TECHNICAL NOTE

Date: 22nd July 2021

File Ref: P21-2187

Subject: **Grant Family – Deadline 5 Response**

1.0 DEADLINE 5 - SUBMISSION

1.1 Create Consulting Engineers have been appointed by the Grant family to provide a written response at Deadline 5 in line with the Planning Inspectorate timescale.

1.2 The purpose of this submission is to build upon the Deadline 2 submission with specific reference to;

- Highlight the severance of the Grant family home to Middleton and other important habitations resulting from the SLR; and
- Highlight fundamental concerns regarding the effect of the Sizewell Link Road (SLR) on the Grant family's home, specifically in relation to:
    - Farm viability
    - Noise
    - Visual impact
    - Lighting
    - Dust

1.3 Create then strengthened this position at DL3 following a review of the Consolidated Transport Assessment and Safety Audit presented by the Applicant at DL2.

1.4 Following attendance at the ISH2/3 and 5 there are several significant points which the Applicant has failed to adequately address. This note submitted at DL5 highlights these points.

1.5 We would urge the Applicant to engage directly with our Client given the conflicting information we are receiving from their Agent and the time taken to receive the requested

information, giving little or no time to respond. The Applicant's lack of engagement since 2019 has been lamentably minimal.

1.6 As a result, we are not expecting to receive specific information until DL5 from the Applicant and therefore we reserve the right to respond to subsequent matters as part of our DL6 submission.

1.7 Specific points which we are expecting at DL5 from the Applicant as set out during the ISHs are discussed below. These are considered to be fundamental and subject to further discussion and a further ISH;

- Fordley Road engineering design: We understand options have been prepared by the Applicant, which considers the Fordley Road change to remove the SLR connection, whilst maintaining Fordley Road.

  We understand from meeting notes between Middleton cum Fordley Parish Council and EDF dated 5th July 2021 that the Applicant has dismissed this possible legacy option on technical grounds, a matter which is strongly disputed and unsupported.

- Justification by the Applicant on the legacy benefit of the Sizewell Link Road and the reason for this not to be removed post construction as requested by Suffolk County Council, the local MP Dr. Therese Coffey and many local Parish Councils.

- Greater detail on the Sizewell Link Road route selection and a complete environmental link assessment as requested by Mr. Humphreys and agreed to be supplied at DL5 by the Applicant.

- Clarity from the Applicant as to why the Sizewell Link Road cannot be constructed the before the Main Plant Site and specific clarity over the points raised by Mrs. Williamson on behalf of the Applicant at ISH 2 Sessions 3/4 being;

  - Use of the Sizewell Link Road as a short-term haul road;

  - The movement of material from the SLR / Two Villages Bypass and the Main Plant Works within the SLR boundary; and

  - Justification for 70,000 vehicle movements to use the SLR as a haul road before construction of the final SLR.

2.0 SEVERANCE

2.1 The Grant family own and actively farm land within the SLR DCO area. The family are directly affected by the DCO and associated works, specifically the Sizewell Link Road. The family home is Fordley Hall, a listed Grade 2 building, which is accessed and connected to Middleton via Fordley Road and Littlemoor Road. Fordley Hall Farm has retained awards from Suffolk Agricultural Association for Best Small Farm and Special Award for Conservation since 2019.

2.2 We understand from meeting notes between Middleton cum Fordley Parish Council and EDF dated 5th July 2021 that the Applicant has dismissed this possible legacy option on technical grounds, specifically it has been stated by the Applicant.

> *Richard Bull - we worked up a design to understand the footprint. There are a number of challenges. The road is 1.5 metres above the current level of Fordley Road to deal with the flood risk as we would need to divert the watercourse and enhance the culvert. Creating an underpass is also challenging and not likely to be compliant with a flood risk assessment. A bridge would be 6-7 metres above the level of the existing road and would then need to go into a cutting at the back of Oakfield House. The embankment at Middleton Moor would be 200 metres long. The visual impact and the flood risk mean this is something we could not promote and it would not be a better outcome than we currently present. The current proposal is the most appropriate scheme*

2.3 Create presented, at DL2, options which were considered to form the basis of an alternative design retaining Fordley Road, removing the 'pointless and potential rat-run' SLR connection that the Applicant current promotes. We demonstrated this can be completed within the DCO parameters and therefore we do not accept that this solution is technically unfeasible, and whilst potentially costly, the legacy benefit would far outweigh the financial offset

2.4 The residents of Fordley Road and Councilors of Middleton cum Fordley Parish Council have voted by majority to demand that Fordley Road be kept open both north and south of the SLR to avoid community severance issues.

