

A MINERALS ASSESSMENT OF THE PANT WILKIN STABLES, COWBRIDGE, WALES

Prepared For
Tim Vaughan Racing Ltd

Report Prepared by



SRK Consulting (UK) Limited
31718

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1 INTRODUCTION

1.1 Background

SRK Consulting (UK) Limited (“SRK”) is an associate company of the international group holding company, SRK Consulting (Global) Limited (the “SRK Group”). SRK has been requested by Tim Vaughan Racing Ltd. (“Tim Vaughan Racing”, hereinafter also referred to as the “Company” or the “Client”) to prepare a Minerals Assessment report on a site located within the Pant Wilkin Stables landholding in Cowbridge, Wales.

It is the purpose of this document to demonstrate that the site, by virtue of its limited size and extent and its proximity to surrounding residential development that prior extraction of Limestone would be impractical.

1.2 Scope of Work

SRK understand that this Minerals Assessment is required to support a planning application for the site due to its location within a Minerals Safeguarding area, as defined by the Vale of Glamorgan Local Development Plan (“the LDP”).

The proposed development work includes provision of three fishing lakes covering a total area of approximately 1.7 ha, and two associated reed beds, as shown in Figure 1. Significant ground reprofiling works appear to be required to create the lakes. The current site landscape is shown in Figure 2.

Supplementary Planning Guidance for the LDP states that within a mineral resource safeguarding area, all applications for non-minerals development should be accompanied by a Minerals Assessment. The Minerals Planning Authority advise that Minerals Assessments should provide an appropriate assessment of the mineral resource, its potential for use in the forthcoming development and an assessment of whether it is feasible or viable to extract the mineral resource ahead of development to prevent unnecessary sterilisation.

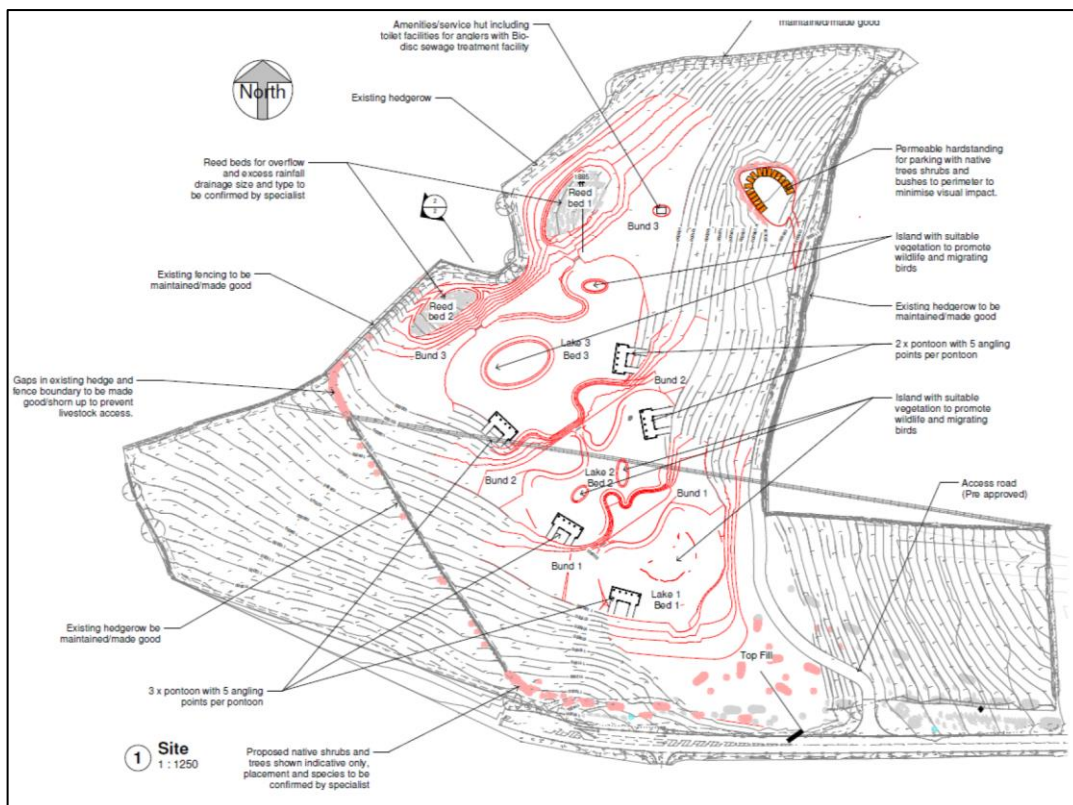


Figure 1 Proposed development works at the Pant Wilkin Site



Figure 2 Pant Wilkin site, looking northwest from the southeastern corner

1.3 Work Completed

To complete this Minerals Assessment, SRK has considered the following:

- the Vale of Glamorgan Local Development Plan (“LDP”);
- the geology of the site;
- the limestone resources of the Vale of Glamorgan;
- existing local developments, environmental reserves and historic sites; and
- the environmental impact of any proposed quarrying of limestone resources at the site.

Particular attention has been given to LDP policies SP9 (Minerals) and MG22 (Development in Minerals Safeguarding Areas), as these have a particular impact on the development planning considerations for the site. Other policies have also been considered where necessary.

To support this assessment, SRK visited the site on 27 May 2022 and made direct observations of the geology and local area in relation to the application.

1.4 Qualifications of Consultants

The SRK Group comprises over 1,400 staff, offering expertise in a wide range of resource engineering disciplines with 45 offices located on six continents. The SRK Group prides itself on its independence and objectivity in providing clients with resources and advice to assist them in making crucial judgment decisions. For SRK, this is assured by the fact that it holds no equity in client companies or mineral assets.

SRK has a demonstrated track record in undertaking independent assessments of resources and reserves, project evaluations and audits, Mineral Experts’ Reports, Competent Persons’ Reports, Mineral Resource and Ore Reserve Compliance Audits, Independent Valuation Reports and independent feasibility evaluations to bankable standards on behalf of exploration and mining companies and financial institutions worldwide. SRK has also worked with a large number of major international mining companies and their projects, providing mining industry consultancy service inputs.

This report has been managed/overseen by Mr Mark Campodonic, who is a full time employee of SRK Consulting (UK) Ltd. Mark Campodonic (MSc, MAusIMM(CP)) is Corporate Consultant (Resource Geology) and a Practice Leader of SRK UK with over twenty years of international experience in mineral exploration, resource estimation and project development. Mr Campodonic is a Member of the Australian Institute of Mining and Metallurgy, and has a Chartered Professional status (MAusIMM (CP)), and has sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration and to the activity which he is undertaking to qualify as a Competent Person (“CP”), as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, 2012 Edition’ and as a Competent Person (by Recognised Professional Organisation-RPO) as defined in the Pan European Reserves and Resources Reporting Committee and the PERC Standard for Reporting of Exploration Results, Mineral Resources and Mineral Reserves (the ‘PERC Reporting Standard’). Mr Campodonic has more than 20 years’ international experience in the field of geology, exploration, sampling, and resource and reserve estimation.

2 SITE APPRAISAL

The site area is shown in Figure 3. The entire site lies within a Category 1 Minerals Safeguarding Area, noted as being of national importance to Wales (and in some cases the UK). This category includes minerals which are of particular economic importance due to their high quality and/or limited occurrence across the UK.

The limestone formations at the site are denoted as '*High Specification Aggregate – Carboniferous Limestone*', and the southern section of the site is identified as high purity (>97% CaCO₃). This limestone is mainly used in non-aggregate uses due to the necessity for the stone to be of the highest chemical purity hence the need for rigorous safeguarding measures.

