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Our Ref: PSM497.L20
Date: 11 December 2006

Hanson Construction Materials Pty Ltd
Wallgrove Quarry
Old Wallgrove Road
EASTERN CREEK NSW 2766

ATTENTION: MR GLEN TROY

Dear Sir,

RE: SHORT TERM RISKS IN QUARRY

1. INTRODUCTION

This letter presents the results arising from an inspection of the Wallgrove Quarry on 18th October 2006.

The quarry was inspected in the company of Mr Bassos of Hanson and as requested by Hanson was utilised to highlight areas that are seen as a potential risk in the near short term (ie next few months).

It is understood that quarry operations by Hanson have now ceased and that access within the quarry is limited to maintenance of pumps. Furthermore, the risks presented within this letter are considered in relation to personnel entering and leaving the quarry via the haulroad and around the perimeter with no requirement to walkover of any berms.

Plates 1 to 7 present a summary of salient geotechnical aspects noted during the inspection whilst Figure 1 presents locations of the Plates to place into perspective the relative location within the quarry.

In general the risks are considered either as low to very low or low to moderate and summarised below into either of these categories.

2. LOW TO VERY LOW RISKS

The majority of the western end of the quarry is seen as presenting a low to very low risks to personnel entering the quarry, Plate 1. The majority of pit walls within the sediments have relatively low overall slope angles, with most benches at or near the angle of repose of the sediments. Whilst the pit walls in the breccia materials are steep, these walls have either been pre-split with very little evidence of blocks “hung up” on pit walls or have wide berms beneath each bench (upper south wall).

Notwithstanding the above there are areas where there are risks and these comprise:

- The upper west wall near surface, where a sandstone layer is being progressively undercut, Plate 2. The risk to the haulroad below from block fall out is considered very low owing to the catch bund immediately below. However, there is a risk of a block fall affecting the road placed near the pit crest, Figure 1. In the short term the risk is considered low with ongoing visual monitoring of the sandstone layer required.
- There remains a risk of block fall out from the instability in the north wall, Plate 3. In the short term the risk is considered low with ongoing monitoring of the instability required.

3. LOW TO MODERATE RISKS

The eastern end of the quarry is seen as presenting several areas of low to moderate risks to personnel entering the quarry, Plates 4 to 7.

The east wall at the bottom of the quarry, Plate 4, has several structures which undercut the bench above. There is a risk of a failure in this area and it is recommended the area be cordoned off with a stand off distance of at least 30m from the toe.

There is an area immediately above the haulroad in the east wall where there is recent evidence of block fall out, Plate 5 and Figure 1. In view of the potential for further rock falls in the immediate area all operations personnel should be made aware of no standing/parking for all vehicles in this area. In consideration of the low number of vehicles traversing this area and with the above mitigative measures in place the risk is considered low.

The upper part of the east wall presents the area of highest potential concern at the quarry. The sandstone ledge within the upper most bench is undercut along a substantial length, Plate 6, and with narrow berm widths in key areas, Plate 7. Furthermore, there have been recent large block fall outs, Plate 7, and evidence of cracks within the sandstone unit to suggest that further block fall out could readily occur. Ongoing visual monitoring of this area is recommended. However, the risk to personnel utilising the haulroad remains as low to moderate.

We trust this letter meets your immediate requirements and please contact the undersigned if you have any queries relating to the above.

