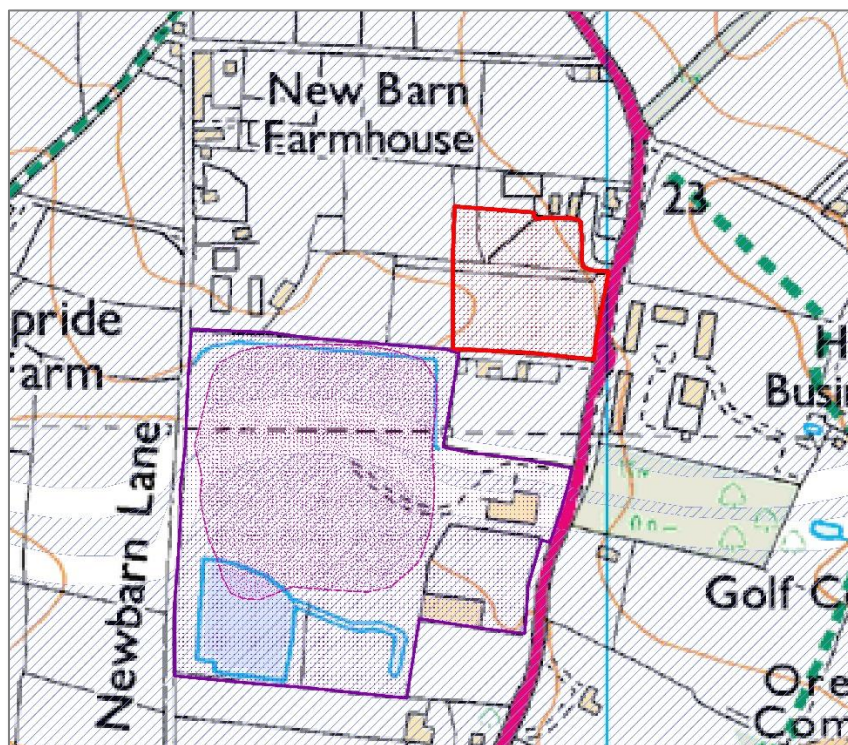


SABBG HOLDINGS LIMITED

Land North of The Old Brickworks,
Shoreham Road, Henfield.

Mineral Resource Assessment



Final Report, 26th November 2024



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CONTENTS

Introduction and Terms of Reference	2
Qualifications and Experience	3
Basis of Assessment	3
Geology and Mineral Resources	3
Mineral Safeguarding Policy.....	4
Assessment	5
Conclusions	6

Introduction and Terms of Reference

1. On 19th September 2024, Cuesta was instructed by Lisa DaSilva of DMH Stallard, on behalf of SABBG Holdings Ltd, to undertake a **Mineral Resource Assessment** in connection with their proposed planning application for commercial/business development on land north of the Old Brickworks, Shoreham Road, Henfield, West Sussex BN5 9SE.
2. The assessment is required because the Site falls within a defined '**Mineral Safeguarding Area**' (MSA), as set out in the West Sussex Joint Minerals Local Plan (JMLP). The JMLP requires that, where non-mineral development is proposed within an MSA, developers may be required to carry out investigation work to ascertain whether economically viable mineral resources are present and whether or not the prior extraction of such resources may be practicable.
3. **Figure 1**, below, shows the location of the site (outlined in red) in relation to the local outcrop of the Lower Cretaceous Weald Clay, which forms the safeguarded brick clay resource in this area (diagonal shading). The map also shows the extent of the old brickworks directly adjacent to the site, to the south, and the approximate extent, within that, of the former brick pit, including a closed landfill site within the former excavation.

