UNDERGROUND SERVICES KEY

TEL(N2) TEL(N2)	British Telecom Communications Cable	AR Assumed Route	GPR Ground Penetrating Radar
COM(N2) COM(N2)	Nynex Communications	BD Backdrop	TFR Taken From Records
VOD(N2) VOD(N2)	Vodafone	CR Cable Riser	PE Polyethylene Pipe
ED(N2) ED(N2)	Empty Ducting	d Depth	UTS Unable To Survey
EL(N2) EL(N2)	Electricity Cables	PR Pipe Riser	UT Unable To Trace
ECH(N2) ECH(N2)	Earth Cables	RS Reducing Slab (Drainage)	UP Unable To Proceed
GAS(N2) GAS(N2)	Gas Pipes	T Tank	NVP No Visible Pipes
CM(N2) CM(N2)	Sewer Combined	VR Vapour Recovery Point	VC Vitrified Clay
FM(N2) FM(N2)	Sewer Foul	UTL Unable To Lift	CO Concrete
SW(N2) SW(N2)	Sewer Surface Water	LS Lost Signal	
TL(N2) TL(N2)	Traffic Light Cables		
UNI(N2) UNI(N2)	Unidentified GPR or electro location trace		
WM(N2) WM(N2)	Water Pipes		
WDA WDA	Water Pipes Abandoned		
	End of trace		
	Services survey boundary		
	Area of No Access		
	GPR Detected Anomaly		
	GPR Detected Rebar		
	GPR Detected Structural Feature		
	GPR Detected Structure		
	GPR Low Data		

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Electromagnetic and ground penetrating radar techniques have been used in the location of underground services shown on this survey plan. These are interpretive procedures and we recommend trial excavations be carried out by hand dug pits to confirm identification, location and depth of services where these are critical.

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(C) = Record data located to Street Furniture - not detected

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NB: QL(A) is inferred at all MHs ICs etc. unless otherwise stated.

NOTES

Where services are non-metallic or not proven on site, positions are taken from records, trench scars & surface detail.

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The diagram below describes the depth information in more detail.

Where the precise position or depths of these features are critical to the design or sitework they must be verified by the use of trial excavations.

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TYPICAL FEATURE DEPTH ANNOTATION

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APPROX DEPTH TO CENTRE	APPROX DEPTH TO INVERT	APPROX DEPTH TO EXTERNAL CROWN
CABLE/FIBRE OPTIC		

Survey Notes

Grid: Local, plane metric related to OS grid

Levels: OS datum from GNSS positioning, converted using the National Geoid model OSGM15

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Topographical Survey Legend

BUILDINGS AND WALLS

Building
Building Open Sided
Ruin (RUIN)
Passage
Wall with Height Retaining Wall (Wall ### No. Height R/W)

FENCE STYLES AND DESCRIPTIONS

Close Boarded C/B
Corrugated Iron C/I
Chestnut Paling C/P
Chainlink C/L
Handrail H/R
Interwoven I/W
Iron Railings I/R
Lattice L/T
Miscellaneous Misc
Palisade P/AL
Post & Chain P/C
Post & Rail P/R
Post & Wire P/W
Post & Barbed Wire B/W
Wire mesh W/M
Stile
Gate
Fence Snakybe

ROADS

Kerbs
Edge of Surfacing
Pedestrian Crossing (PC)
Track
Footpath

STREET FURNITURE

Bellaha Beacon
Bus Stop
Bollard
Cats Eye
Coal Chute
Closed Circuit TV
Drain
Electricity Pole
Flood Light
Flag Staff
Lamp Post
Letter Box
Name Plate (street)
Warning Ring
Mile Post or Mooring Post
Service Marker
Mile Stone
Post
Parking Meter
Reflector Post
Rodding Eye
Road Sign
Speed Camera
Information Sign
Stay
Traffic Light
Telegraph Pole
Traffic Light Push Button Post
Traffic Light Control
Control Box
British Telecom Box
Electricity Box
Gas Box

INSPECTION CHAMBERS AND PIPES

Inspection Cover
Inspection Cover (Elec)
Manhole
British Telecom Cover
Inspection Cover (Comms)
Cable TV
Inspection Cover Traffic Signals
Gully
Kerb Outlet
Vent Pipe
Down Pipe
Rain Water Pipe
Soil Pipe
Gas Pipe
Unable to lift cover
Stop Tap
Stop Valve
Lamphole
Hydrant
Earth Rod
Gas Valve
Water Meter
Washout
Rodding Eye

GEOTECHNICAL INFORMATION

Borehole
Trial Pit
Monitor Pin
Probe Hole
Window Sample

GENERAL INFORMATION

Petrol Pump
Basement Light
Footbridge
Dish Type Channel
Slot Type Channel
Grate Type Channel
Tactile Paving
Drain Barrier
Guardrail
Excavation
Car Vacuum
Offset Pit
Air Valve
Trough
Chimney
Telephone Call Box

OVERHEAD FEATURES

Electricity Pylon (L/P/LDN)
Electricity
Telephone

WATER FEATURES

Canal
Stream
Ditch
Weir
Culvert
Drip (Lined Drain)
Spring

RELIEF AND VEGETATION

Hedge
Edge of wood/Bushes
Stump (STUMP)
Individual Tree
Slopes with Height Greater than 1m
Cliff Face
Marsh
Reeds

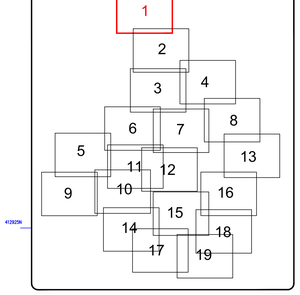
LEVEL AND HEIGHT INFORMATION

Standard Spot Height +123.45
Precision Spot Height +123.456
Bed Level +BL53.50
Water Level +WL24.92
Soffit Level +SL25.82
Threshold Level +THR.98
Cover Level +CL26.45
Invert Level +IL25.15
Pipe Soffit Level +PSL5.00
Floor Level +FL6.00
Finished Floor Level +FFL6.00
Top of Tank Level +TT7.00
Base Level +BL5.00
Roof Level +RL8.00
Ridge Level +RHL8.50
Flat Roof Level +FRL7.00
Top of Canopy Level +TOP_C7.00
Underside of Canopy Level +SOF_C6.50
Window Sill Level +WSL8.00
Window Head Level +WHL9.00
Springing Level +SPL8.50
Arch Level +AL7.00
Cable Level +CH18.00
Top of Wall Level +TWL10.00
Underside of Beam Level +UBL9.55
General Height +H78.00

SURVEY INFORMATION SIGNS

Permanent Ground Marker
O.S. Trig Station
O.S. Bench Mark

Sheet Index



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Accreditations: RICS, The Survey Association, ICES, RISQS (QUALIFIED), FBS 14156

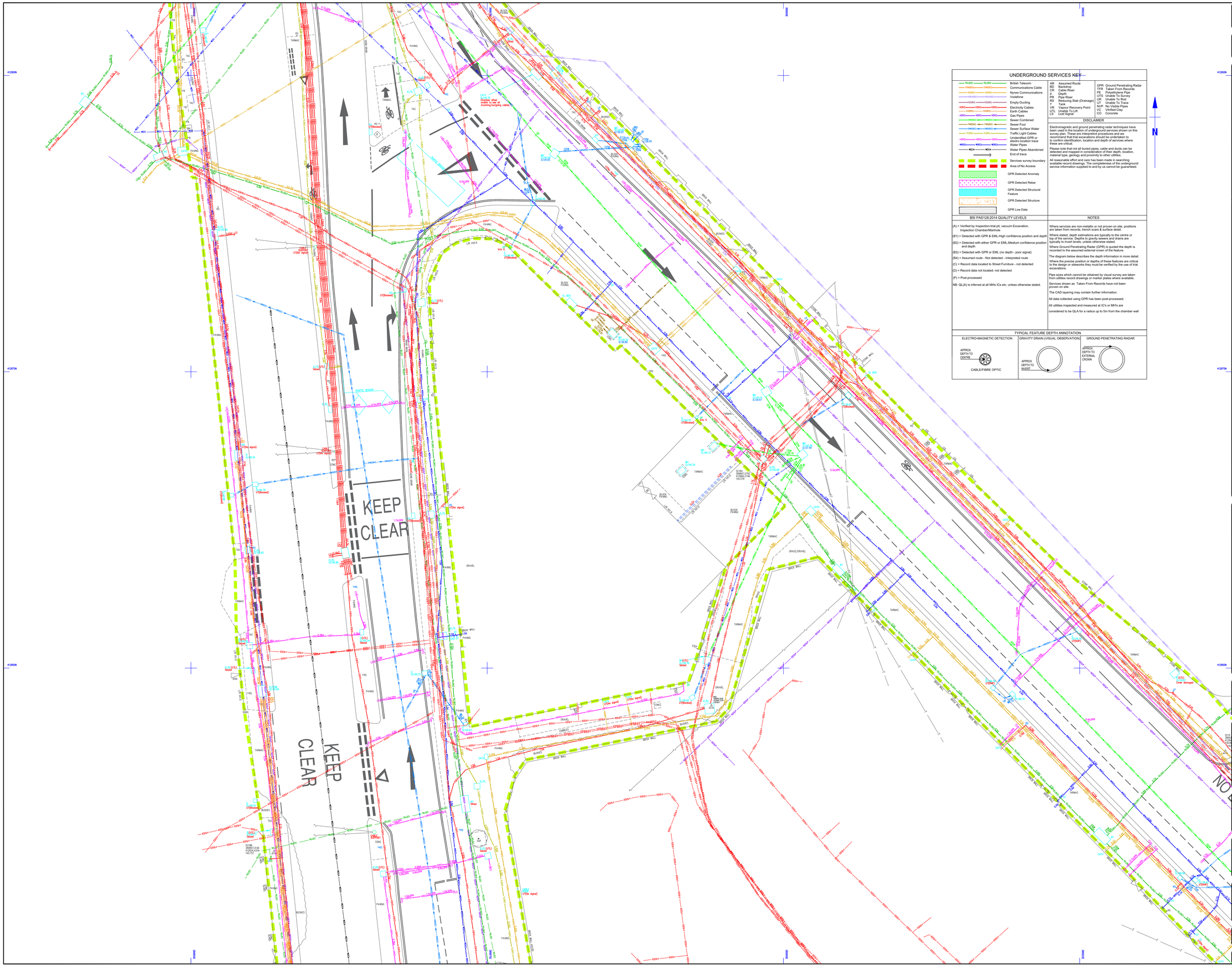
Client
WSP UK LTD.
8 FIRST STREET
MANCHESTER M15 4RP

Project
ROCHDALE STATION SQUARE
OL11 1DS

Drawing Title
UNDERGROUND SERVICES SURVEY

Drawn By	PS 04/08/21	Survey Date	APRIL 2021
Checked by	DJ 04/08/21	Scale	A0@1:100

Drawing No 56653/UG1 Revision



UNDERGROUND SERVICES KEY

TEL(BT)	British Telecom
TEL(C)	Communications Cable
TEL(NY)	Nynex Communications
TEL(V)	Vodafone
DUCT	Empty Ducting
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E	Earth Cables
GAS	Gas Pipes
COMB	Sewer Combined
FOUL	Sewer Foul
SURF	Sewer Surface Water
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VR	Vapour Recovery Point
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Wire mesh
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Fence Envelope

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Electricity Pylon
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Telephone

ROADS

Kerbs
Edge of Surfacing
Pedestrian Crossing
Track
Footpath

WATER FEATURES

Canal
Stream
Ditch
Weir
Culvert
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Cats Eye
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Closed Circuit TV
Drain
Electricity Pole
Flood Light
Flag Staff
Lamp Post
Letter Box
Name Plate (street)
Mooring Ring
Mile Post or Mooring Post
Service Marker
Mile Stone
Post
Parking Meter
Reflector Post
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Road Sign
Speed Camera
Information Sign
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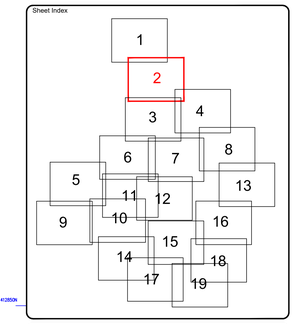

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Drawing Title
UNDERGROUND SERVICES SURVEY

Drawn By	PS 04/08/21	Survey Date	APRIL 2021
Checked by	DJ 04/08/21	Scale	A0@1:100

Drawing No: 56653/UG2

Revision:

UNDERGROUND SERVICES KEY

TEL(N) TEL(N)	British Telecom
COM(N) COM(N)	Communications Cable
NYC(N) NYC(N)	Nynex Communications
VOD(N) VOD(N)	Vodafone
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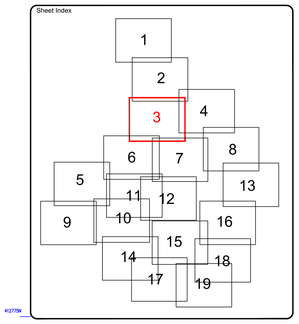

