

NORTH LONDON WASTE AUTHORITY

REPORT TITLE: NORTH LONDON HEAT AND POWER PROJECT UPDATE AND REPORTS

REPORT OF: MANAGING DIRECTOR

FOR SUBMISSION TO: PROGRAMME COMMITTEE

DATE: 18 JANUARY 2024

SUMMARY OF REPORT:

This report provides the Programme Committee with an update on progress of the North London Heat and Power Project (NLHPP) including the Energy Recovery Facility.

RECOMMENDATIONS:

The Programme Committee is recommended to comment on and note the content of the report.

SIGNED:  **Managing Director**

DATE: 8 January 2024

1. INTRODUCTION AND PURPOSE

- 1.1. The North London Heat and Power Project (NLHPP) is the programme of works authorised by a development consent order granted in February 2017 through which the existing Energy from Waste (EfW) plant at the Edmonton EcoPark will be replaced with a new Energy Recovery Facility (ERF). The programme of works includes provision of a Resource Recovery Facility (RRF) for reception and transfer of waste, incorporating a public Reuse and Recycling Centre, EcoPark House, a visitor centre which will be used to provide community and education space and backup office space. In preparing for and carrying out the works in the NLHPP programme, the management team is working closely with LondonEnergy Ltd (LEL), the operators of the EcoPark and the current EfW plant.
- 1.2. This status report provides Members with an update on progress of the NLHPP, building on the report provided to the Authority Meeting in December 2023. The report structure provides:
 - 1.2.1. **Section 2:** a summary narrative.
 - 1.2.2. **Sections 3 to 6:** further details of progress in Health and Safety, Social Value, Stakeholder Engagement, Environmental Management across the NLHPP.
 - 1.2.3. **Section 7:** reports on Cost Performance and Commercial matters of the NLHPP.
 - 1.2.4. **Sections 8 to 12:** provide details of progress in the delivery of the ERF, RRF, EcoPark House and various Site Wide Enabling Works, and preparations for the Decommissioning and Demolition of the current EfW.

2. PROGRAMME DIRECTOR'S SUMMARY

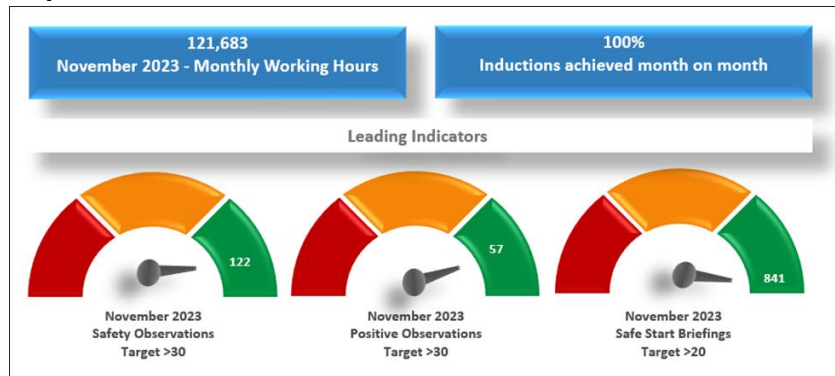
- 2.1. The project is on the cusp of a major achievement with the completion by Taylor Woodrow of the RRF and its transition into service during January 2024. The last six months have seen an intense activity on site testing and commissioning over forty building systems and training LEL's staff. The start of this activity was delayed by the need to first rectify quality issues with the fire protection to steelwork.
- 2.2. During commissioning, around 150-200 tonnes of green, food and bio waste were successfully delivered into the facility as a trial, where it remained for up to four days. The facility will give the Authority ability to manage around 135,000 tonnes of recyclable materials every year.
- 2.3. The construction of the ERF by Acciona continues to progress well on site with civil engineering structures. Over the last year Acciona have made good progress with the completion of the foundation piling and construction of the substantial concrete bunker walls bringing into physical reality the scale of the new facility.