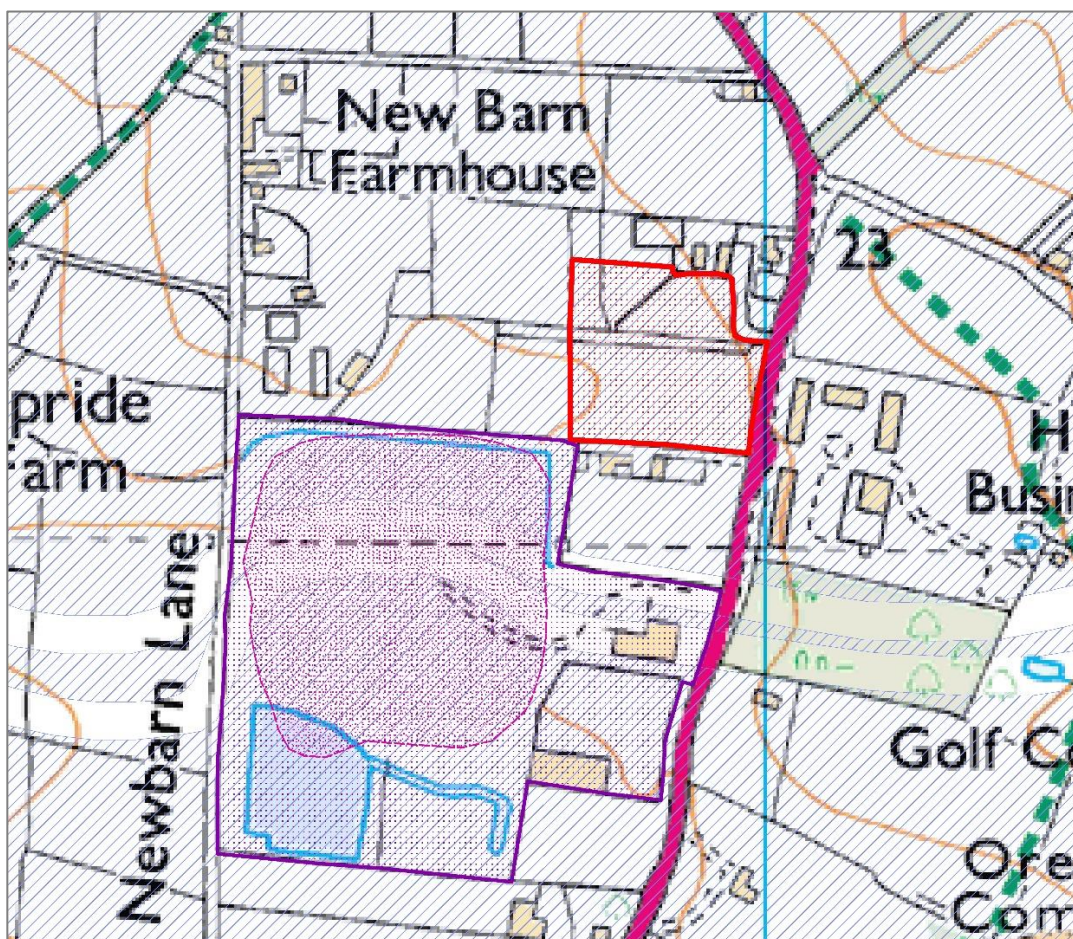


Figure 1: the Location of the Site (outlined in red) in relation to the resource outcrop of Weald Clay (shown by blue hatching) the former brickworks site (edged in purple) and the closed landfill site (magenta stipple)

Qualifications and Experience

4. This assessment has been prepared by Cuesta's Director – **Dr. Alan Thompson** (C. Geol., FGS, MRTPI) – a highly experienced geological and minerals planning consultant with detailed first-hand knowledge of mineral extraction and geological resources in West Sussex, and substantial experience in the preparation of Mineral Safeguarding reports.
5. Alan has an honours degree in Physical Geography and Geology, a PhD in Geomorphology, and 40 years' post-doctoral research and consultancy experience in the practical application of these skills – much of this gained in the context of mineral planning work for both private and public sector clients. He is both a Chartered Geologist and a Chartered Town Planner. From 2017 to 2022 he was the Secretary of the UK Minerals Forum and is also a Director (and current Chairman) of Extractive Industry Geology (EIG) Conferences Limited - a not-for-profit Company Limited by Guarantee.

