

Rebecca Harrison
Gravesham Borough Council
Planning Department,
Civic Centre,
Gravesend,
DA12 1AU

2nd August 2024

Dear Rebecca,

National Grid planning application (ref 20231313).

Please find below a summary table of responses National Grid would like to provide to consultee comments on the above application to help address queries or concerns. In this table, we have excluded consultees that did not raise a query or concern.

We hope our responses provide clarity on the topics raised and enable you to progress towards determination. We anticipate that a consultation and formal response would only be required from only the Environment Agency and Kent Lead Local Flood Authority given that they previously recommended holding objections. However, National Highways, KCC Highways and KCC Biodiversity may also be interested to receive further clarity on our proposals following updates to our transport and biodiversity strategies which we enclose with this submission as explained in the table below. All other comments in the table below are provided for the benefit of the case officer and should not prompt the need for re-consultation.

Consultee	Comment Summary	NGET Response
Port of London Authority	Request further detail on existing tunnel depths. Advice provided on requirements outside of planning application process.	Advice is welcomed and contact was made with PLA on 28 th February to confirm tunnel depths. The original tunnel varied in tunnel invert from -148.43ft (-45.2m OD) rising to Tilbury to -138ft (-42.1m OD) at Gravesend. Whereas, the proposed tunnel invert is -34.434m at Tilbury rising to -32.23m OD at Gravesend. Advances in tunnelling technology over time enable the tunnel to be driven at a higher elevation in the chalk.
Kent Fire and Rescue	Recommendations made for fire service access requirements such a minimum width and weight loading of access road, turning facilities and emergency access.	National Grid can confirm that a minimum road width of 4m has been incorporated into all designs. Routes for emergency services have been considered during design alongside risk of collision with high voltage equipment. The final option chosen (including need for hydrants) will be made in discussion with Kent Fire and Rescue and will be compliant with Building Regulations.
HSE Explosives Team	Advice on what constitutes a 'vulnerable building'. No comments if building does not fall within this definition.	National Grid can confirm that the proposals do not meet the advised definition of a 'vulnerable building'.
Environment Agency	Holding objection.	National Grid carried out revisions to the Flood Risk Assessment and submitted an updated version to the Environment Agency on 30 th May. Upon receipt and review of this document, the Environment Agency

Consultee	Comment Summary	NGET Response
	Further detail required on flood risk matters. Specifically: - Data and risk for possible flood depths and hazards following defence breach - Provide necessary mitigation so development can remain operational and demonstrate development will not increase flood risk elsewhere - Reference to end of century flood defence options	provided further comments which have been addressed in a final version of the report. Please see document reference PDD-100116-REP-015 P04 (23rd July 2024) submitted with this cover letter. The Environment Agency were sent this updated report for further review on 24th July.
Local business	Concern that proposals would impact upon a local business' site access or use of conveyor system. Request information on: - Extent of proposals - Construction traffic including access, volumes, timings and road closures - Detail on impact to river traffic	National Grid has been in contact with this local business and confirmed that the proposals would not impact river traffic or use of the conveyor belt system. Likewise, National Grid is not seeking to acquire rights to land owned by this business. Full details of construction traffic are included in the Construction Traffic Management Plan Rev J (18th July 2024) submitted with this cover letter.
Kent County Council Flood Risk	Holding objection. Analysis must determine if impacts of the greater allowance are significant and exacerbate flood risk. Further evidence and calculations are recommended.	Email contact initiated on 18th April with Lucy Senior and Emily Neale at Kent SUDS team explaining how National Grid has addressed their concerns. Emily Neale confirmed on 10th May that this information was sufficient to lift the holding objection and recommend approval subject to conditions. Please see the updated Drainage Management Plan PDD-100116-REP-060 Rev P03 (11th June 2024) submitted with this cover letter which addresses both the initial concerns raised in Feb 2024 and the subsequent recommendations via email on 10th May. Specifically, discrepancies between hydraulic calculations have now been addressed and are identical on the drawing. The email thread discussing these matters and recommending approval is included in Appendix A of this cover letter.
National Highways	Reference made to comments on sister application in Thurrock Council and need for a meeting to discuss matters and ensure no significant impact upon the Strategic Road Network (SRN).	Meeting was held on 27th February with National Highways to discuss the project. National Highways comments related only to National Grid's sister planning application submitted to Thurrock Council. Since this time, National Grid has rereviewed all previous assessments, put forward a range of new mitigation proposals and prepared an updated Construction Traffic Management Plan (CTMP Rev J, 18th July 2024) included a Construction Worker Travel Plan. This has been sent to National Highways for review and is submitted with this cover letter. The changes made to the CTMP have been transferred into the supporting Transport Assessment work which is also submitted with this cover letter (documents: Chapter 18 and associated appendices 18.6 and 18.9). Tracked changes are used to clearly show the alterations which are summarised below for ease: - minor terminology changes for consistency with the updated CTMP and equivalent chapters for Thurrock e.g.