- 2.4. Acciona are finalising their plans for mobilising the specialist workforce to erect the steelwork that will support the ERF's key process equipment, such as its boilers, to be able to start in the first quarter of 2024.
- 2.5. A notable achievement of 2023 has been the release of the remaining areas of the EcoPark needed for construction whilst maintaining LEL's operations in their reduced operating area. This has been achieved by meticulous planning with LEL, flexibility of their operations, and the investment the extension to the ash handling bay. These measures have largely mitigated the knock-on impacts of Taylor Woodrow's delays in starting their system testing and commissioning, whilst they rectified the quality issues with steelwork fire protection.
- 2.6. Over the last three months, our understanding of the market for the future demolition of the current EfW plant has grown, usefully informing emerging plans for the procurement which is scheduled to start in the next year.
- 2.7. Safety practices on site have been good in 2023 and supported by continuous promotion of Safety First, as well as openness to learning from observations. For example, both Taylor Woodrow and Acciona as the current principal contractors have prioritised a focus on avoiding people and plant coming into conflict.
- 2.8. Environmental impacts on site have been managed by assurance of compliance with good practice, and encouragement of best practices through forums seeking ideas from across the construction supply chain. Taylor Woodrow have provided a good example of improving practices with their wooden pallet recycling.
- 2.9. In 2023, the NLHPP created 14 new apprenticeships, which brings the number of apprentices on the project to 39. 34 of these apprentices live in NLWA boroughs.
- 2.10. The cost outlook position has not materially changed since the report to the Authority meeting in December 2023, and spending is broadly in line with plans for the year.
- 2.11. Overall NLHPP remains on track to deliver its overall objectives, on time and within budget.

3. HEALTH, SAFETY AND WELLBEING (HSW)

- 3.1. The programme continues to demonstrate a strong health and safety culture which aligns favourably with other major construction programmes in the UK.
- 3.2. The Accident Frequency Rate (AFR) for reportable injuries in accordance with Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) 2013 is 0.10 on a 12-month rolling basis, which compares favourably with the construction industry average of 1.74 per 100,000 workers.

Key Performance Indicators



- 3.3. **HSW Audits:** Monthly site inspections continue to be carried out by the Principal Contractors and reports are reviewed by the client HSW and construction teams. These are supplemented by regular walk rounds carried out by the construction, HSW and technical assurance teams.

The deep dive audit for November 2023 is currently in the final stages of preparation, focusing on temporary works and conducted on Acciona's procedures.

- 3.4. **Safety Observations:** Observation reporting continues to increase with 179 recorded for the month of November 2023. 32% of all observations are for positive interventions which is reflective of the messaging delivered at inductions, stand downs, toolbox talks and training sessions.
- 3.5. **Safe Start Briefings:** The number of safe start briefings remain high and are delivered daily to the workforce. This is supplemented by pre-start briefings, re-briefings and safety stand downs targeted to reinforce positive safety messages around high-risk activities.
- 3.6. **HSW Forum:** The HSW Forum met with good attendance from the client team, advisors and contractors. A full review of safety improvements that have been made for the safe systems of work for slipform platform installation was presented by Acciona. The Forum will be supported by a second group beginning in January 2024. The first one will be chaired by the Health, Safety and Environment Delivery Manager and involve operatives from contractors and sub-contractors. The second will be a steering group chaired by the HSW Lead and will consider options and initiatives to drive the improvements forward.

In November 2023, heavy emphasis was put on increasing communication and engagement, with communication being drafted to share improvements and lessons learnt throughout the month of December 2023.

- 3.7. **Take 5:** The Take 5 behavioural/engagement training sessions continue to be rolled out, with 30 members of the team having attended. Further sessions will be run in January 2024 and all project staff will be encouraged to attend.

- 3.8. **Wellbeing:** The HSW Drop-In was a successful event and Acciona were fully involved in the planning, providing simulation equipment and committing to building engagement for the event among subcontractors. Approx 60 people engaged at the event from a mix of operatives and office-based staff. Most engagement was around the simulation equipment demonstrating what the effects of having tinnitus, chronic obstructive pulmonary disease and hand-arm vibrations are like.
- 3.9. The Movember Campaign brought together the client and contractor teams to highlight men's health issues and fundraise money for men's health charities. The team raised £1,032 in total for Movember.

4. SOCIAL VALUE

- 4.1. In accordance with the Programme Committee's desire to have a more in-depth review on social value, this has been provided in a separate report on the agenda.

5. COMMUNICATIONS AND STAKEHOLDER ENGAGEMENT

- 5.1. A December construction update video was launched to focus on the first waste trials through the new RRF. A trade press release was also issued to highlight this major milestone ahead of LEL beginning their operational testing in earnest.
- 5.2. Members had the opportunity to visit the site during the waste trials to see some of the first loads of waste in the bays on 12 December. Further tour opportunities are being explored to align with the opening of new buildings for stakeholders in 2024.
- 5.3. Following the successful awards and many highlights of 2023, a series of social media posts were issued on NLHPP channels for the #12daysofNLHPP campaign. January 2024 marks 5 years of construction at the Edmonton EcoPark and further communications activities are being rolled out during the month to celebrate the achievements to date.

