



**WRITTEN
SUMMARY OF THE
APPLICANT'S
ORAL
SUBMISSIONS AT
ISSUE SPECIFIC
HEARING 1 (ISH1):
9.8**

DECARBONISATION

Cory Decarbonisation Project

PINS Reference: EN010128

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Revision A

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1. INTRODUCTION

- 1.1 This note summarises the oral submissions made by the Applicant at Isse Specific Hearing 1 held on 6 November 2024 in relation to the Applicant's application for development consent for the Cory Decarbonisation Project ("the Proposed Scheme").
- 1.2 Where the Examining Authority (the "ExA") requested further information from the Applicant on specified matters (including in its published Action Points), or the Applicant undertook to provide further information during the course of ISH1, that further information is either set out in this.
- 1.3 This note does not purport to summarise the oral submissions of other parties, and summaries of submissions made by other parties are only included where necessary to give context to the Applicant's submissions, or where the Applicant agreed with the submission(s) made and so made no further submissions (this is noted within the document where relevant).
- 1.4 The structure of this note follows the order of the items listed in the detailed agenda for CAH1, focussing on the items where substantive submissions were made by the Applicant.

2. SUMMARY OF APPLICANT'S ORAL SUBMISSIONS AT ISH1

Agenda Item	Applicant's Response
2. Alternatives	
2.1 The Applicant to briefly summarise the approach to alternatives with particular reference to terrestrial development zone option assessment and selection process.	<p>Mr Andrew Tait KC, on behalf of the Applicant, explained that in to answer this item, the Applicant would first explain the technical and operational requirements of the Carbon Capture Facility that have informed its size (through the oral submissions of Mr Tony Alderson, Technical Lead for Carbon Capture and Storage at WSP, which build on the scheme description contained in Chapter 2 of the ES (APP-051)); then explain the optioneering process undertaken (through the oral submissions of Miss Kirsten Berry, Director at Hendeca, planning lead for the Proposed Scheme, which build on the Applicant's written submissions in the Terrestrial Site Alternatives Report ('TSAR') (APP-125), its Addendum ((AS-044) Appendix H to the Applicant's Response to Relevant Representations (AS-043) and Annex A to the Addendum (AS-062)), and the Applicant's Response to Relevant Representations (AS-043); and conclude with Mr Alister Kratt, Director at LDA Design, design lead for the Proposed Scheme, talking through the masterplan development process following the selection of the preferred site.</p> <p>For the purposes of this note, although at the Hearings comments from the ExA and Interested Parties (and responses to them by the Applicant) were made <u>after</u> the presentations from Mr Alderson, Miss Berry and Mr Kratt, that dialogue has been interwoven into each relevant section of this note, so that the issues can be considered together.</p> <p><u>Operational and Technical Requirements</u></p> <p>Mr Alderson summarised the design approach of the Proposed Scheme and the technical implications and requirements of flue gas ducting. He began by talking through the block flow diagram (DAD, Figure 4.13 (APP-045)) which illustrated the main process elements of the Carbon Capture Facility. He explained that the flue gas supplied from Riverside 1 and Riverside 2 is diverted to the capture plant and undergoes pre-treatment and is then fed to the main absorber column where CO₂ is removed from the flue gas with the remaining flue gas discharged to the atmosphere.</p>

The solvent used in that process goes through heat exchange and is cooled prior to entering the absorber before reheating it to go to the regeneration system. The CO₂ is removed from the solvent through the application of heat and there is also storage of fresh makeup solvent to replace any losses. The CO₂ is removed from the solvent at relatively high concentration and it is compressed and conditioned, which specifically includes dehydration and removal of oxygen. As the CO₂ is exported in liquid form, there is also a liquefaction process and the liquid CO₂ is stored temporarily on site prior to being exported through the loading system onto the ships. In addition, the Proposed Scheme includes supporting plant such as backpressure turbines, water treatment, wastewater treatment and the cooling water system. He confirmed also the other elements required as part of the project such as the control room, workshop, stores, welfare facilities, security and gatehouse.

Mr Tony Alderson discussed how the various facilities are accommodated on the 8 hectare Site. He explained how it is based on a design approach of a flow through process from north to south, so that the flue gas supplied from Riverside 1 and Riverside 2 requires the minimum length of duct work before reaching the carbon capture plant. The utility systems and other supporting plant is further to the south, including the cooling system, electrical infrastructure, occupied buildings, maintenance lay down area and a provision for buffer water storage. Mr Alderson confirmed it is a rational layout of facilities, segregating the occupied buildings from the main process area. It is important to note that the Applicant has sought to minimise the footprint requirements by organising the plant in a compact fashion, i.e. there is no 'wasted space'. It is important to have continuity between the process elements, to facilitate the operation and maintenance aspects of the carbon capture plant as a separate facility to Riverside 1 and Riverside 2, and to allow the safe and successful operation of the Carbon Capture Facility.

In terms of the plot area requirements for each of the process elements, these are made up by information received from carbon capture technology providers that the Applicant has liaised with and in-house engineering design calculations for the balance of plant elements. Mr Alderson confirmed that the information is from a combination of sources, but all is based on robust engineering methodologies and previous projects that other technology providers and the Applicant's consultant team have worked on.

At the Hearing, Mr Turney KC, on behalf of Munster Joinery/Landsul asked a number of questions in relation to technical requirements, which the Applicant responded to as follows:

1. *With regard to the power requirements being met by through the turbine (lowering pressure/generating power) and additionally through a power feed from the existing power sites, then why is there a substation and transformer yard in the operational layout? Mr Alderson confirmed that the power is primarily supplied from the back pressure turbines and existing power output. The requirement for the electrical infrastructure (including the substation) is to supply power up to the range of voltages required by the equipment on site.*

Post Hearing Note: The Applicant expands on this with further explanation below:

The Carbon Capture Facility requires electrical power to enable the plant and its equipment to operate. The type of equipment includes: electric motors for pumps, fans and other equipment; refrigeration and compressors for liquefaction of the CO₂; heating loads; lighting and control; and instrumentation signals.

The supply of electrical power to the plant will be provided from the existing Riverside 1 and Riverside 2 facilities. The plant has the potential for a back-up supply from the local distribution network, in the event that the existing energy from waste facilities are not generating power. These power supplies will be supplemented by power generated by the back pressure turbine(s) that will be installed as part of the Carbon Capture Facility, although this will not generate sufficient power to meet the whole auxiliary power demand for the site.

The exact configuration of the electrical power supplies is yet to be determined, but it is anticipated to be provided via two High Voltage (HV) 132kV electrical connections, to provide the required supply capacity and resilience. The electrical installations within the existing Riverside Campus will be modified to supply electricity at 132kV to the Carbon Capture Plant. However, there is insufficient space within the existing plant sites to accommodate all of the electrical equipment required for the Carbon Capture Facility.

The electrical loads required by the Carbon Capture Plant will be supplied at Medium Voltage (MV) and Low Voltage (LV). The voltage levels to be used will depend on the requirements of the connected load, but the MV voltage level(s) could include 33kV, 11kV

and/or 3.3kV, whereas the LV voltage level(s) would typically include 400V and possibly 690V.