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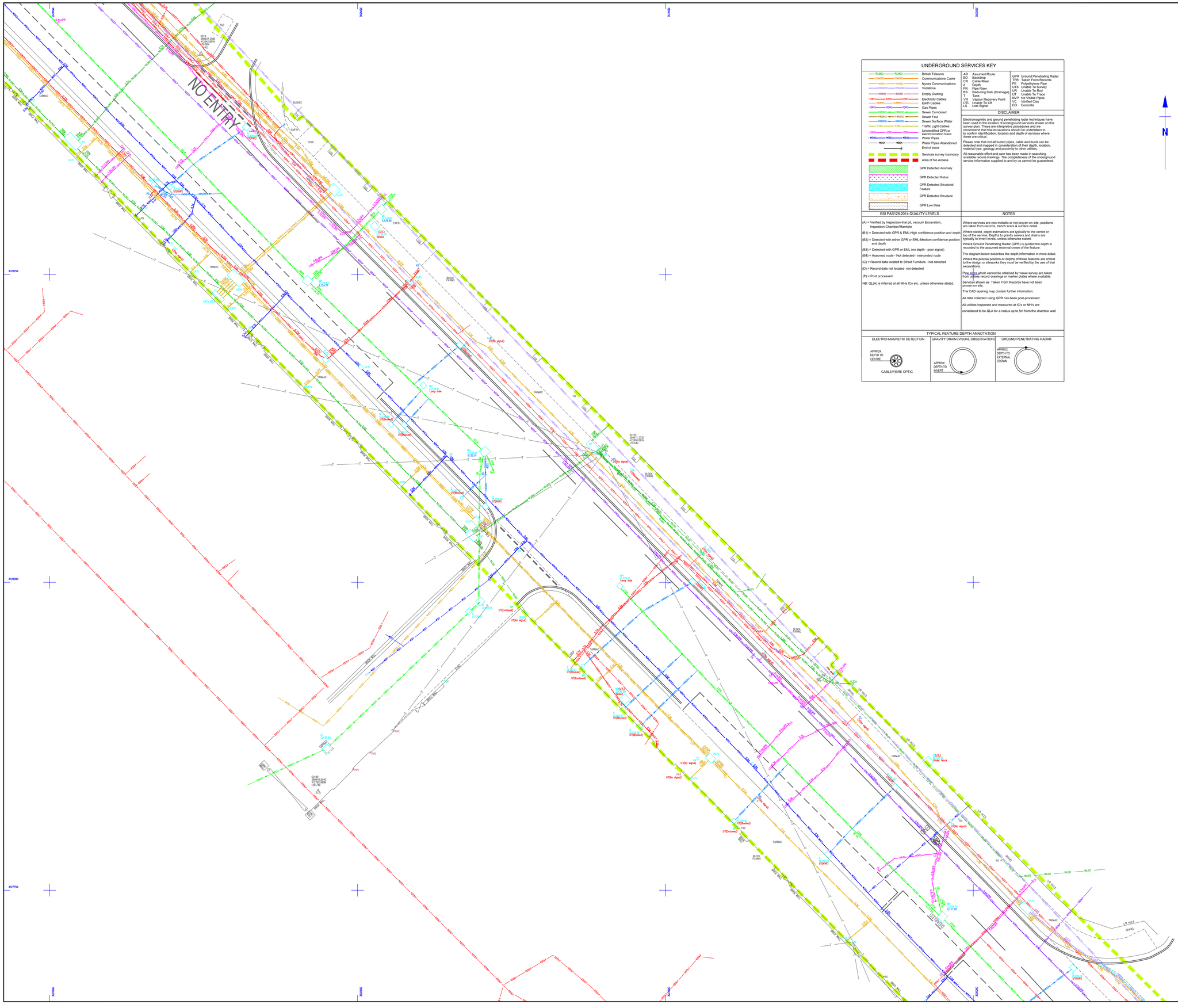
Drawing No 56653/UG3 Revision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TARMAC
BUSHES
EARTH
CONC
GRASS
GRAVEL
BLOCK PAVING
BRICK WALL
CATV
SCTBC
SCTBC
SC180
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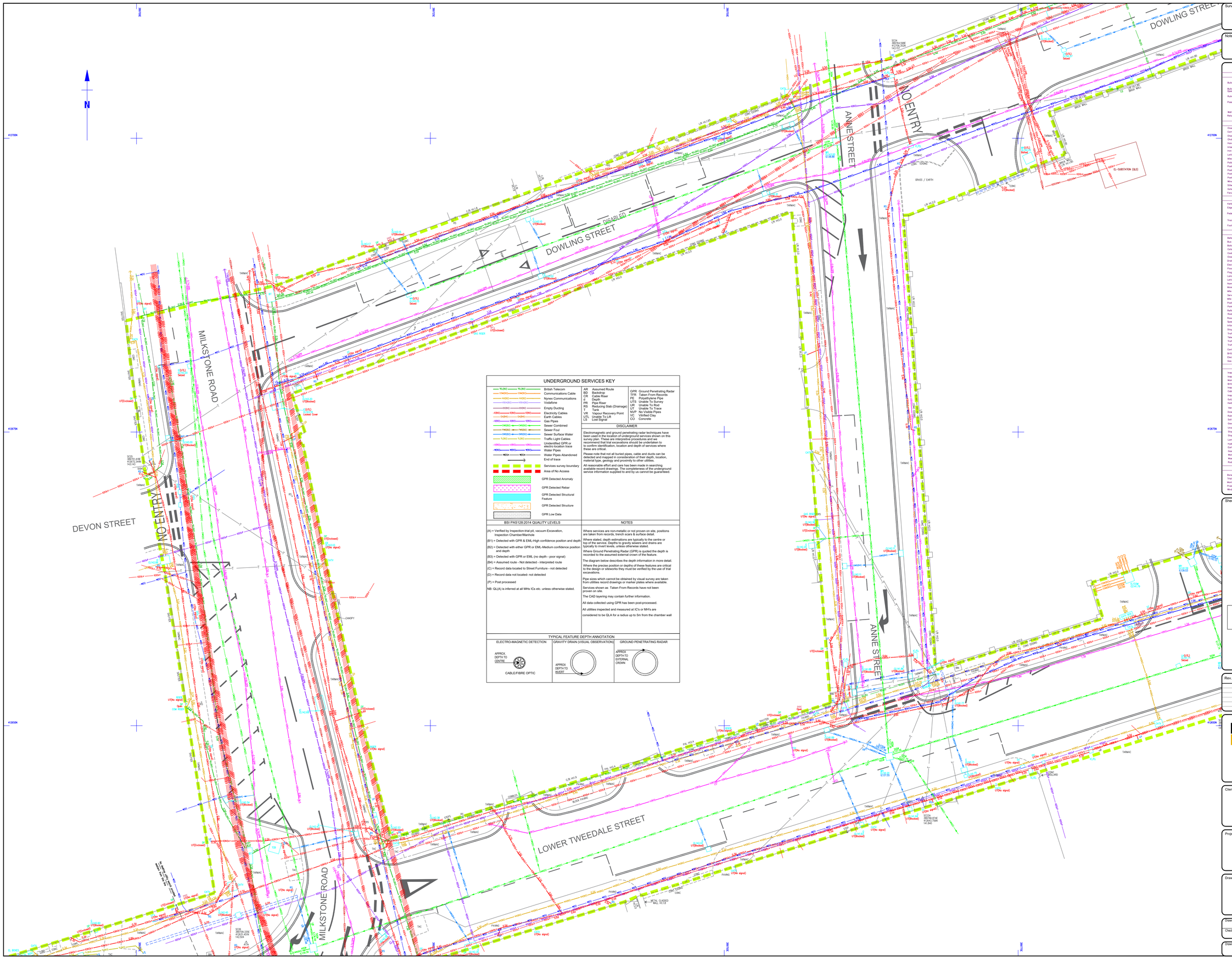

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Electricity Cables	RS Retaining Slab (Drainage)	UT Unable To Trace
Earth Cables	Tank	NVP No Visible Pipes
Gas Pipes	VR Vapour Recovery Point	VC Vitrified Clay
Sewer Combined	UTL Unable To Lift	CO Concrete
Sewer Foul	LS Lost Signal	
Sewer Surface Water		
Traffic Light Cables		
Unidentified GPR or electro location trace		
Water Pipes		
Water Pipes Abandoned		
End of trace		
Services survey boundary		
Area of No Access		
GPR Detected Anomaly		
GPR Detected Rebar		
GPR Detected Structural Feature		
GPR Detected Structure		
GPR Low Data		

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TYPICAL FEATURE DEPTH ANNOTATION

ELECTRO-MAGNETIC DETECTION	GRAVITY DRAIN (VISUAL OBSERVATION)	GROUND PENETRATING RADAR
APPROX. DEPTH TO CENTRE	APPROX. DEPTH TO INVERT	APPROX DEPTH TO EXTERNAL CROWN
CABLE/FIBRE OPTIC		

Survey Notes

Grid: Local, plane metric related to OS grid

Levels: OS datum from GNSS positioning, converted using the National Geoid model OSGM15

Notes

Topographical Survey Legend

BUILDINGS AND WALLS

Building
Building Open Sided
Ruin (RUIN)
Passage
Wall with Height
Retaining Wall (RW)

FENCE STYLES AND DESCRIPTIONS

Close Boarded C/B
Corrugated Iron C/I
Chestnut Paling C/P
Chainlink C/L
Handrail H/R
Interwoven I/W
Iron Railings I/R
Lattice L/F
Miscellaneous Misc
Palisade P/AL
Post & Chain P/C
Post & Rail P/R
Post & Wire P/W
Post & Barbed Wire B/W
Wire mesh W/M
Stile
Gate
Fence Breakpie

ROADS

Kerbs
Edge of Surfacing
Pedestrian Crossing (PC)
Track
Footpath (FP)

STREET FURNITURE

Bellahs Beacon
Bus Stop
Bollard
Cats Eye
Coal Chute
Closed Circuit TV
Drain
Electricity Pole
Flood Light
Flag Staff
Lamp Post
Letter Box
Name Plate (shroud)
Mooring Ring
Mile Post or Mooring Post
Service Marker
Mile Stone
Post
Parking Meter
Reflector Post
Rodding Eye
Road Sign
Speed Camera
Information Sign
Stay
Traffic Light
Telegraph Pole
Traffic Light Push Button Post
Traffic Light Control
Control Box
British Telecom Box
Electricity Box
Gas Box

INSPECTION CHAMBERS AND PIPES

Inspection Cover
Inspection Cover (Elec)
Manhole
British Telecom Cover
Inspection Cover (Comms)
Cable TV
Inspection Cover Traffic Signals
Gully
Kerb Outlet
Vent Pipe
Down Pipe
Rain Water Pipe
Soil Pipe
Gas Pipe
Unable to lift cover
Stop Tap
Stop Valve
Lamphole
Hydrant
Earth Rod
Sale Valve
Water Meter
Washout
Rodding Eye

GEOTECHNICAL INFORMATION

Borehole
Trial Pit
Monitor Pin
Probe Hole
Window Sample

GENERAL INFORMATION

Petrol Pump
Basement Light
Footbridge
Dish Type Channel
Slot Type Channel
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Tactile Paving
Drain Barrier
Direction
Diversion
Car Vacuum
Offset Pit
Air Valve
Trough
Chimney
Telephone Call Box

OVERHEAD FEATURES

Electricity Pylon (E/PYLON)
Electricity
Telephone

WATER FEATURES

Canal
Stream
Ditch
Weir
Culvert
Drip (Lined Drain)
Spring

RELIEF AND VEGETATION

Hedge
Edge of wood/Bushes
Stump (STUMP)
Individual Tree
Slopes with Height Greater than 1m
Cliff Face
Marsh
Reeds

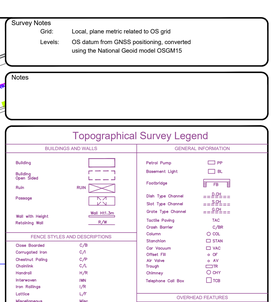
LEVEL AND HEIGHT INFORMATION

Standard Spot Height +123.45
Precision Spot Height +123.456
Bed Level +BL23.50
Water Level +WL24.92
Soffit Level +SL25.52
Threshold Level +THR.98
Cover Level +CL26.45
Invert Level +IL25.15
Pipe Soffit Level +PSL5.00
Floor Level +FL6.00
Finished Floor Level +FFL6.00
Top of Tank Level +TT7.00
Eave Level +EL8.00
Ridge Level +RL9.00
Roof Top Level +RHL8.50
Flat Roof Level +FRL7.00
Top of Canopy Level +TOP/CT/7.00
Underside of Canopy Level +SOF/CS/6.50
Window Sill Level +WSL8.00
Window Head Level +WHL9.00
Springing Level +SPL8.50
Arch Level +AL7.00
Cable Level +CHT8.00
Top of Wall Level +TWL10.00
Underside of Beam Level +UBL9.55
General Height +HT8.00

SURVEY INFORMATION SIGNS

Permanent Ground Marker
O.S. Trig Station
O.S. Bench Mark

Sheet Index



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65 Cross Street, Sale, Manchester
M33 7HF, Tel: 0161 905 1265
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Drawing Title
UNDERGROUND SERVICES SURVEY

Drawn By	PS	04/08/21	Survey Date APRIL 2021
Checked by	DJ	04/08/21	Scale A0@1:100

Drawing No 56653/UG5 Revision

UNDERGROUND SERVICES KEY

BT	British Telecom
COM/DU	Communications Cable
NYC	Nynex Communications
VF/VG	Vodafone
DUCT	Empty Ducting
ELEC	Electricity Cables
EARTH	Earth Cables
GAS	Gas Pipes
SW/CO	Sewer Combined
FW/SO	Sewer Foul
SW/SO	Sewer Surface Water
TL/SO	Traffic Light Cables
UNKN	Unidentified GPR or electro position trace
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W/SA	Water Pipes Abandoned
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	GPR Low Data

AR	Assumed Route
BD	Backdrop
CR	Cable Riser
MH	Manhole
PR	Pipe Riser
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T	Tank
VR	Vapour Recovery Point
UTL	Unable To Lift
LS	Lost Signal
GPR	Ground Penetrating Radar
TFR	Taken From Records
PE	Polyethylene Pipe
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UR	Unable To Rod
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CABLE/FIBRE OPTIC		

Survey Notes

Grid: Local, plane metric related to OS grid

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Notes

Topographical Survey Legend

BUILDINGS AND WALLS

Building
Building Open Sided
Portacabin
Ruin
Passage
Wall with Height Retaining Wall
Fence Wall
Bollard

FENCE STYLES AND DESCRIPTIONS

Close Boarded C/B
Corrugated Iron C/I
Chestnut Paling C/P
Chainlink C/L
Handrail H/R
Interwoven I/W
Iron Railings I/R
Lattice L/T
Miscellaneous Misc
Palisade PAL
Post & Chain P/C
Post & Rail P/R
Post & Wire P/W
Post & Barbed Wire B/W
Wire mesh W/M
Stile
Gate
Fence Swastyke

ROADS

Kerbs
Edge of Surfacing
Pedestrian Crossing
Track
Footpath

STREET FURNITURE

Belisha Beacon
Bus Stop
Bollard
Cats Eye
Coal Chute
Closed Circuit TV
Drain
Electricity Pole
Flood Light
Flag Staff
Lamp Post
Letter Box
Name Plate (street)
Mooring Ring
Mile Post or Mooring Post
Service Marker
Mile Stone
Post
Parking Meter
Reflector Post
Rodding Eye
Road Sign
Speed Camera
Information Sign
Traffic Light
Traffic Light Push Button Post
Traffic Light Control
Control Box
British Telecom Box
Electricity Box
Gas Box

