NORTH LONDON WASTE AUTHORITY
REPORT TITLE: GOVERNANCE OF LONDONENERGY LTD
REPORT OF: MANAGING DIRECTOR
FOR SUBMISSION TO: AUTHORITY MEETING
DATE: 30 JULY 2024
SUMMARY OF REPORT: This provides a regular report on the Governance of LondonEnergy Ltd.
RECOMMENDATIONS: The Authority is recommended to note the comments on the Company's performance and activities in the Q1 2024 Report
SIGNED: ..... Managing Director **DATE:** 19 July 2024

1. INTRODUCTION

1.1. Following decisions made at the February 2010 meeting of the Authority covering a range of issues connected with the control of LondonEnergy Ltd (LEL) by the Authority, this is the regular report to up-date Members on the governance of the Company and its financial performance.

1.2. The Authority is the 100% shareholder of LEL. The Authority officer team manages a close relationship with LEL, providing both challenge and support - and ensuring both organisations act in alignment to deliver sustainable waste disposal services. The LEL Executives and Board have the key responsibility to deliver their services and to operate in a safe, sustainable and cost-effective manner.

2. QUARTERLY REPORTS

2.1. LEL provides quarterly reports to the Authority covering the financial performance of the Company and the main operational issues experienced. This provides shareholder information to enable Members to be briefed on key information concerning the operation of LEL. The report covering the first quarter 2024 is at Appendix A. Members requested that more information is provided about how the company approaches the matters for which it is responsible as well as the outcomes of its performance. The Appendix provides additional information on how LEL approaches the operation and management of the aging Energy from Waste (EfW) facility. For future meetings over the rest of the year, it's proposed that there will be additional information about the developments and activities the company is undertaking on the theme of making LEL a great place to work and the sustainability initiatives which the Company is taking.

2.2 The EfW facility operated below capacity during this period. By way of explanation, LEL refers to two types of operational 'outage' within the EfW.

2.2.1 Planned Outage: These are scheduled, necessary maintenance tasks that require key elements of the EfW to be brought offline for the work to be conducted. These periods result in a reduced rate of waste incineration and a commensurate reduction in electricity generation. They are planned for specific points in the year.

Figure 1: Planned outage works inside boiler 5, refurbishing of the roller grates

2.2.2 Unplanned Outage: These are failures of equipment within the EfW. They require reactive maintenance to rectify the fault. Naturally, these also result in a reduced rate of waste incineration and a commensurate reduction in electricity generation until the fault is fixed and the equipment returned to service. LEL's budget allows for a percentage of unplanned outages based on historic plant performance and a recognition of the age of the equipment.

2.3 There were no planned outages scheduled for January and February so that the company can generate the maximum electricity at a time when prices typically peak. Unfortunately, unplanned outages in this period were more frequent and

significant than expected. They resulted in 130k tonnes of waste incinerated, compared with a planned amount of 135k tonnes (a 3.7% shortfall compared to plan), and 67.3k MWh of electricity generated compared to a planned amount of 71.4k MWh (a 5.7% shortfall compared to plan).

2.4 The causes of unplanned outages in this period included:

2.4.1 Multiple failures of water and steam tubes within boilers - A recurring challenge for the facility which is generally mitigated during planned outage but cannot be fully eliminated. As an example, issues of this type on boilers 1, 4 and 5 during the month of January resulted in a total loss of 528 production hours.

2.4.2 It should be noted that the 2024 planned outages will see numerous problematic tubes replaced throughout all five boilers as part of the Capital Projects Programme. It is hoped that this will provide better reliability of the boilers until end of plant life.

Figure 2: Steam tubes inside a boiler. Fixing some tube leaks requires Oxy-acetylene cutting and removal of healthy pipes to access the fault.

2.4.3 A number of issues with the Main Steam Stop valve actuator on Boiler 2 – This resulted in approximately 130 hours of downtime. The initial fault was with the actuator and once replaced, a cabling fault followed which needed to be found and rectified.

2.5 The Energy Centre delivered an improved performance in March, and indications are that this has continued since the quarter-end.

2.6 The percentage of materials recycled at Reuse and Recycling Centres averaged 70.6% in Q1 2024 (on a weighted average basis), this was very similar to the same period last year (70.7%).

