

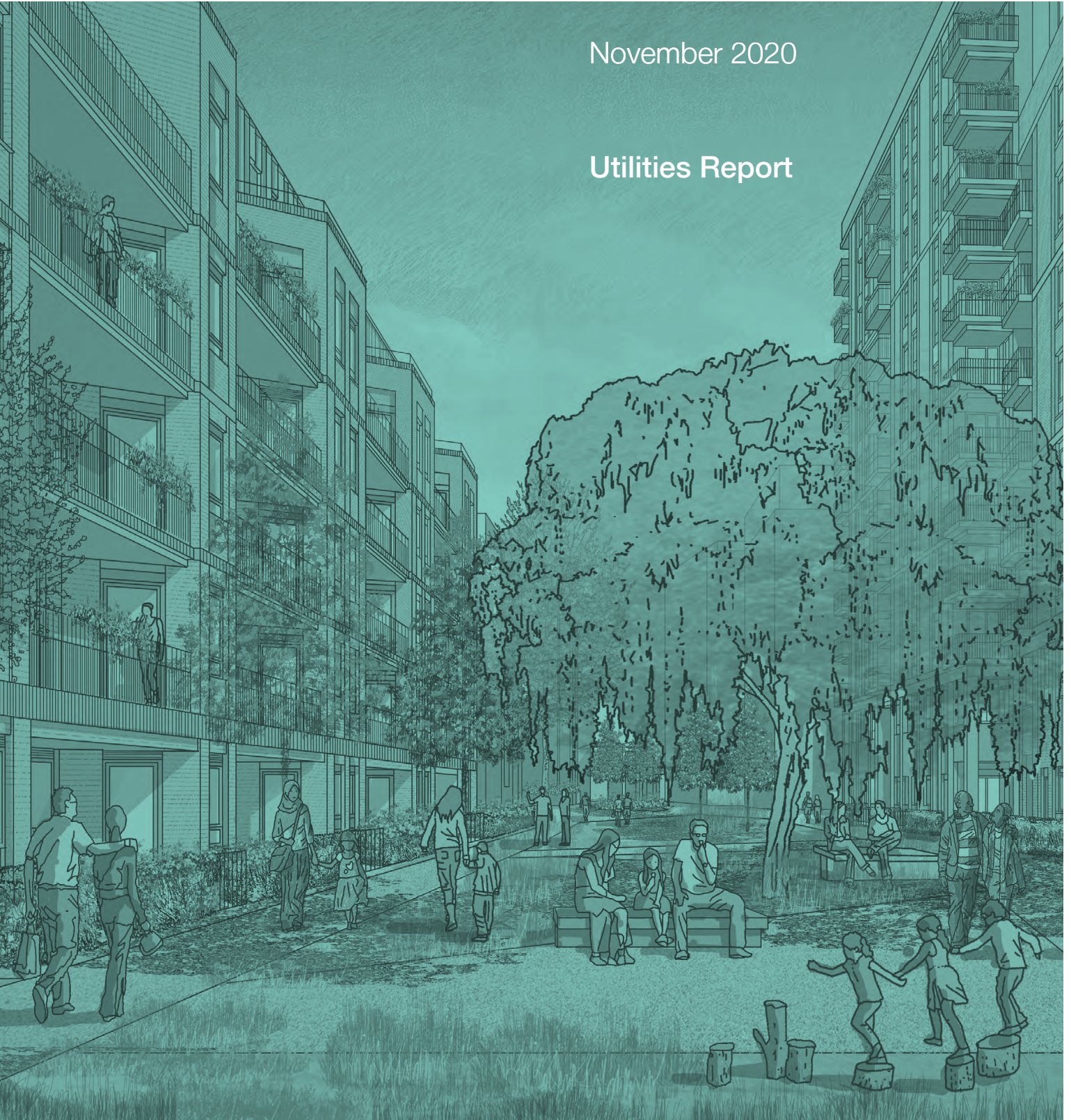
CAMBRIDGE ROAD ESTATE – PLANNING APPLICATION 20/02942/FUL

UTILITIES REPORT

****NO AMENDMENT TO DOCUMENT SINCE SUBMISSION OF
APPLICATION IN NOVEMBER 2020 – ORIGINAL SUBMISSION DOCUMENT****

November 2020

Utilities Report



The Applicant

Cambridge Road (Kingston) Ltd

c/o Countryside Properties
Aurora House
71-75 Uxbridge Road
Ealing
London W5 5SL

The project site

Cambridge Road Estate Project hub

2 Tadlow
Washington Road
Kingston Upon Thames
Surrey
KT1 3JL

Application forms

Covering letter

Application Form and Notices

CIL Additional Information Form

Design proposals

Planning Statement

Design and Access Statement

- Vol.1 - The Masterplan
- Vol.2 - The Detailed Component

The Masterplan

- Parameter Plans
- Illustrative Plans
- Design Guidelines

Phase 1 Architecture and Landscape

- GA Plans, Sections and Elevations

Supporting information

Statement of Community Involvement

Rehousing Strategy

Financial Viability Appraisal

Draft Estate Management Strategy

Transport Assessment

Phase 1 Travel Plan

Car Parking Management Plan

Servicing and Delivery Management Plan

Construction Logistics Plan

Construction Method Statement and Construction
Management Plan

Sustainable Design and Construction Statement
(Including Circular Economy Statement)

Environmental Statement

- Non Technical Summary
- Vol.1 – Technical Reports
- Vol.2 – Technical Appendices
- Vol.3 - Townscape and Visual Impact
Assessment

Energy Statement (Including Overheating

Assessment and Whole Life Cycle Assessment)

Daylight and Sunlight

Internal Assessment of the Detailed Component

External Assessment of the Illustrative Masterplan

Extraction and Ventilation Strategy

Noise Impact Assessment

Arboricultural Report and Tree Conditions Survey

Arboricultural Impact Assessment & Method
Statement

Preliminary Ecological and Bat Survey Report

Biodiversity Net Gain Assessment

Archaeology and Heritage Assessment

Ground Conditions Assessment

Utilities Report

Flood Risk Assessment

Phase 1 Drainage Statement

Fire Strategy Report

Accessibility Audit

Health Impact Assessment

Equalities Impact Assessment

Utility Company Services Report

for:

