

**NORTH LONDON WASTE AUTHORITY**

**REPORT TITLE:** IMPROVING THE WAY NLWA MANAGES WASTE DATA

**REPORT OF:** DIRECTOR OF CORPORATE SERVICES

**FOR SUBMISSION TO:** AUTHORITY MEETING


**DATE:** 5 OCTOBER 2023

**SUMMARY OF REPORT:**

This report provides an overview of how the Authority currently manages waste data, including the limitations of the current version of the Waste Data Management System (WDMS). The paper outlines the benefits of upgrading WDMS, such as improved accuracy, timeliness and transparency of data, and the progress made on upgrading WDMS.

**RECOMMENDATIONS:**

The Authority is recommended to note and comment on the approach to managing waste data management.

**SIGNED:**  ..... Director of Corporate Services

**DATE:** 25 September 2023

## **1. SUMMARY**

- 1.1. The Authority's waste data management role is essential to meeting statutory requirements. The Authority collects data from its contractors, principally LondonEnergy Ltd (LEL) and Biffa Services Ltd, about the tonnage of different waste streams, the borough of origin and the location where it is received. This is shared with boroughs. The sharing is both to inform borough officers and to enable NLWA and individual boroughs to submit mandated quarterly reports to Government.
- 1.2. To deliver this role, the Authority currently uses Waste Data Management System (WDMS), a licenced software product developed for the Authority in 2014. The data resides in a database hosted in a facility in London.
- 1.3. Data from LEL and Biffa is received as Excel spreadsheets and is uploaded by borough officers into WDMS. Any data that is not correctly validated by WDMS is manually reviewed by NLWA officers. All other data related to waste management is not uploaded into WDMS and exists separately in Excel spreadsheets. This includes the split between household and non-household waste, Waste Electrical and Electronic Equipment (WEEE), commingled material sample data, Gateway Road recycling and reuse centre data and all end destination data. Data from the WDMS database as well as external spreadsheets are combined to produce the Waste Data Flow report quarterly for boroughs. This is time consuming and can be prone to error over the course of a year due to the need to employ a variety of formulas and filtering techniques within Excel spreadsheets.
- 1.4. NLWA officers are currently upgrading WDMS to achieve a service improvement. This has been informed by engagement with borough officers, who are involved in the project as it is being delivered. The benefits of the upgraded system will include improvements in NLWA operations as well as improved accuracy, timeliness and transparency of data for boroughs.

## **2. CURRENT SYSTEM**

- 2.1. The current system has major limitations and will become increasingly expensive to maintain as it ages. It is set up for previous operational conditions and has many obsolete data management options that make smooth data uploads difficult. Managing uploads – a daily task – can take considerable time, often several hours to process 500 transactions, which is substantially longer than a modern system. As the system is a legacy product, there are periods where the performance slows and can take several minutes to process a single transaction.
- 2.2. Some transactional data, as described in paragraph 1.3 above, cannot be uploaded into WDMS. The Authority has had to create multiple linked spreadsheets to aggregate tonnage for reporting and to manage the Waste Data Flow returns.

### **3. BENEFITS OF UPGRADING**

#### **3.1. The benefits of upgrading the system include:**

- 3.1.1. Increased operational resilience. The current system is brittle and is incapable of uploading all the data that NLWA requires.
- 3.1.2. Improved data quality, timeliness, accuracy and transparency for NLWA and boroughs through the consolidation of data in one place. The goal is to reduce the time boroughs can view fully reconciled data to less than a month.
- 3.1.3. Reducing the time to produce accurate Waste Data Flow quarterly submissions.
- 3.1.4. Significant saving in staff time spent on low value administrative functions related to WDMS.
- 3.1.5. Future-proofing the system against changes to operations and legislation, avoiding the current workarounds that make data difficult to manage and reduce confidence in its data accuracy. NLWA would also benefit from regular upgrades (as the software would receive regular releases as part of modern development practices).
- 3.1.6. Ensuring value for money. The licensing costs of the legacy product would be higher than if NLWA upgraded and would continue to increase (it is more expensive to maintain legacy products). NLWA will also get better value for its support options, given the limitations on altering the current platform.

### **4. ENGAGEMENT ACTIVITIES**

#### **4.1. Officers are engaging stakeholders in the development and implementation of the new system in the following ways:**

- 4.1.1. Officers have conducted several engagement sessions with boroughs to better understand barriers, data requirements, improvements and process. This is to ensure the upgrade meets borough requirements.
- 4.1.2. Authority and borough officers have a bi-monthly upgrade forum meeting to discuss elements of the upgrade that need joint decisions. This has touched on areas like operational issues and how to manage them, an idealised Waste Data Flow return timeline and access to WDMS. This is to support a smooth transition to the upgraded system.
- 4.1.3. Training on the upgraded WDMS will also be provided where appropriate to relevant user groups.