INSPECTION CHAMBERS AND PIPES

Inspection Cover
Inspection Cover (Elec)
Manhole
British Telecom Cover
Inspection Cover (Comms)
Cable TV
Inspection Cover Traffic Signals
Gully
Kerb Outlet
Vent Pipe
Down Pipe
Rain Water Pipe
Soil Pipe
Gas Pipe
Unable to lift cover
Stop Tap
Stop Valve
Lamphole
Hydrant
Earth Rod
Sea Valve
Water Meter
Washout
Rodding Eye

GEOTECHNICAL INFORMATION

Borehole
Trial Pit
Monitor Pin
Probe Hole
Window Sample

GENERAL INFORMATION

Petrol Pump
Basement Light
Footbridge
Dish Type Channel
Slot Type Channel
Grate Type Channel
Tactile Paving
Drain Barrier
Shelter
Downpipe
Car Vacuum
Offset Fill
Air Valve
Trough
Chimney
Telephone Call Box

OVERHEAD FEATURES

Electricity Pylon
Electricity
Telephone

WATER FEATURES

Canal
Stream
Ditch
Weir
Culvert
Drip (Lined Drain)
Spring

RELIEF AND VEGETATION

Hedge
Edge of wood/Bushes
Stump
Individual Tree
Slopes with Height Greater than 1m
Cliff Face
Marsh
Reeds

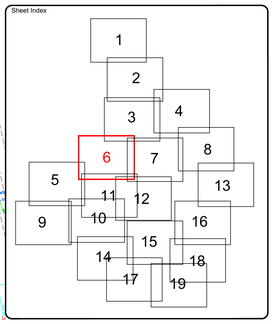
LEVEL AND HEIGHT INFORMATION

Standard Spot Height
Precision Spot Height
Bed Level
Water Level
Soffit Level
Threshold Level
Cover Level
Invert Level
Pipe Soffit Level
Floor Level
Finished Floor Level
Top of Tank Level
Base Level
Ridge Level
Flat Roof Level
Top of Canopy Level
Underside of Canopy Level
Window Sill Level
Window Head Level
Springing Level
Arch Level
Cable Level
Top of Wall Level
Underside of Beam Level
General Height

SURVEY INFORMATION SIGNS

Permanent Ground Marker
O.S. Trig Station
O.S. Bench Mark

Sheet Index



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Drawing Title
UNDERGROUND SERVICES SURVEY

Drawn By	PS 04/08/21	Survey Date	APRIL 2021
Checked by	DJ 04/08/21	Scale	A0@1:100

Drawing No 56653/UG6 Revision

Survey Notes

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Kerb Level
Ridge Level
Pipe Hip Level
Flat Roof Level
Top of Canopy Level
Underside of Canopy Level
Window Sill Level
Window Head Level
Springing Level
Arch Level
Cable Level
Top of Wall Level
Underside of Beam Level
General Height

SURVEY INFORMATION SIGNS

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O.S. Trig Station
O.S. Bench Mark

UNDERGROUND SERVICES KEY

TEL(NK)	British Telecom
CWDC(NK)	Communications Cable
NYAC(NK)	Nynex Communications
VOD(NK)	Vodafone
DUCT(NK)	Empty Ducting
ELEC(NK)	Electricity Cables
EART(NK)	Earth Cables
GAS(NK)	Gas Pipes
SWCB(NK)	Sewer Combined
SWFO(NK)	Sewer Foul
SWSU(NK)	Sewer Surface Water
TL(NK)	Traffic Light Cables
UNKN(NK)	Unidentified GPR or electro location trace
WATE(NK)	Water Pipes
WSA	Water Pipes Abandoned
	End of trace
	Services survey boundary
	Area of No Access
	GPR Detected Anomaly
	GPR Detected Rebar
	GPR Detected Structural Feature
	GPR Detected Structure
	GPR Low Data

AR	Assumed Route
BK	Backdrop
CR	Cable Riser
D	Depth
PR	Pipe Riser
RS	Reducing Slab (Drainage)
T	Tank
VR	Vapour Recovery Point
UTL	Unable To Lift
LS	Lost Signal

GPR	Ground Penetrating Radar
TFR	Taken From Records
PE	Polyethylene Pipe
UTS	Unable To Survey
UR	Unable To Rod
UT	Unable To Trace
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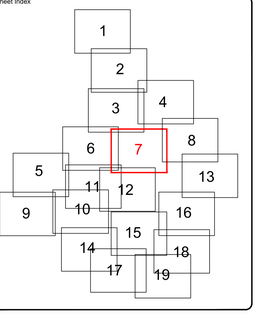
TYPICAL FEATURE DEPTH ANNOTATION

ELECTRO-MAGNETIC DETECTION: APPROX DEPTH TO CENTRE — CABLE/FIBRE OPTIC

GRAVITY DRAIN (VISUAL OBSERVATION): APPROX DEPTH TO INVERT

GROUND PENETRATING RADAR: APPROX DEPTH TO EXTERNAL CROWN

Sheet Index



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Drawing Title
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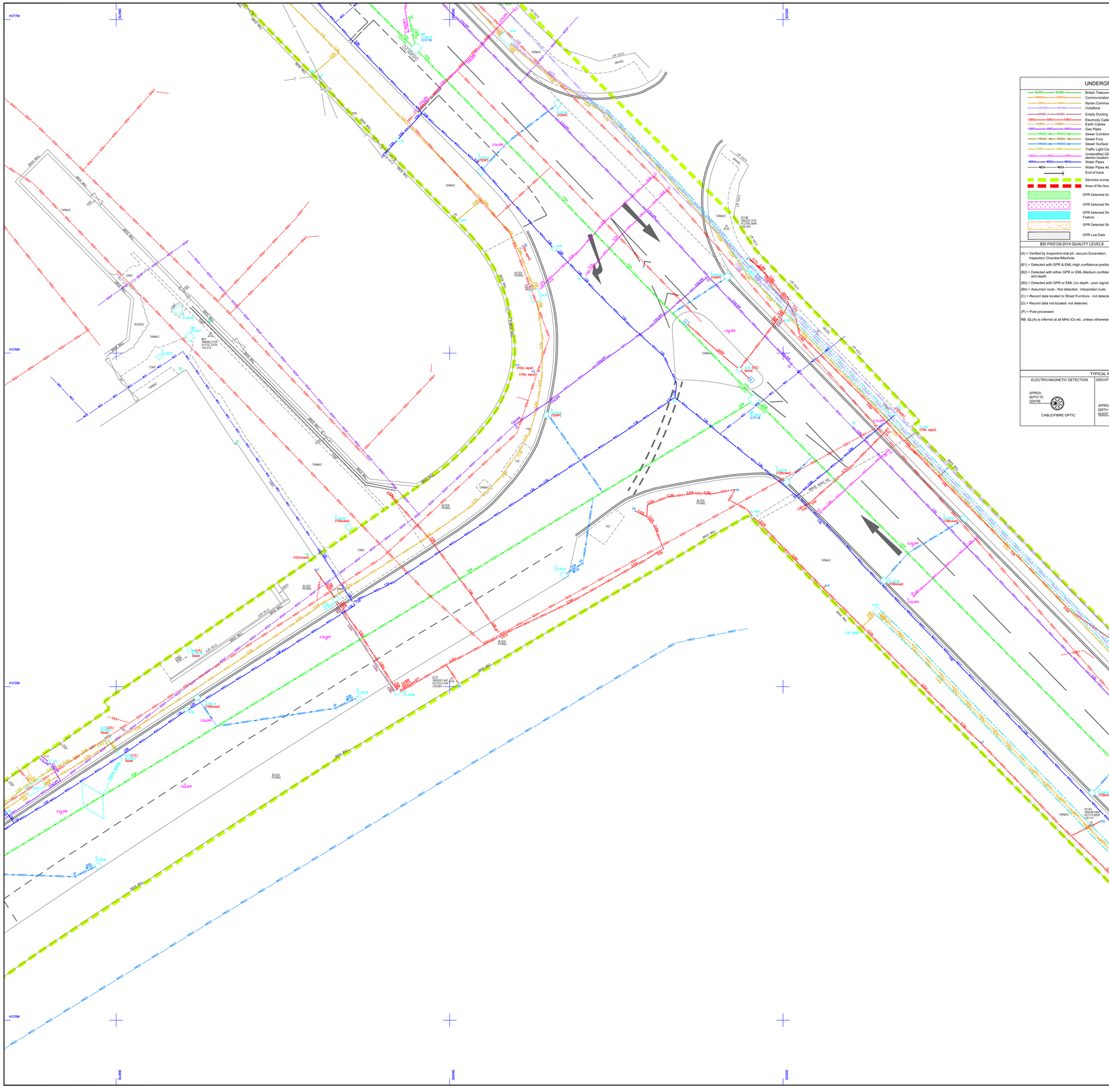
Drawn By	PS 04/08/21	Survey Date	APRIL 2021
Checked by	DJ 04/08/21	Scale	A0@1:100

Drawing No: 56653/UG7

Revision: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CONC
BUSHES
TAC
GRAVEL
BRICK WALL
ELEC WALL
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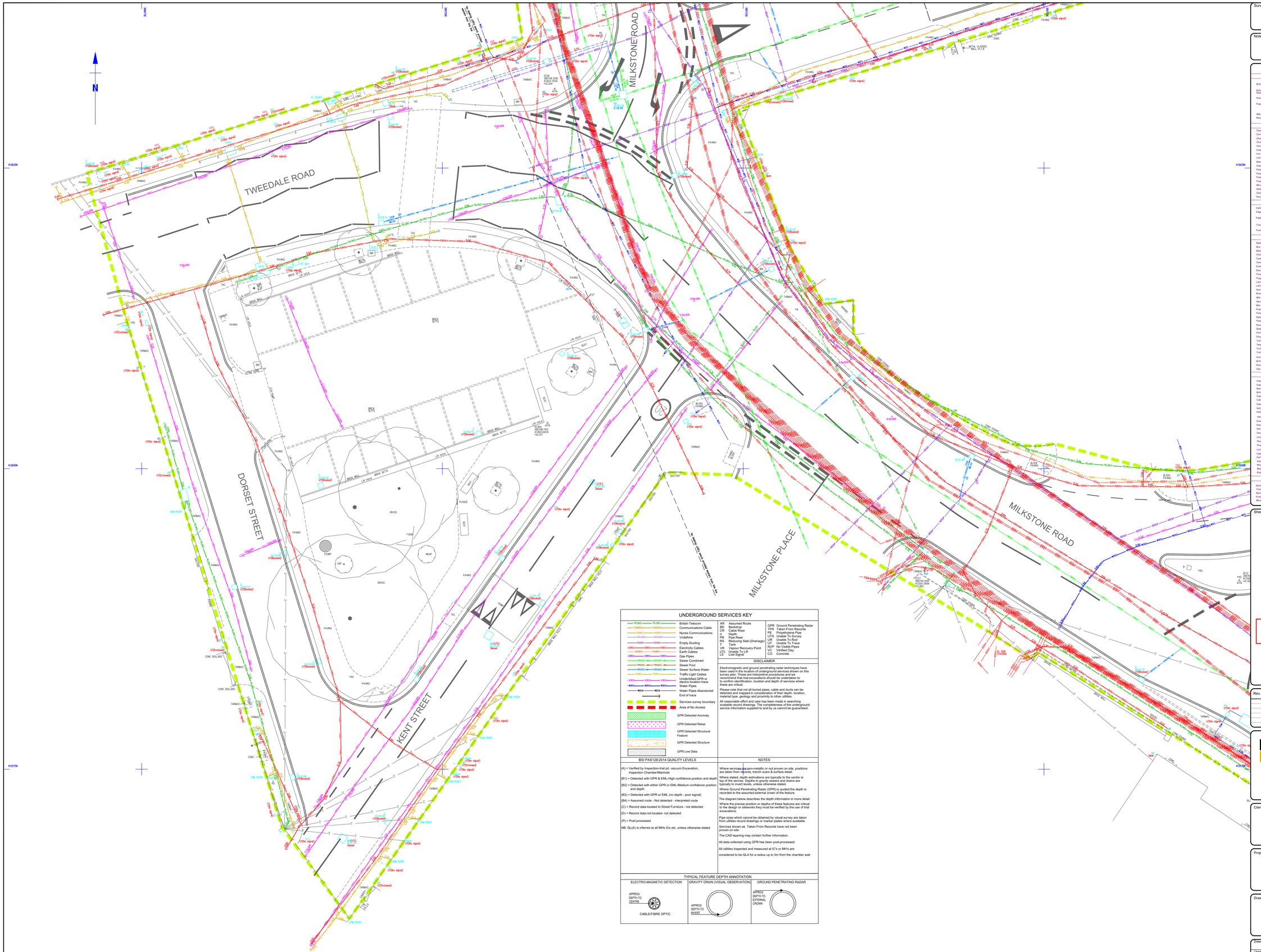

UNDERGROUND SERVICES KEY

British Telecom	AR Assumed Route	GPR Ground Penetrating Radar
Communications Cable	BD Backdrop	TFR Taken From Records
Nynex Communications	DR Drop Riser	PE Polyethylene Pipe
Vodafone	d Depth	UTS Unable To Survey
Empty Ducting	PR Pipe Riser	UR Unable To Rod
Electricity Cables	RS Reducing Slab (Drainage)	UT Unable To Trace
Earth Cables	T Tank	NVP No Visible Pipes
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Where services are non-metallic or not proven on site, positions are taken from records, trench scars & surface detail.

Where stated, depth estimations are typically to the centre or top of the service. Depths to gravity sewers and drains are typically to invert levels, unless otherwise stated.

Where Ground Penetrating Radar (GPR) is quoted the depth is recorded to the assumed external crown of the feature.

The diagram below describes the depth information in more detail.

Where the precise position or depths of these features are critical to the design or siteworks they must be verified by the use of trial excavations.

Pipe sizes which cannot be obtained by visual survey are taken from utilities record drawings or marker plates where available.