3. HEALTH AND SAFETY

3.1 The Board of LondonEnergy Ltd is legally responsible for Health and Safety matters and closely monitors the Company's performance. The report at appendix A sets out the continued improvements which have been achieved in reducing the accident frequency rate by employees and contractors in the last year. This is welcome progress but requires continued drive and initiative to maintain high levels of safety management.

4. PUBLIC RELATIONS

4.1. There were five compliments and seven complaints, for the first quarter 2024. The complaints related mainly to the helpfulness of staff, queuing at RRC, refusal of entry due to late arrival, lack of advance booking of van and non-acceptance of Nitrous Oxide Cylinders. All complaints were investigated and where action required, resolved in a timely manner. The compliments were all in relation to improvements at the South Access Road site, good housekeeping generally across sites and the helpfulness of staff.

5. LONDONENERGY LTD BOARD

5.1 The following directors served during the period:

Don Lloyd (Non-executive Director) Chair
Ulla Rottger (Non-executive Director)
Martha Desmond (Non-executive Director)
Clyde Loakes (Non-executive Director)
Peter Zinkin (Non-executive Director)
Rebecca Rennison (Non-executive Director)
Rowena Champion (Non-executive Director)
Mete Coban (Non-executive Director)
Ian Williams (Non-executive Director)
Doug Wilkinson (Non-executive Director)
Martin Capstick (Non-executive Director)
James Kendall (Managing Director)
Justin Price (Finance Director)

6. EQUALITIES IMPLICATIONS

6.1 There are no equalities issues arising from this report

7. COMMENTS OF THE LEGAL ADVISER

7.1 The Legal Adviser has been consulted in the preparation of this report and comments have been incorporated.

8. COMMENTS OF THE FINANCIAL ADVISER

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

List of documents used:

None

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APPENDIX A

LondonEnergy

Powering the Circular Economy

Quarterly Report to North London Waste Authority

First quarter (Jan – Mar) 2024

APPENDIX A

First Quarter 2024 Report

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1. EXECUTIVE SUMMARY

1.1 Overview of the first quarter 2024

Operations

The Reuse and Recycling Centres (RRCs) performed well over the period, returning a weighted average recycling rate of 70.6%. Schemes to recycle carpets, mattresses and hard plastics all continued to perform well.

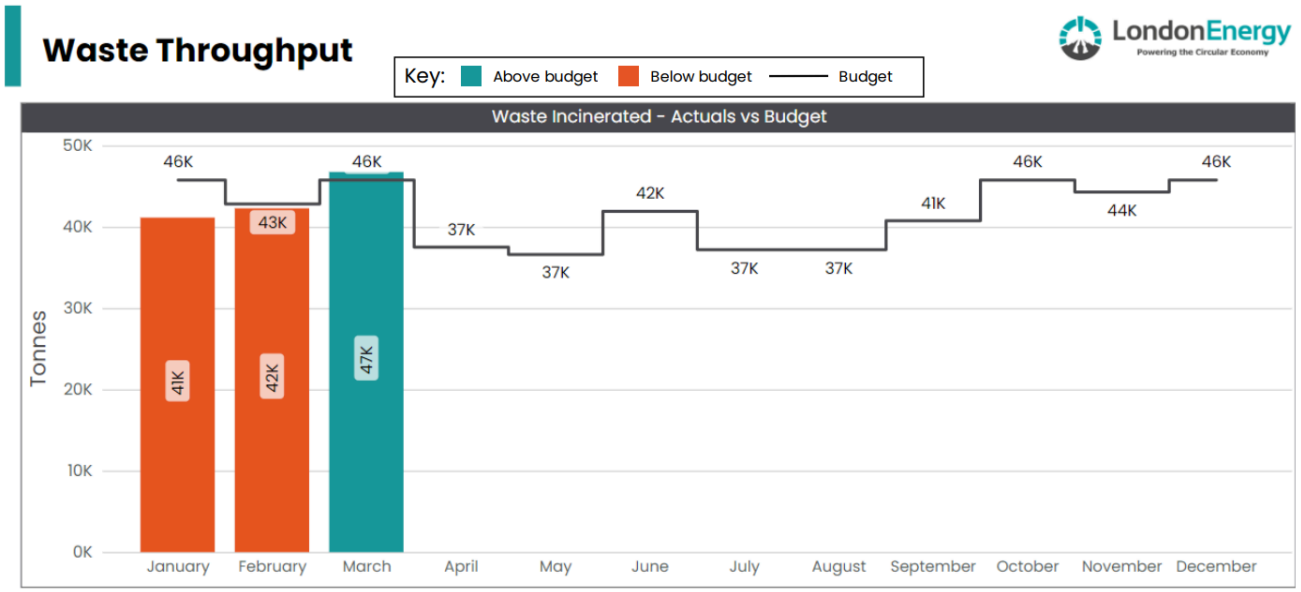
The Reuse Shop at the Kings Road Recycling Centre (which reopened in December 2023 after repairs to the roof were completed) continued to be popular with residents and recorded over £34,000 in takings over the quarter.

