# $e^{10}ttwood$

# Kenley Campus, Victor Beamish Way

Utility Statement

engineering a better society

		Remarks:	For Information				
Revision:	P1	Prepared by:	Anthony Horswell MEng	Checked by:	Paul Chance CEng MICE	Approved by:	Paul Chance CEng MICE
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## One

#### **Terms of Reference**

#### 1.1 Introduction

Elliott Wood has been commissioned to produce a site-specific Utility Impact Assessment for the proposed development of 87 homes at Kenley Campus, Victor Beamish Way, Caterham, CR3 5FX.

The purpose of this report is to identify any significant utility constraints caused by existing utilities or in the provision of any new supplies to the proposed development.

## Two

#### **Existing Site**

#### 2.1 Site Location

The site is located to the north of Caterham in Surrey. Directly adjacent to the north of the site is Kenley Aerodrome and to the east lies undeveloped land forest land. The site is bounded by residential buildings to the south and west. Located within the middle of the site boundary is a school, which is not included as part of this planning application.

The approximate site area of the site is 4.4ha with an OS Grid Reference (approximately at the centre of the site) of 533166, 157341. Refer to Figure 1 for a site location plan.



Figure 1: Site Location (Development site boundary shown in red)

#### 2.2 Existing Development

Histrocially the site was used by the Royal Air Force (RAF) with various buildings and hard standing. Most of the buildings have since been demolished, althought much of the northern part of the site is still underlain by concrete surfacing.

Historical imagery from 2003 (found in figure 2) shows the extents of hard surfacing prior to overgrowth which is seen in more recent imagery. The southern part of the site is currently used as a sports field.



Figure 2: Historical mapping of the site.

## Three

#### **Proposed Development**

The proposed development will consist of the construction of 87 homes, with associated gardens, roads and driveways and landscaping areas.

An extract of the proposed development can be seen below as Figure 6 with more detailed plans in Appendix A.



Figure 5: Proposed Site Layout

## Four

#### **Summary of Utility Searches**

Service	Utility Company	Comments	
Foul Sewerage	Thames Water	Capacity confirmed	
Surface Water Sewerage	N/A	No assets in the area	
Potable Water	SES Water	Capacity confirmed	
Electricity	UKPN	Upgrades to the network required	
Gas	SGN	No records on site and / no connection proposed	
Telecommunications	Openreach / Virgin Media	Infrastructure is in the area	
Major and Hazardous Plant	SGN	None affected	

## **Five**

#### **Foul Sewerage**

#### **5.1** Existing Network

Thames Water (TW) is the foul sewerage undertaker for the area. According to Thames Water sewer mapping, there is no infrastructure located within the site boundary. Additionally, there are no Thames Water surface water sewers indicated to exist in the local area.

Beyond the site boundary there are foul sewers within the highways to the south. A 225mm diameter sewer flows along Salmons Lane West to the east and then flows along Salmons Lane. A further sewer, of unknown diameter, is located within Salmons Lane West but flows to the west.

There are 150mm diameter sewers within the development to the west of the site, which serve the properties in this area. This development drains south down Buxton Lane and connects to the sewer in Salmons Lane West, and continues flowing along Ninehams Road.

An extract of the Thames Water records are presented in full in **Appendix** B.

#### 5.2 Proposed Strategy

It would be proposed to connect to the 225mm diameter foul sewer located within Salmons Lane West between TW manhole reference 1101 and 2101. The sewer turns to flow along Salmons Lane and to the north.

The levels of the TW foul sewer are approximately 169.8mAOD which would allow the majority of the development to gravitate. However, due to the topography of the site, the northeast corner of the development would likely require a pumping station. A rising main would then connect to the onsite foul gravity network before connecting to the TW foul sewer. Any connection to TW sewers would be subject to S106 approval.

#### **5.3** Pre-Planning Enquiry

A pre-planning enquiry for the development has been submitted to TW. They have confirmed that they have no objections to the discharge of foul water into their network on the 225mm dia sewer located within Salmons Lane West, between TW 1101 and TW 2101. Their response is attached as Appendix C.

## Six

#### **Surface Water Drainage**

#### **6.1** Existing Network

TW asset records do not indicate any surface water infrastructure either within the site boundary or the local area. Given the geology of the area it is believed that most of the local area infiltrates to ground.

#### 6.2 Proposed Network

A separate surface water drainage strategy is included and discussed as part of the SuDS report 2230131-EWP-ZZ-XX-RP-C-0003.

## Seven

#### **Potable Water**

#### 7.1 Existing Network

SES is the regional water supply company for the area. Their asset records indicate infrastructure within the highways to the east, south and west of the

site, supplying the local area. However, no infrastructure is indicated to exist within the site boundary.

