

MANSFIELD AND DISTRICT JOINT CREMATORIUM COMMITTEE
22 FEBRUARY 2021

MERCURY ABATEMENT EQUIPMENT

1. SUMMARY

- 1.1 This report provides an update to the Committee on the provision of the new Mercury Abatement Equipment (MAE).

2. RECOMMENDATIONS

To be resolved:

- 2.1 That this update is noted.

3.0 Background Information

- 3.1 The abatement of mercury has been a longstanding matter that has had to be addressed by the Crematorium. The UK had signed up to the Convention for the Protection of the Marine Environment of the North-East Atlantic (known as the OSPAR Convention) required, amongst other things, the cessation of emitting mercury by 2020. The Convention came into force in 1998.
- 3.2 The JCC received a report on 14 September 2005 in which Members were advised that the Department for Environment, Food and Rural Affairs (DEFRA) had issued instructions to all cremation authorities that they must notify their Enforcing Authority by the end of 2005 of how they intend to meet the minimum 50% abatement of mercury required under the guidelines.
- 3.3 There were three options available which were to abate as required by the guidance, burden share with another crematorium who was willing to undertake 100% abatement or to do nothing. The JCC accepted the recommendation that the Enforcing Authority (Mansfield District Council) be notified of the Crematorium's intention to seek 50% abatement through the installation of new mercury abatement equipment (MAE).
- 3.4 On 6 September 2006 the JCC was given an update on the reasons needed for abatement and the cost implications. It was agreed at the meeting that the MAE and associated works should be procured.
- 3.5 On 17 June 2013, the JCC received a report confirming that the upgrading of cremators and the installation of MAE had been completed. The report also discussed the burden sharing principle introduced at the same time as the 50% target for abatement. This was a process whereby those crematoria who achieved the target through installing abatement equipment could share the cost with those who didn't install equipment. This was to be achieved by the selling and buying of Tmacs (tradable mercury abated cremations).
- 3.6 The JCC had already agreed in 2010/11 to join the CAMEO Burden Sharing Scheme (Crematoria Abatement of Mercury Emission Organisation) who acted as a broker for the

trading of Tmacs. The Crematorium has been in a position since 2020/11 where it has received income from Tmacs but also has had to buy Tmacs where the abatement in any given year was less than 50%.

3.7 On 23 February 2018 a report was presented to the JCC advising on the issues with the MAE installed in 2010. At the time of the initial installation the preferred option was to use a fixed bed containing pelletised activated carbon in order to adsorb mercury from the gas stream. The primary benefit of a fixed bed was the large volume of carbon which has a long service period and requires no intervention from the operators. However, it was reported to the JCC that since 2011, there had been issues with reduction in system performance, reduced ability to maintain the system and no scope to develop the installation having regard to the ultimate target of 100% mercury abatement by 2020.

3.8 It was agreed that the MAE would be changed to ensure compliance with the 2020 target.

4.0 Current Position

4.1 A report was received by the JCC on 7 September 2020 providing an update on the replacement MAE. There was a request to increase the budget from £627,000, the cost for MAE design, manufacture, delivery, installation and commissioning, to allow for works over and above that will arise from the main works.

4.2 The Committee agreed that the budget should not be increased until such time as it was possible to get quotes for the additional Builders accommodation works. The accommodation works when approved will be funded from capital reserves.

