

Emergency Isolation

Aims

- The aims of this session are to provide you with the knowledge and understanding of the positioning and operation of emergency meter controls and valves.

Objectives

- **Inside meter positions.**
- **Outside meter position.**
- **Multi-occupancy installations –**
 - **External risers.**
 - **Internal risers.**
 - **Remote meters.**

References

- Regulation 9 – Gas Safety (Installation & Use) Regulations.
- BS 6400Pt 1:2002 – Installation of domestic sized gas meters.
- Maximum rated capacity not exceeding 6m³/h
- 2nd & 3rd family gases.

Emergency Isolation

- Where electricity and gas meters and there associated controls are to be fitted within 150mm of one another, a partition made of electrical insulating material should be fitted.

Emergency Isolation

- The size of the service pipe will depend upon the required gas load and acceptable pressure loss.
- Should terminate on the left hand side of the meter position.
- Gas supply shall be controlled by a meter control valve.
- Primary meters shall only be installed by Transco.
- Must carry a warning label, stating the actions in an emergency.

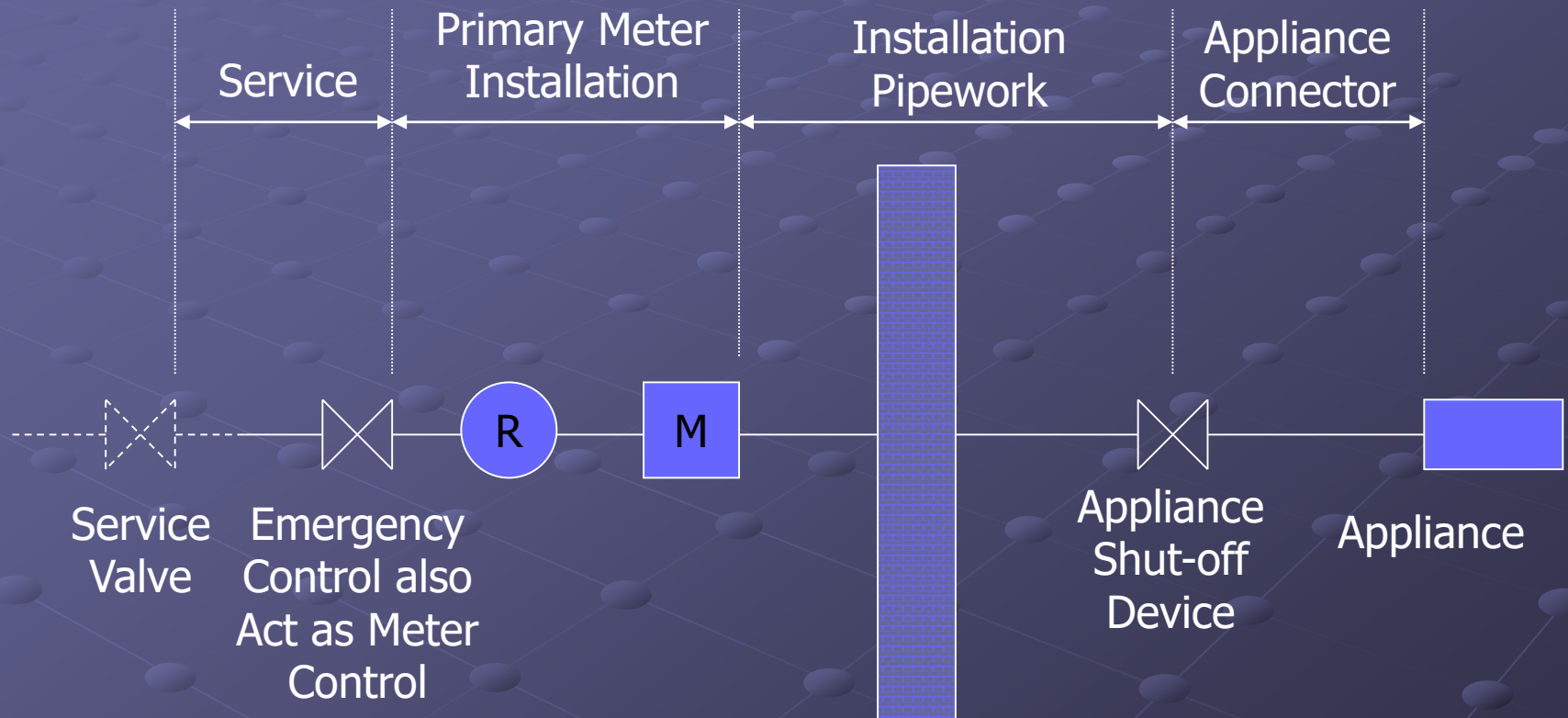
Meter/Emergency Control

- Shall be fitted when installing a new gas supply to the building.
- Situated as near as practicable to the point of entry.
- Readily accessible to the customer.
- Where a meter is installed in a building more than 2m from, or out of sight of, the nearest upstream emergency control.

