

EN010092 Thurrock Flexible Energy Centre

Gravesham Borough Council

Written Representation (WR) and responses to ExQ1

1 Summary

- 1.1 This document updates the Borough Councils views on the issues that it has previously highlighted on the Thurrock Flexible Generation Plant proposal. It includes a pen portrait of the Borough, an outline of the issues, and more detailed discussion of the current position on those issues (and where relevant ExQ1 questions). The responses/comments on the latter are summarised in the final section. Air Quality is the main matter where the Council has significant concerns and will discuss further with the applicant to see if the matter can be resolved.

2 Introduction

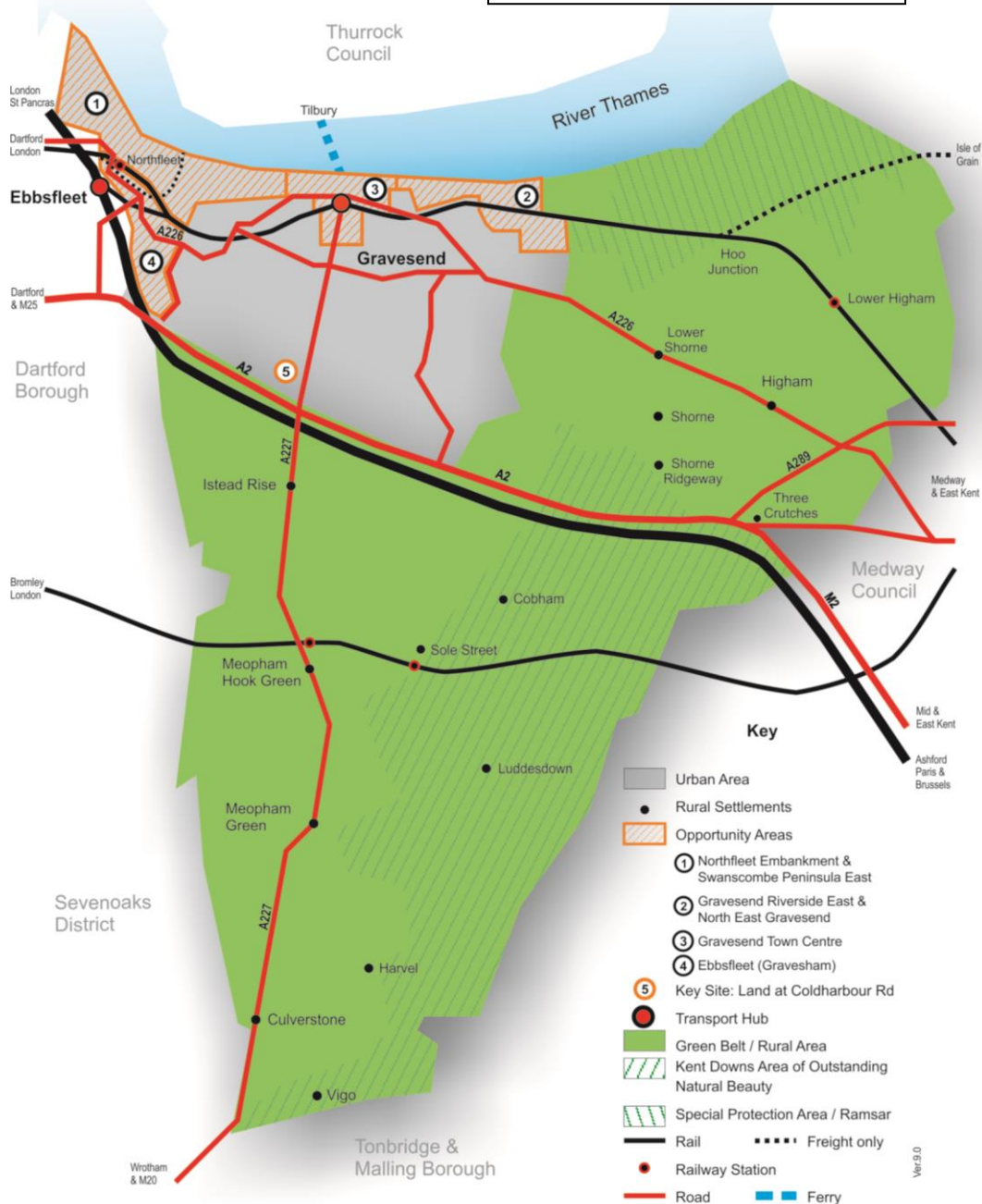
- 2.1 Given the geographical location of the proposal to Gravesend the issues raised relate to matters like air quality, noise, green belt and landscape (for the latter the proposed causeway is also a potential issue).
- 2.2 The first section provides a pen portrait of the Borough emphasising some of the background that is relevant to the consideration of the issues. Second section sets out the concerns raised in the Councils representation, whilst section three explores the issues raised in more detail including the consideration of relevant questions. The final section summarises the responses to, or comments upon, relevant ExQ1 questions for ease of reference.

