
Report To:	Environment & Regeneration Committee	Date:	18 January 2018
Report By:	Head of Environmental and Commercial Services	Report No:	ERC/ENV/WR/17.325
Contact Officer:	Willie Rennie	Contact No:	714761
Subject:	Cremator Replacement Update		

1.0 PURPOSE

- 1.1 The purpose of this report is to update the Committee on the replacement of cremators within Greenock Crematorium and to advise of the anticipated cost and request that the Committee remit this report to the Budget Process for approval.

2.0 SUMMARY

- 2.1 A report to the Environment and Regeneration Committee of 31 August 2017 confirmed that it is necessary to replace both cremators and associated apparatus at Greenock Crematorium, and explained the background as to why new equipment is required. The Committee previously approved a feasibility study being carried out to investigate the options and wider implications of installing new cremators.
- 2.2 The feasibility study is complete and this report summarises the main findings of the study and makes general recommendations as to how best to take the matter forward.
- 2.3 The cremators should be replaced next financial year. The planning and procurement process required to install replacements and manage the process with minimal disruption to the service will be time consuming hence the preference to progress the project as soon as it is approved and funding agreed.
- 2.4 It is proposed to replace both cremators and associated apparatus with modern equivalents. Due to the dimensions of the apparatus and the age of the crematory building a significant amount of building work will be necessary. It is also proposed to re-design and extend the car park to better accommodate the number vehicles that use it.
- 2.5 Officers would recommend that in order to help finance the project and reflect the service improvements arising from this significant investment an increase of 5% in cremation charges is implemented once the new facility is operational.

3.0 RECOMMENDATIONS

- 3.1 That the Committee approve in principle investing £1.65m in the replacement of cremators, associated equipment and building works and remit consideration of the funding to the Budget Process.
- 3.2 That the Committee note the estimated ongoing operational revenue savings and agree to the increase of 5% in all cremation charges with effect from the operation of the new facility and note that it is proposed both these items will be used to prudentially fund £850,000 of the £1.65million investment, leaving £800,000 to be funded from the 2018/21 Capital Programme.

3.3 That the Committee note there will be further reports brought forward in the future to advise the Committee on the progress of the project.

Willie Rennie

Acting Head of Environmental & Commercial Services

4.0 BACKGROUND

- 4.1 Cremation is not a statutory obligation on local authorities. However, Inverclyde Council carries out its functions as a cremation authority in terms of the statutory powers and duties available to it. If the cremation option were not available in Inverclyde, then many more bereaved families would opt to use the burial service instead.
- 4.2 Inverclyde Council operates one crematorium, Greenock Crematorium, which carries out around 1,000 cremations per annum utilising two cremators. The cost of providing burial grounds and maintaining them in perpetuity means that the cremation option is both a service to local residents and an appropriate and cost effective alternative to providing a burial service.
- 4.3 It should also be noted that 20%-25% of the 1,000 cremations carried out at Greenock Crematorium relate to residents from outwith Inverclyde, which is a positive statistic in that it aids the viability of the crematorium.
- 4.4 A report to the Environment and Regeneration Committee of 31 August 2017 confirmed that it is necessary to replace both cremators and associated apparatus at Greenock Crematorium, and explained the background as to why new equipment is required. The Committee previously approved a feasibility study being carried out to investigate the options and wider implications of installing new cremators. The feasibility study is complete and this report summarises the main findings of the study and makes general recommendations as to how best to take the matter forward. The report also indicated that officers would look at the practicality of funding the investment from increased charges.
- 4.5 The cremators should be replaced next financial year. The planning and procurement process required to install replacements and manage the process with minimal disruption to the service will be time consuming hence the preference to progress the project as soon as it is approved and funding agreed.

5.0 SUMMARY OF FEASIBILITY STUDY MAIN ITEMS

5.1 Cremator Replacement & Abatement of Emissions

As expected, replacement of the existing cremators is recommended, as is the requirement to fit abatement equipment to ensure that Greenock Crematorium continues to comply with current emissions regulations and anticipated revisions of said regulation in 2020.

