1. SCOPE

This specification details the requirements for new build and remedial LV internal mains and services work, including the quality of materials, the installation methodology and general procedures to be followed.

2. ISSUE RECORD

This is a Reference document. The current version is held on the EN Document Library.

It is your responsibility to ensure you work to the current version.

Issue Date	Issue No.	Author	Amendment Details
July 2016	3	G MacKenzie	General revision: Revised positioning on Mains isolator switch.
August 2019	4	G MacKenzie	General review including peer review. Replace the term “competent” with the term skilled as defined in BS 7671 (18th Edition).
September 2022	5	Ian Hancock	General review: Update to related documents section. Amendment to Figure 1.
September 2025	6	Ian Hancock	All references to OPSAF removed and replaced with new SI’s as per The ScottishPower Safety Instructions (Electrical & Mechanical) Fifth Edition.

3. ISSUE AUTHORITY

Author	Owner	Issue Authority
Name: Ian Hancock Title: Principal Engineer Engineering Design and Standards	Name: Jamie McDonald Title: Circuits Manager Engineering Design and Standards	Name: Fraser Ainslie Title: Head of Engineering Design and Standards Fraser Ainslie ..... Digitally signed by Fraser Ainslie Date: 2025.10.09 18:51:59 +01'00' Date: .....

4. REVIEW

This is a Reference document which has a 3-year retention period after which a reminder will be issued to review and extend retention or archive.

5. DISTRIBUTION

This document is part of the SPD & SPM System Design and Construction Virtual Manuals maintained by Document Control but does not have a maintained distribution list, but it is published to the SP Energy Networks website.

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7. DEFINITIONS

The Company	Refers to SP Distribution plc, SP Transmission plc and SP Manweb plc.
SP Distribution plc	The Distribution Licence Holder for the distribution service area formerly known as ScottishPower.
SP Transmission plc	The Transmission Licence Holder for the transmission service area formerly known as ScottishPower.
SP Manweb plc	The Distribution Licence Holder for the distribution service area formerly known as Manweb.
SP Energy Networks (SPEN)	The brand name for the division of the ScottishPower group of companies that encompasses SP Distribution plc, SP Transmission plc, SP Manweb plc and SP Power Systems Ltd.
Low Voltage (LV)	An AC voltage not exceeding 1000 volts measured between the phase conductors.
High Voltage (HV)	Any voltage exceeding Low Voltage.
Distribution Fuse Board (DFB)	A fused multi-way enclosure which incorporates facilities for connecting customer's service cables and internal main distribution cables.
Internal Service	A cable connected to a Distribution Fuse Board, protected by a suitable fuse and supplying a single customer.
Internal Main	A cable, installed within a building, supplying more than one customer and which interconnects Distribution Fuse Boards or a cable head and a Distribution Fuse Board.
Common Access	An environmentally controlled location, which affords continuous and unrestricted access, e.g. entrance areas, stairwells, landings etc.
Incoming Supply Cable	The cable connecting the premises to the external LV Electricity Supply Network.
SNE	Separate neutral earth system.
CNE	Combined neutral earth system.
Skilled Person (electrically)	As defined within BS 7671 – Person who possesses, as appropriate to the nature of the electrical work to be undertaken, adequate education, training and practical skills, and who is able to perceive risks and avoid hazards which electricity can create.
Designer	As defined within the Construction (Design and Management) Regulations 2015.
NICEIC	Contractors Approved in accordance with: National Inspection Council for Electrical Installation Contracting.
SELECT	Contractors Approved in accordance with: The Electrical Contractors Association of Scotland.
Contractor	Suitably qualified and skilled persons undertaking work on behalf of SPEN.

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New build works	Works undertaken on premises where assets are principally installed for the first time on new build developments.
Remedial works	Works undertaken on legacy assets within pre-existing housing stock.
BNO	Building Network Operator
Safety Instruction (SI)	Safety Instructions supplement the Safety Rules in providing mandatory instructions on the application of the Safety Rules to certain types of Plant, certain types of Work, and procedures to be followed in certain situations.

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8. REFERENCE AND RELATED DOCUMENTS

Construction (Design and Management) Regulations 2015

Health and Safety at Work Act 1974

Electricity at Work Regulations 1989

BS 7671 Requirements for Electrical Installations – IET Wiring Regulations

BS 9999 Fire safety in the design, management and use of buildings – Code of practice

BS 7657 Cut-out assemblies up to 100 A rating, for power supply to buildings – Specification

G87 Guidelines for the Provision of Low Voltage Connections to Multi Occupancy Buildings

G12 Requirements for the Application of Protective Multiple Earthing to Low Voltage networks

ASSET-02-002 SP Energy Networks Equipment Approvals Procedure

BUPR-22-015 Recording of Electrical Assets by Contractors

EART-01-002 Low Voltage Earthing Policy and Application Guide

EART-10-027 Guidance on Neutral Current Diversion

SWG-03-029 Specification for Heavy Duty Cut-Outs, House Service Cut-Outs, Street Lighting Cut-Outs, Pole Mounted Cut-Outs and Accessories

SWG-03-027 100A Switches for use on 230V Single Phase and 400V Three Phase Customer Service Connections

ScottishPower Safety Rules (Electrical & Mechanical) 5th Edition

SI-2 ‘Safety Rules Training, Authorisation and Competence’

SI-14 ‘Low Voltage Switching’

SI-15 ‘Testing Low Voltage Plant’

SI-16 ‘Low Voltage Ground Mounted Plant’

SI-18 ‘Low Voltage Cables’

SI-19 ‘Low Voltage Service Terminations and Meters’

SI-21 ‘Work in Electrical Panels’

SI-23 ‘Batteries and Battery Chargers’

Approved Equipment Register –
https://www.spenergynetworks.co.uk/userfiles/file/Approved_Equipment_Register.xlsx

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9. INTRODUCTION

This specification should be read in conjunction with the latest versions of all the related documents detailed in section 8. Prior to the commencement of any installation work, a full and comprehensive design shall have been completed as detailed in section 10 and agreed with SPEN in compliance with the specified documentation in section 8.

Contractors undertaking work should be NICEIC or SELECT Approved, unless otherwise agreed in writing by SPEN. The workmanship shall be of an appropriate standard as agreed and audited by SPEN, in compliance with BS 7671 and ENA ER G87.

All work shall be undertaken in accordance with the ScottishPower Safety Rules (Electrical & Mechanical) 5th Edition.

All persons involved in work activities shall be formally assessed and appropriately authorised in accordance with SI-2 as skilled to carry out the installation work described in this specification.

The contractor shall ensure that all specified work is undertaken in accordance with the Construction (Design and Management) Regulations 2015. Appropriate site risk assessments shall be undertaken prior to the initiation of work to the satisfaction of SPEN.

The contractor and all persons employed (including sub-contractors) shall comply fully with the Health and Safety at Work Act 1974, the Electricity at Work Regulations 1989, with all other Statutory Safety Requirements, Approved Codes of Practice and appropriate Guidance Notes and Standards. In compliance with the Electricity at Work Regulations 1989, the Constructor will ensure that no person shall be engaged in any work activity, where technical knowledge or experience is necessary to prevent danger of, where appropriate, injury, unless the person possesses such knowledge or experience, or is under a degree of supervision as may be appropriate having regard to the nature of the work.

