Planning Act 2008

Infrastructure Planning (Examination Procedure) Rules 2010 (as amended)

Planning Inspectorate ref: EN010128 Cory Decarbonisation Project

WRITTEN REPRESENTATION

On behalf of

Western Riverside Waste Authority

26th November 2024

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WRITTEN REPRESENTATION

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26th November 2024

Introduction

1. The Western Riverside Waste Authority ("WRWA") objects to the granting of development consent for the Cory Decarbonisation Project ("the project"); and objects, whether as part of that, or at all, to the authorisation of compulsory acquisition in relation to WRWA land/interests. These representations outline WRWA's concerns to date,[1] and address the issues arising in the following order:
    a. Background
        i. WRWA
        ii. Long-term contractual relationship with Cory[2]
    b. Concerns identified to date in summary:
        i. Modifications to the Riverside 1 Energy from Waste Facility ("Riverside 1") to incorporate novel technology, the long-term viability of which is unclear & compromise to the Riverside 1 operational area.
        ii. Contractual matters, including insurability & unintended contractual implications.

[1] WRWA has felt itself disadvantaged by the very limited contact it has had regarding the project. As the Schedule of Negotiations and Powers Sought (4.4) document dated March 2024 shows, from PDF p.205-206, at the time the document was issued, the only contact had been regarding 1) the LIQ 2) notification of public consultation and 3) the issue of section 42 documentation. The implications for WRWA are complex and important, therefore WRWA reserves the right to make further representations.

[2] References to Cory refer to the Cory group and/or any of its constituent companies and references to RRRL mean Riverside Resource Recovery Limited.

iii. Protective provisions.
iv. Failure to negotiate and reliance on Planning Act 2008 powers in the context of a longstanding commercial relationship.

Background

WRWA

2. WRWA is one of the remaining autonomous statutory bodies responsible for undertaking the waste disposal functions previously undertaken by the Greater London Council; and inherited the land, interests and licences relating to that function, for that purpose. WRWA was established by 1985 Order[3] and undertakes its statutory functions related to waste disposal on behalf of its four constituent London Boroughs: Hammersmith & Fulham, Lambeth, Wandsworth and the Royal Borough of Kensington & Chelsea ("the constituent authorities").

3. WRWA's powers and duties are primarily derived from the Environmental Protection Act 1990 ("the EPA 1990"). It is a "disposal authority" (s.30(2)(b)(i) of the EPA 1990), responsible for making arrangements for waste disposal in conjunction with private waste disposal contractors (under s.51 of the EPA 1990). Under s.51, WRWA has a duty to create reception points where waste collection authorities (here, the constituent authorities) can deposit waste collected by them for disposal and has a power to direct the constituent authorities in its area to deposit waste collected by each of them at such collection points as it may select.

4. WRWA has two riparian waste transfer stations to which it directs its constituent authorities to deposit their collected waste: it has a dock at Smuggler's Way, Wandsworth and another at Cringle Dock, beside Battersea Power Station. Those docks are used for transferring the waste via water transport (barges) to Belvedere. Cory carries out this water transport function under contract on behalf of WRWA, pursuant to WRWA's statutory waste

[3] The Waste Regulation and Disposal (Authorities) Order 1985 SI1985/1884, Schedule 1 Part II.

disposal purpose. It should be noted that at the 2019 examination regarding the Riverside 2 DCO, WRWA pointed out that it is a statutory body, which benefits from the protection of section 127 of the Planning Act 2008[4] although it had not been treated in that way. The same approach seems to have been taken by Cory in relation to this project, but WRWA takes the view that it benefits from that statutory protection.

Long term contractual arrangement with Cory

5. WRWA has been in contract with Cory, one way or another, since 1986.

6. The current contractual arrangements between WRWA and Cory have their origin in WRWA's formulation of a long-term strategy for waste disposal back in 1998. That long-term strategy addressed a period from 2002 to 2032. A detailed procurement process was undertaken, and ultimately, Cory successfully won a contract to treat WRWA's waste for that period of 30 years, from 2002 to 2032. The contract between the parties ("the WMSA") provided for landfill, but the intention was that an energy from waste facility would be built. A lengthy planning process ensued, relating to securing consent for Riverside 1. A detailed negotiation process also took place, which resulted in the settling of an amended and restated waste management services agreement, in 2008. Originally (in 2002 when the WMSA was signed) the intention of the parties had been that the EfW Facility would have operated as a pure "merchant facility" with the WMSA working as a simple supply and pay contract. However, RRRL's prospective funders became concerned with a condition of the planning permission, which restricted the source of the waste to Greater London primarily delivered by river (a principle Cory had agreed to during the inquiry process). In practical terms this effectively meant that, without access to WRWA's riparian transfer stations, Riverside 1 would have been a stranded asset and not independently viable. In order to make it bankable the funders required WRWA to become the owner of last resort in

[4]See section 127(8) which applies section 8 of the Acquisition of Land Act 1981. Section 8(1) says this: "(1) In this Act, unless the context otherwise requires, *"statutory undertakers"* means— (a) **any person authorised by any enactment to** construct, work or **carry on—**(i) **any** railway, light railway, tramway, road transport, **water transport**, canal or inland navigation **undertaking**, or (ii) **any dock**, harbour, pier or lighthouse **undertaking**, or (iii) …" (Emphasis added.)

circumstances where the WMSA terminated early, and the Project evolved into a Public Private Partnership on quasi-Private Finance Initiative (PFI) terms insofar as they related to the river transportation and EfW element of the services (the tugs and barges transferred to RRRL as part of the financing deal). This necessitated the introduction of controls into the WMSA and associated documents to protect WRWA's interest in Riverside 1.

7. As a result of the design life of Riverside 1 exceeding the remaining term of the WMSA (by the end of which its funding had to be fully repaid), WRWA and RRRL entered into a Residual Value Agreement during the currency of which (it expires in 2046) WRWA can elect either to send tonnage to Riverside 1 at a special rate or to receive a royalty.

8. A summary of the WMSA has been produced by WRWA's solicitors and is provided at Appendix 1 to this written representation. It will be understood that one key aspect of the contractual arrangements is that WRWA is the owner/funder of last resort in an early termination scenario (see section 11 of Appendix 1) and is required to buy RRRL (or its assets) if the Project fails. It also has a lease over the main site (which is sub-let back to RRRL in the normal course but which sub-lease may be terminated in certain scenarios, including an early termination of the Residual Value Agreement). This means that WRWA has a direct interest in the Riverside 1 facility, which the DCO proposes to affect.

Concerns identified to date

Modifications to the Riverside 1 Energy from Waste Facility ("Riverside 1") to incorporate novel technology the long-term viability of which is unclear & compromise to Riverside 1 operational area

9. While the detailed design for modifying Riverside 1 to incorporate the proposed carbon capture plant is yet to be worked up, it is nonetheless apparent that there would be a variety of necessary physical interventions to Riverside 1 to retrofit the proposed carbon capture arrangements. WRWA commissioned SLR to consider the implications for Riverside 1. SLR's

technical note is appended as Appendix 2. In it, SLR point out that while energy from waste technology of the type in use at Riverside 1 is specifically selected by plant operators because of its track record of reliability, which is a critical factor for waste disposal services, the carbon capture proposal, in terms of the technology deployed and the chain on which it depends, are untested. This gives rise to various practical concerns, which SLR identifies in the note. Further, SLR points out that the consideration of alternative means of decarbonisation seems to have been relatively limited.

10. During any construction phase, SLR warns of the potential for interruption to WRWA's waste disposal service. As far as the operational phase is concerned, while much detail is outstanding, SLR have identified an extensive array of potential detrimental impacts, about which WRWA is concerned.

Contractual matters, including insurability, a reduced asset & unintended contractual implications

11. A Summary Note of the Adverse Contractual Consequences on the WRWA is appended to these representations as Appendix 3. It points out that one of the consequences of the project is a change to the insurability of Riverside 1, in relation to which WRWA is potentially exposed should insurance cover cease to be available on reasonable terms at an economically viable rate. Further, in a future scenario in which WRWA became the owner of Riverside 1, it would receive a compromised asset the subject of multiple (but as yet unspecified) easements and restrictive covenants, and one which would be physically diminished in size. Bearing in mind the complexity of the contractual arrangements, and the particular circumstances in which this scenario would eventuate, it is far from clear that this is a properly compensatable loss.

12. As to unintended contractual consequences: at the initial compulsory acquisition hearing on 7th November 2024, WRWA raised a query relating to the intended effect of including the entire land parcel 1-086 within Blue Land, per the key: "new rights to be compulsorily acquired and in relation to which it is proposed to extinguish easements, servitudes, and other private rights".

The only response WRWA has had was in the form of an email which highlighted Article 30(6)(b) within the draft Development Consent Order, relating to private rights, which says that the article does not apply to "private rights and restrictive covenants owned by the undertaker REPL, RRRL or WRWA within the Order limits". It seems to WRWA that the order plan key should refer to Article 30(6)(b), and that article should refer to any WRWA contract relating to the site (including the WMSA and the Residual Value Agreement), so that the Development Consent Order would not have the unintended consequence of imposing (e.g. service changes).

Protective provisions

13. It is WRWA's understanding that Cory takes the position that WRWA's interests as the owner/funder of last resort/in the event of a step in, are protected as RRRL has a commercial interest in protecting Riverside 1. In WRWA's view, that provision is too indirect. It supposes that WRWA and RRRL's interests are wholly aligned, which WRWA is not satisfied will always be the case, bearing in mind the commercial relationship with Cory. Further, the Protective Provisions offer no protection to WRWA in its capacity as the leaseholder of the main Riverside 1 site (particularly but not exclusively in circumstances where the sub-lease back to RRRL is terminated). WRWA seeks the direct protection of its interests, either by separate Protective Provisions for its benefit, or where necessary/appropriate for the words "and WRWA" to be added to the Protective Provisions where RRRL is to be consulted by the undertaker.

14. The Protective Provisions as drafted are of serious concern to WRWA. As above, if WRWA steps in, it would be a successor in title to RRRL. It would therefore be caught by paragraph 119 of Part 9 of the Protective Provisions which provides an unlimited indemnity for the benefit of the undertaker.

Failure to negotiate and reliance on Planning Act 2008 powers in the context of a longstanding commercial relationship

15. As has been explained, WRWA and Cory have had very longstanding contractual relationships, providing for the disposal of London's waste since the mid-1980s. Throughout that period, detailed and complex commercial negotiations have resulted, over time, in carefully balanced contractual arrangements. As such, the failure to negotiate properly with WRWA, and instead, to seek to compulsorily acquire land and interests via the DCO is a misuse of those powers.

Conclusion

16. WRWA's statutory function requires that it seeks to ensure the secure, uninterrupted disposal of waste on behalf of the constituent authorities. As matters stand, it is not satisfied that the project safeguards that purpose. It is nonetheless hoped that a mutually acceptable solution will be negotiated, which ought to have been attempted properly before the DCO process was initiated. It is noted that the Examining Authority has requested a Joint Position Statement between WRWA and Cory, and WRWA will of course assist with that process.

WRWA

26th November 2024

APPENDIX 1

WMSA SUMMARY

SUMMARY OVERVIEW OF THE WASTE MANAGEMENT SERVICES AGREEMENT

26th NOVEMBER 2024

1 INTRODUCTION

1.1 This note contains a summary of the Waste Management Services Agreement ("**WMSA**").

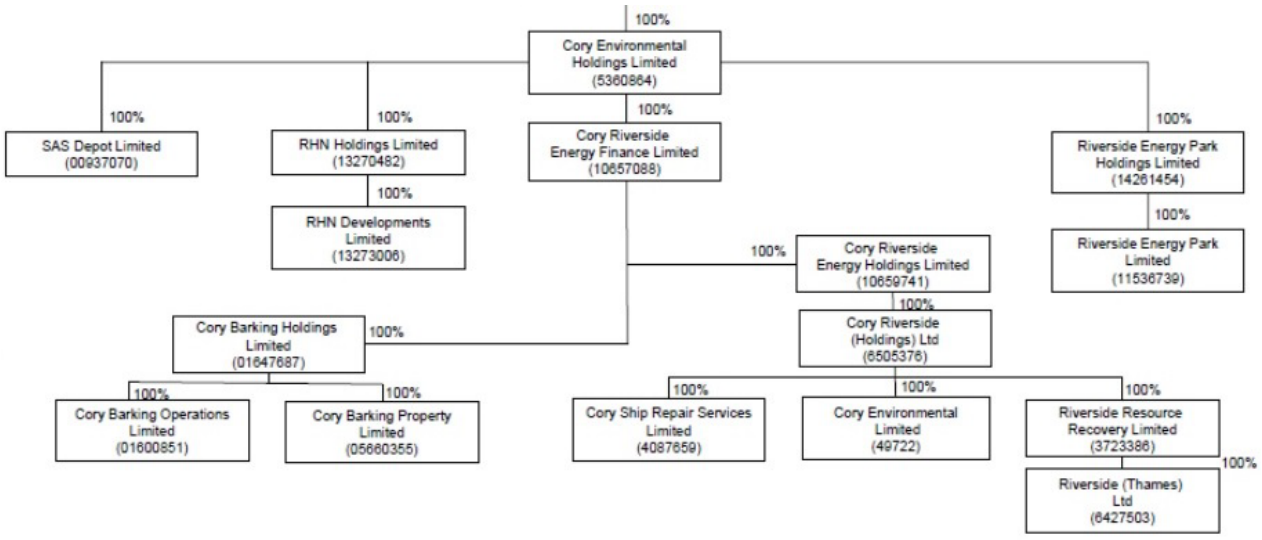
1.2 The parties to the WMSA are the Western Riverside Waste Authority ("**WRWA**" or the "**Authority**") and Cory Environmental Limited ("**CEL**" or the "**Contractor**").

