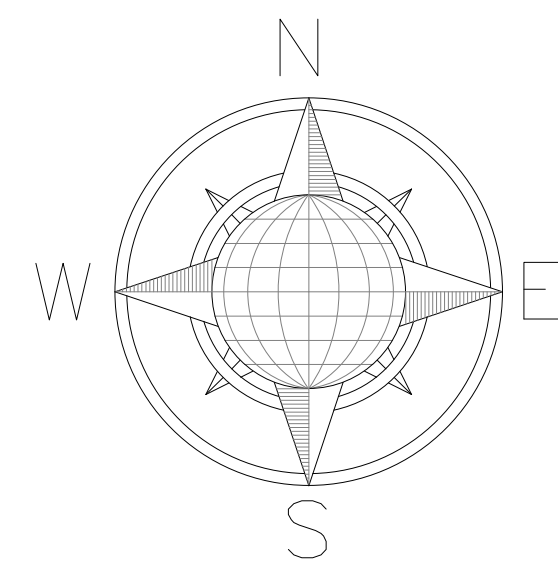




LEGEND

Utility Survey Point Features

- | | | |
|-----------------------|----------------|---------------------|
| FH - Fire Hydrant | ICE - Electric | MHF - Foul |
| GV - Gas Valve | ICR - Round | MHR - Round |
| G - Gully | ICT - Telecom | MHS - Surface Water |
| GR - Gully Round | ICTC - Traffic | SC - Stop Cock |
| IC - Inspection Cover | ICCATV - CATV | WM - Water Meter |
| ICC - IC - Comms | MH - Manhole | WV - Water Valve |

Utility Survey Linework Features

- | | |
|-------------------------------------|------------------------------------|
| BT - British Telecom | E - Electrical |
| CATV - Cable TV | EE - Electrical Earth |
| CCTV - Closed Circuit TV | LV - Electrical - Low Volt |
| COMMS - Communications | LVH - Electrical - High Volt |
| FOL - Fibre Optic Line | EHV - Electrical - Extra High Volt |
| FOLC - Fibre Optic Line - Collt | TFL - Electrical - TFL |
| FOLLE - Fibre Optic Line - Energies | S - Street Lighting |
| FOLFL - Fibre Optic Line - Fibernet | TCSU - Traffic Control System Unit |
| FOLL - Fibre Optic Line - Level 3 | G - Gas |
| FOLM - Fibre Optic Line - Mercury | GLP - Gas Low Pressure |
| FOLMF - Fibre Optic Line - MFSC | GIP - Gas Intermediate Pressure |
| FOLT - Fibre Optic Line - Taret | GMP - Gas Medium Pressure |
| FOLV - Fibre Optic Line - Virgin | GHP - Gas High Pressure |
| FOLVW - Fibre Optic Line - Vodafone | GPR - Unknown |
| FOLW - Fibre Optic Line - Wacom | ED - Empty Duct |
| FOLW - Fibre Optic Line - WCOM | LA - Unknown Asset |
| TS - Telecom Service | UAPS - UA Passive Sweep |
| CW - Combined Water | UCL - Unknown Cable |
| FW - Foul Water | GPR Slab |
| SW - Surface Water | GPR Survey Area |
| FRW - Fire Water | Other |
| RM - Rising Main | Manhole Chamber |
| WM - Water Main | Manhole ID |
| WS - Water Service | PE - Pot End |
| | XX (AS) - Assumed Service |

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

- | | |
|-----------------------------|----------------------------|
| DPTM - Datum Point | E=XXXXXXX - Survey Station |
| PP - Photo Point | H=ZZZZZZZ - Scan Target |
| PPT - Panoramic Photo Point | E=XXXXXXX - Scan Target |
| | H=ZZZZZZZ - Scan Target |

Utility Survey Abbreviations

- | | | |
|--------------------------|------------------------|---------------------------|
| AB - Abandoned | FLO - Flooded | TFR - Taken From Records |
| BLD - Blocked | IL - Invert Level | UTO - Unable to Open |
| CL - Cover Level | NT - No Trace | UTS - Unable to Survey |
| CUT - Disconnect Utility | OE - Overhead Electric | UNK - Unknown |
| EOG - End of GPR Signal | OT - Overhead Telecom | WL - Water Level |
| EOT - End of Trace | P - Pilot | Xdd - Service Depth - Grd |
| FOS - Full of Silt | SOF - Sorts Level | to Top of Service |

Utility Material Abbreviations

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

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The Client must promptly notify the Company of any errors in mapping of which it becomes aware. If misleading, inaccurate or otherwise inappropriate information is brought to the Company's attention or the Company itself identifies any such imprecision or error in a survey, it shall use its reasonable endeavours to fix or remove it and if necessary in certain instances, the Company being on notice of any such misleading, inaccurate or otherwise inappropriate information, it will re-conduct the survey and reproduce the data to within the specified scale or accuracy.

