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Rev No	Date	Summary of Changes	Section or Page Number
P01	26/06/2025	First Issue	n/a
P01.1	02/07/2025	Update following National Grid comments	Various
P01.2	03/07/2025	Update following National Grid comments	Various

MEMO

TO:

Gravesham Borough Council

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SUBJECT

Planning submission of BakerHicks 2023 Interpretive Report and SOCOTEC factual ground investigation report

Document history

Revision	Purpose description	Originated	Checked	Reviewed	Authorised	Date
1.0	Draft release	MC	FPW	CP	DC	May 2025
1.1	Update following comments	MC	CP	MC	CP	July 2025
1.2	Update following comments	MC	CP	MC	CP	July 2025

Introduction

AtkinsRéalis UK Limited (AtkinsRéalis) is providing Ferrovial Construction (UK) Limited and BEMO Tunnelling UK Limited (the client) consultancy services and support for the National Grid Electricity Transmission (NGET) Grain to Tilbury Tunnel project. AtkinsRéalis have prepared this memo to accompany the issue of the BakerHicks 2023 interpretive report¹ and SOCOTEC UK Limited (SOCOTEC) ground investigation (GI) factual report² associated with the construction of the Gravesend Shaft to Gravesham Borough Council.

The reports are being issued to support with the discharge of Gravesham Borough Council planning condition 4 associated with ground contamination, as per the Gravesham Borough Council Decision Notice, Reference 20231313, 04/03/25. Condition 4, Contaminated Land Strategy, includes the following parts:

- Part A) a preliminary risk assessment;
- Part B) a site investigation scheme based on A);
- Part C) a detailed risk assessment based on B) and associated remediation strategy; and
- Part D) a verification plan based on C).

The interpretative report and GI factual report are being submitted to support parts A to C of the planning condition. Condition 4 is presented in full in Appendix A.

¹ BakerHicks, “Geotechnical Interpretive Report, TKRE, Grain-Tilbury and Kingsnorth-Tilbury 400kV Upgrading FEED, 30003364-MSE-XX-XX-RP-Y-10118_GEOTECHNICAL INTERPRETIVE REPORT,” 2023.

² SOCOTEC UK Limited, “TKRE Grain-Tilbury and Kingsnorth-Tilbury 400kv Upgrading Feed, Ground Investigation Report (Factual Account of Fieldwork, Monitoring and Laboratory Testing), D2064-22/B,” 2023.

Background to reports being submitted

In 2022 BakerHicks (as Morgan Sindall Engineering Solutions) produced a geotechnical and geo-environmental desk study report³ for the site. This desk study was referenced within the Environmental Impact Assessment that was issued to the council as part of the application process⁴. Using collected data from the 2022 SOCOTEC UK Limited (SOCOTEC) GI, the BakerHicks 2023 report presents interpretative assessment, including a conceptual site model (CSM) and human health, controlled waters and ground gas risk assessments and provides geo-environmental conclusions for the site based on available site data. Please note that the BakerHicks 2023 report covers the entire proposed development and so not all of the interpretation presented is pertinent to the Gravesend site.

The completed risk assessment generally reports moderate/low risk, other than for asbestos inhalation which reports a medium risk. The CSM presents mitigation measures for all relevant pathways which AtkinsRéalis understand are being implemented as appropriate by Ferrovial and Bemo JV. This includes additional testing if unexpected contamination identified and monitoring of groundwater during the construction works.

Future investigations

The BakerHicks report identifies a data gap associated with shallow ground gas risk at the site, and as such reports this as a high risk. This risk is theoretical only as it is associated with the data gap, rather than based on site-specific data. As part of the Ferrovial and Bemo JV ground investigation, planned to be undertaken at the site in 2025, installation of two shallow ground gas monitoring locations has been included. Monitoring of these locations will provide data to remove the uncertainty regarding the data gap, allowing for sufficient assessment of risk. This risk assessment will be completed when data is available following the GI and is anticipated to result in an overall low risk for ground gas being identified at the site.

Summary

Based on a review of the SOCOTEC GI and BakerHicks 2023 interpretive report, AtkinsRéalis consider the scope and findings of the investigation and report valid for the site and the reports sufficient to meet the requirements of Gravesham Borough Council planning condition 4, parts A to C.

- Part A – a preliminary risk assessment and CSM is presented in the BakerHicks interpretative report.
- Part B – The SOCOTEC site investigation scheme was completed, based on the BakerHicks desk study and CSM, reported within the 2023 factual GI report. This GI advanced boreholes into the underlying superficial deposits and Chalk bedrock and collected geoenvironmental samples. Groundwater installations were completed and monitored.
- Part C – The BakerHicks interpretative report presents detailed risk assessment of the risk to all receptors that may be affected, and highlighted recommended mitigation measures, including additional testing if unexpected contamination identified and monitoring of groundwater during the construction works. A remediation strategy was not recommended but the remaining recommendations and data gaps, i.e. ground gas risk assessment and monitoring of groundwater during the works, are being covered in the client's 2025 GI.

Results of the 2025 client GI will be presented within relevant reports: ground gas risk assessment and/or the Groundwater Monitoring and Maintenance Plan (associated with planning condition 5). These reports will be submitted to the council when available as appropriate. A verification plan will be produced and issued to the council separately to address part D of the planning condition.

³ Morgan Sindall Engineering Solutions, "Geotechnical and Geoenvironmental Deks Study, PDD-100116-REP-001/30003364-MSE-XX-XX-RP-Y-10000, P04", 2022

⁴ AECOM, "National Grid Cable Tunnel Replacement Tunnel, Land Contamination Preliminary Risk Assessment, Gravesend", 2023

Appendix A - Condition 4, Contaminated Land Strategy

4. Prior to shaft excavation works commencing a scheme that includes the following components to deal with the risks associated with contamination of the site shall each be submitted to and approved, in writing, by the Local Planning Authority:

A) A preliminary risk assessment which has identified:

(i) all previous uses

(ii) potential contaminants associated with those uses

(iii) a conceptual model of the site indicating sources, pathways and receptors potentially unacceptable risks arising from contamination at the site.

B) A site investigation scheme, based on (1) to provide information for a detailed assessment of the risk to all receptors that may be affected, including those off site.

C) The results of the site investigation and detailed risk assessment referred to in (2) and, based on these, an options appraisal and remediation strategy giving full details of the remediation measures required and how they are to be undertaken.

D) A verification plan providing details of the data that will be collected in order to demonstrate that the works set out in the remediation strategy in (3) are complete and identifying any requirements for longer-term monitoring of pollutant linkages, maintenance and arrangements for contingency action.

The scheme shall be implemented as approved.

Reason: To protect and prevent the pollution of the water environment (particularly the Secondary (undifferentiated) and Principal aquifers) from potential pollutants associated with current and previous land uses in accordance with Policy CS19 of the Gravesham Local Plan Core Strategy (2014) and paragraphs 187, 196 and 197 of the National Planning Policy Framework (2024), the EU Water Framework Directive, Anglian River Basin Management Plan and Environment Agency Groundwater Protection Position Statements (2017) A4 - A6, J1 - J7 and N7.