Leakage Investigation Survey

Client: College, Midlands.

Mains water meter information

Size (mm)	15-28	✓	32-50		75-100		125-200		Above 200mm	
Serial number	15XC120345									
Read 1	8053.469				Time:		11.38 02/06/2021			
Read 2	8053.494				Time:		11.43 02/06/2021			
Location	Opp greenhouse entrance in garden centre									

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

Meter has constant use – leak suspected.

Activity Summary

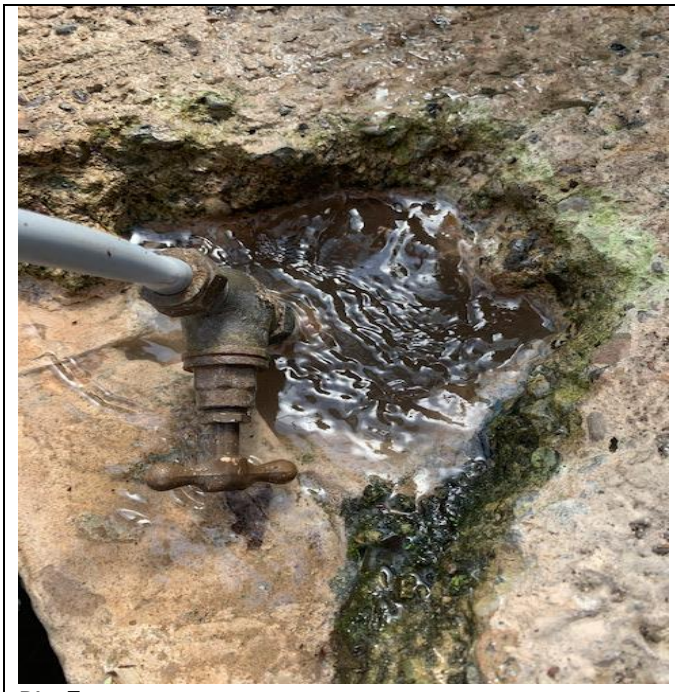
Leakage Survey Activities

Pic 1

Pic 2

Pic 3

Pic 4



Pic 5

On arriving at site I met with the estates manager he informed me of the meter with the high consumption and the area it supplied.

I was teamed up with an estates worker who kindly showed me around the supply area and the location of the meter (pic 2).

The meter was quite deep and I had to enter the meter chamber to obtain a reading. On taking a reading I also took a flow rate which was 4 litres per minute which equates to 5.7m3 per day but had much fluctuation.

On seeing the fluctuation I was coinvinced we were looking for something internal and not an underground leak.

On checking all related buildings an uncontrolled urinal (pic 1) was located with an estimated flow rate of around 1.5 to 2 litres per minute which equates to 2.8m3 per day, this was throttled down by closing the ball-o-fix slightly which reduced the flow, we recommend installing a urinal control to fix this issue and prevent any constant flow.

A further check was made at the meter and was seen to be stationary for several seconds at a time.

We met with a chap who collects the meter reads and deals with the bills etc and he informed us that we were looking at the wrong meter and we need to check out the garden centre meter as that was the one that had increased dramatically.

On checking the garden centre meter (pic 3) which only supplied an irrigation tank and two greanhouses, it had a constant flow rate of 5 litres per minute which equates to 5.7m3 per day.

On entering the first greenhouse there was a board laid on the floor (pic 4), on lifting the board you could clearly see a leak (pic 5) with a very good flow rate.

It was not possible to shut this off as the leak was the live side of the stop tap, on reporting this back to office we were instructed to isolate it and get a team on ASAP to carry out repairs.

Summary & Recommendations

Summary:

Install urinal control in male washroom to prevent flushing out of occupancy.

Carry out repairs on failed supply in greenhouse

Savings 3102 cubic meters a year or 682,440 gallons at a cost of £11,000

Survey carried out by

Engineer	H2O Building Services	Date	2nd June 2021