In ideal conditions these spatial accuracies for the underground utilities are +/- 5% for the ROAD/ROAD/ROAD and +/- 10% of depth for the GPR to 2.5m deep. However, variations within the subsurface may alter this estimated accuracy. In the event of any Materials being unsuccessful, we will report these as 'UTO'. Murphy Surveys UK Ltd will attempt to lift each Manhole for 15 minutes prior to reporting an unsuccessful lift. All lift attempts must be made as a guide only, as it is a requirement to inform BT via their Dial before you Dig scheme prior to commencement of excavation works. For onsite assistance contact - 0800 779999 - digbeforeyouexcavate.co.uk

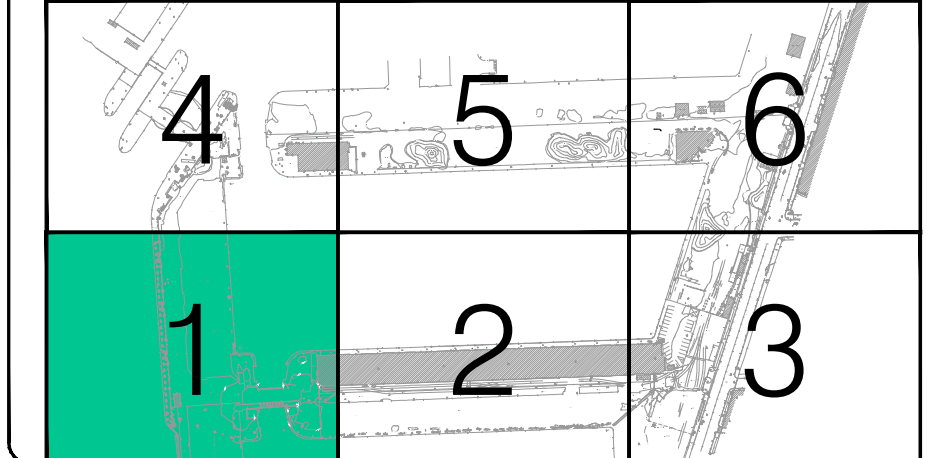
Murphy Surveys UK Ltd promotes safe excavations and prompt all contractors to perform further exploration works in line with PAS128 Quality Level A (Verification).

Please note this drawing should always be read in conjunction with the Utility Survey Report. The Utility Report will also include full disclaimer regarding the works carried out.

Revisions

Rev	Description	Surveyed by	Drawn by	Checked by
A	First Issue	SP/DM - 18/06/16	DS/DM - 17/06/16	DM - 16/06/16

Drawing Sheet Layout



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Laser Scanning, Rectified Photography

