SOP Coordinates			
Coordinate numbering	Coordinate NS	Coordinate EW	Coordinate Elevation
SOP 01	350718.089	332211.019	90.22
SOP 02	350713.592	332231.773	89.16
SOP 03	350720.847	332233.345	88.40
SOP 04	350732.447	332235.859	88.11
SOP 05	350732.765	332234.154	88.12
SOP 06	350733.764	332229.544	88.50
SOP 07	350722.227	332227.044	88.68
SOP 08	350723.902	332219.312	88.93
SOP 09	350729.766	332220.582	88.85
SOP 10	350730.529	332217.064	88.85
SOP 11	350729.551	332216.852	88.95
SOP 12	350729.827	332215.582	89.35
SOP 13	350730.804	332215.793	89.35
SOP 14	350731.574	332212.241	89.69
SOP 15	350730.596	332212.029	89.69
SOP 16	350735.227	332190.660	90.84
SOP 17	350730.340	332189.601	90.99
SOP 18	350725.211	332212.563	89.40

SOP Coordinates			
Coordinate numbering	Coordinate NS	Coordinate EW	Coordinate Elevation
SOP 19	350764.465	332219.143	88.76
SOP 20	350763.700	332217.954	88.76
SOP 21	NS 350762.136	332217.615	88.81
SOP 22	350767.219	332194.159	90.98
SOP 23	350769.760	332194.710	90.55
SOP 24	350770.225	332192.562	90.81
SOP 25	350770.700	332192.256	90.81
SOP 26	350775.778	332193.356	90.77
SOP 27	350776.084	332193.832	90.70
SOP 28	350775.625	332195.981	90.47
SOP 29	350778.167	332196.528	90.74
SOP 30	350773.084	332219.987	88.70
SOP 31	350772.450	332220.003	88.70
SOP 32	350771.467	332219.637	88.57
SOP 33	350770.337	332220.355	88.55

NOTES:

1. OS & Topo provided by Malcolm Hughes Chartered Land Surveyors. It is the contractor’s responsibility to confirm accuracy of the information provided.
2. Services shown on the drawing are indicative only based on information provided by Malcolm Hughes Chartered Land Surveyors. AECOM accepts no liability for the accuracy of this information. Prior to commencing the works, the contractor shall positively determine the location of underground services and arrange and provide for any necessary diversions with the relevant statutory undertaker. Ground works carried out in the vicinity of any services pipes or cables shall be undertaken in accordance with the requirements of the statutory undertakers.

Earthworks:

3. CBR testing of formation shall be performed every 10m grid.
4. Acceptable Limits for Fills shall be in accordance with MCHW Series 600:
5. Table 6/1: Classification and Compaction Requirements
6. Table 6/2: Grading Requirements
7. Table 6/4: Method of Compaction for Earthworks Materials
8. Formation to be competent natural ground or engineering fill. Unacceptable material to be excavated and backfilled with either suitable fill materials as described in Table 6/1 and compacted in compliance with Clause 612 or ST4 cast in-situ concrete.
9. The Contractor shall be responsible for the testing, classification and determination of the acceptability of the proposed earthwork materials. Imported materials shall be classified at the point of deposition, and on-site excavated materials generally classified at the point of excavation. The Contractor shall carry out acceptability testing for all earthworks construction materials on samples from the point of deposition, including imported materials and on-site materials rendered acceptable. The Contractor shall make all test results available to the Supervisor within 3 working days of completion of the tests.
10. All geotextiles and geogrid shall be placed in accordance with the manufacturer's recommendation.
11. Topsoil shall be in accordance with BS 3882.
12. Subsoil shall be in accordance with BS 8601.

Pavement:

13. All pavements shall be laid in accordance with MCHW Series 700.
14. All pavements shall be laid using paving techniques which minimise the number of cold joints.
15. Where asphalt is to be laid, the surfaces shall be free from loose materials and foreign matter e.g. mud, slurry or other deleterious material. Trafficking prior to completion of the surface course should, as far as possible, be restricted to plant and equipment used for laying and compaction of the asphalt.
16. All existing and newly laid surfaces will be treated with a bond coat prior to placing each successive asphalt course following procedures as recommended in SHW Series 900 and in accordance with BS 594987.
17. Joints shall be located and treated in accordance with SHW Series 900, BS 594987 and IAN 154/12.
18. Road construction shall be according to the following

