Riverside Energy Park, Belvedere
In the London Borough of Bexley

Pre-application consultation for proposed Development Consent Order

<table>
<thead>
<tr>
<th>Statutory consultation response</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>The proposal</th>
</tr>
</thead>
<tbody>
<tr>
<td>An integrated multi-technology energy generation park including an Energy Recovery Facility, Anaerobic Digestion Facility, Solar Panels, Battery Storage and electrical connection route. As the Riverside Energy Park would have an electricity generating capacity over 50MW, it is classified as a Nationally Significant Infrastructure Project under section 14(1)(a) and section 15(2) of the Planning Act 2008.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The applicant</th>
</tr>
</thead>
<tbody>
<tr>
<td>The applicant is Cory Environmental Holdings Limited.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Principle of development</th>
</tr>
</thead>
<tbody>
<tr>
<td>The primary energy generating element of the proposed Riverside Energy Park is the Energy Recovery Facility, an energy from waste plant which produces energy through the incineration of waste. The ERF cannot be supported as it does not contribute to the circular economy and will likely suppress efforts to achieve recycling targets, as set out in draft London Plan SI7, London Plan Policy 5.3 and the Mayor’s London Environment Strategy (LES). The applicant has not demonstrated that there is any demand for the proposed facility. Further, if London is to meet its reduction and recycling targets, there will be 153,000 tonnes of surplus EfW capacity by 2030; therefore, there is no need for additional EfW plants to process London’s waste. It is considered that the proposals would prejudice the Government’s core objective of sustainable development with regard to waste as set out in the revised NPPF. Approving the ERF would also be detrimental to the Government’s approach for meeting new ambitious recycling targets agreed to under the EU Circular Economy Policy package. Whilst the development is described as ‘CHP-ready’, and given the existing energy from waste facility has not yet utilised heat off-take after 15 years of operation, it is not considered that the proposed ERF could meet the Carbon Intensity Floor, as required by draft London Plan SI8 and the LES, or could demonstrate demand for the heat produced. Furthermore, the incineration of waste would have unacceptable air quality impacts on existing residents and on future residents in the London Riverside and Bexley Riverside Opportunity Areas. The anaerobic digestion facility, battery storage and PV panels are supported in principle as they allow the generation and storage of entirely renewable energy.</td>
</tr>
</tbody>
</table>
Context

The applicant, Cory Environmental Holdings Limited (hereafter, ‘the applicant’), is applying for a Development Consent Order under the Planning Act 2008 for the development of Riverside Energy Park. A Development Consent Order is required where a scheme is considered to be a Nationally Significant Infrastructure Project (NSIP). The NSIP threshold for energy generating facilities is 50 megawatts. The proposed facility will have an electrical output of greater than 96 megawatts (MW) and as such exceeds the threshold to qualify an NSIP. NSIP applications are assessed by the Planning Inspectorate, on behalf of the Secretary of State, who will issue a decision on the application.

On 12 June 2018, the Mayor of London received documents from Peter Brett Associates, on behalf of Cory Environmental Holdings Limited (hereafter ‘the applicant’), notifying him of their intention to submit a Development Consent Order application for a Nationally Significant Infrastructure Project, under the Planning Act 2008, and asking him for his comments as a statutory consultee, in advance of the formal application to the Planning Inspectorate. This report sets out information for the Mayor’s consideration in deciding what form the consultation response should take.

Section 42 of the Planning Act provides details of the Duty to consult, stating that “the applicant must consult the following about the proposed application –

a) any persons as may be prescribed,

aa) The Marine Management Organisation, in any case where the proposed development would affect, or would be likely to affect, any of the areas specified in subsection (2)

b) each local authority that is within section 43,

c) the Greater London Authority if the land is in Greater London, and

d) each person who is within of or more of the categories set out in section 44”.

Section 49 of the Act requires the applicant to have regard to any response received during consultation. Once an application has been submitted to and accepted by the Inspectorate the applicant must consult the GLA again (Section 56 (2) (c) of the Act). The GLA can then make representations to the Inspectorate. The Inspectorate is also required to invite the GLA to submit a local impact report (Section 60 (2) (b) of the Act). If the GLA makes representations it may request to appear at a hearing to examine the application.

The Mayor of London’s statement on this case will be made available on the GLA website www.london.gov.uk.

Site description

The site of the proposed Riverside Energy Park is located adjacent to the existing Riverside Resource Recovery (RRR), which is also owned and operated by the applicant. The site is bound to the north by the River Thames, industrial land and Norman Road to the south, industrial buildings to the east and, beyond the immediately adjacent Crossness Nature Reserve, lies the Crossness Sewage Treatment Works.
The site lies within Strategic Industrial Land and is served by a safeguarded wharf, known as Borax Wharf / Manor Wharf. The adjacent Crossness Nature Reserve is designated Metropolitan Open Land.

Figure 1 – Google aerial view of the site, with existing Resource Recovery Facility to the east.  
*Source: Google Maps*

Figure 2 – Illustrative image, showing existing RRR (to east) and proposed REP (to west).  
*Source: Cory Riverside Energy*
The site itself is comprised of the existing RRF, an access ramp connecting the wharf to Norman Road, temporary containers, hardstanding and scrub land. In addition, planning permission was granted in 2015 for a Data Centre on land to the west of Norman Road, just south of the existing RFF (LPA reference: 15/02926/OUTM). Whilst this has not been constructed, it remains extant. Figure 1 illustrates the existing site. It is proposed to locate the Energy Park on the west of the site, in place of the temporary containers and hardstanding.