10. INTERNAL MAINS – DESIGN REQUIREMENTS

All new and remedial internal mains and services shall be designed in compliance with this document and ENA ER G87. All designs shall be undertaken by an appropriately qualified and skilled person who undertakes the role of Designer in compliance with the Construction (Design and Management) Regulations 2015. All works shall be designed, constructed and tested in such a manner as to ensure the safe continuous operation under the environmental and electrical conditions prevailing at the specified site, ensuring suitable future access to all assets to facilitate inspection, repair and maintenance as appropriate.

10.1 Remedial Works to Legacy Assets

Where remedial work is to be undertaken on existing legacy internal mains installations, it may not be appropriate for a full design submission to be undertaken. For each specific location, SPEN shall determine the required design calculations and drawings as part of the scope of works, detailed below. Prior to the initiation of all remedial works, SPEN shall provide a site-specific scope of works, detailing:

- Geographical/postal location of property
- Outline scope of remedial/new build works and design requirements in accordance with Appendix A
- Existing or number of proposed service locations
- Existing network capacity and maximum demand, voltage regulation and location
- Type of earth terminal that customers connected to the local network may be offered
- High-level site-specific risk assessment

Remedial work to existing legacy multi occupied installations shall be designed as detailed in Figure 1 using SNE constructed cable and equipment within the fabric of the building. Where alterations or modifications are to be undertaken within an existing legacy installation, SPEN may require additional

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works to be completed to ensure the compatibility of the remedial installation with the legacy supply arrangement.

Customers supplied from an existing legacy network shall be offered an earth terminal compatible with the network to which they are connected, where safe and suitable to do so, in compliance with ENA ER G12 and EART-01-002.

The Constructor shall be responsible for establishing the existing network supply conditions at the point at which the customer is connected to the system prior to disconnection of redundant wiring systems or equipment. Any changes to the existing conditions shall be subject to risk assessment prior to the reconnection of supply. Changes to the existing connection conditions shall be communicated with the customer.

Where it has been established by testing that the existing supply conditions are correct and include a pre-existing earth path, then it is the responsibility of the constructor to maintain these conditions following modernisation.

Where it has been established by testing that the existing supply conditions are correct but do not include a pre-existing earth path, then it is the responsibility of the constructor to provide the facility for the customer to make their own connection to the earth terminal provided.

10.2 New Build Works

Prior to the commencement of new build on site installation work, the proposed electrical design shall be submitted to SPEN for comment and acceptance. New build multi occupied installations shall be designed as detailed in
Figure 1 using SNE constructed cable and equipment within the fabric of the building.

Prior to the initiation of all new build on site works, the developer or their nominated representative shall provide a site-specific scope of works, detailing:

- Geographical/postal location of property
- Outline scope of new build works and design in accordance with Appendix A
- Existing or number of proposed service locations

The submission shall include calculations detailing load and diversity estimates, cable sizing[1] and voltage regulation. Schematic diagrams shall be included detailing load, volt drop, cable cross sectional area, proposed electrical layouts and point of connection to SPEN's network.

New build multi occupied buildings containing individual properties should be offered a PME supply in compliance with the current version of ENA ER G12 and EART-01-002, where appropriate to do so. Each property within the multi occupied buildings 'equipotential zone' shall be offered a PME earth terminal supplied via an SNE constructed cable and equipment (TN-C-S) as detailed in
Figure 1: Typical PME supply to Multi Occupied Building. Prior to the energisation of each property, an Electrical Installation Certificate[2] shall be provided to SPEN detailing compliance with BS 7671.

Where a new multi occupied building occupies a gap site in close proximity or abutted to an adjacent building with an independent electrical supply, an electrical earthing risk assessment should be undertaken to determine the electrical independence of the proposed supply (adequate separation). Due consideration of the risks associated with mixed earthing systems and the possibility or existence of Neutral Current Diversion shall be considered in accordance with ENA ER G12. Guidance on Neutral Current Diversion is provided in EART-10-027.

[1] Calculations detailing cable 'grouping' shall be submitted as appropriate.
[2] Appendix 6, BS 7671.

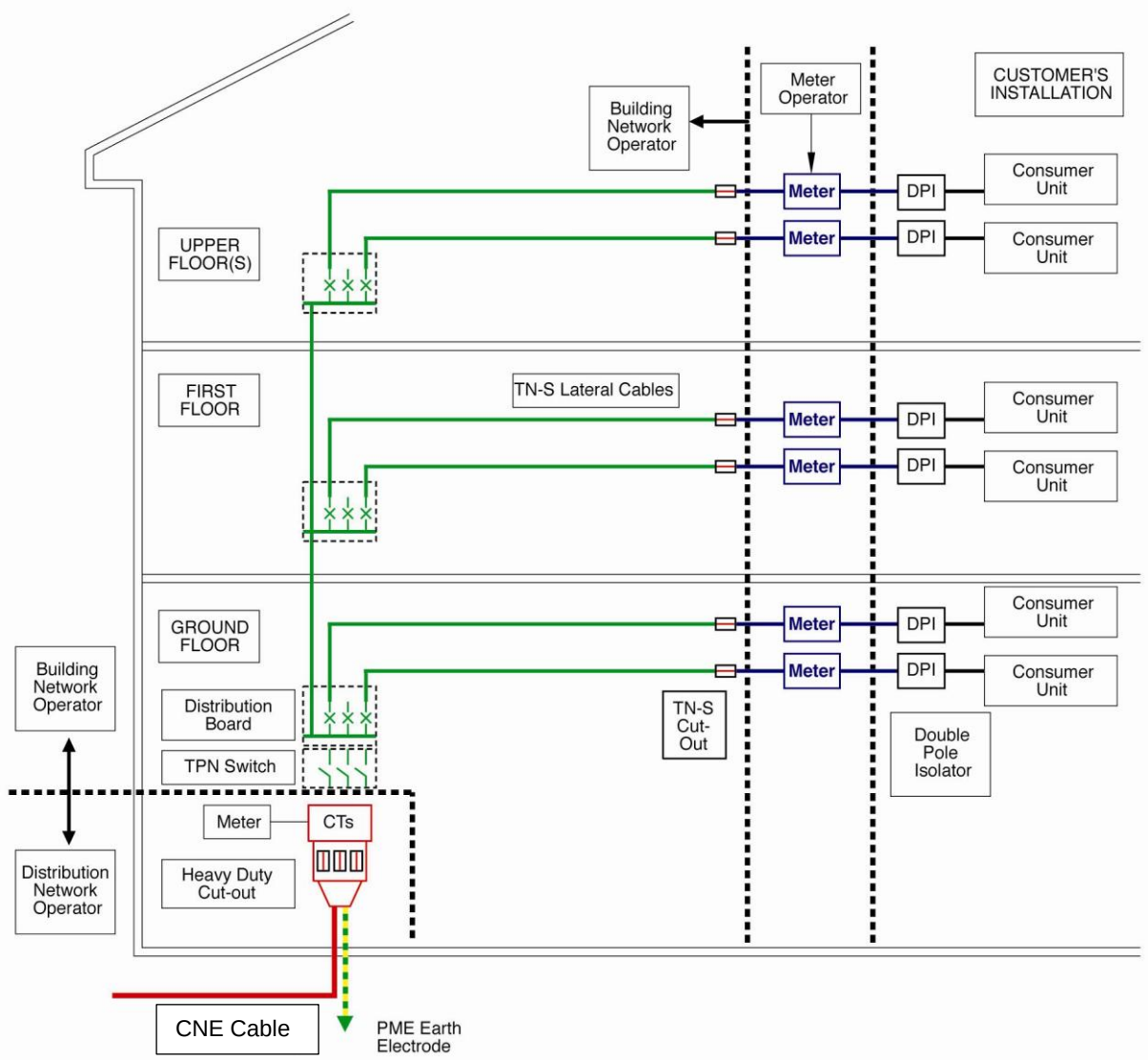

Figure 1: Typical[3] PME supply to Multi Occupied Building

[3] This drawing is indicative – specific requirements are detailed within the referenced SPEN drawings.

