Natural Resources Wales
by email

20th January 2023

Our ref: 331201231L002

Dear Sir/Madam,

Re: Vaynor Quarry Transfer Licence Variation

Introduction

Transfer licence WA/057/0021/0014 was issued by Natural Resources Wales (NRW) to Hanson Aggregates UK (Hanson) on 27 September 2022 for Vaynor Quarry, near Merthyr Tydfil (the Site), with Stantec UK Ltd (Stantec) having acted as agents for the application. The application was for passive groundwater dewatering associated with historical abstraction, with the application made via the transitional arrangements application route. Sites that had been operating under licensing exemptions up until the beginning of 2018 were given a 2-year period in which to apply for abstraction licenses. Operators needed to demonstrate they comply with transitional provisions by obtaining evidence that an exempt abstraction had been undertaken in the 7-year qualifying period prior to 1st January 2018. An application via the standard route (for a variation or a new licence) is required for any planned increases to previously exempt abstractions.

This letter provides important background information and justification for a variation to the recently issued licence to accompany forms WRA and WRD. The technical note that accompanied the transitional licence application is attached for further information as Appendix C. The variation is required to licence increasing passive dewatering volumes as the quarry is further developed downwards and laterally, higher than dewatering volumes during the 7-year qualifying period.

Background

Quarrying has taken place at Vaynor since the 1870s. The quarry is currently inactive, and was last worked during 2007, with quarrying operations being intermittent for a number of years prior to that. The drystone processing plant was closed in 2002 and the asphalt plant also closed in 2003. The fixed plant was removed in 2008. Hanson have planning permission for mineral extraction at the Site, with quarrying expected to take approximately 100 years at an expected annual output rate of 500,000 tonnes. Although there is currently no definite date for resumption of quarrying at Vaynor, Hanson may need to resume quarrying at relatively short notice in order to meet market demands or large short-term orders.

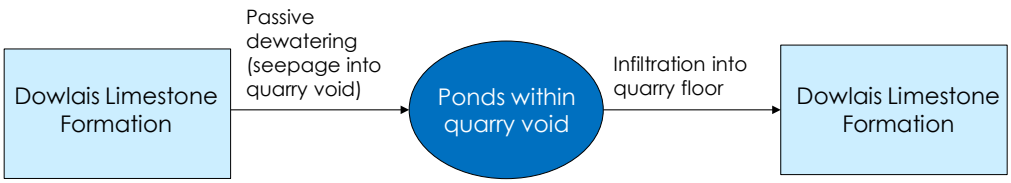
The nature of the Site means that working the quarry resulted in passive dewatering, with the passive dewatering continuing while the quarry has been inactive. Hanson has planning permission for mineral extraction in the Overall Mining Site shown edged red on Figure 2 below, although it is only planned to extract from a smaller area (due to land ownership) indicated by the orange shading in Figure 3 and the black hatched area in the figures within Appendix B. Previously, such passive dewatering would have been exempt from licencing for the full period of mineral extraction and in perpetuity.

To provide some context, the water movements (passive dewatering) at the site are summarised as follows:

- Water currently seeps from quarry faces, flows along the quarry floor and infiltrates back into the same aquifer further down gradient. No water is “lost” from the aquifer except what is thought to be a relatively small amount due to evaporation.
- These quarry faces are permanent features (unless and until modified by further quarrying) and seepage of water is passive (i.e. without human or mechanical activity or intervention). Seepage from these faces will continue in perpetuity.

This can be summarised in the following diagram (Figure 1).

Figure 1 Flowchart of water movements at Vaynor Quarry



A Review of Minerals Permissions (ROMP), submitted in August 2022, is currently being considered by NRW. A Hydrogeological Impact Assessment (HIA) was written by Stantec to review the impacts on the water environment and this formed Chapter 9 of the Environmental Statement (ES) for the ROMP. The HIA (Chapter 9) is provided as Appendix A to this application. The HIA concluded that the potential impacts to the surrounding water environment from quarrying up to the maximum extent (final development) are expected to be limited to the springs at Llwyncilsanws Farm (mitigated by providing an alternative water connection, such as mains, if necessary) and to two springs in the steep-sided valley of the Nant y Glais, for which there is no reasonable mitigation.

