F-JHG MS41: Recovering Fibre

Scope of Works

Recovery of damaged fibre

Sequence of Works

- A linesman ascends the tower with a rope and pulley block to the required height, he will attach the rope to a suitable position on the tower close to the work location
- The ground crew will pull the recovery unit to the linesmen on the top of the tower, who will then attach it to the conductor.
- The fibre cable will be secured with an end clamp and will cut on the damaged side, i.e. the side to be recovered.
- The rope will be attached to the unit using a karabiner, and grounds staff will walk through the span in a controlled manner, pulling the recovery unit, until the work location is reached (location of fibre cable to be saved).

Plant & Equipment and Certification Required

Operatives shall be fully trained and be in possession of calibrated equipment and correct PPE. All plant will be fully certified fit for use before any works proceed.
Rope and Block
Snatch Block
Hand tools
Lift Sling
Safety Sling
Jib Pole
Jib Winch

Staff Involved and Certification Required

Only authorised personnel shall be permitted to carry out works. A minimum of two work team member will be on site at all times, no lone working permitted. Where required technical training is provided to staff on specific equipment, i.e. MEWPs training.

Access and Egress Points

Only permitted access/egress points will be used. Vehicles will be parked in a suitable location agreed with the site provider and Client Rep

Interface with Public

Access will be arranged pre-work and arrangements will be conveyed to the Supervisor/PDM through Contract Management. All required third party notification / procedures will be addressed by the Supervisor/PDM. Work area will be cordoned off to prevent unauthorized access. Appropriate signage will be erected, and a drop zone will be in forced prior to the commencement of any climbing.

Signage:

Signage will be erected at suitable locations at the work area.

Working hours

Normal Working Hours will be 07.00-19.00. Where an emergency Call out is required the working hours may be altered to suit the customer requirements. This timing will be agreed between the project manager and the service provider.

PPE

Safety Boots, Helmet, Eye protection, Hi Vis Clothing, Gloves, Harness, Double Lanyard, Pole Rope, Sala Block

F-JHG MS -42: Recovery of stranded Tug

Scope of Works

Recovery of Stranded Tug

Sequence of Works

- A linesman ascends the tower with a rope and pulley block to the required height, he will attach the rope to a suitable position on the tower close to the work location
- The ground crew will pull the recovery unit to the linesmen on the top of the tower, who will then attach it to the conductor.
- The recovery Rope will then be attached to the unit, to pull out the span to the tug
- The running block will then be installed.
- When recovery unit has been connected to the failed tug, a distance of one metre must be left to make sure of the connection.
- Pull back slowly to the tower recovering any used pulley blocks as you go.

Plant & Equipment and Certification Required

Operatives shall be fully trained and be in possession of calibrated equipment and correct PPE. All plant will be fully certified fit for use before any works proceed.
Rope and Block
Snatch Block
Hand tools
Lift Sling
Safety Sling
Jib Pole
Jib Winch

Staff Involved and Certification Required

Only authorised personnel shall be permitted to carry out works. A minimum of two work team member will be on site at all times, no lone working permitted. Where required technical training is provided to staff on specific equipment, i.e. MEWPs training.

Access and Egress Points

Only permitted access/egress points will be used. Vehicles will be parked in a suitable location agreed with the site provider and Client Rep

Interface with Public

Access will be arranged pre-work and arrangements will be conveyed to the Supervisor/PDM through Contract Management. All required third party notification / procedures will be addressed by the Supervisor/PDM. Work area will be cordoned off to prevent unauthorized access. Appropriate signage will be erected, and a drop zone will be in forced prior to the commencement of any climbing.

Signage:
Signage will be erected at suitable locations at the work area.

Working hours

Normal Working Hours will be 07.00-19.00. Where an emergency Call out is required the working hours may be altered to suit the customer requirements. This timing will be agreed between the project manager and the service provider.

