

FOR PUBLICATION

REPLACEMENT OF BOILERS AT THE WINDING WHEEL

MEETING:	COUNCIL
DATE:	22 JULY 2015
REPORT BY:	CULTURAL & VISITOR SERVICES MANAGER
WARD:	ALL
COMMUNITY ASSEMBLY:	ALL
KEY DECISION REFERENCE:	533

1.0 **PURPOSE OF REPORT**

- 1.1 To recommend for approval the replacement of the boilers located at the Winding Wheel, which serves the Winding Wheel, Stephenson's Memorial Hall and the Parish Church.
- 1.2 To identify the funding to pay for the replacement boilers.

2.0 **RECOMMENDATIONS**

- 2.1 That the replacement of the boilers at the Winding Wheel is approved.
- 2.2 That Council approve:
 - 2.2.1 The inclusion of the replacement of the boilers at the Winding Wheel in the Council's capital programme 2015/16.
 - 2.2.2 That a provisional sum of £110,000 be allocated to this project from the Council's property repairs fund, subject to the outcome of a procurement process.

3.0 BACKGROUND

- 3.1 The Winding Wheel was purchased and refurbished by the Council in 1987. As part of this project, coal fired boilers were installed at the rear of the building. The boilers were subsequently converted to gas following a Council decision to stop using coal to provide heat in any of its buildings.
- 3.2 In 1994 the boilers for the Pomegranate Theatre and Museum were no longer fit for purpose and, rather than replacing their boilers, a decision was made to provide heating to Stephenson's Memorial Hall from the Winding Wheel, via underground pipes.
- 3.3 In 1997, the Parish Church approached the Council and asked if it could help the church as its boilers needed replacing and securing the necessary funding for their replacement was proving challenging. It was subsequently agreed that the most beneficial way of assisting the Parish Church was to connect the church to the existing heating system at the Winding Wheel. The Parish Church authorities paid for this extension to the heating system and continue to pay the Council for their proportion of the gas used, via a heat metering system.
- 3.4 This report and its recommendations were considered by Cabinet at its meeting on 14 July, 2015 and it was resolved that the recommendations be supported.

4.0 CURRENT SITUATION

- 4.1 As part of the Council's partnership agreement, Kier Asset Partnership Services are responsible for the general maintenance and upkeep of the two gas boilers located at the Winding Wheel. The cost of this service is met from the Council's property repairs fund.
- 4.2 In recent years, because of the aging infrastructure, the boilers have needed on-going repairs. Both boilers have broken down in recent years but never at the same time. Consequently, the heating for all buildings was provided by the boiler still in operation so there was no disruption to the service.

- 4.3 Earlier this year, when one of the boilers broke down, the engineer's subsequent report stated that, although the boiler was repaired and fully operational, he could give no guarantees as to how long the repairs would last. The fault was at the base of the boiler water jacket. This metal base on both boilers has worn down considerably and the welding will not necessarily hold long term.
- 4.4 Kier has recommended that consideration should be given to prioritising the boiler replacements at the Winding Wheel this summer as there are no assurances that the boilers will survive the winter period. The breakdown of the heating system would have a significant financial impact on the Winding Wheel and Pomegranate Theatre, at what is generally one of the busiest times of the year.

5.0 **PROPOSAL**

- 5.1 In March of this year, as part of the commercial waste management review, project academy officers investigated the benefits, both financial and environmental, of installing biomass heat generation equipment at the Winding Wheel. Information, advice and data were provided by Kier and the council's Greenspaces and Sustainability Officers.
- 5.2 Investment in wood-chip biomass heat generation equipment initially appeared to be a viable option. On further investigation, however, it was noted that a significant investment of £363,000 for the equipment and £120,000 for the necessary storage barn would be required, compared to an estimated £110,000 for the replacement gas boilers.
- 5.3 After significant research, which initially appeared promising, the use of 'home sourced' wood proved not to be viable due to the significant extraction, transportation, chipping and curing requirements.
- 5.4 Although it was recognised that an investment in biomass heat generating equipment at the Winding Wheel would be a strong environmental statement by delivering substantial reductions in CO₂ it was agreed by the review group that this was not a financially viable option.

