creating a better place
for people and wildlife

Environment Agency

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Our ref: SL/2023/122661/04-L01
Your ref: EN010128
Interested party ref: 20049138

Date: 26 November 2024

Dear Emma

Environment Agency Written Representation for the Development Consent Order (DCO) for the Cory Decarbonisation Project PINS Reference: EN010128

Please find below our Written Representation on behalf of the Environment Agency in relation to the application for a Development Consent Order (DCO) for the Cory Decarbonisation Project PINS Reference: EN010128 made by Cory Environmental Holdings Limited (hereafter referred to as 'the Applicant' or 'Cory).

The Environment Agency's Role
The Environment Agency works to create better places for people and wildlife.

We were established to bring together responsibilities for protecting and improving the environment and to contribute to sustainable development. We take an integrated approach in which we consider all elements of the environment when we plan and carry out our work. This allows us to advise on the best environmental options and solutions, taking into account the different impacts on water, land, air, resources and energy.

We help prevent hundreds of millions of pounds worth of damage from flooding. Our work helps to support a greener economy through protecting and improving the natural environment for beneficial uses, working with businesses to reduce waste and save money, and helping to ensure that the UK economy is ready to cope with climate change. We will facilitate, as appropriate, the development of low carbon sources of energy ensuring people and the environment are properly protected.

We have three main roles:

• **We are an environmental regulator** – we take a risk-based approach and target our effort to maintain and improve environmental standards and to minimise unnecessary burdens on businesses. We issue a range of permits and consents.

• **We are an environmental operator** – we are a national organisation that operates locally. We work with people and communities across England to

protect and improve the environment in an integrated way. We provide a vital incident response capability.

• **We are an environmental adviser** – we compile and assess the best available evidence and use this to report on the state of the environment. We use our own monitoring information and that of others to inform this activity. We provide technical information and advice to national and local governments to support their roles in policy and decision-making.

Please see the following sections below for further information:

- The Environment Agency's Position on the Cory Decarbonisation Project
- Consultation
- Matters not agreed
- Environment Agency's response to Relevant Representations: 9.2
- Flood Risk
- Water framework Directive water quality
- Terrestrial Biology

Yours sincerely

Joe Martyn

Planning Specialist
Direct e-mail [redacted]

1 The Environment Agency's position on the Cory Decarbonisation Project

We will support the Examining Authority by advising them if the application is in line with the objectives above so that they can be satisfied that their recommendation in relation to the application for the DCO can be made taking full account of environmental impacts. so that they can be satisfied that their recommendation in relation to the application for the DCO can be made taking full account of environmental impacts.

The Environment Agency intends to attend oral representations at any relevant hearings if required. We will keep the matters set out in our Written Representations under review and update the Examining Authority on progress with the resolution of these issues at appropriate points as the examination progresses.

2 Consultation

Following the submission of our Relevant Representation on 14 June 2024 we have continued to work with the applicant in respect of the issues raised. The purpose of this Written Representation is to provide an update on our Relevant Representation and provide further information where we have outstanding areas of concern.

There remain a number of outstanding issues that we are still working through to prevent environmental harm and there is still further information to be submitted around these and other areas of interest. This is in part to do with uncertainty over the environmental impacts and the complexity of those impacts and partly due to the timescales for solutions to be found as these issues are worked through.

3 Matters not agreed

We have set out below a summary of the matters not agreed.
A number of outstanding matters not agreed need to be resolved, subject to further endeavours by the applicant in accordance with the suggested solutions and concerns provided in this Written Representation.

It may be possible to address some of the outstanding issues below if suitable wording can be agreed for the Requirements including for the implementation of the Design Principles within the detailed design of the works. A stronger onus is needed to compel the applicant to minimise the land raising and encroachment into the buffer of the main river ditch network. We are of the opinion that the wording as currently proposed is not strong enough to require the applicant to limit these two aspects as much as possible and allows too much freedom to allow an easiest option for the applicant to be taken rather than the most environmentally beneficial. The adoption of mitigation measures including those as set out in our Relevant Representations could help to address the outstanding issues.

Flood Risk – We have still yet to agree the spatial extent of the Order Land, both the freehold and leasehold to be compulsorily acquired and where easements, servitudes, and other private rights are to be extinguished, the breach flood modelling, the fluvial modelling, the offsets relative to the flood defences, offsets relative to watercourses, the adequacy of fluvial flood risk mitigation, proposed land raising, engineering designs, acceptable proximity to the great breach pumping

station and the access route to it and the open channels discharging to it and the rising mains and culvert discharging from it, the sedimentation modelling and any needed mitigation. This is needed to ensure that there is no increased risk to third parties through loss of flood storage and flood flow capacity, impact on the flood defences, impact on the maintenance of, upgrading of and discharging from the great breach pumping station.

