CAERPHILLY SKIPS BESPOKE PERMIT VARIATION

NOISE AND VIBRATION MANAGEMENT PLAN

Report Number 1960r6v2d0520

Commissioned by

Caerphilly Skip Hire (CWS) Limited
The Granary
Graddfa Industrial Estate
Llanbradach
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1 INTRODUCTION

Geotechnology Limited (Geotechnology) has been commissioned by Caerphilly Skip Hire (CWS) Ltd to prepare a Noise and vibration Management Plan (NVMP) as part of a bespoke Environmental Permit Variation application being made to Natural Resources Wales (NRW). The plan is linked to the outcome of the Environmental Risk Assessment and discussions with NRW.

The aim of this NVMP is to identify noise sources at the site and document the measures to be taken to ensure that noise continues to not cause problems or annoyance to potentially sensitive receptors.

Horizontal Guidance Note H3 titled *Noise Assessment and Control* provides a noise management plan template that sets out some of the information expected by NRW to be in a management plan. This NVMP is based on that template.

2 POTENTIAL NOISE SOURCES

The site is located to the north of Llanbradach, as shown on Figure 1.

2.1 Location of On-site Noise Sources

The top yard is used for waste treatment and temporary waste storage. The bottom yard is only used for temporary storage of secure containers prior to off-site transport. In this context the top yard is the main source of noise as this is where all incoming wastes are delivered, received, tipped and sorted. These areas are indicated on Figure 2.

The main noise sources associated with the site are evaluated in Table 2-1.

Table 2-1 Noise Sources

Potential activity/ noise source	Location on site	Nature of the noise/ vibration	Contribution to overall site emission
Vehicle Movements (e.g. delivery, collection, reversing with audible alarm)	Circular movements from north to site through site. Waste tipped off in top yard Vehicle reversing in top and bottom yard	Daily intermittent reversing alarms during operating hours. Low hum of diesel engines.	Low
Manual sorting and use of trommel to separate waste	Inside building in top yard	Daily hum of diesel motors when operational during operating hours. No impact noise.	Low
Crushing of concrete/ inert waste to be undertaken for short periods infrequently	Inside building in top yard	Intermittent and short-term use will produce constant hum similar to trommel when in temporary use.	Low
Screening of soil and stone to be undertaken for short periods infrequently	Externally on top yard	Intermittent and short-term use will produce constant hum from motor. Some clatter may temporarily arise from conveyor discharge.	Low
Shredding of wood to be undertaken for short periods infrequently	Externally on top yard.	Intermittent and short-term use will produce constant hum from motor. Some clatter may temporarily arise from conveyor discharge.	Low

2.2 Other noise sources

Directly to the north of the site are several waste operations. There is a small vehicle maintenance unit on higher ground to the west of the site.

Running along the eastern site boundary is the valleys railway line. This line is between the site and all residents to the east. Trains run daily.

Beyond the railway line is the town of Llanbradach with associated vehicle movements.

3 POTENTIAL RECEPTORS

3.1 Site Location

As shown on Figures 1 and 3, the operation is located directly north of Llanbradach, which is itself north of Caerphilly, South Wales. The thin linear site measures approximately 400m by 25m and is orientated approximately north-south. The site is located near the base of the valley floor with the valley side steeply rising immediately west.

Directly to the north are industrial units, some of which are used for waste activities and some for vehicle maintenance. Directly to the east is a railway line. Beyond the railway line is a Medical Centre, Community Centred, disused works and residential properties. Towards the south, the site is naturally squeezed between the railway line to the east and access road (Colliery Road) running alongside the western site boundary at an elevated position. Further south is woodland and residential properties.

Many of these features are identified on Figure 3.

3.2 Sensitive Receptors

Sensitive receptors are identified on Figure 3 and summarised in Table 3-1.

Table 3-1 Sensitive Receptors

Receptor	Receptor Reference	Distance from noise sources on top yard	Description of ground between noise source and receptor
Other businesses in buildings to west and North	R1	65m north	Mainly hard surfaced open ground but with broken lines of site due to buildings, structures and woodland. Adjacent operations are inside a building
Residential properties/Care home on Colliery Road to west	R2	90m southwest	Receptors are approximately 15m higher than yard noise sources. Ground between receptors and noise source is densely vegetated steeply sloping bank.
Operators and users of railway line to east	R3	10m east	Open air
Residential properties to east and south	R4	130m southeast	Mostly open air with mature trees lining eastern bank of railway line
Residential properties to northeast	R5	360m northeast	Mostly open air with mature trees lining eastern bank of railway line and land close to housing

4 NOISE CONTROL MEASURES

4.1 Baseline Conditions

CWS is to establish baseline conditions at site and at each of the receptor locations. This will be achieved by undertaking separate noise measurements on the top yard, bottom yard and close to each of the identified receptor locations. This will be undertaken at different times of day when the operation is operational and non-operational. Monitoring will be undertaken prior to the new activities covered in the Permit Variation being undertaken.