Cambridge Road Estate, Phase 1
Cambridge Road
Kingston Upon Thames
KT1 3JZ

On behalf of Cambridge Road (RBK) LLP

4th September 2020



COUNTRYSIDE
Places People Love

18084-AWA-ZZ-XX-RP-ME-0001-Utility Company Service Report
Revision: P02

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Issue Register

Project: Cambridge Road Estate, Phase 1

Job Number: 18084

Document: Utility Services Report

This report has been authorised by:

Status	Rev	Details of Issue	Date	Author	Checked
S0	P01	Preliminary Issue	23/03/20	SS	DM
S0	P02	Updated to revised accommodation schedule	04/09/20	SS	DM
S0	P03	Updated to comments	29/10/20	SS	DM

S3 Draft

S0 Preliminary

D2 Tender

A1 Contract

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1.0 Introduction

This report has been prepared to comment on and identify details obtained from the Lightsource Utilities Survey reference CSP-CRE-LSS-XX-SU-GU-UTLY-0001-A1-C01 with respect to the proposed development of the Cambridge Road Estate, Phase 1

The enclosed information provides details, contact names, addresses for each relevant Utility Company, supporting drawings to identify existing on and off-site services, and a summary of site requirements.

Please note, Utility Companies sometimes apply a charge associated with new supplies / connection. These charges will be forwarded to the applicant at the time of initial application for payment.

Site Plan



2.0 Description of Works

2.1 Electricity

Blocks C1-C3

There is an existing substation within 1 to 60 Madingley which supplies the blocks to be demolished and also other properties that will need to be kept live. To keep the sub-station, a HV diversion will be required along Washington Road. The existing properties on site will need to be disconnected to allow for the new development.

Blocks E1-E6 and Block B

There is an extensive on-site network of mains and individual connections to

the existing properties. The on-site supplies and network is to be cutback to a point on Washington Road.

The total load for Phase 1 is approximately 2400kVa, this includes for an Energy Centre within E block and also car-charging. Although the full load for the Energy Centre is not required straight away infrastructure should be allowed for. It is expected a number of sub-stations will be required and due to the increase in loads significant off-site reinforcement will be required.

2.2 British Telecom

Blocks C1-C3

The network feeding this area is supplied from Hawks Road with a number of ducts and chambers. These will need to be cut back for the new development and to allow for the southern part of the site a diversion will need to be put in place along Washington Road.

Blocks E1-E6 and Block B

This area has connections from both the north and the south. The ducts and services will need to be cut back allow for the new development

2.3 Virgin Media

The survey drawings and record drawings do not indicate a cable TV network on either of the Phase 1 areas although Virgin Utility Plans indicated services on site. There will need to be a diversion to allow 1-60 Madingely to remain live and existing properties to be demolished will require disconnection.

2.4 **Water**

Blocks C1-C3

There is an existing 4" main along Washington Road which feeds services across the existing site and needs to be maintained. Although not shown on the survey plans. There may be individual service connections that will need disconnecting. Block C will contain a domestic cold water tank and booster set along with individual connections for the Community Centre and commercial spaces. Dependant on the fire strategy requirements, a supply for a commercial sprinkler set may also be required.

Blocks E1-E6 and Block B

There is an extensive on-site network of mains and individual connections to the existing properties. The on-site supplies and network is to be cutback to a point on Washington Road.

It is expected that each block will have a cold water tank and booster set. This will supply water to all dwellings within the block. In addition to the domestic supplies sprinklers will be provided to the domestic properties and potentially commercial supplies. Due to the increase in capacity offsite reinforcement is expected.

2.5 **Gas**

Blocks C1-C3

There is an on-site network that runs around and through the site. To maintain supplies to 1 to 60 Madingley, a gas diversion will be required around Blocks C1-C3 along Washington Road.

Blocks E1-E6 and Block B

There is an extensive on-site network of mains and individual connections to the existing properties. The on-site supplies and network is to be cutback to a point on Washington Road

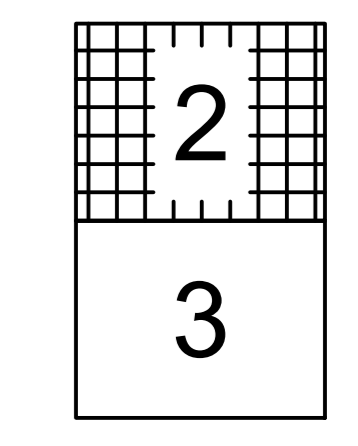
The Energy Strategy is for temporary boilers to serve the development until the offsite connection from the RBKUT District Energy Network is available. The required gas connection will be a substantial size, in excess of 6.8MW; at this size, it is likely that off-site reinforcement will be required.

3.0 Service Fact Sheets

Utility Service	Service Company	Address	Diversion	Existing Services
High/Low Voltage Electricity	UKPN	UKPN Newington House 237 Southwark Bridge House Waterloo London SE1 6NP	See Description	See Description
Telecommunications	British Telecom	BT Openreach 123 Judd Street London WC1H 9NP	See Description	See Description
Cable TV	Virgin Media	Virgin Media Strathclyde Business Park 1 Dove Wynd Bellshill ML4 3AL	See Description	See Description
Gas	Southern Gas Networks	Southern Gas Networks St. Lawrence House Station Approach Horley RH6 9HJ	See Description	See Description
Water	Thames Water	Thames Water Clearwater Court Vastern Road Reading RG1 8DB	See Description	See Description

