

**NORTH LONDON WASTE AUTHORITY**

**REPORT TITLE:** BRINGING THE NEW RESOURCE RECOVERY FACILITY INTO OPERATION

**REPORT OF:** HEAD OF STRATEGY AND SERVICES

**FOR SUBMISSION TO:** AUTHORITY MEETING

**DATE:** 14 DECEMBER 2023

**SUMMARY OF REPORT:**

To update Members on the progress in preparing for operation of new facilities situated on EcoPark South.

**RECOMMENDATIONS:**

The Authority is recommended to note the update on Transition Arrangements.

**SIGNED:**  ..... Head of Strategy and Services

**DATE:** 4 December 2023

## 1. BACKGROUND

- 1.1. The first major permanent operational facility delivered by the North London Heat and Power project (NLHPP) is the Resource Recovery Facility (RRF). This is a large waste management building with a permitted capacity to manage 374,000 tonnes of waste annually. The facility will be operated by LondonEnergy Ltd (LEL) as part of a new Waste Services and Asset Management contract (EcoPark South Contract) with the Authority.
- 1.2. The Recycling and Fuel Preparation Facility (RFPF) is on track to be completed by Taylor Woodrow on the 22 December 2023, following which LEL will take it over to become operational.
- 1.3. The Reuse and Recycling Centre (RRC) and EcoPark House (educational facility and home to the Sea Cadets) will be brought into operation during 2024. Plans will be put to Members in due course and these plans will include arrangements for members of the public to safely access the EcoPark with ongoing construction activity also on site.

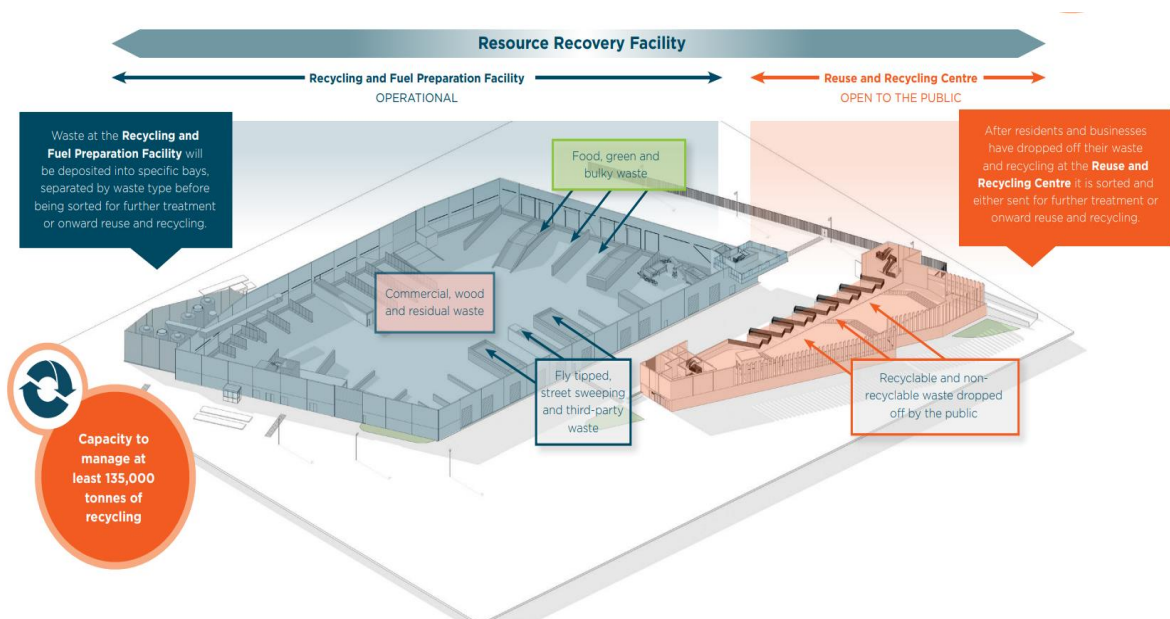


Figure 1: The RFPF and RRC, which together comprise the RRF

- 1.4. The RRF is made up of an enclosed reception hall with sorting, material preparation and storage areas with odour and dust management systems which provide capacity for the following functions:
  - 1.4.1. Transfer Station: for bulking of recycling materials for onward transport to processors.
  - 1.4.2. Sorting Function: to extract recyclables from residual waste.