1.3 WRWA is a statutory body established under section 10 of the Local Government Act 1985 and the Waste Regulation and Disposal (Authorities) Order 1985. It is responsible for the disposal of household, commercial and industrial waste delivered to it by the London Boroughs of Hammersmith and Fulham, Lambeth, Wandsworth and the Royal Borough of Kensington and Chelsea (the "**Constituent Councils**").

1.4 CEL is part of the Cory group of companies, the corporate structure of which is set out below. CEL is a sister company of Riverside Resource Recovery Limited ("**RRRL**" or the "**EfW Operator**") which owns and operates an energy from waste facility at Belvedere, Kent (the "**EfW Facility**" now known as "**Riverside 1**")) on a site (edged light green in Annex A – the "**Site**")) which is leased by RRRL to WRWA and leased back to RRRL.

1.5 In 2022, by agreement with WRWA part of the wider site (edged red in Annex A) was transferred to Cory Environmental Holding Limited's ("**CEHL"**) subsidiary, Riverside Energy Park Limited ("**REPL**") in order to construct and operate a second energy from waste facility ("**Riverside 2**"). The site leased to WRWA and leased back to RRRL was reduced in size accordingly to that land edged light green.

1.6 CEL, RRRL, CEHL and REPL are all associated companies within the Cory group.



2 SERVICES PROVIDED UNDER THE WMSA

2.1 The objective of the WMSA is the provision of waste management services to WRWA, primarily comprising:

2.1.1 the construction and operation of a materials recovery facility at Smugglers Way, Wandsworth;

2.1.2 the operation of WRWA's HWRC at Smugglers Way;

2.1.3 the receipt of waste collected by its Constituent Councils at WRWA's transfer stations at Smugglers Way and Cringle Dock, and the marketing, transport and off-take of recyclable and other waste materials;

2.1.4 the construction and operation of the EfW Facility;

2.1.5 the transfer of general waste received onto barges;

2.1.6 the transportation of the general waste down river to the EfW Facility; and

2.1.7 the thermal treatment of the transported general waste at the EfW Facility.

3 STRUCTURE OF THE WMSA

3.1 The project financing of the EfW Facility in 2008 necessitated the introduction of quasi-PFI standard terms for the benefit of RRRL. The WMSA remains in a single document but is drafted so that it is capable of being split into two severable parts:

3.1.1 the services described in paragraphs 2.1.1, 2.1.2, 2.1.3 and 2.1.5 above comprise the Authority Site Services Contract ("**ASS Contract**" and "**ASS Services**"); and

3.1.2 the services described in paragraphs 2.1.4, 2.1.6 and 2.1.7 comprise the "**EfW Contract**" and "**EfW Services**".

3.2 The EfW Services have been subcontracted by CEL to RRRL, the owner and operator of both the EfW Facility and the tugs / barges.

3.3 This summary relates only to the EfW Contract.

4 TERM

4.1 The term of the WMSA runs to 04 October 2032 (the "**Expiry Date**").

4.2 Residual value rights under a Residual Value Agreement ("**RVA**") with RRRL enable the period over which the EfW Services for a pre-determined tonnage can be provided to extend to 11 October 2046 on similar terms (some of which are subject to further clarification or negotiation). Alternatively, under the RVA WRWA can opt to take a royalty on third party waste tonnage accepted by the EfW Facility.

5 CONTRACTOR PRIMARY OBLIGATIONS

5.1 The Contractor's primary obligations are to:

5.1.1 Provide the services set out in paragraph 2 above (clause 14.1);

5.1.2 (In appropriate circumstances) pay to WRWA its share of the energy revenue generated (Sch 8 para 6);

5.1.3 (In appropriate circumstances) pay to WRWA the Unutilised EfW Annual Reserved Capacity Payment (Sch. 8 para 7);

5.1.4 (In appropriate circumstances) pay to WRWA its share of third party gate fee revenue above a preset threshold (Sch. 8 para 9); and

5.1.5 (In appropriate circumstances) pay to WRWA its share of any refinancing gain and/or gain arising from any equity restructuring (Sch. 15 para 30).

6 WRWA PRIMARY OBLIGATIONS

6.1 WRWA's primary obligations are to:

6.1.1 direct all the waste under its Power of Direction to the Contractor (clause 13.1.1);

6.1.2 make available to the Contractor all waste delivered to the civic amenity sites (clause 13.1.2); and

6.1.3 pay for the services (clause 13.1.3) on the basis of a gate fee per tonne of waste handled / treated by the Contractor (the rate depending on how the waste is handled / treated).

7 CHANGE IN LAW

7.1 The Contractor is entitled to compensation from WRWA (in proportion to WRWA's historic reserved share of tonnage at the EfW Facility in the previous rolling 5 year period) and/or changes to the EfW Contract if any of the following ("**EfW Qualifying Changes in Law**") occur and affect the EfW Services (Sch. 15 para 8):

7.1.1 Discriminatory changes in law (i.e. changes in law that just relate to the project, the Contractor or the EfW Operator, or just to public private partnership contractors);

7.1.2 Changes in law that relate to: services the same or similar to the EfW Services, or to companies whose main business is the holding of shares in such companies; emissions from industrial facilities; discrimination against the sale of electricity generated specifically from energy from waste facilities; changing Constituent Council boundaries;

7.1.3 Changes to required performance standards as a result of a best value order made by the Secretary of State;

7.1.4 General changes in law which involve capital expenditure;

7.1.5 Legislation giving effect to a list of policies in Schedule 6 to the WMSA;

7.1.6 Changes to the EfW Facility's environmental permit;

7.1.7 Changes in law which oblige the Constituent Councils to divert what would have been General Waste away from WRWA's power of direction to the extent that this results in a reduction in General Waste tonnage directed or made available to the Contractor.

8 EFW CONTRACTOR CHANGES

8.1 If the Contractor wishes to propose a change to the EfW Services, it must follow the procedure set out in paragraph 7 of Schedule 15.

8.2 The Authority is entitled to reject a proposed change in circumstances where it would result in: (i) an increase in the EfW General Waste Rate; (ii) a detrimental effect on the Services; (iii) an adverse effect on the value of the Residual Value Rights to the Authority; or (iv) a material change to the risks and costs that the Authority is exposed to either during the EfW Service Period or subsequent to an early termination of the EfW Contract.

9 LAND INTERESTS

9.1 The Site is subject to, and benefits from, the easements granted by a Deed of Easement and Covenant which was entered into when the original site was split to allow the construction of Riverside 2 in December 2022. The Deed of Easement and Covenant allows the owners/operators of Riverside 1 and Riverside 2 from time to time to cross and lay cables over each other's land.

9.2 The management of common parts shared by Riverside 1 and Riverside 2 (e.g. access roads and the Middleton jetty) is governed by the terms of an Access and Usage Agreement to which subsequent owners of Riverside 1 and Riverside 2 from time to time are required to accede.

9.3 Pursuant to paragraph 26.1 of Schedule 15, the EfW Operator is at liberty to dispose of the surplus land (edged blue and lying to the south of the Site – see Annex A) (the "**Belvedere Surplus Land**") as long as the net proceeds of sale are applied to prepay the senior debt:

"*26.1 The Contractor shall procure that the EfW Operator, upon any sale of the Belvedere Surplus Land:*

26.1.1 applies the net proceeds of sale in the prepayment of the Senior Debt (and the permanent prepayment of the 2017 Senior Debt for the purposes of the Base Case) as soon as reasonably practicable following receipt of such proceeds unless and until the 2017 Senior Debt in the Base Case is reduced to zero; and

26.1.2 notifies the Authority in writing once this has been done."

10 TERMINATION OF THE EFW CONTRACT

10.1 EfW Authority Defaults (Sch.1)

These events entitle CEL to terminate the WMSA and comprise: material non-payment; breaches of contract which substantially frustrate the provision of the EfW Services for 2 months; expropriation of the EfW Operator's assets and/or the transfer station(s) which substantially frustrate the provision of the EfW Services for 2 months; expropriation of the Contractor's or EfW Operator's shares which substantially frustrates the provision of the EfW Services for 2 months; enactment of legislation which frustrates or makes it unlawful for WRWA to perform its obligations under the EfW Contract; failure(s) of WRWA to direct or make available waste which result in the Contractor suffering a significant reduction in tonnage over an extended period of time (50% over 2 years or 38% over 3 years) (Sch.15 para 9).

10.2 EfW Force Majeure Events (Sch. 1)

10.2.1 These events relieve the Contractor from its obligations under the WMSA for the duration of the event, and comprise:

(a) "*war, civil war, armed conflict or terrorism; or*

(b) nuclear, chemical or biological contamination unless the source or cause of the contamination is the result of actions or breach of the Contractor or its subcontractors of any tier, except where such actions of the Contractor constitute solely the receipt or treatment by the Contractor of General Waste (containing nuclear, chemical or biological contamination) in accordance with the EfW Contract; or

(c) pressure waves caused by devices travelling at supersonic speeds; or

(d) the suspension of both the Lighterage Business and the EfW Business due to the occurrence of an Economically Unviable Insurance Proposition in the circumstances set out in paragraph 1.3.3 of Schedule 15;

*which directly causes either Party (the "**Affected Party**") to be unable to comply with all or a material part of its obligations under the EfW Contract*."

10.2.2 Either party may terminate the EfW Contract if the EfW Force Majeure Event extends for a period of more than 180 days (Sch.15 para 14.5). Either party may also terminate the EfW Contract if either party is entitled to terminate the ASS Contract for a Force Majeure Event (clauses 10.10.2 and 40.10.2).

10.3 Corrupt Gifts and Fraud (clause 44)

Corrupt gifts and fraud on the part of the Contractor or its sub-contractors entitle WRWA to terminate.

10.4 Breach of Refinancing and Equity Restructuring Provisions (Sch.15 para 13)

WRWA is entitled to a share of the gain accruing from refinancings and equity restructurings. If these are not paid, WRWA is entitled to terminate.

10.5 EfW Contractor Defaults (Sch.1)

These events entitle WRWA to terminate the WMSA and include the insolvency of either the Contractor or the EfW Operator, unauthorised assignment, abandonment and significant performance failures. (Sch.15 para 10).

11 COMPENSATION ON TERMINATION OF THE EFW CONTRACT

11.1 WRWA's rights of termination are subject to rights of step-in on the part of the EfW Operator's funders. In the event of termination, compensation is payable by WRWA in return for the EfW Operator's assets / shares as follows:

Authority Default Termination (Sch.15 para 18)	Senior debt (adjusted); **plus** Redundancy costs; **plus** Sub-contractor breakage costs; **plus** Market value of share capital and subordinated debt
EfW Force Majeure Termination (Sch.15 para 20)	Senior debt (adjusted); **plus** Redundancy costs; **plus** Sub-contractor breakage costs
Corrupt Gifts and Fraud Termination (Sch.15 para 21)	Senior debt (adjusted); **less** Additional permitted borrowing distributions
Breach of Refinancing/Equity Restructuring Provisions Termination **(Sch. 15 para 22)**	Senior debt (adjusted); **less** Additional permitted borrowing distributions
Contractor Default Termination **(Sch. 15 para 19)**	Market value of EfW Operator's shares / undertaking (in conjunction with the provision by WRWA of a New EfW Contract on similar terms to the terminated EfW Contract for the remainder of the contract term to 4 October 2032) net of costs (either actually determined through a tender process or estimated by an expert).

11.2 Payment of the compensation on termination is regulated by a Finance Direct Agreement, which gives the Authority the option to either take ownership of the EfW Operator's shares or assets. The Authority

also has the right to take an assignment of the debt and security over the EfW Operator's assets held by the Security Trustee. This means that following an early termination of the EfW Contract, the Authority (or its nominee) will either acquire ownership of the EfW Operator itself or of the EfW Facility and the Site.

