

1. SCOPE

This document details the Company’s information, quality and timescale requirements for the recording of electrical network assets by third party contractors. The document is intended for internal and external circulation.

This document is an extract from the Service Level Agreement for Asset Data (BUPR-22-014) which defines the processes and data standards required by the Company to enable appropriate capture of asset information on networks constructed by third party contractors.

This document details the requirements for submission of information relating to created, deleted or amended assets.

2. ISSUE RECORD

This is a non-controlled document.

All copies printed via the Intranet or photocopied will be deemed uncontrolled.

Issue Date	Issue No	Author	Amendment Details
	1	Craig Arthur	

3. ISSUE AUTHORITY

Author	Owner	Issue Authority
Craig Arthur Data Management Section Leader (North)	Shaun Stevenson Business Support Manager	Steve Wood Network Strategy Director

4. REVIEW

This document should be reviewed not more than three years from the issue date.

5. CONTENTS

1. SCOPE.....	1
2. ISSUE RECORD	1
3. ISSUE AUTHORITY	1
4. REVIEW	1
5. CONTENTS	2
6. RELATED DOCUMENTS	3
7. DEFINITIONS AND ABBREVIATIONS	3
8. GENERAL	5
9. CONTACT DETAILS FOR DATA SUBMISSION	6
10. GENERAL RECORDING OF COMPANY OWNED ASSETS	7
11. DATA FORMAT FOR OHL, POLES & TOWERS	8
11.1 GENERAL	8
11.2 PATROL NUMBER (FOR DISTRIBUTION ASSETS ONLY)	9
11.3 ROUTE IDENTIFIER (FOR TRANSMISSION ASSETS ONLY)	9
11.4 POLE CLASSIFICATION.....	10
11.5 POLE RELATED HAZARD ATTRIBUTES.....	10
12. DATA FORMAT FOR UNDERGROUND ASSETS (ALL VOLTAGES) AND GROUND MOUNTED LV ASSETS.....	12
12.1 GENERAL	12
12.2 POINTS TO NOTE WHEN TAKING RECORDS.	12
12.3 MANDATORY INFORMATION: AS-LAID SERVICE CABLE ROUTE RECORDS.....	14
12.4 MANDATORY INFORMATION: LV SWITCHPOINTS.....	14
12.5 MANDATORY INFORMATION: LV SWITCHPOINT CLASSIFICATIONS.....	15
12.6 MANDATORY INFORMATION: OPEN POINTS.....	15
12.7 MANDATORY INFORMATION: CABLES	15
12.8 MANDATORY INFORMATION: JOINTS.....	15
12.9 MANDATORY INFORMATION: DUCTS.....	16
12.10 MANDATORY INFORMATION: SUPPLY SENSITIVE CUSTOMERS	16
12.11 DEVELOPERS PLANS	16
13. NOTICE OF CONFIGURATION ALTERATIONS TO THE HV NETWORK.....	16
14. SUBMISSION OF PLANT DETAIL SHEETS.....	18
15. RECORDING OF HAZARD AND DEFECT INFORMATION	19
16. DATA REQUIREMENT MATRIX.....	20
APPENDIX 1: P&C NOTICE FOR CHANGE TO HV NETWORK CONFIGURATION	21
APPENDIX 2: ICOND DIAGRAM AMENDMENT PATCH REQUEST FORM.....	22
APPENDIX 3: BEFORE AND AFTER ICOND DIAGRAMS	23
APPENDIX 4: MANDATORY ATTRIBUTES FOR OHL, POLES and TOWERS.....	24
APPENDIX 5: MANDATORY ATTRIBUTES FOR LV SWITCHPOINTS, CABLES AND JOINTS.....	25
APPENDIX 6: EXAMPLE OHL SKETCH.....	26
APPENDIX 7: EXAMPLE POLE SCHEDULE	27
APPENDIX 8: EXAMPLE SKETCHES.....	28
APPENDIX 9: SKETCH INDICATING ALTERATION TO OPEN POINTS	35
APPENDIX 10: SUBSTATION SWITCH ATTRIBUTES	36

6. RELATED DOCUMENTS

National Joint Utilities Group – Publication Numbers 4, 5, 6 & 7

Service Level Agreement for Asset Data (BUPR-22-014)

Asset Inspection Data Standards Document (ASSET-03-002)

7. DEFINITIONS AND ABBREVIATIONS

The following definitions apply throughout this document:

Approved	Policy and design parameters contained within this document and its appendices or the written approval of SP Distribution Ltd / SP Manweb plc.
CDM	The Construction (Design and Management) Regulations 1994.
CNE	Combined neutral and earth (of cable construction).
Customer	The recipients of the power supply being a tenant or owner of a domestic dwelling.
Distributors	A main electricity cable laid externally in the ground and supplying more than one customer.
External Meter Cupboard	A cupboard, supplied by SP Distribution Ltd / SP Manweb plc, positioned external to the property and containing the customer's point of supply.
Housing Site	A development consisting of domestic dwellings.
Incoming Supply Cable	An electricity cable connecting the building to the SP Distribution Ltd / SP Manweb plc network.
Link Boxes	A device buried in the ground but accessible from street level that enables cables to be isolated by the removal of links.
Mains	See distributor definition.
Network Pillars	An outdoor cupboard arrangement that enables cables to be isolated by the removal of links / fuses.
NRSWA	New Roads and Street Works Act.

PME	Protective multiple earthing.
Point of connection	The position at which a developer's network would connect to the existing distribution system.
Point of Supply	The point at which the ownership of the electrical cable network passes from SP Distribution Ltd / SP Manweb plc to the customer.
Service	A cable providing supply to an individual house.
Service Position	The location in the customer's property at which the SP Distribution Ltd / SP Manweb plc cable termination (cut-out) is located.
Service Strips	A clear route through a housing site containing utility infrastructure.
SP Distribution Ltd	The Distribution Licence Holder for the Distribution service area formally known as Scottish Power.
SP Manweb plc	The Distribution Licence Holder for the Distribution service area formally known as Manweb.
The Company	A term used throughout this document to refer to SP PowerSystems Ltd, SP Distribution Limited and SP Manweb plc including all associated design and planning practices.

In addition, the following abbreviations apply:

ABSW	-	Air Break Switch
AIS	-	Asset Inspection System
BWP	-	Best Working Practice
CSRAS	-	Connection and Site Responsibility Agreement System
DOM	-	Distribution Operations Manual
EGI	-	Equipment Group Identifier
EHV	-	Extra High Voltage
GIS	-	Geographic Information System
GND	-	Generic Network Diagram
H.V.	-	High Voltage
ICOND	-	Integrated Control and Operational Network Diagram
IMS	-	Integrated Mapping System
I.T.	-	Information Technology
L.V.	-	Low Voltage

MIMS	-	Mincom Information Management Systems
MPAN	-	Meter Point Administration Number
MPAS	-	Meter Point Administration System
MSC	-	Medically Sensitive Customer
MST	-	Maintenance Scheduling Task
OHL	-	Overhead Lines
O.R.	-	Operational Restriction
P&C	-	Plant and Circuits
PMAR	-	Pole Mounted Auto Recloser
PTE	-	Pole-Mounted Transformer Equipment
RMU	-	Ring Main Unit
SCA	-	Standard Connection Agreement
SSC	-	Supply Sensitive Customer
UDB	-	Unified Database
UoS	-	Use of System
WAMS	-	Work Asset Management System

8. GENERAL

The data and guidance contained within this document remains the property of the Company and may not be used for purposes other than that for which it has been supplied and may not be reproduced either wholly or in part, in any way whatsoever, nor may it be used by, or its contents divulged to, any other person whatsoever, without the prior written permission of the Company.

The Company reserves the right to change the data contained within this document without notification. Although detailed requirements are covered in this document there may be circumstances where the Company reserve the right to apply other criteria where necessary. The Company accepts no responsibility for any inaccuracies in, or omissions from the document. It is the Contractor's responsibility to ensure they have an up to date version of this document.

The data and guidance contained within this document details the recording of the electrical asset only and does not embrace the physical construction of the network or the associated safety, environmental and legal requirements.

The Contractor is responsible for ensuring they have gathered all relevant information to accurately record the asset. Only Contractors possessing the appropriate skills, training and experience shall use the guidance contained within this document.

9. CONTACT DETAILS FOR DATA SUBMISSION

License area of SCOTLAND				
E-mail	datamanagementnorth1@sppowersystems.com			
Telephone	External	0141 567 4198	Internal	733 4198
Fax	External	0141 567 4262	Internal	733 4262
Address	Data Management Bureau, PowerSystems, 36, St. Vincent Crescent, Glasgow, G3 8LT.			

License area of ENGLAND & WALES				
E-mail	datamanagementsouth1@sppowersystems.com			
Telephone	External	0151 609 2373	Internal	801 4981
Fax	External	0151 609 2470	Internal	801 4985
Address	Data Management Bureau, PowerSystems, Prenton Way, North Cheshire Trading Estate, Prenton, CH43 3ET.			

10. GENERAL RECORDING OF COMPANY OWNED ASSETS

The Company's Asset I.T. Systems require timely and accurate data submission and input to ensure that the company complies with safety, statutory and legislative requirements. Data requirements and submission times are largely dependent on the type of asset to be created or deleted.

