Water Resources Decision Statement for an application for a water abstraction licence at Gore Quarry, Walton, Presteigne, Powys.

In this document, Natural Resources Wales ('NRW') means the Natural Resources Body for Wales ('the NRW') established by Article 3 of the Natural Resources Body for Wales (Establishment) Order 2012.

Please note that on 01 April 2013, the functions previously conducted by the Countryside Council for Wales ('CCW'), Forestry Commission Wales ('FCW'), and the functions of the Environment Agency within Wales ('EA/EAW'), (CCW, FCW and EA/EAW together 'the Legacy Bodies') were transferred to NRW.

In determining this application, NRW has exercised its duties and powers under the Water Resources Act 1991 (as amended) and the Environment Act 1995 and has taken account of guidance issued by the Legacy Bodies where relevant.

NRW has decided to issue the licence.

Application number: PAN-023639

Licence number: WA/055/0008/0006

NRW Region: Mid

Date of Application: 25/10/2023

Applicant details: Tarmac Trading Limited, Ground Floor, T3 Trinity Park, Bickenhill Lane, Birmingham, B37 7ES.

Summary of the proposal: The applicant, Tarmac Trading Limited, has applied for a new full abstraction licence to regulate a consumptive groundwater abstraction from an existing borehole at National Grid Reference (NGR) SO 25669 59311 for the purposes of wheel washing and dust suppression at the Gore Quarry, Walton, Presteigne, Powys.

Source of Supply: Underground strata comprising of Strinds Formation (sandstone).

Point of abstraction and quantities: At NGR SO 25669 59311. 3.5 litres per second (l/s), 12.5 cubic metres per hour (m^3/hour), 100 cubic metres per day (m^3/day), 19,244 cubic metres per year (m^3/year).

Means of abstraction: A borehole not exceeding 10.93 metres in depth and 800 millimetres in diameter with a submersible pump.

Purpose of abstraction: Wheel washing and dust suppression.

Abstraction period: All year.

Element withdrawn during determination: A non-consumptive abstraction for the purpose of dewatering Gore quarry, within the area formed by straight lines running between the following NGR's: SO 25829 59297, SO 25244 58700, SO 24986 58718, SO 25454 59341, SO 25672 59400, SO 25261 59083, SO 25111 58927, SO 25019 58674, SO 25111 58664, SO 25579 58910, SO 25610 59036 and SO 25791 59158. Dewatering would be required when the water table is intercepted, estimated to be at 234 metres above ordnance datum (mAOD). Water was proposed to be returned to the Riddings Brook at NGR SO 25900 59430 under a water discharge permit, reference AW40019022. Proposed abstraction quantities: 175 l/s, 633 m^3/hour, 5,698 m^3/day, 1,310,534 m^3/year.

Case history:

Date	Event
14/09/2022	An application for a new Groundwater Investigation Consent (GIC) submitted by Tarmac Trading Limited, reference PAN-019333.
08/11/2022	GIC issued to Tarmac Trading Limited, reference WA/055/0008/0004.
25/10/2023	An invalid application for a new full abstraction licence submitted by Tarmac Trading Limited, reference PAN-023639.
28/11/2023	Further information received; application deemed valid.
30/11/2023	Valid letter sent.
05/01/2024	Advertisement of the proposal taken place in accordance with Water Resources Act 1991 (as amended by the Water Act 2003) and the Water Resources (Abstraction and 4 Impounding) Regulations 2006. The proposal was advertised in a local newspaper (County Times on 15/01/2024) and on the NRW website.
17/06/2024	Application update letter sent to applicant, highlighting significant concerns with the dewatering aspect of the proposal.
12/08/2024	Partial withdrawal of the application to remove the dewatering activity proposed.
20/03/2025	Completion of relevant decision documents.

Justification of requirements and water efficiency: The applicant has applied for the following abstraction quantities: 3.5 l/s, 12.5 m^3/hour, 100 m^3/day, 19,244 m^3/year for the purposes of wheel washing and dust suppression. The hourly and daily abstraction rates allow for an 8 hour working day, 192 days a year.

The applicant noted that the main usage of the water is for wheel washing, an estimated 60-70% of the water abstracted, with dust suppression at 30-40%. However the

abstraction quantities are aggregated within the licence (between both purposes) to allow operational flexibility.

The applicant provided records of the abstraction from December 2018 to July 2022 to justify the water requested. The records show the average daily abstraction rates throughout each month, based on pumping occurring on weekdays only each month (but not correcting for bank holidays). The peak daily abstraction is 146 m^3/day in May 2020, with the second highest being 68 m^3/day in August 2021. The average monthly abstraction during the 2020-2021 period is 70m^3/day.

NRW note that the abstraction activity has taken place previously without regulation (i.e. prior to this application being submitted), due to uncertainty regarding the means of abstraction, please see site context below for more information. This information has been passed to NRW's area compliance team.

As the applicant's average records deviate less then 30% from the quantities applied for, NRW consider the quantities as fully justified and reasonable.

Resource assessment and water availability: The activity is situated within the River Wye Catchment. The Abstraction Licensing Strategy (ALS) for the River Wye states that the resources assessment status for this area is 'Restricted Water Available'.

Any application for a new abstraction licence will need consideration as to its impact on the River Wye Special Area of Conservation (SAC). Licences will only be granted if it can be demonstrated that the abstractions (with appropriate restrictions) will have "no adverse effect" on the site integrity of the River Wye SAC. There is no separate groundwater policy. The overriding factor with groundwater abstractions is the hydraulic connectivity to any surface watercourse. Applications will be assessed based on their impact on designated features and surface water availability may override local groundwater if a hydraulic link is known, proven via a borehole test pump or, if unknown, under the precautionary principle. If there is found to be connectivity, the River Wye Abstraction Licensing Policy applies. This policy sets a Hands off Flow on all consumptive abstractions of Q74.

NRW are satisfied that this proposal is not likely to impact upon surface water flows because the abstraction borehole is taking groundwater from a localised perched (isolated) waterbody, separated from the main body of groundwater. It is located within/on top of a hill within the quarry, therefore above (in elevation) the surface waters in the local area.

Impact assessment of proposal:

<u>Site context</u>

The applicant noted that an abstraction "well" was installed at the quarry over 10 years ago, and has been in use for dust suppression and wheel washing. There was little information available regarding it's construction. The applicant was of the understanding

that the well was put in place by digging out an area of rock, backfilling with gravel and installing a large diameter concrete slotted pipe in order to collect and pump the water, with the system recharged by surface water runoff and infiltration. Based on this understanding, the applicant considered that an abstraction licence was not required. However, during their more recent investigations it was concluded that the well is deeper than originally reported and is likely to be sourced from groundwater, therefore requiring abstraction regulation.

Test pumping and Hydrogeological Impact Assessment (HIA)