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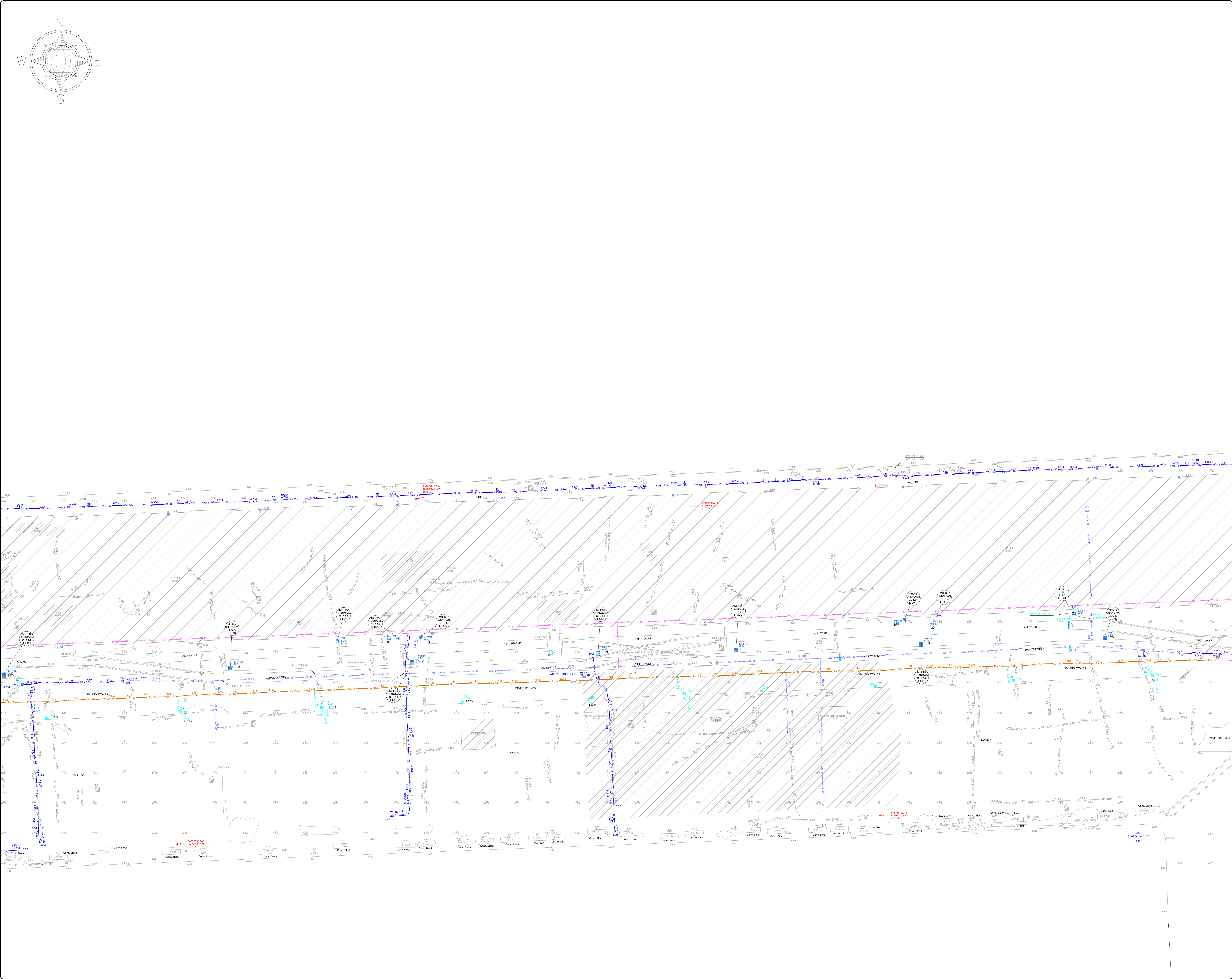
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Client	BuroHappold Engineering
Project	Project Blue - 2019
Site Address	Bramley Moore Dock, Liverpool L5 9SY
Description	Underground Utility Survey (PAS128)
Survey Grid	OSGB36(15)
Survey Datum	GNSS - Ordnance Datum Newlyn (ODN)
Drawing Scale	1:200 @ A0
Drawing Number	MS30369-U-A11-01

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Utility Survey Point Features

	Fire Hydrant		IC - Electric		MH - Foul
	Gas Valve		IC - Round		MH - Round
	Gully		IC - Telecom		MH - Surface Water
	Gully Round		IC - Traffic		Stop Cock
	Inspection Cover		IC - CATV		Water Meter
	IC - Comms		Manhole		Water Valve

