



**FOR PUBLICATION**

**DERBYSHIRE COUNTY COUNCIL**

**REPORT TO CABINET MEMBER FOR INFRASTRUCTURE AND  
ENVIRONMENT**

**22 November 2022**

**Report of the Executive Director - Place**

**Procurement of Replacement Leachate Tanks for Closed Landfills**  
(Cabinet Member for Infrastructure and Environment)

**1. Divisions Affected**

1.1 Tibshelf and Alport and Derwent.

**2. Key Decision**

2.1 This is not a Key Decision.

**3. Purpose**

3.1 To seek approval to procure four landfill leachate storage tanks for the closed landfills at Crich and Glapwell 2.

**4. Information and Analysis**

4.1 The Council operates landfill leachate control systems at four sites around the County, including its closed landfills at Old Quarry, Crich and Glapwell (known as Glapwell 2). Landfill leachate is a highly polluting liquid waste which is produced in landfills and poses a risk to the environment. As it is generated, the leachate is extracted by pipework and pumped to on site tanks and stored.

4.2 The leachate at the four sites is not suitable for direct discharge to the foul sewer so the leachate has to be stored in tanks on site until it can

be collected by road tanker for disposal off site. The tanker transports the leachate to a sewage treatment works where it can be diluted with other wastewaters and discharged in its weakened form into the treatment process.

- 4.3 Sufficient storage capacity has to be provided at the landfill sites to enable storage during periods when leachate generation is high, such as wet winter periods. Sufficient capacity also has to be maintained to cover storage needs for periods when site access by the tankers is precluded, such as periods of ice and snow or periods when road works lead to restricted access for large vehicles.
- 4.4 Each of the tanks stores approximately 25,000 litres of leachate, pending collection by tanker for disposal to sewage treatment works.
- 4.5 The two tanks at Glapwell are of a steel construction and are 17 years old. These have been subject to weekly condition checks and periodic detailed inspections, as well as regular maintenance to the associated fittings. Due to the highly corrosive nature of leachate, steel tanks are prone to corrosion and typically have a life expectancy of 10 to 15 years. The Glapwell tanks have suffered significant degradation and one of them has been taken out of service due to corrosion and some minor leakage into the secondary containment bund.
- 4.6 The two tanks at Crich are nylon reinforced plastic tanks which are over 20 years old. This type of tank does not require the same level of maintenance as steel tanks but are subject to weekly condition checks and periodic detailed inspections. Whilst plastic tanks do not suffer from corrosion, they are prone to UV damage and weathering over long periods, and these effects eventually lead to structural degradation. Both tanks are now severely weathered and one has started to split. The split has been stabilised but this can only be seen as a temporary measure.
- 4.7 At the time the original tanks were designed and installed it was not standard practice in the industry to install fixed access for working at height. Modern installations such as the proposed solution now include fixed access to the top of each tank to facilitate routine inspection and maintenance. The proposed procurement therefore provides the opportunity to bring the tanks in line with modern standards for safe operation.
- 4.8 Alternative options to deal with the tank issues are set out in Section 6.

- 4.9 A technical assessment and business case has shown that for both sites, the best value solution is to replace the tanks with new ones, in order to provide suitable storage facilities going forward and to ensure safe means of access is provided.
- 4.10 It is proposed that a contract is procured using a competitive tendering process to provide the following services and goods:
- The design of the new tanks.
  - The fabrication and testing of the tanks.
  - Transport to site.
  - Removal and disposal of old tanks.
  - Installation of new tanks.
- 4.11 A detailed specification will be prepared and the goods and services will be subject to a suitable warranty requirement. Learning from the highly successful replacement of leachate tanks at Buxton in 2016 will be applied.
- 4.12 Based on the experience from the 2016 project, and allowing for the full installation costs and inflation, a budget figure of £50,000 per tank has been estimated, giving a total project value of £200,000 for the four tanks required.

