

Implementation of new weighbridge software (and associated controls)

BACKGROUND

8.1 Appendix 2

- 1 As an addition to the Internal Audit plan for 2023/2024, a consultation engagement has been completed surrounding the implementation of new weighbridge software (and associated controls).
- 2 This review follows:
 - A wide scale fraud in the area, valued at approximately £417k, a period of consultation and advice from Internal Audit, two subsequent audits of the weighbridge facilities and recent convictions for bribery of four Council/Agency employees and one external party.
 - The procurement and implementation of new weighbridge software system (Weighsoft, which has replaced Gatehouse) which went live in April 2023.
- 3 Areas of focus for the consultancy engagement agreed with management were system implementation; system controls; physical controls; roles/responsibilities, including division of duties, and monitoring and oversight. Details of the context, the summary audit advice, the findings and proposed management actions are contained in the following report for management consideration. Following this review, it is intended to include an assurance audit engagement of the Council's Weighbridges in the Audit Plan 2024/25.

CONTEXT

- 4 The Weighbridge software system records weighbridge activity (waste movements) at Lamby Way and Bessemer Close, with the latter operating as a site which receives waste on a commercial basis, as well as domestically. Previously, significant fraudulent activity took place at the Bessemer Close Commercial Site, and it is a requirement that robust controls are in place to prevent reoccurrence, with a focus on ticket amendment, system reporting and controls, division of duties and management oversight, monitoring and review.
- 5 The weighbridges are staffed as follows:
 - Bessemer Close (including supporting depot staff) – 1 Weighbridge Operator (situated on Out Weighbridge); 1 Barrier man (situated on In Weighbridge - who greets/records incoming vehicles and waste types for subsequent cross check to the weighbridge data); and 1 Plant operator (who moves waste from both the Domestic and Commercial sides of the site for onward transmission). The Commercial Site is open 7am-3.15pm Mon-Fri and is closed for lunch and is open 7am-12.30pm on Saturday. The Weighbridge Operator receives contractual overtime for opening and closing the site and for Saturday Working. Note: The HWRC (Domestic) usually opens later and closes later and is open on Sundays.
 - Lamby Way – 3 Weighbridge Operators (WBO) will work throughout the day (M-F) with 2 operators required at busy times (1 x WBO = 6am-2pm, 1 x WBO = 7am – 3pm and 1 x WBO = 2pm – 10 pm). The Weighbridge is open 6am-10pm M-F and 7am-5pm Sat. A Barrier Man is in place (8am-4pm) for the Waste Transfer Station (WTS) but it was noted that his shift no longer matches the opening hours of the WTS (6am – 5pm) and that there might be occasions where the barrier is unattended.

- 6 The previous audits had followed a period of consultation and advice, from Internal Audit, and both had assurance opinions of insufficient with major improvement needed. These audits had identified a number of control issues, such as the need for a regime of management and secondary officer spot checks, the need for improvements to site security and traffic management controls, issues regarding the use of system administrators (super users) and a lack of audit trail around system access and password changes.
- 7 Whilst the previous impaired audit opinion from the ‘Gatehouse’ system audit, finalised in May 2021, related to a small number of key controls which required management attention, it was subsequently evidenced that these controls had been largely been addressed. The remaining control gap related to audit trails of changes to access rights and passwords, with it advised that this could only be achieved upon implementation of a new software system, which was planned to progress alongside infrastructure improvements and automation to provide an integrated solution. Regrettably, the new system was procured without this required functionality, so further compensating controls will be required and the following longstanding audit recommendation remains open as follows.

Longstanding Audit Recommendation.

Management must:

- *Take steps to review all Gatehouse system users and access levels as appropriate and to ensure that users change their passwords on a regular basis.*
- *Limit the number of System Administrators/ Super users with access rights to change all passwords and consider implementing mitigating controls until such time as a full audit trail of system access or password changes is available;*
- *Take steps to explore development of the Gatehouse System and/or a replacement to include a full audit trail of changes to system access or passwords.*