- 1.4.3. Fuel Preparation: to prepare bulky waste for energy recovery.
- 1.4.4. Gully Waste Dewatering: to dewater gully waste to provide recyclable/treatable solid material with Wastewater Treatment.

**2. BETTER SERVICES AND ENVIRONMENTAL OUTCOMES**

- 2.1. The RRF will receive Local Authority Collected Waste (LACW) from LEL haulage vehicles bringing material from the Authority’s network of Reuse and Recycling Centres (RRCs) or Transfer Stations in Islington and Brent. It will also receive LACW directly from borough vehicles and third-party waste from small traders at the RRC. The facility is permitted to manage a wide variety of wastes detailed in Figure 2.
- 2.2. As a result of its size and scale, the RRF provides the capacity and flexibility to manage changes in both volume and the composition of waste well into the future. For example, the facility is estimated to have capacity to receive 84,000 tonnes of organic waste per year (garden waste and food waste). At present the capture rate of these material is around 60,000 tonnes per year, of which 40,000t was treated at the previous Eco Park Facilities. Therefore, the new facility will have ample capacity to deal with increased organic yields if the Authority and boroughs are successful in diverting increased amounts of food waste for recycling.
- 2.3. The general operation is set out in Figure 2.

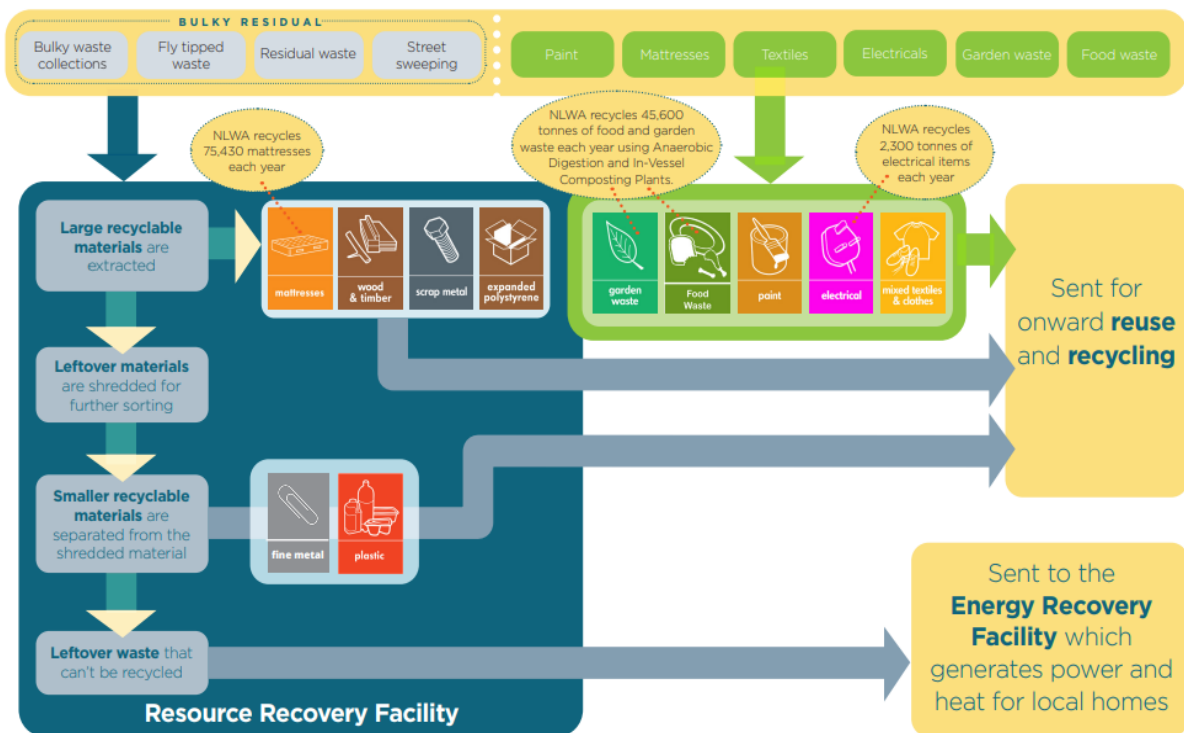


Figure 2: General operation of the RRF

- 2.4. The state-of-the-art facility also provides a solution for managing POPs (Persistent Organic Pollutants) contained in soft furnishing, a problem that threatens the operation of the vast majority of older facilities. The EA require that there be no escape of POPs-contaminated liquids, into the drainage or watercourse. The RRF drainage system allows liquids from the fuel preparation area (where POPs materials will be pre-treated), to be isolated from the main drainage system and incinerated at the energy centre in compliance with EA guidance that comes into force in April 2024.
- 2.5. The RRF has been designed with safety in mind. A control and observation room (crow's nest) overlooks and controls the internal operation including material bays, fuel preparation and the recycling extraction process, with CCTV coverage supporting control of the external tipping apron.
- 2.6. Borough vehicles will tip into the building from the external tipping apron, through automated rapid opening/closing doors. Segregating borough vehicles from operational plant removes many of the dangers associated with operatives and vehicles working in close proximity to yellow plant (large excavation and materials handling machinery). This delivers a safer environment for borough collection teams and LEL colleagues.
- 2.7. The new facility also boasts a Supervisory Control and Data Acquisition system (SCADA) that supports automated management of Environmental, Safety and Operational Management Systems that contribute to achieving high standards in Environmental Quality and Safety.