To the east, within Whyteleafe Hill, is a 3-inch cast iron pipe. This pipe is connected to a 150mm ductile iron pipe which is located to the south of the site within Salmons Lane West. The houses in the neighbouring development to the west are supplied by 100mm ductile iron pipework. SES records are presented in full in Appendix D.

#### 7.2 Proposed Strategy

A connection to the 150 DI main located within Salmons Lane West would be the most suitable connection point for the development. SES have confirmed that they have sufficient capacity within the network for this development with a fire flow of 68.5l/s off a new 90mm main. Their response is attached as Appendix E.

## **Eight**

#### **Electricity**

#### 8.1 Existing Network

The Distribution Network Operator (DNO) for the area is UKPN. UKPN records indicate low voltage (LV) above ground cables within the site boundary to the very north. The cable only exists within the site boundary for approximately 15m before exiting the site and serving the RAF buildings to the north.

Within the existing access road, Victor Beamish Avenue, there is both LV and services cables. The LV cables connect to the existing school with a connection to the west of the school and another cable follows the access road, which forms the southern boundary of the school, and connects on the eastern side. The service cable continues the whole way along Victor Beamish Avenue, exiting the site midway along the western boundary.

A substation is located to the very south of the site, adjacent to Salmons Lane. Connecting to the substation on the northern side is a large number of LV cables which occupy much of the southern area of the development. To the south the substation, outside of the site boundary, are high voltage (HV) cables which exist within Salmons Lane West and Salmons Lane.

UKPN records also indicate out of service cables connecting to the substation and in the northern half of the site, entering from the western boundary and connecting to the buildings which used to exist on the site.

UKPN records are attached as Appendix F.

#### 8.2 Proposed Strategy

UKPN have provided a budget estimate for the connection of 87 dwellings with a load requirement of 1MVA. They have estimated £312,000 based on a point of connection to the high voltage network located within Salmons Lane West.

Their response indicates that a substation will be required within or close to the site, and reinforcement will be necessary to provide the increased capacity. This study will be carried out following a request for a formal quotation. The UKPN budget estimate is attached as Appendix G

## Nine

#### **Gas Supply**

#### 9.1 Existing Network

SGN is the DNO for the area. SGN records for the site indicate the presence of low pressure (LP) and high pressure (HP) infrastructure in the local area. Within the site boundary, SGN infrastructure is situated at the junction of Salmons Lane West and Salmons Lane. From there, a LP pipeline runs up through the site, on the right-hand side of Victor Beams Avenue, and supplies the school.

The HP pipeline comes from Hayes Lane then heads south down Buxton Lane. Turning east the HP pipeline flows along Salmons Lane West, which is to the south of the site, and across to Whyteleaf Road where it then heads south. SGN records are attached as **Appendix H**.

#### 9.2 Proposed Network

The use of fossil fuels is to be minimised and therefore it is not proposed that this development will be connected to the gas network.

### Ten

#### **Telecommunications**

#### **10.1** Existing Network

Openreach have confirmed that they do not have telecommunications supply infrastructure within the proposed development.

However, both Virgin Media and Openreach supply the local area and the properties located along Salmons Hill West. OFCOM advise that standard, superfast and ultrafast broadband services are available in the area.

Mobile coverage in the area has been checked using online open source information. It was found that there is strong 4G outdoor coverage, which is suitable for superfast mobile internet, calls and texts.

#### 10.2 Proposed Network

Information supplied on Openreach and Virgin Media websites indicates that services are available in the area and would be able to supply the site.

Openreach's website indicates that ultrafast full fibre broadband, or Fibre to the Premises (FTTP), is being rolled out in the area and plans to be built between now and December 2026.

## Eleven

#### Major and Hazardous Plant

#### 11.1 Linesearch

The Linesearch major utilities database was consulted. Their response advised that the only Linesearch members with plant in the area were SES Water, SGN and UKPN, which have all been discussed above. No additional utility suppliers were identified.

Linesearch lists a number of asset owners who are not registered to Linesearch. They have all been individually contacted and have all confirmed that they do not have apparatus within the site boundary.

The Linesearch response is attached as Appendix I.

#### 11.2 HSE

The HSE on-line tool was used. The response shows that the site does not lie within the consultation distance (CD) of a major hazard or major accident hazard pipelines, with exception of SGN which is discussed in Section 9.

The HSE response is included in Appendix J.

### **Twelve**

#### Conclusion

Elliott Wood has been commissioned to produce a site-specific Flood Risk Assessment for the proposed development of 87 homes at Kenley Campus, Victor Beamish Way, Caterham, CR3 5FX.

Each utility has been examined to assess the potential for supplying the proposed development and it is considered that sufficient capacity exists or can be provided for all utility services.

