

TECHNICAL NOTE

Job Name: Riverside Energy Project
Job No: 42166
Date: 01/02/2018
Prepared By: C. Leach / N. Frost
Subject: Removal of river works and amended scope of EIA

Introduction

Cory Environmental Holdings Limited (trading as Cory Riverside Energy) (Cory) intends to apply for development consent to build, commission and operate an integrated Energy Park consisting of complementary energy generating development, with an electrical output of up to 96 megawatts (MWe), together with a new connection to the existing electricity network and provision for Combined Heat and Power (CHP) readiness. The Proposed Development, located in Belvedere in the London Borough of Bexley, would be known as 'Riverside Energy Park' (REP) and would be sited adjacent to an existing Energy Recovery Facility (referred to as Riverside Resource Recovery Facility (RRRF)) also operated by Cory.

A Scoping Report for REP was submitted to the Planning Inspectorate (PINS) in November 2017 (ref: EN010093-00004). Paragraph 2.2.3 of the Scoping Report states: *"In order to facilitate construction of REP, temporary works in the River Thames may be required. Cory are currently exploring two potential options for this element of the proposed works. The first would be to install a temporary causeway across the intertidal zone, where self-propelled multi-axle trailers would roll the construction modules off a barge. The second option would include the use of a lift crane, which could be either located on a jetty head constructed in the river or constructed near the river bank, which would directly lift the modules from a barge into the site. Both options would require provision to lift the construction modules over the flood defence wall and the Thames River Path. Some localised dredging may also be required to ensure sufficient vessel access during the tidal cycle"*.

Furthermore, paragraph 2.2.4 states that the marine-related works would be temporary and limited only to the construction phase of the Proposed Development.

Given the nature of these works and the potential for impacts from REP on the Thames Estuary, Sections 7.8 and 7.9 of the Scoping Report describe the proposed scope of the EIA in relation to addressing potential impacts of REP on marine biodiversity and marine geomorphology.

The Scoping Opinion for REP was issued by PINS on behalf of the Secretary of State in January 2018. The Opinion includes a number of responses from stakeholders in relation to refining the scope of assessment of marine works (see Table 1).

Design Iteration

Since the Scoping Opinion was published, further refinement of the REP design and likely construction methodologies has removed the need to undertake any temporary works within the River Thames. Instead, the Applicant is proposing to utilise the existing jetty and fuel delivery infrastructure (currently used for RRRF).

It is anticipated that there would be a peak increase of four vessel movements per day through the existing jetty during the construction phase. At the latter end of this period, during commissioning, this peak daily figure would increase to eight which also represents the peak daily increase in operational vessel movements from that currently existing.

It is noted that the existing jetty has capacity to accommodate this increase in vessel movements without requiring works to the existing structure or cranes. A Navigational Risk Assessment (NRA) will be prepared for the REP DCO application, which will assess the operational increase in vessel movements over existing movements within this part of the River Thames.

On the basis of this design refinement, the temporary river works described in the Scoping Report will no longer form part of the project description for the purposes of the EIA.

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Given these changes to the Proposed Development, the scope of the EIA will be amended to exclude an assessment of the likely impacts of the temporary works in the River Thames described in the Scoping Report. Table 1 below sets out the original consultee responses to the Scoping Report which specifically reference likely impacts of the temporary works in the River Thames, along with how the Applicant proposes to address these comments in the light of the proposed change in REP design and likely construction methodologies described.

Table 1 – Scoping responses and revised actions as a result of removing temporary river works