Terrestrial Ecology – The land raising and the spatial extent of the development platform could have significant impacts to watercourses, designated habitats and protected species. Maximising the setback from main rivers where possible is essential to protect the ecology of the watercourse and allow space for fluvial floodplain compensation works.

Water Framework Directive – The Water Framework Directive (WFD) Assessment currently submitted fails to use the baseline data available for some failing chemicals and therefore cannot predict concentrations after factoring in any uplifts. There is therefore no justification within the supplied WFD assessment that the uplift in suspended solids that might be predicted (by modelling) has sufficiently limited effects on contaminant concentrations to be able to conclude compliance.

However, we are aware through discussion with the applicant's consultants that a revised WFD assessment is being undertaken including baseline concentrations and predictions of uplifts through which the applicant intends to demonstrate that the activities will be WFD complaint. Initial predictions do not yet indicate the activity is compliant and further works in being undertaken. We are awaiting the results of this revised assessment.

Alignment between submission of Environmental Permits and DCO – At this time we must highlight that we are currently unable to advise the Examining Authority of our position on the environmental permits required for this project. We received an enhanced permitting pre-application request in July 2024. However, this was returned on the 12 August with a request for further details and no response to that request has been received.

Protective provisions – The protective provisions included within the draft development consent order are not acceptable to the Environment Agency. We expect to enter into discussions with the applicant seeking to agree protective provisions. Schedule 3 of the dDCO seeks to disapply (c) Metropolis Management (Thames River Prevention of Floods) Amendment Act 1879(c) and (k) Thames Barrier and Flood Prevention Act 1972(k); and replace it with bespoke Article 6(2). We are reserving our position on whether to accept those disapplications until and unless we agree the protective provisions. We expect to have a new standard set of Environment Agency proposed protective provisions available shortly.

Statement of Common Ground - Other than the procedural matters set out in the statement of common ground all of the technical matters are still under discussion and review and therefore cannot be considered matters agreed. We will work with the applicant to address these matters as far as possible.

4 Environment Agency's comment on the applicant Response to Relevant Representations: 9.2

We refer to the to the table within the Response to Relevant Representations: 9.2 below

3.1. 20 – We note the London Borough if Bexley are raising concerns that the facility may not be protected sufficiently from flood risk which in part supports the need for ground raising. We intend to discuss this with the London Borough of Bexley to ensure that both organisations are satisfied that the development is safe in flood risk terms without creating an unacceptable increase in risk elsewhere.

4.1 .39 – The minimum offsets between the relevant parts of the proposals and the flood defences and the Great Breach pumping station and the associated culverts and channels is unclear. Cross section drawings with plenty of dimensions showing the worst-case relationship between the flood risk infrastructure and the relevant part of the proposal would assist the Environment Agency in being able to assess impacts due to proximity.

5.01 The hydraulic flood modelling of breach flood events to assess the increased risk of flooding offsite is being reviewed by the Environment Agency Evidence & Risk team. We disagree with the applicant's assertion that their worst-case assessment shows no significant offsite impact.

The applicant has not responded to the comment in our Relevant Representations that the carbon cost of the ground raising could be greater than that saved by avoiding the equipment being temporarily out of action due to flooding caused by a breach in the flood defences.

We believe a more sophisticated assessment can and should be produced of the equipment and its spatial extent warranting ground raising to protect it from flooding; to better demonstrate that the ground raising is justified and kept to a minimum. That would allow the upper bound limits of ground raising required to be properly considered as part of the DCO process. We are also opposed to the lack of adequate quantification or constraint on the amount of ground raising under the proposed Design Principles and Design Code. We are unfamiliar with the use of Design Principles and ask whether including suitable wording into Requirements would not be more robust. We with discuss the wording of the design principles and codes with the applicant to better address the concerns above.

The applicant has stated that they are unable to undertake a more granular assessment of the need for ground raising at this stage. If the Planning Inspectorate agree that this is the case stronger wording should be included within the Design Principles and the Requirements restricting ground raising to where it is only really necessary should be included that control the ground raising and encroachment into the watercourse buffer strips.

We disagree with the applicant's assertion that the flood risk impacts should not be considered to be significant and do not increase the probability or consequence of flooding to nearby existing development. That is not only about the increased breach flood levels impacting residential property but also the existing commercial development to the east as noted in our comments about the Flood Risk Assessment below.

We therefore also disagree with the applicant's rejection (other than some possible reduction of the areas of ground raising) of the mitigation measures we suggested in our Relevant Representations: -

- Reducing the area of ground raising.
- Lowering ground levels elsewhere as floodplain compensation, although it is unclear if doner high ground exists where it would be needed.
- Pumping to discharge flood water to the Thames to reduce residual risk flooding.
- Improvements to the flood defences, although that is difficult including due to much of the run of the defences being outside the current proposed site extent.