Basis of Assessment

6. The following assessment is based on:
 - a review of the JMLP policies, background papers and associated maps;
 - an examination of the latest available British Geological Survey (BGS) 1:50,000 scale geological map of the area (Sheet 318, Brighton and Worthing, published in 2006), and associated Memoir, and of the current (unchanged) digital geological mapping of the area, as shown on the BGS online GeoIndex (Onshore), accessed September 2024;
 - consideration of the BGS Commissioned Report CR/03/074N "*Mineral Resource Information for Development Plans, Phase One, West Sussex: Resources and Constraints*", (Hopson *et al* 1997) and the accompanying mineral resources map for West Sussex, published in 1998;
 - a search for relevant borehole information within the general area, as recorded in the BGS online GeoIndex (Onshore), accessed in September 2024;
 - a review of borehole logs from a ground investigation carried out in May 1989 by Environmental Resources Ltd. (as presented in Appendix J of the Geo-Environmental and Risk Assessment report by LK Consult Ltd, dated December 2011).

Geology and Mineral Resources

7. The Brick Clay MSA in West Sussex incorporates the entire outcrop of the Lower Cretaceous Weald Clay, which extends over a large part of the County. The outcrop also extends into the adjoining parts of both Surrey and East Sussex. Weald Clay has been actively worked for brick-making in all of these areas for many decades, and two large-scale modern brick pits (at Warnham, north of Horsham and at Laybrook, near Pulborough) continue to operate. These, along with similar operations at South Holmwood and Smokejacks in neighbouring Surrey, are located within the higher parts of the sequence (as is the present site), where there are greater thicknesses of clay, a variety of clay types (which are blended to maintain consistency of output) and relatively few interbedded layers of sandstone, ironstone, calcite etc. Each of these pits also occupies a substantial surface area (each in the order of 250,000m²).

8. The geological map of the area around the Site (BGS, 2006) indicates that it is located within the higher part of the Weald Clay sequence, close to the outcrops of overlying Lower Greensand deposits which are found both to the north and south of the Site – see **Figure 2**, below. The stratigraphy of this area, as revealed in a deep borehole in Henfield, approximately 4 kilometres to the west, shows that much of the Weald Clay sequence, totalling some 120 to 275m in thickness, lies below the material which crops out within the Site.

