

Maintenance and Projects report for Trustees meeting date 24 April 23

Maintenance

Our water meter has been replaced. The work was supervised by KW and the final/initial meter readings noted. The meter location is unchanged but has been marked with blue paint. The bushes have been cut back slightly to make access easier.

Fire and Safety

The 10 year fire and safety inspection was carried out on Wed 29/3 at 1300hrs. The inspection took 4 hours and I answered a wide range of questions. The report is awaited from Fletcher Risk Management. The cost will be £350 but no invoice has yet been received.

Field and trees

The tree surgery has now been completed by Tree Musketeers. The work included an additional tree which shed branches during the winter. This tree was close to the playground and Tree Musketeers obtained permission from CW&C on the basis that it was a safety hazard. They will provide a quote for emptying the midden on an annual basis.

Projects

New double glazed windows. The 19 new double glazed windows will be installed by Northwich Glass in the week commencing Tues 30 May. The work is being planned by Ken Wood in liaison with Northwich Glass.

Cavity Wall Insulation. During April the cavity wall insulation quote from Cooney Insulations will be updated with a view to having the work carried out in August.

Leasing of land to TPC for the new play area. Surveyors BA Commercial has been requested to survey the field and determine the fair rent. At Parish Council request the area to be leased will be the entire field less the car park. Our previous contact in BA Commercial, Melissa Hastie, has left the company and TY has phoned the new contact Nick Edwards. Nick will brief himself next week and will phone Bates Wells for guidance. A site visit will take place during May.

Photo Voltaic array + battery. TY and NO have had discussions with Dr Mike Tough, PV specialist responsible for the Jessie Hughes PV array project. Mike has advised that the east side of the TCC roof should be able to accommodate an array of 38 cells capable of producing 11 kW per phase under ideal conditions. This would be linked to a battery with a max power capability of 11kW per phase. As the TCC is located in the Tarporley Conservation area planning permission would be required. Mike's opinion is that the array should be installed on the car park side of the room (which has a slightly more southerly orientation) as that would not be visible from the road. We would have to request structural engineers to check that the roof can safely carry the additional weight. To estimate the energy savings and reduction in electricity bills Mike has requested half hourly electricity import readings for the last year, but Scottish Power has advised that these are not available. The reason for this is that our "smart" meter was installed by the previous electricity supplier BG Lite and the smart functionality cannot be transferred to another supplier. I will request Scottish Power to install a replacement smart meter with links to their system and start collecting the half hour values. In the meantime some assessment can be done using daily import figures which I can estimate from our records.

Upgrading of TCC heating systems.

The recent Potterton boiler failure has again focused attention on the age of this boiler, which is no longer available on the market. I have been assured that spares will be available until 2026 and indeed the recent failure involved the supply of two major components which were available within a week. In addition we were able to heat the main hall reasonably well electrically for 10 days

although this gave a lot of hassle in turning elec convector heaters on and off manually. We imported about 80kWh of electricity each day so the additional electricity cost was approx. £120. As I understand it, new gas boilers will be available to purchase until 2035 but as the demand will then fall significantly factories are likely to cease production and spares will become more difficult to source.

In view of the above a replacement heating source is required for the main hall in the next 2-3 years. A replacement gas boiler would be much smaller, perhaps 40kW, as the Potterton is very oversized. We would want this boiler to be a wall mounted balanced draught type as the chimney stack needs to be reduced to roof height to avoid the shadow reducing the performance of any new PV array. This would need an internal re-arrangement of the boiler room to provide a route for the flue gas and air intake piping. The recent fire and safety inspection (report pending) has advised that CW&C building regs consent may be needed for this change. The life of a gas boiler is normally around 20 years which mean 2046, but the situation after 2035 is unclear.

We expect that grants will be difficult to obtain for a replacement gas boiler so we will probably have to meet all the total cost ourselves.

The Worcester boilers supplying the CR/AM area and main foyer area have so far been very reliable. The CR/AM boiler is less than 10 years old and the foyer boiler (recently moved to the user store) is the same age as the Potterton ie about 14 years. Both should last a good while longer, and being domestic boilers, spares are easy to obtain.

Against this background we have been looking at the possibility of heating the main hall using reverse cycle heat pumps similar to the ones which have just been installed at the Jessie Hughes. These would be powered by electricity which is approx. 3.5 times more expensive than gas, but approx three quarters of the heat is taken from the atmosphere and one quarter from the electricity supply. Our present 100amp 3 phase supply is sufficient for the duty. We would have to pay VAT at 20% and CCL on the electricity used, so no major savings in electricity bills would be expected. It is too early to provide a sensible cost comparison. This would be a long lasting solution with the following benefits:

- A major reduction in TCC CO2 emissions
- Grants to support the work will be easy to obtain as the change accords with UK Gov policy.
- Gas will become more expensive relative to electricity and will ultimately be phased out if the UK if indeed to become carbon zero by 2050
- The system will be reverse cycle ie., it will be able to cool and dehumidify the main hall during hot summer weather.
- The system would involve multiple units (perhaps six) so total heating failure would be unlikely (unless there was total electricity failure)
- As the system would blow warm air, the hall heating time would be reduced from 2 hours to about 15 to 20 minutes.

The disadvantages of such a system would be:

- No major savings in electricity costs (yet to be quantified)
- Vulnerability to total electricity failure either locally or nationally. However the three existing gas boilers each require electricity to run circulation pumps, fans and controls.

We have not considered hydrogen powered boilers as (blue) hydrogen will only be available in very restricted areas such as Ellesmere Port, and not in country areas. It is likely that some hydrogen will be blended into the natural gas grid, but probably not enough to cause the UK Gov to reverse it's decision to phase out gas fired boilers.

Please consider this to be a progress report and it's far too early to draw any conclusions. Investigations are continuing and we are very grateful to Dr Mike Tough for his assistance.