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Dear [REDACTED]

**Land between the A1270 Broadland Northway near Ringland and the A47 near Honningham: Development of approximately 6km of the Norwich Western Link Road connecting the A1067 (Fakenham Road) with the new A47 North Tuddenham to Easton scheme (being developed by National Highways), including the construction of a new roundabout junction with the A1067 Fakenham Road, improvements to the A1067 Fakenham Road and the roundabout junction with the A1270 Broadland Northway. Structures include a new viaduct carrying the Norwich Western Link over the River Wensum, a new underpass at Ringland Lane, the provision of a green bridge carrying the Broadway over the Norwich Western Link, three further green bridges, wildlife crossings, and culverting of a tributary to the River Tud. Related works include the stopping up, diversion, improvement and provision of side roads, new walking cycling and horse-riding provision, the stopping up, replacement and provision of new private means of access, and ancillary landscaping, ecological mitigation, surface water drainage system, flood compensation, bunds, other environmental mitigation, diversion and protection of apparatus and temporary works to facilitate construction, and the change of use of the premises known as Low Farm as offices (class E), and other ancillary works.**

Thank you for the opportunity to comment on the above application.

Norfolk County Council Public Health is commenting as a statutory consultee and provides recommendations to help ensure the health and wellbeing of potentially affected residents. Comments are restricted to the application as it relates to public health and wellbeing only.

The following chapters of the Environmental Statement have been reviewed:

- Chapter 6: Air Quality
- Chapter 7: Noise and Vibration
- Chapter 17: Population and Health, and
- The Sustainable Transport Strategy

### **Air Pollution**

Poor air quality is the largest environmental risk to public health in the UK, as long-term exposure to air pollution can cause:

***Continued.../***

- Low birth weight in babies
- cardiovascular disease
- respiratory diseases
- lung cancer
- diabetes
- dementia,

leading to reduced life expectancy<sup>1</sup>.

The application states that the dust risk potential for the scheme is large during construction and would be mitigated as set out in the Outline Construction Environmental Management Plan. It further states that impact of changes in ambient concentrations of NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> are predicted to be negligible.

The application relies on modelled data which can be subject to large variances, so without monitoring it is not possible to tell if pollutants are breaching legal thresholds. With the exception of South Norfolk, no district council air quality monitoring has taken place within the study area and South Norfolk's monitoring sites are not adjacent to the proposed route of the road. South Norfolk's monitoring is stated to have taken place at Newmarket Road; Longwater Lane at Costessey; Kirby Bedon Road, Bixley; Thickthorn Cottages off the B1172 Norwich Road; West End at Costessey; Norwich Road at Costessey; Lord Nelson Drive at Costessey; Riverside Court at Costessey and on Broad Street at Harleston. Therefore there is little actual air quality data in the area.

#### **Recommendation 1**

***An appropriate air quality monitoring programme to cover both construction and initial operational phases of the project should be put in place as agreed with relevant Environmental Health Officers in affected district councils. Monitoring during the operational phase should take place for a time period agreed with EHOs but for a minimum of a year.***

#### **Noise and vibration**

Noise is recognised by the World Health Organization<sup>2</sup> as the second most harmful environmental stressor in Europe behind air pollution. The harmful effects come from the stress reactions it causes in the human body (which continue during sleep). These reactions can lead to:

- increased heart rate
- high blood pressure
- cardiovascular disease
- premature deaths
- cognitive impairment
- sleep disturbance
- hypertension
- annoyance

The latest WHO figures estimate 16,000 premature deaths and 1.6 million healthy life years are lost across western Europe each year because of environmental noise pollution.

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<sup>1</sup> [Health matters: air pollution - GOV.UK \(www.gov.uk\)](https://www.gov.uk/health-matters/air-pollution)

<sup>2</sup> <https://www.who.int/europe/publications/i/item/9789289053563>

The applicant has proposed to seek a Section 61 consent from Broadland District Council to agree appropriate noise and vibration controls and mitigation measures once greater details are known about the construction working methods. It also outlines a complaints procedure in the Outline Construction Environmental Management Plan.

