

GLOBAL CENTRE OF RAIL EXCELLENCE

TECHNICAL NOTE – NOISE

PHASE 1A



11th MARCH 2022



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1.0 INTRODUCTION

- 1.01 Planning permission has been granted by both Powys County Council 21/0559 OUT and Neath Port Talbot County Council P2021/0327 for the construction of the Global Centre of Rail Excellence (GCRE). GCRE will be a purpose built Rail Test facility unlike anything else in the UK.
- 1.02 GCRE will address a number of issues and as well as Supporting UK train manufacturers and infrastructure developers and providers it will generate high quality employment and economic opportunities for communities in South West Wales.

2.0 LOCATION

- 2.0.1 The proposed development site is within the Dulais Valley, straddling the Neath Port Talbot and Powys border, with the Brecon Beacons National Park Authority boundary immediately to the north. It consists of areas within the Nant Helen Open Cast mine with ground levels that vary between 220m and 335m AOD, plus the Onllwyn Washery and Distribution Centre (58ha), which serves as a preparation and washery facility.
- 2.0.2 The project site has been extensively worked as an open cast coal mine and therefore currently consists of brownfield restored land, overburden mounds, coal stocking areas, barrel wash and plant maintenance areas, site office facilities and a void which is currently being mined. Much of the site has been revegetated. The planning development boundary is shown on Figure 1.1.
- 2.0.3 An existing rail connection is located to the south.

3.0 CURRENT PLANNING CONDITIONS

- 3.0.1 This technical note is written to address the issues around the following planning conditions from Planning Permissions P2021/0327 (Neath Port Talbot County Borough Council) and 21/0559 OUT (Powys County Council).

- 3.0.2 Condition 41 States that:-

“Prior to the facility being brought into beneficial use the operator shall submit for the written approval of the Local Planning Authority an Operational Noise Management Plan (ONMP) detailing the necessary controls to ensure compliance with the agreed noise criteria set out within the Environmental Statement. As a minimum it shall include any assumptions that have been made regarding the operation of the site in deriving the predicted noise levels as detailed in Appendix 10C of the Environmental Statement. The ONMP shall be subject to periodic review not less than every 12 months, with the results of such review submitted to the Local Planning Authority for its approval in writing, and any recommended changes to operational activities that may be recommended within such revised ONMP thereafter implemented in accordance with a timetable to be agreed in writing by the Local Planning Authority. All operations at the site shall be carried out in full accordance with the ONMP (as approved or revised) for the duration of its operation.

Reason: *To protect the amenity of nearby residential properties and wider locality and to accord with Policy EN8 of the Neath Port Talbot Local Development Plan (2011-2026)."*

3.0.3 Condition 42 states that:-

"Prior to the facility being brought into beneficial use, all acoustic barriers identified on Figures 10.1 to 10.3 within the Environmental statement shall have been constructed/ provided on site in full accordance with a detailed location plans and specification, which shall first have been submitted to and approved in writing by the Local Planning Authority. Thereafter all acoustic barriers shall remain in place for the life of the development.

Reason: *To protect the amenity of nearby residential properties and wider locality and to accord with Policy EN8 of the Neath Port Talbot Local Development Plan (2011-2026)."*

4.0 PROPOSED PHASING

- 4.0.1 Following conversations with both local authorities it has been agreed that a phased approach to the discharge of planning conditions, can where possible take place. The development is over a large area (c.450 Ha) on an existing industrial site and initial development will be taking place over approximately a 3 year period from Mid 2022 until Early 2025. A Plan showing the phases of the development has been submitted to discharge Condition 7 of the Planning Permissions.

5.0 CURRENT OPERATIONS

- 5.0.1 The site is currently used as an industrial site for the processing and dispatch of coal. Given its position and proximity to local residential areas any noise complaints associated with its operations are reported through a technical working party and site liaison group which is held in conjunction with the Local Authority.
- 5.0.2 Celtic Energy Ltd are currently using existing sidings to load and dispatch coal to market. This currently takes place up to twice a week but in the recent past (last 5 years) movements have taken place up to 8 times a week. Most of these operations have taken place during day time working hours, although at times some movements have occurred outside normal working hours.