PPE
Safety Boots, Helmet, Eye protection, Hi Vis Clothing, Gloves, Harness, Double Lanyard, Pole Rope, Sala Block

F-JHG MS-43: Telemess –Procedures Proof of Readiness Site Completion

Scope of Works

Telemess Procedure- Outage confirmation:

A Telemess is a means of communication between all parties involved (ESB & JHG) in disconnection/ reconnection of apparatus for work. The message must be written on a standard form known as a Telemess.
The Telemess must be precise as to:

- The apparatus involved.
- The status of earths.
- The operation or operations to be performed and as to the order in which they are to be performed, or
- The operation or operations that have been performed.

Sequence of Works

Telemess Procedures:

- Once all works are completed the JHG Supervisor/PDM will notify the Telemess Coordinator
- A statement that all persons are clear from the network with be provided to the Telemess Coordinator, confirming that all local earths put on by the sender have been removed, all tools and gear are clear and confirm that the network is suitable for connection/reconnection.
- The Supervisor/PDM must ensure that persons in his charge are clear of the apparatus and are instructed to stay outside “Close Proximity Zone”

Plant & Equipment and Certification Required

- Operatives shall be fully trained and be in possession of calibrated equipment and task specific PPE.
- Voltage Detectors
- Full body harness
- 16mm rope
- Snatch block
- Insulated earth pole (5mtr)

Staff Involved and Certification Required

Only authorised personnel shall be permitted to carry out works. A minimum of two work team member will be on site at all times, no lone working permitted. Where required technical training is provided to staff on specific equipment, i.e. MEWPs training.

Access and Egress Points

Only permitted access/egress points will be used. Vehicles will be parked in a suitable location agreed with the site provider and Client Rep

Interface with Public

Access will be arranged pre-work and arrangements will be conveyed to the Supervisor/PDM through Contract Management. All required third party notification / procedures will be addressed by the Supervisor/PDM. Work area will be cordoned off to prevent unauthorized access. Appropriate signage will be erected, and a drop zone will be in forced prior to the commencement of any climbing.

Signage:

Signage will be erected at suitable locations at the work area.

Working hours

Normal Working Hours will be 07.00-19.00. Where an emergency Call out is required the working hours may be altered to suit the customer requirements. This timing will be agreed between the project manager and the service provider.

PPE

Safety Harness, Safety Boots, Helmet, Gloves, Hi Viz Clothing, Eye protection (if required), Harness Lanyard, Pole rope

F-JHG MS 44: Installation of Phase to Ground

Scope of Works

Complete the spicing of two fibre cables, existing and new. The cable once wrapped to the location of the joint will be dropped to the ground together with the contents of the Donut (coil of slack of existing fibre cable left on the apparatus.

Sequence of Works

- Complete **POWRA**, discuss content with all site members and ensure that it is signed by all.
- Handle all optical fibre cables with care. The glass in exposed fibre ends is very fine and sharp.
- NEVER look directly at the fibre, if live it contains a laser which is harmful to the naked eye
- Prior to starting splicing operation on an optical fibre cable, clean the bench area and machine with a cloth and isopropyl alcohol
- Ensure that the splicing machines are calibrated and serviced annually
- Ensure that the fibre optic machines have been cleaned since last use, to ensure that no fibre particles remain in the machine
- Perform arc test prior to each splicing session
- Electros should be replaced after every 1000 splices
- Before cleaning the fibre, cable ensure that the fibre is not active
- Gently wipe fibre end with a lint-free wipe which is moistened with Isopropyl Alcohol
- To dry, use a lint-free dry wipe
- Qualify the cleaning by microscope inspection or video inspection probe
- Repair fibre for splicing
- Splice the fibre
- Evaluate the splice
- Proceed to fit closure to manufacture specification
- On completion of splicing fibre, route tests are carried out using OTDR and power meter
- Test results for each joint are to be recorded
- Dispose of cleaning cloth and any fibre off-cuts in a Cin Bin or suitable container.
- Never leave fibre off-cuts lying around the work area

Storage:

All materials for spicing will be stored in the spicing van or tent.

Plant & Equipment and Certification Required

- Operatives shall be fully trained and be in possession of calibrated equipment and task specific PPE.
- Van or Tent,
- Hand tool, - Fujlkura machines + Sumitomo (OTDR), power meter.

