




NLHPP PROJECT BRIEF

Authority Member's Project Briefing



North London Heat and Power Project

Document Details	
Document Number	NP-ARP-XXXX-XXX-RP-ZZ-090514

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Date	11/11/2022	11/11/2022	14/11/2022

Revision Record		
Revision No.	Date	Description of Revision
P01	14/11/22	Authority's Members Project Briefing

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 brief provides Members with an update on the progress of NLHPP project.

2. PROGRAMME DIRECTOR'S SUMMARY

- 2.1. This report encompasses project activities throughout September and October 2022. The latest construction update video is available through this link: www.youtube.com/watch?v=6aFOV8UXHCI providing an update on construction, apprenticeship activities and benefits of the project to the local community.
- 2.2. The programme continues to demonstrate good control, remaining on track to deliver against all its objectives, on time and within budget.
- 2.3. With the start of ERF enabling works on site and the RRF soon to begin commissioning, the programme is well into a new phase of delivery. A greater focus is now being placed not only on successful delivery of the physical scope, but what is needed to achieve successful outcomes that enable operation of the facilities. For the RRF and RRC, this means looking beyond delivery of the infrastructure and working closely with LEL on operational transition to ensure the building supports the successful management of waste when complete. Similarly, for EcoPark House the focus will move towards collaboration with stakeholders on opening a well-regarded and useful facility.
- 2.4. A key highlight this month has been Acciona's start on site with good progress of ground preparation for the start of foundation piling, and mobilisation of 50 people on site. The management of the laydown area has also been passed from Taylor Woodrow to Acciona, with new staff now more visible and connected with the team. In terms of activity for the ERF client team, 560 engineering submissions have been reviewed by the team so far, all to be validated and comments returned to Acciona. Following some initial delays and inadequacies in the early submission of documents, the client team and Acciona are working together daily to gain an appreciation of each other's working practises and expectations, to build successful working relationships.
- 2.5. Additionally, our prioritisation of a strong health and safety culture is being further developed through the launch of an innovative wellbeing tool across our supply chain. The tool enables organisations to identify areas of improvement and realistic changes they can make to support the wellbeing of their workforce. The tool has been developed specifically for NLHPP alongside industry leading experts and is expected to make a significant and positive impact, enabling the development of consistently high wellbeing standards across the project.

- 2.6. Taylor Woodrow continue to share the collective commitment to reduction of carbon emission on site, by using a fully electric excavator for EcoPark House construction.
- 2.7. Complexity remains in the activities needed to hand over the remainder of site, where the temporary bulky waste facility currently resides, to Acciona. This is a significant focus for the team, ensuring teams are working collaboratively, activities remain on programme and any opportunities to reduce risk are taken advantage of.
- 2.8. Four new apprentices have started work on the project directly for Acciona in areas of site supervision, quantity surveying, site support services and social value co-ordination, plus a civil works supervisor apprentice has started for Galldris, their enabling works contractor.
- 2.9. Engagement with councillors and community liaison groups are continuing with several briefings, site tours completed and more planned for coming months.

3. PROJECT COST PERFORMANCE SUMMARY

- 3.1. The overall position as of the end of September 2022 remains that the programme is performing well against the March 2019 baseline budget of £1.220.6m and remains on track to be delivered within the budget.
- 3.2. The overall forecast out-turn cost is currently £1,183.7m, including a risk allowance, in March 2019 prices, i.e., £37m below the budget. The forecast is currently split between the base cost (i.e., associated with a defined scope of work) and the remaining risk exposure, at £1,111.8m and £71.9m, respectively. The overall NLHPP cost forecast is presented below in the following table

	Baseline Budget	Actual Cost to Date	Estimate to Complete	Current Out-turn Forecast	Forecast over/under Budget
Total	£1,220.6m	£372.4m	£811.3m	£1,183.7m	-£37.0m
Base Cost	£1,123.7m	£372.4m	£739.4m	£1,111.8m	-£12.0m
Risk/ contingency	£96.9m	N/A	£71.9m	£71.9m	-£25.0m

- 3.3. To date, the Project has committed £1,103.9m of costs. This reflects the value of work agreed in contracts – including construction works, advisors, NLWA direct costs and third-party fees. The commitment represent a significant reduction in risk since the baseline was established in March 2019 and increased reliability in the forecast out-turn cost.