The existing EfW faced several operational challenges involving boilers and turbines. These engineering issues affected performance but were quickly resolved during the period, and the facility met performance targets for both the quantity of waste treated and the amount of electricity generated during March.

LEL continued to work closely with colleagues at NLWA and NLHPP during the period to ensure effective preparations for the takeover of the RRF, which subsequently took place in March.

2. OPERATIONS

2.1 Energy Centre (EC) Operations



March saw the Energy Centre meet budget expectations for waste throughput, a continuation of the improvement seen in February. The graph below shows that the Energy Centre met KPI targets for quality and availability in March, as well as for performance (waste throughput). This was despite the ageing facility suffering from a range of equipment failures (unplanned downtime) which required the maintenance teams to work around the clock to return plant to service.

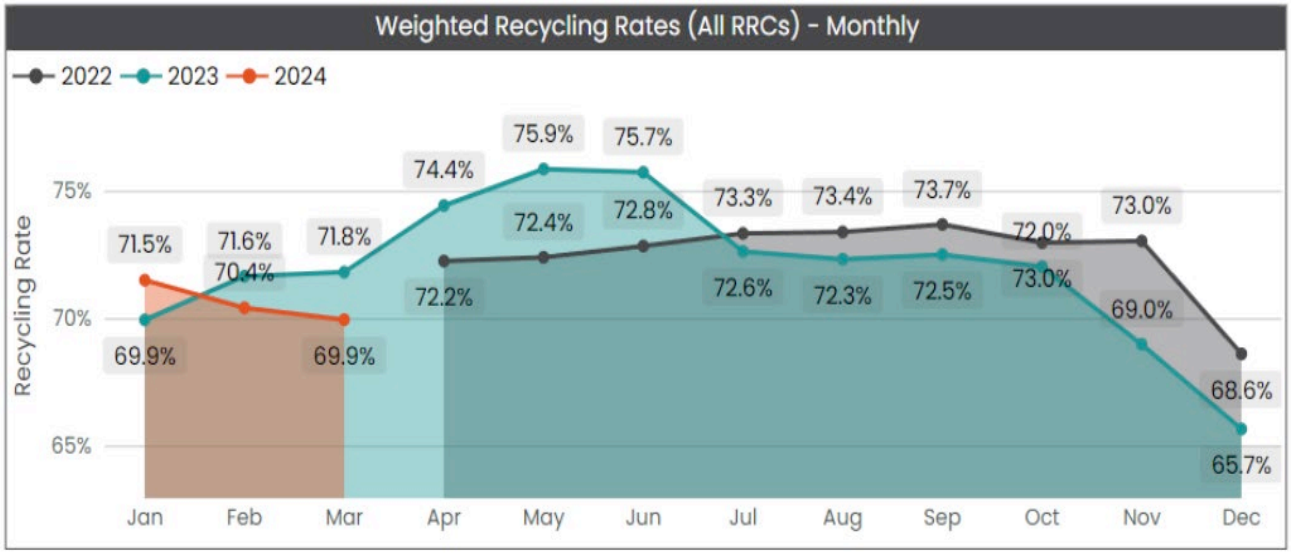
The issue of maintaining the Energy Centre, and the ongoing investment required to ensure availability, is explored in further detail in section 2.3 below.

2.2 Recycling and Waste Operations

RRCs

The average recycling rate across the RRCs in the reporting period was 70% which represents a strong start to the year. The recycling of hard plastics contributed to the positive figures, with over 30 tonnes collected and sent for recycling during the period.

The Kings Road Reuse shop got off to a flying start to 2024 taking over £40,000 in the reporting period. Mattress recycling continues to be a resounding success with over 20,000 sent for recycling in the quarter – a significant increase over the same period last year and a positive start to 2024.



