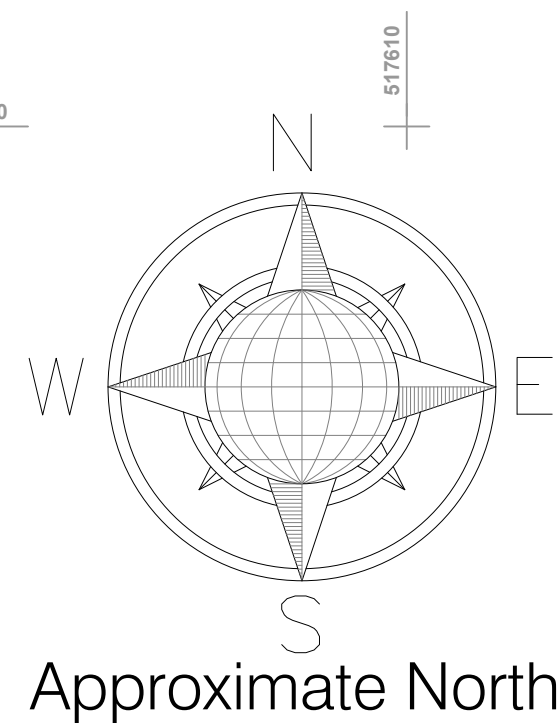


APPENDIX 2

TOPOGRAPHICAL AND UTILITY SURVEY



LEGEND			
Utility Survey Point Features			
AV	Air Valve	GL	Gas Lound
BE	Bellisha Bore	IC	IC - Round
CC	CCTV Camera Pole	IC - C	IC - Corrmis
CB	Cable Riser	ICE	IC - Electric
CD	Down Pipe	ICR	IC - Round
DF	Down Pipe To Ground	ICU	IC - Telecom
EE	Electrical Pole	ICTC	IC - TCSU/TELF
ER	Earth Rod	ICV	IC - CATV
FE	Fire Hydrant	LP	Lamp Post
GM	Gas Meter	MH	MH
GV	Gas Valve	MH - D	MH - Distict Heat
GU	Gully	MH - F	MH - Foul
MH		PH	MH - Round
		MS	MH - Surface Water
		MP	Marker Post
		12-24	
		PR	Pipe
		RL	Recessed Light
		RE	Roofing Eye
		SD	Stop Rock
		TL	Traffic Light
		TP	Telegraph Pole
		V	Valve General
		WM	Water Meter
		WW	Water Valve

Utility Service Linework Features					
	Communications			Electrical	
BT	Bare Telecom		EHV	Electrical - Extra High Voltage	
CATV	Cable TV		HV	Electrical - High Voltage	
CCM	Closed Circuit		LHV	Electrical - Low Voltage	
COMS	Communications		TFL	Electrical - TFL	
FOL	Fibre Optic Line		SL	Street Lighting	
FOL	Fibre Optic Line - Collt		TSU	Traffic Control System Unit	
FOL	Fibre Optic Line - Energis			Gas	
FOL	Fibre Optic Line - MFS			Gas Service	
FOL	Fibre Optic Line - Level 3		GLP	Gas Low Pressure	
FOL	Fibre Optic Line - Mercury		GIP	Gas Intermediate Pressure	
FOL	Fibre Optic Line - Vioflone		GVH	Gas Very High Voltage	
FOL	Fibre Optic Line - Tandem		GHF	Gas High Pressure	
FOL	Fibre Optic Line - Virgin		GP	Gas <i>< unknown ></i>	
FOL	Fibre Optic Line - Verizon		ED	Emergency	
FOL	Fibre Optic Line - Verizon		EP	Epig Anomaly	
FOL	Fibre Optic Line - WCOM		UKA	Unknown Asset	
TE	Telephone Service		ULA	URA Passive Sweep	
			UCL	Unknown Cable	
	Drainage			GPR Slab	
OW	Combined Water		GSR	GPR Survey Area	
FW	Foul Water		GUR	GPR buried structure	
SF	Sanitary Flow		GRR	GPR Reinforced Slab	
RM	Rising Main			GPR Interline layer (change in material)	

FRW — Fire Water	DH — District Heat
WM — Water Main	FU — Fuel Pipe
WS — Water Service	XX — Decommissioned/Abandoned
	— — — — — Manhole Chamber
	 Manhole ID
E — Electrical Service	PEO — Pot End
EE — Electrical Earth	PEO — Scope of Works
P — Electrical Pilot Cable	

PAS128 Quality Levels			
(Consult document 'PAS128:2014.pdf' for full details)			
—XX - A—	Quality Level A	—XX - B3—	Quality Level B3
—XX - B1—	Quality Level B1	—XX - B3P—	Quality Level B3P
—XX - B1P—	Quality Level B1P	—XX - B4—	Quality Level B4
—XX - B2—	Quality Level B2	—XX - C—	Quality Level C
—XX - B2P—	Quality Level B2P	—XX - D—	Quality Level D

Special Survey Features			
AB	E=XXXXXXX ID A=YYYYYYY	Survey Station	E=XXXXXXX ID A=YYYYYYY Scan Target
Utility Survey Abbreviations			
AB	Abandoned	CSER	Controlled Space Entry Required
AR	Assumed Route	MH	Manhole
BI	Illuminated Borehole	NVO	Not Visible Outside
BL	Borehole	OE	Overhead Electric
CPD	Cable	OT	Overhead Telecom
CS	Cover Level	SSF	Soft Soil
CPD	Cable	IFR	Taken From Records
CUT	Discovered Utility	TVM	Trench Vending Machine
EODCTV	End of CCTV Signal	UTU	Unable to Open
EOD EPR	End of EPR Signal	UTU	Unable to Survey
END	End of Trace	UTU	Unable to Trace
EOS	End of Survey	UK	Unknown
IC	Inspection Core	WL	Water Level
IL	Invert Level	XGD	Survey Depth

Utility Material Abbreviations					
AC	Asbestos Cement	CO	Concret	SI	Spun Iron
BC	Brick Chamber	DI	Ductile Iro	ST	Steel
CI	Cast Iron	PE	Polyethylene	WTR	Water
Level Measured For Ducts/Pipes At Pits Is To Top Of The Service			Level Measured For Drainage At Pits Is To Invert Level Of The Service		

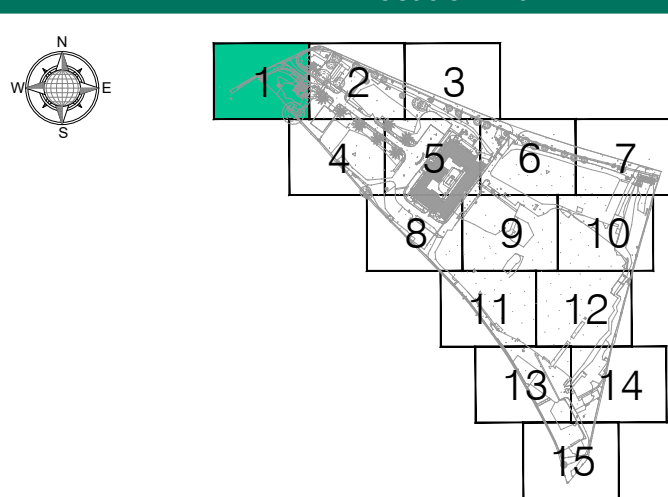
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Location Plan



Revisions				
Rev	Description	Surveyed by	Drawn by	Checked by
A	First Issue	DA - 16/11/24	CN - 20/11/24	DS - 20/11/24
B	CCTV drainage survey added	DA - 16/11/24	CN - 29/11/24	DS - 02/12/24



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London Manchester Birmingham Glasgow Belfast Cork Kildare

Client	TPS Management
Project	Novartis site Horsham - GPR Survey
Site Address	32 Wimbleshurst Rd Horsham RH12 2ED
Description	Underground Utility Survey (PAS128)
Survey Grid	Localised OSGB36(15) - Scale Factor 1.0
Survey Datum	GNSS - Ordnance Datum Newlyn (ODN)
RICS Band	Band E
Drawing Scale	1:100 @A0
Drawing Number	MGS60622-U-RevB-All-Combined-01

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PLEASE NOTE:

Previous topographic and utility survey done in 2018.
Old utility survey can be found in gray color.



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LEGEND		
Utility Survey Point Features		
AV Air Valve	IC - Commis	MH - Round
BB Belisha Beacon	IC - Electric	MH - Surface Water
CP CCTV Camera Pole	IC - Round	MP Marker Post
CR Cable Riser	IC - Telecom	PR Pipe Riser
DP Down Pipe To Ground	IC - TCSU/TFL	RE Recessed Light
EP Electrical Pole	IC - CATV	RE Rodding Eye
ER Earth Rod	LP Lamp Post	SC Stop Cock
FR Fire Hydrant	MH	TL Traffic Light
GM Gas Meter	MH - District Heat	TP Telegraph Pole
GV Gas Valve	MH - Foul	V Valve General
G Gully		WM Water Meter
		WV Water Valve

Utility Survey Linework Features		
BT British Telecom	EHV Electrical - Extra High Voltage	
CATV Cable TV	HV Electrical - High Voltage	
CCTV Closed Circuit TV	LV Electrical - Low Voltage	
COMMS Communications	TFL Electrical - TFL	
FOLC Fibre Optic Line - Colt	SL Street Lighting	
FOLC Fibre Optic Line - Energis	TCSU Traffic Control System Unit	
FOLC Fibre Optic Line - Fibernet	G Gas	
FOLC Fibre Optic Line - Level 3	GP Gas Low Pressure	
FOLC Fibre Optic Line - Mercury	GP Gas Intermediate Pressure	
FOLC Fibre Optic Line - MFCSC	GP Gas Medium Pressure	
FOLC Fibre Optic Line - Tanet	GP Gas High Pressure	
FOLC Fibre Optic Line - Virgin	GP Gas Unknown	
FOLC Fibre Optic Line - Vodafone	ED Empty Duct	
FOLC Fibre Optic Line - Verizon	GPR GPR Anomaly	
FOLC Fibre Optic Line - WCOM	UA Unknown Asset	
TS Telecom Service	UA UA Passive Sweep	
	UCL Unknown Cable	
	GRS GPR Slab	
	GRS GPR Survey Area	
	GRS GPR buried structure	
	GRS GPR Reinforced Slab	
	GRS GPR Interface layer (change in material)	
	Other	
	DH District Heat	
	FU Fuel Pipe	
	XX Decommissioned/Abandoned	
	Manhole Chamber	
	Manhole ID	
	PEO Pot End	
	Scope of Works	

PAS128 Quality Levels	
(Consult document 'PAS128-2014.pdf' for full details)	
XX - A - Quality Level A	XX - B3 - Quality Level B3
XX - B1 - Quality Level B1	XX - B3P - Quality Level B3P
XX - B1P - Quality Level B1P	XX - B4 - Quality Level B4
XX - B2 - Quality Level B2	XX - C - Quality Level C
XX - B2P - Quality Level B2P	XX - D - Quality Level D

Special Survey Features	
E-XXXX-XXX ID A NYYYY YYY Survey Station	ES-XXXX-XXX ID NYYYY YYY Scan Target
HZZZ ZZZ	HZZZ ZZZ

Utility Survey Abbreviations	
AB Abandoned	CSER Confined Space Entry Required
AR Assumed Route	MH Manhole
BI Illuminated Bollard	NVO Not Visible Outlet
BLD Blocked	OE Overhead Electric
CPD Capped	OT Overhead Telecom
CL Cover Level	SOF Soffit Level
CPD Capped	TFR Taken From Rafters
CUT Disconnected Utility	TVM Ticket Vending Machine
EOCCTV End of CCTV Survey	UTO Unable to Open
EOC End of GPR Signal	UTO Unable to Survey
EOT End of Trace	UTT Unable to Trace
EOS End of Survey	UKN Unknown
IC Inspection Cover	WL Water Level
IL Invert Level	XXS Service Depth

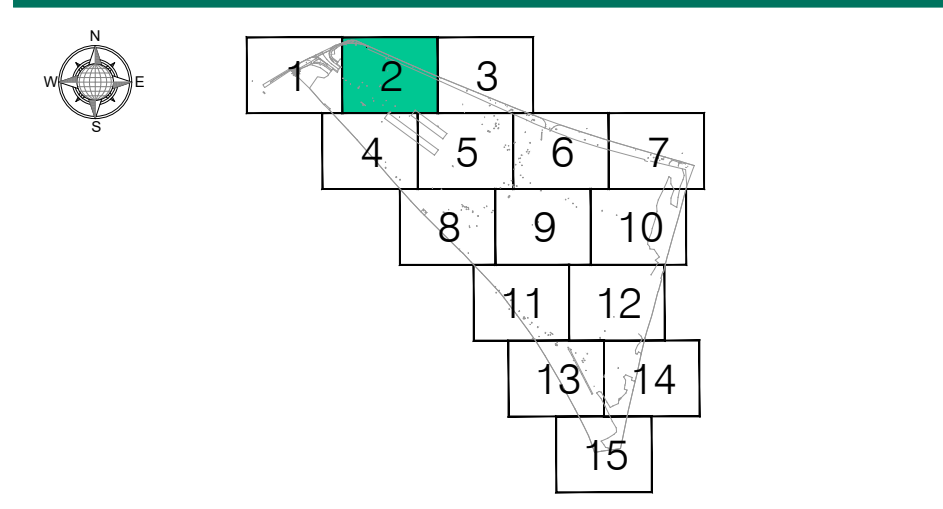
Utility Material Abbreviations	
AC Asbestos Cement	CO Concrete
BC Brick Chamber	DI Ductile Iro
CI Cast Iron	PE Polyethylene
	SI Spun Iron
	ST Steel
	WTR Water

Level Measured For Ducts/Pipes At Pits Is To Top of The Service	Level Measured For Drainage At Pits Is To Invert Level Of The Service
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Revisions				
Rev	Description	Surveyed by	Drawn by	Checked by
A	First Issue	DA - 16/11/24	CN - 20/11/24	DS - 20/11/24
B	CCTV drainage survey added	DA - 16/11/24	CN - 20/11/24	DS - 03/12/24