- 2.8. The World Health Organisation have warned against the risk of exposure to Small Particulate Matter (SPM), which is capable of penetrating deep into the lung and enter the bloodstream causing cardiovascular (ischaemic heart disease), cerebrovascular (stroke) and respiratory impacts. Both long-term and short-term exposure to particulate matter is associated with morbidity and mortality from cardiovascular and respiratory diseases. The SCADA is an integral part of the air and odour control system that will change and filter air inside the facility four times every hour. This is vital for removing SPM and providing clean and breathable air for borough teams and LEL colleagues.
- 2.9. The air and odour control system, working in conjunction with rapid closing doors controlled by SCADA, also creates negative air pressure within the facility that ensure odour from organic waste streams cannot escape even when doors are open for tipping. To minimise environmental and health impacts the facility will operate with all electric fuel preparation equipment, reducing our reliance on fossil fuel and supporting cleaner air.

### 3. ASSET OWNERSHIP

- 3.1. Existing infrastructure on the EcoPark is owned and operated by LEL. New infrastructure delivered by the NLHPP will continue to be operated by LEL; however, crucially, the Authority will own the assets.
- 3.2. This change requires a new approach to the relationship between the Authority and LEL as well as the roles and responsibilities of each party. At the December 2022 Authority meeting, Members agreed to enter into a new EcoPark South Service Contract with LEL that sets out the financial, service, maintenance and asset management arrangements.

### 4. TRANSITION WORKSTREAMS

- 4.1. The transition into new Authority owned facilities requires each organisation to prepare for new ways of working. This change activity has been themed into workstreams with officers from LEL, the NLHPP project team and the Authority Strategy and Services team represented. The product from each workstream with emerging issues is reported into a Transition Board consisting of the Managing Directors of the Authority and LEL, the NLHPP Programme Director and senior officers from both organisations. The board is also supported by programme management resource provide by Arup.
- 4.2. The themed workstreams include:
  - 4.2.1. **Construction and Design Group.** This group is involved in ensuring the final product meets the needs of the service and lessons learnt from previous facilities including the temporary bulky waste facility are applied to the RRF.
  - 4.2.2. The group has introduced innovative vehicle kerbs that guide borough vehicles into the correct place to tip through the doors, reducing the risk of causing damage to the doors or to borough vehicles. Additionally, food waste bays have been redesigned to remove sloped flooring that had proved difficult to operate on in the Temporary Bulky Waste Facility (TBWF).
  - 4.2.3. **Asset Management Group.** This group is tasked with creating an environment where the Asset Management requirements set out in the contract are delivered. The group have agreed the required level of asset and maintenance information that is required ahead of handover and are overseeing the delivery of a single asset management tagging system and the integration of asset management into specialist Asset Management Software.
  - 4.2.4. The group has completed strategic asset management plans for the RRF.