The following section relates to all IMS owned asset types that must be recorded by the Company (refer to Figure 1):

- Overhead lines – LV, HV and EHV
- Poles, Towers
- Cables and Joints – LV, HV, EHV
- LV Switchpoints

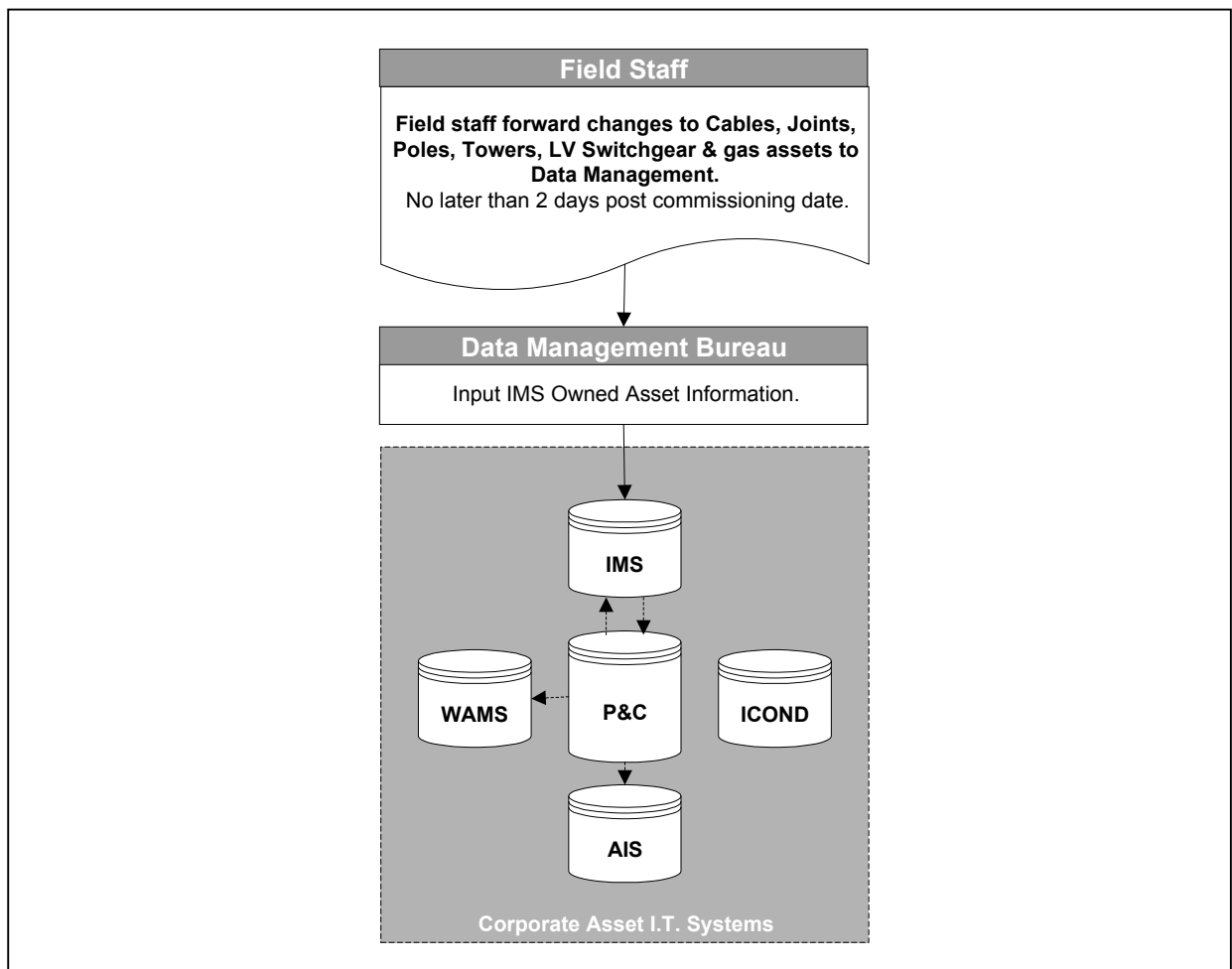


Figure 1

In general, Data Management will receive as-laid/built records for the above asset types in the form of a drawing supported by actual measurements. A competent person should generate these drawings. The drawing will be on an IMS / PC Map Access plot, an AutoCAD generated drawing or an asset update record sheet. The drawing must show the position of the new assets in relation to fixed features, such as kerb lines and building lines.

All other asset information to be recorded should be neatly shown on the drawing or attached to the drawing on a standard pro-forma for that asset type. High accuracy must be maintained on all record drawings. See sections 11 to 16 and the Appendices for further information and examples of as-laid.

As laid/built records must be submitted within **2 days** of the commissioning date passing.

11. DATA FORMAT FOR OHL, POLES & TOWERS

11.1 General

All asset information (plans and sketches) must be submitted within 2 days of the asset commissioning date.

The required data for overhead line assets can be split into 3 types:

- As built drawing
- Attribute values per pole/tower (Schedule)
- A pole/tower profile

Overhead line information must be provided to Data Management in the form of a drawing supported by a pole schedule and profile (where applicable). An example OHL drawing and a pole schedule can be found in appendices 6 and 7 respectively.

Drawings should be provided at a scale of 1/1250 or 1/2500. Wherever possible, drawings must be provided to Data Management on a plot from IMS / PC Map Access or an Ordnance Survey based AutoCAD drawing. If these are not available, the drawing must be supplied on an Asset Update Record Sheet as shown in Appendix 8E. Asset update record sheets are available on request from the Data Management section.

Drawings should show accurate positions of all created, deleted and amended asset positions, conductor sizes, switchgear, stays, supports and hazards. The information supplied must be sufficient to plot the asset position to the nearest 1.0 metre.

A pole schedule should be provided, detailing all mandatory information for each asset. Where a schedule is not available, the mandatory information should be added to the

drawing. For information on mandatory attributes for poles, towers and overhead lines see Appendix 4.

11.2 Patrol Number (for distribution assets only)

Data Management require a patrol number to be clearly associated to each individual pole or tower. The Patrol Number is the Circuit Monitor Reference Number from ICOND and is generally made up of 5 digits (with the exception of Manweb 33 kV lines, which are made up of 6 digits).

For example, in the case of Patrol Number 12345 refer to figure 2:

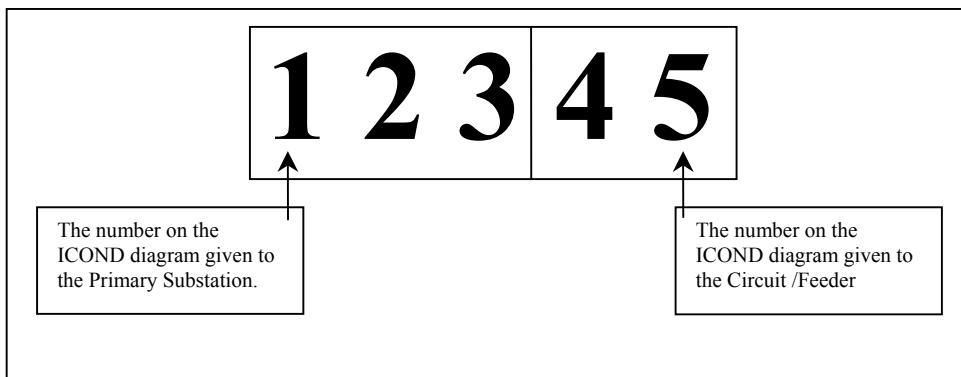


Figure 2

11.3 Route Identifier (for Transmission assets only)

Data Management require a route identifier to be clearly associated to each individual pole or tower. The Route Identifier is the alpha code assigned to each pole or tower by Grid Control.

Table 1 provides a guide to the required patrol / route identifiers per pole and tower asset:

ASSET TYPE		IDENTIFIER REQUIRED		
		PATROL ID NUMBER (COND NUMBER)	ROUTE IDENTIFIER (ALPHA-NUMERIC)	PATROL NUMBER FROM FEEDER HV CIRCUIT
Pole	<= 33kv Distribution	✓		
	>=33kv Transmission		✓	
	LV			✓
TOWER	<= 33kv Distribution	✓		
	>=33kv Transmission		✓	

Table 1

11.4 Pole classification

Data Management require a classification number to be clearly associated to each individual pole or tower. Classifications should be noted for each effected asset on the drawing or pole schedule.

The classification number can either be 1 or 2 (This applies to both distribution and transmission poles and towers).

For guidance on classifications, refer to the Policy for Signing and Guarding of Electrical Network Apparatus document (EPS-01-004).

11.5 Pole related hazard attributes

Pole related hazard attributes are for additional information only and relate to hazards which fall outside the guidelines stated within section 15. Pole related hazard attributes must be noted for each effected pole on the drawing or pole schedule. They should be noted as follows:

- **TH** – Tree hazard – Generally trees within a falling distance of the line that would not be deemed a defect (i.e. outside the process as described in section 15).
- **WH** – Water hazard – where poles are in the vicinity of a formal or informal water area such as a boat club or fishing area. Note: In this situation these poles would also be categorised as class 1.
- **PG** – Playground hazard – where poles are in the vicinity of a formal or informal playground. Note: In this situation these poles would also be categorised as class 1.

-
- **RC** – Railway crossing hazard – Where poles are in the vicinity of a railway crossing.

Poles that are affected by more than one hazard should be marked as such.

12. DATA FORMAT FOR UNDERGROUND ASSETS (ALL VOLTAGES) AND GROUND MOUNTED LV ASSETS

12.1 General

All asset information (plans and sketches) must be submitted within 2 days of the asset commissioning date.

For information on mandatory attributes for LV switchpoints, cables and joints see Appendix 5.

This information will be provided in the form of a drawing supported by actual measurements to the created, deleted or amended plant. These drawings shall be accurately dimensioned showing actual positions of LV switchpoints, cables, ducts and joints relative to buildings, footpaths and roadways. The information supplied must be sufficient to plot the asset position to the nearest 0.1 metre. See Appendix 8 for further information and examples of as-laid.

Drawings should be provided at a scale of 1/500 or larger. Wherever possible, drawings must be provided to Data Management on a plot from IMS / PC Map Access or an Ordnance Survey based AutoCAD drawing. If these are not available, the drawing must be supplied on an Asset Update Record Sheet as shown in Appendix 8E. Asset update record sheets are available on request from the Data Management section.

12.2 Points to Note when Taking Records.

Measurements can be taken from gable ends, boundary walls, fence lines, walls or kerb lines. Measurements should never be taken from lamp posts, gates, doors, windows, garden paths, driveways, road signs, street lighting pillars, trees, manhole covers or drains.

Information on the cables and ducts laid must be given. These should include cable size and type, any instances where cables or plant cross, duct size and type, cross sections of how the cables, ducts and pipes are laid in the ground and an indication of which cables go through which ducts.

Drawings must show:

- Address and plot numbers where applicable.
- LV switchpoint details (including serial number and classification).
- Cable size and type.
- Installation dates.
- Indicate any instances where cables or plant cross.
- Duct size and type.
- Cross sections of how the cables, ducts and pipes are laid in the ground and an indication of which cables go through which ducts.

