

**UTILITIES AND SERVICES APPRAISAL** 



# UTILITIES AND SERVICES APPRAISAL ON BEHALF OF MILLER HOMES

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August 2020





# **DOCUMENT CONTROL SHEET**

Project Name Winnham Farm, Downend Road, Portchester

Project No. 16-329

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#### UTILITIES AND SERVICES APPRAISAL



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#### 1.0 INTRODUCTION

- 1.1 Odyssey has been commissioned by Miller Homes to provide utilities and technical support to be submitted in association with a planning application for proposed residential development at Winnham Farm, Downend Road, Portchester.
- 1.2 The development proposals for this 20.39 hectare (ha) site are for the demolition of existing agricultural buildings and the construction of new buildings providing up to 350 dwellings; the creation of new vehicular access with footways and cycleways; provision of landscaped communal amenity space, including children's play space; creation of public open space; together with associated highways, landscaping, drainage and utilities.
- 1.3 The aim of this appraisal is to assess the existing utility infrastructure in the vicinity of the site, including a review of the capacity to accommodate the development proposals and identifying constraints and opportunities.
- 1.4 The information provided in this report is based on information supplied by the various companies and authorities as of the date of this report.
- 1.5 Existing utility systems may have new third party connections made at any time. As such, the advice provided within this report is subject to change until updated information, formal quotations and asset plans have been issued by the various utility companies operating in the area.
- 1.6 This report is based on information supplied by the utility companies and authorities which has not been independently verified. Odyssey can give no explicit warranty as to their accuracy.
- 1.7 A site location plan can be found in **Appendix A**, the various utility records can be found in **Appendices B to H**, and an existing services layout can be found in **Appendix I**.

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#### 2.0 FOUL DRAINAGE

#### 2.1 Existing Infrastructure

2.1.1 The foul water sewer company operating within the vicinity of the development proposal is Southern Water (SW). SW asset mapping was obtained to confirm the presence of public foul sewers within the proximity of the proposed site. The mapping indicates that there are no public foul water sewers within the site boundary or along Downend Road in proximity to the site access. There is SW infrastructure located to the east of the site, and to the south beyond the railway line. SW mapping is presented in **Appendix B**.

#### 2.2 Foul Drainage Loading

2.2.1 Peak design discharges have been calculated based on Sewers for Adoption 7<sup>th</sup> Edition:

Residential Domestic Flow = 4000 litres/dwelling/day (peak)

2.2.2 It is anticipated that the development would produce a peak flow discharge of approximately 16.2 l/s for a residential development of 350 units.

#### 2.3 Diversions and Budget Estimate

- 2.3.1 There are no SW assets which interfere with the site boundary, and as such, there would be no anticipated diversions onsite or offsite to SW infrastructure.
- 2.3.2 Contact was made with SW to determine the capacity within the foul network to accommodate the foul flows from the proposed development site. At the time of requesting the capacity check, the development proposals comprised 300 residential units.
- 2.3.3 SW stated that there was adequate capacity in the local sewerage network to accommodate foul flows from the proposed development site at or downstream of manhole reference SU60068301, located to the east of the site on Danes Road. This correspondence is shown in **Appendix B**. It was proposed that foul flows would be pumped from the south east of the site in a north east direction to Danes Road.
- 2.3.4 An updated SW capacity check for up to 350 residential units is currently in progress.
- 2.3.5 As part of the detailed design process, and subject to the details above, a Section 106 Connection Application would be made in accordance with the Water Industries Act to seek approval to connect to the SW public foul sewer.

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#### 3.0 SURFACE WATER DRAINAGE

#### 3.1 Existing Infrastructure

- 3.1.1 The majority of the existing site comprises greenfield land. Considering the underlying chalk geology, it is anticipated that the surface water runoff from the site currently infiltrates into the underlying strata, with any excess water discharged towards the south east of the site, owing to the topography. The operating storm sewer company within the area is SW.
- 3.1.2 A copy of SW's asset location mapping was obtained to confirm the presence of public surface water sewers within the vicinity of the site. The sewer records indicate that there are no public surface water sewers currently located within the site boundary or along Downend Road in proximity to the site access. The mapping shows SW infrastructure to the east of the site, and to the south beyond the railway line. The mapping is shown in **Appendix B**.

#### 3.2 Diversions and Budget Estimate

- 3.2.1 There are no SW public surface water sewers located at the site and as such, there would be no anticipated diversions onsite or offsite to SW infrastructure.
- 3.2.2 The impermeable area of the proposed development would be greater than the existing, therefore increasing the volume of surface water runoff generated by the site. Surface water runoff from the site would be managed using Sustainable Drainage Systems (SuDS) to ensure that there is no increased flood risk downstream from the development site. It is proposed that storm water would be attenuated and infiltrated on site using infiltration basins.
- 3.2.3 Additional SuDS source control devices such as permeable paving and swales would be proposed to be incorporated at the detailed design stage, in order to fulfil surface water treatment requirements.
- 3.2.4 As infiltration would be pursued as the method of surface water discharge, a SW capacity check for surface water would not be necessary.

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#### 4.0 POTABLE WATER SUPPLY

#### 4.1 Existing Infrastructure

- 4.1.1 The operating potable water company within the area is Portsmouth Water (PW). PW asset mapping was obtained to establish the presence and extent of potable water infrastructure.
- 4.1.2 The mapping shows that there is no PW infrastructure within the site boundary. A water main is present in proximity to the proposed site access along Downend Road. There are also water main pipelines located to the east of the site, and to the south beyond the railway line. PW mapping is presented in **Appendix C**.

#### 4.2 Diversions and Budget Estimate

- 4.2.1 There are no PW assets located at the site and as such, there would be no anticipated diversions onsite or offsite to the existing PW infrastructure. Existing PW infrastructure along Downend Road would need to be accounted for during the site access design.
- 4.2.2 PW previously estimated that the cost of main-laying to 375 dwellings could be in the region of £350,000 to £400,000, however these costs may be reduced to around £80,000 to £100,000 depending on PW's terms of offer. This estimate did not include fixtures and fittings required for the works, meaning there could be an increase in cost once further details are submitted.
- 4.2.3 PW noted that there are several developable areas within the vicinity of the site which could require additional water mains for potential future development. PW would need to review the available capacity when the mains are requisitioned to confirm if any future offsite reinforcement works would be required. PW advised to budget for £1,200 per plot for service connections.
- 4.2.4 The budget estimate stated that PW would supply a water main from Dore Avenue to the east of the site. This would involve laying the main across private land in the ownership of a third party. Additional costs would be incurred when negotiating easements with landowners. A budget estimate for this work was estimated at £2,000. Alternative options could be available for main-laying which do not cross third party private land. PW correspondence is included in **Appendix C**.
- 4.2.5 An updated budget estimate for up to 350 residential units is currently in progress.