Meter/Emergency Control

- A label shall be fitted on, or near the meter, indicating the position of that control.
- Where meter installation is remote from the dwelling or is not readily accessible to the customer.
- A separate emergency control shall be installed as near as practicable to the point where the gas supply enters the building.

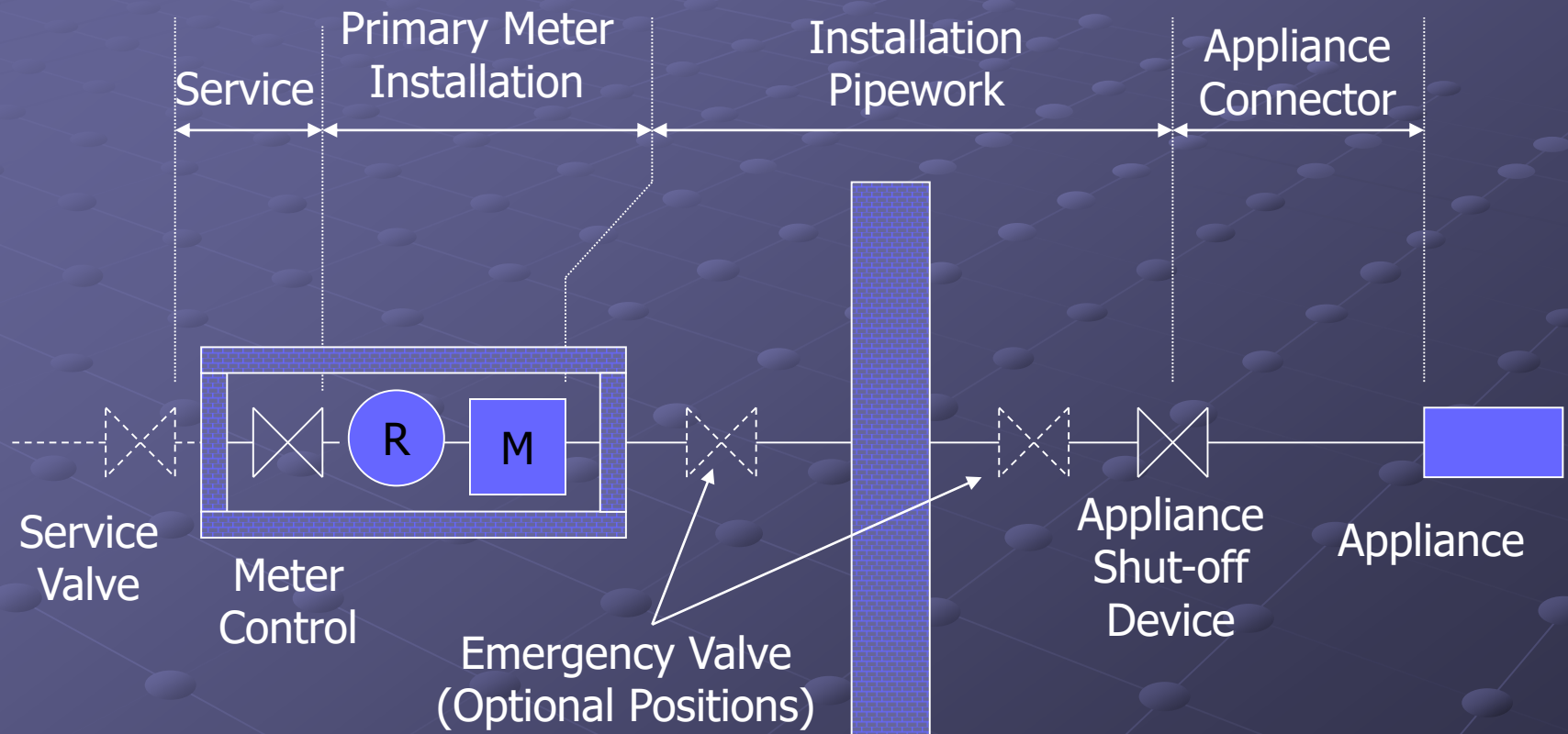
Typical Installations Outside Meter



Remote/Boundary Meter Installations

- IN rural areas a property boundary meter may be considered.
- May be situated well away from the building.
- A separate emergency control shall be installed as near as practicable to the point where the gas supply enters the dwelling and a label attached.