12 SUB-LEASE RESTRICTIONS

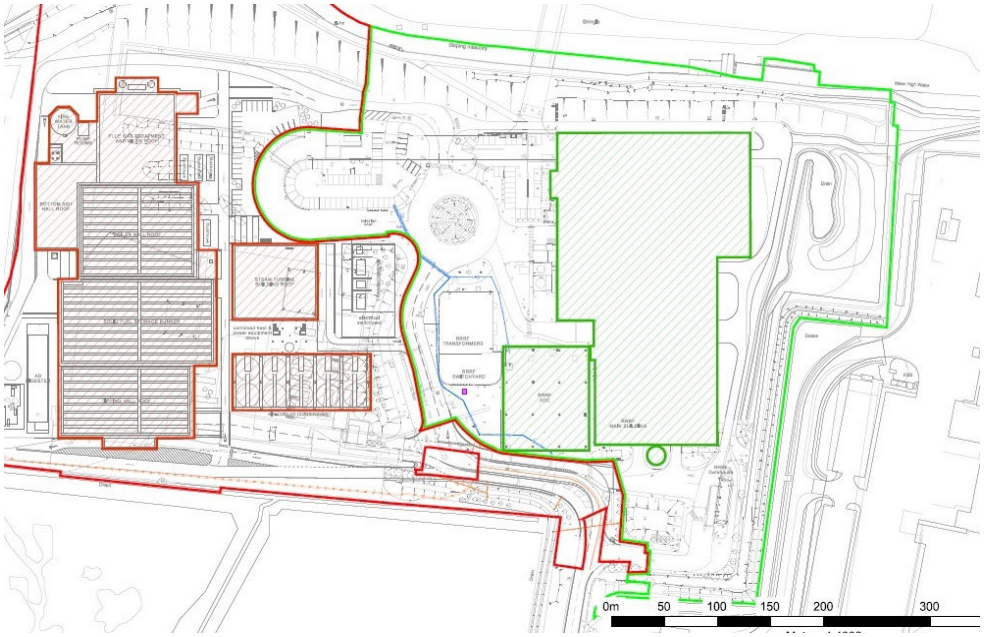
12.1 Under clause 4.7(b) (p.9) of the sub-lease from WRWA (Landlord) back to RRRL (Tenant), RRRL is specifically prohibited from assigning parts of the Site (defined in the sub-lease as the **"Premises"**). Further, RRRL may not knowingly permit or suffer any such assignment by a third party (clause 2.5 p.7).

> **"4.7 *Dealings***
>
> *(a) In this clause 4.4 **"Assignment"** means:*
>
> *(i) in the case of a registered lease the execution of a transfer whether or not that transfer is subsequently registered at the Land Registry and*
>
> *(ii) in the case of any other lease the execution of a deed of assignment of it*
>
> *and **"Assign"** shall be construed accordingly*
>
> *(b) Not to Assign or charge a part (as distinct from the whole) of the Premises*
>
> *(c) Not to Assign the whole of the Premises except:*
>
> ***(i)** in accordance with the provisions of the Direct Agreement; or*
>
> ***(ii)** to the Security Trustee (or to a Suitable Substitute Contractor in accordance with the provisions of the Direct Agreement) as security for the Senior Debt for the Finance Parties under the Facility Agreement; or*
>
> ***(iii)** (otherwise only) with the prior written consent of the Landlord (which consent may be withheld by the Landlord in its absolute discretion)*
>
> *(d) Not to charge the whole of the Premises without the consent of the Landlord (such consent not to be unreasonably withheld or delayed) provided that no consent shall be required in respect of any charge relating to the Senior Debt*
>
> *(e) Within twenty Business Days of any Assignment or any transmission or other devolution relating to the Premises to give written notice thereof to the Landlord's and Superior Landlord's solicitors together with two certified copies of the relevant document and to pay the Landlord's and Superior Landlord's solicitors' reasonable charges not exceeding £50 for the registration of every such document plus Value Added Tax*

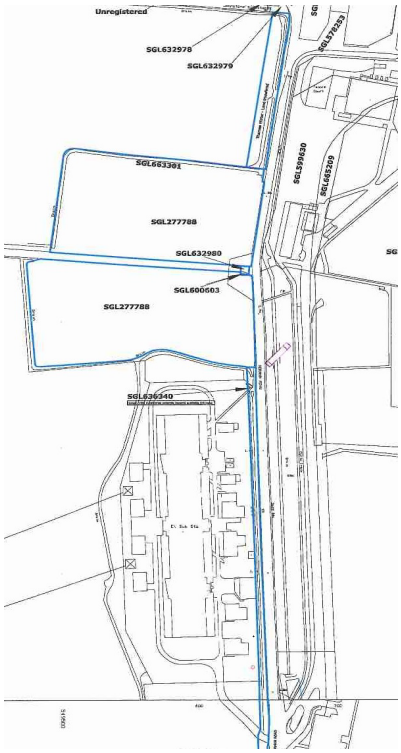
2.5 Any covenants by the Tenant not to do an act or thing shall be deemed to include an obligation not to knowingly permit or suffer such act or thing to be done."

ANNEX A

LAND LEASED TO WRWA (the "Site") (EDGED LIGHT GREEN)



BELVEDERE SURPLUS LAND (EDGED BLUE)



WESTERN RIVERSIDE WASTE AUTHORITY WRITTEN REPRESENTATION

26 NOVEMBER 2024

APPENDIX 2

TECHNICAL MEMORANDUM BY SLR CONSULTING LIMITED:

CORY CARBON CAPTURE DCO – IMPACTS ON WESTERN RIVERSIDE WASTE AUTHORITY

Technical Memorandum

To:	Rachel Espinosa	**From:**	Alban Forster, Paul James, Matt Faulkner, Pete Watkins and Dan Collins
Company:	Western Riverside Waste Authority	**SLR Consulting Limited**	
		Date:	26 November 2024
		Project No.	402.065564.00001

RE: Cory Carbon Capture DCO – Impacts on Western Riverside Waste Authority

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Cory Environmental Holdings Limited ("Cory") has submitted an application for a Development Consent Order (DCO), allowing construction of CO_2 capture (CC) equipment to serve the existing energy from waste (EfW) facility Riverside 1 (Riverside 1), and the proposed new EfW facility Riverside 2 (Riverside 2) (together the "Application").

SLR has supported Western Riverside Waste Authority (WRWA) in developing a preliminary review of impacts of the Application on WRWA (and thereby on the public interest). Our review focusses primarily on technical aspects of the Application. It should be emphasised that SLR's review is not intended as a comprehensive and definitive assessment of all impacts; rather the intention is to highlight initial areas of concern, as far as possible in the available time, given the information currently available. Further ramifications of the Application may be identified through ongoing work in this area.

Riverside 1 is owned and operated by Riverside Resource Recovery Limited (RRRL), an entity created to facilitate investment in the facility, which serves WRWA as the largest supplier of residual waste feedstock.

While WRWA is supportive of suitable decarbonisation measures, the development proposed by Cory entails a range of potential negative impacts on RRRL, and thereby WRWA (and by extension the public interest). Presenting the findings of SLR's preliminary review, this memo summarises identified aspects of the CC proposal having potential deleterious effects on WRWA in four broad areas:

- **CC technology risks –** Development status of the application of CC to EfW, challenges to deployment, and the importance of considering alternatives
- **CC Construction phase** - Potential impacts to waste disposal services undertaken at Riverside 1 that arise due to the construction phase of the proposed CC facility (and associated equipment), as well as more detailed consideration of ground contamination risk
- **CC operational phase** - Potential impacts that could arise to waste disposal services undertaken at Riverside 1 as a result of operations during the proposed CC facility life, once commissioned
- **DCO application rigour -** Other observations on the nature and rigour applied to the DCO application
- **Funding and other market risks –** This section summarises other concerns WRWA has with respect to the DCO application not identified elsewhere in this document

1.0 Carbon Capture (CC) Technology Risk

1.1 Development Status of CC Applied to EfW

EfW technology of the type in use at Riverside 1 is specifically selected by plant operators because of its track record of reliability, which is a critical factor for waste disposal services, and of particular importance to plants servicing major cities generating large volumes of waste, where unmanaged waste quickly becomes a health and environmental hazard. The entire chain of disposal is integral to this service continuity.

When procuring its contract for disposal of residual waste (and in common with most waste disposal authorities) such matters were central to WRWA, and remain so. The addition of the CC plant (and the consequent additional connection to and dependency on the reliability of downstream CO_2 collection, transport, and storage infrastructure chain) adds service reliability risk and has the potential to disrupt this contracted service, as the full chain of CCS has a much lower degree of demonstration than the originally contracted EfW service.

Globally, no operational examples yet exist of CC applied to EfW at the scale proposed for the Cory Riverside 1 facility, either as a retrofitted scheme or as a newly integrated EfW and CC facility. Although a number of full-scale projects are being developed, operational examples globally are currently limited to partial scale projects which capture a proportion of total CO_2 generated by some EfW facilities.

While the amine-based carbon capture approach proposed by Cory has been deployed at scale in other industries (for example in natural gas processing), technical challenges arise in retrofitting the technology to processing flue gas emissions from an existing EfW facility.

A specific issue for the application of CC to UK EfW plants is the technology performance sensitivity to the level of contaminants in EfW flue gases. This is relevant to the UK (and to the Cory facility) as differences in emission abatement systems mean that certain emission levels (e.g. acid gases) tend to be higher and more variable at UK installations than some European installations. Such flue gas composition differences impact on CC plant performance and economics. This need to account for flue gas composition complexities is noted in Environment Agency guidance on CC. It is currently not clear whether adaptations to the EFW emissions abatement system are proposed at Riverside 1. Such alterations may have implications for WRWA's waste service.

Whilst the sector expectation is that technical barriers can be overcome, the present degree of development means that CC projects of this kind do entail additional risk as the performance of the technology, both operationally and financially, is uncertain. More specifically, efficiency of the CC installation in capturing CO_2, and the cost at which this can be achieved, are difficult to predict with confidence at this stage.

1.2 Challenges in Securing Performance Guarantees at retrofit projects

The Cory proposals involve the retrofit of a CC facility to an existing operational[1] EfW plant. With CC plants having very substantial energy and process control requirements and direct connection to the EfW to receive and treat the stack gases, substantial process integration is required. This creates physical process interfaces, which have influence on both the CC and EfW plants. Such interfaces are complex to manage from a technical and contractual point of view – risks during construction and on-going operations can be significant and ownership of these risks difficult to establish. This complexity, combined with the novelty of CC application to EfW, means that it may well be difficult to establish engineering, performance and

[1] R1 is already operational, and construction works for R2 have commenced

construction (EPC) contracts, which provide genuine performance guarantees for CO_2 capture equipment, and also protect the EfW plant operations.

An absence of solid performance guarantees could limit the incentive for contractors to provide a performance guarantee for CC installation, including with respect to CO_2 capture efficiency, as well as parasitic power requirements. There is also an increased cost burden arising under the UK ETS that may be levied on WRWA for any uncaptured CO_2, in short, the ETS savings that could be inferred are not guaranteed.

1.3 Downstream CO2 transport and storage

The capture of CO_2 at the installation is the first stage in a complex chain that entails CO_2 transport and final sequestration (or use). Each of these stages comes with risks, and while UK policy has been driving the development of these markets, full demonstration in the UK remains some years away.

Since capacity to store CO_2 will be limited, continued operation of CC is contingent on reliable ongoing flows of CO_2 offsite. It is intended that CO_2 will to be transported by ship for injection into subsea carbon storage in former oil & gas fields in the North Sea. Availability of vessels with CO_2 transport capability, or operational issues at CO_2 injection / storage points, therefore, represent potential points of operational failure which could limit CC activities at the Riverside 1 site.

There are international examples of CO_2 transportation and storage, although mostly in the oil and gas sector. Application within the EfW sector is currently limited to demonstration and initial partial scale projects, and, has been focussed upon CO_2 supply to users[2] rather than storage. Some CO_2 transport and storage projects[3] have experienced challenges and have not met capture rate expectations.

Any disruption or unforeseen limits to offtake of CO_2 could have operational implications for Cory (including at Riverside 1), including capping of CO_2 capture quantities, and undermining of the economics of CCS. Examples areas of potential failure include availability of vessels with CO_2 transport capability, or operational issues at CO_2 injection / storage points.

1.4 Waste management service continuity

A critical purpose of the EfW plant is to provide a reliable and sanitary waste treatment service. This is recognised by Cory, whose web site page on ‘what they do’[4] opens with *“Ensuring London has a safe, clean and sustainable way of managing its recyclable and non-recyclable waste”.*

The ability to continually and reliably process London`s waste is a critical consideration. Noting uncertainties that arise from the (already discussed) limited degree of demonstration of CC to EfW, and similar lack of demonstration of downstream transportation and storage, the overall chain of performance that is required to successfully, continuously and efficiently deliver CO_2 management of the Cory EfW emissions is uncertain. All process plants suffer some degree of operational unreliability, and the lack of demonstration of this CO_2 chain adds considerable risk.

Furthermore, the high degree of process integration already noted as a requirement for an efficient EfW and CC plant combination means that non availability risk from the CC chain

[2] https://www.twence.com/innovations/circular-economy/co2-capture-and-supply
[3] https://www.abc.net.au/news/2024-11-18/chevron-gorgon-fails-to-deliver-on-carbon-capture-promises/104587894?utm_campaign=abc_news_web&utm_content=link&utm_medium=content_shared&utm_source=abc_news_web
[4] https://www.corygroup.co.uk/about-us/what-we-do/

may conspire to interrupt EfW waste disposal service provision, unless suitable process isolation designs are included. The overall design therefore needs to include suitable measures such as a CC bypass and / or suitable CO_2 storage that will permit the EfW plant to remain in service, even when CCS activities do not. Such important design features are critical for the EfW services provision, but the available design detail is not sufficient to provide suitable comfort to WRWA at this time.

While a by-pass design for CO_2 capture (venting flue gasses without CO_2 removal) can be implemented, this will result in ETS costs and certain other costs arising from the EfW reconfiguration for the CC project.

1.5 Alternative Approaches to Decarbonisation

While the potential benefits of CCS are clear, it should be noted that fossil CO_2 emissions associated with waste combustion can also be mitigated by reducing the fossil carbon content of incoming residual waste. Specifically, this can be achieved by separation of fossil carbon containing waste (particularly plastics) for recycling. The future composition of waste is also not known, and government waste, circularity and decarbonisation policies may have some influence over product & packaging design, and hence the final fossil / biogenic carbon composition of residual waste.