- 8 Audit was advised that there were several pressures to upgrade the existing Gatehouse system in advance of the integrated solution, notably that the existing software was being unsupported and being replaced by Weighsoft. Several systems were considered as options for procurement, but following a site visit to a Council contractor who was running the Weighsoft system, the Weighbridge Team accepted the product as a viable solution.
- 9 The Pre-Tender Report notes that a direct award approach was justified due to ‘Continuity of software & users. Impact on weighbridge hardware. Requirement to provide hosted product.’ The Pre-Tender Report also notes that ‘The Access Group are currently on the G-Cloud framework v12 under the category of social care. It is anticipated v13 will allow a route to market to progress a longer-term contract (5yr) however 2yr interim allows Waste Management to determine if a cloud hosted solution is viable for operations. Alternatively further discussion is required with ICT to continue with previous internally hosted data.’ The Pre-Tender Report and Contract Award Report were both completed by the Contract Manager and signed off, during September 2022, in accordance with the Scheme of Delegations by the Assistant Director – Street Scene. Both documents were also signed off by a representative of Commissioning & Procurement.
- 10 Accordingly, an interim 2-year contract was directly awarded to the Access Group (who had also supplied Gatehouse), in the sum of £84.4k (with costs heavily weighted to the first year (£69k / £3215.4k). The Weighsoft system was procured and went live in April 2023.

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SUMMARY

- 11 It is considered that there was insufficient planning and execution in the procurement of new Weighbridge Software System which has led to a system being purchased that did not have the functionality required to support an effective control environment in respect of weighbridge activities.
- The Pre-Tender Report indicates that all options had not been fully explored, and at the point of award it is considered that a number of assumptions were made in terms of the functionality, reporting and control requirements of the system procured, which is regrettable.
 - Additionally, it is noted that the current system does not deal with the outstanding audit recommendation in respect of audit trails in relation to system access rights and passwords.
- 12 Going forward, checks and assurance need to be reinstated on manual entries, amended tickets and incomplete tickets, as a matter of priority, which have lapsed since the system went live in April 2023.
- In the immediate / short term, this should entail regular and periodic manual sample testing of transactions as well as sample testing of tickets recorded as amended / manual e.g., out of hours movements, Barrier man checks etc. Checks should not be limited to those manually reported as amended, but to all weighbridge operators (with a focus on those of higher risk) with any anomalies followed up as appropriate.
 - Additionally, the provision of appropriate reporting needs to be progressed with the Software Supplier and with assistance sought from in-house Council experts, such as ICT, to establish how to extract the data required directly from the system for routine monitoring and checking, through which a more efficient approach to assurance could be achieved. It may become critical to involve the Council's technical IT experts to establish a solution to get the required data for essential monitoring and control.
- 13 It is also considered that management should undertake a review exercise relating to the procurement to learn from the gaps and assumptions made as part of the due diligence.
- 14 Finally, the wider issues identified as part of the consultation exercise should be progressed to include and provide improvements in respect of controls relating to, division of duties, staffing, infrastructure, processes and training.

POST IMPLEMENTATION CONSULTATION EXERCISE

Software Issues

- 15 This review has identified that a significant number of unanticipated issues have been experienced since the new software went live. These are managed through a Snagging List, by the RNS Business Support Manager, and regular meetings are held with the software suppliers (Software Consultant). Some progress has been made in addressing matters, but some significant issues remain of concern, with instances noted where audit has been advised that the supplier is refusing to provide a solution.
- No manual entry report or report of incomplete or amended tickets – Supplier Development Team have refused to resolve. Software consultant looking into reports.

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- No amended ticket reason requirement – Working on a partial solution to list tickets amended on entry.
- No manual weight reason requirement – Supplier has refused to resolve but partial workaround in place.
- No deleted ticket report - Report now in place but requires amendment to provide usable functionality.
- No email address in system for user password reset – Cardiff Council staff looking to resolve.
- Some Reports do not show updated values – Supplier has refused to resolve but providing support with workaround.
- Amendments: Will not pull through amended EWC (European Waste Code) material codes - Supplier has refused to resolve but providing support with workaround.
- Amendments: If Gross/Tare weights recorded incorrectly & changed, description can be changed but weight will not and will be recorded incorrectly – On the roadmap but low priority.

16 Given the previous fraud, it is of significant concern that it is not currently possible to obtain a report of transactions which had been amended, manually entered or which are incomplete. It was advised that if an individual transaction is reviewed in detail it will be apparent if an amendment has been made, and accordingly this is some scope for mitigating this issue albeit that it would be on a sample basis and labour intensive. Audit has been advised that as it has not been possible to produce exception reports of amended weighbridge tickets, amendments have not been routinely taking place since software implementation in April 2023. The gap in monitoring and review represents a control risk of fraud or impropriety being undetected, and a system of regular review needs to be reinstated without delay.

