

NORTH LONDON WASTE AUTHORITY

REPORT TITLE: NORTH LONDON HEAT AND POWER PROJECT UPDATE

REPORT OF: PROGRAMME DIRECTOR

FOR SUBMISSION TO: AUTHORITY MEETING


DATE: 30 JULY 2024

SUMMARY OF REPORT:

This report provides the Authority with an update on progress of the North London Heat and Power Project including the Energy Recovery Facility.

RECOMMENDATIONS:

The Authority is recommended to note and comment on the contents of this report.

SIGNED:  Programme Director

DATE: 18 July 2024

1. INTRODUCTION

- 1.1. The North London Heat and Power Project (NLHPP) is North London Waste Authority's ambitious plan to redevelop the 53-year-old Edmonton EcoPark, delivering a new sustainable waste hub to replace the existing Energy from Waste (EfW) plant and provide flagship recycling facilities for north London's residents.
- 1.2. The existing EfW plant will be replaced with a new Energy Recovery Facility (ERF), which will provide a green solution to treat non-recyclable waste in the UK. The programme of works also includes a Resource Recovery Facility (RRF) for reception and transfer of waste, incorporating a public Reuse and Recycling Centre (RRC) and EcoPark House, a vibrant visitor and education centre which will be home to Edmonton Sea Cadets. Officers are working closely with LondonEnergy Ltd (LEL) as operators of the existing and new facilities.
- 1.3. The report structure provides:
 - 1.3.1. **Section 2:** Programme summary
 - 1.3.2. **Section 3:** Delivery developments
 - 1.3.2.1. EcoPark South, the RRF and EcoPark House; and
 - 1.3.2.2. New ERF plant delivery
 - 1.3.3. **Section 4:** Programme Wide initiatives: Social Value, communications and Health, Safety and Environment update
 - 1.3.4. **Sections 5:** Cost and Risk position
 - 1.3.5. **Appendix A:** Glossary of abbreviations

2. PROGRAMME SUMMARY

- 2.1. The RRF was delivered in March 2024, and the RRC opened to the public on 15 July 2024. Construction on EcoPark House, the final EcoPark South facility, is close to completion. Acciona are facing continued delays in securing and mobilising sub-contractors for the mechanical and electrical sections of the ERF build. They are reviewing their approach to packaging tasks, to respond to feedback from potential sub-contractors. The NLHPP team are pressing Acciona to give greater confidence on establishing an effective schedule and delivery plan for this work. This is likely to take some weeks. Officers will continue to report to the Authority and Programme Committee.
- 2.2. The NLHPP, through Acciona and their supply chain, have continued to provide extensive social value to the local community and are on track to deliver 100 apprentices. Byrne Brothers recruited two health and safety apprentices in May,

one who is a resident of Enfield and the other who is from Haringey. NLWA were recognised for exemplary innovation and commitment to environmental and social responsibility and won the Innovation in Delivering Sustainability and Social Value award at the MJ Awards in June 2024.

- 2.3. Focus remains on health and safety initiatives including a range of activities for Mental Health Awareness Week, sun awareness drop-ins and Construction Design and Management (CDM) awareness session was held for the Project team. Sustainability initiatives continue to be identified and implemented: both the RRF and EcoPark House are on track to achieve the specified Building Research Establishment Environmental Assessment Methodology (BREEAM) Very Good rating.

3. DELIVERY DEVELOPMENTS

RRF

- 3.1. On 15 March 2024, the RRF was transferred from Taylor Woodrow to the Authority. at the same time, the Authority formally entered into a contract with LEL to operate the new RRF and the building was handed over to LEL and operational ramp up began.
- 3.2. LEL have successfully completed their RRF trial operations and are now managing waste from all seven boroughs. Now that the RRF is operating in a steady state, planning is underway to complete the final performance testing as required by the Environmental Agency permit.
- 3.3. LEL has successfully opened the RRC to the public on 15 July, with safety at the forefront of every decision. Extensive testing and planning of all public access routes by car, cycle and on foot has taken place. Additional temporary signage has been installed to guide visitors as they visit the Edmonton EcoPark for the first time. Further details of EcoPark South transition activities can be found in the Transition of Facilities into Operation report on this agenda.

