

<b>SSE POWER DISTRIBUTION</b>	<b>SPECIFICATION FOR RISING MAINS AND SERVICES USED DURING THE INSTALLATION OF NEW CONNECTIONS</b>	Page 1 of 6
Applies to Third party installers of new connections		<b>SP-PS-322</b>
Prepared by: MJG Network Services		Rev: 3-03

Authorised by: A.B. Network Services Manager	Proposed Review Date: Mar. 13	Issue Date: Mar. 08	No of this copy:
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<b>INFORMATION PROVIDED TO ASSIST THE TENDERER FOR THE SUPPLY OF:</b>			
	<b>ITEM:</b>	<b>SPECIFICATION FOR RISING MAINS AND SERVICES USED DURING THE INSTALLATION OF NEW CONNECTIONS</b>	
	<b>REFERRED TO IN EACH:</b>		
	<b>HARMONISATION DOCUMENT / EUROPEAN STANDARD</b>	BS EN 295	
	<b>I.E.C.</b>		
	<b>BRITISH STANDARD</b>	7671, 8313	
	<b>DEROGATIONS (IF ANY)</b>		

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<b>SSE POWER DISTRIBUTION</b>	<b>SPECIFICATION FOR RISING MAINS AND SERVICES USED DURING THE INSTALLATION OF NEW CONNECTIONS</b>	Page 2 of 6
Applies to Third party installers of new connections		<b>SP-PS-322</b>
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## GENERAL

This document gives guidance to third parties on the approved methods for installing new rising main and services. The notes give general guidance only and each installation will have to be surveyed to establish the best method of carrying out the work.

## REFERENCES

Reference	Title
BS EN 295	Vitrified clay pipes and fittings and pipe joints for drains and sewers
BS 7671	Requirements for electrical installations
BS 8313	Code of Practice for accommodation of Building Services in Ducts
ENA TS 12-3	Outdoor meter cupboards
ENA TS 12-24	Plastic ducts for buried electric cables
SP-PS-051	SSEPD Specification for rising main distribution boxes
SP-PS-313	SSEPD Specification for electricity service and distribution cables for use during the installation of new connections
SP-PS-314	SSEPD Specification for joints and terminations for electricity cables used during the installation of new connections

## INSTALLATION OF RISING MAINS AND SERVICES

### *Main Incoming Service Position*

Ducts to be provided for incoming service cables are to be internally glazed vitreous clayware pipes to British Standard EN 295, or twin walled polyethylene ducting such as Ridgiduct, complying with the Energy Networks Association Technical Specification 12-24.

Ducts provided for our use are to be spaced at least 1.0 metre clear of inspection pits and other duct lines to ensure working clearance at the ends of the ducts. Ducts should be at least 500 mm below external finished ground level and should terminate in an easy radius bend at inside floor level against the specified wall space.

25 mm thick exterior grade ply should be fitted over the wall space to accommodate our main cable termination and distribution panel.

<b>SSE POWER DISTRIBUTION</b>	<b>SPECIFICATION FOR RISING MAINS AND SERVICES USED DURING THE INSTALLATION OF NEW CONNECTIONS</b>	Page 3 of 6
Applies to Third party installers of new connections		<b>SP-PS-322</b>
Prepared by: MJG Network Services		Rev: 3-03

## **Metering**

## **Position**

SSE require that either a standard meter cabinet or internal wall space is provided for electricity meter(s) and supply equipment at each individual customer's premises.

This is to allow for a prepayment meter to be installed at the service position if required, a method of payment which cannot be supported at communal meter positions.

The rising service terminations and meters will be in standard meter cupboards. Fitting instructions are included with the cabinets. The cabinets are only large enough for our equipment. Separate main switches are to be fitted on an inside wall, so that the length of interconnecting cable does not exceed 3metres. This cable must only enter through the bottom of the cabinet, through the right hand hole, when viewed from the front.

Where it has been agreed in writing with SSE that cabinets will not be used, a wall space to fix a meter board (500 mm high x 300 mm wide) to accommodate the cut-out and metering equipment must be provided. The bottom of the meter board to be fixed between 450 mm and 1050 mm above the finished floor level. The meter position must not be situated in a kitchen, bathroom, toilet or any other location deemed to be unsafe for installation of the equipment.

Gas meters, where installed, must be at least 300 mm away from the electrical equipment. The space should be well ventilated.

### **LSOH Internal Service and Mains Cables**

All service and mains cables run within buildings must have Low Smoke and Zero Halogen (LSOH) cables sheaths with separate neutral earth, see SP-PS-313 for details of cable specification details.