-BT	Communications	E	Electrical
-CBT	Cable TV	EE	Electrical Service
-CCTV	Closed Circuit TV	LV	Electrical Earth
-CL	Circuit Load	LH	Electrical - Low Voltage
-FOLG	Fiber Optic Line	EHV	Electrical - Extra High Volt
-FOLG	Fiber Optic Line - Coll	TFL	Electrical - TPL
-FOLG	Fiber Optic Line - Energis	TL	Electrical Lighting
-FOLG	Fiber Optic Line - Fibernet	TCSU	Traffic Control System Unit
-FOLG	Fiber Optic Line - Fiber	G	Gas
-FOLM	Fiber Optic Line - Mercury	GS	Gas Service
-FOLMF	Fiber Optic Line - MFSQ	GLP	Gas Low Pressure
-FOLMV	Fiber Optic Line - Merit	GMPP	Gas Medium Pressure
-FOLV	Fiber Optic Line - Virgin	GMP	Gas Medium Pressure
-FOLV	Fiber Optic Line - Vodafone	GH	Gas High Pressure
-FOLV	Fiber Optic Line - Vantage	GR	Ground
-FOLV	Fiber Optic Line - WOOM	ED	Empty Duct
-TS	Telephone Service	EA	Equip Anomaly
		UASPS	Unknow Asset
-CW	Combined Water	UA	Unit Passive Sweep
-FW	Fire Water	ULCL	Unknown Cable
-SW	Surface Water	GPB	GPB Splat
		GP	GP Survey Area
-FRW	Fire Water	M	Manhole Chamber
-FR	Rising Man	MID	Manhole ID
-MR	Master Meter	Pot	Potential
-WS	Water Service	XX(AS)	Assumed Service

-CATV	Cable TV	-EE	Electrical Earth
-CCIV	Closed Circuit TV	-LV	Electrical - Low Volt
-COMMS	Communications	-HV	Electrical - High Voltage
-FOL	Fiber Optic Line	-EHV	Electrical - Extra High Volt
-FOLB	Fiber Optic Line - Coit	-TFL	Electrical - TPL
-FOLC	Fiber Optic Line - Coris	-LFT	Lighting
-FOLF	Fiber Optic Line - Fibernet	-TCSU	Traffic Control System Unit
-FOLL	Fiber Optic Line - Level 3	G	Gas
-FOLM	Fiber Optic Line - Mercury	G	Gas Service
-FOLMF	Fiber Optic Line - MFSC	-GLP	Gas Low Pressure
-FOLT	Fiber Optic Line - Tanet	-GIP	Gas Intermediate Pressure
-FOLV	Fiber Optic Line - Verizon	-GMP	Gas Medium Pressure
-FOLVF	Fiber Optic Line - Vodafone	-GHP	Gas High Pressure
-FOLVN	Fiber Optic Line - Verizon	-GPH	Gas <i>Unknown</i>
-FOLVO	Fiber Optic Line - Verizon	ED	Elevator Drive
-TS	Television Service	-GRP	DPR Anomaly
		-UA	Unknown Asset
-CW	Combined Water	-UP	Unknown Pipe
-DW	Drainage	-UCL	Unknown Cable
-FW	Fire Water	-PW	GR Survey Area
-WS	Water	OW	Other
-FMW	Fire Main		Manhole Chamber
-RM	Rising Main		Manhole ID
-WM	Water Main	Pot	Potential
-WS	Water Service	-XX (AS)	As Per ESD

(Consult document PAS128:2014.pdf for full details)

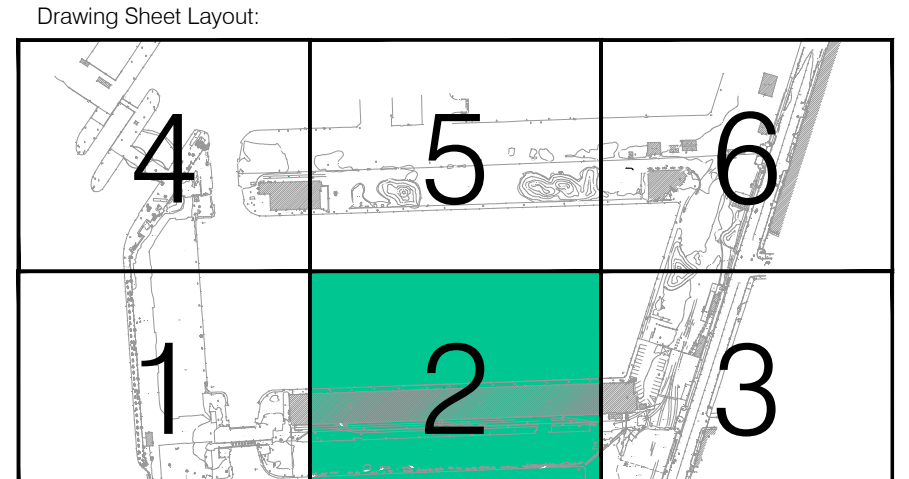
—XX - A—	Quality Level A	—XX - B3—	Quality Level B3
—XX - B1—	Quality Level B1	—XX - B3P—	Quality Level B3P
—XX - B1P—	Quality Level B1P	—XX - B4—	Quality Level B4
—XX - B2—	Quality Level B2	—XX - C—	Quality Level C
—XX - B2P—	Quality Level B2P	—XX - D—	Quality Level D