For and on behalf of
PELLS SULLIVAN MEYNINK PTY LTD



A. DURAN

Encl: Plates 1 to 7
Figure 1

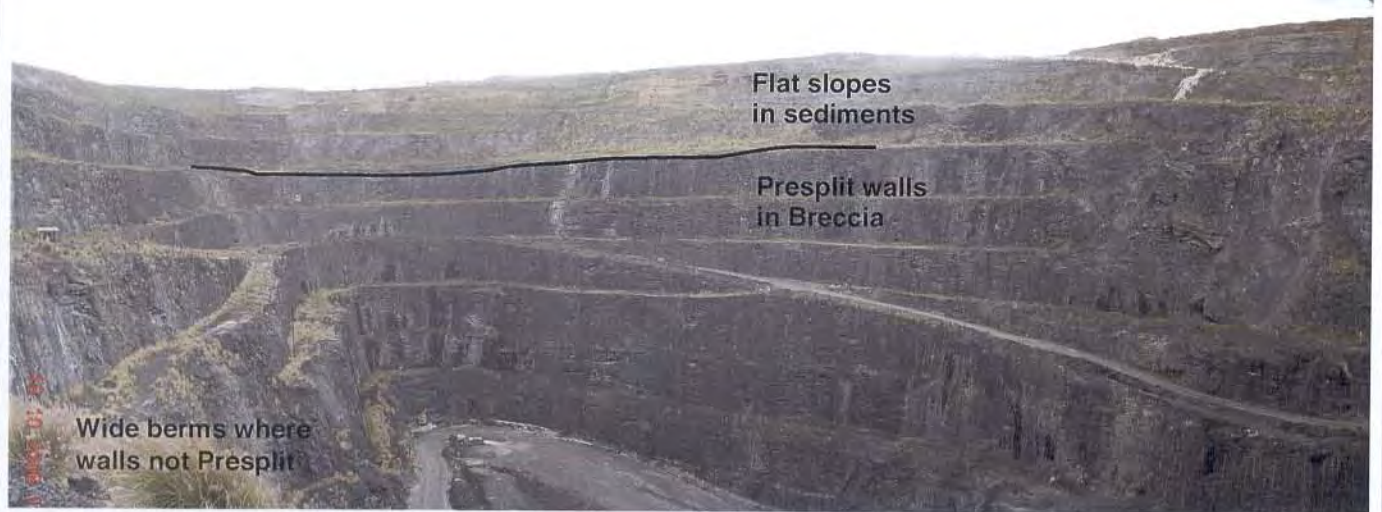


Plate 1 : Overview of west wall, highlighting generally pre-split walls in breccia and generally flat slopes in the overlying sediments.



Plate 2 : Upper west wall, highlighting undercutting of sandstone bed with potential for block fall out. Road below is at low risk owing to bund in place. However there is a risk to road immediately above.



Plate 3 : North wall, highlighting area of instability which initially failed in 2001. Potential for blocks to fall onto road exists. Ongoing monitoring of area required.