Staff Involved and Certification Required

Only authorised personnel shall be permitted to carry out works. A minimum of two work team member will be on site at all times, no lone working permitted.

Access and Egress Points

Only permitted access/egress points will be used. Vehicles will be parked in a suitable location, causing no obstruction to the site provider/ or adjoining users. Any directions / instructions issued by the site provider, as detailed in the site survey will be adhered to.

Interface with Public

Access is generally arranged by the office and arrangements conveyed to the Supervisor/PDM. All required third party notification / procedures will be addressed by the Supervisor/PDM. Work area will be cordoned off to prevent unauthorized access. Appropriate signage will be erected.

Signage:

Signage will be erected at the site entrance (Where applicable) to identify construction activity

Working hours

Normal Working Hours will be 07.00-19.00. Where an emergency Call out is required the working hours may be altered to suit the customer requirements. This timing will be agreed between the project manager and the service provider.

PPE

Safety Boots, Helmet, Gloves, Hi Viz Clothing,

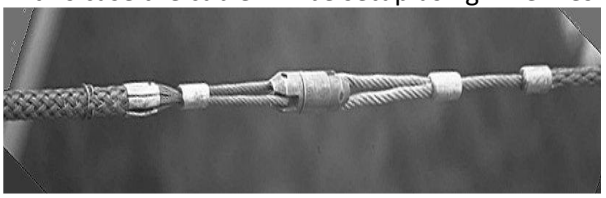
F-JHG MS 45: Stringing Mass Fibre

Scope of Works

Stringing MASS Fibre Cables on purposely installed wood poles.

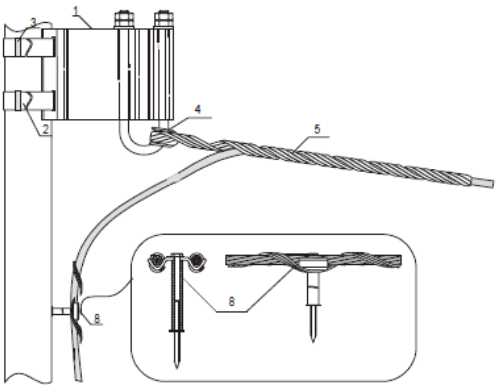
Sequence of Works

- Climb each pole, using climbing spikes, in accordance to the client/industry approved method, and the method of work documented in F-JHG MS-34 Climbing Techniques Wood poles/Pylons
- Attach stringing wheels with ropes and the head gear
- Set up cable reel in line with poles
- Pull out cable, attach to ropes at each pole location in order to get cable up to pole top
- When cable is pulled out to end pole climb pole, remove cable from wheel and attach to head gear (this is referred to as back hanging)
- When the cable is being hung on the poles going uphill, the cable will be pulled mechanically, by winch.
- In this case the cable will be setup using wire mesh grip and swivel.

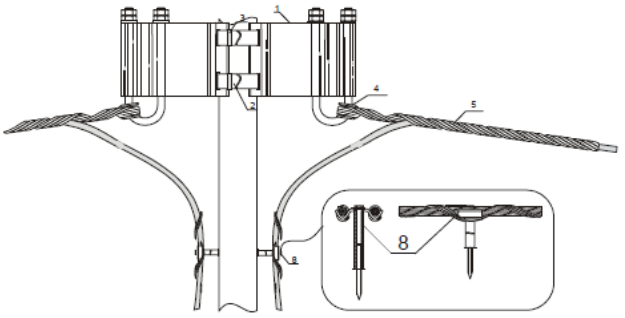


- The winch will only be operated by a competent person, it is important that the reel motion is controlled correctly and protected with guards.
- The winch operator most not wear loose clothes.
- All pull through locations (poles) must be supervised, by persons using two-way radios, to communicate to the winch operator that the cable is been pulled through satisfactorily.
- Then the cable is pulled up to tension using a chain hoist and digital load indicator to determine the sag (tension) (documented in the AFL docs)
- Remove cable from wheel at this location and terminate on to head gear
- Each break pole (normally angle pole) are then terminated and removed from wheels
- Terminate all intermediate poles (IMP's)