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All utilities inspected and measured at IC's or MH's are considered to be QLA for a radius up to 5m from the chamber wall

TYPICAL FEATURE DEPTH ANNOTATION

ELECTRO-MAGNETIC DETECTION	GRAVITY DRAIN (VISUAL OBSERVATION)	GROUND PENETRATING RADAR
APPROX. DEPTH TO CENTRE	APPROX. DEPTH TO INVERT	APPROX. DEPTH TO EXTERNAL CROWN
CABLE/FIBRE OPTIC		

Survey Notes

Grid: Local, plane metric related to OS grid

Levels: OS datum from GNSS positioning, converted using the National Geoid model OSGM15

Notes

Topographical Survey Legend

BUILDINGS AND WALLS

Building
Building Open Sided
Ruin (RUIN)
Passage
Wall with Height
Retaining Wall (R/W)

FENCE STYLES AND DESCRIPTIONS

Close Boarded C/B
Corrugated Iron C/I
Chestnut Paling C/P
Chainlink C/L
Hoardnd H/R
Interwoven I/W
Iron Railings I/R
Lattice L/T
Miscellaneous Misc
Palisade PAL
Post & Chain P/C
Post & Rail P/R
Post & Wire P/W
Post & Barbed Wire B/W
Wire mesh W/M
Stile
Gate
Fence Breakpie

ROADS

Kerbs
Edge of Surfacing
Pedestrian Crossing (PC)
Track
Footpath (FP)

STREET FURNITURE

Bellahs Beacon
Bus Stop
Bollard
Cats Eye
Coal Chute
Closed Circuit TV
Drain
Electricity Pole
Flood Light
Flag Staff
Lamp Post
Letter Box
Name Plate (street)
Mooring Ring
Mile Post or Mooring Post
Service Marker
Mile Stone
Post
Parking Meter
Reflector Post
Rodding Eye
Road Sign
Speed Camera
Information Sign
Stay
Traffic Light
Telegraph Pole
Traffic Light Push Button Post
Traffic Light Control
Control Box
British Telecom Box
Electricity Box
Gas Box

INSPECTION CHAMBERS AND PIPES

Inspection Cover
Inspection Cover (Elec)
Manhole
British Telecom Cover
Inspection Cover (Comms)
Cable TV
Inspection Cover Traffic Signals
Gully
Kerb Outlet
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Down Pipe
Rain Water Pipe
Soil Pipe
Gas Pipe
Unable to lift cover
Stop Tap
Stop Valve
Lamphole
Hydrant
Earth Rod
Gas Valve
Water Meter
Washout
Rodding Eye

GEOTECHNICAL INFORMATION

Borehole
Trial Pit
Monitor Pin
Probe Hole
Window Sample

GENERAL INFORMATION

Petrol Pump
Basement Light
Footbridge
Dish Type Channel
Slot Type Channel
Grate Type Channel
Tactile Paving (TAC)
Drain Barrier (C/B)
Guardrail
Steelstan (STAN)
Car Vacuum (VAC)
Offset Fill (F)
Air Valve (AV)
Trough (TR)
Chimney (CHY)
Telephone Call Box (TCB)

OVERHEAD FEATURES

Electricity Pylon (E/PILON)
Electricity
Telephone

WATER FEATURES

Canal
Stream
Ditch
Weir
Culvert
Drip (Lined Drain)
Spring (SPR)

RELIEF AND VEGETATION

Hedge
Edge of wood/Bushes
Stump (STUMP)
Individual Tree
Slopes with Height Greater than 1m
Cliff Face
Marsh
Reeds

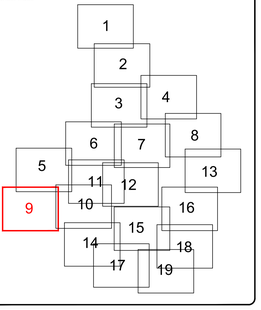
LEVEL AND HEIGHT INFORMATION

Standard Spot Height +123.45
Precision Spot Height +123.456
Bed Level +BL23.00
Water Level +WL24.92
Soffit Level +SL25.82
Threshold Level +THR.98
Cover Level +CL26.45
Invert Level +IL25.15
Pipe Soffit Level +PSL5.00
Floor Level +FL6.00
Finished Floor Level +FFL6.00
Top of Tank Level +TT7.00
Eave Level +EL8.00
Ridge Level +RL9.00
Flat Roof Level +FRL8.50
Top of Canopy Level +TOP./CT.00
Underside of Canopy Level +SOF./CSL50
Window Sill Level +WSL8.00
Window Head Level +WHL9.00
Springing Level +SPL8.50
Arch Level +AL7.00
Cable Level +CHTB.00
Top of Wall Level +TWL10.00
Underside of Beam Level +UBL9.55
General Height +HTS.00

SURVEY INFORMATION SIGNS

Permanent Ground Marker
O.S. Trig Station
O.S. Bench Mark

Sheet Index



Rev.	Date	Description

MALCOLM HUGHES
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65 Cross Street, Sale, Manchester M33 7AF. Tel: 0161 905 1265
www.malcolmhughes.co.uk
survey@mhls.co.uk

Accreditations: RICS, The Survey Association, ICES, RICS Registered, IHE FELLOW

Client
WSP UK LTD.
8 FIRST STREET
MANCHESTER M15 4RP

Project
ROCHDALE STATION SQUARE
OL11 1DS

Drawing Title
UNDERGROUND SERVICES
SURVEY
SHEET 9/19

Drawn By	PS 04/08/21	Survey Date	APRIL 2021
Checked by	ED 04/08/21	Scale	A0@1:100

Drawing No 56653/UG9 Revision

Survey Notes

Grid: Local, plane metric related to OS grid

Levels: OS datum from GNSS positioning, converted using the National Geoid model OSGM15

Notes

UNDERGROUND SERVICES KEY

British Telecom
Communications Cable
Nynex Communications
Vodafone
Empty Ducting
Electricity Cables
Gas Pipes
Gas Pipes
Sewer Combined
Sewer Foul
Sewer Surface Water
Traffic Light Cables
Water Pipes Operational
Water Pipes
Water Pipes Abandoned
End of trace
Services survey boundary
Area of No Access
GPR Detected Anomaly
GPR Detected Rebar
GPR Detected Structural Feature
GPR Detected Structure
GPR Low Data

AAT - Associated Anode Test
BD - Backdrop
CR - Catch Pit Cover
CP - Cable
PR - Pipe Riser
SC - Surface Water Soak (Drainage)
T - Tank
VR - Vapour Recovery Point
WT - Water Tank
LW - Lorell Signal

GPR - Ground Penetrating Radar
PE - Polyethylene Pipe
PP - Polypthylene Pipe
UTS - Unable To Survey
UTL - Unable To Locate
UT - Unable To Trace
NVP - No Visible Pipes
VC - Vitrified Clay
CO - Concrete

DISCLAIMER

Electromagnetic and ground penetrating radar techniques have been used to locate the underground services shown on this survey plan. These are interpretive procedures and we recommend trial excavations be undertaken as necessary to confirm identification, location and depth of services where required.

Please note that not all buried pipes, cable and ducts can be detected and mapped in consideration of their depth, location, material type, geology and proximity to other utilities.

All reasonable effort and care has been made in searching available records and plotting the underground and overground service information supplied to and by us cannot be guaranteed.

BSI PAS 128:2014 QUALITY LEVELS

(A) = Verified by inspection-trial pit, vacuum Excavation, Inspection Chamber/Manhole

(B1) = Detected with GPR & EML-high confidence position and depth

(B2) = Detected with either GPR or EML-Medium confidence position and depth

(B3) = Detected with GPR or EML (no depth - poor signal)

(B4) = Assumed route - Not detected - interpreted route

(C) = Record data located to Street Furniture - not detected

(D) = Record data not located- not detected

(P) = Pipe processed

NB: QL(A) is inferred at all MHs ICs etc. unless otherwise stated.

NOTES

Where services are non-metallic or not proven on site, positions shown are taken from the best available records.

Where stated, depth estimations are typically to the centre or top of the service. Depths to gravity sewers and drains are typically to invert levels, unless otherwise stated.

Where Ground Penetrating Radar (GPR) is quoted the depth is to the top of the service, unless otherwise stated.

The diagram below describes the depth information in more detail.

Where the precise position or depths of these features are critical to the design or siteworks they must be verified by the use of trial excavations.

Pipe sizes which cannot be obtained by visual survey are taken from utilities record drawings or market plans where available.

Services shown as Taken From Records have not been proven on site.

The CAD layering may contain further information.

All data collected using GPR has been post-processed.

All utilities inspected and measured at ICs or MHs are considered to be QLA for a radius up to 5m from the chamber wall

TYPICAL FEATURE DEPTH ANNOTATION

ELECTRO-MAGNETIC DETECTION: APPROX DEPTH TO CENTRE — CABLE/FIBRE OPTIC

GRAVITY DRAIN (VISUAL OBSERVATION): APPROX DEPTH TO INVERT

GROUND PENETRATING RADAR: APPROX DEPTH TO EXTERNAL CROWN

Topographical Survey Legend

BUILDINGS AND WALLS

Building
Building Under Dotted
Ruin
Passage
Wall with Height Retaining Wall

FENCE STYLES AND DESCRIPTIONS

Close Boarded C/B
Corrugated Iron C/I
Chestnut Paling C/P
Chainlink C/L
Handrail H/R
Interwoven IWK
Iron Railings I/R
Lattice L/T
Miscellaneous Misc
Palisade P/AL
Post & Chain P/C
Post & Rail P/R
Post & Wire P/W
Post & Barbed Wire B/W
Wire mesh W/M
Stile
Gate
Fence linestyle

ROADS

Kerbs
Edge of Surfacing
Pedestrian Crossing
Track
Footpath

STREET FURNITURE

Bellaha Beacon
Bus Stop
Bollard
Cats Eye
Coal Chute
Closed Circuit TV
Drain
Electricity Pole
Flood Light
Flag Staff
Lamp Post
Letter Box
Name Plate (street)
Mooring Ring
Mile Post or Mooring Post
Service Marker
Mile Stone
Post
Parking Meter
Reflector Post
Rodding Eye
Road Sign
Speed Camera
Information Sign
Stay
Traffic Light
Telegraph Pole
Traffic Light Push Button Post
Traffic Light Control
Control Box
British Telecom Box
Electricity Box
Gas Box

INSPECTION CHAMBERS AND PIPES

Inspection Cover IC
Inspection Cover (Elec) IC/EL
Manhole MH
British Telecom Cover BT
Inspection Cover (Comms) IC/TCOM
Cable TV IC/TV
Inspection Cover Traffic Signals IC/TL
Gully G
Kerb Outlet KO
Vent Pipe VP
Down Pipe DP
Rain Water Pipe RWP
Soil Pipe SVP
Gas Pipe G-PIPE
Unable to lift cover U/L
Stop Tap ST
Stop Valve SV
Lamphole LH
Hydrant HYD
Earth Rod EB
Sea Valve GV
Water Meter WM
Washout WO
Rodding Eye RE

GEOTECHNICAL INFORMATION

Borehole BH
Trial Pit TP
Monitor Pin MON
Probe Hole PH
Window Sample WS

GENERAL INFORMATION

Petrol Pump PP
Basement Light BL
Footbridge
Dish Type Channel
Slot Type Channel
Grate Type Channel
Tactile Paving TAC
Drain Barrier C/BR
Obstruction OBS
Diversion DIV
Car Vacuum VAC
Offset Fill JF
Air Valve AV
Trough TR
Chimney CHY
Telephone Call Box TCB

OVERHEAD FEATURES

Electricity Pylon
Electricity
Telephone

WATER FEATURES

Canal
Stream
Ditch
Weir
Culvert
Strip (Lined Drain)
Spring

RELIEF AND VEGETATION

Hedge
Edge of wood/Bushes
Stump
Individual Tree
Slopes with Height Greater than 1m
Cliff Face
Marsh
Reeds

LEVEL AND HEIGHT INFORMATION

Standard Spot Height +123.45
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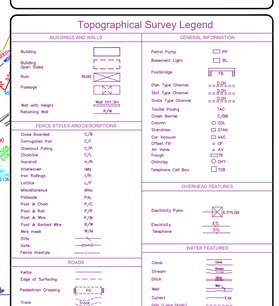
Invert Level +IL25.15
Pipe Soffit Level +PSL5.00
Floor Level +FL6.00
Finished Floor Level +FFL6.00
Top of Tank Level +TT7.00
Eave Level +EL8.00
Ridge Level +RL9.00
Flat Top Level +FRL8.50
Flat Roof Level +FRL7.00
Top of Canopy Level +TOP/CT.00
Underside of Canopy Level +SOF/CS.50
Window Sill Level +WSL8.00
Window Head Level +WHL9.00
Springing Level +SPL8.50
Arch Level +AL7.00
Cable Level +CHT8.55
Top of Wall Level +TWL10.00
Underside of Beam Level +UBL9.55
General Height +HT6.00

SURVEY INFORMATION SIGNS

Permanent Ground Marker
O.S. Trig Station
O.S. Bench Mark

Sheet Index



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Project
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Drawing Title
UNDERGROUND SERVICES
SURVEY
SHEET 10/19

Drawn By			Survey Date	
PS	04/08/21		APRIL 2021	
Checked by			Scale	
ED	04/08/21		A0@1:100	