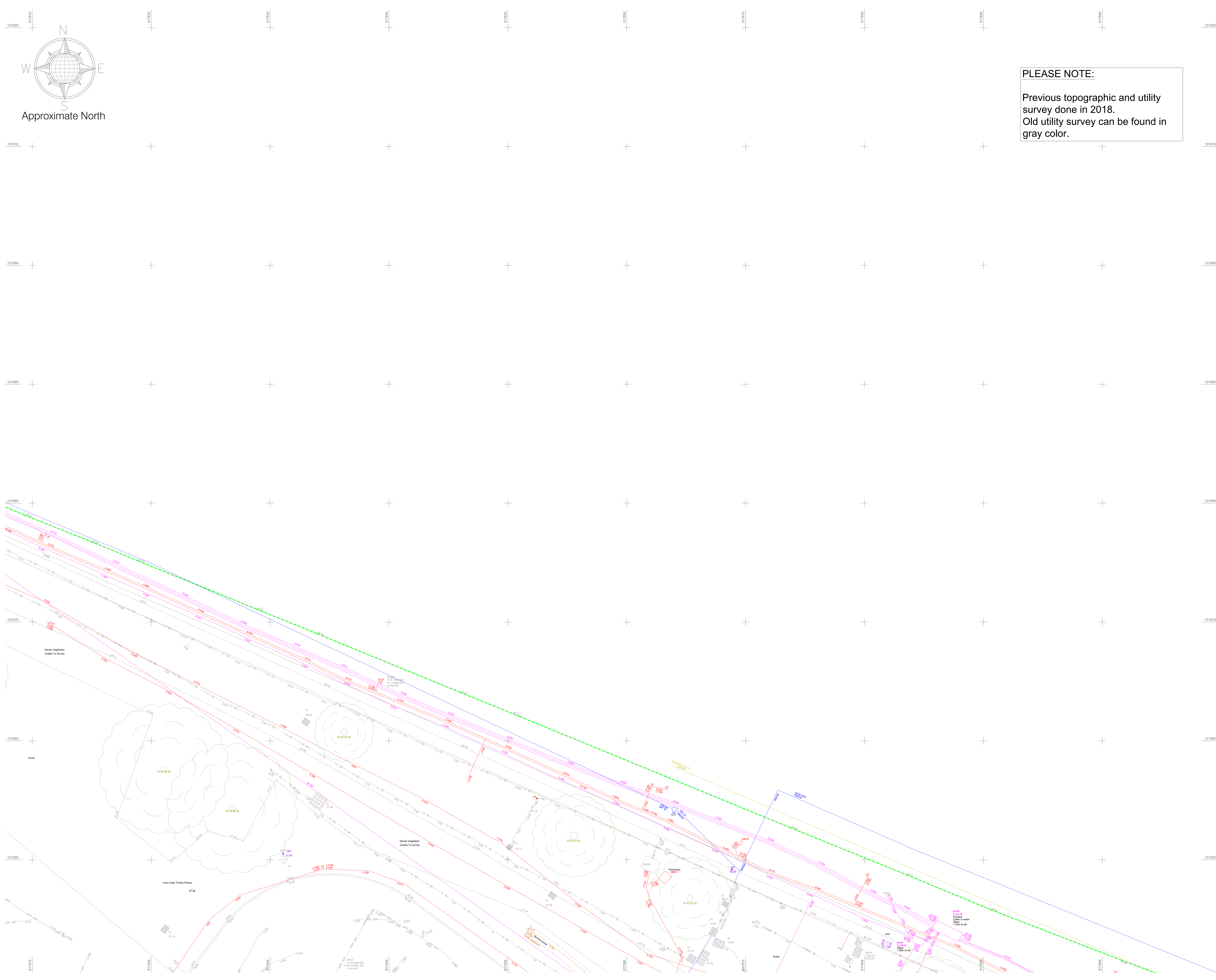
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Description	Underground Utility Survey (PAS128)
Survey Grid	Localised OSGB36(15) - Scale Factor 1.0
Survey Datum	GNSS - Ordnance Datum Newlyn (ODN)
RICS Band	Band E
Drawing Scale	1:100 @A0
Drawing Number	GS60622-U-RevB-All-Combined-02



PLEASE NOTE:
Previous topographic and utility survey done in 2018.
Old utility survey can be found in gray color.

LEGEND		
Utility Survey Point Features		
AV Air Valve	IC Gully Round	MH - Round
BB Belisha Beacon	IC IC	MH - Surface Water
CP CCTV Camera Pole	IC - Comms	MK Marker Post
CR Cable Riser	IC - Electric	12.24 Pipe Riser
DP Down Pipe	IC - Round	RE Recessed Light
DPG Down Pipe To Ground	IC - Telecom	RE Rodding Eye
EP Electrical Pole	IC - TCSU/TFL	SC Stop Cock
ER Earth Rod	IC - CATV	TL Traffic Light
FR Fire Hydrant	LP Lamp Post	TP Telegraph Pole
GM Gas Meter	MH	V Valve General
GV Gas Valve	MH - District Heat	WM Water Meter
G Gully	MH - Foul	WV Water Valve

Utility Survey Linework Features		
BT British Telecom	EHV Electrical - Extra High Voltage	
CATV Cable TV	HV Electrical - High Voltage	
CCCTV Closed Circuit TV	LV Electrical - Low Voltage	
COMMS Communications	TFL Electrical - TFL	
FOL Fibre Optic Line	SL Street Lighting	
FOLC Fibre Optic Line - Cot	TCSU Traffic Control System Unit	
FOLE Fibre Optic Line - Energis	Gas	
FOLF Fibre Optic Line - Fibernet	Gas Service	
FOLL Fibre Optic Line - Level 3	Gas Low Pressure	
FOLM Fibre Optic Line - Mercury	Gas Intermediate Pressure	
FOLN Fibre Optic Line - MFS	Gas Medium Pressure	
FOLT Fibre Optic Line - Tanet	Gas High Pressure	
FOLV Fibre Optic Line - Virgin	GPR - Unknown	
FOLVF Fibre Optic Line - Vodafone	ED Empty Duct	
FOLVN Fibre Optic Line - Verizon	GPR Anomaly	
FOLVW Fibre Optic Line - WCOM	UA Unknown Asset	
TS Telecom Service	UA Passive Sweep	
	UCL Unknown Cable	
	GPR Slab	
	GPR Survey Area	
	GPR buried structure	
	GPR Reinforced Slab	
	GPR Interface layer (change in material)	
	Other	
	DH District Heat	
	FU Fuel Pipe	
	XX Decommissioned/Abandoned	
	Manhole Chamber	
	Manhole ID	
	PEO Pot End	
	Scope of Works	

PAS128 Quality Levels		
(Consult document PAS128-2014.pdf for full details)		
XX - A - Quality Level A	XX - B3 - Quality Level B3	
XX - B1 - Quality Level B1	XX - B3P - Quality Level B3P	
XX - B1P - Quality Level B1P	XX - B4 - Quality Level B4	
XX - B2 - Quality Level B2	XX - C - Quality Level C	
XX - B2P - Quality Level B2P	XX - D - Quality Level D	

Special Survey Features		
E-XXXX-XXX	ES-XXXX-XXX	
ID NYYYY-YYY Survey Station	ID NYYYY-YYY Scan Target	
HZZZ ZZZ	HZZZ ZZZ	

Utility Survey Abbreviations		
AB Abandoned	CSER Confined Space Entry Required	
AR Assumed Route	MH Manhole	
BI Illuminated Bollard	NVO Not Visible Outlet	
BLD Blocked	OE Overhead Electric	
CPD Capped	OT Overhead Telecom	
CL Cover Level	SOF Soffit Level	
CPD Capped	TFR Taken From Rafters	
CUT Disconnected Utility	TVM Ticket Vending Machine	
EOCCTV End of CCTV Survey	UTO Unable to Open	
EOG End of GPR Signal	UTS Unable to Survey	
EOT End of Trace	UTT Unable to Trace	
EOS End of Survey	UKN Unknown	
IC Inspection Cover	WL Water Level	
IL Invert Level	XGS Service Depth	
AC Asbestos Cement	CO Concrete	SI Spun Iron
BC Brick Chamber	DI Ductile Iro	ST Steel
CI Cast Iron	PE Polyethylene	WTR Water

Utility Material Abbreviations		
Level Measured For	Level Measured For Drainage	
Ducts/Pipes At Pits Is To	At Pits Is To Invert Level	
Top of The Service	Of The Service	

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Location Plan		

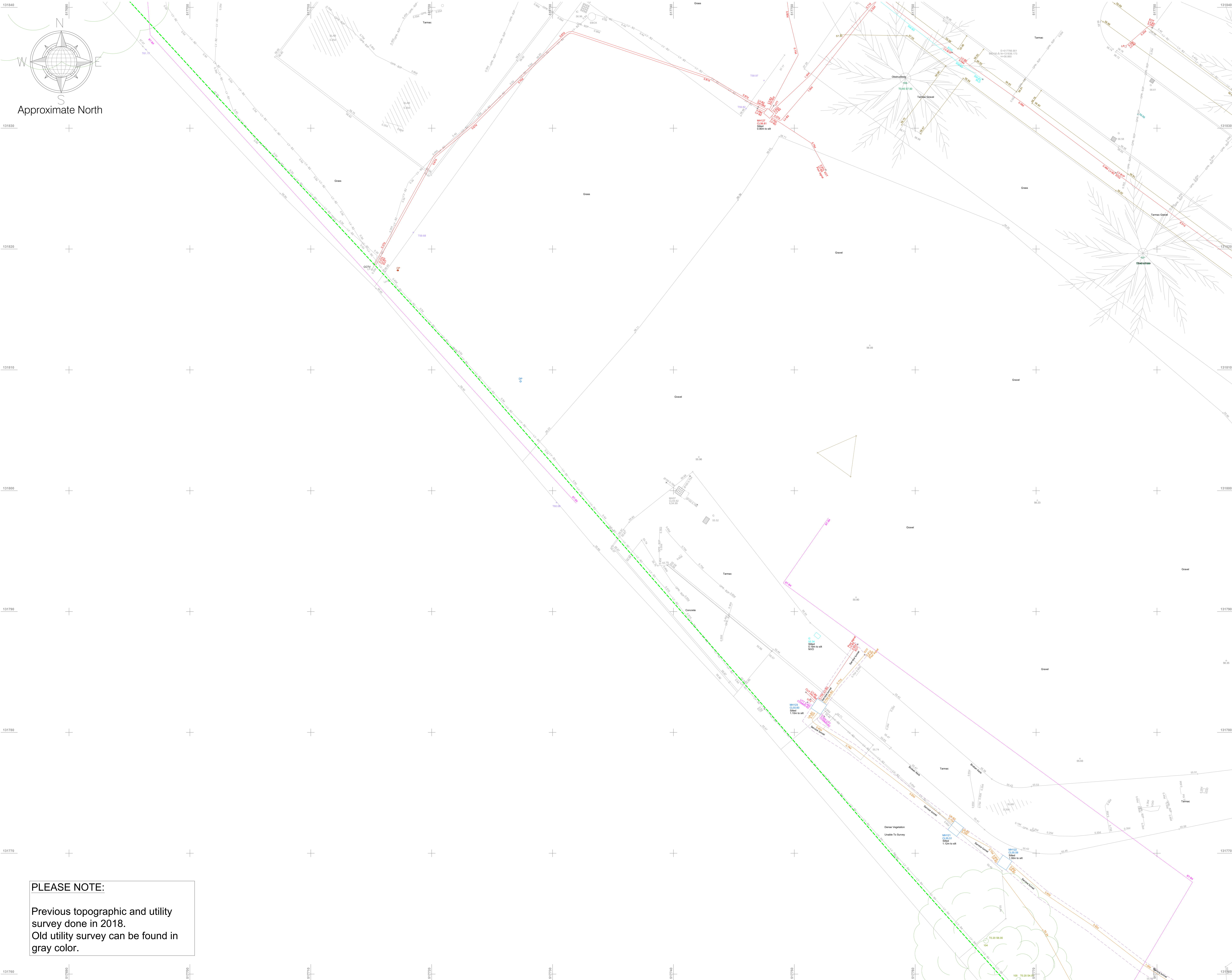
Revisions			
Rev	Description	Surveyed by	Checked by
A	First issue	DA - 16/11/24	DN - 20/11/24
B	CCTV drainage survey added	DA - 16/11/24	DN - 20/11/24

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RICS Band	Band E
Drawing Scale	1:100 @A0
Drawing Number	GS60622-U-RevB-All-Combined-03

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LEGEND		
Utility Survey Point Features		
AV Air Valve	IC Comm	MH - Round
BB Belisha Beacon	IC - Comm	MH - Surface Water
CP CCTV Camera Pole	IC - Electric	MK Marker Post
CR Cable Riser	IC - Round	12.24 Pipe Riser
DP Down Pipe	IC - Telecom	RE Recessed Light
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EP Electrical Pole	IC - CATV	SC Stop Cock
ER Earth Rod	LP Lamp Post	TL Traffic Light
FR Fire Hydrant	MH	TP Telegraph Pole
GM Gas Meter	MH - District Heat	V Valve General
GV Gas Valve	MH - Foul	WM Water Meter
G Gully		WV Water Valve

Utility Survey Linework Features		
BT British Telecom	EHV Electrical - Extra High Voltage	
CATV Cable TV	HV Electrical - High Voltage	
CCTV Closed Circuit TV	LV Electrical - Low Voltage	
COMMS Communications	TFL Electrical - TFL	
FOL Fibre Optic Line	SL Street Lighting	
FOLC Fibre Optic Line - Cof	TCSU Traffic Control System Unit	
FOLE Fibre Optic Line - Energis	Gas	
FOLF Fibre Optic Line - Fibernet	Gas Service	
FOLM Fibre Optic Line - Mercury	GLP Gas Low Pressure	
FOLN Fibre Optic Line - MFS	GLP Gas Intermediate Pressure	
FOLT Fibre Optic Line - Tanet	GLP Gas Medium Pressure	
FOLV Fibre Optic Line - Virgin	GLP Gas High Pressure	
FOLVN Fibre Optic Line - Verizon	GPR + Unknown	
FOLW Fibre Optic Line - WCOM	GPR Anomaly	
IS Telecom Service	ED Empty Duct	
	GPR Anomaly	
	UA Unknown Asset	
	UA Passive Sweep	
	UCL Unknown Cable	
	GRS GPR Slab	
	GRS GPR Survey Area	
	GRS GPR buried structure	
	GRS GPR Reinforced Slab	
	GRS GPR Interface layer (change in material)	
	Other	
	DH District Heat	
	FU Fuel Pipe	
	XX Decommissioned/Abandoned	
	Manhole Chamber	
	Manhole ID	
	PEO Pot End	
	Scope of Works	