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#### 5.0 ELECTRICITY SUPPLY

#### 5.1 Existing Infrastructure

- 5.1.1 The electrical utility company operating within the vicinity of the site is Scottish & Southern Energy Power Distribution Ltd (SSE).
- 5.1.2 The SSE mapping indicates that there is apparatus located within the site boundary. There is an extra high voltage (EHV) overhead power line of 132 kilovolt (kV) capacity which traverses the south west of the site, in proximity to the site access. There is a high voltage (HV) overhead power line of 11kV capacity also located to the south west of the site, which traverses across to the existing farm buildings, close to the southern boundary of the site. There is also a low voltage (LV) underground cable of 1kV capacity along Downend Road, adjacent to the proposed site access. SSE asset plans are provided in **Appendix D**.

#### 5.2 Diversions and Budget Estimate

- 5.2.1 The proposed development would require the diversion of the 11kV HV power line, from overhead to underground across the site, and the previous indicative budget estimate provided by SSE took these diversion works into account.
- 5.2.2 The 132kV EHV main would remain on site, and there would be an easement and height clearance associated with this.
- 5.2.3 SSE did not anticipate any further diversions to the existing infrastructure as part of their previous estimate.
- 5.2.4 The previous budget estimate quoted between £308,197 and £369,836 for diversion works, the installation of a transformer on site, and the provision of HV and LV infrastructure to serve 375 residential units at 2.25 kilovolt-amperes (kVA) per plot. This estimate was calculated exclusive of VAT, and was based on the developer undertaking all on site excavation and reinstatement. The correspondence and details of the works are included within **Appendix D**.

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5.2.5 An updated SSE budget estimate for 350 residential units is currently in progress.

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#### 6.0 GAS SUPPLY

#### 6.1 Existing Infrastructure

- 6.1.1 The gas utility company providing the gas apparatus in the vicinity of the proposed development is Southern Gas Networks (SGN). SGN location plans of the existing infrastructure were provided and are presented as part of **Appendix E**.
- 6.1.2 SGN asset plans show no gas apparatus within the site boundary. SGN infrastructure is shown to serve the existing residential properties located to the east of the site and to the south beyond the railway line.

#### 6.2 Diversions and Budget Estimate

- 6.2.1 There are no SGN assets within the site boundary and as such, there would be no anticipated diversions onsite or offsite to the existing SGN infrastructure.
- 6.2.2 An indicative budget for gas supply was requested from SGN. It was estimated that it would cost £244,000 (including VAT) to install appropriately sized gas infrastructure to serve 375 properties. This was based on SGN providing all excavation and reinstatement of the trenches up to the site boundary, and the developer providing all pre-excavation, backfill and reinstatement within the site boundary. The quote was also based upon an hourly load of 22,500 kilowatts (kW) and an annual quantity of 7,725,000 kilowatt hours (kWh). No meter work was included in this estimate. SGN correspondence is included within **Appendix E**.
- 6.2.3 An updated SGN budget estimate for 350 residential units is currently in progress.

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#### 7.0 TELECOMMUNICATIONS

#### 7.1 Existing Infrastructure

- 7.1.1 The telecommunications provider operating within the vicinity of the site is BT Openreach. Telecommunications mapping is presented in **Appendix F**.
- 7.1.2 According to BT Openreach asset plans, there is plant cabling within the site boundary. This apparatus is present from the existing farm buildings to the southern boundary and beyond the railway line. The mapping also indicates that there is BT plant located on Downend Road, located to the south of the proposed site access. There is also BT plant located to the west and the east of the site boundary, and to the south beyond the railway line.
- 7.1.3 Virgin Media mapping indicates apparatus located to the east and the south of the site. This mapping is also included within **Appendix F**.

#### 7.2 Proposed Telecommunications Supply

- 7.2.1 Diversion works may be required for the BT apparatus onsite, however this is subject to the final masterplan design of the site and confirmation of the location of built development. As there is existing BT apparatus along Downend Road, it may be affected by the new site access junction arrangement. A detailed junction layout would be required to determine the effect, if any, on the existing infrastructure.
- 7.2.2 There are no Virgin Media assets within the site boundary and as such, there are no anticipated diversions to the Virgin Media infrastructure.
- 7.2.3 The existing BT Openreach apparatus in the vicinity of the site could provide a point of connection to supply the telecoms service to the site.
- 7.2.4 Any infrastructure works or service provision to the site would be installed by BT Openreach, as they are obliged to do so under Ofcom's Universal Obligation Service with any excess costs, where appropriate, being met by the developer.
- 7.2.5 BT Openreach do not supply budget estimates before outline planning permission has been granted.

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#### 8.0 PIPELINES

#### 8.1 Linesearch

- 8.1.1 Linesearch is an online search facility to which all the pipeline operators subscribe. This was previously accessed to confirm if there are any major pipelines near to the site.
- 8.1.2 A Linesearch search conducted in September 2016 confirmed that there were no pipelines within the vicinity of the site. Linesearch results are presented in **Appendix G**.

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#### 9.0 NETWORK RAIL

- 9.1 Network Rail (NR) provided comments and conditions to be observed in connection with new development adjacent to NR land and assets. It may be necessary to enhance or renew NR existing boundary fencing as a result of the development in order to reduce the risk of trespass and possible vandalism.
- 9.2 NR previously stated that the developer should undertake investigations to establish any level of noise and vibration likely to originate from the railway, and mitigation measures should be designed accordingly. Mitigation would be addressed at the detailed design stage.
- 9.3 NR stipulated that all structures should be situated at a minimum distance of 2 metres (m) from the NR boundary fence, and at a sufficient distance to enable construction to proceed without the risk of affecting the normal and safe running of the railway. This clearance would also enable construction and maintenance to proceed without the need to enter onto NR property.
- 9.4 Temporary and permanent works should be designed and constructed so that they would have no influence on the stability of NR structures and adjoining land. Design details and construction plans should be submitted to NR for approval to ensure that the integrity of the railway formation and structures would not be compromised.
- 9.5 All excavation and earthworks within 15m of NR boundary would require review and prior approval from NR. NR correspondence is presented in **Appendix H**.