Typical Installations Inside Meter

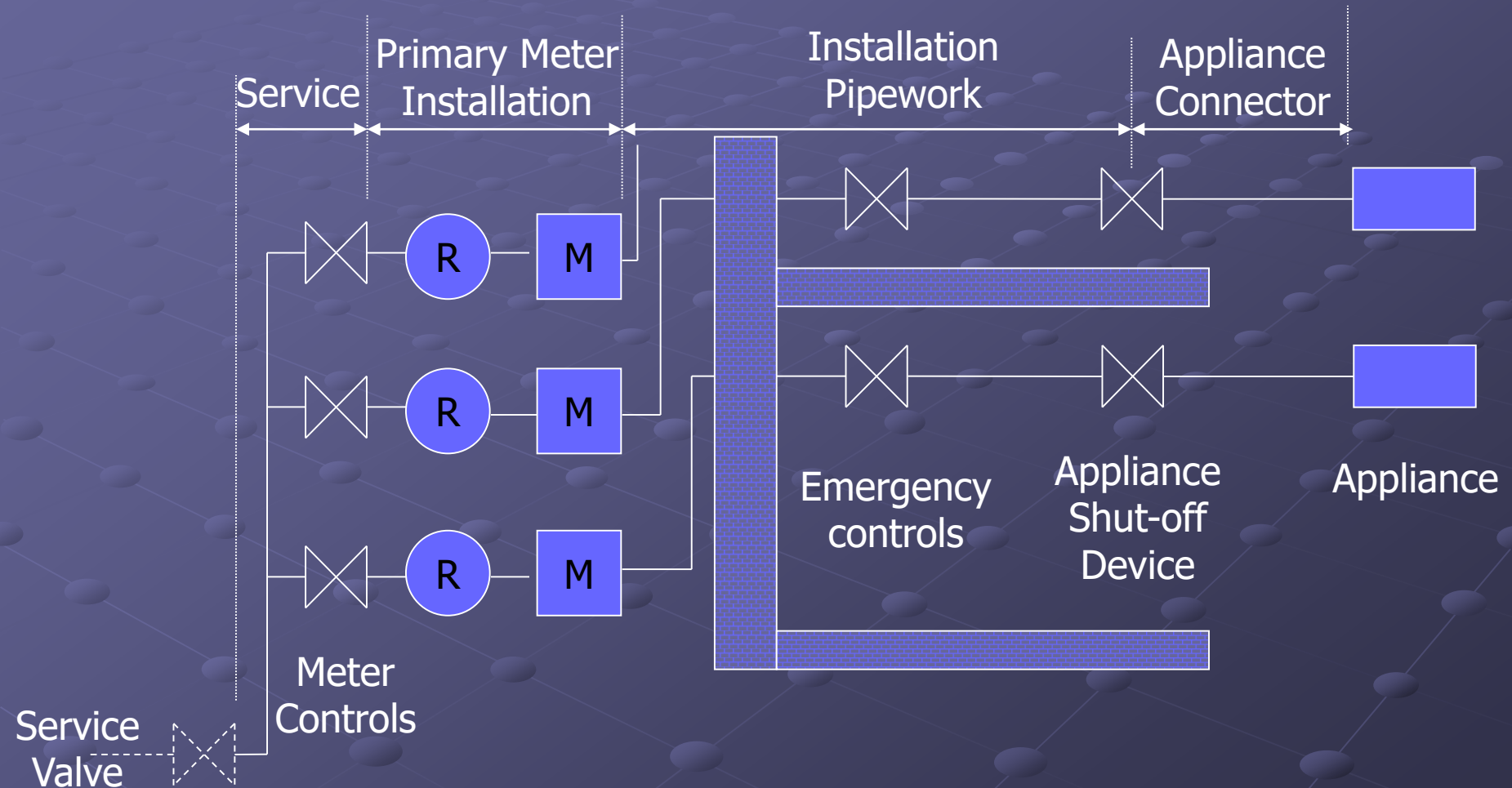


Multiple Occupancy Installations

- Meters shall be sited in a secure, well ventilated area which is reasonably accessible at all times.
- Compartment keys should be held by the occupier.
- An authorised person to have access to all the meter compartments and the meter/room area.
- Meters clearly marked to indicate which dwelling it serves.

