

I am making my submission with regard to my concerns at the impact the proposed Morgan and Morecambe windfarm project during construction and thereafter.

This is particularly concerning given the location of the proposed siting of the substations which will be located extremely close to schools and housing estates.

There is no doubt looking at research world wide that there would be significant impact on the physical, mental, educational and social health particularly of children but of the general population of the communities of the Fylde.

## **Negative Impact of Noise and Noise**

## **Sensitivity on Mental Health in Childhood**

Lim, Jongseok; Kweon, Kukju; Kim, Hyo-Won<sup>1</sup>; Cho, Seung Woo<sup>2</sup>; Park, Jangho; Sim, Chang

In this population-based study conducted in two large cities in South Korea, elementary and middle-school students were included. After direct measurements at the selected sites, a noise map was created using an interpolation method. The road traffic noise of the participants' residential areas was calculated based on this noise map. Noise sensitivity was assessed. Using multivariate logistic regression, The relationship between noise, noise sensitivity, and the Child Behaviour was investigated.

Living in noisy environments can negatively impact a child's general sense of well-being and overall quality of life. Children in the area where the substations will be located will be living, being educated, playing, socialising and sleeping with no respite from noise.

### **Psychological Stress:**

Noise can contribute to psychological stress and anxiety, potentially impacting a child's overall well-being.

### **Sleep Disruption:**

Noise can disrupt sleep patterns, which are vital for physical and cognitive recovery.

### **•Learned Helplessness:**

In noisy environments, children may develop learned helplessness, characterized by a lack of motivation to learn due to a perceived lack of control over their environment.

### **•Behavioral Problems:**

Environmental noise, has been linked to behavioral difficulties in children.

### **•Increased Hyperactivity:**

Studies have found an association between noise exposure and increased hyperactivity symptoms in children.

•**Brain Development:**

Research suggests that noise can disrupt crucial brain development stages, particularly in the context of cognitive function.

**Working Memory:**

Verbal working memory, which is essential for processing and retaining information, can be negatively impacted.

**Language Development:**

Exposure to excessive noise, particularly during early childhood, can affect speech and language development, impacting the acquisition of vocabulary and communication skills.

**Reduced Reading Comprehension:**

Studies show a correlation between noise exposure and lower reading comprehension scores in children, especially those living near busy transportation routes.

**Cognitive Development:**

• **Impaired Learning:**

Noise can interfere with a child's ability to focus and concentrate, making it harder to learn new information and retain what they've learned.

- There is also a suggested link between noise and the growing foetus.

Noise also negatively affects auditory and non auditory health in adults. With respect to the non auditory health effects of noise, an association among noise exposure and hypertension, cardiovascular diseases, and stroke has been reported. .

Studies have reported that noise exposure is associated with emotional distress, sleep disturbances potentially resulting in hallucinations and delusional beliefs, psychosomatic disorders, and increased psychiatric hospital admission rates.

Because of these negative effects, noise can impair the quality of life. Among various noise sources, road traffic noise is of special interest, considering its generally wide and usually long exposure. Traffic noise was cited as the second most influential environmental risk factor in a recent European study. However 24/7 noise of the substations will inevitably cause disruption to sleep and impact general well being.

Exposure to high levels of noise, particularly from traffic, is associated with an increased risk of dementia, including Alzheimer's disease. Studies have shown that even moderate increases in noise levels can heighten the likelihood of developing dementia, with some evidence suggesting a dose-response relationship, where higher noise levels lead to a greater risk.

Looking at the wider context, inevitably stress, sleep deprivation and increasing health issues which is likely to accompany the increased traffic and building and operation of the substations is likely to have a detrimental impact on family life, personal economic situations and relationships.

I would remind you of the close proximity to the schools and homes of the substations and the intended works.

Try to imagine if you can having a fractious child unable to sleep because of noise and as a parent or grandparent needing to work also being unable to sleep knowing that the next night and the next night and the one after that it is going to be the same.