Current legislation requires that 50% of all cremations across the UK be abated. Greenock Crematorium does not abate any cremations at present, environmental obligations are instead met by other crematoria abating more than their 50% target and Greenock Crematorium paying into a burden sharing scheme which involves those crematoria who abate more than the required 50% receiving income from the scheme.

Income to crematoria that abate cremations is reducing as more abatement equipment is fitted by crematoria to replace their older cremators. At current rates, the fitting of abatement equipment in Greenock Crematorium would likely generate income of £7k and also negate the need to pay into the burden sharing scheme. At present, Greenock Crematorium pays £27.5k into the scheme. This would see a positive difference to the revenue budget of £34.5k per annum; however, this would be partly offset by the increased cost of maintaining abatement equipment. Until such time as it is known which manufacturer will supply the new cremators and abatement equipment, an exact outcome figure cannot be calculated, but it is certain that there will be a financial as well as regulatory and environmental benefit when abatement equipment is installed.

5.2 Bariatric Requirements

Obesity is a growing problem across the UK, affecting both children and adults. People are

changing in both shape and size, not only creating an issue during life, but also in death. The bereavement services industry is adapting to the demand with the introduction of bariatric or 'wide-coffin' cremators, bariatric rated catafalques and lifting equipment.

The provision to install at least one new cremator capable of taking a wider coffin (up to 43" in width) to future-proof the site and ensure that the service to the community offers all available options. More than one wide coffin cremator is recommended to ensure continuity in the event of a breakdown or routine maintenance.

The existing catafalque (the structure on which the coffin is laid during the funeral service) will need to be replaced by a wider one and the access hatch, through which the coffin passes from the crematorium chapel to the committal room, will have to be widened. It is anticipated that the visual appearance of a new unit will match the existing unit as near as possible, but it will need to be capable of handling coffins of at least 300KG (47 stone).

5.3 Cremation Statistics

The following table compares cremation statistics at Greenock Crematorium, with other nearby facilities over the past 5 years.

Cremations by site	Inverclyde / South West Glasgow	Inverclyde / South West Glasgow				
		2012	2013	2014	2015	2016
Greenock	LA	957	991	964	1047	1042
Paisley	Private	1428	1448	1452	1606	1592
Irvine	LA	1290	1412	1416	1453	1497
Cardross	LA	612	601	591	658	716
Clydebank	LA	1490	1529	1521	1430	1325
Craigton	Private	1008	909	886	936	904
TOTAL REGION		6785	6890	6830	7130	7076

The published cremation figures show that Greenock Crematorium undertook circa 1,042 cremations in 2016, thereby the average number of cremations over the past 5 years is exactly 1,000 per annum.

Although it is not due to open until the Spring of 2018, a new crematorium is currently being constructed approximately 5 miles to the east of Largs town centre, on a 10-acre site in open country next to the Kelburn Estate wind farm. This is the first development of the privately owned Horizon Cremation company based in nearby Millport. It has been confirmed that it will initially be equipped with 1 cremator and it is possible that the opening of such a new facility will influence the cremation numbers at Greenock. This influence is likely to be relatively minor given that Greenock Crematorium is 30 minutes' drive away, and the roads between the new Largs installation and Greenock Crematorium are relatively awkward especially during the winter, which is the busy period for a crematorium.