	Datum Point	ID	E=XXXX.XXX N=YYYY.YYY H=ZZZ.ZZZ	Survey Station
	Photo Point			
	Panoramic Photo Point	ID	E=XXXX.XXX N=YYYY.YYY H=ZZZ.ZZZ	Scan Target

AB	Abandoned	FLD	Flooded	TFR	Taken From Record
BLD	Blocked	IL	Invert Level	UTO	Unable to Open
CL	Cover Level	NT	No Trace	UTS	Unable to Survey
CUT	Disconnect Utility	OE	Overhead Electric	UKN	Unknown
EOT	End of GPR Signal	OT	Overhead Telecom	WL	Water Level
EOT	End of Trace	P	Pilot	XxD	Service Depth - Grd
FOS	Full of Silt	SOF	Soft Soil		to Top of Service

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

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Client	BuroHappold Engineering
Project	Project Blue - 2019
Site Address	Bramley Moore Dock, Liverpool L5 9SY
Description	Underground Utility Survey(PAS128)
Survey Grid	OSGB36(15)
Survey Datum	GNSS - Ordnance Datum Newlyn (ODN)
Drawing Scale	1:200 @ A0
Drawing Number	MS30369-1-A11-02



LEGEND

Utility Survey Point Features

Fire Hydrant	IC - Electric	MH - Foul
Gas Valve	IC - Round	MH - Round
Gully	IC - Telecom	MH - Surface Water
Gully Round	IC - Traffic	Stop Cock
Inspection Cover	IC - CATV	Water Meter
IC - Comms	Manhole	Water Valve

Utility Survey Linework Features

British Telecom	Electrical
Cable TV	Electrical Earth
Closed Circuit TV	Electrical - Low Volt
Communications	Electrical - High Volt
Fibre Optic Line	Electrical - Extra High Volt
Fibre Optic Line - Colt	Electrical - TFL
Fibre Optic Line - Energis	Street Lighting
Fibre Optic Line - Fibernet	Traffic Control System Unit
Fibre Optic Line - Level 3	Gas
Fibre Optic Line - Mercury	Gas Service
Fibre Optic Line - MFSC	Gas Low Pressure
Fibre Optic Line - Tarent	Gas Intermediate Pressure
Fibre Optic Line - Virgin	Gas Medium Pressure
Fibre Optic Line - Vodafone	Gas High Pressure
Fibre Optic Line - Verizon	Gas Pressure
Fibre Optic Line - WCOM	Empty Duct
Telecom Service	Unknown Asset
Combined Water	UA Passive Sweep
Foul Water	Unknown Cable
Surface Water	GPR Slab
Fire Water	GPR Survey Area
Rising Main	Other
Water Main	Manhole Chamber
Water Service	Manhole ID
	Pot End
	Assumed Service

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

Datum Point	ID = XXXX XXX
Photo Point	ID = N-YYYY YYY
Panoramic Photo Point	ID = XXXX XXX
	ID = N-YYYY YYY
	ID = H-ZZZ ZZZ
	ID = H-ZZZ ZZZ

Utility Survey Abbreviations

AB - Abandoned	FLO - Flooded	TFR - Taken From Records
BLO - Blocked	IL - Inlet Level	UTO - Unable to Open
CL - Cover Level	NT - No Trace	UTS - Unable to Survey
CUT - Disconnect Utility	OE - Overhead Electric	UKN - Unknown
EOG - End of GPR Signal	OT - Overhead Telecom	WL - Water Level
EOT - End of Trace	P - Pilot	Xdd - Service Depth - Grd to Top of Service
FOS - Full of Silt	SOF - Sorts Level	

Utility Material Abbreviations

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

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Revisions				
Rev	Description	Surveyed by	Drawn by	Checked by
A	First Issue	SP/DM - 18/09/16	GS/DM - 17/08/19	DM - 16/08/19

Drawing Sheet Layout

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Drawing Scale	1:200 @ A0
Drawing Number	MS30369-U-All-03

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