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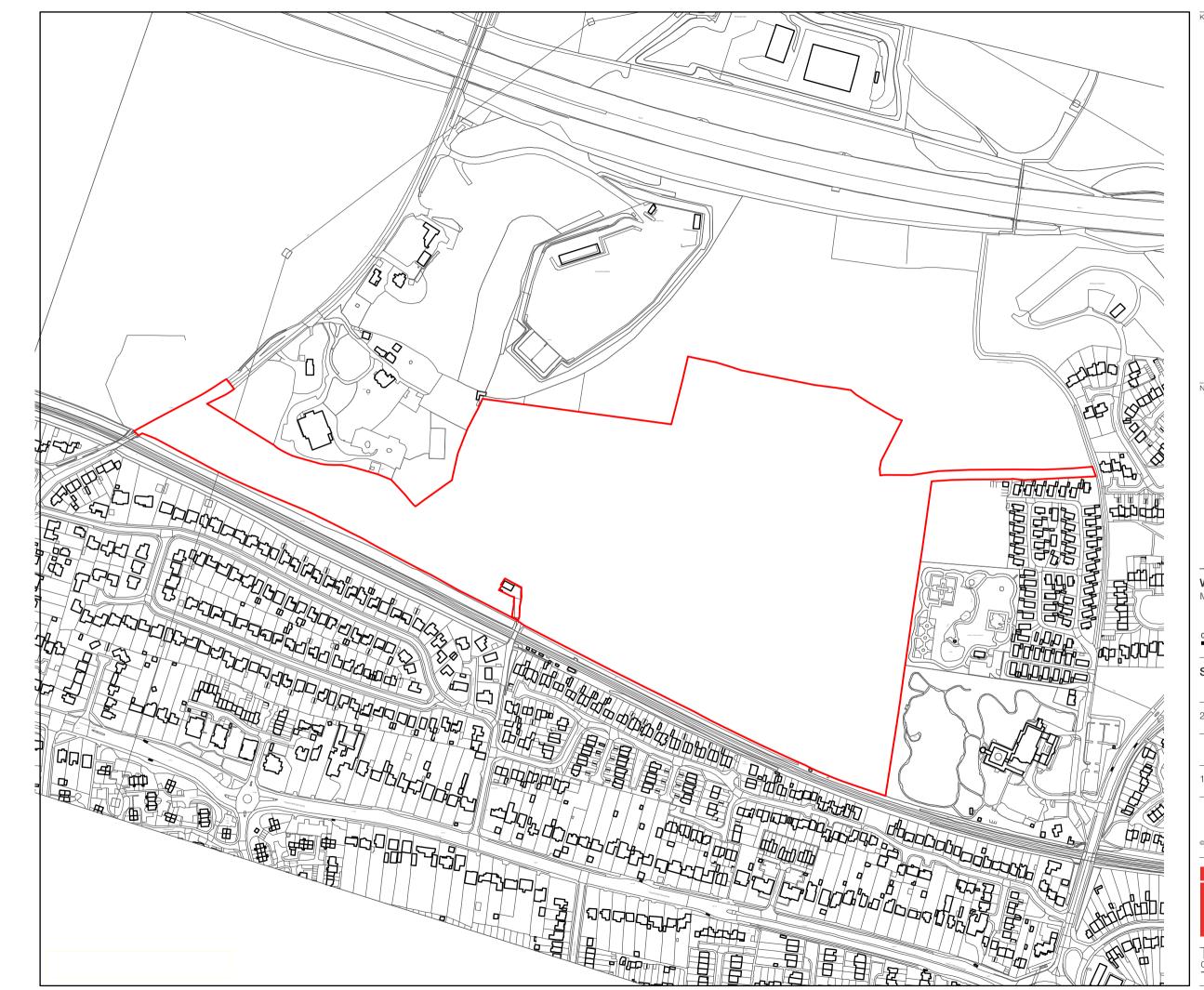


#### 10.0 SUMMARY AND CONCLUSIONS

- 10.1 Odyssey has been commissioned by Miller Homes to provide utility and technical support to be submitted in association with a planning application for proposed residential development at Winnham Farm, Downend Road, Portchester.
- This appraisal has assessed the existing utility infrastructure within the vicinity of the site, and has reviewed the capacity to accommodate the development proposals, and identified constraints and opportunities.
- 10.3 It has been demonstrated that suitable utility infrastructure is present in the surrounding area to service the proposed development. Diversionary and point of connection works are expected to some utilities between the site and the existing infrastructure.
- 10.4 Updated budget estimates for servicing a development of up to 350 residential units are in progress.
- 10.5 The information provided in this report is based on information supplied by the various companies and authorities as of the date of this report.

# **APPENDIX A**

**Site Location Plan** 



Notes/Revisions

Winnham Farm, Dowend Road, Portchester Miller Homes

0m 50m 100m 15

Site location plan

© Terence O'Rourke Ltd 2017 Scale for planning purposes only



7 Heddon Street London W1B 4BD BOURNEMOUT Everdene House

BH7 7DU

TELEPHONE
020 3664 675

020 3664 6755 www.torltd.co.u

# **APPENDIX B**

**Southern Water Services Limited Records** 





F.A.O: Mr. Bernard Thuku,

21 NOV and Odyssey Tuscany House White Hart Lane Basingstoke Hampshire **RG21 4AF** BAC 58B....... 12.

**Developer Services** Southern Water Sparrowgrove House Sparrowgrove Otterbourne Hampshire SO21 2SW

Tel: 0330 303 0119

Email: developerservices@southernwater.co.uk

ACC. ......

Your Ref:

Our Ref: CC/003144

Date:

16 November 2016

Site: Land East of Downend Road, Fareham, Hampshire, PO16 8QF.

Dear Sirs,

I am now in receipt of the results of the capacity check you requested for the above development site.

#### **FOUL WATER**

Following initial investigations, there is currently adequate capacity in the local sewerage network to accommodate a foul flow from proposed development site at/downstream of manhole reference SU60068301. Please note that no surface water flows (existing or proposed) can be accommodated within the existing foul sewerage system.

Before any connection/s are made, an application form needs to be completed and approved by Southern Water Services.

Please let me know if we can be of any further assistance in this matter.

