

LEGEND

Utility Survey Point Features

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

Utility Survey Linework Features

- Communications
- British Telecom
- Cable TV
- CCTV - Closest Circuit TV
- COMMS
- Fibre Optic Line
- Fibre Optic Line - Energis
- Fibre Optic Line - Fibernet
- Fibre Optic Line - Level 3
- Fibre Optic Line - Mercury
- Fibre Optic Line - MFS
- Fibre Optic Line - Tanel
- Fibre Optic Line - Virgin
- Fibre Optic Line - Vodafone
- Fibre Optic Line - Verizon
- Fibre Optic Line - WCOM
- Telecom Service
- Electrical
- Electrical Service
- Electrical Earth
- Electrical - Low Volt
- Electrical - High Volt
- Electrical - Extra High Volt
- Electrical - TFL
- Street Lighting
- TCSU - Traffic Control System Unit
- Gas
- Gas Service
- Gas Low Pressure
- Gas Intermediate Pressure
- Gas Medium Pressure
- Gas High Pressure
- GPR - Unknown
- ED - Empty Duct
- GPR - Anomaly
- UA - Unknown Asset
- UA Passive Sweep
- UA Unknown Cable
- GPR Slab
- GPR Survey Area
- Other
- Manhole Chamber
- Manhole ID
- Pot End
- Assumed Service

PAS128 Quality Levels

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

Special Survey Features

- DATUM
- Photo Point
- Panoramic Photo Point
- E=XXXXXXX
- N=YYYYYYY
- H=ZZZZZZZ
- Survey Station
- E=XXXXXXX
- N=YYYYYYY
- H=ZZZZZZZ
- Scan Target

Utility Survey Abbreviations

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

Utility Material Abbreviations

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

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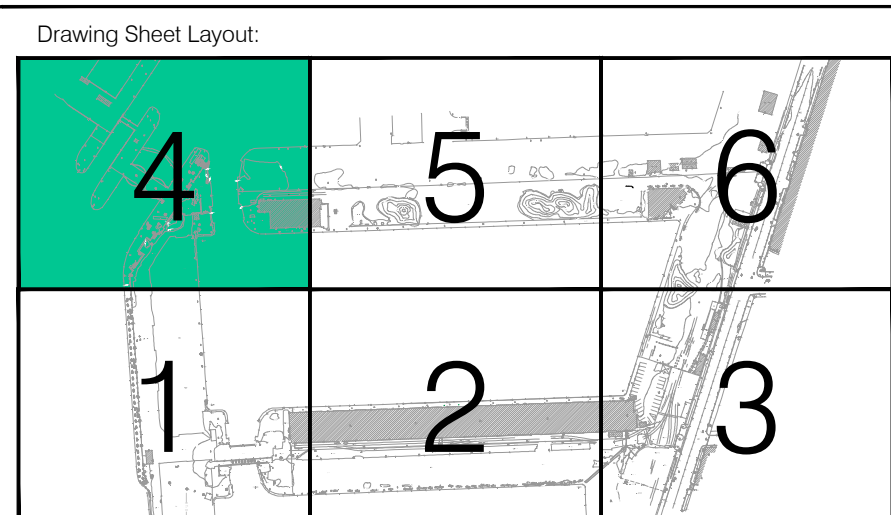
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In ideal conditions these spatial accuracies for the underground utilities are +/- 5% for the R04000R0600 and +/- 10% of depth for the GPR to 2.5m deep. However, variations within the subsurface may alter this estimated accuracy. In the event of any Manhole ID being unsuccessful, we will report this as 'UTS'. Murphy Surveys UK Ltd will attempt to lift each Manhole for 15 minutes prior to reporting an unsuccessful lift. All BT services marked on site are 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 872660 - dby@murphysurveys.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).