Organisation	Specific topic area	Comment – paragraph references relate to individual responses appended to the Scoping Opinion.	Applicant response in light of removing temporary works from River Thames
Marine Management Organisation (MMO)	Marine Biodiversity	3.4 - Recommend that Marine Conservation Zone is scoped in.	As no temporary works within the river are now planned, there will be no potential impacts on the MCZ.
Marine Management Organisation (MMO)	Marine Geomorphology	4.1 to 4.3 - MMO recommend effects of vessel wash and wave impacts on intertidal sediments should be considered.	<p>During construction of REP, it is anticipated that there would be an additional two vessel movements per day, within the worst-case month, above existing vessel movements. This worst-case scenario is anticipated to last for a single month with all other construction months requiring fewer additional vessel movements.</p> <p>It is considered that the anticipated additional vessel movements would not be likely to cause significant effects from vessel wash or wave impacts on intertidal sediments. Accordingly, it is considered that wave impacts on intertidal sediments from vessel wash can be scoped out of the EIA.</p>
Marine Management Organisation (MMO)	Marine Biodiversity	<p>6.4 - MMO advises effects of underwater noise and vibration on herring to be assessed, and also recommends impacts relating to fish receptors are not scoped out at this stage.</p> <p>6.8 - MMO recommends noise disturbance as a result of vessel movement during marine works, temporary habitat loss and change resulting from marine infrastructure, light disturbance</p>	<p>No potential impacts as no works to take place within river.</p> <p>As above, the anticipated additional vessel movements are not considered to cause likely significant effects on underwater noise and vibration, habitat loss or change. Accordingly, it is considered that these impacts can be scoped out of the EIA.</p>

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		and remobilising contaminated sediment are considered.	
Marine Management Organisation (MMO)	Marine Biodiversity	7.2 - MMO recommend the potential impacts on fish, marine mammals, benthic species and shellfish must be considered.	No construction infrastructure in the river will be required, so any potential impacts can be scoped out.
Port of London Authority (PLA)	Marine Biodiversity	(No para reference) - PLA highlight the need to remove construction infrastructure with appropriate restoration.	No construction infrastructure in the river will be required, so no requirement to remove such infrastructure will be necessary.
Port of London Authority (PLA)	Marine Geomorphology	(No para reference) - PLA recommend consideration to physical impacts on nearby terminals and the navigation channel.	No construction works will take place within the river and therefore there is no potential for physical impacts on the navigation channel.
Environment Agency	Marine Licences	(No para reference) - EA note that dredging and marine construction works both require marine licences.	No dredging or construction works are required within the river.
Environment Agency	Marine Biodiversity	(No para reference) - EA recommend that lighting be included for marine and terrestrial habitats in order to demonstrate that it is identical in terms of impact to the existing conditions. This approach applies to all development aspects that that could impact in the adjacent nature reserve and River Thames.	No construction works will take place within the river. As existing infrastructure will be utilised, effects from lighting on marine habitat will remain the same.
PINS	General Assessment	2.3.11 - The Scoping Report identifies the potential for dredging during the construction phase. The ES should delineate the areas that would be dredged and identify the likely quantities of material that would be dredged, along	No construction infrastructure or dredging will be required, so any potential impacts can be scoped out.

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		with the frequencies of these activities.	
PINS	General Assessment	2.3.12 - The Applicant is currently exploring two options for the temporary works within the River Thames; a temporary causeway or a lift crane. The Scoping Report does not state whether the DCO application will retain both options or opt for a single option. The ES should ensure that the significant effects associated with these options are assessed.	No temporary works within the river are now planned and therefore the need for assessment is scoped out.
PINS	Marine archaeology	Section 4.5 (9) - This chapter of the Scoping Report has focused primarily on land-based archaeology. The ES should also assess the potential for effects to archaeology within the marine environment.	No temporary works within the river are now planned and therefore the need for assessment is scoped out.
PINS	Marine conservation	Section 4.7 (1) - The Inspectorate considers that designation of the rMCZ is likely and therefore the ES should assess impacts on the rMCZ and its features.	As no temporary works within the river are now planned, there will be no potential impacts on the MCZ.
PINS	Marine Biodiversity	Section 4.7 (2) - The Scoping Report states that crustacean sensitivity to underwater sound and vibration is very much lower than fish and that noise levels are unlikely to adversely impact the benthic community of shellfish. The Scoping Report has not provided existing and predicted noise levels or details of marine construction and noise generating activities. In the absence of detail of the marine construction works, the Inspectorate does not agree that this matter can be scoped out and recommends that the Applicant agrees the approach	<p>No temporary works within the river are now planned, therefore construction noise impacts to the benthic community of shellfish would only occur from the small increase over current total levels of river traffic. This small effect would be temporary and is not anticipated to result in significant effects.</p> <p>As with noise impacts associated with the increase in operational vessel movements, construction noise impacts associated with vessel movements are scoped out.</p>