4. SOCIAL VALUE

- 4.1. The project's progress in relation to Social Value is covered in a separate briefing report

5. COMMUNICATIONS AND STAKEHOLDER ENGAGEMENT

- 5.1. The Communications team have continued to provide responses to local councillors and community members across the period. Topics of interest include the progression of carbon capture and storage, safe delivery of the project and how challenges to recycling are being addressed in London.
- 5.2. A Community Liaison Group meeting was held on the 28th of September which was attended by 7 members of local area including Enfield Council, Haringey Council, Broxbourne Council, Residents of Edmonton Angel Community Together (REACT), Lee Valley Regional Park Authority and Friends of the Earth, Haringey. The meeting was an informal meeting where the group was provided with a tour of the EcoPark to signpost the latest progress and discussed the project directly with the project team. Energetik also provided a representative to discuss the progress on the District Heat Network.
- 5.3. An announcement was made on the agreement to invest in initial services to develop carbon capture at the Edmonton EcoPark on the NLHPP website and social media channels. This was published in several specialist online outlets reaching 1,692 people. The full notice is available on the NLHPP website: <http://northlondonheatandpower.london/news/nlwa-takes-next-step-towards-carbon-capture-in-edmonton/>

6. PROJECT DELIVERY SUMMARY

- 6.1. This section summarises progress in delivering the new facilities that comprise the North London Heat and Power Project which are:
- the Energy Recovery Facility (ERF),
 - the Resource Recovery Facility (RRF) and
 - EcoPark House.

The overall summary below highlighting progress on each and other supporting works is followed by a short project report on each facility.

- 6.2. Acciona are working in accordance with their ERF schedule and have taken advantage of their early access to the eastern portion of the site, making good progress in preparation for the start of foundation piling. They have so far removed c30,000 tonnes of excess material off site.
- 6.3. Acciona are due to take full possession of the cleared ERF site in June 2023 which requires LEL to fully vacate and handover the Temporary Bulky Waste Facility (TBWF) in February to allow time for DSM Demolition to complete site clearance. In order to adhere to this date, two actions are required; i) the move to process offsite the waste which is currently handled in the TBWF for a short period until the RRF is ready to start operations in April 2023, and ii) the construction of a temporary ash bay to provide LEL with continued functionality once the

TBWF is demolished. Plans have been developed and agreed with LEL for both these initiatives. This enables the ERF construction to maintain its schedule.

- 6.4. The RRF continues to take shape with the formation of the roadways around the building including civil works for the new weighbridges. This will enable site traffic in the EcoPark to resume use of the Southern Entrance and Western Road in due course. The reopening of the Southern Entrance for waste operations enables the Northern Entrance to be dedicated to construction traffic for the ERF. Testing and commissioning of individual RRF building systems has continued to make good progress towards the start of LEL's operations on the 10th of March 2023.
- 6.5. Building on the commitment to reduce carbon across the programme, the c2000 solar power panels have been installed on the RRF roof to provide power to the facility. Additionally, Taylor Woodrow have won a Green Apple Award for their use of ultra-low carbon concrete introducing a new cement replacement product to the UK.
- 6.6. In a positive step toward increasing the future efficiency of waste management operations across the EcoPark, a consistent method of asset identification and tagging for all new equipment across the ERF and RRF facilities has been agreed and validated to meet the Authorities and LEL's requirements.
- 6.7. The project has been able to take advantage of the annual weather window by seeding the roof on EcoPark House in time for growth next year.
- 6.8. The Western Road Utilities works that link the RRF with the ERF is in procurement through the Minor Works Framework so that the work can be carried out next year to suit the overall NLHPP phasing plan.
- 6.9. The management of the Laydown Area sited adjacent to the EcoPark and its welfare and office facilities has been transferred to Acciona whose operations are expanding. Taylor Woodrow's team remain based in the Laydown Area until the completion of their works in the spring of 2023. Both Acciona and Taylor Woodrow have collaborated effectively in the arrangement to share the area.
- 6.10. Further details of progress of each major element of the project are provided in the following tables.