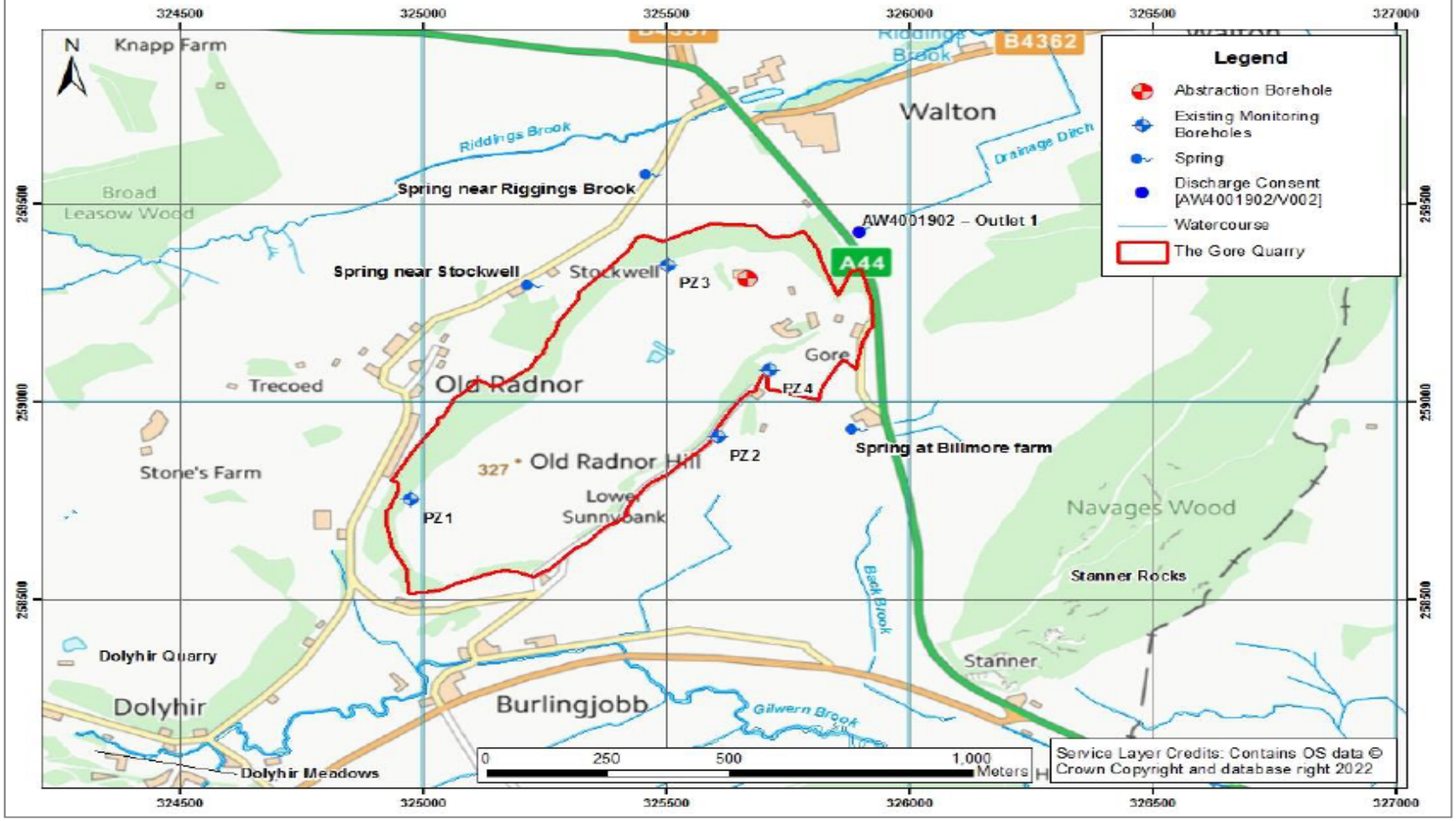
NRW issued a Groundwater Investigation Consent (GIC) on 08/11/2022, reference WA/055/0008/0004, to allow the applicant to undertake a test pump of the borehole (well).

The results of the test pumping have been incorporated into a HIA (reference: *331201262R1Rev1 - October 2023*) which was submitted with this application for a groundwater abstraction licence. The applicant was required to declare in this assessment if any complaints were received from nearby landowners or water users during the test pumping.

The GIC required a test pump with a minimum duration of 48 hours up to 96 hours to allow groundwater levels to stabilise during the testing. The test was completed for 74.4 hours (three days and two and half hours) with a subsequent recovery test being monitored for 68 hours when 58% of recovery (to pre-test rest water levels) was recorded.

Four piezometers (also monitoring the Strinds Formation) around the quarry were used for monitoring during the test pump (*see map 1 below*). Non-pumping, the piezometers showed that groundwater levels are higher in the South West corner of the site and reducing in elevation to the North East, implying a groundwater flow direction towards the North East. The springs at Bilmore Farm, Riddings Brook and Stockwell were visually observed during the test pump period. No flow was observed during the testing period. The springs are not used for potable water supply. Therefore, it was concluded that the spring were not at risk of derogation from the abstraction.

Figure 2-3 Surface water features and boreholes



Map 1

Initially the groundwater levels within the abstraction borehole dropped steadily, but after 900 minutes (15 hours) the groundwater levels dropped and the resultant time vs. drawdown graph showed a steep drop. This steepening of the graph indicates a low permeability (or no flow) boundary close to the borehole location, which will limit the yields of the borehole over time. If the abstraction rate is not managed appropriately, the borehole has the potential to dry up and recovery would be slow, as indicated by the recovery test not having reached full recovery in 68 hours.

Only PZ3 showed any noticeable effect from abstraction at the borehole. This is located close the abstraction borehole and to the west. PZ4 is the next closed monitoring location which does show a response to abstraction from the borehole. This indicates that the cone of depression from the abstraction borehole will remain within the confines of the quarry and derogation of local water features and users is limited and unlikely.

NRW did not commission an independent hydrogeological survey, as this does not form part of our process when determining a water resources licence application. Technical specialists within NRW carried out a full assessment of the information provided by the applicant in support of a licence application. NRW consider the borehole test pumping and assessment sufficient in demonstrating that impact from the abstraction borehole will remain within the confines of the quarry and there are no anticipated impacts to private water supplies in the locality or local water features. The abstraction duration is limited to 8 hours per day to allow the borehole to recover before subsequent use the next day. This has been captured within the Maximum Quantities Of Water To Be Abstracted condition (6.1) in the abstraction licence.

NRW are not liable to pay for any of the testing (done under the consent to investigate a groundwater source) nor for any of the consequences that may have arisen from the consent. The Consent Holder is responsible for making good and compensating for any loss, damage or injury (whether to persons or property, including water resources generally or derogation from individual sources of supply) resulting from the consent

Impacts on the water environment

NRW are satisfied that this proposal is not likely to impact upon surface water flows because the abstraction borehole is taking groundwater from a localised perched (isolated) waterbody, separated from the main body of groundwater. It is located within/on top of a hill within the quarry, therefore above (in elevation) the surface waters in the local area.

NRW consider the derogation of local water features (springs, streams, rivers etc.) is limited and unlikely.

Impacts to flooding

NRW consider that there are no impacts anticipated from the abstraction borehole activities on localised flooding because this is a fully consumptive abstraction, with water

being used in the processes of dust suppression and wheel washing. Any run-off associated with these activities will be discharged (via an existing settlement lagoon system) within acceptable parameters under an existing water discharge permit, reference AW4001902 (consolidated permit issued 07/07/2015). The Operator will need to comply with permit conditions to ensure the discharge activity operates the parameters of the permit. As the borehole abstraction activities have been operating historically, there no changes are anticipated.

The Riddings Brook is classified as an ordinary watercourse. Any works affecting an ordinary watercourse may need consent from the Local Authority.

Impact to water quality

There are no anticipated pollution impacts on any water features in the locality from the abstraction borehole activities. Any run-off associated with these activities will be discharged (via an existing settlement lagoon system) within acceptable parameters under an existing water discharge permit, reference AW4001902 (consolidated permit issued 07/07/2015). The Operator will need to comply with permit conditions to ensure the discharge activity operates the parameters of the permit. As the borehole abstraction activities have been operating historically, there no changes are anticipated. There have been no recent instances of non-compliance with the permit.

Impacts to ecology

NRW technical specialists have audited the data provided by the applicant and considered potential impacts on ecology. As the impact of the abstraction borehole will remain within the confines of the quarry, NRW do not anticipate any impacts on the local or wider ecology.

Impacts on the historic environment

In accordance with current working agreements, NRW consulted the Clwyd-Powys Archaeological Trust (CPAT) on 06/12/2024, however, no response was received. As the dewatering element of the proposal was withdrawn during the course of determination, there are no impacts anticipated on the historical environment by the borehole abstraction because the impact will remain within the confines of the quarry.

Impact to Water Framework Directive (WFD) status of waterbodies

This activity has screened out of requiring a Water Framework Directive Assessment due to it being a “green light activity” as defined in NRW Operational Guidance Note (OGN) 72: Guidance for assessing activities under the Water Framework Directive. The licence has been issued in-line with the test pump data and the Abstraction Licensing Strategy for the River Wye Catchment.

NRW are satisfied that there will be no deterioration in ecological status of the identified waterbodies as a result of the components of this activity authorised by the licence.