EcoPark House

- 3.4. The handover of EcoPark House is expected to take place in late summer. As with the RRF, regular walkarounds of EcoPark House have commenced with NLWA, LEL, borough officers and the Sea Cadets to allow key stakeholders to become more familiar with the building, ensure that user requirements are met and allow detailed LEL and NLWA departmental planning to be undertaken.
- 3.5. Once handover has taken place, there will be an eight-week user acceptance period where LEL will be the facilities manager of EcoPark House to undertake trial operations prior to the service offering commencing.

- 3.6. Further details on all aspects of EcoPark House including the developments of the education and visitor service offering is detailed in the Transition of Facilities into Operation report on this agenda.



Figure 1: EcoPark House

ERF Construction works

- 3.7. The ERF project continues to make progress on the civil scope of work with the completion of the main building, ramps, stack piling works, the tipping hall, the superstructure for the stair and lift cores and the fire water main. The turbine area excavation works for the turbine water pit and attenuation tanks continued. A large mechanical tower crane arriving on site in July, which is a significant milestone and is required for the start of the mechanical installation.
- 3.8. Acciona have identified issues in their delivery of the next stages of the design, procurement, and construction of the ERF facility, namely the mechanical and electrical sections of the build, in what is a challenging period for the construction industry. Officers are in regular discussions with Acciona to understand both how on-site momentum can be restored and how future delays can be minimised. Acciona are considering as part of this revising their approach to packaging work to generate increased interest from the potential supply chain.
- 3.9. Key to understanding the consequences of Acciona's difficulties is the production of a realistic schedule and delivery plan for the delayed work, which officers are pressing them to produce, and when this is received members will be briefed further. Our contract with Acciona provides that delays in the programme are their risk, and they may be liable to pay damages if the new facility is not delivered on time. However, it is not in the Authority's interest to be working with a contractor facing

significant financial challenges. Given these early indications of Acciona's challenges in meeting their existing contractual obligations, the discussions between the parties are exploring what needs to change going forward to ensure a timely construction of the facility and improve confidence in the delivery programme. These detailed discussions involve senior officers from both organisations and any proposals will be reported to Members before changes are agreed.

- 3.10. Separately officers are working with Colleagues from LEL to understand and plan for the consequences of the delay, and how the current plant can be kept operational for longer than originally contemplated.

