

Technical note:

Addendum – Consideration of the REP Protective Provisions for the Riverside Resource Recovery Facility.

1. Purpose of this report

This document sets out a rapid review of the adequacy of the draft REP protective provisions to address technical risks previously identified by Wood.

1.1 Context

- 1.1.1 Wood has provided advice on the technical risks and considerations arising from the proposed development of Riverside Energy Park (REP), which could impact upon the adjacent Riverside Resource Recovery Ltd facility at Belvedere¹.
- 1.1.2 This addendum provides an update on the adequacy of the draft REP protective provisions (Schedule 10 to the Draft DCO) to address these technical risks.

2. Review

- 2.1.1 Table 2.1 sets out the outline assessment for each risk. The protective provisions are considered with respect to current drafting in Schedule 10 to EN010093-000192-3.1 Draft Development Consent Order, as submitted by applicant. The table is not a comprehensive analysis of the provisions and does not proposed drafting changes to the schedule.

¹ 41884 WRWA REP Tech Note_16052019 "Technical impacts of the proposed Riverside Energy Park on the existing Riverside Resource Recovery Facility", Wood Environment & Infrastructure Solutions UK Limited (May 2018)

Table 2.1 Technical risk assessment

Risk ID	Risk heading	Risk event <i>There is a risk that...</i>	Risk Effect <i>Which results in...</i>	Schedule 10 Protective Provisions
REP construction phase risks				
CONST-1	Construction works on utilities supplies	REPL Facility construction works disrupt utility supplies to the RRRL facility.	Utility connections for the REPL Facility require outages for gas/water/data that affect operation of the RRRL Facility Significant excavations may be required; also impacting on traffic movements.	Current draft: Part 1; definition of "apparatus" is restricted to electrical cables/plant. Part 2 covers other utility undertakers (electricity, gas, water and sewerage undertakers), and Part 3 communication lines. They appear to be restricted to statutory utility undertakers. However these assets will usually have termination points at or within the RRRL site boundary, after which the utilities are RRRL owned. Protection of RRRL owned apparatus and utilities needs consideration.
CONST-2	Construction Works on Electrical Connection	Electrical installation works up to the substation in Littleford and onward to Dartford cause disruption at the RRRL facility.	Periods where the RRRL facility cannot operate at full capacity or at all	Current draft: covered in Part 1 paras 6 to 11 for direct costs of replacement, which appears to address this risk. Consequential losses not included.
CONST-3	Surface water / foul drainage	Capacity of receiving foul/surface water drainage needs to be increased for new development	Excavations required on RRRL Facility site to reconstruct drainage	As per Const-1
CONST-4	Dewatering during construction	Disposal of groundwater causes flooding	Impacts on RRRL Facility site including disposal of surface water	Current draft: Part 4 covers EA approval for such works which appears to reduce this risk. However consequential losses that could arise from flooding etc. are not included
CONST-5	Ground gas migration	Displacement of ground gas causes migration into RRRL Facility	Ground gas entering building	Current draft: No references found.
CONST-6	Impact of construction works on flood wall	REP construction works damage flood wall	Breach of wall resulting in flooding of site	As per Const-4
CONST-7	Limited space for lifting and laydown areas	Insufficient space on new site for crange and laydown areas for process plant and construction materials	Encroachment onto RRRL Facility land	Current draft: No references found. Paragraph 9 covers on-site disruption for electrical apparatus only, not disruption to RRRL from all works activities.
CONST-8	Unexploded ordnance (UXO)	UXO encountered during construction of new facility	Evacuation of site	Current draft: No references found.

Risk ID	Risk heading	Risk event <i>There is a risk that...</i>	Risk Effect <i>Which results in...</i>	Schedule 10 Protective Provisions
CONST-9	Structural integrity of jetty under increased loading	Jetty has not been designed for increased frequency of vehicle movements associated with this proposal	Structural modifications or repairs required to jetty	Current draft: No references found. The damage, and need for extra maintenance/repairs, would accrue over time and need to consider how would evidence what is attributable to REP.
CONST-10	River access during construction	REP construction works impact on RRRL operations Replacement of Cranes	Delays in waste deliveries to RRRL, and impact on operations Delays to throughput on the Jetty and turnaround times	Current draft: No references found. Some delay costs may be incurred by supply chain/waste hauliers who could claim for damages against RRRL.
CONST-11	Level of construction traffic	Peak periods of REP construction traffic may interfere with RRRL operational traffic	Delays in waste deliveries to RRRL, and impact on operations (staff, deliveries of consumables, offtake of APCR ash).	As per Const-10
CONST-12	Construction works on access road	REP construction works impact on RRRL operations Accidents, temporary road closures, traffic lane closures or restrictions – requirement for temporary traffic signals interfere with RRRL REP construction works degrade Norman Road at quicker rate.	Delays in waste deliveries to RRRL, and impact on operations (staff, deliveries of consumables, offtake of APCR ash). Impacts on staff and waste deliveries Damaged vehicles and delays.	Current draft: No references found.
REP operational phase risks				
OPS-1	Flood Risk	New development exacerbates flood risk on RRRL facility	Unable to access site during flood and/or flood damage	Current draft: Not covered.
OPS-2	Sufficiency of jetty for vehicle movements	REP operational traffic to/from jetty could cause congestion.	Vehicle congestion if jetty cannot satisfy increased demand, and delays in waste deliveries to RRRL. Barge movements to/from RRRL are disrupted if unloading is delayed.	As per Const-10
OPS-3	Sufficiency of jetty cranes	Jetty cranes do not remain operational under increased load	Outages required to repair cranes	Similar risk to Const-9.
OPS-4	Staff Recruitment	The REPL Facility staffing requirements may place a high demand on the skilled labour force currently employed at the RRRL Facility	Increased labour costs and difficulty in retaining staff due to the proximity of a competitor for available specialist labour	Current draft: Not covered.

