Sewer Approved Method Statement

Mitton Road,

Whalley
**Existing Sewer Network**

There are 3 existing sewers cross the site;

- 150mm combined sewer serving properties facing on to Mitton Road.
- 450mm combined sewer crossing the site from north to south.
- 675mm combined sewer following Riding Lane
**Proposed Scheme:**
The proposed scheme is to construct 137 residential units with associated infrastructure. See appendix A. There are a number of interactions between the existing sewer network and the proposed scheme, the risks are highlighted below;

- **150mm Sewer – Shallow,** close to foundations and shared drive, ground levels need to be reviewed. Proposed levels are elevated above current levels by circa 300mm. High risk of contact.
- **450mm Combined Sewer – Circa 2.5m below existing ground level,** multiple points of connection for new sewer network. Proposed levels are elevated above current levels by circa 300mm. Moderate risk of contact.
- **675mm Combined Sewer – Deep and remote from all proposed construction. Low risk of contact.**

**Discussion and Mitigation of risks:**
Prior to commencement on site the depth and location of all existing sewers will be confirmed and their location clearly marked on the surface at 20m centres and a CCTV survey will be under taken to record the current condition.

All foundations will design to prevent loads transferring on to the sewers, due to the proximity of the 150mm sewer to the proposed housing it is at risk. As proposed plots are located 6-5m away for the sewer and the founding depths are at a similar level to the invert of the sewer, there is no risk of loading the sewer. See foundation schedule in Appendix B.

The 450mm sewer sits directly beneath the site access road so the construction of the road needs to be considered. See Appendix C Long section showing proposed road and sewers along with existing sewer. The section of sewer to have a road constructed above it runs from UU6508 (EGL 46.10, ProposedCL 46.40, IL 43.40) to UU6401(EGL 45.034, PCL 45.76, IL43.13), along this entire length the proposed finished road level is above the current ground level thus increasing cover to the pipe and ensuring that excavation above the pipe is limited.

The proposed road construction is generally 600mm but this could increase to 900mm, so this excavation for the road capping layer will be in excess of 2.5m above the sewer. In term of process the topsoil will be removed and the road footprint excavated to formation level where upon it will be back filled with suitable crushed stone or concrete, thus protecting the existing sewer.

Installation of proposed sewers the proposed sewers do not undermine the existing network and therefore risk of lateral movement is limited, irrespective this correct use of trench supports and shoring would prevent this for occurring.

**Method statement and risk assessment for installation of new sewers and crossing of the existing sewers:**
Appendix D contains the contractors risk assessment for the installation of new sewers discussing the methods for connecting on to and crossing the existing network.
With regard to the existing network United Utilities standard methods will be adopted, these are as follows:

Demolition, piling, tunneling or any other construction technique which induces significant vibration (not exceeding a peak particle velocity of 5mm/s) shall be permitted up to 10 metres away from the Pipeline(s). Permission will be granted by UU provided that the Promoter has accurately established the position of the Pipeline(s) and this has been verified by UU and a written statement of the precautions to be taken to ensure the safety of the Pipeline(s) has been submitted by the Promoter and received and consented to by UU prior to works being undertaken.

Should demolition, piling, tunneling or any other construction technique which induces significant vibration be proposed within 3.5 - 10 metres of the Pipeline(s) this shall be subject to seismic monitoring in order to prevent damage to the Pipeline(s). The Promoter shall accurately establish the position of the Pipeline(s). Seismograph readings shall be taken by the Promoter's specialist organisation on the line of the Pipeline at locations to be agreed with UU. Vibration monitoring shall be done under the supervision of a specialist organisation which has significant experience of similar monitoring work. The identity of the specialist organisation shall be proposed by the Promoter and approved by UU. This approval should not be unreasonably withheld or delayed. The cost of the seismic monitoring shall be borne by the Promoter. Vibration shall be measured in terms of peak particle velocity (PPV) and the Promoter shall employ suitable methods of construction in carrying out its works such that the PPV does not exceed 5mm/s. If the measured PPV does exceed 5mm/s then work shall cease immediately and a review of the monitoring data shall be undertaken between the Promoter and UU Engineering staff. If necessary UU shall notify the Promoter of any reasonable mitigation measures to protect the Pipeline(s) that it requires the Promoter to carry out. The Promoter shall comply with these reasonable mitigation measures in carrying out its works. A written statement of the precautions to be taken to ensure the safety of the Pipeline(s) shall be submitted by the Promoter and received and approved by UU prior to works being undertaken.

