

Appendix 1

Potential economies realised at 315 Coxford Road through changes in water supply and heating.

- Removal of the storage calorifier: This generates approximately a 30% saving on energy usage, this is reflected in the compliance under L8 water quality regulations, which state, the water temperature should be stored at 60 degrees at all times. Further benefits are storage hot water vessels are renowned for producing scale which assists the risks of legionella developing within the system.
- Heating system controls up-grade will produce further savings by controlling the temperatures and set point produced by the boiler.
- Removal of the hot water flow and return pipework delivering hot water to each outlet within the building, due to the length of the runs and heat losses through the pipework will produce energy savings this also mitigates the risk of legionella.
- Removal of showers and baths, this is a direct energy saving and removing the risk of low usage which then mitigates the risk of legionella.
- Removal of the existing galvanised pipework, the condition of the pipework is poor this was reflected during usage and rusty water would be produced at the outlets. By removing the galvanised pipework it mitigates a really high risk of bacteria forming and with this comes the development of legionella within the system..
- The introduction of single point hot water heaters within the ablution areas and the benefits this brings as follows.
 1. Heaters set at 38 degrees no need to add cold water. All of which will produce energy/usage savings.
 2. No storage of hot water therefore producing a high energy saving, and water usage savings.
 3. No long pipe runs reducing water wastage and usage, therefore producing savings.
 4. Tea boilers these are not the standard type where they keep boiling water temperatures 24/7, the models selected will have an in-built timer and can be programmed to match the building occupation, therefore shutting down weekends and after working hours. They also have a mode facility if they are not used say within two hours they will shut down. This against a normal boiler will produce up to 25 to 40% energy savings, for this type of facility.
 5. A new cold mains throughout the building, this will take away dead legs and will support the low usage plant and equipment all areas will be brought up to the current water regulations and mitigate further building risks such as legionella developing within the system, this will reduce maintenance costs.
 6. Isolation and drain off points, this will afford areas to be isolated without disrupting the complete building in times of major reactive works.
 7. Hot and cold services drawings detailing the current installation, this will assist with the water quality risk assessment for this building

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