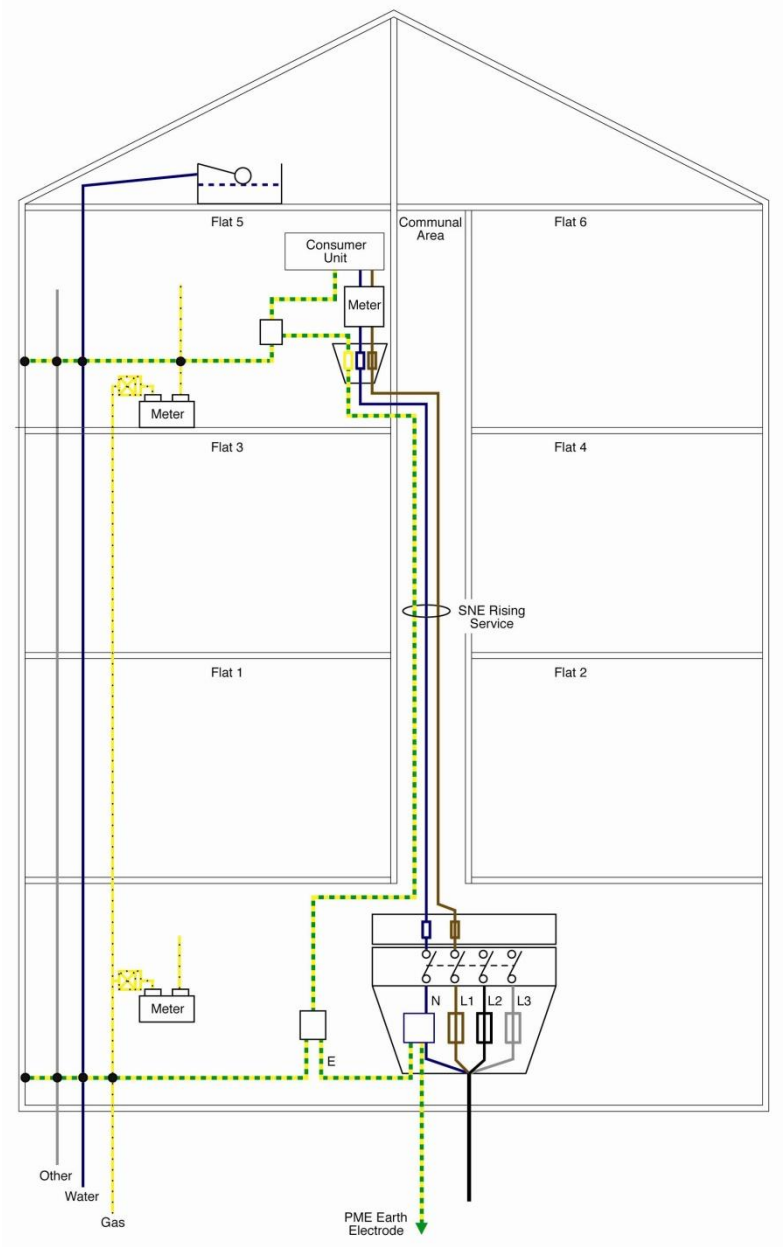

Figure 2: PME Supply – SNE Service

11. INTERNAL MAINS – INSTALLATION REQUIREMENTS

All new and remedial internal mains and services assets shall be installed and adopt the standards of construction necessary to comply with BS 7671. All new build and remedial installations within SPD shall comply with the Building Regulations (Scotland) 2004, in particular Regulation 9 and within SPM the Building Regulations of England and Wales, in particular Part P (Electrical Safety). Precautions against fire shall be taken in accordance with BS 9999.

For new builds, only one incoming supply cable should be installed into multi-occupied premises, unless otherwise agreed in writing by SPEN. The most appropriate location for the incoming supply cable should be determined at an early stage and agreed with SPEN. The physical security of the supply equipment including the incoming supply cable and switchgear should be considered when determining the layout of the equipment.

Consideration shall be given at design stage to the suitability and practicability of equipment location within the fabric of the building, in particular locations that are close to, or sited in fire escape routes. Constructors and designers shall separate system equipment from escape routes wherever possible to do so, with any exceptions to this subject to specific risk assessment and approval from the relevant building authority.

11.1 Installation Drawings

Prior to the commencement of all new build (and where deemed necessary by SPEN remedial[4] works), suitable CAD drawings in compliance with BUPR-22-015 detailing the proposed electrical installation shall be submitted to SPEN for comment including:

- General arrangement drawings, detailing: installation date, cable routes, length of run, cable type, substation spatial envelopes and containment methods adopted.
- A laminated copy of the layout drawings for completed modernisation works shall be left by the Constructor within the embedded substation of all Multi-Storey Flats (Tower Blocks).

11.2 Approved Equipment

All equipment installed on the SPEN network shall be Approved in accordance with ASSET-02-002.

11.2.1 Cable

Internal mains and service cables shall be Approved and designed with an LSOH sheath. Cables shall be of an Approved type as detailed in the Approved Equipment Register. Each dwelling shall have an individual split concentric service cable connection direct from the Distribution Fuse Board (DFB) or cable head. Service cables shall be connected to the DFB/cable head over the three phases to ensure a balanced load. All cables shall be suitably protected against mechanical damage in accordance with BS 7671 and should where possible be unobtrusive on completion of the installation.

11.2.2 Service Termination

Service termination equipment shall be mounted inside the property in a position acceptable to SPEN, which facilitates inspection. Minimum spatial requirements are as detailed in ENA ER G87.

[4] This will be detailed in the scope of work section 10.1.

11.2.3 Cut-out

As per SWG-03-029, Specification for Heavy Duty Cut-Outs, House Service Cut-Outs, Street Lighting Cut-Outs, Pole Mounted Cut-Outs and Accessories.

The service cut-out shall be installed as per manufacturer's instructions and be compliant with:

BS 7657 Specification for cut-out assemblies up to 100 A rating, for power supply to buildings.

11.2.4 Metering

For new build installations – metering is the responsibility of the meter operator appointed by the customer's supplier and shall be installed in accordance with section 6 of ENA ER G87.

Remedial work at legacy installations – it is the responsibility of the contractor undertaking internal mains and service installation works to establish the existing supply conditions prior to works being initiated. Where this is not possible due to access restrictions, the supply will be withheld until access is gained and testing is completed.

Revenue protection – it is the responsibility of the contractor undertaking internal mains and service installation works to report any damage, interference, abstraction or misuse of equipment on discovery to SPEN.