The aim of this monitoring is to establish existing baseline conditions at site and to provide an initial characterisation of noise levels close to the potential the receptors. This data will be retained for future reference, if required. All measurements will be made using calibrated sound level meters capable of measuring the 'A-weighted' equivalent sound level. The monitoring will be in accordance with H3 guidance.

Specific vibration measurements are not considered to be necessary at this stage given the proposed activities and location of the site relative to receptors.

4.2 Normal Conditions

CWS recognise that preventing nuisance related to noise and vibration starts with good housekeeping, careful site management and layout and being a considerate neighbour. In this context, several preventative actions are integrated to the operation, as summarised in Table 4-1.

Table 4-1 Noise Control Measures

Potential activity/ noise source	Location on site	Control Measures
Vehicle Movements (e.g. delivery, collection, reversing with audible alarm)	Circular movements from north to site through site. Waste tipped off in top yard. Short-term vehicle reversing in top and bottom yard.	Noise reduction at source: Banksman to be used to avoid use of reversing alarm where safe and possible to do so Directional audible alarms to be used. Short duration reversing kept to a minimum Vehicle routes to be kept clean Staff to avoid unnecessary revving of engines
Use of trommel to mechanically sort waste	Inside building in top yard	Located in a building All plant and infrastructure subject to preventative maintenance and housekeeping Crusher to be used for short periods intermittently Crusher fitted with noise dampening features and cawls/ covers Drop heights to be minimised Activities only to be undertaken on top yard as further from sensitive receptors
Crushing of concrete/ inert waste to be undertaken for short periods infrequently	Inside building in top yard	
Screening of soil and stone to be undertaken for short periods infrequently	Externally on top yard	Screen to be used for short periods intermittently Plant subject to preventative maintenance and housekeeping Drop heights to be minimised Only to be undertaken on top yard as further from sensitive receptors
Shredding of wood to be undertaken for short periods infrequently	Externally on top yard.	Shredder to be used for short periods intermittently Subject to preventative maintenance and housekeeping Drop heights to be minimised Only to be undertaken on top yard as further from sensitive receptors

4.3 Abnormal Conditions

During normal operations, noise issues are not predicted to negatively affect off-site receptors. To ensure that abnormal conditions are identified any change to on-site noise levels will be identified by site operatives and management. This will initially be done by subjective on-site assessment of noise levels based on experience and familiarity. As increased noise levels on-site could be indicative of failure of a control measure the cause will be immediately investigated.

5 MONITORING AND COMPLAINTS

5.1 Complaints

CWS recognises that complaints are never a substitute for comprehensive monitoring and waste management practices but they do offer a valuable indicator of potential offsite problems related to the waste activity. For this reason, all complaints will be logged and documented in accordance with existing management systems.

Any complaints received will be promptly investigated and appropriate remedial action taken. CWS will inform the complainant and record the details of the complaint and the actions taken.

5.2 Monitoring

A Noise Level Assessment involving additional noise level monitoring and assessment may be necessary to assess and investigate complaints or changes in noise level identified at site. During these instances, an assessment in accordance with the strategy set out in H3 guidance would be undertaken. This would be aimed at characterising any potential off-site impact and identification of the root cause(s).

5.3 Contingency Action Plans

Where observations, monitoring results or complaints indicate a potential noise problem the contingency actions set out in Table 5-1 will be adopted.