- 4.2.5. **Operational Readiness.** This workstream is focused on ensuring LEL have the appropriate capacity and capability to operate the new facility and lessons learnt from operating in the TBWF are incorporated into the future operation.

### **Lessons Learnt**

- 4.3. The TBWF required new ways of working for borough drivers and LEL operational teams. The TBWF tipping operation is very similar to the mode of operation intended at the new RRF and as such provided great opportunities to modify the design or LEL operating procedures.
- 4.4. Door widths for the tipping bays require borough drivers to be extremely accurate when reversing on to their tipping point. On occasion this task was too great and the TBWF doors were struck several times causing significant damage to the facilities doors and Borough vehicles. Installing physical guides in the form of high kerbs at the RRF will help to ensure borough vehicles are in exactly the right place to tip. Borough teams from London Boroughs of Barnet and Waltham Forest provided vehicles for a series of field test that provided the solution.
- 4.5. Food waste bay design included a sloping floor that ensured leachate from food waste did not escape; however, on occasion this created a surface that was hazardous to drivers and even to yellow plant. The food bays have been redesigned and now incorporate a split-level design that removes the risk of slippage.
- 4.6. The two examples above demonstrate the value of the TBWF in applying lessons learned and how they have contributed to the current design and informed the User Acceptance Testing (UAT) process and trial operations.

### **Recruitment**

- 4.7. Initial recruitment by LEL has been completed in anticipation of the forthcoming occupation of the RRF. This includes all critical positions. A new head of RRF operations within the company has been appointed and is heavily involved in preparations for operation with the existing management team that are transferring from the previous EcoPark-based facility. Staff to operate within the RRF and the sorting function will be recruited when required.
- 4.8. Existing LEL colleagues have been involved with union representatives in a very positive consultation exercise with the aim of minimising the impact of the transition.
- 4.9. Staff numbers are expected to rise over the next year from 46 across all shifts to 59 full time equivalents. The increases are required to operate the new RRF when it is ready to open and to support a sorting function which is planned to extract

recyclable material. The increase in number of green jobs is required to deliver improved environmental outcomes at the EcoPark.

### **Training**

- 4.10. A full training programme has been developed for individual staff at all levels. Key to successful and safe operation is traffic marshalling training. A bespoke training package has been delivered and this will be provided initially to the staff based at the RRF and then rolled out to all LEL managed sites.
- 4.11. The training consists of mandatory training for all staff, as well as any additional training identified for specific roles and cross training into other positions within the operation to support resilience planning.
- 4.12. The maintenance team are conducting a final review of operating and maintenance manuals, in conjunction with the Authority's asset management lead. The review supports the fine tuning of training for existing engineers and operatives and any potential skills gap that will be covered by third-party expertise. In addition, this process ensures the correct spares are held, that planned maintenance impacts are understood and incorporated into operational plans and that asset management information will be obtained and shared in a way that meets the service requirements.

### **Equipment**

- 4.13. Electric plant required for fuel preparation function has been procured and delivered to site. Lease arrangements have been entered into for yellow plant providing greater freedom to change plant at short notice to meet emerging operational need.

### **Traffic and Safety Planning**

- 4.14. Significant work has been completed with regard to traffic modelling and a traffic management plan has been developed for the site. Traffic arrangements have been shared with all operational safety information to borough teams in advance of the first deliveries of waste by borough drivers as part of the Trials with Waste (WET) UAT which began on 4 December 2023.
- 4.15. The process for communicating changing traffic and safety management arrangements to the boroughs is well established and has been well practiced with several changes taking place on the EcoPark in the last 18 months. NLWA and LEL have shared initial induction materials with boroughs and will carry out on-site inductions with staff during the UAT period, when vehicle numbers are relatively modest.