### **Recommendation 2**

***Further information from the applicant about the extent and timing of likely noise and vibration during construction is required to be able to determine likely impacts on health.***

The assessment of operational road traffic noise identifies 34 properties that would experience moderate or major adverse impacts during the operational phase of the project due to the increase in noise levels. The application states that mitigation measures such as screening are not required as either these properties:

- Are not within the red line boundary of the project
- The increase in noise levels doesn't result in noise levels above the Lowest Observed Adverse Effect Level as introduced within the Noise Policy Statement for England
- Access to properties would be restricted by screening
- Are over 300m from the proposed carriageways

Furthermore the application states that significant adverse wider network effects are anticipated at receptors within 50m of the following road links:

- Taverham Road
- Fir Covert Road (north of A1270)
- A1270 (west of Broadland Northway Roundabout)
- Stations Road (through Attlebridge)
- Old Fakenham Road
- Mattishall Lane (between A47 and Burgh Lane)

The application states that as these roads are outside the red line boundary it is not possible to provide mitigation. Further as receptors along these routes generally gain their access from the road experiencing the impact, screening measures would not be appropriate.

### **Recommendation 3**

***Exploration of further noise mitigation measures for affected residents during the operational phase of the project both adjacent to the new road and on the broader road links listed at 7.6.104 who will experience wider network effects should be undertaken.***

Noise Insulation Regulations (NIR) are in place to ensure that when new highways are constructed in proximity to existing dwellings, mitigation, in the form of secondary glazing and ventilation where appropriate is provided where set eligibility criteria are met. To qualify for compensation under the NIR 4 criteria must be met:

- Be within 300m of the proposed scheme
- Show a relevant noise level of at least 68dB (façade)
- Show a noise increase between the relevant noise level and the prevailing noise level of at least 1dB
- The contribution to the increase in the relevant noise level from the proposed scheme must be at least 1dB

The applicant states that there are no dwellings which are predicted to meet all 4 criteria for eligibility for NIR.

### **Recommendation 4**

***Monitoring of noise levels in the run up to the construction works, during the construction works and during the operational phase should be undertaken so that eligibility tests for NIR can be completed when noise levels are known. Monitoring during the operational phase should be agreed with EHOs but be in force for a minimum of one year.***

## Population and human health

### Guidance on HIA

Public Health had previously suggested that the applicant conduct a Health Impact Assessment of the scheme to better understand the overall impact of the proposal on human health in both the immediate area adjacent to the proposed road and in surrounding areas. This has not been undertaken so it is difficult to weigh up how the positive and negative impacts of the scheme offset each other. The applicant has applied the Design Manual for Roads and Bridges LA 112 Population and Human Health guidance, to identify issues and their severity. While assessment has been undertaken for individual sites, the applicant has not assessed whether the overall impact of the scheme is beneficial or negative to health at a population level.

### Recommendation 5

***The ES must provide an assessment of significance for those health determinants scoped into the population and human health chapter, and should draw upon the findings from other relevant chapters, including air quality and noise. The guidance issued by the Institute for Environmental Management and Assessment (IEMA) should be used as a basis for the assessment of significance.***

The applicant has presented baseline data on the health of the population in both the immediate and study area. It should be noted that the identified areas have a population that is largely older than the county and national average. This makes the population more potentially vulnerable.

There are 42 communities across Norfolk and Waveney where some or all the population live in the 20% most deprived areas in England. None of these communities are in Broadland. Life expectancy is good in the identified areas and, with the exception of Taverham North, is above Norfolk averages.

The applicant has included indicators from the 2020 OHID Health Profile for Norfolk County which compares health in Norfolk to the national average across a range of indicators. This data is out of date. Norfolk experiences a high degree of health inequality across its geography with life expectancy varying by up to 9.2 years for men and 7.2 years for women between the most and least deprived communities<sup>3</sup>.

