NORTH LONDON WASTE AUTHORITY

REPORT TITLE: APPROACH TO DIGITAL, DATA AND TECHNOLOGY

REPORT OF: DIRECTOR OF CORPORATE SERVICES

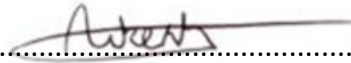**FOR SUBMISSION TO:** AUTHORITY MEETING

DATE: 24 APRIL 2025

SUMMARY OF REPORT:

This report provides an overview of the Authority's approach to digital, data and technology, and the initiatives being delivered. It also reports on the outcome of a review of the Authority's arrangements for its Information Technology (IT) services and recommends that the Authority establishes its own independent IT infrastructure and migrates away from Haringey Council as its supplier of IT infrastructure and services.

RECOMMENDATIONS:

The Authority is recommended to:

A. Agree that the Authority will serve a one-year notice on Haringey Council to terminate their agreement for provision of managed IT services and work with the council to migrate its systems and data in 2025/26 or another timeframe agreed with the council;
B. Delegate authority to the Director of Corporate Services to award and manage a contract for managed IT services with LondonEnergy Ltd at an estimated total cost of £275,000 a year (subject to inflation) for an initial contract term of three years with two possible extensions of one year each;
C. Note the estimated migration costs of £300,000, which have been included in the budget for 2025/26; and
D. Note the updates on the Authority's digital initiatives in this report.

SIGNED: .... Director of Corporate Services

DATE: 10 April 2025

1.   INTRODUCTION

1.1.   At the Authority meeting in April 2024[1], officers presented a report on the Authority's approach to Digital, Data and Technology (DDAT), as well as the initiatives being undertaken to drive the Authority towards becoming a technology-enabled organisation, modernising how it manages its operations and using data to support evidence-based decision making and forecasting.

1.2.   This report provides an update on the initiatives. In relation to the Authority's IT arrangements, it also recommends a course of action to establish Authority's own independent IT infrastructure as the next step in its digital transformation.

1.3.   For many of the initiatives, officers worked closely with colleagues from LondonEnergy Ltd (LEL), the Authority's wholly owned waste company. As the Authority takes ownership of the assets delivered by the North London Heat and Power Project (NLHPP), alignment and collaboration with LEL as operator of the facilities is becoming more important than ever.

2.   STRATEGIC PRINCIPLES

2.1.   The Authority's approach follows four core strategic principles.

Table 1: The Authority's strategic principles for DDAT and examples of work undertaken

Principle	Description	Examples of work
Aligned	The Authority's technology choices must allow it to work smoothly across organisational boundaries, for example with LEL and officers from the seven north London boroughs.	• Waste tonnage data dashboards for Authority and borough officers • Increased strategic alignment with LEL
Secure	The Authority and LEL must treat cybersecurity incidents as a real possibility and take proactive measures to mitigate the operational, financial and reputational risks associated with a successful attack.	• Increased alignment with LEL on governance in relation to security
Fit for purpose, flexible and future-proof	The Authority's technology must enable it to deliver its core functions and strategic objectives. The Authority must also have the capability to engage with the opportunities presented by future technologies as well as	• Assessment of the Authority's corporate IT arrangements • Roadmaps for the digital tools used to control and report on the NLHPP

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[1] The report for this meeting is available online here:
https://www.nlwa.gov.uk/ourauthority/our-meetings/reports-authority-meeting-25042024

Principle	Description	Examples of work
	challenges from regulatory changes and the evolving needs of its stakeholders.	
Preserve assets for the future	The Authority must ensure that the new assets it is building through the NLHPP remain in good working order to deliver benefits to the residents of north London for as long as possible.	• Work with LEL and the contractor for the energy recovery facility to agree the tools needed for asset data management

3.   KEY OUTCOMES, DELIVERABLES AND OUTPUTS

3.1.   The previous report detailed outcomes across the following areas:

   3.1.1.   improving operational data management and systems

   3.1.2.   data for modern day asset management

   3.1.3.   enablement of the NLHPP capital delivery

   3.1.4.   corporate technology choices.

3.2.   The following sections give an overview of activity in these areas, including achievements to date and current and future work.

