

## 1. Purpose

To detail the method for removing and fitting frames and covers on BT Jointing Chambers in accordance with BT Specification LN 550 Part 901

## 2. Responsibilities

2.1 The Gang Foreman shall ensure staff involved in the installation of frames and covers for BT Jointing Chambers adhere to this method and are licensed under the BT scheme for the disciplines they are in charge of.

2.2 The Site Supervisor shall periodically monitor the compliance to this method statement.

2.3 The Quality Manager will ensure that the process is monitored periodically.

2.4 If this method cannot be adhered to, contact your supervisor for advice before proceeding.

## 3. References & Definitions

### 3.1 References

- Openreach Specification LN 550– Underground Duct Laying and Associated Works
- BT CN Drawings
- New Roads and Street Works Act 1991
- HAUC – Specification for the Reinstatement of Openings in Highways
- Safety at Street Works and Road Works – A Code of Practice
- HS (G) 47 Avoiding Danger from underground services
- Reporting Positive Gas Test Results

### 3.2 Definitions

- DFE Departure From Estimate
- Chapter 8 is the section of the New Roads and Street Works Act, which details the requirements of the road works guarding.

## 4. Safety considerations

### 4.1 Hazards

Traffic	√	Fumes/Gas	√	Falls of material	Mobile Plant & Vehicles	√
Buried Services	√	Dust	√	Demolition	Noise & Vibration	√
Overhead Services		Deep Excavations		Collapse of Structure	Lifting Operations	√
Fire/Explosions	√	Confined Spaces	√	Soft Ground	Manual Handling	√
Flying Particles/Objects		Lighting Levels	√	Falls on Level	Working near Water	
Heat		Falls from Height	√	Infected Materials	Adverse Weather	√

5. ASSESS THE RISK - Ensure that prior to starting work a SITE SPECIFIC RISK ASSESSMENT is conducted and recorded on MUS-FM-S-013 Site Specific Risk Assessment to identify specific risks that may be present. If in doubt contact your site supervisor.

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- ROAD WORKS GUARDING
  - To be in accordance with Chapter 8.
  - Signs and barriers to be secured with sand bags if necessary.
  - Maintain a safe route for pedestrians to by pass by the works.
  - Guard pedestrians from vehicles when directed into carriageway.
  - Where required lights to be attached to signing and guarding.
- PLANT, VEHICLES & WORK TOOLS
  - To be kept inside the work area.
  - To be in good working order and properly maintained.
  - To have mufflers and silencers fitted where practicable.
  - Vehicles to be fitted with, and use amber rotating beacon/s.
  - Plant operators to be trained and competent in the use of the plant they are using.
  - Switch plant off when not in use.
  - Ensure that all guards are properly secured and unauthorised persons do not use the plant/vehicle.
  - Rotate operators to reduce individual exposure.
  - Keep plant & vehicles away from the edge of the excavation.
  - Air hoses to be maintained in good order with joints correctly coupled.
  - Hose check arrestors to be fitted and used on all compressed air lines.
  - Dust suppression is to be used when saw cutting or using equipment that can cause airborne dust, i.e. water.
  - Fuel oil to be stored and handled safely to prevent spillage or contact with skin or clothing.
  - Ensure the correct PPE is used for the type of equipment.
  - Ensure fumes do not enter confined space.
- SAFE DIGGING
  - Utility safe dig prints to be available on site at all times.
  - Visual & CAT/ Genny where necessary surveys to take place.
  - All identified services to be marked on the surface.
  - Pilot Holes to be excavated by hand to confirm positions of services.
  - Ensure where necessary that correct trench wall supports are available and are used.
  - Excavated material shall be stored a safe distance away from the excavation to stop possible collapse into the excavation, but kept within the guarded area.
  - Mechanical excavation equipment shall not be used in the vicinity of other utility services.
  - Adequate access/ingress to be maintained at all times.
- CONFINED SPACE WORKING
  - Ensure that gas-testing equipment is available, and is used when entering joint boxes or manholes.
  - Where man entry is required ensure that all involved are trained and competent in confined space working and that there is an approved safe system of work and the confined space is continually gas monitored.
  - Ensure that in confined spaces where there is no free flow of clean air, ensure there is adequate ventilation and where practicable used forced ventilation.

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## • SAFE LIFTING TECHNIQUES

- When lifting materials and tools from/to the excavation or onto/off the truck ensure that items are not too heavy. Either reduce them into lighter pieces or/and seek assistance to spread the load or use suitable lift equipment. If in doubt seek advice.
- When lifting manhole or box covers ensure that the proper lifting keys are used and that safe lifting techniques are employed. For carriageway covers lifting aids shall be used for lifting the covers wherever practicable, i.e. a suitable manhole lifter.

## 4.2 Personal Protective Equipment

- ensure the following is worn at all times during the works:
- Hard Hat
- Safety boots or wellingtons
- High visibility jacket or jerkin
- Coveralls

Ensure the following is worn as required during the works:

- Eye protection – grinding, sawing and cutting
- Ear protection – grinding, sawing, cutting, using jackhammers.
- Dust masks – grinding, sawing, cutting or conducting activities that involve airborne dust.
- Gloves – when using power equipment or manual handling.
- Waterproofs – in wet weather.