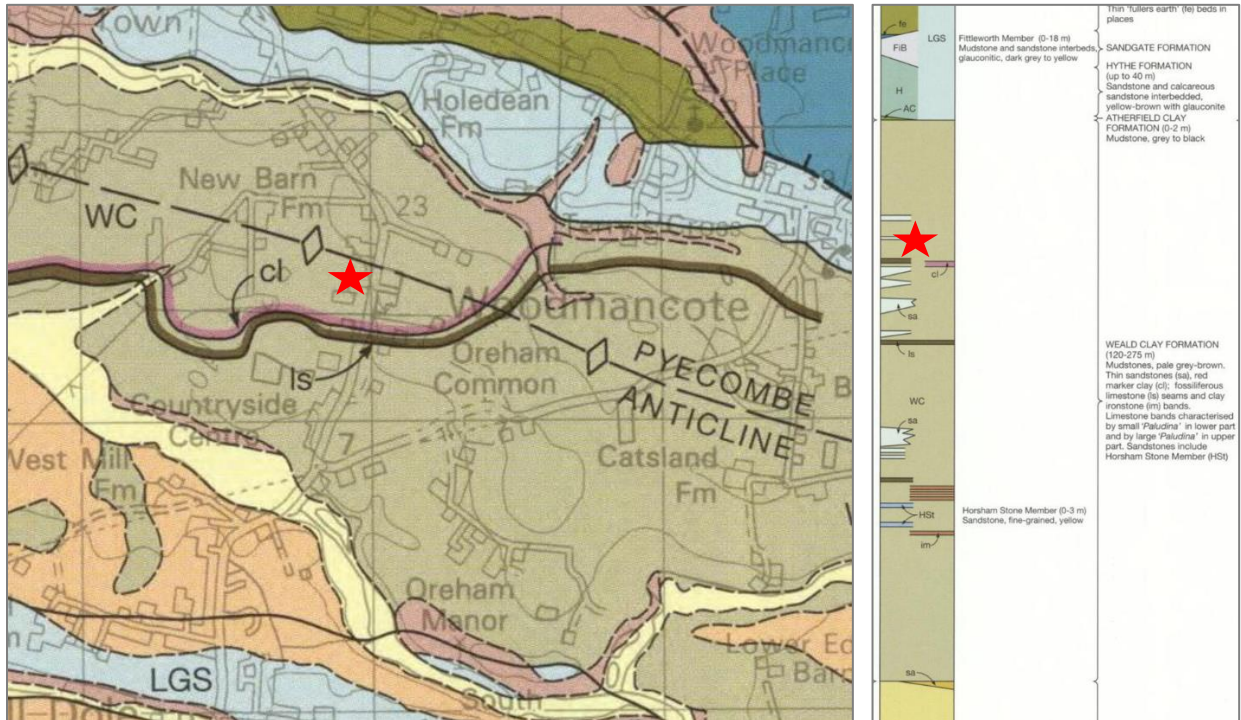


Figure 2: the Geology around the Site including (right) stratigraphic details from the nearby Henfield borehole. Taken from the BGS 1:50,000 Sheet 318, published in 2006. Red stars indicate the position of the Site

9. Another deep borehole (BGS reference TQ21SW57) lies closer to the site, approximately 1km to the south-east. This proved Weald Clay deposits extending to a depth of at least 80 metres below ground level. More recent boreholes drilled within and adjacent to the former brickworks site, including two within the present Site, extended only to a depth of 10m, but again proved Weald Clay deposits throughout.
10. It is clear from the foregoing information that a substantial thickness of Weald Clay is likely to be present beneath the Site. The fact that the deposits directly south of the Site were formerly worked for brick-making also bears testimony to the suitability of the resources for this purpose, though it should be noted that this was on a much smaller scale than any of the continuing, modern operations referred to above.

Mineral Safeguarding Policy

11. Policy M9 of the JMLP states that proposals for non-mineral development within the Minerals Safeguarded Areas (as shown on maps in Appendix E of the Plan) will not be permitted unless:

- (i) Mineral sterilisation will not occur; or
- (ii) it is appropriate and practicable to extract the mineral prior to the development taking place, having regards to the other policies in this Plan; or
- (iii) the overriding need for the development outweighs the safeguarding of the mineral and it has been demonstrated that prior extraction is not practicable or environmentally feasible.