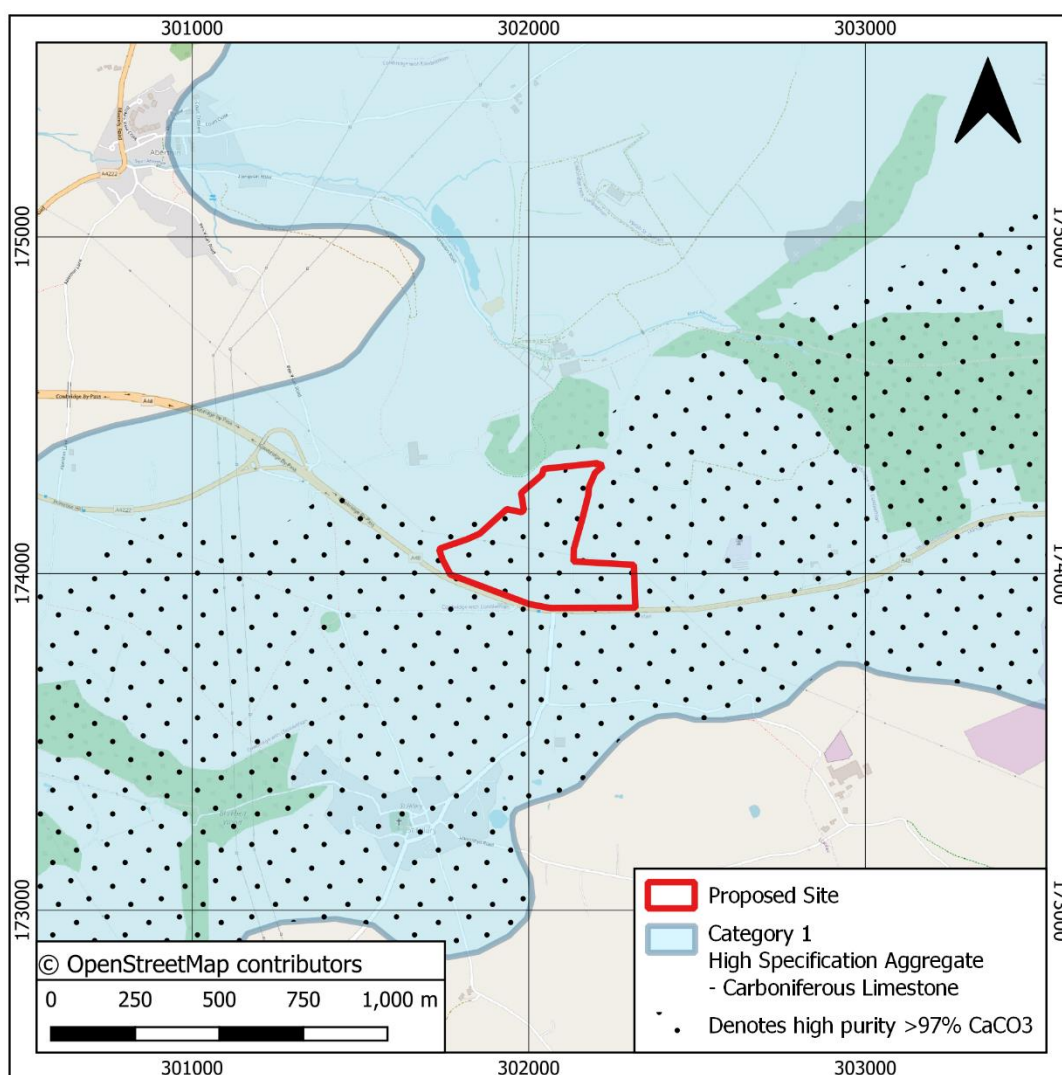


Figure 3 Category 1 Minerals safeguarding areas

3 GEOLOGY OF THE SITE

Geological data from the British Geological Survey ('BGS') shows the site is underlain by two limestone formations. The Gully Oolite formation underlies a small section in the south of the site, with the remainder underlain by the Friars Point Limestone formation. No overburden is described, but the site is covered by a thick soil layer. A BGS geology map of the site is shown in Figure 4.