Tension fittings
(one sided with joint box) (for wooden poles)



Tension fittings for
(two sided with joint box) (for wooden poles)



- Remove all wheels and slings
- Complete required splices, as per site specific method referenced in LH2 72-GB-01 and the Splicing Method Statement WMS-85

Plant & Equipment and Certification Required

Operatives shall be fully trained and be in possession of calibrated equipment and correct PPE. All plant will be fully certified fit for use before any works proceed.
Hand tools
Rope and Pulley
Lift Sling
Mechanical Winch
Reel Carrier
MEWP- (if required)

Staff Involved and Certification Required

Only authorised personnel shall be permitted to carry out works. A minimum of two work team member will be on site at all times, no lone working permitted. Where required technical training is provided to staff on specific equipment, i.e. MEWPs training.

Access and Egress Points

Only permitted access/egress points will be used. Vehicles will be parked in a suitable location agreed with the site provider.
The work area (Construction site) will be cordoned off using red/white tape, the fall zone-exclusion zone will be controlled on a risk assessment on a site by site basis, either by a second condoned off area, or by way of walkie-talkie communication.

Interface with Public

Access will be arranged pre-work and arrangements will be conveyed to the Supervisor/PDM through Contract Management. All required third party notification / procedures will be addressed by the Supervisor/PDM. Work area will be cordoned off to prevent unauthorized access. Appropriate signage will be erected, and a

drop zone will be in forced prior to the commencement of any climbing.

Signage:

Signage will be erected at suitable locations at the work area.

Working hours

Normal Working Hours will be 07.00-19.00. Where an emergency Call out is required the working hours may be altered to suit the customer requirements. This timing will be agreed between the project manager and the service provider.

PPE

Safety Boots-plus climbing Spikes, Helmet, Eye protection, Hi Vis Clothing, Gloves, Harness, Double Lanyard, Pole Rope-climb save

F-JHG MS 46: Use of ATV's

Scope of Works

Use of ATV for transporting materials:

Sequence of Works

The following advice is no substitute for formal training.
Most ATVs have no differential (i.e. they have a solid rear axle) and so do not handle in the same way as other machines. This means that when you turn, the ATV tries to keep going in a straight line.
When cornering on an ATV with no differential or with the differential engaged, where your body weight needs to be positioned depends on how sharp the corner is and on how fast you are going.
For slow cornering you should put your body weight on the footrest on the outside of the turn while leaning your upper body into the turn. This will allow the inside driving wheel to skid slightly, allowing the ATV to make the turn properly. At faster turning speeds the need for weight transfer to the outside of the turn decreases:

- If your ATV has a differential and it is disengaged, then, when cornering, weight should be transferred to the inside of the turn.
- When riding across a slope, keep your weight on the uphill side of the ATV.
- When going downhill, slide your weight backwards and select a low gear, reducing the need to use the brakes.
- When going uphill, move your weight forwards and maintain a steady speed.

NB: The positions described above can be made more effective for rough ground and higher speeds by standing in a stooped position (called active riding). This increases the ability to shift weight quickly and maintain stability. It is important to keep both feet on the footrests at all times.

- Avoid sudden increases in speed, as this is a common cause of rearward overturning accidents, even from a standing start on flat ground where there is good grip
- Never put your foot onto the ground to stabilise an ATV when riding.

Route Planning

Over rough terrain, get to know your own ground and stick to planned routes where possible. Walk new routes if necessary, to check for hidden obstructions. When selecting routes allow for changes to the surface and weather conditions and for any loads and attachments. These make a marked difference to the stability and abilities of the machine.

Trained equipment and loads

Ensure all riders know the manufacturers recommended towing capacity and drawbar loading limit. Always operate within these requirements. Remember that your ability to control the ATV by your body movements will be considerably reduced when carrying a load or towing a trailer.

- When selecting trained equipment look for:
  - over run brakes.
  - swivel hitch drawbar.
  - bead lock rims on wheels.
  - a low centre of gravity and a wide wheel track.
  - a long drawbar.
  - attachment points for securing a load.