To provide the required supplies, the following electrical infrastructure will be required:

- 132kV switchgear for the main 132kV power supply, incoming from Riverside 1 and Riverside 2;*
- Transformers to facilitate the supply of power to the elements of the Proposed Scheme that require electrical power, including the Proposed Jetty;*
- MV and LV switchgear, including Motor Control Centres (MCC);*
- Uninterruptible Power Supply (UPS);*
- Backup power in the form of backup power generators, requiring diesel storage tanks local to the generators;*
- Site cabling, including HV, MV and LV power, as well as control and instrumentation cabling; and*
- Earthing and lightning protection systems.*

To provide the most efficient solution with respect to minimising lengths of cable runs and electrical losses in the MV and LV cable runs, it is proposed that the equipment listed above will be provided within the Carbon Capture Facility site, as shown at item 10 in the Indicative Equipment Layout Drawing. Locating the HV/MV transformers and/or 132kV switchgear remotely from the Carbon Capture Plant was discounted as an option at an early stage in the design process. This is due to lack of space at the existing Riverside Campus to accommodate this equipment.

- 2. In relation to the control room, how many staff would be required to operate the facility? Why can't the control be provided within the control rooms at Riverside 1 and Riverside 2? Mr Fox referred to the Chapter 2 of the ES (APP-051) that there is likely to be 27 full time staff (para 2.66) with Mr Alderson explaining that these 27 people would be on shifts and not all on site at one time. At this time it is not known how many of those 27 people would be control room employees specifically. Regarding the latter question, the existing control rooms are full. The*

intention is to have the carbon capture plant operating as a standalone facility with its own control room. This also answers Action Point iii.

3. *Is the Applicant's position that building around the Munster Joinery is technically impossible or is it undesirable?* Mr Alderson confirmed it would not be technically feasible to have the site split by Munster Joinery with some facilities to the north and some to the south because there would need to be an interface between those elements with pipework, cabling, personnel access. Furthermore, from an operational basis you need interconnection, so there would be additional access requirements, an additional gatehouse, security etc. Another element to consider would be having a third party located within the process plant and the operational, safety and security implications arising from that. Mr Fox, also noted that dealing with access and security arrangements would likely mean infrastructure needing to be put either in the AOL/SINC or in Norman Road, which would pose highway safety issues.

Post Hearing Note: As noted in the discussion at CAH1 to which Mr Turney KC agreed, 'safe, suitable and secure operation' is a relevant factor for the site layout for the Applicant to consider, and that the Applicant considers that such operation would not be possible if the Munster Joinery site was retained. The Applicant confirms that a single site is required for the following reasons:

The Applicant's position on this matter is clear.

Cory requires a single cohesive site configuration of useable land to construct, operate, and maintain the Proposed Scheme.

Reasons for this fundamental requirement include:

- *To enable the efficient and safe construction of the Carbon Capture Facility, without recourse to a separated construction/laydown area.*
- *To maintain the integrity and security of the entire Carbon Capture Facility through a single, staffed, controlled point of access (via the Gatehouse) and controlled access routes.*
- *To underpin operational efficiency, by enabling rapid, unrestricted operator access (by foot and/or vehicle plus emergency access) to all parts of the Facility from the control room,*

	<p><i>workshop and stores in order to perform ongoing routine operational and maintenance activities (including mobile cranes and large loads etc) and to deal with events requiring direct and immediate intervention.</i></p> <ul style="list-style-type: none"> • <i>To provide pipeline/cable and utilities routes between all elements of the Carbon Capture Facility wholly within the site boundary, minimising the potential for third party interference, ensuring ready access to all elements (at all times) for maintenance and repair, and optimising environmental/visual impact. As discussed at the Hearing, the high temperature of the flue gas ductwork, and the low temperature of the LCO2 pipeline means that undergrounding either of them would be technically challenging as they would need to be constructed in a manner to prevent heat leak to or from the surrounding ground.</i> • <i>To optimise plant configuration, minimising cable and pipeline lengths, process inventory, overall footprint, capital cost, and environmental/visual impact (by not locating more equipment nearer to residential receptors or on 'green' land).</i> • <i>To segregate sources of hazard/risk to third party receptors (i.e. residents, members of the public, including employees of neighbouring businesses).</i> <p><i>The Applicant has a proven track record of delivering, maintaining and operating complex large-scale, strategic, sustainable infrastructure projects in London and this locality in particular.</i></p> <p><i>There is a wealth of experience within the business about what is needed to build, operate and maintain complex infrastructure installations successfully through clear internal health, safety and wellbeing systems and controls while meeting all planning, environmental permitting and other regulatory controls too.</i></p> <p><i>Cory has proven safe systems of work for each site that set out mandatory rules and controls that everyone must follow to control activities/operations and provide for the health, safety and wellbeing of employees, contractors, visitors and others affected by its operations.</i></p> <p><i>For instance, Riverside 1 is a high performing plant that has been in operation in this location since 2011. Riverside 2 is under construction alongside R1 and is due to become operational in 2026. Figure 2 below shows R1, R2 and the Applicant's other operational sites along the River Thames, from start to finish. A common thread across all of the Applicant's operational sites is that</i></p>
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none of Cory's operational facilities operate on a split site basis – for many of the reasons set out above.

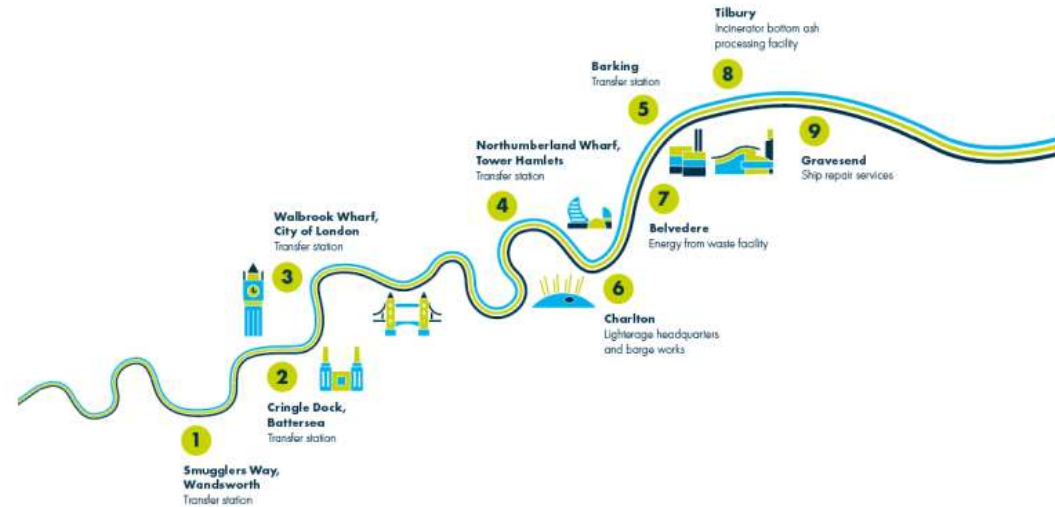


Figure 2: Cory Group, Operational Sites along the River Thames

The consequential impact of not relocating Landsul /Munster's premises is an inadequate and unacceptable residual quantum and provision of land that:

- *fails to provide the temporary land required to construct the Proposed Scheme. The significant loss of 'on site' space for construction laydown areas / fabrication space provision would force the need to use separate parcels of land that would not bring the required safety and efficiency demands to deliver the project in a timely manner;*
- *fails to provide the permanent land necessary for the Proposed Scheme as outlined, and evidenced, in the DCO Application submission; and*

(a) (in addition to the fundamental points above) fails to provide spatially for flexibility, innovation, and good design evolution/outcomes as the scheme progresses through iterative stages of design.