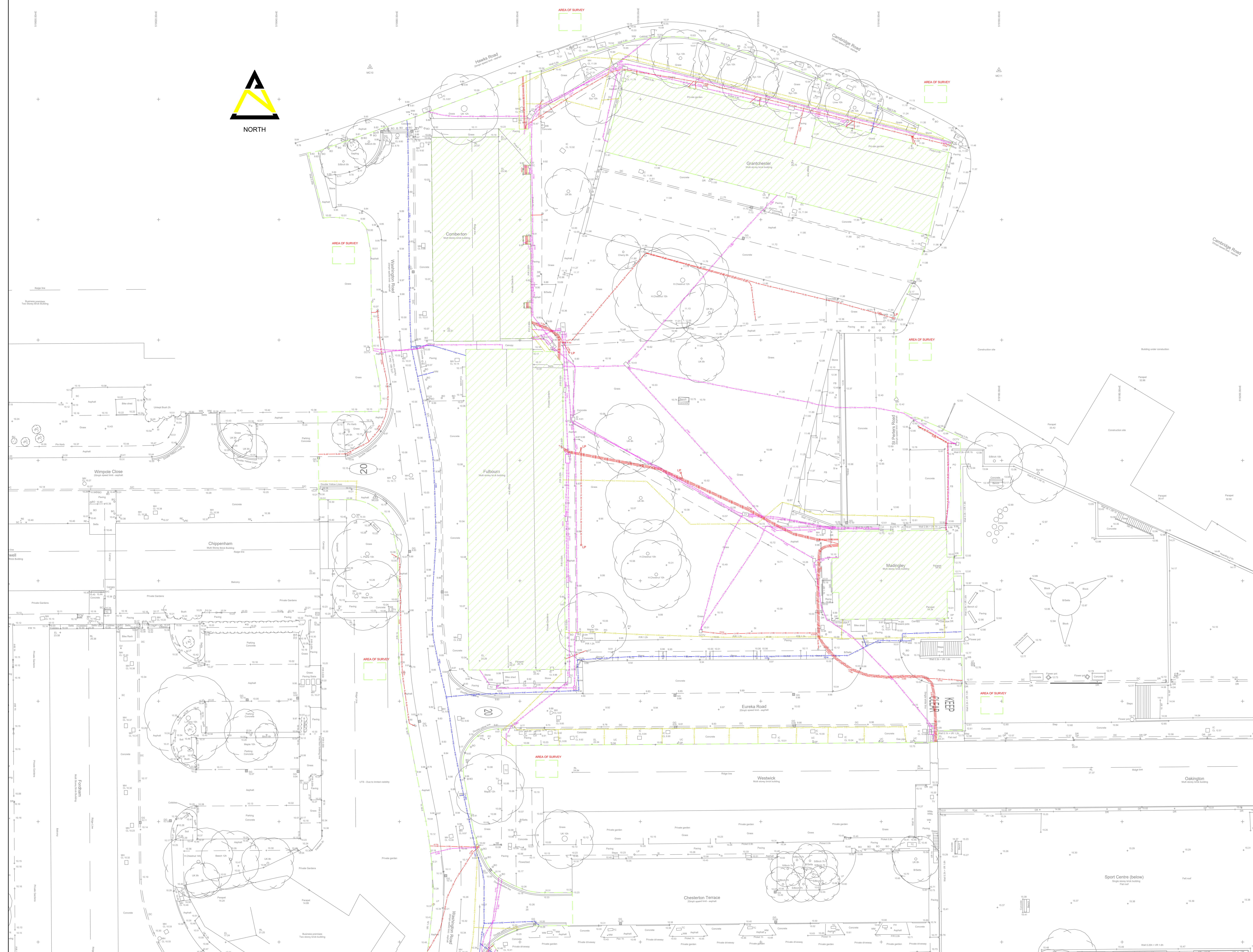
Appendix One - Existing Site Plan with existing Utilities Blocks C1-C3

SHEET PLAN



LEGEND

- AREA OF SURVEY ▭
- AREA UNABLE TO SURVEY ▨
- TRENCH SCAR / SURFACE SCAR ▨
- DEPTH BELOW SURFACE -0.40d (m)
- DIAMETER OF PIPE Ø100mm
- UTILITY CONFIDENCE LEVEL xx
- END OF TRACE EoT
- POT END
- DISCONNECTION POINT
- EXTRA HIGH VOLTAGE ELECTRIC — EHV-xx
- HIGH VOLTAGE ELECTRIC — HV-xx
- LOW VOLTAGE ELECTRIC — LV-xx
- STREET LIGHTING — SL-xx
- TRAFFIC CONTROL — TC-xx
- GAS — G-xx
- INTERMEDIATE PRESSURE GAS — IPG-xx
- MEDIUM PRESSURE GAS — MPG-xx
- HIGH PRESSURE GAS — HPG-xx
- WATER — W-xx
- BRITISH TELECOM — BT-xx
- VIRGIN MEDIA — VM-xx
- CLOSED CIRCUIT TV — CCTV-xx
- ANALOGUE TV — ATV-xx
- FUEL PIPELINE — F-xx
- OIL PIPELINE — O-xx
- SURFACE WATER DRAINAGE — SD-xx
- FOUL WATER DRAINAGE — FD-xx
- COMBINED WATER DRAINAGE — CD-xx
- PUMPED WATER DRAINAGE — PD-xx
- UNKNOWN UTILITY — U-xx
- HEATING PIPES — HTG-xx



C03		
C02	PAS 128:2014 Type B Survey site survey completed on 29th October 2019	29.10.2019
No.	REVISIONS:	DATE:

THE DETAIL SHOWN ON THIS DRAWING IS BASED ON THE BEST AVAILABLE INFORMATION AT THE TIME THE SURVEY WAS CARRIED OUT. HOWEVER, ALL POSITIONS MUST BE REGARDED AS APPROXIMATE. THE ACTUAL POSITION OF ALL OPERATORS MUST BE ESTABLISHED BY ON-SITE INSPECTION. LIGHTSOURCE SURVEYS LIMITED EXCEPT NO LIABILITY FOR ERRORS OR OMISSIONS.

Lightsource Surveys Ltd
 Technical Surveying Specialists.

2 Fambridge Road Dagenham Essex RM8 1NS
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CLIENT:
COUNTRYSIDE PROPERTIES PLC

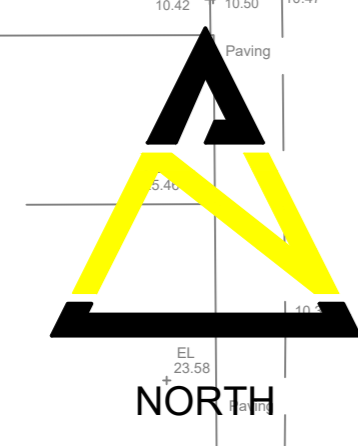
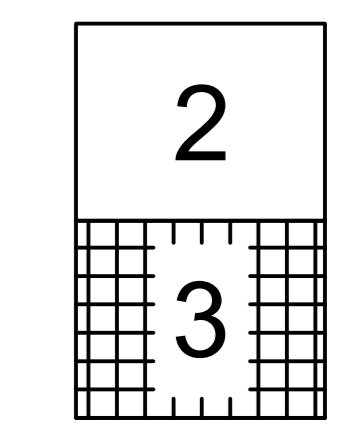
LOCATION:
 CAMBRIDGE ROAD ESTATE
 KINGSTON-UPON-THAMES