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Revisions

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

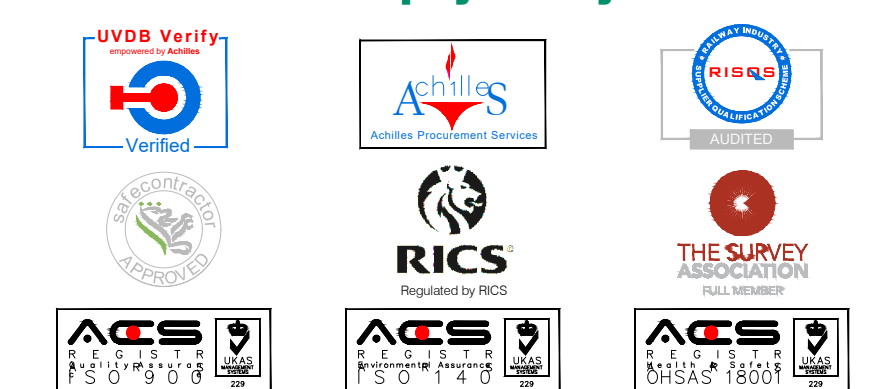


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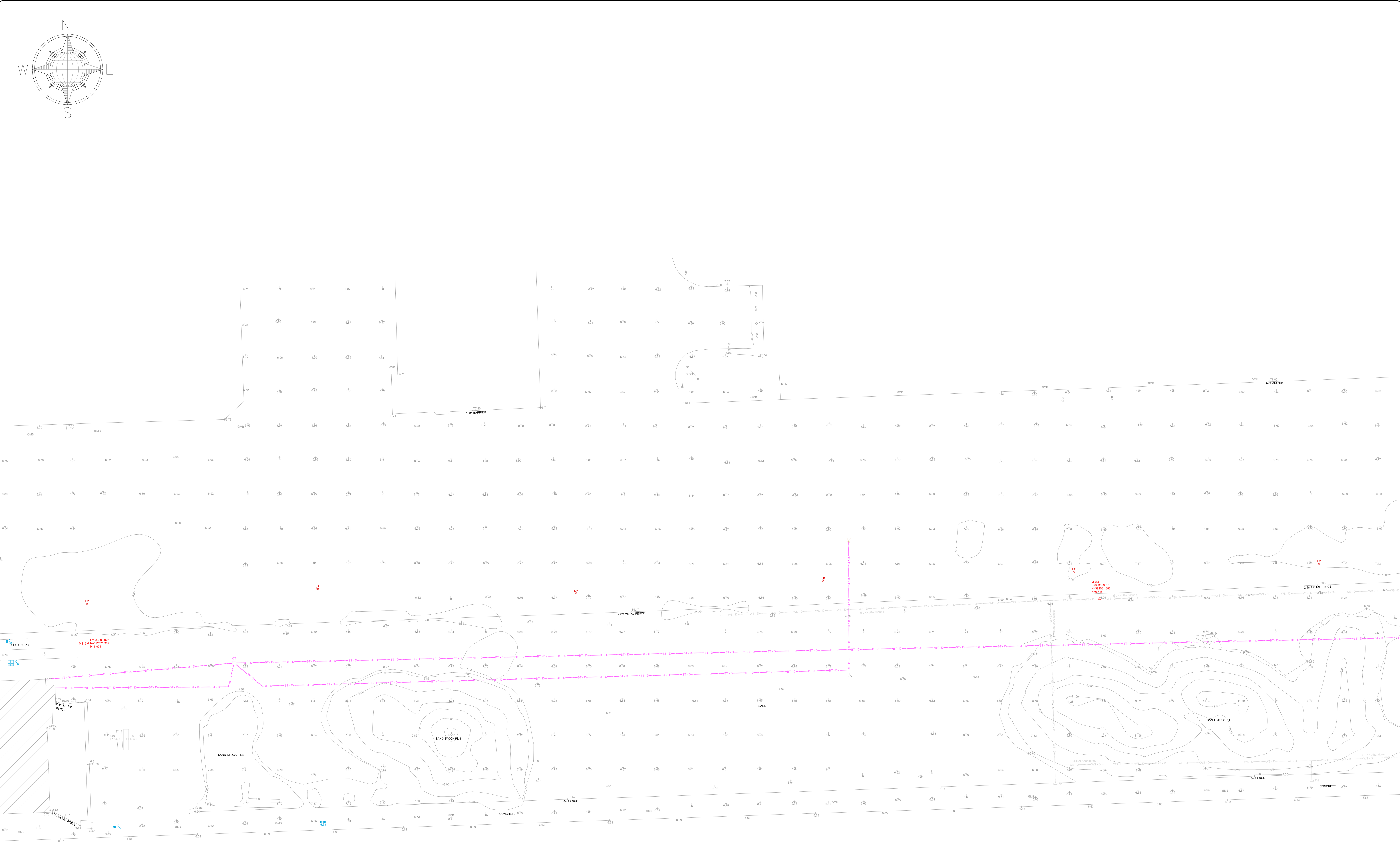
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Client	BuroHappold Engineering
Project	Project Blue - 2019
Site Address	Bramley Moore Dock, Liverpool L5 9SY
Description	Underground Utility Survey(PAS128)
Survey Grid	OSGB36(15)
Survey Datum	GNSS - Ordnance Datum Newlyn (ODN)
Drawing Scale	1:200 @ A0
Drawing Number	MS30369-U-All-04