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		with the Marine Management Organisation.	
PINS	Marine Biodiversity	Section 4.7 (3) - The Scoping Report states that the footprint of the proposed works and extent of indirect habitat change only covers a highly localised area that constitutes a very small fraction of the known ranges of local fish and marine mammal populations. However, the area of habitat loss and its importance to species has not been detailed within the Scoping Report. As such the Inspectorate does not agree to scope this out of the ES.	No temporary works within the river are now planned and therefore there will be no marine habitat loss. Therefore the need for assessment is scoped out.
PINS	Marine Biodiversity	Section 4.7 (5) - The Scoping Report states that the area of river that will be lit as a result of the new temporary infrastructure will only constitute a small fraction of the total width of the river and therefore no disruption or blocking of migratory routes are anticipated. No information on the importance of the affected area as a migratory route or the lux levels of lighting has been provided within the Scoping Report. In the absence of such information, the Inspectorate does not agree that this can be scoped out of the ES.	No temporary works within the river are now planned and therefore there will be no lighting required in the river. Therefore the need for assessment is scoped out.
PINS	Marine Biodiversity	Section 4.7 (10) - The Marine Management Organisation's response highlights the Cefas spawning maps, the Cefas young fish survey and The Fish Atlas of the Celtic Sea, North Sea and Baltic Sea. The	As no temporary works within the river are now planned, there will be no potential impacts on fish species.

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		<p>Inspectorate advises that these resources are used to help establish the baseline environment.</p>	
PINS	Marine Biodiversity	<p>Section 4.7 (11) - No fish or marine mammal surveys are proposed. The Scoping Report proposes to utilise data from the London Zoological Society, Environment Agency, the National Biodiversity Network and previous impact assessments for nearby developments. The Inspectorate recommends that the Applicant agrees the level of necessary survey effort with relevant consultees including Natural England, the Environment Agency and the Marine Management Organisation.</p>	<p>No temporary works within the river are now planned and therefore the need for assessment of impacts on marine mammals is scoped out.</p>
PINS	Marine Geomorphology	<p>Section 4.7 (12) - The ES should detail how the seabed would be restored following the removal of marine infrastructure that is required for the construction phase. The aims of the restoration should be clear. The ES should provide details of any necessary pre- and post-construction coastal monitoring arrangements with any necessary defined triggers for intervention and restoration.</p>	<p>No temporary works within the river are now planned and therefore the need for assessment is scoped out.</p>
PINS	Marine Geomorphology	<p>Section 4.7 (13) - The ES should identify the logarithmic spreading model and the piling parameters that have been utilised. A worst case assessment should be allowed for.</p>	<p>No temporary works within the river are now planned and therefore the need for assessment is scoped out.</p>
PINS	Marine Geomorphology	<p>Section 4.7 (15) - The Inspectorate agrees with the Marine Management Organisation that the potential remobilisation of contaminated sediment should be assessed within the ES.</p>	<p>No temporary works within the river are now planned and therefore the need for assessment is scoped out.</p>

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PINS	Marine Biodiversity	Section 4.7 (16) - The Inspectorate notes from the Marine Management Organisation's response that the Thornback ray is an important species in the Thames estuary. This species has not been identified within the Scoping Report; the Inspectorate considers the potential impacts on this species should be assessed.	No temporary works within the river are now planned and therefore the need for assessment is scoped out.
PINS	Marine Biodiversity	Section 4.7 (17) - The assessment of impacts to marine mammals should consider inter-related impacts of a minor nature.	No temporary works within the river are now planned and therefore the need for assessment of impacts on marine mammals is scoped out.
PINS	General Assessment	Section 4.8 (1) - The Inspectorate understands that all temporary structures in the River Thames would be removed following completion of construction of the REP. On that basis, the Inspectorate agrees that significant effects during operation of the REP (i.e. following removal of the structures) are unlikely and can be scoped out of the ES. However, for the avoidance of doubt, the Inspectorate would expect the effects of decommissioning of the temporary structures and reinstatement of habitats to be assessed. The Inspectorate does not therefore agree that the decommissioning of temporary structures can be scoped out.	No temporary works within the river are now planned and therefore the need for assessment is scoped out.