# elliottwood

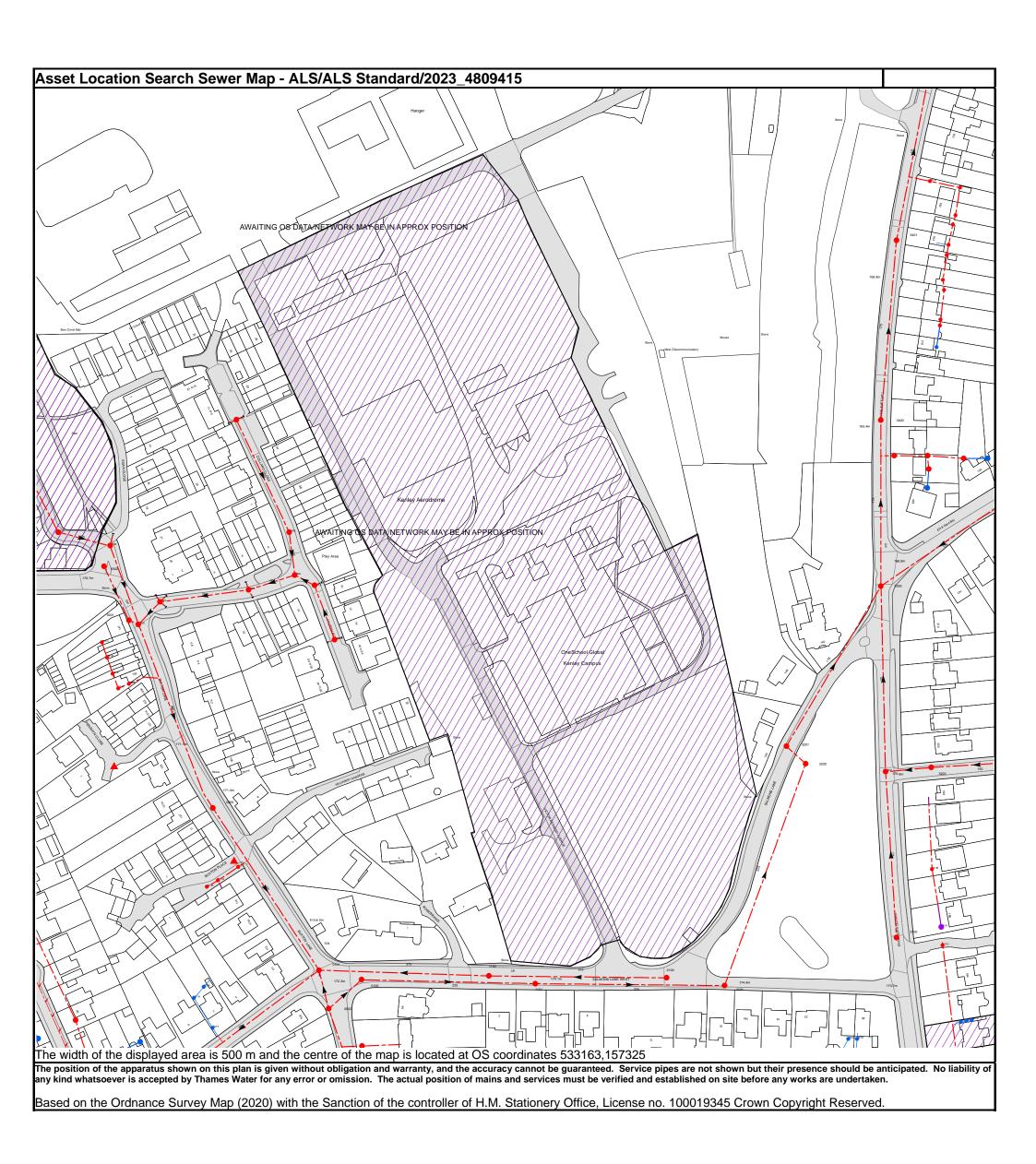
## **Appendices**

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A Proposed Development



B Thames Water Records



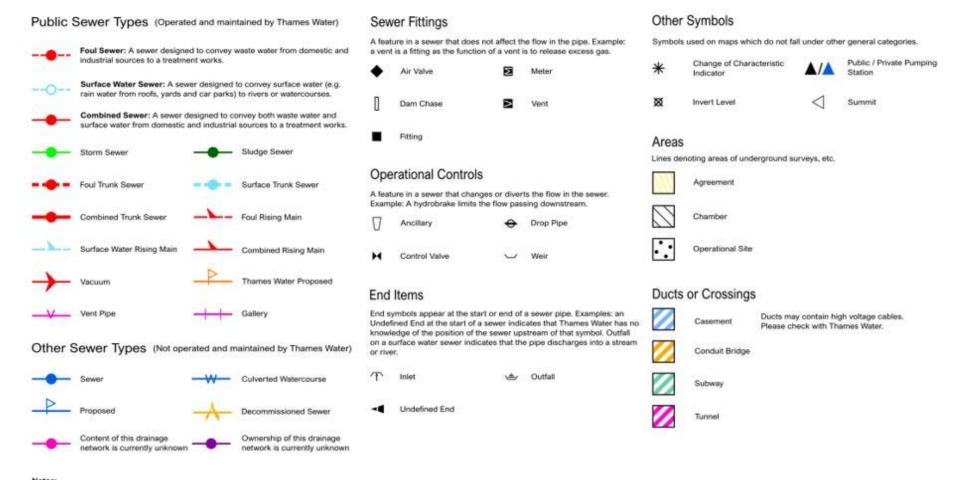
<u>Thames Water Utilities Ltd</u>, Property Searches, PO Box 3189, Slough SL1 4W, T 0800 009 4540 E searches@thameswater.co.uk I www.thameswater-propertysearches.co.uk

Manhole Reference	Manhole Cover Level	Manhole Invert Level
931D	171.02	169.77
921C	n/a	n/a
9302	170.79	169.6
931B	170.79	169.64
9201	n/a	n/a
9200	171.14	169.33
9301	171.47	169.72
9301 041A	172.86	170.77
031A		
	172.34	170.02
031B	172.81	170.42
0302	172.73	170.23
021A	172.85	170.33
0200	171.06	168.75
921F	n/a	n/a
921G	n/a	n/a
921E	n/a	n/a
921D	n/a	n/a
90AI	n/a	n/a
90BA	n/a	n/a
90BI	n/a	n/a
911A	n/a	n/a
011B	n/a	n/a
011D	n/a	n/a
001F	n/a	n/a
011A	n/a	n/a
011C	n/a	n/a
0101	172.16	167.86
3400	n/a	n/a
3401	n/a	n/a
351A	n/a	n/a
34BF	n/a	n/a
34BE	n/a	n/a
34BD	n/a	n/a
34BB	n/a	n/a
34BC	n/a	n/a
34BA	n/a	n/a
34BI	n/a	n/a
35AF	n/a	n/a
35AE	n/a	n/a
35AD	n/a	n/a
0002	172.17	170.38
0201	172.94	170.48
0100	172.47	170.36
1100	173.72	170.47
1101	173.89	169.87
2100	174.24	172.79
2101	174.22	169.69
3201	171.17	169.19
3200 3300	171.57	169.25
3300	n/a	n/a
3202	n/a	n/a
33AH	n/a	n/a
3100	n/a	n/a
33AJ	n/a	n/a
33AG	n/a	n/a
33AE	n/a	n/a
3203	n/a	n/a
311B	n/a	n/a
311A	n/a	n/a
311C	n/a	n/a
301F	n/a	n/a
33BA	n/a	n/a
301H	n/a	n/a
301G	n/a	n/a
43BD	n/a	n/a
0003	n/a	n/a
301D	n/a	n/a
301C	n/a	n/a

The position of the apparatus shown on this plan is given without obligation and warranty, and the accuracy cannot be guaranteed. Service pipes are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Thames Water for any error or omission. The actual position of mains and services must be verified and established on site before any works are undertaken.