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LEGEND

Utility Survey Point Features

FH - Fire Hydrant	ICE - Electric	MH - Foul
GV - Gas Valve	ICR - Round	MH - Round
G - Gully	ICT - Telecom	MHS - Surface Water
GR - Gully Round	ITC - Traffic	SC - Stop Cock
IC - Inspection Cover	ICATV - CATV	WM - Water Meter
ICC - 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	HV - Electrical - High Volt
FOL - Fibre Optic Line	EHV - Electrical - Extra High Volt
FOLC - Fibre Optic Line - Colt	TFL - Electrical - TFL
FOLLE - Fibre Optic Line - Energis	SL - Street Lighting
FOLFB - Fibre Optic Line - Fibernet	TCSU - Traffic Control System Unit
FOLL - Fibre Optic Line - Level 3	G - Gas
FOLM - Fibre Optic Line - Mercury	GS - Gas Service
FOLMF - Fibre Optic Line - MFSC	GLP - Gas Low Pressure
FOLT - Fibre Optic Line - Tanel	GIP - Gas Intermediate Pressure
FOLV - Fibre Optic Line - Virgin	GMP - Gas Medium Pressure
FOLVF - Fibre Optic Line - Vodafone	GHP - Gas High Pressure
FOLVN - Fibre Optic Line - Verizon	GPR - Unscreen
FOLW - Fibre Optic Line - WCOM	ED - Empty Duct
TS - Telecom Service	GPR - Anomaly
CW - Combined Water	UA - Unscreen Asset
FW - Foul Water	UAPS - UA Passive Sweep
SW - Surface Water	UCL - Unknown Cable
FRW - Fire Water	GPR - Slab
RM - Rising Main	GPR - Survey Area
WM - Water Main	Other
WS - Water Service	Manhole Chamber
	Manhole ID
	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

DUM - Datum Point	E=XXXX.XXX - Survey Station
PP - Photo Point	E=XXXX.XXX - Scan Target
PPT - Panoramic Photo Point	E=XXXX.XXX - Scan Target

Utility Survey Abbreviations

AB - Abandoned	FLO - Flooded	TFR - Taken From Records
BLO - 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
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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In ideal conditions these spatial accuracies for the underground utilities are +/- 5% for the RDA000R0000 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 Manhole ID being unsuccessful, we will report these as 'UTD'. Murphy Surveys UK Ltd will attempt to lift each Manhole for 15 minutes prior to reporting an unsuccessful lift. All UT services marked on site are 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 779660 - dy@murphysurveys.co.uk