The site is located within the Belvedere Industrial area and is bounded to the north by the River Thames and to the south by the A2016, Picardy Manorway. The A2016, Picardy Manorway, forms part of the Strategic Road Network (SRN) for which TfL has a duty under the Traffic Management Act 2004 to ensure that any development does not have an adverse impact on its operation. The nearest section of the Transport for London Road Network (TLRN) is the A2 Rochester Way, located over 5km south from the site.

Three bus routes (180, 401, 601), providing services into Lewisham, Thamesmead and Bexleyheath, serve the area with bus stops located within 150 metres of the Norman Road / Picardy Manorway junction. Belvedere rail station, on the Dartford to London line, is located approximately 1 kilometre to the south of the site on Station Road. Abbey Wood station is located approximately 3.5 kilometre to the southwest of the site. The site currently records a variation in Public Transport Accessibility Level (PTAL), with the southeast of the site recording a PTAL 2; however, on average the majority of the site records a very poor PTAL of 0 (on a scale of 1-6, where 6 is excellent).

Details of the proposal

The applicant is seeking a Development Consent Order (DCO) from the Secretary of State as the scheme is considered a Nationally Significant Infrastructure Project. The proposed development would be known as Riverside Energy Park (“REP”) and is comprised of the following:

- Energy Recovery Facility, which would process non-recyclable commercial and industrial waste and would have the potential to accept municipal solid waste, to generate electricity through combustion. It is proposed that the ERF would have a maximum throughput of 805,920 tonnes per annum (t/pa), with the nominal throughput being 655,000 t/pa.
- Anaerobic Digestion Facility, which would generate biogas through the degradation of food and green municipal waste by natural organisms. It would also create a digestate bi-product, which could be used as agricultural fertiliser, subject to suitable treatment. It is anticipated that this element of the scheme would have a throughput of 40,000 t/pa.
- Solar Photovoltaic Installation on the roof of the main Riverside Energy Park building, which would generate electricity from solar radiation.
- Battery Storage, which would store and supply additional power to the offsite distribution network at times of peak electrical demand.

The REP would be Combined Heat and Power ready, with enabling infrastructure for it to provide a potential district heat pipe connection in the future. This would able to export up to 30 thermal megawatts (MWe) to local offsite consumers, which could serve approximately 10,500 homes and businesses.

In addition, it is proposed to connect REP to the existing electrical distribution network at Littlebrook, to the south east of the site. The electrical connection would be laid beneath the existing road network, except for where it connects with the REP itself and at the point of connection into the existing substation at Littlebrook.
During construction two temporary construction compounds are required: one for the construction of the REP site and would be located south of the REP site, and would be used as a laydown area, including a delivery reception; and a second to serve the construction of the cable route.

**Case history**

GLA officers provided initial pre-application advice on a proposal for the redevelopment of the site on 5 June 2018 at a meeting, with an additional site visit undertaken on 20 June 2018. The advice given primarily related to the land use designations. Given the tight timescales, it was agreed that the consultation response would follow instead of a written pre-application response.

The applicant also met with members of the GLA’s Environment Team on 23 November 2017 to brief officers on the project. The applicant was advised that the proposed facility would conflict with the Mayor’s waste policies.

**Strategic planning issues and relevant policies and guidance**

For the purposes of Section 38(6) of the Planning and Compulsory Purchase Act 2004, the development plan in force for the area comprises Bexley Core Strategy (2012), Saved Policies of the Unitary Development Plan (2007) and the 2016 London Plan (Consolidated with Alterations since 2011). The NPPF states that planning applications must be determined in accordance with the development plan in each LPA. The London Plan legally forms part of each London Borough’s development plan. It is, however, acknowledged that Development Consent Orders are determined under the Planning Act 2008, using National Policy Statements but regard should be had to the development plan and the policies and evidence contained within.

The following are relevant material considerations:

- National Policy Statement for Energy (2011);
- National Policy Statement for Renewable Energy (2011);
- National Planning Policy for Waste (2014);
- Revised National Planning Policy Framework (2018);
- National Planning Practice Guidance;
- Draft London Plan (consultation draft, December 2017).

The relevant strategic issues and corresponding policies are as follows:

- Air Quality  
  London Plan; London Environment Strategy.
- Energy  
  London Plan; London Environment Strategy.
- Sustainable development  
  London Plan; Sustainable Design and Construction SPG; London Environment Strategy.
- Transport  
  London Plan; the Mayor’s Transport Strategy; Land for Industry and Transport SPG.
- Urban Design  
  London Plan
- Waste  
  London Plan.
Scope of report

As noted in the context section, this report presents the Mayor’s initial view on the proposed Riverside Energy Park, noting that the application is at the pre-application consultation stage. The Mayor will submit further representations once the application has been accepted by the Planning Inspectorate, in accordance with the DCO process.

Principle of proposed development

The ERF, an energy from waste plant, is the primary element of the proposed REP, with the anaerobic digester, battery storage and potential CHP being secondary in terms of energy generation, storage and transfer. The principle of an additional energy from waste (EfW) plant is not supported by the Mayor as it fails to accord with London Plan and draft London Plan policies on energy generation, energy from waste, the circular economy and air quality.