4.   IMPROVING OPERATIONAL DATA MANAGEMENT AND SYSTEMS

4.1.   In the last report, officers reported on the upgrade of the Authority's WDMS, which delivered increased reliability and significant performance improvements and reduced the time needed to capture data on waste tonnages.

4.2.   Since then, officers have recategorized the data in WDMS to make it more meaningful through better alignment with the categories used at the waste facilities. Additional work has overhauled the system's usability, resulting in better usage by borough officers, fewer corrections needed to the data after it is imported and fewer issues at the weighbridges, which can cause delays to borough vehicles' ability to tip waste and get back on the road for further collections.

4.3.   At the same time, officers have significantly progressed work on presenting the data on dashboards for use by borough and Authority officers. The dashboards take data from the boroughs and weighbridges and apply calculations to provide an overview of operations in north London. Officers worked closely with colleagues at Haringey Council, the supplier of the Authority's IT services, to find a solution that enabled the dashboards to be shared with borough officers in early autumn.

4.4. The dashboards allow investigation of irregularities and trends, and they provide a key input to the Authority's finance processes. Some of the initial successes of the dashboards have included the following:

4.4.1. Provision of up to date, accurate data for borough and Authority officers to inform waste management processes and decision making.

4.4.2. A clearer picture of waste operations across north London to enable borough officers to provide context in their internal reporting with reference to other boroughs' data. They previously had to request this data from each other every month.

4.4.3. Increased transparency of the data to enable the boroughs to understand and question it, giving greater confidence in its accuracy and reducing the time spent by borough and Authority officers on queries. The time required for Authority officers to respond to queries has reduced from about two weeks each quarter to about two days.

4.4.4. Automated calculations for the data required to report waste tonnages to the government, greatly reducing the time required for borough and Authority officers. The process of calculating and validating the waste tonnages has reduced from three months to one week.

4.4.5. Improvements to Authority officers' understanding of how Dry Mixed Recycling (DMR) is processed, which is helping to inform discussions on service improvement with Biffa, the Authority's DMR contractor. Data on DMR contaminants (non-recyclable waste mixed in with recycling) are also informing borough interventions and the Authority's responses to Biffa's contractual claims.

4.4.6. A clearer view of the performance of waste transport operations.

4.4.7. Better oversight of third-party waste disposal arrangements. This data was previously only available through raising specific queries with LEL but is now available in the dashboards.

4.4.8. Better tracking of Waste Electrical and Electronic Equipment (WEEE) collections and improved distinctions between waste categories to inform the processing of rebate payments and budget forecasting.

4.4.9. More regular processes for other ad hoc and infrequent reporting, for example the Authority's annual report and calculation of the landfill tax owed by the Authority.

4.5. Officers are now working with the supplier of WDMS and colleagues from Haringey Council's digital services team to deliver a solution that will allow the dashboards to be automatically updated through a gateway that will transmit data directly from WDMS. This will improve the reliability of the updates and increase the timeliness of the data by allowing updates to take place more frequently and consistently.

4.6. The dashboards will continue to be iteratively developed in line with feedback received, and new dashboards will be developed to address any needs that arise. Officers will also work to identify further opportunities to use the data to improve processes and deliver efficiencies.