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XX - B2 - Quality Level B2	XX - C - Quality Level C	
XX - B2P - Quality Level B2P	XX - D - Quality Level D	

Special Survey Features		
E-XXXX-XXX	ES-XXXX-XXX	
ID A NYYYYYYY Survey Station	ID N NYYYYYYY Scan Target	
HZZZ ZZZ	HZZZ ZZZ	

Utility Survey Abbreviations		
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CI Cast Iron	PE Polyethylene	WTR Water

Level Measured For Ducts/Pipes At Pits Is To Top Of The Service	0.80d	Level Measured For Drainage At Pits Is To Invert Level Of The Service	0.80d
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Location Plan		

Revisions				
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A	First Issue	DA - 16/11/24	CN - 20/11/24	DS - 20/11/24
B	CCTV drainage survey added	DA - 16/11/24	CN - 20/11/24	DS - 03/12/24

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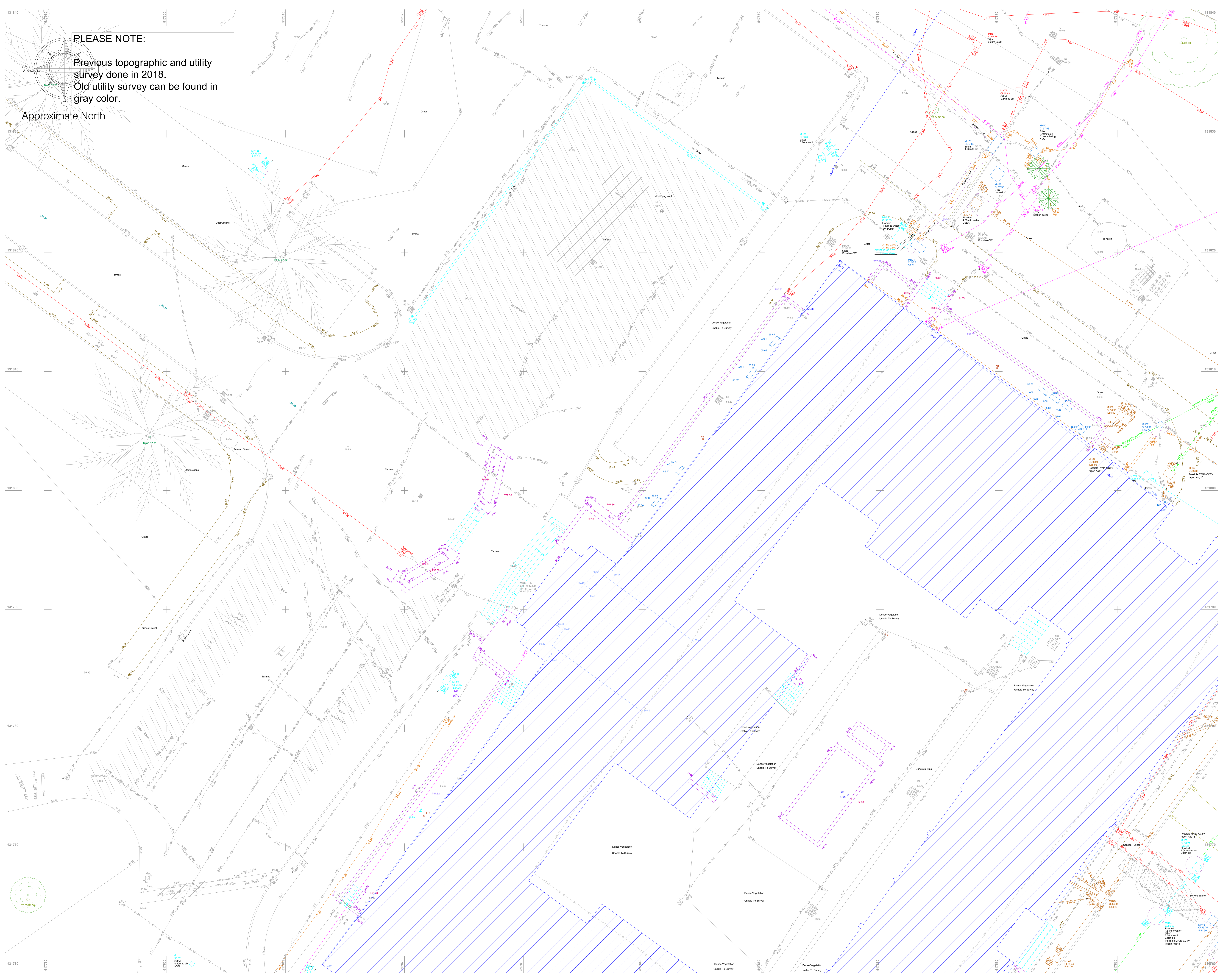
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RICS Band	Band E
Drawing Scale	1:100 @A0
Drawing Number	GS60622-U-RevB-All-Combined-04

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Drawing Scale	1:100 @A0
Drawing Number	GS60622-U-RevB-All-Combined-04



LEGEND

Utility Survey Point Features

AV Air Valve	IC - Comm	MH - Round
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CR Cable Riser	IC - Telecom	Pipe Riser
DP Down Pipe	IC - TCSU/TFL	Recessed Light
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FR Fire Hydrant	MH	Traffic Light
GM Gas Meter	MH - District Heat	Telegraph Pole
GV Gas Valve	MH - Foul	Valve General
G Gully		Water Meter
		Water Valve

Utility Survey Linework Features

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CATV Cable TV	HV Electrical - High Voltage
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FOLV Fibre Optic Line - Virgin	Gas - Unknown
FOLV Fibre Optic Line - Vodafone	ED Empty Duct
FOLV Fibre Optic Line - Verizon	GPR Anomaly
FOLV Fibre Optic Line - WCOM	GPR Unknown Asset
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Fire Water	FU Fuel Pipe
Water Main	Decommissioned/Abandoned
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	Manhole ID
Electrical	PEO Pot End
Electrical Service	Scope of Works
Electrical Earth	
Electrical Pilot Cable	

PAS128 Quality Levels
(Consult document 'PAS128-2014.pdf' for full details)

XX - A - Quality Level A	XX - B3 - Quality Level B3
XX - B1 - Quality Level B1	XX - B3P - Quality Level B3P
XX - B1P - Quality Level B1P	XX - B4 - Quality Level B4
XX - B2 - Quality Level B2	XX - C - Quality Level C
XX - B2P - Quality Level B2P	XX - D - Quality Level D

Special Survey Features

E-XXXX-XXX	ES-XXXX-XXX
ID A NYYYYYYY Survey Station	ID NYYYYYYY Scan Target
HZZZ ZZZ	HZZZ ZZZ

Utility Survey Abbreviations

AB Abandoned	CSER Confined Space Entry Required
AR Assumed Route	MH Manhole
BI Illuminated Bollard	NVO Not Visible Outlet
BLD Blocked	OE Overhead Electric
CPD Capped	OT Overhead Telecom
CL Cover Level	SOF Soffit Level
CPD Capped	TFR Taken From Rafters
CUT Disconnected Utility	TVM Ticket Vending Machine
EOCCTV End of CCTV Survey	UTO Unable to Open
EOC End of GPR Signal	UTS Unable to Survey
EDT End of Trace	UTT Unable to Trace
EOS End of Survey	UKN Unknown
IC Inspection Cover	WL Water Level
IL Invert Level	XXS Service Depth

Utility Material Abbreviations

AC Asbestos Cement	CO Concrete	SI Spun Iron
BC Brick Chamber	DI Ductile Iro	ST Steel
CI Cast Iron	PE Polyethylene	WTR Water

Level Measured For
Ducts/Pipes At Pits Is To
Top of The Service

Level Measured For Drainage
At Pits Is To Invert Level
Of The Service

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Location Plan

Revisions

Rev	Description	Surveyed by	Drawn by	Checked by
A	First Issue	DA - 161124	CN - 201124	DS - 201124
B	CCTV damage survey added	DA - 161124	CN - 201124	DS - 031224

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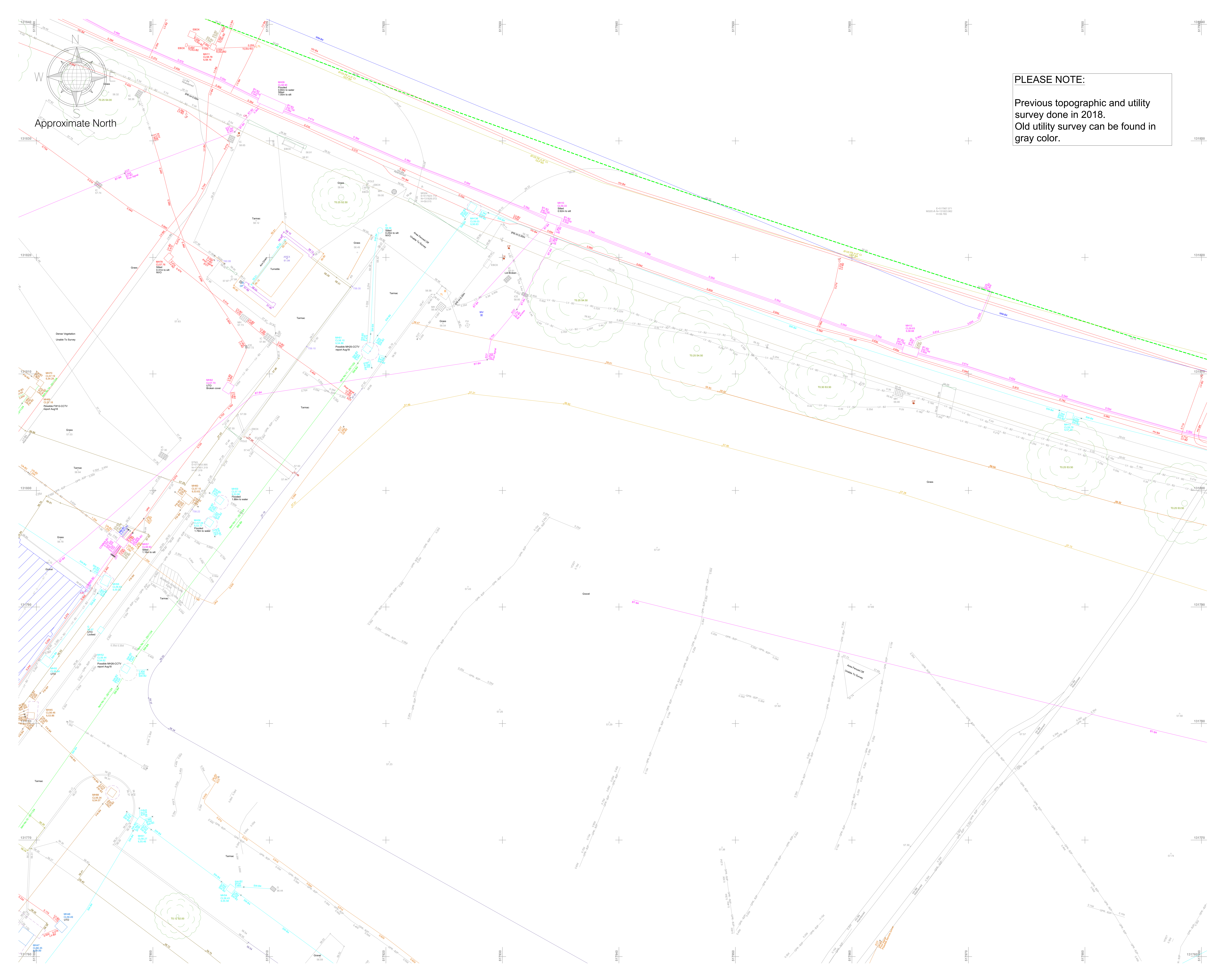
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Phone: (+44) 0192 362 4800
Email: info@murphygs.com

London Manchester Birmingham Glasgow Belfast Cork Kildare

Client	TPS Management
Project	Novartis site Horsham - RDR Survey
Site Address	32 Wimblehurst Rd Horsham RH12 2ED
Description	Underground Utility Survey (PAS128)
Survey Grid	Localised OSGB36(15) - Scale Factor 1.0
Survey Datum	GNSS - Ordnance Datum Newlyn (ODN)
RICS Band	Band E
Drawing Scale	1:100 @A0
Drawing Number	GS60622-U-RevB-All-Combined-05

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PLEASE NOTE:
Previous topographic and utility survey done in 2018.
Old utility survey can be found in gray color.