Energy Recovery Facility (ERF)

Summary

The projected completion dates including issuing of the takeover certificate remain unchanged and in 2026. Following successful handover of the Northern area of site, Acciona has taken over the Laydown Area as Principal Contractor on the 3rd of October as planned. Acciona are making progress on site but are not evidencing sufficient planning of the management of their work which is evident from the lateness or absence of submission of management documents. The submission of engineering documents is improving. The early development of the detailed engineering programme between Acciona and the NHLPP is ensuring the timely agreement of critical design packages to support Acciona's procurement process.



Drone View of the Galldris Bund Removal Works

Successes and Milestones

Galldris, Acciona's earthworks contractor has commenced the removal of the 30,000 m³ bund at the eastern side of the site. The number of "muck away" trucks is peaking at 70 per day and there has been no reported impact to LEL's waste operation. This achievement is a testament to the positive effect that Working Groups are having that across NLHPP, which includes the Site Working Group chaired by LEL. Acciona have now awarded their piling contract and have commenced detailed planning around their test piling activities. The piling risk assessment has also been approved by the LBE and Environmental Agency. This approval was a key condition of the DCO and was required before the piling works could commence. These are both critical milestones, that enable the start of piling works around the ERF bunker area in October. LBE has also approved plans for a covered walkway between the Laydown Area and Acciona construction site and a new and pedestrian bridge over the River Lee Navigation.

Look Ahead

Galldris will continue to excavate the bund and export "muck" off-site.

Acciona's piling subcontractor Van Elle will begin their mobilisation of their piling rigs in readiness for the commencement of test and permanent piling works around the bunker area. The NLHPP Team will continue to closely monitor the interface between operational and construction traffic within the vicinity of the Temporary Bulky Waste Facility and ERF worksite.

Acciona have placed the order for the steam turbine package, which is a critical procurement within Acciona's construction programme.

Resource Recovery Facility (RRF)

Summary

The RRF is estimated to receive first waste by the 10th of March 2023 with full operation by the end of April 2023. 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 started in September and will continue until it goes into service.



RFPF – Cladding to Crows Nest



Canopy between RRF & RRC

Successes and Milestones

Floor screeding to the main tipping hall has been completed in the period allowing high level service installation to commence. The steel frame to the workshop and external IVOS compound screen has been installed, following delivery & installation of the final 2 adsorbers. Roller shutter door installation has commenced. At roof level installation of the PV panels continues to make good progress, with completion due in late October.

The facility will be energised from the current EfW facility which will enable its mechanical and electrical systems to be tested, commissioned, and operated. High level services including sprinkler systems and lighting along with works to the HV plantrooms continue to be progressed to enable energisation of same by late October.

The commissioning plan and Transition programme 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 by 10th of March 2023.

Look Ahead

The recent progress with the completion of the building exterior and mechanical and electrical systems means that there is confidence in HV energisation to enable the commissioning processes in October. 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 have been completed over the summer to create a new landmark in the area.

EcoPark House

Summary

The main 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. Mechanical & Electrical services installation has commenced and is progressing well

The building will be independently powered “off-grid” and the equipment to enable this innovative solution is on order.



Electric Excavator used at EcoPark



EcoPark House view from the River Lee Navigation

Successes and Milestones

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

Internally, works to the electrical, mechanical and ventilation systems have commenced.

Ground source heat pumps and the tesla batteries for the “off-grid” power supply have been placed on order and installation of the 5 x 150m depth boreholes for the heat pumps have been completed.

Externally on the roof planting to the green roof has commenced.

The green roof has been seeded.