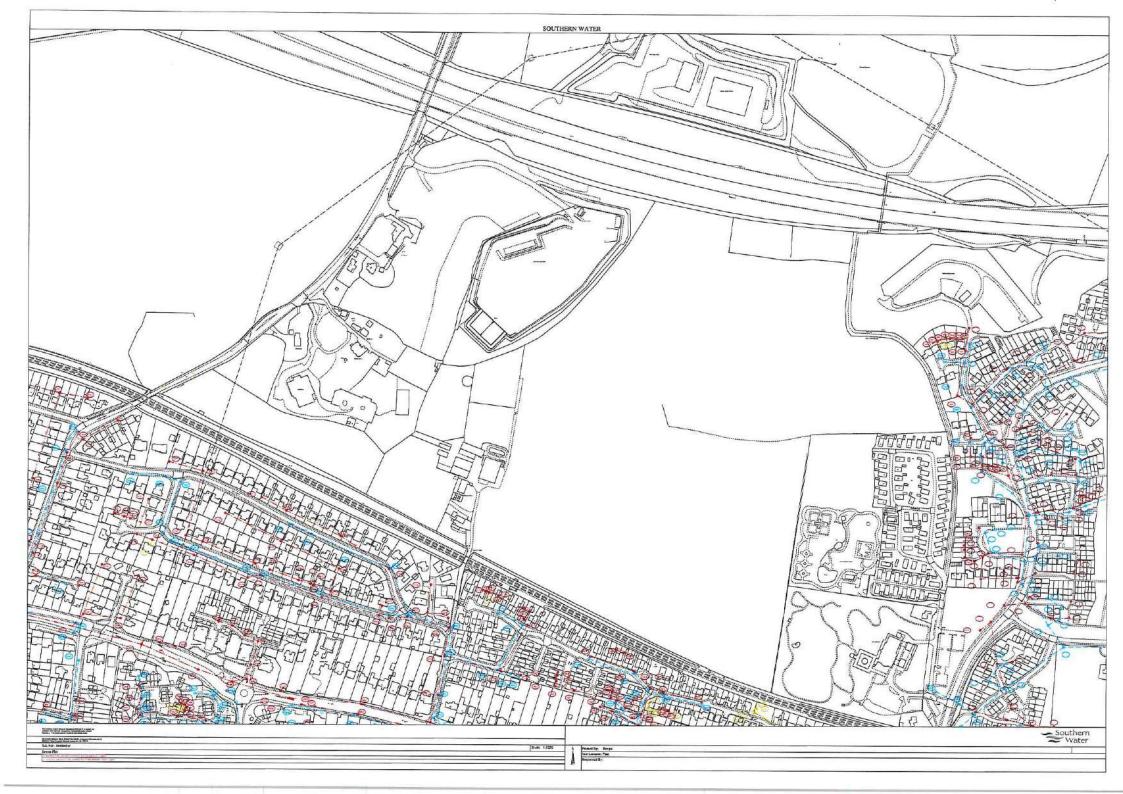
Yours faithfully,

David Akehurst

**Developer Services** 

Please note: -

The information provided above does not grant approval for any designs/drawings submitted for the capacity analysis. The results quoted above are only valid for 12 months from the date of issue of this letter.

