

**Report to:** EXECUTIVE CABINET

**Date:** 24 October 2018

**Executive Member/Reporting Officer:** Councillor Allison Gwynne – Neighbourhood Services  
Emma Varnam – Assistant Director – Neighbourhood & Operations

**Subject:** **REPLACEMENT OF CREMATORS AND MERCURY ABATEMENT, FILTRATION PLANT AND HEAT RECOVERY FACILITIES.**

**Report Summary:** The report provides information on replacing the cremators, mercury abatement and all auxiliary equipment at Dukinfield Crematorium in order to meet its statutory requirements.  
Key objectives are to ensure the Council meets its legal obligations with regard to providing a cremation service and the impacts on air quality and protecting the environment to protect public health.

**Recommendations:** To agree for Executive Cabinet to consider:  

1. To support and recommend that the proposed works are carried out as set out in the report from Capital allocation.
2. That a lifecycle fund is created from income collected for service delivery to enable the cremators to be replaced at the end of their life without it being an unplanned call on the capital programme.

**Links to Community Strategy:** The scheme seeks to provide an improved and more sustainable asset for the residents of Tameside, thereby contributing to a safe environment and continuing economic key priorities within the 2012-22 Tameside Sustainable Community Strategy. It shows a commitment to the Air Quality Plan with the emphasis on reducing pollution to the environment within the borough of Tameside, which also improves the public health of the residents.

**Policy Implications:** None.

**Financial Implications: (authorised by Section 151 Officer)** In October 2017, £1.5m was earmarked in the capital programme to fund this capital project. A further £1m was reported as a pressure and earmarked in July 2018 in the Executive Board paper for the review of the capital programme. This was also listed as a business critical scheme due to the nature of work required. The £2.500m estimated cost of this scheme is based on quotations from other organisations. If the successful tender price is significantly different from the £2.500m estimate, a revised business case will be submitted with a full breakdown of the cost. In future years, it is proposed that the existing environmental levy placed on each cremation will be used to establish a financial reserve for on-going repair and maintenance of the cremators.

**Legal Implications: (authorised by Borough Solicitor)** Not to comply with legislation affecting crematoriums puts any operator in breach of their statutory obligations. The Council must ensure the necessary compliance whilst complying with its statutory duty to ensure any expenditure is efficient and effective and achieves a balanced budget.

**Risk Management :**

The Council will be in breach of its environmental permit if it can no longer abate the particulates being released into the atmosphere. Air quality and environmental standards are compromised if the proposed works are not carried out. Ad hoc repairs will continue to be carried out on the equipment to ensure compliance until replacement equipment is in situ. There would be a major loss of revenue income to the Local Authority should the cremators not be in working order. This could cause substantial Public Health issues.

**Access to Information :**

The background papers relating to this report can be inspected by contacting Mike Gurney, Head of Management and Operations



Telephone:0161 342 5181



e-mail: [Michael.gurney@tameside.gov.uk](mailto:Michael.gurney@tameside.gov.uk)

## **1 EXECUTIVE SUMMARY**

### **Proposed Investment**

- 1.1 To replace the cremators, mercury abatement and heat exchangers and auxiliary equipment at Dukinfield Crematorium due to the current equipment coming to the end of their working life and to ensure compliance with Environmental legislation.

### **Options for Investment**

- 1.2 Option 1, which is to replace the 3 cremators at Dukinfield Crematorium, with the consideration as to whether 100% mercury abatement or partial abatement is required and fit accordingly and install a new heat recovery system and auxiliary equipment and to carry out minor building works as required, is the preferred option. This option will provide a cremation service for the residents of Tameside and surrounding areas for the next 20 – 25 years and will ensure that the borough has a cleaner, greener and safer environment for all.

### **Project Delivery**

- 1.3 The project will be delivered by private contractors via the procurement process and Council's standing orders and through The Chest tender process, or current frameworks already in place, in order to achieve a best value and best quality solution.

