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Work instruction:	Date Raised
Water Mains Investigation	18/06/2012

Work Description

Step-by-step procedure for investigations into suspected leaking of privately owned section of water service pipe / water mains. Focus is on determining if pipe is leaking, making educated judgement on possible cause of leak along with any insurance liability and finally suggesting most cost-effective / suitable repair method.

Instruction

INITIAL SURVEY

1. Refer to W0001 & W0002
2. Auger engineer attends site & undertakes a visual survey with special attention to the following;
 - a. Location of stop cock in road / pavement – Note the construction of the visible pipework, the depth of the pipework, the surrounding surface area, is there a water meter present etc.
 - b. Location of the end termination in the house i.e. internal stop tap, external tap etc. Again note the construction of the pipework (polypipe, lead, copper etc.) along with any obstructions in area, is the pipework boxed in, surrounded by kitchen units etc.
 - c. Walk length of assumed route of the water feed from stop cock to internal connection & visually inspect for any signs of leaking, i.e. dips in surface, damp patches, water visually escaping etc.
 - d. Note any suggestions of previous excavations along route of water feed ie. scaring in driveway, recent fences, poles or structures which have been erected over route of pipe. Anything that might have caused damage to underground pipework from above and which would suggest accidental damage or third party involvement.
3. Auger engineer undertakes manual listening test;
 - a. Notify owners of property not to use any water services within the property, taps, showers, washing machines etc.
 - b. Turn off the stop tap within the property. (When turning off internal stop tap, the engineer must discuss with the homeowner, we cannot be held responsible for any leaks or seized stop taps which may leak after the test. **Homeowner should sign engineer's paperwork to authorise this.**)
 - c. Insert listening device onto accessible stop-cock & listen for any evident signs of leaking.
 - d. For longer stretches of pipe with multiple stop-cocks, multiple tests will be undertaken to each isolated section of pipe between each stop-cock.
 - e. Where a property is metered the engineer can also monitor the consumption and visually inspect the dial to determine if there is a leak.
4. Auger engineer sends layout of site back to office with dimensions including;
 - a. Length of pipework from stop cock to internal connection
 - b. Details of all surface constructions and obstacles to excavation above the length of pipework
 - c. Location of internal water feed within house with details of floor construction, fixtures fittings etc.

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SHARED WATER MAINS

5. If the customer is on a shared water mains supply further investigations are required to determine liability. This often requires tracing the pipework from the internal stop tap position to locate the homeowners tee connection. At this position, the pipework may need to be cut & capped and tested to identify the location of the leak. If you suspect a shared supply, contact the technical team to discuss options for further investigation.

WATER MAINS MEASURE-UP

6. A water mains measure-up is applicable when Auger have either been instructed or the customer has shown an interest in having the pipework replaced in its entirety. An Auger engineer will scope out the works involved in installing the pipework from the boundary to connect up to the existing internal stop tap or up to a cold feed where backing feeding the system is possible. This will detail the length, surface conditions, obstacles and CAT scanning for other utilities etc. to enable accurate costing, time onsite and resource to be provided.

LIABILITY –

The water feed pipe cannot be camera surveyed to determine the cause or location of any significant defects. The cause of the defect along with any insurance liability can therefore only be suggested via careful consideration of the following;

- A visual inspection to determine any above ground factors which may suggest accidental damage or third party involvement
- The construction of the pipework. Each material has different properties which react differently over time and within different circumstances, i.e. Lead will be more susceptible to ground movement, Polypipe has a much longer life span so will be less susceptible to wear and tear etc.
- Laying technique – Has the visible pipe (at stop-cock and stop tap) been laid in any way that would cause damage to the components and allow an escape of water, i.e. laid at shallow depth under driveway.

The above information will allow us to report on any evident leaking to the pipework along with a considered opinion on the cause of any defects. **Engineers are required whilst onsite to contact the Technical Manager to determine next actions.**

Responsibilities

Engineers

Key Objectives

Thorough investigation providing conclusive quality recommendations.