- Check the weight ratio between your ATV and its trailed load. This needs to be assessed for each operation. As a general guide, on level ground braked trailed equipment can be a maximum of four times the unladen weight of the ATV. For unbraked trailed equipment the maximum should be twice the unladen weight. These loads should be reduced when working on slopes, uneven ground or poor surface conditions. Follow the manufacturer's advice for your particular machine.
- Weight transfer is also important. Stability and resistance to jack knifing is improved if some load is transferred onto the ATV's drawbar. Approximately 10% of the gross weight of the loaded trailer is recommended, but this should not exceed the manufacturer's drawbar loading limit. Remember that weight transfer can change dramatically when you start going up or downhill
- When selecting mounted equipment, make sure it is within the Manufacturer's approved weight limit, with a low centre of gravity, and controls which are easy to operate but do not create a hazard. Where equipment is added to one end of the machine, add ballast at the other end to maintain stability.
- Loads carried on racks must be well secured, e.g. with ratchet straps, and be evenly balanced between the front and rear, except where they are deliberately altered to aid stability when going up or down a slope. Only tow a load from the hitch point. Loads towed from other points such as the rear rack have caused sudden rear overturning even on slight slopes or with slight acceleration. Ropes or chains should not be used to drag a load where they can become caught on a wheel. This may lead to entanglement with the brake cable, causing unexpected braking.
- **NEVER** carry a passenger on a sit-astride ATV. The long seat is for operators to shift their body weight backwards and forwards for different slope conditions **NOT** for carrying passengers. You should not carry a passenger in a trailer behind an ATV, as any movement will make the machine unstable.
- **Roll bars, lap straps and weather cabs** Roll bars are not required in ATVs where they would increase the overall risk. Research has shown that they are more likely to increase injuries by obstructing the rider either when thrown off or when jumping off during an overturn. This causes the rider to fall to the ground alongside the ATV and increases the likelihood of injury.
- Lap straps should not be fitted. They prevent active riding and would be lethal without a full cab or roll cage.
- Weather cabs restrict a rider's ability to jump clear in an overturn. The rider is likely to be crushed within the cab unless it is strong enough to withstand the forces involved. Carefully assess the risks for your particular conditions of use before fitting any such structure and consult the manufacturer for information.
- **Road use** Manufacturers of certain ATVs may indicate that their ATVs are not suitable for use on the public roadway. You should therefore establish that your ATV is suitable for road use before taking it out onto the public road.
- Should an ATV go onto a public roadway, it will be deemed to be a non-agricultural tractor and subject to road tax. It will also have to comply with the structural requirements of a non-agricultural tractor, i.e. rollover protection, tractor mudguards, horn, braking and lighting requirements. Further information should be obtained from the Department of the Environment, Vehicle Standard Section.
- Enforcing of the Department of Environment legal requirements for ATVs on the public roads is a matter for the Gardai.

Plant & Equipment and Certification Required

More than half of all ATV riders have been thrown off at some time. There is no cab or roll bar, so your only protection is what you wear.
Head protection is vital. A certain percentage of serious injuries with ATVs involve head injuries. At present a motorcycle helmet to BS 6658: is recommended, but other helmets head protection which meets BSEN1384:1997 is also acceptable

Wear clothing which is strong and covers your arms and legs. Gloves are useful for protection and to keep hands warm in cold weather for good control of the ATV. Wear boots or Wellingtons which are strong and have good grips (Complying with EN345-1)
Protect your eyes from insects and branches with either a visor or safety goggles (Complying with EN166)
High visibility clothing may also be appropriate.

NOTE : Accidents – In recent years the number of serious work related accidents involving ATVs, in particular in agriculture and forestry, has given rise to great concern. Non-fatal accidents are not well reported but are estimated to amount to over 1000 serious injuries per year in the UK. The underlying causes are usually one or more of the following:

- Lack of structured training and/or experience.
- Excessive speed
- Carrying a passenger or an unbalanced load.
- Tipping on a bank, ditch, rut or bump.
- A steep slope combined with other factors, e.g. ground or load conditions.
- Towing excessive loads with unbraked equipment.

