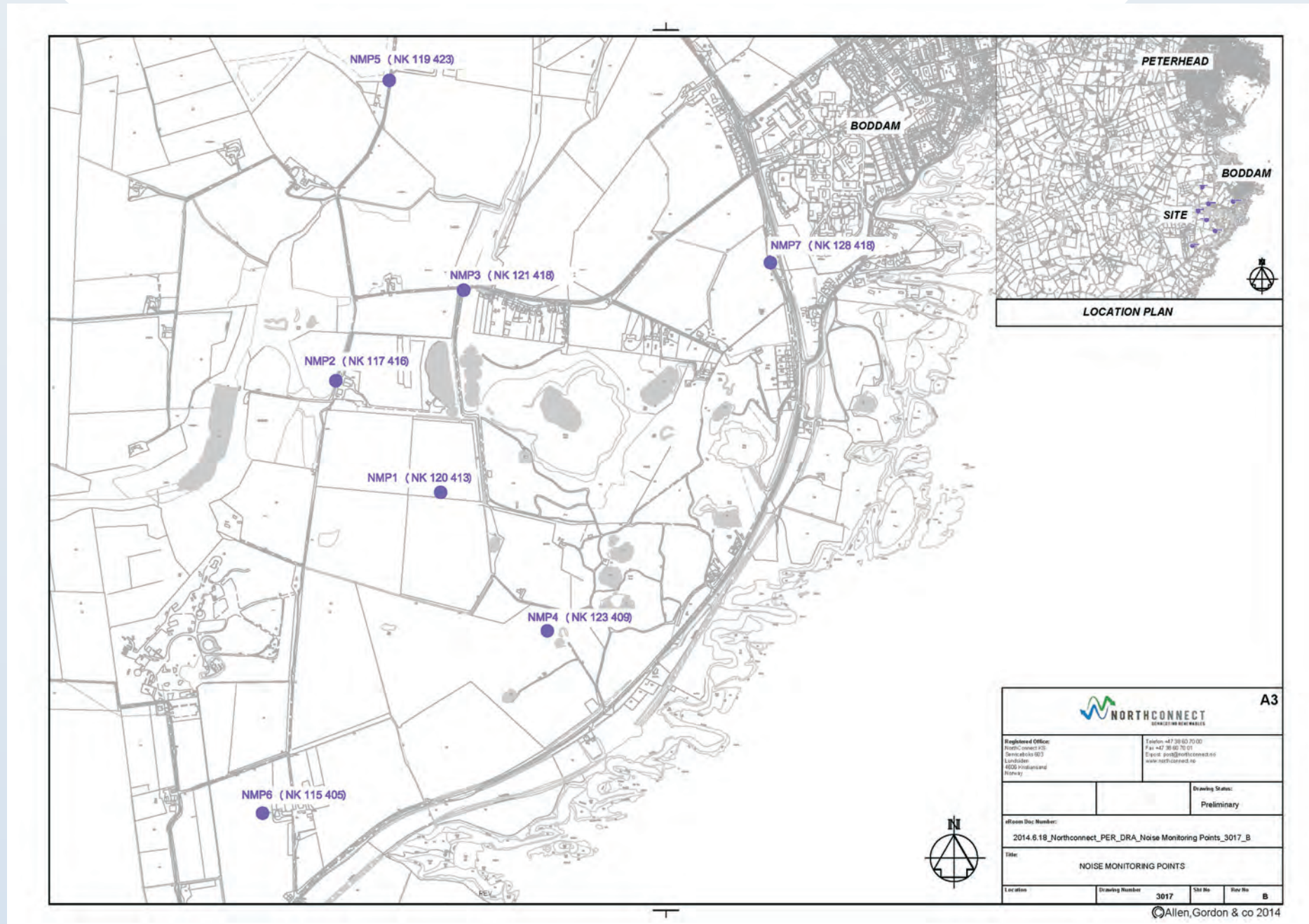


BASELINE NOISE SURVEY

Baseline noise monitoring has been undertaken to quantify noise levels currently experienced at the nearest noise sensitive receptors to the proposed converter site.



Baseline Noise Monitoring Locations

CONSTRUCTION NOISE

During construction, noise levels will vary depending on the specific activities at the site. Landscaping landforms will be created to the north and east of the site to reduce noise levels experienced by local residents. The bund will be constructed as early as possible into the construction programme. A construction management plan will include measures to manage noise levels using various controls, for example, scheduling the noisiest activities during the day time over as short a period as practicable.

Noise

| Location | Period | $L_{Aeq,t}$ (dB)* | $L_{A90,t}$ (dB)* |
|--------------------------|--------|-------------------|-------------------|
| Converter Site | Day | 53 | 42 |
| | Night | 33 | 26 |
| Highfield | Day | 43 | 41 |
| | Night | 37 | 23 |
| Lendrum Terrace | Day | 54 | 43 |
| | Night | 44 | 27 |
| Hill of Boddam Viewpoint | Day | 54 | 41 |
| | Night | 40 | 30 |
| Gateside Access Road | Day | 54 | 45 |
| | Night | 34 | 30 |
| Longhaven Mains | Day | 45 | 36 |
| | Night | 34 | 28 |
| Stirlinghill | Day | 45 | 36 |
| | Night | 53 | 31 |

* $t=1$ hour in the day and $t=15$ mins at night

BASELINE SURVEY RESULTS

- The L_{Aeq} measurement value indicates the equivalent continuous sound level of the measurement period. It can be taken as an indication of the average sound level.
- The L_{A90} measurement value indicates the sound level exceeded for 90% of the measurement period. It can be taken as an indication of the background sound level.
- If the L_{Aeq} and the L_{A90} are close in value, this indicates that the sound sources measured are steady in level, e.g. Distant traffic on a busy road. An increasing difference between these values is indicative of sound sources that fluctuate in level. The greater the difference, the greater the fluctuation, e.g. close to a road with occasional traffic.