It is acknowledged that the Planning Inspectorate will have regard to the National Policy Statements. In line with the National Policy Statement for Energy, National Policy Statement for Renewable Energy, and the National Planning Policy for Waste (NPPW), it is considered that the proposals would prejudice both London’s reduction and recycling targets as well as the Government’s core objectives for sustainable development for waste, as set out in the revised NPPF\(^1\).

Specifically, NPPW sets out what waste planning authorities should consider in determining waste planning applications\(^2\):

- only expect applicants to demonstrate the quantitative or market need for new or enhanced waste management facilities where proposals are not consistent with an up-to-date Local Plan. In such cases, waste planning authorities should consider the extent to which the capacity of existing operational facilities would satisfy any identified need;
- recognise that proposals for waste management facilities such as incinerators that cut across up-to-date Local Plans reflecting the vision and aspiration of local communities can give rise to justifiable frustration, and expect applicants to demonstrate that waste disposal facilities not in line with the Local Plan, will not undermine the objectives of the Local Plan through prejudicing movement up the waste hierarchy; and
- consider the likely impact on the local environment and on amenity against the criteria set out in Appendix B (Locational criteria) of the NPPW and the locational implications of any advice on health from the relevant health bodies. Waste planning authorities should avoid carrying out their own detailed assessment of epidemiological and other health studies;


The Government has also indicated that despite leaving the EU, it will agree the EU Circular Economy Policy package adopted by the European Council in May this year³ and transpose into UK law at a later date. The CE package sets ambitious waste targets for EU Member States including 65% municipal waste recycling by 2035, 70% recycling for packaging waste by 2030, and that separate collections for biowaste (food waste) are in place by December 2023. Approving the ERF would also be detrimental to the Government’s approach for meeting these new targets.

**Energy from waste**

**Mayoral policy context**

In terms of Mayoral policy, new waste management sites will be assessed against various criteria, in accordance with draft London Plan Policy SI8 and London Plan Policy 5.17, including: locational suitability; nature of the activity; proximity to source of waste; achieving a positive carbon outcome, where the demonstrable steps of this include a commitment to source truly residual waste (non-recyclable waste), a commitment to delivering the necessary means for heat supply infrastructure to meet the minimum CO2 standard known as the ‘carbon intensity floor’ or CIF; the impact on surrounding amenity, including air quality, odour and noise; environmental impact of transportation, with use of river and rail networks supported; and social benefits.

The draft London Plan introduces a policy, Policy SI7, on the circular economy, which aims to keep materials in their highest value for as long as possible, resulting in minimal levels of residual waste; this builds on London Plan Policy 5.3 which seeks to maximise reuse and recycling. Draft London Plan Policy SI7 also seeks to meet the Mayor’s recycling targets: recycling 65% of municipal waste by 2030 and 95% of all construction, demolition and excavation waste by 2020.

**Need for additional energy from waste capacity in London**

Energy from waste (EfW) is the least desirable form of waste disposal after landfill, as it destroys materials and releases greenhouses gases. Within the waste hierarchy, as noted in the Mayor’s London Environment Strategy and within the Government’s 2011 guidance note on the waste hierarchy⁴, the primary aim is to ‘prevent’ (using fewer materials and keeping products in their highest value for longer), followed by ‘preparing for re-use’ and ‘recycling’ (refurbishing materials for re-use as a whole or through turning waste into a new product). It should be noted that commercial waste can also be considered municipal waste, if similar in composition, even if it is not collected by a local authority. Commercial waste can, therefore, also contribute towards recycling targets.

Whilst the proposed ERF may reduce the export of waste to landfill, it does not contribute to the transition to the circular economy, in accordance with draft London Plan Policy SI7, as it does not promote the retention of materials in their highest value, as per the waste hierarchy. In line with the waste hierarchy, commercial and industrial waste must be kept in its highest value for as long as possible and then considered for recycling, before it is would be appropriate to dispose of this waste via incineration. Further, with regard to black bag rubbish, whilst much is considered to be non-recyclable, many recyclable products are incorrectly disposed of in black bags and many local authorities still do not provide separate food waste bins; as such, EfW plants also burn recyclables or green waste that could contribute to the circular economy and recycling targets in London.

---

⁴ See https://www.gov.uk/government/publications/guidance-on-applying-the-waste-hierarchy
Modelling used to develop the Mayor’s London Environment Strategy and inform the draft London Plan showed that achieving the Mayor’s reduction and recycling targets will mean that no new EfW facilities (defined as incineration, gasification and pyrolysis) in London will be needed, with an expected 153,000 tonnes surplus EfW capacity by 2030. The new facility, together with the neighbouring RRR incinerator facility would result in approximately 1.5 million tonnes of waste being burned on the site (670,000 t/pa in the existing facility and up to 805,000 t/pa in the proposed facility) and increase London’s incineration capacity to nearly three million tonnes (representing nearly 50 per cent of London’s total municipal waste arisings). Simultaneously, London is expected to need, or need access to, an additional 1.4 million tonnes of recycling infrastructure (in addition to existing capacity) to meet the self-sufficiency target and recycling targets, set out in London Plan 5.17, draft London Plan SI8 and the LES. The Mayor’s net self-sufficiency target should not encourage the import of waste from other regions, but should encourage less of London’s waste being exported in order to preserve the benefits for London and Londoners.