- MPAN details must be written on the plan submitted in respect of services to new customers.
- Where the cable is running straight, lateral position and depth should be given every 5 metres. Where the cable bends or depth varies, this should be increased to every 1 metre. (See Appendix 8H)
- Drawings must be provided to Data Management on a plot from IMS / PC Map Access or an asset update record sheet as shown in Appendix 8E. Asset update record sheets are available on request from the Data Management section.
- Any cables / pipes / road-crossings laid at non-standard depths must be marked as such. A note of the depth must be written alongside the cable.
- If multiple cables / pipes / road-crossings are laid, the configuration and depths of these must be shown on any drawings (Refer to figure 3). The configuration should be shown in a section drawing:

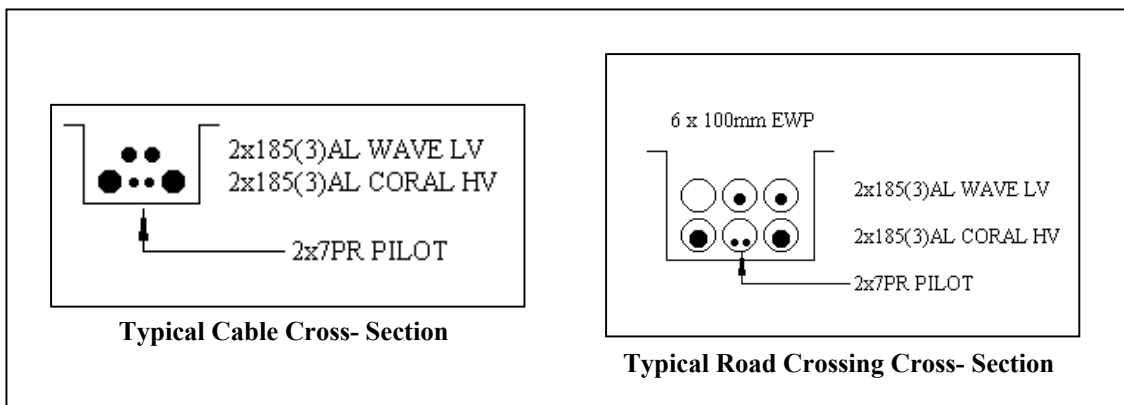


Figure 3

- ALWAYS take measurements from permanent structures. NEVER take measurements from anything not on ordnance survey map e.g. windows, doorways, gates, lamp posts, trees, site offices etc.
- ALWAYS take abnormal depths of cables.
- ALWAYS take Size and Type of Cable/Ducts and Date laid.
- ALWAYS include an Ordnance Survey Grid Reference i.e. SJ 543-675.
- NEVER take measurements from structures being altered or demolished.
- NEVER use round objects to measure from, since exact positions of cables cannot be located as indicated in figure 4:

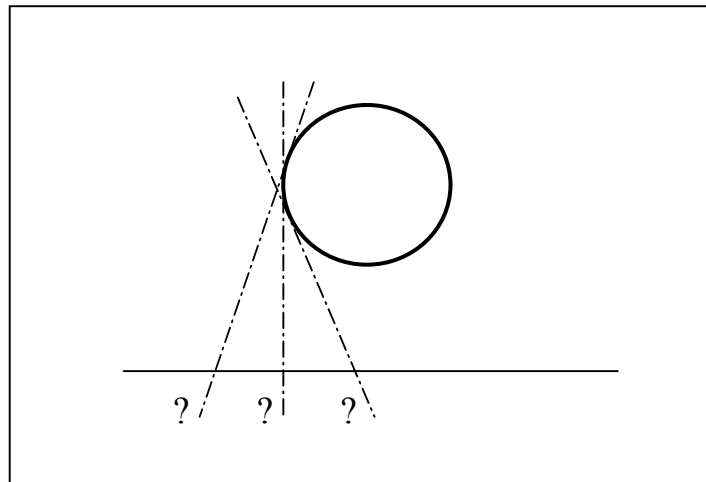


Figure 4

12.3 Mandatory Information: As-Laid Service Cable Route Records

As-laid service cable route drawings must be provided to Data Management on a plot from IMS / PC Map Access, an Ordnance Survey based AutoCAD drawing, a developers plan or an asset update record sheet as shown in Appendix 8E. In the absence of an Ordnance Survey map or suitable builder's plan, the following guidelines should be used to produce a service cable record:

- Measure the basic size/shape of the house.
- Draw the house relative to its surroundings.
- Take measurements to the cable and road crossing.
- Indicate whereabouts of ducts and service ducting
- Add all applicable details (cable size, date laid etc.) as described in 12.1 – 12.11

12.4 Mandatory Information: LV Switchpoints

LV switchpoint details must contain:

- Type (link-box or pillar).
- Locality (i.e. nearest address).
- Electrical configuration (e.g. 2 way, 4 way).
- Manufacturer (e.g. Lucy, Bonar Long).
- Date of manufacture.
- Serial number.
- Classification 1 or 2. (See 12.5)
- Asset Activity Code : Who the work was completed for. Reason for work.
- Any relevant information about created, deleted or amended open points.

12.5 Mandatory Information: LV switchpoint classifications

For guidance on classifications, refer to the Policy for Signing and Guarding of Electrical Network Apparatus document (EPS-01-004).

It is a requirement that each LV switchpoint has a classification. Classifications should be noted for each effected asset on the drawing or pole schedule.

12.6 Mandatory Information: Open Points

The responsible engineer must provide Data Management with details of any changes to LV network open points within 24 hours of the change. These must be received on a Generic Network Diagram (GND) based plot of the area concerned. An example can be seen in Appendix 9.

12.7 Mandatory Information: Cables

Cable details must contain:

- Design voltage.
- Working voltage.
- Cross sectional area.
- Construction type.
- Number of conductors.
- Conductors per phase.
- Number of phases.
- Conductor material.
- Installation date.
- Asset Activity Code : Who the work was completed for. Reason for work.
- Who owns the cable if anyone other than ScottishPower.
- Where cable is a service, phase colours must be noted.

12.8 Mandatory Information: Joints

Joint details must contain:

- Joint type – e.g. straight, breech, pot end etc.
- Voltage.
- Installation date.
- Name of company that installed the cable
- Where cable is a service, phase colours should be noted.

-
- Where phases are crossed or cores are bunched, phasing should be noted. For example ('Phases crossed: R-Y, Y-B, B-R' or 'RYB Bunched').

12.9 Mandatory Information: Ducts

Duct details must contain the following information:

- Duct Size – i.e. 125mm, 100mm etc.
- Duct Material – i.e. PCP, PVC, Fireclay etc.

12.10 Mandatory Information: Supply Sensitive Customers

Data Management requires information about all new Supply Sensitive Customers (SSC) and amendments to existing SSC's as soon as such information becomes available. The data required for input is:

- Customer name, contact name
- Telephone number, fax number, address and postcode
- Type of Business

12.11 Developers Plans

Developer's plans are required by Data Management for every new development where either ScottishPower or third party service providers will create new assets. Data Management will receive developers plans at least 10 days before site work commences (also, whenever there are alterations to the site layout, eg. Changes to plot numbers or road layouts, while work is in progress or after completion).

Wherever possible, developer's plans will be forwarded to Data Management electronically in an AutoCAD 2000 format. Data Management can also accept drawings in all AutoCAD versions up to v2000. Where AutoCAD based drawings are unavailable, Data Management will accept a clear 1/500 scale paper copy of the developers plan.

It is the responsibility of the business unit (i.e. third party contractor) to supply developer's plans prior to the submission of cable records.

13. NOTICE OF CONFIGURATION ALTERATIONS TO THE HV NETWORK

The Company's Asset I.T. Systems require timely and accurate data submission and input to ensure that the company complies with safety, statutory and legislative requirements. Data requirements and submission times are largely dependent on the type of asset to be created or deleted.

Prior to commissioning assets that require changes to the configuration of the HV network diagram, a P&C notice, ICOND patch request and before and after ICOND

diagrams are needed. These should be submitted to Data management **no less than 10 days** prior to the commissioning date (Refer to Figure 5). Data Management will receive the request on the standard pro-formas, which are available in either paper or electronic format from the Data Management Bureaux. An example P&C notice, ICOND patch request and before and after ICOND diagram can be found in Appendices 1, 2 & 3 respectively.

N.B. Major network changes (grid sub-station and primary sub-station) shall be submitted one month prior to the commissioning date.