Table 5-1 Contingency Action Plan

OBJECTIVE To initiate timely mitigation measures to prevent significant off-site noise problems	
Frequency of test	Following receipt of complaint related to noise or identification of significant rise in on-site noise levels

CONTINGENCY ACTION RESPONSES	**Response Time**
Step 1. Investigate Potential Sources Following detection of potential noise problem undertake detailed site inspection. If source of noise is obvious go to Step 2. If source cannot be identified go to Step 4.	Within 1 day or same day where feasible
Step 2. Remove noise source Review working practice and source of noise. Cease relevant operation and implement remedial actions where necessary. Go to Step 3.	Within 48 hrs of problem detection
Step 3. Continued Monitoring Repeat routine evaluation of site noise levels based on experience and familiarity once problem has been remedied. If problematic noise levels are still persistently detectable go to Step 4.	Within 1 week of problem initially being identified
Step 4. Further Investigation and Monitoring Ensure obvious noise problems have been remediated. Consider all available information including meteorological records, complaints history, other activities occurring at site / in surrounding area. Undertake detailed site inspections on-site and off-site for noise sources in accordance with H3 guidance. This will likely involve noise level assessment and monitoring at site and at receptor(s). Some operations may need to temporarily cease. **Outcome 1. Waste activity considered to be noise source.** Cease identified problematic activity and identify new mitigation measures. Go to Step 5. **Outcome 2. Waste activity not considered to be noise source.** Document investigations and return to normal operations.	Within 2 weeks of problem being identified
Step 5. Implement Mitigation Measures Review risks to off-site receptors. Implement relevant mitigation measures in consultation with NRW. This may involve temporarily ceasing operations.	Within 3 weeks of problem being identified

As noted in the contingency action plan, depending upon the outcome of investigations at all stages, there may be a need to temporarily cease operations.

5.4 Receptor Notification

Following the identification of a significant noise problem, particularly following a noise complaint, CWS will liaise with the persons affected. This is to ensure that they are informed of the investigations being undertaken, relevant findings and mitigation measures.