Therefore, to be meaningful, a health profile at the lowest geographical level should be used, and is available at the level of the district. Similarly, data is included in the application looking at COPD rates and asthma rates, comparing Norfolk data with that of the East of England and England. These rates will vary significantly across Norfolk and more granular data is available from both ONS and OHID.

The application has identified where health issues could be impacted by the proposal including information on:

- Air quality
- Noise and vibration
- Landscape and visual effects
- Changes to flood risk
- Traffic and transport

during both the construction and operational phases of the project.

The first two sections are addressed above. The remaining issues from a Public Health perspective relate largely to communities experiencing severance between residents and facilities; loss of

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<sup>3</sup> [https://www.norfolkinsight.org.uk/wp-content/uploads/2023/09/Respiratory\\_PH\\_outcomes\\_and\\_prevention\\_priorities\\_paper\\_and\\_accessible\\_slides.pdf](https://www.norfolkinsight.org.uk/wp-content/uploads/2023/09/Respiratory_PH_outcomes_and_prevention_priorities_paper_and_accessible_slides.pdf)

visual amenity; risk of flood; and changes to public rights of way affecting walking, cycling and horse riding.

The impacts identified seem to largely occur during the construction phase of the project, and mitigation actions are suggested.

Given that the detail of construction methods are not yet known, it is difficult to assess the extent of health impacts relating to severance, changes to public rights of way affecting walking, cycling and horse riding and mitigation strategies without further information.

While the application does state that mental health of the resident population, in particular, is at risk from the proposal, mitigation in the form of a programme of engagement with the community is not suggested.

The Outline Construction Environmental Management Plan identifies the following measures around external communications:

- A contact number will be advertised on the site board, site entrances and possibly community locations
- Letters within 2 weeks of works will be sent to properties likely to be impacted by construction works
- A complaints procedure will be in place

#### **Recommendation 6**

***A broader programme of liaison and engagement should be put in place to alleviate community anxiety and stress with regular communication with residents by a variety of communication methods, including face to face meetings, given the demographics of the population, and occurring on a regular basis. In addition, the scheme should appoint a named individual to undertake this community liaison role.***

#### **Sustainable Transport Strategy**

Public Health notes the inclusion of a Sustainable Transport Strategy in the application which encourages modal shift, the introduction of new public rights of ways and plan to link up new routes with the existing network of PROW to maximise local connectivity for pedestrians, cyclists and equestrians. These are measures that if enacted will act to support Public Health.

In summary, the recommendations outlined above are:

1. An appropriate air quality monitoring programme to cover both construction and initial operational phases of the project should be put in place as agreed with relevant Environmental Health Officers in affected district councils. Monitoring during the operational phase should take place for a time period agreed with EHOs but for a minimum of a year.
2. Further information from the applicant about the extent and timing of likely noise and vibration during construction is required to be able to determine likely impacts on health.
3. Exploration of further noise mitigation measures for affected residents during the operational phase of the project both adjacent to the new road and on the broader road links listed at 7.6.104 who will experience wider network effects should be undertaken.
4. Monitoring of noise levels in the run up to the construction works, during the construction works and during the operational phase should be undertaken so that eligibility tests for NIR can be completed when noise levels are known. Monitoring during the operational phase should be agreed with EHOs but be in force for a minimum of one year.
5. The ES must provide an assessment of significance for those health determinants scoped into the population and human health chapter, and should draw upon the findings from

other relevant chapters, including air quality and noise. The guidance issued by the Institute for Environmental Management and Assessment (IEMA) should be used as a basis for the assessment of significance.

6. A broader programme of liaison and engagement and liaison should be put in place to alleviate community anxiety and stress with regular communication with residents by a variety of communication methods, including face to face meetings, given the demographics of the population, and occurring on a regular basis. In addition, the scheme should appoint a named individual to undertake this community liaison role.

Please do contact me if I may be of further assistance.

Yours sincerely

  
Public Health Principal - Prevention