11.2.5 Switchgear

The DFB(s) shall be of an Approved type as detailed in the Approved Equipment Register. Adequate capacity for the proposed development and any future extensions or alterations shall be provided both in terms of rating and number of fuseways provided. In many developments, a 'landlords' supply catering for common area lighting, small power, lifts etc. will be required and the provision of adequate capacity to cater for such supplies shall be made. Integral incoming supply fuses will be required in all DFBs, however, this may not be achievable in existing properties where the incoming cable is terminated into a cable head.

Switchgear shall be located in an area that is readily accessible from a communal area, i.e. in or off a stairwell, lobby or hall and the selected location shall afford continuous and unrestricted access. The distribution board should be sited as close as is reasonably practicable, to the load centre of the installation in High Rise buildings, and as close as is reasonably practicable to the Intake Point in Low Rise buildings. This measure ensures that the length of internal service cables is kept to a minimum. Notwithstanding the above, where the internal mains and services designs cannot cater for central location of the distribution board, or in some cases even where this requirement can be accommodated, the length of internal service cables can still be excessive. It may therefore be more economic and practical to install additional distribution boards, which can take the form of either sub-distribution boards, supplied from a main distribution unit, or completely separate distribution boards independently connected to incoming supply.

Where sub-distribution boards are supplied from a main distribution board, the interconnecting internal main (sub mains) cable must in all cases be provided with a means of overload and short circuit protection. This will be afforded by fuse links, preferably within a DFB although a suitable fused cable head may be acceptable in some instances.

The fuse link at the origin of the internal main should adequately discriminate with the incoming fuse links in the sub-distribution board. DFBs shall not be located in, or require access through, the premises of an individual customer. DFBs shall not be located in inappropriate positions, for example:

- Directly beneath, within, or immediately adjacent to the bottom of a vertical service duct containing a water pipe where a leak could result in water ingress to the unit.

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- In an area which constitutes a hostile environment i.e. where steam or water vapour are present.
- In a position where it may be subjected to mechanical damage under normal circumstances e.g. behind a door which when opened could strike the unit, at low level in a pend used by vehicular traffic or behind panelling which requires significant time and effort to remove for access.
- Where there is insufficient headroom i.e. at the rear of an under stairs cupboard.
- Where there is inadequate working space around the unit a minimum clearance of 1000mm should be available in front of the equipment.
- In areas where it may be particularly susceptible to fire damage i.e. communal bin stores.
- At head height protruding from the wall of say, a corridor where there is a risk of personal injury.
- Where access is obstructed or restricted.
- In fire escape routes.

The foregoing list is not exhaustive.

Where a dedicated room or cupboard is provided for DFB accommodation an appropriate dual access locking mechanism shall be fitted and agreed with SPEN. In high-risk legacy properties, the landlord, or building owner may, by agreement with SPEN, deem it necessary to provide a more secure location for distribution equipment, retaining control and responsibility for entry to the switch room.

11.2.6 Containment

All surface mounted cables in communal areas shall be mechanically protected using suitable means as determined by BS 7671, typically metal trunking or conduit as appropriate. At all times containment and mechanical protection should be installed in compliance with BS 7671.

Alternative containment system materials shall be zero combustible.

Containment systems shall not provide a step hazard or restrict free movement in common access areas.

11.2.7 Isolation Switch

The fitting of a DP Isolator switch during modernisation and refurbishment works is **recommended** in the following situations:

- When it is deemed unsafe to re-energise the existing installation e.g. reversed polarity in the customer's installation, exposed component parts within the customer installation.
- When the property owner has agreed payment for the provision of an MI switch.

Isolator switch where installed shall be compliant with SWG-03-027, Specification for 100A Switches for use on 230V Single Phase and 400V Three Phase Customer Service Connections.

12. INSTALLATION RECORDS

Internal mains As-Built drawings for all installation works shall be submitted to SPEN in an approved electronic format in accordance with BUPR-22-015. Where applicable, Operating Manuals and CDM Health & Safety Files shall be submitted to SPEN in an approved electronic format.

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13. INSPECTION & TESTING

SPEN reserves the right to access the site at all reasonable times for the purposes of inspection and auditing of the works as may be considered necessary.

All new connections and remedial works shall be tested in accordance with the ScottishPower Safety Rules (Electrical & Mechanical) 5th Edition. Testing shall be undertaken in accordance with SI-15 and SI-19 as well as SI-14, SI-16, SI-18, SI-21 and SI-23 where applicable.

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APPENDIX A – DRAWINGS

The following drawings indicate typical details that are deemed to satisfy with respect to certain aspects of internal mains design:

Internal Mains and Services Communal Metering Layout	
Drawing Number	Date of Last Issue
SP4058630	April 2009
Internal Mains and Services Six in a block (Tenement) – Single Point of Supply	
Drawing Number	Date of Last Issue
SP4058632	April 2009
Internal Mains and Services Multiple Distribution – Single Point of Supply	
Drawing Number	Date of Last Issue
SP4058673	April 2009
Internal Mains and Services Multiple Distribution – Multiple Points of Supply	
Drawing Number	Date of Last Issue
SP4058685	April 2009
Internal Mains and Services Four in a block (Cottage style flats) and Semi detached	
Drawing Number	Date of Last Issue
SP4059139	April 2009
Internal Mains and Services Deck access	
Drawing Number	Date of Last Issue
SP4059175	April 2009
Internal Mains and Services Landlords Connection	
Drawing Number	Date of Last Issue
SP4059172	April 2009