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PINS	Marine Geomorphology	Section 2.8 (2) -The Scoping Report states that the complex morphological shape of the Thames Estuary is likely to lead to dissipation of swell waves prior to entering the middle estuary containing the Proposed Development. Consequently, any wave activity at the site would be a result of local wind generation and will be small in magnitude. The Inspectorate considers that a jetty or causeway has the potential to generate a wave shadow and that the impacts of this on intertidal sediments, for example erosion or accretion around the structure, should be considered within the ES. As the Scoping Report does not provide details of the proposed structures in the River Thames, the Inspectorate does not agree that sufficient information is available to agree to scope out impacts from changes to wave climate.	No temporary works within the river are now planned and therefore the need for assessment is scoped out.
PINS	Contamination	Section 4.8 (3) - The nearest bathing water (The Serpentine in Hyde Park) is located at a distance greater than 20km from the Proposed Development. The nearest shellfish water protected area (Southend shellfish water) is located greater than 30km from the application site. The distances of these areas from the Proposed Development are noted, however the Scoping Report has not demonstrated there is no pathway for effect (e.g. via the deposition of emissions), or that the concentrations of pollutants would not be at level to impact on these areas. Therefore the Inspectorate does not agree to scope out these matters.	No temporary works within the river are now planned and therefore there will be no pathway to the Serpentine or Southend Shellfish Water. The need for assessment is scoped out.

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PINS	Assessment methodology	Section 4.8 (4) - The Inspectorate notes that the suspended sediment concentrations for the Thames Estuary are based on data collected in 2004. The Applicant should ensure that up-to-date information is utilised, or provide justification within the ES as to why data of this age is considered to be suitable and relevant.	No temporary works within the river are now planned and therefore the need for assessment is scoped out.
PINS	General Assessment	Section 4.8 (8) - The design of the proposed temporary marine works should be provided within the ES and used to inform the scope of hydrodynamic assessments.	No temporary works within the river are now planned and therefore the need for assessment is scoped out.
PINS	Hydrology, Flood Risk and Water Resources	Section 4.9 (7) - The Scoping Report refers to a flood defence wall over which construction modules would be lifted. The ES should identify the locations of the flood defences and detail whether any works are required to them and, if so, the potential impacts from these works should be assessed. The ES should assess the potential impacts of the Proposed Development on the existing flood defences, in particular any effects resulting from changes to the hydrodynamic and sedimentary regime from the temporary marine infrastructure.	No construction infrastructure will be required, as such no lifting over the flood wall would take place. It is considered that use of the jetty would pose no greater risk to the integrity of the flood defence than through already consented operational activities, and any associated potential impacts can be scoped out. The outline Code of Construction Practise to be included within the DCO application would provide for a briefing of construction workers to maintain the integrity of the jetty.

Conclusion

Since publication of the REP Scoping Opinion, further refinement of the project design and construction methodologies has removed the need to undertake temporary works within the River Thames. Those temporary works will therefore no longer form part of the project description for the purposes of the EIA. The Applicant considers that many of the original comments raised by consultees within the Scoping Opinion in respect of those river works can now be scoped out of the assessment (see Table 1).

Consequently, for the reasons set out above, the Applicant considers that the Marine Biodiversity and Marine Geomorphology chapters of the PEIR and ES are no longer required. It is therefore not proposed to consider these further within the application for development consent and Cory is seeking to agree this approach with the statutory bodies whose comments are described in the table above. Notwithstanding this, consideration will still be given within the REP DCO application to the

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requirements of the Water Framework Directive, and to Navigational Risk as appropriate. The views of consultees to confirm this approach are sought.

DOCUMENT ISSUE RECORD

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