### **Financial Investment Requirement**

- 1.4 The project will require an approximate investment of £2.500m capital monies. Full details can be found in Table 1 at 3.9

### **Project Management and Monitoring**

- 1.5 The project specification is currently being produced by National Industrial Fuel Efficiency Service Consultants, (NIFES), and the delivery of the project will be delivered by the successful tender contractor. The works will be overseen by the Council's Design and Delivery team along with the Head of Bereavement Services.

### **Conclusion**

- 1.6 The proposed works to replace the cremators, abatement equipment and heat recovery equipment at Dukinfield Crematorium are essential in order to be able to continue to provide a cremation service for the residents of the borough, to ensure staff are working in a safe environment, to meet the Council's statutory obligations with regard to The Environmental Protection Act and the Cremation Regulations, to improve air quality in the borough and control the emissions of harmful pollutants in the environment and to adhere to the Council's Environmental Health regulators permit. The project will also allow the Council to continue receiving an essential, significant, income stream; it will provide an improved facility and asset and could potentially support local business.

### **Recommendation**

- 1.7 Firstly, that support is given for the programme of works as indicated in Option 1 which is to replace the 3 cremators at Dukinfield Crematorium, with the consideration as to whether 100% mercury abatement or partial abatement is required and fit accordingly and install a new heat recovery system and auxiliary equipment and to carry out minor building works as required.

Secondly, that in future years the existing environmental levy placed on each cremation is used to establish a financial reserve, to be used for on-going repair and maintenance of the cremators.

## 2 PROPOSED INVESTMENT

### Background and Existing Arrangements

#### Introduction

- 2.1 The chapel building in Dukinfield Cemetery was built in 1865 and in 1953 the crematorium was adapted from the Church of England and Non-Conformist chapels, the former being retained for use as the crematorium chapel and the latter being adapted to be the crematory which is where all the technical equipment (cremators etc.) are housed. This was in order to meet the growing demand for cremations nationally.
- 2.2 This building is listed under the Planning (Listed Buildings and Conservation Areas) Act 1990 for its special architectural or historic interest and as such, carrying out work both internally and externally has always been complex and somewhat challenging whilst trying to meet the demands from Central Government in adhering to environmental standards.
- 2.3 Dukinfield Crematorium is a busy crematorium carrying out over 2000 cremations annually. It is also the third busiest crematorium in Greater Manchester. The table below, issued by The Federation of Cremation Authorities, shows the cremation statistics from across the conurbation for the period January – December 2017. As part of the budget setting process, Tameside Council Bereavement Services carries out a benchmarking exercise on fees & charges annually with all the Greater Manchester Bereavement Services to ensure its fees & charges are in line and consistent with others.

Name of Crematorium	No of Cremations
Stockport	2479
Bolton	2195
Tameside	2092
Manchester (Private)	2021
Salford	1841
Oldham	1586
Trafford	1552
Rochdale	1322
Wigan	1128
Manchester (Council)	1112
Bury	1011

#### Why are we proposing to do this?

- 2.4 The current three cremators were installed in 1998. The life expectancy of cremators, based on the capacity they are being used at Dukinfield, is between 15 and 20 years. They are clearly now at the end of their working life as they are now 20 years old.
- 2.5 The three cremators are now in need of replacement. Due to their constant use and their age, the cremators are now susceptible to mechanical breakdown and maintenance costs are therefore increasing all the time, which has an impact on revenue spend and can cause inevitable delays when trying to make appointments for funerals with families.
- 2.6 To comply with legislation from DEFRA, mercury abatement was required to be retro-fitted to the existing equipment to ensure 50% of the cremations that took place were abated. Legislation stated that this had to be in place by 1 January 2013. However, due to Tameside Council's commitment to a clean environment, Dukinfield Crematorium installed its 50% mercury abatement programme, together with a Heat Recovery System, in 2009. This abatement equipment needs to be replaced as it would not be compatible with any new installation of cremators.
- 2.7 Due to the fact that the mercury abatement equipment was also added to the cremators at a later date, the emission monitoring tests that are regularly carried out, show particulates

being realised could fail if mercury abatement equipment is not replaced as part of the project. The Council would be in breach of its conditions of the environmental permit should that occur.