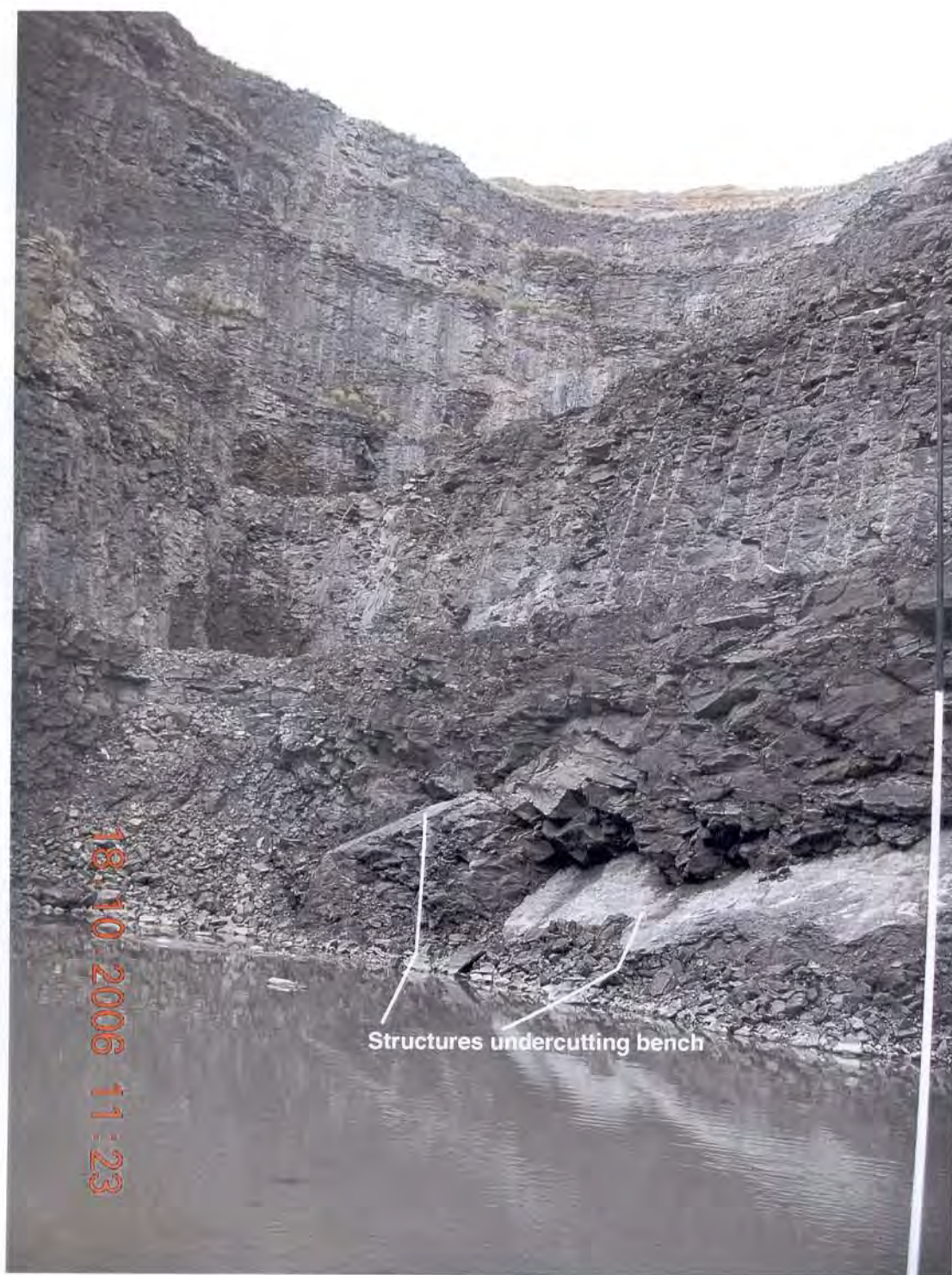


Plate 4 : Lower east wall, highlighting structures undercutting lowest most bench. Area needs to be cordoned off to limit access.



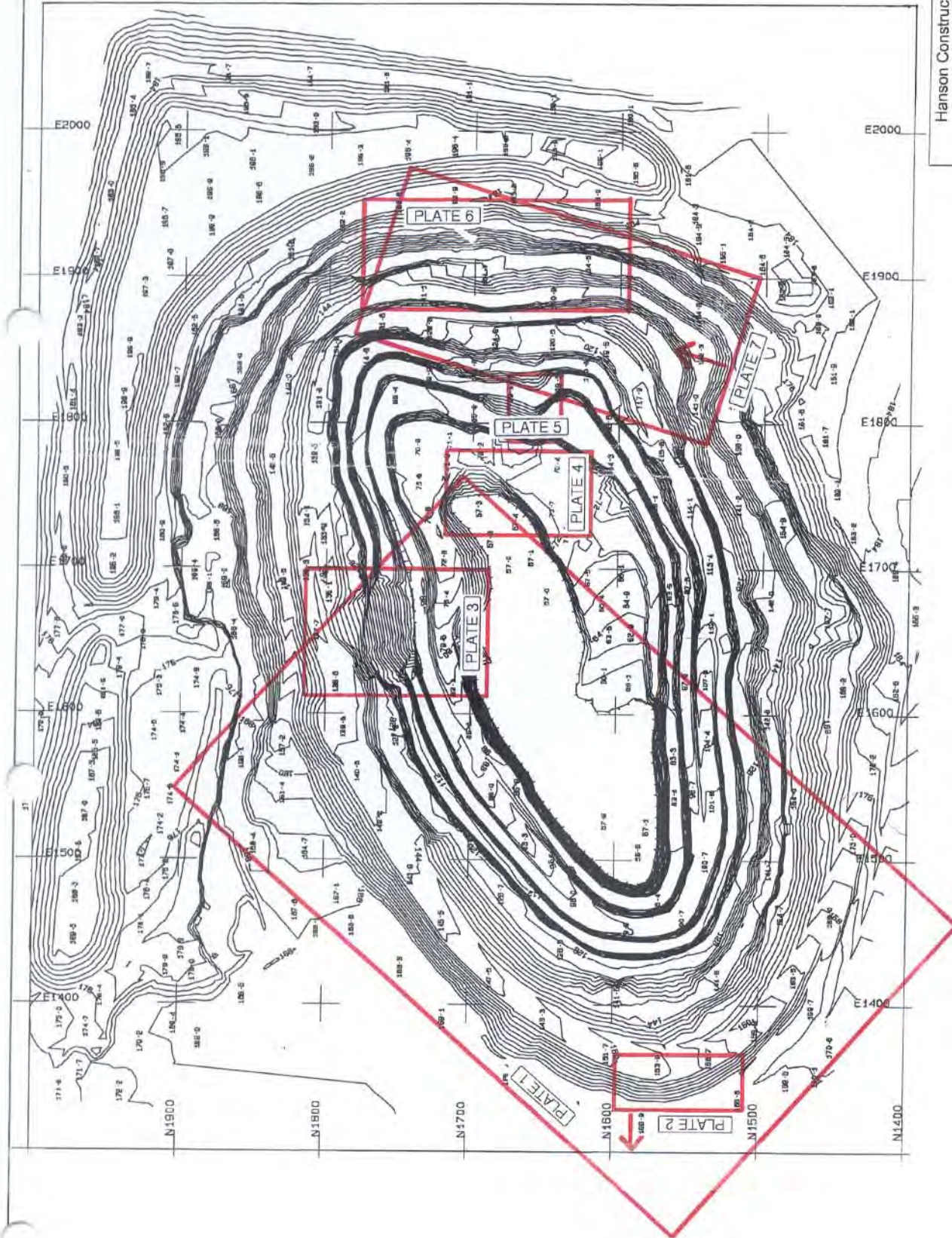
Plate 5 : West wall immediately above haulroad, highlighting area of recent block fall out. All operations personnel need to be made aware of no standing/parking of vehicles beneath this area.