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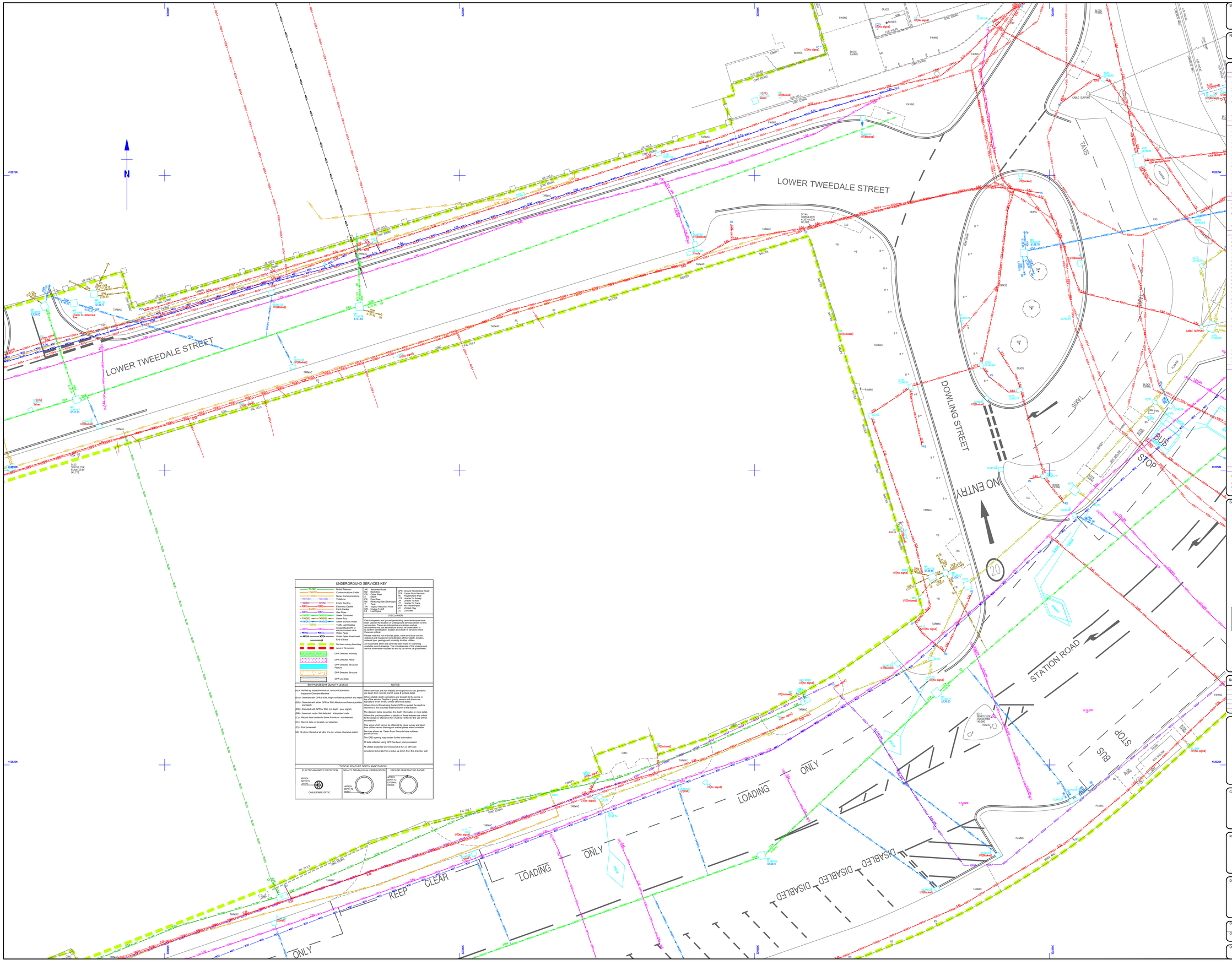

Survey Notes

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Notes

Topographical Survey Legend

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Belisha Beacon
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Cats Eye
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Lamp Post
Letter Box
Name Plate (street)
Mooring Ring
Mile Post or Mooring Post
Service Marker
Mile Stone
Post
Parking Meter
Reflector Post
Rodding Eye
Road Sign
Speed Camera
Information Sign
Sump
Traffic Light
Telegraph Pole
Traffic Light Push Button Post
Traffic Light Control
Control Box
British Telecom Box
Electricity Box
Gas Box

INSPECTION CHAMBERS AND PIPES

Inspection Cover
Inspection Cover (Elec)
Manhole
British Telecom Cover
Inspection Cover (Comms)
Cable TV
Inspection Cover Traffic Signals
Gully
Kerb Outlet
Vent Pipe
Down Pipe
Rain Water Pipe
Soil Pipe
Gas Pipe
Unable to lift cover
Stop Tap
Stop Valve
Lamphole
Hydrant
Earth Rod
Gas Valve
Water Meter
Washout
Rodding Eye

GEOTECHNICAL INFORMATION

Borehole
Trial Pit
Monitor Pin
Probe Hole
Window Sample

GENERAL INFORMATION

Petrol Pump
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Footbridge
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Grate Type Channel
Tactile Paving
Crash Barrier
Bollard
Staunton
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Trough
Chimney
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Telephone

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Stream
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Weir
Culvert
Drip (Lined Drain)
Spring

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Edge of wood/Bushes
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Slopes with Height Greater than 1m
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Marsh
Reeds

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Precision Spot Height
Bed Level
Water Level
Slurry Level
Threshold Level
Cover Level
Invert Level
Pipe Soffit Level
Floor Level
Finished Floor Level
Top of Tank Level
Base Level
Ridge Level
Eaves Level
Flat Roof Level
Top of Canopy Level
Underside of Canopy Level
Window Sill Level
Window Head Level
Springing Level
Arch Level
Cable Level
Top of Wall Level
Underside of Beam Level
General Height

SURVEY INFORMATION SIGNS

Permanent Ground Marker
O.S. Trig Station
O.S. Bench Mark

UNDERGROUND SERVICES KEY

British Telecom
Communications Cable
Nynex Communications
Vodafone
Empty Ducting
Electricity Cables
Earth Cables
Gas Pipes
Sewer Combined
Sewer Foul
Sewer Surface Water
Traffic Light Cables
Unidentified GPR or Anomalous Information trace
Water Pipes
Water Pipes Abandoned
End of trace

Services survey boundary
Area of No Access
GPR Detected Anomaly
GPR Detected Rebar
GPR Detected Structural Feature
GPR Detected Structure
GPR Low Data

AR	Assumed Route	GPR Ground Penetrating Radar
CP	Cable Pipe	TFR Taken From Records
CR	Cable Riser	PE Polyethylene Pipe
d	Depth	UR Unable To Rod
DP	Drain Pipe	UR Unable To Rod
RS	Reducing Slab (Drainage)	UT Unable To Trace
T	Tank	UT Unable To Trace
TP	Transport Recovery Point	VC Vitrified Clay
UTL	Unable To Lift	VC Vitrified Clay
LS	Lost Signal	CO Concrete

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(B3) = Detected with GPR or EML (no depth - poor signal)

(BA) = Assumed route - Not detected - interpreted route

(C) = Record data located to Street Furniture - not detected

(D) = Record data not located- not detected

(P) = Post processed

NB: QLAs is interred at all MHs ICs etc. unless otherwise stated.

NOTES

Where services are non-metallic or not proven on site, positions are taken from records, trench scars & surface detail.

Where stated, depth estimations are typically to the centre or invert of the pipe. Depths to the tops of buried plant are typically to invert levels, unless otherwise stated.

Where Ground Penetrating Radar (GPR) is quoted the depth is recorded to the assumed external crown of the feature.

The diagram below describes the depth information in more detail.

Where the precise position or depths of these features are critical to the design, we recommend they must be verified by the use of trial excavations.

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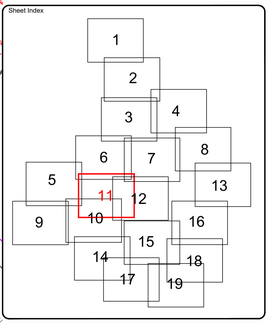
GRAVITY DRAIN VISUAL OBSERVATIONS: APPROX DEPTH TO INVERT

GROUND PENETRATING RADAR: APPROX DEPTH TO EXTERNAL CROWN

Sheet Index



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SHEET 11/19

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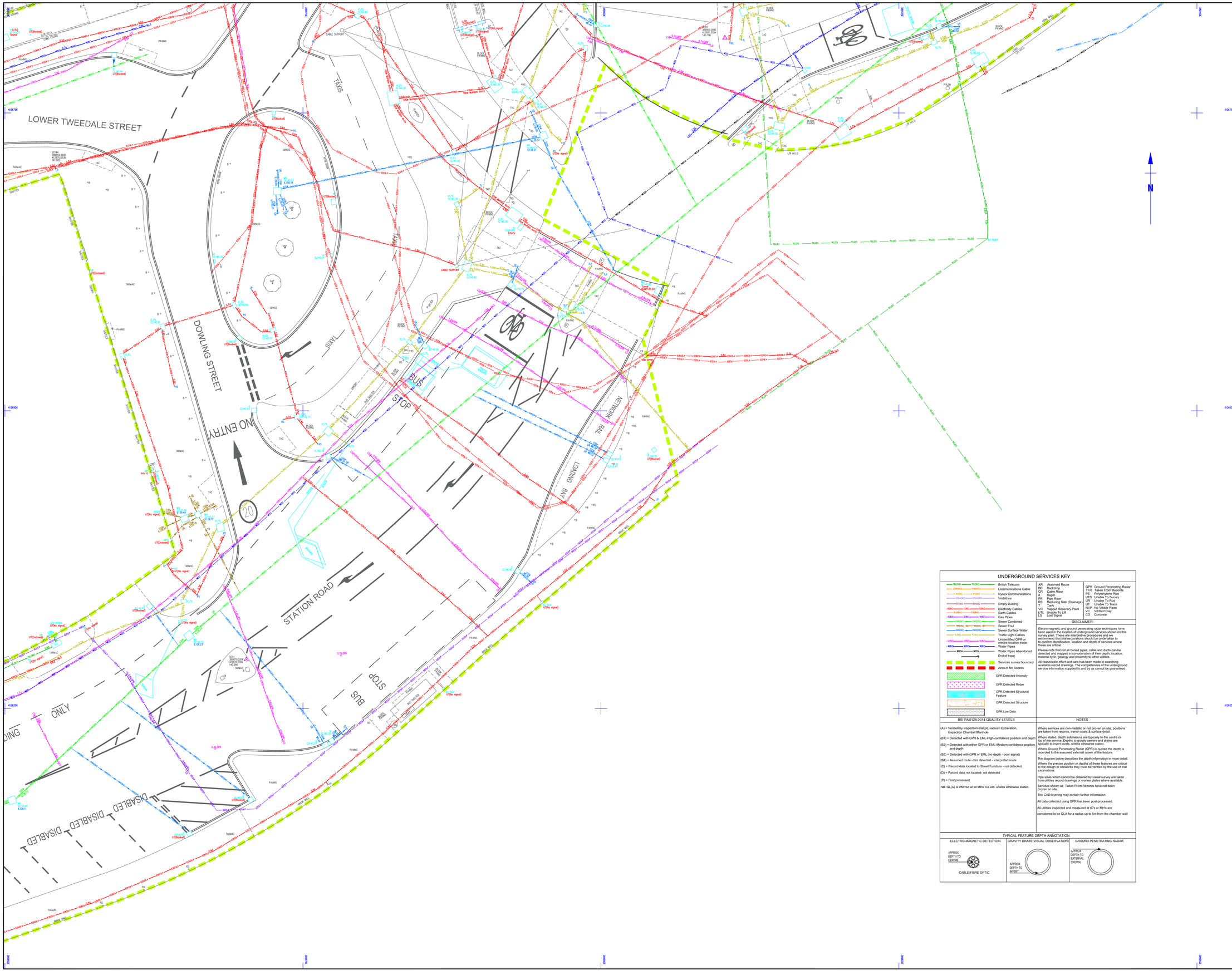
Drawing No: 56653/UG11

Revision:



Survey Notes

Grid: Local, plane metric related to OS grid

Levels: OS datum from GNSS positioning, converted using the National Geoid model OSGM15

Notes

Topographical Survey Legend

BUILDINGS AND WALLS

Building
Building Open Sided
Ruin
Passage
Wall with Height
Retaining Wall

FENCE STYLES AND DESCRIPTIONS

Close Boarded C/B
Corrugated Iron C/I
Chestnut Paling C/P
Chainlink C/L
Handrail H/R
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Palisade P/AL
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ROADS

Kerbs
Edge of Surfacing
Pedestrian Crossing
Track
Footpath

STREET FURNITURE

Bollards Beacon
Bus Stop
Bollard
Cats Eye
Coal Chute
Closed Circuit TV
Drain
Electricity Pole
Flood Light
Flag Staff
Lamp Post
Letter Box
Name Plate (street)
Mooring Ring
Mile Post or Mooring Post
Service Marker
Mile Stone
Post
Parking Meter
Reflector Post
Rodding Eye
Road Sign
Speed Camera
Information Sign
Stay
Traffic Light
Telegraph Pole
Traffic Light Push Button Post
Traffic Light Control
Control Box
British Telecom Box
Electricity Box
Gas Box

INSPECTION CHAMBERS AND PIPES

Inspection Cover
Inspection Cover (Elec)
Manhole
British Telecom Cover
Inspection Cover (Comms)
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Inspection Cover Traffic Signals
Gully
Kerb Outlet
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Down Pipe
Rain Water Pipe
Soil Pipe
Gas Pipe
Unable to lift cover
Stop Tap
Stop Valve
Lamphole
Hydrant
Earth Rod
Sale Valve
Water Meter
Washout
Rodding Eye

GEOTECHNICAL INFORMATION

Borehole
Trial Pit
Monitor Pin
Probe Hole
Window Sample

GENERAL INFORMATION

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Basement Light
Footbridge
Dish Type Channel
Slot Type Channel
Grate Type Channel
Tactile Paving
Drain Barrier
Bollard
Diversion
Car Vacuum
Offset Fill
Air Valve
Trough
Chimney
Telephone Call Box

OVERHEAD FEATURES

Electricity Pylon
Electricity
Telephone

WATER FEATURES

Canal
Stream
Ditch
Weir
Culvert
Drip (Lined Drain)
Spring

RELIEF AND VEGETATION

Hedge
Edge of wood/Bushes
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Slopes with Height Greater than 1m
Cliff Face
Marsh
Reeds

LEVEL AND HEIGHT INFORMATION

Standard Spot Height
Precision Spot Height
Bed Level
Water Level
Soffit Level
Threshold Level
Cover Level
Invert Level
Pipe Soffit Level
Floor Level
Finished Floor Level
Top of Tank Level
Cone Level
Ridge Level
Roof Top Level
Flat Roof Level
Top of Canopy Level
Underside of Canopy Level
Window Sill Level
Window Head Level
Springing Level
Arch Level
Cable Level
Top of Wall Level
Underside of Beam Level
General Height

SURVEY INFORMATION SIGNS

Permanent Ground Marker
O.S. Trig Station
O.S. Bench Mark

UNDERGROUND SERVICES KEY

TEL(BT)	British Telecom	AR	Assumed Route
CON(C)	Communications Cable	BD	Backdrop
NYN(C)	Nynex Communications	CR	Cable Riser
VOD(C)	Vodafone	d	Depth
CON(D)	Empty Ducting	PR	Pipe Riser
ELEC(C)	Electricity Cables	RS	Reducing Slab (Drainage)
CAT(C)	Earth Cables	T	Tank
GAS(P)	Gas Pipes	VR	Vapour Recovery Point
COM(C)	Sewer Combined	WL	Water Level Lift
FW(SC)	Sewer Foul	LS	Lost Signal
SW(SC)	Sewer Surface Water		
TL(SC)	Traffic Light Cables		
UNK(C)	Unidentified GPR or electro location trace		
W(SC)	Water Pipes		
W(SA)	Water Pipes Abandoned		
	End of trace		
	Services survey boundary		
	Area of No Access		
	GPR Detected Anomaly		
	GPR Detected Rebar		
	GPR Detected Structural Feature		
	GPR Detected Structure		
	GPR Low Data		