TITLE:
 UTILITY IDENTIFICATION SURVEY
 SITE PLAN

Sheet 2 of 3	SCALE: 1:200	DRAWN: PL	DATE: 29.10.2019
	SURVEYED: PS	CHECKED: PS	DATE: 29.10.2019

Appendix Two - Existing Site Plan with existing Utilities Blocks E1-C6

SHEET PLAN



LEGEND

- AREA OF SURVEY ▨
- AREA UNABLE TO SURVEY ▨
- TRENCH SCAR / SURFACE SCAR ▨
- DEPTH BELOW SURFACE -0.40d (m)
- DIAMETER OF PIPE Ø100mm
- UTILITY CONFIDENCE LEVEL xx
- END OF TRACE EoT
- POT END ┌
- DISCONNECTION POINT ┌┐
- EXTRA HIGH VOLTAGE ELECTRIC —EHV-xx
- HIGH VOLTAGE ELECTRIC —HV-xx
- LOW VOLTAGE ELECTRIC —LV-xx
- STREET LIGHTING —SL-xx
- TRAFFIC CONTROL —TC-xx
- GAS —G-xx
- INTERMEDIATE PRESSURE GAS —IPG-xx
- MEDIUM PRESSURE GAS —MPG-xx
- HIGH PRESSURE GAS —HPG-xx
- WATER —W-xx
- BRITISH TELECOM —BT-xx
- VIRGIN MEDIA —VM-xx
- CLOSED CIRCUIT TV —CCTV-xx
- ANALOGUE TV —ATV-xx
- FUEL PIPELINE —F-xx
- OIL PIPELINE —O-xx
- SURFACE WATER DRAINAGE —SD-xx
- FOUL WATER DRAINAGE —FD-xx
- COMBINED WATER DRAINAGE —CD-xx
- PUMPED WATER DRAINAGE —PD-xx
- UNKNOWN UTILITY —U-xx
- HEATING PIPES —HTG-xx

C03		
C02	PAS 128:2014 Type B Survey site survey completed on 20th October 2019	29.10.2019
No.	REVISIONS:	DATE:

THE DETAIL SHOWN ON THIS DRAWING IS BASED ON THE BEST AVAILABLE INFORMATION AT THE TIME THE SURVEY WAS CARRIED OUT. HOWEVER, ALL POSITIONS MUST BE REGARDED AS APPROXIMATE. THE ACTUAL POSITION OF ALL OPERATORS MUST BE ESTABLISHED BY ON-SITE INSPECTION. LIGHTSOURCE SURVEYS LIMITED EXCEPT NO LIABILITY FOR ERRORS OR OMISSIONS.



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CLIENT:
COUNTRYSIDE PROPERTIES PLC

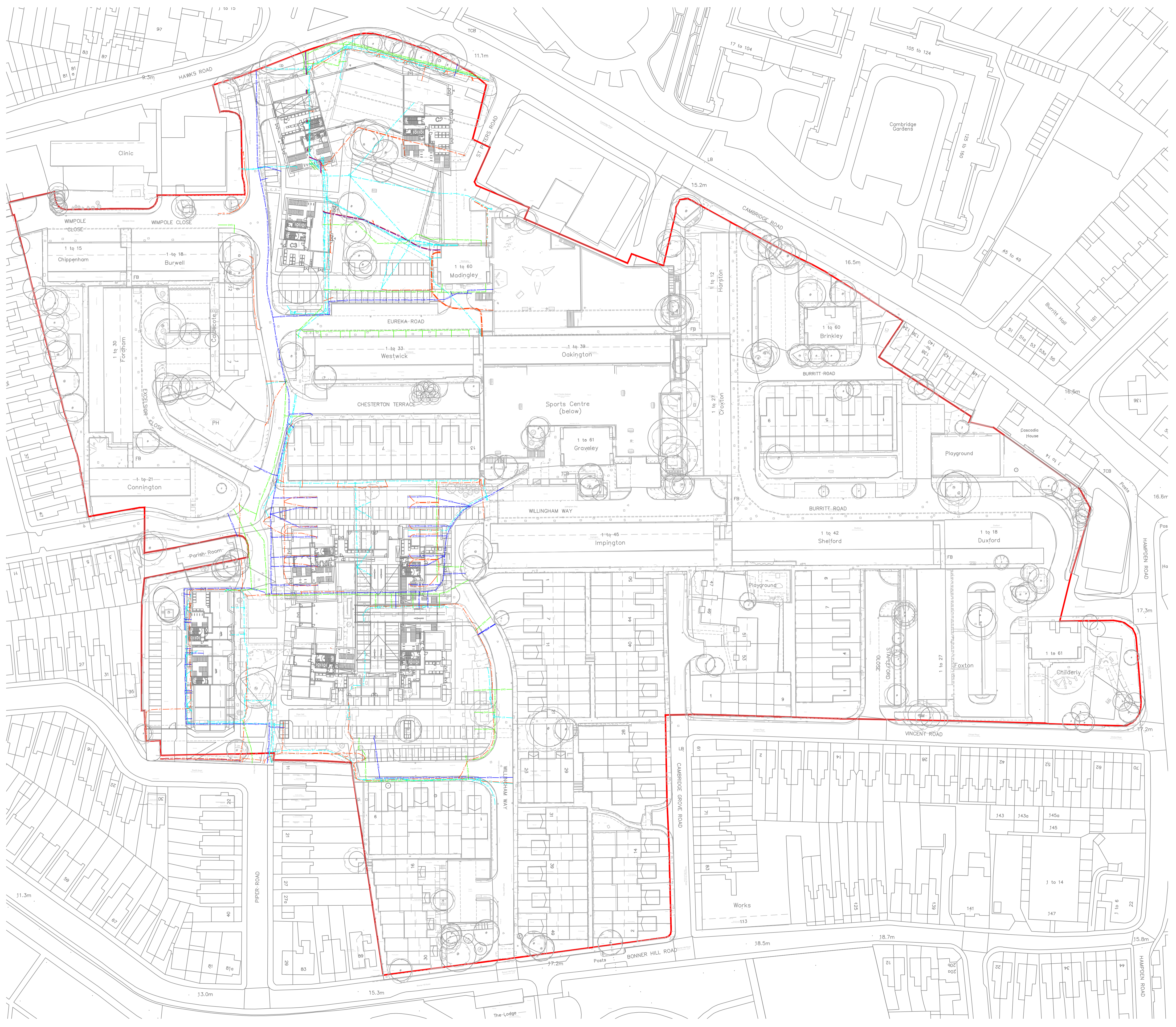
LOCATION:
CAMBRIDGE ROAD ESTATE
KINGSTON-UPON-THAMES

TITLE:
UTILITY IDENTIFICATION SURVEY
SITE PLAN

Sheet 3 of 3	SCALE: 1:200	DRAWN: PL	DATE: 29.10.2019
	SURVEYED: PS	CHECKED: PS	DATE: 29.10.2019

DRAWING No: CSP-CRE-LSS-XX-SU-G-UTLY-0003-A1-C01	A0
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Appendix Three - New Site Plan with existing Utilities



