

NORTH LONDON WASTE AUTHORITY

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

REPORT OF: PROGRAMME DIRECTOR

FOR SUBMISSION TO: PROGRAMME COMMITTEE

DATE: 23 SEPTEMBER 2022

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 contents of the report.

SIGNED:



Programme Director

DATE: 12 SEPTEMBER 2022

1. INTRODUCTION AND PURPOSE

- 1.1. The North London Heat and Power Project (NLHPP) is the programme of works authorised by Development Consent Order (DCO) 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 (EPH), a visitor centre which will be used to provide community / education space and back up 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. The report structure provides a narrative in the main body with supporting information in appendices.

2. PROGRAMME DIRECTOR'S SUMMARY

- 2.1. This report encompasses project activities since the last Authority meeting in June 2022. The programme remains on track to deliver against all its objectives, and updates on some of the key projects and workstreams are provided within this report. A separate report on the agenda details work with the community delivering social value.
- 2.2. On site, construction activities have continued to progress safely and at good pace. The RRF is being fitted out with its odour control, other building management systems and cladding is in place for the southern and western building elevations. EcoPark House has seen good progress on internal aspects and external aesthetics can start to be seen with the glass roof now in place. The project teams are working collaboratively with LEL towards successful commissioning and operation; this remains a critical area of focus.
- 2.3. In the north of the site Acciona, contractor for the ERF, are preparing for eastern site handover on 5 September to begin enabling works; a month earlier than planned, due to site clearance and demolition work through DSM completing ahead of schedule. Civil works construction is on track to start 3 October.
- 2.4. A notable success of two key health, safety, and wellbeing metrics used, the accident frequency rate (AFR) and lost time injury rate (LTI), reduced to zero in early summer and have stayed at zero in recent weeks. Additionally, EcoPark South has surpassed a significant milestone of 1million hours worked without a lost time injury.
- 2.5. In addition to progressing construction of RRF and EcoPark House, Taylor Woodrow reflected on construction practises over the years through a series of briefings, with a focus on equality, diversion and inclusion. These briefings were well attended and provide confidence of continued efforts to encourage a diverse and inclusive workforce.
- 2.6. Acciona are working through substantial design work and procurement activities for the ERF, with over 900 design documents reviewed so far. To continue building the collaborative values the project has established, two successful away days were carried out between senior members of the Acciona and NLHPP project team.

- 2.7. The project's external communications work has expanded again after the restrictions around the election period. A primary focus for the team has been on engaging with new and existing councillors in the north London boroughs, helping to enhance their knowledge and awareness of the Authority's work and the benefits of the project. Site visits are planned, with many already completed, for councillors to get a first-hand view of the works being undertaken.
- 2.8. Engagement with the broader community has also resumed, through social media channels, newsletter publications and production of the latest construction update video. The latter, coinciding with Women in Engineering Day 2022, showcases the substantial contributions made by female colleagues on NLHPP. The team were delighted to hear that Carmen Santos, a colleague with Taylor Woodrow has been short-listed for a CN & NCE Inspiring Women in Construction & Engineering Award. The awards celebrate the role models and organisations empowering women in construction and engineering.
- 2.9. Finally, the Authority has completed its procurement of a four-year framework for minor civils works to allow for the completion of work which is not cost-effective to include in the primary construction contracts. Following procurement procedure, three contractors were awarded contracts to be in this framework:

- Galldris Services Limited,
- Falco Construction Limited, and
- DGP Logistics PLC

Task orders with a value of less than £50,000 would be distributed to the three contractors via Direct Award via Rotation. Task orders exceeding £50,000 would necessitate a mini competition between the three framework contractors.

3. SOCIAL VALUE

- 3.1. 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.

4. COMMUNICATIONS AND STAKEHOLDER ENGAGEMENT

- 4.1. The communications team have been engaging with a few local groups in Edmonton to provide more information on the North London Heat and Power Project. Two meetings were attended in June and interest continues to be on how public health is being managed on the site and the opportunities for training and skills development through the project. Further engagements are planned across the summer to meet with local resident groups.
- 4.2. Councillors have also been provided with key information on NLWA services and how NLHPP is being delivered. A session with 26 Waltham Forest Councillors was held on Monday 20 June and 12 Enfield Councillors on Wednesday 27 July. Further Councillor briefings take place in September for Barnet and Hackney, with Camden and Islington councillors meeting later in the year. Key stakeholders, including Councillors, MPs, and borough officers, are also being invited to visit the site across the summer months and see the construction progress as the new recycling facilities start to prepare for commissioning. A number of tours have been carried out across August.

