

to MVSP high pressure sludge pipelines and the Filtrate Line

General

The Mersey Valley Sludge Pipeline is a 400mm ductile iron pipeline which runs from Oldham WwTW in Manchester to Liverpool WwTW in Regent Road Liverpool. The pipeline is owned by United Utilities and laid and operated under the 1977 North West Water Authority Act. It operates at pressures up to 25 bars (375 psi) and a flow rate of up to 205 ltrs/sec. Its location is indicated by marker posts at regular intervals, including at every gas release valve and sludge washout valve location.

On private property the pipeline is laid in a 7 metre permanent easement and prior to any access being taken along, or over this easement, or any construction work begun over it, agreement must be reached with United Utilities Asset Management department and a consent/licence granted.

Whilst the average cover to the pipeline is 1 to 1.5 metres, in places it may be in excess of 9 metres deep or as shallow as half a metre. It is, however, protected by yellow tape bearing the legend – "North West Water – caution sludge main below". This tape has been placed immediately above the pipeline with a further layer 300mm above the pipe. The presence of this tape is for guidance only and all required precautions must be taken to avoid damage to the pipeline.

Prior to any work being undertaken in the vicinity of the pipeline the newcomer must:

Confirm to United Utilities in writing that all conditions herein will be adhered to together with any special conditions which may be imposed from time to time. Locate, using both electro-location methods and hand/VacEx excavated trial holes, in the presence of United Utilities representatives, the accurate position of the pipeline and place suitable markers. United Utilities representatives will be appointed to help you and protect regional infrastructure asset. Permits will need to be issued for working with 3.5m each side of the centreline of the Pipeline.

DESIGN OF NEW WORKS ADJACENT TO THE SLUDGE PIPELINE

Construction Works Adjacent to the Sludge Pipeline

United utilities must be informed before any backfill is placed against the sludge pipeline in order that an inspection of the sleeving and pipeline protection tapes can be carried out and any defects remedied.

The sludge pipeline is RVC sleeved (and in some areas wrapped) to give protection against corrosion. If any damage is caused to the sleeving or wrapping United Utilities must be notified immediately and the pipeline left exposed in order that a repair can be carried out.

Welding or any activity involving a naked flame may only take place at a safe distance from the sludge pipeline to the satisfaction of United Utilities. Under no circumstances may such activities take place on the easement without the express written consent of United Utilities and in the presence of a United Utilities representative.

The use of explosives within 150 metres or piling within 50 metres of the sludge pipeline will only be permitted following the receipt and approval of a written statement of the precautions to be taken to ensure the safety of the sludge pipeline.



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EMERGENCY ACTION TO BE TAKEN IN THE EVENT OF A LEAK FROM THE SLUDGE PIPELINE

Immediately notify United Utilities at the Mersey Valley Control Room (01925 537900) and take all precautions necessary to prevent sludge from flowing into rivers, ditches, streams, drains, manholes or any other watercourse or duct. Means to be used (as far as is consistent with the safety of operatives) shall include the digging of grips and bunding with earth and boards.

Sludge may contain substances injurious to health and care shall be taken not to come into physical contact with any spillage.

The owners of the new service shall pay to United Utilities any and all sums which may be expended by them in making good any damage to the pipeline, which results from operations in its vicinity in the construction of any crossing or from any failure to comply with any condition contained herein and will indemnify and will keep indemnified United Utilities from and against all losses (including consequential losses) costs, damages, charges and expenses arising out of or in connection therewith. The owners of a new service or construction will effect and maintain (and demonstrate to United Utilities that this has been done) an insurance in respect of potential liabilities of $\pounds 2,000,000$.

If at any time during the course of the new construction it becomes necessary for United Utilities to carry out any repair work on the sludge pipeline then while such work is taking place that part of the new construction affected by the repair work shall be immediately stopped until the repair is complete and approval given by United Utilities for work to recommence.

Under such circumstances United Utilities will not entertain any claim for delay or additional costs in the new construction.