5.1.5 – A Requirement to lower the ground levels to the levels existing in 2024, as part of decommissioning would be appropriate to restore the flood storage function of the floodplain when the Carbon Capture Facility (CCF) is no longer required; or the area required for an operational development platform including raised ground is reduced in the future.

5.1.6 – The merit of the discreet breach locations that have been modelled is subject to confirmation following the review of the computer-based hydraulic flood modelling by our Evidence and Risk team.

5.1.7 – The Applicants response did not provide the raw results requested from the hydraulic flood modelling, but instead refers to 10mm bands having been reviewed. Our previous request for more granular information remains outstanding. That request is in line with the current guidance set out on gov.uk.

5.1.8 The largest increase in flood depth of 0.67 metres is shown at location point 24, to the east of Norman Road where warehousing and light industrial uses are located. See comment on the Flood Risk Assessment (FRA) below.

It is unreasonable to increase even breach flood levels to receptors sensitive to flooding as shown by the modelling, furthermore the need for the ground raising causing that offsite impact has not been justified as substantive. If any amount of ground raising in the residual risk floodplain is acceptable then the risk to existing developments will accumulatively increase.

The applicant has asserted why they consider their assessment of the off-site impacts of the large-scale ground raising in the floodplain to be conservative, including that the beneficial effect of the pumping stations discharging some of the

floodwater to the River Thames during a flood. Please note that over the long term there are uncertainties over funding for the pumping stations.

5.1. 9 The Environment Agency and the Applicant's positions have not changed, and the difference is unresolved over the significance of the flood risk impacts of the proposed ground raising.

5.1. 10 The wholesale ground raising approach with any reduction in extent at detailed design stage being effectively at the discretion of the Applicant is unreasonable. The issue over the impact of a possible breach between Riverside 1 and Riverside 2 shows that even the ground raising proposed does not fully protect the CCF equipment. The benefits do not outweigh the disbenefits.

5.1. 12 The biggest factor in setting the clearance that any jetty should over sail the flood defences by is the space required for future works. The existing Middleton Jetty was required to respect a 5-metre vertical clearance.

5.1. 13 The Applicants response acknowledges that surface water runoff could create overland flow into the watercourses. The point is that the landscaping should be designed to prevent such by-passing.

5.1. 14 Contrary to the Applicants response the Design Principles and Design Code are proposing zero buffer zone on one side of the Main River open channel at the northern end of Norman Road. A stronger onus to maximise the width of the buffer zones is required than included in the Applicants proposed Design Principles and Design Codes wording. Including that need in the wording of a Requirement would be more robust.

5.1. 16 We have not received all if the information needed to allow the Environment Agency to review all the different computer based hydraulic flood models and it has not been possible to review that evidence before Deadline 1 on 26/11/2024.

5. 1. 17 We have questioned the soundness of the applicant's coastal process assessment modelling including results appearing to be counterintuitive relative to the change being assessed. The development team have acknowledged our challenge questions by e-mail, and we are waiting for their response.
Changes to sediment transport could impact surface water outfalls and the sustainability of vessel berths.

The Applicant's response to our challenge over whether the new jetty has been represented well enough in the modelling does not answer the point about the design of the jetty only refereeing to its location. None of this can be resolved before a sound modelling approach has been substantiated.

5.1. 19 The coastal process modelling evidence remains in doubt and the Environment Agency disagree over the need to address the risk of sediment build up at the Great Breach pumping station outfall.

5 Flood Risk

ENVIRONMENTAL STATEMENT: 6.3 APPENDIX 11-2: FLOOD RISK ASSESSMENT, Cory Decarbonisation Project, PINS Reference: EN010128, September 2024

We have reviewed the revised FRA dated September 2024. Page 11 parg 4.5.1 states

'The Metropolis Management (Thames River Prevention of Floods) Amendment Act29 requires riparian owners to maintain their defences to a suitable condition and level dictated by the Environment Agency. ***This Act has been disapplied in the Draft DCO (Document Reference 3.1) in relation to the Applicant's carrying out of, and maintenance of, the Proposed Scheme, to be replaced by the various mechanisms contained within the DCO. However, the act has not been disapplied in general terms in relation to the Applicant's responsibilities as riparian owner.'***

We do understand this distinction and would welcome further clarification on what the applicant is trying to achieve through partial disapplication of the *The Metropolis Management (Thames River Prevention of Floods) Amendment Act 1879*

Page 28 states

'8.3.2 The Environment Agency has ensured that measures (raised defences) are in place across the flood cell to prevent flooding during the design event (1 in 200 year event plus climate change) from the River Thames to the Proposed Scheme for the entirety of the design life.'

Paragraph 8.3.2 Can be seen as misleading because funding to implement the TE2100 plan which is the strategic plan to raise flood defences and protect London and the Thames Estuary from tidal flooding over the next 100-years are yet to be secured for future improvement works.

