Lyons Holiday Parks
Pendyffryn Hall Leak Detection Site Survey

21st December 2015

We attended Lyons Pendyffryn Hall on Monday 14th December to carry out water leak detection. The water consumption through the meter supplying Pendyffryn Park was reported to be higher than expected, suggesting leakage or other unidentified water consumption on the network around the park.

The park has 155 plots with a touring field and the main hall housing a bar and restaurant facilities.

Upon arrival at site, we identified x2 water meters located in large split lid chamber at the entrance to the park. This can be accessed with pair of large lifting keys.

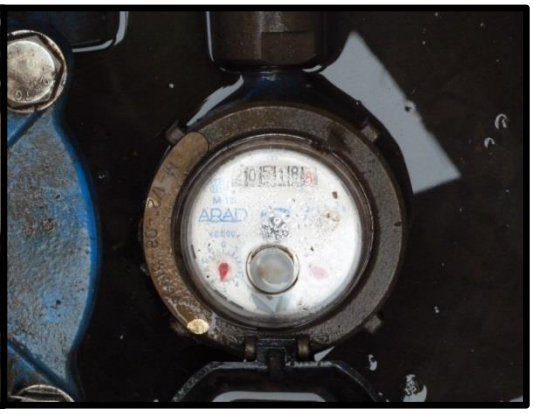
Picture 1 – Water Meter Location

Picture 2 – Inside water meter chamber

The main water meter was 0850Cm0015 reading 51394m³ at 10am on 14th December. We read this meter again at 4pm on 14th December and the meter showed 51395m³. Therefore, in approx. 6 hours the site had used 1m³ of water (0.16m³ per hour).

We read the bypass meter, 08-519945, which at 10am read 20516m³ and at 16.01pm, read 20519m³. The bypass recorded consumption of 3m³ in 6 hours (0.5m³ per hour).

Picture 3 – Main Water Meter 0850Cm0015



Picture 4 – Bypass Meter 08-519945

Visible pipework around the areas of the park is typically MDPE (Medium Density PolyEthylene or more commonly known as blue poly) or black poly.

With the exception of a few newly installed valves on pipework around the back of the hall, there are no other isolation valves known on the site.

All water connections on the park were acoustically sounded for leak noise. All pipework underneath the mobile homes was also inspected for any visible leaks on connections and fittings. However, limited access to pipework on a number of plots prevented a comprehensive acoustic and visual survey from taking place. This was due to most of the mobile homes having wooden or PVC 'skirts' fitted, with access hatches padlocked in some cases.

During the survey a visible leak was identified on a connection to one of the empty plots – T11. **This leak was repaired at the time of the survey by H2O.**

Two smaller visible leaks were also identified throughout the survey:

1. Plot A10 – small split in black poly pipe

2. Plot E1 – drip on stoptap (main stoptap not fully closed?)

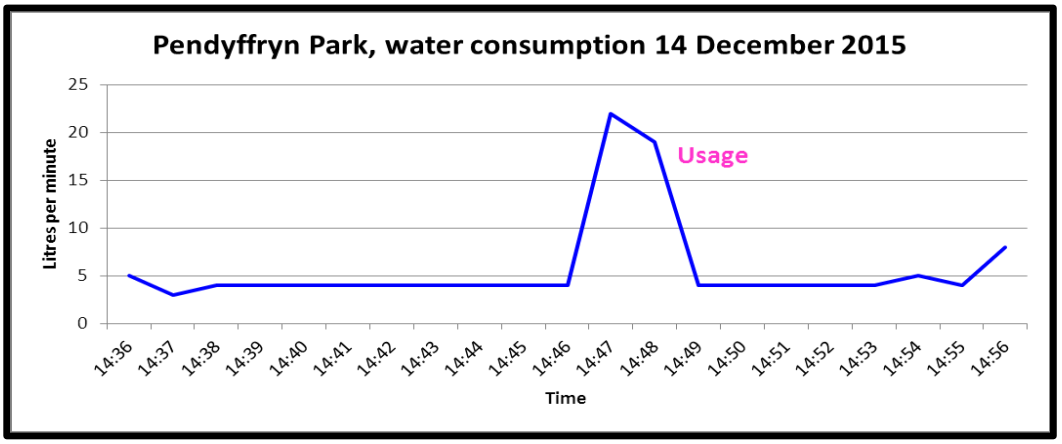
Picture 5 – Location of leak – Plot T11

Picture 6 – Split on Pipework causing leak

Picture 7 – Repaired leak (cut back pipe to remove split section)

Prior to repairing the leak, the meter was monitored for a short period of time and found to be recording water consumption at a minimum rate of 8 litres per minute. This equates to 0.48 cubic metres per hour or 11.5 cubic metres per day.

Following the repair, the meter was monitored and found to be recording an average minimum flow rate of 4 litres per minute (0.24m³/hour or 5.7m³/day). This is an instant saving for Lyons due to repair of **0.24m³ per hour (240 litres per hour)** and an **instant financial save of £17.12 per day** & **over one year, £6,244.13.**



Summary:

1. All water connections (where accessible) were acoustically sounded for leak noise and checked for visible leaks;

2. Not all pipework checked due to limited access – approximately 20 plots were missed due to padlocked access hatches or extensive verandas;

3. Three leaks identified on the park, of which **the main one (4 litres per minute) was repaired at the time of the survey;**

4. Remaining leakage measured at 4 litres per minute or 0.24m³/hour which could result in a potential further saving of £6244.13 per annum if located and repaired.

Recommendations

1. Repair 2x minor leaks identified;

2. Provide protection for the repaired leak to prevent it being driven over again;

3. Provide easier access to the rising main or isolating valve underneath each mobile home to enable a full survey to be carried out;

4. In the absence of a data logger, it is also recommended that the meter is read on a monthly or weekly basis to monitor water consumption. Note: both meters must be read within the chamber to obtain an accurate figure.

Annual Saving Achieved: £6,244.13