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

Drawing Sheet Layout

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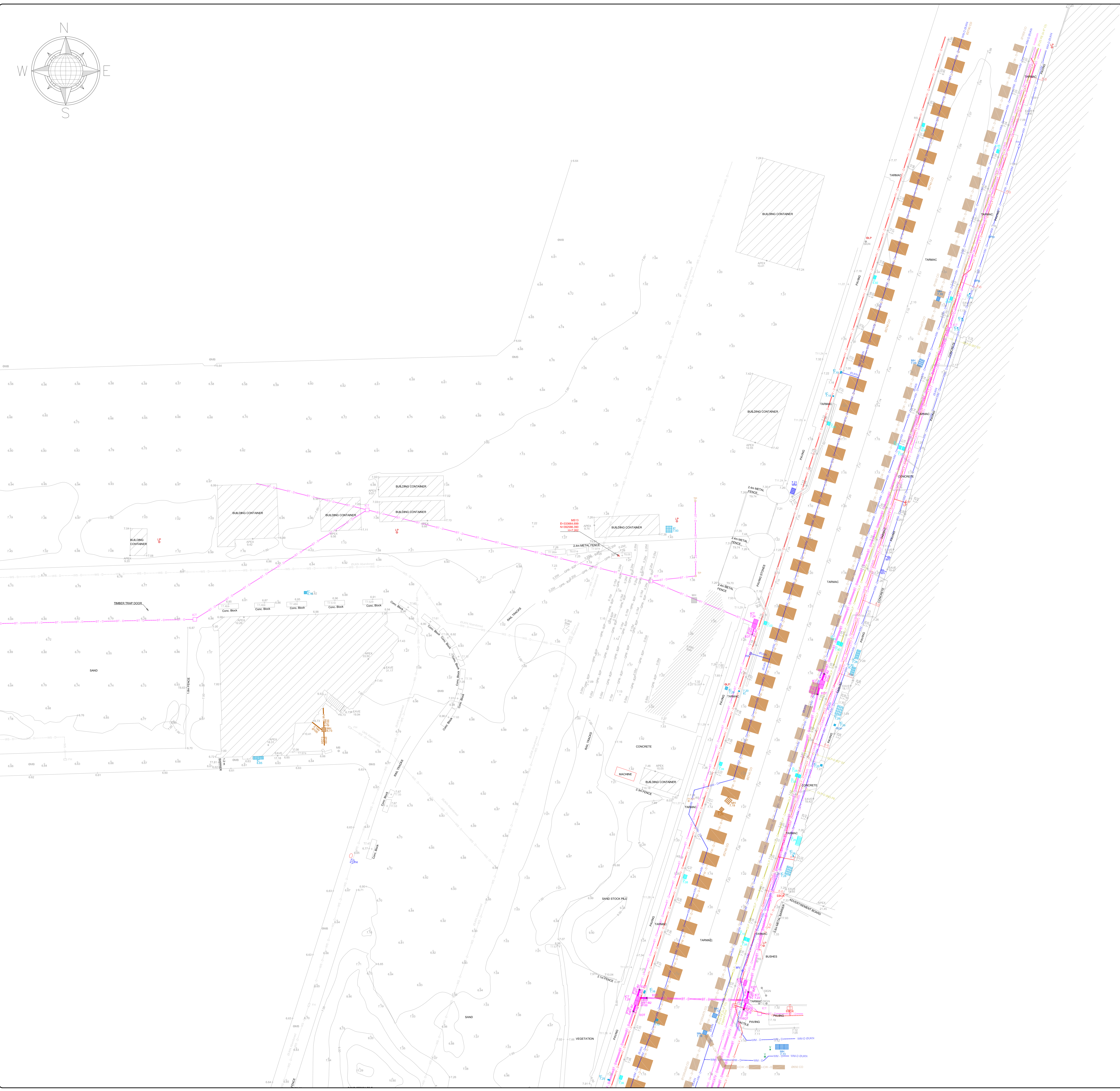
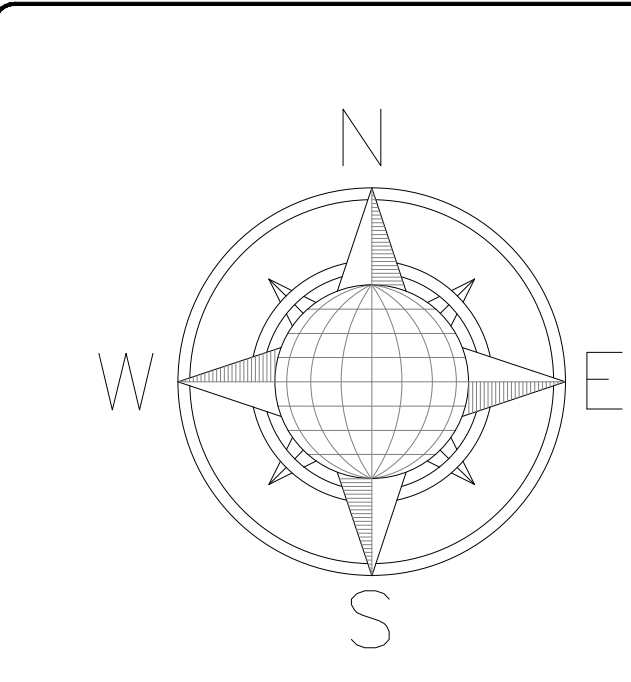
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Client	BuroHappold Engineering
Project	Project Blue - 2019
Site Address	Bramley Moore Dock, Liverpool L5 9SY
Description	Underground Utility Survey(PAS128)
Survey Grid	OSGB36(15)
Survey Datum	GNSS - Ordnance Datum Newlyn (ODN)
Drawing Scale	1:200 @ A0
Drawing Number	MS30369-U-A11-05