6.0 DESCRIPTION OF PHASE 1A OPERATIONS

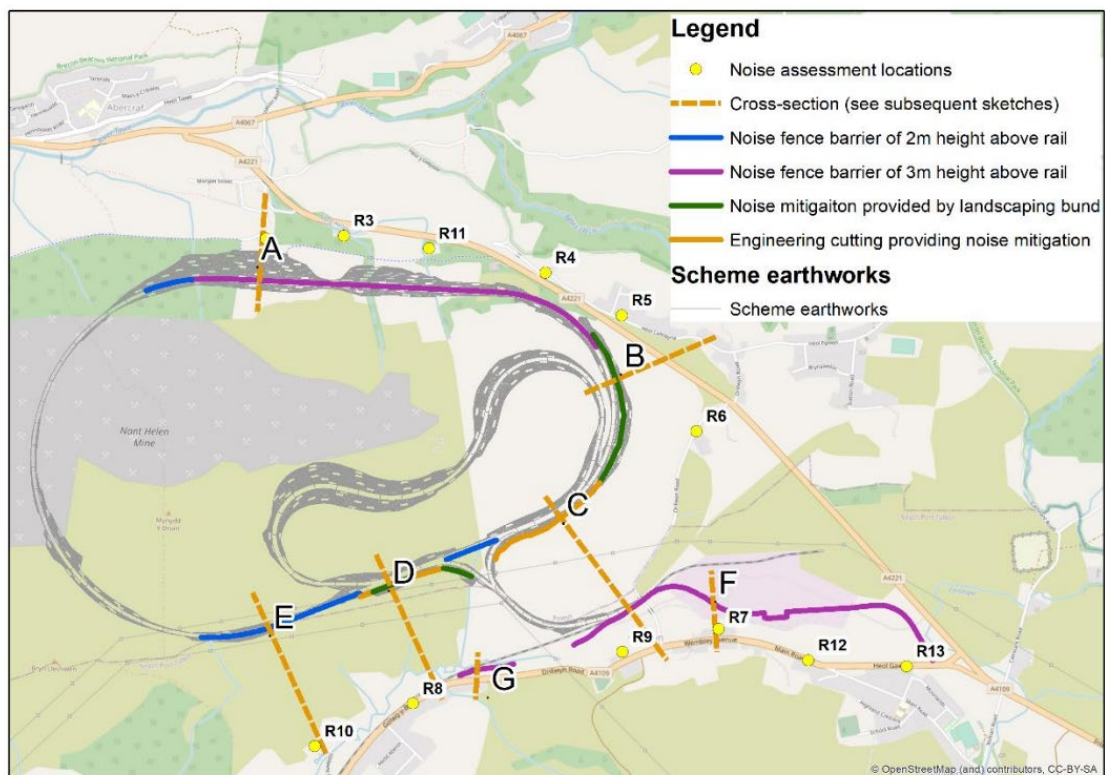
- 6.0.1 In order to ensure the viability of the project it is necessary to enable the scheme to be in a position to generate income as soon as possible. In order to do this, it is GCRE's aim to create 'Storage Sidings' in the Washery area of the site.
- 6.0.2 The purpose of this sidings area in the short term (approximately 12 months) will be solely to store rolling stock. The area of Phase 1A and its proposed layout is shown on drawing CG3500 attached to this note.
- 6.0.3 Once complete the Washery area will provide multiple roles for the GCRE. These will include stabling / storage, maintenance sheds, train wash, re-fuelling lines and decommissioning sheds.
- 6.0.4 However for Phase 1A the only service to be provided will be that of stabling / storage.
- 6.0.5 Trains will be brought to the sidings using the Neath Branch Line during the daytime and manoeuvred at slow speed (5 mph) into the sidings. No movements will take place over the

first 12 month period outside the hours of 8am to 6pm Monday to Friday unless prior agreement has been made with the Local Authority.

- 6.0.6 In effect rolling stock (Trains) will be parked with no running engines in a siding for up to 12 months until they are ready to be returned to leasing companies or brought back into service. With the exception of minor shunting movements (approximately once a month where trains will be moved a maximum of 50m in a siding to prevent moving parts seizing and undue loads being placed on wheel bearings etc) the trains will remain static. Any movements will take place at low speed and within normal working hours (8am-6pm).

7.0 STATUS OF ASSESSMENT

- 7.0.1 Chapter 10 (See Appendix A - including supporting figures and Appendices) of the Environmental Statement sets out the Noise and Vibration Assessment for the scheme and in particular the Noise effects of the scheme are discussed in Paragraphs 10.5.4 – Washery: Calculation Methodology and in Paragraphs 10.6.15 – 10.6.30 with mitigation being



discussed in detail in Paragraphs 10.7 onwards.

- 7.0.2 The Sketch above shows the location of the Noise Sensitive Locations used in the assessment.
- 7.0.3 Table 10.1 from the Environmental Statement (reproduced below) shows the Criteria adopted against which the noise predictions for the scheme were measured.

Table 10.1: Criteria for operational noise assessment

Time period	Noise metric	Internal noise criteria	Acoustic transmission loss of partially open window	External noise criteria*
Daytime, 0700-1900	Overall scheme noise level, $L_{Aeq,T}$	Living areas: 35dB**	15	50dB
Evening, 1900-2300	Overall scheme noise level, $L_{Aeq,T}$	Living areas: 35dB**		50dB
Night-time, 2300-0700	Overall scheme noise level, $L_{Aeq,T}$	Bedrooms: 30dB**		45dB
	Maximum train noise levels, $L_{Amax,F}$	Bedrooms: 45dB***		60dB

7.0.4 Table 10.5 of the Environmental Statement (reproduced below) shows predicted noise levels at each of the receptors for Daytime, Evening and Night time working with and without noise fence barriers. This table assumes that all operations in the washery will be undertaken as set out in the Environmental Statement.

