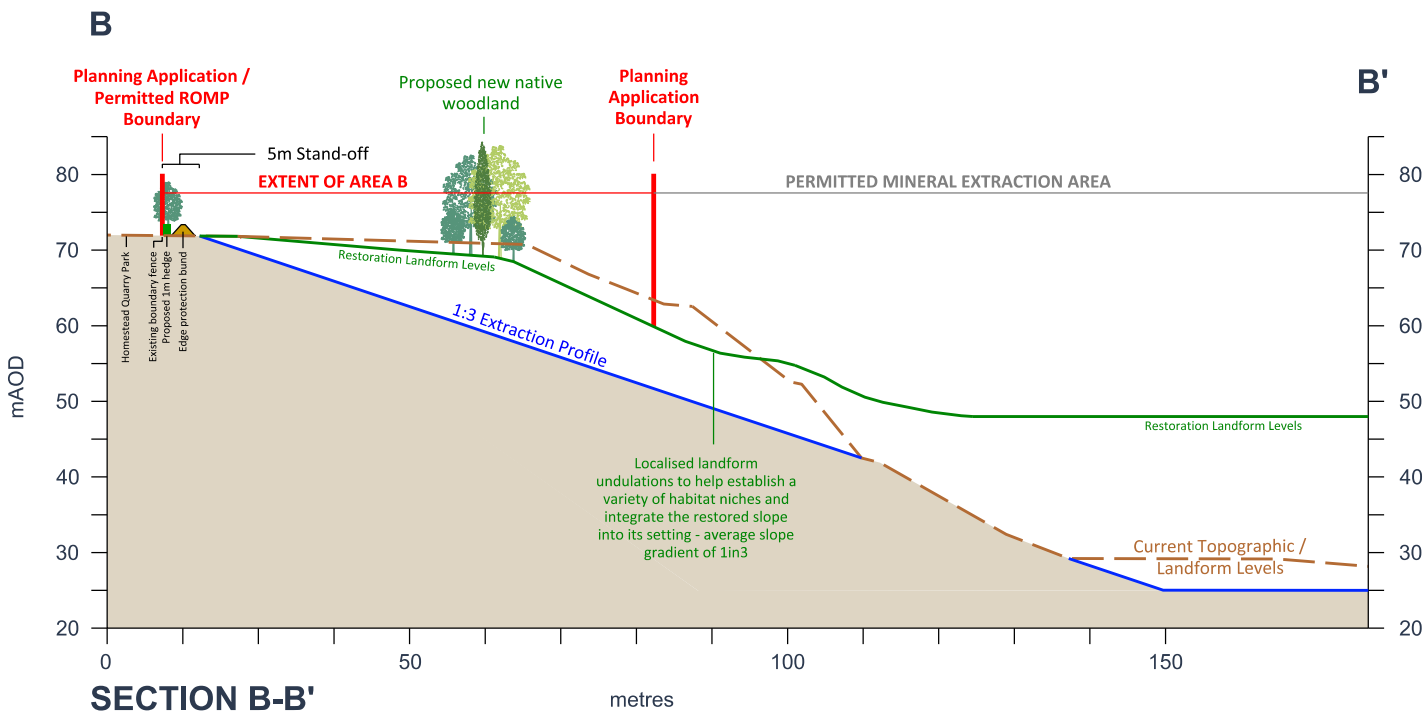
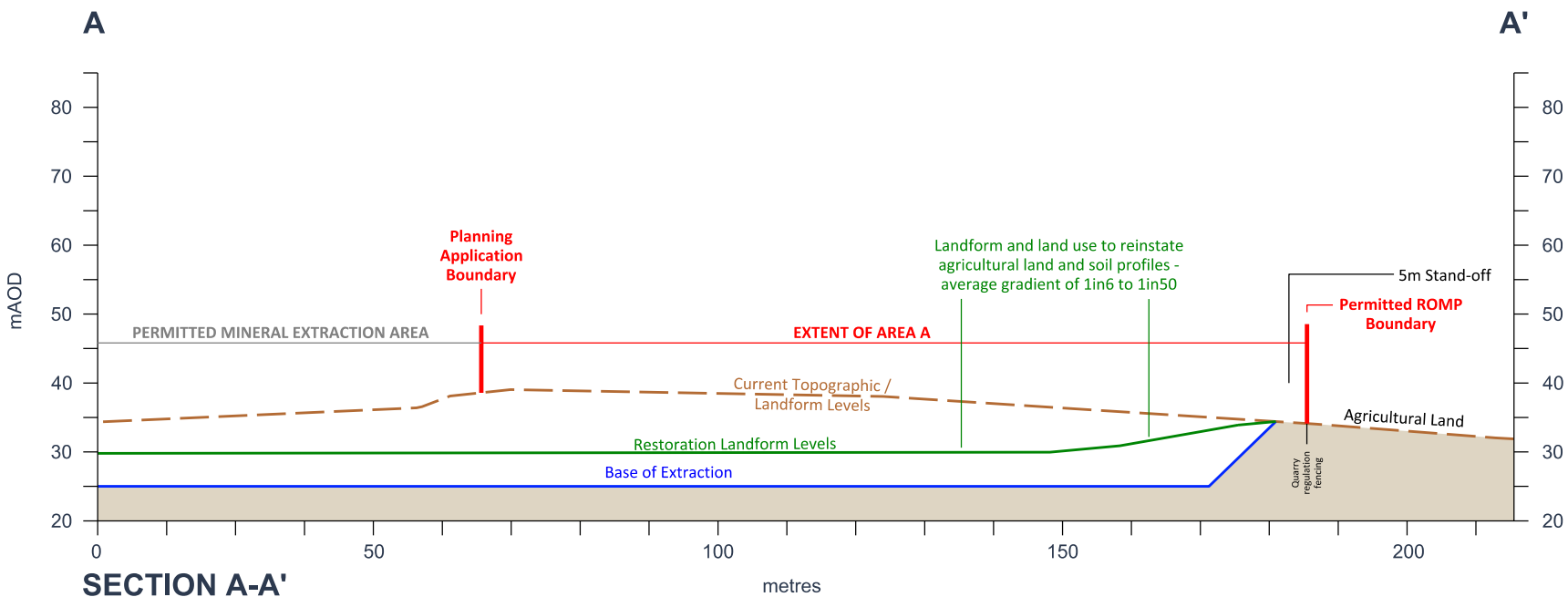