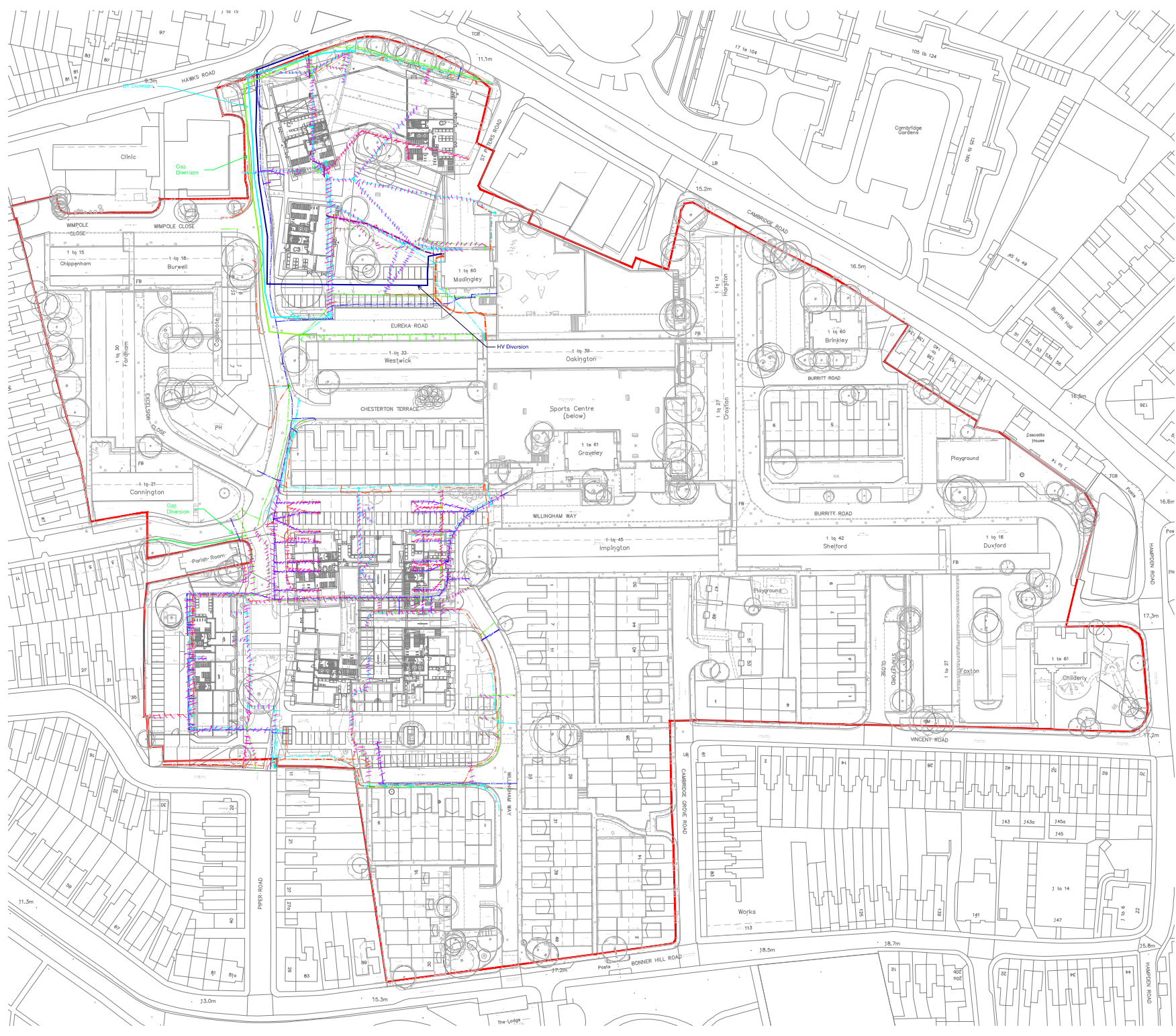
SERVICES LEGEND	
	EXISTING LOW VOLTAGE SERVICE
	EXISTING HIGH VOLTAGE SERVICE
	EXISTING BT SERVICE
	EXISTING CABLE TV SERVICE
	EXISTING WATER SERVICE
	EXISTING GAS SERVICE
	EXISTING SERVICE TO BE ABANDONED
	SITE BOUNDARY

- GENERAL NOTES:**
- THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH ALL OTHER AWA SERVICES DRAWINGS, SCHEMATICS, ARCHITECTS, STRUCTURAL AND ALL OTHER SERVICES DRAWINGS, SPECIFICATIONS AND SCHEDULES.
 - ALL DRAWINGS SHALL BE USED WHEN CO-ORDINATING NEW SERVICES WITH EXISTING SERVICES: STRUCTURE & NEW ARCHITECTURAL PROPOSALS.
 - THIS DRAWING IS COPYRIGHT OF AWA PLEASE OBTAIN PERMISSION BEFORE COPYING. THIS DRAWING MUST NOT BE MODIFIED OTHER THAN BY AWA.
 - THIS DRAWING IS NOT TO BE SCALED. ALL DIMENSIONS ARE NOMINAL IN MILLIMETRES AND MUST BE CHECKED ON SITE.
 - ANY DISCREPANCIES SHOULD BE BROUGHT TO THE ATTENTION OF THE CONSULTANT. IF IN DOUBT ASK.
 - THIS DRAWING INDICATES DESIGN INTENT ONLY AND SHOULD NOT BE USED FOR CONSTRUCTION PURPOSES.