### **Existing Funding Arrangements**

- 2.8 The net 2018/2019 income budget for Bereavement Services is £1,281m. The income which Bereavement Services brings in contributes to the overall budget of Operations & Neighbourhoods Directorate in ensuring that, as a team, we balance the budget. In future years, it is proposed that the existing environmental levy placed on each cremation is used to establish a financial reserve, to be used for on-going repair and maintenance of the cremators. This reserve could be in the region of £100k per annum.

### **Options not considered**

#### **To only have 2 cremators installed.**

- 2.9 3 cremators are required to deal with the number of cremations carried out at Dukinfield. The operational cremation process at Dukinfield is managed by officers and trained staff that follow the guiding principles such as BATNEEC (Best Available Techniques Not Entailing Excessive Cost). This means that, where possible, 2 cremators will be used where appropriate to save unnecessarily heating up a third cremator. However, this decision is balanced taking into account other factors such as staff working hours in order to comply to with shift patterns in place, large coffins which take longer, maintenance work being carried out on the cremators etc. It is very rare that the demands of the service only require the use of just 2 cremators on any working day. To only have 2 cremators installed would also put a pressure on meeting the demands of funerals should there be any down time on one of the cremators.

#### **To install 4 cremators**

- 2.10 There is not sufficient space to install 4 cremators. There is also no business case in installing 4 cremators. The number of cremations that can be carried out are dictated by the actual number of funeral service slots available within the chapel. 3 cremators are sufficient to deal with the maximum number of services that can be carried out should every available appointment be taken up for a funeral service. If the death rate was to increase significantly, families would potentially have to have to wait a couple of days longer to hold a funeral service, but this, as is the case now through busy periods, would be managed by staff.

### **Low Cost Options**

- 2.11 The low cost option would be to do nothing.

### **Business Needs/Council policies, strategies and plans**

- 2.12 The percentage of people choosing cremation as an option over burial within Tameside is 70% which is in line with the national percentage.
- 2.13 Whilst the death rate has been significantly down over recent years, it is expected to rise over the next decade.
- 2.14 The Council is also planning to ensure that it is in a position to be able to have the correct equipment in place for further potential changes where 100% of all cremations may have to be abated in line with Government legislation. This was originally going to be by 2020 but no further guidance as yet be issued by DEFRA on this. However, this project will abate 100% of its cremations (space permitting) and will therefore show the Council's commitment to the clean air agenda.
- 2.15 The replacement and installation of new cremators will also support the Council's priorities within the Corporate Plan such as:

- Promote cleaner, greener and safer environment
- Reduce our carbon footprint, both in energy and waste
- Improve health and wellbeing of residents as a result of a safer, cleaner air quality in the borough.

#### **Regional and national policies, strategies and plans**

2.16 As per 2.12 above.

#### **Benefits**

2.17 The benefits are covered in each of the options

#### **Spending Objectives**

- 2.18 The successful outcome can be summarised as below.
- An upgraded crematorium fit for purpose
  - No pollution being released into the atmosphere
  - Safe working environment
  - Recycling wasted energy to heat building
  - Project to be completed within capital budget allowance
  - Project to be delivered on time

#### **Risks**

2.19 Risks are covered in each of the options.

#### **Scope**

2.20 The work being proposed is just for Dukinfield Crematorium which is the only crematorium that the Council has and is responsible for.

#### **Constraints**

2.21 The project needs to commence in May 2019 at the latest in order to minimise any disruption to funeral services. Many more funerals take place during the months November to April. It is therefore imperative that works are carried out during the summer months due to the downtime that will inevitably occur whilst the essential works are carried out.

#### **Dependencies**

2.22 The delivery of the project is dependent on the specialised market of suppliers and manufacturers and their availability to deliver the work at the given timescales.

### **3 OPTIONS FOR INVESTMENT**

#### **Do Nothing**

##### **Summary**

3.1 Due to the sensitive nature of the work means that to 'do nothing' is not an option. To 'do nothing' also cannot be considered as the Council has a statutory duty under The Public Health Act 1984 to cause a body to be buried or cremated of any person who has died. To 'do nothing' would also mean that the Council would not be able to continue operating its existing equipment as it would not be compliant with the Environmental Health Act 1990. If the Council could not operate the cremators, no funerals would be able to be carried out. This would create a major public health issue and also have huge implications on revenue income. Not being in a position to operate the cremators would also bring the Council into disrepute and cause a public outcry from the most vulnerable residents of the borough.