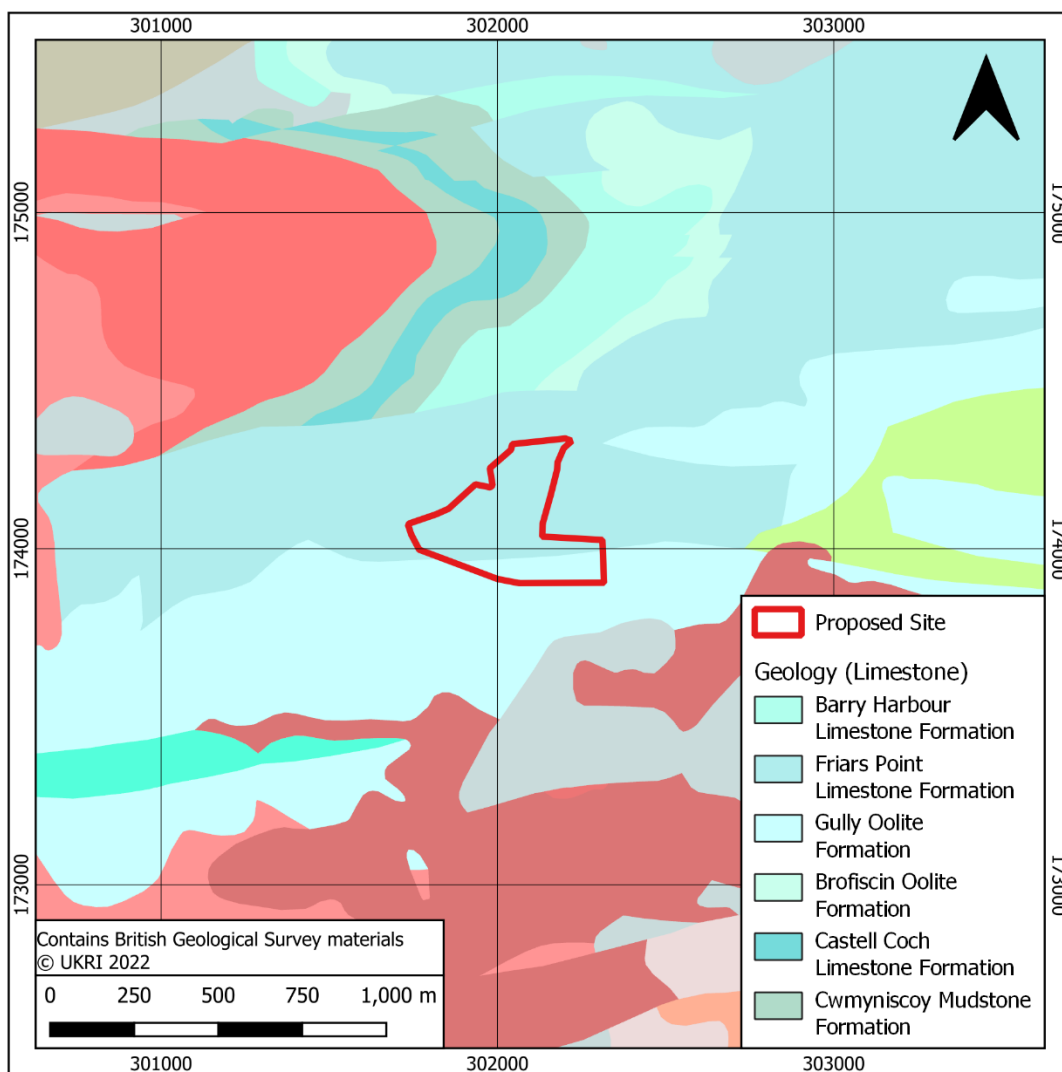


Figure 4 BGS 1:50,000 mapped bedrock geology of the site and surrounding area

There is no borehole drilling data available from the BGS from the site or immediate area.

4 LOCAL DEVELOPMENT PLAN POLICIES

4.1 MG22 - Development in minerals safeguarding areas

MG22 states the following:

“Known mineral resources of sandstone, sand and gravel and limestone are safeguarded as shown on the proposals map.

New development will only be permitted in an area of known mineral resource where it has first been demonstrated that:

1. *Any reserves of minerals can be economically extracted prior to the commencement of the development; or*
2. *extraction would have an unacceptable impact on environmental or amenity considerations; or*
3. *The development would have no significant impact on the possible working of the resource by reason of its nature or size; or*
4. *The resource in question is of poor quality / quantity.”*

Policy MG22 provides several factors that should be considered to demonstrate that prior extraction from a site is not appropriate. These are shown in Table 1.