4.3 As referenced in the report on 7 September 2020, the accommodation work may include such items of work as:

- Resin floor to transfer room. Required due to removal of cremator.
- Making good to walls, ceilings etc. where No 1 cremator removed. Finishes and design to be approved possible public viewing
- Sound insulation to transfer room.
- Adaptation/new screen to roof mounted MAE plant.
- Possible alterations to roof and recovering to mess room and mezzanine. Requires recovering prior to new equipment being fitted. Note that the recovering of the Crematory roof is an independent project subject to an insurance claim following copper theft. This work will be carried out in conjunction with MAE due to restrictions relating to a European Protected Species Licence (relating to bats) which gives restricted timescales when work can be carried out.
- Possible structural steelwork alterations subject to final MAE design. (Equipment support)
- Chimney flue alteration/additional flue, cladding etc. to external flue dependant on final design. Work to the chimney will also be subject to the European Protected Species licence restrictions.
- Upgrade of incoming gas safety valve including connection to the fire alarm system.
- New steel deck mezzanine over yard and mess room

- New screen to control room.
- New access gate to service yard.
- Electrics

- 4.4 It is unlikely that there will be any impact on the proposed PPW programme arising from the above works however if there is, the PPW will be amended accordingly
- 4.5 As previously reported, a contract was entered into with Matthews Environmental Solutions (Matthews) on 25 August 2020. The reason for using Matthews was reported to the Committee on 16 September 2019 when Members were advised that Matthews would need to be used to ensure compatibility with the existing cremators as the control system for the abatement system has to work in sync with the cremators. Members were also advised on 24 February 2020 that the order had been placed with Matthews reiterating the need to ensure compatibility with the cremators.
- 4.6 A meeting was held on site on 29 September 2020 in order for staff to meet the Project Manager for Matthews who would be looking after this project.
- 4.7 However due to the effects of Covid-19, Matthews have not yet been able to start the design work as they do not have the resource. Since March they have been severely impacted by the pandemic with remote working, staff having to quarantine, increased lead time on bought in equipment impacting on other projects and a high demand to support their clients who would otherwise have been unable to cremate due to having equipment at the end of its service life.
- 4.8 Matthews subsequently had a 14 day closure of their production facility due to members of their production and design team testing positive for Covid-19 and only returned to work on 9 November.
- 4.9 They have now reviewed the programme of work and assessed their resource capacity. In doing so, they have considered the fact that any substantial work on the roof area needs to be completed by the end of April due to the presence of bats. It is their view therefore that they should only start work if there is no risk of the works running beyond that time.
- 4.10 Given that they have had two closures due to Covid-19 they have anticipated some lost time due to the pandemic either from their operations or their supply chain. Based on this assessment they believe that they would not be able to be in a position to have the majority of the noisy/heavy work on the roof completed by the end of April 2021 and therefore would have to stop work and not be able re-commence work until October 2021 to comply with the restriction due to the bats. This would result in them leaving the site for five months in a state of partial construction and also having their site compound including welfare facilities etc being there for an extended period.
- 4.11 To avoid such disruption Matthews have issued a revised programme. Whilst this is not desirable, given the amount of disruption experienced to date and the potential for further disruption, it is a sensible approach to scheduling the works and not exposing the Crematorium to any risk of part completed works or non-compliance with the European Protected Species Licence should the work overrun into May 2021.
- 4.12 The key milestones within the revised programme are as follows:

1. Detail design development – commence 1 March 2021
2. Procurement lead time of major equipment – commence 29 March 2021
3. Site setup and removal of existing plant – 6 August 2021 – 26 September 2021
4. Plant installation – 4 September 2021 – 16 December 2021
5. Electrical installation – 21 December 2021 – 14 February 2022
6. Testing and Commissioning – 24 January 2022 – 14 March 2022
7. Completion and site handover – 14 March 2022 – 6 April 2022

4.13 It is anticipated that by the end of April, it will be known what accommodation works will be required over and above the work of Matthews at which point officers can get quotes to advise the committee on the costs. It is anticipated that details of the work and possible prices will be provided at the committee meeting scheduled for 26 May 2021.

4.14 Design Services at Mansfield District Council will be overseeing the delivery of the works.

Background Papers

Matthews Environmental Solutions Programme – 5474 PL 001 Rev1.

For further information please contact Sarah Troman, Head of Neighbourhoods, Mansfield District Council, stroman@mansfield.gov.uk, 01623 463036.