5.4 Cremation Fees

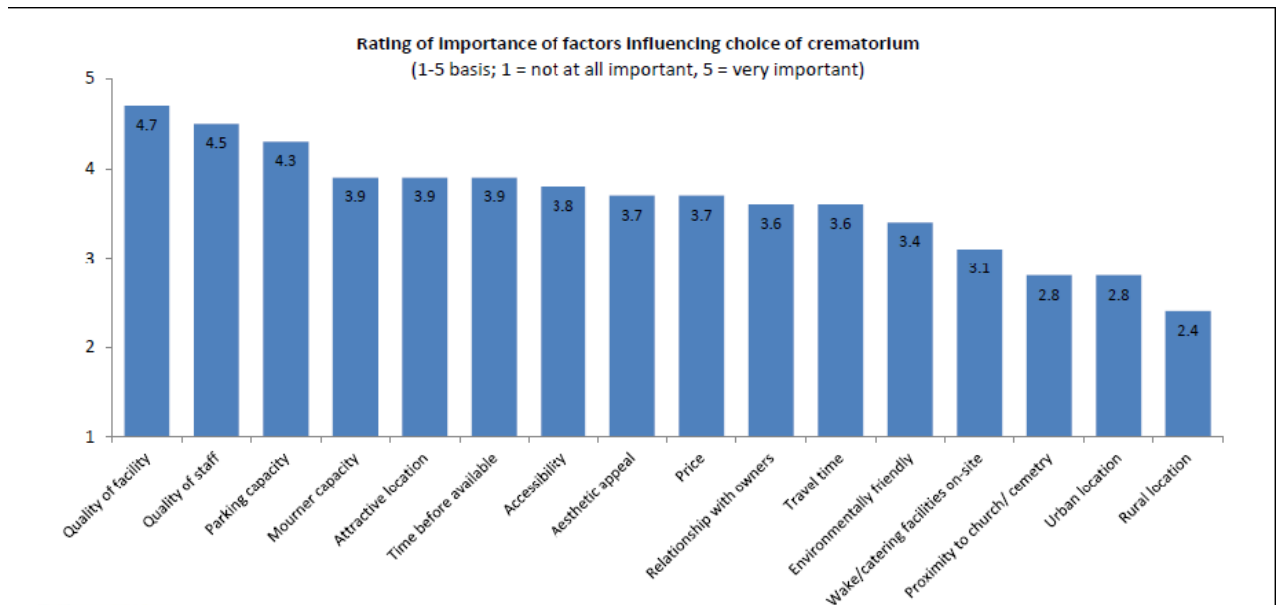
At the time of writing, prior to the 2018/19 budget round, the fees charged by Inverclyde Council for an adult cremation were the lowest when compared to other nearby crematoria the range of difference was in some instances quite marked with the others charging between 5.5% and 51% more than Greenock Crematorium.

The fees for Greenock Crematorium are the lowest in the area (and among the very lowest in the whole of the UK at 268th of 284 crematoria). When Greenock Crematorium is refurbished, it is the recommendation of this study that consideration should be given to increase the existing fee. The

fees for the crematorium facility currently under construction near Largs should also be taken into consideration so that Greenock does not lose undue business from the shared catchment area, particularly during the establishment phase, once this opens in Spring/Summer 2018.

Previous research undertaken by Rose Project Management among funeral directors throughout the UK, strongly indicated that the decision to use a particular crematorium by the bereaved is heavily influenced by emotion and is not highly price sensitive. This is caveated by local conditions, attitudes and practice to ensure that the crematorium does not price itself out of the local market.

From the research the highest and lowest factors which influenced the choice of crematorium among the bereaved was as follows:



5.5 The Crematory

The crematory is the working, “behind the scenes” part of the crematorium which houses the cremators and associated apparatus. In summary, the design of the available space will have to be changed to accommodate the new cremators etc. There is insufficient space at present to accommodate the new equipment and to allow the staff to operate them safely. Also, given the finite life of cremators, it is recognised that replacement cremators will need to be installed every 15-20 years. In the circumstances, it is proposed to make changes to the building both to accommodate the new equipment and to make it easier to replace future generations of cremators and equipment.

- 5.6 This particular section of the study is mainly concerned with the space and facilities within the existing crematory and the surrounding ante rooms. At the time of writing this report (November 2017) a full building and structural survey on the crematorium buildings had not yet been carried out, so the observations and recommendations made are as a result of preliminary studies undertaken around this time.

The basic structure of the building is deemed to be in a satisfactory condition.

The most recent building plans appear to be a fairly accurate representation of the building as it currently stands, although an initial survey of the crematory area was also undertaken by Rose PM to ensure that critical measurements for the planning of the new cremator installation and flue runs were accurate.

5.7 Asbestos

The most recently available Management (non-invasive) asbestos survey on record was undertaken for Inverclyde Council by National Britannia Ltd, of Broxburn, West Lothian in July 2008. This report highlighted the major areas of inspection and found that asbestos was present in the following locations:

- In gaskets in machinery within the roof void (deemed to be Low Risk)
- In insulation board within a radiator cupboard (deemed to be Medium Risk)
- In electrical insulation boards (deemed to be a Low Risk)

All other accessible areas have resulted in either no suspected asbestos being found or have returned a negative response from any samples tested. None of the above are currently considered dangerous or injurious to health but care will be necessary if any works occur in the areas identified which may result in the asbestos fibres being released to atmosphere.

