APPENDIX ES4.5

NOISE MONITORING SCHEME

NOISE MONITORING SCHEME FOR COOKS HOLE QUARRY AND THORNHAUGH LANDFILL SITE, THORNHAUGH, PETERBOROUGH

Report reference: AU/CH/SPS/1774/01/NMS/FV
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TABLE

Table NMS1 Noise limits for Cooks Hole and Thornhaugh

FIGURE

Figure NMS1 Noise monitoring locations (drawing reference AU/CH/01-24/24137)

1. Introduction

1.1 This noise monitoring scheme has been prepared to set out the approach to noise monitoring for the operations associated with the achievement of the revised restoration profile at Cooks Hole Quarry (Cooks Hole) and Thornhaugh Landfill Site (Thornhaugh). Throughout this report, when referred to collectively, Cooks Hole and Thornhaugh will be called 'the sites'. The operations at the sites are subject to noise limits which are specified in the existing planning permissions for the sites. The current operations at Thornhaugh are also subject to a noise monitoring scheme that was prepared in April 2013 and approved by Peterborough City Council in August 2013.

1.2 Under the scoping process for the Environmental Impact Assessment which has been prepared to accompany the planning application for the revised restoration profile, Peterborough City Council agreed that the existing noise limits within the existing planning permissions for the sites provide sufficient protection for the noise sensitive premises. This noise monitoring scheme has been prepared based on the noise limits which are set out in the existing planning permissions and which it is anticipated will be taken forward in any new planning permission.

2. Noise sources

2.1 The proposed development comprises the continuation of the landfilling and restoration operations at Thornhaugh and the importation of material for use in the creation of a coherent restoration landform for both Cooks Hole and Thornhaugh. The main noise sources for the operations at the sites are set out below:

Cooks Hole

- Placement of clean, naturally occurring materials to create the landform profile
- Works for the establishment of surface water management infrastructure
- Processing of on site mineral stockpiles using mobile plant
- Restoration works including soil placement
- HGV movements
- Mobile plant movements

Thornhaugh

- Landfill cell excavation, preparation and engineering
- Stockpiling of materials
- Installation of environmental control infrastructure
- Waste placement and cover placement in the operational landfill cells
- Construction of low permeability capping
- Placement of clean, naturally occurring materials to finalise the landform profile
- Processing of mineral extracted during the landfill construction operations and processing of suitable waste excavated from Phases 1 and 2 by mobile plant
- Processing of imported material to create restoration soils

- Restoration works including soil placement
- HGV movements
- Mobile plant movements

3. Monitoring locations and noise limits

3.1 The noise monitoring locations which are specified in the existing planning conditions are presented on Figure NMS1. These noise monitoring locations will continue to be used for the proposed development.

Table NMS1 – Noise limits for Cooks Hole and Thornhaugh

No	Location	Day	Threshold during temporary operations dB LAeq,1h (free-field)	Threshold during working hours dB LAeq,1h (free-field)	Threshold outside working hours dB LAeq,1h (free-field)
1	Home Farm House	Mon-Sat	70	55	42
2	Leedsgate Farm	Mon-Sat	70	50	42
3	Nightingale Farm	Mon-Fri	70	50	42
		Saturday	70	46	42
4	Sibberton Lodge	Mon-Sat	70	51	42
5	Oaks Wood Cottage	Mon-Sat	70	55	42
6	Toll Cottage	Mon-Sat	70	55	42

3.2 These properties are the closest noise sensitive receptors in each direction from the sites. Should access not be possible to any one of these locations, alternative locations which are considered representative shall be chosen and the reasons for choosing them will be included in the noise monitoring report.

3.3 Temporary operations include activities such as the construction of bunds/noise attenuation barriers, soil stripping and placement, landfill capping, final restoration works and landscaping.

4. Monitoring

Survey Periods

4.1 Noise monitoring shall be undertaken during typical working hours when the site is operating normally and avoiding:

- lunch/break times;
- periods of plant maintenance or breakdown; and
- periods of peak road traffic on the local road network.

4.2 Monitoring shall be undertaken for a minimum of 1 hour total duration during the operational hours on Monday to Friday between 0700 – 1800 hrs.

Monitoring Locations

4.3 Monitoring shall be undertaken in 'free-field' conditions, with the microphone placed at a height of between 1.2 - 1.5 metres above the ground and at least 3.5 metres away from other reflecting surfaces.

4.4 The monitoring will be undertaken at the locations specified in Section 3 and shown on Figure NMS1. The exact location of the monitoring position will be decided prior to or during the survey visit depending on access and agreement with land owners/local residents.

4.5 Monitoring shall be undertaken either directly at the premises within an external amenity area, such as a private garden, or at an alternative location where the acoustic environment (including any contributions from the site) is considered to be similar.

4.6 Where possible, the selected monitoring locations should be accessible from public roads and footpaths and should also be available to the site operator as well as the regulators such as local authority officers.