## 5. DECISION TO UPGRADE

- 5.1. Officers reviewed the market prior to deciding to upgrade the current system to the newest version, which is a modern product. As alternatives to upgrading the current system, the review also considered similar waste management software platforms, namely Intellex, Cority, Resourcify and WasteHero. The reason for the decision to upgrade the WDMS product was that most data products in this area are geared towards an operational environment (informing scheduling of services or staff shifts). As the Authority is not a waste operator, our requirements relate to reliable and prompt reporting and ability to integrate with other systems.
- 5.2. Officers considered the option of building the Authority's own platform. However, there is not the capability in-house to do so.
- 5.3. Upgrading WDMS provided the greatest benefit at the lowest risk. Not upgrading the system presented the highest risk. The Director of Corporate Services made the decision to upgrade based on a recommendation from the Authority's internal Digital, Data and Tech Steering Group and external engagement with Members and borough officers.

## 6. COSTS

Year	Current WDMS (no upgrade)	Notes	Upgraded WDMS	Notes
1	£61,500	Server upgrade (required to continue with existing system), licensing, hosting, and support	£63,000	Implementation and first year of licensing and support
2	£49,500	Licensing, hosting, and support	£33,450	Licensing, hosting, and support
3	£49,500	Licensing, hosting, and support	£33,450	Licensing, hosting, and support
4	£53,500	Licensing, hosting, and support	£33,450	Licensing, hosting, and support
Total	£214,000		£163,350	

## 7. CURRENT SYSTEM VS UPGRADED SYSTEM

7.1. The table below summarises the improvements being planned for. As noted in the table above, the upgraded system will quickly save money compared with maintaining the current system.

<b>Current waste data functions</b>	<b>Current system</b>	<b>Upgraded system</b>
Data uploads of waste transaction data	Can process some transactional data but not all	Can process all data transactions
Borough declarations (household and commercial waste and recycling)	Boroughs need to send via spreadsheets and cannot be uploaded into WDMS	Boroughs can enter data directly into WDMS
Processing of data transactions	Contradictory data settings requiring manual interventions to process data	Can match data settings to current operations, eliminating contradictions and leading to most data being automatically processed
Data transparency for boroughs	Due to the complex reporting (because of data being in a database and spreadsheets), boroughs have limited visibility of how Waste Data Flow data is put together for quarterly returns	Boroughs will have full transparency of data, which will be available via Power BI (or other reporting mechanisms if they do not use Power BI)
Recycling rates and other basic information	Due to different way waste is categorised within WDMS, it is hard to calculate figures like recycling rate	NLWA will update some waste types to match how data is used, making it easier to calculate measures like recycling rates and with greater confidence
Year on year data	As data is captured across multiple spreadsheets and WDMS, it is difficult to make year-on-year comparisons	As data will now be in one place, NLWA can provide year on year comparison data and make it available to boroughs
The resilience of the system	Currently a legacy product that is no longer developed, so it lacks resiliency to any future changes in operations	Can request additional development for changes to operations or legislation, is more robust as a modern platform, is less expensive to licence than the legacy product

Current waste data functions	Current system	Upgraded system
Context to data	Currently NLWA officer time is spent managing operations and Waste Data Flow returns, due to time it takes to manage operations and validation of data	Most NLWA officer time can be spent on value add analysis, providing context to data and changes in waste / recycling versus basic data

## 8. CURRENT PROGRESS AND NEXT STEPS

- 8.1. The upgrade of WDMS started at the end of July, with the completion of the new environment, migration of data and settings completed by 14 September 2023.
- 8.2. By 15 October 2023, officers are planning to have finished user acceptance testing of the new system. This includes updating settings to match current operational practices, such as:
  - 8.2.1. Setting up data from new sources to go directly into WDMS (Gateway Road RRC data and WEEE)
  - 8.2.2. Implementing the non-household declarations module for boroughs
  - 8.2.3. Changing waste types to speed up reporting (for example, to make recycling rates easier to calculate)
  - 8.2.4. Cleansing obsolescent historical data.
  - 8.2.5. Uploading operational data into the new WDMS, to ensure that it is behaving as expected.
- 8.3. Once the officer team is satisfied that all deliverables are met, NLWA officers, borough officers and OpenSky will agree on a go-live date. This needs to be carefully considered to ensure that there are no complications on waste data reporting for Quarter 3 of 2023/24.
- 8.4. From November, officers will be working with all relevant stakeholders on data products in Power BI (or relevant tool) to improve data transparency, for example, creating Waste Data Flow dashboards that will pull together data as the quarter progresses and allow boroughs a more accurate forecast.
- 8.5. Officers are working with Haringey Council, who provide digital infrastructure such as Microsoft Office, to ensure that the Authority can enable data sharing through Power BI, as it will require a 'Power BI Gateway' between WDMS and Azure

(Microsoft's cloud computing platform) to automatically refresh data in the data products created.

**9. EQUALITIES IMPLICATIONS**

9.1. There are no equalities implications arising from this report.

**10. COMMENTS OF THE LEGAL ADVISER**

10.1. The Legal Adviser was consulted during the preparation of this report.

**11. COMMENTS OF THE FINANCIAL ADVISER**

11.1. The financial Adviser has been consulted during the preparation of this report and comments have been incorporated.

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