Movement of vehicles and plant with a total weight exceeding 6 tonnes across the unprotected Pipeline is forbidden. The repetitive movement of vehicles or plant of any weight over the unprotected Pipeline in the same position is forbidden. Where temporary or permanent access is required, the Promoter must consult with UU prior to gaining access.

Each proposed temporary crossing point of a Pipeline shall be considered on an individual basis. The Promoter shall submit the design of the proposed crossing point to UU for acceptance. Work to construct the temporary crossing point shall not commence without prior written consent from UU.

The Promoter shall design any temporary crossing point such that the load from any vehicle or any item of construction plant that will use the crossing point creates a suitably factored bearing pressure of not more than 8.5kN/m² at the crown of the UU Pipeline. (N.B. This load is approximately equivalent to the loading on a Pipeline with 900mm of cover when a 6 tonne excavator crosses above it.) In order to achieve this, the Promoter may use substantial timber baulks, reinforced concrete slabs or proprietary ground protection systems (e.g. Eve Trakway). Where it is not possible to distribute the surcharge load from the plant to less than 8.5kN/m² at the crown of the Pipeline, then the design of the temporary crossing point shall consist of a suspended crossing which bridges over the Pipeline.

Temporary crossing points shall only be used to allow vehicles and plant to traverse across a Pipeline. Temporary crossing points are not to be used as working platforms for construction plant. Plant shall not be allowed to operate above a UU Pipeline unless specific written consent is given by UU. Any
request by a Promoter for them to site working plant above a UU Pipeline must demonstrate that the platform which their plant is to be sited on has been designed as a working platform and will ensure that the maximum surcharge load from that plant is distributed to less than 8.5kN/m2 at the crown of the Pipeline, or bridges over the Pipeline.

All parts of a temporary crossing point must be removed when the work is complete, unless written consent is obtained from UU for the crossing to be left in place. The design and construction of the temporary crossing point shall be such that it permits for its removal (and the reinstatement of the ground beneath it) without exposing the Pipeline to undue loading, vibration or risk

**Pond Construction:**
The proposed pond is to be constructed adjacent to the existing 450mm combined sewer, the pond is located outside of the United Utilities sewer easement and is generally between 5m (minimum) and 10m to the east of the sewer. The bed level of the pond is between 41.863m AOD and 42.163m AOD, the invert of the sewer 42.51m AOD (worst case). The edge of the pond will be situated some 5m from the sewer, the deepest bed point will be some 11m from the sewer, the maximum level difference is 0.68m giving a gradient of 1:16 which is stable in all soil conditions.

The pond will be former by removing the topsoil, excavating the subsoil and then lining the basin with puddle clay to form an impermeable lining. The sides of the ponds are to be battered at 1:3 to ensure slope stability.

Upon reviewing the proximity of the pond to the sewer and the relative invert levels, it is clear that the sewer highly unlikely to be impacted by the construction of the pond. However to ensure that there is no chance of the sewer being impacted during the construction phase, insitu geotechnical testing would be undertaken to ensure slope stability can be ensured and if necessary sheet piling will be installed. Geotechnical review and detailed design to be agreed with United Utilities prior to construction.
Appendix A

Main Drainage Plan - DWH133-101_DRAINAGE_LAYOUT_P3
Appendix B
Foundation Schedule - DWH133 Mitton Road, Whalley, Lancashire-1001 Foundation Table 1 - REV P2
Appendix C
Long Section - DWH133-102_LONGSECTIONS_P3
Activity: Drainage 1.5m-3.2m installation depth alongside existing sewer