Figure 1 Site Location Plan

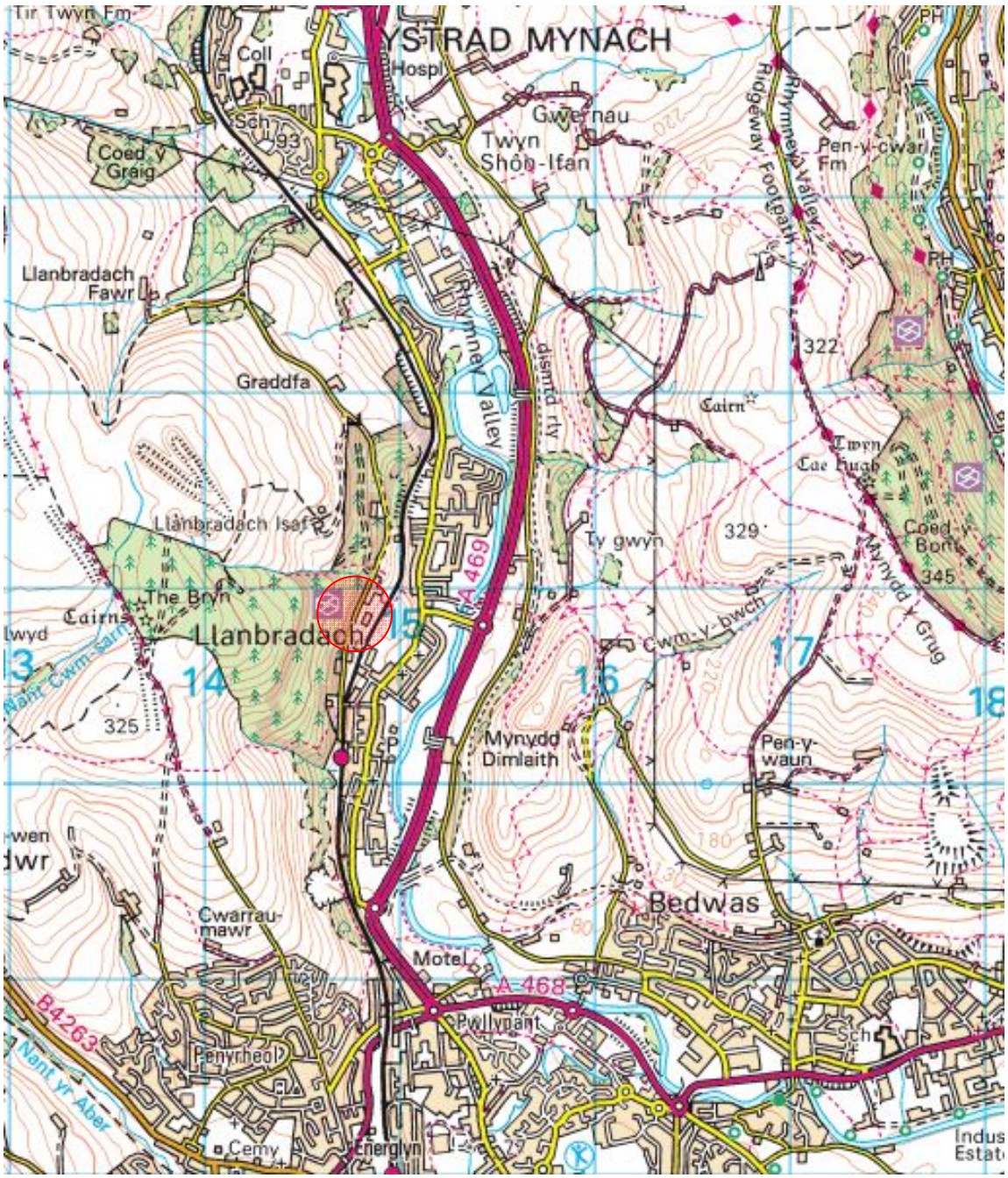
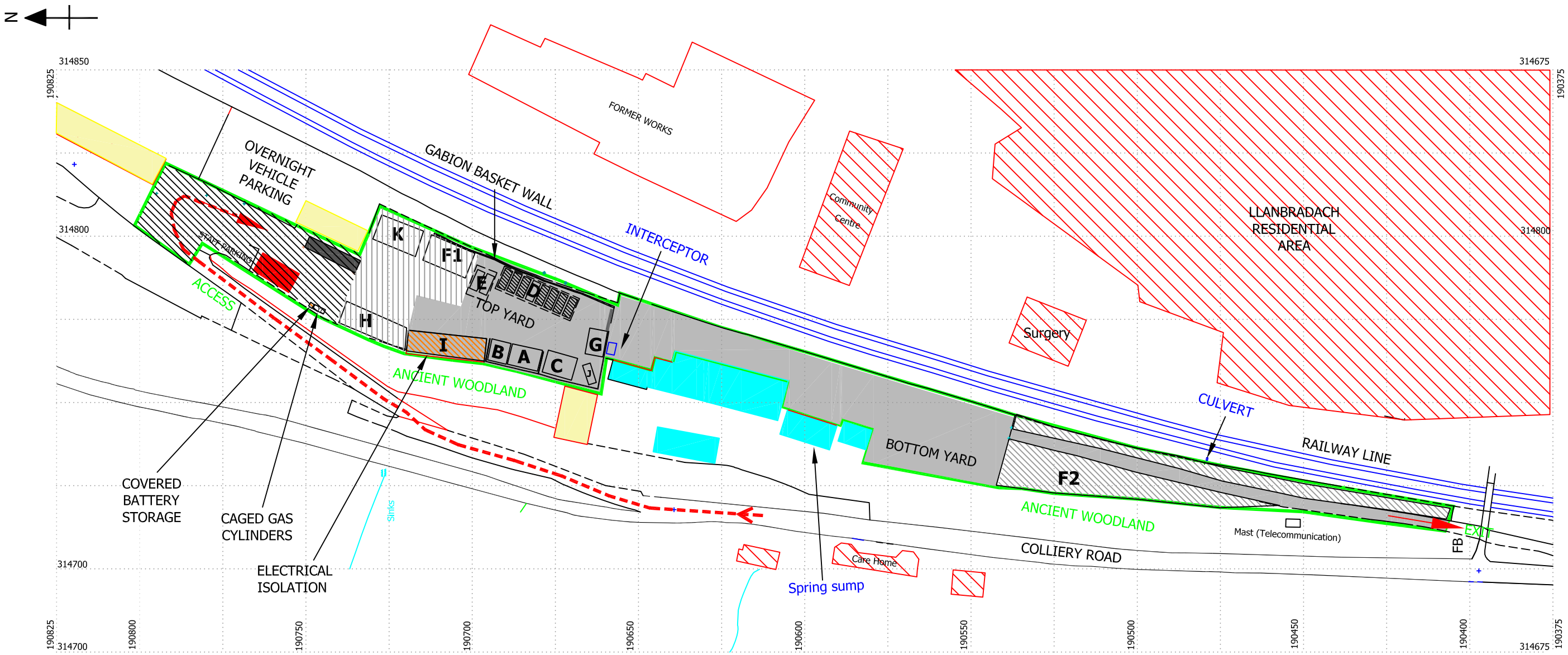


Figure 2 Site Layout



LEGEND

- Proposed Permit Boundary
- Access Route
- Concrete
- Hardstanding
- Weighbridge
- Sleeping Policeman
- Concrete push wall
- Residential Areas and Facilities
- Waste Treatment Building
- Off Site Buildings
- Hardstand to be concreted
- Vehicle Maintenance Sheds
- Site Offices
- Prevalent Wind Direction