The current municipal recycling rate is 41%, where considerable improvement is needed to reach the Mayor’s 65% target by 2030. London and the UK’s local authority collected waste recycling rate has stalled over the past five years, whilst its incineration rate has doubled (from 900,000 tonnes to 2 million tonnes in London, and from 4.8 million tonnes to 9 million tonnes nationally). Additional thermal EfW capacity would likely stifle growth in recycling rates, because they require large volumes of waste to treat in order to be cost effective and to operate efficiently. Whilst thermal EfW plants deliver energy generation benefits, they do so by destroying waste materials along with their intrinsic value, prejudicing movement up the waste hierarchy, and creating harmful air pollutants and greenhouse gases. Approving the facility will have a detrimental impact on London and the UK achieving its recycling targets, and also counters measures that the Government will need to take for the UK to meet ambitious recycling targets under the EU Circular Economy Policy Package.

The applicant has not identified a clear need for the EfW facility, either locally or nationally, or identified where the waste will come from, noting only that waste will be “sourced from the waste market in London, and the surrounding area, once operational”. It is considered, therefore, that the proposals will artificially increase demand, through creating additional speculative capacity. At the same time, expanding the capacity for London’s incineration will likely suppress recycling rates, as waste that could otherwise be recycled may be redirected to the incinerators and thereby prejudice movement up the waste hierarchy. In addition, without an identification of the key sources, it is not possible to ascertain whether the waste could be used higher up the waste hierarchy, as required by paragraph 3.4.3 of the National Policy Statement for Energy.

Impact on locality

The applicant stresses the social economic benefits of the scheme, in accordance with the requirements of London Plan Policy 5.17 and draft London Plan Policy SI8, stating that, once operational, the development could create 75 permanent jobs; however, it is not clear whether these are additional jobs or whether the two plants would share staff. It is also argued that the REP operation would provide approximately £16.87 million and £24.9 million per annum to the local and national economies respectively; however, financial and employment benefits could also be achieved through the creation of a waste plant that aligns with Mayoral policies on the circular economy and recycling. The economics of the EfW plant further suggests that the provision of the facility would financially disincentivises recycling and reuse of materials, due to the length of contracts between LPAs and energy providers.
As discussed further below, it is considered the ERF could have an adverse impact on local air quality, primarily within Rainham, on the north side of the river, due to the direction of prevailing winds, and could limit the success of London’s Opportunity Areas. Further, the air quality report already represents the ‘best case scenario’, as such, it is not considered that there is scope for any additional mitigation measures to limit or reduce these impacts. GLA officers will thoroughly investigate air quality once the full technical details are available at the next stages of consultation and examination. The air quality impact is considered to be contrary to draft London Plan Policy SI8 and London Plan Policy 5.17, which specifically discuss energy from waste.

Carbon intensity floor

The Mayor expects all of London’s EfW facilities to only manage truly non-recyclable waste, and maximise the use of both the heat and power generated. To support this, and in addition to developing the EPS, a minimum carbon emissions performance standard has been set, known as the Carbon Intensity Floor (CIF). The CIF was first introduced in 2011 and was developed to help decarbonise London’s energy supply by encouraging clean, efficient and local energy generation from London’s non-recycled waste. The CIF works to ensure that any energy generated from London’s municipal waste is no more polluting in carbon terms than the source of energy generation it displaces.

Waste going to EfW plants often contains large amounts of recyclable materials that are high carbon and high value, as noted above. Reducing the amount of high carbon materials particularly plastics and metals going to EfW plants will deliver GHG savings, and reduce the reliance on fossil fuels. This will drive change and investment within boroughs and with facility operators, to ensure that truly residual waste is used to generate both heat and power for the benefit of Londoners.

Notwithstanding the Mayor’s view that London does not need further EfW plants, if the Secretary of State grants permission for the REP, a requirement to meet the CIF from the start of the proposed plant’s operation, in addition to monitoring, should be secured within a Section 106 agreement.

Any new EfW facility must meet the minimum greenhouse gas performance from ‘day 1’ of operation. As set out in London Plan Policy 5.16 and draft London Plan Policy SI8. The CIF is set at 400grams of CO2 equivalent per kilowatt hour of electricity produced. In order to achieve this, the facility must commit to implementing all demonstrable steps as a minimum, as set out in paragraph 9.8.13 of the draft London Plan, namely:

- committing to source truly residual waste. The use of a pre-treatment facility may be necessary to recover all materials for recycling before treatment via the REP;
- commit to invest in and delivery the necessary means for infrastructure via the CIF, this should include investment in the development of a heat distribution network beyond the site boundary. The heat network should be installed and operational from first operation of the new facility; and
- an agreed timeline for the implementation of the proposed measures.
Heat offtake and CHP-readiness

The 2013 Department of Environment and Rural Affairs (DEFRA) publication on the incineration of municipal waste identified the key issues affecting energy recovery from incinerators. While electricity can easily be supplied into the national grid, once an appropriate connection is established, heat will need to be used locally and will be dependent on identifying and establishing a local need by using a district heating system for buildings/housing and/or supply of heat to a factory for industrial use. To date this has required significant public sector involvement to address.

The difficulty in establishing district heating in the UK was attributed to not having a substantial history in the use of district heating systems, having relied on indigenous fossil fuel reserves, unlike in Scandinavian countries where it is common place to use locally available resources such as wood and peat. With increasing energy costs and the need to move away from the use of fossil fuels, the DEFRA report stated that district heating may become attractive in the UK, and that the Government (at the time of publication) had incentivised the use of heat through the development of the Renewable Heat Incentive (RHI) and Renewables Obligation Certificates (ROCs), where a good quality CHP is in place.