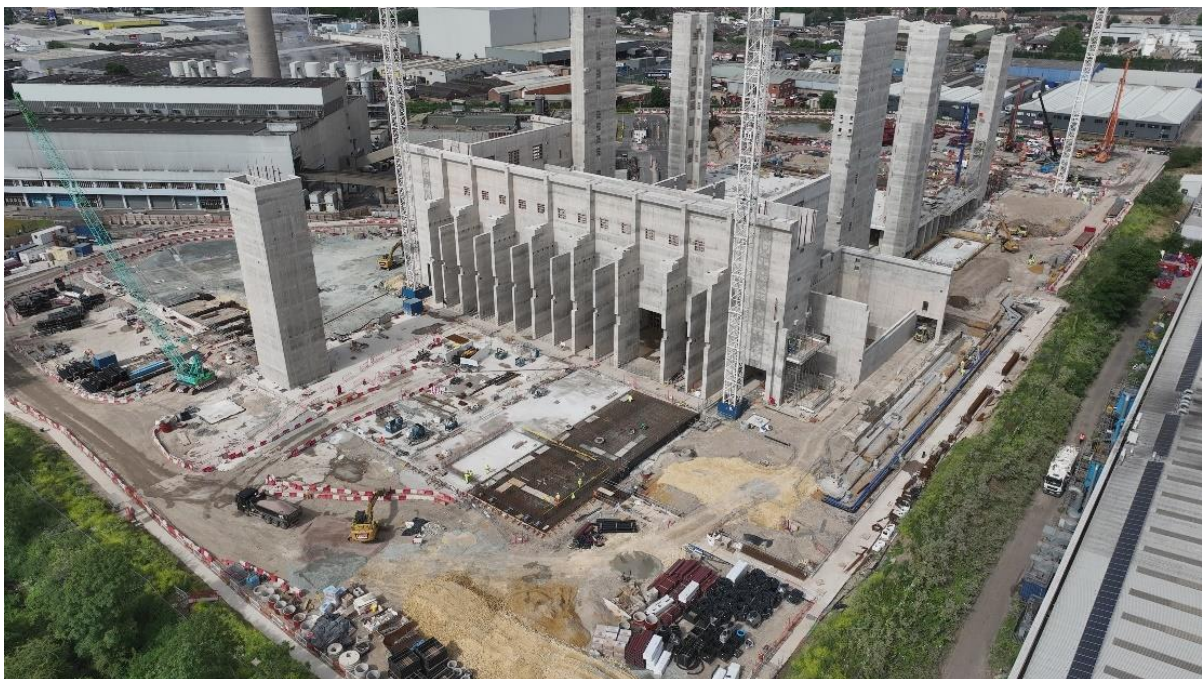


Figure 2: ERF progress

4. PROGRAMME WIDE INITIATIVES

Social Value

- 4.1. The programme continues to make progress towards its social value targets as contractors deliver a range of high-quality social value initiatives for north London communities, such as apprenticeships, local spend, community projects and school engagement. In summary:
 - 4.1.1. 48 new apprenticeship opportunities have been created.
 - 4.1.2. 94 apprenticeship years have now either been delivered or are committed.
 - 4.1.3. 195 training placements have been completed by 164 individuals.

- 4.1.4. 20.4% of the workforce are residents of a NLWA borough in headcount terms.
 - 4.1.5. The overall proportion of contractor local supply chain spend is at 8.2%, which equates to just over £37 million.
 - 4.1.6. Over 4,000 students from 76 schools and colleges in north London have participated in the NLHPP Schools Programme.
 - 4.1.7. The programme has donated over £144,000 and nearly 800 volunteering hours to 36 organisations across all seven NLWA boroughs.
 - 4.1.8. Over 800 hours of Equality, Diversity and Inclusion (EDI) training have been delivered for the on-site workforce.
- 4.2. In recognition of our successes, the NLHPP won the MJ Award in the Innovation in Delivering Sustainability and Social Value category in June and are nominated for Community Engagement Project of the Year at the Construction News Awards being held in July 2024.
- 4.3. At the April Authority meeting, Members requested an update on the supported internship that was delivered by Acciona last year in partnership with West Lea School, in Enfield, for a local student with Special Educational Needs. The internship was part-time and took place on-site for a period of 10 weeks, which led to a paid role in the Acciona social value team with the aim of leading to an on-site apprenticeship. Because of personal circumstances, the individual unfortunately resigned from their position in September 2023. The social value team is exploring delivery of a second placement due to start in September, this time delivered in partnership with Barnet Mencap.
- 4.4. RE-Power Communities, the community programme for the ERF construction project, continues to progress, with team members engaging in social impact days with various organisations.
- 4.5. The NLHPP schools programme has so far engaged with nearly 4,200 students from 76 schools and colleges across the NLWA area. Since the beginning of April, the programme has engaged schools from Waltham Forest, Hackney and Barnet. In Barnet, the programme team visited Oak Hill SEN secondary school to deliver a session on recycling to Year 9 students.

Health, Safety and Environment (HSE)

- 4.6. Activities on site are focussed on the ERF construction works and the close out of snagging on the EcoPark South project. The accident frequency rate (AFR) for reportable injuries in accordance with Reporting of Injuries, Diseases and

Dangerous Occurrences Regulations (RIDDOR) 2013 for May and June remains constant at 0.200 on a 12-month rolling basis.



