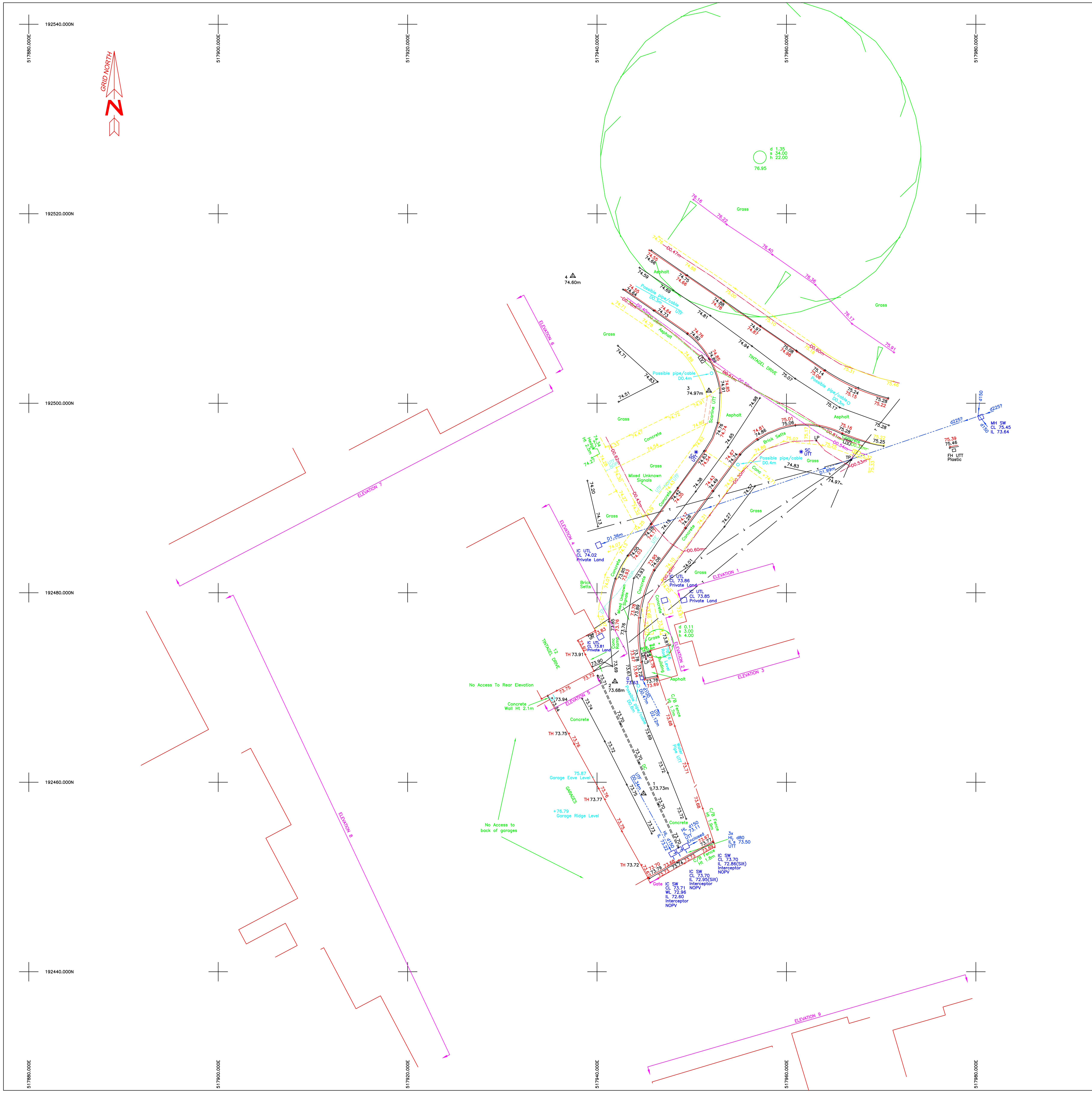


UNDERGROUND SERVICES

1) Although every effort has been made to trace underground services using radiodetection no guarantee can be given that all have been found. Due to their non-conductivity it may not been possible to trace certain types of plastic service pipes. eg. Gas & Water. Service trial holes must be dug prior to excavation.

2) In the absence of evidence to the contrary the routes of confirmed manhole connections are assumed to be direct and straight.

3) This survey has been carried out in accordance with the RICS specification for tracing underground utilities at scales of 1:500 & larger.

4) Underground service information should be read in conjunction with latest statutory drawings.

5) Please note that it is illegal to lift telecommunications covers in public areas. Their routes can be ascertained by contacting the relevant statutory authorities. Broken or damaged manholes were not lifted by Laser Surveys Limited. It is not possible to trace plastic pipes by radiodetection e.g. Gas/Water or fibre optic cables or pipes of less than 100mm in diameter. The electronic detection of pipework will apply to live metallic pipes/cables that we can induce a signal to. As an alternative GPR techniques can be employed at additional cost in attempt to locate services not detectable by radiodetection. All tracing is subject to retrieval of clear signals.