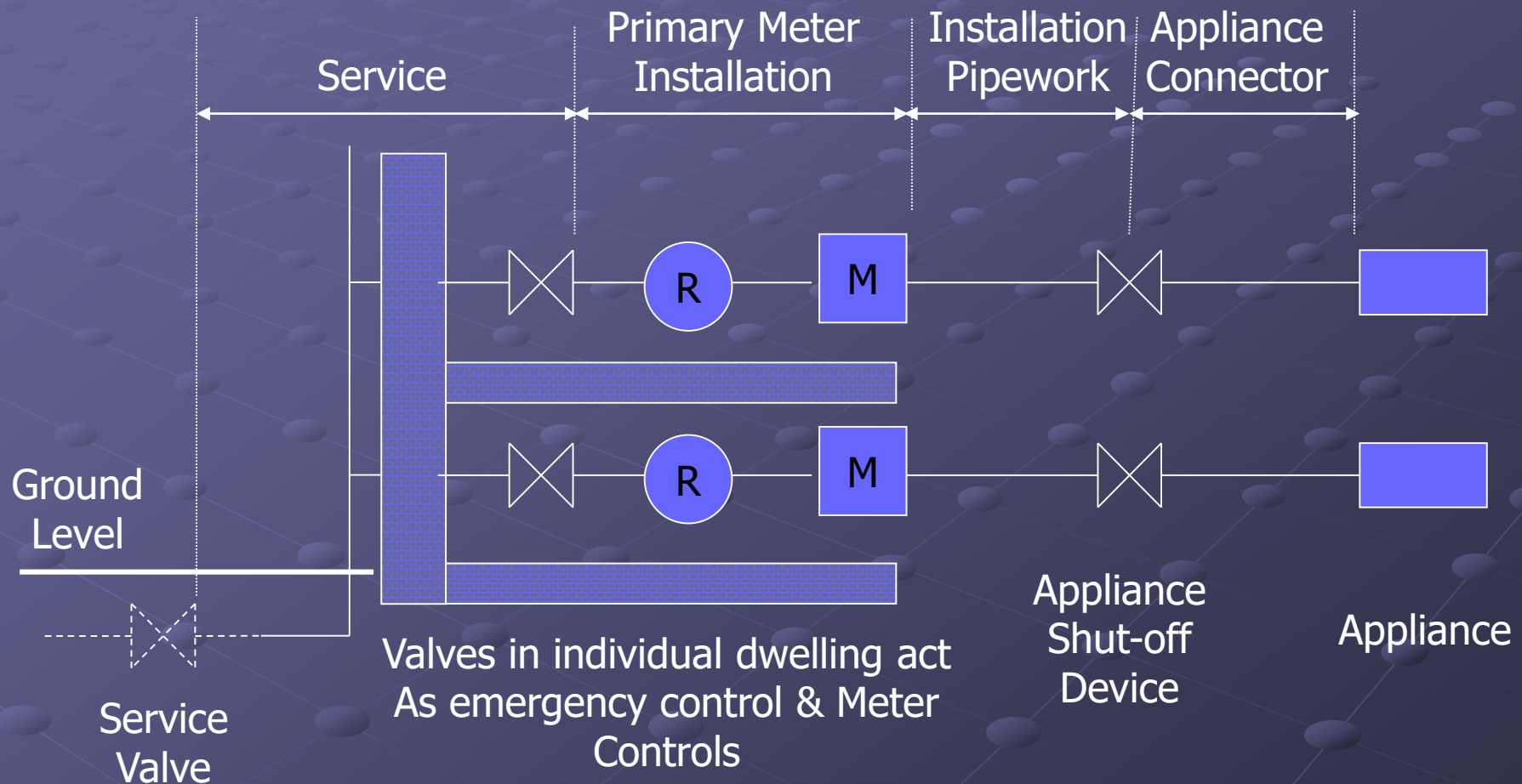
Typical Installations

Multi-occupancy – Remote Meters



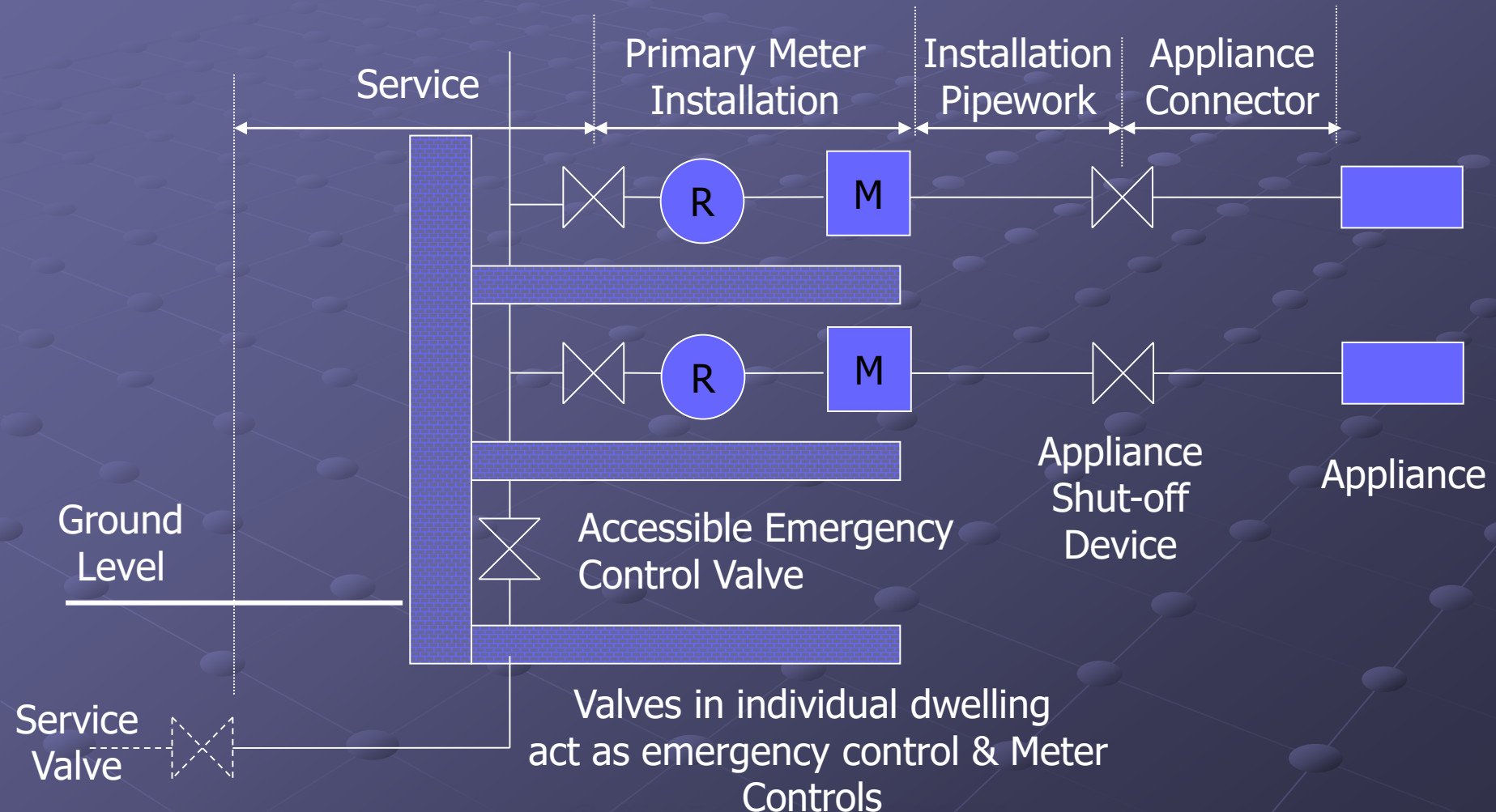
Typical Installations

Multi-occupancy – External Riser



Typical Installations

Multi-occupancy – Internal Riser



Operation of Emergency/Meter Control.

- Domestic supplies terminate at emergency/meter control.
 - Exceptions are external meters fitted in a meter box or housing.
- Emergency/meter control is normally the property of the gas supplier.
- Simplest form of controlling gas flow manually is a cock.

Operation of Emergency/Meter Control.

- A plug valve is a tapered plug which is drilled or slotted to allow gas to flow.
- BS 1552



Operation of Emergency/Meter Control.

- The flow of gas is controlled by rotation of the plug.
- Valve open/closed is indicated by fan or groove.
- Niting washer.
- Niting (plug stops).



Operation of Emergency/Meter Control.

- Simple ball valve used on new installations.



Operation of Emergency/Meter Control.

- Typical emergency/meter control with 180° niting.
- On-Off Tape.
- Lever secured with a nut or split pin.
- Lever should be in line with pipe & gas flow direction when on.



Positioning of Emergency Control Valves.

- **Locate as close as possible to where the gas supply enters the property.**
- **Must be accessible at all times.**
- **The key must be able to move fully downwards to the OFF position.**

Positioning of Emergency Control Valve.

- Addition emergency control will be required if the primary emergency control is remote from the gas meter.
 - Gas meter installation is more than 6 meters from the property.
 - If the gas supply leaves the main building & enters another building on the same property but under the control of a different person.
 - The gas supply enters a number of flats within the same building.

Unused Service Pipework

- On an unused service pipe, the emergency/meter control valve must be locked & sealed as follows.
 - The control is turned off.
 - The lockscrew is tightened.
 - Split pin & key removed.
 - The control outlet has been capped.
 - The cap & locking screw have been sealed.
 - A warning label has been attached.