#### Asset Location Search - Sewer Key



- 1) All levels associated with the plans are to Ordnance Datum Newlyn.
- 2) All measurements on the plan are metric.
- 3) Arrows (on gravity fed sewers) or flecks (on rising mains) indicate the direction of flow.
- Most private pipes are not shown on our plans, as in the past, this information has not been recorded.
- 5) 'na' or '0' on a manhole indicates that data is unavailable.
- 6) The text appearing alongside a sewer line indicates the internal diameter of the pipe in millimeters.
- Text next to a manhole indicates the manhole reference number and should not be taken as a measurement. If you are unsure about any text or symbology, please contact Property Searches on 0800 009 4540.

C Thames Water Pre-Development Response



Paul Chance

Elliott Wood Partnership Ltd 241 The Broadway Wimbledon London SW19 1SD



16 June 2023

#### **Pre-planning enquiry: Confirmation of sufficient capacity (Foul Only)**

Site: KENLEY CAMPUS, VICTOR BEAMISH AVENUE, CATERHAM, CR3 5FX

Dear Paul.

Thank you for providing information on your development.

Proposal is for 88 new dwellings

Proposed foul water discharge via gravity into the existing 225mm foul water sewer between existing manholes TQ3357 1101 and 2101
Surface water discharge via SuDS

We have completed the assessment of the foul water flows and surface water run-off based on the information submitted in your application with the purpose of assessing sewerage capacity within the existing Thames Water sewer network.

#### **Foul Water**

If your proposals progress in line with the details you've provided, we're pleased to confirm that there will be sufficient sewerage capacity in the adjacent foul water sewer network to serve your development.