'8.3.3. There is however a residual risk associated with a breach of the River Thames Flood Defences. A breach of the existing flood defences is considered unlikely to happen as they are regularly inspected and managed by the Environment Agency. This is considered to be a residual risk, and therefore in accordance with Paragraph 41 of the Flood Risk and Coastal Change PPG27 is included in this assessment.'

It should be noted that the primary responsibility for the maintenance of the flood defences rests with the landowner.

On page 51 Table 8-4 includes 'Baseline' and 'With Proposed Scheme' modelled peak breach water levels at various locations from the Cory Thames Tidal breach modelling. The largest increase in flood depth of 0.67 metres is shown at location point 24, to the east of Norman Road where warehousing and light industrial uses are located. That breach modelling is being QAed by the Environment Agency.

6 WFD Water Quality

We are involved in in ongoing discussions regarding ensuring the required dredging works at the Cory berth are WFD compliant for the water quality element.

In the latest meeting between a member of our marine team and the applicants consultants HR Wallingford the consultants provided a presentation working through modelling the contaminant loadings, and although most contaminants were demonstrated to comply, a small number of chemicals appeared to still be likely to cause more than a 3% uplift on existing (failing) annual average concentrations; i.e. currently they would not meet our criteria for “no deterioration” under the dredge scenarios proposed by the applicant.

The substance fluoranthene (a failing priority hazardous substance) appeared to “fail worse” by a little under 5% vs the existing annual average concentration. Several of the other substances were more marginal differences vs our 3% working threshold. Both parties agreed that some of the implicit assumptions used may be conservative and that there was merit in revisiting these and re-evaluating calculations where there may be reasonable grounds for justifying the use of a modified value for calculations.

We expect further discussions HR Wallingford on this once this process has been undertaken. If the new calculations can demonstrate the proposal is WFD compliant then we will recommend that the dredge be permitted, if not then other alternative options may need to be considered.

Options may include using the dredge to provide a monitoring programme that may demonstrate current models are over conservative and provide better understanding of sediment behavior in water under a water injection dredge scenario, or the worst case scenario might involve using a different removal dredge method (or a combination of dredge methods) to remove either all the material, or if practical to do so, the most contaminated parts of the material) and to dispose of it to appropriate locations for the level of contamination.

Due to the high levels of contamination of total PAH compounds it is thought unlikely that the material will be suitable for disposal within a marine environment, and it may require specialist hazardous waste landfill (regulated under EA waste permits). This would massively elevate the costs of the project, so is understood to be a last resort.

The berths are used for transportation of materials involved in the waste management business of the applicant, and as such perform an important role in the wider recycling industry. Failure to maintain the berths at the correct depth could lead to vessel safety issues which may result in the inability to use the berths. This could have knock-on effects for wider society.

We therefore await further details from HR Wallingford once they have had the chance to explore the implications of revising the values used in assumptions used in the calculation methods.

If ultimately it was found that there was no way any dredge could be achieved without causing deterioration, we would recommend that the dredge is not approved.

Our view is that technically a removal dredge (and associated landfill disposal) probably would be WFD compliant (even if much more expensive), so the application to dredge (by dispersive means) would not satisfy the criterion that there was no other technical method of achieving the dredge that could be applied that wouldn't deteriorate the waterbody. This, however, would be a matter for the Secretary of State to consider. So far, no dredge in the Thames has been referred to the Secretary of State due to an inability to comply with WFD and an overriding public interest in carrying out a dredge regardless of the impact on the waterbody.

We are hopeful that further detailed consideration of the revised impact assessment may indicate the proposed dredge option finally put forward (which itself may be modified in the light of revised calculations) may still comply with WFD and avoid the need for removal of dredgings to a hazardous waste landfill site.

6 Terrestrial ecology

We are in agreement with comments from Natural England. We have concerns with the proposed infilling of ditches with a presence/potential for Water voles. No development should take place until a water vole mitigation strategy that includes displacement under licence is submitted to and approved by the local planning authority. At present, the proposals represent a degradation of viable habitat for o water voles and certain harm without displacement and mitigation.

Proposals should include:
Mitigation measures for habitat destruction.
A methodology of displacement under licence.
Biodiversity net gain assessment to include new habitat created on and off site.
Further ecological mitigation in the form of retaining and enhancing pier structure(s) should be included within the BNG assessment. In addition, further proposals to create on-site habitat for pollinators/birds should be included. This could include, but not limited to green roofs/walls green SuDS schemes and native planting.

We request that requirement 12 should be modified to include a lighting strategy and for mitigation-with particular reference to Water Vole habitat. We would strongly encourage the applicant to draw up proposals to utilise one of the redundant/retained piers to create an ecological niche area. The structure could additionally be enhanced with timbers and/or fish refugia.