Leakage Investigation Survey

Client: Car dealership, Glasgow

Mains water meter information

Size (mm)	15-28	✓	32-50		75-100		125-200		Above 200mm	
Serial number	16N124358									
Readings (1)	19235.330				Time:		09.03 8th November 2018			
Readings (2)	19235.530				Time:		09.08 8th November 2018			
Location	Meter located in footpath left of entrance road									

Leakage Activities

Acoustic sounding	✓	Correlation		Ground microphone	✓	Environmental Inspection	
Other	Isolation of rising main						
Pipe traced		CAT & Genny			Distance		
Pipe correlated	Accelerometer		Hydrophones		Distance		

Background Information

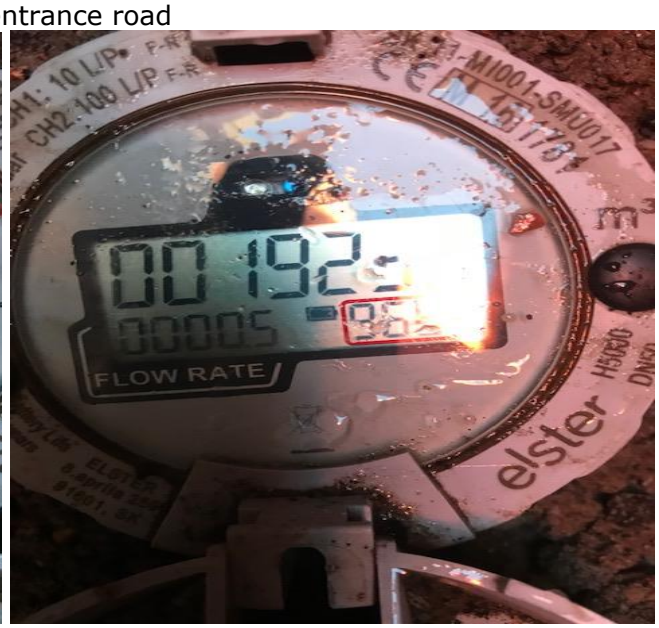
Suspected water leak causing high water bills in excess of £33,000pa.

Activity Summary

Pipework & Metering

The water meter is located in footpath, LHS of entrance road

Pic 1



Pic 2

Pic 3

Pic 4

Pic 5

Pic 6

Pic 7

Pic 8

Leakage Survey Activities

After walking the site with site manager to establish where all mains water isolation points were, the task of looking for a problem began.

A reading of the revenue meter was taken (pic 1) which had a flow rate of 2.5m3 Pper hour, on inspection of some of the internal meters it was evident that in the valeting plant room there was a sub meter (pic 3,4&5) that had a costant flow. On timing this flow rate for a while it was noted that it had a constant flow rate of 40 litres per minutes which equates to 2.4m3 per hour and 57.6m3 per day at a cost of £129 per day, this supply was then isolated.

The revenue meter was then checked and the flow rate had reduced to 0.5m3 PH (pic 2), this flow rate was confirmed by the tanks filling for the vehicle jet wash area in valeting and also the use of the jet wash.
The sub meter in the valeting plant room (pic 3) was then put back in commission, our engineer made an enquiry to the valeting manager who pointed out that the meter measured water used on the main pitch areas around the show room.
He escorted our engineer around and pointed out the standpipes around the site.

Using aquaphones on the standpipes, leak noise could be heard almost straight away, on one of the standpipes, also subsidence was apparent. On checking out the standpipe a substantial leak noise could be heard, on probing of the grassed area clear water was being drawn up confirming a leak below ground at this location (pic 6,7&8).
The site is less that one year old so it maybe a warranty issue with the builder, this to be confirmed with site before action is taken.

Summary & Recommendations

Summary:

Substantial leak leak located on pitch standpipe

Recommendations:

Excavate and repair. – Client to advise of this is being carried out by the builder.
Re-claim water and waste water costs due to poor workmanship - £33,000.

Survey carried out by

Engineer	H2O Building Services	Date	9th November 2018