Examples of Common Hazards: Put 'x' by the ones that apply

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Falls from height</th>
<th>Trip on level</th>
<th>Falling objects</th>
<th>Striking object</th>
<th>Fragile material</th>
<th>Electrocution</th>
<th>Manual Handling</th>
<th>Noise</th>
<th>Dust</th>
<th>Falling objects</th>
<th>Collapse of excavation</th>
<th>Collapsed or cold surface</th>
<th>Collapse of structure</th>
<th>Cutting accident</th>
<th>Lift failure</th>
<th>Lifting Equipment</th>
<th>Drowning or flooding</th>
<th>Struck by traffic</th>
<th>Struck by plant</th>
<th>Confined Spaces</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall from height</td>
<td>x</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explosion</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COSHH</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collapse of excavation</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fire</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lighting</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>mea</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Striking hot contact</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>mea</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Using this list and your knowledge of the activity, select the SIGNIFICANT hazards:

**Significant Hazards:**

<table>
<thead>
<tr>
<th>Significant Hazards: (Section 'A')</th>
<th>Person at Risk (Number, Staff, Public, Children)</th>
<th>Likelihood L,M or H</th>
<th>Severity L,M or H</th>
<th>Risk L,M or H</th>
</tr>
</thead>
<tbody>
<tr>
<td>Striking underground electricity cables</td>
<td>Operative(s)</td>
<td>M</td>
<td>H</td>
<td>H</td>
</tr>
<tr>
<td>Collapse of unsupported excavations</td>
<td>Operative(s)</td>
<td>H</td>
<td>H</td>
<td>H</td>
</tr>
<tr>
<td>Falling into unfenced excavations</td>
<td>Operative(s)</td>
<td>M</td>
<td>H</td>
<td>H</td>
</tr>
<tr>
<td>Materials or plant falling into the excavation</td>
<td>Operative(s)</td>
<td>M</td>
<td>H</td>
<td>H</td>
</tr>
<tr>
<td>Breaking into gas or water main/existing sewer</td>
<td>Operative(s)</td>
<td>M</td>
<td>H</td>
<td>H</td>
</tr>
<tr>
<td>Operative being struck by the excavator</td>
<td>Operative(s)</td>
<td>M</td>
<td>H</td>
<td>H</td>
</tr>
</tbody>
</table>

Give priority to hazards where the persons at risk, likelihood or severity are high. Include any controls that reduce the risks from the significant hazards.

**Control Measures:** (For example, Work at height = Full scaffold instead of ladders, Electrocution = Battery powered drill instead of 110V or mains electric, Confined spaces = Forced air ventilation instead of BA)

- Accurate location of underground services by operatives trained in the use of locating equipment.
- Planned provision of and use of excavation support equipment, trench support is to extend to 250mm from the bottom of the dig. This is to be reviewed after every movement of the trench box, so ground conditions can be assessed by WBCE Supervisor.
- If ground conditions are that of solid state works may progress but any changes e.g. Water ingress, loose ground the works must stop and be re assessed.
- Excavations to be always backfilled as soon as practicable, if not warning signage, inspections & adequate fencing used. Spoil and pipes, not to be placed at the edge of the excavation so as to surcharge it.
- Proper tied ladder access extending 1.05m above top of excavation, and placed into the supported area of the excavation. Only certified operators & lifting equipment to be used.....SWL is not to be exceeded for the Excavator being used.
- Excavator is banked during excavation work, and stops used on dumpers to prevent vehicles over running the excavation. Operatives to be confined space trained medium risk and supervisor confined space trained high risk.

**Control measures using PPE -**

- Only select PPE where you cannot control or remove the hazard another way
- Remember PPE is the last resort

<table>
<thead>
<tr>
<th>Put 'x' by the ones that apply:</th>
<th>Head protection</th>
<th>Eye Protection</th>
<th>Dust mask</th>
<th>Toe Protection</th>
<th>Ear Protection</th>
<th>Respirator</th>
<th>High-vis clothing</th>
<th>Harness or line</th>
<th>Escape BA</th>
<th>Gas Detector</th>
<th>Full BA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Details / other PPE required:</td>
<td>Gloves</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Gloves & good washing/personal hygiene to be adopted due to the increased risk of Weils disease. Gas detector to be used before entry in to the trench, and remain within the trench either attached to the operative or by line into the trench.