Layer	Clause	Description	Requirements
40mm Surface course	911	sn	Mixture Designation: HRA 55/10 C Surf PMB Des PSV 50 Course Aggregate: crushed rock, blast furnace slag and steel slag only Thickness: 40mm Minimum PSV: 50 Maximum AAV: 16 Stability in accordance with BS EN 12697-34: 8.0 to 16.0 kN Flow: ≤5.0mm Composition: PD 6691
60mm Binder course	929	Dense Binder Course Asphalt Concrete (Design Mixtures)	Mixture Designation: AC20 dense bin 40/60 des Compaction is to be monitored for compliance in accordance with the requirements in Clause 929.7 to 929.18 Resistance to permanent deformation classification: Class 2, Table B4, PD 6691 Composition: PD 6691 Table B11
100 Base course	929	Dense Base Course Asphalt Concrete (Design Mixtures)	Mixture Designation: AC32 dense base 40/60 des Compaction is to be monitored for compliance in accordance with the requirements in Clause 929.7 to 929.18 Resistance to permanent deformation classification: Class 2, Table B4, PD 6691 Composition: PD 6691 Table B11
Sub-base	803	Type 1	As per clause 803.

Kerbs, Footways and Paved Areas

19. Kerbing, footways and paved area shall be in accordance with the Specification for Highway Works.
20. Kerbs haunching and bedding shall be of ST3 concrete.
21. All kerbs are to be constructed from precast concrete and will comply with the requirements of BS EN 1340.
22. Flexible footway construction details are as following:

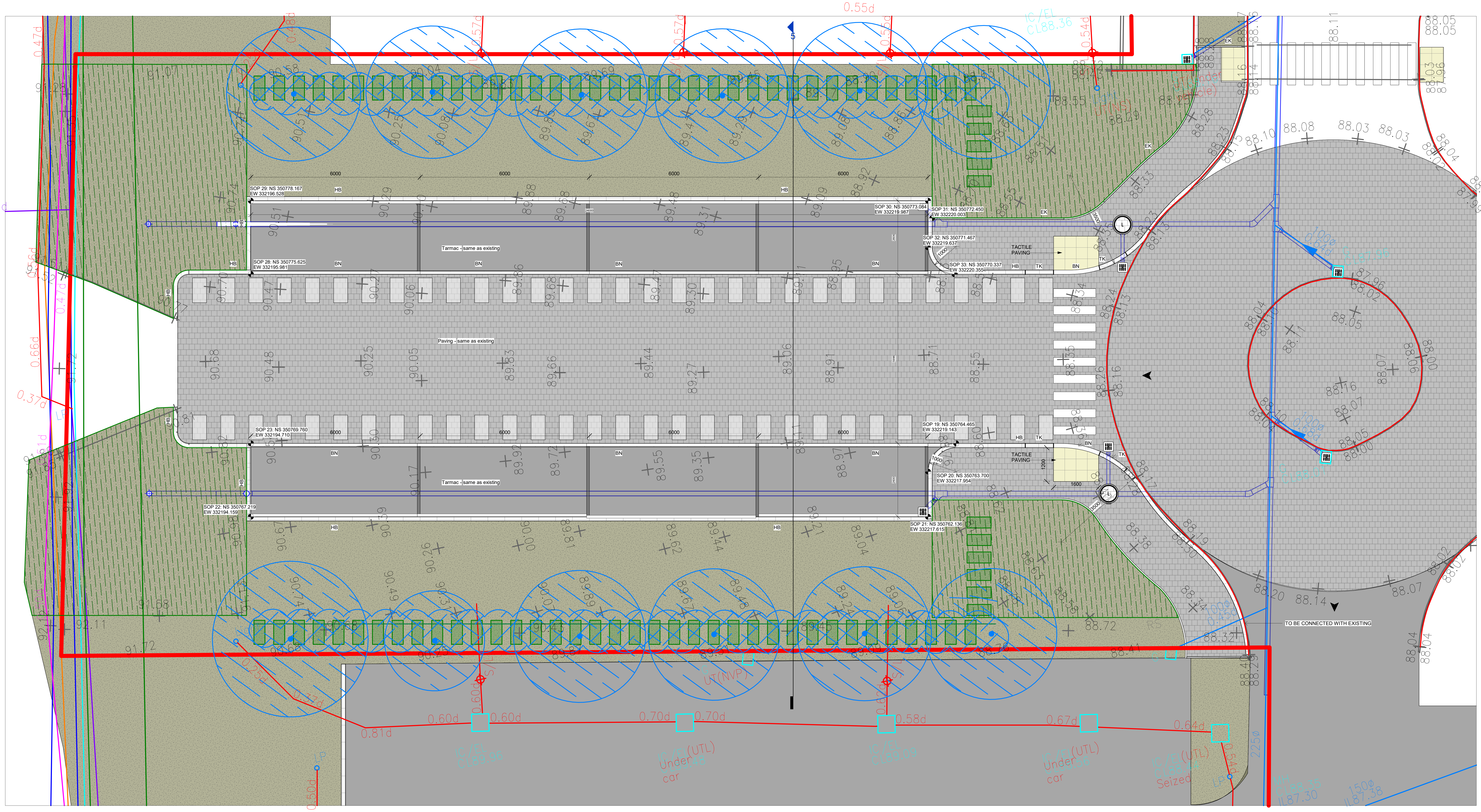
Layer	Clause	Material	Thicnkess (mm)
Surface course	909	Dense asphalt concrete	20
Binder course	906	Dense binder course asphalt concrete	50
Sub-base	803	Granular sub-base Type 1	150