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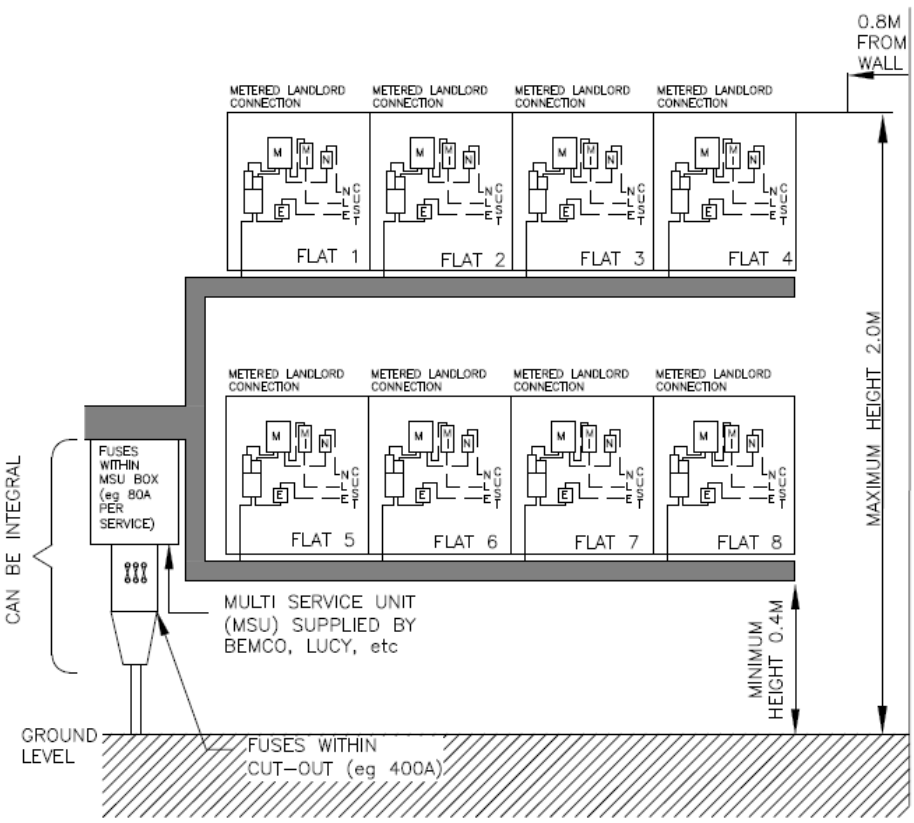
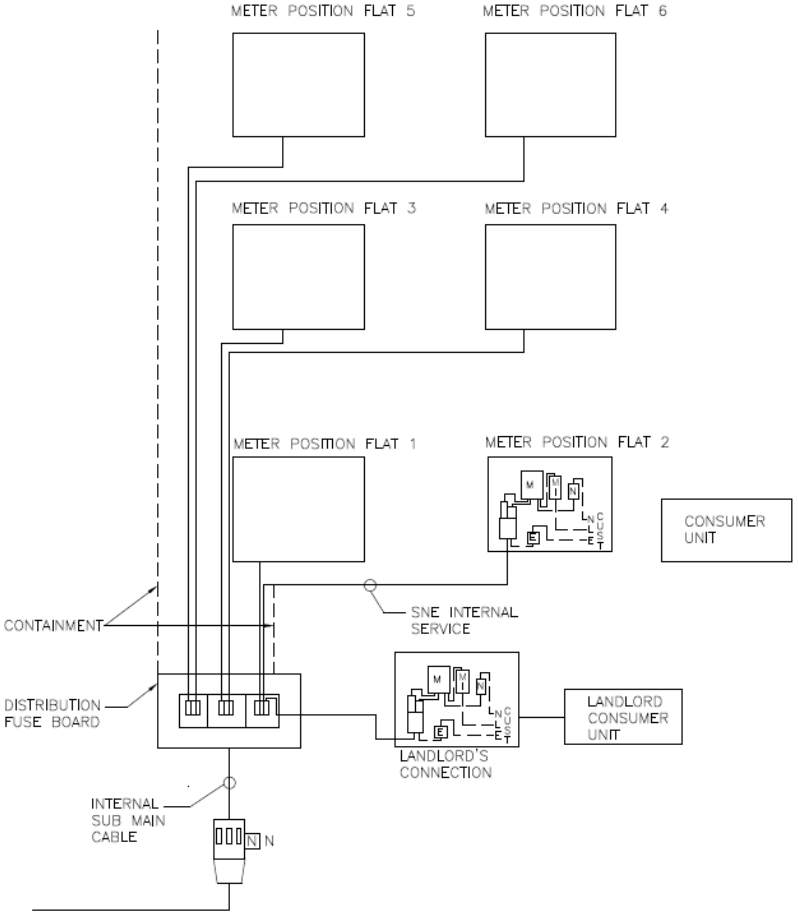


POINTS TO NOTE:
SUITABLY SIZED FUSES MUST BE INSERTED AT THE CUT OUT TERMINATING THE INCOMER AND THE MSU FOR EACH SERVICE.
ALL METERING BOARDS MUST CLEARLY INDICATE THEIR CORRESPONDING FLAT NUMBER.
ALL FUSES WITHIN MULTI UNIT (MSU) MUST BE CLEARLY LABELLED WITH FLAT REF. No.

SP ENERGY NETWORKS

Drawn SMCG	Date 30/03/09	Title	COMMUNAL METERING LAYOUT
Checked TC	Date 02/04/09		
Approved G.M.	Date 16/04/09		
TRS No.		Location NEW NON-CATEGORISED	Voltage N/A
Project		Status FOR ISSUE	Drg. No. SP4058630 / Rev. 1.0
Rev / Date / Drawn / Checked / Approved		Copyright property of SP PowerSystems Ltd.	Scale NTS / Size A4



DISTRIBUTION FUSE BOARD
- TO BE SITED AS CLOSE TO POINT OF SUPPLY AS POSSIBLE
- CIRCUIT SCHEDULE TO BE COMPLETED
- EQUIPMENT TO BE LOCKFAST AND SECURE
- ADEQUATE FUSE PROVISION FOR ALL CIRCUITS PLUS LANDLORD CONNECTION
- NOT TO BE LOCATED IN BASEMENT AREA
- MINIMUM HEIGHT 500MM FROM FLOOR LEVEL
- MINIMUM CLEARANCE OF 1000MM FACING DISTRIBUTION EQUIPMENT

INTERNAL SUB MAINS CABLE
- TO BE SNE IN CONSTRUCTION
- CABLES TO BE LSOH (LSF FOR SINGLE CORE CABLES ENCLOSED IN TRUNKING)
- SECURELY CONTAINED AND MECHANICALLY PROTECTED FROM EXTERNAL INTERFERENCE
- CONNECTED TO CORRECT SIDE OF DFB WITHOUT CROSSING INTERNAL SERVICE WIRING

INTERAL SERVICE CABLES (LATERALS)
- TO BE SNE IN CONSTRUCTION
- TO BE LSOH WITH ORANGE OUTERSHEATH
- SECURELY CONTAINED AND MECHANICALLY PROTECTED FROM EXTERNAL INTERFERENCE
- TERMINATED IN SP+N CUTOUT AT METER POSITION
- SHALL NOT PASS THROUGH A PROPERTY THE CABLE DOES NOT SUPPLY
- SHALL BE 100% REWIRABLE
- SHALL DISTRIBUTE ONE METHOD OF EARTHING – SNE IN CONSTRUCTION

CONTAINMENT
- SHALL PROVIDE FULLY ACCESSIBLE MECHANICAL PROTECTION TO ALL INTERNAL MAINS CABLES
- SHALL BE BONDED TO EARTH AT SOURCE AND THROUGHOUT SYSTEM
- SHALL BE PROTECTED AGAINST THE EFFECTS OF FIRE IN HIGH RISK AREAS
- WILL BE SEALED TO PREVENT SMOKE TRAVEL THROUGH CONTAINMENT ROUTES
- WILL BE EXCLUSIVE TO SCOTTISHPOWER EQUIPMENT
- WILL BE INSTALLED ON ALL CABLES LESS THAN 2.4 METRES FROM FLOOR LEVEL

