

CONGLETON TOWN COUNCIL

COMMITTEE REPORTS AND UPDATES

COMMITTEE:	Council		
MEETING DATE AND TIME	3 rd October 2024 7pm	LOCATION	Congleton Town Hall
REPORT FROM	David McGifford (Chief Officer)		
AGENDA ITEM REPORT TITLE	12 Town Hall Decarbonisation update		
Background	<p>Meetings between the Project Board and Pearson Surveyors have taken place on 4th July, 8th August and 5th September 2024. These meetings precede the monthly meetings with our Salix Client Support Officer which are scheduled for around the 15th of each month. Initial meetings of the project board agreed Terms and Conditions, initial proposals for the Programme of Works for Year 1, Risk Register and monthly reports to Salix. As a reminder the first year of the contract with Pearson Surveyors is to develop designs and solutions to assist in the decarbonisation of the Town Hall.</p>		
Project Board Meetings	<p>Investigations into heating solutions and solar energy continue with proposed locations and plans being drawn up in preparation for any planning applications to the Conservation Office.</p> <p>Four options for solar energy are being investigated:</p> <ul style="list-style-type: none">• Utilising the Grand Hall roof only. This area would create a 20kwe system.• Utilising the Museum roof only. Using only the Museum roof would create a smaller PV array generating a 7.6kwe system. This system could mean a proposed change in scope from the initial Salix project and result in offering money back to Salix on the basis that we cannot use the Grand Hall roof.• A hybrid mix of using both the Grand Hall and Museum roofs. This option has been investigated by Pearson Surveyors who would strongly avoid this option as this will add cost and complexity when connecting to mains supply. There are also maintenance issues with the Museum roof from brief inspection which would need to be addressed before any work was carried out as access could prove difficult following installation.• The use of thin, solar film laminate on the windows on the side of the Grand Hall roof. These solar sheets are a standard solar panel made up of silicon cells around 200 to 500 micrometres thick. They are flexible to touch and similar to a roll of laminate flooring. Many thin-film technologies have been found to have a shorter lifespan and larger degradation rates than first generation cells which has contributed to their limited development. This type of technology has an expected lifespan of 8-10 years, as opposed to 25 years plus of first generation cells. Typically, a 4kwe system of traditional solar panels would cover a space of 28m². To generate the same 4kwe output using the solar film laminate option would require an area of 42m².		

The solar film laminate technology would need any area of 230m² to achieve a 20kwe output. Current technology indicates solar film laminates are much less efficient than traditional panels and, because of their construction, are more likely to degrade in a much shorter period of time as opposed to traditional solar panels.

Proposals for alternative heating solutions are based around the installation of a Carrier 30 RQP 210R(equal or approved) Air Source Heat Pump. The ASHP would be located on the car park at the rear of the Town hall and connected to existing pipework around the Town Hall. The preference and reasons for this type of technology were highlighted in the feasibility study (Heat Decarbonisation Plan) provided to Salix by Pearson Surveyors and used to help unlock and approve the grant application. The table below is a summary from the Pearson Surveyors feasibility study, the complete feasibility study is attached.

Opportunity	Observations	Consideration
Solar Hot water	Ruled out due to cost associated.	Not considered due to suitability and high CAPEX.
Photovoltaics	Limited vacant roof and listed building consent.	Photovoltaic installations are to be included in the form of new solar glazing to replace windows in main hall.
Hydro power	No water course	Not considered as no known aquifer within the proposed area of work
Wind Turbine	Quantity is impractical and wind speed inadequate	Not considered due to planning constrains, capital cost and spatial requirements
Biomass boiler	Too expensive, high maintenance	Not considered due to shortage of fuel source, ongoing maintenance and back up gas boiler requirements
Combined heat and Power	Highly reduced efficiency due to improvements to electric emission factor.	Not considered due to natural gas requirement to generate
Ground source heat pumps	Risk in ground	Not considered due to requirement for auxiliary boiler requirement
Water source heat pumps	No known aquifer	Not considered as no known aquifer within the proposed area of work
Air to water heat pumps	Viable with available plant space	To be included in assessment
Co2 heat pumps	No common system.	Not considered as cannot be used on wet heating systems
Low energy lighting	Viable to replace existing inefficient fittings.	To be included in assessment
Heat Networks	No existing heat networks in the area.	Not Considered as no communal opportunity for district heating in area
Waste Heat Recovery	Geographical location concludes that there are no opportunities for anaerobic digestion from cattle / methane recovery from landfill.	Not Considered as no known waste plant in the vicinity to utilise

<p>Additional grant</p>	<p>Data logging was carried out at the Town Hall between 9th & 16th September 2024 to determine the electrical and gas usage over an average week. As mentioned in previous reports, one of the early concerns is the energy supply into the Town Hall which may be very close to capacity. Information retrieved from the data logging will be discussed at the next Project Board meeting on 10th October. This information will determine if the electrical supply to the Town Hall is sufficient to support proposed decarbonisation improvements or if discussions need to take place with the Distribution Network Operator (DNO) to increase the electrical supply. Other areas for discussion at the next Project Board meeting will be progression with plans to be submitted to the Conservation Office for solar panels, location of ASHP, secondary glazing and also the best use of the Improved, Greener, Community Facilities Grant.</p> <p>The Improved Greener, Community Facilities Grant was an additional successful grant application not connected to the Salix grant application. The grant is for 75% of projects costs up to a maximum of £15,000. When initially applying for the grant the Cheshire East Community Grants team advised that the Improved Greener, Community Facilities Grant could be used alongside the Salix grant as part of CTC's financial commitment. Following a successful grant application we were advised that projects supported by the Improved Greener, Community Facilities Grant needed to be completed by 31st March 2025. As there is no financial commitment by CTC in the first year of the Salix project we must use the Improved Greener, Communities Facilities Grant for additional projects. The fund is seeking projects that:</p> <ul style="list-style-type: none"> • Will strengthen the social fabric and nurture a feeling of local pride and belonging, through investment in activities that enhance physical, cultural and social connections and amenities. This includes community infrastructure (buildings), local green space and community-led projects. • Demonstrate a passion to make a difference within the local community. • Will improve engagement with the community by 25%. • Tackle climate change, including: <ul style="list-style-type: none"> • Reduce carbon emissions (eg from buildings, travel, food and waste). • Capture carbon through tree planting and improved green spaces for nature and the community. • Protect people and the environment from the effects of climate change. • Help communities to take action against climate change through sustainable energy projects and travel. • Improve community facilities as a result of support.
<p>Payments</p>	<p>The first invoice from Pearson Surveyors for £22,493 + VAT was received on 5th August 2024. Salix have now paid that invoice and we have made payment to Pearsons</p> <p>The second invoice from Pearson Surveyors for £18,557 + VAT was received on 10th September 2024. This invoice was submitted to Salix along with the Monthly Monitoring Report on 15th September. Payment of this invoice to Pearson</p>

	Surveyors will be completed around 18 th October when CTC receive payment from Salix of £18,557 + VAT.
Finance	At this stage, there are no financial implications or risks to the Town Council based upon the agreed invoicing and payment procedure. The additional grant could also be used if required and agreed upon.
Environment	This project is about decarbonisation and the project board has the opportunity to monitor the environmental impact not only in the delivery of the project at the town hall but also in the procurement process for the materials used.
Equality	The designs if implemented should not negatively impact on accessibility to the building, any equality issues will need to be highlighted and considered by the project board
Proposal	To receive the update on the Town Hall Decarbonisation Project