The land surrounding the Carbon Capture Facility development area is not appropriate to provide an alternative to the area currently occupied by Landsul/Munster Joinery being: operational waste management to the north, i.e. the source points for the Facility; public highway to the east; and land designated for nature conservation and Metropolitan Open Land to the south and west.

In short, failure to deliver a single site solution, allowing contiguous development with Riverside 1 and Riverside 2, enabling efficient access to the Jetty, and providing a suitable development footprint, will hinder the timely delivery of this, carefully considered, critical national priority infrastructure.

4. Mr Turney KC indicated evidence would be put forward to suggest that there is space for cable and pipe duct behind the warehouse and this could also be used as pedestrian access. Mr Tait KC, on behalf of the Applicant, confirmed the Applicant would await these proposals before commenting. Mr Turney KC, asked whether 'line of sight' as a factor is a technical impediment or undesirable to Option 3? Mr Tait KC, on behalf of the Applicant, confirmed that this was one of the factors (and would go to safe, suitable and secure operation) but it would be incorporated into our response to Mr Turney's clients' Deadline 1 submissions at Deadline 2 on this matter.

5. At 3.4.10 of Chapter 3 of the ES it details the choice being made to have dual process lines, rather than a single line. There is also a choice to prefer hybrid cooling over wet-cooling. Mr Alderson confirmed that flexibility is being sought in relation to a dual or single line approach, considering all the factors set out in Chapter 3. In terms of footprint, a single line would have a reduced footprint, but the vital point is that it would not be halved, as much of the Carbon Capture Facility is based on the amount of carbon that needs to be dealt with, which would remain the same irrespective of whether a single or dual line approach was taken.

In relation to cooling – for wet cooling, the makeup water requirement would be significantly higher and discussions with Thames Water indicate there is not sufficient water supply in the

local area to facilitate the requirements. The Applicant is therefore considering hybrid cooling and dry cooling, as set out in Chapter 3.

Post Hearing Note: As discussed at the Preliminary Meeting, on-going design evolution has indicated that further flexibility should be sought in relation to the design of the cooling equipment within the Carbon Capture Facility. This is explained in the Applicant's Change Notification of 22 November 2024. That flexibility would allow for the addition of infrastructure on top of existing proposals, so does not impact the land take considerations being considered by Munster Joinery/Landsul.

6. *Mr Turney KC requested a copy of the information that has informed the Pre-FEED design. Mr Tait KC confirmed that the Applicant would consider what could be shared in the context of: (a) the information has come from a number of different sources and then has been interpreted by WSP; (b) much of the information is subject to commercial Non-Disclosure Agreements; (c) that much of the information that Munster Joinery/Landsul have asked for in the past are matters of detailed design; and (d) the DCO process allows for flexibility, and with carbon capture still being an evolving technology, the Applicant has allowed for that.*

Post Hearing Note: Following the Hearing, the Applicant has engaged with Munster Joinery/Landsul and provided it with the information it considers able and appropriate to share (on 14 November, with some further information on 15 November) to inform their submissions at Deadline 1. Further to the discussions at the Preliminary Meeting, the Applicant will continue to work with Munster Joinery/Landsul, including on a focussed SoCG to inform discussions at the February Hearings.

From those discussions, and as foreshadowed at the Preliminary Meeting it is clear that the Applicant will require until 20 December to respond to the Deadline 1 submissions and so would welcome this being allowed for within the Examination timetable.

However, as set out at the Preliminary Meeting, the Applicant considers that cross-examination is not required as part of the Examination process, given the opportunities for extensive written material to be able to be submitted, and the aims of the Planning Act 2008 process. However, it is willing to work with Munster Joinery/Landsul to put together a 'without

prejudice' list of topics that should be the matter of focussed, reciprocal cross-examination, should the ExA consider that cross-examination is in fact necessary.

LCO2 Buffer Storage Area

In response to a question from Mr Hewitt in terms of the size and location of the LCO2 buffer storage area, Mr Alderson confirmed that in terms of storage capacity, it is currently proposed to have 24,000 cubic metres which is appropriate storage for maximum ship size of 20,000 cubic metres (as now allowed for following the acceptance of the Applicant's change request), therefore giving a 20% buffer margin, for example to allow for the late arrival of a ship. The location of the storage area has been developed in consideration of its role in the overall carbon capture process.

Post Hearing Note (as committed to at the Hearing and in response to Action Point vi): In response to Mr Hewitt's suggestion that the LCO2 buffer storage area should be located nearer to the Proposed Jetty, including possibly on stilts within the River, the Applicant would respond as follows:

*A floating containment structure for storing LCO₂ prior to onward vessel export from the Proposed Jetty was considered as part of the design development, as noted within **Paragraph 3.5.36 of Chapter 3: Consideration of Alternatives of the Environmental Statement (Volume 1) (APP-052)**.*

Whilst this option would take up less landside space, additional maritime works such as construction, dredging, and ongoing maintenance would be required that would increase adverse impacts to the marine environment. It would also be permanently moored in the river and therefore present navigation risks. A floating containment structure is also likely to incur additional maintenance costs particularly being an offshore floating unit as well as increased dredging. A floating containment structure was consequently not progressed.

The potential for a fixed containment structure within the River Thames was also raised during ISH1. This is also considered inappropriate within the River Thames for the following reasons:

- *The tanks would be vulnerable to accidental ship impact resulting in likely unacceptable risks (low probability, high consequence risks to both river and landside receptors).*

- *Likely to incur additional operational costs for items such as maintenance given that marine and terrestrial access would likely need to be taken.*
- *Piles in the River Thames would cause localised scour which may affect the sensitive foreshore habitat.*
- *The infrastructure required would result in the loss of additional intertidal habitat, which is of national importance.*
- *The inclusion of additional hard structure has the potential to provide additional habitat for Invasive Non-Native Species to colonise.*
- *The inclusion of additional structures could result in issues regarding scour and deposition of sediment, thus adversely impacting habitats.*

Heat Network

In response to queries from Mr Hewitt, and Mr Turney KC on behalf of Munster Joinery/Landsul, Miss Berry confirmed that the Proposed Scheme does include heat infrastructure required for heat from the carbon capture facility to be integrated into the heat network scheme that is proposed for the Riverside Campus. Riverside 1 is CHP enabled and Riverside 2 is being built to be CHP enabled, both will be able to export heat at some point. The Proposed Development includes the kit required to contribute to that heat distribution network. Mr Fox, on behalf of the Applicant, added that the DCO relating to Riverside 2 has a requirement relating to the heat networks and the draft DCO for the Proposed Scheme seeks to ensure that the Proposed Scheme integrates into any heat network that is developed. The DCO application allows for the heat network to be built in Norman Road.

Mr Alderson, on behalf of the Applicant explained that heat transfer would be required whether or not there is heat recovery and that the heat facilities provided for in the DCO application are of a size suitable for the Carbon Capture Facility.

Post Hearing Note (as committed to at the Hearing and in response to Action Point vi) the Applicant has provided further information on the role of the heat infrastructure within the Proposed Scheme and its interaction with any wider heat network for the Riverside Campus in Appendix A to this note.