Training

Professional training is vital. It is a legal requirement to provide adequate training under both the Safety. Health and Welfare at Work Act 2005.
Under the 2005 Act, an employer must provide such instruction, training and supervision as is necessary to the health and safety of their employees. The employer must provide adequate training and ensure that ATVs are only ridden by employees who have received appropriate training in their safe use, including the use of any towed equipment or attachments. The same requirements apply to the self-employed.
In addition, under the General Application Amendment Regulations 2001 employees must have at their disposal adequate information and written instruction.

Storage:

N/A

Plant & Equipment and Certification Required

Operatives shall be fully trained and be in possession of calibrated equipment and correct PPE. All plant will be fully certified fit for use before any works proceed.

Staff Involved and Certification Required

Only authorised personnel shall be permitted to carry out works. A minimum of two work team member will be on site at all times, no lone working permitted. Where required technical training is provided to staff on specific equipment, i.e. ATVs training.

Access and Egress Points

Only permitted access/egress points will be used. Vehicles will be parked in a suitable location agreed with the site provider and Client Rep

Interface with Public

Access will be arranged pre-work and arrangements will be conveyed to the Supervisor/PDM through Contract Management. All required third party notification / procedures will be addressed by the Supervisor/PDM. Work area will be cordoned off to prevent unauthorized access. Appropriate signage will be erected, and a drop zone will be in forced prior to the commencement of any climbing.

Signage:

Signage will be erected at suitable locations at the work area.

Working hours

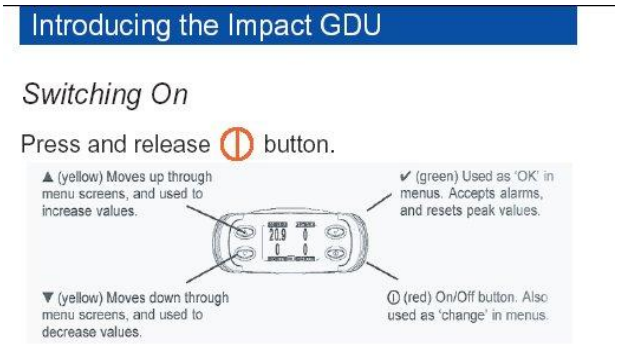
Normal Working Hours will be 07.00-19.00. Where an emergency Call out is required the working hours may be altered to suit the customer requirements. This timing will be agreed between the project manager and the service provider.

PPE

Safety Harness, Safety Boots, Helmet, Gloves, Hi Viz Clothing, Eye protection, Lanyard.

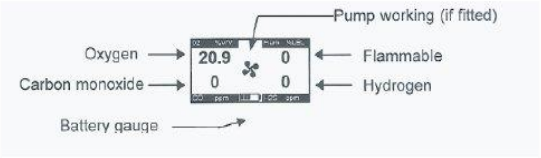
F-JHG MS 47 : Use of GDU's

Testing Procedures for the presence of asphyxiating and explosive gases



- Close up the support leg and counterbalance arm

The normal display then shows the instantaneous values measured by each sensor fitted plus the battery level.



The screen display shown above indicates there are no alarms present, it also shows the gas sensors fitted and their respective readings. For instruments fitted with only two detection heads (sensors) the unused sensor positions will show "- -". A battery indicator gauge is shown at the bottom of the display, if this is flashing there is only 20 minutes of battery life left.

Switching Off

At any time press and hold the button for 3 seconds.