The 2009 Department of Energy and Climate Change (DECC) paper on the potential of district heating networks identified three key barriers, economic, project costs and institutional issues, to the deployment of district heating in the UK:

- The key economic barrier was the cost of capital (rate of return) required to invest in the heat network and its connections and that this was a core driver of the cost competitiveness of any scheme that reflected the risk (actual or perceived) of investing in the project.

- The project cost drivers are structural and relate to the mix of the housing stock in the UK, which increases the unit cost of building a network compared to, for example, Finland, where there are a higher proportion of flats and apartments, which increases the heat density and makes the district heating network more cost effective.

- Institutional issues are based on the example of European countries that have successfully developed extensive DHNs which strongly suggested that any drive to deploy district heating must be led by the public sector. Otherwise potential private sector investors in heat networks will be looking for underwriting of the identified project risks by the public sector.

The two long-established incinerators in London, the Edmonton EcoPark in Enfield and the South East London Combined Heat and Power (SELCHP) in Bermondsey, operated in electricity-only mode for many years. Edmonton is now in the advanced stages of constructing a heat off-take as a result of the local borough’s response to the Mayor’s Upper Lea Valley Opportunity Area Planning Framework, Mayor’s previous Climate Change Strategy and development support. Owned by Veolia, the SELCHP heat off-take was finally established after some 15 years and was led by Southwark Council (and now serving 2,500 homes). Southwark Council’s waste Private Finance Initiative contract with Veolia fell short of the carbon reductions required by the waste policy targets. Southwark Council required Veolia to deliver the carbon savings by supplying heat to Southwark housing from SELCHP to displace the use of gas.

A recent example of public sector involvement is the new Viridor incinerator, which is under construction at Beddington in the London Borough of Sutton. The plant was consented under the previous Mayoral administration. Both GLA planners and the Environment team worked closely with Sutton to ensure that the plant was procured with an efficient heat off-take and that Viridor worked closely with Sutton Council to establish the heat supply arrangements, make financial contributions to associated initiatives and form a heat network working group. The GLA provided Sutton Council with development support for the first phase of the heat network that has been procured, with the first connections to be made in the next year. The GLA is currently supporting the development of the second phase of the heat network.

Furthermore, as set out in a 2007 Department of Energy & Climate Change note, which provides guidance on Section 36 of the Electricity Act, and also set out in National Policy Statement for Energy, applicants are advised to engage with planning authorities to ensure that existing and future heat customers are identified as well as contact DEFRA’s Good Quality CHP team to ensure that they have fully explored incentives for CHP and the economic benefits of Good Quality CHP.

The applicant has not provided sufficient detail on the heat off-take potential of the proposed REP, noting only that it is CHP-ready; this is particularly important in the context of the existing EfW plant which is also equipped with heat off-take as a planning requirement, as there is no heat network at present which transfers this to homes. The GLA is currently supporting Bexley Council, Peabody and the applicant to study the feasibility of supplying heat from the existing RRR to the Thamesmead and Abbey Wood Opportunity Area. As such, given experience of previous schemes throughout London, the applicant’s proposed EfW plant would not establish a heat off-take without the involvement of the public sector, and without a heat network, it would be unlikely to achieve the CIF. For the avoidance of doubt, an EfW facility that generates electricity only is not acceptable; it must also capture heat.

Further, given the untapped capacity of the neighbouring EfW plant and the number of years that it has been active for, it would be many years, if not decades, before the local heat demand exceeded the existing supply capacity. The site lies in close proximity to the Thamesmead & Abbey Wood Opportunity Area and the Bexley Riverside Opportunity Area, where the Mayor is seeking a minimum of 6,000 and 8,000 new homes respectively. Homes have begun to be constructed in the Thamesmead OA, whereas Bexley Riverside OA is approximately 5 years behind this. Whilst this evidences that significant growth is projected in the area, the existing RRR is expected to be able to provide heat to in excess of 26,000 homes. Given the potential heat off-take capacity of the existing RRR, it is not considered that there is currently demand for the heat from the proposed ERF and there will not be for a significant period of time. The proposal would therefore not accord with the requirements of the NPS for Energy, relating to identifying existing and future heat customers.

Finally, proposals must be consistent with the Government’s energy policy and its goals of reducing carbon emissions, maintaining the reliability of energy supply and promoting competitive markets as well as ensuring that every home is adequately and affordably heated.
**Air quality**

The London Plan, draft London Plan and London Environment Strategy (LES) do not differentiate between different types of emissions, as the impact upon human health is dependent on the content rather than the source of emissions. London Plan Policy 7.14 and draft London Plan Policy SI1 seek to improve air quality across London and limit exposure to poor air. Draft London Plan Policy SI1 provides further details, stating that development proposals should not: lead to further deterioration of existing poor air quality; create new areas that exceed air quality limits, or delay the date at which compliance will be achieved in areas that are currently in exceedance of legal limits; reduce air quality benefits that result from the Mayor’s or borough’s activities to improve air quality; or create unacceptable risk of high levels of exposure to poor air quality.