- 4.16. This will be followed up in mid-December with a bespoke induction video and electronic induction register that will need to be completed by borough drivers in January when trial operations are due to begin.
- 4.17. Borough colleagues including operational, and health and safety officers have toured the facility and receive a detailed briefing on the new operation by NLWA and LEL officers.

### UAT and Joint Trials

- 4.18. As part of preparing for user acceptance testing and trial ops, a specific LEL team has been identified, supported by advisers who have experience of transitioning to new facilities. To support trials without waste (Dry) UAT, LEL leased a refuse vehicle to minimise the disruption to borough collection teams.
- 4.19. Details of the UAT plan have been shared with borough teams who are aware of the deliveries they are expected to make as part of WET UAT. This involves testing with waste prior to completion of the facility, which gives assurance of operation prior to handover from Taylor Woodrow and also assists LEL teams in familiarising themselves with practical use of the facility.

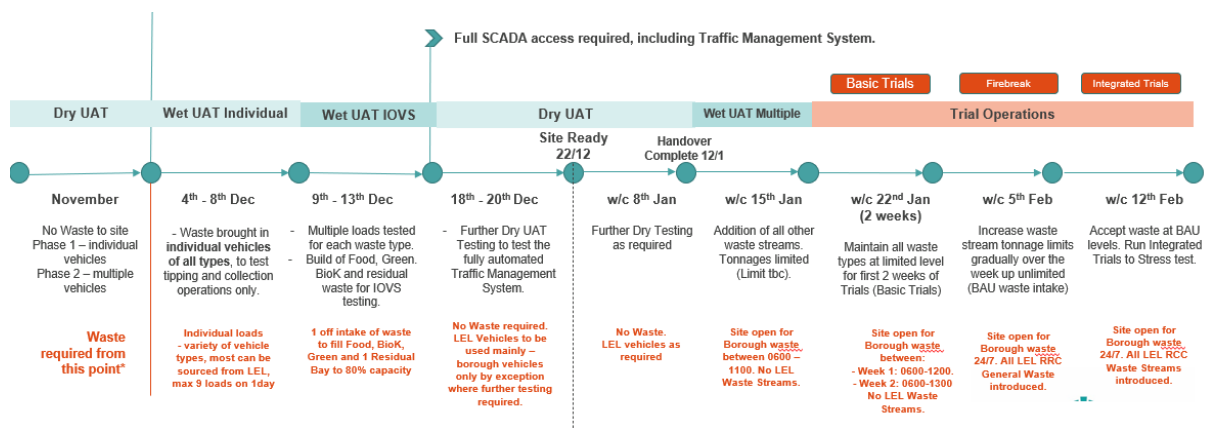


Figure 3: UAT and trial operations timeline

### Extracting recycling

- 4.20. The RRF will occupy significantly more space than its predecessor facility at the EcoPark. Existing activities to separate recycling from residual waste – for example pulling out mattresses, wood and larger metal objects – will continue. In addition, the intention is to use the additional space for equipment that will help to increase recycling volumes. A working group has been established to develop an options appraisal for new equipment to be installed. This assessment will take account of changing legislation including the plan for a national deposit return scheme which will reduce the volume of cans and plastic bottles in household waste, as well as regulatory changes that include the treatment of soft furnished seating.



4.21. An options appraisal will be produced in 2024 for consultation with Members Recycling Working Group.

## **5. TRANSITION GOVERNANCE**

5.1. The first assets are approximately one month away from the beginning of trial operations and the ramp up to new business as usual activity. The Transition Board is monitoring progress made by the various working groups, and officers will update Members as the facility goes into service.

## **6. EQUALITIES IMPLICATIONS**

6.1. There are no equality implications associated with 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

### **Contact officer:**

Michael Clarke  
Head of Strategy and Services  
North London Waste Authority  
Unit 1b Berol House  
25 Ashley Road  
London  
N17 9LJ