3 Pen Portrait of Gravesham

- 3.1 Gravesham Borough is a triangular shaped area located south of the River Thames rising up to the crest of the North Downs scarp, underlain by chalk. The main urban centres are Gravesend/Northfleet, historic settlements located at the first point on the river where the chalk reached the riverside. To the east is the North Kent Marshes stretching away to the Medway, which are Ramsar/SPA. The southern boundary of the urban area is defined by the A2, approximately on the alignment of the Roman Road from London to Rochester, Canterbury and Richborough. The A2 is a 4 lane dual carriageway with hard shoulders, frequently called a motorway although technically it is not. On the east side of the Borough it becomes the M2. Together with the M20, it is one of the two routes across Kent connecting the M25 to the Dover and the Channel Tunnel.
- 3.2 The south and east sides of the Borough are in the Kent Downs Area of Outstanding Natural Beauty, which extends north of the A2 to the east of Gravesend. The entire of the east and south of the Borough are within the Metropolitan Green Belt with the larger villages as insets. There is a large amount of built heritage with 310 listed buildings (10 Grade I & 21 Grade II*) and 23 conservation areas¹ spread across the entire Borough.

¹ Maps and area appraisals for the conservation areas can be found on our [web site](#)

Key diagram from
Local Plan Core Strategy 2014



3.3 The east side of the Borough abuts the Medway Unitary Authority area, whilst Tonbridge & Malling Borough is to the south east and south. Sevenoaks District is to the south west and Dartford Borough due west along the River Thames. Kent County Council is the Transport Authority and also responsible for Minerals and Waste planning.

3.4 The boundary with Dartford Borough north of the A2 broadly follows the historic Ebbsfleet Stream that flows out into the Thames at Northfleet Harbour. There was a major Roman temple complex by the A2, and there are numerous historic and archaeological sites in this area. The northern boundary of the Borough is the River Thames, which at this point is in the order of 500m wide at Northfleet, 600m at Gravesend Town Centre, and then widening out further east towards the sea. The

Thurrock unitary lies on the north shore. The main development opposite Gravesend on the north side of the river is Tilbury Docks and what was the site of Tilbury Power Station (half of which is now Tilbury 2 port facility). The photograph used on the cover of the application documents helpfully shows the relationship across the river.