The right supervision will help ensure a quality product at a fair price

**Arrangements for Work:**

- Name of work Supervisor for this method statement: WBCE Supervisor TBC
- Level of supervision required (e.g. full time / part time / hourly): Full Time
- Permits required (e.g. permit-to-dig / permit-to-enter etc.): Permit to Dig/Permit to enter
- Level of competence / training standard required by operatives: CSCS, CPCS, confined space
- Other arrangements: A ‘Permit to Dig’ to be in place before this work begins, and the required trench support already on site
## Resources

**Plant & tools required:**
- Cat & Genny, Full escape set & gas detector,
- 13-20 tonne 360 degree Excavators & associated lifting gear. compactor.
- Proprietary trench system 5metre Drag box and 2.4-4.5 metre Man-Hole box. Edge protection.

**Materials:**
- Clay pipe 150mm: foul drainage
- Concrete pipe 300mm: surface water
- Pipe bedding, Concrete Manhole Rings & Cover slabs Gen3 concrete (builds manholes, bed and surrounds pipes when applicable). Trench fill Crushed hard-core/excavated material.

**Labour:**
- Operatives (confined space trained).

## Safety Method Statement

*(Section: ‘B’)*:
Listing your sequence of work will help you, and your operatives, carry out the task safely and cost effectively. It can reduce errors and cut downtime due to lack of planning.

1. Underground services on site will be known, and have been located through a cat & genny survey and marked out on the ground. Working area to be fenced off at all times. Gas detector to be lowered in to excavation before operative enters and to remain within excavation to monitor gas levels. Escape BA also to remain within excavation for easy access for operative if required.
2. A ‘Permit to Dig’ and Permit to enter will have been issued to the Westbourne team for the drainage work.
3. Manholes & excavations once they are excavated will be supported by using a drag box’s/ manhole box support system lifted into situ by 360 excavator.
4 Foul line will be excavated first after trial holes have been excavated to establish depth and position of existing sewer.
Existing sewer is approx. 1.8m below ground so Hand Dig will be used for final 0.8 to expose existing sewer within trial holes.
Surface water line will be excavated after installation of foul line has been completed. At two points the surface water will cross the existing sewer at these points operatives are to Hand dig to expose the existing sewer so as not to damage the sewer with the 360 machine as there is only 300mm between the two at this point
Works will progress from shallowest point adjacent to Mitton Rd. Excavator will load arising into 9 tonne dumper, once dumper has been filled operator will mount dumper fit seat belt, start dumper and travel across site to stockpile/tipping area (to be loaded off site at later date) or stockpiled and sealed.

5 Once manhole excavation has reached a depth of 1 metre deep excavator will lift and lower Manhole box in-situ. Excavator will carry on digging until required depth has been reached. Then the Drag box will be placed and abutted to manhole box to provide all round excavation support and protection prior to placement and securing of ladder into excavation. Excavation will be reviewed by supervisor prior to entry. This process will be repeated and temporary support will be adapted according to depth of dig. Gas monitor used to establish safe atmosphere prior to entry. The above process and sequence will be repeated for the surface water drainage run. All safe systems of work will be adopted as required.
6 Operatives will hand dig around existing pipe to accommodate concrete base to construct manhole. Excavator will place concrete into excavation where operative will level concrete to accommodate clay channels/boxing out base to accommodate Manhole ring. Manhole rings are to be lifted in-situ by means of manhole lifting pins and 4 leg chains attached to excavator by means of a bow shackle (all lifting gear to have a valid test certificate). Once Manhole has been built Excavator will lift in-situ 1200mm-3m dia Manhole shutter. Once Manhole shutter in place excavator will place concrete on cover slab to enable operative to shovel concrete around shutter ready for 2”poker drive unit to vibrate concrete.