Transport

There have been no prohibition notices issued, nor MOT failures or roadside checks undertaken by the DVSA. LEL has FORS Gold Accreditation for the next twelve months and will maintain green Operator Compliance Risk Score (OCRS).

The OCRS a measure used by DVSA to decide which vehicles should be inspected. OCRS is used to calculate the risk of an operator not following the rules on roadworthiness (the condition of its vehicles) and traffic, for example drivers' hours or weighing checks. It's more likely that an operator's vehicles will be inspected if the OCRS is high – LEL's score is very low as measured by the "Green" status.

2.3 Investment and Capital Expenditure – LEL Energy Centre

Introduction and context

Built 55 years ago, the Energy Centre was the largest energy from waste (EfW) facility in the UK. Commissioning began in the late 1960's and in 1970 it started exporting to the National Grid.

The plant comprises:

- 5 Bunkers for waste acceptance and storage
- 3 Cranes for waste transfer from bunker to boiler feed hopper
- 5 Boilers for waste incineration and steam generation
- 5 Turbines which use steam for electricity generation
- 4 Flue Gas Treatment (FGT) streams to reduce environmental pollutants

Boilers

Once state of the art, the boilers in the Energy Centre are now particularly labour intensive to maintain.

A scheduled (planned) outage is conducted annually on each boiler to maximise their uptime. However, these are old and complex pieces of equipment, and no amount of planned servicing can entirely prevent issues that require the boiler to be taken off-line to be fixed.

Tube leaks are the main contributor to boiler downtime. These tubes contain the water which is heated into steam by the incineration process. The gas produced by the incineration of waste corrodes the tubes over time.

Each boiler contains approximately 10 miles of tubing. Some of this tubing is still original from 1969 and requires careful management.

When a leak is diagnosed the boiler is cooled before being accessed and the leak located. The failed section is then cut out using a grinder or other cutting equipment and a new length welded into place.

Turbines

The steam turbines operated in the Energy Centre are over 60 years old. The four original turbines having been manufactured by Associated Electrical Industries, a company that ceased to exist in 1967.

Although the turbine technology is relatively reliable, LEL encounter many instrumentation and control system failures due to the age and obsolescence of components.

When the turbines themselves do fail, due to the low tolerances and high speeds involved, rectification can be particularly labour intensive (the turbine casings alone weigh 10 tonnes) and time consuming. It also requires specialist knowledge that is increasingly hard to acquire.

Equipment obsolescence

Much of the equipment operated in the Energy Centre is no longer manufactured. This means that when an equipment failure occurs the Operations and Maintenance teams must be innovative in finding solutions.

This may involve finding alternative components or adjusting equipment for them to work.

Additionally, some parts must be reverse-engineered and recreated in the workshop. In this case downtime is dictated by the speed of diagnosis, the availability of skills and materials and the time needed to create and fit.

Capital investment and independent assurance

To counter the challenges posed by the need to continue operating the Energy Centre, LondonEnergy has a long-term capital investment plan, approved by the Board and NLWA, aimed at keeping the facility running until the end of the decade.

At the end of July 2024 Zurich will undertake their annual inspection of the facility. Previous inspections have been very positive for a facility of this age, with the 2023 report highlighting LEL's technical management competency and "commitment to improvement of the overall plant risk profile with continued investment".

The team at Zurich consistently compliment the Operations and Maintenance teams for their hard work and dedication to keeping an aging plant operating to an impressive standard.

Ramboll, a firm of independent consulting engineers appointed by NLWA, has undertaken five separate condition surveys of the Energy Centre. The first occurred in 2009, then again in 2013, 2016, 2019, and most recently in 2022. The extensive surveys cover all major systems, including

boilers, turbines, electrical and control systems, and civil engineering structures. The 2022 survey found the plant to be "well operated and generally well maintained for its age"

This year that sees the capital projects team overseeing c.£7.5m of investment to repair and replace prioritised elements of the facility. The table below shows the investment in greater detail. These measures aim to ensure the facility continues to deliver an uninterrupted service to boroughs until the replacement Energy Recovery Facility is ready.