Wider Issues

- 17 Procurement – Audit requirements, concerns and recommendations identified in previous audit reports and intervention, highlighting control issues around the system and in response to the wide scale fraud appear to have been overlooked when procurement of the current system has taken place. There is considered to be a gap in due diligence in the procurement and some suggestion from the service area that, given the fact that the software was procured from the same supplier as previously, there was an assumption that functionality and control would at least have remained constant, but due consideration should have been given to control requirements as well as to those of a functionality/operational nature.
- 18 Division of Duties – Staffing changes have meant that currently staff are acting up to the roles of Weighbridge Data Manager (System Super User) and Weighbridge Supervisor. Currently, these are the only two staff who are able to amend/delete completed tickets. However, due to staffing and sickness issues, these staff were both noted to have worked on the weighbridge as operators since the implementation of the new system, including at Bessemer Close where income is taken. There is a risk arising from these staff working operationally, and particularly at the Bessemer Close site, as they could bypass controls in the system, including cross checks on Barrier Man documentation etc., especially given the current position regarding reporting on amended tickets etc.
- 19 Management spot checks – Although cross checks are built into the system (e.g., Barrier Man data) were advised to be in place, it was evident that checks on the work done by the

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Weighbridge Data Manager (Super User) were still in development, because of the issues in reporting.

- 20 Weighbridge infrastructure – From the site visits undertaken all barriers were noted to be functional at the Bessemer Close site, although there is still a possibility of unrecorded out of hours movements. Infrastructure issues were noted at the Lamby Way site with weighbridge barriers not working, external weight displays not working, and ANPR no longer functional. It was also apparent that the weighbridges (In or Out) at Lamby Way could be easily avoided in any event, as they can be bypassed via the fleet car park or by the exit lane next to the weighbridge, by using the unmonitored ANPR or remote operated barriers.
- 21 Staffing – Current staffing arrangements mean that overtime is payable to existing staff to cover operational shifts in cases of long-term sickness etc. It is considered that staffing arrangements should be reviewed to ensure there is suitable flexibility, whilst managing any dependency on overtime. Additionally, one Weighbridge Operator is usually based at Bessemer Close and receives contractual overtime as part of that role, but consideration should be given to moving operators around sites, so that collection of income does not predominantly fall to one member of staff.
- 22 Processes – Existing processes were noted to require reviewing and refreshing to reflect any changes including those associated with the new software. Additionally, checks should be made to ensure that existing processes adequately document the service and the checks undertaken by the Weighbridge Data Manager and Management.
- 23 Training – It was advised that currently only certain weighbridge staff are Payment Card Industry (PCI) trained and that this is a requirement to work at the Bessemer Close site. Consideration should also be given as to whether, in due course, the acting Weighbridge Data Supervisor requires any additional training pertinent to that role e.g., PowerBi etc. Additionally, steps should be taken to record all training on DigiGov.

PROPOSED MANAGEMENT ACTIONS

1. Checks and assurance need to be reinstated on manual entries, amended tickets and incomplete tickets, as a matter of priority, which have lapsed since the system went live in April 2023.
 - In the immediate / short term, this should entail regular and periodic manual sample testing of transactions as well as sample testing of tickets recorded as amended / manual e.g., out of hours movements, Barrier man checks etc. Checks should not be limited to those manually reported as amended, but to all weighbridge operators (with a focus on those of higher risk) with any anomalies followed up as appropriate.
 - Additionally, the provision of appropriate reporting needs to be progressed with the Software Supplier and with assistance sought from in-house Council experts, such as ICT, to establish how to extract the data required directly from the system for routine monitoring and checking, through which a more efficient approach to assurance could be achieved. It may become critical to involve the Council's technical IT experts to establish a solution to get the required data for essential monitoring and control.
2. Management should conduct a Lessons Learned exercise relating to the procurement to learn from the gaps, and assumptions, made and to ensure that due consideration is given

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to system requirements, both from an operational and control point of view, particularly in view of the work previously undertaken and outstanding audit recommendation.

3. The weighbridge infrastructure should be reviewed at Lamby Way, with appropriate measure put in place to address the issues raised in this report.
4. Consideration should be given to division of duties requirements. If staff who can amend or delete tickets are to continue to work operationally, as weighbridge operators, then robust mitigating controls must be put in place to ensure the controls provided by the requirement for division of duties are not compromised.
5. Staffing arrangements for the weighbridge function should be reviewed to provide flexibility and to ensure that overtime paid is not excessive. Additionally, consideration should be given to moving weighbridge operators between the sites, so that one member of staff is not predominantly responsible for the collection of income.
6. Processes should be reviewed to ensure that they reflect current practices, any changes required by the new software and the checks undertaken by the Weighbridge Data Manager and Management.
7. Management should review the training requirements for staff and ensure that training records are recorded on DigiGov.

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