GPR Ground Penetrating Radar
TFR Taken From Records
PE Polyethylene Pipe
SUR Survey Boundary
UR Unable To Rod
UT Unable To Trace
NVP No Visible Pipes
VC Vitrified Clay
CO Concrete

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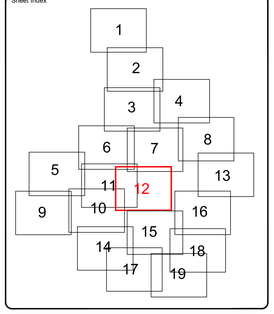
TYPICAL FEATURE DEPTH ANNOTATION

ELECTRO-MAGNETIC DETECTION

GRAVITY DRAIN (VISUAL OBSERVATION)

GROUND PENETRATING RADAR

Sheet Index



Rev.	Date	Description

MALCOLM HUGHES
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www.malcolmhughes.co.uk
survey@mhls.co.uk

Accreditations

Client

WSP UK LTD.
8 FIRST STREET
MANCHESTER M15 4RP

Project

ROCHDALE STATION SQUARE
OL11 1DS

Drawing Title

UNDERGROUND SERVICES
SURVEY
SHEET 12/19

Drawn By	PS 04/08/21	Survey Date	APRIL 2021
Checked by	ED 04/08/21	Scale	A0@1:100

Drawing No. 56653/UG12

Revision

UNDERGROUND SERVICES KEY

British Telecom	TELEBC
Communications Cable	COMMSBC
Nynex Communications	NYNEXBC
Vodafone	VODAFONEBC
Empty Ducting	DUCTBC
Electricity Cables	ELECTBC
Earth Cables	EARTHBC
Gas Pipes	GASBC
Sewer Combined	SEWCOMBC
Sewer Foul	SEWFOULBC
Sewer Surface Water	SEWSURFBC
Traffic Lights Cables	TLIGHTBC
Unidentified GPR or electro location trace	UNIDBC
Water Pipes	WATERBC
Water Pipes Abandoned	WATERABC
End of trace	
Services survey boundary	
Area of No Access	
GPR Detected Anomaly	
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GPR Detected Structural Feature	
GPR Detected Structure	
GPR Low Data	

AR Assumed Route	GPR Ground Penetrating Radar
BD Backdrop	TFR Taken From Records
CR Cable Riser	PP Plastic Pipe
d Depth	UTS Unable To Survey
PR Pipe Riser	UR Unable To Rod
RS Reducing Slab (Drainage)	UT Unable To Trace
T Tank	NVP No Visible Pipes
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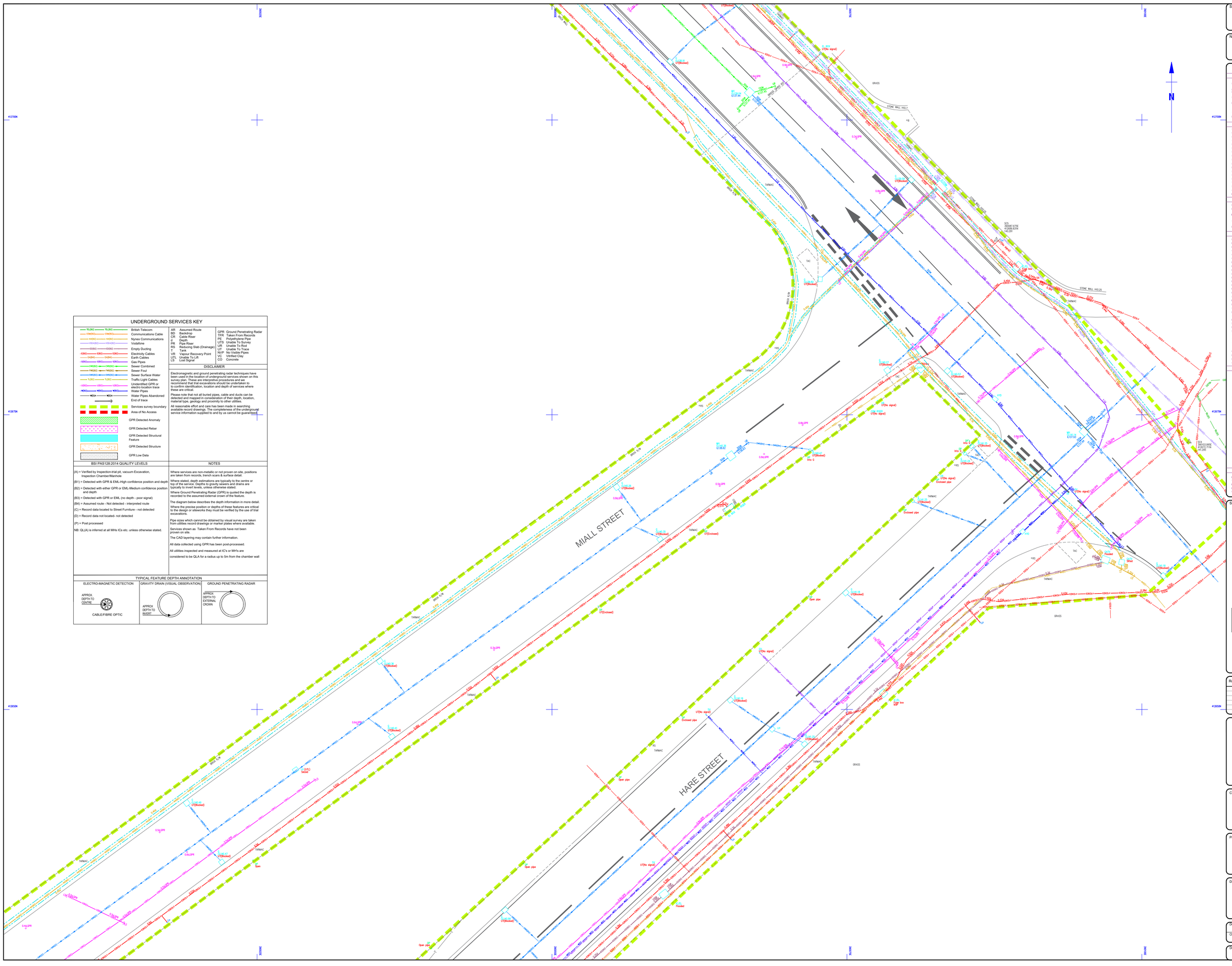
ELECTRO-MAGNETIC DETECTION

GRAVITY DRAIN (VISUAL OBSERVATION)

GROUND PENETRATING RADAR



Survey Notes

Grid: Local, plane metric related to OS grid

Levels: OS datum from GNSS positioning, converted using the National Geoid model OSGM15

Notes

Topographical Survey Legend

BUILDINGS AND WALLS

Building
Building Open Sided
Ruin (RUIN)
Passage
Wall with Height Retaining Wall (Wall H10.5m) R/W

FENCE STYLES AND DESCRIPTIONS

Close Boarded C/B
Corrugated Iron C/I
Chestnut Paling C/P
Chainlink C/L
Handrail H/R
Interwoven I/W
Iron Railings I/R
Lattice L/F
Miscellaneous Misc
Palisade P/AL
Post & Chain P/C
Post & Rail P/R
Post & Wire P/W
Post & Barbed Wire B/W
Wire mesh W/M
Stile
Gate
Fence Breakpie

ROADS

Kerbs
Edge of Surfacing
Pedestrian Crossing (PC)
Track
Footpath

STREET FURNITURE

Bellaha Beacon
Bus Stop BS
Bollard B
Cats Eye CE
Coal Chute CC
Closed Circuit TV CCTV
Drain DR
Electricity Pole EP
Flood Light FL
Flag Staff FS
Lamp Post LP
Letter Box LB
Name Plate (street) NP
Mooring Ring MR
Mile Post or Mooring Post MP
Service Marker MK
Mile Stone MS
Post P
Parking Meter PM
Reflector Post RP
Rodding Eye RE
Road Sign RS
Speed Camera S/CAM
Information Sign SIGN
Stay ST
Traffic Light TL
Telegraph Pole TP
Traffic Light Push Button Post TLP
Traffic Light Control T/LC/P
Control Box C/BOX
British Telecom Box BT BOX
Electricity Box EL BOX
Gas Box GAS BOX

INSPECTION CHAMBERS AND PIPES

Inspection Cover IC
Inspection Cover (Elec) IC/EL
Manhole MH
British Telecom Cover BT
Inspection Cover (Comms) IC/COM
Cable TV CATV
Inspection Cover Traffic Signals IC/TL
Gully G
Kerb Outlet KO
Vent Pipe v
Down Pipe DP
Rain Water Pipe RWP
Soil Pipe SVP
Gas Pipe G-PIPE
Unable to lift cover U/L
Stop Tap ST
Stop Valve SV
Lamphole LH
Hydrant HYD
Earth Rod ER
Gas Valve GV
Water Meter WM
Washout WO
Rodding Eye RE

GEOTECHNICAL INFORMATION

Borehole BH
Trial Pit TP
Monitor Pin MON
Probe Hole PH
Window Sample WS

GENERAL INFORMATION

Petrol Pump PP
Basement Light BL
Footbridge
Dish Type Channel
Slot Type Channel
Grate Type Channel
Tactile Paving TAC
Drain Barrier C/BR
Obstruction OBS
Diversion DIVN
Car Vacuum VAC
Offset Fill OF
Air Valve AV
Trough TR
Chimney CHY
Telephone Call Box TCB

OVERHEAD FEATURES

Electricity Pylon (LIFELON)
Electricity
Telephone

WATER FEATURES

Canal
Stream
Ditch
Weir
Culvert
Drip (Lined Drain)
Spring

RELIEF AND VEGETATION

Hedge
Edge of wood/Bushes
Stump STUMP
Individual Tree
Slopes with Height Greater than 1m
Cliff Face
Marsh
Reeds

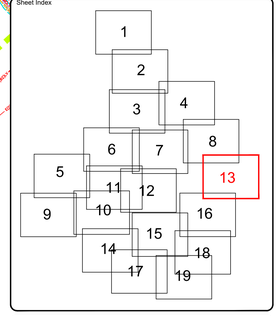
LEVEL AND HEIGHT INFORMATION

Standard Spot Height +123.45
Precision Spot Height +123.456
Bed Level +BL23.50
Water Level +WL24.92
Soffit Level +SL25.82
Threshold Level +THR.98
Cover Level +CL26.45
Invert Level +IL25.15
Pipe Soffit Level +PSL5.00
Floor Level +FL6.00
Finished Floor Level +FFL6.60
Top of Tank Level +TT7.00
Eave Level +EL8.00
Ridge Level +RL9.00
Flat Top Level +FHL8.50
Flat Roof Level +FRL7.00
Top of Canopy Level +TOP/CT.00
Underside of Canopy Level +SOF/CSL50
Window Sill Level +WSL8.00
Window Head Level +WHL9.00
Springing Level +SPL8.50
Arch Level +ALT.00
Cable Level +CHT8.00
Top of Wall Level +TWL10.00
Underside of Beam Level +UBL9.55
General Height +HTS.00

SURVEY INFORMATION SIGNS

Permanent Ground Marker
O.S. Trig Station
O.S. Bench Mark

Sheet Index



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8 FIRST STREET
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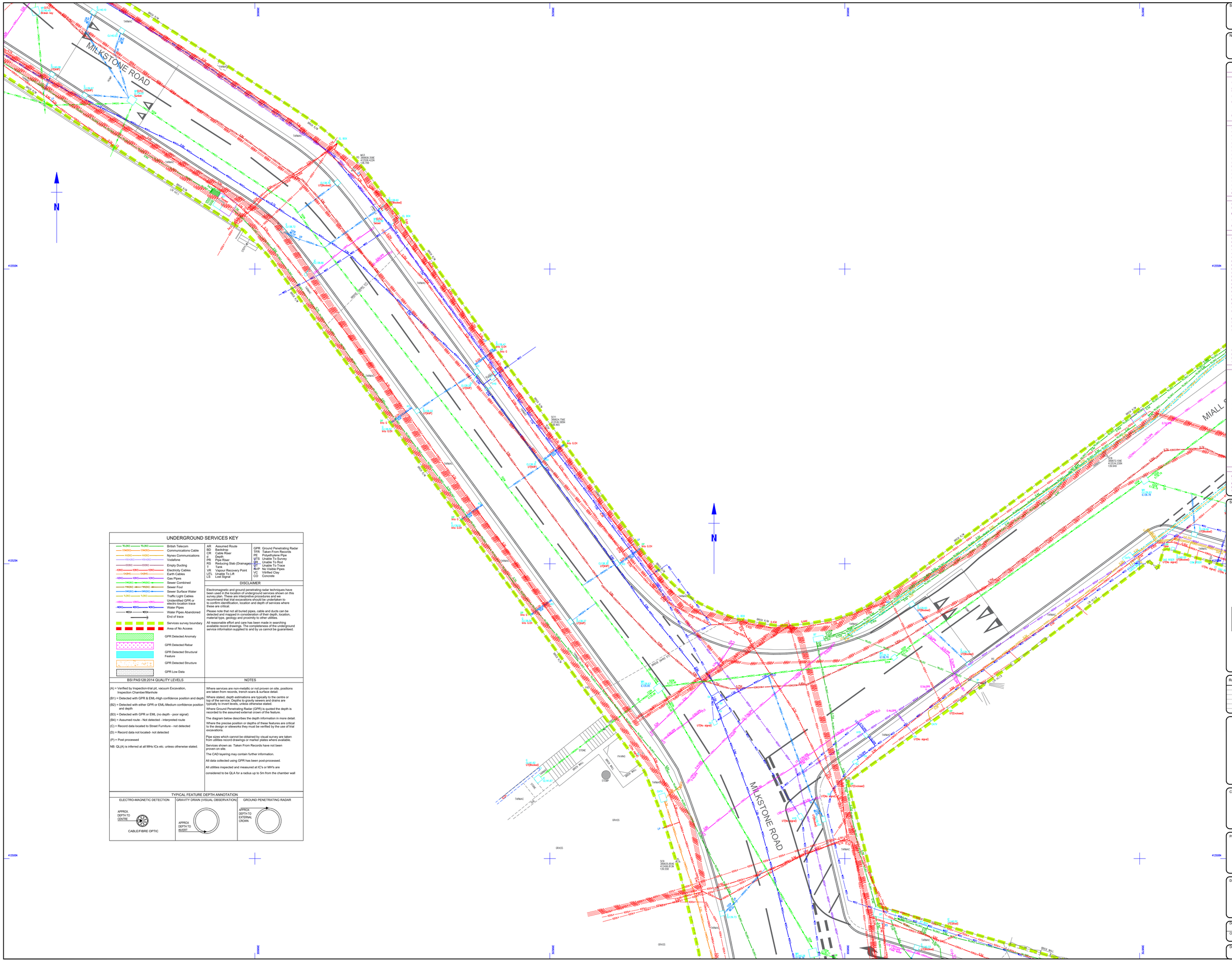
Project
ROCHDALE STATION SQUARE
OL11 1DS