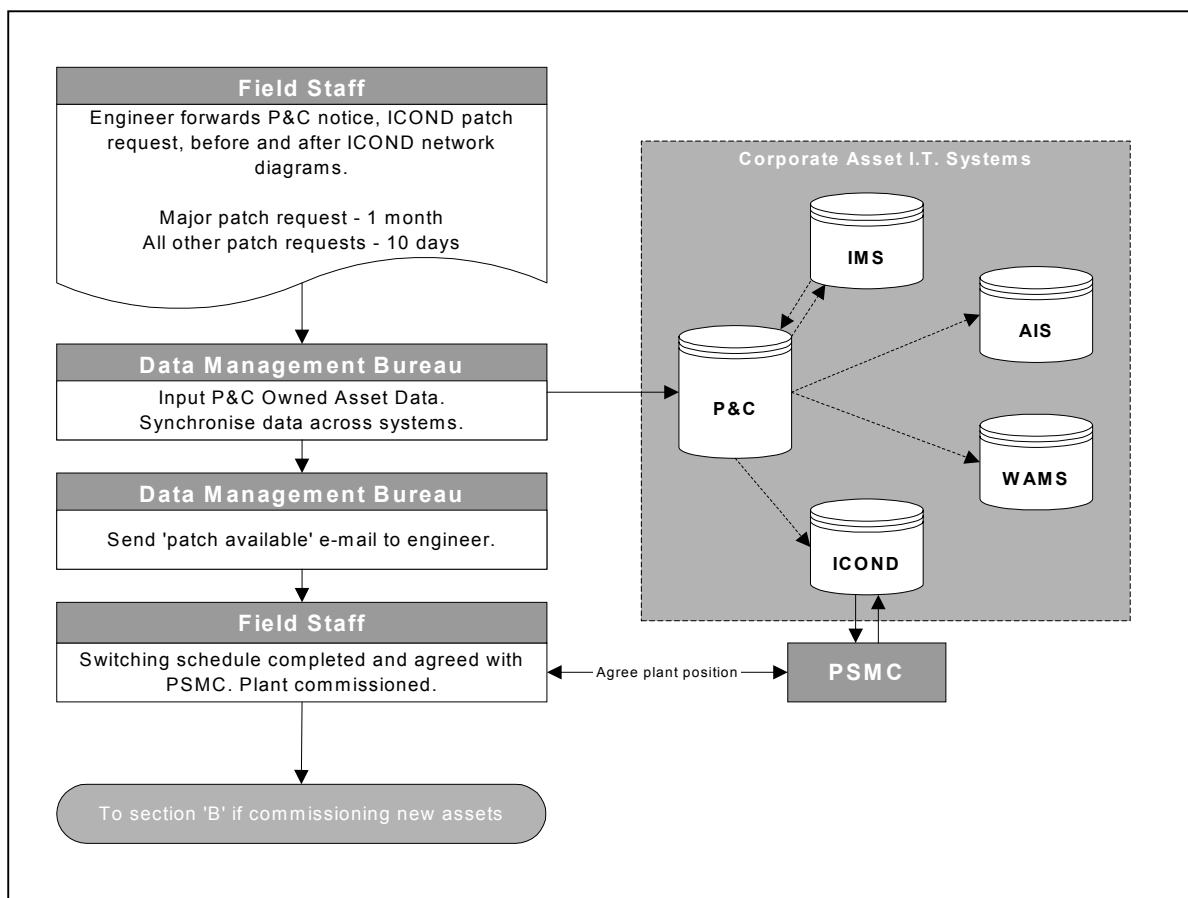


Figure 5

Where the HV network is changing due to the creation, deletion or amendment of overhead line or underground cables, Data Management must receive an ICOND patch request and a before and after ICOND diagram. A P&C notice is not required.

Where assets are to be de-commissioned only, Data Management must receive an ICOND patch request, a before & after ICOND diagram and a completed P&C detail sheet clearly identifying the reason for decommissioning and the scrap or idle location. A P&C notice is not required.

For example, where an RMU is being decommissioned due to an operating restriction, the completed P&C detail sheet should indicate that this was the reason for decommission. It is also a requirement to associate the plant being scrapped to the correct Sub-office location.

14. SUBMISSION OF PLANT DETAIL SHEETS

As indicated in Figure 6, P&C plant detail sheets must be submitted to Data Management no later than 10 days post plant commissioning. These are required in two distinct situations:

- After the commissioning process covered in section 13, all individual plant data must be input into P&C to enable plant data to be shown as asset attributes within ICOND, IMS and WAMS.
- In the instance of changing plant like for like (e.g. PTE replaced) no patch request or P&C notice is required as no changes will be made to the HV network diagram. However, it is vital that plant detail sheets are submitted no later than 10 days post commissioning.

In both situations, P&C detail sheets should be submitted no later than 10 days after plant commissioning.

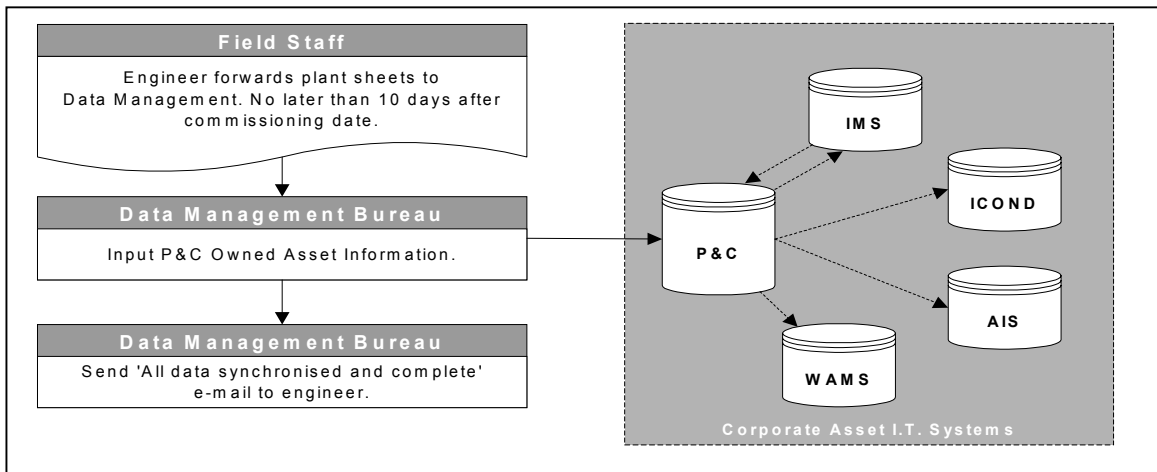


Figure 6

Data Management will receive plant details on standard pro-formas, which are available in either paper or electronic format from Data Management. There are individual sheets for all substation plant, LV fuseboards, remote equipment including transformers, PMAR's, switchgear and test prods. All fields on plant detail sheets are mandatory information for P&C data entry and therefore detail sheets forwarded to the Data Management section must be completely filled in (wherever plant type permits).

When submitting detail sheets for new substation loop-ins, it is extremely important to include new circuit names. As is explained in Appendix 10, the LH and RH switch attributes for the existing substations on either side of a new substation must be updated in P&C. This information should be included in the LH and RH switch sections of the RMU detail sheet for the new substation.

15. RECORDING OF HAZARD AND DEFECT INFORMATION

For guidance on defect types, refer to the ‘Asset Inspection Data Standards’ document (ASSET-03-002)

Where an asset (pole, tower, conductor, switchpoint or sub-station) is created or amended and has a defect or hazard present, this must be noted on the Plant & Circuits input sheet, drawing or pole schedule to be forwarded to Data Management.

For guidance on hazards, refer to the ‘Hazard Management Policy’ document (EPS-01-002)

Wherever hazards occur information should be added to the drawing or schedule to be forwarded to Data Management. Information supplied should contain a description of the defect and a hazard category.

Assets that are effected by more than one hazard should be marked as such.

16. DATA REQUIREMENT MATRIX

The following matrix (Table 2) should be used as a quick guide to the data requirements per asset type and activity (Create, amend and delete):

ASSET TYPE		Data Required				
		For explanation see section 13		For explanation see section 14		Sections 10-12
		Plant & Circuits notice	ICOND patch request + Before and after diagrams	Plant & Circuits Plant detail sheet	12 figure Ordnance Survey reference	IMS sketch
Sub Station (change to network configuration)		✓	✓		✓	
Plant within substation	<i>Change to network configuration</i>	✓	✓	✓		
	<i>No change to network configuration</i>			✓		
Transmission Plant				✓	✓	
Transmission OHL						✓
Remote Equipment Location (change to network configuration)		✓	✓		✓	
Remote equipment. (Including PTE/ABSW/PMAR/HV fuses and sectionalisers)	<i>Change to network configuration</i>	✓	✓	✓		
	<i>No change to network configuration</i>			✓		
HV OHL	<i>Change to network configuration</i>		✓			✓
	<i>No change to network configuration</i>					✓
LV OHL						✓
HV cable/joints	<i>Change to network configuration</i>		✓			✓
	<i>No change to network configuration</i>					✓
LV cable/joints						✓

Table 2

**APPENDIX 1: P&C NOTICE FOR CHANGE TO HV NETWORK
CONFIGURATION**

Request For a New Location and Icond Patch
**This sheet must be passed for update prior to
commissioning or decommissioning of new apparatus**

Requestors Name	Date of Request
Internal Tel No	Mob Tel No
	Fax No

Substation Name and Number		Type Of Location (Please tick one box)																	
Sub Office		Transmission																	
Substation Name		Grid Sub																	
Address		Primary Sub																	
Town		Ground Mounted Secondary Sub																	
District Number (Manweb Only)		Pole Mounted Secondary Sub																	
12 Figure Coordinates	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">X</td> <td style="width: 20px;"></td> <td style="width: 20px;"></td> <td style="width: 20px;"></td> <td style="width: 20px;"></td> <td style="width: 20px;"></td> <td style="width: 20px;"></td> <td style="width: 20px;"></td> </tr> <tr> <td style="text-align: center;">Y</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	X								Y								Remote Equipment Location *	
X																			
Y																			
In Square No* (Manweb ONLY) *(to be allocated by Data Management)		* For use with the following on their own: Sectionaliser, FPI, Fusegear, ABSW and PMAR																	

Additional Information		Non Transformer Details (Manweb Use Only - Please tick one box)	
Owner Of Substation (Please Tick response)	SP Distribution Ltd	LV Only	
	Customer	Building Only	
	SP Transmission Ltd	Site Only	
Capacity (KVA)		Switchgear Only	
Voltage (KV)		Not Applicable	
Work Undertaken For (Please Tick response)	Reason For Work (Please Tick response)		
Core Utility Solutions	New Asset		
Maintenance	Reinforcement		
OHLine Delivery	Modernisation		
Plant Delivery	Defect Repair		
SD&C	Fault Repair		
Other Projects	Diversion		
Network Areas	Decommission		