Unused Service Pipework

- **Note – Emergency/meter control valve must not be turned on without ensuring there are no unsealed pipes.**

Defective Emergency Control Valves

- **Faulty or incorrectly fitted emergency/meter control valve.**
 - **Notify the gas supplier who will treat the problem as an emergency.**
- **If dangerous,**
 - **Notify the occupier of your actions, turn off the gas & attach a warning label.**
- **If not dangerous,**
 - **Notify the occupier of your actions.**

Defective Emergency Control Valves

- Under no circumstances should the installer attempt a repair of any kind on an emergency/meter control other than to make it safe.

Low Pressure Domestic Supplies

- Low pressure domestic supplies terminate at an emergency/meter control, within a building, an external meter box or meter housing.
- Domestic services must not run through unventilated voids, under load bearing footings or similar foundations.

Low Pressure Domestic Supplies

- The emergency/meter control and meter positions will be:-
 - Approved external installations.
 - Within an attached garage or out building.
 - Inside the dwelling.

Meters in Approved External Installations

- **Meter Boxes must designed to ensure:-**
 - **In the event of a gas escape, gas cannot enter the building or wall cavity.**
 - **That it is accessible with a special key.**

Built-in Meter Box

- Generally fitted on the outside wall.
- Facing the gas main or on an adjacent wall.
- Not more than 2m from the front wall.



Built-in Meter Box

- Height of box – 500 to 1000mm above the DCP.
- Emergency/meter control located at front left hand corner.



Surface Mounted Meter Box

- Mounted on external wall.
- Generally used where no building work is required.



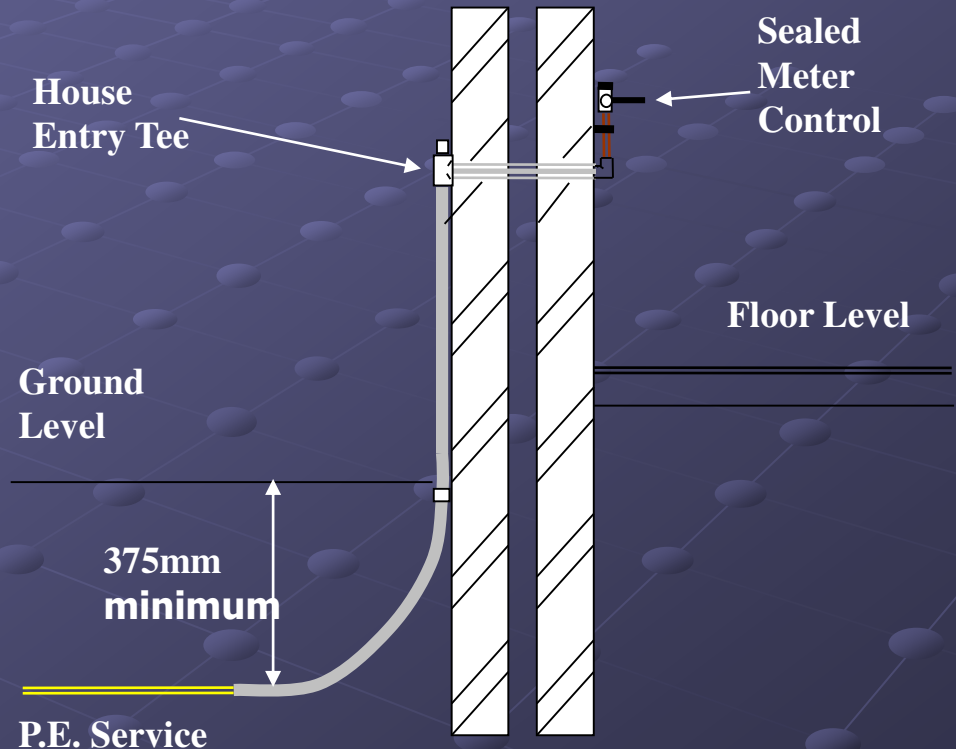
Semi-concealed Meter Box

- Installed against an outside wall.
- Partially concealed below ground.
- Special meters & other equipment are required.



Meters within Dwellings

- Found in dwellings at various points.
- Emergency/meter control situated as close as possible to entry point.
- Entry tee on houses less than 20 years old.