23. Prepared formation shall be treated with non-toxic weed killer prior to placing of sub-base.
24. Typical tactile paving construction details are as following:

Course	Clause	Material	Size	Special requirements
Pre-cast concrete Tactile flag	1104	Concrete	450x450x70 mm	Buff tactile flag to BS EN 13369.
Laying Course Sand		Laying course sand (compacted) or mortar	25mm	Blocks; BS 7533: Part 3 Tables D1 to D4
Sub-base	803	Granular sub-base Type	150mm	Minimum CBR>5%

25. Levels of proposed ducts are based on existing utility as-built information. Prior to commencing works, the Contractor shall positively determine the location and depth of existing underground services and arrange and provide for any necessary diversions with the relevant statutory undertaker. Ground works carried out in the vicinity of any service pipes or cables shall be undertaken in accordance with the requirements of the statutory undertakers.

26. SOP levels have been designed in accordance with the OS & Topo provided. Prior to commencing works, the Contractor shall survey and confirm levels. Any discrepancies in the levels shown in the drawing shall be reported to the Designer.



1 Layout plan - normal parking

Scale: 1 : 50

AECOM

PROJECT

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LEGEND

- Property line
- Existing
- Demolition
- EV Charger unit
- Power units
- IDNO 4.18 x 3.04 x 2.64m IDNO substation
- IONITY 1 Street markings
- Light pole
- Bollard
- Walkaway - Concrete Tiles
- Permeable Paving
- Street - Asphalt
- Grass
- Existing pedestrian walkway
- Kerbs
- Access road

LANDSCAPE LEGEND

- Footway - concrete paving 200 x 100 x 80mm granite aggregate paving setts.
- Road - asphalt (refer to engineers drawings).
- Approximate location of existing trees to be retained.
- Approximate location of existing trees/hedge to be removed.
- Bu Standard tree (planted in soft verge). All new tree pits to include tree root barrier to protect existing and proposed utility services.
- Native hedge
- Shrub planting
- Amenity grass / turf

Refer to the Landscape drawings ACM-WRE-00-DR-LA-1001 and ACM-WRE-00-DR-LA-1002 for full details of landscaping.

UNDERGROUND SERVICES KEY

- British Telecom
- Communications Cable
- Empty Ducting
- Electricity Cables
- Gas Pipes
- Sewer Combined
- Sewer Foul
- Sewer Surface Water
- Traffic Light Cables
- Unidentified GPR or electro location trace
- Water pipes
- 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
BD	Backdrop
BLK	Blocked Pipe
CR	Cable Riser
d	Depth
PR	Pipe Riser
RS	Reducing Slab (Drainage)
VR	Vapour Recovery Point
UTL	Unable To Lift
S/L	Signal Lost
GPR	Ground Penetrating Radar
PE	Polyethylene Pipe
UTS	Unable To Survey
UR	Unable To Rod
UT(NS)	Unable To Trace (No signal detected)
NVP	No Visible Pipes
VC	Vitrified Clay
CO	Concrete

DISCLAIMER

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 that trial excavations should be undertaken to to confirm identification, location and depth of services where these are critical.