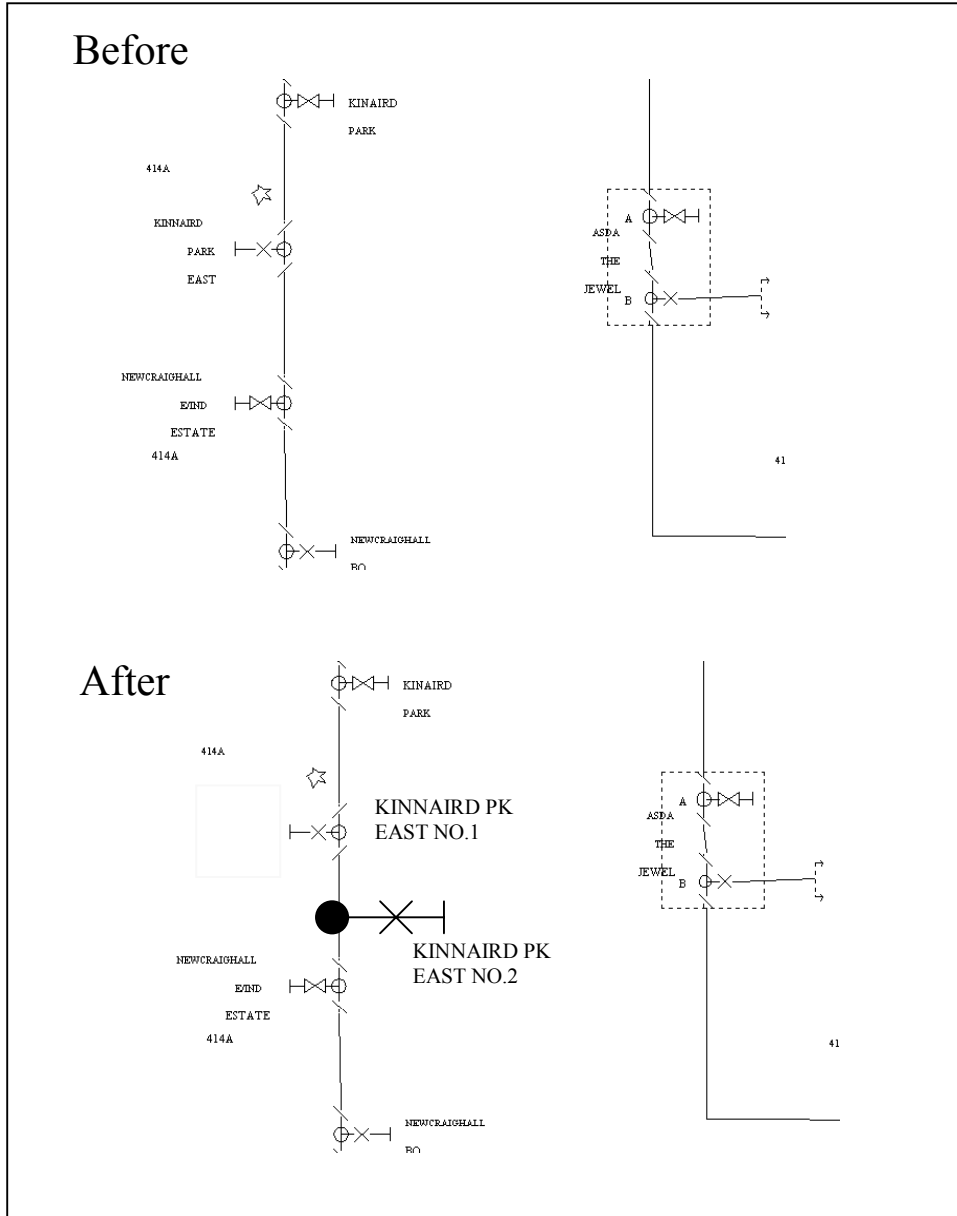
Data Management Use Only			
UDB No	Date passed to PSMC	Created By	

For work sourced within the franchise area of Scotland				
E-mail	DataManagementNorth1@SPPowerSystems.com			
Fax	External	0141 567 4262	Internal	733 4262
Address	Data Management Bureau, StVincent Cresent, Glasgow, G3 8LT			

For work sourced within the franchise area of England & Wales				
E-mail	DataManagementSouth1@SPPowerSystems.com			
Fax	External	0151 609 4985	Internal	801 4985
Address	Data Management Bureau, Prenton Way, Prenton, CH43 3ET			

Data Management May 2002

APPENDIX 3: BEFORE AND AFTER ICOND DIAGRAMS



APPENDIX 4: MANDATORY ATTRIBUTES FOR OHL, POLES and TOWERS

Mandatory attributes for pole asset:

Attribute	Description
Type	Single, H, A, 3 or 4 member, lattice, galley, strut and lay leg
Pole material	Wood, steel, concrete
Associated voltage	LV, 6.6kv, 11kv, 22kv, 33kv, 132kv
Height	Number
Diameter	Light, medium, stout, extra stout
Patrol/Route	Number/Alpha
Category/Classification	number
Hazard	Tree, water, playground
BS Specification	L10, L15, GENU2, BS1320 etc.
Date installed	Date
Asset Activity Code	Work completed for / Reason for work

Mandatory attributes for tower asset:

Attribute	Description
Tower ID	Number
Tower type	Single, dual, tri or quad circuit
Route identifier	Number
Patrol/Route	Number/Alpha
Category/Classification	Number
Design voltage	LV, 6.6kv, 11kv, 22kv, 33kv, 132kv, 275kv, 400kv
Height	number
Base dimension	number
Commission date	Date
Asset Activity Code	Work completed for / Reason for work

Mandatory attributes for overhead line asset:

Attribute	Description
Cross sectional area	Metric/Imperial measurement
No. of conductors	1-8
Conductor material	Aluminium, copper, steel, steel cored aluminium, hard drawn copper etc.
Design voltage	LV, 6kv, 6.6kv, 11kv, 20kv, 22kv, 33kv, 132kv, 275kv, 400kv, pilot, earth, aux., telephone
Working voltage	If different from design voltage
Number of phases	1-3
Spec	L10, L20, Genu2, Genu3 etc.
Asset Activity Code	Work completed for / Reason for work

APPENDIX 5: MANDATORY ATTRIBUTES FOR LV SWITCHPOINTS, CABLES AND JOINTS

Mandatory attributes for LV Switchpoint:

Attribute	Description
Type	Linkbox or pillar
Category	1 or 2
Electrical configuration	2 to 16 way, 4/6/7/8 way double busbar
Manufacturer	Lucy, Bonar Long etc.
Date of manufacture	Date
Serial number	Number
Asset Activity Code	Work completed for / Reason for work

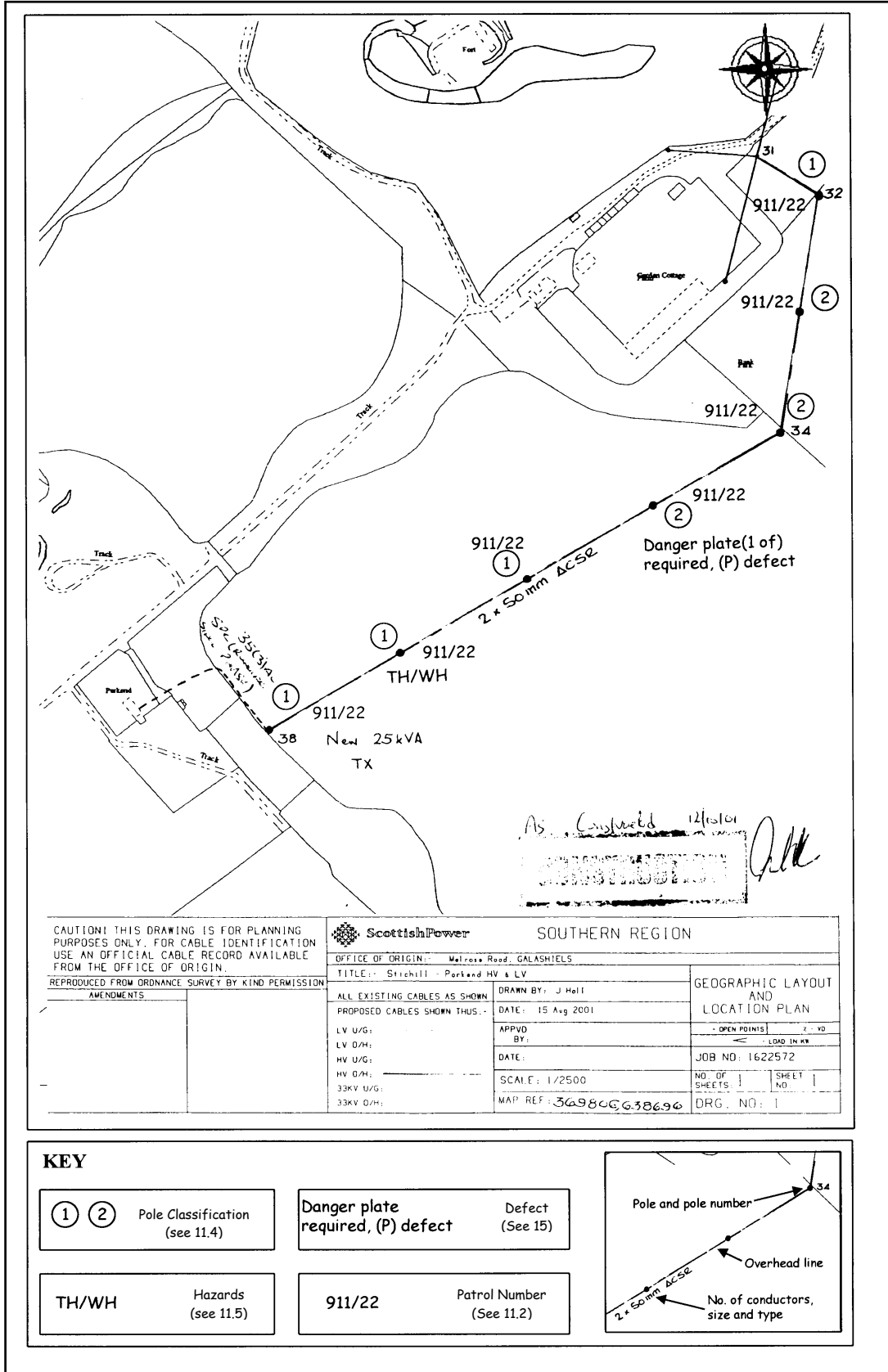
Mandatory attributes for underground cable asset:

Attribute	Description
Cross sectional area	Metric/Imperial measurement
No. of conductors	1-6 or no. of pair if pilot
No. of phases	1-3
Construction type	Pile, Waveform etc.
Conductors per phase	1-3
Conductor material	Alluminium, copper
Design voltage	LV, 6.6kv, 11kv, 22kv, 33kv, 132kv, 275kv, 400kv, pilot
Working voltage	If different from Design voltage.
Date installed	Date
Asset Activity Code	Work completed for / Reason for work