A Sortng Area
B Inert Materials
C Non Recyclables
D Recyclates in ROROs
E Emergency Quarantine
F Empty Skip Storage
G Wood
H Soil and Stone Screening and Product Storage
I Trommel, Picking Line & Jaw Crusher
J Secure Asbestos Skip
K Wood Shredding and Product Storage

6m x 2.4m RORO skip (drawn to scale)

Figure 3 Sensitive Receptors

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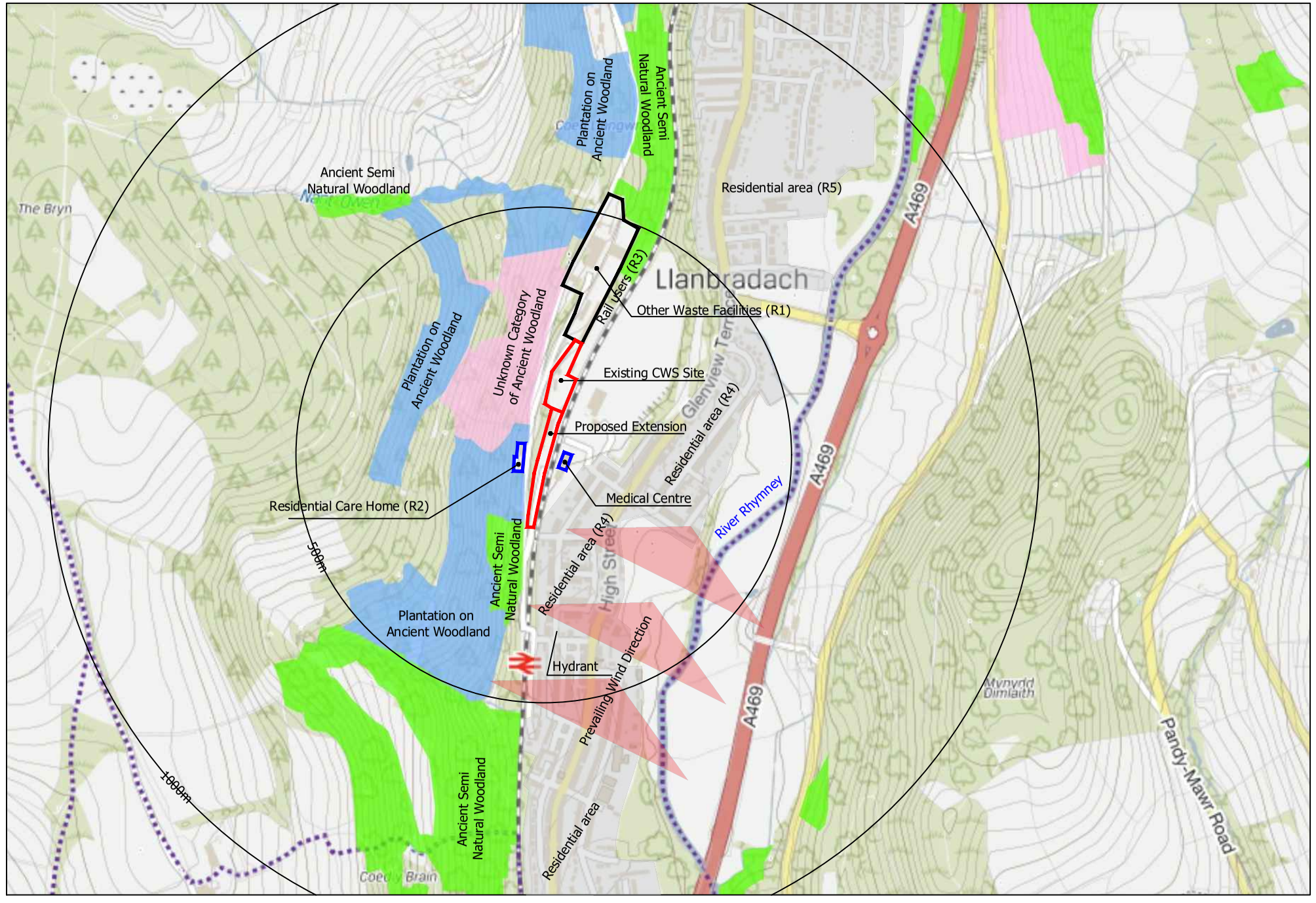

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