For energy-from-waste sites, however, there are additional pollutants to be considered compared to a normal gas-fired energy centre: incineration of solid waste can lead to emissions of toxic heavy metals, dioxins, furans and other substances that are detrimental to human health and biodiversity.

Prior to the consultation period, the applicant received written comments GLA officers regarding air quality, the scope and the content of the assessment. The PEIR has not incorporated GLA officers’ recommendations into the assessment; specifically, it does not fully assess the cumulative impacts of both traffic and operational emissions, nor was it accepted that the requirement to restrict CHP emissions would apply to their development.

The emissions from the ERF have been modelled based on the expected requirements of the current draft European Best Available Technique Reference (BREF). BREF notes, and in particular the emerging BREF notes, set out the best that can be achieved in practice in terms of emissions, including using all available mitigation and abatement measures. Given the use of the BREF notes, the air quality assessment within the PEIR is optimistic and represents the ‘best case scenario’, and it should not be anticipated that the emissions could be further improved in order to make the plant acceptable.

The site’s location benefits from prevailing wind, generally blowing towards the river, meaning that the most significant impacts occur over the water; however, this does not mean that there are no impacts on existing receptors. The impact is particularly clear north of the river in Rainham, in the London Borough of Havering.

Nitrogen Dioxide impacts from the plant are described within the PEIR as negligible at all receptors that were considered; however, the isopleth maps appear to show that there would be at least a risk of more significant impacts on Rainham town centre, including a potential risk to compliance with legal limits. The overarching NPS for Energy states that in the event that a project will lead to non-compliance with a statutory limit the IPC should refuse consent. More concerning than Nitrogen Dioxide are the Arsenic and Nickle impacts, which are shown to be “minor adverse” at a number of explicitly modelled receptors. Again, the isopleth maps in the PEIR showed that these impacts could be relatively widespread across Rainham. In addition to these impacts on human receptors, the assessment also shows non-negligible impacts of biodiversity receptors at Crossness Nature Reserve, as well as Ingreborn and Inner Thames Marches. The NPS for Renewable Energy states that these particulates should be a consideration when the Planning Inspectorate assesses the application, and the overarching NPS for Energy also indicates that air quality considerations will also be important where substantial changes in air quality levels are expected, even if this does not lead to any breaches of national air quality limits.
The air quality impact does not just impact existing residents. The site lies within the Bexley Riverside Opportunity Area, near Thamesmead & Abbey Wood Opportunity Area and across the river from the London Riverside Opportunity Area. The impacts of the proposed incinerator would, therefore, likely impact the future delivery of housing growth in these areas, and, as such, would run contrary to London Plan Policy 2.13 and draft London Plan SD1. The development does not comply with the emphasis on ‘good growth’ which is central to the draft London Plan Policy. One such good growth policy, Policy GG3, states that development in London should improve Londoners’ health and reduce health inequities. The ERF facility is clearly contrary to these policies.

In addition to the direct impacts of combustion there are potential impacts from road and river transport. Although the PIER asserts that these will be acceptable a more detailed assessment would be expected in the EIA to accompany any full application.

The applicant has not demonstrated that the development would be acceptable in air quality terms. The modelling is optimistic in terms of emissions and GLA officers do not consider that the proposals could be made acceptable through additional mitigation. The development and the air quality assessment does not, and cannot, comply with London Plan Policy 7.14 and draft London Plan Policy SI1 and SI3 or NPS requirements.

In order to show that the development could be acceptable the applicant would need to show:

- That there is no risk to compliance with legal air quality limits (noting that all possible abatement technologies have already been assumed); and
- That impacts from road and river transport are acceptable.

Although the Renewable Energy NPS suggests that the health impacts of pollutants such as heavy metals can be ignored where Waste Incineration Directive emission limits are met, we would also recommend that, given the sensitivity of the receptors and the scale of the predicted impact, the applicant also has a moral duty to demonstrate the impact of these emissions on the health of nearby residents.

Given the size of the ERF and its dominance in the proposals, the above comments primarily relate to air quality impacts from incineration. The proposed Anaerobic Digestion plant, if providing gas to the grid, would be acceptable in air quality terms for the following reasons: whilst grid gas use in domestic and commercial boilers do emit Nitrogen Dioxide, the emission source is pre-existing and so there would be no additional impact on local air quality at the point of use; and the PEIR seems to show that the impacts from traffic emissions from vehicles, associated only with the AD facility, serving the site would be acceptable.

**River freight**

Draft London Plan Policy SI14 promotes the transportation of freight by river and states that proposals which increase the use of safeguarded wharves for such a use will be supported.

Whilst the ERF element of the proposed development would utilise the river and maximise the use of the existing wharf, which is supported, it is considered that the site’s wharf and the river could be also be utilised in a scheme which accords with the aims of the circular economy or contributes to meeting the Mayor’s recycling targets. Should the Secretary of State permit the proposed development, the applicant should be conditioned to exclusively bringing waste to the site by river, as is required in the existing RRR.
**Metropolitan Open Land**

London Plan Policy 7.17 affords Metropolitan Open Land (MOL) the strongest possible protection, whilst Policy G3 of the draft London Plan states that MOL should be protected from inappropriate development and proposals that harm MOL should be refused. Both policies state that national Green Belt policies, set out within the NPPF, apply to MOL and therefore MOL is offered the same protection as Green Belt. Chapter 9 of the NPPF is entitled ‘protecting Green Belt land’ and applies equally to MOL. Paragraph 79 states that the fundamental characteristic of the Green Belt is its openness and its permanence and a key purpose of the Green Belt is to prevent encroachment that would reduce green space, as per paragraph 80.