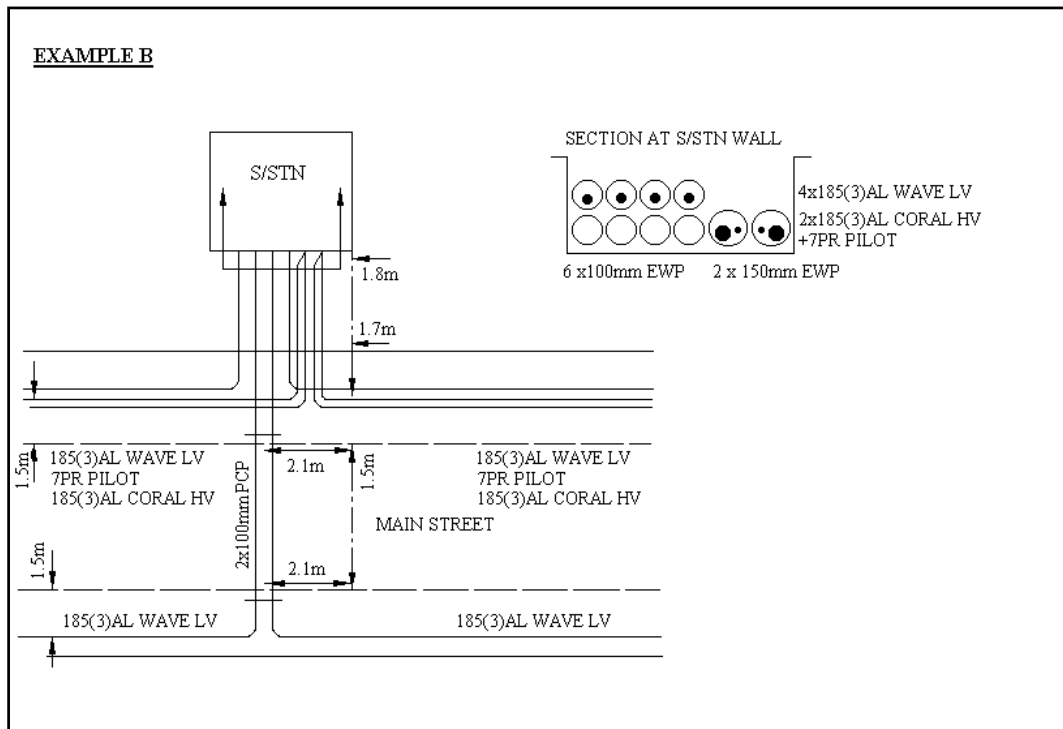
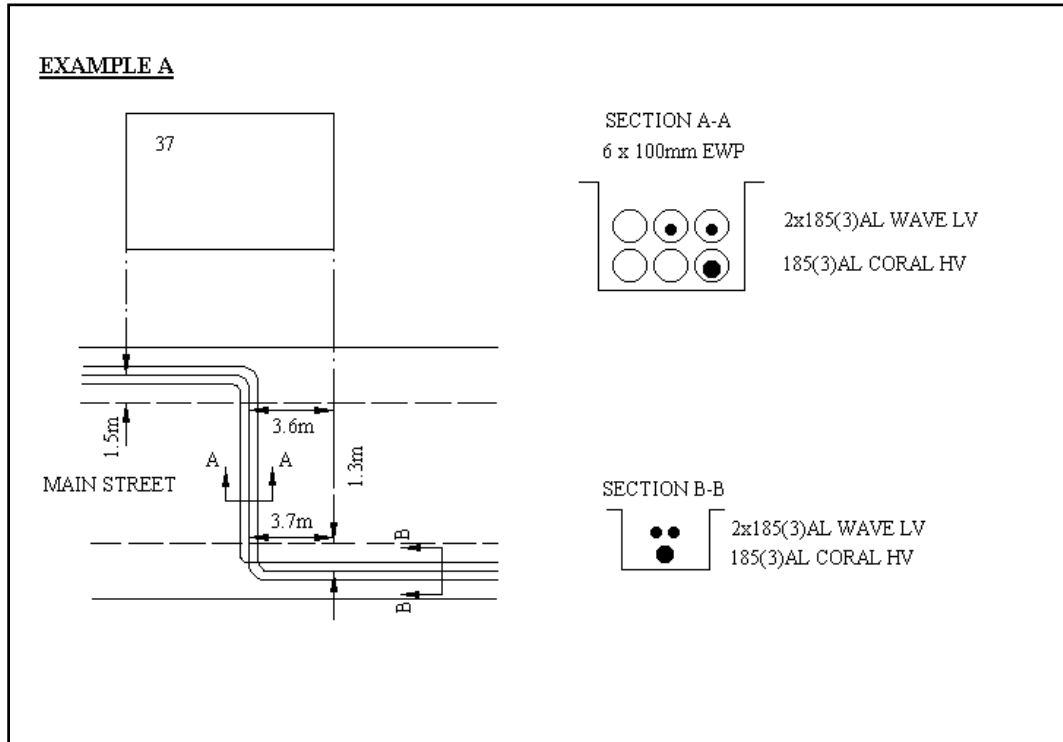
Mandatory attributes for underground joint asset:

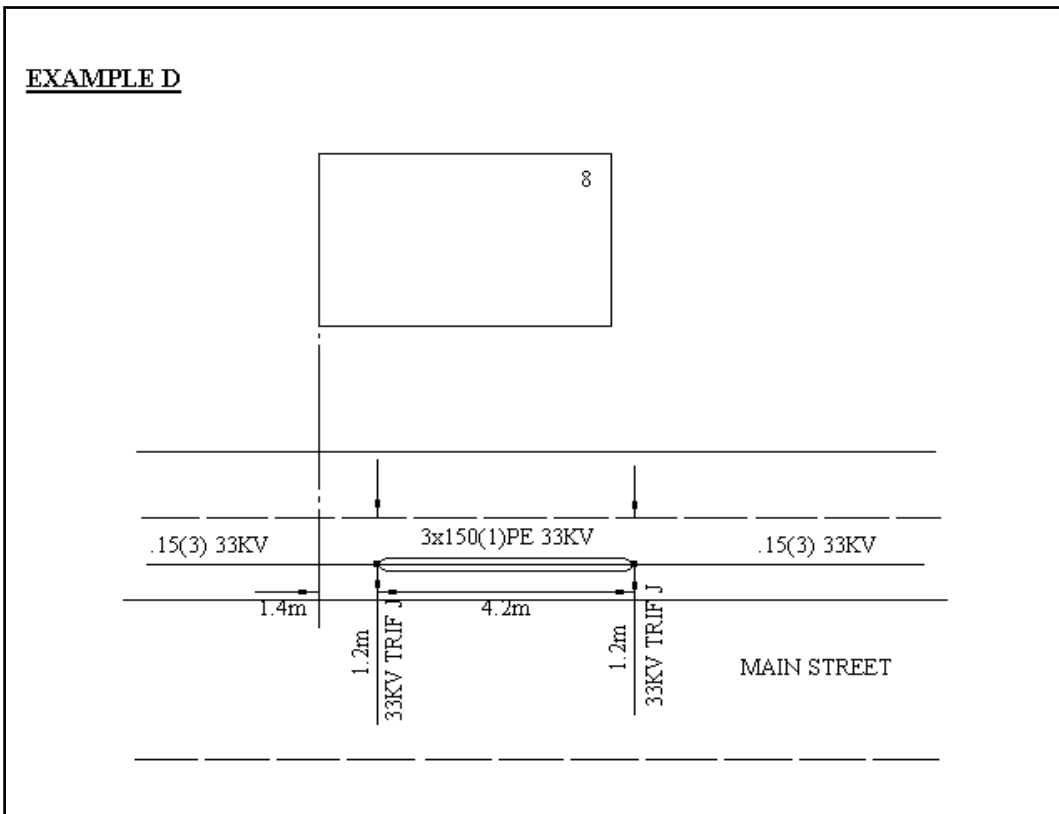
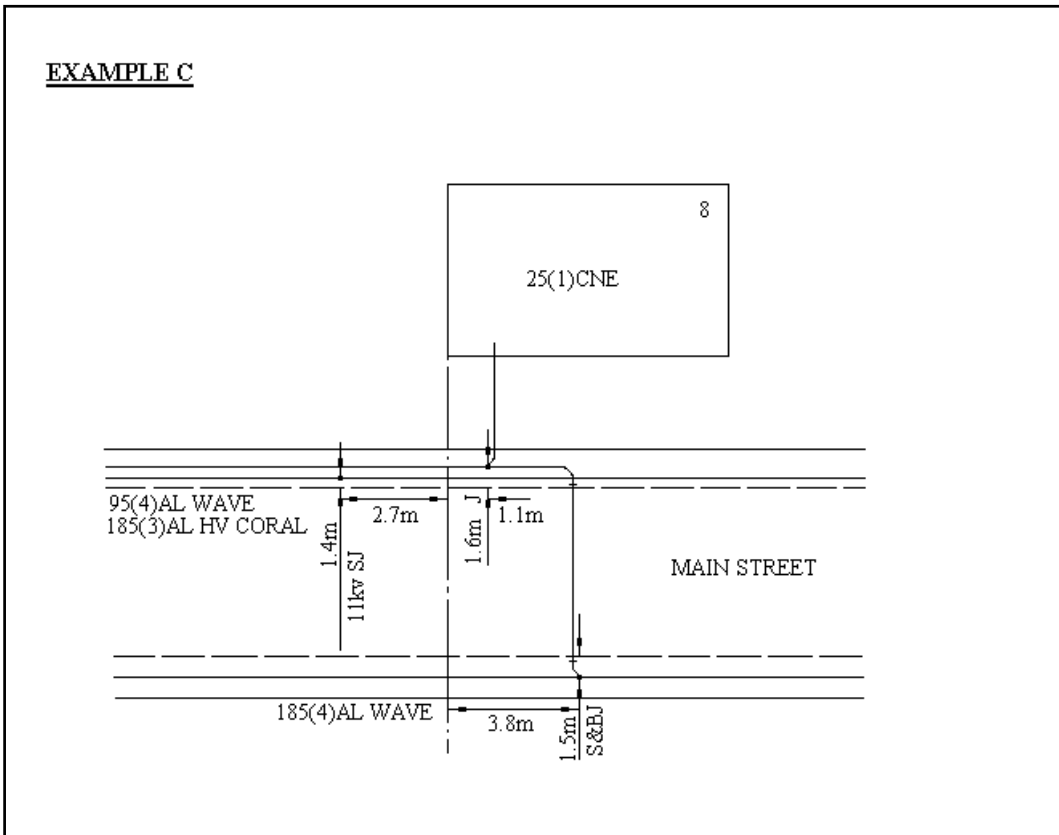
Attribute	Description
Type	Service, Straight, Pot end etc.
Working voltage	LV, 6.6kv, 11kv, 22kv, 33kv, 132kv, 275kv, 400kv, pilot
Installation date	Date
Installed by	ScottishPower/Name of contractor