The current licence (WA/057/0021/0014)

The current transfer licence WA/057/0021/0014 covers a much more restrictive area than that which has planning permission for mineral extraction, covering only the areas previously quarried and including only the seepages identified by Stantec during its site visits. It is understood that the licence granted applies to this much reduced area in order to cover only the passive dewatering that was taking place at identified locations during the qualifying period (2011 to 2017) and there is no allowance for abstraction from any other seepages that may occur as a result of future development of the quarry laterally or vertically within the licenced area (as defined by Condition 2.1). Hanson is seeking to vary the licence to allow mineral extraction of the full mineral reserve in the permitted area.

Future development at the quarry

Future development at Vaynor would involve expansion of the quarry void below the groundwater table that would further intercept groundwater and this is expected to lead to an increase of passive inflows into the quarry. However, all of this water would continue to infiltrate into the same aquifer at the downgradient end of the quarry as it currently does (just at an increased rate), and there would continue to be no loss of water from the aquifer, save for that lost via evaporation.

Once all of the permitted quarrying is undertaken, it is proposed to restore the quarry to species-rich grassland with pockets of woodland planting as well as promoting natural re-colonisation of the quarry floor and faces. No infilling of the quarry is proposed. Therefore, passive dewatering and infiltration back to the aquifer will continue in perpetuity.

Proposed changes to the variation licence

We request that a varied licence allows passive dewatering within the full area of proposed mineral extraction. We have named this larger area “Area B”, with Area A being the currently licenced area. Area A and B are shown on Figure 2, and Area B is also shown on Figure 3 overlain on the final development plan. Area B includes all of Area A plus all of the proposed mineral extraction area.

The means of abstraction and infiltration will remain the same as in the existing permit. The flow rate of water from the quarry faces is likely to increase as the quarry is expanded, and the infiltration rate will increase in response to the additional water. As the rate of seepages from the quarry faces is both uncontrollable and unmeasurable, we presume that the limit on the licence, if granted, will

continue to be by a spatial restriction but covering the full proposed mineral extraction area (i.e. Area B).

Stantec

Figure 2 Area A and Area B overlain on the Overall Mining Site at Vaynor Quarry (original drawing by Tir Collective for ROMP application)