- 4.3. In July, the latest Community Newsletter was issued to 28,000 homes and business surrounding Edmonton EcoPark to provide updates on upcoming construction activity and environmental points of interest. The Construction Update Video was also issued at the end of June and provided a key focus on Women in Engineering with female speakers from across the project giving updates with specific stories on developments promoted across NLHPP Social media platforms.
- 4.4. London Climate Action Week saw a focus on two stories from the EcoPark South Construction Works published online. One focus was EcoPark House being designed to be off-grid and the second was on the positive water savings by re-using water onsite between projects and saving 500,000 litres. Further environmental successes were celebrated at the start of July through the NLHPP Social Media platforms to raise the profile of the achievements to date.
- 4.5. In July, the next phase of recruitment for Apprenticeships started with a key focus on the positions available with Acciona on their construction works. A new campaign ran in partnership with Acciona to drive up local interest and opportunities on the project. Contacts within the local councils are also being engaged to raise awareness in local groups and physical posters have been delivered to ward councillors in Enfield to share the opportunities. In response to community feedback, the team have updated the project website to streamline the access to apprenticeship opportunities and jobs and made the page more user friendly.
<http://www.northlondonheatandpower.london/careers/>
- 4.6. In July the Department of Business, Energy and Industrial Strategy awarded £27.8 million of funding for Haringey Council to build two heat networks which will connect to heat supply from the Edmonton EcoPark when built. The Authority shared this news widely as a clear example of Government support for the project in providing community benefits which support the move towards Net Zero. The press release can be viewed on the NLWA website:
<https://www.nlwa.gov.uk/news/heat-thousands-homes-haringey-be-piped-edmonton-ecopark>
- 4.7. The team are continuing to respond to enquiries about the project and providing reference in the Scheme of Publication on NLWA's website when new issues arise.

5. PROJECT DELIVERY SUMMARY

- 5.1. This section summarises progress in delivering the new facilities that comprise the North London Heat and Power Project.
- 5.2. The project continues to make good progress on site with a complex set of operations working across a substantial area of the EcoPark. The Resource Recovery Facility (RRF) is being fitted out with its odour control and other building management systems. The preparation for the start of Energy Recovery Facility (ERF) construction continues at pace with the completion of demolition of the old bulky waste facilities by DSM Demolition.
- 5.3. Acciona, the ERF contractor has been given access to the site one month earlier to enable them to get ahead. This means that they will be able to start major civil works on their original date of 3 of October. This helps them deconflict the overlap between the civil construction and installation of plant and equipment, which is one of the significant challenges of constructing an ERF.
- 5.4. Acciona has made good progress with the detailed design and engineering of the facility by initially fixing the plant layout and planning for the start of construction on site. The full site access

is dependent on moving the bulky waste recycling and fuel preparation operations from their current temporary location in the north of the EcoPark to the new RRF which is under construction in the south. Work is ongoing with Taylor Woodrow, DSM, and London Energy to ensure that the timing of this critical and complex sequence of activities is achieved. This will enable Acciona to be given full site access in two further stages in May and June 2023 giving them the ability to complete in 2026.

- 5.5. Safely building and commissioning the new facilities whilst maintaining a busy operating environment in the EcoPark remains a primary focus and is being managed through the Site Working Group. Recently the working group has successfully resolved how access in and around the EcoPark will be maintained when during construction of the new eastern access to the future public Resource and Recycling Centre and EcoPark House.
- 5.6. The Project's supply chain has been strengthened and expanded with the appointment of three civil engineering contractors who will be called upon to provide minor civil engineering works. Minor civil engineering works are required from time to time to in connection with the need to maintain and co-ordinate waste management operations alongside construction and works that fall outside the scope of the main contracts. Task orders with a value of less than £50,000 would be distributed to the three contractors via Direct Award via Rotation. Task orders exceeding £50,000 would necessitate a mini competition between the three framework contractors.
- 5.7. Further details of progress of each major element of the project are provided in the following tables.

Energy Recovery Facility (ERF)

Summary

The ERF project remains on plan to achieved “take-over” into service in 2026.

The handover of ERF Zones 3 & 4 to Acciona is scheduled for 5th September 2022 – one month earlier than planned.

Acciona has mobilised its commercial, design and procurement teams based at its headquarters in Madrid and continues to mobilise its onsite delivery team at the EcoPark. These teams are working collaboratively with the NLHPP team to put plans in place to deliver the ERF’s quality and performance requirement.