- 3.5 Gravesend was the first and last place on the River Thames, the point where passengers frequently boarded or disembarked from boats. It is the home of the Port of London Authority, river pilots and the place controlling river traffic. It has historic fortifications in the form of New Tavern Fort (and Shornemead Fort further downstream) that complement Tilbury and Coalhouse Forts on the Thurrock side. The Tilbury ferry provides a foot passenger link across the river.
- 3.6 The availability of chalk on the river played a key role in the development of the cement industry, so for example at one stage Northfleet Cement works was the largest in Europe. There were also a number of paper mills (Kimberley Clark is still operational), Northfleet Power station and other heavy industry. Many of these were located in former chalk quarries. The net result has been economically a classic picture of industrial decline, but combined with a dramatic landscape of chalk cliffs and spines with dramatic changes in level from the chalk extraction.
- 3.7 The original main railway line was the North Kent Line from London (Charing Cross/Cannon Street) to the Medway Towns and further east. To the east of Gravesend across the marshes this runs alongside the Thames & Medway Canal, and then uses the former canal tunnels to reach Strood. This has been joined by High Speed 1 (original called Channel Tunnel Rail Link) which runs along the M2/A2 corridor and turns north through the Ebbsfleet Valley, where Ebbsfleet International station is located, and then under the Thames enroute to London St Pancras. The line from the Medway Towns to London Victoria runs through the rural part of the Borough. From Ebbsfleet International, St Pancras is 17 minutes by train and from Gravesend (via a connection off the North Kent line) 24 minutes.
- 3.8 The parts of the Ebbsfleet Valley in Gravesham plus Northfleet Embankment East and West are covered by the Ebbsfleet Development Corporation (EDC) as Development Management Authority. Gravesham and Dartford Borough's remain the plan making Authorities. Major development has long been planned around the International station, and is occurring in Eastern Quarry (now called Whitecliffe) in Dartford and at Northfleet Embankment East. EDC is shortly to bring forward major development proposals for Central Ebbsfleet, part of which (Northfleet Rise) is located in Gravesham.
- 3.9 As well as Thurrock Flexible Energy DCO application the Borough Council is dealing with three other major infrastructure projects, as well as other significant development and the regeneration projects. These are:
 - London Resort – Euro Disney scale (12.5m annual visitors) leisure resort located on the Swanscombe Peninsula, parts of which are in Gravesham. This has been accepted by PINS for Examination and is currently undergoing the Registration of Interested parties phase
 - Lower Thames Crossing – 3 lane dual carriageway 23km long linking M25 J29 with the current M2 J1, with a 4.3km tunnel under the Thames. The

DCO was submitted in October 2020, then withdrawn and a fresh submission is expected in autumn 2021

- Proposed Medway Hoo Transport & Works Act Order – Medway are proposing to submit a TWA Order to put passenger trains back on the Isle of Grain line (currently freight only) as far as a new station at Hoo
- 3.10 The Council has been previously involved in the Tilbury 2 DCO examination, raising issues on noise, air quality, heritage and visual impact given the proximity to central Gravesend.
- 3.11 Within Gravesend/Northfleet there are major development proposals at (with reference to the opportunity areas in the map above):
- Northfleet Embankment West – 250 homes permitted (in area 1 on map)
 - Northfleet Embankment East – 499 homes (under construction – area 1)
 - St Georges, Gravesend – proposals circa 150 homes (area 3)
 - The Charter, Gravesend – 242 homes permitted (area 3)
 - Clifton Slipways, Gravesend – 227 homes permitted (area 3)
 - Canal Basin (Albion Waterside), Gravesend – application for 1,500 homes made in March 2021 (20210270²) – with building heights up to 21 storeys (area 2)
- 3.12 St Georges, the Charter and the Canal Basin have particular significance due to their location close to the south bank of the river. The Canal Basin area is 1.7km from the main part of the application site.
- 3.13 The A226 one-way system around the town centre is an Air Quality Management Area due to traffic levels and the built form. There are also AQMA's at the road junctions at A227/B261 junction, B261 Echo Square, and B261/B262 Pelham Road, The B261 (Old Road East & West) provides a bypass route for the town centre³.

4 Areas of concern highlighted in the Councils initial representation

- 4.1 Noise and vibration: During construction and operation there is potential for noise and disturbance to Gravesham residents, in particular in relation to the causeway.
- 4.2 Air Quality and emissions: The possible implications arising from the development on the air quality in the Borough which has a number of air quality management areas, in particular on West Street, Gravesend.
- 4.3 Nature conservation: The ecological and biodiversity impacts of the project are complex, with the project having the potential to impact directly and indirectly upon both the terrestrial and marine environments, including those of international significance.
- 4.4 Landscape and visual impact: The Environmental Statement notes the impact on long views from Gravesend towards the development leading to further urbanisation of the river where long views are a key element of the character of the area.

² Application can be found via the Gravesham [web site](#)

³ Maps of the AQMA's can be found on the Gravesham [web site](#).

Potential lighting impacts of the causeway during construction and its long term use are a concern.