LEGEND		
Utility Survey Point Features		
AV Air Valve	IC - Comm	MH - Round
BB Belisha Beacon	IC - Electric	MH - Surface Water
CP CCTV Camera Pole	IC - Round	Marker Post
CR Cable Riser	IC - Telecom	Pipe Riser
DP Down Pipe To Ground	IC - TCSU/TFL	Recessed Light
EP Electrical Pole	IC - CATV	Rodding Eye
ER Earth Rod	LP Lamp Post	Stop Cook
FR Fire Hydrant	MH	Traffic Light
GM Gas Meter	MH - District Heat	Valve General
GV Gas Valve	MH - Foul	Water Meter
G Gully		Water Valve
Utility Survey Linework Features		
BT British Telecom	EHV Electrical - Extra High Voltage	
CATV Cable TV	HV Electrical - High Voltage	
CCTV Closed Circuit TV	LV Electrical - Low Voltage	
COMMS Communications	TFL Electrical - TFL	
FOLC Fibre Optic Line - Colt	SL Street Lighting	
FOLC Fibre Optic Line - Energis	TCSU Traffic Control System Unit	
FOLC Fibre Optic Line - Fibernet		
FOLC Fibre Optic Line - Fibernet		
FOLC Fibre Optic Line - Mercury		
FOLC Fibre Optic Line - MFS		
FOLC Fibre Optic Line - Tanet		
FOLC Fibre Optic Line - Virgin		
FOLC Fibre Optic Line - Vodafone		
FOLC Fibre Optic Line - Verizon		
FOLC Fibre Optic Line - WCOM		
TS Telecom Service		
Drainage		
FW Combined Water		
FW Foul Water		
SW Surface Water		
RM Rising Main		
Water		
FRW Fire Water		
WM Water Main		
WS Water Service		
Electrical		
E Electrical Service		
EE Electrical Earth		
P Electrical Pilot Cable		
Other		
DH District Heat		
FU Fuel Pipe		
XX Decommissioned/Abandoned		
Manhole Chamber		
Manhole ID		
Pot End		
Scope of Works		

PAS128 Quality Levels	
(Consult document PAS128-2014.pdf for full details)	
XX - A - Quality Level A	XX - B3 - Quality Level B3
XX - B1 - Quality Level B1	XX - B3P - Quality Level B3P
XX - B1P - Quality Level B1P	XX - B4 - Quality Level B4
XX - B2 - Quality Level B2	XX - C - Quality Level C
XX - B2P - Quality Level B2P	XX - D - Quality Level D

Special Survey Features	
E-XXXX-XXX	ES-XXXX-XXX
ID A-NNNNN-YYY Survey Station	ID N-NNNNN-YYY Scan Target
H-ZZZ-ZZZ	H-ZZZ-ZZZ

Utility Survey Abbreviations	
AB Abandoned	CSER Confined Space Entry Required
AR Assumed Route	MH Manhole
BI Illuminated Bollard	NVO Not Visible Outlet
BLD Blocked	OE Overhead Electric
CPD Capped	OT Overhead Telecom
CL Cover Level	SOF Soffit Level
CPD Capped	TFR Taken From Records
CUT Disconnected Utility	TVM Ticket Vending Machine
EOCCTV End of CCTV Survey	UTO Unable to Open
EOC End of GPR Signal	UTO Unable to Survey
EOT End of Trace	UTT Unable to Trace
EOS End of Survey	UKN Unknown
IC Inspection Cover	WL Water Level
IL Invert Level	XKS Service Depth
AC Asbestos Cement	CO Concrete
BC Brick Chamber	DI Ductile Iro
CI Cast Iron	PE Polyethylene
SI Spun Iron	ST Steel
WTR Water	

Utility Material Abbreviations	
Level Measured For Ducts/Pipes At Pits Is To Top of The Service	Level Measured For Drainage At Pits Is To Invert Level Of The Service

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Location Plan	

Revisions			
Rev	Description	Surveyed by	Checked by
A	First Issue	DA - 16/11/24	CN - 20/11/24
B	CCTV drainage survey added	DA - 16/11/24	CN - 20/11/24

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Email: info@murphygs.com

London Manchester Birmingham Glasgow Belfast Cork Kildare

Client
TPS Management

Project
Novartis site Horsham - GPR Survey

Site Address
32 Wimbleshurst Rd
Horsham
RH12 2ED

Description
Underground Utility Survey (PAS128)

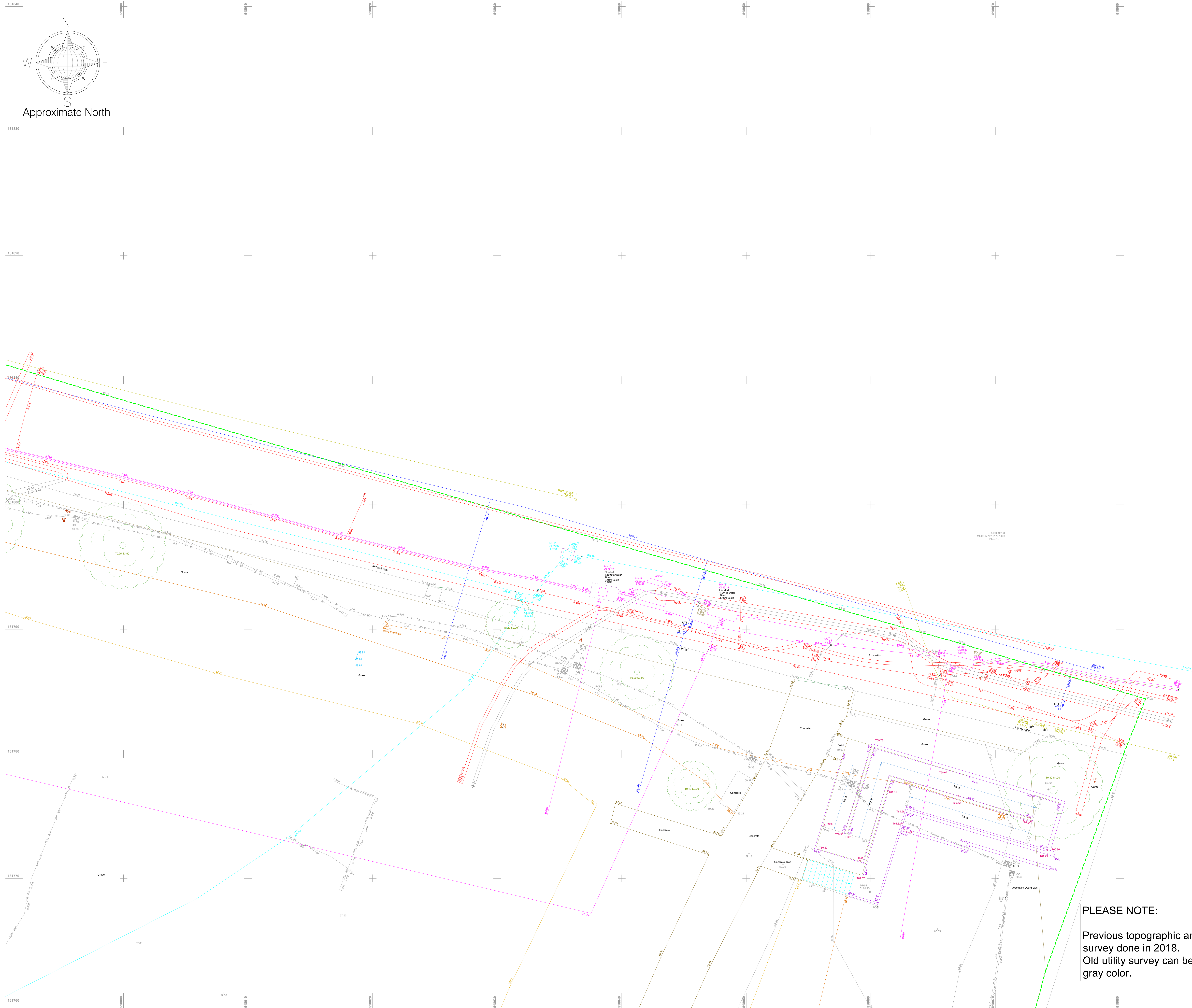
Survey Grid
Localised OSGB36(15) - Scale Factor 1.0

Survey Datum
GNSS - Ordnance Datum Newlyn (ODN)

RICS Band
Band E

Drawing Scale
1:100 @A0

Drawing Number
GS60622-U-RevB-All-Combined-06



LEGEND		
Utility Survey Point Features		
AV Air Valve	IC Gully Round	MH - Round
BB Belisha Beacon	IC IC	MH - Surface Water
CP CCTV Camera Pole	IC - Comms	Marker Post
CR Cable Riser	IC - Electric	Pipe Riser
DP Down Pipe	IC - Round	Recessed Light
DPO Down Pipe To Ground	IC - Telecom	Rodding Eye
EP Electrical Pole	IC - TCSU/TFL	Stop Cock
ER Earth Rod	IC - CATV	Traffic Light
FR Fire Hydrant	Lamp Post	Telegraph Pole
GM Gas Meter	MH	Valve General
GV Gas Valve	MH - District Heat	Water Meter
G Gully	MH - Foul	Water Valve

Utility Survey Linework Features		
Communications	Electrical - Extra High Voltage	
BT British Telecom	EHV	
Cable TV	Electrical - High Voltage	
CCTV Closed Circuit TV	HV	
COMMS Communications	Electrical - Low Voltage	
Fibre Optic Line	Electrical - TFL	
Fibre Optic Line - Cot	SL	
Fibre Optic Line - Energis	TCSU	
Fibre Optic Line - Fibernet	Gas	
Fibre Optic Line - Level 3	Gas Low Pressure	
Fibre Optic Line - Mercury	Gas Intermediate Pressure	
Fibre Optic Line - MFS	Gas Medium Pressure	
Fibre Optic Line - Tanet	Gas High Pressure	
Fibre Optic Line - Virgin	GPR - Unknown	
Fibre Optic Line - Vodafone	ED Empty Duct	
Fibre Optic Line - Verizon	GPR Anomaly	
Fibre Optic Line - WCOM	UA Unknown Asset	
Telecom Service	UA Passive Sweep	
Drainage	Unknown Cable	
Combined Water	GPR Slab	
Foul Water	GPR Survey Area	
Surface Water	GPR buried structure	
Rising Main	GPR Reinforced Slab	
Water	GPR interface layer (change in material)	
Fire Water	Other	
Water Main	District Heat	
Water Service	Fuel Pipe	
Decommissioned/Abandoned	Manhole Chamber	
Manhole ID	Manhole ID	
Pot End	Pot End	
Scope of Works	Scope of Works	

PAS128 Quality Levels		
(Consult document PAS128-2014.pdf for full details)		
XX - A - Quality Level A	XX - B3 - Quality Level B3	
XX - B1 - Quality Level B1	XX - B3P - Quality Level B3P	
XX - B1P - Quality Level B1P	XX - B4 - Quality Level B4	
XX - B2 - Quality Level B2	XX - C - Quality Level C	
XX - B2P - Quality Level B2P	XX - D - Quality Level D	

Special Survey Features		
E-XXXX-XXX	ES-XXXX-XXX	
ID A NYYYYYYY Survey Station	ID NYYYYYYY Scan Target	
HZZZ ZZZ	HZZZ ZZZ	

Utility Survey Abbreviations		
AB Abandoned	CSER Confirmed Space Entry Required	
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CPD Capped	OT Overhead Telecom	
CL Cover Level	SOF Soffit Level	
CPD Capped	TFR Taken From Rafters	
CUT Disconnected Utility	TVM Ticket Vending Machine	
EOCCTV End of CCTV Survey	UTO Unable to Open	
EOG End of GPR Signal	UTS Unable to Survey	
EOT End of Trace	UTT Unable to Trace	
EOS End of Survey	UKN Unknown	
IC Inspection Cover	WL Water Level	
IL Invert Level	XXS Service Depth	

Utility Material Abbreviations		
AC Asbestos Cement	CO Concrete	SI Spun Iron
BC Brick Chamber	DI Ductile Iro	ST Steel
CI Cast Iron	PE Polyethylene	WTR Water

Level Measured For Ducts/Pipes At Pits To Top of The Service	0.80d
Level Measured For Drainage At Pits To Invert Level Of The Service	0.80d

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Location Plan		

Revisions				
Rev	Description	Surveyed by	Drawn by	Checked by
A	First Issue	DA - 16/11/24	CN - 20/11/24	DS - 20/11/24
B	CCTV drainage survey added	DA - 16/11/24	CN - 20/11/24	DS - 03/12/24

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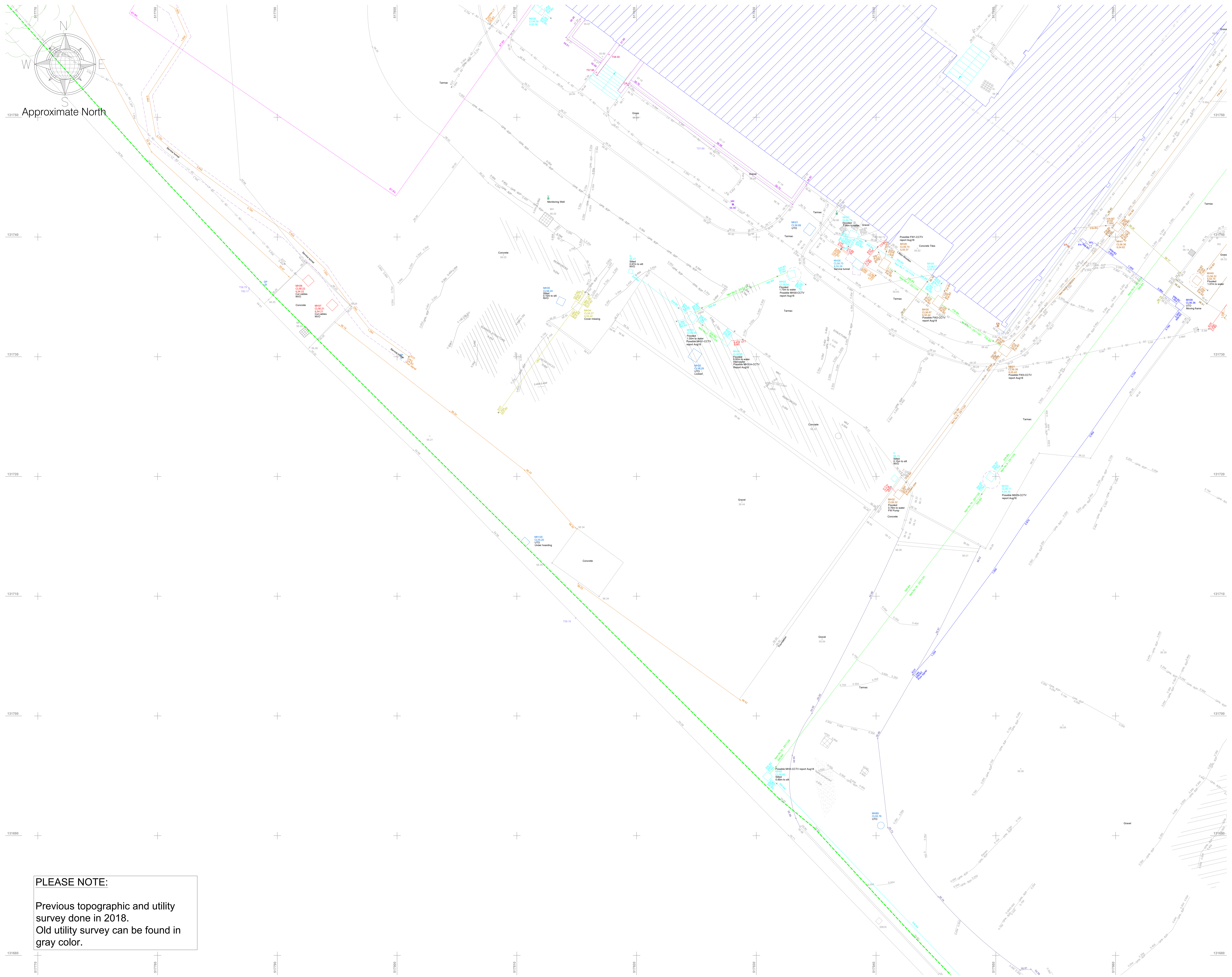
London Manchester Birmingham Glasgow Belfast Cork Kildare

Client	TPS Management
Project	Novartis site Horsham - RDR Survey
Site Address	32 Wimblehurst Rd Horsham RH12 2ED
Description	Underground Utility Survey(PAS128)
Survey Grid	Localised OSGB36(15) - Scale Factor 1.0
Survey Datum	GNSS - Ordnance Datum Newlyn (ODN)
RICS Band	Band E
Drawing Scale	1:100 @A0
Drawing Number	GS60622-U-RevB-All-Combined-07

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PLEASE NOTE:

Previous topographic and utility survey done in 2018. Old utility survey can be found in gray color.