Consultee	Comment Summary	NGET Response
		consideration of a 10% threshold for sensitive receptors instead of 30% and reference to the newly added Construction Worker Travel Plan; - clarity regarding what constitutes a 2-way movement which has resulted in a correction of a previous error and slight increase in peak daily HGV numbers from 32 HGVs to 40 HGVs. See updated Table 18-18. - updates to the supporting appendices (Appendix 18.6 Preliminary Highway Impact Assessment and 18.9 Cumulative Assessment) to reflect the above. Importantly, the above changes have not changed the previous conclusion that no significant impacts on the Strategic Road Network (SRN) are predicted. Likewise, the changes made have not resulted in a significant increase to the traffic on the M2, A2 or A289.
KCC Highways	Recommend a condition be applied that requires a CTMP to include a Sustainable Travel Plan and pre condition road survey	An updated CTMP is submitted with this cover letter including a Framework Construction Worker Travel Plan (Rev J, 18th July 2024). The changes made to the CTMP have been transferred into the supporting Transport Assessment work which is also submitted with this cover letter (documents: Chapter 18 and associated appendices 18.6 and 18.9). A summary of these changes is provided above in relation to the response for National Highways response.
Kent Police	Comments appear to relate to a different application.	Advice welcomed. Principles of designing out crime are inherent in all proposals for new high voltage electricity compounds.
KCC Biodiversity	Concerns regarding reptile mitigation, clarity on water vole impacts, request further detail on Biodiversity Net Gain (BNG) and recommendations for planning conditions.	A meeting was held on 25th April with Emma England and Helen Forster to discuss all concerns and queries. To provide clarity on our approach, National Grid has prepared a Technical Note which is submitted with this cover letter. Whilst the BNG is not a legal requirement for this planning proposal, we understand the importance of reviewing the proposed strategy and so have also provided our latest BNG assessment and strategy report with this cover letter.
Met Police	Concerns regarding access, further detail requested regarding the programme for Overhead Line works (with reference to adjacent Lower Thames Crossing project) and Electromagnetic Forces.	A meeting was held with the Met Police on 25th February to discuss practical aspects and timings of National Grid's proposals. Regarding EMFs, the UK has a carefully thought-out set of policies for protecting against Electric and Magnetic Fields (EMFs), the main component of which is exposure limits. These policies are set out in National Policy Statement (NPS) EN-5 along with associated Codes of Practice which set out the conditions under which calculations of compliance are performed. Calculations on the proposed changes to the overhead line have been performed according to the provisions in the Code of Practice; the maximum calculated electric and magnetic fields across Milton Rifle Range are 6.3 kV/m for electric fields and 50.4 µT for magnetic fields. These calculations are performed at minimum design clearance of the conductors to ground and 100% continuous power rating, so represent a worst case. On any typical day the EMFs will be significantly lower. The public EMF exposure limits as detail in NPS EN-5 are 9 kV/m and 360 µT. In addition, there are occupational exposure limits that are significantly higher than the public limits. Ensuring compliance with the public limits will always guarantee compliance with the occupational ones. The overhead line

Consultee	Comment Summary	NGET Response
		will fully comply with these polices and exposure limits, set to protect everyone.
Bug Life	Various recommendations and requests for clarity including: - a phased approach to habitat loss and commitment to reinstating habitats as soon as possible after disturbance. - Advice about horse grazing post development and avoidance of commercial seed mixes - Clarity sought on decommissioning stage	All comments welcomed. National Grid can confirm that these recommendations will be captured as far as practicable within the more detailed Construction Environmental Management Plan. Decommissioning of existing infrastructure does not form part of the current proposals. However, advice will be sought from all nature conservation bodies in the future should a proposal be brought forward.