In addition, previous projects which Rose has undertaken which have required the removal of old Furnace Construction (Matthews) cremators (the model currently installed in Greenock Crematorium) has confirmed that this company stopped using asbestos within the construction of its cremators in the early 1990's long before the cremators installed at Greenock were manufactured. However, extreme care will still be required during the demolition process in case the whole system utilised asbestos containing components which were previously installed – particularly in the flue linings where it was known that in some older cremators flues were reused. This is considered unlikely to be the case at Greenock but caution should still be taken.

Given the age of the building and the type of work likely to be undertaken, a full Refurbishment & Pre-demolition survey will be required as part of the pre-construction planning stage of replacement.

5.8 Potential Areas of Future Energy Savings

Following the installation of mercury/dioxin abatement equipment, gas consumption per cremator is expected to decrease as the required cremator operating temperature reduces in the secondary chamber from 850 degrees centigrade to 800 degrees centigrade. This is likely to be offset slightly by an increase in electricity used to drive the larger fans required for the mercury abatement process (circa a rise of 10%). Until such time as it becomes known which manufacturer will supply the new cremators and abatement equipment, an exact outcome figure cannot be calculated.

Having an abated system would also enable a plate heat exchanger (PHE) to be fitted (depending on which system is finally chosen) should a compatible central heating system be present or installed within the facility. This is designed to improve the efficiency of a gas-fired central heating system by utilising “borrowed” heat from the outgoing flues and feeding it into the main “flow & return” pipes. Such an option has the potential of saving approximately 25% of heating energy costs and is arguably a much more “environmentally effective” solution. The current boilers are approximately 8 years old having been installed in 2009 and may not be compatible or of sufficient efficiency to benefit from this system. A detailed assessment of the options will be required as part of the final system development.

5.9 Maintenance Agreements

It is highly recommended that whichever cremator manufacturer supplies the cremators, the abatement system and ash processing equipment on the site, one overall maintenance agreement is put in place for all items. This usually provides the most efficient and cost effective solution possible particularly when agreed for an extended period and includes all costs (including hearth and refractory replacements) over 10-15 years from commissioning.

5.10 Cremator Manufacturers

There are five main manufacturers/suppliers of specialist cremator equipment currently supplying the UK market. That being the case there is a sufficient marketplace to ensure that there will be an interest in supplying new cremators for installation in Greenock Crematorium. Prior to the project reaching the stage of suitable manufacturers being invited to tender for the works, discussion with the procurement section will take place to ensure an appropriate outcome is achieved.

5.11 Site Access

Access to the rear of the crematorium building at Greenock is difficult. There is no straightforward route for the delivery and placement of large items of capital equipment to the rear of the crematorium other than through double gates at either end of the small service yard to the south side of the crematorium. The other access point to the rear of the main building is to the north of the site but this is effectively part of the public exit route and only gives pedestrian access to the rear. Whichever option is chosen the aim will be to ensure:

- A level entrance to the crematory from the outside
- The minimum of disruption to the existing site – using the same footprint, without the necessity to extend the building externally to any significant degree
- Retention of the existing staff facilities
- The retention of an existing cremator in the early stages of the construction phase

5.12 Energy Provision

A full assessment of the electrical and gas supplies to the site will be required by a qualified M&E engineer.

It is likely that the gas supply pressure will be sufficient. A minimum of 20mBar at each cremator is required (currently the existing system is configured to deliver 21mBar so some minor adjustments may be required).

Initial inspection suggests that the capacity of the electrical supply to the site may be insufficient to cope with the increased loads required to drive the abatement machinery (a minimum of 400v 3-phase, total installed power of 170 amps and an installed capacity of circa 77kVa for 2 cremators and a “double” abatement system is typically required). An upgrade, if required, may be possible by simply upgrading the sub-main cables within the building, from the supply before the meter or in the worst case it may be required to bring in an additional or high capacity supply into the site altogether. It is also anticipated that the existing distribution panels, switching and main switch panel in the crematory may also require upgrading given their age and condition. A detailed assessment of the existing electricity supply will be required to determine the extent of any upgrade and the associated timescales.