Item	Driver	Priority	2024 Budget (£ms)	Current Stage	Current RAG	Due to Complete
1) Demin Water Tank & Acid Regen Skid	Mitigating Asset Failure	High	0.31	7. Project Closure	Complete	Apr 24
2) Boiler House Asbestos Abatement	Legal, HSQE	Critical	2.3	7. Project Closure	Complete	June 24
3) IBA conveyor steelworks ('24 & '25)	HSQE Mitigating Asset Failure	High	0.73	5. Implementation	On track and on Budget	Dec 25
4) 3rd Export Transformer ('24 & '25)	Business Critical Mitigating Asset Failure	Critical	0.21	4. Detailed Design	Awaiting Materials	Dec 25
5) Boiler Banks, Super Heaters and Baffle Walls Replacement on Boiler 1, 2, 3 & 4. ('24 & '25)	Business Critical Mitigating Asset Failure	Critical	2.09	5. Implementation	On track and on Budget	Sep 25
6) CW ring main	Mitigating Asset Failure	High	0.21	4. Detailed Design	Awaiting Quotes	Dec 24
7) FGT structure repairs & replacement ('24 & '25)	Business Critical Mitigating Asset Failure	Critical	0.73	5. Implementation	On track and on Budget	Dec 25
8) Upgrade ETP ('24 & '25)	Environmental Compliance	High	0.21	3. Outline Design	Awaiting Second Survey	Dec 25
9) Energy Centre Roof repairs ('24 & '25)	HSQE	High	0.26	3. Outline Design	Awaiting Quotes	Dec 25
10) Fire Door Remedials Site Wide ('24 & '25)	Legal, HSQE	High	0.07	3. Outline Design	Awaiting Quotes	Aug 25
11) Facilities Refurbishments ('24 & '25)	Staff Welfare	Medium	0.19	3. Outline Design	On Track	Aug 25
Total 2024			**7.31**			

2.4 North London Heat and Power Project (NLHPP)

EcoPark South – including the Resource Recovery Facility (RRF)

Significant progress was made during the reporting period, with daily team meetings involving all parties ensuring that communication was regular, open and collaborative in nature. The hard work paid off, and the Resource Recovery Facility (including the RFPF, RRC, and the surrounding areas) was successfully handed over to LondonEnergy at 09:00 on Friday, March 15th.

The period immediately after the handover saw the LEL operations team working with NLWA and borough partners to conduct a full suite of operational trials to ensure the RRF could meet the design criteria and deliver the required service. The team worked hard to overcome a number of snags and adapt to the new ways of working required by a modern facility.

Post-reporting period note: The RRF passed all operational tests and passed into "business as usual" operation in May. It continues to deliver an uninterrupted service to boroughs.

Energy Recovery Facility (ERF)

Plans for handover between the EfW and ERF were further developed during the reporting period – this included the thinking around the potential dual running of the existing EfW and the new ERF during the period around handover from one facility to the other. Other activities included:

- A review of an updated version of the 3D model for the ERF.
- Balancing, Overspeed and HV testing of the Generator rotor – these tests were witnessed remotely and all tests deemed satisfactory.
- An operations and maintenance review meeting with Acciona and their crane provider GH Cranes.
- A number of meetings with Grimshaw (architects) and Arup to finalise the fixtures, fittings and electrical layout of the administration building. Further meetings are planned.