2.5 We have not been provided with the Applicants justification or plans as to why it's proposed scheme is more appropriate and request information is provided for the Landowner and Technical Team to review.

2.6 We maintain our position that;

- The Transport Assessment has not assessed the SLR / Fordley Road junction;
- There is no environmental link assessment prepared for along Fordley Road; and
- The SLR / Fordley Road junction has not be considered within the Safety Audit presented.

3.0 FORDLEY HALL DIRECT IMPACT

3.1 Create have previously set out concerns at DL2 and DL3.

Noise

3.2 At ISH2, Mr Humphreys highlighted that there was to be a separate ISH on Noise. This has not been added to the agenda to date, but we support such a hearing given the significant

concerns which we have set out over the method of assessment, we further expand on our DL3 submission as below.

3.3 The ES details a preliminary assessment of construction noise, undertaken in accordance with Method 1 of BS5228-1:2009+A1:2014. The aforementioned standard details two acceptable methodologies for assessment of construction noise. Method 1: the "ABC Method", and Method 2: the "2-5 dB(A) Change" method. Selecting an appropriate method is discretionary and whilst both are acceptable in broad terms, a distinction should be made based on the situational context at this rural location.

3.4 The threshold noise levels have also been stated incorrectly. Table 3.12 of LA111 (DMRB) suggests that the SOAEL is determined by Section E3.2 and Table E.1 of BS 5228-1. This would result in noise thresholds being set at 65 dB $L_{Aeq,T}$ for day times. It appears however that the thresholds have been set using Table E.2 of BS 5228-1 which is used for eligibility for noise insulation, or for determining the noise insulation trigger level.

3.5 The Assessment provided by the Applicant is considered preliminary only. Assessments of the anticipated works were not based on any contractor method statements, plant schedules or construction phase staging. The construction noise calculations (and in turn, the resultant effects), therefore, have been based on 'professional judgement' and assumptions on behalf of the acoustic consultants. Whereas this would be considered appropriate to assess a site's viability for development, it would not be considered representative of the actual resultant noise levels during phased works and thus on our Client's home and land interests.

3.6 To date, there have been no dedicated construction noise assessments conducted for the receptor sites. For example, the 'Enabling Works' Table (Appendix 4A1, Volume 6.5), has assessed the construction noise for this phase against the sound levels produced by a single excavator alone. It is not clear where the information for calculating the resultant impact at the Fordley Road *et al* residences originated; however, this assumptive approach would not be considered robust or exhaustive to assess any resultant impact in practice.

3.7 The Mitigation Route Map (8.12) details various measures of mitigation for specific works phases in broad terms, stipulating adherence to BPM 'Best Practicable Means' and the CoCP 'Code of Construction Practice'. These mitigative strategies have been based on the assumed construction activities (as discussed above) and have not been directly quantified at the receptor locations to judge their effectiveness.

3.8 The reported ambient levels in section 4.4.5 of the ES states the 'Typical Measured Level – Day' at SLR3 (Fordley Hall) was 45-47 dB $L_{Aeq,T}$. Using the ABC method, a negligible impact would be a resultant sound level ≤ 65 dB(A) $L_{Aeq,T}$, which could be up to 20 dB greater than the measured ambient level. Table 4.15 estimates the work phase noise at the receptor locations to be:

- Preparatory Works: 38-53 dB $L_{Aeq,T}$
- Main Construction Phase: 52-57 dB $L_{Aeq,T}$

3.9 The upper limit of the preparatory works has been calculated to be above the measured residual ambient by 11 dB, which has been deemed to be of a negligible impact. The upper limit of the main construction phase has been predicted to be 19 dB above the residual ambient, for which a moderate adverse significance has been determined (as detailed in the Applicants Table 4.16). Both exceedances would be considered excessive.