6. ENVIRONMENT AND SUSTAINABILITY

- 6.1. During 2023, the project's focus on environmental and sustainability considerations centred around working with contractors to assure compliance with environmental requirements, facilitating cross-programme collaboration, identifying opportunities to enhance sustainability performance, and communicating NLHPP's environmental benefits to internal and external audiences. A summary of our achievements to date in 2023 (January–November) is shown below.



6.2. Our environment and sustainability priorities for 2024 will continue to centre around assuring compliance, identifying opportunities for delivering a sustainable project and communicating and celebrating the project’s environmental performance internally and externally.

November 2023 Performance

6.3. Performance against a selection of Environment and Sustainability (E&S) Key Performance Indicators (KPIs) in November 2023 is shown below.



6.4. Taylor Woodrow has identified an opportunity to recycle excess wood pallets via Community Wood Recycling. Through this initiative, wooden pallets which are still in good condition are be collected by community wood recycling and resold, bringing dual savings as Community Wood Recycling collections are often cheaper than typical wood skip and 100% of the wood waste is reused or recycled. Eight

biodiversity opportunities were identified in a biodiversity and ecology focused Environment and Sustainability Working Group workshop (see below).

- 6.5. **Environmental and Sustainability Working Group:** To promote cross-programme collaboration and excellence in environment and sustainability performance, an Environment and Sustainability Working Group meets approximately quarterly. The Working Group comprises representatives from NLWA, NLHPP, environment and construction managers, principal contractors and other key personnel as required. In November, a biodiversity and ecology-focussed workshop was held to share knowledge from NLHPP and other similar projects, and to identify and discuss potential biodiversity and ecology opportunities for implementation on NLHPP. Eight opportunities for enhancing biodiversity on site were discussed and will be considered further by the Acciona, Taylor Woodrow and project teams, with support from our environmental specialists.
- 6.6. **Environmental Incidents:** Six minor and near-miss incidents occurred on the site in November 2023, reflecting the continued ramp up of activity and the change in weather. Five incidents related to the risk of contamination and one relating to impacts on smooth newts. Environmental incidents were identified through site visits, observations, and reports from the health and safety team. Acciona, Taylor Woodrow and the environmental team worked together to monitor these incidents and review adaptations where necessary. The site operatives were briefed on the incidents with immediate actions taken, toolbox sessions, trainings and briefings were conducted to minimise the risk of recurrence.

7. COST AND COMMERCIAL MATTERS

- 7.1. The currently assessed outturn baseline budget, including inflation, is **£1,508.0m**. As of the end of October, a committed cost value of **£619.7m** has been delivered. This reflects the value of work agreed in contracts for construction works, advisors' fees, NLWA direct costs and third-party fees. A further **£657.0m** of committed cost remains to be paid, which is largely for the ERF construction contract with Acciona.

8. ERF

Summary of Progress



Figure 1: Completion of the bunker walls following 10 weeks of 24/7 operations

- 8.1. The ERF civil works have progressed well during November 2023 with the commencement and completion of the concrete works to the final section of the bunker walls and the completion of the boiler hall slabs in readiness for the heavy lifting of equipment associated with the boiler and steelwork erection works. The forecast completion for take-over of the ERF remains late 2026.
- 8.2. Preparations are underway, following the completion of factory inspection test, for the shipment of critical boiler sections from Acciona's supplier HZI. These will be shipped direct to the EcoPark in readiness for the commencement of mechanical and steelwork erection in 2024.
- 8.3. Acciona has now identified a preferred supplier for their boiler and steelwork erection activities. The mobilisation of these critical subcontractors is subject to finalisation and approval of these subcontracts, industrial relations, union agreements, and immigration processes. The completion of these activities is critical to Acciona's ability to meet their programme and achieving these activities on time is proving challenging.
- 8.4. The previous reported issue related to the fire containment strategy for the steam turbine, boilers and flue gas treatment plant has seen a positive mitigation during

November 2023 following a workshop with Insurers, Acciona and the Authority. At this workshop, a series of key design principles were agreed by all parties, which fully mitigate the original concerns of the Insurers. Acciona are currently reviewing their detail design to incorporate these principles.

9. RRF

Summary of Progress



Figure 2: Aerial view of the Reuse and Recycling Centre and Eastern Road

- 9.1. Construction of permanent works continued to be progressed in all areas of the RRF. Taylor Woodrow is targeting a handover of the RRF in January 2024 however, they face challenges to achieving this, primarily from the extent of outstanding testing and commissioning activities.
- 9.2. Taylor Woodrow's key milestones for RRF asset information delivery and fixing of asset labels are substantially complete and undergoing verification by the NLHPP team.
- 9.3. Mechanical and electrical final installations continue in all areas of the RRF following the intumescent paint remedial works. The intumescent paintworks are complete in the (RFPF) building and nearing completion in the Reuse and Recycling Centre (RRC) building. Taylor Woodrow is working seven days a week to minimise disruption to mechanical and electrical finishing works and commissioning.
- 9.4. With the mechanical, electrical and plumbing installation substantially complete, this has allowed the testing and commissioning of the RRF standalone systems to be progressed at pace and these are now nearing completion.