Flue Gas Ductwork

In terms of the flue gas ductwork, Mr Alderson noted that the Applicant has had to deal with the fact that the stack for Riverside 1 is at the south of the plant, but for Riverside 2 will be at the north of the plant. He confirmed that the Applicant had sought to minimise the overall length of ductwork by having the layout of the plant with the flue gas supplied at the north end, to the absorber plant. The ductwork is located on pipe bridges at elevation for supply from Riverside 1 and Riverside 2 to the carbon capture plant. That is the only technically viable way of supplying the flue gas. The ducts themselves are three to four metres in diameter as the flue gas is very low pressure from Riverside 1 and Riverside 2 and it is also at an elevated temperature, above 100 degrees.

As such (and also in response to the comments of Mr David Wilson from Thames Water), the option of burying the ductwork is not viable - firstly, you would require significant excavation to be able to bury such a large duct and secondly, because of the high temperature you would be faced with heat leak from the duct into the surrounding soil, that would be likely to kill off surrounding flora and fauna for several metres around the duct work unless specific mitigation measures were taken. Such measures include insulation and cooling around the ductwork, which would add to complexity and reduce the viability of the buried solution.

In response to the ExA's questions on distance limits for how far flue gas can be ducted, Mr Alderson confirmed the issue with distance is the pressure drop in the ductwork. The flue gas is emitted from Riverside 1 and Riverside 2 at low pressure and as you increase distance the pressure drop is excessive, and you would need to install booster fans to provide additional pressure to traverse the length of the duct work. It is technically viable but requires additional equipment and extra power assumption associated with that. The current indicative layout includes for booster fans, but the Applicant anticipates that the existing fans within Riverside 1 and Riverside 2 are sufficient to reach the capture plant. How far you could extend ductwork with boosters would be subject to design calculations between the diameter of the ductwork and the pressure drop.

In relation to extending flue gas ductwork into any East Zone, Mr Alderson confirmed that the length of ductwork would be greater and one of the considerations across all sites was to minimise the length of ductwork. In depth calculations to work out when booster compression would be needed have not been undertaken to date, but at a high level, in relation to the original East Zone (Iron Mountain) boosters may not be needed, but in relation to the new East Zones considered in the

TSAR Addendum which were more south, it is likely additional booster compression would be required.

In response to a query from Mr Wilson of Thames Water about the Applicant exploring land to the south of Eastern Way, Mr Alderson noted that for such a site the ductwork (and the return LCO2 pipeline) would have to traverse a major highway, carrying its own significant implications. It would not be impossible, but to be technically viable it would be a huge engineering project and would in any event fail the Project Objectives as not being close to the EfW facilities (and, for example, would likely involve developing on green open space).

Vertical Integration

In response to a query from the ExA, Mr Alderson confirmed that the Applicant has implemented some degree of vertical integration where possible. For example, the design includes pipe racks to carry pipe work and ductwork. In some locations there is equipment mounted below that and in others there are multiple levels of equipment (one above the other). Consideration has to be given to the maintainability of the equipment, that being free access to the equipment, so that does limit opportunities for vertical integration in some places. Occupied buildings can be multiple levels for example, control rooms, welfare facilities etc. However, the sheer amount of equipment that is required for such a complex process has space requirements and that is why the Applicant has an 8 hectare plot to accommodate them.

Post Hearing Note: Expanding on Mr Alderson's oral submissions:

Throughout the development of the design and the layout of the Carbon Capture Facility, opportunities to reduce the required overall site footprint requirement through the use of vertical integration have been sought and incorporated where safe and operable.

Specific opportunities incorporated include:

- *Vertically arranging ductwork, pipework and cabling on pipe bridges, where possible, so as to minimise the width of pipe bridges.*
- *Employment of vertically orientated pipeline expansion loops.*
- *Vertical stacking of smaller items of equipment on multi-tier support structures*

- *Locating equipment beneath pipe bridges.*
- *Locating liquid CO₂ pumps and associated infrastructure under liquid CO₂ storage tanks.*
- *Integrating CO₂ compressor intercoolers/aftercoolers and knockout pots within compressor.*
- *Integrating refrigerant compressor intercoolers/aftercoolers within the compressor packages.*
- *Employing two-storey buildings to accommodate control room, welfare facilities, instrument rooms, workshops, stores, etc. to minimise building footprint.*

The Applicant also notes the update to Schedule 1 proposed in its 18 November submission which demonstrates that in relation to cooling, further vertical integration may be possible.

From the above, it can be seen that vertical integration opportunities have been allowed for throughout the Carbon Capture Facility, and that this is an ongoing process with further opportunities being sought as the design process progresses. Therefore, it can be seen that minimisation of site footprint is already an important design consideration, that has been built into the submission documents, whilst maintaining the operability, maintainability and safety integrity of the Carbon Capture Facility.

Overview of site selection process

Miss Kirsten Berry, on behalf of the Applicant, discussed in detail the relevant points on site selection generally and in relation to flue gas ducting.

Miss Berry began with reference to the National Policy Statement (NPS EN-1) which sets out the expectations for alternatives and details that in consideration of alternatives, this should comply with policy requirements in a proportionate manner and critically, only those alternatives that can meet the objectives of the proposed project need to be considered.

As Miss Berry stated at the Hearing, the Applicant acknowledges that additional to this, the ExA needs to consider legal tests such as compulsory acquisition. This has informed its approach the Optioneering Principles, as discussed in the TSAR.

Miss Berry set out the context for the Project Objectives which have underpinned the optioneering process.

Cory Environmental Holdings Limited (Cory) is long established on the River Thames. It was set up in late 1800's and it was a river operating business from the start. It has been established at the site in Belvedere with Riverside 1 energy from waste facility becoming operational in 2011. Riverside 2 is currently under construction and between the two facilities, they would provide approximately 50% of the residual waste management strategy required to manage London's residual waste; they are of themselves strategically important infrastructure and they are located at a site which is allocated for strategic waste management. Middleton Jetty (the existing jetty) is a safeguarded Wharf.

Miss Berry briefly described the current operation: residual waste is collected and substantially brought to site via the river, using tugs and barges to the energy from waste facilities at the Riverside Campus. The most significant residue from these facilities that is not already being proactively managed is carbon dioxide. In 2022, Riverside 1 represented some 99% of Cory's carbon dioxide emissions as a company, so it is clearly a priority to address.

She went on to explain that decarbonisation infrastructure is a project of critical national importance, and the Proposed Scheme would capture the carbon dioxide generated from the safe and efficient management of residual waste and the use the river again to export it for sequestration.

Miss Berry, continued by explaining how the context set out above sets the framework for the Project Objectives. These objectives are: that the carbon capture facility needs to be located in the vicinity of Riverside 1 and Riverside 2 and the River Thames for the export of carbon dioxide; it clearly needs to be of sufficient size to accommodate the development, including the supporting plant and associated infrastructure; and, it needs to be deliverable in a timely manner. Options that cannot meet these objectives are not reasonable alternatives.

Miss Berry shared Figures 2-2 and 2-3 of the TSAR (APP-125) to represent the site selection process that has been followed, including application of the Optioneering Principles to consider:

- achievement of the Project Objectives;
- application of the mitigation hierarchy;

- application of key protective policies relevant to the Site and which would be a differentiator between options – including Metropolitan Open Land ('MOL'), Accessible Open Land ('AOL'), local nature designations (LNR/SINC) and protected species; and
- legal requirements - noting that it was clear from the outset that the Proposed Scheme would be unlikely to have WFD or HRA issues, and so predominantly accounting for the fact that the legal tests for compulsory acquisition would need to be demonstrated, given that all options involved third party land.