Measurement parameters

4.7 The equivalent continuous A-weighted sound pressure level ($L_{Aeq,1hour}$) shall either be measured directly (over a minimum one-hour period) or calculated from a number of shorter contiguous or disaggregated measurements (e.g. 4 x $L_{Aeq,15min}$ or 2 x $L_{Aeq,30min}$) via logarithmic averaging. Sound levels shall be measured using a 'fast' time weighting. L_{Amax} and L_{A90} noise levels shall also be recorded and reported.

Sources of interference

4.8 Precautions shall be taken to minimise the influence on the sound level readings from sources of interference such as temperature, wind, rain and electrical interference.

4.9 Monitoring shall be avoided during heavy precipitation and when wind speeds are greater than an average 5 ms^{-1} and when air temperatures are below 3°C. All sound level meters shall be fitted with an effective windshield to minimise turbulence at the microphone. Meteorological conditions prevailing during the monitoring shall be recorded and reported.

Observations

4.10 During the survey, detailed observations of the acoustic environment including the identification of any dominant sound sources shall be recorded and reported. Full details of the activities taking place at Cooks Hole and Thornhaugh during the monitoring periods shall also be recorded and reported.

Instrumentation

4.11 Instrumentation should preferably conform to Class/Type 1, but at least of Class/Type 2 as specified in either BS EN 61672-1:2013, BS 7580-1, BS 7580-2 or BS EN 60804.

4.12 Sound calibrators should preferably be Class/Type 1 and conform to BS EN 60942:2003, BS EN 60942 or BS 7189 (identical with IEC 942).

4.13 Sound level meters and field calibrators shall have had their conformity and calibration checked periodically in accordance with manufacturer's recommendations or relevant standards.

4.14 With the equipment set up in the configuration used during measurement, field calibration checks shall be performed immediately before and after the survey period using a sound calibrator.

4.15 Any significant drift in the calibration value observed between the initial and final checks will be recorded and reported.

Frequency and reporting

4.16 Noise monitoring shall be undertaken on 2 occasions per year at approximately 6 month intervals.

4.17 Noise monitoring reports will be prepared within 2 weeks of the completion of the monitoring and will be kept at the site offices for review by the Local Planning Authority when requested. The results of the survey shall be evaluated against the site noise limit thresholds presented in Section 3 of this report.

4.18 Where sound emissions from site activities are considered to have been the cause of a noise level above the specified threshold, the Site Manager shall be notified and a review will be undertaken by the operator to determine the cause of the exceedance.

4.19 Following the review and, if practicable, the operator will implement suitable noise control measures in consultation with the Local Planning Authority.

5. Complaints

5.1 It is the duty of all members of staff to receive and record complaints, which will be processed by the Site Manager.

5.2 The Operator will maintain a record of all complaints received. Any complaints will be responded to and recorded in accordance with the Complaints Procedure which forms part of the Augean externally certified Environmental Management System. The complaints log will be made available to the Local Planning Authority for inspection upon request.

5.3 All complaints will be investigated to identify the likely source of the noise. If it is established that the operator could be the source then further investigation will be undertaken to determine the scale of impact. Should clear impacts from site operations be identified then, if practicable, the operator will implement suitable control measures in consultation with the Local Planning Authority.

5.4 During any investigation and subsequent remedial action, the complainant will be kept updated of progress.

6. Management, training and responsibility

6.1 The Site Manager will have responsibility for ensuring that nuisances and hazards arising from the operations due to noise are minimised, and that the measures outlined in this noise monitoring scheme are implemented, documented and subject to ongoing evaluation and review through the procedure review process which forms part of the site Environmental Management System.

6.2 The Operator conducts its operations according to management systems that are designed to ensure that all staff are competent to carry out the tasks that have been designated their responsibility.

6.3 The company identifies the training requirements of its employees and provides suitable resources to ensure they have the required knowledge, skills and expertise to carry out their duties. This includes their roles and responsibilities in complying with the Operator's management systems and all relevant legislation. This is achieved through induction training for new employees, awareness training for all employees and specific training as required as set out in the Environmental Management System.

6.4 Contractors and all persons performing tasks on behalf of Augean will also be made aware of the policy and relevant management system requirements and will be competent in the roles undertaken.

