	Check by
30.01.25	1:1,000@A1 1:2,000@A3	J.W.	T.L.
Project No	Drawing No	Revision	
333101884	RG-M-AI02	N	

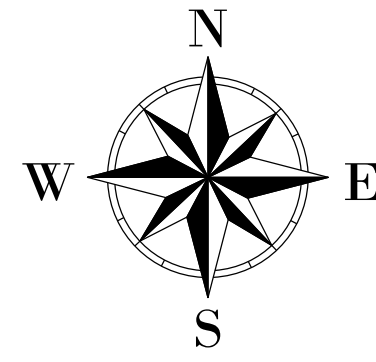
0 50m



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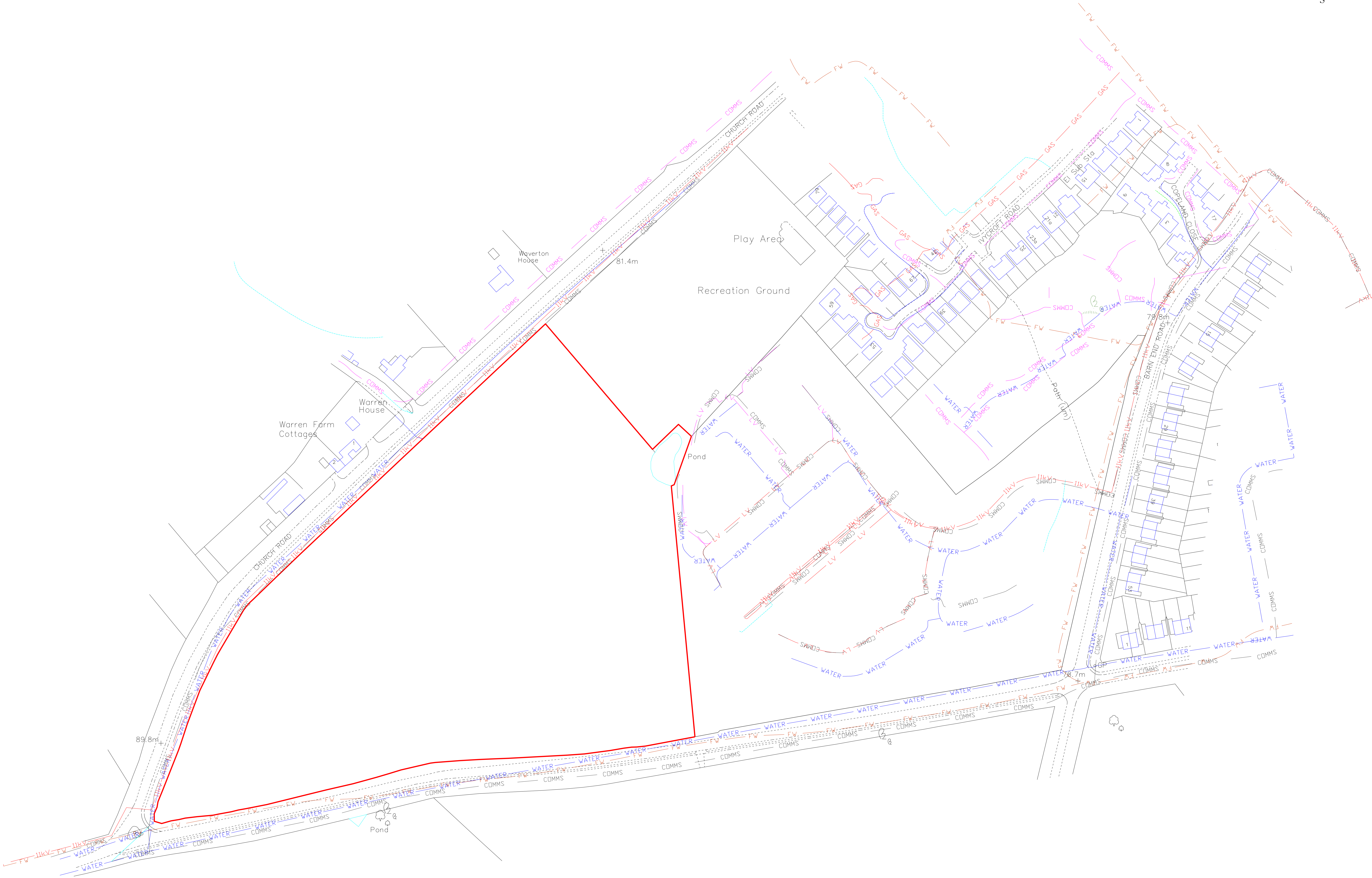
APPENDIX 3: Composite Services Plan

(Drawing No. 244784-BWB-ZZ-XX-DR-C-0100_P02 Composite Services Plan)



- Notes**
1. Do not scale this drawing. All dimensions must be checked/verified on site if in doubt etc.
 2. This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.
 3. All dimensions in millimetres unless noted otherwise. All levels in metres unless noted otherwise.
 4. Any discrepancies noted on site are to be reported to the engineer immediately.

Legend	
	Severn Trent Water Main
	Severn Trent Foul Water Sewer
	Gas Main
	LV Cables
	Openreach (BT) Underground Cables
	11kV HV Cables
	Red Line Site Boundary



P1	28.03.25	Preliminary Issue	FM	IB
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Issues & Revisions

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Client
Richborough Estates

Project Title
Land Off Orton Road

Drawing Title
Composite Services Plan

Drawn:	F.Musa	Reviewed:	I.Bhatti
BWB Ref:	244061	Date:	Mar'25
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Preliminary			
Project - Originator - Zone - Level - Type - Role - Number			
224061-BWB-ZZ-XX-DR-C-0100			
Status	S2	Rev	P1