Figure 3: Health and Safety Leading Indicators

- 4.7. Various health and safety initiatives have been carried out recently, as summarised below:
- 4.7.1. Supervisor and Point of Work Risk Assessment (POWRA) training was delivered by Acciona across the site to assist with the improvement of safety performance. This followed the recording of three minor incidents and changes to team members, procedures and working practices.
 - 4.7.2. The wellbeing workstream, in conjunction with Acciona, managed a mental health awareness week campaign called 'Keep on moving for mental health', with a range of activities that included walks, yoga and Pilates classes. In addition, Acciona ran a virtual reality cycle race challenge. All activities were received well and supported by the workforce. Drop-in sessions including sun awareness have taken place.
 - 4.7.3. The HSE team attended the project's Inclusion Conference, which involved members of project staff from several different organisations including Acciona working on the NLHPP. As there are several different contractors on site, the importance of people speaking to each other and looking out for each other was highlighted as this can stop incidents occurring.
- 4.8. A Construction Design and Management awareness session was held in June 2024 to refresh the client team's knowledge and reiterate the importance of adhering to the CDM Regulations 2015. A new CDM Manager has joined Acciona and will work closely with the client team to ensure that the duties of the Principal Designer and Principal Contractor are being discharged in accordance with the CDM regulations.

- 4.9. Focus remains on environmental and sustainability considerations, working collaboratively with the construction contractors to manage environmental risks and identify opportunities for enhancing sustainability performance. The NLHPP team continues to promote best practice across the programme around carbon reduction, promotion of biodiversity and circular economy principles. At the end of May 2024, some 69 sustainability opportunities had been identified and implemented on the project.
- 4.10. Solar energy is now being generated by the Edmonton EcoPark solar array. 2,235 photo voltaic panels cover the size of a football pitch generate energy that is distributed to the EcoPark for waste operations and construction commissioning activities. By 21 June, the panels had produced over 230,000 kilowatt-hours.



Figure 4: The Solar Array on the Roof on the RRF

- 4.11. Daily solar energy figures presented on a display screen in the foyer at EcoPark House are currently being tested and commissioned. The statistics in Figure 5 below show that the EcoPark House battery supply was charged to 59% capacity on 21 June. EcoPark House will be powered completely by solar energy and ground source heat pumps, allowing it to operate 'off grid'.



Figure 5: Real-time energy statistics being tested for display to public in EcoPark House

- 4.12. Overall, there was good performance against environment and sustainability Key Performance Indicators (KPIs) in May 2024, a selection of which are shown below.



Figure 6: Environmental KPIs

Communications

- 4.13. Planning and advertising the new Edmonton EcoPark RRC opening has been a focus for this team. More details can be found in the Transition of Facilities into Operation report on this agenda. In May, the programme released a press notice about the solar panel energy generation of the now commissioned Edmonton EcoPark array. The solar panel news update was released on the NLHPP website and social media channels, and it featured in the May construction update video. Further updates about the panels' energy generation will be referenced in press stories celebrating the new facilities operating on the site. Another construction update video was released in June marking International Women in Engineering Day and the progress on EcoPark House and the Energy Recovery Facility.

Awards

- 4.14. NLWA won the Innovation in Delivering Sustainability and Social Value award at the MJ Awards in June 2024. The Authority was recognised for exemplifying innovation and commitment to environmental and social responsibility on the NLHPP. The submission showcased the extensive benefits to local communities delivered through local job creation, training opportunities, over 30 community projects and inspiring young people through schools' engagement.
- 4.15. Other recent awards submissions include the Institute of Civil Engineering (ICE) London awards for Infrastructure Project of the Year with Taylor Woodrow, recognising the completion of the EcoPark South project (shortlisted), and the Black People in Construction (BPIC) award for Best Social Value Team recognising the collaborative work between NLWA, Acciona and AECOM to include local communities in the project's legacy.