The proposal is not likely to have an impact on the CAMS status or WFD status as the following conditions will be imposed on the abstraction licence:

- Maximum abstraction quantities
- Metering and recording of abstracted quantities
- Time limit

Impact to National Conservation Designations

Natural Resources Wales is of the opinion that the proposal will have no conceivable impact on any sites designated under the Habitats Regulation or the CRoW Act due to the nature and location of the proposal.
Technical specialists within NRW carried out a full assessment of the information provided by the applicant and consider the borehole test pumping and assessment sufficient in demonstrating that impact from the abstraction borehole will remain within the confines of the quarry. Therefore, there is no potential to impact on any sites designated under the Habitats Regulation or the CRoW Act.

NRW Appropriate Nature Conservation Body (ANCB) confirmed agreement to these conclusions on 05/11/2024.

Impact to Protected Rights and lawful users

Through the advertising process (see 'External Representations' below), NRW is aware of many private water supplies in the local area. Due to: the distance between the borehole and private abstractors, the local geology of the area (borehole groundwater body separated from the main body of groundwater) and the nature of the proposal (historic abstraction), NRW consider the derogation of local water users (boreholes, springs, streams, brooks, rivers etc.) is limited and unlikely.

Statutory Consultation: NRW consulted with Dŵr Cymru Welsh Water (DCWW), the Statutory water undertaker, on 04/01/2024. DCWW raised concerns regarding potential impacts to a public water supply abstraction licence, because the dewatering element of the application may impact flows within the Gilwern Brook. As the dewatering aspect of the proposal was withdrawn during the course of determination and there are no impacts on surface water flows anticipated from the borehole abstraction, this concern has been satisfied. However, the applicant has been made aware of the concern and will need to address it if they wish to submit a future application for dewatering.

Cross-border consultation: NRW consulted with the Environment Agency (EA) on 09/01/2024. Several concerns (impacts to designated sites, WFD, derogation etc.) were raised in a response letter, primarily regarding the dewatering element of the application. After the dewatering element of the application was withdrawn, the EA confirmed that they were content for NRW technical specialists to make a decision on the application.

External Representations: In accordance with Water Resources Act 1991 (as amended by the Water Act 2003), the application was advertised in The County Times on 05/01/2024 and on the NRW website. Representations were accepted within the period specified in the press notice (28 days), for NRW to consider views before making a decision. The advertisement period was extended on the NRW website for an additional 2 weeks between 21/02/2024 and 06/03/2024 due to external interest in the application. Therefore a total of 42 days was afforded for members of public to submit a representation on the application. A summary of the concerns raised is provided below:

***Advisory note: The dewatering element of the application was formally withdrawn by the applicant during the course of determination. Therefore, the responses below address the representation concerns raised as they pertain to the consumptive abstraction borehole activity in isolation.**

Subject	Issue raised	NRW response
Flooding impacts	<u>Increased water discharge</u> • Discharging additional water from the quarry may cause increased flooding to properties located near the Riddings Brook. Measures (such as flood barriers and defences) have been undertaken to stop flooding. • The increase in water discharge from the quarry will have a detrimental effect on the stream leading to the Riddings Brook and could eventually flood the land that properties are located on. • There are currently flooding issues in the area (lands, fields and properties), some of which have been brought to the attention of Powys County Council. Residents do not want properties/ homes further endangered by unmonitored activities by business. • Increasing the volume of water in the Arrow/Lugg/Wye river system, which is already struggling to handle the more frequent high rainfall events of recent years. • Given the proposed volume of water abstracted/ discharged, increased flood risk and the potential to impact on access to properties. How will NRW ensure that access remains unaffected?	NRW consider that there are no impacts anticipated from the abstraction borehole activities on localised flooding because this is a fully consumptive abstraction, with water being used in the processes of dust suppression and wheel washing. Any run-off associated with these activities will be discharged (via an existing settlement lagoon system) within acceptable parameters under an existing water discharge permit, reference AW4001902 (consolidated permit issued 07/07/2015). The Operator will need to comply with permit conditions to ensure the discharge activity operates the parameters of the permit. As the borehole abstraction activities have been operating historically, there no changes are anticipated. The Riddings Brook is classified as an ordinary watercourse. Any works affecting an ordinary watercourse may need consent from the Local Authority.
	<u>Monitoring water discharge</u> • The applicant should have to monitor and fix any increase in local pooling and flooding resultant. • The immediate area is subject to periodic localised flooding and pooling of water from runoff. The applicant should be required to monitor the local area for any unintended consequences of the abstraction process and associated water flows, such as exacerbation of this flooding. As part of this, they should be required to gather and respond to any concerns of local people. This should be a condition of the licence.	The water discharge activity is regulated under discharge permit, reference AW4001902. The Operator will need to comply with permit conditions, including any monitoring requirements, to ensure the discharge activity operates within acceptable parameters.
Test pumping and Hydrogeological Impact	<u>Notification of test pump</u> • Local residents were not notified that the Test Pumping was being carried out.	<u>Notification of test pump</u> • There is no legislative requirement for consent holders to notify external parties that a test is happening.

Assessment (HIA)	• Condition 5 of the Groundwater Investigation Consent states that the Consent Holder must declare if any complaints are received from nearby land owners or water users during the test pumping. How would local residents know to complain if they didn't know about the testing? How could landowners monitor for any changes if they weren't aware of the testing?	Test pumping • The testing was completed during a period of river low flows. Undertaking the test at this time aids in assessing the impact of an abstraction during dry conditions when there is less water available. • The applicant noted that groundwater pumped from the Abstraction Borehole was diverted to storage tanks on the site. There were three storage tanks, one with a capacity of 100,000 litres and two tanks with capacities of 54,000 litres. • NRW raised concerns with the impact assessment for the dewatering activity, which was subsequently withdrawn by the applicant during the course of determination. As a result the abstraction rates have been greatly reduced and therefore have a smaller impact radius. The applicant has been made aware of these concerns and will need to address them with a more robust assessment if they wish to submit a future application for dewatering. The borehole abstraction activities have been operating historically; therefore no changes are anticipated.
	Test pumping • The Groundwater Investigation Consent Testing was completed in August, which is not appropriate because the local watercourse is at its lowest during the summer months. • The Groundwater Investigation Consent states that that pumped water must be disposed of in such a way as to prevent circulation back to the aquifer. How can this be prevented and how would it be disposed of? • The pumping test undertaken for the application appears to be based on significant extrapolation. The applicant is proposing to abstract 1,310,534m^3 per year, or 3,590m^3 per day, for 20 years. However, in the test undertaken, 108m^3 per day was abstracted for less than 3.5 days. The points of reference used to assess the impact of this pumping were boreholes or springs all less than 250m from the site boundary. Given the scale of the proposed abstraction and the number of people reliant on the local groundwater, the testing undertaken seems to be substantially underpowered. Again, how can NRW be sure that the proposed abstraction will not impact the water available to pre-existing local users?	
	Validity of the Hydrogeological Impact Assessment • In-depth impact assessments on the surrounding valley need to be carried out before any further extraction. • Additional scientific evidence that The applicant taking extra water will not impact the local water situation any further should be provided. • There is not sufficient understanding of the impact this level of abstraction will have on the water table of the land around the quarry. • There is a credible threat to the local Private Water Supply (PWS) in the area both interns of quantity and quality. Have NRW carried out baseline monitoring of every local property on the PWS register? • The potential impact of the de-watering on the springs and other water flows. It has previously been acknowledged that a likely impact from the	The dewatering aspect of the proposal was withdrawn during the course of determination, as a result the abstraction rates have been greatly reduced and therefore have a smaller impact radius. As the borehole abstraction activities have been operating historically, there no changes are anticipated. Technical specialists within NRW carried out a full assessment of the information provided by an applicant in support of a licence application. Applicants are required to carry out the pumping tests and produce a groundwater impact assessment in line with relevant guidance and best practice, including: • British Standard ISO 14686 (2003) "Hydrometric determinations – pumping tests for water wells – considerations and guidelines for design, performance and use". • Environment Agency (2012) 'Hydrogeological Impact Appraisal for groundwater abstractions • Scottish Environment Protection Agency (2013). Regulatory Method (WAT-RM-24) Pumping Test Methodology NRW consider the test pumping demonstrates that impacts from the abstraction borehole at an abstraction rate of 100m^3 will remain within the confines of the quarry and derogation of local water features/ users is limited and unlikely.

