DO NOT SCALE!

KEY PLAN:





NOTE:
Unable to survey area with GPR due to poor ground conditions i.e. the construction of the concrete slab with protruding rebar.

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Unable to survey area with GPR due to poor ground conditions i.e. the construction of the concrete slab with protruding rebar.

NOTE:
Technics have not surveyed any utilities shown outside the survey boundary. QLD has been added from records for services that could not be located on site.

NOTE:
Topographical features in this area have changed since topo was done. Some valves and covers are no longer there.

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NOTE:
Technics have not surveyed any utilities shown outside the survey boundary. QLD has been added from records for services that could not be located on site.

NOTE:
We were unable to determine if there were any other cables or ducts passed the depth of cover due to the construction of the chamber. The chamber is both a CATV and Electric chamber.

NOTE:
Technics have not surveyed any utilities shown outside the survey boundary. QLD has been added from records for services that could not be located on site.

NOTE:
Difficult to survey this electric as it was running directly beneath the hoarded fence line. There is possibly more than one cable in this area.

NOTE:
Technics have not surveyed any utilities shown outside the survey boundary. QLD has been added from records for services that could not be located on site.

NOTE:
Manholes indicated on C2 records do not exist in this area.

NOTE:
Difficult to survey this electric as it was running directly beneath the hoarded fence line. There is possibly more than one cable in this area.

Gas Pipe Visible on surface LITT Cut

Cable Cut LITT Visible on surface

GENERAL NOTES:

Electrical Comments:
Please note that ratings for electrical services i.e. LV, HV and EHV are taken from statutory records provided by the client. Technics hold no liability for misidentification of the rating for cables as there is no detection technology that will confirm the rating of a cable. Where no statutory records are provided we will show all cables as LV unless there is evidence to the contrary.

Methods Used:
Radio-frequency, Flexitracing and sonde and Ground Penetrating Radar techniques may be used in the location of underground utilities. The results are not infallible and vacuum excavation (QL-A) should be carried out to confirm positions of the identified utilities. Although great efforts have been made in conducting the survey the completeness of the underground utilities information cannot be guaranteed.

Accuracy Statement:
For Radio frequency depths shown have been obtained by electromagnetic means and can be subject to high levels of interference and distortion at the source or from surrounding services so can not be relied upon. In areas where depth is of high importance Technics would advise you to use PAS128 QL-A to obtain accurate depth readings.

Drainage:
Drainage connectivity will be proven by either a bang test or by drain dye. Unless otherwise specified in project spec the line shown between connecting manholes will be assumed as running straight. Where a connecting manhole can not be found or is thought not to run straight, the line of the pipe will be sonded as far as possible at the time of survey.
For Ground Penetrating Radar (GPR) methods the depth surveyed varies according to the subsurface ground conditions and level, and is normally characterised by the depth of penetration of the radar signal. In areas where depth is of high importance Technics would advise you to use PAS128 QL"A" to obtain accurate depth readings. The average penetration will be greater in sandier regions than in clay regions, but will typically be in the range 2.0m to 2.5m. In exceptionally good or exceptionally bad conditions the depth may exceed 3m or be restricted to 1.2m to 1.5m. Clay conditions and water logged areas offer a greater restriction to the surveyor and can in some cases render the GPR ineffective in locating services within some areas. Where the client issues statutory records we will highlight the services that could not be found for this reason. This is not possible when the client does not issue statutory records and may require further investigation prior to commencing with the project.

PAS128:02:
Description are per the PAS128 Standard
QL"A" Precise horizontal and vertical location of utility obtained. Approximate horizontal location of utility obtained through the use of geophysical methods by exposing utility (i.e.- Vacuum Excavation).
QL"B" Approximate horizontal location of utility obtained through the use of geophysical methods (electromagnetic detection) Default QL unless noted otherwise.
QL"C" Information obtained by surveying visible above ground features and using professional judgement.
QL"D" Information derived from existing records and/or oral recollections. Where client has not provided such information this information may be shown to help the client as the team may not be able to prove due to site and equipment limitations but believe there could be other services within a given area.