Fossil carbon waste separation is possible either at the point of collection from households and businesses, or via mechanical sorting of mixed residual waste. While WRWA constituent councils already endeavour to maximise recycling at the point of collection, mechanical separation of plastics from residual waste is potentially a practical and cost-effective option for decarbonisation and reduction of costs under the UK ETS. A specialist mechanical plastics separation facility of this kind could potentially be developed on the Belvedere Surplus Land.

Environmental Statement: 6.1, Chapter 3: Consideration of Alternatives implicitly assumes that carbon capture is the only intervention capable of reducing fossil CO2 emissions from the Riverside 1 and Riverside 2 facilities. In assessing “alternative technologies” in section 3.5, this document merely discusses a range of possible technology variations for CC itself. It is therefore unclear whether Cory has undertaken any cost-benefit modelling exercise to evidence whether development of CC at Riverside 1 is the most economic means to reduce fossil CO_2 emissions generated by its EfW operations, or indeed whether there are other alternatives that would be in the interests of Riverside 1 and WRWA. In the absence of such an assessment, any claimed financial benefits that can be achieved by UK ETS cannot be properly judged. In this context we believe Cory has not sufficiently demonstrated whether CCS represents best value as a means of fossil CO_2 emissions reduction when compared to interventions to reduce the fossil carbon content of residual waste. It should be noted that reducing the fossil carbon content of incoming residual waste would not necessarily incur many of the negative aspects of retrofitting CC technology to Riverside 1 that are set out in this note.

Most notable is that the installation of CC equipment will result in a significant reduction in the volume of electricity exported to the National grid by Riverside 1, with CC equipment reducing export by approximately 20-30%[5] of the electrical power generated by the EfW. This is acknowledged in the application in paragraph 2.6.3 of the ES Chapter 2 Site and proposed Scheme Description [APP-051] which states:

‘The supply of steam to the Carbon Capture Facility will reduce the amount available to drive the steam turbines of Riverside 1 and Riverside 2 (once operational), decreasing their power generation. The Carbon Capture Facility will also add parasitic load. Consequently, the

[5]Example reference: https://esc-production-2021.s3.eu-west-2.amazonaws.com/2021/10/20200513-Energy-from-Waste-Plants-with-Carbon-Capture-Final.pdf - page 7

supply of steam and electricity to the Proposed Scheme will reduce the amount of electricity exported from Riverside 1 and Riverside 2 by around 40%'.

The power losses at the EfW facility arise from the energy requirement for CC that is necessary to operate the amine-based removal of CO_2 from flue gases, and also for the compression of separated CO_2 before onward transport. Major energy demands arise from the heat required for the CC plant operation and for additional cooling.

The Riverside 1 facility was granted consent by Secretary of State under the section 36 of Electricity Act 1989 as a generation facility. Although NPS EN-1 places an urgent need for new carbon capture and storage (CCS) infrastructure to support the transition to a net zero economy, this has to be balanced against the importance of the UK maintaining an energy supply that is secure, reliable and affordable (as set out in Section 2.5 of NPS EN-1). A reduction in current generation capacity would need to be met by a corresponding increase elsewhere, requiring development of an additional generation facility.

Alternative approaches to any new CC infrastructure may also avoid potential disruption to the waste disposal service that is provided at Riverside 1, both during construction (as set out in Section 2 below), or operation of the CC facility (as set out in Section 3). Impacts upon the ability of Riverside 1 to process residual waste without interruption could have upstream impacts such as a need to divert waste to alternative disposal options, or a need for temporary storage of waste within the four WRWA London Boroughs (Hammersmith & Fulham, Kensington and Chelsea, Lambeth and Wandsworth).

In addition, alternative approaches may not require powers for compulsory acquisition of land to be sought and would avoid the adverse effects identified within the ES. These include adverse effects upon:

- Crossness Local Nature Reserve (LNR), Erith Marshes Marine Site of Importance for Nature Conservation (MSINC), Belvedere Dykes SINC, River Thames and Tidal Tributaries MSINC and a number of other ecological receptors.
- townscape character,
- users of Public Rights of Way (PRoW)
- Munster Joinery,
- England Coast Path and
- accessible open land

Such effects could potentially be avoided if an alternative approach were adopted, however, this is not clear within the application documents currently submitted. For example, ES Chapter 3 - Consideration of Alternatives [APP-052] does not consider such alternative approaches, or the potential for reduction in the identified adverse impacts associated with the CC scheme.

2.0 Construction phase impacts of the proposed CC facility

The construction of a carbon capture facility is a major and complex enterprise, with direct and indirect interfaces to the current operational Riverside 1 facility. This will lead to significant risk of interruption to the WRWA waste disposal service.

The Riverside 1 facility currently receives residual waste collected on a daily basis from Hammersmith & Fulham, Kensington and Chelsea, Lambeth and Wandsworth, serving a combined population of over 970,000 people. Since the capacity available to store residual waste collected in these boroughs is negligible compared to daily quantities collected, the essential sanitary management of waste generated in these boroughs is contingent on the ability of Riverside 1 to process residual waste without interruption.

While contingency disposal to landfill may be possible, this would go against the principles of the waste hierarchy and any protracted suspension of waste receipt at Riverside 1 would have severe financial consequences for WRWA. Diversion to export or other EfW facilities would impart additional procurement costs and administration, and capacity availability is not guaranteed. Furthermore, the spot market prices for the disposal of waste so diverted to alternative EfW plants is likely to far exceed that secured by the current WRWA contract with Cory, imparting additional cost on WRWA.

Given the finite area of the overall Riverside site and the large proposed CC plant footprint, the construction activities create an increased risk of challenges for the essential day to day activities of Riverside 1, whilst also introducing risks of long-term damage to Riverside 1 infrastructure. For context, the proposed CCS facility footprint covers approximately 7ha of the entire 45ha site (including wharf); the CCS footprint is larger therefore than the Riverside 1 and Riverside 2 combined operational footprint (approximately 6.2ha). This section expounds on the risk events associated with construction activities, and their potential impacts on WRWA.

Below, section 2.1 expands on a range of construction activities and events which may have adverse consequences for WRWA. Section 2.2 then considers the particular risks posed to WRWA by ground contamination in more detail.

2.1 Construction Impacts Overview

In its latest annual performance report for 2023, Cory reports that the Riverside 1 site received 802,677 tonnes of residual waste[6], equivalent to an average of 2,199 tonnes per day. Receipt of these waste volumes, processing via the EfW facility, and managing combustion residues is a complex operation requiring careful choreography of site activities. The proposed CC facility is assumed to take a minimum of two years to complete, possibly more, over a significant area of the entire site.

Disruption to receipt and treatment of waste arising from WRWA (as well as other Cory customers) could be caused by a range of adverse risk events associated with construction activities, which we have summarised in Table 1.

[6] https://www.corygroup.co.uk/application/files/2417/1136/6619/Riverside_Resource_Recovery_Facility_-_2023.pdf

Table 1: Activities with potential to disrupt waste disposal services during construction of the CC infrastructure

Activity	Description	Potential impact
Works to construct new jetty	Construction works, such as those associated with the capital dredge, sheet piling and construction of a new jetty, could potentially impede riparian deliveries. Within the Environmental Statement: 6.1 Chapter 5: Air Quality [App-054] (para. 5.4.12.), it is indicated that a decision is yet to made on whether the scheme will make use of the existing, disused, power station jetty, or whether a new jetty will be constructed. In contrast, the Environmental Statement: 6.1 Chapter 2: Site and Proposed Scheme Description [App-051] is definitive on the requirement for a new jetty to be developed (para. 2.2.69). Assuming construction of a new jetty, details provided by the applicant are insufficient to allow WRWA the level of understanding to potential disruption to waste deliveries which may occur. We note that Environmental Statement: 6.1 Chapter 5: Air Quality, Table 5-4 (page 25) of the same document provides details of marine movements associated with construction, including 9 vessel movements per day, alongside hotelling of a jack up barge, and presence of a jack up generator. While cordoning of areas for safe working may impede deliveries, the extent of this disruption is difficult to assess on the basis of information currently provided. A Preliminary Navigation Risk Assessment [APP-115] has been provided with the application, however, this only considers hazards to shipping (collision, contact, grounding, and breakout), rather than potential for delay congestion or impediment of movements. It is noted that additional mitigation is required in the Preliminary Navigation Risk Assessment [APP-115] in response to seven hazards scored as intolerable / unacceptable. The mitigation that is proposed does not fully apply to vessels delivering waste, whereby these would need to enter the proposed exclusion zone around works. As such, it is not clear whether remaining mitigation measures would protect waste delivery barges using Middleton jetty.	Disruption to riparian deliveries could increase congestion on the river Thames and/or result in impacts to upstream waste management (e.g. waste stored on barges and / or at WRWA transfer stations or diversion to landfill).

Activity	Description	Potential impact
Works to England Coast path	It is noted that temporary possession of WRWA land is sought to undertake improvements to the England Coast Path (FP3/NCN1/FP4, Environmental Statement: 6.1 Chapter 2: Site and Proposed Scheme Description, [APP-051] para. 2.4.68 and Land Rights Tracker (Revision A) [PDA-012]. (States Work No 4A: Required for Improvements to the England Coast Path for parcels 1-109 and 1-112). While such works could disrupt onshore movement of waste from delivery barges to the Riverside 1 facility.	
Abnormal Indivisible Loads (AILs)	There is a high likelihood that substantial equipment items for installation at the CC plant will be manufactured off-site and require delivery. Within the Environmental Statement: 6.3 Appendix 18-1: Transport Assessment [APP-114], it is noted that "there are likely to be Abnormal Indivisible Loads (AILs) required for the construction of the Proposed Scheme " (6.2.1). While a Framework Construction Traffic Management Plan is provided (document reference 7.7), this does not elaborate on the impacts and management of AILs, it being stated in the transport assessment that a "full CTMP will be prepared post-determination" (6.2.1). As such there is therefore uncertainty regarding impacts upon EfW operations and infrastructure associated with AILs for the CC facility.	Disruption to operational road traffic entering and moving within the Riverside 1 site could impact staff movements, deliveries of consumables, offtake of APCR ash and other routine operational traffic. Waste disposal services integrity and performance may therefore be impaired. An assessment should be undertaken to consider how AILs would affect access to and within the site, and the potential for access to be impeded resulting in an impact on routine daily waste deliveries, staff movements or other operational vehicle movements.
Works on roads around the Riverside 1 site	Work No. 3 – utilities connections and site access works (Works plans [AS-053], Sheet 15]), includes a significant section of Norman Road and the junction of Norman Rd and the A2016 Picardy Manorway. The works proposed include site access works and connection to water supply, foul sewer, heat pipework, condensate pipework, electrical and comms cables and modification of watercourses. Traffic Regulation Measures: 2.6 (drawing EN010128-00-XX-RP-ENS-0204-P02) [APP-012], highlights the main access road to the site (Norman Road), indicating a requirement for "temporary speed limit and temporary signals, crossings and lane closures"). These measures will likely interfere with Riverside 1 operations and accelerate the rate of degradation of Norman Road.	

Activity	Description	Potential impact
Undertaking pre-construction investigations	Environmental Statement: 6.1, Chapter 17: Ground Conditions and Soils [APP-066] highlights that *"concentrations of concern for metals, metalloids, organics and asbestos could be present, as previously found"*. Site investigations are proposed prior to construction as set out in DCO Requirement 21 [AS-056] and ES Chapter 17 which states in para 17.9.1 that a ground investigation would be undertaken to inform detailed design. These investigations (or their findings) may potentially cause disruption to other routine site activities. Considerable disruption is likely in the event that remediation requires movement of material or indeed in-situ treatment.	
Use of areas of the site construction compounds and laydown	Works Plans: 2.3 [APP-009], drawing EN010128-01-XX-DG-PL-0024-P02 depicts extensive temporary construction compounds, including a jetty construction compound overwhelmingly encompassing the northern and eastern areas of the site. There appears to be significant potential for use of these compounds to impinge upon efficient day to day operation of the RRRL facility. Movement of materials and equipment from these laydown to working areas could impact daily routine operations at Riverside 1.	
Onshore construction traffic, including deliveries to construction site, access by construction staff, and movements within the site	It is noted in Environmental Statement - Chapter 2 - Site and Proposed Scheme Description [APP-051], that the peak period for construction traffic will be approximately 3 months whereby there will be 144 HGV movements per day. Peak periods of construction traffic are likely therefore to interfere with routine RRRL operational traffic. This has the likely potential to impact upon EfW staff movements or impede existing deliveries to/from Riverside 1. This is not currently considered by the ES and so it is difficult to quantify what this impact would be, or whether it can be sufficiently managed. Moreover, within the Framework Construction Traffic Management PLAN: 7.7 (Revision B) [AS-031], in discussing site access via Norman Road, it is stated that the *"main vehicular access route to and from the Site is congested during peak travel times*", and it is indicated that this congestion will *"encourage construction staff to access and egress the site by non-car modes"* (para. 2.4.19). This is an optimistic assumption, and it is possible that congestion impacts have been underestimated.	