APPENDIX 6: EXAMPLE OHL SKETCH

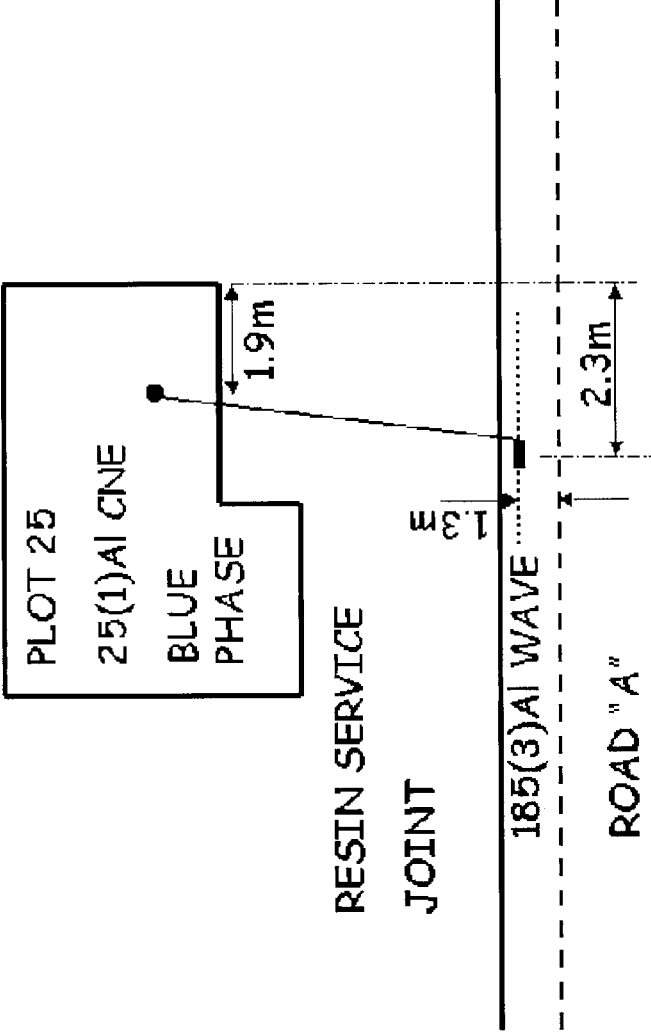
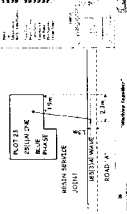



APPENDIX 8: EXAMPLE SKETCHES



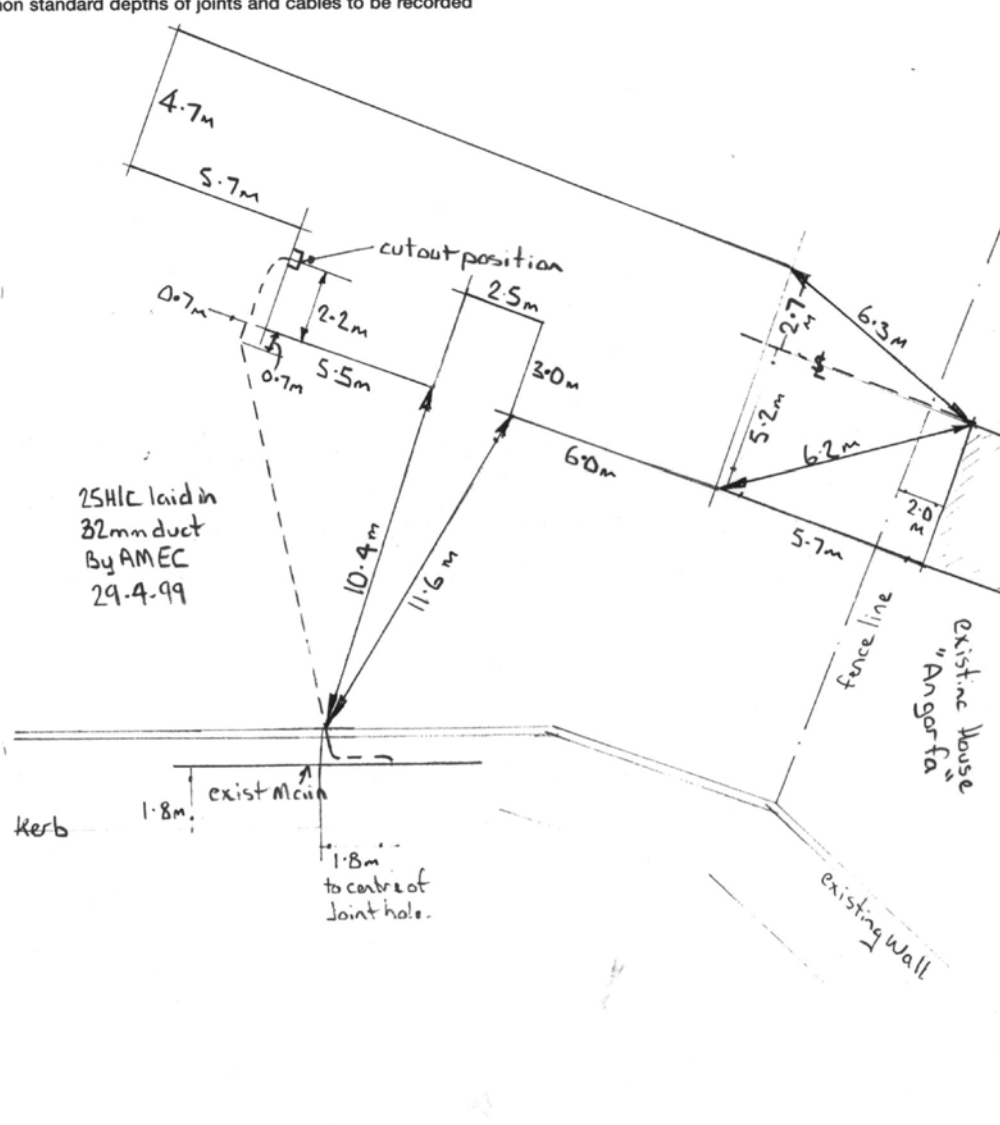


Example E

DATA COLLECTION - ASSET UPDATE RECORD	
Name: John Smith	Business Unit: JV Co.
Date: 10/05/01	Location: Wimpey Ph5, Anytown
Work Order No: 123456	
	<p>Type of Work:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Diversion <input type="checkbox"/> Fault repair <input type="checkbox"/> Reinforcement <input type="checkbox"/> Modernisation <input checked="" type="checkbox"/> New connection <input type="checkbox"/> Disconnection <p>I have noted the following:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Name <input checked="" type="checkbox"/> Date <input checked="" type="checkbox"/> Job Location <input checked="" type="checkbox"/> Work Order Number <input checked="" type="checkbox"/> Joint Type <input checked="" type="checkbox"/> Phase Colours <input checked="" type="checkbox"/> Cable Sizes <input checked="" type="checkbox"/> Dimensions <input checked="" type="checkbox"/> Site Name <input checked="" type="checkbox"/> Plot Number <input type="checkbox"/> Feeder Name <div style="border: 1px solid black; padding: 2px; font-size: small;"> <p>ASSET COLLECTION - ASSET UPDATE RECORD</p> <p>Plot No. 25(1)A1 CNE Blue Phase</p> <p>Job Location: Wimpey Ph5, Anytown</p> <p>Work Order No: 123456</p> <p>Date: 10/05/01</p> <p>Contractor: JV Co.</p> <p>Site Name: Wimpey Ph5, Anytown</p> <p>Plot Number: 25</p> <p>Feeder Name: 185(3)A1 WAVE</p> </div> 
 "Working Together"	

Accurately capturing service information.