Recycling – by borough

FinancialYear	April	May	June	July	August	September	October	November	December	January	February	March	Total
⊞ 2019/20	7,673.48	8,157.92	7,442.10	8,297.50	7,295.60	7,454.94	8,135.34	7,256.43	8,509.98	8,155.46	6,957.07	7,798.47	**93,134.29**
⊞ 2020/21	9,506.30	9,485.56	10,374.30	10,271.32	8,537.81	9,596.95	9,643.52	9,483.52	11,346.91	9,986.19	9,197.29	10,795.77	**118,225.44**
⊞ 2021/22	10,415.08	9,471.95	10,297.04	10,013.94	8,437.33	9,544.52	8,902.56	8,930.33	10,050.25	9,280.67	8,235.46	9,541.78	**113,120.91**
⊞ 2022/23	8,492.96	9,179.73	9,197.30	8,903.27	8,470.13	9,351.97	8,741.66	9,465.07	9,573.68	9,500.20	8,160.70	9,460.51	**108,497.18**
⊞ 2023/24	9,738.83	10,803.59	10,596.13	10,166.80	9,707.29	10,135.73	10,447.46	10,712.84	11,037.16	11,116.73	9,969.13	9,982.22	**124,413.91**
Total	45,826.65	47,098.75	47,906.87	47,652.83	42,448.16	46,084.11	45,870.54	45,848.19	50,517.98	48,039.25	42,519.65	47,578.74	**557,391.72**
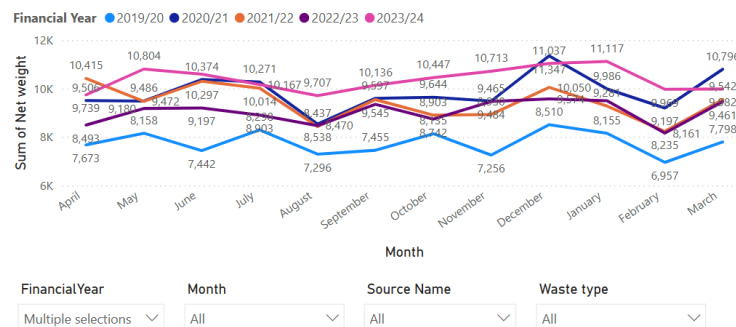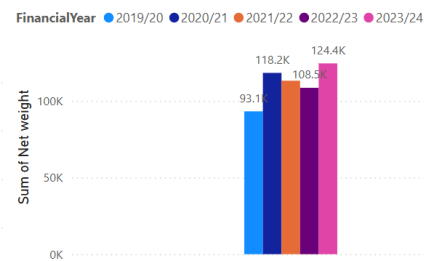
Figure 1: An example of a waste tonnage dashboard

4.7. In the longer-term, officers plan to recategorize and generally tidy up the 10 years of historical data collected previously. This will provide opportunities for the Authority to use data modelling to see how the environment in which it operates has changed and anticipate future changes.

4.8. Another achievement in the past year is an overhaul of the process for handling recycling credits. This previously required hiring a temporary member of staff for four months but now requires a week of an existing staff member's time. Efficiencies were delivered through process changes and the use of electronic forms to streamline onboarding recipients, validating claims and issuing payments. The presentation of data from the claims in the waste tonnages dashboards has also been automated.

5.   DATA FOR MODERN DAY ASSET MANAGEMENT

5.1.   In the last year, the Authority has taken ownership of new waste management facilities at the Edmonton EcoPark, delivered through the NLHPP. These include a new Resource Recovery Facility (RRF) and EcoPark House. These facilities now form part of the Authority's expanding suite of facilities operated and maintained by LEL (see the asset management paper on this agenda for more information).

5.2.   LEL has uploaded the asset management data provided by the construction contractor for these new facilities into its enterprise management system. These data include information on how the assets installed should be maintained over their life.

5.3.   Officers have also configured the Authority's fixed asset register for accurate financial management of the Authority's assets.

6.   ENABLEMENT OF THE NLHPP CAPITAL DELIVERY

6.1.   The Authority was joined by a product manager who is now managing the digital tools used to support delivery of the NLHPP. They led on the procurement of a new contract for a programme management data hub, as authorised at the September 2024 Authority meeting, to ensure continuity when the contract for the existing hub expired. Following a competitive process using the Crown Commercial Service's G-Cloud 13 framework, the contract was awarded to the incumbent supplier, Asset Handling. The hub combines data on the costs and schedules for the programme and serves as a single source of the truth for programme controls.

6.2.   The product manager has since been engaging with stakeholders across the NLHPP to develop roadmaps that will ensure the products are fit for purpose as the programme's needs evolve, and that they are gracefully retired once they are no longer needed. At this point the data they contain will either be archived for later reference or used in daily operations.

6.3.   Examples of data being transitioned into operations include the digital 3D models being built as part of the NLHPP's design process. These map out details of the existing utilities at the EcoPark and the new facilities being constructed by the programme. This data has many uses for operations, maintenance, hazard identification, staff training and planning of future works. It may also be possible to link the models to future asset management systems to allow users to access data on the assets by interacting with their digital twins. LEL is now establishing a team to manage the models from 2025/26.