Meters in Attached Garages

- **Similar to Meters within dwellings.**
- **Fitted at high level.**
- **Termination & entry fitted as close as possible above ground entry point.**
- **House entry tee fitted.**

Low Pressure Multi-occupancy Building Supplies

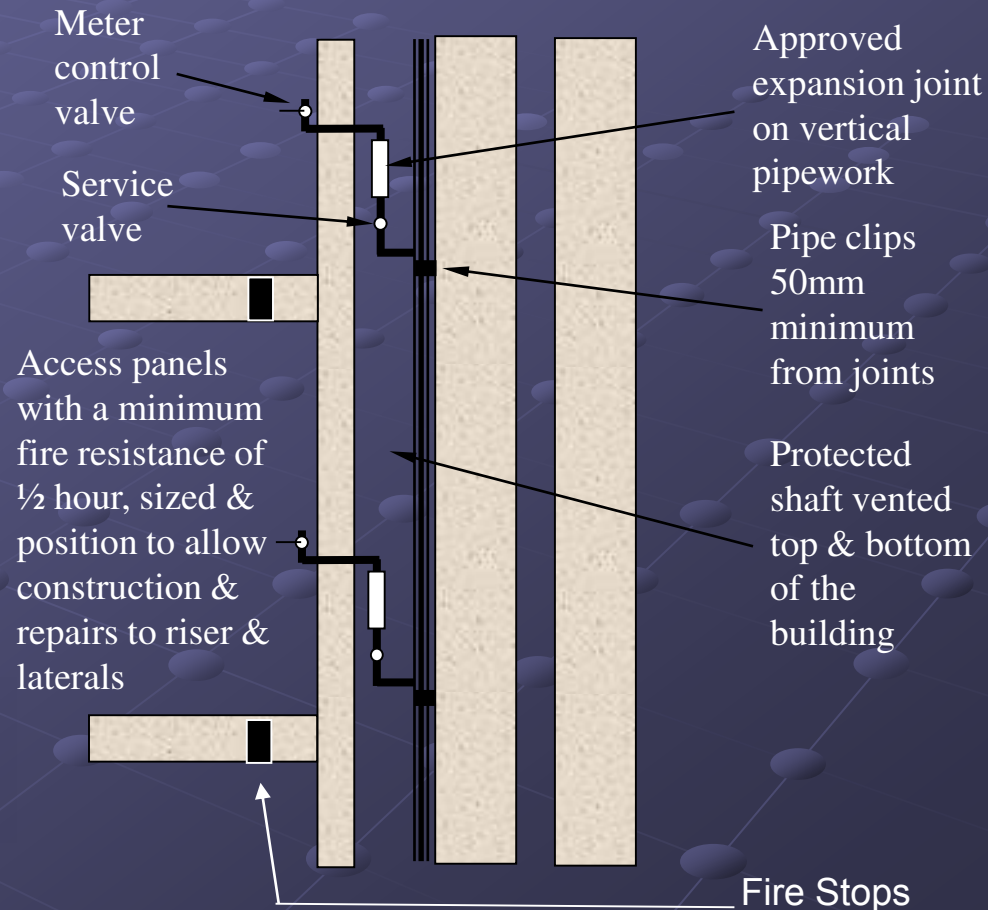
- **Gas supplies in multi-story & multi-dwelling properties should terminate with an emergency/meter control, taking local conditions into account.**
 - **Inside the building with internal service riser within a protected shaft.**
 - **Inside the dwelling, supplied by a readily accessible external riser.**

Low Pressure Multi-occupancy Building Supplies

- **In an approved, readily accessible, remote meter boxes with external service risers.**