Pipeline, cable, drain and ditch crossings

Where a new pipe or services is to pass beneath the sludge pipeline there shall be a minimum clearance of 300mm. A concrete slab shall be placed between the sludge pipeline and the new service and this shall be 150mm below the sludge pipeline and 150mm thickness. It shall be 1 metre in width and a minimum of 7 metres in length orientated along the line of the new service. A similar slab shall also be placed above the sludge pipeline to give protection against any future plant travelling along the line of this new service. It shall have a minimum clearance of 150mm above the sludge pipeline; this clearance zone shall be filled with sand.

Motorway, trunk and main road crossings

Each case shall be considered on its merits and individual designs must be submitted by the party wishing to cross the sludge pipeline. It is likely that the pipeline will need to be constructed in a man entry service tunnel in order that maintenance and repairs can be carried out.

Marker posts at the road fences will be required.

Minor roads

The minimum requirement for protection will be a 300mm thick reinforced concrete slab 1 metre in width over the sludge pipeline and extending between backs of footpaths or the widest extent of any permanent construction in connection with the new road.



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CONSTRUCTION WORKS ADJACENT TO THE SLUDGE PIPELINE

All excavation within 3.5 metres of the pipeline shall be by hand and no mechanical plant whatsoever shall be used without the specific written authorisation of a member of United Utilities staff.

No part of any building, structure, caravan, site office or tree shall be within 3.5 metres of the nearest point of the pipeline.

No vehicle, plant or machinery is to stand, operate or travel within 3.5 metres of the pipeline except as agreed by United Utilities. Where required suitable sleeper tracks or reinforced concrete rafts shall be provided at agreed crossing points to the satisfaction of United Utilities. Fencing shall be erected to regulate vehicle movements and confine crossing of the pipeline to approved crossing points. The fencing shall be of substantial construction and not simply post and wire construction. It shall be adequately maintained at all times to the satisfaction of United Utilities.

Access to the pipeline at normal United Utilities access points shall be maintained at all times as shall an access of 7 metres wide along the pipeline easement.

At all times when work is being carried out in the immediate vicinity of the pipeline a representative of United Utilities must be in attendance. At least 2 working days' notice will be required to make the necessary arrangements.

All backfilling is to be in maximum 300mm layers of suitable material, free from flints, large stones, frost bound or carbonaceous material. Where the depth to be filled is less than 300mm (e.g. between concrete slabs and pipes) then clean filling sand shall be used.

Standard conditions of work carried out within the easement or when crossing the easement

These conditions are issued for the guidance of contractors and others in order to reduce the risk of damage to the sludge pipeline and the consequent liability for such damage. They do not replace or alter any rights held by United Utilities by virtue of the deed of grant of easement for the length concerned.

- No works of any description shall take place on or within the easement before full agreement has been reached with United Utilities regarding the manner in which the work shall be carried out. At least two weeks' notice shall be given of any intention to carry out works. In an emergency, contact shall be made immediately with your appointed UU representative.
- 2. No buildings of any description shall be erected on the easement. No materials including spoil shall be placed on the easement and access to and along the easement shall be kept clear and unrestricted at all times. *No trees shall be planted or allowed to grow on the easement and United Utilities will remove any trees which remain on the land 2 weeks after giving notice that they should be removed by the owner and will recover from the owner its costs in doing so.*
- 3. Any pipes, drains, sewers or cables crossing over the sludge pipeline shall be laid in steel or ductile iron, suitably protected to the satisfaction of United Utilities, and shall cross as near

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as possible to 90° to the line of easement. In no case shall any crossing be made at an angle of less than 50°. A minimum of 300mm of clearance must be given to any crossing above or below the sludge pipeline.

4. Excavation around or beneath the sludge pipeline must be carried out by hand and care exercised to ensure that the protective wrapping is not damaged. In addition, between Oldham WwTW and Sandon Dock, a signal cable is laid in the same trench as the pipeline. Care must be exercised to ensure that the cable is not damaged. Excavations shall be fully supported and shall be backfilled to the satisfaction of United Utilities. All work shall be carried out during working hours which shall have been previously agreed with United Utilities. United Utilities will stop all work on or within the easement which in the opinion of its officers, places the sludge pipeline at risk. As a consequence of such action, United Utilities will not accept any claims for damages.