Compliance with Quarry Regulations assessed by James Associates Geophysical Consultants, 3 Snitterton Road, Matlock DE4 3NA

Slope Stability and Method of Working / Restoration:

Proposed Area B - Section B-B'

This area is remote from any features lying outside of the site boundary which would be significantly impacted should slope instability extending beyond the boundary occur.

The proposed relatively low face heights which will be excavated, between 5.8 and 11.8 metres and slope gradient of 1 vertical to 1 horizontal [45 degrees] is unlikely to result in significant instability developing and affecting land beyond the site boundary. This assumes that a stand-off from the site boundary to limit of extraction at surface is at least 3 metres.

It is likely that short term excavation slopes with a gradient of 1 in 1 will remain stable though are un-likely to do so in the medium to long term. Therefore, sections of excavated slope should be rapidly infilled against to create the proposed long-term 1 vertical to 3 horizontal restoration profile.

The infilling / final restored slope construction should be undertaken by tipping in layers of approximately 500mm, tracking-in by dozer and ADT's and construction from the base upwards. End-tipping should not be permitted in the construction of the restored slope.

Proposed Area A - Section A-A'

It was originally proposed to construct a slope with a maximum excavated height of 47 metres, extending from approximately 72mAOD to 25mAOD, at an overall gradient of 1 in 1.0.

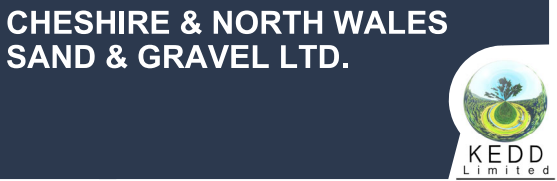
To date on site the maximum excavated overall slope height is approximately 30 metres. The maximum excavated slope heights are in the southern quarry void, specifically the northern face which lies adjacent to the main ramp, the other along the western boundary. The overall slope gradients for these faces are 1 in 1.3 and 1 in 1.7 respectively.

Both profiles have shown good stability with only localised , water related, minor scouring / collapse.

To accurately define an excavated slope profile, further works in the area are being undertaken. Until this work has been completed, it should be assumed that the maximum extraction face slope profile should be no steeper than 1in3 to provide appropriate stability.

The Operator has confirmed that all Geophysical reports / Quarry Regulations will be fully implemented.

If on the completion of further geophysical assessment it is confirmed that mineral can be extracted to the currently stable 1 in 1.3 slope, this information would be submitted to Wrexham County Borough Council Public Protection, Planning Control / Planning Department for consideration.



PROJECT:	
Ballswood Quarry	
TITLE:	
Typical Sections through Proposed Extension Areas A & B	
REF NO:	
KD.BLWQ.2.D.016A	
DATE:	SCALE:
June 2022	1:1,000 @ A3
STATUS:	
FINAL	

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Please note that the extension Areas A and B constitute a single Phase. As described on submitted Drawing No. KD.BLWQ.2.D.007: "Due to the geological nature of the site, Areas A and B, together with the limited remining consented mineral, are to be worked concurrently to ensure suitable product splits and blending opportunities of both sands and gravels is possible".

Restoration will take place on the completion of mineral extraction within these Areas, as a single operation.

Note. See Drawing No. KD.BLWQ.2.D.023 for Section Locations