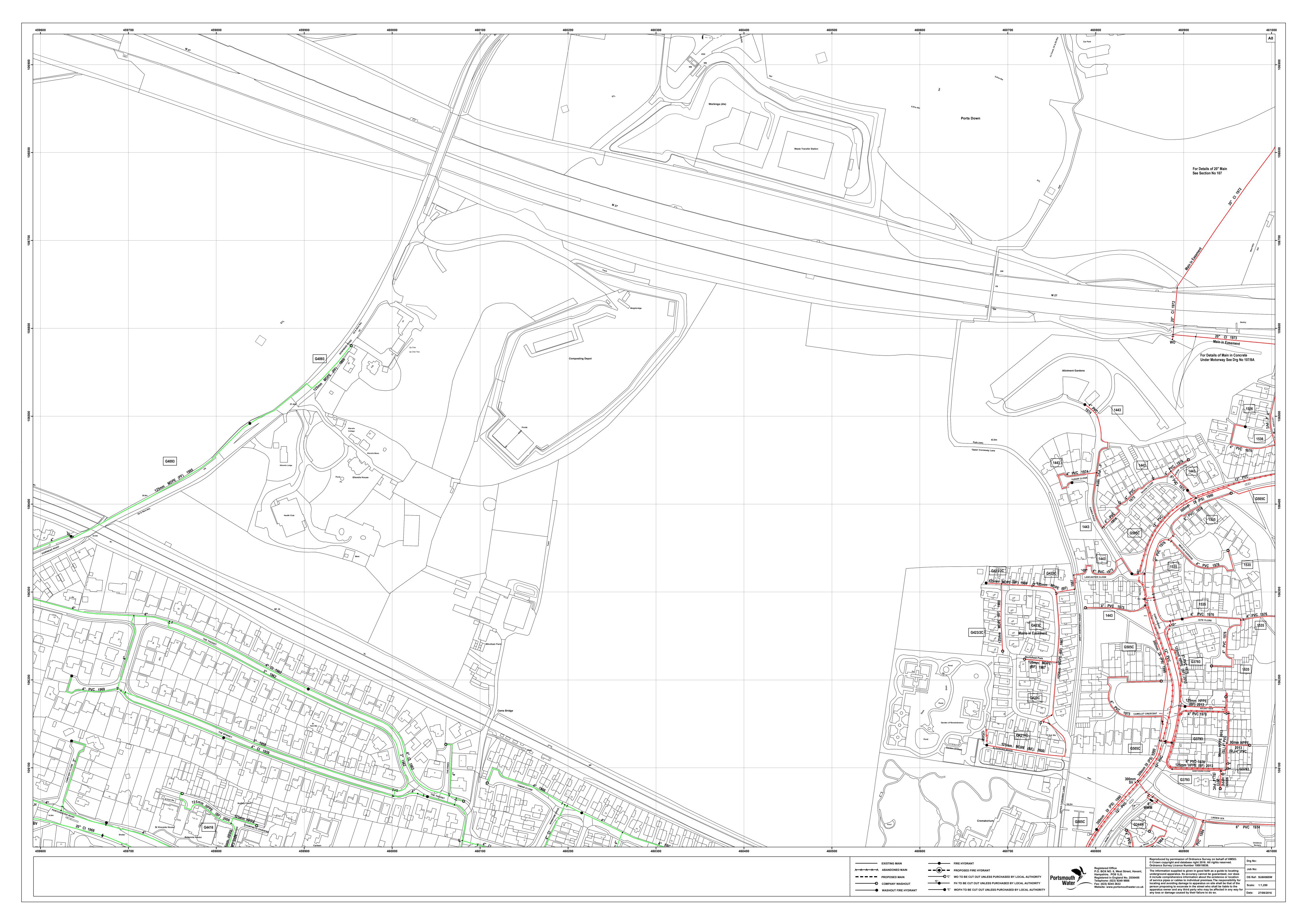


# SOUTHERN WATER 109062 ROEBUCK AVENUE FU DEERLEAP FUNTLEY ROAD , El Sub Sig (930D Southern The positions of pipes shown on this plan are believed to be correct, but Southern Water Services Ltd accept no responsibility in the event of inaccuracy. The actual positions should be determined on site. Based upon Ordnance Survey Digital Data with the permission of the controller of H.M.S.O. Crown Copyright Reserved Licence No. WU 298530 Scale: 1:1250 O.S. REF: SU5508SE Printed By: Date: 2-11-2016 Roopa Site Location Plan Sewer Plot WARNING: BAC pipes are constructed of Bonded Asbestos Cement Requested By: WARNING: Unknown (UNK) materials may include Bonded Asbestos Cement

# **APPENDIX C**

**Potable Water Records** 







For the Attention of Natalie Anderson, Graduate Engineer Odyssey Tuscany House White Hart Lane Basingstoke Hampshire RG21 4AF

#### **Registered Office:**

Portsmouth Water Ltd PO Box 8 West Street Havant Hampshire PO9 1LG

Tel: 023 9249 9888 Fax: 023 9245 3632

Web:www.portsmouthwater.co.uk/developers

Please ask for: Mr Hayler
Our reference: JAH/G4817

Your reference:

Dear Ms Anderson,

# G4817 - LAND EAST OF DOWNEND ROAD, PORTCHESTER, FAREHAM PO16 8RQ - BUDGET ESTIMATE

Thank you for your payment of £385.20 (Inc VAT) paid as a standard charge for a Budget Estimate in respect of water mains at the above location. Our official invoice has been forwarded under separate cover.

In response to your enquiry I would comment as follows:-

#### 1. On-Site Mains

We have estimated the cost of mainlaying to the 375 dwellings based on the Terence O'Rourke Sketch Master Plan 249501\_SK\_IMP\_002 which you provided. These costs could be in the order of £350,000 - £400,000. Depending on our terms offer this may be reduced to around £80,000 - £100,000. Please note that this estimate does not include fixtures and fittings required for the works. As such the cost may rise once a more accurate estimate is applied for.

#### 2. Future Potential Development

The above proposal will provide sufficient flow and pressure to your initial development of 375 dwellings. It should be noted however that this situation may change. There are several developable areas near your site that may also require additional water mains. A result is that we would need to review the available capacity when the mains are requisitioned to confirm if any future off-site reinforcement works are required.

#### 3. Diversionary Work

I do not anticipate that any diversionary work to our existing mains will be required as a result of this development.

#### 4. Service Connections:

You are advised to budget for £1,200 per plot.

#### 5. Private Land:

We will need to bring a water main from Dore Avenue, to the east of the development. This will involve laying our main across private land in the ownership of a third party. The costs of mainlaying are included above but there will be additional costs involved in negotiating easements with the landowners. We will seek payment from you to cover this. I am unable to tell you how much these costs will be but I would suggest you budget for £2,000.

This **BUDGET ESTIMATE** is based on your the Terence O'Rourke Sketch Master Plan 249501 SK IMP 002.

#### 6. Pressure

We advise that units constructed higher than 2 storeys should consider a storage and booster arrangement to maintain constant water supplies.

#### 7. Terms and Conditions

Once I have sufficient information to determine the total cost of the on-site mains extension, I will then be able to offer you terms and conditions for the provision of mains.

You will be offered two options:

- (a) To enter into an agreement, in accordance with section 42 of the Water Industry Act, 1991, to guarantee for twelve years, a fixed return of our total estimated mainlaying costs and depositing this sum with us for a period of twelve years, or
- (b) Making a once and for all contribution towards the cost of the mains, in accordance with section 91 of the Water Industry Act 2003.

When we calculate the amount to be paid under each option, we take account of our income (in the form of water charges) from the new properties concerned.

Please note that the terms and conditions would exclude individual service connections and building water. Statements of Cost for these would only be prepared, on application from yourselves, once the new mains were commissioned. A Scheme of Charges is available on our website <a href="https://www.portsmouthwater.co.uk/developers/new-services/">https://www.portsmouthwater.co.uk/developers/new-services/</a>

VAT is charged according to the type of development concerned.

(c) We are also able to offer developers a 'self lay' option. Please see our website <a href="https://www.portsmouthwater.co.uk/developers/new-developments/">https://www.portsmouthwater.co.uk/developers/new-developments/</a> for details.

This **budget** quote is only valid for 3 months from the date shown at the top of the letter.

#### 8. Existing Mains and Services

The enclosed extract of Ordnance Survey sheet shows our existing water mains in a black line. I regret that I am unable to indicate any other water services that have been taken from these mains but wherever there are surface stopcock or meter boxes, it should be assumed that a service has been connected to the main.

Should accurate information regarding the Company's installation be required, then trial holes should be taken by hand digging and no mechanical plant should be used within two metres of the Company's mains.

Please note that all enquiries regarding drainage should be directed to Southern Water, who is the responsible undertaker in this area.

Cont: 2

#### 9. Contaminated Land

I have assumed for the purposes of this budget estimate that the site and surrounding area is contaminated. Certain contaminants can permeate polyethylene water pipes. The mains and services are proposed to be laid in barrier pipe or some other impermeable material. We would also require that your underground service pipes be laid in an impermeable material.

I would request a copy of the soil report when it becomes available.

When you are in a position to provide the information requested above, I will be pleased to offer you a firm quotation of terms and conditions for the development.