5.13 Broadband Connection

It is strongly recommended that any newly installed facility has the integration option of monitoring the cremator and abatement equipment via an off-site central diagnostic centre, which the existing cremators already benefit from. This will continue to assist with the ongoing maintenance and to determine the requirement for a service engineer to attend the premises prior to expending travelling time (and therefore cost). A detailed assessment of the existing telecoms provision will be required to determine the extent of any upgrade, associated timescales and the installation of a new dedicated ADSL line if required.

5.14 Ash Processing Facility & Control Room

The ash processing area is within a small room off the crematory which is extremely restricted and offers very little working space for processing the cremains. The current equipment is also of an ageing and obsolete design and should be replaced with modern energy efficient and fast processing units which are slightly larger than the existing equipment.

Ideally, a new control room would be constructed onto the rear of the crematory, with access via a single door, and with a large fire resistant window giving an excellent view of the crematory. The existing ash processing room could then be used for additional storage. It would be necessary to fit an escape door to the rear in the event of a fire in the crematory.

5.15 Listed Status

The Grade C Listed status of the crematorium building, will create an additional layer of planning procedures and approvals which will be required before any changes are possible to the fabric of the building.

Rose PM has already had an initial discussion with the Conservation Officer at Inverclyde Council who confirmed that changes will be possible, providing that similar materials are used. It will not be necessary to seek Historic Environment Scotland's approval as the local authority has delegated powers in this situation.

5.16 The Car Park

There is provision for an estimated 50 cars in the car park. This is often inadequate for the number and frequency of the cars visiting the crematorium. The elevated topography of the site and the absence of easily accessible public transport nearby (it is some distance away at the bottom of a steep hill) results in nearly all mourners arriving by car. The normal number of car parking spaces is usually a minimum of half the capacity of the chapel, which in the case of Greenock should be 70 spaces.

The existing one-way layout of the car park creates more spaces than a conventional layout would; however, the weakness of this design is that often lanes are blocked by earlier cars, which does not then enable full use of the space available.

The options for expanding the car park or changing the layout are restricted, however one other option could be to utilise the grassed area to the left of the exit road or even construct an additional car park at a slightly lower level to the north east of the existing car park. This would also improve provision nearer to the main crematorium building for the disabled and those with mobility difficulties.

5.17 Impact on Service Provision During the Works

One of the significant challenges which can arise when it has been decided to develop an existing facility on the same site is to determine whether the crematorium should remain open and operational during the whole, or a part, of the works. To some extent this will depend on the areas of the site being developed. As the redevelopment of the chapel area is likely to only relate to the enlargement of the catafalque opening to the rear and of the catafalque itself, it is likely that this can be undertaken over a matter of a week or less. The works will be timed to minimise service disruption and therefore mitigate any potential lost income as much as possible. The new catafalque unit will be constructed off site which will minimise the disruption time on site. It will be important to communicate with local funeral directors well in advance of the shutdown period and to explain from the outset the timeline of planned works.

Assuming planning permission is granted to open up the rear of the building, and it is possible to bring and crane-in completely pre-fabricated cremators to the rear of the building, then a decision would need to be taken whether to phase the work over a longer period of time, whilst attempting

to maintain a reasonable degree of service provision. This option would involve a mixture of partial opening times and extended closures. An alternative would be to simply close the crematorium completely for a period of time (although some limited access to the grounds will be necessary for visitors to memorials). The latter option is likely to be quicker and less disruptive, but there is a risk that future services could be lost (especially on the fringes of the catchment area) to other neighbouring crematoria and, of course, there would be a complete loss of income, and the requirement to redeploy the existing staff during this period.

5.18 Crematorium Chapel Expansion

The key priority is to progress the cremator replacement in early course and to do so with minimal disruption to the cremation service. In the circumstances, expansion of the Crematorium Chapel was not included in the feasibility study at this time. It is recognised that there is limited scope to extend the chapel; however, the option will be investigated in the future given that on a few occasions the chapel has not been able to accommodate all those in attendance at the funeral service.