	proposed water abstraction would be the drying up of the springs and other water flows within 160 metres of the abstraction area and - in a "worst case scenario" - this would extend to 250 metres. In para. 5.2.3 of the Stantec Report page 44/163 it is stated that "the surrounding springs have not been considered in the impact assessment. However, the spring flow impacts may be considered further by NRW during the abstraction licence application". NRW should carefully consider this issue and the various implications of the quarry depriving landowners of water flows from these springs. • All existing boreholes have a right to at least 20m^3 per day. How can NRW be confident that this right will not be restricted given the large volume of water involved in the proposed abstraction? Particularly given that NRW would be liable to legal action should granting a licence impact this right and the inherent uncertainty in any hydrogeological survey associated with an abstraction of this scale and length. • How can NRW be certain that there will be sufficient water available for pre-existing local requirements (public water supply) when such significant abstraction is already being undertaken. • The hydrology report has not taken into account the local and historical knowledge of those living in the area and this knowledge would provide much useful information on water supplies and flow in the valley. • The authors of the Stantec Report seem unaware of the numerous springs, wells and streams on the south side of Old Radnor Hill. NRW should survey such surface water sources fully and fully assess the impact that quarrying has already had on those sources alongside analysing the impact dewatering will have in the future. • How are residents to believe the information submitted by an organisation who has specialists with reasonable skill levels? • The main concern is that the quarries hydrological survey hasn't be completed in enough detail and local residents don't believe that the impact of removing that quantity of water will only effect 250 meters of the abstraction. • A full and thorough monitoring process must be put in place and that this should monitor the effect on the valley as a whole not just the 250m zone identified in the report commissioned by the quarry.	In accordance with NRW guidance, a water feature survey of 500m was submitted in support of the groundwater investigation consent for the borehole activity (document reference: *Gore Quarry: Groundwater Investigation Consent Application 331201262TN1)*.
	<u>Requests for an independent survey</u>	NRW did not commission an independent hydrogeological survey as this does not form part of our process when determining a water resources licence application. Technical specialists within NRW carried out a full assessment of the information provided by the applicant in support of a licence application. We may

	• Request for an independent hydrology and hydrogeology survey to validate that commissioned by The applicant. • NRW should request The applicant provide a detailed Environmental Impact Assessment to determine the impact on the local water resources, considering both the aquifer and the Hindwell brook. • Request that a comprehensive hydrological and hydrogeological study be undertaken to assess the potential impact of the abstraction on local groundwater levels, particularly concerning boreholes. These studies need to take into account the impact on the surrounding ecosystem. • NRW should commission an independent hydrology and hydrogeology survey. The current report is inconsistent and contains errors. • Is Report which supports the application sufficient for decisions to be based, because it will have long term impacts upon the livelihood and well-being of the inhabitants of the area. This is a private sector firm commissioned by another private sector firm - where is the independence in that? An independent assessment of the potential impact of such a scheme should be undertaken, with a more detailed hydrological and hydrogeological analysis of the proposal. • It is essential that a 'second opinion' is sought to ensure that any further water extraction is genuinely benign for any of the surrounding community. Such a report should be done by an independent firm.	also request that an applicant provide further information or undertake additional assessments and/or surveys that are reasonably required in order to inform our decision making. This was not required because the dewatering aspect of the application was withdrawn. Applicants are required to carry out the pumping tests and produce a groundwater impact assessment in line with relevant guidance and best practice, including: • British Standard ISO 14686 (2003) "Hydrometric determinations – pumping tests for water wells – considerations and guidelines for design, performance and use". • Environment Agency (2012) 'Hydrogeological Impact Appraisal for groundwater abstractions • Scottish Environment Protection Agency (2013). Regulatory Method (WAT-RM-24) Pumping Test Methodology In accordance with NRW guidance, a water feature survey of 500m was submitted in support of the groundwater investigation consent for the borehole activity (document reference: *Gore Quarry: Groundwater Investigation Consent Application 331201262TN1)*.
Pollution impacts	<u>Increased water discharge</u> • Additional water pumped into the Riddings Brook will cause pollution. • The discharged water may be contaminated with petrol or oil or some other unpleasantries. Local residents regularly see pollutants in a small water course called the Riddings Brook. • What effects will the increase in emissions have? • Waste water from the quarry is currently put into a water course called Riddings, which is a tributary of the Hindwell. It is well known locally that this wastewater will regularly lead to froth and a multi-coloured petrol sheen. When the volume of wastewater increases as proposed from the dewatering process, what will be the impact on the river of the resulting pollutants on the heath of the river and the safety of the ground water for either human or animal consumption?	There are no anticipated pollution impacts on any water features in the locality from the abstraction borehole activities. Any run-off associated with these activities will be discharged (via an existing settlement lagoon system) within acceptable parameters under an existing water discharge permit, reference AW4001902 (consolidated permit issued 07/07/2015). The Operator will need to comply with permit conditions to ensure the discharge activity operates the parameters of the permit. As the borehole abstraction activities have been operating historically no changes are anticipated and NRW have no records of any recent instances of non-compliance with the discharge permit. The abstraction licence contains conditions to set the maximum abstraction quantities, location and periods of abstraction and the method of measurement and recording to aid compliance. Members of the public can contact NRW's incident hotline on 0300 065 3000 if there are concerns with non-compliance with the permit/licence conditions.

	• Due to increased risk of pollution, increased spill prevention and management should be required. • If the water is used for washing down the quarry yards and the gravel, it is going to be seriously polluting to the waterways and lands where the 'spill off' goes. • The risk of contaminating sub terranean aquifers in the area. • Potential severity of pollution incidents and spills will be significantly increased. This includes additional water flows (whether 'dirty', polluted or clean). As such, additional mitigation measures should be put in place and explicitly stated as a condition of the licence. • What action will be taken to prevent contaminated water returning to the existing watercourses? Streams and brooks have already been contaminated by polluted water from the quarry. • The Riddings Brook flows through local residents fields and provides access to several residential and business buildings. There have been persistent issues with discharge from the quarry, mainly white sediment but there may be other pollutants present. Will this issue be exacerbated by the huge increase in discharge? • Concerns for the rivers and streams which run nearby, which have suffered contamination in the recent past. • There have been past frequent instances of contamination of local water courses caused by discharge of water from The applicants operations. • The applicant has a history of affecting local watercourses. Up to relatively recently, the Gilwern/Back Brook regularly turned white or pale grey as a result of quarry washings (photo attachment included), mainly from Dolyhir. This pollution affected the stream to its confluence with the Arrow, and the river Arrow for several miles downstream, depositing layers of fine sediment on the riverbed (photo attachment included). Following repeated local complaints and incident reports to the Environment Agency, The applicant has introduced mitigation measures which appear to have been reasonably successful in reducing the pollution.	
Impacts to ecology	<u>Abstraction</u> • The reduction in groundwater could adversely affect the ecosystem and biodiversity in the local area.	<u>Abstraction</u> The application is for an abstraction licence to regulate an existing groundwater abstraction. NRW consider that there will be no changes to the current operations or additional impacts.