LEGEND

Utility Survey Point Features

AV Air Valve	IC Gully Round	MH - Round
BB Belisha Beacon	IC	MH - Surface Water
CP CCTV Camera Pole	IC - Comms	MK Marker Post
CR Cable Riser	IC - Electric	12.24 Pipe Riser
DP Down Pipe	IC - Round	RE Recessed Light
DPG Down Pipe To Ground	IC - Telecom	RE Recessed Eye
EP Electrical Pole	IC - TCSU/TFL	SC Stop Cock
ER Earth Rod	IC - CATV	TL Traffic Light
FR Fire Hydrant	LP Lamp Post	TP Telegraph Pole
GM Gas Meter	MH	V Valve General
GV Gas Valve	MH - District Heat	WM Water Meter
G Gully	MH - Foul	WV Water Valve

Utility Survey Linework Features

BT British Telecom	EHV Electrical - Extra High Voltage
CATV Cable TV	HV Electrical - High Voltage
CCTV Closed Circuit TV	LV Electrical - Low Voltage
COMMS Communications	TFL Electrical - TFL
FOL Fibre Optic Line	SL Street Lighting
FOLC Fibre Optic Line - Colt	TCSU Traffic Control System Unit
FOLE Fibre Optic Line - Energis	Gas
FOLF Fibre Optic Line - Fibernet	G Gas Service
FOLL Fibre Optic Line - Level 3	GP Gas Low Pressure
FOLM Fibre Optic Line - Mercury	GIP Gas Intermediate Pressure
FOLN Fibre Optic Line - MFS	GMP Gas Medium Pressure
FOLT Fibre Optic Line - Tanel	GHP Gas High Pressure
FOLV Fibre Optic Line - Virgin	GPR Gas Unknown
FOLV Fibre Optic Line - Vodafone	ED Empty Duct
FOLV Fibre Optic Line - Verizon	GPR Anomaly
FOLW Fibre Optic Line - WCOM	UA Unknown Asset
TS Telecom Service	UA Possible Sweep
Drainage	Unknown Cable
FW Foul Water	GPR Slab
FW Foul Water	GPR Survey Area
RM Rising Main	GPR buried structure
Water	GPR Reinforced Slab
FRW Fire Water	GPR interface layer (change in material)
WM Water Main	Other
WS Water Service	DH District Heat
Electrical	FU Fuel Pipe
ES Electrical Service	XX Decommissioned/Abandoned
EE Electrical Earth	Manhole Chamber
P Electrical Pilot Cable	Manhole ID
	PEO Pot End
	Scope of Works

PAS128 Quality Levels
(Consult document PAS128-2014.pdf for full details)

XX - A - Quality Level A	XX - B3 - Quality Level B3
XX - B1 - Quality Level B1	XX - B3P - Quality Level B3P
XX - B1P - Quality Level B1P	XX - B4 - Quality Level B4
XX - B2 - Quality Level B2	XX - C - Quality Level C
XX - B2P - Quality Level B2P	XX - D - Quality Level D

Special Survey Features

E-XXXX-XXX ID A NYYYYYYY Survey Station HZZZZ ZZZ	E-XXXX-XXX ID NYYYYYYY Scan Target HZZZZ ZZZ
---	--

Utility Survey Abbreviations

AB Abandoned	CSER Confined Space Entry Required
AR Assumed Route	MH Manhole
BI Illuminated Bollard	NVO Not Visible Outlet
BLD Blocked	OE Overhead Electric
CPD Capped	OT Overhead Telecom
CL Cover Level	SOF Soffit Level
CPO Capped	TFR Taken From Raucous
CUT Disconnected Utility	TVM Ticket Vending Machine
EOCCTV End of CCTV Survey	UTO Unable to Open
EOC End of GPR Signal	UTO Unable to Survey
EOT End of Trace	UTT Unable to Trace
EOS End of Survey	UKN Unknown
IC Inspection Cover	WL Water Level
IL Invert Level	XXS Service Depth
AC Asbestos Cement	CO Concrete
BC Brick Chamber	DI Ductile Iro
CI Cast Iron	PE Polyethylene
Level Measured For Ducts/Pipes At Pits Is To Top of The Service	Level Measured For Drainage At Pits Is To Invert Level Of The Service

Utility Material Abbreviations

AC Asbestos Cement	CO Concrete	SI Spun Iron
BC Brick Chamber	DI Ductile Iro	ST Steel
CI Cast Iron	PE Polyethylene	WTR Water

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Location Plan

Revisions

Rev	Description	Surveyed by	Drawn by	Checked by
A	First Issue	DA - 16/11/24	CN - 20/11/24	DS - 20/11/24
B	CCTV drainage survey addit	DA - 16/11/24	CN - 20/11/24	DS - 03/12/24

Client
TPS Management

Project
Novartis site Horsham - GPR Survey

Site Address
32 Wimbleshurst Rd
Horsham
RH12 2ED

Description
Underground Utility Survey (PAS128)

Survey Grid
Localised OSGB36(15) - Scale Factor 1.0

Survey Datum
GNSS - Ordnance Datum Newlyn (ODN)

RICS Band
Band E

Drawing Scale
1:100 @A0

Drawing Number
GS60622-U-RevB-All-Combined-08

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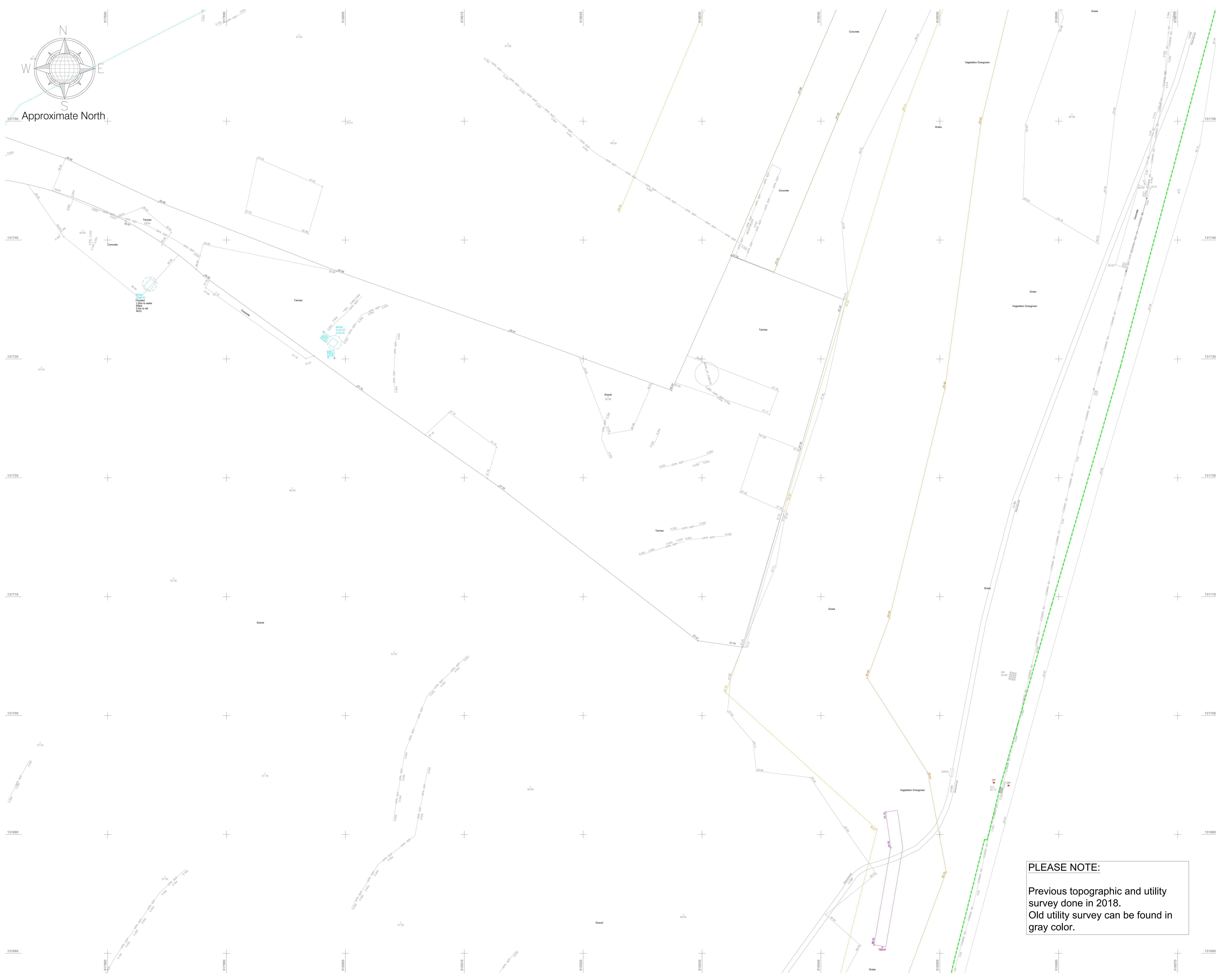
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London **Manchester** **Birmingham** **Glasgow** **Belfast** **Cork** **Kildare**

Logos:



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LEGEND		
Utility Survey Point Features		
AV Air Valve	GR Gully Round	MH - Round
BB Belisha Beacon	IC IC	MH - Surface Water
CP CCTV Camera Pole	IC - Comm	MK Marker Post
CR Cable Riser	IC - Electric	12.24 Pipe Riser
DP Down Pipe	IC - Round	RE Recessed Light
DPC Down Pipe To Ground	IC - Telecom	RE Rodding Eye
EP Electrical Pole	IC - TCSU/TFL	SC Stop Cock
ER Earth Rod	IC - CATV	TL Traffic Light
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GM Gas Meter	MH	V Valve General
GV Gas Valve	MH - District Heat	WM Water Meter
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Utility Survey Linework Features		
Communications	EHV Electrical - Extra High Voltage	
BT British Telecom	EHV Electrical - High Voltage	
CATV Cable TV	EHV Electrical - Low Voltage	
CCTV Closed Circuit TV	EHV Electrical - TFL	
COMMS Communications	EHV Street Lighting	
FOL Fibre Optic Line	EHV Traffic Control System Unit	
FOLC Fibre Optic Line - Colt	Gas	
FOLE Fibre Optic Line - Energis	Gas Service	
FOLF Fibre Optic Line - Fibernet	Gas Low Pressure	
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FOLN Fibre Optic Line - MFS	Gas Medium Pressure	
FOLT Fibre Optic Line - Tanet	Gas High Pressure	
FOLV Fibre Optic Line - Virgin	GPR - Unknown	
FOLVF Fibre Optic Line - Vodafone	GPR Anomaly	
FOLVN Fibre Optic Line - Verizon	GPR Buried Structure	
FOLVW Fibre Optic Line - WCOM	GPR Reinforced Slab	
IS Telecom Service	GPR Interface Layer (change in material)	
Drainage	Other	
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SW Surface Water	XX Decommissioned/Abandoned	
RM Rising Main	Manhole Chamber	
Water	Manhole ID	
FRW Fire Water	PEO Pot End	
WM Water Main	Scope of Works	
WS Water Service		
Electrical		
E Electrical Service		
EE Electrical Earth		
P Electrical Pilot Cable		

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XX - A - Quality Level A	XX - B3 - Quality Level B3
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Special Survey Features	
E-XXXX-XXX	ES-XXXX-XXX
ID A NYYYYY YYY Survey Station	ID N NYYYYY YYY Scan Target
HZZZ ZZZ	HZZZ ZZZ

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EDS End of Survey	WL Water Level
IC Inspection Cover	XXS Service Depth
IL Invert Level	

Utility Material Abbreviations	
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CI Cast Iron	PE Polyethylene
	SI Spun Iron
	ST Steel
	WTR Water

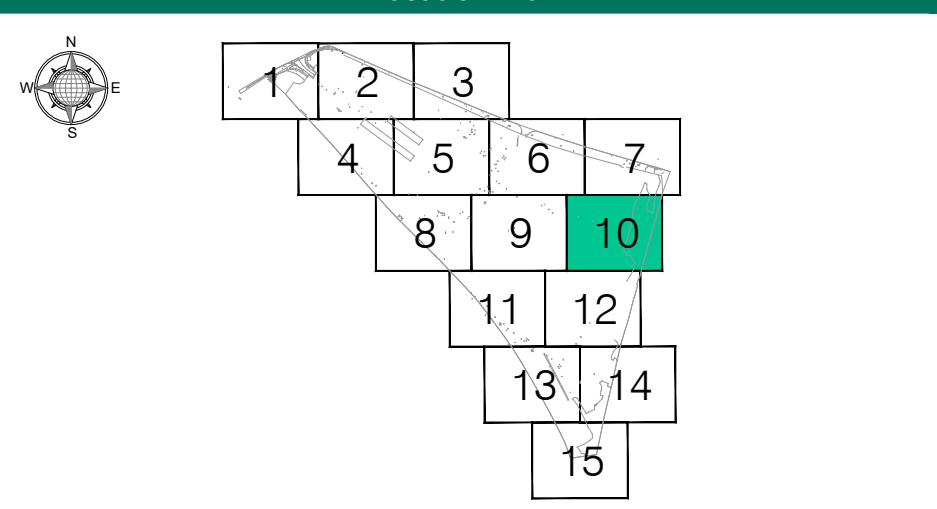
Level Measured For	
Ducts/Pipes At Pits Is To Top of The Service	At Pits Is To Invert Level Of The Service