## **5. Consultation**

- 5.1 Procurement Officers have been consulted on the proposed procurement.
- 5.2 Consultation on funding has been undertaken with the Assistant Director - Resources & Waste, the Executive Director - Place and the Director of Finance and ICT as part of developing the business case to approve capital expenditure on the proposed solution.
- 5.3 The Business Case has been approved.

## **6. Alternative Options Considered**

- 6.1 Do nothing – continue to run on one tank at each site. This option carries the continued risk of tank failure leading to a pollution incident and prosecution by the Environment Agency. It also incurs additional disposal costs due to the loss of ability to balance the load across two tanks and limit collection to once a day and ensure a full road tanker load can always be available.

- 6.2 Repair only one of the tanks at each site – due to the degraded state of each tank it is considered unlikely that an economic repair backed up by a warranty from the repairer could be obtained. There are also technical challenges in effecting any repairs on site and the cost of removal of tanks to a workshop is prohibitive.
- 6.3 Replace one tank at each site – this solution does not allow the load balancing approach as noted in 6.1 above. In wet weather, the sites can produce more than one tank of leachate in a day and, without two tanks, this would mean two leachate collections in a day. Local sewage treatment works cannot accept more than one tank of leachate per day due to the composition of the leachate.
- 6.4 Replace both tanks at each site – this is the only solution that solves the issue of the degraded tank materials. It also provides capacity for leachate storage to enable the sites to stay in compliance with legal requirements, including periods such as when sites are snowed in or otherwise inaccessible. This is also the only solution that enables the required improvements in safety measures for access as the old tanks are not suitable for retrofitting safe access systems. Procuring the four tanks together will enable a more attractive package to be procured, leading to the most advantageous price.
- 6.5 Options 6.1, 6.2 and 6.3 have been rejected and Option 6.4 is recommended for approval.

## **7. Implications**

- 7.1 Appendix 1 sets out the relevant implications considered in the preparation of the report.

## **8. Background Papers**

- 8.1 Business Case: Replacement of leachate storage tanks at the closed landfill at Crich, April 2022.
- 8.2 Business Case: Replacement of leachate storage tanks at the closed landfill at Glapwell 2, July 2022.

## **9. Appendices**

- 9.1 Appendix 1 – Implications.

## **10. Recommendation**

10.1 That the Cabinet Member:

- a) Approves the procurement of four new landfill leachate storage tanks for the closed landfill sites at Crich and Glapwell 2 as detailed in the report.

## **11. Reason for Recommendation**

11.1 Replacement of the leachate storage tanks has been found to be the only solution which ensures that the Council continues to meet its statutory obligations to manage landfill leachate at the Crich and Glapwell 2 closed landfills whilst incurring minimum cost and meeting safety obligations to staff.

## **12. Is it necessary to waive the call in period?**

12.1 No.

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## **Implications**

### **Financial**

- 1.1 The total project value for four tanks is estimated to be £200,000, based on the 2016 Buxton project and taking into account installation costs and inflation. This will be met from the Waste Management Revenue budget and Place Departmental reserves.

### **Legal**

- 2.1 The procurement will be undertaken in accordance with the Public Contract Regulations 2015 and the County Council's Financial Regulations.

### **Human Resources**

- 3.1 All resources required to deliver the management of this project are available in-house within the Waste Management Service.

### **Information Technology**

- 4.1 None.

### **Equalities Impact**

- 5.1 Not applicable.

### **Corporate objectives and priorities for change**

- 6.1 This proposal will help deliver the following Council Plan priorities: Resilient, Healthy and Safe Communities; High Performing, Value for Money and Resident-Focused Services; A Prosperous and Green Derbyshire.

### **Other (for example, Health and Safety, Environmental Sustainability, Property and Asset Management, Risk Management and Safeguarding)**

- 7.1 Failure to implement the recommendations could lead to a pollution incident with consequent risk of prosecution by the Environment Agency under the Water Resources Act. The recommendation includes safety upgrades for the tank access systems to enable the Council to fully comply with its obligations under the Health & Safety At Work Act, the Work At Height Regulations and the Provision & Use of Work Equipment Regulations.