

## Sunderland Royal Hospital – Generator Sub-station

### Additional Information in Support of Noise Assessment (Condition 10)

A Noise Assessment has been carried out by Stantec in respect of Condition 10 of the planning approval. In support of this document Sunderland Royal Hospital have provided information in respect of unplanned interruptions to power supply during the last calendar year.

Unplanned interruptions to supply:

Date	Time	Duration
15.04.23	10:06	less than 5 secs
15.04.23	10:10	less than 5 secs
01.08.23	22:01	less than 5 secs
19.10.23	03:32	less than 5 secs
20.10.23	16:32	less than 5 secs
20.10.23	16:49	less than 5 secs
20.10.23	17:05	less than 5 secs
21.10.23	05:07	less than 5 secs
21.10.23	05:45	less than 5 secs
21.10.23	06:02	less than 5 secs
27.12.23	01:00	less than 5 secs
27.12.23	03:02	less than 5 secs

The interruptions in October and December related to issues with Northern Power Grid during storm events.

During the last calendar year there were no extended periods of loss of power.

There was a total of 12 unplanned interruptions to power supplies, none of which lasted more than 5 seconds. Interruptions to supply of less than 5 seconds covers interruptions lasting between 1 and 5 seconds. Within this scenario very short interruptions may not result in activation of the generators as there is a slight delay built into the system before the generators activate. Life critical systems within the hospital environment are generally protected with UPS and IPS systems which ensure continuity of constant power supply, including during short power interruptions, and in longer interruptions whilst the essential supplies generator systems are activated. In this situation where the generator is activated this would run for 5 minutes before shutting down.

Whilst this information relates only to the last year, this does demonstrate that interruptions to power supply are generally infrequent. Loss of power supply for extended periods is extremely rare.

Whilst it is noted that operation of the generators at night may result in raised noise levels at the receptors of 9 – 12 dB above background levels, this should be considered in the context of frequency this is likely to occur. It should also be noted that the assessment discounts intermittent

traffic noise, which is far higher than noise from the generators, and which is likely to occur throughout the night, every night of the year. In this context it may be considered that the impact of additional noise by the development is minimal.

**Anthony Watson Chartered Architect**

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