## **Earthing**

The electrical installation must comply with any statutory requirements current at the time it is connected. SSEPD will usually provide a SNE terminal at the meter position to assist with the electrical protection of the installation. The bonding on the electrical installation must meet the requirements of the current edition of the I.E.T Wiring Regulations (British Standard 7671).

<b>SSE POWER DISTRIBUTION</b>	<b>SPECIFICATION FOR RISING MAINS AND SERVICES USED DURING THE INSTALLATION OF NEW CONNECTIONS</b>	Page 4 of 6
Applies to Third party installers of new connections		<b>SP-PS-322</b>
Prepared by: MJG Network Services		Rev: 3-03

## **GENERAL REQUIREMENTS FOR SUPPLY TO MULTI-OCCUPANCY DOMESTIC PREMISES**

Where supply is to two or more separately metered consumers on the same premises, and a service position accessible to each consumer at all times could not be provided (e.g. a flat over a lock-up shop), each consumer should be supplied by a separate service. It follows that the cut-outs and meters etc. are within the individual premises, and a prepayment meter can be installed at the service position if required.

It is SSE policy, wherever possible, to supply the individual flats etc. via internal services. This system allows individual services to be fused at the main intake position/s.

The internal services (i.e. the cables from the intake/s to the individual flats) should terminate in the flats in a cut-out or Flat Service Meter Isolator (f.s.m.i. - a cut-out with the fuse replaced by a link); this allows local isolation.

The fuse at the intake should be 100A and an f.s.m.i. should be fitted in the flat.

The size and number of phases of the cable supplying the building should be decided according to loading, spacing of cables and volt drop considerations.

The builder/developer is required to facilitate installation and possible replacement of the SSEPD cables. This generally requires a plastic or earthenware duct from a point clear of the building and any concrete aprons, etc. to the intake position (with an easy bend at the service position) for the incoming cable, and suitable ducts or chases for the internal services. British Standard 8313 'Code of Practice for Accommodation of Building Services in Ducts' gives guidance on the specification of such ducts etc., and gives details of fire resisting barriers etc. which may be required.

Every effort should be made to ensure ready replacement of a faulted service without the need to enter the property of a third party.

## **TYPICAL ARRANGEMENTS**

The following typical arrangements should be used subject to appropriate loading and volt-drop considerations:-

- (i.) Supply to two consumers may be arranged by bus-barring single phase cut-outs at the intake see Fig. 1/1 & 1/2.
- (ii.) Supply to three consumers may be arranged by three phase cut-out at the intake see Fig. 1/3.
- (iii.) Where loading or number of consumers precludes the above, the arrangements shown in Fig. 2 should be adopted. These use 7, 10 or 16-way distribution units at the intake position/s, the supply being via 95 mm<sup>2</sup> or 185 mm<sup>2</sup> Wavecon cable/s for 10 & 16 way units and 95

<b>SSE POWER DISTRIBUTION</b>	<b>SPECIFICATION FOR RISING MAINS AND SERVICES USED DURING THE INSTALLATION OF NEW CONNECTIONS</b>	Page 5 of 6
Applies to Third party installers of new connections		<b>SP-PS-322</b>
Prepared by: MJG Network Services		Rev: 3-03

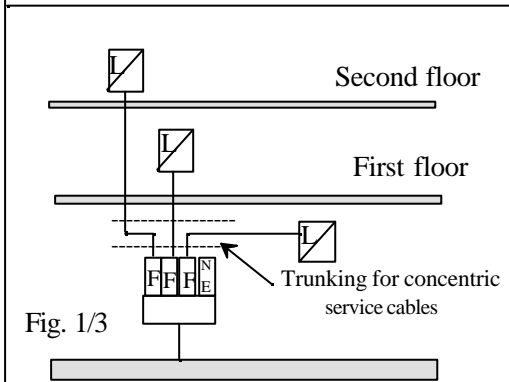
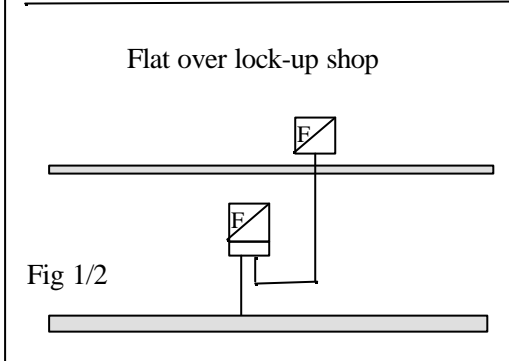
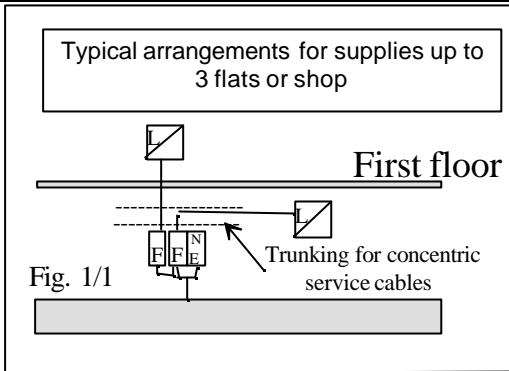
mm<sup>2</sup> or 35 mm<sup>2</sup> 3 phase cable (if maximum load permits) for the seven way unit.