Successes and Milestones

The collaboration between the NLHPP team and Acciona since the start of the contract in January has produced high quality design and pre-constructions plans.

The Authority’s document and contract management tools are performing as planned and has processed over 900 design related documents.

The main area of progress is the development of the design and engineering by Acciona and their specialist suppliers for the process equipment, who have delivered early design packages related to these. These packages have been reviewed by the Authority’s technical assurance function with no major deviations from the contractual quality and performance requirements identified.

Acciona have appointed Galldris, based in Enfield to carry out works across their site to prepare for the major civil engineering and foundation works. Acciona have also procured the piling works and appointed Van Elle Ltd.

Look Ahead

On site foundation piling is due to start in October, which will see a build-up of people and heavy construction equipment on site. Construction traffic using the northern entrance will increase to access the ERF worksite.

Acciona will be placing on order the Raw and Demineralised Water Treatment, and the Flue Gas Steam Heat Exchanger systems. These are key systems to the energy recovery process and the next steps in Acciona's overall procurement programme.

Resource Recovery Facility (RRF)

Summary

The RRF is estimated to start receiving waste end of February 2023 and be in full operation at end of March. Good progress has been made with the building cladding and installation of the odour control equipment inside the building.

The start of commissioning elements of the facility and training LEL's staff for its operation and maintenance are starting in September and will continue until it goes into service.



Steel work canopy link between the RFPF and RRC



An aerial view including the odour control chimneys

Successes and Milestones

The cladding to the southern and western building elevations has been completed, revealing the future look of the building. Underground tanks for 900,000L of fire water and 1,200,000L of storm water attenuation have been completed. The Trade Effluent Waste treatment plant has been installed and is ready for commissioning.

The facility is now supplied with its electrical power supply from the current Energy from Waste facility which will enable its mechanical and electrical systems to be tested, commissioned, and operated.

The commissioning plan has been developed in conjunction with LEL to include the needs of their role as the future operator and maintainer. This is an important step towards the successful transition of the facility into operation in February 2023.

Using the Building Research Establishment Environmental Assessment Method (BREEAM) the RRF has attained a rating of Very Good as planned.

Look Ahead

The strong progress with the completion of the building exterior and mechanical and electrical systems means that there is strong confidence in starting the commissioning processes in September.

Over 3000 documents will be received over the next 6 months during commissioning and training to support LEL's development of its operation and maintenance procedures.

The external faces of the building will be completed over the summer to create a new landmark in the area.

EcoPark House

Summary

The construction of EcoPark House remains on plan to be completed in April 2023. Good progress has been made with the internal fit out of the building and the outside is taking shape.

The building will be independently powered “off-grid” and the equipment to enable this innovative solution has now been ordered.



Glazing install on the EcoPark House.



EcoPark House view from the River Lee Navigation

Successes and Milestones

The building's aesthetics are now being revealed by the completion of the grey precast concrete exterior cladding and the glass roof to the parapet on the western side facing into the EcoPark.

Internally the lift has been installed and has been tested ready for when the whole building is commissioned.

Ground source heat pumps and the tesla batteries for the “off-grid” power supply have been placed on order.

Using the Building Research Establishment Environmental Assessment Method (BREEAM) EcoPark House has so far attained a rating of Very Good as planned. A higher assessment of Excellent is now being targeted.

Look Ahead

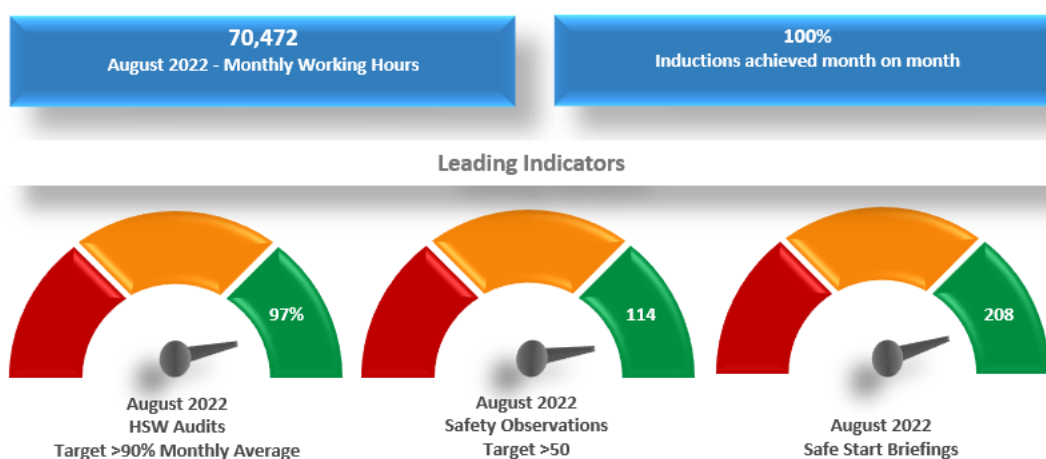
The building construction internally and externally will be completed over the summer and early autumn, followed by testing of all mechanical and electrical systems.

