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Our Ref: ENV01-TAKE-068b

10<sup>th</sup> July 2023

Mr David Poole  
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Essex  
CM22 6PU

By Email only: [REDACTED]

Dear David,

**Ref:** Proposed development at Jacks: Response to Environmental Health Officer Comments (12.06.23)

This letter has been produced by Stansted Environmental Services Ltd. (SES) following comments received from the Environmental Health Officer (EHO) on 12<sup>th</sup> June 2023, in relation the proposed residential development located at Jacks Lane.

It is understood concerns have been raised by the EHO as the noise assessment does not consider the impacts from the Essex and Herts Shooting School.

For completeness, I have summarised these below;

- The proposed development is within close proximity of a shooting school (although this operates without the benefit of planning permission).
- As published within the Chartered Institute of Environmental Health (CIEH), Clay Target Shooting Guidance on the Control of Noise published in January 2003, the proposed development is within the 1.5km noise 'buffer' zone.

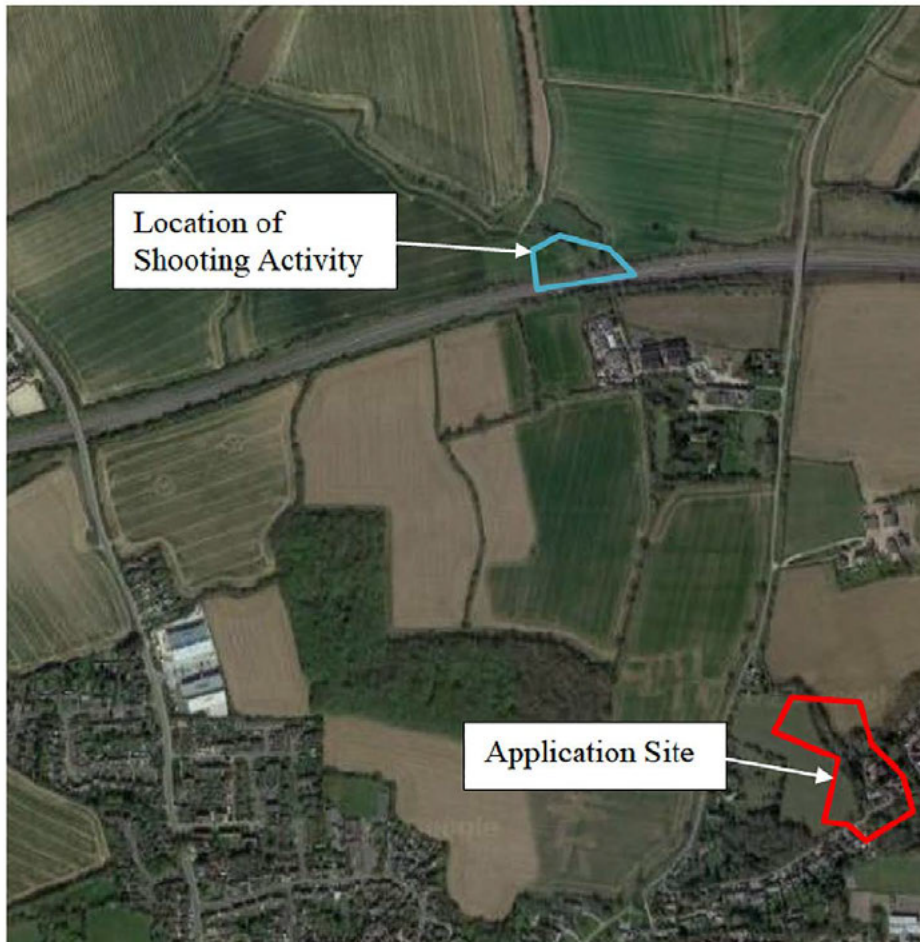
With the above in mind, my responses are as follows. For clarity and convenience to the reader, I have laid out the point into separate headings.

### **Distance attenuation**

Within their letter (dated: 12<sup>th</sup> June 2023), the EHO states that the Essex and Herts Shooting School is 400m to the north east of the Application Site. Although the Essex and Herts Shooting School website sets out that they are located at Parkers Farm, Smiths Green, Takeley, which is 400m to the north east of the application Site, the noise generating activity (shooting) takes place further away accessed from a track off of Smiths Green Lane to the north of the A120.