Table 1 MG22 - Considerations that may prevent prior extraction

	Consideration	Justification
1.	Is the resource constrained by existing sensitive development?	If extraction would have an unacceptable impact on environmental or amenity considerations, the development would be acceptable under LDP Policy MG22(ii). No further justification is required
2.	Are there any environmental constraints to Prior Extraction?	<p>Prior extraction could have unacceptable impacts on important environmental features. The Council will need to consider whether environmental considerations outweigh the need for prior extraction.</p> <p>Details of following features could be impacts on the provided as part of any justification:</p> <ul style="list-style-type: none"> • Landscape designations (e.g., Special Landscape Areas) • Historic assets and their settings (e.g., Listed buildings, Historic Parks, Conservation Areas) • Ecological and biodiversity features (e.g., Sites of Importance for Nature Conservation) • Hydrology impact on groundwater or flood risk; or

		<ul style="list-style-type: none"> • Land stability. <p>For example, see LDP Policies MG17 (Special Landscape Areas), MG25 (Mineral Working), MD7 (Environmental Protection) and MD8 (Historic Landscape).</p>
3.	Would there be any adverse cumulative or incremental impacts on the resource?	If it can be demonstrated that the development would, have no significant impact on the possible working of the resource by reason of its reason of size then nature no further justification would be required. However, consideration should be given to the impact that incremental developments could have on the future working of the wider resource, particularly when other existing or approved developments are considered.
4.	Is the mineral confirmed would and Prior Extraction be viable?	If the mineral resource in question is in insufficient quality or quantity to be economically viable to extract, then prior extraction will not be required.
5.	Are there other reasons why prior extraction cannot take place?	<p>Prior extraction may not be appropriate for a number of reasons and each case will need to be considered on its merits. For example, it may not own be technically feasible, it could delay the justified development beyond a reasonable timescale, or there may be no market for the material taking into account the timescale of the development and storage may not be appropriate.</p> <p>The following may be relevant in these cases:</p> <ul style="list-style-type: none"> • Additional costs or savings - effect on deliverability and viability of the proposed development; • Interested operator/local market for the minerals; • Distance from the site to market destination; • Possibility of mineral storage and processing (on or off-site) for use or later use/export; or • Overriding need for the development without unreasonable delays.

	<p>Developers will be required to demonstrate why it is not practical or desirable to extract the material in conjunction with the proposed development. They will also be required to demonstrate why it would not be possible to modify the proposal to avoid sterilisation of the resource. In considering such justification, the impact of phases of development which could provide the ability to store materials prior to exporting off site should also be considered.</p> <p>If it is considered that there is no market demand for the mineral resource at the time of the application, information regarding the viability of the resource will be required. Responses from three credible sources will normally be expected to be provided by the applicant as evidence that the matter has been investigated. As market demand for mineral resources changes over time, this is a matter that would need to be re-tested should a re-submission be made at a later date.</p> <p>The Council will need to consider whether the need for the development and these factors, outweigh the need for prior extraction. If, having carried out the above evaluations, the Council cannot identify a sufficiently justified reason why prior extraction cannot take place in conjunction with the development, a planning application for the prior extraction of the mineral will be required.</p>
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4.2 Item 1 - Constraints of the resource by existing sensitive development

Limestone resources require deep quarrying extraction, which predominantly consists of drilling and blasting, followed by loading and hauling, and finally crushing and screening. A minimum buffer distance of 200 m from sensitive development is therefore required for extraction. Sensitive development includes *“any building occupied by people on a regular basis and includes housing areas, hostels, meeting places, schools and hospitals where an acceptable standard of amenity should be expected...”* (Minerals Safeguarding Supplementary Planning Guidance, 2018).

Figure 5 shows the proposed site, along with 200 m radius buffers from selected sensitive developments including residential developments, the Pant Wilkin Farm and Public House. Buffers are also included for sites of environmental and historic significance, further details of which are provided in Section 4.3.

The close proximity of sensitive developments to much of the site would make the extraction of minerals inappropriate. Whilst these buffers do not cover the full site, the size and extents of the remaining area (and limestone resource) make it highly unlikely to be economically viable for extraction.