- 4.5 Impact on heritage assets: Gravesend contains a significant number of listed buildings, conservation areas and a historic monument. The historical significance of the forts and blockhouses comes from their interrelationships as well as individually.
- 4.6 Green Belt: The proposal is located in the Metropolitan Green Belt. The applicant notes that new buildings are inappropriate development under the NPPF and so should not be approved except in very special circumstances. This is not a renewable energy project so not covered by NPPF paragraph 147.

5 Current position on topics

Noise

- 5.1 Consultants (Bureau Veritas) for the Borough have reviewed the noise and vibration material in the Environmental Statement and come to the conclusion that there are no immediate concerns for the Borough Council. 'However, it is recommended that the mitigation measures incorporated into the Thurrock Flexible Generation Plant assessment (ES Section 2.8) to reduce the potential for impact on noise and vibration, to be confirmed during the detailed design stage phase are adopted and controlled via an Environmental Permit.'
- 5.2 Accordingly there Borough Council does not wish to make further representations on the matter provided that the condition referred to above is met and that there is a robust monitoring strategy during construction and operation to ensure that that the agreed levels are adhered to and action taken if they are breached. Tilbury 2 DCO provides a model in this regard.
- 5.3 A comprehensive monitoring strategy across all topics is therefore required during construction and operation to ensure that the impacts are as predicted in the Environmental Statement, or otherwise agreed at the Examination, are what happens in practice and that appropriate action is taken if exceedances occur.

Air Quality

- 5.4 Bureau Veritas (BV) have also reviewed the air quality material where they find that there are some deficiencies in the analysis and a need for further clarification. In particular they say that:
- On construction 'it is considered that the conclusion that the change in emissions from construction is 'negligible' is robust and defensible'
 - However on operation:
 - "The short-term and long term contour plots do not seem to match results within the tables. There is a conflicting long-term contour plot in Appendix 12.8.
 - No information around Bias Adjustment or Annualisation of the project specific NO₂ monitoring is provided.
 - Justification required for choice of diffusion tubes for model verification of construction traffic modelling and why the assessment does not use the modelled concentrations from this study as background for main body of the assessment.

- For the additional roads modelling within Gravesham, details of the model verification are not provided and it is stated that ‘a ratio has been used as an adjustment factor’ and the ratio is not clearly provided.
 - It is not clear what background concentrations were used for the purpose of the additional Gravesham traffic assessment and the traffic data used in the modelling is not provided.
 - There is no discussion of short-term exceedances in the additional assessment of Gravesham. “
- 5.5 Further advice has been sought from the consultants taking into account the questions posed in ExQ1 to the applicant: 1.1.3, 1.1.4 and 1.5.7.
- 1.1.13 Explain the adverse impact on air quality at receptor 9 – Gravesend one way system.* BV comment that comment “additional work including modelling of additional receptors around ‘Receptor 9’ and GR13 (West Street) has been completed by the applicant in appendix 12.8. This additional work confirms that the AQAL is predicted to be exceeded at receptors adjacent to West Street as a result of the development (Paragraph 1.3.11 of Appendix 12.8). This is true in both the 2022 and 2025 modelled scenarios. This is as a result of the effect of traffic emissions and process contribution from the proposed development. Without the development in place the pollutant concentration at these receptors is above 40ug/m³. Given that the sensitivity of the site increases at higher pollutant concentrations, the effect is considered ‘moderate adverse’”.
- 5.6 *1.1.14 Asking the applicant why air quality exceedances in Tilbury and Gravesend have not been addressed in the Environmental Statement.* This comment relates only to the situation in Gravesend. BV comments that “it is our understanding that the effect of the development on air quality has been identified as ‘Moderate adverse’ in the Environmental Statement at affected sensitive receptors in Gravesend. This has been identified through use of the industry standard IAQM/EPUK Guidance document – ‘Land-use planning and development control: Planning for Air Quality’. It is not accepted that, given the evidence provided, the effect is ‘not significant’ as stated in ES Chapter 12, paragraph 5.1.5.”
- 5.7 *1.5.7 Asking the applicant to comment on the exceedance in air quality at point 47 (A227 Wrotham Road in school grounds and at the north west corner of the Mid Kent Golf Course).* BV state “it appears that the applicant has used a background concentration close to the AQAL of 38.6µg/m³ based on the concentration monitored at location ‘GR57’. This is a ‘roadside’ monitoring location within the Old Road West Junction AQMA (see footnote 3 for link to map). With the effect of additional roadside and process emissions included, this results in the predicted exceedance of the AQAL at this committed development.”
- 5.8 There is therefore in the view of the Borough Council that there is a significant air quality issue in West Street, Gravesend as a result of the proposed development. The one-way system round the Town Centre is an Air Quality Management Area already due to impacts of pollution from traffic flow and the impact of built form. The applicant is not responsible for the base conditions, but is for the increment. This is despite the relatively infrequent operation of their facility. This is a matter that should be tackled at source and the Council will discuss the matter with the applicant.