Activity	Description	Potential impact
Utility connections	As noted in Environmental Statement - Chapter 2 - Site and Proposed Scheme Description [APP-051], the CCS will require connections to existing services and utilities. Utility connections for the CCS facility will require outages for gas/water/data that may affect operation of Riverside 1.	Disruption to EfW operation with resultant impact on upstream waste disposal service. (e.g. waste stored on barges and / or at WRWA transfer stations or diversion to landfill). Waste disposal services integrity and performance may be impaired with periods where the Riverside 1 facility cannot operate at full capacity or at all. The application does not provide information on how long this would take or how it would be managed.
Electrical installation works	As noted in Environmental Statement - Chapter 2 - Site and Proposed Scheme Description [APP-051], the CCS will require a connection to the RRRL 132kV substation. This will require works to the substation that will interrupt the connection to existing routine RRRL operations.	
Ground gas migration	Environmental Statement: 6.1 Chapter 17: Ground Conditions and Soils [APP-066] highlights a risk of "*(s)ite wide*" instances of "*(g)round gases including methane, carbon dioxide and hydrogen sulphide*" (Table 17-16). In the event that ground gas is released by excavation works, there is a possibility that this may enter the RRRL facility. This poses a risk of explosion or health impacts, as well as constraints to acceptance of waste requiring treatment.	
Flood wall damage	Damage to the flood wall, such as during construction of the proposed new jetty and connecting infrastructure, could result in flooding of the site with consequential impact on plant operation. In Environmental Statement: 6.3 Appendix 11-2: Flood Risk Assessment [App-107], para. 9.2.1. It states that *"No works would be carried out within the Site Boundary when there is a risk of breach of the River Thames Flood Defences"*. Notwithstanding this, in the absence of a detailed method statement, the possibility remains that a breach occurs and is not repaired prior to a subsequent flood event.	
Unexploded ordinance (UXO)	The applicant states that, on the basis of a review of the Zetica Bomb Risk Maps *"the Site is within a 'High' risk area from UXO"*. (Environmental Statement: 6.1 Chapter 17: Ground Conditions and Soils [APP-066], para. 17.6.36.) Discovery of any UXO during excavations would require evacuation of parts of the site and cause severe disruption to site activities. This could also delay CC construction works, already stated as a minimum of 2 years.	
Liability for RRRL damage	Theoretical potential exists for CC infrastructure to be damaged by RRRL during the construction	WRWA may incur additional liabilities as a result of the

Activity	Description	Potential impact
to CC installation during construction	phase. While construction activities will be coordinated to minimise this risk, it remains possible that RRRL incurs a significant liability.	development unless fully indemnified.

2.2 Contamination Risk During the Construction Phase

This section focusses upon the **land contamination risks** arising during the carbon capture plant construction phase. **Other contamination risks** arise at the operational stage – please refer to Section 3.0 below, including notes in the table.

SLR has reviewed ES Chapter 17 - Ground Conditions and Soils [APP-066], Chapter 11 - Water Environment and Flood Risk [APP-060] and Appendix 17-1 - Preliminary Risk Assessment [APP-113], to consider the level of contamination risk that is reported in the DCO Application.

We are in general agreement with Chapters 11 [APP-060] and 17 [APP-066]. Baseline conditions have been assessed by virtue of the separate Preliminary Risk Assessment (PRA) [APP-113]. The site has a potentially contaminative history based on its previous uses as a Mill, Guano Works, gunpowder store and presence of spoil/waste heaps etc. The PRA did not include an intrusive site investigation. A number of previous site investigations have, however, been referenced in the PRA. Collectively these studies indicate varying levels of contamination, however based on the proposed use of the site and environmental sensitivity contamination risks have generally been deemed moderate to low.

Generally, SLR would agree with the above although it should be noted that historic site investigations to date do not cover the site in its entirety and, thus, there are data gaps in some areas. The PRA acknowledged this and suggested that further site investigation is undertaken prior to the construction phase of the project. On this basis Chapter 17 cannot claim to have fully assessed baseline ground conditions, however the approach applied is acceptable. Further site investigation is likely to be a key consideration on the basis that the Chapter outlines an intention to excavate and recover soils at the site during the construction phase. The significance of this in terms of potential impact on sensitive receptors has been deemed relatively low based on the fact that any site-won soils will be tested and risk assessed prior to use.

Based on the above we would generally agree with the assessments undertaken. Risks associated with contamination arising from the existing land are likely to be more significant during the construction phase of the project due to the potential for mobilisation and exposure. This would be relatively simple to mitigate (as stated in Chapter 17) and the key considerations are likely to be undertaking further site investigation in areas that have, until now, not been investigated, undertaking a contamination watching brief during the excavation of soils/made ground and completing testing and risk assessment on any soils proposed for reuse at the site. It should also be noted that the highest potential contamination risk identified by the PRA was in relation to the possible presence of asbestos. Asbestos is likely to be present at the site, and groundworks should be completed in compliance with the Control of Asbestos Regulations (CAR, 2012) if asbestos is identified in future site investigations.

Operation phase risks have been scoped out in relation to below ground conditions and soils. We would agree with this approach, however in section 3 below we have considered other above ground operational contamination risks requiring further consideration. In relation to controlled waters risks from pollution we would agree with the mitigation measures proposed in Chapter 11 that are mainly set out in the Outline Code of Construction Practice (CoCP) [APP-124]. Full detail for construction mitigation will be secured by requirement of the DCO requiring production of the full CoCP(s) in substantial accordance with the outline documents. WRWA would wish to review the final CoCP, through a DCO Requirement (DCOR 7) to be amended to include WRWA as a consultee (current approval is from LB Bexley and Port of London Authority).

Similarly, WRWA requests inclusion as a consultee in DCOR 21 which requires a ground conditions investigations and assessments strategy be approved by LB Bexley and the Environment Agency in advance of works commencing.

For comments regarding land contamination risks arising from the CC plant operations, please refer to Section 3.0, including the tabulated comments.

3.0 Operation phase impacts of the proposed CC facility

In addition to potential impacts arising from construction activities, there are potential impacts to the receipt and treatment of waste arising from WRWA arising from the on-going operation of the CC equipment.

Detailed design has not yet been undertaken for the CC plant, with much of the detail required to determine operational impacts upon the EfW being determined post consent with approval via DCO Requirement or Protective Provision.

ES Chapter 4: EIA Methodology states that the EIA has been undertaken on the basis of parameters set out in the DCO, Works plans and Design code that are presented as worst case (also known as the 'Rochdale Envelope' approach).

The lack of detailed design within the application means it is not possible to fully determine impacts arising from the CC plant upon Riverside 1, and WRWA's waste disposal service. We have identified a number of areas where there is potential for impacts to arise from operation of the CC plant, which we have summarised in the Table below, noting where there is information. At this stage it is not possible to fully determine potential impacts as this would require review of detailed design information for the CC that is proposed post-consent.

Table 2: Activities with potential to disrupt waste disposal services during any operation phase of the proposed CC infrastructure

Activity	Description	Potential impact
Reduction in electricity export to the national grid and associated loss of power revenues. The loss of EfW power also removes from the National Grid a substantial base load, partly renewable power supply source, which also has "security of supply" energy generation merit as it is derived form a UK fuel source (locally collected waste).	The installation of CC equipment will result in a significant reduction in the volume of electricity exported to the National grid by Riverside 1, with CC equipment reducing power export from the EfW by approximately 40%. This is acknowledged in the application in paragraph 2.6.3 of the ES Chapter 2 Site and proposed Scheme Description [APP-051] which states: *'The supply of steam to the Carbon Capture Facility will reduce the amount available to drive the steam turbines of Riverside 1 and Riverside 2 (once operational), decreasing their power generation. The Carbon Capture Facility will also add parasitic load. Consequently, the supply of steam and electricity to the Proposed Scheme will reduce the amount of electricity exported from Riverside 1 and Riverside 2 by around 40%'* This power loss is necessary to supply energy to the amine-based CC plant which will remove CO_2 from flue gases, and also for the compression of separated CO_2 before onward transport. Under a revenue share mechanism defined in the existing WRWA-Cory contract, we understand WRWA receives a share ofenergy. In the DCO it is stated that the operation of CO_2 capture and compression equipment will result in a reduction of 40% of power generated by the EfW.	It is understood there are gainshare mechanisms in the contract which may be impacted by changes in power output from Riverside 1. Loss of low carbon, base load, and secure power has a wider impact on UK energy generation and security of supply, all matters which were important consideration in the original S.36 granted to the EfW facility. It is noted that the stated reduction in generating capacity would be sufficient to reduce electrical output of Riverside 1 from 80.5 to below 50MW, which is the S.36 and Nationally Significant Infrastructure Projects (NSIPs) threshold (the maximum capacity was revised to 80.5MW in the approved Section 36 consent variation (Dec 2021). A 40% reduction in electrical export would be 48.3MW).
Increased complexity in processes and equipment associated with Riverside 1 Complexity increases overall risk of service disruption	Development of CCS increases the complexity of operations at the Riverside 1 EfW, substantially increasing the number of potential points of failure which would result in disruption to the waste disposal service. These relate to the capture of CO_2, as well as storage and removal offsite.	Increased probability of disruption to waste disposal services with resultant impact on upstream waste disposal service. (e.g. waste stored on barges and / or at WRWA transfer stations or diversion to landfill).
Variation of the Riverside 1 Environmental Permit	Development of CC plant will require an appropriate site environmental permit (EP), which will necessitate consideration of potential new	Any difficulties in securing required permits (or future challenges in complying with these changes), could impact on

Activity	Description	Potential impact
	emissions risks arising from both CC and EfW. This is acknowledged in application document 5.5 - Other Consents and Licences Statement [APP-043]. This document also acknowledges that a variation will need to be sought to the current EP for Riverside 1. The EfW EP variation and new CC EP will need to reflect several significant changes to: • the substances emitted (including new substances of concern such as nitrosamines) • the concentrations and quantities released • the release points (away from the existing EfW stack) • the dispersion characteristics The addition of new CCS plant and equipment onto the site means there is uncertainty whether these could affect previous emission levels for the EfW (such as additional emission points and different emission characteristics such as NH3 that are associated with CC technology). There is potential for the future permitting requirements to differ to those in place when the current EP was established, with potential for more stringent future requirements and/or additional emitters in the area affecting available headroom or deposition levels at surrounding sensitive sites. EfW flue gas composition complexity may mean that the CC plant drives technological changes within the EfW flue gas treatment system. This issue is already noted in new EA guidance[7].	the ability of the Riverside 1 facility to provide core residual waste treatment services under the WRWA-Cory contract. It is noted that the Environment Agency has raised concern relating to the alignment between submission of Environmental Permits and DCO and has included the following statement within it's RR [RR-065] which does not provide comfort that a new/varied EP can be achieved: *'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. Pre-permit application discussions are still ongoing.'* Changes to the EfW plant flue gas abatement systems driven by the application of the CC plant may result in additional EfW services interruption and costs that impact on WRWA.
Flue gas, steam and CO_2 leakage risks and safety zones	The details of design of the connection of flue gas exhaust into the CCS facility is as yet uncertain, but it is likely to create another potential hazard point/area requiring additional risk management at the site.	Potential contamination at Riverside 1 and harm to RRRL operatives, or WRWA delivery drivers. Creation of potential additional site hazards that could impact insurance cover for the Riverside 1 site.

[7] https://www.gov.uk/guidance/post-combustion-carbon-dioxide-capture-best-available-techniques-bat

Activity	Description	Potential impact
	While CO_2 pipeline related land contamination hazards are considered improbable, ruptures or leaks could be a serious hazard to RRRL operatives and operations. This is acknowledged in Environmental Statement: 6.3, Appendix 20-2: ES Risk Record [APP-117], which notes (under item 15, page 14) the possibility of "*loss of containment event from the LCO_2 storage tank or the LCO_2 above ground pipeline*", stating that this *"could cause loss of life or permanent injury which requires ongoing disability support"*. Notably, the Applicant indicates *"dedicated studies undertaken to assess the likelihood and consequences of a large CO_2 release, as part of detailed design of the Proposed Scheme"*, highlighting that this hazard is yet to be meaningfully assessed. It is currently unclear whether the CCS will require safety clearance areas around plant and equipment, that could impede existing routine operations at Riverside 1. Environmental Statement: 6.3, Appendix 20-2: ES Risk Record [APP-117] states thats part of the final design hazardous area classification will take place and control measures implemented to manage ignition risks to ALARP. Given the hazardous area classification has not yet been undertaken, it is not possible to say that such areas would not impede existing operations. Similarly Environmental Statement: 6.3, Appendix 20-2: ES Risk Record [APP-117] (item 25, page 27) highlights the potential for "*(leakage from flue gas ductwork*", stating that this could cause "*death and/or injury to maintenance workers*". Section 2.2.25 of the ES appears to suggest a new turbine configuration that will pass high pressure steam from the EFW plant to the carbon capture plant, where it will then pass	Restrictions to areas of the Riverside 1 site that could in turn affect the waste disposal service

Activity	Description	Potential impact
	to other equipment before the lower pressure steam is passed to the CC plant. This implies that high pressure steam lines will need to be routed, but there is no specific information on how resultant safety and operational risks will be manged.	
Storage and use of hazardous substances	The carbon capture facility is a complex process plant which will require the use of new process and substances, including substances which are hazardous to human health and the environment. The supply, transport & use of such new hazardous substances give rise to additional risks at the site including to personnel, visitors, and of environmental impacts such as land contamination. Good design and operational practice is required to ensure that operation of the decarbonisation plant will not result in such risks.	While the risk of land contamination and other safety risks can be largely mitigated by appropriate design & operational standards (e.g. appropriate chemical plant bunding / drainage standards), limited details have been provided to date on how this will be achieved and indeed any indemnity Cory can offer in the event of such contamination. Whilst the final resultant (post mitigation) risk of contamination etc may eventually be low, the degree to which control measures are in place is not presently possible to judge, although it can be said that the inherent hazard is increased.
River access congestion	The proposals will introduce CO_2 ship transport and tugs pulling barges into place in the area around Middleton Jetty which receives waste deliveries to Riverside 1. The Preliminary Navigation Assessment [AS-060] and Environmental Statement: 6.1, Chapter 5: Air Quality [APP-054] estimates that during operation average weekly visits will include (Table 5-6, page 34): • 4.05 liquid CO_2 vessels • 8.1 tugs (providing aid to the CO_2 vessels) Notably, liquid CO_2 vessels are assumed to make *"12 hour stops per visit".* Particularly during manoeuvring on arrival / departure from jetties, these vessels may inhibit receipt of waste feedstock, leading to potential congestion on the Thames. The Preliminary Navigation Risk Assessment [APP-115] provided with the application only considers	Delays in waste deliveries to RRRL via the Thames, and increased probability of disruption to waste disposal services with resultant impact on upstream waste disposal service. (e.g. waste stored on barges and / or at WRWA transfer stations or diversion to landfill). Creation of potential additional site hazards that could impact insurance cover for the site and associated activities.