6.0 PROPOSALS

6.1 The replacement of cremators, refurbishment of the crematory and a minor extension will be possible at the existing Greenock Crematorium, the development will inevitably be limited by the size, shape and location of the existing building and any limitations caused by the Listing of the building.

Maintaining the service provision of a crematorium during refurbishment works is possible, however, introduces challenges in the management of the site and the public perception whilst construction works are ongoing.

A loss in revenue is likely to be experienced for a period of time during the cremator replacement when the operational capabilities are reduced to one cremator at a time or during periods of restricted services to allow for noisy works or crematory refurbishment to take place. As described previously, this can be limited through careful phased management.

The following is a summary of the planned works:

- Installation of new cremators with wide coffin capability.
- Installation of a mercury abatement system to the new cremators.
- Extend and reconfigure the rear of the crematorium to provide a formal cremator control room and use existing spaces more efficiently.
- Provide improved an Ash Processing Room, store and meter cupboard.
- Replace the existing catafalque to ensure it is capable of supporting the larger, heavier bariatric coffins.
- Install a fire escape from the extended control room.
- Install semi-automatic coffin charging which will also improve manual handling for staff – especially of heavier coffins, and reduce wear and tear on the crematory hearth, thus extending the life of the existing cremator lining.
- Improve the layout of the existing crematorium service yard.
- Extend the car park.

7.0 IMPLICATIONS

Finance

7.1 Financial Implications

The cost of the capital works assumes that no particular difficulties are identified as a result of the surveys that will take place prior to and during the proposed works. Factors that will influence the cost of the refurbishment project are:

- The cost of the civil building works. This will depend on such issues as the condition of the existing building (no deleterious materials present etc, the condition of the roof support beams and the removal of any asbestos containing materials – if found following a Demolition and Refurbishment survey), poor underlying ground conditions etc.
- The condition and capacity of both the mains electrical and mains gas supplies
- Competitive tender returns

It is proposed to enter into a long term maintenance contract with the manufacturer of the new cremators and abatement equipment. The anticipated cost of the maintenance contract is £32k per annum over 15 years. This is more than the existing cremator maintenance budget of £20k, however, the fact that the new equipment will abate each cremation means that £27.5k currently paid to the burden sharing scheme will no longer have to be paid. There will also be a reduction in gas usage with the new equipment, the exact figure cannot be confirmed as yet, it is however expected to that gas cost will reduce by circa £7k.

7.2 Earlier reports had raised the possibility of funding the full investment via Prudential Borrowing via an increase in Cremation Charges. As indicated earlier in the report, Inverclyde has one of the lowest charges for cremations in the country and given the significant investment proposed and the budget situation facing the Council it is proposed that a 5% increase in charges is applied once the new facility is operational. This increase will be in addition to any increase approved as part of the 2018/20 Budget.

The increased income and savings detailed above would fund approximately £850,000 of the investment with the remaining £800,000 proposed to be added to the 2018/21 Capital Programme due to be approved by the Council as part of the Budget in March.

One off Costs

Cost Centre	Budget Heading	Budget Year	Proposed Spend £'000	Comments
Capital Programme	Cremator Replacement	2018/20	800	Subject to approval as part of the 2018/20 Budget.
Prudential Borrowing	Cremator Replacement	2018/20	850	Funded via the £54k / annum savings/increased income detailed below.

Annually Recurring Costs/ (Savings)

Cost Centre	Budget Heading	With Effect from	Annual Net Impact £000	Virement From (If Applicable)	Other Comments
Crematorium	Running Costs	2019/20	(20)		Prudent estimate of net savings
	Income	2019/20	(34)		5% increase once new facility is operational

Legal

7.3 There are no legal implications arising from this report.

Human Resources

7.4 There are no Human Resources implications arising from this report.

Equalities

7.5 There are no equality issues arising from this report.

Repopulation

7.6 There are no repopulation issues arising from this report.

8.0 LIST OF BACKGROUND PAPERS

8.1 Reference to The Burial and Cremation (Scotland) Act 2016, and Government Directive PG 5/2 (12) was made in the drafting of this report.