Drawing Title
UNDERGROUND SERVICES SURVEY
SHEET 13/19

Drawn By	PS 04/08/21	Survey Date	APRIL 2021
Checked by	ED 04/08/21	Scale	A0@1:100

Drawing No 56653/UG13

Revision



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Building Open Sided
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Passage
Wall with Height Retaining Wall

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Post & Rail
Post & Wire
Post & Barbed Wire
Wire mesh
Stile
Gate
Fence Envelope

ROADS

Kerbs
Edge of Surfacing
Pedestrian Crossing
Track
Footpath

STREET FURNITURE

Bellahs Beacon
Bus Stop
Bollard
Cats Eye
Coal Chute
Closed Circuit TV
Drain
Electricity Pole
Flood Light
Flag Staff
Lamp Post
Letter Box
Name Plate (street)
Mooring Ring
Mile Post or Mooring Post
Service Marker
Mile Stone
Post
Parking Meter
Reflector Post
Rodding Eye
Road Sign
Speed Camera
Information Sign
Stay
Traffic Light
Telegraph Pole
Traffic Light Push Button Post
Traffic Light Control
Control Box
British Telecom Box
Electricity Box
Gas Box

INSPECTION CHAMBERS AND PIPES

Inspection Cover
Inspection Cover (Elec)
Manhole
British Telecom Cover
Inspection Cover (Comms)
Cable TV
Inspection Cover Traffic Signals
Gully
Kerb Outlet
Vent Pipe
Down Pipe
Rain Water Pipe
Soil Pipe
Gas Pipe
Unable to lift cover
Stop Tap
Stop Valve
Lamphole
Hydrant
Earth Rod
Gas Valve
Water Meter
Washout
Rodding Eye

GEOTECHNICAL INFORMATION

Borehole
Trial Pit
Monitor Pin
Probe Hole
Window Sample

GENERAL INFORMATION

Petrol Pump
Basement Light
Footbridge
Dish Type Channel
Slot Type Channel
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Tactile Paving
Drain Barrier
Guardrail
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Car Vacuum
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Trough
Chimney
Telephone Call Box

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Grip (Land Drain)
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UNDERGROUND SERVICES KEY

BT	British Telecom
COM	Communications Cable
NYN	Nynex Communications
VOD	Vodafone
DUCT	Empty Ducting
ELEC	Electricity Cables
EARTH	Earth Cables
GAS	Gas Pipes
CMB	Sewer Combined
FOUL	Sewer Foul
SW	Sewer Surface Water
TLC	Traffic Light Cables
UNKNOWN	Unidentified GPR or electro location trace
WATER	Water Pipes
WATER	Water Pipes Abandoned
	End of trace
	Services survey boundary
	Area of No Access
	GPR Detected Anomaly
	GPR Detected Rebar
	GPR Detected Structural Feature
	GPR Detected Structure
	GPR Low Data

AR	Assumed Route
CH	Cable Head
CR	Cable Riser
d	Depth
PR	Pipe Riser
RS	Reducing Slab (Drainage)
T	Tank
VR	Vapour Recovery Point
UTL	Unable To Lift
LS	Lost Signal
GPR	Ground Penetrating Radar
TFR	Taken From Records
PE	Polyethylene Pipe
UTS	Unable To Survey
UR	Unable To Rod
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ELECTRO-MAGNETIC DETECTION

APPROX. DEPTH TO CENTRE

CABLE/FIBRE OPTIC

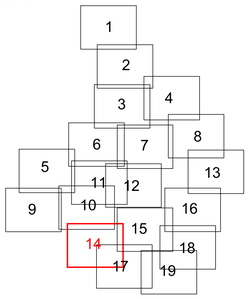
GRAVITY DRAIN (VISUAL OBSERVATION)

APPROX. DEPTH TO INVERT

GROUND PENETRATING RADAR

APPROX DEPTH TO EXTERNAL CROWN

Sheet Index



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Drawing Title

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SURVEY
SHEET 14/19

Drawn By	Date	Survey Date	
PS	04/08/21		APRIL 2021
Checked by ED	04/08/21	Scale	A0@1:100

Drawing No: 56653/UG14 — Revision

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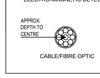
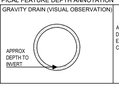
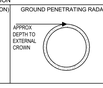
ELECTRO-MAGNETIC DETECTION



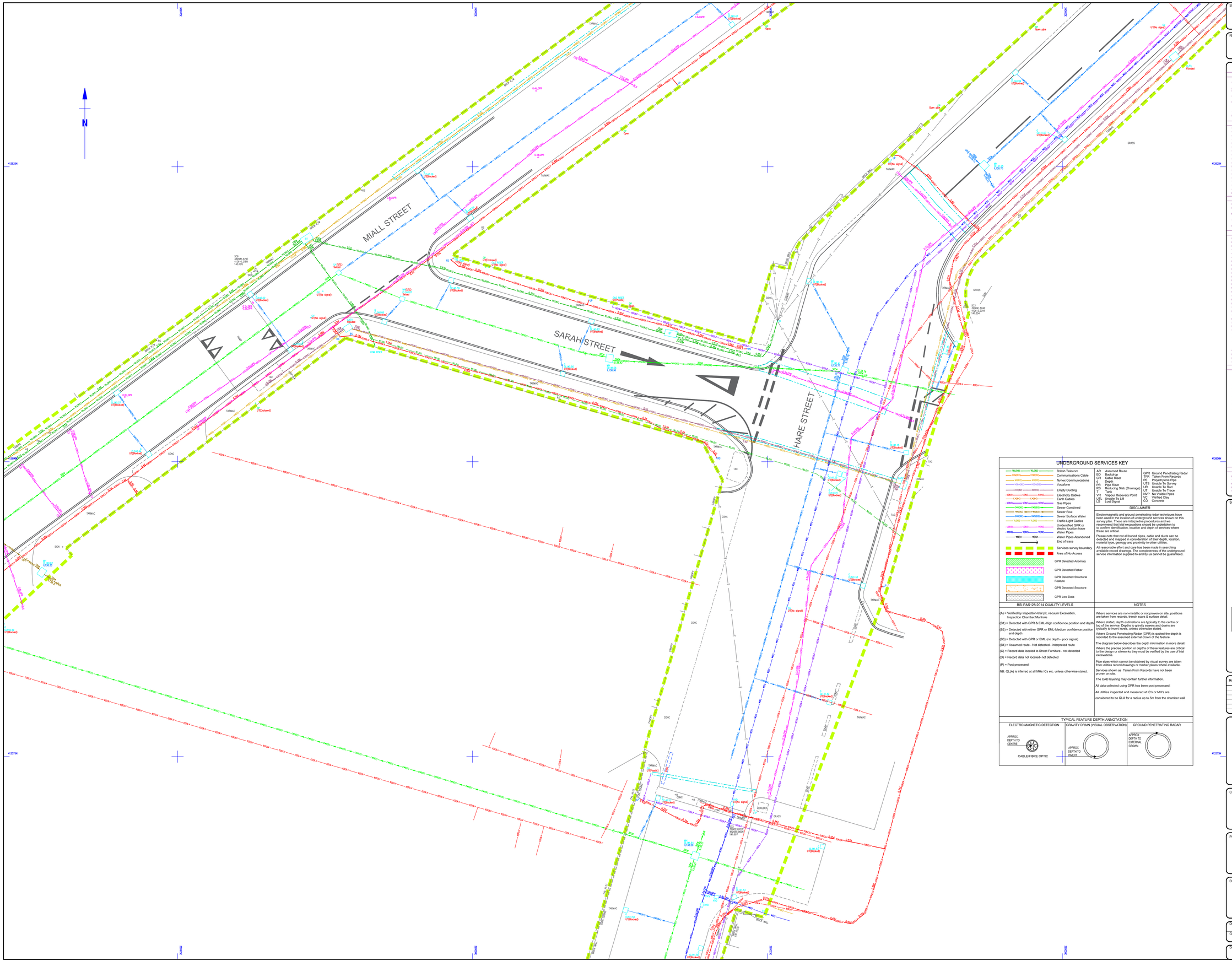
GRAVITY DRAIN (VISUAL OBSERVATION)



GROUND PENETRATING RADAR



MIALL STREET
TARMAC
BUSHES
CONC
STUMP
MAPLE H12.0
ASH H16.0
BUILDING LINE (SECURED BY RAILINGS) UNABLE TO SURVEY
0.5x0.5 UTS(Buried)
0.5x0.5 UTS(Blocked)



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Drain Barrier (CVB)
Bollard (O)
Staunton (STA)
Car Vacuum (VAC)
Offset Fill (P)
Air Valve (AV)
Trough (TR)
Chimney (CHY)
Telephone Call Box (TCB)

FENCE STYLES AND DESCRIPTIONS

Close Boarded (C/B)
Corrugated Iron (C/I)
Chestnut Paling (C/P)
Chainlink (C/L)
Handrail (H/R)
Interwoven (IWK)
Iron Railings (I/R)
Lattice (L/T)
Miscellaneous (Misc)
Palisade (PAL)
Post & Chain (P/C)
Post & Rail (P/R)
Post & Wire (P/W)
Post & Barbed Wire (B/W)
Wire mesh (W/M)
Stile
Gate
Fence Swastyke

OVERHEAD FEATURES

Electricity Pylon (ELEC PYLON)
Electricity
Telephone (OHL)

ROADS

Kerbs
Edge of Surfacing
Pedestrian Crossing (PC)
Track
Footpath (FP)

WATER FEATURES

Canal (Canal)
Stream (Stream)
Ditch (Ditch)
Weir (Weir)
Culvert (Culvert)
Drip (Lined Drain) (Drip)
Spring (SPR)

STREET FURNITURE

Bellaha Beacon (BB)
Bus Stop (BS)
Bollard (B)
Cats Eye (CE)
Coal Chute (CC)
Closed Circuit TV (CCTV)
Drain (DR)
Electricity Pole (EP)
Flood Light (FL)
Flag Staff (FS)
Lamp Post (LP)
Letter Box (LB)
Name Plate (street) (NP)
Mooring Ring (MR)
Mile Post or Mooring Post (MP)
Service Marker (MK)
Mile Stone (MS)
Post (P)
Parking Meter (PM)
Reflector Post (RP)
Rodding Eye (RE)
Road Sign (RS)
Speed Camera (S/CAM)
Information Sign (SIGN)
Stay (ST)
Traffic Light (TL)
Telegraph Pole (TP)
Traffic Light Push Button Post (TLP)
Traffic Light Control (T/L/C/P)
Control Box (C/BOX)
British Telecom Box (BT BOX)
Electricity Box (EL BOX)
Gas Box (GAS BOX)

RELIEF AND VEGETATION

Hedge
Edge of wood/Bushes
Stump (STUMP)
Individual Tree
Slopes with Height Greater than 1m
Cliff Face
Marsh
Reeds

INSPECTION CHAMBERS AND PIPES

Inspection Cover (IC)
Inspection Cover (Elec) (IC/EL)
Manhole (MH)
British Telecom Cover (BT)
Inspection Cover (Comms) (IC/TCOM)
Cable TV (CATV)
Inspection Cover Traffic Signals (IC/TL)
Gully (G)
Kerb Outlet (KO)
Vent Pipe (vp)
Down Pipe (DP)
Rain Water Pipe (RWP)
Soil Pipe (SVP)
Gas Pipe (G=PIPE)
Unable to lift cover (UTL)
Stop Tap (ST)
Stop Valve (SV)
Lamphole (LH)
Hydrant (HYD)
Earth Rod (ER)
Sea Valve (SV)
Water Meter (WM)
Washout (WO)
Rodding Eye (RE)

LEVEL AND HEIGHT INFORMATION

Standard Spot Height (+123.45)
Precision Spot Height (+123.456)
Bed Level (+BL23.50)
Water Level (+WL24.92)
Soffit Level (+SL25.52)
Threshold Level (+THR.98)
Cover Level (+CL26.45)
Invert Level (+IL25.15)
Pipe Soffit Level (+PSL5.00)
Floor Level (+FL6.00)
Finished Floor Level (+FFL6.00)
Top of Tank Level (+TT7.00)
Eave Level (+EL8.00)
Ridge Level (+RL8.00)
Pub Roof Level (+PRL8.50)
Top of Canopy Level (+TOP_CY7.00)
Underside of Canopy Level (+SOF_CS6.50)
Window Sill Level (+WSL8.00)
Window Head Level (+WHL9.00)
Springing Level (+SPL8.50)
Arch Level (+AL7.00)
Cable Level (+CHT8.00)
Top of Wall Level (+TWL10.00)
Underside of Beam Level (+UBL9.55)
General Height (+HT8.00)

GEOTECHNICAL INFORMATION

Borehole (BH)
Trial Pit (TP)
Monitor Pin (+MON)
Probe Hole (+PH)
Window Sample (+WS)

SURVEY INFORMATION SIGNS

Permanent Ground Marker
O.S. Trig Station
O.S. Bench Mark

UNDERGROUND SERVICES KEY

TEL(NK)	British Telecom	AR Assumed Route	GPR Ground Penetrating Radar
CW(NK)	Communications Cable	BD Backdrop	TFR Taken From Records
NK(NK)	Nynex Communications	CR Cable Riser	PE Polyethylene Pipes
VOD(NK)	Vodafone	d Depth	UTS Unable To Survey
DUCT	Empty Ducting	PR Pipe Riser	UR Unable To Rod
ELEC	Electricity Cables	RS Radiating Stub (Drainage)	UT Unable To Trace
EARTH	Earth Cables	VR Vapour Recovery Point	NVP No Visible Pipes
GAS	Gas Pipes	UTL Unable To Lift	VC Vitrified Clay
CW(NK)	Sewer Combined	LS Lost Signal	CO Concrete
FW(NK)	Sewer Foul		
SW(NK)	Sewer Surface Water		
TL(NK)	Traffic Light Cables		
UNK	Unidentified GPR or electro location trace		
WAT	Water Pipes		
WDA	Water Pipes Abandoned		
	End of trace		
	Services survey boundary		
	Area of No Access		
	GPR Detected Anomaly		
	GPR Detected Rebar		
	GPR Detected Structural Feature		
	GPR Detected Structure		
	GPR Low Data		