	• The abstraction activity may impact the ecology within the Summergil Brook /River Hindwell. • Extraction will cause the water table to drop which will inevitably impact local surface water sources that are vital for the survival of numerous ecosystems and agricultural enterprises. • What environmental damage will abstraction do to the area, and the water table? • The quarry has already destroyed acres of land with no attempt at regeneration of exhausted quarries. • There is no consideration on the potential risks of water abstract on the local and wider ecology. • The ecology of the Radnor Valley already suffers from the impacts of the quarry, the size of which is ever increasing. Now it is proposed to extract unsustainable quantities of water with further impacts on the environment and the community. • Taking that quantity of water will do so much damage to the local environment and community. • Abstraction will jeopardise the water table and sensitive ecology of the Walton Basin and wider Radnor valley. <u>Impacts to wildlife (fish, birds, otter etc.)</u> • Removing water from Radnor Valley will further contribute to the demise of the water ecosystem and in turn the biodiversity of Wales. This is because if one part of the ecosystem is destroyed, it has a ripple effect on the rest of the system. For example, without water there is no algae to feed the fish, and without fish the heron has no food and becomes displaced and lost to this area. • The proposed abstraction will affect the wildlife and plants living and growing nearby. Last year the Gilwern brook in Burlingjobb dried up leading to loss of fish and other animals and birds. If more water is taken this will happen more. This will harm the wildlife. • The River Arrow and its catchment support a highly stressed population of wild trout, salmon and indigenous invertebrates (English Crayfish). Water levels during summer months are already dangerously low and further extraction from the system will significantly add to the stress the wildlife is under.	NRW are satisfied that this proposal is not likely to impact upon local water features because the abstraction borehole is taking groundwater from a localised perched (isolated) waterbody, separated from the main body of groundwater. It is located within/on top of a hill within the quarry, therefore above (in elevation) the surface waters in the local area. NRW consider that impacts to local water features (springs, streams, rivers etc.) is limited and unlikely. <u>Impacts to wildlife (fish, birds, otter etc.)</u> NRW technical specialists have audited the data provided by the applicant and considered potential impacts on ecology. As the impact of the abstraction borehole will remain within the confines of the quarry, NRW do not anticipate any impacts on the local or wider ecology. Due to the nature and location of the proposal, there is no impact pathway to any sites designated under the Habitats Regulations or the CRoW Act. NRW Appropriate Nature Conservation Body (ANCB) confirmed agreement to these conclusions on 05/11/2024. There are no anticipated pollution impacts on any water features in the locality from the abstraction borehole activities. Any run-off associated with these activities will be discharged (via an existing settlement lagoon system) within acceptable parameters under an existing water discharge permit, reference AW4001902 (consolidated permit issued 07/07/2015). The Operator will need to comply with permit conditions to ensure the discharge activity operates the parameters of the permit. As the borehole abstraction activities have been operating historically, there no changes are anticipated. The impact of worsening dust particles is beyond Water Resources licencing remit.

	• The Hindwell Brook is a trout brook managed by the Wye and Usk foundation. There is concern around discharge into the brook causing imbalance to the quality of water, thus having a negative impact on the fish life. • There are otters inhabiting the water and the surrounding areas. Observed both the otters and the evidence they leave behind in Gilwern Brook, and they will be directly affected by this abstraction, should it be allowed to go ahead. Otters, by law, are protected are under the Wildlife and Countryside Act 1981, and furthermore by the Conservation of Habitats and Species Regulations 2017. This means that it is an offence to endanger or harm the otters and/or their habitat. • Concerns with the impact on river habitat (not least on invertebrate populations as a result of worsening dust particles) in immediate vicinity as well as the broader Wye catchment. • Concerns regarding a pool on a local farm that is fed by natural springs and supports a huge amount of wildlife.	
	<u>Pollution</u> • The threat to aquatic and other wildlife and flora from pollution in surface water.	The Operator will need to comply with permit conditions of discharge permit, reference AW4001902, to ensure the discharge activity operates within acceptable parameters.
Consultation	<u>Formal consultation regarding the licence application</u> • Why have local residents not been consulted on the application or had the opportunity to learn the rationale behind the proposal nor the opportunity to question the likely impact. • Why is there a deadline of February 2nd for public comments from the public, when there has been little dissemination of information? • The failure to communicate any of the plans to the local community or consult with them is unacceptable. • There are still many home owners/land owners in the area to be de-watered who are unaware of the application to de-water and as such are unaware of the potential impact on their property and or livelihood. Should there not be wider direct consultation with the various stakeholders who are likely to be affected before any decision is made?	In accordance with Water Resources Act 1991 (as amended by the Water Act 2003), the application was advertised in The County Times on 05/01/2024 and on the NRW website. Representations were accepted within the period specified in the press notice (28 days), for NRW to consider views before making a decision. The advertisement period was extended on the NRW website for an additional 2 weeks between 21/02/2024 and 06/03/2024 due to external interest in the application. Therefore a total of 42 days was afforded for members of the public to submit a representation on the application. NRW has met the legal requirements for public consultation of the application. Concerns regarding communicating plans to the local residents are beyond NRW's legislative requirements. The legislation does not require contacting individual members of the community to raise awareness of an application. Additionally an NRW Environment Officer attended a meeting between the applicant and the local community at Dolyhir Quarry Offices on 28/02/2024 to discuss the ongoing application with the local community. The site currently has an existing water discharge permit, reference AW4001902 (consolidated permit issued 07/07/2015).

	• NRW should ensure the details of all private water users both within and outside the expected 250m affected zone are lodged with NRW prior to the current consultation closure date. • The need for the expected future application for a discharge licence to be fully publicised and adequate time given for the receipt of responses. • Further investigations into the impact of the proposals on ground water levels in the surrounding area should be conducted and a more comprehensive public consultation process should be conducted before approving the application. • The applicant has not communicated their plans with the local community. • Only made aware about the application by chance. There has been no attempt to contact the community to discuss the issues raised particularly with those who could be affected. Does this mean the community will be disregarded and left to deal with the consequences of the application?	
Derogation (boreholes, wells, springs, streams, rivers etc.)	Derogation of local water users • Many properties in the vicinity of the quarry are not on mains water. They rely on their own boreholes. Any change in the underlying water table may affect their water supply. • Concerned about how the proposed water abstraction by the quarry will impact the quantity and quality of water available in a borehole in the village of Knill. It seems unlikely that it would not impact the availability of ground water in the locality. How will this impact be assessed? • If the depth of the abstraction is below the existing water table there will be serious consequences for the surrounding agricultural land. Farmers have already seen springs that have dried up on the south side of Old Radnor Hill due to extraction. • What are the implications for the surrounding area and in particular, boreholes? • Water sourced solely from a borehole (approx. 1.5 miles Northeast) which serves the farm stock and 5 properties. There is no access to a mains supply. Considering the extreme dry summers experienced over the last few years and taking into account the vast amounts of water	The dewatering aspect of the proposal was withdrawn during the course of determination, the abstraction rates have been greatly reduced and therefore have a smaller impact radius. The application is for an abstraction licence to regulate an existing groundwater abstraction. NRW consider that there will be no changes to the current operations or additional impacts. Any application for a new abstraction licence will need consideration as to its impact on the River Wye Special Area of Conservation (SAC). Licences will only be granted if it can be demonstrated that the abstractions (with appropriate restrictions) will have “no adverse effect” on the site integrity of the River Wye SAC. There is no separate groundwater policy. The overriding factor with groundwater abstractions is the hydraulic connectivity to any surface watercourse. Applications will be assessed based on their impact on designated features and surface water availability may override local groundwater if a hydraulic link is known, proven via a borehole test pump or, if unknown, under the precautionary principle. If there is found to be connectivity, the River Wye Abstraction Licensing Policy applies. This policy sets a Hands off Flow (HoF) on all consumptive abstractions of Q74. Technical specialists within NRW carried out a full assessment of the information provided by the applicant in support of a licence application. NRW consider the borehole test pumping and assessment sufficient in demonstrating that impact from the abstraction borehole will remain within the confines of the quarry and there are no anticipated impacts to private water supplies in the locality or local water features. The abstraction duration is limited to 8 hours per day to allow the borehole to recover before subsequent use the next day. This has been captured within the Maximum Quantities Of Water To Be Abstracted condition (6.1) on the abstraction licence.