Miss Berry confirmed that all sides of the Riverside Campus were considered: the north, east (incorporating the Belvedere Industrial Area), west (potential for reusing the disused sewage sludge incinerator on Thames Water land) and the south (recognised there were different outcomes in terms of the designations).

Miss Berry continued that in relation to the south zones, five different locations were considered by the Applicant, details of which are set out in the TSAR.

In response to queries from Mr Turney KC, on behalf of Munster Joinery/Landsul, the Applicant confirmed that the errata version of ES Figure 3-3 was correcting missing labelling, and that the updated version represented what was considered in the masterplanning process.

Mr Turney then raised queries on the following matters, and the Applicant committed to confirm the position in writing. These matters are dealt with (and thus also dealing with Action Point vii) in Appendix B to this note.

- Clarification of the approach to measurements of each zone and how that developed over time.
- At what point the DAD masterplan approach was taken, in particular whether it was after the site selection process.
- Given the site layout brought forward in the DCO application is smaller than 8 hectares, if the results of the site optioneering process have been re-considered and would there be any change to the Applicant's conclusions.

Flue Gas Ductwork Optioneering

Miss Berry explained that the flue ductwork was considered in principle across all of the zones. Optioneering Principle 5 was particularly important as it focussed on the utility connections and demonstrated the importance of proximity for various connections. South Zone 1 was identified as the preferred location, so the Applicant then considered the routes in more detail (as reported at ES Chapter 3 (APP-052) with the preferred route being shortest, avoiding infrastructure in the Thames and crossing the footpath and avoiding the utilities and operational requirements of the Riverside Campus. Miss Berry concluded her presentation on this matter by referring to the early design work that had been undertaken seeking to minimise the impact of the Flue Gas Ductwork being located within the Crossness LNR, particularly as represented in the sketch shared on screen and submitted as Figure 5.12 of the Design Approach Document (APP-045) Miss Berry acknowledged the questions raised in Relevant Representations querying if flue gas ductwork could go through the area of Riverside 1 and Riverside 2 and confirmed, by reference to Section 2.4 of the Response to Relevant Representations (AS-043) and Appendix E (AS-044), that there is no space within the campus, with tall structures, roadways, utilities and maintenance requirements preventing this being able to be taken forward.

At the Hearing, the ExA further questioned why the ductwork could not be routed through these areas.

Mr Alderson explained that a range of options were considered regarding getting the ductwork from Riverside 2 to the Carbon Capture Facility, initially considering the presence of doing this internally through the campus, but this was not possible because of the complex layout of the site, the size of the ductwork and access requirements for the Riverside 1 and Riverside 2 facilities. The practical issues with following the access road is that it would obstruct use of the access road (which importantly, are used by the waste vehicles delivering waste to the EfWs) and obstruct maintenance access. It would not allow the existing ongoing operation of the site because, while the ductwork is elevated, it's on a series of pipe supports that have to be rested at grade, and this would take up a lot of space. In particular, it is noted that the maintenance craneage (which involves using one of the largest cranes in Europe and undertaking activities such as taking the roof of the facilities) would also be parked up on the access road to reach across into buildings and the ductwork would interfere with that. Furthermore, there is simply not enough room in the middle of the site to put the

ductwork through without interfering with existing arrangements (see Section 2.4 of the Applicant's Response to Relevant Representations (AS-043) and Appendix E (AS-044)).

Post Hearing Note: The Applicant has expanded on the above in a note at Appendix C.

Application of the Optioneering Principles

Miss Berry presented the RAG chart (Table 2-1 of the Applicant's Response to Relevant Representations (AS-043)) of the performance of the zones against the Optioneering Principles, which visually demonstrates the analysis set out in the TSAR (APP-125). No weighting was applied to the Optioneering Principles to ensure a balanced consideration. All zones had some level of challenge, as is not unexpected for a project of this scale, however critically South Zone 1 had no red score (a fatal flaw). South Zone 1 provides the smallest loss of MOL, Erith Marshes SINC and Crossness LNR. There is no loss of AOL; noting that the East Paddock and Stable Paddock are not publicly accessible open land. The outcome of the site selection process was validated against the Design Principles and has been subject to further design evolution to further minimise impacts.

East Zone

Miss Berry moved on to address the detailed points on the Agenda raised by the ExA regarding the East Zone, and the Relevant Representations which also queried use of this area. With reference to the TSAR Addendum (AS-044) Miss Berry noted that an additional seven plots of land had been considered, concluding that there are no appropriate locations within the North, East or West zones and the additional areas considered generally performed the same or worse than the 'representative' areas considered in the TSAR.

Miss Berry confirmed that the additional East Zones of the TSAR Addendum considered a north/south alignment, but these did not perform well in terms of many of the Optioneering Principles and would fail to provide a contiguous site with the Riverside Campus.

Addressing the ExA's questions in regard to Footpath 4, Miss Berry shared a Google aerial screenshot and described how, if the Carbon Capture Facility was located to the east, then some combination of Iron Mountain and either Asda or Lidl facilities would be required. Furthermore, a number of connections would be required to be built east-west across Footpath 4. Miss Berry

went on to note that Footpath 4 is a very limited space, fenced on both sides with a sharp dog leg. The overhead pipe work would make for an unpleasant environment for the footpath. It would likely have to be closed every time a vehicle needed to pass from one side to the other. There was potential for the footpath to be closed completely.

In a response to a question from the ExA, Miss Berry confirmed that the TSAR (APP-125) was focussed on a representative zone for the East, whilst the TSAR Addendum (AS-044) was produced in response to Relevant Representations to consider the different permutations of what could be built in that zone (but also the North and West Zones, they were all additional land parcels). The East Zone within the TSAR was considered representative of that area and this has been confirmed through the TSAR Addendum, which demonstrates that other options within that zone are equally as bad or worse than that representative location.

At the Hearing, in response to comments from the ExA, Applicant committed to providing further information on its concerns with the impacts of seeking to connect an East Zone to Riverside 1 and Riverside 2 across Footpath 4 (Action Point ii). This is set out in Appendix D.

At the Hearing, in response to comments from the ExA, Thames Water and Munster Joinery/Landsul queried the level of economic analysis that has underpinned the dismissal of the East Zone. Miss Berry explained that it was a case of considering Optioneering Principles 3 and 6 (detailed above) and the scale and complexity of existing businesses and third party landowners. The Applicant had a general understanding of what the existing businesses are from land agents, building type, number of employees and then conversations with engineering colleagues regarding reconstruction costs. There was no detailed cost evaluation, but a proportionate assessment was undertaken using advice from Ardent (land advisors on the Proposed Scheme) who are very familiar with the area. Mr Fox, on behalf of the Applicant, added that the Applicant had been seeking to engage with parties, specifically with Landsul Limited and Munster Joinery, to try and find out that information directly, but no information had been provided.

In response to a comment from SCNR group, Miss Berry confirmed that the Applicant's analysis hadn't just been a case of considering the financial cost implications. As set out above, the Applicant had undertaken a full optioneering process, which included consideration of ecological matters.

The Applicant committed to provide further information on its approach to economic considerations in the optioneering process. This is set out in Appendix E to this note (and therefore responding to Action Point v).