We would also like to take this opportunity to inform you that we have submitted an amendment to the red line boundary for the sister planning application for our tunnel proposals in Thurrock Council. The amendment affects only the proposed position of the temporary construction compound with proposals for permanent infrastructure and access routes remaining unchanged. We do not expect this change to prompt a material amendment to the Gravesham Borough Council application but have provided a drawing showing the proposed amendment in Appendix B for your consideration.

If you have any further questions regarding the above, please do not hesitate to contact me.

Yours sincerely,



Kate McGregor

Lead Consents Officer

This cover letter is submitted with the following updated reports:

Flood Risk Assessment. Document reference: PDD-100116-REP-015. Revision P04 (23rd July 2024).

Drainage Management Plan. Document reference: PDD-100116-REP-060. Revision P03 (11th June 2024).

Construction Traffic Management Plan. Document reference: PDD-100116-REP-063. Revision J (18th July 2024).

Ecological Technical Note. 24th July 2024. Revision 02.

Environmental Statement Transport Documents:

Chapter 18 – Traffic and Transport – Gravesend. Revision 1 – Tracked Changes.

Appendix 18.9 – Cumulative Assessment – Gravesend. Revision 1 – Tracked Changes.

Appendix 18.6 – Preliminary Highway Impact Assessment – Gravesend. Revision 1- Tracked Changes.

Appendix A

Email exchange with Kent LLFA

From: Emily.Neale@kent.gov.uk
To: Kate.McGregor
Cc: planning.admin@gravesham.gov.uk; planning.reps@gravesham.gov.uk
Subject: RE: [EXTERNAL] RE: National Grid Tunnel - LLFA Application Comments - 20231313
Date: 10 May 2024 16:41:01

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Good afternoon Kate,

Thank you for your email.

If this was submitted as a full application through the LPA it would be sufficient for us to recommend approval of the scheme with advisories and conditions.

An example of the specific response is included below:

Thank you for your consultation on the above referenced planning application.

Kent County Council as Lead Local Flood Authority have reviewed the email dated 18.04.2024 from National Grid, the TKRE Drainage Management Plan prepared by BakerHicks dated 22.09.2023 and the Gravesend Compound Surface and Foul Water Drainage Design General Arrangement (document number: 30003364-BHK-XX-XX-DR-C-02041, revision: P02, dated 03.11.2023) and have the following comments:

We appreciate the clarification and additional information provided and are now able to remove our previous objections. However as part of the detailed design condition we require for the following points to be addressed:

1. There appears to be discrepancies between the hydraulic calculations provided within the report and the Compound Surface and Foul Water Drainage Design General Arrangement (document number: 30003364-BHK-XX-XX-DR-C-02041, revision: P02, dated 03.11.2023). We would seek for the invert levels on the drawing to be identical to those within the model and for all the surface water manholes and features to be included within the modelling.
2. The arrangement of water treatment measures should ensure that pollution is suitably mitigated, taking into account that a factor of 0.5 is used to account for the reduced performance of secondary or tertiary components associated with already reduced inflow concentrations. Section 2.1 of the report suggests that the proposed drainage does not suitably meet the mitigation requirements for TSS when these factors are taken into account.
3. The site is within Flood Zone 2 and 3, with a proposed connection into a main river. Consultation with the Environment Agency early in the planning process is recommended to identify any constraints or specific requirements in this area that may impact the proposed SuDs methods.

Should the Local Planning Authority be minded to grant permission, we would recommend for the following conditions are attached to any approval:

Condition:

Development shall not begin in any phase until a detailed sustainable surface water drainage scheme for the site has been submitted to (and approved in writing by) the

local planning authority. The detailed drainage scheme shall be based upon the TKRE Drainage Management Plan prepared by BakerHicks dated 22.09.2023 and shall demonstrate that the surface water generated by this development (for all rainfall durations and intensities up to and including the climate change adjusted critical 100 year storm) can be accommodated and disposed of without increase to flood risk on or off-site.

The drainage scheme shall also demonstrate (with reference to published guidance):

- that silt and pollutants resulting from the site use can be adequately managed to ensure there is no pollution risk to receiving waters.
- appropriate operational, maintenance and access requirements for each drainage feature or SuDS component are adequately considered, including any proposed arrangements for future adoption by any public body or statutory undertaker.

The drainage scheme shall be implemented in accordance with the approved details.