LEGEND:

Utility features:

- Approximate chamber extents
- BT Cable \ duct
- BT Cable QLD
- CATV Cable \ duct
- Electrical cable \ duct
- Electrical cable \ duct QLD
- Gas Main
- Gas Main by GPR
- Gas Main QLD
- Ground Penetration Radar detection
- Sewer - Foul water
- Sewer - Foul water Assumed Route
- Sewer - Foul water QLD
- Sewer - Surface water
- Sewer - Surface water QLD
- Survey Boundary
- Traffic Light cable \ duct
- Unknown Radio Frequency detection
- Water Main
- Water Main by GPR
- Water Main QLD

Topographical features:

NB: Topographical legend not applicable if Technics utility survey is overlaid onto client's topographical survey.

- Bank - Bottom
- Bank - Top
- Building
- Building canopy
- Concrete
- Drainage Channel
- Fence
- Kerb - Bottom
- Kerb - Drop
- Kerb - Top
- Road marking - yellow
- Road marking - white
- Road - centre line
- Roof / Eaves levels
- Surface change
- Visible Trench Line
- Wall

QLD Utility line taken from records provided by client and or site features.
GPR Utility \ feature found using ground probing radar which maybe non-metallic.
RF Utility \ feature found using radio frequency locating equipment.

- Unable to survey area with GPR due to poor ground conditions.
- Area not surveyed.
- Unidentified subsurface distortion designated with GPR
- X4 Number of ducts entering or exiting the inspection pit
- Survey control station
- Buildings
- OS Buildings
- Overhead electrical tower
- GPR Baseline

SERVICE DEPTHS:

A 1.20 B 1.20 C 1.20

* Depths of services can be measured from different points:
A Indicates where GPR depth is measured from.
B Indicates where depth is measured from when using radio frequency.
C Indicates where depth is taken from on drainage pipes using a tape measure.

ABBREVIATIONS:

Designation:

BLKD	Blockage	ID	Invert Depth	OSA	Out of Survey Area
D	Depth to Utility	IL	Invert Level	PS	Post Signal
DIA	Diameter	MAR	Man Entry Required	PEV	Polyethylene Valve
DOC	Depth to Cover	MKR	Marker Post	SOR	Start of Run
DTB	Depth to Base	NFI	No Further Information	UTL	Unable to Lift
EOT	End of Designation	NVP	No Visible Pipe	UTT	Unable to Trace
GPR	Ground Penetrating Radar	NVV	No Visible Valve	WO	Wash Out

Topographic:

BOL	Bollard	P	Post	WM	Water Meter
BT	British Telecom Cover	PB	Post Box	WP	Waste Pipe
DK	Drop Kerb	RE	Rodding Eye	WT	Wall Top
EL	Electricity Cover	RS	Road Sign	WV	Water Valve
EP	Electricity Pole	RSC	Rolled Steel Column		
FH	Fire Hydrant	RSJ	Rolled Steel Joist	Fence and Wall features:	
FFP	Flagged Footpath	RWP	Rain Water Pipe	B/W	Barbed Wire
FL	Floor Level	SC	Stop Cock	C/B	Close Boarded
G	Gully	SP	Sign Post	C/M	Corrugated Metal
GM	Gas Meter	SS	Street Name Sign	C/L	Chain Link
GV	Gas Valve	STP	Stand Pipe	C/P	Chesnut Paling
HT	Height	SV	Stop Valve	HR	Hand Rail
IC	Inspection Cover	SVP	Soil Vent Pipe	I/R	Iron Railing
LP	Lamp Post	TFP	Tarmac Footpath	Lat	Lattice
LH	Lamp Hole	THL	Threshold Level	P/C	Post and Chain
MH	Manhole	TL	Traffic Light	P/R	Post and Rail
NB	Notice Board	TP	Telegraph Pole	P/W	Post and Wire
OSBM	OS Bench Mark	VP	Vent Pipe	Ret	Retaining Wall

SURVEY AND DATUM INFORMATION:

The topographical survey data shown in grey is from CAD drawing "454.007.dwg" has been provided by our client.

The results of the subsurface survey have been graphically fitted to common detail measured during the survey.