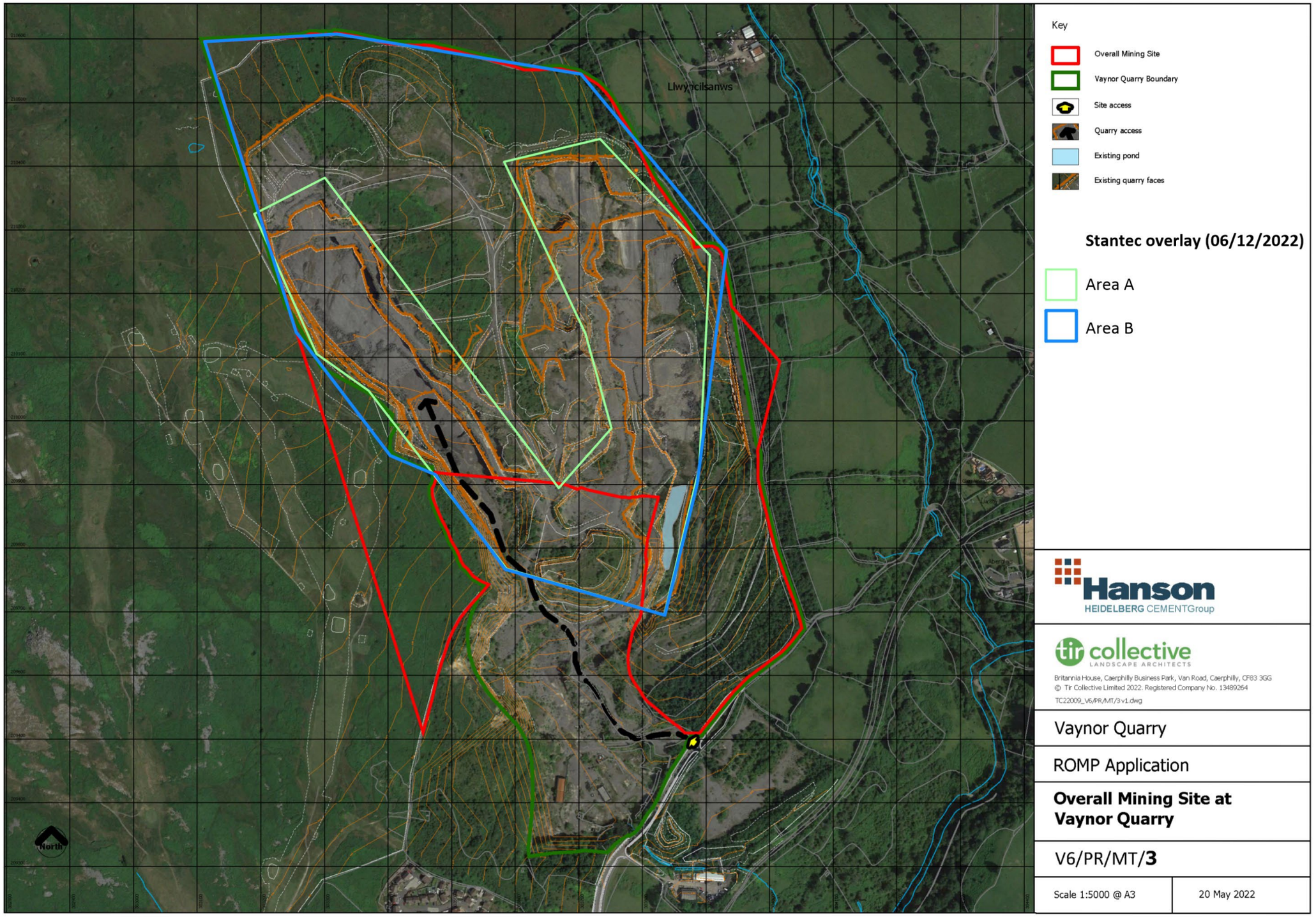
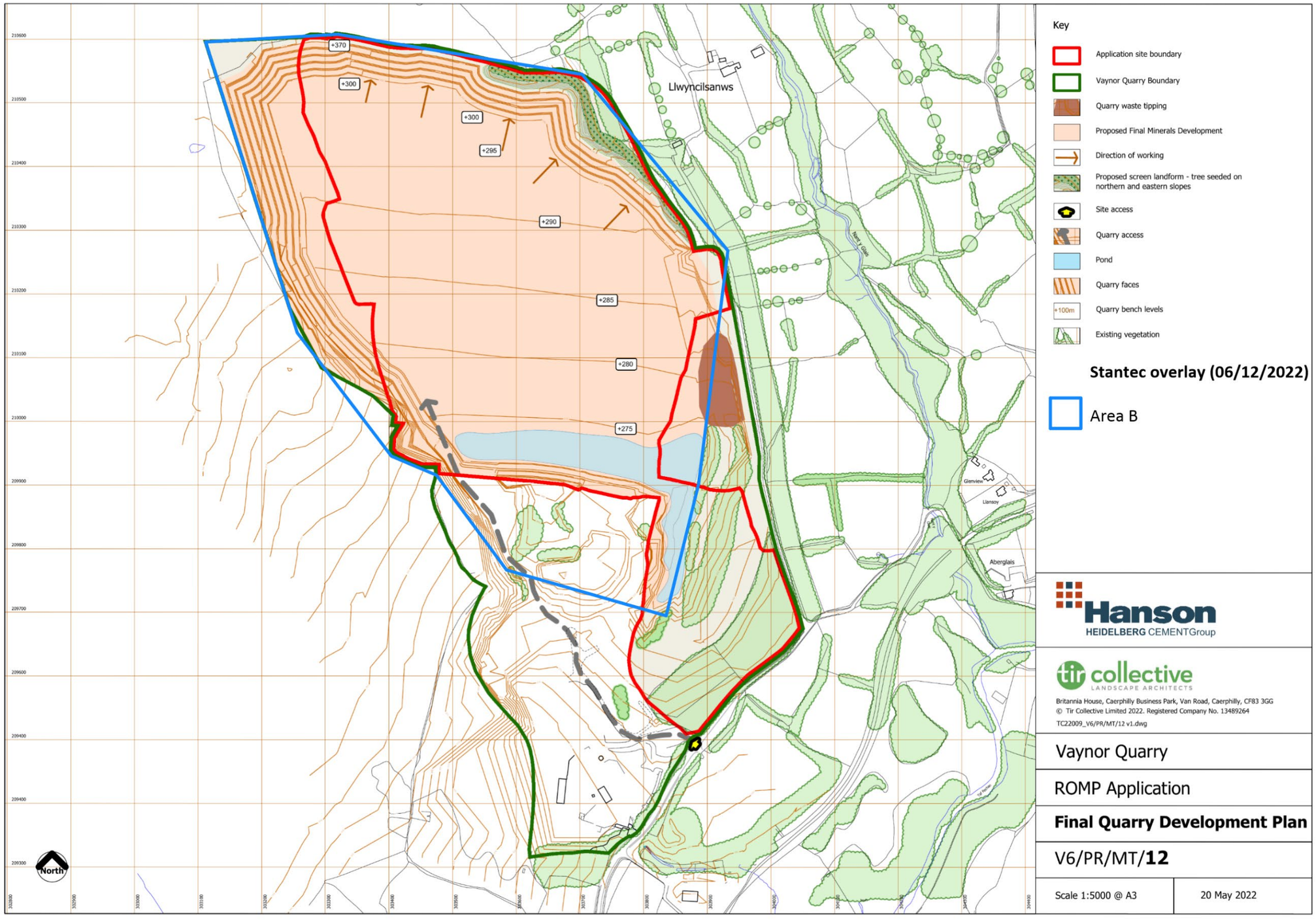