7. Once manhole construction completed excavation will be backfilled by means of excavated material placed by excavator in 300mm layers and compacted. Once backfilled excavator will lift manhole box and place safely away from excavation so as remaining drainage run can continue. The excavator digs the trench (for pipe work) to level (with a banks man present) the trench support will be placed by excavator as the excavation progresses. Excavator will place into excavation 10mm-20mm pipe bedding. Operative will level pipe bedding with shovel to accommodate clay/concrete pipe. Excavator will lower clay/concrete pipe into trench box using certificated strap fixed to excavator by means of 9 tonne certificated alloy bow shackle.

7. A tied off ladder will be placed into the excavation, (5 rungs of the ladder above trench box) so as to provide a safe means of access/egress for ops,. The trench support system will extend 1m above the top of the excavation with edge protection so as to prevent falls.

8. Backfilling will progress as manholes and pipe work are constructed/placed to avoid open excavations. Where this is not possible open excavations will be fenced as required.

9. Compaction of crushed hard-core/excavated material to be compacted with compactor where applicable . Once backfill material is 600mm from top of excavation a Bowmag 1200 roller and operator will be used to compact material. Clay pipe will have to be cut by means of Disc cutter, suppression bottle and Diamond blade, operatives abrasive wheel trained and all JSP fpp3 dust mask approved Face fit trained. Drainage less than a metre deep will be individually assessed may not need any trench support systems.

Details to make the risk assessment site specific

Residual risk for significant hazards, is low, but control measures and safety method statement must be followed by operatives on site
**Site Name:** Mitten Rd, Whalley  
**Date:** 2/12/2015  
**SSW No.:** WBCE

**Written By:** A Gallagher  
**Client Review:** D.W.H.

**Activity:** Manhole Connection for 150mm Rising Main

### Examples of Common Hazards: Put 'x' by the ones that apply

- Fall from height  
- Explosion  
- COSHH  
- Collapse of excavation
- Trip on level  
- Noise  
- Falling objects  
- Dust  
- Collapse of...  
- Cutting accident  
- Lighting  
- Striking object  
- Asbestos  
- Struck by traffic  
- Steel  
- Fragile material  
- Eye injury  
- Maniual Handling  
- Struck by plant  
- Striking object  
- Gas exceedance  
- Noise  
- Dust

### Using this list and your knowledge of the activity, select the SIGNIFICANT hazards

#### Significant Hazards: (Section ‘A’)

<table>
<thead>
<tr>
<th>Persons at Risk</th>
<th>Likelihood</th>
<th>Severity</th>
<th>Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operative(s)</td>
<td>M</td>
<td>H</td>
<td>H</td>
</tr>
<tr>
<td>Operative(s)</td>
<td>H</td>
<td>H</td>
<td>H</td>
</tr>
<tr>
<td>Operative(s)</td>
<td>M</td>
<td>H</td>
<td>H</td>
</tr>
<tr>
<td>Operative(s)</td>
<td>M</td>
<td>H</td>
<td>H</td>
</tr>
<tr>
<td>Operative(s)</td>
<td>M</td>
<td>H</td>
<td>H</td>
</tr>
</tbody>
</table>

Give priority to hazards where the persons at risk, likelihood or severity are high. Include any controls that reduce the risks from the significant hazards.

### Control Measures:

- Accurate location of underground services by operatives trained in the use of locating equipment
- Planned provision of and use of excavation support equipment, trench support is to extend to the bottom of the dig
- Excavations to be always backfilled as soon as practicable, if not warning signage, inspections & adequate fencing used
- Spoil and pipes, not to be placed at the edge of the excavation so as to surcharge it
- Proper tied ladder access extending 1.05m above top of excavation, and placed into the supported area of the excavation
- Only certified operators & lifting equipment to be used.....SWL is not to be exceeded for the Excavator being used
- Excavator is banked during excavation work, and stops used on dumpers to prevent vehicles over running the excavation.
- All operatives to be confined space trained. Gas detector to be used, Emergency BA and Escape Kit