Activity	Description	Potential impact
	hazards to shipping (collision, contact, grounding, and breakout), rather than potential for delay, congestion or impediment of movements. Increased river traffic means there is an increased risk of accidents/near miss impeding deliveries to the EfW.	
Flue gas ducting impact on site operations	ES Chapter 2 - Site and Proposed Scheme Description [APP-051] confirms new ducts will be required to route flue gasses from the EfW to the CC process. Ductwork may be routed via a pipe bridge traversing the current EfW operational areas of the existing weighbridge and reception building. The materials submitted within the DCO application do not provide clarity on the final location of ductwork and/or associated bridges.	The introduction of ductwork and/or flue gas/$C0_2$ pipeline to existing operational areas would increase the likelihood of service outages if existing operations were impeded through any access restrictions, safety zones or if access to the ductwork is required for emergency or planned works. This could, in turn, result in disruption to waste disposal services with resultant impact on upstream waste disposal service. (e.g. waste stored on barges and / or at WRWA transfer stations or diversion to landfill). Review of detailed designs will be required to ensure operation of RRRL is not adversely impacted.
CO_2 pipeline constraint to current and future EfW operations	The proposed location of the CO_2 piping, flue gas ducting, steam offtake pipework, electrical connection and pipe bridge (as detailed in Engineering Plans: Indicative Equipment Layout: 2.5 [APP-011]) may constrain future land use options for WRWA, as will any safety zones identified in future hazardous area classification.	
CO_2 pipeline maintenance access	Environmental Statement: 6.1, Chapter 2: Site and Proposed Scheme Description [APP-051] highlights that *"(a)bove Ground Pipelines also facilitate maintenance activities".* Maintenance activities for the new pipeline (via the north east corner of the RRRL building) could impede reception of waste.	
Capacity of utilities	There is concern over uncertainty around the capacity of existing utilities and services connected to the EfW to meet additional demand from the CC plant. For example, within ES Chapter 11: Water Environment [APP-060] it is reported that Thames Water has suggested it would be unlikely to supply the requested volume of potable water.	Potential deleterious impact on RRRL operations.

Activity	Description	Potential impact
	This does not appear to be resolved with potential to adversely impact on supply to Riverside 1. Carbon capture plants typically give rise to a substantial volume of contaminated wastewater (from flue gas condensation) – the management of this is presently unclear.	
Works access to utility connections	The introduction of CC infrastructure such as the CO_2 pipeline, flue gas ducting, electrical connection or steam take-off for the CC plant could impede future access to utility connections associated with Riverside 1. It does not appear that these access considerations have yet been addressed.	
Liability for RRRL damage to CC installation during operations	Theoretical potential exists for operational CC infrastructure to be damaged by RRRL. For example, there is potential for on-site equipment to be damaged by operational vehicles (this risk is not identified in the ES Risk Record [APP-117] which only considers collision of marine vessels). While the design will seek to limit these risks, it remains possible that RRRL incurs a significant liability.	WRWA may incur additional liabilities as a result of the development unless fully indemnified.
Interactions with heat offtake	It is unclear whether Cory has considered how CCS proposals interact with previous indicated intentions to operate the existing EfW in combined heat and power (CHP) mode. Significant cooling requirements at CC plants mean that heat losses may also substantially increase with the introduction of CCS, increasing the imperative for CHP to be developed. It has been indicated (in Paras 2.2.107 to 109 of Environmental Statement - Chapter 2 - Site and Proposed Scheme Description) that a heat recovery and transfer system will be in place, albeit available details are limited.	Although the 2.2.107 and 2.2109, indicate some heat will be supplied from the EFW plant, the amounts are small in relation to the overall available heat from the existing EFW facility. Large scale heat recovery schemes have proven difficult to develop in the UK at any scale that permits efficient recovery of EfW energy. Shifting recovery away from power generation to supply the CC plant then results in additional heat loads that are similarly difficult to exploit, which may lower overall WRWA energy recovery performance per tonne of waste treated. The efficiency of energy recovery from the waste is a key quality criteria in the waste contract.
Impediment to development of the proposed AD facility	It is noted that the proposals for the Riverside Energy Park (Riverside 2), that was granted development	Cory's commitment to develop an AD is an important element of its wider energy park proposals

Activity	Description	Potential impact
	consent in Feb 2023, include proposals for an Anaerobic Digestion (AD) plant. On the basis of submitted proposals it is unclear whether CC development may constrain realisation of this facility, either directly, or indirectly via over-congestion of the site.	and indeed planning permissions. In the event that the AD facility is not realised WRWA will lose the opportunity to bulk food waste and send it to the Riverside site for treatment.
Liabilities for flue gas quality	It is likely that the CC installation could impose a requirement for adherence to an input specification for flue gas. The potential for this to result in revised flue gas treatment has already been noted above. Flue gas quality can be substantially impacted by EfW plant operations and also the waste composition. Whilst the current EfW plant has been designed to accommodate a reasonable variation in waste composition there are limits to this flexibility, and composition changes are already known to result in emission variations that can exceed permitted levels. The additional need to accommodate the CC plant flue gas input specification may therefore tighten constraints on the composition of waste which can be accepted.	Liabilities may be incurred by RRRL if the flue gas specification is not met. New obligations to manage waste input quality to the EfW may impose additional operational constraints which would not otherwise exist.
Availability of suitably qualified personnel for CC plant operation.	CC plants have similar technical characteristics to chemical or oil & gas process plants. Such installations are somewhat different to the existing EfW plants operated by Cory. The skills base of staff required to operate the CC plant is therefore somewhat different to the EfW plant. The CC plant has a greater need for chemical process engineers and operatives.	It is critical that appropriately trained, qualified and experienced staff are involved in the CC plant operations. The different profile of such personnel when compared to EfW facilities means that there is some degree of skills gap, that must be bridged. Information about how this issue will be addressed has not been encountered in the DCO documents. There is therefore a risk that the plant will not be properly and safely operated, with risk then arising of operations, safety and environmental impacts with implications for WRWA.
CO_2 offtake risk to waste movements	Downstream disruption in CO_2 offtake (for example in storing or shipping CO_2), could result in a need for cessation in CO_2 capture. In this event ETS costs would accrue.	In the event that investment is made in CCS, but ETS costs still accrue, it is predictable that there will be pressure to recoup additional costs. Being market driven, ETS prices are subject to

Activity	Description	Potential impact
		fluctuation, creating challenges in budgeting.
Carbon capture plant contractor	Cory has not yet confirmed the contractor that will be responsible for design and construction of carbon capture (CC) equipment, nor how the interface to the EfW plant operations and performance will be managed. Given the relatively nascent status of application of CC to EfW to ETS, appointment of an appropriately experienced provider may be challenging. How this contract impacts the EfW plant performance and guarantees has significant potential to impact on WRWA received service quality.	Any contractor performance challenges mayhave an adverse impact on the treatment of waste at Riverside 1 .

4.0 Observations on the DCO Application

Further to assessment of aspects of the proposed CC development having potential negative consequences for WRWA, this section sets out initial relevant observations from review of key DCO Application documents.

4.1 Consideration of potential impacts upon the operation of Riverside 1 within the submission documents

Sections 2 and 3 set out a number of potential impacts upon the Riverside 1 facility, that could occur as a result of the construction and operation of the proposed CC infrastructure. It is noted that the Environmental Statement (ES), that supports the application for development consent does not appear to fully consider potential impacts upon the operation of Riverside 1.

For example, the traffic and transport assessment presented in document 6.1 ES Chapter 18: Landside Transport [APP-067], does not consider potential impacts of traffic generated by construction and operation of the CCS upon the operation of Riverside 1. Any unplanned interruption to the operation of the EfW could have a knock-on effect upon the waste disposal service undertaken for WRWA, with consequential upstream effects (such as an increase in waste storage within the WRWA administrative area if there are delays in unloading waste at Riverside 1).

It is noted in ES Chapter 2 - Site and Proposed Scheme Description [APP-051], that there will be a 3-month period during CC construction where there could be 144 additional HGV movements per day, alongside 1,000 construction staff, that would access the Riverside 1 site. This has the likely potential to impact upon EfW staff movements or impede existing deliveries to/from Riverside 1. This is not currently considered by the ES and so it is difficult to quantify what this impact would be, or whether it can be sufficiently managed.

Another example is that ES Chapter Chapter 16 - Materials and Waste [APP-065] does not consider the impact of construction and operation of the CC on existing waste disposal operations at Riverside 1. In addition, there is no reference to potential for impacts to the commercial operation of Riverside 1, through usage of heat or electricity (or any of the other considerations summarised in Sections 2 and 3 of this note) within ES Chapter 15 - Socioeconomics [APP-064].

Other ES Chapters where there is potential for impacts to occur on Riverside 1 include:

- Chapter 11 - Water Environment and Flood Risk [APP-060]
- Chapter 14 - Population, Health and Land Use [APP-063]
- Chapter 17 - Ground Conditions and Soils [APP-066]
- Chapter 19 - Marine Navigation [APP-068]
- Chapter 20 - Major Accidents and Disasters [APP-069]

4.2 Consideration of alternative approaches to decarbonisation in the ES

Section 1.5 of this note sets out alternative approaches that could be undertaken in order to reduce carbon emissions, however, these are not considered within ES Chapter 3 - Consideration of Alternatives [APP-052].

4.3 Reporting of consultation between the Applicant and WRWA

It is understood that WRWA has not been kept fully informed of the proposals for CC during the Pre-Application stage. Engagement between Cory and WRWA is not described within the Consultation Report [APP-024], which only lists WRWA as having a land interest (in the consultation report Appendices Volume 7 [APP-039]). A description of consultation is provided within the Land Rights tracker [PDA-012] which states:

'The Cory corporate group has a longstanding relationship with the WRWA and engages with them across multiple sites and projects. WRWA also holds a non-occupational interest in the Riverside 1 land and was issued with an LIQ and notice of the Applicant's statutory consultation for the Proposed Scheme. The Applicant received a response to the LIQ and issued a confirmation schedule to confirm information from WRWA. Cory corporate group companies have regular meetings with WRWA at which the Proposed Scheme has been raised on a number of occasions. Further, the Applicant has an ongoing business interface with WRWA and has corresponded and met on site at Riverside 1 and 2 to discuss the detail of how the Proposed Scheme will interact with and benefit Riverside 1, intends to continue this engagement, and seeks to reach agreement on the rights required.'

This suggests that to date, consultation regarding the DCO application has been limited to the land interest questionnaire (LIQ), rather than meaningful discussion on the implications of the CC to Riverside 1 and the Authority's waste disposal service.

5.0 Funding and Other Market Risks

Realisation of benefits cited by Cory in putting forward its DCO Application will ultimately be contingent on the viability of the CC installation. By virtue of its connections with RRRL and the Riverside 1 site, WRWA is at risk of exposure to a range of potentially negative consequences in the event that CC is not ultimately viable, or underperforms. Sections below explore funding and market related risks to the viability and application of CCS, including consideration of the economics of the process, and competing approaches to decarbonisation. Following this risk overview, impacts of possible failure of CC on WRWA are then highlighted.

5.1 Overall Funding Model

Within Funding Statement Number: 4.2 (section 2.2), the Applicant highlights the financial standing of Cory Group, and the scale of the investment assets of its shareholders. The Funding Statement does not however provide details of the revenue sources which are expected to operate CCS and the pay back required capital investment. For reasons elaborated below in section 5.2, despite benefits in avoiding costs under the UK Emissions Trading Scheme (UK ETS), current market indications suggest that CCS is expected to be unviable without significant government subsidy.

It has been reported that Cory Group intends to apply (or is applying) for support for CCS development under the CCUS Cluster Sequencing Track-2 scheme[8], administered by the Department for Energy Security and Net Zero's (DESNZ)[9].