### Benefits

- 3.2 The only benefits of taking this option would be that the Council would not have to draw down monies from the Council's capital funding.

### Risks

Risk	Likelihood	Outcome/impact	Mitigation
No cremations available	High	Public Health Issues	To replace the cremators.
No cremations available	High	Council brought into disrepute	To replace the cremators
No cremations available	High	Significant loss of income	To replace the cremators
Operating non-complaint equipment	High	DEFRA could close crematorium	To replace the cremators
Operate old cremators	High	Not compliant with legislation	To replace the cremators

### Cost

- 3.3 There would be major revenue costs in trying to keep up the repairs to old cremators and equipment. There would also be continued downtime as cremators are being repaired which would limit how many services could be taken daily. This would create a backlog of funerals with many families choosing an alternative crematorium. This would then have an impact on revenue budgets as income would be adversely affected.

### Wider impacts

- 3.4 The Council's image would be tarnished and not being able to function as a crematorium would bring the Council into disrepute and cause a public outcry from the most vulnerable residents of the borough. Not being compliant with regards to the Environmental Protection Act would also mean an unsafe working environment for staff which would be a breach of Health and Safety legislation.

### Option 1

- 3.5 To go out to tender for replacing the 3 cremators at Dukinfield Crematorium, with the consideration as to whether 100% mercury abatement or partial abatement is required and fit accordingly and install a new heat recovery system and auxiliary equipment. To carry out minor building works as required. It is understood that the costs involved of installing 50% abatement equipment against installing 100% abatement is minimal and not significant.

### SITE SPECIFIC CONSIDERATIONS

- 3.6 The following needs to be taken into consideration:

- All three cremators will be replaced with new machines
- Options as to whether 100% or partial abatement will be considered.
- At least one cremator will be capable of accepting very large coffins due to demand
- The crematorium to remain operational at all times during the refurbishment
- Minor building works within the crematory and chapel
- Air conditioning in crematory and computer room
- Fit for purpose operators computer room

- Soundproofing from crematory to chapel
- Cremators to have auto start and auto shutdown capability
- Remote fault diagnostics and control to be provided
- New ash processing equipment required (Cremulator)
- Ventilation requirements will be considered
- Heat recovery provisions to be included
- Noise levels will be considered
- Automated coffin charging equipment (space permitted)
- Electrics being placed/removed in appropriate place (not mess room)
- Installation to be carried out in summer 2019
- It is understood that the building is Grade 2 listed and cremators will be built on site

### Summary

3.7 This option would mean that Tameside Council would be fulfilling its legal requirements with regards to The Environmental Protection Act and be able to continue to provide cremation as an option for Bereaved families.

### Benefits

3.8 The following are the benefits of taking this option:

- Commitment to improving Air Quality within the borough and Greater Manchester
- Protecting Public Health and the environment
- Ensuring a Bereavement Service that offers cremation for the residents of the borough
- Ensuring staff in Bereavement Services are working in a safe environment.
- Ensuring that the significant income stream continues to be received for the revenue budget

### Risks

Risk	Likelihood	Outcome/impact	Mitigation
Costs from tender admissions come in too high	Medium	Not enough funding/delay in project commencing	Apply for additional funds
Not enough physical space for all equipment	Low	Reduce number of funerals taken per day/loss of income	Ensure prospective contractors can design and deliver as per specification
Project not completed within timescales	Medium	Service delivery disruption/reduced income	Ensure contractor can meet deadlines

### Cost

3.9 Indicative costs are looking to be in the region of £2.5m for the above project. However, exact costs cannot be confirmed totally until the tender process has been completed. If, from the tendering process, costs are significantly different, a further report will be produced. To ensure the Council doesn't breach any financial regulations, asking potential cremator suppliers for any costs at this stage has been avoided. The costs provided in the table below have been reached from professionals within the cremation industry who have been through similar projects recently.