Using Google Maps, an approximate distance of 758 metres from the closest site boundaries has been measured, this is deemed as a 'worst case' scenario.

Figure 1 indicates the site location and the location of where the shooting activity associated with the Essex And Herts Shooting School takes place.



**Figure 1 - Site Location and Location of shooting activity**

To calculate distance attenuation across both site boundaries, the following assumptions have been applied:

- Shot guns will be discharged at an approximate height of 3.5m.
- The closest boundary (southern) is approximately 26m in length.
- It is believed there is a maximum of 6 cradles onsite.



The shooting school site is deemed to be a plane source. This would mean close to the site no attenuation would occur. This would be followed by line source (-3dB per doubling of distance) and finally point source (-6dB per doubling of distance) attenuation to the receiver location:

*Height/ $\pi$ = 1.11m, Length/ $\pi$ =8.27m, Distance to receiver=758m*

*Therefore:*

*1.11 to 8.27m = line source attenuation (10log) -8.27dB*

*8.27 to 758m = point source attenuation (20log) -39dB*

It has been calculated an overall distance attenuation (from the location of where the shooting takes place) of -47dB will be achieved from the shooting range site at the receiver location (the application site).

### **Environmental noise sources**

The A120 lies between the shooting range and the proposed site at Jacks. According to the England Noise and Air Quality Viewer [REDACTED] a daytime typical roadside level of 69dB<sub>L<sub>Aeq</sub></sub> is expected at around 2 metres from this carriageway.

At the north boundary of Jacks, a daytime resultant noise level from the A120 has been calculated to be approximately 44dB<sub>L<sub>Aeq</sub></sub>.

In addition, to the northwest exists Stansted Airport which also influences environmental noise levels at Jacks.

### **Environmental noise assessment report**

Stansted Environmental Services had completed an environmental noise assessment at the Jacks site. This covered an assessment period from Tuesday 6<sup>th</sup> to Saturday 10<sup>th</sup> April 2021. As stated on the shooting schools web site, operating hours of the shooting school are typically between 10am-4pm, around 3 days a week in the summer, less in winter. Because of the time of year, it is expected that some shooting sessions were in progress during the survey period. Furthermore, restrictions surrounding the Covid-19 pandemic had begun to lift during this period, with outdoor sports venues operating as normal.

Daytime maximum measured noise levels for the unattended survey were in the region 59dB<sub>L<sub>Amax</sub></sub>. Under the guidance of BS8233:2014 no requirement for daytime maximum environmental noise levels exists.

### **Assessment**

A typical L<sub>Amax</sub> level for a firearm is in the region of 110dB(A) at 7metres. As advised within the 'distance attenuation' section of this letter, a loss of -47dB(A) is expected acting as a plane source. Therefore, the following maximum noise level has been calculated at the receiver location:

$$110\text{dB}_{L_{Amax}} - 47\text{dB(A)} = 63\text{dB}_{L_{Amax}}$$



## Conclusion

It is important to firstly set out that the noise generating source from the shooting school (the shooting) takes place further from the application site (to the north of the A120) than the location of the school itself (Parkers Farm, Smiths Green, Takeley). The effects are therefore reduced by way of distance attenuation, in comparison to the situation set out in the comments from the EHO.

The calculation of noise propagation from the shooting range as a plane source (rather than a series of individual point sources) represents a more accurate receiver level. This is further demonstrated by the fact the measured average (as reported in the SES Environmental Noise Assessment) and predicted levels (from this calculation) are within 4dB.

Furthermore, it should be noted the highest measured level was 61dB<sub>L<sub>Amax</sub></sub>.

With Covid-19 restrictions lifting at the time of the survey (29<sup>th</sup> March 2021: outdoor sports venues were open), and therefore these measurements are considered to be representative.

Concluding remarks in response to queries raised are that the presence of the shooting range is not expected to be of concern upon the proposed residential development due to the significant separating distance. Furthermore, we understand that the Environmental Health Department has had no complaints whatsoever, in relation to the noise generated by the Shooting School. The proposed development is not closer to the noise source than existing residential development, suggesting that the likelihood of the noise generated from the Shooting School impacting upon the proposed development would be minimal.

Yours faithfully

Yours sincerely/faithfully



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