Many EfW facilities across the UK are likely applying for this funding support under this scheme, and available government funds for CCS projects are likely to be limited. At this stage it is therefore not possible to determine whether the Riverside CCS project will ultimately be awarded required financial support under Track 2. In lieu of this support, it appears unlikely that the Applicant will be successful in realising its CCS proposals (please see 5.6 below for further discussion of potential consequences).

5.2 CC Costs in the Context of the UK Emissions Trading Scheme

Under existing plans established by the previous Government, it is intended that from 2028 EfW installations will be fully subsumed within the UK ETS. (Prior to this, requirements for monitoring, reporting and verifications (MRV) of emissions from EfW facilities will apply from 2026 onwards.)

The UK ETS is managed by the UK ETS Authority, comprising the Scottish Government, Welsh Government, the Department of Agriculture, Environment and Rural Affairs for Northern Ireland, and UK Government). In including EfW with the UK ETS, the UK ETS Authority hopes to *"decarbonise the sector by providing an incentive for industry to adopt decarbonisation technologies"*[10].

Once EfW facilities are included within the UK ETS, they will be required to purchase one UK allowance (UKA) for each tonne of fossil CO_2 emitted. This requirement theoretically creates a financial incentive for EfW operators, and by extension the wider waste

[8] [redacted]

[9] https://www.gov.uk/government/publications/cluster-sequencing-for-carbon-capture-usage-and-storage-ccus-track-2/ccus-cluster-sequencing-track-2-market-update-december-2023

[10] https://www.gov.uk/government/news/proposals-to-expand-the-uk-emissions-trading-scheme

management sector, to consider approaches to reducing fossil CO_2 emissions generated through waste combustion.

Following the announcement that the scope of the UK ETS will be enlarged to include EfW, industry interest around CC has intensified. (Other approaches to reducing fossil CO_2 generation from waste production are also being actively explored, as detailed in section 1.5.)

Critical to the successful development of CC is the ability to achieve reductions in overall EfW costs, when compared to purchase of UKAs to permit continuing emissions of CO_2.

In a recent study the Oxford Institute for Energy Studies has estimated that implementation of carbon capture and storage (CCS) for EfW imposes an additional cost of circa £150 per tonne of captured CO_2[11]. More recent analysis commissioned by EfW operator Viridor indicates a "minimum", cost of £180 per tonne CO_2[12].

At the time of writing the UKA price currently stands at £38 per tonne of fossil CO_2[13]. Under its "Net Zero Strategy Aligned" scenario, DESNZ estimates UKA price reaching £121 per tonne of fossil CO_2 by 2035[14]. Under the UK ETS, these ETS costs are however only levied on the fossil fraction of emitted CO_2. Assuming a circa 50% fossil CO_2 fraction[15], the UKA incurred per average tonne of CO_2 emitted would therefore be circa £60 per tonne CO_2.

Notably, the Climate Change Committee has reached this same conclusion, stating the following[16]:

> *The average UK ETS auction price for the first half of 2024 was £37 per tonne of CO 2 emitted. This is far lower than the cost of many decarbonisation measures in the traded sectors, such as carbon capture and storage, which are required for the UK to achieve its climate targets.*

Without any intervention to further incentivise or subsidise application of CC to EfW, costs entailed in developing and operating CC plant therefore are likely to be substantially higher than costs applying under the UK ETS for unmitigated emission of CO_2.

5.3 Possibility of Delays in Subsuming EfW within the UK ETS

Also of relevance to the financial case for application of CC to EfW is the timescale over which any savings under UK ETS can be achieved. The new Government has not publicly expressed any intention to depart from the scheduled full inclusion of EfW with ETS from 2028 (with monitoring requirements applying from 2026). Nevertheless, it is possible that implementation challenges could ultimately lead to delays. Relevant factors include for example complexities around the administration for the inclusion of EfW, lack of preparedness of the waste sector, as well as the inherent political sensitivity of inclusion (with substantial local authority cost implications).

5.4 Potential for Passthrough of UK ETS Costs to Third Parties

The UK ETS Authority has indicated that it will *"explore different mechanisms for distributing costs of the UK ETS fairly, for example through linking to packaging Extended Producer*

[11] [redacted]
[12] [redacted]
[14] https://www.gov.uk/government/publications/traded-carbon-values-used-for-modelling-purposes-2023/traded-carbon-values-used-for-modelling-purposes-2023
[15] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1067125/developing-the-uk-ets-english.pdf
[16] [redacted]

Responsibility (pEPR)"[17]. Moreover, it is understood that Defra has now developed a mechanism for passthrough of a proportion of ETS costs under pEPR. It is therefore now understood that organisations which place plastic packaging on the market will be liable for costs arising under UK ETS, when this packaging becomes waste.

Given this intention to thus "fairly" distribute ETS costs, it is possible that a proportion of the ETS cost liability incurred through combustion of residual waste at Riverside 1 will be offset by pEPR payments. This being the case, any argument that CC has the potential to benefit the financial position of local authorities may be diminished.

In this context it important to also note that under pEPR, producers of packaging containing fossil plastics will be subject to a financial penalty. Over time this penalisation may incentivise replacement of fossil plastics with biogenic or other non-fossil materials. The result of this would be a gradual reduction in the fossil CO_2 intensity of residual waste combustion, eroding the case for carbon capture.

5.5 Income from stored biogenic carbon

Findings expounded above indicate that, in the context of current confirmed policy, operation of CC will be more costly than the financial burden imposed under the UK ETS.

Nevertheless, given the right future conditions, it is possible that CCS may become a significant revenue source. This could for example be income received for storage of biogenic carbon, in the event that this is recognised by the UK ETS (yet to be determined by the Government) and the price secured for this is higher than current ETS allowance expectations for fossil CO_2. Alternatively, storage of biogenic CO_2 could theoretically qualify for credits that could be traded in a voluntary market.

Any income derived by Cory from biogenic waste delivered by WRWA may represent a loss of value to the Authority. Moreover, income derived from storage of biogenic carbon from non-WRWA waste into Riverside 1 and Riverside 2 also represents a theoretical loss. In this context, correctly accounting for fossil and biogenic carbon content of waste delivered by WRWA and third parties will be an important consideration.

5.6 Implications of Carbon Capture Project Failure for WRWA

While WRWA is supportive of suitable decarbonisation measures, findings set out above suggest that its successful application at the Riverside 1 without any impairment to its performance site cannot be guaranteed.

In the event that CCS underperforms, capital and operating costs burdens will be incurred, whilst envisaged ETS cost reductions will not be achieved. The resultant net financial burden on Cory could undermine its service provision to WRWA, and also jeopardise the RRRL business. In the event that certain significant risks occur at the Riverside 1 (e.g. contamination or uninsurability) as a result of CC, WRWA could incur significant financial liabilities , particularly if the waste management service agreement is then terminated on a force majeure basis. See other Appendices to the written representation.

Viability risks associated with the development of CC could therefore have severe financial and existential repercussions for WRWA as a public body. This being the case, WRWA has a clear and material interest in the timing and indeed consideration of ultimate viability/benefit of the CC development at the site.

[17] https://assets.publishing.service.gov.uk/media/6669a60c9d27ae501186db79/ukets-scope-expansion-consultation-waste.pdf

6.0 Credentials for Authors of this Memo

Name	SLR position	Qualifications	Summary of relevant experience
Alban Forster	Infrastructure Sector Leader – SLR Europe	BSc Geography & Geology MSc. (DIC) Environmental Engineering	Alban has 30 years professional experience in the field of commercial, technical and environmental due diligence across principally the bio-energy and waste sectors. Alban's specialist technical areas include transaction diligence support, business planning and market analysis, strategy development and policy review, strategic plan development, procurement support and operational service reviews. In London Alban has supported the GLA in developing the strategic waste management plan (The London Plan), as well as local authority strategy development, and buy side commercial diligence support for investor acquisition of the Belvedere Energy from Waste facility. Alban has worked internationally, in Canada, Australia, Malaysia and continental Europe. He works for banks, other investors, developers, governments, local authorities and utility companies. Alban is also an accredited PRINCE 2 practitioner ensuring his capacity to manage teams and projects complement his technical capability.
Paul James	Technical Director	BSc Applied Chem MSc Env Technology & Mgmt. (Chem Eng) AMCWIM	Over 30 years working internationally in the Energy and Environment fields for both the public and private sector, and in consultancy. Career experience of renewable energy and waste technologies, industrial emissions and impact reduction, project & policy/regulatory development & implementation, investor technical and environmental due diligence. Specific sector expertise in waste-to-energy and biomass energy, carbon capture and regulatory standards. Former roles including with Environment Agency (National technical adviser on waste incineration) & European Commission (Author and project leader of the EU "Best Available Techniques" BAT Reference (BREF) document on thermal waste treatments). Since then, he has worked internationally on numerous projects for the development and implementation of waste and energy infrastructure, in both a technical and project management capacity, as an adviser to industry, investors, regulators, national and international governments & agencies. Current member of various industry sector groups on EFW, carbon capture and heat. Former Chairman of the UK Chartered Institute of Wastes Management (CIWM) Special Interest Group on Thermal Waste Treatment for over a decade, expert adviser to Environment Agency & OECD on industrial emission standards & regulation.
Matt Faulkner	Technical Director, Environmental & Social Impact Assessment	BSc (hons) Environment Management	Matt's experience includes delivering planning consents and Development Consent Orders (DCO) for transmission, offshore windfarms, large scale thermal power generation and waste management facilities. This has included support for one of the first power station DCO consents issued by the Secretary of State (North Blyth), to more recent support to Awel y Mor offshore windfarm, that Matt supported through pre-application, Examination and post consent phases alongside a number of other DCO projects.

Name	SLR position	Qualifications	Summary of relevant experience
Pete Watkins	Technical Director, Sustainable Waste Management	BSc Physics MRes Environmental Science PhD Computational Physics MCIWM	Pete has 19 years' experience in providing strategic advice supporting the development of waste and resource management services and infrastructure. He works with clients across public and private sectors, analysing waste data, modelling waste flows, and assessing the commercial viability of new projects. Pete has worked over a number of years with the Greater London Authority (GLA), including supporting the development of waste projections included in the London Plan, and contributing to the evidence base for the London Environment Strategy. Assisting investors and developers, Pete regularly undertakes commercial due diligence assessments pertaining to waste businesses and facilities. This has included analyses relating to major waste management infrastructure in London, including the Riverside site.

APPENDIX 3

ADVERSE CONTRACTUAL CONSEQUENCES NOTE

SUMMARY NOTE OF THE ADVERSE CONTRACTUAL CONSEQUENCES ON THE WESTERN RIVERSIDE WASTE AUTHORITY

26TH NOVEMBER 2024

1 INTRODUCTION

1.1 This note contains a summary of certain adverse contractual consequences on the Western Riverside Waste Authority ("**WRWA**") of the compulsory acquisition of land arising from the Cory Decarbonisation Project DCO ("**DCO**"), including on:

1.1.1 the Waste Management Services Agreement ("**WMSA**"); and

1.1.2 the Residual Value Agreement ("**RVA**").

1.2 For the purposes of this note, the Applicant and/or the owner/operator of the Cory Decarbonisation Project from time to time and/or the carbon capture and storage facility itself (as the context permits) is referred to as **"CCS"**.

1.3 On 31 May 2002, WRWA signed the WMSA with Cory Environmental Limited ("**Cory**", which expression also includes other members of the Cory group), pursuant to which, amongst other things, an Energy from Waste facility ("**Riverside 1**", defined in the WMSA as the **"EfW Facility"**) to thermally treat WRWA's residual waste was constructed on a plot located at Belvedere, Kent (the "**Site**", edged light green on the plan in Annex A of this note). The relevant WMSA provisions are summarised in a note on the WMSA, which is at Appendix 1 to WRWA's Written Representation.

1.4 A special purpose vehicle, Riverside Resource Recovery Limited ("**RRRL**") was set up to design, finance, construct, own and operate Riverside 1, on a project finance basis.

1.5 On 31 July 2008, the WMSA was amended and restated to accommodate the construction of Riverside 1 on quasi-PFI terms. As part of the arrangement and amongst other things:

1.5.1 New clauses which only related to the river transportation and waste disposal services at Riverside 1 were introduced to make RRRL bankable in the PFI / PPP funding market. Those parts of the WMSA which related to Riverside 1 and the river transportation services formed the "**EfW Contract**" which was severable from the remainder of the WMSA (the "**ASS Contract**"), so that if Cory defaulted in relation to the Authority Site Services, the EfW Contract would continue.

1.5.2 Pursuant to these new clauses WRWA undertook to buy RRRL/RRRL's assets in the event that the WMSA terminated early for whatever reason (the price determined by the reason for the termination). **This would leave WRWA (or its nominee) as the freehold owner of the Site.**

1.5.3 In recognition of the capital contribution WRWA was making to the development of the Site (and Riverside 1) through the payment of gate fees under the EfW Contract, pursuant to a Residual Value Agreement with RRRL ("**RVA**") WRWA was granted residual value rights for the remainder of Riverside 1's design life (i.e. from the EfW Contract's expiry date of 4 October 2032 to 11 October 2046) on similar terms to the EfW Contract. These rights allow WRWA to either:

(a) continue to send a pre-determined tonnage to Riverside 1 during this period; or

(b) take a royalty on the tonnage allocation it releases back to RRRL for use by third parties; and

1.5.4 WRWA was granted a lease over the Site for 50 years (i.e. to 30 July 2058) (the "**Lease**") which was then leased back to RRRL for 50 years less one day (i.e. to 29 July 2058) (the "**Sub-Lease**").