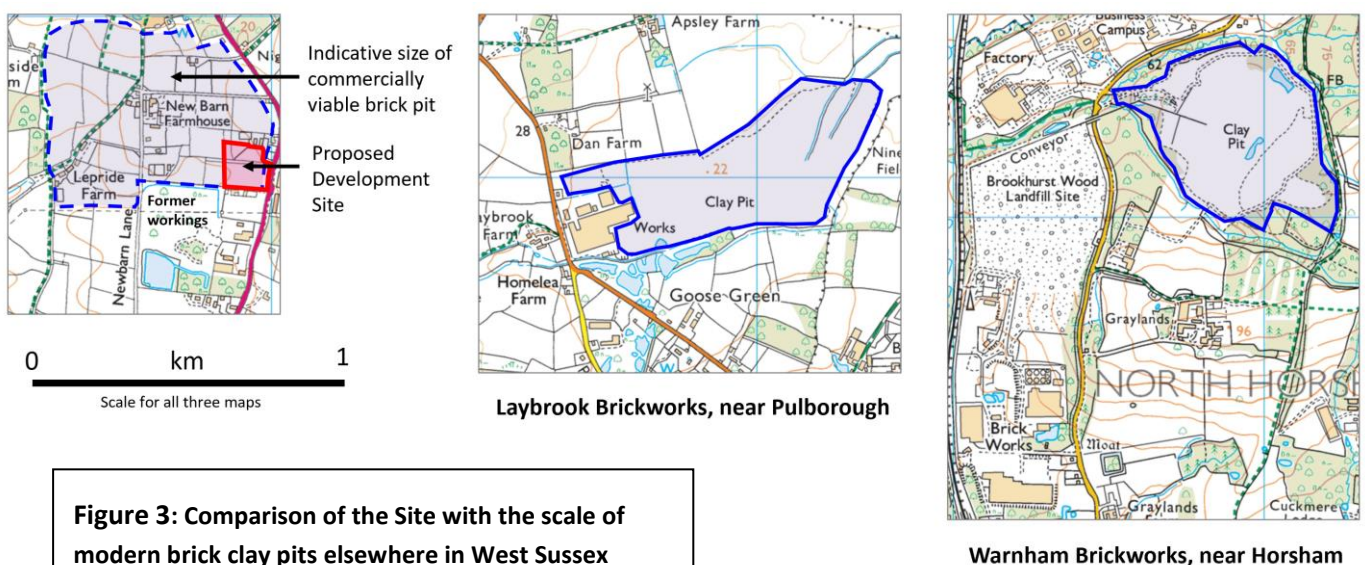
Assessment

12. Given that Weald Clay mineral resources that have proved suitable for use in brick manufacturing are likely to be present to considerable depth beneath the Site, it is inevitable that mineral sterilisation will occur as a consequence of the proposed development.

Exemption (i) of Policy M9 would therefore not be applicable, in this case.

13. With regard to **Exemption (ii)**, whilst prior extraction would probably be feasible, from a technical point of view, this would only provide access to the uppermost parts of the resource. That is because clay pits can only be worked at relatively shallow slope angles with significant stand-off distances from existing buildings and infrastructure (e.g. roads), to guard against slope failure. It follows that, within a small site such as this, the maximum depth of working would be severely limited. Moreover, only the uppermost, relatively weathered layers of clay would be able to be extracted, and these are less likely to be useful for brick-making than those at greater depth. Similarly, the opportunity to blend clays from multiple horizons within the sequence would be lost.

14. Conversely, in order to extract more viable quantities of clay, and to provide access to multiple horizons for blending purposes, a much larger surface area of extraction would be required. **Figure 3**, below, illustrates this by comparing OS maps of the Site (on the left) and the two nearest modern clay pits (Laybrook and Warnham), at the same scale. For purely illustrative purposes, the Site map also shows the extent of a potential clay pit of comparable size to the others (*though it should be emphasised that most of that area is beyond the applicant's control and that there is no suggestion of such a pit being developed*).



15. Any clay resources that might be extracted from the Site would need to be transported to one of the other existing brickworks for processing and brick manufacture. Whilst this could theoretically be done, and might help to extend the life of brick-making operations at those sites for a few years, it is thought unlikely to be a commercially viable prospect because of the limited quantities involved and the cost of transportation.
16. Finally, the concept of prior extraction implies that the proposed development would be capable of being implemented after the extraction has been carried out. In this case, extraction would create a hollow, with potentially unstable side-slopes, which would naturally become flooded on completion unless backfilled with inert material and compacted to provide adequate foundations for development. Both the extraction of the clay and the infilling of the void would take time and would significantly delay the onset of any subsequent built development.
17. The various points outlined in paragraphs 13 to 16 above would require more detailed analysis in order to provide more definitive evidence, but are thought likely to be sound, based on experienced judgement. On that basis, Exemption (ii) is NOT considered to be applicable: it would be neither appropriate nor practicable to extract brick clay from the Site prior to the proposed development.
18. With regard to **Exemption (iii)** of the Policy, the question of whether or not the need for development overrides the safeguarding of the mineral is a matter of judgement for the Mineral Planning Authority, taking account of the merits of this application itself. In terms of the mineral, though, a distinction needs to be drawn between the ongoing need for brick clay resources to support the existing brick manufacturing industry in the area, and the need for safeguarding the resources. The latter is a much longer-term concept, intended to ensure that brick-making can continue long into the future.
19. In that regard, it is pertinent to note that alternative Weald Clay resources are very extensively available over much wider areas, both in West Sussex and in neighbouring counties. There is certainly no foreseeable shortage, and this is recognised within the JMLP by the fact that (unlike for other minerals) the safeguarding maps of the Weald Clay exclude existing built-up areas (para 6.9.10 of the Policy refers).

Conclusions

20. On balance, taking account of the various factors outlined above, in my professional opinion it would not be appropriate to undertake prior extraction of Weald Clay resources from within the Site. Such extraction would be neither practicable nor environmentally feasible.
21. The need for safeguarding of Weald Clay is tempered by the substantial extent of these resources elsewhere in West Sussex and adjoining counties.
22. For these reasons **Policy M9 of the JMLP should NOT preclude the proposed development, despite this being located within the designated Mineral Safeguarding Areas for Brick Clay resources.**