SP ENERGY NETWORKS

Project					TRG No.
Title: INTERNAL MAINS AND SERVICE DISTRIBUTION SYSTEM IN MULTI-OCCUPIED PROPERTY					
Location: NEW NON-CATEGORISED				Voltage	
Drawn: SMCG	Date: 30/03/09	Checked: TC	Date: 02/04/09	Approved: G.M.	Date: 16/04/09
Status: FOR ISSUE		Drg. No.: SP4058632			Rev.: 1.0
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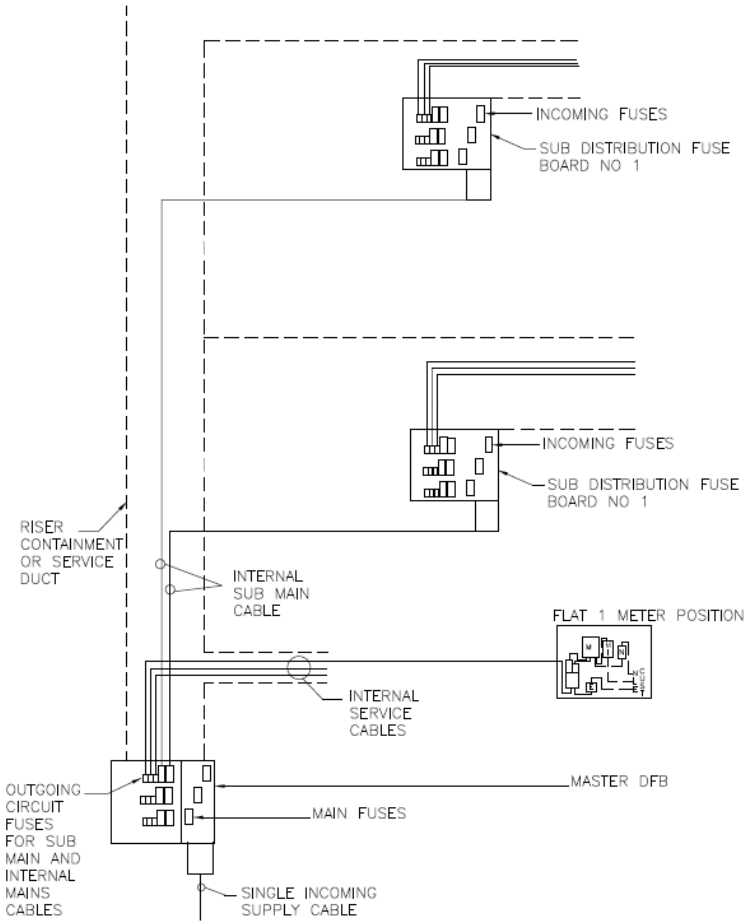

DISTRIBUTION FUSE BOARD
- TO BE SITED AS NEAR AS POSSIBLE TO LOAD CENTRE TO MINIMISE RUN LENGTHS
- CIRCUIT SCHEDULES TO BE COMPLETED
- EQUIPMENT TO BE ACCESSIBLE, LOCKFAST AND SECURE
- ADEQUATE FUSE PROVISION FOR ALL CIRCUITS PLUS LANDLORD CONNECTION
- NOT TO BE SITUATED IN A SHARED UTILITY RISER
- NOT TO BE LOCATED IN A BASEMENT AREA
- MINIMUM HEIGHT 500MM FROM FLOOR LEVEL
- MINIMUM CLEARANCE OF 1000MM FACING DISTRIBUTION EQUIPMENT

INTERNAL SUB MAINS CABLE
- TO BE SNE IN CONSTRUCTION
- CABLES TO BE LSOH, ORANGE OUTER SHEATH
- SECURELY CONTAINED AND MECHANICALLY PROTECTED FROM EXTERNAL INTERFERENCE
- CONNECTED TO CORRECT SIDE OF DFB WITHOUT CROSSING INTERNAL SERVICE WIRING

INTERAL SERVICE CABLES (LATERALS)
- TO BE SNE IN CONSTRUCTION
- TO BE LSOH, WITH ORANGE OUTER SHEATH
- SECURELY CONTAINED AND MECHANICALLY PROTECTED FROM EXTERNAL INTERFERENCE
- TERMINATED IN AN SPEN CUT OUT AT METER POSITION
- SHALL NOT PASS THROUGH ANOTHER PROPERTY THAT THE CABLE DOES NOT SUPPLY
- SHALL BE 100% REWIREABLE
- SHALL DISTRIBUTE ONE METHOD OF EARTHING – SNE IN CONSTRUCTION

CONTAINMENT
- SHALL PROVIDE FULLY ACCESSIBLE MECHANICAL PROTECTION TO ALL INTERNAL MAINS CABLES
- SHALL BE BONDED TO EARTH AT SOURCE AND THROUGHOUT SYSTEM
- SHALL BE PROTECTED AGAINST THE EFFECTS OF FIRE IN HIGH RISK AREAS
- SHALL BE SEALED TO PROTECT SMOKE TRAVEL THROUGH CONTAINMENT ROUTES
- SHALL BE FOR THE EXCLUSIVE USE OF SCOTTISHPOWER
- SHALL BE PROVIDED FOR CABLING LESS THAN 2.4M FROM FLOOR LEVEL

SP ENERGY NETWORKS

Project				TRS No.	
Title: INTERNAL MAINS AND SERVICE DISTRIBUTION SYSTEM IN LARGE MULTI-OCCUPIED PROPERTY WITH SINGLE POINT OF SUPPLY					
Location: NEW NON-CATEGORISED				Voltage	
Drawn: SMCG	Date: 30/03/09	Checked: TC	Date: 02/04/09	Approved: G.M.	Date: 16/04/09
Status: FOR ISSUE		Drg. No.: SP4058673		Rev.: 1.0	
© Copyright property of SP PowerSystems Ltd.				Scale: NTS	Size: A3

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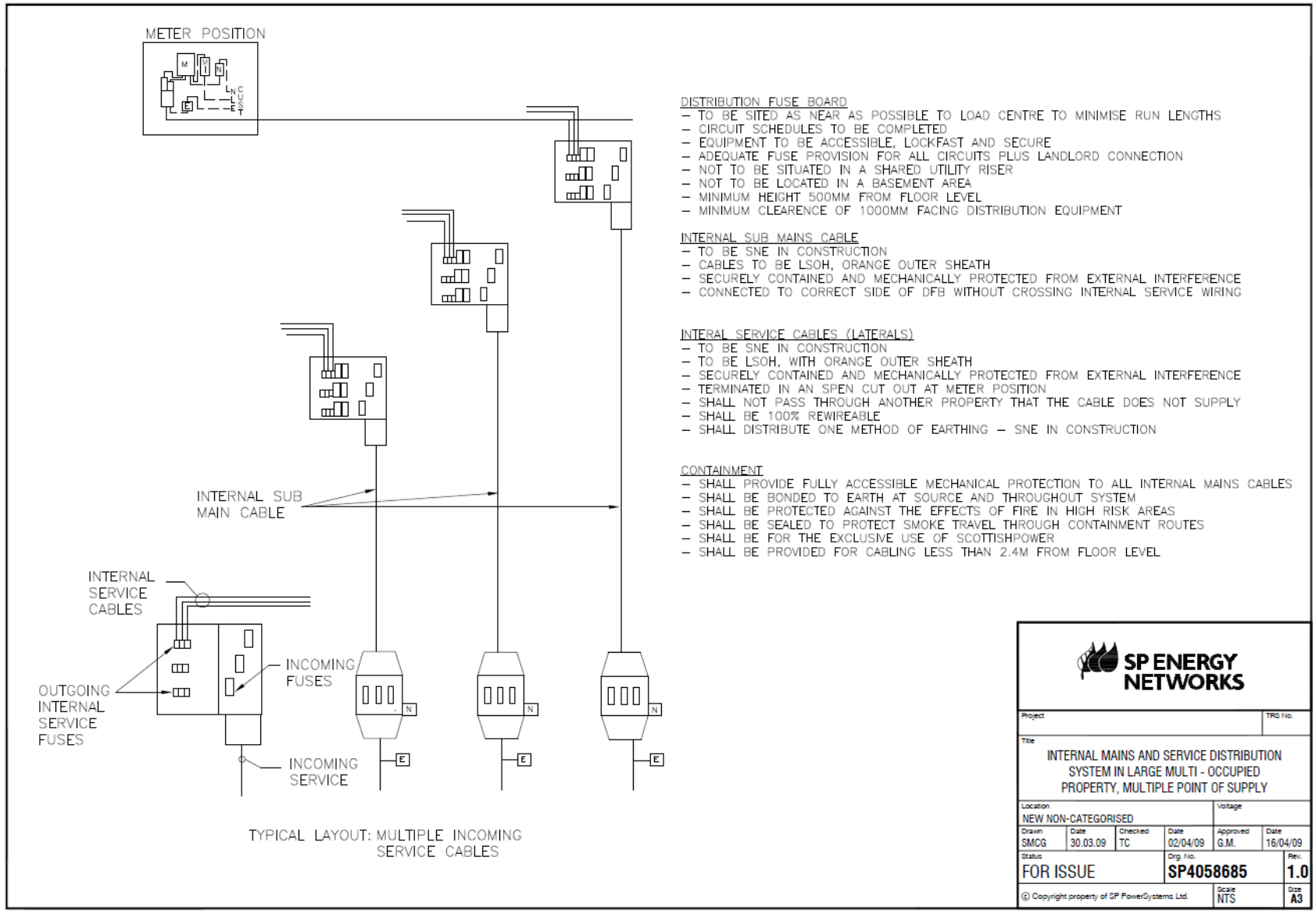