1.5.5 Under the terms of the Lease, WRWA can terminate the Sub-Lease where there is an early termination of, amongst other things, the RVA due to a default by RRRL in providing the residual value payments/services to WRWA. **This would leave WRWA in possession of the Site as a tenant of RRRL and subject to the full terms of the Lease (which for as long as the Sub-Lease is in place are otherwise largely suspended)**.

1.6 WRWA is concerned **not** to be exposed to risks which could:

1.6.1 disrupt the provision of the EfW Services by RRRL;

1.6.2 put it in the position of being required to buy RRRL/RRRL's assets; and/or

1.6.3 lead to WRWA finding itself in possession of the Site and subject to the (activated) terms of the Lease.

The EfW Contract and the Lease provide protections to WRWA to prevent certain changes to the Site and the EfW Services from being made without consent. This includes the transfer of parts of the Site to third parties.

1.7 Where WRWA becomes the owner of the Site following an EfW Force Majeure termination, the compensation payable by WRWA is **not** determined by the value of the assets being transferred but rather primarily by the modelled value of senior debt that should have been outstanding at the point of termination. **WRWA therefore takes the risk that it ends up overpaying for assets of lesser value**. If the DCO is granted and the powers exercised it will inherit a Site which is:

1.7.1 smaller than it otherwise would have been; and

1.7.2 constrained by the (as yet unspecified) rights taken by CCS.

1.8 In this context it is understood that CCS and RRRL will both be members of the Cory group. As long as this remains the case, operationally they can be anticipated to work together in the event of an operational problem arising, and any legal rights taken by CCS through the DCO are likely to be of little practical consequence. However, in the event that the Site is occupied by non-Cory parties the rights and their strict application may become more relevant. This could occur following:

1.8.1 an early EfW Contract termination and an acquisition of RRRL's assets by WRWA (or its nominee); or

1.8.2 after 2032, an early termination of the RVA in circumstances where the Sub-Lease to RRRL has been terminated.

2 RISKS DURING THE CCS CONSTRUCTION PHASE

2.1 The risk of operational disruption and/or damage to Riverside 1 will be heightened during the construction phase of CCS, especially to the extent that on-Site works are being undertaken (e.g. the construction of the pipelines and their connection to Riverside 1). WRWA's primary interest is in ensuring that there is no disruption to the EfW Services.

2.2 Some of the construction risks which could lead to disruption to the EfW Services are highlighted in the SLR technical note appended to the Written Representation at Appendix 2. Subject to further due diligence, we anticipate that most of these risks are to be borne by Cory.

2.3 This is not the case however where an EfW Force Majeure Event prevents an EfW Service from being provided. In these cases, Cory is relieved from its obligation to provide the affected service.

2.4 "**EfW Force Majeure Events**" are defined as the following:

(a) war, civil war, armed conflict or terrorism;

(b) nuclear, chemical or biological contamination unless the source or cause of the contamination is the result of actions or breach of the Contractor or its subcontractors of any tier, except where such actions of the Contractor constitute solely the receipt or treatment by the Contractor of General Waste (containing nuclear, chemical or biological contamination) in accordance with the EfW Contract;

(c) pressure waves caused by devices travelling at supersonic speeds;

(d) the suspension of both the Lighterage Business and the EfW Business due to the occurrence of an Economically Unviable Insurance Proposition;

2.5 Of particular concern to WRWA is the risk of **uninsurability** (EfW Force Majeure Event (d)).

2.5.1 Under the terms of the EfW Contract, Cory is responsible for procuring that Riverside 1 is properly insured. However, WRWA affords protection in the event that key risks become uninsurable on reasonable terms at an economically viable rate in the worldwide insurance market, in which event Cory can suspend/amend the affected service(s) until cover becomes available again or WRWA agrees to act as insurer of last resort. In the meantime WRWA is held responsible for a large percentage of the landfill tax associated with sending its waste to landfill in addition to paying the normal EfW gate fee.

2.5.2 There is currently a very limited insurance market available in the UK for insuring waste infrastructure assets.

2.5.3 WRWA has been advised by its external insurance adviser that the addition of carbon capture and storage infrastructure to the existing Site will potentially mean the existing Site will be more complex to insure whilst the construction work is ongoing (e.g. additional risks of damage to existing assets/plant/machinery, and/or risk of fire damage at Riverside 1).

2.5.4 If the uninsurability circumstances continue for a prolonged period and affect both the lighterage and EfW businesses, then the EfW Contract can be terminated and WRWA required to take over RRRL/its assets and pay compensation on an EfW Force Majeure basis (i.e. one not based on asset value but rather the modelled level of senior debt).

2.5.5 WRWA does believe it to be appropriate to be exposed to this risk without its consent.

2.6 Also of particular concern is the risk of **contamination** (EfW Force Majeure Event (b)).

2.6.1 A no fault contamination event which causes RRRL to be unable to comply with a material part of its obligations under the EfW Contract relieves Cory from liability for breaches of contract.

2.6.2 The risk of contamination occurring at Riverside 1 (during the installation of the CCS infrastructure) will increase as a result of connecting CCS to and around Riverside 1 (including from the pipelines that will transport carbon to the CCS Facility and/or liquefied carbon from the CCS Facility to the proposed new jetty).

2.6.3 If the contamination continues for a prolonged period, then the EfW Contract can be terminated and WRWA required to take over RRRL/its assets and pay compensation to Cory on an EfW Force Majeure termination basis (see 1.7 above).

2.6.4 Further information on contamination risks are highlighted in the SLR technical note appended to the Written Representation at Appendix 2.

2.6.5 WRWA does not believe it to be appropriate to be exposed to this risk without its consent.

3 RISKS DURING THE CCS OPERATIONAL PHASE

3.1 Some of the operational risks which could lead to disruption to the EfW Services are highlighted in the SLR technical note appended to the Written Representation at Appendix 2.

3.2 During the operational phase, the risk of contamination caused by CCS should be lower; however the risk of uninsurability due to the risks associated with asset stacking increases (e.g. by co-locating the CCS adjacent to Riverside 1 and Riverside 2).

3.3 WRWA has been advised by its external insurance adviser that it is uncertain how the insurance market would react if there was a claim and this may impact the availability of cover. If cover ceases to be available at an economically viable rate the uninsurability clauses could be triggered.

3.4 WRWA does not believe it to be appropriate to be exposed to this risk without its consent.

4 RISKS UPON AN EARLY TERMINATION OF THE EFW CONTRACT / RVA

4.1 Upon any early termination of the EfW Contract, WRWA is required to buy RRRL/RRRL's assets (including the Site). In certain circumstances (including most relevantly an EfW Force Majeure Event) the compensation paid by WRWA bears no relationship to the value of the assets transferred (see paragraph 1.7).

4.2 The compulsory acquisition of part of the Site would not only reduce the physical footprint of the land transferred to WRWA, but such land would be encumbered with all the other strategic and operational problems associated with its shared usage (with both CCS and Riverside 2) and its physical constraints. WRWA would have to pay the same compensation as before the compulsory acquisition but for assets of lesser value.

4.3 The Lease offers security in relation to the risks accepted by WRWA under the EfW Contract/RVA.

4.3.1 The Lease/Sub-Lease arrangement serves to prevent RRRL from selling off parts of the Site, as nobody would purchase a freehold subject to the terms of the Lease, under which no rent was payable and which enabled WRWA to terminate the Sub-Lease (and thereby deny occupation of the Site by third parties) upon any termination of the EfW Contract/RVA.

4.3.2 In addition, the Sub-Lease contains a total prohibition on partial assignments of the Site by the tenant (which in this case is also the freeholder).

4.4 If parts of the Site subject to the Lease are now made subject to compulsory acquisition this will frustrate the purpose of the Lease/Sub-Lease arrangement by:

4.4.1 devaluing the Site through the physical loss of the pink land (see Annex B of this note) which reduces the operational flexibility afforded to the owner of Riverside 1 from time to time (and which could include WRWA if there is an early EfW Contract termination); and

4.4.2 increasing the risks and liabilities of the occupier of the Site from time to time by virtue of the (as yet unclarified) rights being sought over the blue land (see Annex B of this note). It will be noted that the blue land includes the entirety of Riverside 1's buildings and it is understood that CCS is seeking amongst other things to secure access to the interior of the tipping hall. The DCO does not propose to give any protection to WRWA in its capacity as leaseholder of the Site.

4.5 The special status afforded to the Site can be contrasted with the different approach taken in relation to the land owned by RRRL to the south of the Site (edged blue on the plan in Annex A of this note). In relation to this "Belvedere Surplus Land", WRWA agreed that Cory could dispose of it at will, as long as the proceeds of sale were applied in prepayment of RRRL's senior debt (Sch.15 para 26).

5 CONCLUSION

5.1 WRWA's primary concern is to ensure that the EfW Services continue to be provided without disruption. The development of CCS assets on the Site increases the risk of disruption irrespective of

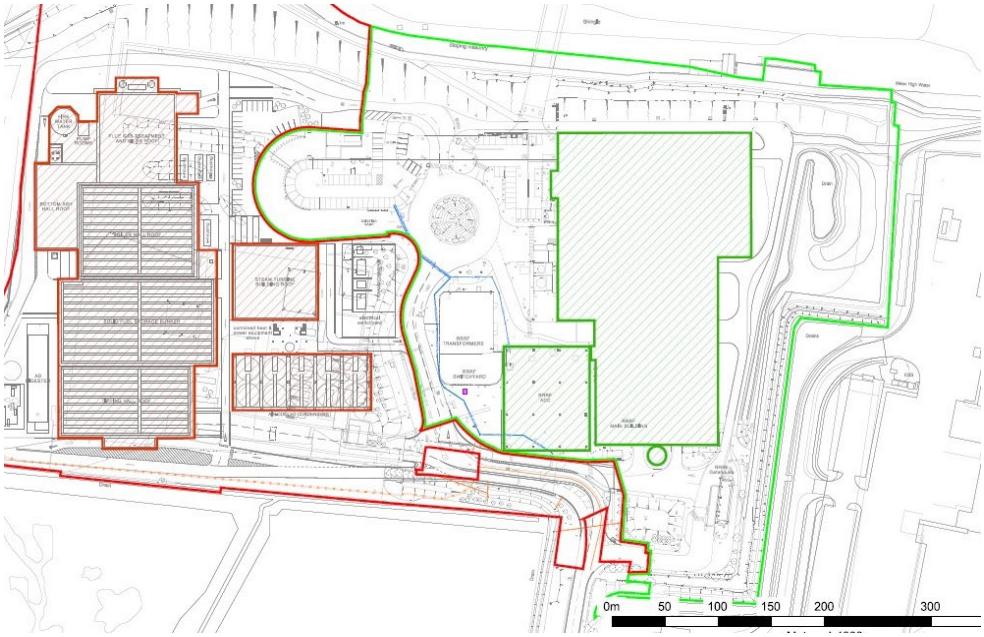
who may bear the financial consequences, both during the construction and operational phases (see the SLR technical note appended to the Written Representation at Appendix 2).

5.2 The concentration of major waste treatment and energy infrastructure assets in a small area raises the risk of an incident occurring in such area and the likelihood that more than one asset/service may be affected by such incident. This in turn leads to insurability pressure which will increase as incidents occur, a risk which in certain circumstances is borne by WRWA.

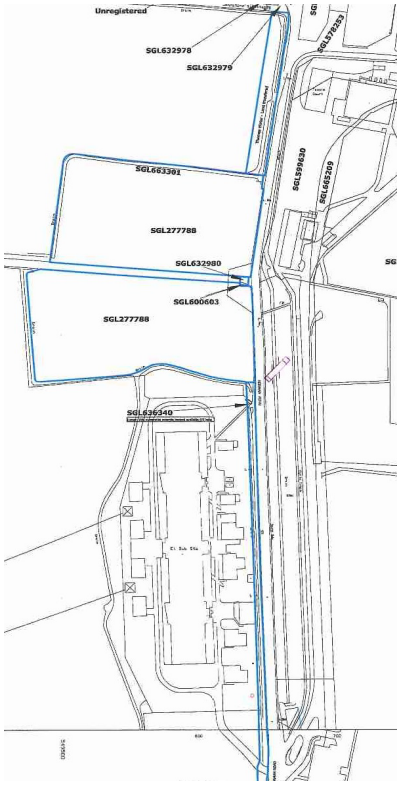
5.3 In 2008 WRWA was required to give PFI-style support to Riverside 1 in order to make it bankable, including an obligation to buy the Site if Riverside 1 failed for whatever reason. In return it was (amongst other things) given certain controls to prevent dispositions of the Site without its consent. These controls are now being circumvented by one part of the Cory group seeking statutory powers under a DCO to take part of the Site from another part of the Cory group, the one that had previously agreed to the controls granted to WRWA as part of the commercial deal and risk balance. This is not considered appropriate.

ANNEX A

LAND LEASED TO WRWA (the "Site") (EDGED LIGHT GREEN)



BELVEDERE SURPLUS LAND (EDGED BLUE)



ANNEX B

DCO PLAN RELEVANT TO THE SITE