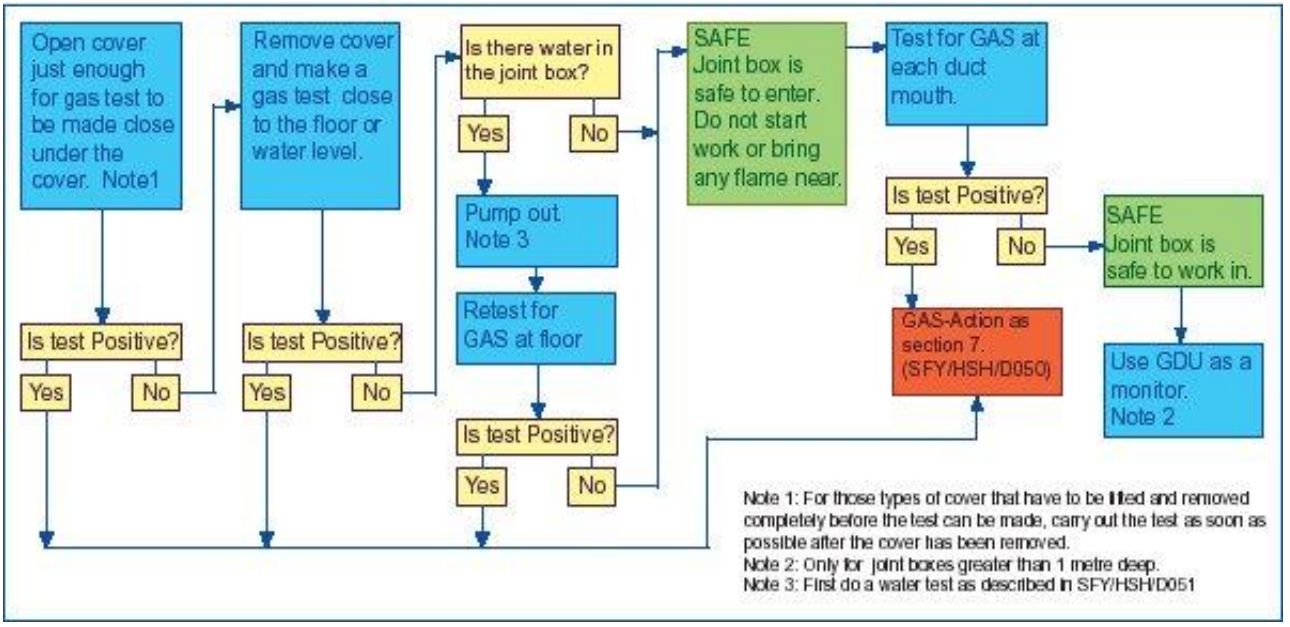
<u>All tests 2 bleeps / 2 flashes</u>

- Turn on GDU and allow to warm up
- All tests are 2 bleeps / 2 flashes
- Break seal then drop support leg on No.5 key
- Raise cover and rest on support leg
- <u>First gas test</u> immediately under the cover
- Insert the roller well forward
- Operate the counterbalance arm
- Lift cover and then lower onto the roller

- Remove cover
- <u>Second gas test</u> at base or water
- If no water or no need to disturb the water, then:
- <u>Final gas test</u> at duct mouths (if available)

<u>To Close</u>

- <u>If cover on roller, push back on</u>
- [If cover not on roller drop support leg]
- Raise cover and rest on support leg
- Insert roller operate counterbalance arm
- Lift cover and then lower onto the roller
- Close up the support leg and counterbalance arm
- Push cover back on
- Drop support leg raise cover and rest on support leg
- Remove roller, operate counterbalance, lift cover
- Lower cover over box & ensure level etc



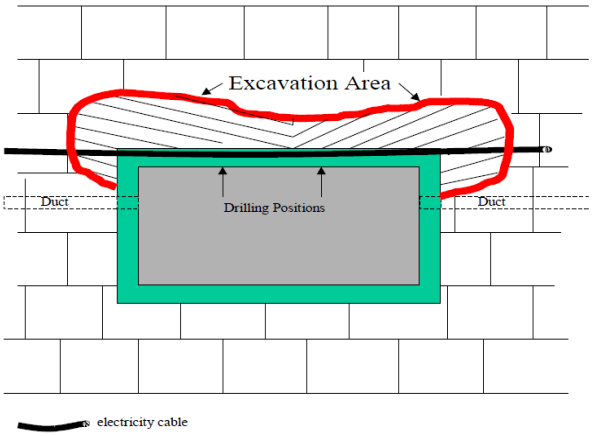
F-JHG MS 48 : Core drilling of chambers

Core Drilling of Chambers

- Before starting the task read, and apply measures contained in Risk Assessment "Avoiding Danger from Underground Services" (F-JHG RA 05), and ensure that adequate and suitable materials are available for shoring.
- Dig around chamber ends (to be core drilled) to ensure no services exist in the fabric of the chamber. (see diagrams 1 & 2, on page 2)