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 record drawings. The completeness of the underground service information supplied to and by us cannot be guaranteed.

BSI PAS128:2014 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) = Post 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 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.

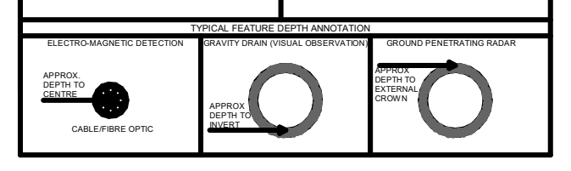
Services shown as Taken From Records have not been proven on site.

The CAD layering may contain further information.

All data collected using GPR has been post-processed.

All utilities inspected and measured at 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
APPROX. DEPTH TO CENTRE
CABLE/FIBRE OPTIC
GRAVITY DRAIN (VISUAL OBSERVATION)
APPROX DEPTH TO INVERT
GROUND PENETRATING RADAR
APPROX DEPTH TO EXTERNAL CROWN

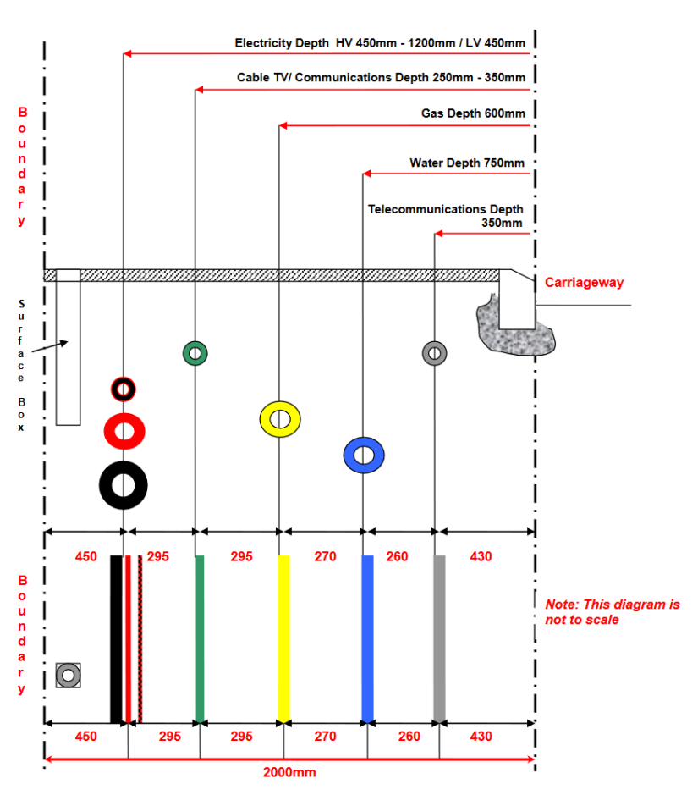
UNDERGROUND UTILITIES DEPTH

The National Joint Utilities Group

NJUG Guidelines on the Positioning of Underground Apparatus for New Development Sites

FIGURE 1 - Recommended Positioning of Utility Apparatus in a 2 metre Footway

Note – the same positioning should apply in the carriageway/service strip (if safe and practical to do so) where a development has no footway(s) available for services and/or the boundary of the property is on the carriageway (please refer to minimum depths in carriageways). For further advice please contact the asset owner.


Electricity Depth HV 450mm - 1200mm / LV 450mm
Cable TV/ Communications Depth 250mm - 350mm
Gas Depth 600mm
Water Depth 750mm
Telecommunications Depth 350mm
Boundary
Surface Box
Carriageway
450
295
295
270
260
430
2000mm
Note: This diagram is not to scale

NJUG Publication: Volume 2 Issue 4: 29.10.2013 Page 11

ISSUE/ REVISION

00.7	18.01.2024	Changed paving materials
00.6	24.08.2023	Implemented comments
00.5	17.08.2023	Update Normal parking layout
00.4	11.08.2023	Update Normal Parking layout
00.3	07.08.2023	Update Normal Parking layout
00.2	05.07.2023	Issued for construction
00.1	30.06.2023	DD set update
00.0	28.06.2023	First release DD set
Revision	Date	Description

PROJECT NUMBER

60695026

SHEET TITLE

Layout plan - normal parking

SHEET NUMBER

60695026_ACM_ DDE_ WRE_ DR_ AR_ 1014_ 00.7