Figure 3 Area B overlain on Final Development Plans (original drawing by Tir Collective for ROMP application)



We have provided suggested updates to the wording of the licence based on the previous correspondence between Stantec and NRW on the transitional licence (Appendix D).

SCHEDULE OF CONDITIONS

1. SOURCE OF SUPPLY

1.1 Underground strata of the Dowlais Limestone Formation at Vaynor Quarry, Trefechan near Merthyr Tydfil.

2. POINT OF ABSTRACTION

2.1 Within the area marked Area B on the map and not outside the boundary formed by straight lines running between the following 10 National Grid References: SO 03112 10596, SO 03320 10608, SO 03704 10545, SO 03933 10268, SO 03887 09901, SO 03836 09694, SO 03585 09766, SO 03475 09915, SO 03404 09945 and SO 03256 10139.

3. MEANS OF ABSTRACTION

3.1 Uncontrolled gravity flow from seepages in the current and future quarry void within Area B.

4. PURPOSE OF ABSTRACTION

4.1 Transfer of groundwater from seepages in quarry faces to the infiltration pond within the quarry void in Area B, as a by-product of quarrying.

5. PERIOD OF ABSTRACTION

5.1 All year.

6. FURTHER CONDITIONS

6.1 (i) The Licence Holder shall ensure that water abstracted in pursuance of this licence shall be returned to the source of supply specified in condition 1.1.

(ii) The Licence Holder shall return water to the underground strata via infiltration from ponds within the quarry void (Area B).

We note that the ROMP application submitted in August 2022 is currently being considered by NRW as part of the statutory consultation process. This abstraction licence variation to allow working of the full planned reserve will have to consider the very same matters as have been considered in the HIA for the ROMP (namely the potential impacts of passive dewatering from the quarry expansion). Therefore, we expect that both the licence application and the ROMP to be considered in tandem.

Yours sincerely,

Andrew Tait

TECHNICAL DIRECTOR

Enclosed (A-D):

A. Environmental Statement for Vaynor Quarry ROMP – SLR Consulting (2022). Chapter 9 is the Hydrogeological Impact Assessment written by Stantec UK Ltd;

B. Figures to accompany Chapter 9 of the ROMP – Appendix 9.1 Stantec (2022);

C. Technical Note accompanying the transitional application (with Appendix D removed) – Stantec (2019). *Note that figures within this document show a slightly different application area (it includes the IDO area which is not included in the ROMP application). This was subsequently amended so please refer to the figures in Appendix 9.1 to the ROMP for up-to-date boundaries.*

D. Letter from Stantec to NRW Re Vaynor Quarry Transfer Licence, ref 331201231L001, dated 21 October 2022 (D1) and response from NRW to Stantec, ref WA05700210014, dated 16 November 2022 (D2).