## 5. Method

### 5.1 Prior to commencing work

- Survey the works to be done, noting the position of the other utility services.
- Erect road works guarding and signs in accordance with Chapter 8.
- Read service prints and conduct survey with CAT and where practicable mark all services in the vicinity of the excavation.
- Mark the surface around the frame to be excavated, allowing enough space for materials and compaction tools.
- Gas test any Jointing Chambers directly prior to entering and periodically during the works. If gases are found within the Jointing Chamber, no work must take place and your Supervisor informed.
- Ensure that all BT apparatus is protected from damage prior to and during the works.
- Examine the inside of the Jointing Chamber to establish that the structure is sound. If the Jointing Chamber needs to be re-built then inform your Supervisor to raise a DFE before proceeding.
- If the existing frame and cover is still in good condition and fit for re-use, all the covers will be marked to identify their original positions and the frame will be cleaned of all old bedding, materials and rust.

### 5.2 Fitting Footway frames & covers

- Removing the frame
- Remove the existing frame by excavating the area around it, ensuring that the Chamber is not damaged in the process.
- Where practicable, for excavations in blacktop the surface shall be cut with a suitable road saw to ensure that the edges are straight and square.
- All excavation equipment used should be suitable for the work undertaken and mechanical

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excavating equipment should not be used near other services.

- Check all brickwork or concrete to ensure it is sound. Up to two courses of brickwork may be renewed within the cost of renewing the Frame And Cover.
- If any additional brickwork needs to be renewed, then contact your supervisor who will arrange for a DFE for “Brickwork Erected per Square Meter”
- Fitting the new footway frame
- Ensure the frame to be used is clean and free from twists or damage prior to fitting.
- Materials used for bedding the frame shall be cement mortar mix, of 1 part cement to 3 parts sharp sand.
- For Modular Boxes the bedding shall be resin Mortar
- If the change in level is less than 25mm, then either a suitable bed of cement mortar shall be placed around the uppermost surface of the Chamber and the frame tamped and bedded on the mortar so that the frame is level with the surface. Alternatively place the frame in a position level with the final footway surface by using packing pieces under each corner of the frame.
- All voids under the frame shall be filled with cement mortar and any excess mortar shall be neatly trowelled and struck off in line with the inside of the frame. Remove the packing pieces and fully fill voids with cement mortar.
- After 12 hours have elapsed the cover/s may be placed.
- The covers are now checked for rocking. If the covers rock then the frame shall be re-levelled.
- In unmade surfaces, a 100mm C28 concrete surround shall be placed around the frame to the frame’s full depth.
- With Modular Chambers a Resin surround should be fitted, trowelled off at 45 degrees.
- The area is reinstated in accordance with the HAUC Specification.

### • 5.3 Fitting Carriageway frames and covers

- Removing the frame
- Remove the existing frame by excavating the area around it, ensuring that the Chamber is not damaged in the process.
- Where practicable, for excavations in blacktop the surface shall be cut with a suitable road saw to ensure that the edges are straight and square.
- All excavation equipment used should be suitable for the work undertaken and mechanical excavating equipment should not be used near other services.
- Check all brickwork or concrete to ensure it is sound, if necessary re-bed or re-point up to two courses of brickwork.
- Fitting the new carriageway frame
- Ensure the frame to be used clean and free from cracks or damage prior to fitting.
- If the Chamber requires modification to accept the frame refer to BT CN drawing 1750.
- Position the frame squarely on the Chamber walls and level with a suitable material.
- On the inside of the Chamber, place a bead of resin mortar or stiff cement mortar to act as an inside shutter. When the mortar is firm, mix and pour resin bedding around the frame until it just covers the lower flange.
- Allow 2 hours to elapse before fitting the covers.
- Cover connection pins must be fitted during installation of triangular covers.
- Covers shall be checked for rocking.
- In carriageway of flint, gravel, macadam unsurfaced, the frame shall have a 130mm wide surround all round the frame, to its full depth.
- In grass, soft surface or unmade surface or when directed by the schedule of works a

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concrete surround shall be constructed to BT CN Drawing 15353.

- Conduct reinstatement in accordance with the HAUC Specification.

#### 5.4 Fitting lockable frames and covers

- Lockable Carriageway frames and covers are installed to the same requirements as normal carriageway frames and covers, except carriageway frame and covers number 1. This must be installed so that the lockable inserts are positioned either side of the ladder steps.

#### 5.5 Housekeeping

- The roadwork's guarding and signs should be regularly checked to ensure they always meet the requirements of Chapter 8.
- All spoil, materials, vehicles and plant should be properly guarded in accordance with Chapter 8.
- The site should be kept as clean and tidy practicable during the works.
- Always be polite to the general public within the vicinity of the works and where necessary liaise with the local residents and other contractors present.