- NOTES REGARDING EXTERNAL UTILITY SERVICES:**
- ALL ELECTRICAL CABLES, GAS & WATER PIPEWORK SHOULD BE ASSUMED LIVE EVEN IF NOTED ON DRAWING AS ABANDONED UNTIL PROVEN DEAD.
 - ALL CONTRACTORS & SUB CONTRACTORS ARE TO REFER TO THE HEALTH & SAFETY EXECUTIVE GUIDANCE DOCUMENT HSG47 'AVOIDING DANGER FROM UNDERGROUND SERVICES' PRIOR TO THE COMMENCEMENT OF ANY TRENCHING OR EXCAVATION WORKS.
 - AWA WILL ACCEPT NO LIABILITY FOR ANY ERROR OR OMISSIONS.
 - ALL DIMENSIONS, LEVELS AND SURVEY INFORMATION ARE TO BE CHECKED ON SITE AND ANY DISCREPANCIES SHOULD BE NOTIFIED IMMEDIATELY PRIOR TO COMMENCEMENT OF ANY WORKS.
 - EXISTING SERVICE CONNECTIONS AND STOP VALVES TO BUILDINGS MAY NOT INDICATED ON THIS DRAWING BUT MAY BE PRESENT. THE POSITION OF UTILITIES SERVICES MUST BE LOCATED ON SITE BEFORE ANY PLANT IS USED.
 - THE CONTRACTOR SHALL CONTACT ALL OF THE APPROPRIATE UTILITY COMPANIES AND ESTABLISH THE LOCATION OF ALL THE SERVICES PRIOR TO THE COMMENCEMENT OF ANY WORKS BY HAND DUG TRENCHES.
 - PRIOR TO ANY WORKS WHICH MAY EFFECT THE INTEGRITY OF, OR ACCESS TO ANY EXISTING SERVICES INDICATED AS 'ABANDONED' OR 'TO BE ABANDONED' ON THIS DRAWING, THE CONTRACTOR SHALL SEEK VERIFICATION OF THE ABANDONMENT FROM THE RELEVANT UTILITY COMPANY PRIOR TO THE WORKS BEING CARRIED OUT.
 - IT IS THE CONTRACTORS RESPONSIBILITY TO CONTACT ALL UTILITY COMPANIES, THE LOCAL AUTHORITY, AND OTHER INTERESTED PARTIES FOR AUTHORITY PRIOR TO UNDERTAKING THE WORKS.
 - FOR DIVERSION WORKS REFER TO APPROPRIATE UTILITY COMPANY DESIGN DRAWINGS AND QUOTATIONS.

PRELIMINARY			
CAMBRIDGE ROAD ESTATE			
PHASE 1 EXISTING SITE SERVICES NEW SITE OVERLAY			
Client	Checked	Scale	Date
C:JH	SS	1:500 @ A0	Mar. 20
EXTERNAL SERVICES			
18084-ES-1003		P	

Appendix Four - New Site Plan with existing Utilities Mark-Up



SERVICES LEGEND

- LV — EXISTING LOW VOLTAGE SERVICE
- HV — EXISTING HIGH VOLTAGE SERVICE
- BT — EXISTING BT SERVICE
- CATV — EXISTING CABLE TV SERVICE
- WTR — EXISTING WATER SERVICE
- GAS — EXISTING GAS SERVICE
- EXISTING SERVICE TO BE ABANDONED
- SITE BOUNDARY

GENERAL NOTES

1. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH ALL OTHER AWA SERVICES DRAWINGS, SCHEDULES, SPECIFICATIONS, STRUCTURAL AND ALL OTHER SERVICES DRAWINGS, SPECIFICATIONS AND SCHEDULES.
2. ALL DRAWINGS SHALL BE USED WHEN CONSIDERING NEW SERVICES WITH EXISTING SERVICES, STRUCTURE A NEW AND EXISTING PROPOSALS.
3. THE DRAWING IS COPYRIGHT OF AWA PLEASE OBTAIN PERMISSION BEFORE COPYING. THIS DRAWING MUST NOT BE MODIFIED OTHER THAN BY AWA.
4. THIS DRAWING IS NOT TO BE SCALED. ALL DIMENSIONS ARE NOMINAL VALUES AND MUST BE CHECKED ON SITE.
5. ANY DISCREPANCIES SHOULD BE BROUGHT TO THE ATTENTION OF THE CONSULTANT BY E-MAIL OR BY PHONE.
6. THE CONSULTANT ACCEPTS LIABILITY ONLY AND SHOULD NOT BE HELD FOR CONSTRUCTION PURPOSES.

NOTES REGARDING EXISTING UTILITY SERVICES

1. ALL ELECTRICAL, CABLE, GAS & WATER WORK SHOULD BE ASSUMED TO BE AS SHOWN UNLESS OTHERWISE NOTED OTHERWISE. PROVIDE A WA.
2. ALL CONTRACTORS & SUB CONTRACTORS ARE TO REFER TO THE HEALTH & SAFETY EXECUTIVE GUIDANCE DOCUMENT 'HEAVY AVOIDANCE FROM UNDERGROUND SERVICES PRIOR TO THE COMMENCEMENT OF ANY TRENCHES OR EXCAVATION WORKS.
3. AWA WILL ACCEPT NO LIABILITY FOR ANY ERROR OR OMISSIONS.
4. ALL DIMENSIONS, LEVELS AND SURVEY INFORMATION ARE TO BE CHECKED ON SITE AND ANY DISCREPANCIES SHOULD BE NOTED IMMEDIATELY PRIOR TO COMMENCEMENT OF ANY WORKS.
5. EXISTING SERVICE CONNECTIONS AND STOP VALVES TO ALL UTILITIES MAY NOT BE INDICATED ON THE DRAWINGS BUT ANY REPRESENTATION OF UTILITIES SERVICES MUST BE LOCATED ON SITE BEFORE ANY WORKS BEGIN.
6. THE CONTRACTOR SHALL CONTACT ALL OF THE APPROPRIATE UTILITY COMPANIES AND ESTABLISH THE LOCATION OF ALL THE SERVICES PRIOR TO THE COMMENCEMENT OF ANY WORKS BY HAND DUG TRENCHES.
7. PRIOR TO ANY WORKS WHICH MAY EFFECT THE INTEGRITY OF, OR ACCESS TO ANY EXISTING SERVICES, PROTECT OR HANDOVER ON TO BE RECONSTRUCTED ON THE DRAWING. THE CONTRACTOR SHALL SEEK PERMISSION FROM THE APPLICABLE UTILITY COMPANY PRIOR TO THE WORKS BEING CARRIED OUT.
8. IF IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT ALL UTILITY COMPANIES, THE LOCAL AUTHORITY, AND OTHER INTERESTED PARTIES FOR AUTHORITY PRIOR TO UNDERTAKING THE WORKS.
9. FOR EXISTING WORKS REFER TO APPROPRIATE UTILITY COMPANY DESIGN DRAWINGS AND CATALOGUES.