3.10 Create consider an appropriate assessment method is to use the 2-5 dB(A) change method. Noise levels generated by site activities are deemed to be potentially significant if the total noise (pre-construction ambient plus site noise) exceeds the pre-construction ambient noise by 5 dB or more, subject to lower cut-off values of 65 dB, 55 dB and 45 dB $L_{Aeq,T}$ from site noise alone, for the daytime, evening and night-time periods, respectively; and a duration of one month or more, unless works of a shorter duration are likely to result in an significant effect.

3.11 Section 4.3.26 states: "*For noise sensitive receptors where the magnitude of change in the short term is minor, moderate or major at noise sensitive buildings, local circumstances must also be considered to determine the final significance, as required by LA111."* As the new road would be used by most/all of the construction traffic for the next 10+yrs, this would be indicative of a significant effect, in addition to the operational phase going forward beyond this point and should be assessed and mitigated.

3.12 Further dialogue with the Applicant's Agent has confirmed that 30-minute noise measurements took place during 2019. Whilst we accept there is no set measurement duration, typically the minimum measurement duration would be one hour measurement between the hours of 10:00h and 17:00h for daytime hours and the minimum duration for the nighttime would be 15 minutes. Relying on only a small handful of short measurements automatically increases the uncertainty and reduces the reliability of the noise measurements. Given the importance of these levels when producing an ES, the longer the measurement the better and more reliable the results. In essence, the shorter measurement only captures the noise levels at that particular time.

3.13 The author also noted that there was a train for one minute of those 30 minutes, occasional aircraft (which in a rural location can be heard for a long time) and the rustle of vegetation. By virtue, the $L_{Aeq,T}$ is a logarithmic average of the sound levels over the period of time (T) and as these are energy calculations are weighted towards the higher sound levels, as opposed to the arithmetical averaging method. The fact that there was vegetation rustling, would suggest that the breeze was slightly more than "moderate" which again can artificially increase these sound levels, thus we believe the noise monitoring benchmarking is inadequate.

3.14 To accurately gauge the ambient sound level for a day, industry guidance recommends to establish the typical sound level, which would be the most commonly occurring hour long measurement between the hours of 07:00h to 23:00h. That is simply not possible when you are working with one or two 30-minute readings.

3.15 Furthermore we now understand the Applicant proposes that Littlemoor Road will be used as principal alternative route whilst Fordley Road junction with the SLR is being created given the comments referenced no assessment has been completed which considered the noise implications to both Fordley Hall and Vale farm (both listed Grade 2) together with potential structural damage from vibration.

3.16 As a result, our Client is seeking to conduct new noise surveys which will reflect accurate baseline ambient and background sound levels and assess the construction noise to that prepared and used by the Applicant. We will present these findings at Deadline 6, in the hope a further discussion can take place on the actual noise effects of the DCO proposal.

3.17 It should also be noted that the Applicant has declined to contribute to the cost of these surveys despite their awareness of our reservations as to the efficacy of their existing surveys.

3.18 Whilst we expect the Applicant to suggest the Construction Code of Practice will capture this, we do not feel this is appropriate, at this stage, given the noise impact is expected to be far greater than currently predicted to be by the Applicant.

Visual Impact / Lighting

3.19 The Deadline 2 submission remains unaddressed, our Client is seeking a lighting and visual assessment specific to the Client's dwelling and usable outdoor space, we don't accept the Applicants position stating that the impact will move from severe to slight with the planting proposed over a 15-year period.

3.20 It was disappointing that during ISH5 there was insufficient time for this specific point to be made and therefore we gratefully request the above is provided to allow us to fully understand the impact on our Clients property at Fordley Hall.

4.0 CONCLUSIONS

4.1 Create have reviewed the Applicants position following the ISHs on our Client's direct landholdings and home. It has been shown that several important areas have been missed, or remain unanswered, which could misrepresent the final impact outcome.

4.2 Our Client and Create have raised significant, legitimate concerns with respect to the SLR and it is requested that the Applicant responds accordingly which in turn could potentially lead to the introduction of mitigation measures and/or redesigned components of the overall scheme currently proposed.

Note By: Paul Zanna - Technical Director