- 5.9 It is noted that at Appendix 12.3 of the Environmental Statement there is a discussion about the influence of stack heights on emissions and that beyond 50m there are not significant gains. The analysis in Chapter 12 is based on 40m, so the Council would appreciate a determination on whether an increase to 45m or 50m would address the air quality issues or not. There may of course be other ways of achieving the same result but the focus should be at source.
- 5.10 One of the unclear matters is what traffic levels assumed in the modelling for the one way system. It is not clear what flow data has been used and whether it reflects recent permissions and forthcoming proposals.
- 5.11 The one-way system in Gravesend town centre needs to be subject to ongoing monitoring to find if the issue is significant or if more so require additional measures to be taken. The monitoring would also require logs of when the gas engines run so that it is clear if any deterioration in air quality is as a result of this development or some other cause. The Borough Council would expect to receive copies of such reports and there to be an agreed strategy of what happens is the agreed impacts are breached.
- 5.12 Point 47 is however in a much more open location with school playing fields to the west, and Mid Kent Golf Course to the south east. The Borough Council would therefore suggest that there probably is not an air quality issue a point 47 but that location GR57 needs to be checked. That is located in an AQMA at a skewed road junction and together with the surrounding built form at this location mean the emissions are not readily dispersed.

Nature Conservation

- 5.13 On Nature Conservation issues the Council is content to leave the matter to the appropriate bodies to consider.

Landscape

- 5.14 1.12.1 *Have the representative viewpoints been agreed.* The Borough Council has reviewed the landscaped views provided by the applicant in chapter 6 of the ES, the locations of which were previously agreed by the Council. In terms of the operational plant itself the views illustrate that the stacks, as the highest element, are generally not prominent in long distance views or else become lost in the pylons and other structures that exist in any case.
- 5.15 A wider point than just landscape is the potential implications from the proposal on the development at the Canal Basin. This is a key site in the Gravesham Local Plan Core Strategy 2014 and the largest site in Gravesham's brownfield land register. It is important that this site is not sterilised or jeopardised from development, as was discussed in the Tilbury 2 examination. The Council would note that the new Canal Basin application is for a larger amount of development than allocated under policy CS04, and is therefore a departure from the Local Plan. There was however a previously an outline consent for residential and employment development⁴ that covered the site and the principal of residential development in this area is long established. Should this site not come forward there are implications for the Green

⁴ Application 20020666

Belt in Gravesham where sites are already being examined in the Site Allocations and Development Management Policies document.⁵

- 5.16 There is also concern is over the introduction of the causeway into the proposals. In the short term this will be used for the delivery of the gas engines, but this is an activity that being dependent on the tides is a 24 hour operation when it occurs. Given the proposed development timescales this is not thought likely to be a significant issue. Of more concern is how the causeway may be used in the longer term. Any use after the completion of construction (and logically any replacement of the engines in the longer term) should be subject to a suitable requirement for consultation of the Borough Council.

Heritage

- 5.17 Gravesend Town Centre is a historic location with conservation areas and listed buildings as noted above. A significant issue for any riverside development is the relationship between the various forts up and down the river, of which Tilbury Fort, Coalhouse Fort (north of the river), New Tavern Fort (Gravesend) and Shornemead Fort (south of the river) are the most relevant in this context.
- 5.18 As indicated in the landscape section above the impact of the current proposal is in practical terms not significant, though it does add to the clutter as viewed from the south shore. The concern therefore focuses on the noise and disturbance. There will no doubt be some limited disturbance caused by the delivery of the engines, but that is of relatively short duration and on the analysis noise is not seen as a major issue. As noted above there needs to be some form of control over the future use of the causeway.

Green Belt

- 5.19 *1.9.1 Comments on the very special circumstances case for Green Belt.* The Borough Council has considered the material on the Green Belt topic supplied by the applicant as well as the helpful draft Local Impact Report as reported to Planning Committee⁶ by Thurrock Council which provides a detailed analysis starting at section of 7.6 on page 43. (The page number may vary in the submission version). This approach is taken to avoid repetition of material where the conclusions are agreed with, seeking only to highlight the disagreement with the conclusions. The concern arises from the general justification of inappropriate development in the Green Belt.
- 5.20 At Para 7.12 of the Thurrock report three key questions are asked:
- Whether the proposals constitute inappropriate development in the Green Belt;
 - The effect of the proposals on the open nature of the Green Belt and the purposes of including land within it; and
 - Whether the harm to the Green Belt is clearly outweighed by other considerations so as to amount to very special circumstances necessary to justify inappropriate development.

⁵ [Regulation 18 consultation](#) on this took place in autumn 2020

⁶ [11 February 2021](#)

- 5.21 Thurrock Council's conclusion (p.58, para 7.92) is that "taking into account all Green Belt considerations and for the reasons explained it is considered that the site presents a unique opportunity for power generation making beneficial use of the existing Tilbury substation and associated electricity pylon infrastructure. There is a clear demand for electricity production and security that is recognised at the national level through the Government's National Policy Statement for Energy EN1 considered to clearly outweigh the identified harm to the Green Belt through inappropriate development and the adverse impact that would result upon the openness of the Green Belt in this location such that Very Special Circumstances exist. Therefore the principle of the development is considered acceptable."
- 5.22 As the report says the critical factor is the weight given to the various factors in the analysis. In the Borough Councils opinion the judgement fails to give sufficient weight to the need to reduce the carbon footprint, which argues against the use of gas as a fuel (as raised by question 1.2.1). The critical factor is the proposal should be judged on current policy basis (as established in the Heathrow judgement). More tellingly though is the emphasis on the very special circumstances brought about by the, rare, juxta positioning of the electricity substation at Tilbury, the pylon lines and relative close access to the gas grid. The former two are a direct result of the previous use of the adjoining site as Tilbury Power Station.
- 5.23 Following closure and demolition half this site has been used for the Tilbury 2 port development. The other half, not in the Green Belt, is a vacant site which was therefore used for power generation, and could be again, without damage to the Green Belt. The DCO process provides the mechanism through Compulsory Purchase powers to purchase the site if there is not a willing vendor.
- 5.24 The Council is aware that when this project was first mooted, the residual Tilbury Power Station site was being promoted by RWE for a project entitled the Tilbury Energy Centre. Development of the proposals was frozen the November 2018.
- 5.25 Anecdotally energy promoters do not tend to CPO each other's land, however that is not a good enough justification for ignoring a seeking a sequentially preferable site in Green Belt terms (noting that physically it would be closer to Gravesend). The very special circumstances argument inherently required alternative sites to be fully explored.

6 Summary of responses or comments on ExQ1 questions

- 6.1 1.1.3 The Borough Council considers that the impact on West Street from air quality is 'moderate adverse'. This should be mitigated at source.
- 6.2 1.1.4 As in response to 1.1.3 this should be addressed by the applicant.
- 6.3 1.5.7 Point 47 is in an open location has been modelled using GR57 which is at a relatively enclosed location. That point needs checking, but point 47 is not thought to be significant.
- 6.4 1.9.1. Special circumstances in the Green Belt have been argued, but there is a suitable adjacent site which is not in the Green Belt.
- 6.5 1.12.1 Yes the viewpoints in Gravesham have been agreed with the Council.