Figure 2: A 3D model showing the tipping bays on the RRF

6.4. As mentioned in the previous report, development of the Authority's internal digital capabilities enabled officers to in-house the digital and information management functions of the NLHPP in February last year. This has led to estimated cost savings to date of £350,000.

7. CORPORATE TECHNOLOGY CHOICES

7.1. The Authority has a longstanding arrangement with Haringey Council for provision of its managed IT services by Haringey's in-house IT team. This includes use of Haringey's infrastructure for storage of the Authority's data, installation of networking equipment and provision of software licences, service desk support and security monitoring. While the arrangements have been steady, the technology underpinning the infrastructure has evolved, and the Authority has benefited from Haringey's digital transformation work over the past five years. This has included being the pilot project for Haringey's migration of its data onto new cloud-based infrastructure in 2023.

7.2. In the past couple of years, however, officers have increasingly found that the measures that Haringey is obliged to take to secure its infrastructure in the current cybersecurity landscape has restricted the delivery of the Authority's strategic objectives. This is partly because the Authority has use cases that Haringey does not, and their systems are not set up to support them without modification.

7.3. The Authority and Haringey also have fundamentally misaligned organisational needs in relation to their technology:

7.3.1. Haringey holds large quantities of personal and financial information about its residents, including the most sensitive categories of information about

vulnerable residents, and is at high risk of cyberattack. This means the council must place heavy restrictions on other organisations' access to its infrastructure. As a large organisation with over 3,000 staff, it must also take a conservative approach to providing new tools for collaboration and data sharing because of the resources needed to train staff to use them safely.

7.3.2. The Authority holds relatively little sensitive information, is at lower risk of cyberattack and works closely with partners in LEL, the boroughs and the contractors working on the NLHPP, so it would be better served by a more targeted approach to managing its cybersecurity risks and having the flexibility to set up shared workspaces for collaboration and data sharing. As a smaller organisation, it is also able to move faster to develop new digital tools and train staff in their use.

7.4. An example of an issue caused by this misalignment was the delay to the Authority sharing the waste tonnage dashboards referenced in section 4 of this report. This required Haringey to make an exception to its standard restrictions and permit officers from other boroughs to access the dashboards. The search for alternatives and development of the solution lead to a ten-month delay to a key strategic objective for the Authority.

7.5. It is likely that the misalignment will become more pronounced as the Authority's needs evolve in relation to its management of waste data and assets delivered by the NLHPP. Having assessed its IT arrangements, officers have therefore concluded that the best course of action is for the Authority to move to its own infrastructure and procure an alternative supplier of managed IT services. This will enable officers to establish systems and policies that are fit for the Authority's needs, without requiring policy exceptions that would add unwanted complexity to Haringey's administration of its own infrastructure.

7.6. Officers propose to award a contract to LEL to deliver the services through a combination of its in-house IT team and its contracts with external suppliers, whom the Authority would subcontract. The scope will be in line with the services that Haringey currently provides, and LEL will support the Authority with establishing and managing its own infrastructure and migrating its systems and data from Haringey's infrastructure. Officers have engaged with colleagues at Haringey, and they have committed to supporting the Authority with the transition.

7.7. If agreed, the Authority will serve a one-year notice on Haringey in line with the terms of their agreement and work closely with Haringey and LEL colleagues to plan and execute the migration during the 2025/26 financial year or another timeframe agreed with Haringey.

7.8. Engagement with LEL indicates that there will be cost efficiencies of £65,000 to £70,000 a year from the move. This is based on a projection of Haringey's costs for 2024/25 and onwards, based on the charge for each user in 2023/24 and the Authority's current headcount. Officers estimate that Haringey's costs for 2024/25, once calculated following the end of the financial year, will be at least £340,000.

7.9. There is never a perfect time to implement a migration of systems and services. However, the migration would be simplified by the facts that the Authority's data is already stored in cloud-based infrastructure, meaning it can set up its own instance of the same infrastructure and migrate to a similar environment, and it currently has few interfaces across systems, relatively few shared dashboards and few automations.