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- LEGEND**
- Utility Survey Point Features**
- Fire Hydrant
 - Gas Valve
 - Gully
 - Gully Round
 - Inspection Cover
 - IC - Comms
 - IC - Electric
 - IC - Round
 - IC - Telecom
 - IC - Traffic
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 - MH - Round
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- Utility Survey Linework Features**
- Communications
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- PAS128 Quality Levels**
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 - XX - B3P - Quality Level B3P
 - XX - B4 - Quality Level B4
 - XX - C - Quality Level C
 - XX - D - Quality Level D
- Special Survey Features**
- DATUM
 - Photo Point
 - Panoramic Photo Point
 - E=XXXX XXX
 - N=YYYY YYY
 - H=ZZZ ZZZ
 - E=XXXX XXX
 - N=YYYY YYY
 - H=ZZZ ZZZ
- Utility Survey Abbreviations**
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 - P - Pilot
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 - TFR - Taken From Records
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- Utility Material Abbreviations**
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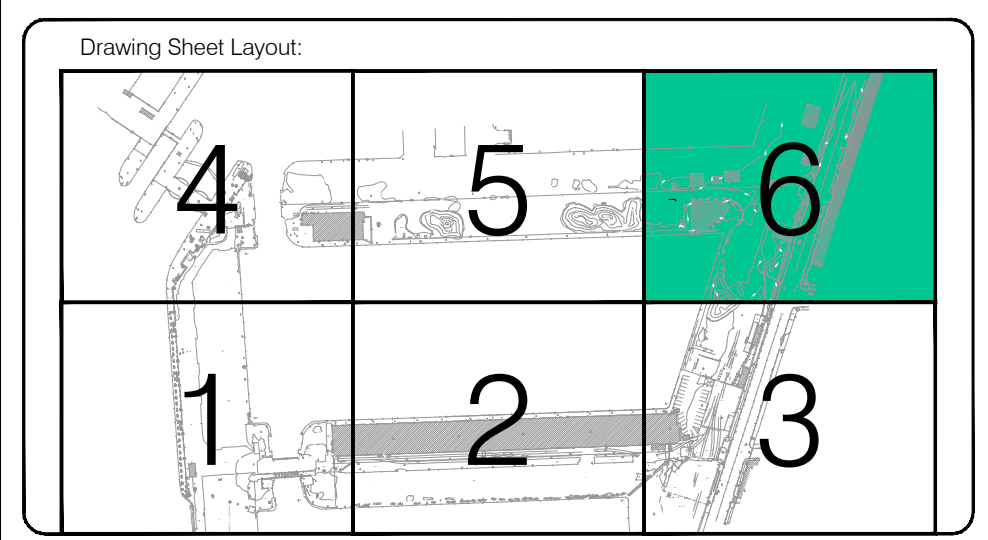
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Revisions				
Rev	Description	Surveyed by	Drawn by	Checked by
A	First Issue	SP/DM - 18/09/18	DS/EX - 17/08/19	DS - 16/08/19



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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-A11-06

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