	The applicant propose to abstract and store is raising concerns about how this will affect the water supply in the future. • The Hindwell Brook is one of the boundaries of a property, whose water comes from an adjacent borehole. This has supplied sufficient water in summer and winter for the last 50 years. Should the abstraction go ahead, legal advice will be sought if the borehole fails. • The abstraction figure is an enormous one, which is concerning for private water supplies, which have suffered considerably in recent years. • Concerns on impacts to a well supply within Hindwell in the middle of the Radnor Valley. • This will have an impact on the local community in terms of their own reliance on boreholes for their water supply, both on farms and for domestic use. • Most of the area does not have mains water and so residents rely on the underground water system. At present it is stable but come the summer months water it will be in short supply. Previously, drums of water were required, due to supplies drying up. If more water is taken this will become a year round problem. • Lowering of the water table to the point at which the various local boreholes for domestic and business water supplies, are jeopardized in terms of both water quality and availability. • Concerns regarding impacts to a property adjacent to the South and West boundary of the Gore Quarry. Over the years there has been supply of spring water to the associated fields, which has never ceased to flow for over 250 years, even in the most drought ridden years. • The impact assessment findings clearly show the Gore Barn Spring is within 160m, so within the area where The applicant say water levels will be affected and therefore it will have an major negative effect on the land by having no water for livestock and devaluing an extremely productive farm, with devastating effects to the biodiversity and habitat of the land. • The proposed abstraction licence being sought by The applicant raises several significant concerns for the residents of Knill. There are multiple boreholes in Knill which feed the various farming enterprises and residential properties.	NRW are satisfied that this proposal is not likely to impact upon surface local water users because the abstraction borehole is taking groundwater from a localised perched (isolated) waterbody, separated from the main body of groundwater. It is located within/on top of a hill within the quarry, therefore above (in elevation) the surface waters in the local area. Therefore, no HoF will be required on the abstraction licence.

	• NRW should carefully consider local groundwater availability to pre-existing water users in addition to assessing the river catchment impacts. • Will the River Gilwern dry up? The river is already under threat from large scale abstraction and the discharge which it has had to endure from the Dolyhir Quarry upstream about a mile. • Concerns regarding the derogation of multiple water source supplies at Lower Womaston (borehole, well and spring).	
	<u>Derogation of local water features</u> • The pumping may impact on the local environment especially as drought conditions are set to worsen. • What are the implications for the surrounding area and the other nearby water courses and the water table? • The water table in the Radnor Valley will be seriously affected. • This application has concerned local residents with regard to effects on the water table as pumping the levels applied for are colossal. • The brooks and streams that used to hold water every Summer, e.g. the Summergill have been witnessed drying up. Concerns regarding water availability if The applicant is allowed to abstract such a vast amount of water. • Concerns regarding water availability due additional impacts alongside existing abstraction, such as quarry, poultry /dairy & Public Water Supply. • The Summergill and its tributaries are drying up earlier in the season and running more erratically than previously. Further extraction will exacerbate this. • The activity will dramatically impact the water levels in the Radnor Valley and therefore impact anything that depends on natural water sources. • There is the possibility of the proposed development affecting groundwater availability not only in the areas immediately adjacent to the quarry but also farms and the settlements of Nash and Knill in the Riddings valley, and even the town of Presteigne.	

	• There are already decreasing water levels in a local brook in New Radnor and the water scarcity in boreholes and springs of local farmers. Therefore, any further extraction seems logically to jeopardise the natural water levels of the local community.	
Objections to the proposal	<u>Objections to abstraction application</u> • Objection to the applicant abstracting more water from the quarry. • Objection to groundwater abstraction application. • Objection to the proposal to abstract more water from the Radnor Valley. • Objection as a local landowner and resident in the Radnor Valley. • Objection as a local resident. • Objection to The applicant abstracting a further 1.5 million tonnes of water a year. As a private water supply user, concerns that it will impact private water supply	NRW are satisfied that this decision is compatible with our general purpose of pursuing the sustainable management of natural resources in relation to Wales and applying the principles of sustainable management of natural resources.
	<u>Objections to planning application</u> • Objection to the planning application of a further 1.5m tonnes of water being abstracted from the Radnor Valley. • Objection to the planning application. • Objection to The applicants planning application to extract 1.5million tonnes of water from Radnor. • Objection to The applicant planning application to abstract further water from Radnor quarry.	These comments are not relevant as they relate to the planning process. The existing planning permission allows quarry working to 164 mAOD.
Archaeological impacts	• The Vale of Radnor is an internationally important archaeological landscape with an archaeological resource There is also a large concentration of Scheduled Ancient Monuments (SAMs) in the Vale of Radnor. The potential impact of dewatering the quarry on the archaeological resource of the Vale of Radnor needs to be fully considered. In	In accordance with current working agreements, NRW consulted the Clwyd-Powys Archaeological Trust (CPAT) on 06/12/2024, however, no response was received. As the dewatering element of the proposal was withdrawn during the course of determination, there are no impacts anticipated on the historical environment by the borehole abstraction because the impact will remain within the confines of the quarry.

	particular, the potential risk it may pose to the preservation of in situ paleoenvironmental remains and other potential organic remains. As a baseline, it would be necessary for the application to consider the archaeological resource in the area in the form of a desk-based assessment. Further, monitoring of sites potentially at risk from dewatering should be undertaken by a suitably qualified contractor. Also, consultation with CADW and CPAT should be undertaken. This archaeological resource is important to the local community. • There are multiple Scheduled Ancient Monuments which must be, and have not been, addressed as part of in the plan as required by Planning Policy Wales, under 'Historic Assets'. Further still, the impact on the water table and the water level of the Radnor Vale must also be considered given the potential for waterlogged conditions which can preserve invaluable organic archaeological materials. • The Stantec Report makes very little reference to the international significance of the Walton Basin (to the orthodox of Old Radnor Hill) which has been a site of human activity from 10,000 BC (nomadic hunter gatherers) to being the site of some of the earliest settled farmers in this country around 6,000 BC. There is evidence in the basin/valley of huge Neolithic enclosures constructed around 4,000 BC. The Basin/ Radnor Valley has some interesting hydrological characteristics; from the Summergill which dries up in summer and groundwater which wells up in a series of springs on the far side of Hindwell Pool. Hindwell Pool the source of the Hindwell Brook which continues to flow throughout the year. (Ref. Clywd-Powys Archaeological Trust - Walton Basin) I suggest that quarrying to a depth below the level of the car park of the ex Crown Inn in Walton (on the east side of the valley) is likely to challenge water levels in the much-loved Walton Basin/Radnor Valley - and will be very evident to all observers. • The Hindwell Brook and pond are very important historical sites and should be left undisturbed in perpetuity.	
Impacts to business	• A local farming business may well be impacted by the proposed water extraction as a result of possibly reduced ground water levels in dry periods in the summer, reducing summer grass growth and arable crop yields. • The applicants proposals would endanger my business and the ecology of the Radnor valley.	In exercising its functions NRW must have regard to the health and social well-being of individuals and communities and the economic well-being of individuals, businesses and communities. Technical specialists within NRW carried out a full assessment of the information provided by the applicant in support of a licence application. NRW consider the borehole test pumping and assessment sufficient in demonstrating that impact from the abstraction borehole will remain within the confines of the quarry and there are no anticipated impacts to private water supplies in the locality or local water features that support local businesses.

	• The brook running through a residents land runs dry for much of the year, and these plans will exacerbate this situation and have a direct negative impact on their business. • Water sourced from the Riddings brook to south west boundary of the quarry for watering of livestock. The brook on the side of the quarry is supplied by water from 2 springs in close proximity to the Gore Quarry. Concerns that abstraction will impact the supply of water to these springs and also Summergill brook (which is already noticeability shorter of water in recent years due to already high levels of abstraction). • The water table has already fallen in an area where agriculture is a vital part of the economy, and in a time where ecosystems are under unprecedented threat. • A local businesses in the village of Walton on a private water supply concerned with The Application to extract one million tonnes of water per year from the Radnor Valley. • Reducing the water levels and therefore the fertility of the rich soils of Walton Basin, possibly even leading to wind erosion of the top layers of soil and risking the many agricultural enterprises operating in the area. • If water is abstracted from the valley there would be a vast disruption in the farming communities because that water supplies most of the farms in the area with water for their animals and crops, which means lots of flora and fauna would perish and many farms would have to be given up. • The water taken it is going to adversely affect the water table and consequently the agriculture in the valley. Farmers are already having to deal with periods of drought which put considerable stress on the crops, and any further 'man made' reduction in water availability for agriculture will be felt not just in the valley but throughout the food chain. The Radnor Valley is very good, fertile farmland. Much depends on the maintenance of the water table. • The valley serves as grazing land that sustains multiple farms. The abstraction of such a significant volume of water raises concerns about the potential impact on the ability of the valley to sustain livestock. What guarantees can be provided that the water abstraction will not detrimentally affect the agricultural viability of the valley?	NRW are satisfied that this decision is compatible with our general purpose of pursuing the sustainable management of natural resources in relation to Wales and applying the principles of sustainable management of natural resources.

