Quality Alert

MORGAN SINDALL CONSTRUCTION

Underground Mains Water Leak

What happened:
A poorly installed underground pipe coupler failed, allowing approximately 23,000 litres of water per day to escape. The leak had been present for several months and pre-dated project handover.

The impact:
Significant costs were incurred through the prolonged loss of water and the extensive trial-and-error investigation required to locate the concealed breach, including specialist machinery, labour and plant.

Root cause:
- Poor installation: the underground pipe coupler was not fitted correctly.
- The completed buried pipework was not adequately checked before backfilling.
- The suitability of the fitting for the installation was not sufficiently verified.

Remedial action:
- Extensive investigations were undertaken to identify which buried pipe contained the breach.
- Trial holes were formed using specialist vacuum-excavation equipment.
- The failed coupler was exposed, removed and replaced with a correctly installed fitting.
- The repaired pipework was checked before reinstatement.

Required Learning / Prevention:
1. All underground pipework and fittings must be inspected before burial.
2. Confirm that every fitting is suitable for the pipework and installation environment.
3. Introduce a formal QA hold point before backfilling.
4. Retain photographs and test records as evidence of compliance.
5. Supervisors must verify completion before pipework is covered.

Photographic Evidence



Failed underground pipe coupler exposed



Specialist vacuum excavation used to locate the breach





Investigation works and replacement coupler

Key message:

- Buried pipework must be fully inspected and verified before backfilling, with suitable fittings used throughout
- Morgan Sindall Building Service Managers must ensure the contractors have provided 100% proof of compliance in accordance with the design and specifications

☐	Brickwork / Blockwork	☐	Design	☐	DFMA (Offsite Manufacture)	☐	Doors & Windows	☒	Drainage	☐	Electrical	☒	FFE (Furnishings, Fixing & Equipment)
☐	Fire & Lightening	☐	Floor Coverings	☐	Frames & Superstructure	☐	Internal Walls, Partitions & Ceilings	☐	Joinery & General Carpentry	☐	Miscellaneous	☐	Painting
☐	Public Health (Water)	☐	Roads, Paths, Paving & Surfacing	☐	Roof	☐	Services & Systems	☐	Site Preparation Works	☒	Substructure	☐	Walling (Tiling & Finished)