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Revisions				
Rev	Description	Surveyed by	Drawn by	Checked by
A	First Issue	DA - 16/11/24	CN - 20/11/24	DS - 20/11/24
B	CCTV drainage survey added	DA - 16/11/24	CN - 29/11/24	DS - 03/12/24



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Client	TPS Management
Project	Novartis site Horsham - GPR Survey
Site Address	32 Wimblehurst Rd Horsham RH12 2ED
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Survey Datum	GNSS - Ordnance Datum Newlyn (ODN)
RICS Band	Band E
Drawing Scale	1:100 @A0
Drawing Number	GS60622-U-RevB-All-Combined-10

LEGEND					
Utility Survey Point Features					
AV	Q	GI	Round	MH	MH - Round
BS	Q	IC		MH	MH - Surface Water
CP	Q	IC	Comms	MK	Marker Post
CR	Q	ICE		12/24	
DR	Q	IC	Electric	PR	Pipe
DP	Q	IC	Radio	RE	Recessed Light
EP	Q	IC	Telephone	SC	Sticking Eye
ER	Q	IC	TSU/UTL	SD	Road Curb
FR	Q	IC	CATV	TL	Traffic Light
FM	Q	LP	Lamp Post	TR	Telephone Pole
GM	Q	MH		V	Valve General
GV	Q	MH	Dist. Heat	WM	Water Meter
GU	Q	MH	Foul	WW	Water Valve

Utility Survey Line Feature Notes			
Communications			
BT	British Telecom	EHV	Electrical - Extra High Voltage
CATV	Cable TV	HV	Electrical - High Voltage
CC	Closed Circuit TV	LV	Electrical - Low Voltage
COM	Communications	TEL	Electrical - TLI
FOL	Fiber Optic Line	SL	Street Lighting
FOLC	Fiber Optic Line - Coit	TCSU	Traffic Control System Un
FOLF	Fiber Optic Line - Energy		
FOLFB	Fiber Optic Line - Fibernet	G	Gas
FOLFL	Fiber Optic Line - Level 3	G	Gas Measurement
FOLM	Fiber Optic Line - Mercury	GP	Gas Intermediate Pressure
FOLN	Fiber Optic Line - NESC	GP	Gas Medium Pressure
FOLT	Fiber Optic Line - Tanel	GP	Gas High Pressure
FOLV	Fiber Optic Line - Virgin	EMP	EMP + Unknown
FOLV	Fiber Optic Line - Volterra	EMP	EMP + Unknown
FOLVN	Fiber Optic Line - Verizon	GP	GP Unknown
FOLTW	Fiber Optic Line - WCOM	UA	Unknown Asset
	Telecom Service	UCL	Unknown Cable
		UCL	Unknown Cable
Drainage			
CW	Combined Water	GP Sld	GP Sld
FW	Full Water	GP Sld	GP Survey Area
FW	Full Water	GP	GP buried structure
FW	Full Water	GP	GP Reinforced Steel
R	Rising Main	GP	GP interface structure (change in material)
Water			
FRW	Fire Water	OH	Overhead
WW	Water Main	DH	District Heat
WS	Water Service	FU	Fuel Pipe
		XX	Decommissioned/Abandoned
			Manhole Chamber
E	Electrical		Manhole ID
E	Electrical Service		Post End
E	Electrical Service		Post End
E	Electrical Pilot Cable		Scope of Works

PAS128 Quality Levels			
(Consult document 'PAS128:2014.pdf' for full details)			
—XX-A—	Quality Level A	—XX-B3—	Quality Level B3
—XX-B1—	Quality Level B1	—XX-B3P—	Quality Level B3P
—XX-B1P—	Quality Level B1P	—XX-B4—	Quality Level B4
—XX-B2—	Quality Level B2	—XX-C—	Quality Level C
—XX-B2P—	Quality Level B2P	—XX-D—	Quality Level D

Special Survey Features			
E=XXXX.XXX		E=XXXX.XXX	
ID N=YYYY.YYY	Survey Station	ID N=YYYY.YYY	Scan Target
H=ZZZ.ZZZ		H=ZZZ.ZZZ	

Utility Survey Abbreviations		
AB	Abandoned	CSER Confined Space Entry Required
AR	Assumed Route	MV1 Manhole
BL	Illustrated Borehole	NVO Not Visible Utility
BLD	Blocked	OE Overhead Electric
CP	Capped	OT Overhead Telecom
CL	Core Cover	SOF Soft Lateral
CPD	Capped	TRR Taken From Records
EUC	Disconnected Utility	TVM Ticket Vending Machine
ECCVT	End of CCTV Survey	UTO Unable to Open
EOG	End of GPR Signal	UTS Unable to Survey
EOT	End of Trace	UTI Unable to Trace
EOS	End of Survey	UNK Unknown
IC	Inspection Cover	WL Water Level
IL	Invert Level	XXG Service Depth

Utility Material Abbreviations					
AC	Asbestos Cement	CO	Concret	SI	Spun Iron
BC	Brick Chamber	DI	Ductile Iro	ST	Steel
CI	Cast Iron	PE	Polyethylene	WTR	Water
Level Measured For Ducts/Pipes At Pits Is To Top Of The Service			Level Measured For Drainage At Pits Is To Invert Level Of The Service		

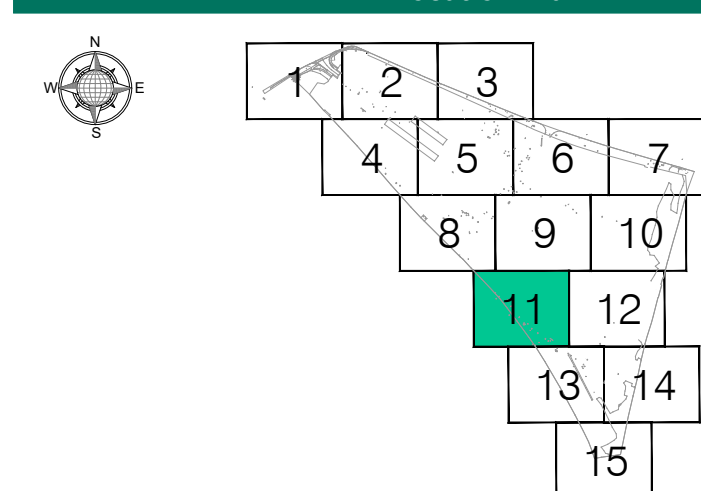
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Location Plan



Revisions				
Rev	Description	Surveyed by	Drawn by	Checked by
A	First Issue	DA - 16/11/24	CN - 20/11/24	DS - 20/11/24
B	CCTV drainage survey added	DA - 16/11/24	CN - 29/11/24	DS - 02/12/24



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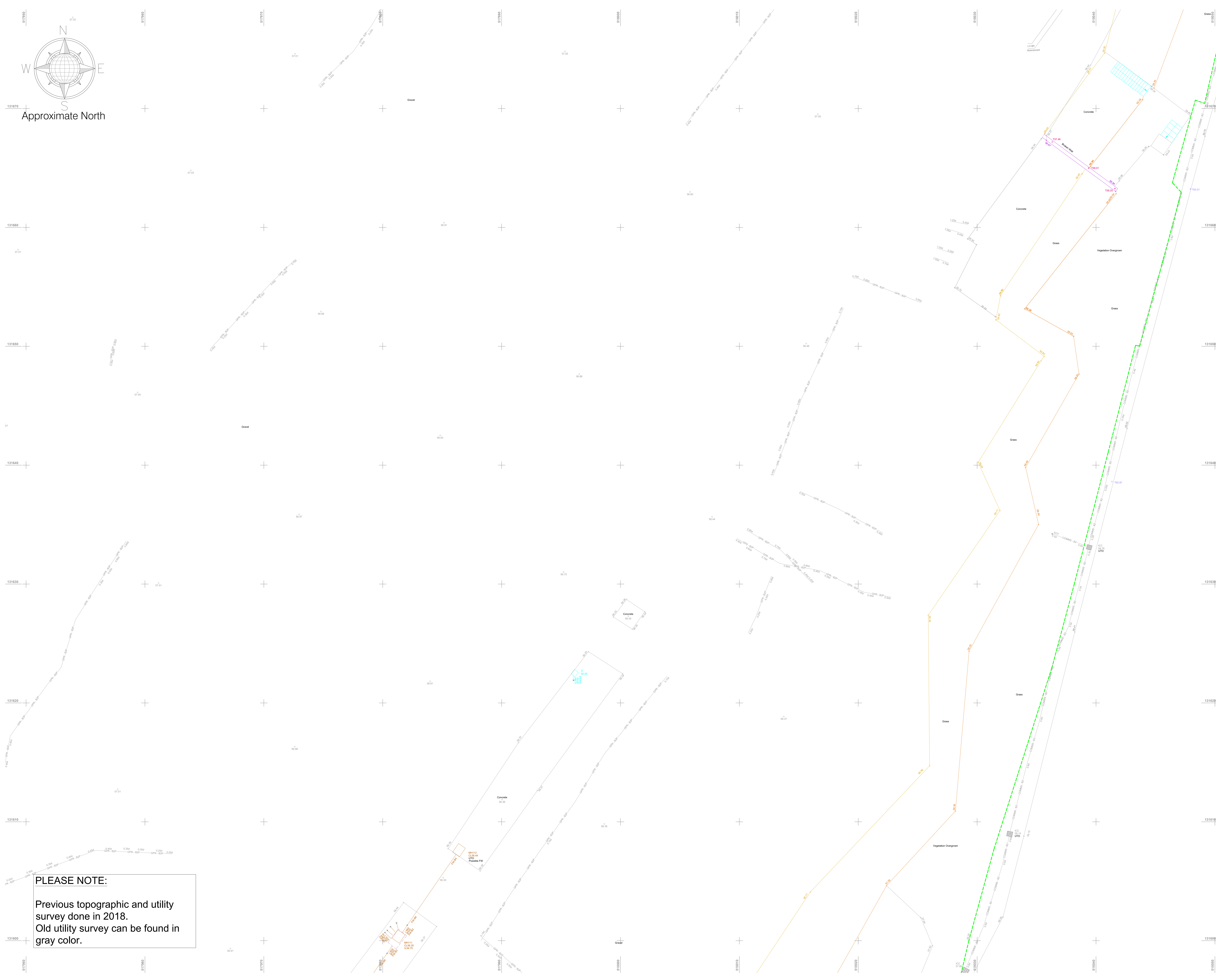
London Manchester Birmingham Glasgow Belfast Cork Kildare

Client	TPS Management
Project	Novartis site Horsham - GPR Survey
Site Address	32 Wimbleshurst Rd Horsham RH12 2ED
Description	Underground Utility Survey(PAS128)
Survey Grid	Localised OSGB36(15) - Scale Factor 1.0
Survey Datum	GNSS - Ordnance Datum Newlyn (ODN)
RICS Band	Band E
Drawing Scale	1:100 @A0
Drawing Number	GS60622-U-RevB-All-Combined-

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PLEASE NOTE:

Previous topographic and utility survey done in 2018.
Old utility survey can be found in gray color.



PLEASE NOTE:

Previous topographic and utility survey done in 2018.
Old utility survey can be found in gray color.

LEGEND

Utility Survey Point Features

AV Air Valve	IC - Comm	MH - Round
BB Belisha Beacon	IC - Electric	MH - Surface Water
CP CCTV Camera Pole	IC - Round	MP Marker Post
CR Cable Riser	IC - Telecom	PR Pipe Riser
DP Down Pipe	IC - TCSU/TFL	RE Recessed Light
DPG Down Pipe To Ground	IC - CATV	RE Rodding Eye
EP Electrical Pole	IC - District Heat	SC Stop Cook
ER Earth Rod	IC - Foul	TL Traffic Light
FR Fire Hydrant		TP Telegraph Pole
GM Gas Meter		V Valve General
GV Gas Valve		WM Water Meter
G Gully		WV Water Valve

Utility Survey Linework Features

BT British Telecom	EHV Electrical - Extra High Voltage
CATV Cable TV	HV Electrical - High Voltage
CCTV Closed Circuit TV	LV Electrical - Low Voltage
COMMS Communications	TFL Electrical - TFL
FOL Fibre Optic Line	SL Street Lighting
FOLC Fibre Optic Line - Cot	TCSU Traffic Control System Unit
FOLE Fibre Optic Line - Energis	Gas
FOLF Fibre Optic Line - Fibernet	Gas Service
FOLM Fibre Optic Line - MFS	Gas Low Pressure
FOLN Fibre Optic Line - NBN	Gas Intermediate Pressure
FOLV Fibre Optic Line - Virgin	Gas Medium Pressure
FOLW Fibre Optic Line - Vodafone	Gas High Pressure
FOLX Fibre Optic Line - Xo	GPR - Unknown
FOLY Fibre Optic Line - Y	GPR Anomaly
FOLZ Fibre Optic Line - Z	ED Empty Duct
TS Telecom Service	GPR Buried Structure
	GPR Reinforced Slab
	GPR Interface Layer (change in material)
	Other
	DH District Heat
	FU Fuel Pipe
	XX Decommissioned/Abandoned
	Manhole Chamber
	Manhole ID
	PEO Pot End
	Scope of Works

PAS128 Quality Levels
(Consult document 'PAS128-2014.pdf' for full details)

XX - A - Quality Level A	XX - B3 - Quality Level B3
XX - B1 - Quality Level B1	XX - B3P - Quality Level B3P
XX - B1P - Quality Level B1P	XX - B4 - Quality Level B4
XX - B2 - Quality Level B2	XX - C - Quality Level C
XX - B2P - Quality Level B2P	XX - D - Quality Level D