Reason:

To ensure the development is served by satisfactory arrangements for the disposal of surface water and to ensure that the development does not exacerbate the risk of on/off site flooding. These details and accompanying calculations are required prior to the commencement of the development as they form an intrinsic part of the proposal, the approval of which cannot be disaggregated from the carrying out of the rest of the development.

Condition:

No building on any phase (or within an agreed implementation schedule) of the development hereby permitted shall be occupied until a Verification Report, pertaining to the surface water drainage system and prepared by a suitably competent person, has been submitted to and approved by the Local Planning Authority. The Report shall demonstrate that the drainage system constructed is consistent with that which was approved. The Report shall contain information and evidence (including photographs) of details and locations of inlets, outlets and control structures; landscape plans; full as built drawings; information pertinent to the installation of those items identified on the critical drainage assets drawing; and, the submission of an operation and maintenance manual for the sustainable drainage scheme as constructed.

Reason:

To ensure that flood risks from development to the future users of the land and neighbouring land are minimised, together with those risks to controlled waters, property and ecological systems, and to ensure that the development as constructed is compliant with and subsequently maintained pursuant to the requirements of paragraph 175 of the National Planning Policy Framework.

This response has been provided using the best knowledge and information submitted as part of the planning application at the time of responding and is reliant on the accuracy of that information.

Kind regards,

Emily Neale | Graduate Flood Risk Officer | Flood & Water Management
Kent County Council | Invicta House, County Hall, Maidstone ME14 1XX |

As Lead Local Flood Authority (LLFA) for the County, we have become a statutory consultee in planning to promote the provision of Sustainable Drainage Systems. You can find out more by visiting: <http://www.kent.gov.uk/waste-planning-and-land/flooding-and-drainage/sustainable-drainage-systems>

 Please don't take offence if I don't reply to say 'thank you'. If every UK adult sent 1 less courtesy email a day, we'd save over 16,400 tonnes of carbon a year – so please, [think before you thank](#).

From: Kate McGregor <kate.mcgregor@nationalgrid.com>
Sent: 22 April 2024 13:49
To: SUDS - GT <SUDS@kent.gov.uk>
Subject: RE: [EXTERNAL] RE: National Grid Tunnel - LLFA Application Comments

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Hi Becca.

We have a tight programme so I think we'd be happy to pay for the service for you to view it earlier. Could you let me know how to send across payment?

Many thanks,

Kate

From: SUDS@kent.gov.uk <SUDS@kent.gov.uk>
Sent: Monday, April 22, 2024 1:40 PM
To: Kate McGregor <kate.mcgregor@nationalgrid.com>
Subject: [EXTERNAL] RE: National Grid Tunnel - LLFA Application Comments

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Hi Kate,

Lucy has just gone on maternity leave so will not be able to look at this for you! Please submit to the LPA, who will consult us in due course.

Alternatively, should you want us to view it earlier, we can review it for a fee of £240 inc vat, or have a meeting at £360 inc vat.

Best wishes,

Becca

From: Kate McGregor <kate.mcgregor@nationalgrid.com>
Sent: Thursday, April 18, 2024 7:01 PM
To: Lucy Senior - GT - ECE <Lucy.Senior@kent.gov.uk>
Cc: SUDS - GT <SUDS@kent.gov.uk>
Subject: National Grid Tunnel - LLFA Application Comments

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Dear Lucy,

Apologies for the direct approach. I am working for National Grid on the Gravesend tunnel project ([ref 20231313](#)).

Many thanks for your comments on the application (attached for ease). We are keen to address and resolve all of your comments and thought it would be quicker to do this directly with you. I hope this is alright.

To this end, please find attached and below responses from our drainage designers to your queries. Could you please let us know if this extra detail is now sufficient to remove your recommendation for a holding objection?