	• Concerns with impacts to boreholes located at the three farm businesses, located in Knill. • Sufficient consideration has not been made to the impact of the application on local people and businesses. • Abstracting at the proposed volume of water could impact the viability of many pre-existing businesses. • Farmers need the brooks and streams flowing within the Radnor Valley to be able to provide water for their livestock. In some fields this is their only source of water, and livestock need to must have a continuous access to a suitable water supply to survive. The brooks drying up causes them to have a reduced flow and amount of water coming into some residential homes as there is not enough water being filled in filling their boreholes before being filtered in. Some have no other means of water as they are not connected to the mains water supply around Wales.	
	<u>Additional impacts</u> • The documentation associated with the application appears to make little consideration of the de-watering scheme on the economic livelihood, property and environment of the individuals and businesses within the area. It is difficult to identify anything which is going to impact on these stakeholders in a positive manner. The quarry will be imposing large external costs on the area to add to the noise, dust, water quality deterioration, light pollution, degradation of the road surfaces, blasting for which it is currently responsible.	The Operator will need to comply with permit conditions of discharge permit, reference AW4001902, to ensure the discharge activity operates within acceptable parameters. The impacts of noise, light pollution, degradation of road surfaces and blasting noise impact are outside of the Water Resources Act 1991 remit, and may be considered under other permissions e.g. planning permission.
	<u>Tourism</u> • Currently, Radnor Valley has a good flow of tourism, and sightseers, mainly due to the vast bodies of water that are able to be seen. This helps small businesses stay afloat, which is especially important after the drastic hit due to from Covid-19. If water is removed then this in turn will lessen the amount of water based tourist attractions, such as Water Break its Neck and the Elan Valley, as they are interlinked. This will have a ripple effect on those small businesses and events that are dotted around the attractions.	In exercising its functions NRW must have regard to the health and social well-being of individuals and communities and the economic well-being of individuals, businesses and communities. The application is for an abstraction licence to regulate an existing groundwater abstraction. NRW consider that there will be no changes to the current operations or additional impacts. NRW are satisfied that this decision is compatible with our general purpose of pursuing the sustainable management of natural resources in relation to Wales and applying the principles of sustainable management of natural resources
The activity	<u>Regarding the proposed activity and abstraction licence</u> 1. What will the water will be used for?	1. Water will be abstracted from an existing borehole at National Grid Reference (NGR) SO 25669 59311 for the purposes of wheel washing and dust suppression.

	2. How will the water be disposed of? 3. How deep is the extraction? 4. The routes for water abstracted from the site should be more clearly stated and the capacity, locations and pathways to the stated final destinations (Gilwern Brook, Riddings Brook etc) should be explicated and shown on maps with the application and licence. 5. The applicant are claiming to wash lorries, however, water may be used for concrete production (which is a pollutant). 6. The pathways of flows from abstraction to receptors (e.g. Riddings Brook) should be clearly indicated in application and licence conditions.	2. This is a fully consumptive abstraction, with all water being used in the processes of dust suppression and wheel washing. Any run-off associated with these activities will be discharged within acceptable parameters under an existing water discharge permit, reference AW4001902. 3. A borehole not exceeding 10.93 metres in depth and 800 millimetres in diameter with a submersible pump. 4. The location of the abstraction is stipulated in the licence through a condition and referenced in an associated map. There is no requirement to return water to the environment as this is a consumptive activity. 5. NRW consider the abstraction quantities and purposes applied for as fully justified and reasonable. The impacts of the abstraction upon receptors have been assessed during determination. There is no requirement for pathway of flows to be included within water resources abstraction licences.
	<u>Water efficiency</u> • The applicant should recycle its current water quota and adopt other water saving measures. • The applicant should be implementing some sort of rainwater collection and storage system to help with the amount of water required.	The applicant has noted that water for dust suppression is also taken from onsite lagoons which receive surface run-off to increase water efficiency.
	<u>Sustainability</u> • Will the source replenish or will it run dry? • What are the likely consequences over the next 20 years of this abstraction? • The report filed with the application indicates that the proposed level of abstraction is significantly in excess of sustainable levels. The results of the test conducted in August 2023 confirm that the Abstraction Borehole cannot sustain abstraction at the proposed level of 100m3 per day for 365 days a year without significantly damaging the flow of water into the brooks and thereby the lower catchment.	NRW consider the borehole test pumping and assessment sufficient in demonstrating that impact from the abstraction borehole are sustainable. A daily abstraction rate of 100m^3 was undertaken during the pump test. This will allow the borehole to recover before subsequent use the next day and been captured within the Maximum Quantities Of Water To Be Abstracted condition (6.1) on the abstraction licence. The abstraction licence is time-limited to allow for future reviews.
	<u>Cost benefit analysis</u> • Will it bring in an income for both parties?	The applicant will benefit from the availability of water for their operation. There will be a cost saving from not having to use mains water for this purpose. The applicant will incur the costs of maintaining the method of abstraction and of measuring the volumes of water they abstract. The applicant will have to pay the application fee, any advertising costs that apply and an annual subsistence charge based on their licensed

		quantity. Natural Resources Wales will incur the cost of determining the application and enforcing the licence. These costs will be partly recovered through the application charge and annual charges.
	<u>Monitoring</u> • There is an absence of credible monitoring of extraction volumes in future.	In accordance with current guidance, monthly records of water abstracted will need to be submitted to the NRW within 28 days of 31 in each year or within 28 days of the NRW requesting the records in writing. The Licence Holder will also be required to keep all records for at least 6 years and to make them available for inspection during all reasonable hours. The applicant has will be advised of the measuring requirements which will comply with Natural Resources Wales's Abstraction Metering Good Practice Manual (R & D Technical Report W84).
	<u>Derogation agreements</u> • Will NRW require The applicant to enter into a Derogation Agreement with existing local users of the groundwater resources?	NRW have audited the data provided by the applicant and consider the impact from the abstraction borehole will remain within the confines of the quarry and derogation of local water features is limited and unlikely. Therefore derogation agreements are not required.
	<u>Discharge</u> • How does NRW plan to properly assess the abstraction licence when there is no firm plan for the discharge/no discharge application yet made.	This is a fully consumptive abstraction, with water being used in the processes of dust suppression and wheel washing. Any run-off associated with these activities will be discharged within acceptable parameters under an existing water discharge permit, reference AW4001902.
Impacts to Water Framework Directive status of waterbodies	<u>The Gilwern brook</u> • The Gilwern is currently failing under the Water Framework Directive (WFD), categorised in the latest assessments as "Bad" for fish. One of the reasons for that failure is point source sediment from "industrial discharge." The Stantec report highlights the Riddings Brook in particular "….as potentially at risk of a significant impact….." by the proposal. The Riddings Brook is an important Brown trout spawning and juvenile habitat. It feeds the Hindwell, which provides Atlantic salmon spawning and juvenile habitat but is also failing WFD for fish (classified as "moderate"). The proposal is for up to 1,230,41m3 to be abstracted in total, all-year-round with no seasonal restrictions. While the Stantec report does not mention potential increased risk of impact to local streams during dry periods of extra abstraction and vehicle washing, it does acknowledge a flow reduction in springs feeding the Gilwern and Riddings brooks that will result. Flows in the Gilwern are already under considerable pressure. Sections of the streambed are known to dry up in periods of low rainfall	The dewatering aspect of the proposal was withdrawn during the course of determination, as a result the abstraction rates have been greatly reduced and therefore have a smaller impact radius. There are no anticipated water quality impacts on any water features in the locality from the abstraction borehole activities. Any run-off associated with these activities will be discharged (via an existing settlement lagoon system) within acceptable parameters under an existing water discharge permit, reference AW4001902 (consolidated permit issued 07/07/2015). The Operator will need to comply with permit conditions to ensure the discharge activity operates the parameters of the permit. As the borehole abstraction activities have been operating historically, there no changes are anticipated. NRW are satisfied that there will be no deterioration in ecological status of the identified waterbody(ies) as a result of the components of this activity authorised by the licence because abstraction borehole is taking groundwater from a localised perched (isolated) waterbody, separated from the main body of groundwater. It is located within/on top of a hill within the quarry, therefore above (in elevation) the surface waters in the local area.