4.3 Item 2 - Environmental constraints on prior extraction

SRK consider that there are multiple environmental constraints on the land which would prohibit prior of future extraction of limestone from the site. This includes:

- Llanquian Castle and Llanquian Wood Settlement Camp Scheduled Monuments are located immediately north of the site. Whilst no specific buffer between these sites and any proposed mining is provided within the LDP policies, SRK have considered a 200 m to limit the impact of noise pollution and blasting (shown in Figure 5).
- The site is bound to the north by Llanquian Wood, a Site of Importance for Nature Conservation ("SINC"). The noise and air pollution created by quarrying at the site would have an unacceptable impact on this environment.
- Were the site to be considered for extraction, it would be necessary to provide some form of attenuation barrier between the extraction area and residential developments. This would likely take the form of berms and screens, which would be unlikely to be acceptable from a visual standpoint.
- To allow continued safe operation of the Pant Wilkin Stables and to protect the welfare of horses and other animals at the site, SRK consider that a buffer would be required between any mining activities any areas used for grazing, training or housing of horses. Noise and air pollution or vibrations caused by these activities could cause health issues and stress in the animals.
- Operation of any mineral workings in this area would also necessitate significantly increased vehicle traffic, further adding to the noise and air pollution introduced by any working.

Due to the above factors, SRK consider that prior extraction of limestone from the site would have an unacceptable impact on the local environment.

4.4 Item 3 - Limestone resources within the Vale of Glamorgan

SP9 states that:

Based on the Council's landbank reserve figure at July 2016 (31,962,000 tonnes) and the 10 year average production figure the Vale of Glamorgan landbank for hard rock aggregate was 40.7 years giving a landbank of 30.7 years available at 2026. Reserves of hard rock for non-aggregate production (i.e. cement production) are sufficient for 19.8 years supply. The Vale of Glamorgan therefore has sufficient reserves to satisfy the requirements of the Regional Technical Statement.

Reserves at sites such as Ruthin Quarry and Garwa Farm Quarry, where time limited extraction comes to an end in 2017 and 2019 respectively, are included within the landbank. The permitted level of extraction will not be completed at these sites within these time periods but there is no environmental or amenity reason for not extending the time limits to allow winning and working of the resource to continue.

The following are active mineral working sites in the Vale of Glamorgan and inactive sites where future working is considered likely to occur:

1. *Aberthaw - Liassic*

2. *Ewenny - Carboniferous*
3. *Forest Wood - Carboniferous (Shared with Rhondda Cynon Taf)*
4. *Pant - Carboniferous*
5. *Pantyyffynnon - Carboniferous*
6. *Longlands - Carboniferous*
7. *Lithalun - Carboniferous*
8. *Wenvoe - Carboniferous*
9. *Garwa Farm * - Carboniferous*
10. *Ruthin *- Carboniferous*

** Currently inactive but held in reserve*

In Policy MG25 (Mineral Working), the Council state that “...*the current landbank of reserves with planning permission at existing mineral working sites within the Vale of Glamorgan, there is no requirement for the Plan to allocate additional areas for limestone extraction.*”

The extents of Category 1 Limestone resources are shown in Figure 6.

It is reasonable to conclude that the high-quality limestone resources of The Vale of Glamorgan are extensive and not scarce. Given the extensiveness of the resource, site selection is likely to be based on commercial cost of extraction. Extensions to existing sites, re-opening of dormant sites or the initiation of dormant consents are likely to be the most viable extraction options.

Extraction of aggregate on a small site adjacent to residential and commercial developments is unlikely to represent a viable site for extraction of limestone.

It is also noted that the proposed development is unlikely to have any impact on the possibility for future extraction of resources from adjoining sites, and so does not sterilise resources from a footprint larger than the site itself.