This confirmation is valid for 12 months or for the life of any planning approval that this information is used to support, to a maximum of three years.

You'll need to keep us informed of any changes to your design – for example, an increase in the number or density of homes. Such changes could mean there is no longer sufficient capacity.

#### **Surface Water**

In accordance with the Building Act 2000 Clause H3.3, positive connection of surface water to a public sewer will only be consented when it can be demonstrated that the hierarchy of disposal methods have been examined and proven to be impracticable. Before we can consider your surface water needs, you'll need written approval from the lead local flood authority that you have followed the sequential approach to the disposal of surface water and considered all practical means.

When developing a site, policy SI 13 of the London Plan states "Development proposals should aim to achieve greenfield run-off rates and ensure that surface water run-off is managed as



close to its source as possible. There should also be a preference for green over grey features, in line with the following drainage hierarchy:"

The disposal hierarchy being:

- 1. rainwater use as a resource (for example rainwater harvesting, blue roofs for irrigation)
- 2. rainwater infiltration to ground at or close to source
- 3. rainwater attenuation in green infrastructure features for gradual release (for example green roofs, rain gardens)
- 4. rainwater discharge direct to a watercourse (unless not appropriate)
- 5. controlled rainwater discharge to a surface water sewer or drain
- 6. controlled rainwater discharge to a combined sewer

Where connection to the public sewerage network is still required to manage surface water flows, we will accept these flows at a discharge rate in line with CIRIA's best practice guide on SuDS or that stated within the sites planning approval.

Please see the attached 'Planning your wastewater' leaflet for additional information.

#### **Source Protection Zone**

The development site boundary falls within a Source Protection Zone for groundwater abstraction. These zones may be at particular risk from polluting activities on or below the land surface. To prevent pollution, the Environment Agency and Thames Water (or other local water undertaker) will use a tiered, risk-based approach to regulate activities that may impact groundwater resources, this may potentially affect your drainage or surface water strategies where deep or infiltration systems are proposed. The applicant is encouraged to read the Environment Agency's approach to groundwater protection (available at <a href="https://www.gov.uk/government/publications/groundwater-protection-position-statements">https://www.gov.uk/government/publications/groundwater-protection-position-statements</a> and may wish to discuss the full implications for their development with a suitably qualified environmental consultant.

#### What happens next?

Please make sure you submit your connection application, giving us at least 21 days' notice of the date you wish to make your new connection/s.

If you have any further questions, please contact me on 0774 764 6498.