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

Look Ahead

The building construction internally will be completed by late 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 support the commissioning process.

Focus moves towards what is needed to open EcoPark House and how it will be best utilised by the Community. Engagement with stakeholders will be critical to this success.

7. HEALTH, SAFETY AND WELLBEING

- 7.1. The proactive measures and good practices in place across the NLHPP programme continue to support the good standards of HSW performance across the NLHPP programme managed, coordinated, and controlled.
- 7.2. 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 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.
- 7.3. The AFR for Lost Time Injury (LTI) is 0.00. The LTI performance metric mirrors the RIDDOR description in 6.2 but uses a three day recordable injury baseline.
- 7.4. Acciona the appointed contractor for the ERF have been present on site since February 2022. There has been ongoing collaboration with Acciona since to ensure that HSW objectives, compliance, process, and procedures are prepared for the safe start of construction works. Works which commenced in the period have been monitored and show a good level of HSW standards being set by Acciona in the early works. Safety culture will be an area of focus as construction works begin to increase.



- 7.5. **HSW Performance Indicators**
- 7.6. **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 September 2022 period averages 98% reflective of 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.
- 7.7. **Safety Observations:** The programme encourages all staff to report observations to remain vigilant and proactive in managing safety. The total number of observations remain high with a total of 96 recorded for September, a slight decrease from 114 the previous month due to a reduction of workforce associated with completion of Northern Area Clearance Zones 3 & 4, coupled with a programmed ramping up of the ERF works commencement. Within these figures 28 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.

- 7.8. **Safe Start Briefings:** The number of prestart briefings delivered daily to the workforce remain consistently high and are 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.
- 7.9. **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.
- 7.10. **Wellbeing Matrix:** Over the past year, alongside industry experts and the NLHPP supply chain partners, the wellbeing team have designed and tested a new innovative Wellbeing Matrix. The Wellbeing Matrix is a tool to measure and support the NLHPP delivery partners in achieving a successful programme for all those involved on the project. It is a robust, evidence-based self-assessment tool which will provide knowledge and a baseline to the supply chain partners regarding their current wellbeing status. The tool is intended to identify realistic changes the organisation can make to support their workforce and improve their wellbeing provision.

8. ENVIRONMENT AND SUSTAINABILITY

- 8.1. The project continues to focus on environmental and sustainability considerations, working to successfully manage environmental risks and identify opportunities for enhancing sustainability performance. Acciona started works on site in September and as is often the case with new contractors, there is a lag in receiving environmental data against project KPIs. This information will be provided within next month's report. The data presented in this section relates to Taylor Woodrow's activities on the EcoPark South component of the programme.
- 8.2. There has been continued good performance against Environment and Sustainability (E&S)



KPIs, with minimum targets either met or exceeded, as shown below.

- 8.3. **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. Overall, 29 environmental observations were raised across the project (16 positive and 13 negative).

- 8.4. **Sustainable Materials:** 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.
- 8.5. **Environmental Site Inspections:** Surveillance visits have identified that in general, environmental items were being well managed in line with good practice. This month's environmental site inspection focussed on land contamination and observed good site management. Areas for improvement were identified in relation to correct skip use and ensuring lights are switched off during the day. Actions have already been implemented in response to these observations. Positive observations were raised recognising correct storage of oil and diesel, and spill kit management.
- 8.6. **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 currently achieved this rating and are targeting Excellent. The Energy Recovery facility is working towards this commitment.
- 8.7. **Sustainability Innovations, Opportunities and Best Practices:** Taylor Woodrow's subcontractor are using a fully electric excavator to support foundation installation for the EcoPark House timber decking. This has reduced carbon emissions compared with a diesel excavator, protected air quality and reduced risk of pollution associated with works close to the River Lee. Taylor Woodrow have also used recycled aggregates to stabilise soils to enable foundations for roads and weighbridges. The original design proposed use of lime to stabilise the soils, but recycled aggregates reduce carbon emissions and use of natural resources, promoting sustainability.