Table 10.5: Scheme noise levels with and without noise fence barriers

Receptor (See Fig 10.1)	Total overall predicted scheme noise level, $L_{Aeq,T}$ without noise fence barriers				Exceedances of criteria without noise fence barriers?	Mitigation area (see section 10.7)	Reduction in L_{Aeq} noise levels due to noise fence barriers	Total overall predicted scheme noise level, $L_{Aeq,T}$ with noise fence barriers				Exceedances of criteria with noise fence barriers?
	Daytime $L_{Aeq,T}$ 0700-1900	Evening $L_{Aeq,T}$ 1900-2300	Night-time $L_{Aeq,T}$ 2300-0700	$L_{Amax,F}$				Daytime $L_{Aeq,T}$ 0700-1900	Evening $L_{Aeq,T}$ 1900-2300	Night-time $L_{Aeq,T}$ 2300-0700	$L_{Amax,F}$	
R1	29	29	26	56	No	to the west	0	29	29	26	56	No
R2	48	48	45	68	Yes	A	-7	41	41	37	58	No
R3	47	47	44	68	Yes	A	-7	40	40	37	58	No
R4	49	49	46	69	Yes	A	-8	41	41	38	59	No
R5	43	43	39	67	Yes	B	-1	42	42	39	57	No
R6	39	37	34	57	No	B	0	39	38	35	54	No
R7	48	35	31	49	No	F	-3	45	33	29	49	No
R8	42	42	38	53	No	D	-5	37	37	33	53	No
R9	42	38	34	50	No	C	-2	40	36	31	50	No
R10	43	43	40	58	No	E	-7	36	36	33	53	No
R11	50	50	46	69	Yes	A	-9	41	41	38	59	No
R12	37	22	21	48	No	F	-2	35	22	18	48	No
R13	34	27	23	47	No	F	-1	33	27	23	47	No
R14	43	37	32	57	No	C	-1	42	35	31	57	No

7.0.5 As can be seen from the sketch above the most relevant noise receptors relating to the washery area are R6,R7,R9,R12 and R13. When considering the predicted noise levels, even without the presence of noise fence barriers the Noise Criteria set out in Table 10.1 can be met at these receptors.

7.0.6 As the proposed operation for Phase 1A is a much reduced compared to that of the full scheme these levels will be considerably lower again as operations during Evening and Nighttime will not be occurring during the first 12 months.

8.0 COMPLIANCE WITH PLANNING CONDITIONS

- 8.1 The planning conditions are designed to cater for the operation of the entire scheme and not for discreet phases such as Phase 1A. As clearly demonstrated above the operation of the sidings for storage will be well within the criteria set out and agreed as part of the Environmental Assessment. As the rest of the scheme would still be under development it is considered that Condition 41 as it stands should not apply at this juncture as the actual operation of the site and its eventual layout is still being developed. Instead, it is suggested that a flexible approach be adopted that looks to ensure no nuisance is caused during the limited use of the storage sidings.
- 8.2 Table 10.5 above also demonstrates that for this limited operation it is unnecessary to construct any noise fence barriers in order to prevent nuisance as levels even without barriers remain within the criteria agreed and set out as part of the Environmental Assessment. Therefore for Phase 1A condition 42 does not need to apply. The provision of noise fence barriers at this point in the evolution of the scheme would also be problematic as they would need to be moved and re-erected during the construction operations in subsequent phases within the washery.
- 8.3 In order to ensure compliance with the noise levels calculated as part of the Environmental Assessment it is suggested that a proportionate approach is adopted for Phase 1A. It is suggested that a programme of monitoring is established during the operation of this phase to ensure that predicted noise levels are being met and that noise levels set as part of the Environmental Assessment are being adhered to.

9.0 SUGGESTED PROGRAMME OF MONITORING FOR PHASE 1A.

9.0.1 Pre Commencement

Daytime Monitoring at Receptor Points R6 and R7 from 7am until 7pm

9.0.2 Week 1 of Operation

Daytime Monitoring at Receptor Points R6 and R7 from 7am until 7pm

9.0.3 Week 4 of Operation

Daytime Monitoring at Receptor Points R6 and R7 from 7am until 7pm

10.0 REVIEW & FURTHER ACTIONS

- 10.0.1 Results after this will be reviewed with the Local Authority after the first 4 weeks of operation and further monitoring will be agreed if required but as a minimum it is suggested that monitoring would take place one day a month to ensure compliance. This would then be reviewed through a technical working group with Planning Officers, Environmental Health Officers, Biodiversity officers and other relevant regulators.
- 10.0.2 A full operational noise management plan can then be developed as the scheme progresses and all elements of the finalised design are understood and data captured during Phase 1A can also feed into the ONMP to further verify predicted results.

11.0 COMPLAINTS

- 11.0.1 A Complaints Reporting Procedure will be established to allow all complaints to be registered and investigated by both GCRE and the Local Authority. This will be communicated to the local community through a site liaison committee.

FIGURES

APPENDIX A