PRELIMINARY

AWA Building Services Consultants

CAMBRIDGE ROAD ESTATE


PHASE 1 EXISTING SITE SERVICES NEW SITE OVERLAY


CSH	SS	1:500 @ A0	Nov 20
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EXTERNAL SERVICES

18084-ES-1003 | P

Appendix Five - Electrical Loads Breakdown

AWA BUILDING SERVICES CONSULTANTS		ELECTRICAL LOAD CALCULATIONS									
Project:	Cambridge Road Estate	Job No:	18084								
Project Engineer:	Jack Childs	Date:	19-Aug-20								
Checked by:	Daniel Moynihan	Sheet:	1 of 4								
Location:	London	Doc Ref:	Preliminary								
Client:	CPPLC	Revision:	C								
											
A	B	C	D	E	G	H	I	J			
Unit Ref.	No. Units	LENGTH	WIDTH	Area	W	w/m2	kW/m2	KVA (w/pf)	Actual KVA	AMPS TPN	Diversity Loads
Cambridge Road Estate Phase 1, Block B											
Core B1											
>2B Units	38							1.5	57.0	82.3	
3B Units	4							1.9	7.6	11.0	
4B Units	2							2.1	4.2	6.1	
Landlords	1							25.0	25.0	36.1	
Cold Water Booster Sets	1								12.2	17.6	
B1 Total									106.0	153.0	
Car Charging											
Car Charging Active 20% w/o Array	7							7.7	53.9	77.8	
Car Charging Passive 20% w/o Array	7							7.7	53.9	77.8	
Phase 1 Total w/o Array									213.8	308.6	
Assumptions											
<ol style="list-style-type: none"> 1. Car parking loads have been calculated on 20% of car parking spaces associated with Block. There may be a possibility that these can be included within the dwelling load calculations and therefore reduce overall load and space requirements. TBC by IDNO. 2. Dwellings and Areas based upon 503-PTA-ZZ-XX-PP-A-8277_S02-P01. 3. Cold Water Booster Set to provide Domestic Sprinkler Load. 4. Separate Commercial Sprinkler system for Blocks C & E. 5. Two substations required for diverse fire-fighting supplies. (subject to DNO/IDNO requirements may be 3) 6. All smoke ventilation is natural. 7. UKPN G81 ADMD allowances used for residential dwellings and BSRIA BG9/2011 allowances used for commercial areas. 											

AWA BUILDING SERVICES CONSULTANTS		ELECTRICAL LOAD CALCULATIONS									
Project:	Cambridge Road Estate	Job No:	18084								
Project Engineer:	Jack Childs	Date:	19-Aug-20								
Checked by:	Daniel Moynihan	Sheet:	2 of 4								
Location:	London	Doc Ref:	Preliminary								
Client:	CPPLC	Revision:	C								
											
A	B	C	D	E	G	H	I	J			
Unit Ref.	No. Units	LENGTH	WIDTH	Area	W	w/m2	kW/m2	KVA (w/pt)	Actual KVA	AMPS TPN	Diversity Loads
Cambridge Road Estate Phase 1, Block C											
Core C1											
>2B Units	82							15	123.0	177.5	
3B Units								1.9	0.0	0.0	
Landlords 2No. Lifts	1							25.0	25.0	36.1	
Car Park Vent (Block C)	1								18.0	26.0	
Cold Water Booster Set	1								18.3	26.4	
C1 Total									184.3	266.0	
Core C2											
>2B Units	53							15	79.5	114.7	
3B Units	22							1.9	41.8	60.3	
Landlords 2No. Lifts	1							25.0	25.0	36.1	
C2 Total									146.3	211.2	
Core C3											
>2B Units	36							15	54.0	77.9	
3B Units	9							1.9	17.1	24.7	
Landlords 2No. Lifts	1							25.0	25.0	36.1	
Cold Water Booster Set	1								18.3	26.4	
C3 Total									114.4	165.1	
Car Charging											
Car Charging Active 20% w/o Array	6							7.7	46.2	66.7	
Car Charging Passive 20% w/o Array	6							7.7	46.2	66.7	
Commercial											
Commercial Sprinkler	1								150.0	216.5	
Commercial Sprinkler Block E Seco	1								150.0	216.5	
Community Centre				1123	87	97718	98	108.6	120.6	174.1	
Retail				200	185	36945	37	41.0	45.6	65.8	
Workspace				264	87	22977	23	25.5	28.4	40.9	
Commercial Total									494.6	713.9	
Block C Total w/o Array									1032.0	1489.6	
Assumptions											
<ol style="list-style-type: none"> Car parking loads have been calculated on 20% of car parking spaces associated with Block. There may be a possibility that these can be included within the dwelling load calculations and therefore reduce overall load and space requirements. TBC by IDNO. Dwellings and Areas based upon 503-PTA-ZZ-XX-PP-A-8277_S02-P01. Cold Water Booster Set to provide Domestic Sprinkler Load. Separate Commercial Sprinkler system for Blocks C & E. Two substations required for diverse fire-fighting supplies. (subject to DNO/IDNO requirements may be 3) All smoke ventilation is natural. UKPN G81 ADMD allowances used for residential dwellings and BSRIA BG9/2011 allowances used for commercial areas. 											