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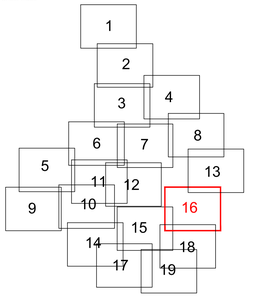
TYPICAL FEATURE DEPTH ANNOTATION

ELECTRO-MAGNETIC DETECTION

GRAVITY DRAIN (VISUAL OBSERVATION)

GROUND PENETRATING RADAR

Sheet Index



Rev.	Date	Description

MALCOLM HUGHES
CHARTERED LAND SURVEYORS
65 Cross Street, Sale, Manchester M33 7HF. Tel: 0161 905 1255
www.malcolmhughes.co.uk
survey@mhls.co.uk

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WSP UK LTD.
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MANCHESTER M15 4RP

Project

ROCHDALE STATION SQUARE
OL11 1DS

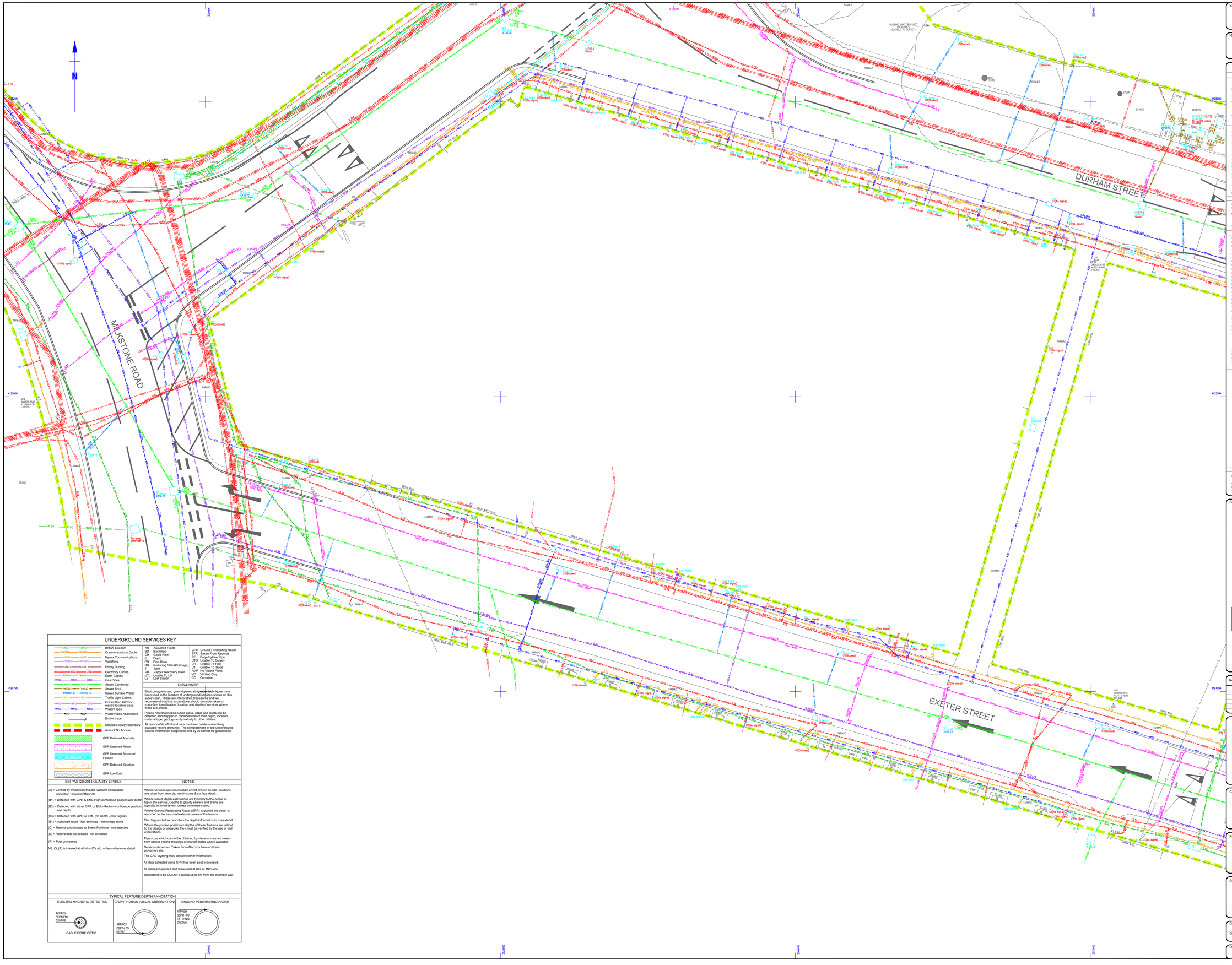
Drawing Title

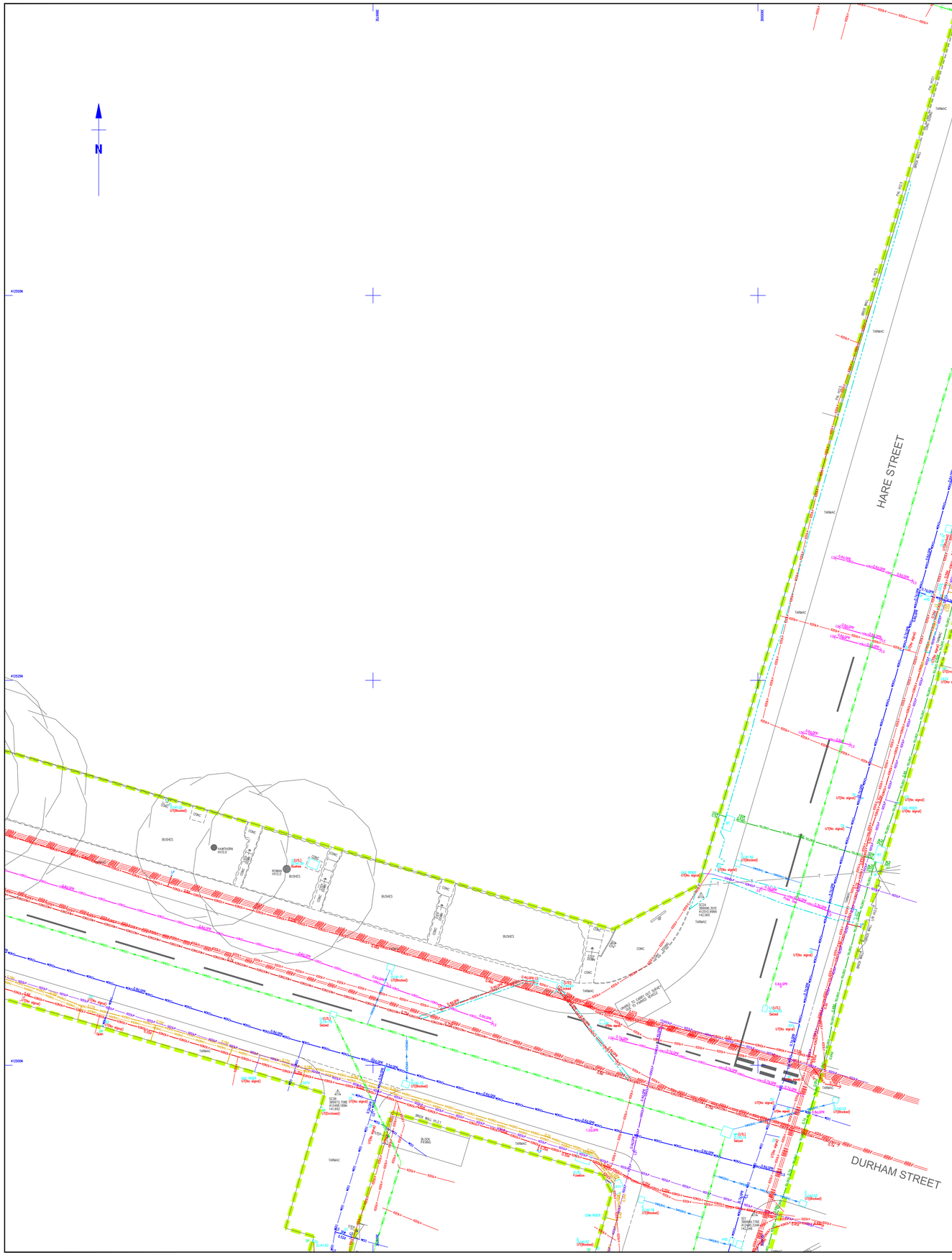
UNDERGROUND SERVICES
SURVEY
SHEET 16/19

Drawn By	PS 04/08/21	Survey Date	APRIL 2021
Checked by	ED 04/08/21	Scale	A0@1:100

Drawing No: 56653/UG16

Revision:


MILKSTONE ROAD
DURHAM STREET
EXETER STREET
N
TARMAC
BUILDING LINE OBSCURED BY BUSHES (UNABLE TO SURVEY)
BUSHES
STUMP
GRASS
BRICK WALL
CONC WALL
CONC RIDGE
LOW WIRE
GAS RISERS
COM RISER
TEL RISER
TEL BOX
BT BOX
ELEC BOX
GAS BOX
CATV
LP
SIGN
TRAFFIC LIGHT CONTROL BOX
TRAFFIC LIGHT
LAMP POST
BOLLARD
SIGN
SIGN
SIGN


HARE STREET
DURHAM STREET
TARMAC
BUSHES
CONC
BRICK WALL
BLOCK WALL
IRON RAIL
LAMPSON
ROBIN
U/G Unknown
U/G Enclosed
U/G Booked
U/G Solved
U/G No Signal
U/G Signal
Fusion
Join
SCOB
SCOB 300695.30E 411695.00N 141.855
SCOB 300696.30E 411695.00N 142.065
SCOB 300693.70E 411680.10N 142.248
BLOCK PILLBOX
BRICK WALL
BRICK WALL
BRICK WALL

DURHAM STREET

DURHAM STREET

HARP STREET

EXETER STREET

TARMAC

CONC

BUSHES

BRICK WALL

CONC WALL

BLOCK PAVING

Survey Notes

Grid: Local, plane metric related to OS grid

Levels: OS datum from GNSS positioning, converted using the National Geoid model OSGM15

Notes

Topographical Survey Legend

BUILDINGS AND WALLS

Building
Building Open Sided
Ruin (RUIN)
Passage
Wall with Height Retaining Wall (Wall ##0.0m) R/W

FENCE STYLES AND DESCRIPTIONS

Close Boarded C/B
Corrugated Iron C/I
Chestnut Paling C/P
Chainlink C/L
Handrail H/R
Interwoven I/W
Iron Railings I/R
Lattice L/T
Miscellaneous Misc
Palisade PAL
Post & Chain P/C
Post & Rail P/R
Post & Wire P/W
Post & Barbed Wire B/W
Wire mesh W/M
Stile
Gate
Fence Breakpie

ROADS

Kerbs
Edge of Surfacing
Pedestrian Crossing (PC)
Track (Track)
Footpath (Footpath)

STREET FURNITURE

Belisha Beacon BB
Bus Stop BS
Bollard B
Cats Eye CE
Coal Chute CC
Closed Circuit TV CCTV
Drain DR
Electricity Pole EP
Flood Light FL
Flag Staff FS
Lamp Post LP
Letter Box LB
Name Plate (street) NP
Warning Ring MR
Mile Post or Mooring Post MP
Service Marker MK
Mile Stone MS
Post P
Parking Meter PM
Reflector Post RP
Rodding Eye RE
Road Sign RS
Speed Camera S/CAM
Information Sign SIGN
Stay ST
Traffic Light TL
Telegraph Pole TP
Traffic Light Push Button Post TLP
Traffic Light Control TL/C/P
Control Box C/BOX
British Telecom Box BT BOX
Electricity Box EL BOX
Gas Box GAS BOX

INSPECTION CHAMBERS AND PIPES

Inspection Cover IC
Inspection Cover (Elec) IC/EL
Manhole MH
British Telecom Cover BT
Inspection Cover (Comms) IC/TCOM
Cable TV CATV
Inspection Cover Traffic Signals IC/TL
Gully G
Kerb Outlet KO
Vent Pipe VP
Down Pipe DP
Rain Water Pipe RWP
Soil Pipe SVP
Gas Pipe G-PIPE
Unable to lift cover U/L
Stop Tap ST
Stop Valve SV
Lamphole LH
Hydrant HYD
Earth Rod ER
Sea Valve GV
Water Meter WM
Washout WO
Rodding Eye RE

GEOTECHNICAL INFORMATION

Borehole BH
Trial Pit TP
Monitor Pin MON
Probe Hole PH
Window Sample WS

GENERAL INFORMATION

Petrol Pump PP
Basement Light BL
Footbridge
Dish Type Channel (DC)
Slot Type Channel (SC)
Grate Type Channel (GC)
Tactile Paving TAC
Drain Barrier C/BR
Culvert CUL
Diversion DIV
Car Vacuum VAC
Offset Pit OP
Air Valve AV
Trough T/R
Chimney CHY
Telephone Call Box TCB

OVERHEAD FEATURES

Electricity Pylon (ELP/EPn)
Electricity
Telephone

WATER FEATURES

Canal
Stream
Ditch
Weir
Culvert
Drip (Lined Drain)
Spring

RELIEF AND VEGETATION

Hedge
Edge of wood/Bushes
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T Tank
VR Vapour Recovery Point
U/L Unable To Lift
LS Lost Signal

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UTS Unable To Survey
UR Unable To Rod
UT Unable To Trace
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TYPICAL FEATURE DEPTH ANNOTATION

ELECTRO-MAGNETIC DETECTION

APPROX. DEPTH TO CENTRE

CABLE/FIBRE OPTIC

GRAVITY DRAIN (VISUAL OBSERVATION)

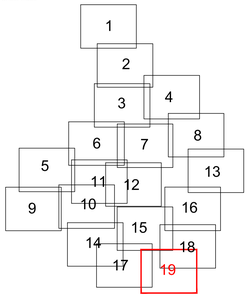
APPROX. DEPTH TO INVERT

GROUND PENETRATING RADAR

APPROX. DEPTH TO EXTERNAL CROWN

N

Sheet Index



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