Kind Regards,

Long Tran

Developer Services – Adoptions Engineer, Sewer Adoptions Team

Tel: 0800 009 3921

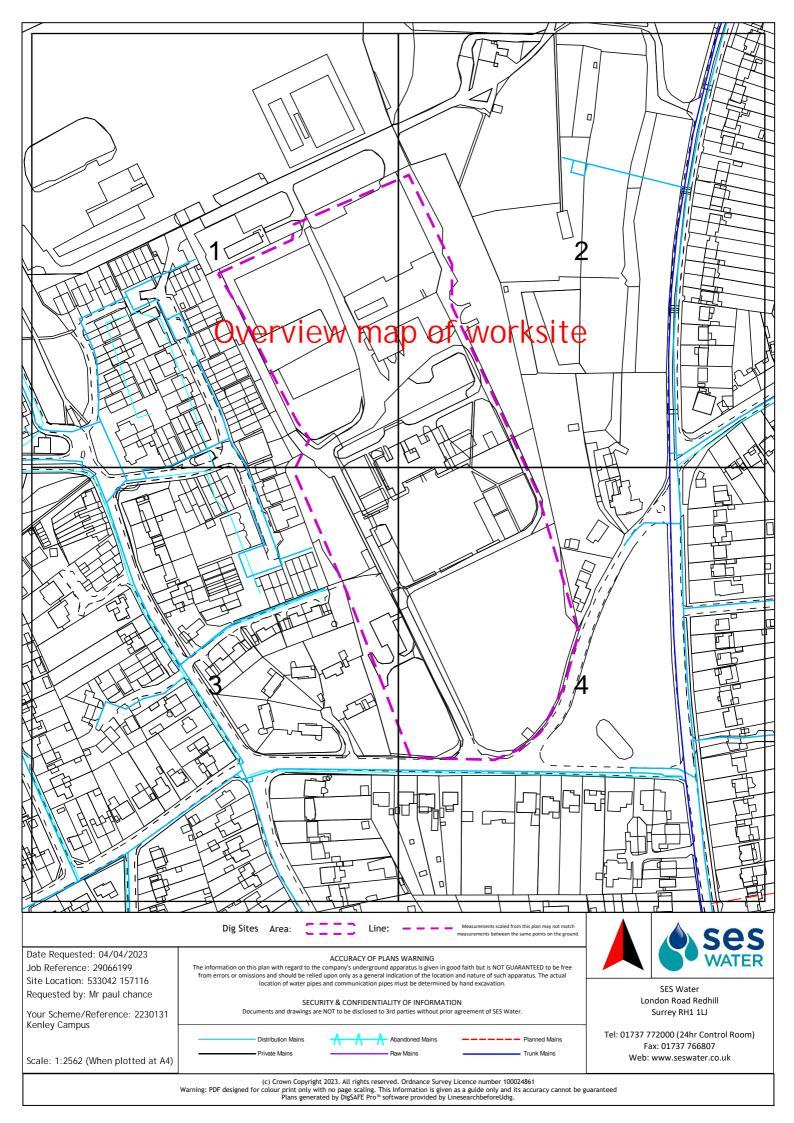
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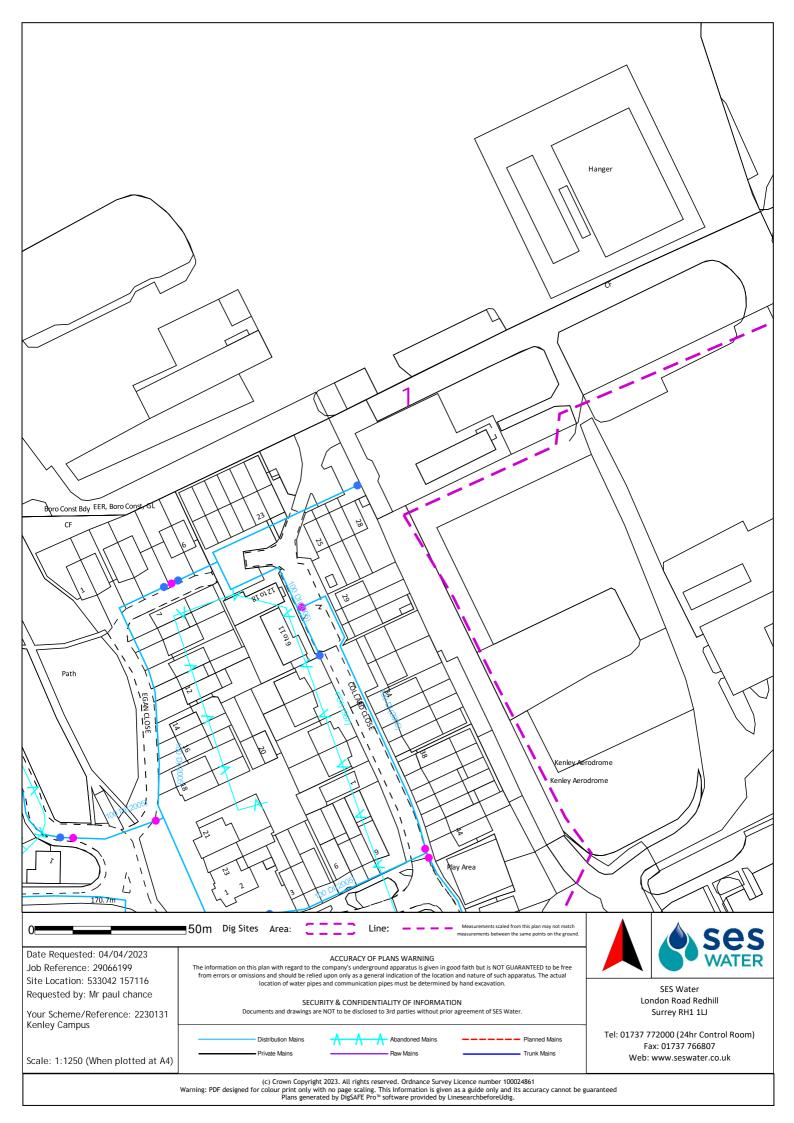
Get advice on making your sewer connection correctly at connectright.org.uk