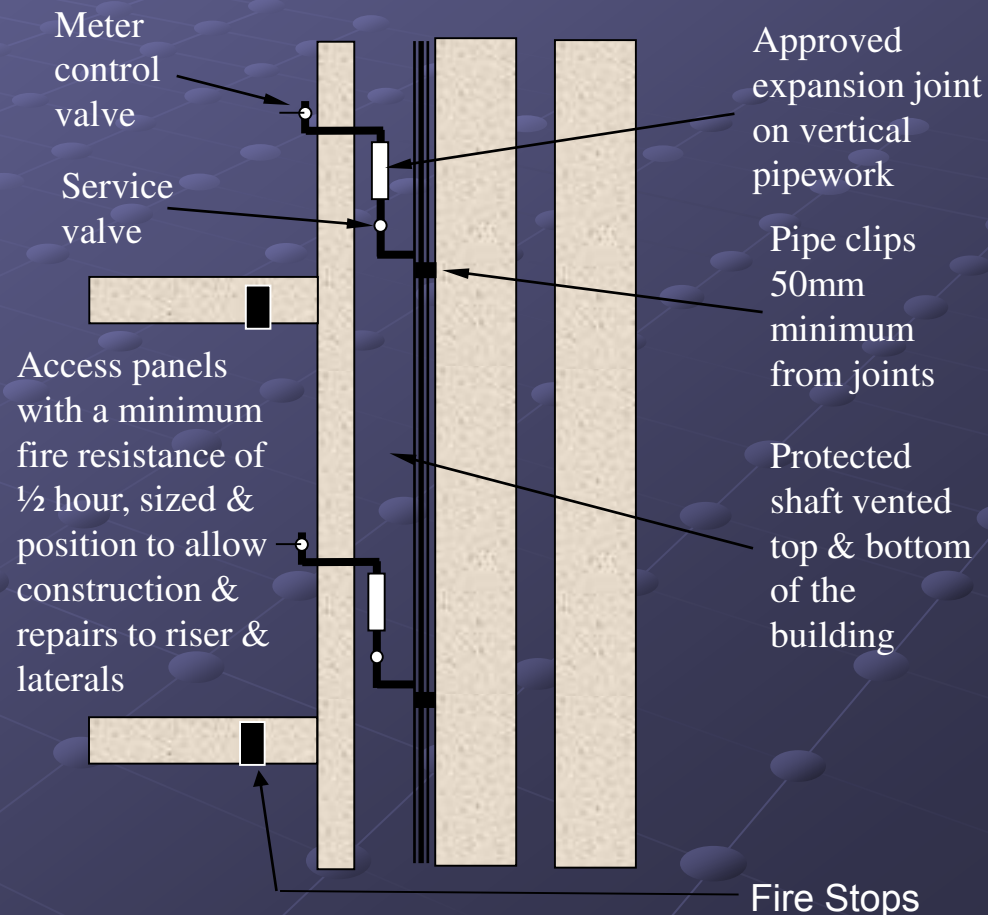
Internal Service Risers

- **Installed inside Buildings.**
- **Position near, service entry.**
- **Sited to minimise length of internal pipework or laterals, not exceeding 2m from entry point.**



Internal Service Risers

- Installed in a protected shaft which is continuous & ventilated to the outside at top & bottom.
- Each dwelling must have an emergency/meter control.
- Security type emergency control for the whole building.



External Service Risers

- Each dwelling will have a service riser entry & emergency/meter control adjacent to the meter & regulator.
- Emergency control for the building is not required.

Remote Meter Boxes with External Service Risers.

- All dwellings must be provided with an emergency control within the property, near the service entry.
- Installation is identical to a single dwelling.
- Installation pipework may rise a number of storeys into an individual property.
- Risers are located on or near the house wall closest to the gas main.

Remote Meter Boxes with External Service Risers.

- If emergency control does not form part of the primary meter installation, a notice must be displayed. It must:-
 - Give instructions in the event of an escape.
 - Notify actions if gas continues to escape.
 - Instructions not to re-open the control once it is turned off.
 - Give the name & telephone number of the gas emergency service.
 - Date the notice was first displayed.

Gas Safety (Installation & Use) Regulations (Regulation 9)

- **Regulation 9 – Emergency control.**
- **Places responsibility on the gas supplier to provide an emergency/meter control.**
- **Installer must ensure the satisfactory operation of the emergency/meter control.**
- **Installer must ensure remote emergency controls are labelled, warning the consumer & giving user instructions.**

Emergency Control Positions

- **Gas Safety (Installation & Use) Regulation 1984.**
- **Emergency control - Meter control valve.**
- **Emergency control - Gas is used in the building downstream of the valve.**
- **Labels must be fitted if the meter is more than 2m from, or out of sight of the emergency control.**

Emergency Control Positions

- In flats or similar situations, when the meter is remote, each dwelling must have an emergency control as close as possible to the service entry.
- If they have secondary meters, they must have an emergency/meter control installed.
 - Maintenance is the responsibility of the property owner.
 - The installer is responsibility for the correct position & labelling of the emergency/meter control.

Emergency Control Positions

- **An additional security-type emergency control valve will be necessary in a multi-occupancy dwelling with an internal riser.**
 - **It must be easily closed in an emergency.**
 - **Opened only with a special key.**

Emergency Control Positions

- To facilitate tightness testing, a test point should be located downstream of each emergency control valve.
- Each emergency control valve should be:-
 - Labelled & marked OFF/ON.
 - Accessible & easy to operate.

Emergency Control Positions

- **A suitable handle, securely attached, or other permanent means of operation, must be fitted to emergency control valves.**
- **When the control is in the 'open' position, the key or lever should be inline with the pipe & flow direction.**
- **The key or lever must not be allowed to fall open when fitted vertically.**

Emergency Control Positions

- Where the emergency control does not form part of the primary meter installation, a permanent notice stating 'Gas Emergency Control' must be fixed in a prominent position, either on or near the valve.
- It will inform what actions the consumer should take in the event of a gas escape, together with the name & telephone number of the gas supplier & date the notice was first displayed.

Emergency Control Positions

- **The Gas Suppliers must be made aware if the installation is lacking any of the details discussed.**
- **Ensure that all defects are reported & the correct details are given.**

**Thank you for
your
attention.**