- 5.5 The review group did consider other heat sourced eco-solutions such as a heat pump, solar and underfloor technology but none of these are presently suitable alternatives to biomass and would entail significant internal changes to a listed building.
- 5.6 Kier have, therefore, proposed that the boilers are replaced with modern gas boilers and that the work should begin as soon subject to funding being available. Kier would be responsible for overseeing the design for the scheme and would produce the specification, drawings, tender documentation and cost plan. Listed building consent will also be required before this work could commence.
- 5.7 Kier would also be responsible for the tender process. It is estimated that the work on site would start in September and last approximately 4/6 weeks. It is anticipated that there should be sufficient space to allow one of the boilers to be removed and install the two new boilers whilst, at the same time, keeping the other original boiler operational. This would result in a short swap over period and would negate the need for shutdown of any of the three buildings. Alternatively, if this proved unachievable, a mobile boiler could be hired in for a short period. It is imperative that there is no disruption to the service delivered by all three buildings, in what is a very busy period.
- 5.8 The safety aspects of the project would be overseen by Kier and a CDM lead designer would also need to be appointed.

6.0 **FINANCIAL IMPLICATIONS**

- 6.1 It has been estimated that this project will cost in the region of £110,000, which will include all professional fees and a CDM lead designer. The costs include a contingency sum which could be used for a mobile boiler, should it be required.
- 6.2 As stated earlier in this report, Kier will oversee this project and this will include the preparation of all tender documents, evaluation of tenders and the appointment of the contractor.
- 6.3 It is proposed that the replacement boilers should be included in the council's capital programme for 2015/16 and will be financed

from the council's property repair fund, for which provision exists for this expenditure.

6.4 This work will be subject to a tendering process and it is estimated that the work, including all professional fees, will cost £110,000.

6.5 It is anticipated that the installation of a modern boiler will result in efficiency savings of between 10% and 15% based on the current gas usage. It is estimated that, over the three buildings, this could be between £2,500 and £3,750 per annum.

7.0 RISK MANAGEMENT

7.1 The table below outlines the risks and mitigation actions related to this project.

Description of the Risk	Impact	Likelihood	Mitigating Action
Boiler breaks down before replaced	Medium	Possible	Replacement boiler installed as soon as possible
Listed planning permission not granted	High	Unlikely	Liaise with Conservation Officer before submit application
Cost of project higher than anticipated	Medium	Possible	Robust tendering process
No heating during installation period	High	Possible	Standby mobile boiler in place

8.0 ALTERNATIVE OPTIONS TO BE CONSIDERED

8.1 The replacement of the boilers could be deferred until a later date. There is a high risk that the boilers may break down again this year and, according to the engineer's report, they may not be fit to be repaired. This would have both a financial and reputational impact on the Council and this course of action is not recommended.

8.2 Alternatively the gas boilers could be replaced with a biomass heat generation system but, as explained, this would be an expensive option to pursue. Given the current financial pressures on the council this option is not recommended.

9.0 **RECOMMENDATIONS**

9.1 That the replacement of the boilers at the Winding Wheel is approved.

9.2 That Council approve:

9.2.1 The inclusion of the replacement of the boilers at the Winding Wheel in the Council's capital programme 2015/16.

9.2.2 That a provisional sum of £110,000 be allocated to this project from the Council's property repairs fund, subject to the outcome of a procurement process.

10.0 **REASONS FOR RECOMMENDATIONS**

10.1 To ensure business continuity at the Winding Wheel, Stephenson's Memorial Hall and the Parish Church.

You can get more information about this report from Bernadette Wainwright (Tel: 01246 345779)