5. COST AND RISK POSITION

- 5.1. The NLHPP outturn cost forecast cost is currently £1.52bn considering the costs incurred up to the end of May 2024 and is in line with the £1.42 to £1.52bn estimate reported in April 2023. There is a risk to this position, as outlined in Section 2.
- 5.2. As noted in paragraphs 3.8 to 3.10, Acciona are showing signs of experiencing delays in the delivery of the ERF. As was widely reported in the mainstream media, in recent years general inflation reached its highest levels in 40 years. Across the 2022/23 financial year the Consumer Price Index (CPI) measure of inflation peaked at 11.1% in October 2022 and impacted many capital projects both in London and nationally. Inflation has had a significant impact to the construction industry with the global construction market experiencing volatility of commodities and labour pricing forces.
- 5.3. Construction materials prices are generally around 40% higher than early 2020 levels, after allowing for recent price falls. Shipping costs are also rising once again, with ongoing disruption to the Red Sea distribution route due to tension in the Middle East still a factor. Labour costs have continued to rise above inflation. The skills shortage has created a candidate-driven market that has made skilled labour significantly more expensive and is hampering the delivery of key national infrastructure projects.
- 5.4. Figure 7 below compares Building Cost Information Survey (BCIS) construction-based inflation indices with CPI inflation. Inflation for construction related indices increased higher than CPI in 2020, 2021 and into 2023. Acciona is responsible for procuring the construction materials including steel and also labour. Large

procurements took place in 2022 and 2023 which resulted in inflationary uplifts far in excess than record high CPI.