- 9.5. Taylor Woodrow is following a programme for integrated testing based upon key drivers being prioritised to limit any impact on the critical path.
- 9.6. In the RRC, standalone testing and commissioning is being progressed in parallel with final finishes.
- 9.7. Ensuring the timely submission of handover documents is another crucial aspect that requires careful focus. Taylor Woodrow has dedicated additional resources and extended their work week to proficiently manage the significant volume of submittals required for as-built information and record packs.
- 9.8. Externally, good progress has been made to all areas with all the commissioning of all weighbridges completed in November 2023. The tarmac work on the Turbine Hall Road junction has been completed and the installation of street furniture is underway throughout the site.
- 9.9. Wet waste was delivered to site on 4 December, allowing testing of key systems to be progressed.
- 9.10. The northern tipping apron is now complete and being cleared in anticipation of LEL's user acceptance tests.

Look Ahead

- 9.11. Testing and commissioning of the 42 mechanical and electrical systems will be continued at an increased pace.
- 9.12. A key focus for Taylor Woodrow will be to deliver their plan for the integrated system testing to meet this milestone.
- 9.13. The fitout has begun for the RRC level three and four office spaces, and this is to be completed in December 2023.
- 9.14. In parallel to the physical works, the asset information and manuals will be received progressively to enable LEL to incorporate into their operating procedures and receive training on the operation and maintenance of the systems.
- 9.15. Submissions to London Borough of Enfield to obtain safety-related building control certificates are also due in the next period.
- 9.16. Taylor Woodrow will complete the final builder's clean to enable the integrated testing and commissioning of the ventilation system.



Figure 3: RFPF Integrated odour and Ventilation system ready for wet waste testing

- 9.17. A key focus for the team will be the completion of the maintenance manuals, delivering the training sessions to LEL, and early assurance of handover documents to meet LEL's readiness programme. The project team continues to work closely with the Authority services team and LELs' operations team. In addition to reporting to the Authority, this also enables the LEL Board to be kept closely involved as key handover dates approach, with the LEL Board providing further assurance and insight to promote an effective gearing up of the facility for operations.

10. ECOPARK HOUSE

Summary of Progress



Figure 4: EcoPark House – canopy and decking – view from east

- 10.1. Resources have been prioritised on the RRF as it is more critical to the NLWA and LEL's operations in the short term. The Taylor Woodrow team have implemented workshops with the delivery team and key suppliers to mitigate the impact.
- 10.2. Intumescent paint and fire compartmentation works have been progressed to the ground floor and first floor allowing services reinstatement and closure of ceilings.
- 10.3. Externally the doors are complete, and the timber decking is now being progressed.
- 10.4. Internally, works for power, lighting, communication and fire detection installation has continued in available areas in preparation for commissioning. Also, pre-commissioning works for the ground source heat pumps has commenced.

Look Ahead

- 10.5. Final fix of high-level services to progress the testing and commissioning will be continued in the next period.
- 10.6. Phased submission of handover documents to support the works progress in the next period.

11. SITE WIDE ENABLING WORKS

- 11.1. The Ash Bay Extension is nearing completion with minimal disruption to LEL ash handling operations. The main structure is now complete with operational handover to LEL planned for early January 2024.
- 11.2. Infrastructure works for the western area of the site are being procured with a target start on site from April 2024, with phasing coordinated to minimise disruption both LEL operations but also site wide construction activities.
- 11.3. The Cadent gas main installation targeted start date has been revised to the second quarter of 2024 to allow conclusion of necessary land easements with estimated completion in early quarter four of 2024.
- 11.4. Preparations are being concluded by relevant stakeholders to enable this road to be opened to the public in December 2023.

12. DECOMMISSIONING AND DEMOLITION OF THE EXISTING EFW FACILITY

- 12.1. The early market engagement event has collected valuable input from the supply chain, aiding in the refinement of procurement and project delivery strategies. This input will be instrumental in shaping the planning and scheduling of project activities.

13. EQUALITIES IMPLICATIONS

- 13.1. There are no impacts on equality to be noted arising from the content of this report.

14. COMMENTS OF THE LEGAL ADVISER

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

15. COMMENTS OF THE FINANCIAL ADVISER

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

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