**Table 1: Summary of estimated costs**

Description of Works	Estimated Cost (£)
Replacement 3 cremators	600,000
Abatement Plant	1,000,000
New Stack Liners	100,000
Installation Works, Gas ducting, thermal installation	200,000
Heat Exchanger Works	10,000
Cremulator and ash recovery ventilation	30,000
Ventilation of crematory	40,000
Automated coffin charging equipment	40,000
Relocation of all electrical works	75,000
Commissioning & training acceptance tests	30,000
Internal Building Works	75,000
Contingency	300,000
<b>TOTAL</b>	<b>2,500,000</b>

**Wider impacts**

- 3.10 Tameside Council has already been innovative when it was one of the first authorities to introduce the heat recovery system to capture the energy from the excess heat in order to heat its crematorium. If it is feasible to abate 100% of its cremations within this project, the Council will be one of the first to do so and this will show a real commitment to the Environment and to increasing the Air Quality of the borough and Greater Manchester as a whole.

**Summary/Preferred Option**

**Table 2: Summary of Options**

- 3.11 Option 1, which is to replace the 3 cremators at Dukinfield Crematorium, with the consideration as to whether 100% mercury abatement or partial abatement is required and fit accordingly and install a new heat recovery system and auxiliary equipment and to carry out minor building works as required, is the preferred option.

	Do nothing	Option 1 Replace all equipment
Spending Objectives (see 2.1.9):		
Replace 3 cremators	x	√
Install 100% mercury abatement	x	√
Install Heat Recovery equipment	x	√
Minor Building Works	x	√
Widen hatch in chapel to allow for larger coffins	x	√
New Cremulator	x	√
Summary	Discounted	Preferred

- 3.12 Option 1 would be the preferred option due to the benefits highlighted in 3.2.2. To do nothing cannot be a consideration.

## 4 PROJECT DELIVERY

### Background

- 4.1 Officers from Tameside Bereavement Services have been met with NIFES consulting Group regarding the provision of consultancy support in connection with the planned installation of the new cremators, mercury abatement and heat recovery equipment at Dukinfield Crematorium. The consultancy support from NIFES would be for the initial phase of the Project i.e. the preparation of the specification and tender support.
- 4.2 NIFES is an independent organisation that is not influenced by any manufacturers, suppliers or third party providers. This allows NIFES to be able to offer completely impartial advice.
- 4.3 The proposal from NIFES following initial discussions would include the following:
- Review the individual needs of the crematorium considering cremation numbers and work practices.
  - Prepare an outline upgrading plan for the proposed work.
  - Although the responsibility for the tender actions will be with the Council, they will assist the client procurement team with the selection of tenderers and the preparation of the tender advertisement as required by the EU regulations.
  - Prepare a performance specification for the abatement plant and cremators based around the MF/1 Form of Contract
  - Assist with the tendering process for the work by answering questions during the tender period.
  - Assist the Council's procurement and evaluation team during the evaluation period by providing technical advice to help the selection team determine most the economically advantageous offer and arrive at the most appropriate purchasing decision.
- 4.4 The main criteria in terms of the technical specification will be to ensure that the contractor installs cremators and any associated abatement plant that is able to operate in compliance with the conditions detailed in the Environmental permit Q6045 Tameside Borough Council - Cremators Abatement Plant at Dukinfield Crematorium issued by the local Environmental Health Department. In general, these operational constraints will reflect the conditions outlined in the Secretary of State's Guidance Note PG5/2(04) 'Crematoria', which identifies the limits for pollutant emissions to air, for both abated and unabated cremators, as well as identify standards of secondary combustion zone performance, emission monitoring and reporting, chimney height and work practice.
- 4.5 In addition to these key operational criteria, the energy usage and reliability/aftercare services will be major factors.
- 4.6 The performance specification will be issued to design and build contractors; the design responsibility for the project will therefore remain with the contractor and not with the Council or NIFES and the performance specification will clearly state this to protect the Authority.
- 4.7 The overall programme of work for the whole contract will inevitably vary depending upon the final requirement of the crematorium and the choice of equipment supplier.