Conclusion of the Site Selection Process

The Applicant maintains there is no other reasonable alternative. The Applicant has sought to minimise impacts through application of the mitigation hierarchy in its optioneering process, and developed a Proposed Scheme which will lead to enhanced habitats and improved access arrangements.

The Proposed Scheme is important strategic infrastructure that is recognised as being of critical national priority and the starting point in such cases is that the project has met the tests which require clear outweighing of harm, including the very special circumstances test which applies to MOL. The Applicant considers it is clear that there are very special circumstances (as set out in the Planning Statement (APP-040), not least that the project will capture around 1.3 million tonnes of carbon dioxide which will make a material contribution to climate change.)

Miss Berry concluded the Proposed Scheme uses all of the Strategic Industrial Land allocation on the west side of Norman Road, which makes up some 70% of the area proposed for the Carbon Capture Facility and that impacts on the MOL, SINC and LNR designations had been minimised. A comprehensive masterplan had been developed both for the Site and the surrounding area, demonstrating a project that will deliver on global and national priorities whilst addressing local sensitivities.

Masterplan Development

Mr Kratt explained the design process as set out in the Design Approach Document (APP-044 to APP-046) ('DAD'). The design process forms a key part of demonstrating good design to accord with NPS EN-1 paragraph 4.7.1 – 4.7.15, with the focus not only looking at the outturn of process but the process itself.

He went on to highlight that the design process reflects the interaction and integration of environmental and planning considerations, consultation (stakeholder) and design development to inform a structured design approach. It is a cascade of hierarchy thinking, commencing with the project vision and objectives and down to the optioneering process as set out by Miss Berry.

Mr Kratt moved on to the three layout options that were explored within South Zone 1. The layout options considered the merits of an 'expanded layout' (Option 1) and a 'compressed layout' (Option 2) and Option 3 which was the layout option that considered the feasibility of the retention of Munster Joinery. One of the fundamental operational requirements was to retain a contiguous layout (avoiding interruption in the complete access to all elements within the project).

In relation to Option 3, this would place pressure on the ability to deliver the infrastructure operationally but would also break the sequence of flow and access from operational people. Consideration was therefore focussed on Option 1 and Option 2, the main difference between these options is the integration of existing green infrastructure within South Zone 1.

The diffuse layout is characterised by: operational plant extending to the north western boundary to adjoin West Paddock; retention of existing ditches within the operational area, all of which are in a poor habitat status and provide little effective drainage; and limited green infrastructure provision to the south and east along Norman Road

The compact layout is characterised by: provision of green infrastructure to the north western boundary supporting integration principles; a compact operational layout minimising the built layout footprint; and provision of opportunities for green infrastructure provision along Norman Road and to the south to support a generous public entrance point to the proposed expanded Crossness Local Nature Reserve.

Mr Kratt shared an extract from the DAD (Figure 4.2) which provided clarity on the operational layout using the compressed scheme. He emphasised that the Design Principles identified illustrate the benefits of the compact compressed layout and how that allows for the integration with Crossness Nature Reserve; it also supports the mitigation associated with integration of MOL and the amenity benefits arising from that.

	<p>Finally, in relation to design control, Mr Kratt discussed the Design Principles and Design Code (AS-020). Part of the information submitted for approval not only comprises of parameters upon which the environmental impact assessment has been made but also a set of Design Principles that are identified in accordance with good practice.</p>
<p>2.2 The Applicant to advise of any update on parameters for the proposed Jetty including implications for the existing former Belvedere Power Station Jetty.</p>	<p>Mr Matthew Fox, Senior Associate at Pinsent Masons LLP, on behalf of the Applicant, confirmed that the focus of the change was to do with the vessel sizes and what this has meant is very slight reductions in the limit of deviation (to accommodate a larger vessel – 20,000m³ instead of 15,000m³) following further engagement with the carbon capture storage partner – Viking). It does not affect the interaction with the Belvedere Jetty. The Change Report explains that the Applicant did consider the change assessment assumptions around the dredged pocket level (which has gone from 10.50mCD to 11.00mCD and with an increase in capital dredging volume from 110,000m³ to approximately 150,000m²), and the limit of deviation for that and the number of berthing dolphins has gone from 2 to 4. In the grand scheme of the overall jetty, these are minor changes and they do not change or have any effect on the optionality the Applicant has sought in terms of the interaction with the Belvedere Jetty.</p> <p>He confirmed that there will be a slight change in parameters, but it has no implications on the existing former Belvedere Power Station Jetty.</p>

3. On and off-site mitigation and compensation

3. The Applicant to briefly summarise the approach on and offsite natural environment mitigation and compensation, including:

3.1 The approach to offsite proposals at Thamesmead Golf Course;

Mr Fox, on behalf on the Applicant, confirmed that in relation to other developments having interactions within the area, there are no other developments to the Applicant's understanding now or planned that would lead to development on the Thamesmead Golf Course. Furthermore, the Thamesmead Golf Course performs no role as mitigation, compensation or BNG for any other development.

Dr Paul Joyce, Ecologist, on behalf of the Applicant, confirmed that the Thamesmead Golf Course is currently maintained through cutting alone and with no other regime that the Applicant is aware of. It was previously a golf course, but now has no civic function. It is a collection of different habitats that have been left develop due to relaxed management including woodland and scrubland. The Applicant has been working with Peabody on a landscape design which will enhance the site in line with the Pathways to the Thames strategy Peabody is working on. The strategy is currently without a funding mechanism, and the Applicant's scheme therefore provides a mechanism for that strategy to be brought forward.

Dr Joyce confirmed that there are three base proposals in relation to the Thamesmead Golf Course: creation of open mosaic habitat; creation of reedbed habitat; and enhancement of grassland or other habitat. On-site, the Applicant will achieve 1.31% net gain from landscaping on-site and will seek to gain 8.7% off-site BNG. In total, the Applicant is working with Peabody to enhance habitats in 65% of the golf course area.

In response to a question from the ExA as to what the landowners would do with the site in the absence of this scheme, Dr Joyce confirmed that the current approach to the site is to maintain it eg without brambles and other vegetation completely covering it – there is no other active management.

There is no funding mechanism for Peabody to commence work at present. Whilst Peabody have the strategy 'Pathway to the Thames' there is no mechanism for the site to be enhanced at present. Mr Fox confirmed that the Applicant deliberately uses the word 'aspiration' in these discussions, as there is no planning requirement for Peabody to deliver on Thamesmead Golf Course or more generally. The Proposed Scheme is the only way therefore that ecological improvements in this area can be delivered in the near future.

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In response to a question from the ExA as to what the boundary of the area that will form the BNG Opportunity Area will be, Dr Joyce confirmed that the former driving range falls within the boundary. The car park and club house structure, does not fall within the boundary of the area in which the Applicant will undertake works.

In terms of future management of the area, Dr Joyce confirmed that the Applicant will work with Peabody to meet the aspiration of providing a nature conservation site that is accessible to the public, building on the work the Applicant is already doing with Peabody's landscape designers. Mr Fox provided further clarification that the housing estate to the west is a Peabody Estate so improvements to the Golf Course are part of Peabody's wider aim to improve nature and green space for the local people. Miss Berry confirmed, further to Dr Joyce's previous statements, that the Applicant has engaged in detailed discussions with Peabody on their overarching strategy ('Living in the Landscape'), and their strategy called 'Pathways to the Thames' to make connections with the River Thames as part of developing its own proposals. Miss Berry summarised that Peabody have aspirations but not yet detailed proposals - they are at an early stage in delivery. What the Applicant proposes would bring ecological enhancement to the area that would enable aspirations to be met.