Risk ID	Risk heading	Risk event <i>There is a risk that...</i>	Risk Effect <i>Which results in...</i>	Schedule 10 Protective Provisions
OPS-5	Ash and container storage	REP construction works impact on RRRL operations with the removal of the current ash storage and container area	Reduced ash storage capacity for both facilities	Current draft: Not covered. The loss of this area may require a firm mitigation measure in the DCO to enable ongoing RRRLF operations.
OPS-6	Surface water release	Increased discharge to sewer as a result of the operation of the REPL Facility could result in overloading of the oil/water separators	Enforcement action from the Environment agency	Current draft: Not covered.
OPS-7	Fire hazard	The AD facility will have flammable biogas, and other hazardous chemicals stored onsite	The presence of the management and storage of biogas and other dangerous substances bring an increased risk of fire and / or explosion	Current draft: Not covered. Proposal: Physical damage and consequential losses covered in new para 12.
OPS-8	Road access during REP operations	Increased used of Norman Road by REP Increased risks of road accidents	Delays in waste deliveries to RRRL, and impact on operations	As per Const-10. The increased probability of accidents needs further consideration, and may represent a residual risk.
OPS-9	River access during operations	REP tugs pulling barges in to place Increased chances of accidents/near miss	Delays in waste deliveries to RRRL, and impact on operations Environmental risk	As per Ops-8
OPS-10	Combined Heat and Power (CHP) potential	The local CHP opportunities do not support both the REPL and RRRL facilities	REPL Facility will either not secure CHP outlets, or utilise those which RRRL Facility may otherwise have delivered.	Current draft: part 1 para (4) covers consulting RRRL on waste heat pipes route. The risks of both facilities resulting in over capacity for heat is not addressed. The sharing of the network income and customer would need further consideration.
OPS-11	Feedstock competition – supply	The REPL Facility would be in direct competition with the RRRL Facility for securing waste supplies	The RRRL facility receiving lower waste stream quantities or quality	Current draft: Not covered.
OPS-12	Disposal of Incinerator Bottom Ash (IBA)	The REPL Facility will generate quantities of increased IBA	Increased demand for local and competitively priced IBA processing capacity	Current draft: Not covered.
OPS-13	Disposal of Air Pollution Control Residues (APCR)	The REPL Facility will generate increased quantities of APCR	Increased demand for local and competitively priced disposal and / or recycling processing capacity	Current draft: Not covered.

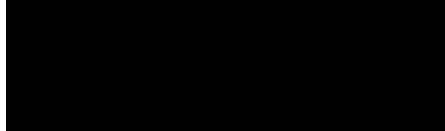
Issued by

Steve Blackburn



Approved by

James Allen



Copyright and non-disclosure notice

The contents and layout of this report are subject to copyright owned by Wood (© Wood Environment & Infrastructure Solutions UK Limited 2019) save to the extent that copyright has been legally assigned by us to another party or is used by Wood under licence. To the extent that we own the copyright in this report, it may not be copied or used without our prior written agreement for any purpose other than the purpose indicated in this report. The methodology (if any) contained in this report is provided to you in confidence and must not be disclosed or copied to third parties without the prior written agreement of Wood. Disclosure of that information may constitute an actionable breach of confidence or may otherwise prejudice our commercial interests. Any third party who obtains access to this report by any means will, in any event, be subject to the Third Party Disclaimer set out below.

Third party disclaimer

Any disclosure of this report to a third party is subject to this disclaimer. The report was prepared by Wood at the instruction of, and for use by, our client named on the front of the report. It does not in any way constitute advice to any third party who is able to access it by any means. Wood excludes to the fullest extent lawfully permitted all liability whatsoever for any loss or damage howsoever arising from reliance on the contents of this report. We do not however exclude our liability (if any) for personal injury or death resulting from our negligence, for fraud or any other matter in relation to which we cannot legally exclude liability.

Management systems

This document has been produced by Wood Environment & Infrastructure Solutions UK Limited in full compliance with the management systems, which have been certified to ISO 9001, ISO 14001 and OHSAS 18001 by LRQA.