The site lies adjacent to Crossness Nature Reserve, which is designated MOL. One of the proposed options for the electrical cable connection route to Littlebrook runs via the western edge of the Nature Reserve. Cables would be laid in ditches on the western edge of MOL, before the land would be made good on top. The applicant should pursue the electrical connection route via Norman Road, to avoid any direct impact on the MOL.

Notwithstanding the above, the scheme, due to its design and size, will cause harm to the openness of the MOL and a negative impact upon the views out of the nature reserve towards the river. It is acknowledged that the existing Riverside Resource Recovery facility lies to the north east of the nature reserve, whilst the Thames Water plant lies to the north west, but at present there remains a strip of land where views toward the river are not terminated or punctuated by a large plant. The applicant should fully explore the impact of the plant on MOL and the aspect of harm.

Furthermore, there are concerns, as discussed above, that the air quality impacts of the development would have a non-negligible impact on the biodiversity of the nature reserve, which could fundamentally change its character.

**Flood risk**

London Plan Policy 5.12 and draft London Plan Policy SI12 state that development proposals should ensure that flood risk is minimised and mitigated against. Any proposals be designed to remain operational under flood conditions. London Plan Policy 5.13 and draft London Plan Policy SI13 provide guidance on sustainable drainage, stating that development should aim to achieve greenfield run off rates and ensure that surface water is managed as closely as possible to its source and in ways that use water efficiently.

The proposed development is located within Flood Zone 3; therefore, sequential and exception tests are required by the NPPF in any application. The applicant proposes to set the level of power generation and related infrastructure above flood levels arising from any breach of the River Thames tidal defences, which is supported in line with London Plan Policy 5.12 and draft London Plan Policy SI12. However, given that the proposed building envelope appears to be within 16 metres of the River Thames flood defences, the applicant will need to agree works with the Environment Agency.

With regard to drainage, in accordance with draft London Plan Policy SI13 and London Plan Policy 5.13, the applicant should limit all post-development discharge rates to the greenfield value and should maximise the use of SuDS measures. In terms of water quality, the applicant is proposing a SuDS treatment train approach to manage water quality which is supported as an approach.
The applicant provides no details on the water demands of the development or how they would be supplied and it is noted that the Secretary of State’s scoping opinion requires that water source and quantity information be provided. The applicant should use alternative sources of water for process requirements to reduce the reliance on ‘wholesome water’ and it is considered that the proximity to the Crossness Sewage Treatment Works would present a unique opportunity to work with Thames Water to source treated effluence for non-potable uses, with the dual benefit of reducing effluent discharge into the Thames and reduce reliance on these ‘wholesome water’. Notwithstanding the lack of support for the principle of the proposal, given that London is ‘water stressed’, should the ERF be approved by the Secretary of State, the Mayor will expect the applicant to commit to the use of alternative water from Crossness Sewage Treatment Works.

**Transport**

A dedicated transport related pre-application meeting was held between the applicant and Transport for London on 1 May 2018. The applicant has circulated two documents to TfL officers: the first being a transport assessment scoping note which sets out the approach to assessment, the proposed trip generation methodology and the assumptions involved in the assessment; and the second document is a PEIR, which cover similar aspects in relation to the transport but covers more detail relating to the requirements for Environmental Impact Assessment and initial findings. The comments here relate to both documents.

**Trip generation**

In terms of trip generation in the scoping note, TfL confirm that the approach appears to be reasonable; however, further information should be provided with regard to routing and the distribution of operational vehicles as there are different assignment patterns based on two scenarios. In addition, for the proposed construction vehicle distribution, predicted to be 50% using Eastern Way and 50% using Bronze Age Way, further evidence should be provided to justify the expected distribution. Given that the origins and destinations of construction material generally fall outside the M25 and that Normal Way is left in / left out only, it is likely that a greater proportion of the construction vehicles will be routing eastward towards the M25. It would also be useful to provide graphical route maps to aid the understanding of the vehicle movements for all scenarios.

The proposed mode share for operational staff is based upon ‘Journey to Work’ data from the 2011 census; however, given the adjacent and comparable Riverside Resource Facility, it would be more appropriate to survey existing staff to understand their current travel patterns and mode share. An understanding for where staff live would also provide a more accurate account of trip distribution for assignment purposes. This information should be available from the RRR travel plan monitoring.

**Highway and Public Transport impact**

The scale and extent of highway modelling required can be confirmed once the baseline surveys have been undertaken and presented alongside the agreed proposed trip generation for the site. Where areas are highlighted from the baseline surveys and impact assessment, mitigation may be required. Improvements could potentially comprise possible junction improvements, such as new signals or signal alterations in order to optimise their operation.
The PEIR suggests that driver delay is only likely to be an issue that requires mitigation where junctions are operating beyond capacity. However, in London, practical operational capacity should not exceed 85% as junction operation can deteriorate quickly beyond this point as there is no spare capacity to deal with localised spikes in demand. The applicant should also consider total delay to all vehicles, and the mean delay per vehicle on each of the approaches. Both James Watt Way / Queens Road signalised junction and Larner Road / Northend Road / Boundary Street roundabout are not included as transport sensitive receptors in the PIER and should be included.

