BRIEFING NOTE FOR AUDIT & GOVERNANCE COMMITTEE – 26 JUNE 2014

GL1 Leisure Centre Combined Heat & Power (CHP)

By way of brief background information, the following information has been gathered from files and various emails sent to and from individuals involved in the project. It is not an exhaustive list, nor is it necessarily a true reflection on activity or the priorities that may or may not have been adopted at the time it was recorded.

It is not easy to unravel the issues that arose, before and after installation. There has been a number of Gloucester City Council employees involved in the project, from inception to present day. None of the officers that procured the works, or had a hand in the process, are still employed by the City.

I was made aware that there could be operational issues with the CHP at GL1 soon after starting by employment in Aug 2012. At this time the matter was being dealt with by Senior Building Surveyor John Slaney who left the council in February 2013.

We have no Mechanical and Electrical expertise in the Asset Management Team. It was therefore decided that we take a step by step approach to resolving issues, procuring services of experts as required. As is often the case with such matters, this takes more time than relying on in house advice. On a positive note, having repaired and re-commissioned the 3rd boiler in the plant room and then implemented the recommended adjustments to the CHP we seem to have made significant progress. We will be able to measure the outcomes once we have a data set covering a greater like for like time period.

August 2006
Report on file from Congenco providing initial advice on installation and specification of CHP. Includes quote for the works and ongoing annual maintenance charges.

October 2006
Various emails regarding gas pressure available on site and pressure required for optimum performance of the CHP. Indicates that site pressure is 19mb and optimum operating pressure required is 20mb

May 2007
Meeting notes seeking including projected project start date of July 2007

October 2007
Emails from Chris Dobson of GCC to Congenco advising that gas pressure would only allow for 85% full load.

Sept 2008
Martin Skerritt emailed Ian Bragg cc Viv Lean and Steve Tonks outlining achieved savings of circa £15,000 over a 7 month period. Suggests this is only 50% of projected savings. There is a response from Ian Bragg with recommendations to ensure optimum efficiency. Unknown whether these measures were undertaken.

July 2010
Email from Godfrey Tarling to Peter Monahan requesting an increase in gas pressure as CHP unit not functioning correctly.

December 2012 – November 2013
A series of works are undertaken to ensure that the plant at GL1 is functioning as designed.

Brian Duncan (Clerk of Works for City Council) site inspection of plant room advises that one of the three boilers in GL1 plant room has been dismantled. Investigative work undertaken, it transpires that the boiler was stripped in 2008 as required repair. Quotes are sought to reinstate.

Works are undertaken to the CHP to re-route the flue as exhaust gases are entering the Air Handling Unit.

December 2013 – March 2014
Informal investigative works were undertaken by Mechanical and Electrical (M&E) Surveyor, Doug Wheeler. Doug had been appointed by the City Council to oversee the procurement of the AHU works early in 2013. During a site visit Doug noted that the CHP did not appear to be running correctly.

A meeting was arranged between City Council and Aspire to discuss the probable causes of the plant "dumping" heat which resulted in excess energy consumption and inefficient operation of the plant.

The M&E Surveyor believed that the issues could be solved by undertaking some relatively straightforward adjustments to the temperature flow and return settings via the Building Management System (BMS). It was agreed that a report would be commissioned jointly by Aspire and GCC to further understand the issue. In order to demonstrate a collaborative approach, GCC agreed the joint commission was to be awarded to Aspire's chosen specialist contractor Tim Linford of TJL Associates. Tim was made aware of Doug Wheeler's suggestions prior to visiting site.

March 2014
Commissioned report by JTL Associates is received. In broad terms, Tim's findings largely concurred with Doug Wheeler's initial advice. Tim's report made a number of recommendations to look at varying the temperature controls via the CHP's remote monitoring system. Some comfort was taken from both experts agreeing a similar remedy.

3rd boiler re-commissioned after lengthy wait for parts to be shipped from Italy.

April 2014
Aspire's in house operative Paul Dewsbury arranged with the plant manufacturer Congenco to implement the recommended changes.

April 2014 – present
We are currently in the process of monitoring the impact on energy consumption, a joint exercise between Aspire and GCC. Initial assessment is positive and the CHP appears to be working considerably more efficiently than previously. We will have a clearer picture once more comparable data is collected. We anticipate there may be further tweaks to the system over the coming 6-12 months in order to optimise performance in line with seasonal temperature swings.

Richard Webb, Asset Manager