Grid and datum as per topographical survey.

UTILITY NOTES:

Services shown outside the survey boundary are for information only and may not be complete. If information is required outside our survey boundary, please contact a Technics Project Manager.

Technics
Geospatial Consultant Surveyors

Approach House
109 Great North Road, Woodlands
Doncaster - DN6 7SU
Tel: 01302 330105 Fax: 01302 338920
e-mail: Lee.Mcnichol@technicsgroup.com

Regulated by RICS · ICES · The Survey Association · Pas128 Accredited · RISQS · Achilles · CHAS Accredited Contractor · GPR Underground

Client:	Carillion			
Project:	Princess Street Manchester M1 6JB			
Survey Quality:	Overlay QL"B" Utility Survey			
Start Date of Survey:	15 February 2016			
Drawing Status:	Surveyed:	Drawn:	Approved:	
Final	RXS/JV	JM	LJM	
Digital File:	Original Size:	Scale:	Sheet:	
3532-0216-01-3D.dwg	A0	1:100	1 of 2	
Drawing No.:	3532-0216-01	Revision:		

DO NOT SCALE!

KEY PLAN:





NOTE:
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CAUTION:
Unable to trace this pipe due to the depth of the pipe at the manhole. Man entry would be required if this pipe is to be traced.

CAUTION:
This is an access chamber for the basement which is locked from the inside. Caution when digging in this area.

NOTE:
Technics have not surveyed any utilities shown outside the survey boundary. QLD has been added from records for services that could not be located on site.

NOTE:
Difficult to survey this electric as it was running directly beneath the hoarded fence line. There is possibly more than one cable in this area.

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NOTE:
Manholes indicated on C2 records do not exist in this area.

CAUTION:
This manhole appears to be an access route to the sewer, more access required to confirm. There are no visible pipes so we believe they are offset in the chamber. Caution when digging in this area.

GENERAL NOTES:

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Topographic

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BT	British Telecom Cover	PB	Post Box
DK	Drop Kerb	RE	Rodding Eye
EL	Electricity Cover	RS	Road Sign
EP	Electricity Pole	RSC	Rolled Steel Column
FH	Fire Hydrant	RSJ	Rolled Steel Joist
FFP	Flagged Footpath	RWP	Rain Water Pipe
FL	Floor Level	SC	Stop Cock
G	Gully	SP	Sign Post
GM	Gas Meter	SS	Street Name Sign
GV	Gas Valve	STP	Stand Pipe
HT	Height	SV	Stop Valve
IC	Inspection Cover	SVP	Soil Vent Pipe
LP	Lamp Post	TFP	Tarmac Footpath
LH	Lamp Hole	THL	Threshold Level
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NB	Notice Board	TP	Telegraph Pole
OSBM	OS Bench Mark	VP	Vent Pipe
OSA	Out of Survey Area	WM	Water Meter
P/S	Poor Signal	WP	Waste Pipe
PEV	Polyethylene Valve	WT	Wall Top
SOR	Start of Run	WV	Water Valve
UTL	Unable to Lift		
UTT	Unable to Trace	Fence and Wall features:	
WO	Wash Out	B/W	Barbed Wire
		C/B	Close Boarded
		C/M	Corrugated Metal
		C/L	Chain Link
		C/P	Chesnut Paling
		HR	Hand Rail
		I/R	Iron Railing
		Lat	Lattice
		P/C	Post and Chain
		P/R	Post and Rail
		P/W	Post and Wire
		Ret	Retaining Wall

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Technics
Geospatial Consultant Surveyors

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e-mail: Lee.Mcnichol@technicsgroup.com

Client:	Carillion			
Project:	Princess Street Manchester M1 6JB			
Survey Quality:	Overlay QL"B" Utility Survey			
Start Date of Survey:	15 February 2016			
Drawing Status:	Surveyed:	Drawn:	Approved:	
Final	RXS/JV	JM	LJM	
Digital File:	Original Size:	Scale:	Sheet:	
3532-0216-01-3D.dwg	A0	1:100	2 of 2	

Drawing No.:	Revision:
3532-0216-01	