Crucially, the cumulative development in the area will be a key consideration and all development sites in the immediate locality will need to be considered and taken into account.

**Site access and design**

Good quality pedestrian and cyclist access into the site should be provided in the detailed design of works to Norman Road and relevant junctions. As part of this, the applicant should undertake an assessment of the local cycle infrastructure and routes, particularly to the closest stations. A Cycle Level of Service (CLOS) assessment should be completed for the junction of A2016 Picardy Manorway / Norman Road as a minimum and should deficiencies be found, mitigations and improvements should be suggested. Whilst a full PERS audit is not required, an assessment should be undertaken for footways immediately outside of the site and routes towards local bus stops.

**Car and operational parking**

The documents provided do not set out the proposed car and operational parking provision; however, due to the potential future improvements to public transport and the pressures on the local highway network, the applicant should provide a low level of car parking, aiming for lower than the maximum standards allowed within the draft London Plan. A review of the provision of parking and the usage of this parking at the adjacent and comparable RRR should form part of the evidence base to justify appropriate parking levels for the Riverside Energy Park. In addition, 10% of the overall parking spaces should be provided as Blue Badge compliant parking spaces. The details of the management of car parking spaces should be included in the TA as part of a Car Park Design and Management Plan. In accordance with draft London Plan standards, TfL requests that all car parking spaces be fitted with Electric Vehicle Charging Points.

Short distance cycle trips will be crucial to link the development to the public transport interchanges at Belvedere and Abbey Wood stations as well as the surrounding residential areas and the Belvedere growth area. Cycle parking should be provided in accordance with draft London Plan Policy T5 standards and it should be designed to be easy, safe and convenient to use.

All cycle parking should be designed in accordance with the London Cycling Design Standards (LCDS) and the location described in the TA. The LCDS recommends that at least 5 per cent of all spaces should be capable of accommodating a larger cycle. There should also be provision for showers and storage facilities as part of the development.
**Construction**

TfL has concerns regarding the level of potential disruption caused by the construction of the proposed development, including the laying of the Electrical Connection Route. It is likely that the volume of construction vehicles and number of construction workers will be far in excess of what is anticipated during the normal operating conditions of the REP. Although the construction phase is temporary, it could cause significant impacts to the local highway network and public transport capacities. Further work is required as part of the Transport Assessment to assess the full impact of construction on the local transport network. It is encouraging that formal parking for construction workers is going to be minimal, but it is unclear how the 1,097 construction workers are going to travel to the site on a daily basis; further assessment of the impacts is required. The incorporation of a Construction Staff Travel Plan into the Construction Traffic Management Plan is welcomed; this should provide additional information on specific measures to restrict informal parking and encourage sustainable travel.

The applicant should provide TfL with the UKPN assessment of the Electrical Connection Route (ECR) to understand the extent of road closures that may be required as part of this construction and the anticipated duration of these closures. As both the construction of the REP and ECR is envisaged to be undertaken simultaneously, the construction impact assessment should consider any road closures and route diversions. Depending on the scale, length of closures and construction phasing details, it may be necessary to undertake microsimulation analysis of the impacted area.

The applicant should provide a draft Construction Logistics Plan, a Delivery and Servicing Plan and an Employee Travel Plan.

**Local council position**

It is understood that Bexley Council’s response is primarily going to focus on a review of the details of the proposals, rather than the principle itself, as well as the impact of the proposal on views looking toward the river.

**Conclusion**

The primary energy generating element of the proposed Riverside Energy Park is the Energy Recovery Facility, an energy from waste plant which produces energy through the incineration of waste. The ERF cannot be supported as it does not contribute to the achievement of sustainable development as set out in the revised NPPF and does not accord with various NPSs. It will not contribute to the circular economy and does not support achieving high recycling rates, as set out in draft London Plan SI7, London Plan Policy 5.3 and the Mayor’s London Environment Strategy (LES).

The applicant has not demonstrated that there is any need for the proposed facility. Further, if London is to meet its reduction and recycling targets, there will be a surplus of EfW capacity by 2030; therefore, there is no need for additional EfW plants to process London’s waste.

Whilst the development is described as ‘CHP-ready’ (and given the existing energy from waste facility has not yet utilised heat off-take), it is not considered that the proposed ERF could meet the Carbon Intensity Floor, as required by draft London Plan SI8 and the LES. Furthermore, given that a heat off-take has not yet been established from the adjacent RRR, it is considered that there is unlikely to be any demand for the heat from the proposed facility for many years. It would, therefore, essentially be operating as an incinerator and contrary to the NPS for Energy, which requires applicants to identifying existing and future heat customers.
The incineration of waste would have unacceptable air quality impacts on existing residents and on future residents in the London Riverside and Bexley Riverside Opportunity Areas.

The anaerobic digestion facility, battery storage and PV panels are supported in principle as they allow the generation and storage of entirely renewable energy.

for further information, contact GLA Planning Unit:

**Juliemma McLoughlin, Chief Planner**  
020 7983 4271  email juliemma.mcloughlin@london.gov.uk

**John Finlayson, Head of Development Management**  
020 7084 2632  email: john.finlayson@london.gov.uk

**Katherine Wood, Principal Strategic Planner**  
020 7983 4265  email katherine.wood@london.gov.uk

**Vanessa Harrison, Senior Strategic Planner (Case Officer)**  
020 7983 4467  email vanessa.harrison@london.gov.uk