OPERATIONAL NOISE

The converter building structure will be designed to mitigate noise from equipment within it. Hence, it is the external components that will be the source of operational noise.

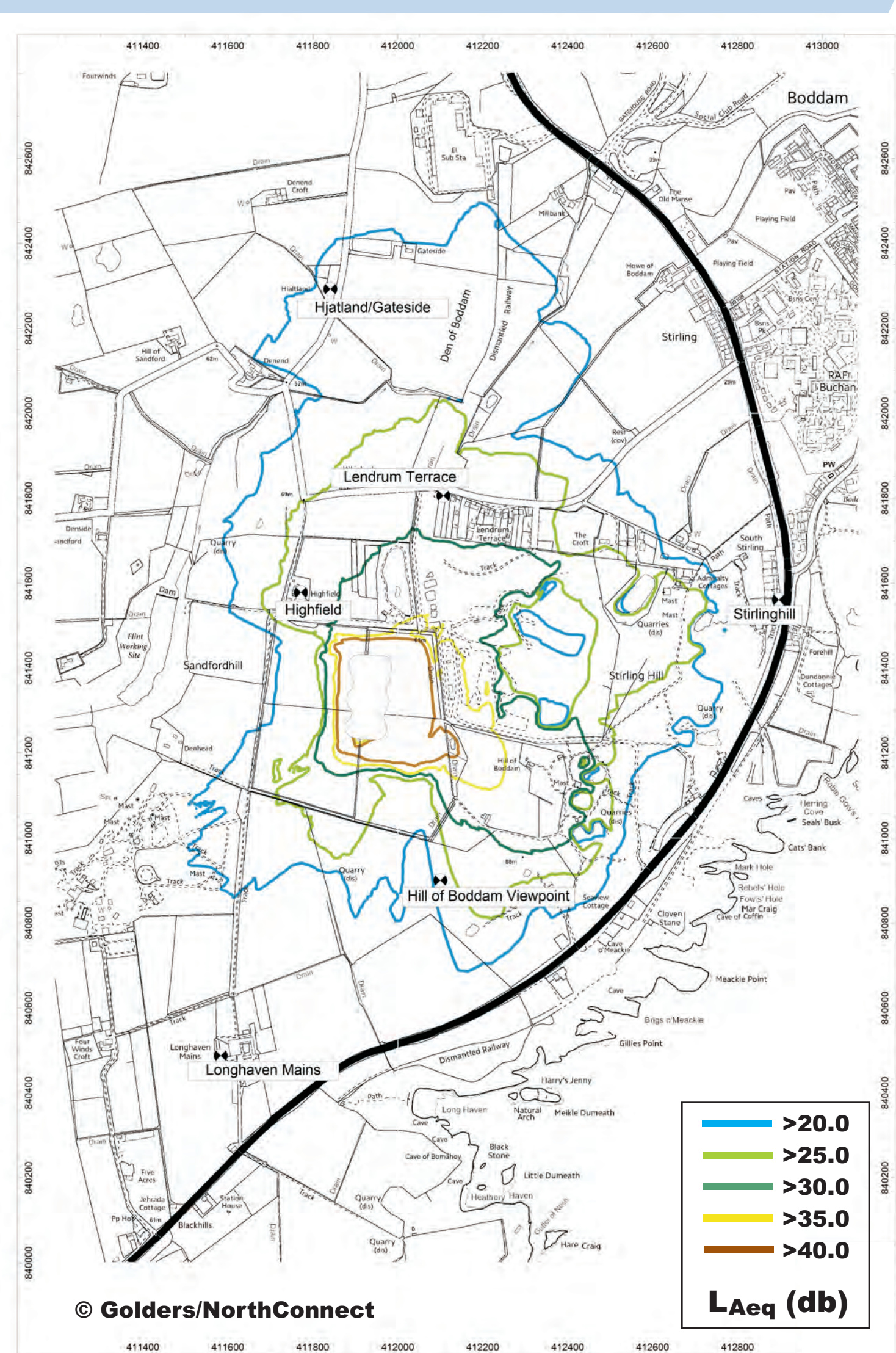
Therefore, on the external components the following mitigation measures will be used:

- The selection of low noise emission components and systems.
- Noise insulated enclosures.
- Noise barriers around individual items of equipment.

In addition, landscaping landforms around the site will serve to shield the locality from operational noise from the site.

A prediction of the spread of operational noise from the site has been undertaken. Conservative (loudest) typical noise levels have been used, due to the exact items of equipment not being specified at this stage.

At the detailed design stage, the prediction calculations will be redone using the exact equipment to be utilised.



CONTOUR PLOT
Predicted spread of operational noise