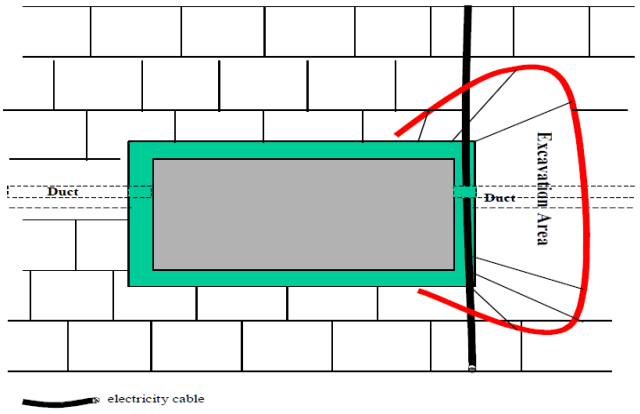
Plan View Of Areas To Be Excavated Around Jointing Chamber

Diagram 1 - Cable Embedded in Side Wall



Plan View Of Areas To Be Excavated Around Jointing Chamber

Diagram 2 - Cable Embedded in End Wall



- Entry into the structure will be carried out in accordance Confined space (Low Risk) Risk and Method Statement F-JHG MS 23).
- The point of entry into the chamber is to be marked, and offset from other duct entries to be measured in accordance with the specifications for the type of chamber.
- Using these measurements the drill point on the outside of the chamber is identified. All cables within the chamber are tied and secured to the opposite side away from core drill entry point.
- If the entry point cannot be easily identified from existing entries and/or simple offset measurements from adjoining walls etc. Then it may be necessary to perform a pilot drill from the inside of the chamber to the outside so that an exact reference point can be determined.
- The equipment shall only be used in accordance with the manufacturer's instructions and by trained operatives.
- The diamond core bit is water cooled from a pressurised water container; the operator will ensure that the water flows freely before commencing drilling.
- The operator will commence drilling with regular checks to the inside of the chamber, to identify when drill has completed. If the thickness of the wall is known or can be determined, then the operator will measure the amount the core has drilled to determine the optimum time to start increasing the frequency of the checks.
- It is essential that core drill bits are in good condition and not blunt. Inspection of drill bits shall take place prior to commencement of drilling and during the operation to ensure condition is maintained and drill bits replaced and sharpened as necessary. Blunt drill bits can result the jamming of the equipment potentially resulting in injury.

Core Drilling of Basements

- Same as for the drilling of chambers, but location must be ascertained inside the building and the entry point agreed with the building owner/client. Drill pilot hole to point outside prior to conducting core.

- Rags or other suitably absorbent material will be used to retain the water from the drill in the basement area.

Plant & Equipment and Certification Required

Core Drill and hand tools
All plant & Equipment must be serviced, and/or calibrated to the requirement of legislation and the manufacture. Any electrical tools required e.g. drills, sump pump, jigsaw, will all be 110v in line with the current regulations.

Staff Involved and Certification Required

Only trained, competent authorised personnel shall be permitted to carry out works. All Construction workers must have the required basic legislative health and safety training and Manual Handling Training:
Each crew collectively should have a combined training of:

- Sign, lighting and guarding,
- 1st aid training
- Abrasive wheels training

Access and Egress Points

Only permitted access/egress points will be used. Vehicles will be parked safely adjacent to the work area.

Interface with Public

All required third party notification will be addressed by the Site Supervisor. Work area will be cordoned off to prevent unauthorized access.

Working hours

Normal Working Hours will be 08.00-17.00. Where an emergency Call out is required the working hours may be altered to suit the Client requirements to be agreed by JHG Supervisor.

PPE
Safety Boots, Helmet, Gloves , Hi Viz Clothing, Eye protection (as required)**,** Ear protection (as requried)**,** Dust Mask (as required)