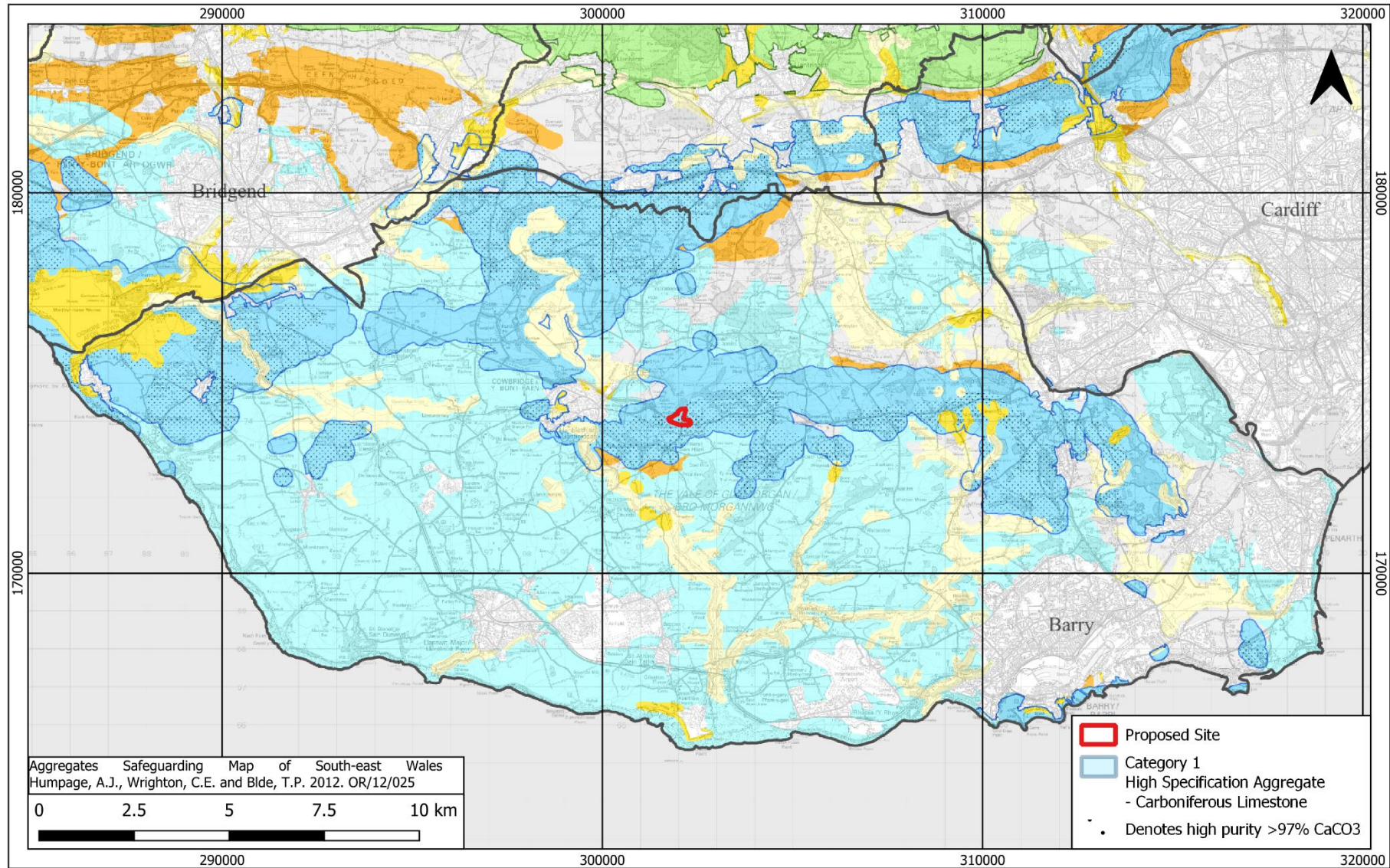


Figure 6 Vale of Glamorgan Aggregate Safeguarding Map

5 CONCLUSIONS

For the reasons outlined above, SRK do not consider the site to represent a viable commercial mineral resource.

Application of a 200 m buffer from sensitive developments and historical sites prevents extraction of limestone from most of the site, with very little potential limestone resource remaining. Whilst a 200 m buffer is considered a minimum, it is likely that a larger buffer would be required to allow safe operation of existing businesses such as the Pant Wilkins Stables, likely excluding the whole of this site as safely exploitable.

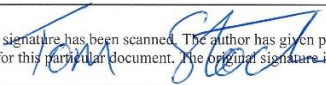
Operation of mineral workings at the site would also introduce significant and unacceptable environmental detriments, such as noise, vibration and air pollution. Strategies to mitigate this impact, such as berms and barriers would be unacceptable on a visual basis.

Given the availability of high-quality limestone resources within The Vale of Glamorgan, the site is of a size and scale which would have a negligible impact with respect to sterilising an exploitable mineral resource.

As such, SRK consider that the first, second and third considerations which would prevent prior extraction of resources have been demonstrated. SRK consider that the proposed development is exempt from mineral safeguarding on this basis.

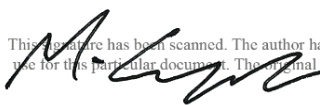
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