Page 1

AWA BUILDING SERVICES CONSULTANTS				ELECTRICAL LOAD CALCULATIONS							
Project:		Cambridge Road Estate		Job No:		18084					
Project Engineer:		Jack Childs		Date:		19-Aug-20					
Checked by:		Daniel Moynihan		Sheet:		3 of 4					
Location:		London		Doc Ref:		Preliminary					
Client:		CPPLC		Revision:		c					
A	B	C	D	E	G	H	I	J			
Unit Ref.	No. Units	LENGTH	WIDTH	Area	W	ufm ²	kW/m ²	KVA (ufpf)	Actual KVA	AMP/STPH	Diversity Load
Cambridge Road Estate Phase 1, Block E											
Core E1											
>2B Units	40							1.5	60.0	86.6	
3B Units	12							1.9	22.8	32.3	
Landlords 2 No. Lifts	1							25.0	25.0	36.1	
E1 Total									107.8	155.6	
Core E2											
>2B Units	46							1.5	69.0	99.6	
3B Units	9							1.9	17.1	24.7	
4B Units	0							2.1	0.0	0.0	
Landlords 2 No. Lifts	1							25.0	25.0	36.1	
E2 Total									111.1	160.4	
Core E3											
>2B Units	22							1.5	33.0	47.6	
3B Units	25							1.9	47.5	68.6	
4B Units	1							2.1	2.1	3.0	
Landlords 2 No. Lifts	1							25.0	25.0	36.1	
E3 Total									107.6	155.3	
Core E4											
>2B Units	31							1.5	46.5	67.1	
3B Units	1							1.9	1.9	2.7	
4B Units	0							2.1	0.0	0.0	
Landlords 2 No. Lifts	1							25.0	25.0	36.1	
E4 Total									73.4	105.9	
Core E5											
>2B Units								1.5	0.0	0.0	
3B Units								1.9	0.0	0.0	
4B Units	2							2.1	4.2	6.1	
E5 Total									4.2	6.1	
Core E6											
>2B Units								1.5	0.0	0.0	
3B Units								1.9	0.0	0.0	
4B Units	3							2.1	6.3	9.1	
E6 Total									6.3	9.1	
Mechanical Loads											
Energy Centre	1								175.2	252.8	
Car Park Vent (Block E)	1								18.0	26.0	
Cold Water Booster Sets	1								18.3	26.4	
Commercial Sprinkler	1								150.0	216.5	
Commercial Sprinkler Block C Secondary	1								150.0	216.5	
Mechanical Load Total									511.5	738.2	
Car Charging											
Car Charging Active 20% w/o Array	15							7.7	115.5	166.7	
Car Charging Passive 20% w/o Array	15							7.7	115.5	166.7	
Car Charging Active 20% w/ Array	1							63.0	63.0	93.6	
Car Charging Passive 20% w/ Array	1							63.0	63.0	93.6	
Block E Total w/o Array									1152.3	1664.0	
Block E Total w/ Array									1053.3	1529.8	
Assumptions											
1. Car parking loads have been calculated on 20% of car parking spaces associated with Block. There may be a possibility that these can be included within the dwelling load calculations and therefore reduce overall load and space requirements. TBC by IDNO.											
2. Dwellings and Areas based upon 503-PTA-ZZ-XX-PP-A-827T_S02-P01.											
3. Cold Water Booster Set to provide Domestic Sprinkler Load.											
4. Separate Commercial Sprinkler system for Blocks C & E.											
5. Two substations required for diverse fire-fighting supplies. (subject to DNO/IDNO requirements may be 3)											
6. All smoke ventilation is natural.											
7. UKPN G81 ADMD allowances used for residential dwellings and BSRIA BG9/2011 allowances used for commercial areas.											

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AWA BUILDING SERVICES CONSULTANTS				ELECTRICAL LOAD CALCULATIONS							
Project:	Cambridge Road Estate	Job No:	18084								
Project Engineer:	Jack Childs	Date:	19-Aug-20								
Checked by:	Daniel Moynihan	Sheet:	4 of 4								
Location:	London	Doc Ref:	Preliminary								
Client:	CPPLC	Revision:	C								
A	B	C	D	E	G	H	I	J			
Unit Ref.	No. Units	LENGTH	WIDTH	Area	W	w/m2	kW/m2	KVA (w/pf)	Actual KVA	AMPS TPN	Diversity Loads
Cambridge Road Estate Phase I											
Block B									213.8	308.6	
Block C									1032.0	1489.6	
Block E									1152.9	1664.0	
Total Phase I									2398.7	3462.2	
Assumptions											
<p>1. Car parking loads have been calculated on 20% of car parking spaces associated with Block. There may be a possibility that these can be included within the dwelling load calculations and therefore reduce overall load and space requirements. TBC by IDNO.</p> <p>2. Dwellings and Areas based upon 503-PTA-ZZ-XX-PP-A-8277_S02-P01.</p> <p>3. Cold Water Booster Set to provide Domestic Sprinkler Load.</p> <p>4. Separate Commercial Sprinkler system for Blocks C & E.</p> <p>5. Two substations required for diverse fire-fighting supplies. (subject to DNO/IDNO requirements may be 3)</p> <p>6. All smoke ventilation is natural.</p> <p>7. UKPN G81 ADMD allowances used for residential dwellings and BSRIA BG9/2011 allowances used for commercial areas.</p>											



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Appendix Six – Riser Sizes

Block B	
Electrical Switch Room	3.5m x 0.6m or 3m x 2m
Electrical Riser – Landlords	1.6m x 0.45m
Electrical Riser – Tenants Meters	2.2m x 0.45m (9 flats per floor - 2-4) 1.4m x 0.45 (5 flats per floor - 0, 1 & 5)
BCWS Riser	1m x 0.45m
Heating Riser	0.8m x 0.45m

Block C – Needs a 1.25mVA Substation	
Electrical Switch Room (commercial)	4.5m x 0.6m or 3m x 2m
Firefighting Switch Room	4.5m x 0.6m or 3m x 2m
Electrical Riser – Landlords	C1 - 1.6m x 0.45m C2 - 1.6m x 0.45m C3 – 1.6m x 0.45m
Electrical Riser – Tenants Meters	C1 – 1.8m x 0.45m (7 flats per floor) C2 – 1.8m x 0.45m (7 flats per floor) C3 – 1.4m x 0.45m (6 flats per floor)
BCWS Riser	1m x 0.45m
Heating Riser	0.8m x 0.45m

Block E – Needs a 1.5mVA substation. (subject to IDNO confirmation may need two substations next to each other)	
Electrical Switch Room	4.5m x 0.6m or 3m x 2m
Firefighting Switch Room	4.5m x 0.6m or 3m x 2m
Electrical Riser – Landlords	1.6m x 0.45m
Electrical Riser – Tenants Meters	1.4m x 0.45 (6 flats per floor)
BCWS Riser	1m x 0.45m
Heating Riser	0.8m x 0.45m

The Design Team

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Visualisation artist

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Physical modelmaker

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Planning consultant

Environmental Impact Assessment

Townscape Impact Assessment

Countryside Properties

Developer

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H+H Fire

Fire consultant

Markides

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Patel Taylor

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