Special Survey Features

E-XXXX-XXX	E-XXXX-XXX
ID A NYYYYYYY Survey Station	ID N NYYYYYYY Scan Target
HZZZ ZZZ	HZZZ ZZZ

Utility Survey Abbreviations

AB Abandoned	CSER Confined Space Entry Required
AR Assumed Route	MH Manhole
BI Illuminated Bollard	NVO Not Visible Outlet
BLD Blocked	OE Overhead Electric
CPD Capped	OT Overhead Telecom
CL Cover Level	SOF Soffit Level
CPD Capped	TFR Taken From Raucous
CUT Disconnected Utility	TVM Ticket Vending Machine
EOCCTV End of CCTV Survey	UTO Unable to Open
EOC End of GPR Signal	UTS Unable to Survey
EOT End of Trace	UTT Unable to Trace
EOS End of Survey	UKN Unknown
IC Inspection Cover	WL Water Level
IL Invert Level	XSS Service Depth

Utility Material Abbreviations

AC Asbestos Cement	CO Concrete	SI Spun Iron
BC Brick Chamber	DI Ductile Iro	ST Steel
CI Cast Iron	PE Polyethylene	WTR Water

Level Measured For
Ducts/Pipes At Pits Is To
Top of The Service

Level Measured For Drainage
At Pits Is To Invert Level
Of The Service

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Location Plan

Revisions

Rev	Description	Surveyed by	Drawn by	Checked by
A	First Issue	DA - 16/11/24	CN - 20/11/24	DS - 20/11/24
B	CCTV drainage survey added	DA - 16/11/24	CN - 20/11/24	DS - 03/12/24

Client

Project

Site Address

Description

Survey Grid

Survey Datum

RICS Band

Drawing Scale

TPS Management

Novartis site Horsham - GPR Survey

32 Wimblehurst Rd
Horsham
RH12 2ED

Underground Utility Survey (PAS128)

Localised OSGB36(15) - Scale Factor 1.0

GNSS - Ordnance Datum Newlyn (ODN)

Band E

1:100 @A0

GS60622-U-RevB-All-Combined-12

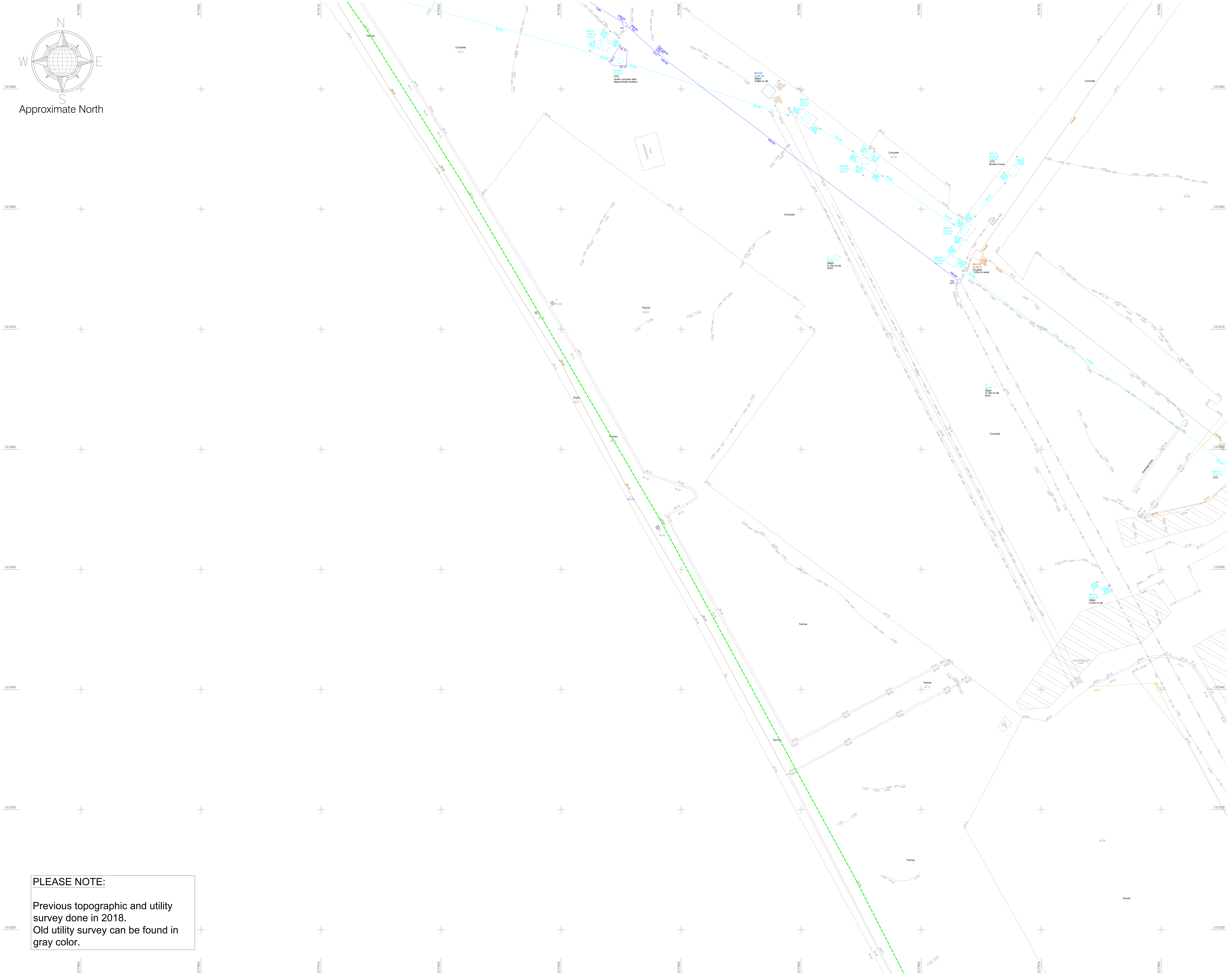
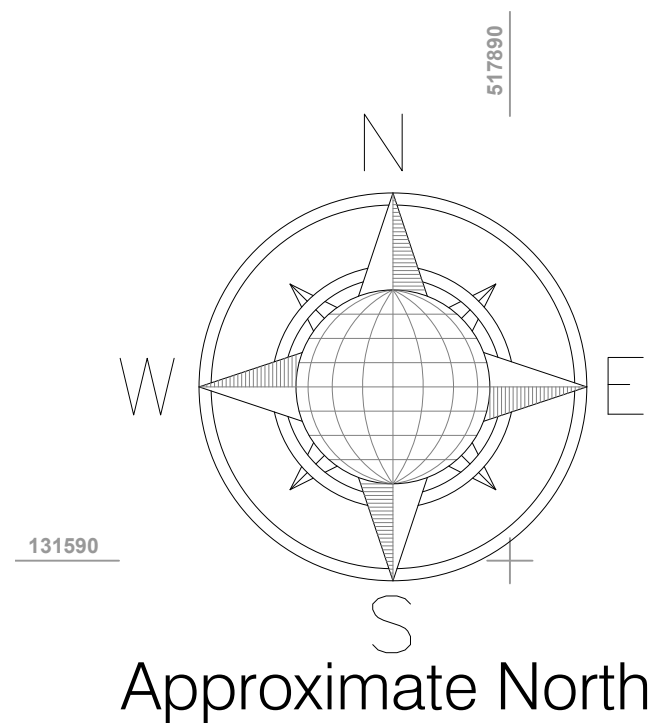
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PLEASE NOTE:

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LEGEND		
Utility Survey Point Features		
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DP Down Pipe	IC - Round	Recessed Light
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EP Electrical Pole	IC - TCSU/TFL	Stop Cook
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FOLE Fibre Optic Line - Energis	Gas	
FOLF Fibre Optic Line - Fibernet	G Gas Service	
FOLM Fibre Optic Line - Mercury	GP Gas Low Pressure	
FOLN Fibre Optic Line - NFSC	GIP Gas Intermediate Pressure	
FOLT Fibre Optic Line - Tanet	GMP Gas Medium Pressure	
FOLV Fibre Optic Line - Virgin	GHP Gas High Pressure	
FOLV Fibre Optic Line - Vodafone	GPR Gas Pressure	
FOLV Fibre Optic Line - Verizon	GPR - Unknown	
FOLV Fibre Optic Line - WCOM	ED Empty Duct	
IS Telecom Service	GPR Anomaly	
	UA Unknown Asset	
	UA Possible Sweep	
	UCL Unknown Cable	
	GPR Slab	
	GPR Survey Area	
	GPR buried structure	
	GPR Reinforced Slab	
	GPR Interface layer (change in material)	
	Other	
	DH District Heat	
	FU Fuel Pipe	
	XX Decommissioned/Abandoned	
	Manhole Chamber	
	Manhole ID	
	PEO Pot End	
	Scope of Works	

PAS128 Quality Levels		
(Consult document PAS128-2014.pdf for full details)		
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XX - B2 - Quality Level B2	XX - C - Quality Level C	
XX - B2P - Quality Level B2P	XX - D - Quality Level D	

Special Survey Features		
E-XXXX-XXX	ES-XXXX-XXX	
ID A NYYYYYYY Survey Station	ID NYYYYYYY Scan Target	
HZZZ ZZZ	HZZZ ZZZ	

Utility Survey Abbreviations		
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BI Illuminated Bollard	NVO Not Visible Outlet	
BLD Blocked	OE Overhead Electric	
CPD Capped	OT Overhead Telecom	
CL Cover Level	SOF Soffit Level	
CPD Capped	TFR Taken From Raucous	
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EOC End of GPR Signal	UTS Unable to Survey	
EOT End of Trace	UTT Unable to Trace	
EOS End of Survey	UKN Unknown	
IC Inspection Cover	WL Water Level	
IL Invert Level	XXS Service Depth	

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BC Brick Chamber	DI Ductile Iro	ST Steel
CI Cast Iron	PE Polyethylene	WTR Water

Level Measured For
Ducts/Pipes At Pits Is To
Top Of The Service

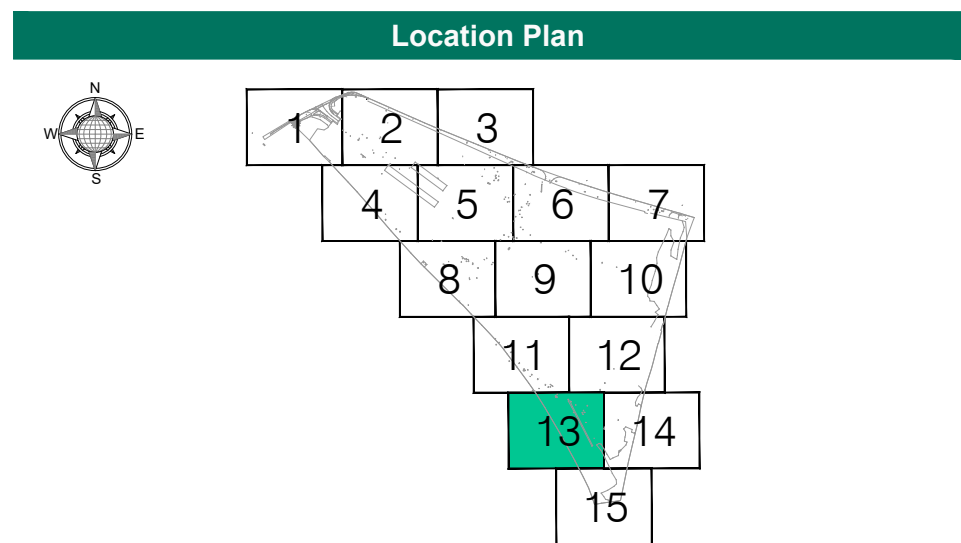
Level Measured For Drainage
At Pits Is To Invert Level
Of The Service

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Revisions				
Rev	Description	Surveyed by	Drawn by	Checked by
A	First Issue	DA - 161124	CN - 201124	DS - 201124
B	CCTV drainage survey added	DA - 161124	CN - 201124	DS - 03/12/24



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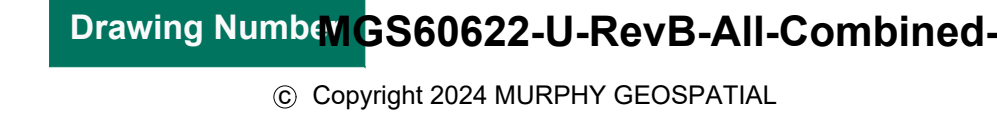
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Surveying
Contractors
Association

RICS
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of Chartered
Surveyors

Client	TPS Management
Project	Novartis site Horsham - GPR Survey
Site Address	32 Wimblehurst Rd Horsham RH12 2ED
Description	Underground Utility Survey(PAS128)
Survey Grid	Localised OSGB36(15) - Scale Factor 1.0
Survey Datum	GNSS - Ordnance Datum Newlyn (ODN)
RICS Band	Band E
Drawing Scale	1:100 @A0
Drawing Number	GS60622-U-RevB-All-Combined-13