- (iv.) An alternative method of particular use in high rise buildings uses the 12, 18 and 24 way rising main boxes shown in Fig. 3. This unit is supplied by a 95 mm<sup>2</sup> or 185 mm<sup>2</sup> 4 core Wavecon cable to the bottom and allows another 4 core Wavecon cable to leave the top to feed higher level units.
- (v.) Separate Neutral Earth (SNE) will normally be used all mains and services to avoid the risk of circulating currents within the building.

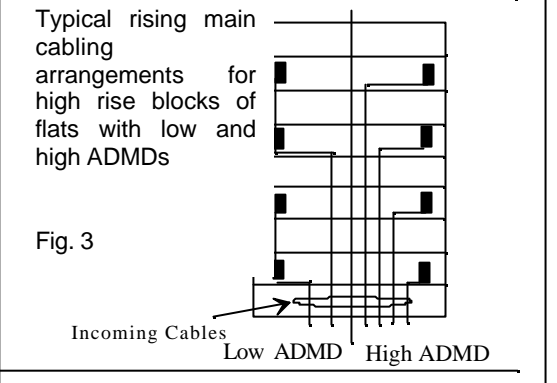
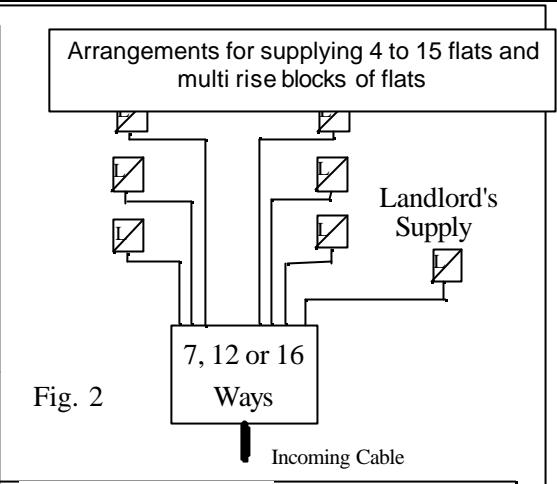
#### **APPLICABLE STANDARDS**

- 1.1 Third Parties will obtain copies of non SSE Standards from the issuing organisations at their own expense.
- 1.2 Third Parties will obtain copies of SSE Standards from the Scottish & Southern Energy Power Systems Document Administrator, Inveralmond House, 200 Dunkeld Road, Perth. PH1 3AQ.
- 1.3 There will be a cost of £50 for each Standard requested to cover administration and copying costs.

<b>SSE POWER DISTRIBUTION</b>	<b>SPECIFICATION FOR RISING MAINS AND SERVICES USED DURING THE INSTALLATION OF NEW CONNECTIONS</b>	Page 6 of 6
Applies to Third party installers of new connections		<b>SP-PS-322</b>
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- Key
- Meter Isolator
  - 100A Cut-out
  - 100A Cut-out with loop
  - Neutral / Earth Terminal
  - Rising main boxes (12, 18 & 24 way)



Single Cable Entry Rising Main Distribution Boxes				
No. Ways	'H' mm	'W' mm	'D' mm	Cable sizes mm <sup>2</sup>
7	610	410	150	35 3Ø or 95
10	655	590	150	95 or 185
16	720	830	150	95 or 185

Top and Bottom Entry Rising Main Distribution Boxes for High Rise Blocks of Flats				
	'H' mm	'W' mm	'D' mm	Cable sizes mm <sup>2</sup>
15 J1	1000	680	245	95 or 185
15 J2	1000	920	245	95 or 185
24 J1	1000	800	245	95 or 185
24 J2	1000	1005	245	95 or 185

**SCHEMATIC LAYOUTS FOR RISING MAINS AND LATERAL SERVICES**