### Control measures using PPE -

<table>
<thead>
<tr>
<th>Put 'x' by the ones that apply:</th>
<th>Head protection</th>
<th>Eye Protection</th>
<th>Dust mask</th>
<th>Toe Protection</th>
<th>Ear Protection</th>
<th>Respirator</th>
<th>High-vis clothing</th>
<th>Harness or line</th>
<th>Escape BA</th>
<th>Safety torch</th>
<th>Full BA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Details / other PPE required:</td>
<td>Gloves</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Gloves to be used in excavations & good washing/personal hygiene to be adopted due to the increased risk of Weill’s disease.

---

**The right supervision will help ensure a quality product at a fair price**

### Arrangements for Work:

**Name of work Supervisor for this method statement:***

**Level of supervision required (e.g. full time / part time / hourly):*** Full Time

**Permits required (e.g. permit-to-dig / permit-to-enter etc.):*** Permit to Dig/ Confined Space Permit

**Level of competence / training standard required by operatives:*** CSCS & CPCS/NPORS

**Other arrangements:** A ‘Permit to Dig’ to be in place before this work begins, and the required trench support already on site, Emergency escape kit and tripod, Gas detector and BA
Resources

Plant & tools required:

Cat & Genny
360° Excavator & associated lifting gear, dumper, Proprietary trench support system and Man-Hole trench sheets and frames, Gas detector, harness, tripod and winch, LOLER Lifting Equipment. Disc cutter and dust suppression kit, compressor and medium duty breaker (low vibration).

Materials:

Brick, sand, cement, Sika jointing compound

Labour:

Operative(s), Supervisor

Sketch or diagram

Manhole & Sewer Construction Schedule:

Sewers 600mm Concrete
150mm pipe (rising main)

All sewer/manhole design drawings to be reviewed to ensure construction issue design drawing is used.

Methodology Amendment:

Safety Method Statement

(Section: ‘B’):

Listing your sequence of work will help you, and your operatives, carry out the task safely and cost effectively. It can reduce errors and cut downtime due to lack of planning.

1. Set up Working area to be fenced off with Heras fencing and signage.
2. Service Information to be reviewed and Cat Scanned. A “permit to dig” will be implemented by WBCE and issued to the WBCE Construction team.
3. Existing work environment will be mechanically civilised to provide flat working area. Designated bucket change area will be established close to work area.
4. Underground services on site will be known (service drawings to be supplied by DWH), and have been located through a cat & genny survey.
5. Excavator will break up existing ground and load into dumper and taken to spoil stockpile (stockpile to be removed from site at later date).
6. Excavator will commence dig for MH connection. Operatives will construct the (MGF) temporary works system using LOLER certificated Lifting Equipment and Excavator if a reduced dig is not achievable to. Prior to entry into formed excavation the GTU (gas detection unit) will be placed at bottom/middle and top to gain air clearance. Operative will implement a wooden pole ladder will be lashed to extended to accommodate access and egress.
7. Once required depth has been reached Supervisor will complete confined space permit (confined space trained) will enter excavation review and commence the connection of the 150mm rising main.
8. Once chamber prepared with gas readings taken to record safe levels, operatives wearing appropriate PPE will break out with CP9 medium breaker, an opening for 150mm-pipe connection. (with a top man present)
9  The excavator and lifting equipment will then lift into excavation 150mm pipe. Operatives will be positioned within the temporary works protected areas while pipe is lowered. Pipe will then be manoeuvred manually in to correct position, operatives will then make good manhole to UU Standards.

10  Backfilling will progress as manholes and pipe work are in place to avoid open excavations. Where this is not possible Open excavations will be fenced as required.

11  Banksman/top man will be in attendance at all times and only confined space trained operatives will enter the manholes/excavations.

12  Works area will be monitored to ensure area is made safe, temporary covers placed on open chambers and this will be monitored as required.

13

Details to make the risk assessment site specific

Residual risk for significant hazards, is low, but control measures and safety method statement must be followed by operatives on site.