The “off-grid” power supply is expected to be switched on in January 2023 and used to complete the commissioning process.

6. HEALTH, SAFETY AND WELLBEING

- 6.1. The proactive measures and good practices in place across the NLHPP programme continue to support the good standards of Health, Safety and Wellbeing (HSW) performance across the NLHPP.
- 6.2. The Accident Frequency Rate (AFR) for reportable injuries in accordance with Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) 2013 stays at **0.00** for all projects. RIDDOR accidents must be reported where, among other things, they result in an employee or self-employed person being away from work, or unable to perform their normal work duties, for more than seven consecutive days as the result of their injury.
- 6.3. The Lost Time Injury (LTI) Accident Frequency Rate (a performance metric that mirrors the RIDDOR description noted in 6.2 but uses a 3-day recordable injury baseline to measure performance for all projects) is AFR 0.00.
- 6.4. Energy Recovery Facility – ERF. Acciona the appointed contractor for the ERF have been present on site since February 2022. There has been ongoing collaboration with NLHPP since to ensure and alignment of HSW objectives, compliance, process and procedures are prepared for the safe start of construction works on 01 September 2022. A month earlier than initially planned for construction work to start.
- 6.5. Two further milestone achievements are to be noted during the reporting period. These include the EcoPark South project having not recorded any further 3 day lost time injuries since a sprained ankle injury in June 2021 and secondly having achieved over 1 million injury free working hours without a lost time incident.

HSW Performance Indicators



- 6.6. **HSW Audits:** Each construction area is audited weekly with a minimum of 4 audits per live project during any month. The NLHPP targeted average compliance score is set at +90%. The recorded monthly average audit score for August 2022 period averages 97% reflective the good levels of HSW performance. These in-depth audits review contractor health, safety, and wellbeing compliance in specific areas for example: work at height, lifting operations, excavations, worker welfare etc.

6.7. **Safety Observations:** The total number of observations remain high with a total 114 recorded for August a slight decrease from 126 the previous month due to a reduction of workforce as the project progresses and the holiday season. Within these figures 30 positive behaviours and interventions were recorded which is reflective of the proactive initiatives (safe start briefings, audits etc) that are in place across the programme. We continually encourage reporting of observations (positive and negative) to support our drive for continual improvement. All observations are recorded and tracked to a satisfactory completion.

6.8. **Safe Start Briefings:** The number of prestart briefings delivered daily to the workforce remain consistently high and are aimed at primarily aimed at awareness of work hazards and ongoing daily site activities. These briefings are also utilised to undertake toolbox talks specific to the type of work being undertaken on the project.

6.9. **Achievements and Initiatives**

EcoPark South: Taylor Woodrow 18 June. A Safety Stand Down briefing was undertaken with 192 persons in attendance. The key focus of the briefing was how the construction industry has changed over the last 30 years, the importance of Equality, Diversity & Inclusion and what appropriate and negative behaviours are with clear messaging around zero tolerance policies.



Figure 1: Safety Stand Down Briefing

EcoPark South – Taylor Woodrow 21 July. A Stand Down Call was undertaken over two 3-hour sessions with 50 site personnel at each session. These interactive sessions use video and actors as well as interactive sessions to discuss behaviours and culture with the aim enhancing awareness of their responsibility towards their colleagues. Due to the success further sessions are planned for 22 September 2022.

EcoPark South – Taylor Woodrow 31 August. A regular project monthly team brief was undertaken with the wider team. These informative engagement briefings provide an overview of any incidents, lessons learned, project progress, future events and an opportunity to recognise achievements of the workforce.

These regular health, safety and wellbeing initiatives continue to support and drive the HSW culture across the NLHPP programme with high attendances being maintained.