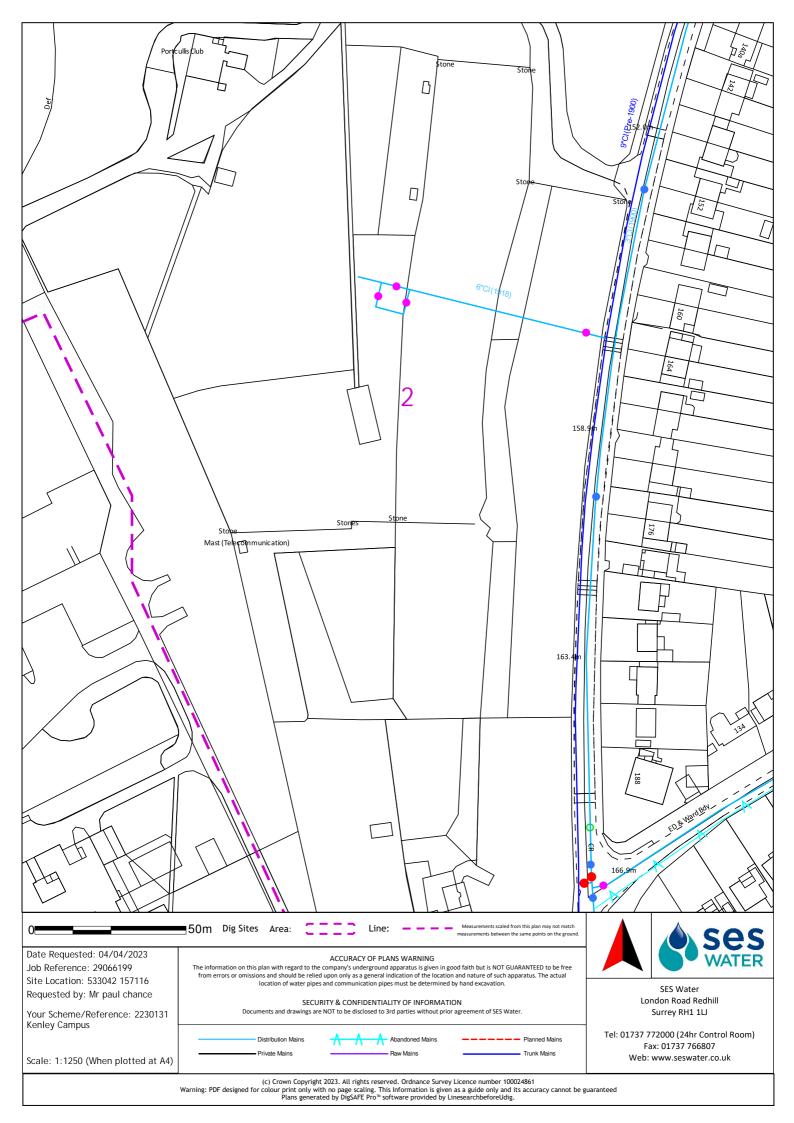
Clearwater Court, Vastern Road, Reading, RG1 8DB

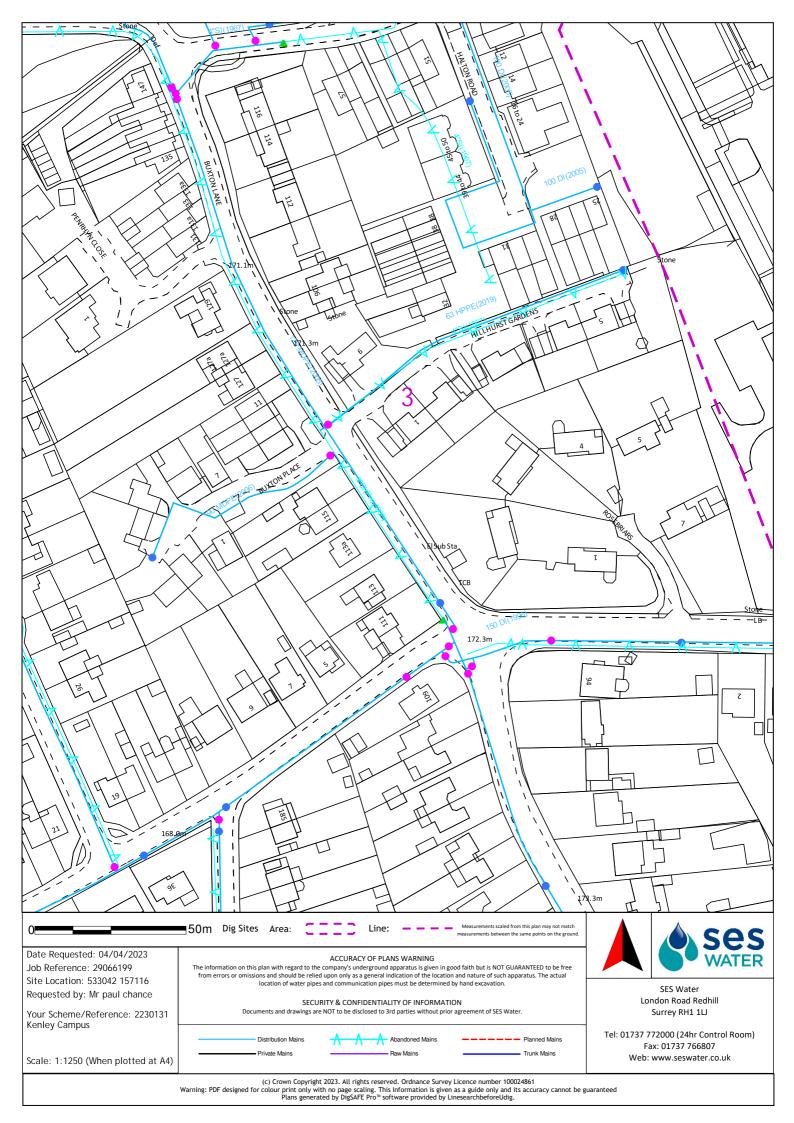
Find us online at developers.thameswater.co.uk