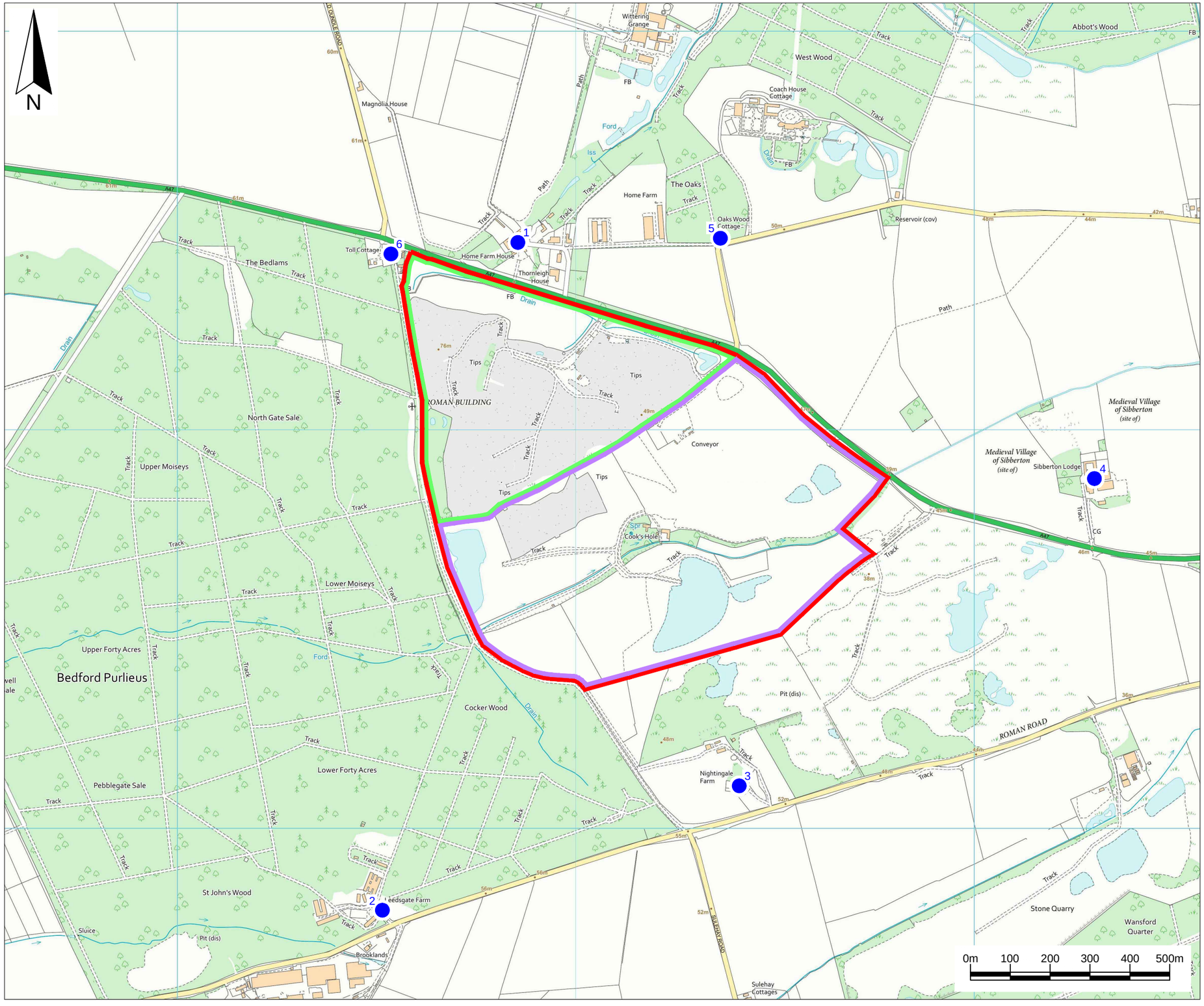
6.5 Operatives will be trained to employ appropriate techniques to keep site noise to a minimum and will be effectively supervised by the Site Manager to implement best working practice. All operational staff and contractors will be responsible for reporting any problems relating to noise directly to the Site Manager.

6.6 All staff at the site will be made fully aware of the need to be constantly vigilant about the control and management procedures in place. To minimise the risk of noise emissions, emphasis will be given to:

- Awareness of their responsibilities for avoiding noise nuisance;
- The timely reporting of noise issues directly to the Site Manager; and

- Actions to minimise noise emissions during abnormal operating scenarios that could give rise to noise issues.

FIGURE



Key / Notes

- Application boundary
- Boundary of Cooks Hole Quarry
- Boundary of Thornhaugh Landfill Site
- Noise monitoring locations
  - 1 Home Farm House
  - 2 Leedsgate Farm
  - 3 Nightingale Farm
  - 4 Sibberton Lodge
  - 5 Oaks Wood Cottage
  - 6 Toll Cottage

Note:
The details shown on the Ordnance Survey base plan for the ground in Thornhaugh Landfill Site and Cooks Hole Quarry is out of date and does not reflect the current ground conditions.

Rev	Status	Drn	App	Chk	Date
	Final	KR	SPS	LH	07/02/24

Site: Cooks Hole Quarry and Thornhaugh Landfill Site

Client: Augean

Title: Noise monitoring locations

Figure NMS 1 | Scale: 1:10,000@A3

Drawing Ref: AU/CH/01-24/24137

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