	and climate change will exacerbate this. Most importantly, another reason given for its WFD failure for fish is “flow”.	
Impacts to sites designated under the Habitats Regulation and the CRoW Act	<u>Designated sites</u> • The water abstraction could affect one of Radnorshire Wildlife Trust sites, Burfa Bog Nature reserve approximately 2,200m North-East of the proposed extraction. This site is protected as a Site of Special Scientific Interest (SSSI) and changing the hydrology of the area could affect the sites’ capacity for water retention, and subsequently the sites biodiversity. As a SSSI Burfa Bog contains a mosaic of wetland habitats that are vital for Willow warblers (Phylloscopus trochilus) which are listed as Amber under the Birds of Conservation Concern 5: the Red List for Birds (2021). If Burfa Bog was to dry out due to decreased water levels in the local watercourses as a result of abstraction, they could dry out the wet Fen Meadows causing a decline in rare flora such as the, Heather Spotted Orchid (Dactylorhiza maculate and the Marsh Orchid (Dactylorhiza praetermissa). The deep peat in which the bog consists of, must remain wet, and RWT are ongoing management of the peatland areas, through the National Peat Action Programme coordinated by NRW. The natural bog sequester carbon and work to mitigate climate change, if these were to dry up as a consequence of water abstraction, there could be damaging effects to the local climate. • The Gilwern Brook and Riddings Brook are, tributaries of the river Lugg. The river Lugg is itself designated as a SSSI which, and it’s a tributary of the river Wye – a designated Special Area of Conservation (SAC) and approximately 28km from the proposed extraction site. Any discharge not captured by the attenuation ponds, could have damaging effects to the rivers and local water courses surrounding the proposed extraction sites. Species which could be affected include the Brown Trout (Salmo trutta) that is a priority species which requires a variety of freshwater habitats throughout their life cycle. The proposed abstraction could increase the drying events and reduce the potential habitat for the Brown Trout in the Radnorshire area. Similarly, the Summer Gill Brook, which is not mentioned in the proposal, and other seasonal brooks could be impacted by the water removal. These brooks are in the Wye catchment area and through seasonal drying events in summer, they provide ecosystem services and support a diverse biota that includes rare and endemic specialists. This ecological value could be lost if they dry permanently as a result of water abstraction.	NRW have audited the data provided by the applicant and consider the impact from the abstraction borehole will remain within the confines of the quarry. Therefore, due to the nature and location of the proposal, there is no impact pathway to any sites designated under the Habitats Regulations or the CRoW Act. NRW Appropriate Nature Conservation Body (ANCB) confirmed agreement to these conclusions on 05/11/2024.

Statutory consultation	Has the Statutory Water Undertaker been made aware of the application and did they have any concerns?	NRW consulted with Dŵr Cymru Welsh Water (DCWW), the Statutory water undertaker, on 04/01/2024. DCWW raised concerns regarding potential impacts to a public water supply abstraction licence, because the dewatering element of the application may impact flows within the Gilwern Brook. As the dewatering aspect of the proposal was withdrawn during the course of determination and there are no impacts on surface water flows anticipated from the borehole abstraction, this concern has been satisfied. However, the applicant has been made aware of the concern and will need to address it if they wish to submit a future application for dewatering. DCWW have been informed that the dewatering element of the application was withdrawn.
Compensation	<u>Derogation</u> • If abstraction impacts water availability in a private borehole, what recourse is there against the applicant? There are many local farming businesses that would be in the same circumstances. It is very plausible that abstracting that the proposed volume of water could impact the viability of many pre-existing businesses. • If indeed there are any impacts on ground water levels or other unforeseen impacts it seems a reasonable minimum requirement for any businesses in the area negatively impacted to be compensated appropriately for any losses incurred.	Due to the distance between the existing borehole and private abstractors, the local geology of the area (borehole groundwater body separated from the main body of groundwater) and the nature of the proposal (historic abstraction), NRW consider the derogation of local water users (boreholes, springs, streams, brooks, rivers etc.) is limited and unlikely. As the dewatering aspect of the proposal was withdrawn during the course of determination, the abstraction rates have been greatly reduced and therefore have a smaller impact radius.
	<u>Flooding</u> • Who will compensate residents for any damage and take responsibility for The applicants actions?	No impacts to localised flooding are anticipated, please refer to the ‘Impacts to flooding’ section above.
Other	• The quarry is a large company with very little concern for properties laying along the watercourse. • Local springs have dried up and residents are unsure why. • Allowing a commercial mining conglomerate to raid the natural resources of this unique and beautiful valley, with all the concomitant effects on it's ecosystem is unacceptable..	• NRW has determined the application in accordance with our duties and responsibilities. • NRW have assessed the proposal as applied for, including potential impacts to local water features and users and consider the impact from the abstraction borehole will remain within the confines of the quarry and derogation of local water features/ users is limited and unlikely as a result of this abstraction. • In exercising its functions NRW must have regard to the health and social well-being of individuals and communities and the economic well-being of individuals, businesses and communities. This duty does not include a power to require operators to provide or include specific community benefits as part of their abstraction scheme.

Costs/ Benefits:

Options considered	Option 1: issue the licences as applied for. Option 2: issue the licence with conditions. Option 3: refuse application.
Preferred option	Option 2
Reason for choosing preferred option	The costs and risks to the environment associated with this proposal do not make a refusal a reasonable or appropriate course of action. Conditions, such as maximum abstraction rate are considered necessary and adequate to. All conditions placed on the licence are in accordance with current legislation and policy.

Costs/ Benefits analysis: The applicant will benefit from the availability of water for their operation. There will be a cost saving from not having to use mains water for this purpose. The applicant will incur the costs of maintaining the method of abstraction and of measuring the volumes of water they abstract. The applicant will have to pay the application fee, the advertising costs that apply, and an annual subsistence charge based on their licensed quantity. Natural Resources Wales will incur the cost of determining the application and enforcing the licence. These costs will be partly recovered through the application charge and annual charges.

Compliance: The abstraction licence contains conditions to set the maximum abstraction quantities, location and periods of abstraction and the method of measurement and recording to aid compliance.

Monitoring: In accordance with current guidance, monthly records of water abstracted will need to be submitted to the NRW within 28 days of 31 in each year or within 28 days of the NRW requesting the records in writing. The Licence Holder will also be required to keep all records for at least 6 years and to make them available for inspection during all reasonable hours.

The applicant has will be advised of the measuring requirements which will comply with Natural Resources Wales's Abstraction Metering Good Practice Manual (R & D Technical Report W84).

Biodiversity and sustainable development: The principles of sustainable development and biodiversity are embodied in the conditions attached to the licence.

Social and Economic welfare of rural communities: NRW are satisfied that no adverse effects upon the social and economic well-being of local communities in the rural area are perceived as a result of this proposal. The impacts of noise, light pollution, degradation of road surfaces and blasting noise impact are outside of the Water Resources Act 1991 remit, and may be considered under other permissions e.g. planning permission.

Sustainable Management of Natural Resources: The abstraction licence issued is time-limited to allow for future reviews.

NRW are satisfied that this decision is compatible with our general purpose of pursuing the sustainable management of natural resources in relation to Wales and applying the principles of sustainable management of natural resources.

Conclusion and recommendation: Full and due consideration has been given to any representations made, and due regard has been taken of protected rights and other lawful interests.

The principles of sustainable development are embodied in the conditions attached to the licence.

The conditions incorporated on the licence are considered to be necessary and reasonable in the light of the available and presented evidence. The conditions are also considered to be consistent with appropriate standards for enforcement by Natural Resources Wales.

I therefore recommend approval of the application (as modified) and issue of Licence number WA/055/0008/0006 with the conditions as drafted.

Contact the Permitting team responsible for this decision:
Email: permittingconsultations@naturalresourceswales.gov.uk
Or write to:
Water Resources Team Leader
Permitting Service
Natural Resources Wales
Welsh Government Offices
King Edward VII Avenue
Cardiff
CF10 3NQ