Yours sincerely,

Mike Dannatt Senior Project Manager 02392 249 230

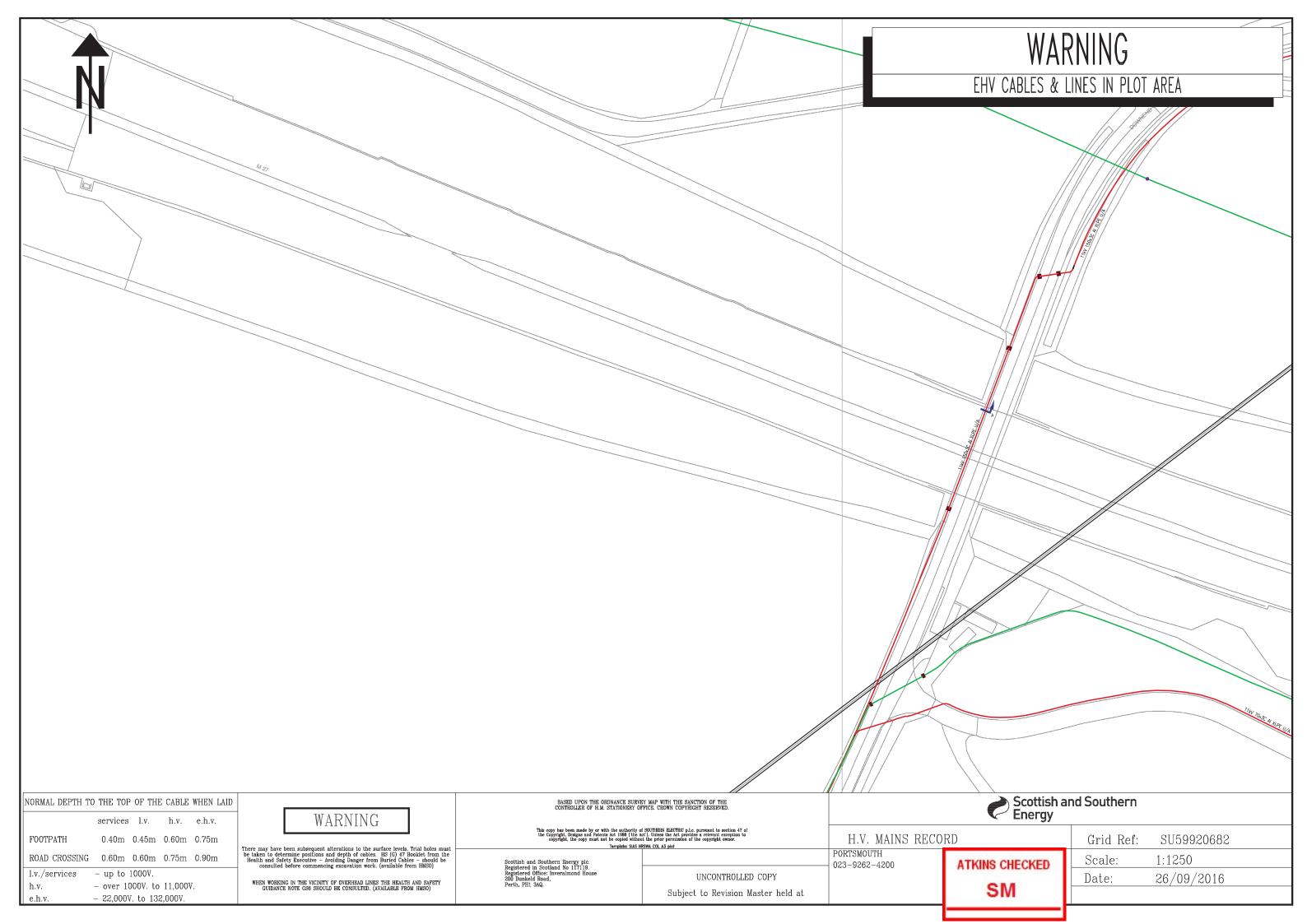
m.dannatt@portsmouthwater.co.uk

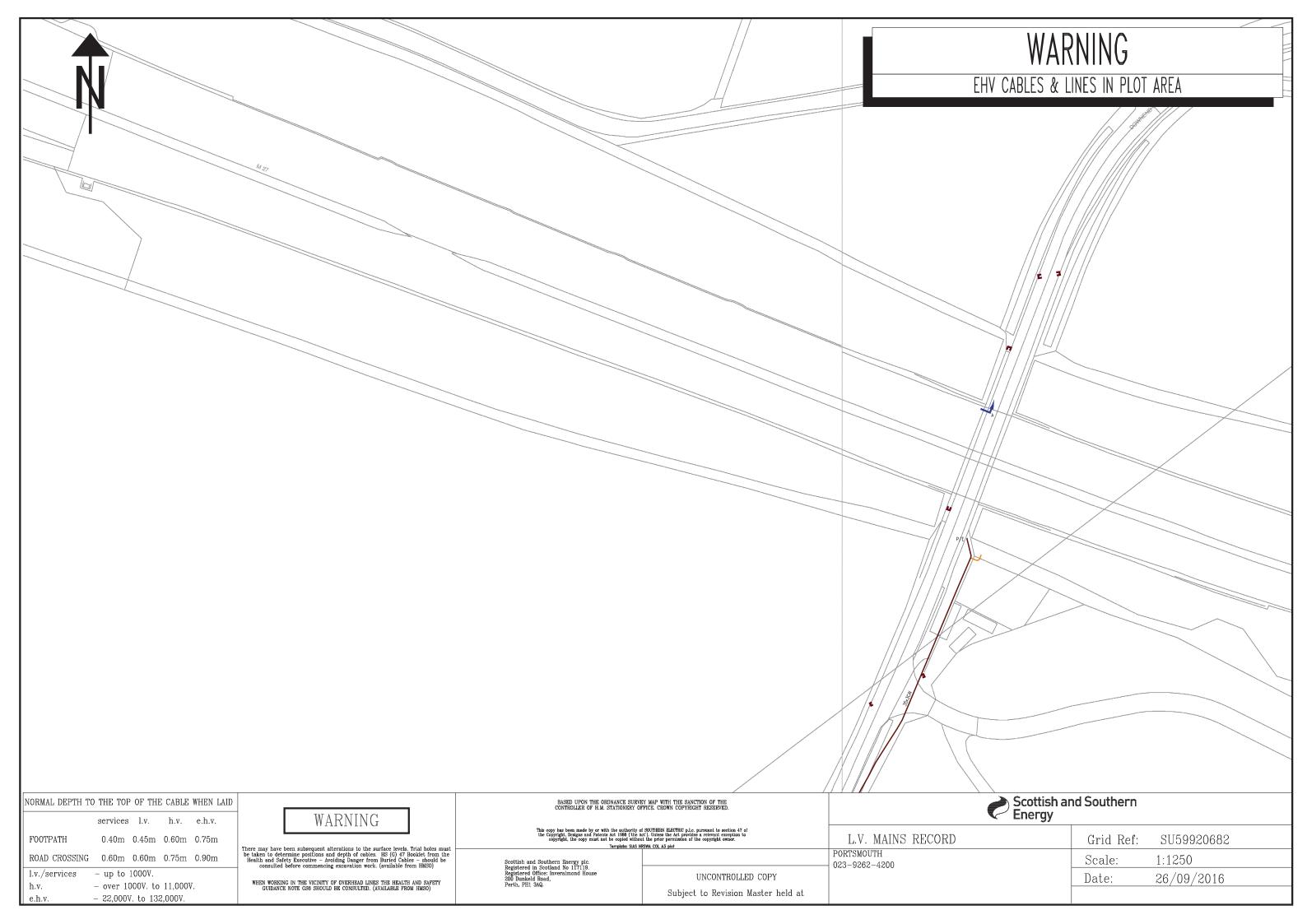