TYPICAL LAYOUT: MULTIPLE INCOMING SERVICE CABLES

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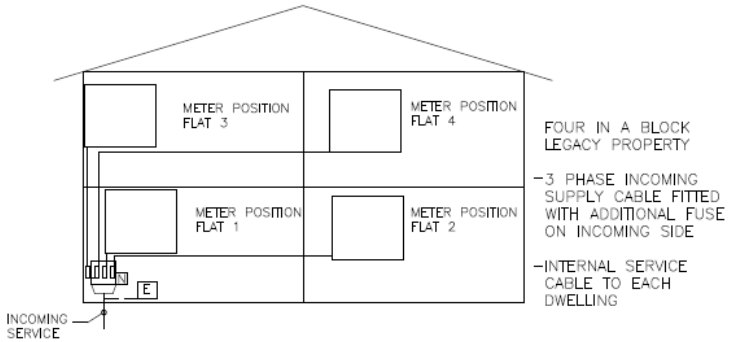
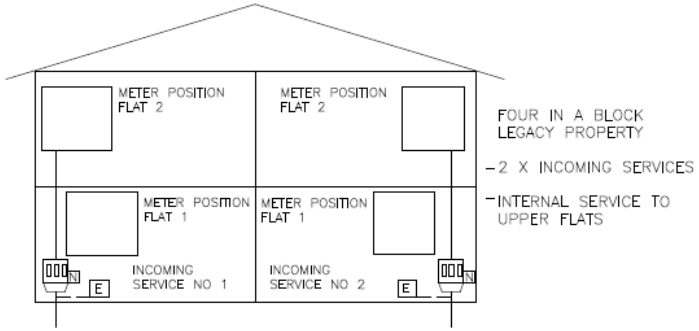


FOUR IN A BLOCK LEGACY PROPERTY

– 3 PHASE INCOMING SUPPLY CABLE FITTED WITH ADDITIONAL FUSE ON INCOMING SIDE

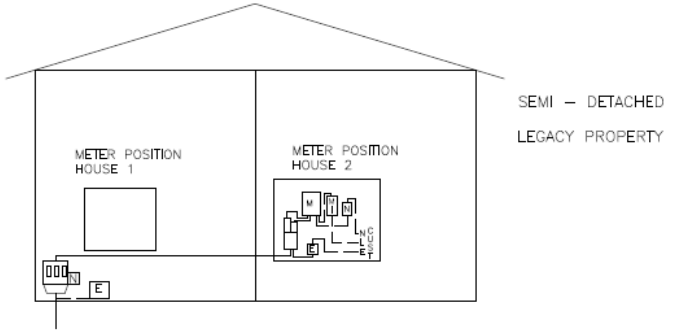
– INTERNAL SERVICE CABLE TO EACH DWELLING



FOUR IN A BLOCK LEGACY PROPERTY

– 2 X INCOMING SERVICES

– INTERNAL SERVICE TO UPPER FLATS



SEMI – DETACHED

LEGACY PROPERTY

DISTIBUTION CABLEHEAD
– EQUIPMENT TO BE ACCESSIBLE, LOCKFAST AND SECURE
– ADEQUATE FUSE PROVISION FOR ALL CIRCUITS – NO DOUBLE CONNECTIONS
– CIRCUIT SCHEDULES TO BE COMPLETED
– NOT TO BE LOCATED IN A BASEMENT AREA
– SECURELY CONTAINED AND MECHANICALLY PROTECTED FROM EXTERNAL INTERFERENCE

INTERNAL SERVICE CABLES (LATERALS)
– TO BE SNE IN CONSTRUCTION
– CABLES TO BE LSOH, WITH ORANGE OUTERSHEATH
– SECURELY CONTAINED AND MECHANICALLY PROTECTED FROM EXTERNAL INTERFERENCE
– TERMINATED IN AN SPEN CUT OUT AT METER POSITION
– SHALL BE 100% REWIRABLE
– SHALL DISTRIBUTE ONE METHOD OF EARTHING – SNE IN CONSTRUCTION
– SHOULD BE INSTALLED AND CONTAINED WITHIN THE FABRIC OF THE BUILDING
– SHOULD BE INSTALLED AND CONTAINED ON SURFACE WHERE POSSIBLE

CONTAINMENT – METHOD OF WIRING
– SHALL PROVIDE FULLY ACCESSIBLE MECHANICAL PROTECTIONS TO ALL INTERNAL MAINS CABLES
– SHALL BE BONDED TO EARTH AT SOURCE, AND THROUGHOUT SYSTEM
– SHALL BE PROTECTED AGAINST THE EFFECTS OF FIRE IN HIGH RISK AREAS
– SHALL BE SEALED TO PREVENT SMOKE TRAVEL THROUGH CONTAINMENT ROUTES
– SHALL BE FOR THE EXCLUSIVE USE OF SCOTTISHPOWER
– SHALL BE PROVIDED FOR CABLES LESS THAN 2.4M FROM FLOOR LEVEL