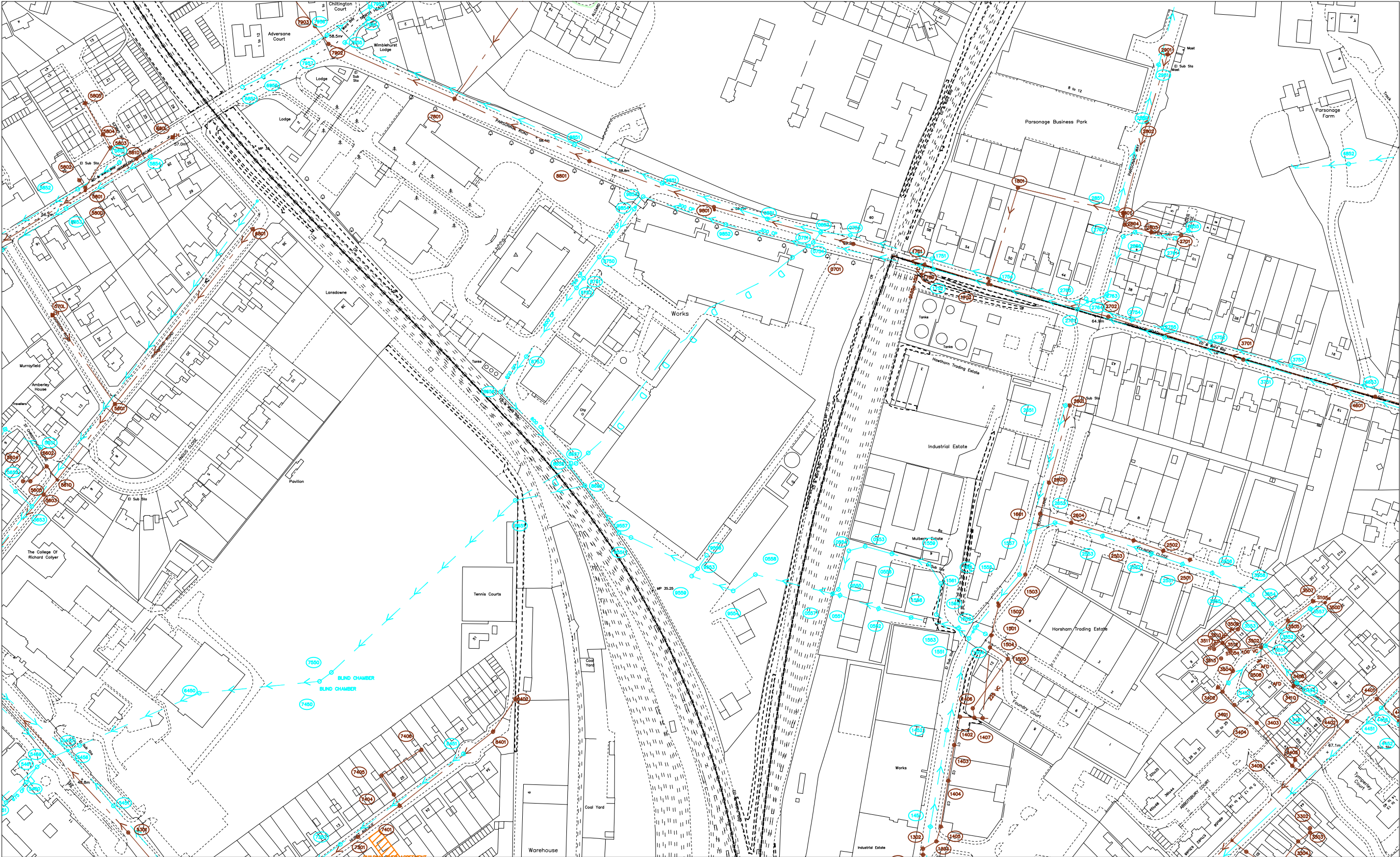
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APPENDIX 3

SOUTHERN WATER SEWER PLAN

SEWER RECORDS PAGE 1 OF 2

131957



131379

517492

O.S. REF

TQ1731NE

Title: Land At The Former Novartis S

Drawn by: mondaln

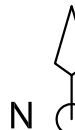
Scale: 1:2500

Date: 06/11/2015

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.

WARNING: BAC pipes are constructed of Bonded Asbestos Cement
WARNING: Unknown (UNK) materials may include Bonded Asbestos Cement

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518438

SEWER RECORDS PAGE 2 OF 2

Node	Cover	Invert	Size	Material	Shape		Node	Cover	Invert	Size	Material	Shape		Node	Cover	Invert	Size	Material	Shape		Node	Cover	Invert	Size	Material	Shape
0551X	60.38	58.92	300	VC	CIRC		2754X	65.31	64.16	150	VC	CIRC		4852X	65.08		300	CP	CIRC		8851X	58.45	57.49	300	CP	CIRC
0552X	60.4	59.07	300	VC	CIRC		2755X	65.76	64.33	225	VC	CIRC		5301X	50.01		225	VC	CIRC		9551X	56.02		UNK	UNK	CIRC
0553X	60.69	59.39	600	CP	CIRC		275DX			150	VC	CIRC		5451X	49.44	47.8	225	VC	CIRC		9553X	56.26		UNK	UNK	CIRC
0554X	60.66		UNK	UNK	UNK		2761X	65.15	63.79	225	PVC	CIRC		5456X	47.81		375	CP	CIRC		9554X	57.2		UNK	UNK	CIRC
0555X	60.73	59.23	600	CP	CIRC		2762X	64.76	63.3	525	CP	CIRC		5459X	47.9	46.22	675	CP	CIRC		9556X	56.32		UNK	UNK	CIRC
0556X	60.7	59.48	600	CP	CIRC		2763X	64.31	63.1	525	CP	CIRC		5460X	47.9	46.015	675	CP	CIRC		9557X	56.13		UNK	UNK	CIRC
0557X	60.39	58.97	600	CP	CIRC		2764X	64.1	61.87	150	VC	CIRC		5461X	47.6	46.09	675	CP	CIRC		9559X			UNK	UNK	CIRC
0558X			UNK	UNK	UNK		2765X	64.18	62.91	225	VC	CIRC		546DX			375	CP	CIRC		9801X	59.72	55.42	225	CP	CIRC
0701X	59.71	56.01	225	VC	CIRC		2801X	64.46	59.86	150	VC	CIRC		547DX			375	CP	CIRC		9851X	59.22	57.81	300	CP	CIRC
0751X	59.23	57.86	300	CP	CIRC		2802X	63.36	60.46	150	VC	CIRC		5601X	55.77	52.97	225	VC	CIRC		9852X	59.78	57.265	300	CP	CIRC
0753X	59.69		UNK	UNK	UNK		2803X	64.83	63.06	150	VC	CIRC		5602X	54.81	52.53	150	VC	CIRC		9853X	59.07	56.6	300	CP	CIRC
0754X	59.31	57.7	300	CP	CIRC		2804X	64.55	62.98	150	VC	CIRC		5603X	54.38	51.68	225	VC	CIRC		9854X	58.093	54.7	600	CP	CIRC
0851X	59.65	57.97	300	CP	CIRC		2851X	64.45	62.39	300	CP	CIRC		5604X	54.59	52.68	150	VC	CIRC							
0852Y	59.09	57.95	300	VC	CIRC	*	2852X	63.38		UNK	UNK	UNK		5605X	54.57		150	VC	CIRC							
0852X	59.09	58.07	300	CP	CIRC	*	2855X	65.1	63.88	225	PVC	CIRC		561DX			225	VC	CIRC							
1301X	59.86	59.26	225	VC	CIRC		2856X	64.684	63.647	300	PVC	CIRC		5651X	54.78	53.96	150	VC	CIRC							
1302X	59.9	59.29	225	VC	CIRC		2901X	64.1	60.99	150	VC	CIRC		5652X	54.45	53.38	225	VC	CIRC							
1303X	59.95	59.41	225	VC	CIRC		2951X	63.85	61.72	525	CP	CIRC		5653X	54.14	53.14	225	VC	CIRC							
1401X	63.97		225	VC	CIRC		3302X	66.6		150	VC	CIRC		570LX	55.74	53.52	225	VC	CIRC							
1402X	60.58	59.83	250	CI	CIRC		3303X	66.37		150	VC	CIRC		5801X	56.26	53.9	150	VC	CIRC							
1403X	60.28	59.67	250	CI	CIRC		3304X	66.15		150	VC	CIRC		5802X	56.28	54.43	150	VC	CIRC							
1404X	60.3	59.58	250	CI	CIRC		3307X	65.78		UNK	UNK	CIRC		5803X	56.62	54.26	150	VC	CIRC							
1405X	60.27	59.43	250	CI	CIRC		331DX	63.53		225	VC	CIRC		5804X	56.48	54.42	150	VC	CIRC							
1406X	64.022	60.759	225	VC	CIRC		3401X	66.82	65.92	150	VC	CIRC		5805X	56.22	54.7	150	VC	CIRC							
1407X	64.007	60.718	225	VC	CIRC		3402X	66.85	66.01	150	VC	CIRC		580DX			225	VC	CIRC							
1451X	60.03	58.63	300	VC	CIRC		3403X	66.75		UNK	UNK	UNK		581DX			225	VC	CIRC							
1452X	60.07	58.27	450	CP	CIRC		3404X	66.83		UNK	UNK	UNK		5851X	56.48	55.83	150	VC	CIRC							
1501X	64.78	62.81	225	VC	CIRC		3405X	66.94	65.84	150	VC	CIRC		5852X	56.33	55.45	150	VC	CIRC							
1502X	64.87	62.84	225	VC	CIRC		3406X	67.13	65.82	150	VC	CIRC		5853X	56.2	55.01	150	VC	CIRC							
1503X	65.6		225	VC	CIRC		3409X	66.96	65.46	150	VC	CIRC		5854X	56.67	55.87	150	VC	CIRC							
1504X	63.905	61.221	225	VC	CIRC		341DX	64.47		225	VC	CIRC		6450X			375	CP	CIRC							
1505X	64.087	61.113	225	VC	CIRC		3451X	67.23	66.11	225	VC	CIRC		6801X	57.07	54.73	225	VC	CIRC							
1551X	62.48	58.03	600	CP	CIRC		3453X	66.77	65.88	225	VC	CIRC		680LX	56.89	55.67	225	VC	CIRC							
1552X	60.77		UNK	UNK	UNK		3454X	67.15	66.14	225	VC	CIRC		6851X	57.71		225	CP	CIRC							
1553X	64.44	61.42	225	VC	CIRC		3502X	66.91	66.11	150	VC	CIRC		685DX			225	VC	CIRC							
1554X	64.78	62.28	225	VC	CIRC		3504X	66.8	66.08	150	VC	CIRC		6955X	57.76	56.93	225	CP	CIRC							
1555X	64.15	62.55	225	VC	CIRC		3505X	67.27	66.28	150	VC	CIRC		7301X	52.48	50.24	225	VC	CIRC							
1557X	63.97		UNK	UNK	UNK		3507X	67.41	66.51	150	VC	CIRC		7353X	52.39	50.59	225	VC	CIRC							
1558X	61.17	59.64	300	VC	CIRC		3509X			100	VC	CIRC		7401X	52.93	50.72	150	VC	CIRC							
1559X	61.36	59.61	600	CP	CIRC		350DX			UNK	UNK	CIRC		7404X			UNK	UNK	CIRC							
1560X			UNK	UNK	UNK		3510X			100	VC	CIRC		7405X			UNK	UNK	CIRC							
1561X			UNK	UNK	UNK		3511X			100	VC	CIRC		7406X			UNK	UNK	CIRC							
1601X			225	VC	CIRC		3512X			100	VC	CIRC		7450X			375	CP	CIRC							
1701X	60.65	56.39	225	VC	CIRC		3551X	66.96	65.73	225	VC	CIRC		7550X			375	CP	CIRC							
1702X	61.91	56.67	225	VC	CIRC		3552X	67.17	65.64	225	VC	CIRC		7801X	58.64	54.08	225	CP	CIRC							
170DX			150	VC	CIRC		3553X	67.15		UNK	UNK	UNK		7902X	58.28	53.34	225	CP	CIRC							
1751X	60.74	59.82	225	VC	CIRC		3554X	67.02		UNK	UNK	UNK		7903X	58.02	53.08	225	VC	CIRC							
1752X	60.85	59.93	225	VC	CIRC	*	3555X	66.97		UNK	UNK	UNK		7953X	58.55	56.65	225	CP	CIRC							
1752Y	60.85	59.93	225	VC	CIRC	*	3556X	66.24	65.24	300	VC	CIRC		7954X	58.39	56.71	300	CP	CIRC							
1754X	62.27	61.38	150	VC	CIRC		3557X	67.4	65.74	225	VC	CIRC		7955X	58.33	56.83	300	CP	CIRC							
1801X	64.11	59.55	150	VC	CIRC		3558X	66.94		UNK	UNK	UNK		7956X	58.35	56.81	300	CP	CIRC							
2501X	66	64.61	150	VC	CIRC		3701X	68.82		225	VC	CIRC		7957X	58.31	56.84	225	CP	CIRC							
2502X	65.59	64.18	150	VC	CIRC		3751X	67.23	65.82	225	VC	CIRC		8401X	52.98	52	150	VC	CIRC							
2503X	65.22	63.77	150	VC	CIRC		3752X	66.41	65.62	150	VC	CIRC		8402X	53.32		UNK	UNK	UNK							
2551X	65.9	64.9	300	VC	CIRC		3753X	67.45	66.67	150	VC	CIRC		8451X	52.9	51.77	150	VC	CIRC							
2552X	65.4	64.49	375	CP	CIRC		4401X	67.95	65.57	225	VC	CIRC		8651X	53.86		375	CP	CIRC							
2553X	64.84	63.82	375	CP	CIRC		4402X	67.61	65.27	225	VC	CIRC		8652Y	55.76		UNK	CP	CIRC							
2601X	64.71	62.83	225	VC	CIRC		4403X	68.03	66.26	150	VC	CIRC		8655X	55.63		UNK	UNK	CIRC							
2603X	64.32	62.13	225	VC	CIRC		4451X	47.8	45.84	675	CP	CIRC	*	8656X	56.05	54.355	600	CP	CIRC							
2604X	64.41	62.94	150	VC	CIRC		4451X	67.9	66.86	225	VC	CIRC	*	8657X	55.63	54.225	375	CP	CIRC							
2651X	64.63	63	225	VC	CIRC		4452X	67.93	67.01	225	VC	CIRC		8750X	56.475	54.615	600	CP	CIRC							
2652X	64.18	63.07	375	CP	CIRC		4455X	67.85	66.83	225	VC	CIRC		8751X	56.255	52.924	750	CP	CIRC							
2701X	65.16	63.24	150	PVC	CIRC		4601X	68.49	64.6	225	VC	CIRC		8752X	56.267	54.576	600	CP	CIRC							
2702X	64.93		OTHER	VC	CIRC		4652X	54.42	53.8	225	VC	CIRC		8753X	56.258	54.435	600	CP	CIRC							
2751X	64.26	63.15	150	VC	CIRC		4653X	68.67	67.82	150	VC	CIRC		8801X	58.58	54.75	225	CP	CIRC							

LINE STYLES / COLOURS

Brown

— Foul

— Foul Syphon Sewer

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