3. SHAREHOLDER MATTERS

3.1 Number and names of directors for first quarter 2024

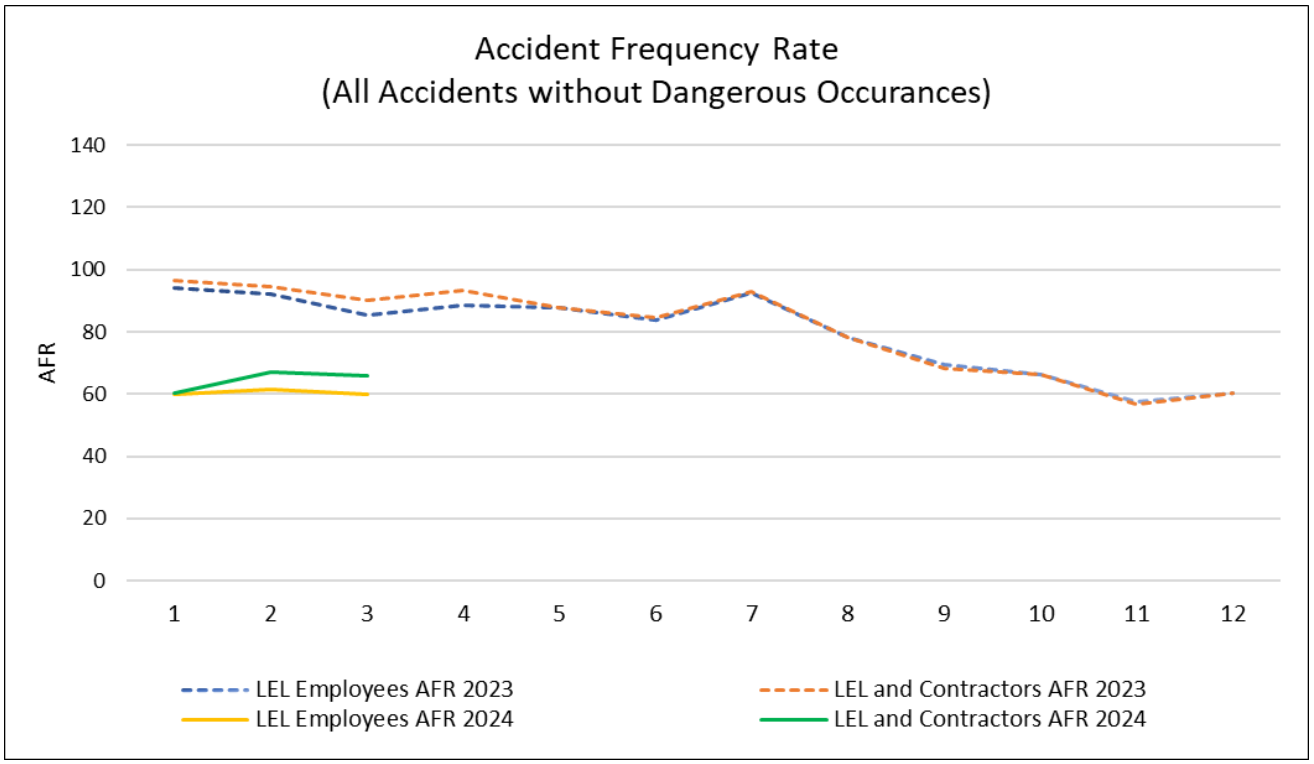
There were 13 serving directors on the LEL Board for the period, they are as follows:

- Don Lloyd (Non-executive Director) – Chair, Board
- Ulla Rottger (Non-executive Director) – Chair, Transition Committee
- Martha Desmond (Non-executive Director)
- Clyde Loakes (Non-executive Director)
- Rowena Champion (Non-executive Director)
- Mete Coban (Non-executive Director)
- Peter Zinkin (Non-executive Director) – Chair, Audit & Risk Committee
- Rebecca Rennison (Non-executive Director) – Chair, Remuneration & People Committee
- Ian Williams (Non-executive Director)
- Doug Wilkinson (Non-executive Director) – Chair, Operations, Health, Safety, & Sustainability Committee
- Martin Capstick (Non-executive Director)
- Jim Kendall (Managing Director)
- Justin Price (Finance Director)

4. HEALTH, SAFETY, QUALITY AND ENVIRONMENT (HSQE).

4.1 Update on compliance matters

There were no prohibition notices, improvement notices or prosecutions in the quarter.



As can be seen from the graph above, the accident frequency rate (relating accidents recorded to hours worked) continued to be significantly lower than it was during the same period in 2023.

The improvement has been seen after the Health & Safety leadership team at LEL initiated a fatality prevention programme, focussing on the implementation of 9 "life-saving rules". The training uses highly interactive virtual reality technology to allow members of staff to experience realistic scenarios in a safe environment. The aim is to eliminate those accidents which have the

greatest potential to do harm, and with around 70% of the workforce now trained, the feedback has been overwhelmingly positive. The remainder of LEL's employees and any new starters will be able to access the training online.

Despite the improvements seen, the environment remains a challenging one with an ever-present need for vigilance. There was one RIDDOR reportable accident during the period.

January – There was one RIDDOR accident in January after an employee fell after slipping on wet grass. The fall resulted in a broken leg.

February – There were two reportable accidents during the month of February.

At Western Road RRC. An employee suffered a minor back injury while closing the entrance gate (poor manual handling technique). This resulted in an absence from work over 7-days.

At the EcoPark. Two LB Enfield dustcart vehicles collided on the up-ramp to the Energy Centre Tipping Hall. One of the borough drivers was signed off work for two weeks due to back and neck pain. The incident did not involve any LEL employees but must be reported as a RIDDOR by the company as it happened on an LEL site.

March – There were no reportable accidents in March.