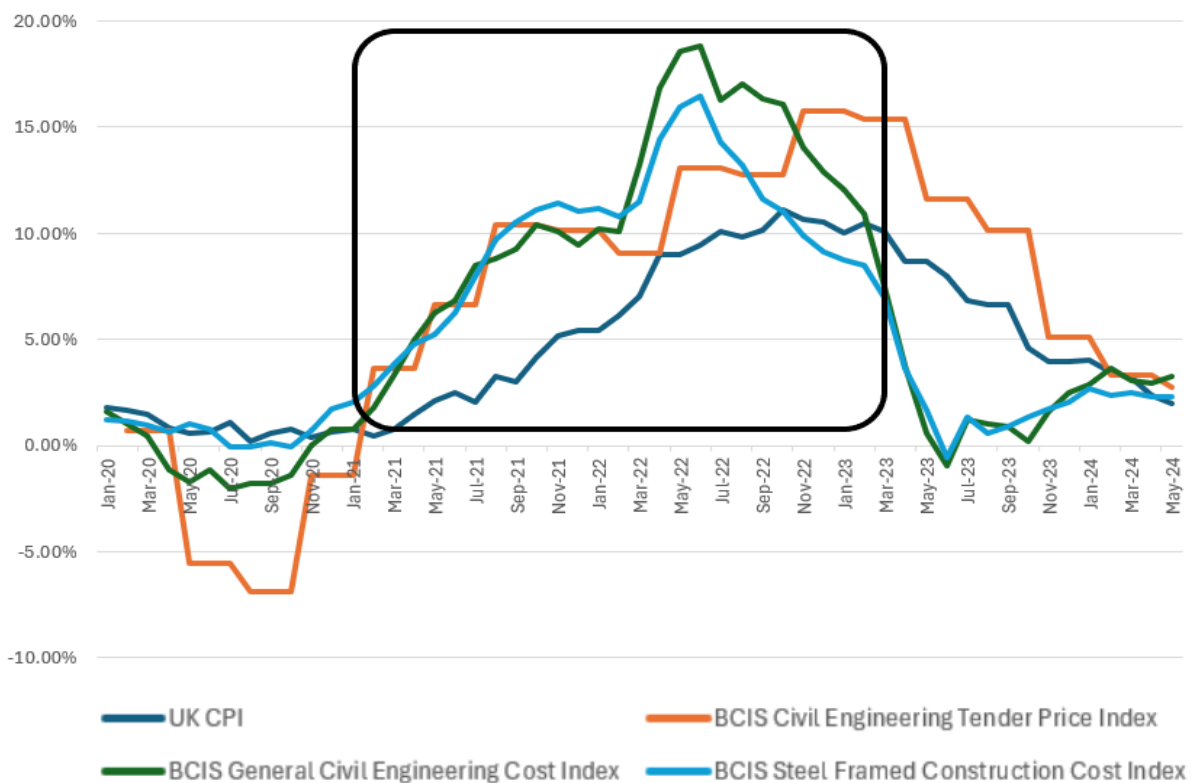


Figure 7: Construction Indices vs. CPI

- 5.5. These cost pressures are affecting the resilience of supply chains. This applies both in terms of having to absorb the effects of these changes and in their willingness to take on future risks having experienced the volatility of the last few years.
- 5.6. The NLHPP is seeing the programme contingency come under pressure. Officers are considering how realistic risk share arrangements are with the supply chain in practice, and therefore what will be required to assure delivery of new facilities.

Table 1: Forecast Costs for the NLHPP

	Committed	Value of Work Done	Cost to Complete	Forecast Total
Base Cost	£1,314.1m	£789.5m	£644.3m	£1,433.8m
Contingency	N/A	N/A	£85.9m	£85.9m
Total	£1,314.1m	£789.5m	£730.2m	£1,519.7m

- 5.7. The programme has committed around 86% of outturn costs. Spend to date is £790m, which is 52% of the total expected cost. The remaining committed costs left

to be delivered are largely for the ERF construction contract with Acciona. A further £120m of the forecast remains to be committed for further works to the EcoPark after the existing EfW plant is no longer operating.

- 5.8. Until we satisfy ourselves of the robustness of Acciona's schedule and delivery plan, officers must be cautious about the certainty of the costs and contingency, although the figures above represent current best estimates. There will be an update on the complete finance position to members accordingly.
- 5.9. Previously, our financing strategy for the NLHPP was to borrow £280m by July 2024. Considering the elections that were not announced when the strategy was written, we conducted further due diligence by liaising with experts from the field including getting advice from Link (last advice received week of the election). Following consultation with chair and vice chairs, we exercised a further £140m borrowing (at 5.32%) ahead of the July 2024 election and intend to borrow £140m by September 2024 (with an additional £140m in mid-2025 requiring further consultation). This was borrowed over forty-two and a half years. This means our overall borrowing for the project of £1,110m has an average rate of 2.78% and the Authority has been fortunate to take advantage of borrowing while interest rates were low, minimising future levies.

6. EQUALITIES IMPLICATIONS

- 6.1. There are no equalities implications arising from this paper, though in section 4 the paper notes actions being taken to make the NLHPP an exemplar project in promoting diversity and inclusion.

7. COMMENTS OF THE LEGAL ADVISER

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

8. COMMENTS OF THE FINANCIAL ADVISER

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

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APPENDIX A GLOSSARY OF ABBREVIATIONS

Abbreviation	Definition
AFR	Accident Frequency Rate
BCIS	Building Cost Information Survey
BPIC	Black People in Construction
BREEAM	Building Research Establishment Environmental Assessment Methodology
CDM	Construction Design and Management
CPI	Consumer Price Index
EDI	Equality, Diversity and Inclusion
EfW	Energy from Waste
ERF	Energy Recovery Facility
HSE	Health, Safety and Environment
ICE	Institute of Civil Engineering
KPIs	Key Performance Indicators
LEL	LondonEnergy Ltd
NAECI	National Agreement for the Engineering Construction Industry
NLHPP	North London Heat and Power Project
POWRA	Point of Work Risk Assessment
PPE	Personal Protective Equipment
RIDDOR	Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013
RRC	Reuse and Recycling Centre
RRF	Resource Recovery Facility