In response to a question from the ExA, Dr Joyce explained that the Thamesmead Golf Course is to perform a role as both compensation and to achieve BNG. Under trading rules, the Applicant is in a deficit on-site due to land take, particularly open mosaic habitat and reed bed habitat. The Applicant is unable to create open mosaic habitat and proposes to undertake compensation instead in this regard, however the remaining proposals are for BNG.

Dr Joyce and Miss Berry then went on to explain how the proposals correlate with mitigation and compensation previously provided as part of Riverside 1 and Riverside 2, further to questions from the ExA and Interested Party Mr Efker:

- There is no interaction with the ecological requirements for Riverside 1. These primarily related to the creation of a new wetland to the east of Riverside 1, the wet areas of which are to be avoided by the Proposed Scheme (albeit some aspects of the LCO2 pipeline will pass over the top of it).
- The impacts of Riverside 2 focused on open mosaic habitat ('OMH') with much of the focus on the loss of OMH from the parcels of land known as Borax North and Borax South, and the impacts to habitats along the electrical connection route corridor. Riverside 2, through its DCO, offset the loss of this OMH through offsite provision, wholly independent of and not affected by the Proposed Scheme. This offsite compensation is being delivered on five sites (4 in Bexley and 1 is on the Bexley/Greenwich border), all distinct from Thamesmead Golf Course. A conservative approach was built into the mitigation for the electrical connection route, assuming that the route would predominantly lie in soft landscape verges on the edge of the public highway. The works for this element are substantially and in practice almost no ecological impacts have been realised because the route has predominantly been laid in the public highway.
- However, Riverside 2 had also committed to restore OMH on the Gannon parcel of land, currently occupied by laydown for that project. The Proposed Scheme is to be built on that parcel. As such, the Applicant shall be compensating for that loss through the provision of OMH at Thamesmead Golf Course, as a replacement for replicating it on the Gannon land.

Mr Fox, on behalf of the Applicant, expanded on the legal mechanisms in relation to the BNG Opportunity Area. As it is offsite, it is secured by a Deed of Obligation that would work alongside Requirement 13 of the draft DCO which requires the Applicant to explain how it is going to deliver 10% BNG. The Applicant recognised the risk that Peabody may not necessarily move fast enough, so the proposed Deed of Obligation (as described in the Heads of Terms (APP-121) makes provision for this. Essentially the agreement requires the Applicant to use all reasonable endeavours to use the Thamesmead Golf Course, and if it is used, the Applicant would give Peabody a contribution to commence the works and Peabody would commit to delivering it. The

Applicant would then give notice to the London Borough of Bexley and Peabody of the date of final commissioning, and if Peabody have not completed the works then they would have to return the remaining aspects of the contribution and the Applicant would need to come up with alternative proposals to deliver any uncompleted ecological outcomes (that would need to be delivered before the Proposed Scheme opens).

In response to a question from the ExA as to whether the Applicant had considered credits, Mr Fox, explained that ultimately that is one alternative option for the Applicant, but given the uncertain nature of the credit market moving forward, it would much prefer to deliver local benefits. By way of comparison, on Riverside 2, habitat banks were used to deliver the off-site measures discussed above. The important point is that a realistic proposal has been brought forward focussed on delivering BNG. The Applicant's case is not predicated on the BNG proposals fitting into the wider access proposals that Peabody may bring forward at Thamesmead Golf Course.

Ms Pinturault, volunteer for Save Crossness Nature Reserve group, then suggested that the Thamesmead Golf Course is already very rich in biodiversity and that the Applicant's proposals would not improve habitat, it would just change it.

Mr Fox responded to highlight that, as set out in its BNG Assessment (APP-088), the Applicant's proposals will make improvements to habitats, and crucially, given the current state of the Golf Course, will ensure there is deliverability - the Applicant will be making a funding contribution to ensure something actually happens. Peabody have no obligation to do anything, it is simply an aspiration. The Applicant is enabling delivery with a funding contribution and, critically, ensuring it stays there and is appropriately managed for at least 30 years.

<p>3.2 Overall approach to the Application Site;</p>	<p>In response to a question from the ExA about the implications of the Belvedere Power Station Jetty (disused) being considered a nesting feature, but also potentially being lost to the Proposed Scheme, Dr Joyce, on behalf of the Applicant, confirmed that an Oyster-Catcher nest had been found on the Belvedere Power Station Jetty (disused) but that the Applicant in Chapter 7: Terrestrial Biodiversity of the Environmental Statement ('ES', APP-056) had considered a worst-case approach assuming removal of the Belvedere Power Station Jetty (disused). Mitigation for nesting birds is provided by, for example, demolition of the Belvedere Power Station Jetty (disused) outside bird nesting season to avoid direct impacts on those Oyster-Catchers.</p> <p>The loss of both pillars associated with the Belvedere Power Station Jetty (disused) is not considered to result in a significant effect on the local breeding oystercatcher population, as there are plenty of other nesting opportunities both within the Site, such as the shallow wader scrapes (as detailed within the Outline LaBARDs (as updated alongside this submission)), and in the wider Thames Estuary where core breeding areas for this species are located.</p> <p>Further to comments from Miss <i>Pinturault</i>, Dr Joyce confirmed that the Applicant had recognised the importance of migratory breeding birds in its assessment through identifying them as having a county value in the EIA. No significant adverse impacts are reported in Chapter 7: Terrestrial Biodiversity of the ES (APP-056) as a result of the Proposed Scheme proposals, including any potential loss of the Belvedere Power Station Jetty (disused).</p>
<p>3.3 Implications of the anticipated flue gas supply ductwork to the west and south of Riverside 2 and the effect on those parts of the Application site presently part of the CNR</p>	<p>Dr Joyce detailed the approach taken in the Environmental Statement, which is assuming a precautionary approach and has undertaken a shading study that showed there will be significant shading impacts to habitats in a small area around the ductwork (within 10 to 20 metres) without mitigation. The Applicant has then assumed the existing habitats under that ductwork would be lost with the exception of the water in ditches (i.e. grassland and reed bed). The Applicant does believe that the open water in the ditches can coexist with the ductwork. There will still be grass underneath the ductwork, it is possible to have a planted modified grassland.</p> <p>In summary, Dr Joyce confirmed that the Applicant had accounted for the loss but allowed for natural environment underneath. In terms of security fencing, this is a detail the Applicant will consider in the design phase. No significant effects are reported to arise in relation to these effects in the ES.</p>

	<p>The impacts to water voles will be mitigated pursuant to a species licence and the Applicant is working with Natural England to obtain a LoNI.</p> <p>Further to comments from Miss <i>Pinturault</i>, Dr Joyce, confirmed that lighting, noise and shading effects had all been considered in the Applicant's impact assessment in the ES.</p>
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4. Environmental Matters

4. The Applicant to briefly summarise the current situation with respect to:

4.1 Any existing management plans, regimes or obligations in place on parts of the Application site or offsite land including Crossness Nature Reserve, Norman Road Field and the proposed 'BNG Opportunity Area' at former Thamesmead Golf Course;

4.2 Implications of mitigation and compensation for impacts of other development elsewhere which may have been carried out on the Application site;

Mr Fox, confirmed that the Applicant has only recently become aware of the section 106 position of Norman Road Field as mitigation for Viridon Business Park (VBP), and it will be updating the DCO to account for this, i.e. to create the same legal position as Thames Water as discussed below, those provisions fall away. *Post Hearing Note: This has been reflected in the updated DCO submitted at Deadline 1.*

Mr Fox continued by setting out that the Outline LaBARDS builds on what has been required in the past but is reflective of what the actual position is and goes a lot further. In response to the ExA's first and second points on 4.2, it mitigates what is the current position. It builds on what the Thames Water and VBP developers committed to and makes it bigger and better. There is therefore no loss of planning position by building on the Management Plan for Thames Water or on the Norman Road Field managing the ditches, sluices, grazing, fencing and bird habitats, providing more, and turning it into a Local Nature Reserve.

