

GLOBAL CENTRE OF RAIL EXCELLENCE

TECHNICAL NOTE – AIR QUALITY

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 condition from Planning Permissions P2021/0327 (Neath Port Talbot County Borough Council) and 21/0559 OUT (Powys County Council).

3.0.2 CONDITION 37 States:

“No less than three months prior to the first beneficial use of the facility hereby approved, a scheme shall be submitted detailing:

1. The predicted nature and type of trains using the facility, which as a minimum should ensure that unless required for shunting of other trains within the facility, all trains using the test tracks hereby approved shall as a minimum fall within the environmental parameters as set out in Chapter 14 of the Environmental Statement;

2. updated air quality modelling and assessments relating to statutory, nonstatutory sites and ancient woodland based upon such identified parameters; and

3. Any necessary mitigation and long-term monitoring measures to be implemented to minimise adverse impacts upon the ecology of these sites.

The development shall not be brought into beneficial use until such scheme has been approved, with any mitigation and long-term monitoring identified within the assessments thereafter implemented in accordance with the agreed details and timescales.

Reason: To update and clarify the ecological impacts from air quality predicted and inform the ecological mitigation measures to be applied in line with the ES in compliance with wildlife legislation, particularly the Conservation of Habitats and Species Regulations 2017 (as amended), PPW, Future Wales, TAN5 and LDP Policies EN6 and EN7.”

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 the receptors described in Chapter 14 (Air Quality) currently air quality 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. Air quality modelling is not required under the current consent.
- 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. Current rail movements and shunting operations involve the use of a Class 66 Diesel Locomotive.

6.0 DESCRIPTION OF PHASE 1A OPERATIONS

- 5.0.1 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 12-18 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.
- 6.0.6 In effect rolling stock (Trains) will be parked with no running engines in a siding for up to 18 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.

7.0 AIR QUALITY MODELLING AND ASSESSMENT (ES CHAPTER 14)

- 7.0.1 The phased approach to discharge of planning conditions allows flexibility to allow the scheme to progress and remain viable. That said GCRE Ltd recognise the need to address issues raised in planning conditions and air quality in particular nitrogen deposition in relation to Ecological Receptors is one such issue.
- 7.0.2 Chapter 14 of the Environmental Statement (ES) that accompanied the Planning Application deals with the assessment of Air Quality both in relation to construction and operation of the scheme.

- 7.0.3 The mitigation measures to be employed during the construction of the scheme are described in 14.10.1 of Chapter 14 (Reproduced here at Appendix A, together with supporting figures and Appendices). The purpose of this note is not to consider these issues, as details of the construction mitigation will be included in the Construction Environmental Management Plan (CEMP) to be submitted under Condition 11.
- 7.0.4 In terms of the operational effects of the scheme these have been modelled extensively in Chapter 14 of the ES and are based on the 'worst case scenario' of operation which assumes that the GCRE is fully operational and running using diesel locomotives for up to the first five years.
- 7.0.5 As can be seen from the above description of operations for Phase 1A the operations will be limited to the storage of rolling stock only for at least the first 12-18 months. The GCRE will **not** enter fully into service until Early 2025 as construction will be taking place up until that point.
- 7.0.6 Figure 14.1 of the ES shows the location of modelled sources. In relation to the Phase 1A sidings area Ecological Receptors E1,E2 and E3 are those that are the most likely to be affected.
- 7.0.7 Table 14-13 of the ES shows the Nitrogen Deposition Rates together with the % change together with the % change as a critical load.
- 7.0.8 For receptor E1 this is predicted as a 'worst cast' to be 1.6%, at E2, 1.3% and at E3, 1.6%.
- 7.0.9 Paragraph 14.9.31 of the ES states that:

" These predicted changes at receptors are also not necessarily considered to be significant; rather they cannot be considered to be insignificant at this stage without ecological evaluation by a biodiversity specialist. Further discussion of the impacts of the proposed development on nitrogen deposition at these locations, focussing on the specific habitat types in the receptor locations, is included in the biodiversity chapter (ES chapter 7)."

8.1 ES CHAPTER 7 ASSESSMENT

- 8.1.1 The key receptors that would potentially be affected during Phase 1A are considered in the modelling of receptors E1-E3 and are as follows :

8.1.2 Statutory Sites:

Gorsllwyn SSSI

8.1.3 Non Statutory Sites

Onllwyn Coal Washery SINC

Dyffryn Cellwen SINC

- 8.1.4 As well as the assessments made on Air Quality in Chapter 14, Chapter 7, Biodiversity, of the ES assesses the effects of Air Quality on biodiversity assets, in particular the above sensitive sites.
- 8.1.5 Condition 37 looks to detail the mitigation required for the operation of the full facility, however at this stage (Phase 1A) the nature of the trains using the facility for testing firstly is not known and secondly any trains using the storage sidings will be 'stabled' or parked.
- 8.1.6 With the exception of limited shunting movements (approximately once a month to avoid seizing of moving parts), those trains will remain stationary as the rest of the facility will not yet have been built.
- 8.1.7 These limited activities will be at a much lower level than those already undertaken on site and which have contributed to the baseline readings shown in Table 14-8.
- 8.1.8 In terms of impact even when assessed for the full operation of the scheme it is concluded in Paragraph 7.19.23 that *"Considering the above, it is not anticipated that there would be actual adverse effects on Gorsllwyn SSSI..."*
- 8.1.9 Also in relation to the two Non-Statutory SINCS a similar conclusion is reached in Paragraph 7.19.31 of the ES that *"Similary to the conclusion on likely effects to the SSSI from nitrogen deposition, it is not anticipated that there would be actual adverse effects on the two SINCS within the site."*
- 8.1.10 Whilst it is recognised that both 7.19.23 and 7.19.31 also recommend *"...that a precautionary approach is taken with regard to air quality impacts as a result of emissions by updating modelling data."* Taking account of the above statements and the assessments in Chapters 7 and 14 of the ES It is considered unnecessary for Phase 1A to update the air quality modelling and assessments relating to statutory, nonstatutory sites and ancient woodlands as emission levels during this stage will be far lower than those modelled as part of the ES assessment.

9.0 FUTURE MONITORING AND MODELLING

- 9.0.1 During the construction phase air quality monitoring will take place both for particulates, nuisance dust as well as if deemed appropriate NOx emissions. This data can then be used for data modelling purposes prior to the facility beginning operation.
- 9.0.2 Details of the location and types of monitoring will be included in the CEMP and will be agreed with the LPA prior to implementation.

10.0 CONCLUSION AND RECOMMENDATION

- 10.0.1 As the operations will be limited before the facility becomes operational, both in scope and duration it is concluded that any updated air quality modelling and assessments relating to statutory, nonstatutory sites and ancient woodland are not required for Phase 1A for the reasons set out above.
- 10.0.2 Before the facility comes into full operation in Early 2025 a much clearer understanding of the nature and types of trains using the facility will be known. It is suggested that at least 3 months prior to the opening of the facility that the Air Quality data is remodelled to take account of any known changes.

FIGURES & DRAWINGS

APPENDIX A