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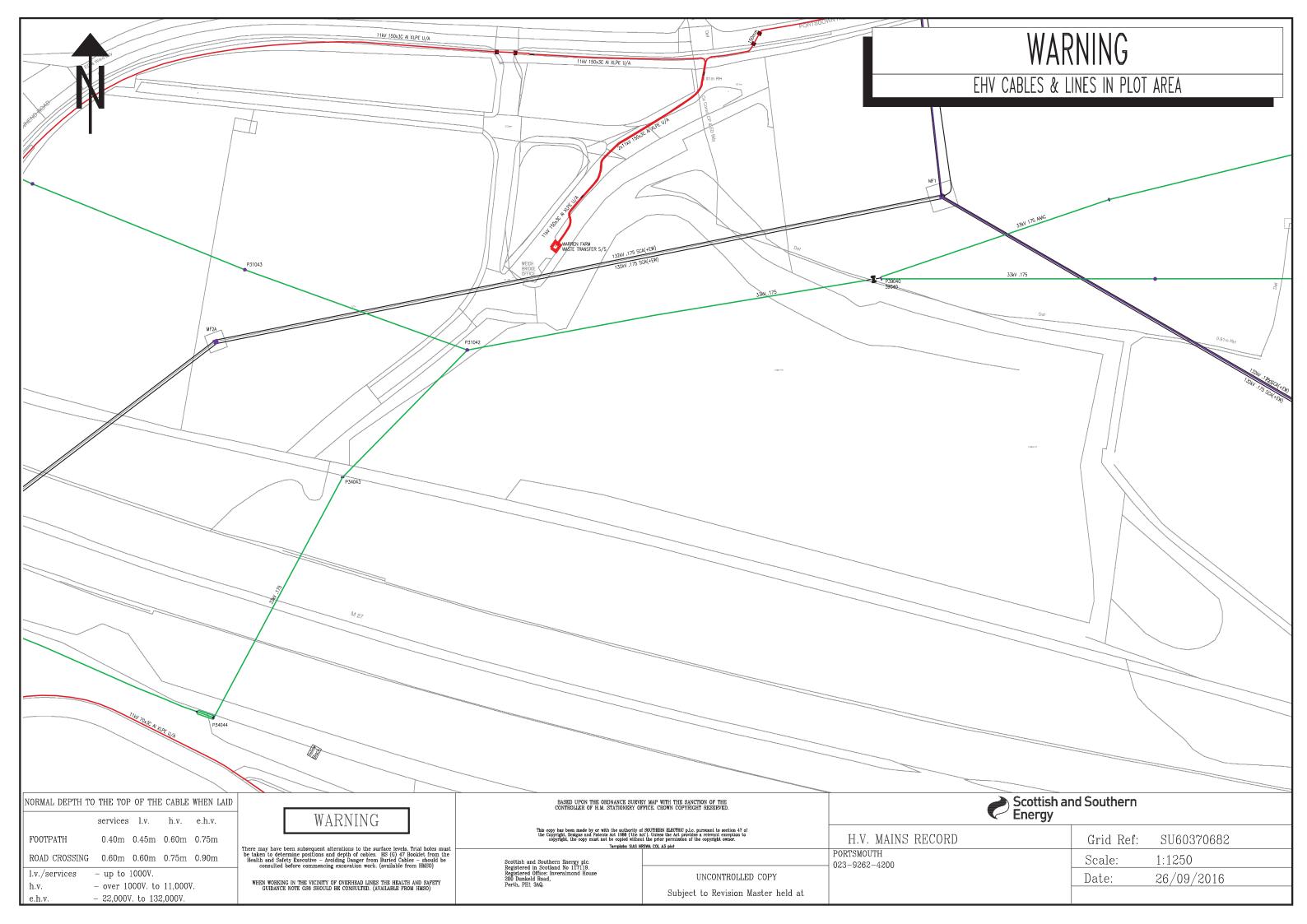
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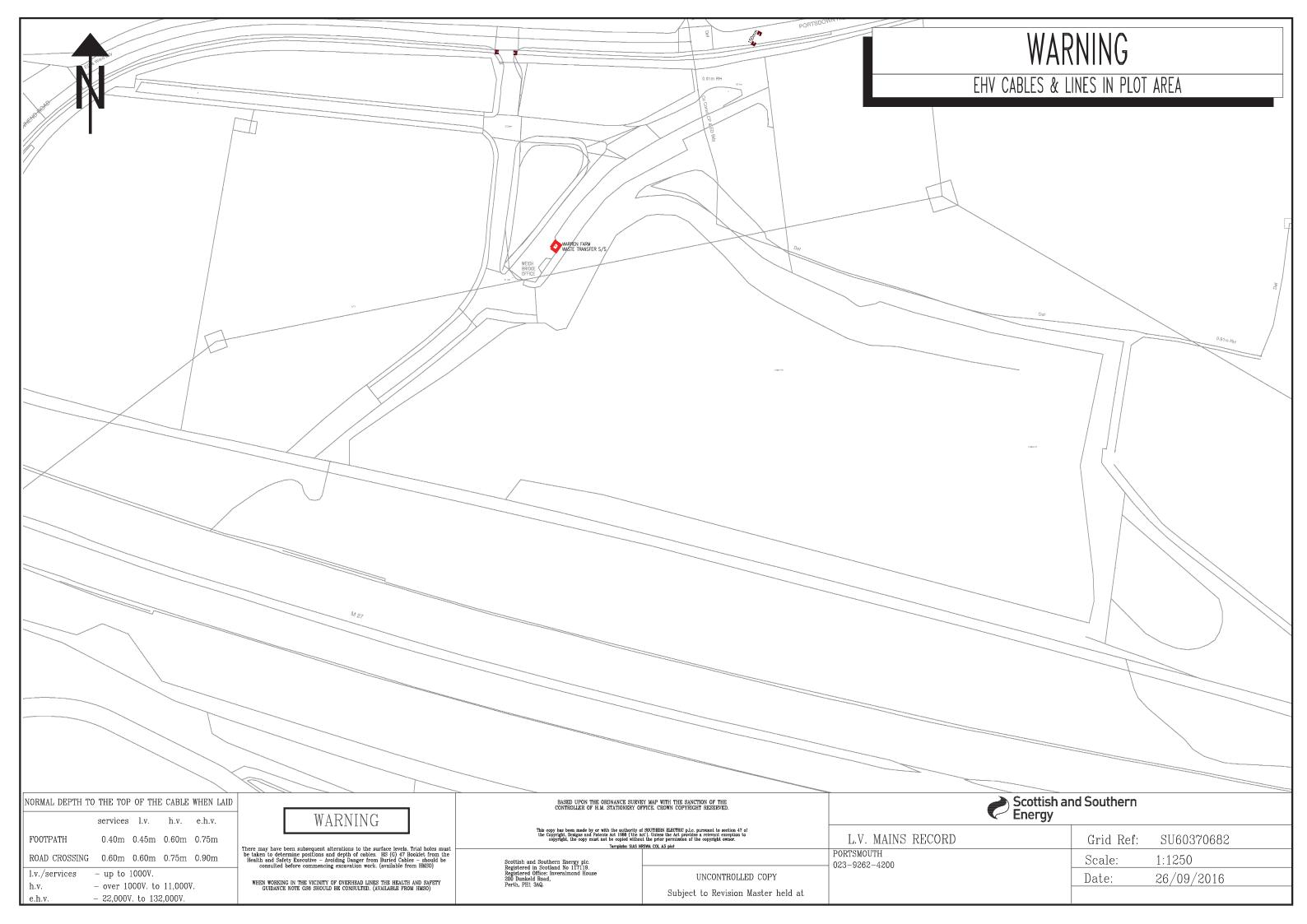
# **APPENDIX D**