In terms of the legal position, Requirement 13 requires detailed LaBARDS to be signed off prior to construction and development to be implemented as approved. This will ensure that the MEA works are done, and management measures are delivered. Requirement 13(3)(k) includes for a LNR management plan to form part of the detailed LaBARDS, for the whole extended Crossness LNR area (AS-012). This includes the area known as the Member's Area, which is behind TWUL STW operational fence.

Article 48 requires the Applicant to notify LBB when the Mitigation and Enhancement Area (MEA) works are completed. From that date, the MEA shall be formally created, and the existing designation falls away, and any byelaws. Crucially, the relevant clause of the 1994 section 106 is also abrogated.

4.3 Implications of any mitigation and compensation in terms of land management and ecology within the Application Site in respect of any requirements or similar relating to Riverside 1 and 2 developments.

In terms of the section 106 as proposed (APP-121), this seeks to deal with the fact that the Member's Area is not within the Order limits, but does fall within the Crossness LNR, and that therefore the Applicant recognises the benefit of having one management regime. Its purpose is therefore to seek to bind TWUL, owners of the land, into that regime, including continued employment of the Crossness LNR Manager that they currently employ. It would then seek to recompense TWUL for any additional cost arising from having to do that compared to the current position.

Mr Fox confirmed that updated draft Deeds of Obligation were due to be shared with the relevant Parties shortly after the Hearings. *Post Hearing Note – this was done, and the versions circulated to the relevant parties have been submitted at Deadline 1.*

Mr Fox confirmed in response to Thames Water's representatives that a Deed of Obligation can cover whatever land it needs to - it doesn't matter if the land is not included in an application red line boundary. As the Member's Area is within what the Applicant had understood to be what Thames Water would consider within its operational boundaries, it had not included it in the DCO.

In response to queries from Thames Water's representatives, the Applicant does not rely on this for the benefit of the MEA. If TWUL determines it does not want to do this, the DCO will be amended to abrogate the 1994 section 106 provisions only within the Order limits, and LaBARDS will be amended to seek co-existence where possible.

Finally, the Applicant also seeks to recognise that the 1994 106 requires on-going management until 2093. As such, given the expected design life of the Proposed Scheme may not last that long, it allows for Applicant to pay an Endowment to LBB for any gap in time between end of scheme and 2093, so there is no gap in the planning position from the baseline.

In response to discussions at the Hearing, Dr Joyce explained the Thames Water Management Plan was not the starting point for designing improvement works. The Applicant surveyed the site and identified the floodplain grazing marsh was in poor condition. Consequently, two independent assessments had reached the same conclusion that the grazing marsh habitat in this location was in poor condition. The reason being lack of long-term management of the interventions that had

been undertaken. What the Applicant seeks to do is to change the condition of the floodplain grazing marsh, rather than digging water bodies for example.

In respect of the Norman Road Field, the Applicant has only just become aware of the existence of a section 106 Agreement and so is endeavouring to confirm the nature and extent of the current planning obligations.

However, from what it understands, and in response to queries from the ExA, Thames Water and Miss Pinturault, Mr Fox confirmed that in respect of both Norman Road Field and the existing Crossness Local Nature Reserve its proposals are being developed so that they should not be considered as 'double counting' for measures that either have been delivered, or should have been delivered but have not been and not enforced against – the Applicant's proposals go above and beyond that 'base' position and should therefore be seen as a benefit (as well as mitigation for the Proposed Scheme's impacts).

To confirm this, and as requested by the ExA at the Hearing and in Action Point i, the Applicant has produced a note setting out the existing obligations which exist in respect of the Norman Road Field and the Crossness LNR and how the Applicant's proposals build on them to create that benefit – see Appendix F to this note.

5. Any other business

Ms Pinturault, commented on the term 'Accessible Open Land' and referred to Miss Berry's earlier comments about improving access. Ms Pinturault explained that whilst open space benefits the public, the wildlife benefits from some of the restricted access.

Mr Fox, on behalf of the Applicant, responded to confirm that in relation to Accessible Open Land this also counts as open space or special category land. The term Accessible Open Land had been in recognition that this land is used by people both to recreate and to access nature. It was a term used in the Environmental Statement and in the Optioneering Principles.

Post Hearing Note: In response to the point of how the Applicant's proposals for improved access to the MEA can correlate with ecological outcomes, the Applicant notes as follows:

*As described in **Chapter 2: Site and Proposed Scheme Description of the Environment Statement (Volume 1) (APP-051)**, Crossness Local Nature Reserve (LNR) comprises both publicly Accessible and Non-Accessible Open Land within the Site Boundary and a Members' only restricted area which is located behind Thames Water fencing. Some areas of the Crossness LNR are not publicly accessible in order to avoid visitor disturbance, mainly to birds using the LNR.*

*The Mitigation and Enhancement Area proposed within the Site comprises of the remainder of the Crossness LNR located within the Site and the Norman Road Field land parcel as shown on **Figure 1-2: Satellite Imagery of the Site Boundary Plan (Volume 2) (APP-072)**. The Mitigation and Enhancement Area will ensure the ecological mitigation measures and objectives set out in **Chapter 7: Terrestrial Biodiversity of the Environment Statement (Volume 1) (APP-056)** and the **Outline LaBARDS (as updated alongside this submission)** are achieved, for example:*

- the condition of floodplain grazing marsh habitat in Norman Road Field will be improved to raise its ecological value; and*
- provision of new ditch habitat and improvements to existing ditch habitat to mitigate effects on water voles.*

*The Mitigation and Enhancement area primarily consists of land that is publicly accessible and this is proposed to be maintained. The indicative locations of new and altered Public Rights of Way (PRoW) are detailed within the **Outline LaBARDS (as updated alongside this submission)**, however confirmation of the exact routes will be determined as part of the detailed design process, pursuant to Requirement 12 of the **draft DCO (AS-056)** and alongside the discharge of the full LaBARDS. As part of this process, consideration to ecological features, including ground nesting bird habitat and ditches used by water voles, and other ecologically sensitive areas, will be given, with measures needing to be to the satisfaction of LBB.*

*The provision of new and altered PRoW within the Mitigation and Enhancement Area is considered appropriate as the ecological sensitive areas will be protected via the Applicant's measures such as signs being installed to ensure visitors do not stray from the paths and to instruct dog walkers to keep their dog on a lead. This measure has been included within the update to the **Outline LaBARDS (as updated alongside this submission)**. Furthermore, water voles are able to exist in publicly accessible areas as they occupy the banks of ditches and wetland features generally avoided by visitors; in addition, water voles live in burrows that act as refuges.*



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