### Procurement Mechanism

- 4.8 The procurement of the project will be where possible through existing framework contracts.

### Procurement Risks

- 4.9 The risks associated with the delivery of the preferred option. Option 1, is the availability of suppliers/manufacturers being able to carry commence the project in May 2019 which could

have an impact on delivering the programme. The more that the start date of the programme is pushed back, the more disruption it would create to normal delivery of the bereavement service as it would result in work being carried out in a period which is generally busier for the service.

## Procurement Project Plan and Timescales

**Table 3: Procurement Plan**

Preparation of documents including specification	30 days	October 2018 – in progress
Invitation to suppliers to submit bid	30 days	November 2018
Removal of seal	2 days	December 2018
Evaluation exercise	7 days	December 2018
Award and voluntary standstill period	10 days	December 2018
Meet with successful supplier	7 days	January 2019
Contract start		May 2019

## 5 FINANCIAL INVESTMENT REQUIREMENT

**Table 4: Financial Case**

	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24
<b>Recurrent budget</b>						
<b>One-off investment (capital or revenue)</b>						
Full project		£2.5m				

### Summary of forecast financial investment

- 5.1 Indicative costs are looking to be in the region of £2.500m for the above project. However, this cannot be confirmed totally until the tender process has been completed. If, from the tendering process, costs are significantly different, a further report will be produced.

### Timescales and milestones

Preparation of documents including specification	30 days	October 2018
Invitation to suppliers to submit bid	30 days	November 2018
Removal of seal	2 days	December 2018
Evaluation exercise	7 days	December 2018
Award and voluntary standstill period	10 days	December 2018
Meet with successful supplier	7 days	January 2019
Contract start		May 2019

### External Funding Sources

- 5.2 Replacement of cremators and auxiliary equipment does not attract external funding.

### Financial Risks

- 5.3 Subject to approval, the project will be funded through the Council's Capital Programme. Indicative costs are looking to be in the region of £2.500m for the above project. However,

this cannot be confirmed totally until the tender process has been completed. If, from the tendering process, costs are significantly different, a further report will be produced.

## **6 PROJECT MANAGEMENT AND MONITORING**

### **Project Management, governance and reporting arrangements**

- 6.1 The project will be managed by Operations and Neighbourhoods – Head of Design & Delivery along with the Head of Bereavement Services who will monitor the quality, timescales and budget control

### **Stakeholders and facilitators**

- 6.2 Involved in the project will be NIFES consultants, Bereavement Services staff. The Head of Design and Delivery will be responsible for overseeing the delivery of the project.

### **Resources**

- 6.3 NIFES consultants will writing up the specification. The procurement team will need to assist and guide on putting the contract out to tender through any existing frameworks, or through the Chest, STAR or OJEU

### **Delivery plan, milestones and timescales**

- 6.4 This information will not be available until the tenders have been received during the procurement process.

### **Project monitoring**

- 6.5 The project specification is currently being produced by National Industrial Fuel Efficiency Service Consultants, 'NIFES', and the delivery of the project will be delivered by the successful tender contractor. The works will be overseen by the Council's Design and Delivery team along with the Head of Bereavement Services who will be on site.

### **Contract Management**

- 6.6 All external contracts will be managed by the Head of Design and Delivery

### **Risks and Contingency**

- 6.7 Should the work be delayed and not be able to commence in May 2019 as per the procurement plan, there will be disruption to Bereavement Services. It is anticipated the project will take approximately 3 months to complete. If the project commences on site in May 2019, it should be completed by August 2019 at the latest. If the start date is delayed, it will inevitably mean that some of the work will be carried out during busier periods within the service, i.e.; September, October. The sensitive booking of funerals would be managed by Bereavement Services Staff should that occur.

### **Benefits realisation/post implementation review arrangements**

- 6.8 The Council will measure the success of this business case.
- All equipment is working in accordance with the guidance and legal limits required.
  - That the project is delivered on time
- 6.9 That the equipment is fit for purpose and not in a good maintained state of repair.