- 6.1. The HSW Forum continues to meet monthly to discuss performance and initiatives that support continual improvement of HSW at NLHPP. The Working Groups continue to make good progress with development of initiatives for Behavioural Based Safety, Mental Health & Wellbeing and Communications with a short-term objective of taking the next steps to developing roll out programmes.

7. ENVIRONMENT AND SUSTAINABILITY

- 7.1. The project continues to focus on environmental and sustainability considerations, working to successfully manage environmental risks and identify opportunities for enhancing sustainability performance.
- 7.2. There has been continued good performance against Environment and Sustainability (E&S) KPIs with minimum targets either met or exceeded, as shown below.



- 7.3. **Environmental Incidents, near misses and complaints:** No environmental incidents, near misses or complaints were reported, demonstrating the strength of environmental management measures implemented on site.
- 7.4. **Environmental Observations:** Our contractors continue to champion environmental and sustainability issues on site, through raising environmental observations and exceeding their monthly minimum target of two observations per contractor. The observations either recognise a positive behaviour or highlight an at-risk condition that does not constitute an environmental incident or near miss. Overall 27 environmental observations were raised across the project (16 positive and 11 negative). The high number of observations raised is consistent with previous months.
- 7.5. **Sustainable Materials:** Across the project 100% of timber delivered to site has been from recycled or sustainable sources as defined by Forestry Stewardship Council (FSC) standards. The target for this KPI is 100% of timber procured is from recycled or sustainable sources.
- 7.6. **Environmental Training:** 6 environmental toolbox talks were delivered with 88 people attending, focused on topics of greatest relevance to the construction activities occurring at the time, such as dust control and flood risk compliance.
- 7.7. **Environmental Site Inspections:** Surveillance visits have identified that in general, environmental items were being well managed in line with good practice however there were some areas for improvement. The July site inspection was waste focused, and observations included requirement for improvement of waste management as some skips were overfilled and not segregated. Improvement opportunities were also identified in relation to increasing availability of hazardous

waste bins, appropriate storage of materials to avoid damage (e.g. cement bags) and ensuring that spill kits are available and clear of rubbish. During the August site inspection a noticeable difference in waste management on site was observed. Hazardous waste drums have now been set up on site, signage has also been added to spill kits to prevent them from being used as rubbish bins. All spill kits were checked, and all were filled, dry and clear of rubbish. A positive observation was made that silt fencing has now been installed along the River Lee Navigation to protect the waterway once landscape works begin at EcoPark House.

- 7.8. **BREEAM:** In line with our sustainability commitments, the project is required to achieve 'Very Good' (55%) rating in the Building Research Establishment's (BRE) Environmental Assessment Methodology (BREEAM) rating system, which provides a sustainability framework to deliver high sustainability performance across buildings whilst also creating positive environmental and social impact. Both EcoPark House and Resource Recovery Facility have achieved this rating and are targeting Excellent. The Energy Recovery facility is working towards this commitment.
- 7.9. **Sustainability Innovations, Opportunities and Best Practices:** The project continues to promote and encourage environment and sustainability best practice and innovations. Taylor Woodrow at EcoPark South have implemented 3 sustainability opportunities during this period. The first was the use of the electric crane for lifting operations during roof installation works. The six-axle crane is the largest mobile tower crane in the world and can operate 100% emission free saving carbon and reducing air quality impacts.
- 7.10. The second was the reuse of 563m³ of water on site. An existing fire tank had become redundant and as a result the water left in tank was transferred to the newly constructed rainwater tanks to be used for a leakage test. The benefits of reusing the water on site include the reduction in the use of natural resources and has also reduced the carbon footprint of the project as the water required for this testing would have had to come from the water mains and been then delivered to site in containers.
- 7.11. The third was the use of an electric excavator for excavation works to support the installations of the foundation footings for the timber decking to be installed along the River Lee Navigation. The benefit of using this electric excavator is that it is also emission free saving carbon and reducing air quality impacts.
- 7.12. Taylor Woodrow also hosted a Swap Shop to promote transition to a circular economy. The event was a huge success with clothes, books, bikes, cameras and appliances being swapped. The remaining items were donated to a local charity.
- 7.13. One environmental best practice was implemented by DSM who used a DustBoss dust suppression cannon instead of a water hose during the dry weather. This dust suppression method uses less water and minimises surface water run-off.

8. EQUALITIES IMPLICATIONS

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

9. COMMENTS OF THE LEGAL ADVISER

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

10. COMMENTS OF THE FINANCIAL ADVISER

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

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