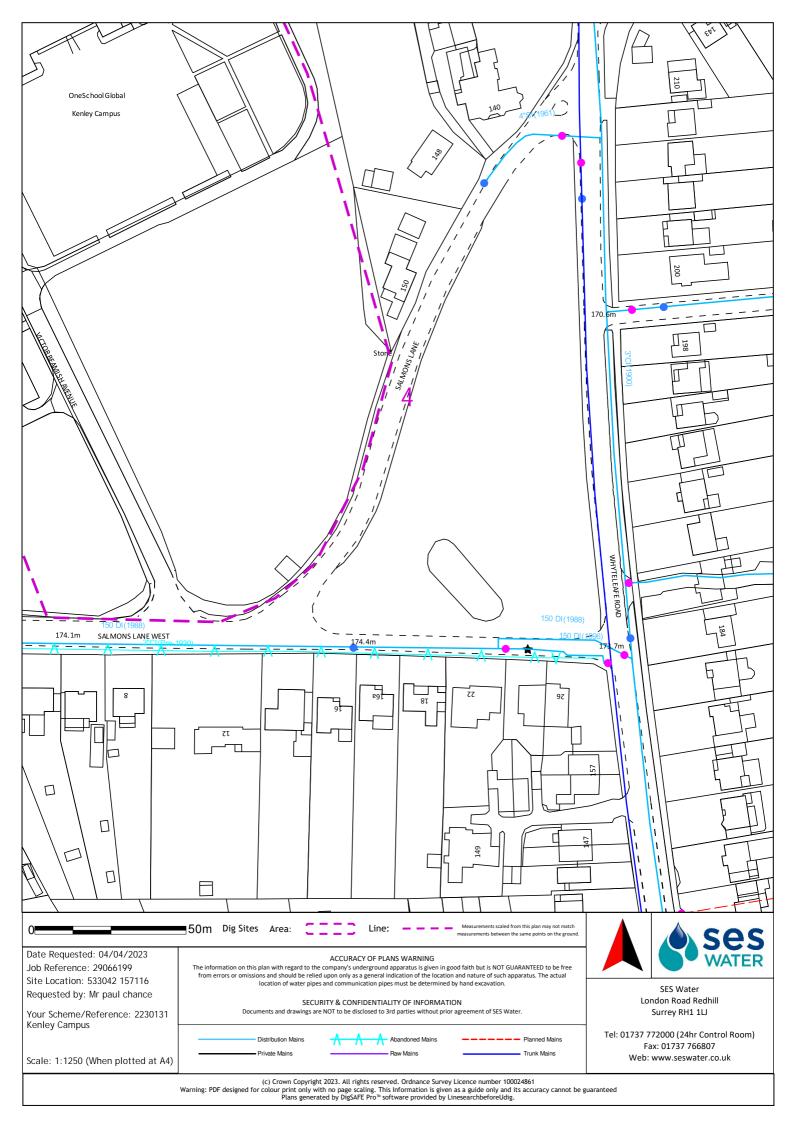
D SES Records











E SES Capacity Response

#### **Anthony Horswell**

From: Debbie Bower < Debbie.Bower@seswater.co.uk>

**Sent:** 12 May 2023 11:24

To: Joe Roche

**Cc:** p.chance@elliottwood.co.uk

**Subject:** [Elliott Wood: 2230131] - Capacity Check

Categories: Scanned by Gekko

Dear Joe,

I apologise for the delay in sending you this information.

I have received the network capacity results and I can confirm we have capacity in our network for this Development with a fire flow of 68.51l/s off of a new 90mm HPPE Barrier main.

If you require anything else from us please let me know.

Kind regards

Debbie

Debbie Bower Developer Services Network Advisor SES Water

Tel: 01737772000 Option 3 - Agent 2 - (Mon-Fri 09:00 - 15:00)

Email: developerservices@seswater.co.uk

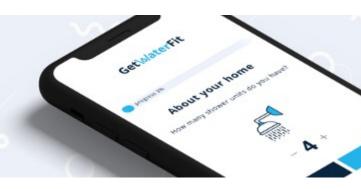
Due to the increased demand on applications our phone line is currently open Monday to Friday between 9am and 3pm. Please email us on developerservices@seswater.co.uk or please call us back within these times on 01737 772000.

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