LLFA Comment	NGET Drainage Designer Response
LLFA seeks the 'upper end' allowance for climate change for both the 30 (3.3%) and 100 (1%) year storm allowances.	We have applied +45% climate change. As shown in Appendix B of the attached Drainage Management Plan, the proposed network has been checked for 100yr (+45% climate change) storms.
Analysis must determine if impacts of the greater allowance are significant and exacerbate flood risk.	Based on the relatively low catchment areas upstream, storage within the piped network is deemed sufficient. Please note that the scenario with tidal locked outfall (zero discharge) has been assessed as a worst case.
Include supporting evidence such as greenfield calculations, infiltration testing or boreholes analysis and any further information to clarify the assumptions made.	Infiltration testing is not available however the drainage design does not rely on infiltration. Runoff is conveyed to the existing ditch watercourse. Based on the close proximity of the Thames and the network of ditches, infiltration was deemed highly unlikely. This is backed up by borehole testing for the site which show clay and silt to be present at both sites. We would be happy to provide the greenfield runoff rate calculation, however 0.4 l/s is already below practical lower limit. See Runoff evidence attached.
Detailed design should utilise a modified infiltrate rate and demonstrate that any soakaway will have an appropriate half drain time.	Soakaways are not utilised in the drainage design. The filter drain system is to capture and convey road runoff to the ditch watercourse outfall. See high resolution drawing attached (PDD-100116-LAY-030).
We recommend inclusion of full hydraulic calculation to review input to the model such as rainfall data, safety factors, time are diagrams and flow rates.	Within the Drainage Management Plan attached, Appendix B includes microdrainage model outputs to support the strategy wording and general arrangement drawings. Section 5.2.1 presents model inputs. Section 5.2.2 presents model results (0.4l/s discharge at SW09) Section 5.2.3 presents an additional check if the outfall was tide locked (zero discharge) which is the worst case assumption for upstream attenuation. As can be seen, given that the catchment areas are relatively low, the upstream pipe network provides sufficient attenuation to cope with critical 100yr 24hr storms including 45% climate change.

With kind regards,

Kate

Kate McGregor MSc BSc MIEMA (*she/her*)

Lead Consents Officer
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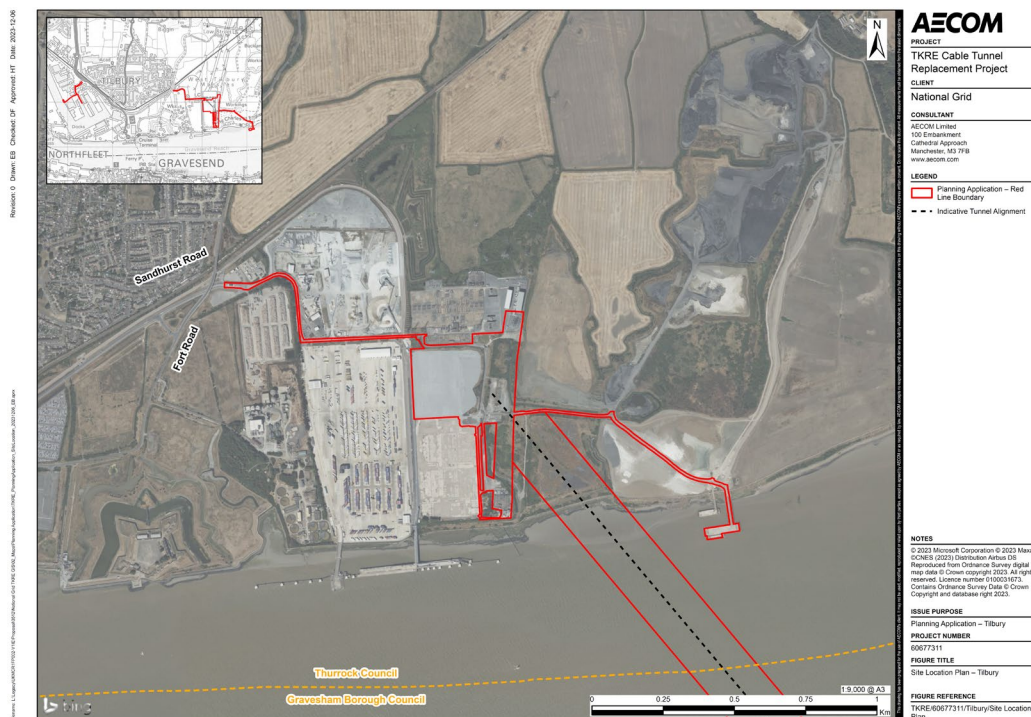
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For the registered information on the UK operating companies within the National Grid group please use the attached link: <https://www.nationalgrid.com/group/about-us/corporate-registrations>

Appendix B

Red line boundary change for sister planning application submitted to Thurrock Council

Original red line boundary:



Amended red line boundary:

