MILLS & REEVE

Your reference:
Our reference: MFBA/4060919-0005
Document number: 753065105_2

Direct line: [redacted]

26 February 2025

Dear Sirs

Outer Dowsing Offshore Wind (the trading name of GT R4 Limited) ("the Applicant")

Proposed Outer Dowsing Offshore Wind Farm Order

Deadline 4a submissions on behalf of T.H. Clements & Son Limited ("T.H. Clements")

Mills & Reeve continue to be retained by T.H. Clements and have been instructed to make the following submissions to the Examining Authority ("**ExA**") at Deadline 4a of the examination.

These submissions have been prepared in conjunction with the following experts appointed by T.H. Clements:

- Mr Phillip Wright of Wright Resolutions Limited (soil expert);
- Mr Iain Gould, Associate Professor of Soil Science at the University of Lincoln (soil expert);
- Mr Damian Pawson of Sweco UK (air quality expert); and
- Mr Daniel Jobe of Brown & Co. (surveyor).

Appendices 1-4 of the written representation submitted by Mills & Reeve on behalf of T.H. Clements [RR-067] set out the qualifications and relevant experience of the above experts.

1 Post-hearing submissions including written summaries of oral case put at ISH5

1.1 Please see Appendix 1 which comprises T.H. Clements' summary of its oral case put at ISH5.

2 Comments on ISH5 Action Points

2.1 Please refer to Appendix 2 which sets out T.H. Clements' comments on the actions arising from ISH5.

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3 Comments on the Applicant's update to the draft DCO [REP4-007]

3.1 Following ISH5 T.H. Clements asked the Applicant to propose drafting to be included in the restrictive covenant to address T.H. Clements' concerns about the need for consent to carry out trenching to address waterlogging of crops to be given as quickly as possible. The Applicant has advised that it would be willing to provide comfort in the context of the voluntary negotiations but did not intend to include any additional drafting to cover this point on the face of the DCO. As agreement is yet to be reached with the Applicant, T.H. Clements reiterates its request for the following amendment to be made to the restrictive covenant drafting in the dDCO (additions shown in green):

B. A restrictive covenant over the land for the benefit of the remainder of the order land to—

(a) prevent anything being done in or upon the land or any part thereof for the purposes of—

(i) the construction of any buildings; or

(ii) the hard surfacing of the land;

(b) prevent the planting of any trees or shrubs on the land without the consent in writing of the undertaker (such consent not to be unreasonably withheld or delayed provided that 97 the proposed trees, or shrubs would not cause damage to the relevant part of the authorised development nor make it materially more difficult to maintain or to access the relevant part of the authorised development);

(c) prevent the carrying out of any excavations or works or agricultural practices to a depth greater than 0.75 metre from the surface of the land, without the consent in writing of the undertaker (such consent not to be unreasonably withheld or delayed, with consent for trench digging requests relating to waterlogging to be determined within 24 hours, if the proposed activity would not cause damage to the relevant part of the authorised development nor make it materially more difficult to access or maintain the authorised development) provided that (for the avoidance of doubt)—

(i) ordinary agricultural practices including but not limited to acts of cultivation including soil preparation, ploughing and sub-soiling, not exceeding 0.75 metre in depth from the surface of the land, do not require the consent of the undertaker; and

(ii) flushing of land drainage systems, maintenance of outfalls and culverts of land drainage systems, clearance of vegetation (by use of machinery or by hand) and the operation of existing land drainage systems do not require the consent of the undertaker provided that no excavations take place to a depth greater than 0.75 metre.

4 Comments on the Applicant's update to the Land Rights Tracker [REP4-093]

4.1 T.H. Clements are continuing to liaise with the Applicant with a view to agreeing Heads of Terms for a voluntary agreement. The last meeting between the parties was held on 20 February 2025.

5 Comments on The Applicant's Response to T.H. Clements' Dust Report, Assessment and Conclusions [REP4-125]

5.1 Please see Appendix 3 which sets out T.H. Clements' comments on The Applicant's Response to T.H. Clements' Dust Report, Assessment and Conclusions.

6. March Hearings

6.1 We note that the ExA has specifically requested that T.H. Clements attend the next set of hearings (CAH2 and ISH8 being the relevant hearings) and T.H. Clements would appreciate the opportunity to discuss further its concerns regarding dust impacts and mitigation.

6.2 Should the ExA require any additional information in relation to this representation, please contact Fiona Barker or Melanie Grimshaw of Mills & Reeve at [redacted] or [redacted]

Mills & Reeve LLP

Appendix 1 - Post-hearing submissions including written summaries of oral case put at ISH5

OUTER DOWSING OFFSHORE WINDFARM

T.H. CLEMENTS (Interested Party Reference 20049059)

POST HEARING SUBMISSION – SUMMARY OF ORAL SUBMISSIONS MADE AT ISH5: ONSHORE ENVIRONMENTAL MATTERS

INTRODUCTION

1. The following persons appeared on behalf of T.H. Clements at ISH5:

   (i) Mark Westmoreland Smith KC, Francis Taylor Building;

   (ii) Fiona Barker, Solicitor and a Principal Associate at Mills & Reeve LLP, T.H. Clements' lawyers;

   (iii) Philip Wright, Director and founder of Wright Resolutions Limited, a consultancy which provides specialist advice to the agricultural industry. Mr Wright is a Chartered Engineer with a BSc (Hons) in Agricultural Engineering. Mr Wright's CV is at App.1 to T.H. Clements' Written Representation **[REP1-050]**);

   (iv) Damian Pawson, Technical Director on Air Quality at Sweco UK Limited (whose CV is at App.4 to T.H. Clements' Written Representation **[REP1-050]**).

2. T.H. Clements contributed to Agenda Item 3.5: Land Use, Geology and Ground Conditions at ISH5; and 3.7: draft Development Consent Order. Where an agenda item is omitted below, it reflects the fact that T.H. Clements did not contribute to the discussion under that heading.

AGENDA ITEM 3.5: LAND USE, GEOLOGY AND GROUND CONDITIONS

Agricultural Land Classification ("ALC") and soil surveys

3. As previously explained, T.H. Clements does not suggest a need for ALC soil surveys in order to further assess the impact of the proposed development on best and most versatile agricultural lands prior to determination.

4. Rather T.H. Clements' concern relates to whether or not ALC soil surveys are sufficient for the purpose of identifying soil condition so as to determine the standard to which they need to be restored . As explained in **[REP2-079, p.29, Q1 LU 1.12]** and **[REP4-150, p.6, Q2 LU.1.2]** they are not.

5. It is vital that the soils are in the same condition post- construction as they were pre-construction in order that the cable corridor area has similarly performing (including re rate of crop growth/ maturity (harvest date) and therefore marketable yield in the case of vegetables) crops compared to the areas immediately adjacent in the same field. Surveying / restoring to ALC category is not sufficient (ALC categories being broad).

6. The Applicant has now amended the oSMP in order to restore soils to surveyed condition and not to ALC category with which T.H. Clements is content.

Working width of the cable corridor

7. T.H. Clements explained where this issue has arrived at and that T.H. Clements latest position is encapsulated in **[REP4-150, Q2 LU.1.3]**. This is not repeated here. Action point 14 from ISH5 is for the Applicant and T.H. Clements to engage in discussions and provide a note of respective positions regarding the cable corridor width and ability for micro-siting. T.H. Clements has requested from the Applicant justification of its claimed need for 20m micro-siting where trenchless techniques are used (in particular, because there is no requirement for micro-siting elsewhere in the cable corridor; the Applicant gives zero examples of why it might be required; and the clear engineering preference is to bury cables in as straight a line as possible). This explanation was outstanding at the time of drafting of this document.

Suitability of the outline Soil Management Plan (oSMP) submitted at deadline 4

8. T.H. Clements noted that it had provided a mark-up in track changes of amendments sought by T.H. Clements to the oSMP to the Applicant but that many of the amendments sought had not been accepted. As such, there remain issues on the oSMP as between the Applicant and T.H. Clements.

9. Mr. Wright spoke to this issue and sought to identify the key (not only) differences between the parties as follows:

   (i) Soil horizons: the oSMP refers to the following soil horizons: topsoil, upper subsoil and lower subsoil. This is means that currently the Applicant is not accounting for different layers in the topsoil. T.H. Clements has provided evidence as to the existence of different layers to our reported findings in Foxholes Field (see **[REP2-079, pp.29-32, ExAQ1 Q1 LU 1.12 to 1.15 inclusive and pp.56-57, App.2]** which shows the presence of upper topsoil, lower topsoil and subsoil. Although ALC guidance (MAFF, 1988, page 43 onwards) refers to soils with two subsoil horizons and only one topsoil, which the Applicant has sought to reflect, this does not properly reflect the nature of the soil on T.H. Clements farmed land. The key point is that the different horizons must be identified and then stripped, stored and managed separately. The oSMP requires segregation of (just) topsoil and subsoil throughout. Were this to be followed, the "lower topsoil" horizon (intermediate horizon) would be treated as subsoil. This intermediate horizon therefore would be mixed (diluted) as a result of soil stripping, and reinstatement, with the subsoil beneath. This would severely compromise the quality of soil below the upper (0cm to 40cm) top soil horizon. The result of this would be a high potential for loss of marketable yield (for all the reasons we have repeatedly argued – see also comments which follow). Were this intermediate horizon to be treated as "topsoil", it would be mixed with the highest quality topsoil above, diluting these qualities (to a lesser extent than if mixed with the subsoil) – and result in a topsoil upper horizon of reduced quality. This again, would impact on plant establishment, growth, and marketable yield. It is critical, therefore, that the different horizons are handled separately in order to enable "like for like" reinstatement.

   (ii) Paragraph 53 of the oSMP addresses adverse weather. The paragraphs reads so far as relevant: "*Soil operations must not restart until the ground has had at least one full dry day **or** an agreed moisture criteria of the soil can be met (such as 'drier than the plastic limit') as advised by the SCoW*." T.H. Clements requested that the emboldened "or" is amended to "and." The current drafting fails to acknowledge situations where the ground has had one full dry day (and therefore, would be deemed fit for operations to continue as the oSMP stands), but this has not resulted in acceptable moisture levels being met. Paragraph 22 of the Clarification Note on Climate Change, Increased Rainfall & Soil Impacts **[REP3-055]** states that: "*Field capacity refers to the amount of soil moisture or water content held in*

the soil after excess water has drained away and the rate of downward movement has decreased, typically occurring two to three days after rain or irrigation in soils with uniform structure and texture". One full dry day in such circumstances will still result in above field capacity soil moisture. It is, therefore, the moisture criterion that is the most important. The text should be changed to "and" or simply rely on the moisture criteria.

10. T.H. Clements raised the further issue of consultation. At present, paragraph 3 of the oCoCP **[REP4-068]** requires the Applicant prior to submission to the LPA, to submit the final CoCP to the Landowner Interest Group providing no less than 10 working days for comments to be provided. Both the SMP and CoCP are important to T.H. Clements' ongoing business. T.H. Clements has requested that it is included as a separate consultee in this paragraph in order to ensure the opportunity for it to comment on the final CoCP. The same provision should be included in the oSMP. There is no clear reason that T.H. Clements can see as to why this could not be done or why it would be unduly onerous on the Applicant. T.H. Clements would also like the oCoCP and oSMP to require the Applicant to submit any consultation responses to the relevant planning authority when submitted the final versions for approval automatically rather than requiring the relevant planning authority to request the same.

Soil restoration

11. T.H. Clements covered this issue in the context of the oSMP, as set out above.

Cable burial depth

12. At present the oCoCP states at paragraph 109 that "*The cable shall be installed 300mm below any current drainage system where practical*". T.H. Clements confirmed that it is content for the cable to be installed 300mm under existing drainage systems. However, it was concerned as to the lack of clarity as to what "*where practical*" would mean in practice. In the event, the Applicant has undertaken to remove these words and, in such circumstances, the issue in relation to cable depth will be resolved.

Severance

13. This issue is addressed in T.H. Clements Written Representation **[REP1-050, p.18-21]** as well as its response to the first written questions (Q1 LU 1.5) **[REP2-079, p.13-27]** (which answer sets out the land the T.H. Clements estimates will be affected by severance, i.e. become impractical to farm). ISH5 action point 21 is for the Applicant and T.H. Clements to meet and agree the extent of severed land and this is in train and will be reported separately at Deadline 4a.

14. In addition, severed land is addressed in the oCoCP **[REP4-068, p.32, s.6.12]**. This sets out a mechanism for landowners and the Applicant to work together to identify and manage severed land and this is largely agreed, the Applicant having accepted a dispute resolution clause proposed by T.H. Clements.

Dust contamination

15. T.H. Clements provided a Technical Report: Dust Deposition Modelling assessment which was appended to their Written Representation **[REP1-050]** (the "THC Dust Report"). The Applicant has now responded to the THC Dust Report **[REP45-125] ("Applicant's Dust Report)**. T.H. Clements will respond to this at Deadline 5. A partial response has been provided at Deadline 4 **[REP4-150, pp.13-42,Q2 LU 1.6]** to a draft

of the Applicant's Dust Report which was provided to T.H. Clements but there are differences between the draft and the version submitted.

16. There is a material difference between the parties on dust emissions. The Applicant's position is that there will be *no risk* of dust deposition beyond the redline of the application (i.e. outside of the cable corridor) due to the mitigation measures it will put in place. That is plainly not going to translate into reality as a matter of common sense. It is acknowledged that detailed dust modelling is rarely done, but given the sensitivity of the receptor in question and the significance of the business at risk then, it is appropriate in the circumstances of this case to conduct the assessment that T.H. Clements has done. What the assessment does is identify land at high risk of visual dust deposition. It is does not seek to establish how much dust will fall where but looks at risk. The suggestion – which is the Applicant's position – that there is no risk beyond the redline is plainly wrong. But this suggestion is the basis for the Applicant's current refusal to compensate T.H. Clements for the need to grow its products away from the high risk areas or risk business failure through interruption to supply/ quality/ and contract failures.

17. Without agreement on this issue, the ExA will have to take into account the very significant risk to the T.H. Clements business. It is not a question of the impact of dust per se (which was the context the Applicant sought to place the issue in) but the impact on the business (and the existential threat), which is a very material consideration.

Agricultural drainage and irrigation

18. T.H. Clements' position is set out in its responses at **[REP2-079, ExA Q1 LU 1.15]** and **[REP4-150, pp.44-46, Q2 LU 1.9]**.

19. Paragraphs 111 and 112 of the oCoCP **[REP4-068]** state that where the existing drainage system cannot be adequately reinstated, an alternative (new) scheme "*over part, or the entirety of the field*" can be installed.

20. Mr Wright explained that partial reinstatement is a concern. An alternative scheme needs to apply to the entire field where drainage pipe depths are changed, in order that a consistent soil moisture status (including water table height) is achieved. This is needed to provide crop consistency across the field which ensures a marketable yield at harvest is maintained for the field as a whole.

21. Existing (redundant) drainage must be removed where it is uphill of the cable corridor to avoid this providing water movement to the points of severance of these drains. If this was not done, soil moisture levels in the vicinity of the cable could increase, increasing the risk of farming machinery sinkage under wetter conditions. Paragraphs 4.3.8 to 4.3.15 of T.H. Clements' Written Representations **[REP1-050]** describe the risks involved with sinking farm machinery in greater detail. Increased moisture levels in this vicinity also exacerbate marketable yield issues, as outlined above.

22. All reinstated or new (replacement) drainage schemes must be capable of being jetted for their full length from an outfall in the surrounding ditch. This requirement is particularly important for high silt content soils (i.e. those farmed by T.H. Clements along the cable route).

Climate change, increased rainfall and soil impacts

23. T.H. Clements confirmed that it did not have anything further to add to the position set out at **[REP4-150, Q2 LU 1.12]**.

AGENDA ITEM 3.7: THE DRAFT DEVELOPMENT CONSENT ORDER

24. T.H. Clements made two comments in relation to the draft development consent order.

25. First, that many of the proposed amendments made by T.H. Clements in relation to the restrictive covenant had been accepted by the Applicant (see **[REP4-007, p.104]**). The only issue remaining in relation to the Restrictive Covenant is the need for urgent consent to dig deeper than 0.75m where the land is waterlogged and drainage is required to be dug to save crops. The Applicant has indicated it will give this issue further thought.

26. The second point is not necessarily tied to the draft development consent order. It is that T.H. Clements has a genuine interest in the contents of the SMP and CoCP and would like to be consulted on the draft final plans before submission to the relevant planning authority. T.H. Clements does not need this stated on the face of the order but can accept it stated up front in the oCoCP and oSMP. This is addressed above.

Appendix 2 - Comments on ISH5 Action Points

Actions arising from **ISH5** held on **Wednesday 12 February 2025**

No.	Action	T.H. Clements' position
14	Engage in discussions and provide a note of respective positions regarding the cable corridor width and ability for micro-siting.	Please see paragraph 7 of T.H. Clements' written summary of its oral case put at ISH5 (Appendix 1 of these submissions).
15	Consider additional wording to the drafting of the consultation requirements with affected landowners to be set out in the Soil Management Plan (SMP) and provide a commentary note on this and also on the issue of when after a period of heavy rain the land would be able to accommodate heavy machinery on it.	The oSMP has been updated to provide that the Applicant must consult with T.H. Clements, as well as the Land Interest Group (LIG), before submission of the SMP to the local planning authority for approval, and for any comments on the draft SMP made by T.H. Clements and/or the LIG, to be submitted at the same time. This is welcomed by T.H. Clements. Unfortunately, the oSMP has not been amended to properly protect against damage to soils following heavy rainfall. For all of the reasons explained at ISH5, the ability to simply default to a time delay of one day following sustained heavy rainfall **does not fulfil the criterion for effective management of soil** to reduce risk of degradation and damage: • A return to field capacity moisture levels (above which damage risk is severe) is unlikely to happen in one day. Paragraph 22 (p 7) of the Clarification Note on Climate Change, Increased Rainfall & Soil Impacts [REP3-055] states that: "*Field capacity refers to the amount of soil moisture or water content held in the soil after excess water has drained away and the rate of downward movement has decreased, typically occurring* ***two to three days after rain or irrigation*** *in soils with uniform structure and texture".* One full dry day in such circumstances will still result in above field capacity soil moisture, and therefore conditions above plastic limit. The agreed moisture criteria of the soil (drier than plastic limit) need to be met. • Without the moisture criteria requirement (this alone would be acceptable) there is no adequate provision made for effective soil management to reduce risk of soil degradation and damage.
16	Clarification to be provided on the current and future role and status of the Land Interest Group and any	The oSMP and oCoCP have been updated to provide that the Applicant must consult with T.H. Clements, as well as the Land Interest Group (LIG), before submission of the SMP/CoCP to the local planning

	implications for the appropriate consultation body for the outline SMP and oCoCP.	authority for approval, and for any comments on the draft SMP/CoCP made by T.H. Clements and/or the LIG, to be submitted at the same time. This is welcomed by T.H. Clements.
19	Consider providing amendments to the wording of the Soil Management Plan to ensure there is no deterioration of the ALC grade, whilst also safeguarding the need to restore soil profiles to their pre-construction condition.	T.H. Clements need to be satisfied that distinct soil horizons found during surveys are identified, stripped, segregated during storage, and reinstated to their original condition insofar as possible. The oSMP does not specify this. There is lack of clarity and detail on specific horizons present – "Topsoil" and "Upper and lower Subsoil" clearly **do not represent** the situation in its current form, as seen in Foxholes Field by way of example, and as explained during ISH5. It would be helpful if the Applicant could explain if these descriptions ("Topsoil" and "Upper and lower Subsoil") are remaining in the oSMP. If so, there is a lack of clarity and the likelihood of misinterpretation is high. If the recommended alterations have not been made to the full oSMP as requested (other than as occurs in lines 6 to the end in section 1.26 Reinstatement), there can be no confidence that these will be made in the final SMP. Reference to "the existing sequence of horizons", as opposed to specifically topsoil and (upper and lower) subsoil, should apply generally in REP4-070: • Surveys 1.8 • Table 1 (p 19) • 1.17 Soil handling – last bullet point • 1.23 Soil Stripping #73 • 1.24 Soil Storage #76, and paragraphs #81, #83, and #84. No changes appear to have been made to Section 1.8 point #17 that surveys will take place to a depth of 1.5m, as opposed to 1.2m. • Soil surveying depth at 1.2m will not be deep enough to account for cables buried below current drainage where this exceeds 1m in depth. • There is, as a result, the risk that running sand/silt layers present in the excavation envelope at greater depths than 1.2m will not be identified beforehand. This significantly reduces the level of understanding of the actual soil conditions present ahead of excavations actually commencing. This implies poor, or inadequate provision is made for such situations likely to occur on parts of the cable route. Section 1.22 Drainage: Para #69 also requires amending to include "*All such techniques will allow unrestricted jetting of all drainage pipes to their full length from a ditch outfall."* This was requested during

		ISH5 and is essential for silt loam soils present on the route. By jetting the reinstated drainage system prior to handover, this will confirm that the drainage has been effectively reinstated. This procedure could either be carried out by T.H. Clements, or if undertaken by the Contractor, T.H. Clements would need to be in attendance to ensure reinstatement is to an acceptable standard.
20	Amend wording in the CoCP to remove the 'where practical' tailpiece in regard to cable burial depth.	Unfortunately the oCoCP has not been amended as agreed at ISH5 re burial of the cables 300mm below existing drainage systems. While the 'where practical' tailpiece has been removed from paragraph 109 of the oSMP as agreed, additional text now provides for the cables to be buried 300mm below existing drainage systems *or any alternative drainage system,* which has the same effect as the original tailpiece and is contrary to what was agreed by the Applicant at ISH5. This additional text expressly provides for existing drainage schemes to be replaced in order for cable depth to be limited (for example, to depths less than that needed where current drainage is below 1.1m), and there is no provision made to remove existing (functioning) drainage systems where they are present at a higher gradient than the cable corridor, in order to minimise water being channelled by such drains to the vicinity of the cable corridor itself. This issue was explained during ISH5 and is a major concern, as water movement through the existing drainage system (if it is not removed) will make the area in the vicinity of the cables wetter, and at greater risk of damage through sinking farm machinery, The Applicant clearly does not regard lack of removal of existing upstream drainage systems as being a risk to machinery (sinkage), or to (marketable) crop loss through soil moisture differences across the field. T.H. Clements must be indemnified against any losses occurring as a result. These include, but are not exclusively limited to: • Cable damage as a result of machinery sinkage, or its removal. • Marketable yield loss resulting from differences across the field resulting from the installation of the cable. Such indemnity needs to apply for an unlimited future time. • Market (land) value of the field itself which could be compromised due to the above issues.
21	Arrange discussions to investigate any disparities between their respective assessments of severed land now that the relevant shapefiles have been reviewed.	These areas are largely agreed between T.H. Clements and the Applicant, however, there are still minor amendments/adjustments being made.

24	Provide comments on the Applicant's revised wording in relation to securing dust contamination measures in the final documents to take account of detailed construction data.	T.H. Clements have reviewed an extract of a revised Air Quality Management Plan provided by the Applicant and, assuming that extract is included in the updated Air Quality Management Plan submitted at Deadline 4a, are happy with the position in relation to this action point.
25	Respond to the applicant's conceptual pre and post-construction drainage plans.	The drainage plans are agreed. However, T.H. Clements has requested an extended indemnity (20 years) to ensure any possible failure to the drainage system due to the running silts located in the area is mitigated.
27	Respond to the argument put forward by TH Clements in regard to climate change and its the increased frequency of heavy rainfall event will leave less time for land to drain.	Climate change and its effects are already evident and it is not the end of 2025 yet, let alone 2050. Cables buried in fields will as a direct result, limit future drainage schemes to, at most, the current drainage depths. This affords no possibility to increase depth of drainage to increase the reservoir soil storage available, to potentially mitigate against increased severity of, and frequency of, heavy rainfall events. At the very least, such climate change risks should negate the option to replace existing drainage schemes with shallower versions (if this were done to allow cable depth to be similarly kept to shallow depths, for example). The very fact that there will be limited time for land to drain (the Applicant is only intending to allow 1 day for land to dry out following heavy rainfall as noted in our comments on ISH5 Action 15 above) will imply that drainage systems cannot be compromised by the cable depth, or any consequence of the installed cable. Please note "*the increased rainfall will leave less time for the land to drain in its entirety*" adds further weight to our argument that a delay of one full dry day after rainfall is an inadequate provision to ensure soil is in a workable (non-plastic) state.

Appendix 3 - Comments on The Applicant's Response to T.H. Clements' Dust Report, Assessment and Conclusions [REP4-125]

T.H. Clements' Comments relating to REP4-125 "*The Applicant's Response to T.H. Clements' Dust Report, Assessment and Conclusions*" (Feb 2025)

This document provides T.H. Clements' (THC) consolidated comments on the Applicant's review (REP4-125) of THC's detailed dust dispersion modelling study (Appendix 14 of REP1-050) (the "THC Study").

This document supersedes THC's responses to ExA Q2 LU1.6 (REP4-150) in relation to dust contamination, which were based on an earlier version of the Applicant's review document.

T.H. Clements' Position on Dust Contamination

THC's responses to the Applicant's review are responded to in detail within **Table 1**, principally based on the concluding remarks presented by the Applicant at section 5 of REP4-125. However, the below sets out THC's position.

Assessment Overview

THC's customer contracts impose a zero-tolerance policy for visible dust contamination on Brassica crops. This necessitated a robust and site-specific assessment of the risk of dust emanating from construction-related activities dispersing and settling on (contaminating) THC crops growing on land adjacent to the export cable corridor (ECC).

The THC Study established appropriately reasoned and justified benchmarks for dust deposition over short-term periods (daily/monthly), against which the dust deposition modelling outputs were assessed for each of the three key construction phases independently.

A 'high risk' of visible dust contamination on THC farmed land was determined where exceedance of assessment benchmarks occurred for 120 days/4 months or more, based on modelling representative meteorological data (i.e. exceedance frequency over these timescales indicates high likelihood of conditions conducive to dust dispersion and deposition). In reality, visible dust accumulation could occur over much shorter timescales (i.e. days).

The area at 'high risk' of dust contamination was reported separately for each construction phase, such that overlapping and double-counting of dust-generating construction activities was avoided. Dust control was represented within the THC Study through the application of dust control factors (i.e. reducing dust emissions), specifically with respect to key dust suppression techniques such as watering, reducing material drop heights, and material stockpile seeding (as per AS1-046 and REP3-022).

The 'high risk' area reported for the Cable Infrastructure Installation phase was 107 hectares, representing the maximum modelled area of visible dust impact, inclusive of dust control.

Reliance on Project-level and Site-specific Characteristics

The THC Study relied on project-level construction activity information to determine the likely construction activity rates (i.e. scale of activity) in each phase and, crucially, applied dust emission factors that took specific account of local conditions i.e. site-specific inputs relating to climate (e.g. wind, rainfall) and soil (e.g. silt content, moisture content), which were available for the THC Study. These emission factors are recognised as global best practice in estimating emissions from the activities included in the THC Study and are not limited for use in specific countries or industry sectors.

The dust emissions from each construction activity were calculated by multiplying the relevant emission factor by the activity rate. Based on the above, it is evident that the dust emissions inventory presented in the THC Study was founded on data and information specific to both the proposed project and local site-specific conditions.

Put simply, the action of excavation, removing soil, and dropping the material onto the ground on a construction site in the UK, is the same as doing it in on a mining site in Australia. The key differentiators are the nature of the soil, the climate/weather that the material is exposed to, and the scale of the activity (i.e. activity rate). As summarised above, these key differences are accounted for in the THC Study.

Appropriate Application of Guidance

The Applicant has suggested that the THC Study is "flawed" and "unreliable", arguing that the methodology used is not appropriate for this type of assessment, based on the IAQM *Minerals Dust Guidance* (2016).

These concerns are robustly refuted, both inherently by the THC Study (REP1-050) and by the above summary (and in detail within **Table 1** below).

The use of dispersion modelling and the associated globally recognised emission factors is clearly justified and facilitated by Section 5.5 of the *IAQM Construction Dust Guidance* (2024)[1], which is the principal guidance document of relevance (i.e. construction).

It is of note that the IAQM is currently in the process of reviewing and updating its guidance on mineral dust, such that the collective view presented in 2016 may not be representative of current (2025) views. Indeed, since Issue Specific Hearing 5, the IAQM has issued a briefing (19 February 2025) regarding the status of their updated *Minerals Dust Guidance*, stating that:

> "*The **2016 IAQM Guidance on the Assessment of Mineral Dust Impacts for Planning is now nine years old** and as such there are some **elements of the document that are dated** and the **focus of assessment is changing***.
>
> *A full review is being carried out by an IAQM Working Group established specifically with regards to this guidance. The review is considering feedback on many aspects including*:
>
> - …***Increased application of dispersion modelling***…
>
> *The intent is to issue an updated guidance document still applying the same risk assessment concept, but that also takes account of the issues raised by members, and the legal and technological changes*." (***our emphasis***)

Therefore, the IAQM has acknowledged the need to consider the increasing role of dispersion modelling. Likewise, the IAQM *Construction Dust Guidance* (2024) signals a change in the IAQM's position, given that the guidance states that detailed dispersion modelling can be applied as an assessment approach.

Concluding Remarks

The key distinction between the two assessments before the Examining Authority is:

- THC's Study (REP1-050) provides a quantitative, evidence-based assessment of visible dust impact risk on THC- farmed land.

[1] Institute for Air Quality Management (January 2024) *Guidance on the assessment of dust from demolition and construction v2.2*

- The Applicant's study relies on a qualitative, risk-based approach that assumes mitigation eliminates risk, without explicitly assessing site-specific sensitivities.

While the Applicant proposes best practice mitigation, it is not reasonable to assume zero dust impact on land adjacent to construction activities (i.e. dust mitigation does not represent the removal of all dust sources). As the IAQM (2024) guidance acknowledges, even the most rigorous dust management plan cannot guarantee complete effectiveness at all times.

For THC, for whom zero visible dust contamination is contractually mandated, it was both appropriate and necessary to undertake a detailed quantitative assessment. The Applicant's assertion that it does not need to quantify dust impact fails to account for the specific commercial risks faced by THC.

Accordingly, the Examining Authority should place greater weight on THC's detailed, evidence-based assessment, which:

- Aligns with the latest IAQM guidance and evolving best practice.
- Provides a clear, site-specific quantification of dust contamination risk.
- Demonstrates that even with mitigation, significant dust impact remains likely.

The Applicant's approach, in contrast, presents an unsubstantiated assumption that mitigation alone is sufficient, without the necessary quantification of risk. Given the potential for significant commercial losses to THC, the Examining Authority should give due consideration to the robust, quantified findings of THC's Study.

THC's Detailed Written Responses to Applicant's Review of Dust Modelling Study (REP4-125)

THC's written responses to each of the main points raised by the Applicant in their review (REP4-125) of THC's Study (REP1-050) are presented in **Table 1** overleaf. These are presented in a tabulated format, with the left-hand column presenting the key outcomes of the Applicant's review from pages 25-26 of REP4-125 and the right-hand column presenting THC's response.

Table 1: T.H. Clements' Responses to Applicant's Review (REP4-125) of Detailed Dust Dispersion Modelling Study (REP1-050)

Applicant's Statement (Page 25-26; REP4-125)	T.H. Clements Response
Contradicts UK Technical Guidance: The modelling study uses mining dust emission factors from USA and Australia, which are not validated for the UK climate. The IAQM explicitly advises against using these emission factors in dispersion modelling, describing it as "extremely rare", "not recommended" and "inappropriate".	**Emission Factors** The Applicant suggests that the dust emission factors used in the THC Study (REP1-050) are only applicable for use in the USA and Australia, and solely reserved for use in the mining sector. This is categorically incorrect. The emission factors used in the THC Study are ***globally*** accepted for use across multiple sectors, ***including construction***. In terms of applicability globally, the International Finance Corporation (IFC, World Bank Group) Environmental, Health and Safety Guidelines[2] cites both the US EPA AP-42 and the Australian National Pollutant Inventory (NPI) suite of emission factors as being representative of Good International Industry Practice (GIIP). Furthermore, the same suite of factors are referenced by Defra air quality technical guidance[3] and the UK Government's National Atmospheric Emissions Inventory (NAEI)[4]. With respect to applicability across multiple sectors, the same emission factors used in the THC Study are referenced in both Australian National Pollutant Inventory guidance documents for ***Fugitive Dust*** (i.e. relating to construction activities) and, separately, for *Mining*. Both documents are referenced in Table 4-1 of Appendix 14, REP1-050. In other words, the activity types represented in the THC Study are common across a number of industry sectors, including construction, and are not exclusively reserved for use in the mining sector and/or in specific countries. Put simply, the ***action*** of digging a hole, removing soil, and dropping the material onto the ground on a construction site in the UK, is the same as doing it in on a mining site in Australia. The key differences between the two are the ***nature of the soil***, the ***climate/weather*** that the material is exposed to, and the ***scale*** of the activity (i.e. activity rate). Crucially, the dust emission factor equations used in the THC Study ***take specific account of local conditions*** i.e. *site-specific inputs* relating to climate (e.g. wind,
Coal Mining Emission Factors: The study relies on dust emission factors from coal mines which are not representative of construction dust characteristics.	

[2] IFC / World Bank (2007) *EHS General Guidelines* [redacted]

[3] Department for Environment Food and Rural Affairs (2022) Local Air Quality Management Technical Guidance https://laqm.defra.gov.uk/wp-content/uploads/2022/08/LAQM-TG22-August-22-v1.0.pdf

[4] National Atmospheric Emissions Inventory (2024); [redacted]

Applicant's Statement (Page 25-26; REP4-125)	T.H. Clements Response
	rainfall) and soil (e.g. silt content, moisture content), which were available for the THC Study. Of equal importance, the scale of dust emissions from each construction activity are derived by multiplying each emission factor by an activity rate. Again, the activity rates for each construction activity used in the THC Study were equivalent to the project-level information presented in relevant DCO documents (e.g. APP-058, AS1-086, REP3-022, and APP-270). The dust emissions derived in the THC Study explicitly account for these site-specific and project-level variables, such that the dust emissions inventory is representative of local conditions. Whilst we acknowledge that this type of assessment is rare within the UK, based on the above it is clearly established that the emission factors used in the THC Study can be applied to construction activities. Moreover, ***given that the emission factors are dependent on site-specific characteristics relating to soil and climate, they can be appropriately applied within a UK context.*** Therefore, by definition, this is a *construction dust assessment*, such that we default to the IAQM construction dust guidance (2024)[5] to justify the appropriateness of a detailed modelling assessment. **Guidance** The Applicant's statement on "*contradicting UK Technical Guidance*" suggests that the question of dust dispersion should not be addressed, and their position is said to be based upon the IAQM's specific guidance (published in 2016) on assessing dust impacts from mineral sites in the operational phase[6]. The 2016 IAQM minerals dust guidance states: "*Detailed dispersion modelling of dust impacts from minerals sites in the UK is extremely rare and is not **generally** recommended by the IAQM given the lack of accurate UK emissions data for this sector…* *The collective view of the IAQM Working Group is that it is currently inappropriate to use a quantitative modelling approach to predict the impact in **most cases** and a qualitative risk-based approach using the S-P-R [Source-Pathway-Receptor] concept should **usually** suffice*." (***our emphasis***)

[5] Institute for Air Quality Management (January 2024) *Guidance on the assessment of dust from demolition and construction v2.2*
[6] Institute for Air Quality Management (May 2016) *Guidance on the Assessment of Mineral Dust Impacts for Planning v1.1*

Applicant's Statement (Page 25-26; REP4-125)	T.H. Clements Response
	As outlined in REP3-065 (PDF pages 13-14), with appropriate citation from the IAQM's construction dust guidance (published in 2024)[7], the premise for the THC detailed construction dust dispersion modelling was driven by the particularly high quality standards to which THC are held, such that there can be no visible dust deposition on their produce. It is important to note that the 2016 IAQM minerals dust guidance states that: "…*The IAQM does not expect practitioners to follow the suggested approach in all circumstances. Other approaches may also be valid provided they are based on sound scientific principles and are appropriate for the application*." As is clear from the wording of the guidance (see above – "generally", "in most cases", "usually"), dispersion modelling may be appropriate in certain circumstances. The Applicant's position reads the guidance as effectively prohibiting further investigation but that is not what it says at all. It does violence to the generality of the language and the explicit acknowledgement that the general approach will not be followed in all circumstances. In effect, the Applicant is trying, inappropriately, to leverage the guidance to avoid the issue. As is obvious from the terms of the guidance itself, that is not a tenable approach. It is of note that the IAQM is currently in the process of reviewing and updating its guidance on mineral dust[8], such that the collective view presented in 2016 may not be representative of current (2025) views. Indeed, since Issue Specific Hearing 5, the IAQM has issued a briefing (19 February 2025)[9] regarding the status of their updated Minerals Dust Guidance, stating that: "*The **2016 IAQM Guidance on the Assessment of Mineral Dust Impacts for Planning is now nine years old** and as such there are **some elements of the document that are dated** and the **focus of assessment is changing**.* *A full review is being carried out by an IAQM Working Group established specifically with regards to this guidance. The review is considering feedback on many aspects including:* • ***…Increased application of dispersion modelling**…*

[7] Institute for Air Quality Management (January 2024) *Guidance on the assessment of dust from demolition and construction v2.2*

[8] [redacted]

[9] IAQM (19 Feb 2025) Guidance Update – *IAQM Guidance on the Assessment of Mineral Dust Impacts for Planning* – [redacted]

Applicant's Statement (Page 25-26; REP4-125)	T.H. Clements Response
	The intent is to issue an updated guidance document still applying the same risk assessment concept, but that also takes account of the issues raised by members, and the legal and technological changes." Therefore, it is clear that, as part of the guidance update on minerals dust, the IAQM is considering the role of dispersion modelling, given that they are aware of an increased application of such methodologies. Likewise, the IAQM construction dust guidance (2024)[10] signals a change in the IAQM's position, given that Section 5.5 of the guidance states that detailed dispersion modelling ***can be applied*** as an assessment approach. The IAQM construction dust guidance explicitly states that appropriate dust emission factors are required to facilitate a dispersion modelling assessment, such as those referenced in the THC Study (*see above in relation to emission factors*). Therefore, in correctly defaulting to the IAQM construction dust guidance (2024), the assessment methodology employed (i.e. emission factors and modelling) by **the THC Study is appropriate and aligned with the IAQM guidance**. Whilst the Applicant's qualitative dust risk assessment (AS1-046) adheres to the iterative IAQM construction dust methodology for an EIA, it inherently cannot capture the specific commercial requirements of THC's produce (i.e. zero tolerance for visible dust) or consider the dust deposition impacts at the scale of the THC Study.
Inappropriate Wind Erosion Modelling: 83% of the emissions in the study are based on a known flawed wind erosion emission factor 20-80 times higher than default factors validated in Australia and the USA. Additionally, the model simulates emissions even during periods of insufficient wind speeds to initiate erosion, leading to overpredictions.	**Wind Erosion Emission Factor** The wind erosion emission factor equation used in the THC Study aligns with the above stated principles, with the emission factor being directly dependent on site-specific information relating to soil silt content, wind speed, and rainfall. Furthermore, the use of this emission factor equation is advocated by the Fugitive Emissions Estimation Techniques Manual published by the Australian Government (see Table 4-1, Appendix 14, REP1-050), specifically when the above site-specific variables are available for use. To reiterate, this ensures that the wind erosion dust emissions derived for the THC Study area ***rely directly on the location-specific information*** on soil and weather, which were available for the THC Study. The use of default factors, as referenced by the Applicant in REP4-125, should only be used where such site-specific information is *not available*. This is not the case in the THC Study.

[10] Institute for Air Quality Management (January 2024) *Guidance on the assessment of dust from demolition and construction v2.2*

Applicant's Statement (Page 25-26; REP4-125)	T.H. Clements Response
	In developing a detailed, bottom-up inventory and modelling assessment, best practice is to use site-specific information (where available) in preference to the use of a default factor. Given the volume of material being excavated within the Order Limits, the location of the project, and the susceptibility of the excavated soil to wind erosion, the predominant source of dust will be wind erosion. In addition, the activity rate for wind erosion emissions was appropriately based on the nature and proposed scale of material proposed to be excavated within the Order Limits, as presented in relevant DCO documents (e.g. APP-058, AS1-086, REP3-022, and APP-270). On the above basis, the Applicant's suggestion that the wind erosion emission factor is "flawed", and should not have been used in preference to default factors, is wholly inappropriate. **Modelling of Emissions** The dispersion model used in the THC Study (Aermod) is a regulatory approved model accepted for use in the UK and internationally. Wind erosion emissions were represented within the model in the same manner as other activity sources (i.e. averaged across a full year, in each discrete construction phase). In terms of the treatment of these emissions, the model for the THC Study included a location-specific particle size distribution (PSD) and used hourly weather data for a full year (including hourly wind speed and direction) representative of the THC Study area. These two key model inputs dictate how and to what extent dust deposition occurs in varying weather conditions. The Aermod model includes enhanced treatment of low wind speeds, such that the potential for over-prediction of dust deposition at low wind speeds is reduced. In summary, the wind erosion factor equation captures the influence of soil and weather characteristics such that an appropriate total annual mass emission can be derived, with the subsequent modelling approach, as outlined above, facilitating the dispersion and deposition of dust at receptors (THC fields) within proximity to the emission source.
No Model Validation: The study relies on predictions, but no validation exercise was conducted to improve its reliability.	Although the Applicant's review comment suggests that the lack of model validation is a criticism of THC's Study, page 7 of the review (REP4-125) states that the THC

Applicant's Statement (Page 25-26; REP4-125)	T.H. Clements Response
Validation studies in the USA indicate a four-fold overestimation in dust emission modelling.	Study "…*acknowledges that field model validation for this specific assessment is not possible due to a lack of baseline data which is accepted…".* Validation of model outputs against observed data was not possible for the dust deposition modelling assessment for the reasons outlined in paragraph 149 of Appendix 14, REP1-050. The THC Study acknowledges that model predictions can differ from actual observed data for the reasons detailed in paragraph 147 of Appendix 14. Again, to minimise such uncertainty, project and location-specific data were used in the THC Study with appropriate assumptions applied to the modelling, as detailed in paragraphs 148-153 of Appendix 14, REP1-050. Following the above acceptance on the position of model validation, the Applicant goes on to state on page 7 of *REP4-125* "…*However, it* [the THC Study] *does not reference published, peer-reviewed validation studies comparing modelled output with measured dust deposition rates to enhance the certainty of the model outputs*". The Applicant proceeds to provide a number of published model validation studies on page 7, which advocate for the application of a "factor-of-four" correction, with the Applicant implying that the dust deposition model outputs in the THC Study should have been divided by four. However, the papers referenced principally focus on regional and/or urban scale dispersion modelling of dust emissions. Such modelling is used to represent far-field impacts in the order of kilometres away from a given source, with a tendency to focus on finer particulate matter (e.g. PM_{10} and $PM_{2.5}$) which can be transported larger distances. In contrast, the THC Study solely focusses on total suspended dust and, by definition, only considers near-field dust deposition due to the proximity of sensitive growing fields to the proposed Order Limits (i.e. predominantly within 500 m). Indeed, one of the studies[11] cited in REP4-125 states that "…*accounting for near-source deposition losses is superior to the 'divide-by-four' approach*". The modelling completed for the THC Study effectively does this as all receptors are located in proximity to the Order Limits (i.e. near-source dust deposition is modelled). Therefore, the assertion that the THC Study reports a "*four-fold overestimation in dust emission modelling*" is patently incorrect within the context of the modelling undertaken and is applied in very different circumstances not relevant here.

[11] Countess, Richard. "*Reconciling Fugitive Dust Emission Inventories with Ambient Measurements*." Presented at Emission Inventory Conference. November 15, 2007.

Applicant's Statement (Page 25-26; REP4-125)	T.H. Clements Response
Continuous Construction: The study assumes uninterrupted construction over a 48.3km segment for three years at maximum parameters, which is incorrect as construction is intended to be sequential.	With respect to the application of maximum parameters, page 20 of REP4-125 makes it clear that the Applicant's dust risk assessment reported in AS1-046 assessed "…*the entire onshore Order Limits, rather than in the discrete route segments. While dust impacts along the full extent of the Order Limits will not overlap, the assessment assumes a single source active at one time, interacting simultaneously with the surrounding environment.*" This is stated to represent a precautionary approach and captures maximum design parameters / extents of any proposed construction areas (i.e. full extent of the Order Limits). The Applicant's review on page 20 of REP4-125 goes on to criticise, somewhat inaccurately (see further details below), the application of the same precautionary approach within the THC Study, citing the "…*use of unreliable inputs*" and "…*a methodology not recommended by the IAQM*". The THC Study identifies the risk of potential dust deposition impacts on their sensitive growing fields, using approved and globally accepted emission factors and dispersion model, whilst incorporating appropriate location/site-specific data and proposed project design parameters published in the relevant DCO documents (e.g. APP-058, APP-270, AS1-086, REP3-022), with appropriate assumptions applied, including the following (paras. 136-141 of Appendix 14, REP4-125): o Use of five years of hourly weather data representative of the THC Study area. o Soil data representative of the THC Study area. o Application of relatively high moisture contents for soil, although Outline Soil Management Plan (REP3-022) states that "…*soils will only be moved when they are in a dry and friable condition*…" o For open cable trenches, a 50% dust emission reduction was applied to reflect a lower likelihood of dust generation compared to above-ground surfaces. o For dust generated by HGV movements on the haul road, the average daily HGV flows reported in Table 27.28 of AS1-086 were used in deriving emissions as opposed to use of the maximum daily HGV flows given in the same table (see below response pertaining to HGV movements for further context). o Similarly, the emissions calculated for wheel generated dust from the haul road optimistically assumed that soil dust from adjacent activities within the ECC working width (e.g. trench excavation/reinstatement), which

Applicant's Statement (Page 25-26; REP4-125)	T.H. Clements Response
	would be of a finer size, will not settle on the haul road and be re-suspended. As such, the assertion that the assessment has used "*unreliable inputs*" is incorrect and, as detailed above, the IAQM construction dust guidance[12] facilitates dispersion modelling for the assessment of construction dust impacts. Therefore, it is incorrect to classify the methodology as "*not recommended by the IAQM*". The Applicants review suggests that the THC Study assumes continuous construction over a 48.3 km segment for three years at maximum parameters. This is wrong for the reasons outlined below. It is acknowledged in paragraphs 122 and 157 within Appendix 14 of REP1-050 that construction activities will not occur continuously in each phase and that these are likely to be undertaken sequentially in sections. The approach to phasing in the THC Study is further explained in REP3-065 (PDF pages 14-15). However, the indicative timing of sequential construction activities could not be accounted for in the assessment as such details were not available, although were requested by THC (see Table 1-1 of Appendix 14, REP1-050). Instead, the dust deposition results of each of the three construction phases were treated independently, as explicitly presented in Section 6 of Appendix 14, REP1-050. This removed the potential for double counting of dust deposition impacts between phases and overlapping of construction activities between phases. Dust deposition impacts at each receptor in each phase were modelled over short-term periods (daily/monthly). Total ***annual dust deposition results were not modelled*** as that would effectively be a representation of continuous construction across the entire 48.3 km (see paragraph 157, Appendix 14, REP1-050). The adopted modelling approach assesses the risk of dust deposition at a given location under varying weather conditions throughout the year. This is why dust emissions were averaged across the THC Study area for all relevant working hours of the year (except for wheel generated dust emissions from the haul road, which were proportioned according to HGV movements in each ECC segment), to acknowledge that the precise timing and duration of a construction activity is not known at any given location. Further details of this approach are provided in paragraphs 155-158 of Appendix 14, REP1-050.

[12] Institute for Air Quality Management (January 2024) *Guidance on the assessment of dust from demolition and construction v2.2*

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	This approach allowed the identification of areas where there is a clear risk that dust emissions from construction could deposit on land THC farms under certain weather conditions. This was done within the context of the assessment criteria, whereby a 'high risk' of visible dust deposition was only assigned to areas where dust deposition was modelled to exceed the benchmarks at a frequency of 120 days / four months or more (i.e. a high probability that weather conditions in these locations will promote the deposition of dust from adjacent construction activities). These lenient assessment thresholds were deliberately applied to acknowledge the limitations applicable to the THC Study. In reality, however, visible dust deposition on THC land could feasibly occur over much shorter timescales (i.e. days) than those applied by the assessment criteria
Conflicting Construction Activities: The model assumes overlapping, simultaneous activities, such as continuous soil stripping and wind erosion over a year, which is neither feasible nor representative of practical construction scenarios. **Misalignment with the Project Description:** The modelling approach incorporates activities that are misaligned with the scope and sequencing of the Project, eroding its reliability.	As detailed in the above response, the dispersion model outputs were not considered or presented over an annual period, so they did not assume any continuous construction activities over a year. Total mass emissions of dust were calculated over a discrete twelve month period in each construction phase with reference to information provided within the Project Description (APP-058), Outline Soil Management Plan (REP3-022), and Onshore Transport Assessment (AS1-086), as outlined in Section 4.2 of Appendix 14, REP1-050, which included: o Construction activities relating to the three phases considered in the THC Study over a total 36-month period (i.e. assumed 12 months per phase). o Main construction compounds and temporary access roads expected to be in use for up to 36 months. o Stripping of soil and vegetation across the working width, except for topsoil bund areas. o Emplacement of soil bunds for durations that could exceed six months at any given location. o Retention of 100% of the haul road for up to a maximum of 36 months. o Provision of daily average HGV movements, proportioned by segment of the export cable corridor, for a 42-month period. The information presented within the respective DCO documents clearly indicate that these construction phases will be completed over an approximate 36-42 month period,

Applicant's Statement (Page 25-26; REP4-125)	T.H. Clements Response
	hence why all relevant construction activities were included in the emissions inventory by phase over an assumed discrete 12 month period. The total mass emissions for each discrete construction phase were represented separately in the dispersion model as average emission rates over a year to acknowledge the absence of detail of the construction activity location, intensity, sequencing, and duration (as outlined in the above response). As considered in paragraph 4.2.113 of REP1-050 and on PDF page15 of REP3-065, the sequencing of construction phases on a section-by-section basis may result in periods of higher dust emission intensity in some cases, where the potential for construction activities to overlap is more likely, albeit over shorter timescales. As stated above, in practice, visible dust accumulation could occur over relatively short timescales (e.g. in the order of days) compared to the assessment criteria adopted for the THC Study. Based on the above, the assertions by the Applicant that the THC Study is in "*misalignment with the Project Description*" and contains "*conflicting construction activities*" are considered to be incorrect given that the THC Study is based on the project information presented in the DCO documents and given the absence of further details on how construction phases might be sequenced.
Trenchless Techniques Excluded: The modelling disregards trenchless construction techniques that avoid surface-level excavation. There are over 150 defined trenchless locations within segments 5 to 14 of the onshore ECC (20% of the study area), yet the study presumes continuous open-cut excavation for the full 48.3km length.	We accept that the exclusion of trenchless technique is a limitation inherent to the THC Study. However, THC did issue two requests to the Applicant for the provision of relevant georeferenced spatial information (e.g. shapefiles) relating to activities within the Order Limits – once prior to commencing the dispersion modelling (see Table 4-1 of Appendix 14, REP1-050) and once after the December hearings. On both occasions, this information was not provided. Unfortunately, this made it impractical for any form of measurement to be accounted for in relation to these areas within the modelling, so that assessment was completed in the absence of this information. The Applicant has stated that the trenchless areas cover approximately 20% of the THC Study area. Whilst it is accepted that any THC land that is directly adjacent to trenchless technique areas will likely receive a reduced rate of dust deposition, it is not possible to assign a value to this.
Unrealistic HGV Movements: The study assumes that HGV movements will traverse the entire length of the haul roads within each segment generating dust continuously over the three years, overlooking access points specified in the application. Further,	With respect to the comment on haul roads potentially not being constructed in areas where trenchless techniques are proposed, the above response to 'trenchless

Applicant's Statement (Page 25-26; REP4-125)	T.H. Clements Response
haul roads may not be constructed at locations where trenchless construction is planned.	techniques excluded' applies. However, it was acknowledged by the Applicant at ISH5 that, in most cases, the haul road will be present within these areas. Data presented in Table 27.28 of AS1-086 explicitly states the average daily HGV movements in each segment of the export corridor across a 42-month construction programme. As no further breakdown of movements within each segment was provided in AS1-086, these data were utilised in the assessment as presented in Table 27.28. Given the assessed timescales over which dust deposition was assessed in the THC Study (daily/monthly), the use of the maximum daily HGV traffic flow data (also presented in Table 27.28 of AS1-086) could have been justified to represent worst case impacts from wheel generated dust. However, for the reasons outlined in the above responses relating to construction phasing and as per paragraph 136 of Appendix 14, REP1-050, this approach was not adopted to avoid an overly precautionary assessment. Overall, the THC Study has used the HGV movements data in an identical manner to that presented by ODOW in AS1-086 (i.e. HGV movements proportioned by ECC segment). Indeed, these data could have been interpreted and used in a more precautionary manner than they were (i.e. THC Study could have adopted *maximum* rather than *average* movement data). As such, the Applicant's criticism of THC's use of these data is not justified.
Due to these issues, the assessment is inherently unreliable and unsuitable for estimating potential dust soiling impacts and determining the extent of land potentially affected for farming. The evidence base underpinning the claim that approximately 100 hectares of land would be rendered unusable is flawed. This is exemplified in practice, as in order to match this assertion, the extent of residual dust impacts would need to extend beyond 150m from the Order Limits - a finding that is highly unusual in the UK context.	The above responses provide appropriately evidenced and justified reasoning to demonstrate that the assessment is indeed valid for the purposes of predicting visible dust deposition impacts on THC land adjacent to the Order Limits. Therefore, claims stated in the Applicant's review to suggest that the assessment is "inherently unreliable", "unsuitable", and "flawed" are justifiably refuted. The Applicant has stated a concern relating to the extent of the predicted impact, particularly around the area of THC land at 'high risk' of impact (107 hectares) and that impacts would need to extend beyond 150 m from the Order Limits for this area of land to be affected. There are two key points to assist in placing the predicted area at 'high risk' of impact and extent from the Order Limits (150 m) into context: 1. The dust deposition benchmarks applied for the THC Study are appropriately stringent, driven by the strict contractual requirements to which THC produce is held to with respect to zero tolerance for visible dust.

Applicant's Statement (Page 25-26; REP4-125)	T.H. Clements Response
	That is to say, the level of dust deposition and accumulation required for there to be a ***visible level of dust***, and thus contravene the contractual requirements, is minimal. 2. The IAQM construction guidance[13] requires the practitioner to ***consider impacts within 250 m*** of the construction site boundary (i.e. the Order Limits). Therefore, the IAQM guidance implicitly states that impacts out to 250 m are possible. Indeed, the IAQM guidance states that, for 'high risk' projects (as classified by the Applicant in their assessment of the ODOW project, AS1-046), impacts beyond 250 m may need to be assessed (Box 1, page 15 of guidance). As such, the IAQM guidance suggests impacts beyond 250 m may be possible in some cases. The dust deposition modelling results presented in REP1-050 include for key mitigation measures relating to wet suppression, reduced drop heights of material, and seeding of material storage piles. With these measures in place, the results of the modelling identify an area of 107 ha at 'high risk' of visible dust deposition, with all impacts occurring well within 250 m of the Order Limits. Therefore, within the context of the stringent assessment benchmarks for visible dust deposition and the distances over which the IAQM guidance requires the practitioner to consider, we do not deem the impacts reported in the THC Study to be "*highly unusual*".
While justifications may be provided, the Applicant maintains the IAQM's position is clear: using non-UK mining dust emission factors to model dust impacts in this context is inappropriate.	As demonstrated and justifiably reasoned in the responses above, the position adopted by the IAQM construction dust guidance (2024) is contrary to the position of the IAQM guidance published in 2016, in that ***dispersion modelling is stated as an appropriate methodology***. Furthermore, the emission factors used in the THC Study are demonstrably applicable to the relevant construction activities and are recognised for use globally. The key differentiators in the THC Study are that the emission factors used are directly reliant on site-specific characteristics relating to soil and climate, with the scale of each construction activity (activity rate) explicitly accounted for in deriving construction dust emissions.

[13] Institute for Air Quality Management (January 2024) *Guidance on the assessment of dust from demolition and construction v2.2*

Applicant's Statement (Page 25-26; REP4-125)	T.H. Clements Response
	As per the briefing note issued by the IAQM on 19 February 2025[9], their guidance on mineral dust is currently being updated due to its dated nature (nine years old) and is considering the role of dispersion modelling, given that they are aware of an increased application of such methodologies. As such, the Applicant's assertion that they "…*maintain the IAQM's position is clear: using non-UK mining dust emission factors to model dust impacts in this context is inappropriate*" is subject to significant uncertainty.