SP ENERGY NETWORKS

Project					TRS No.
Title: INTERNAL MAINS AND SERVICE DISTRIBUTION SYSTEM, SEMI - DETATCHED AND COTTAGE FLAT TYPE PROPERTIES					
Location: NEW NON-CATEGORISED				Voltage	
Drawn: SMCG	Date: 26/03/09	Checked: TC	Date: 02/04/09	Approved	Date
Status: PRELIMINARY			Drg. No.: SP4059139		Rev.: 1.0
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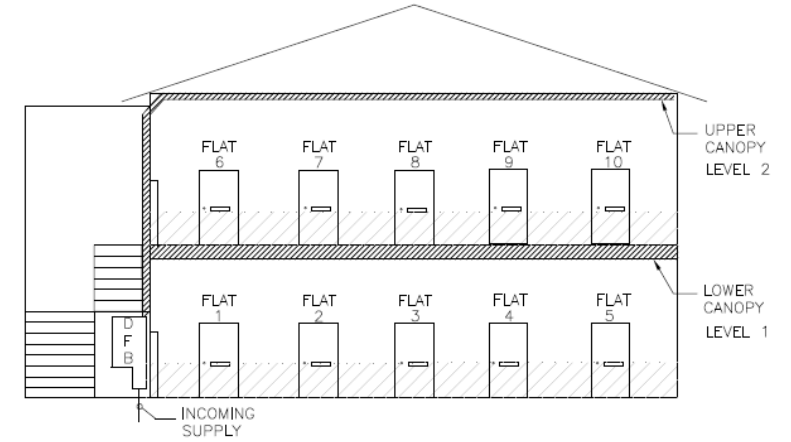
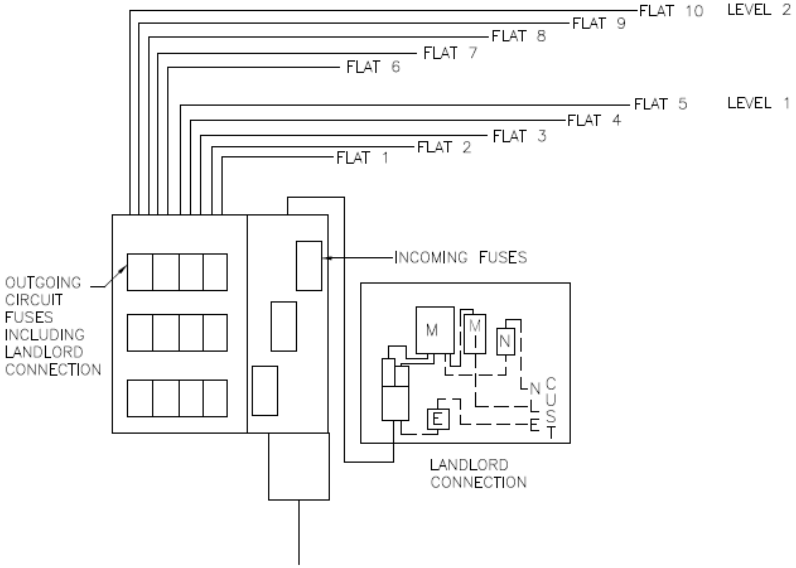
Internal Use





DISTRIBUTION FUSE BOARD
- TO BE SITED AS CLOSE AS POSSIBLE TO POINT OF SUPPLY
- CIRCUIT SCHEDULE TO BE COMPLETED
- EQUIPMENT TO BE ACCESSIBLE, LOCKFAST AND SECURE
- ADEQUATE FUSE PROVISION FOR ALL CIRCUITS AND LANDLORD CONNECTION
- NOT TO BE LOCATED IN THE BASEMENT OR BIN AREA
- MINIMUM HEIGHT OF 500MM FROM FLOOR LEVEL
- MINIMUM CLEARANCE OF 1000MM FACING DISTRIBUTION EQUIPMENT

INTERNAL SERVICE CABLES (LATERALS)
- TO BE SNE IN CONSTRUCTION
- CABLES TO BE LSOH, WITH ORANGE OVERSHEATH
- SECURELY CONTAINED AND MECHANICALLY PROTECTED FROM EXTERNAL INTERFERENCE
- TERMINATED IN AN SPEN CUT OUT AT METER POSITION
- SHALL BE 100% REWIRABLE
- SHALL DISTRIBUTE ONE METHOD OF EARTHING – SNE IN CONSTRUCTION

CONTAINMENT
- SHALL PROVIDE FULLY ACCESSIBLE MECHANICAL PROTECTION TO ALL INTERNAL MAINS CABLES
- SHALL BE BONDED TO EARTH AT SOURCE, AND THROUGHOUT SYSTEM
- SHALL BE PROTECTED AGAINST THE EFFECTS OF FIRE IN HIGH RISK AREAS
- SHALL BE SEALED TO PREVENT SMOKE TRAVEL THOUGH CONTAINMENT ROUTES
- SHALL BE FOR THE EXCLUSIVE USE OF SCOTTISHPOWER
- SHALL BE PROVIDED FOR CABLING LESS THAN 2.4M FROM FLOOR LEVEL

SP ENERGY NETWORKS

Project						TRG No.
Title: INTERNAL MAINS AND SERVICE DISTRIBUTION SYSTEM, DECK ACCESS PROPERTY						
Location: NEW NON-CATEGORISED					Voltage	
Drawn: SMCG	Date: 30.03.09	Checked: TC	Date: 02/04/09	Approved: G.M.	Date: 16/04/09	
Status: FOR ISSUE			Drg. No.: SP4059175		Rev.: 1.0	
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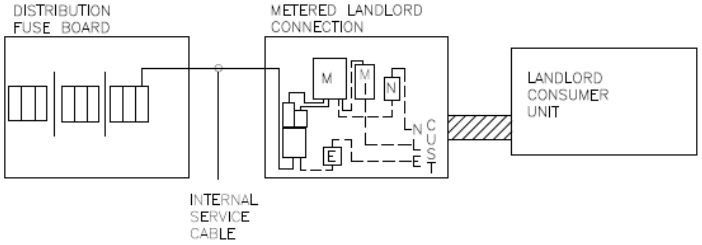
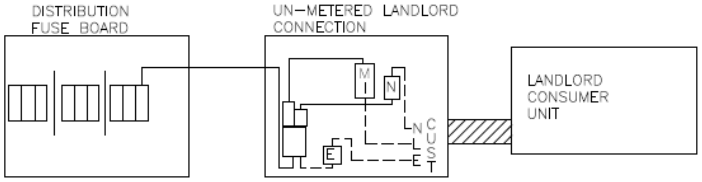
Internal Use





METERED LANDLORD CONNECTION
- EXCEEDS 500W ELECTRICAL LOAD
- SECURELY CONTAINED AND MECHANICALLY PROTECTED FROM EXTERNAL INTERFERENCE
- WILL PROVIDE SAFE ACCESSIBLE POINT OF CONNECTION
- ACCESS TO SCOTTISHPOWER DISTRIBUTION EQUIPMENT WILL NOT BE REQUIRED

UN–METERED LANDLORD CONNECTION
- WILL NOT EXCEED 500W ELECTRICAL LOAD
- SECURELY CONTAINED AND MECHANICALLY PROTECTED FROM EXTERNAL INTERFENECE
- WILL PROVIDE SAFE ACCESSIBLE POINT OF CONNECTION
- ACCESS TO SCOTTISHPOWER DISTRIBUTION EQUIPMENT WILL NOT BE REQUIRED

INTERNAL SERVICE CABLES (LATERAL)
- TO BE SNE IN CONSTRUCTION
- CABLES TO BE LSOH, WITH ORANGE OVERSHEATH
- SECURELY CONTAINED AND MECHANICALLY PROTECTED FROM EXTERNAL INTERFERENCE
- TERMINATED IN AN SPEN CUT OUT AT LANDLORDS POSITION
- SHALL BE 100% REWIRABLE
- SHALL DISTRIBUTE ONE METHOD OF EARTHING – SNE IN CONSTRUCTION
- INDEPENDENTLY FUSED IN DISTRIBUTION FUSE BOARD

SP ENERGY NETWORKS

Project					TRS No.
Title: TYPICAL LAYOUT, LANDLORD CONNECTION					
Location: NEW NON-CATEGORISED				Voltage	
Drawn: SMCG	Date: 30/03/09	Checked: TC	Date: 02/04/09	Approved: G.M.	Date: 16/04/09
Status: FOR ISSUE		Drg. No.: SP4059172			Rev.: 1.0
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