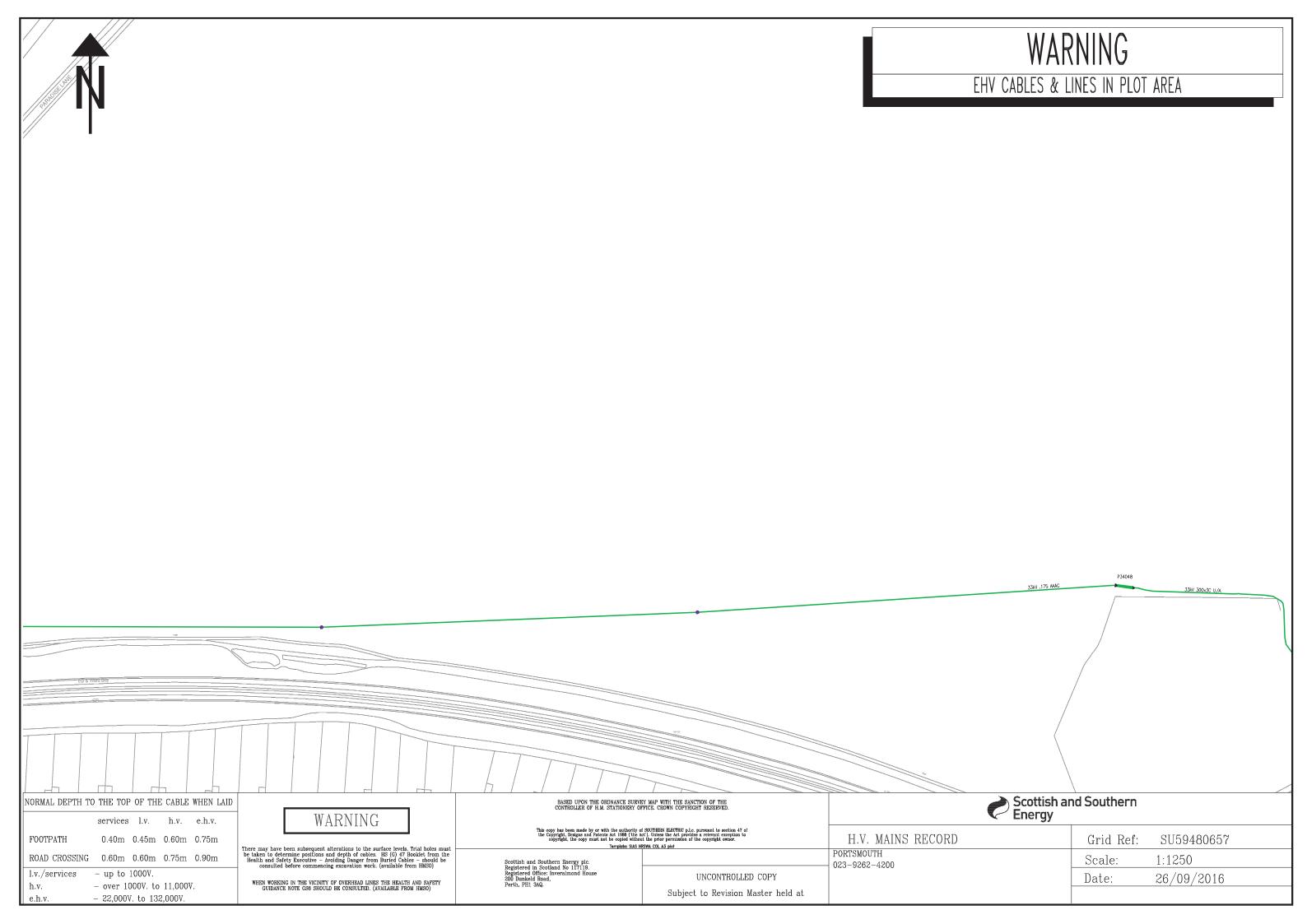
**Electricity Records** 













# WARNING

EHV CABLES & LINES IN PLOT AREA