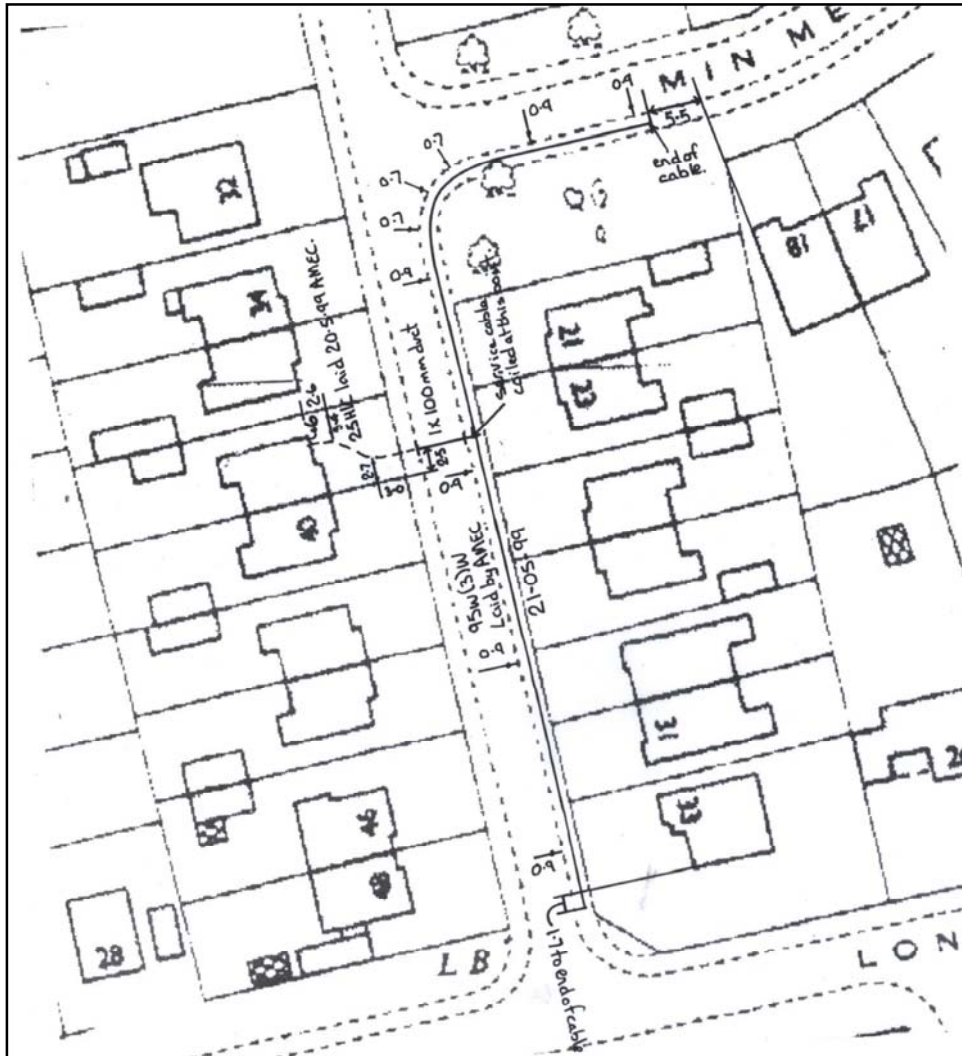
Example G

ADDRESS	14 The Links, Sycamore Lane, Wendale.							
DESCRIPTION	New supply to single dwelling							
<p>All measurements are metric non standard depths of joints and cables to be recorded</p>  <p>25HIC laid in 32mm duct By AMEC 29.4.99</p>								
service size	cable type	grid ref.	WR No.	main	joint type	phase	date	joiners name
.0225	10 service	3290	123456	95w	mains service	as above	13-4-96	R. Kelly
25HIC	1φ service	5J362190	AB12345	95w	—	—	6.2.99	—

complete information and return to your Team Leader attached to the job card

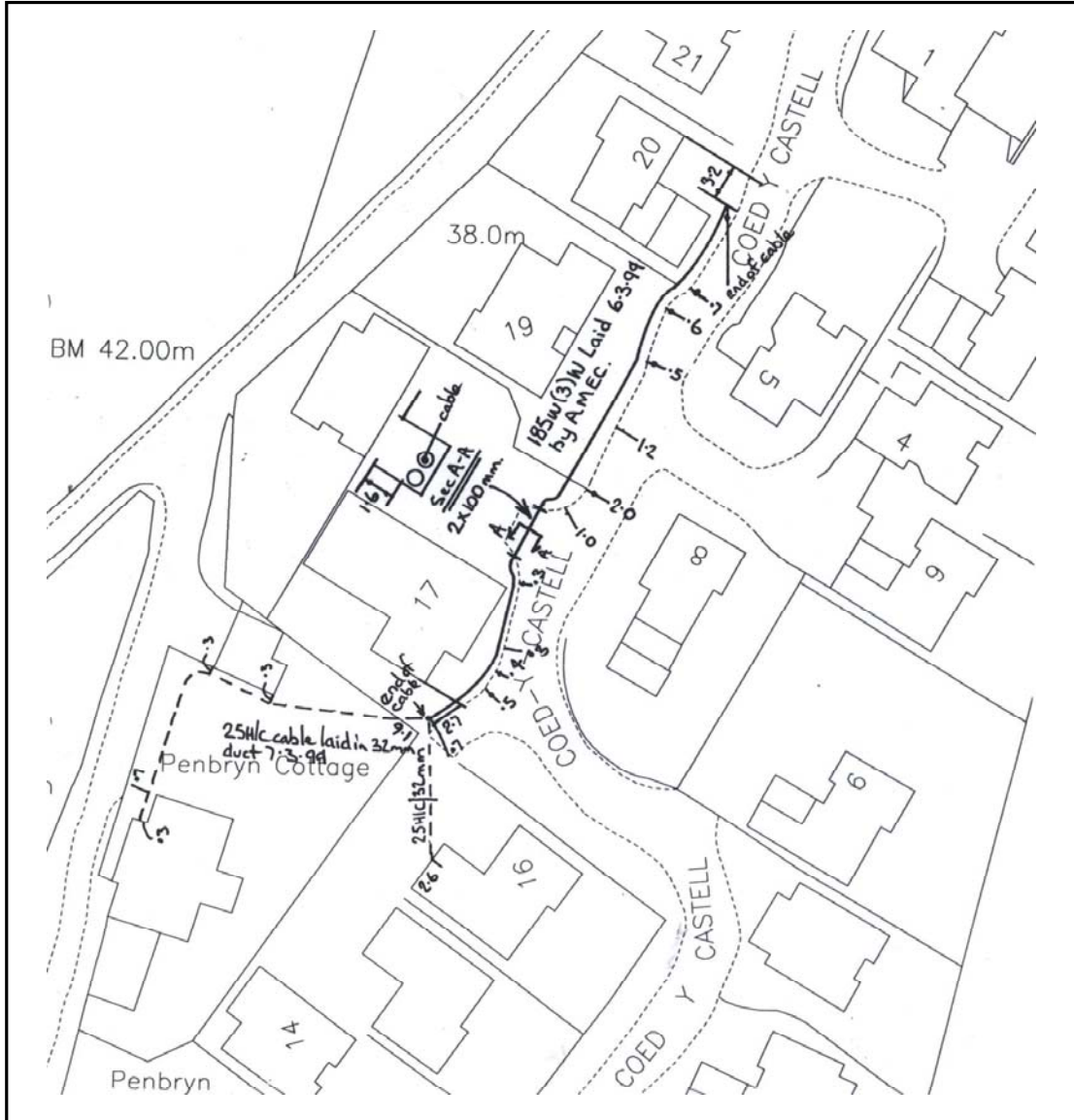
LV cable installation within a new development.

Example H



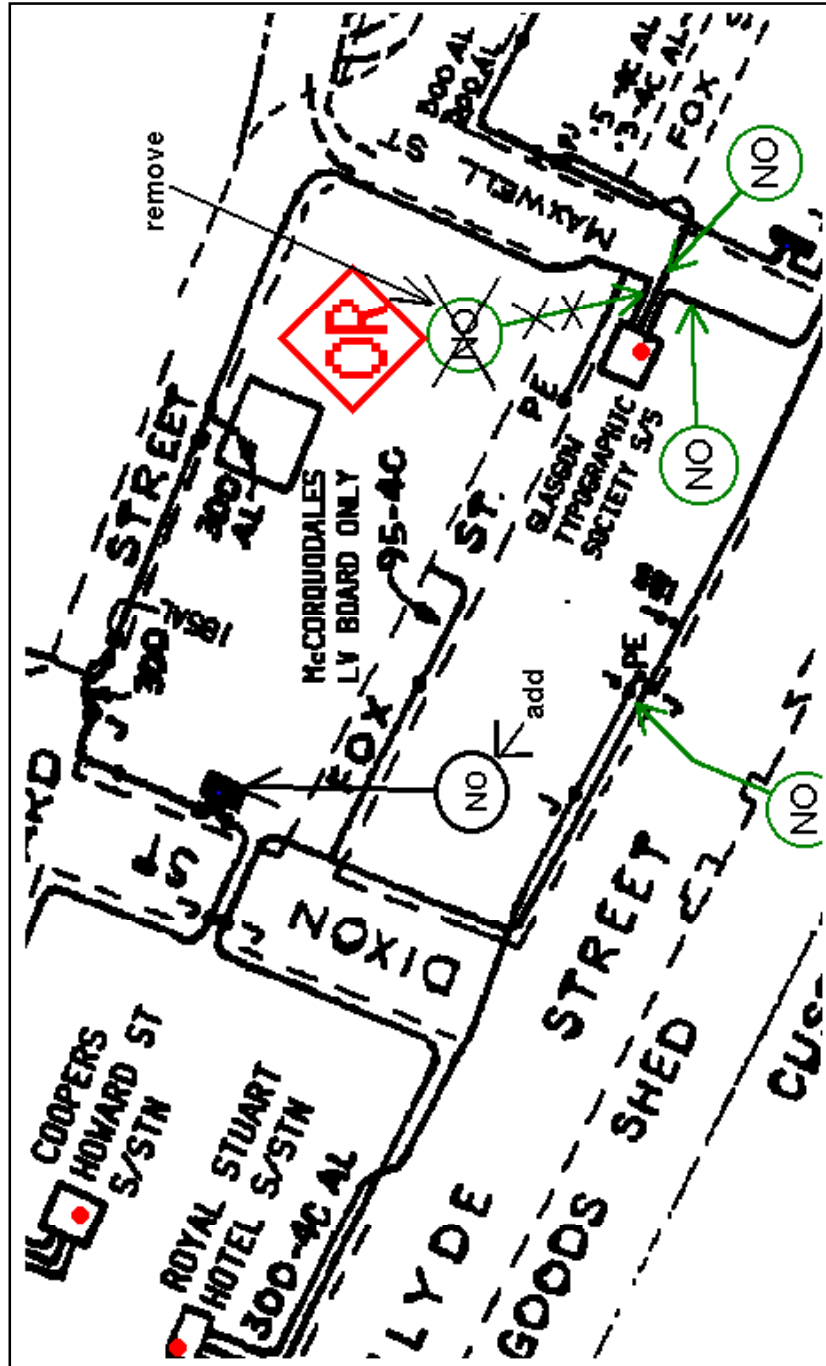
LV cable installation through existing estate.

Example I



LV cable installation through new estate

APPENDIX 9: SKETCH INDICATING ALTERATION TO OPEN POINTS



APPENDIX 10: SUBSTATION SWITCH ATTRIBUTES

This Appendix is a further detail for the description given in section 14

When submitting detail sheets for new substations, it is extremely important to include new circuit names. As can be seen in the diagram below, the LH and RH switch attributes for the existing substations on either side of the new one have now changed and must be updated within Plant and Circuits.