7.10. The Authority's ambitions to improve its use of digital tools and become a technology-enabled organisation mean that any future migration is likely to be more complicated as there will be more systems, tools and data to move. It is therefore important that the Authority take the opportunity to move to its own infrastructure at this early stage of its digital transformation, as this will be more efficient, more cost-effective and less risky in the long term.

7.11. Members are recommended to agree that the Authority will serve a one-year notice on Haringey Council to terminate their agreement for provision of managed IT services and work with the council to migrate its systems and data in 2025/26 or another timeframe agreed with the council.

7.12. Members are also recommended to delegate authority to the Director of Corporate Services to award and manage a contract for managed IT services to LEL at an estimated cost of £275,000 a year (subject to inflation) with an initial contract term of three years with two possible extensions of one year each.

7.13. The cost of the transition is estimated at £300,000 in 2025/26, which covers buying and installing the necessary computer and networking equipment, licensing and configuring new cloud-based infrastructure and the professional services needed to transfer the Authority's data. This has been included in the budget paper agreed at the February Authority meeting. With the yearly cost efficiencies referenced above, the payback period is expected to be about four to four-and-a-half years, which is within the generally accepted five-year lifecycle for technology investments.

8. RISKS

8.1. The table below shows some of the risks, comprising both threats and opportunities, associated with DDAT and the actions being taken in relation to them.

Risk	Opportunity / Threat	Action taken
Short term		
Optimise local waste related decision making	Opportunity	Officers have shared waste tonnage dashboards with Authority and borough officers to enable them to gather insights that will inform their decision making.
Failure to take advantage of the opportunities identified from the data	Threat	Officers continue to respond to feedback on the dashboards and develop new ones as required to enable further insights.
Lack of data capability in the organisation	Threat	Officers continue to develop the Authority's capability in this area.
Disruption to the Authority's ability to update the waste tonnage dashboards	Threat	Officers are working with the supplier of WDMS and Haringey Council to establish a gateway to enable direct updates to the dashboards from WDMS.
Corporate technology choices that limit the Authority's ability to collaborate and share data	Threat	Officers have reviewed the Authority's IT arrangements and developed a corporate IT strategy to migrate to its own infrastructure, which it can then configure for its own needs.
Disruption to the Authority's business from migrating its IT infrastructure	Threat	Officers have prepared a corporate IT strategy and are beginning project planning for the migration. They will work closely with Haringey and LEL to manage any disruption.
Cyberattacks on the Authority	Threat	Officers have carried out a security audit and completed all the actions required on the minor risks identified. They regularly engage with Haringey Council for updates on the cybersecurity landscape.
Medium term		
Misaligned organisational needs with LEL as the Authority's new IT services supplier	Threat	The Authority will establish its own infrastructure for data storage rather than using LEL's infrastructure. This will enable it to set separate policies for collaboration and data sharing. It will also allow for an easier transition away from LEL in the future if necessary.
Collaboration with and influence on the waste industry through discussion of the right measures	Opportunity	Officers have begun calculating the waste generated by each resident (as opposed to household) as a more appropriate measure of waste arisings in areas with high population density.

Risk	Opportunity / Threat	Action taken
Enable maximum asset performance	Opportunity	Officers have agreed an appropriate product for the management of asset data with LEL and the contractor for the energy recovery facility.
Long term		
Efficient transition of NLHPP systems into business as usual	Opportunity	The Authority has onboarded a product manager to ensure that the systems and their data are transitioned gracefully once no longer needed.

9. EQUALITIES IMPLICATIONS

9.1. There are no equalities implications from this report.

10. COMMENTS OF THE LEGAL ADVISER

10.1. The direct award of a contract for managed IT services to LEL is permissible under the Procurement Act 2023 (the Act) as it is an exempted contract as described in Schedule 2 of the Act. This means it is not subject to many of the Act's requirements.

10.2. The exemption applies to this contract because it meets the three tests defined in the Act: the Authority wholly owns LEL, no one other than the Authority exerts a decisive influence over them, and more than 80 percent of their activities are carried out on behalf of the Authority.

10.3. The direct award of the contract is also permitted by the Authority's Standing Orders.

11. COMMENTS OF THE FINANCIAL ADVISER

11.1. The Financial Adviser was consulted in the preparation of this report and comments have been incorporated.

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