6) The different services are denoted as follows:—

D0.50m	*Underground Cable/TV (depth in metres)*
D0.50m	*Underground Electric (depth in metres)*
d100	*Underground Storm Drainage (diameter in millimetres)*
D0.50m	*Underground Telecom (depth in metres)*
D0.50m	*Underground Unidentified (depth in metres)*

7) Abbreviations:—

CL	Cover Level	MH	Manhole	NDP	No depth possible
d	Diameter (mm)	NPV	No pipes visible	NOPV	No other pipes visible
D	Depth (m)	SW	Storm Water		
FW	Foul Water	UTF	Unable to trace further		
HL	High Level pipe	UTT	Unable to trace		
IC	Inspection Cover	WL	Water Level		
IL	Invert Level	CW	Combined Water		

GROUND RADAR

The material surrounding and particularly above buried services can effect whether the services can be resolved using GPR. Reinforced concrete , buried metallic objects, the presence of moisture or clay and changes in the material construction can lead to poor data resolution.

As we have no information with respect to the material overlaying any services the GPR method can only give a guaranteed accuracy of 50%.

Depth results using GPR are typically accurate to within 10% with a horizontal accuracy of ± 150mm.

The results of the GPR survey should be treated with caution as there is no guarantee that any service shown actually exists, only a possibilty that something can be seen on the records.

GPR Reflection

LASER SURVEYS

LAND AND BUILDING SURVEYS, UNDERGROUND SERVICES LOCATION, CCTV DRAINAGE SURVEYS.
Established 1975. Member of The Survey Association.

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DATUM NOTES

GRID ORIGIN IS BASED UPON SURVEY STATION 3 FIXED TO THE ORDNANCE SURVEY NATIONAL GRID BY LEICA SMARTNET GPS NETWORK. A SCALE FACTOR OF 1 APPLIES TO THIS DRAWING.

ie. MEASURED DISTANCES ON THE GROUND WITHOUT GPS WILL BE THE SAME AS THOSE MEASURED ON THIS DRAWING

LEVELS ARE RELATED TO :—

ORDNANCE SURVEY GPS ACTIVE NETWORK AND TRANSFORMED USING THE OSGM15 & OSTN15 MODEL.

DATUM USED IS LOCATED AT :—

SURVEY CONTROL STATION 3 AS SHOWN3

VALUE GIVEN AS 74.97m (NEWLYN DATUM)

NG REF E 517951.810 N 192501.316

SURVEY CONTROL STATIONS SHOWN

ABBREVIATIONS (where applicable)

AV	Air Valve	MH	Manhole Cover
BK	Brick	MK	Marker
BL	Bollard	MS	Milestone
BS	Bus Stop	MT	Meter
BT	British Telecom	MY	Mercury
CB	Control Box	OH	Overhead
C/B	Close Boarded	PAV	Paving
CL	Cover Level	PB	Post Box
CLK	Chainlink	PE	Pipe
CO	Column	PM	Parking Meter
Conc	Concrete	P/R	Post and Rail
CP	Catch Pit	PT	Post
CPS	Concrete Paving Slabs	P/W	Post and Wire
CATV	Cable Television	RE	Rodding Eye
DC	Drainage Channel	RET	Retaining
DP	Drain Pipe	RS	Road Sign
EC	Electricity Cover	RSJ	Rolled Steel Joist
ER	Earthing Rod	SC	Stop Cock
FB	Flower Bed	SK	Soakaway
FE	Fence	SP	Signpost
FH	Fire Hydrant	ST	Silt Trap
FL	Floor Level	SV	Stop Valve
FP	Flag Pole	SVC	Security Video Camera
GP	Gate Post	TCB	Telephone Call Box
GV	Gas Valve	TK	Tank
GY,G	Gully	TL	Traffic Light
HT	Height	TP	Telegraph Pole
IC	Inspection Cover	UG	Underground
IL	Invert Level	UTF	Unable To Trace Further
IN	Interceptor	UTL	Unable To Lift
I/R	Iron Railings	VP	Vent Pipe
KO	Kerb Outlet	WL	Water Level
LB	Litter Bin	WM	Water Meter
LP	Lamp Post	WO	Wash Out

NOTES

- Drainage pipe sizes (where shown) have been gauged from the surface for safety reasons and should be regarded as approximate only.
- Tree species (where shown) should be treated with caution and expert identification is advised.
- Although this is a digital survey the accuracy and amount of detail shown is only commensurate with the graphical scale of mapping as specified. Care should be exercised when working to larger scales.
- Visible features in the vicinity of the boundaries as shown above, may not represent the extent of legally conveyed ownership.
- Whilst every effort has been made to achieve accuracy on this plan, CRUCIAL clearance dimensions, levels and invert levels should be checked prior to design and construction.
- Kerb levels have been taken in the bottom of the channel.
- Areas of dense undergrowth cannot be surveyed in detail, these areas will be shown in outline only and marked as 'dense undergrowth' on the plan.

SHEET LAYOUT
NOT TO SCALE

TINTAGEL DRIVE
HA7 4SR

TOPOGRAPHICAL SURVEY
UNDERGROUND SERVICE TRACE
GPR SURVEY

SURVEYED FOR: HARROW COUNCIL, CIVIC CENTRE, STATION ROAD, HARROW, HA1 2XY

SURVEYOR: S.L/B.F
DATE: 20.03.2020

NO	DATE	REVISION

DRAWING NO	L 9700—5 T2D	REV 0
SCALE	1 : 200	
SEE ALSO DWG NOS		
SHEET	1 of 1	
REF NO	L 9700	