Plate 6 : Overview of upper west wall, highlighting sediments and undercutting of sandstone bed in the area.



Plate 7 : West wall looking to the north, highlighting undercutting of sandstone bed, narrow berms below, recent failure and cracks within sandstone bed.



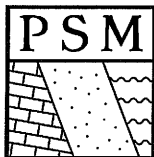
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Wallgrove Quarry

SHORT TERM RISKS

Pells Sullivan Meynink Pty Ltd

PSM 497.L20

Figure 1



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ATTENTION: MR GLEN TROY

Dear Sir,

RE: LONG TERM RISKS IN QUARRY

INTRODUCTION

This letter presents the results arising from an inspection of the Wallgrove Quarry on 18th October 2006. The quarry was inspected in the company of Mr Bassos of Hanson.

Hanson requested that two letters be provided, one that addressed the short term risks within the quarry, PSM497.L20, and another that provided the long term risk within the quarry, this letter.

It is understood that quarry operations by Hanson have now ceased and that access within the quarry is limited to maintenance of pumps. However, in the longer term quarrying could be recommenced by others or used for alternative purposes. As such, this letter has considered areas of risk that could manifest in the longer term and ongoing requirements.

The consideration of the risks has been largely based on the ongoing geotechnical advice that PSM have provide to Hanson at Wallgrove over the last 5 years coupled with regular site inspections to address various issues at the quarry.

Plates 1 to 12 present a summary of the key geotechnical aspects seen as long term risks within the quarry whilst Figure 1 presents key locations where these risks are evident. The risks are provided below in order of decreasing impact.

NEAR SURFACE IMPACTS

The predominant long term risk at the quarry is the behaviour of the near surface slopes. The upper slopes comprise sediments, Figure 1, with volcanic breccia comprising the slopes in the lower part of the quarry. The sediments, predominantly comprise shale, with the presence of a strong sandstone bed evident in the upper part of the east and west walls, Plates 1, 3, 4, 5, 8, 9 10 and 11.

Observations of the behaviour of these upper slopes over the last 5 years has shown that the shale slopes slowly degrade. This degradation is manifested as a loss of bench crest and berm width directly above coupled with filling of the bench toe below with shale rill. Where the entire slope consists of shale, the overall slope will eventually result in an large rill slope. This is evident in the northwest corner, Plate 8, where a rill slope over 3 benches is already evident. The process will be gradual and will eventually result in an impingement of the final crest location of the quarry, Figure 1.

However, in the upper east and west walls there is a strong sandstone bed which is being continually undercut by the degrading shale. The undercut sandstone fails suddenly resulting in block fall outs. Where, the sandstone bed is evident cracking behind the pit crest and with the potential for sudden failure can be anticipated until an overall rill slope is formed. Owing to the potential for sudden failure a more cautious approach is required in these areas. In particular two key areas are of concern for the long term:

- In the upper part of the west wall, Plate 4, the road between the recently constructed weighbridge and the quarry crest on the western edge will need to be relocated, with also the potential for relocation of the power poles required.
- In the upper part of the east wall, particularly the southern part, Plate 11, the potential for sudden rock falls will pose a risk to any operations utilising the haul road within the quarry. This will require ongoing review with either requirement for increased bunds at the toe of the haulroad or potentially minor cutbacks of the upper benches to remove the sandstone bed.
- For both areas, Figure 1 presents the distance behind the crest where cracking and or failure may extend to.

Ongoing visual monitoring of the above is required.

A small area was indicated to Hanson by PSM, PSM497.R1, in the upper north wall where a large block on the point of fall out was observed, Plate 12. In the long term there is a risk to road users from this block. Options comprise either pulling down the block or closing off the road.

BLOCK FALLS NEAR BRECCIA/SEDIMENT CONTACT

One aspect that will pose a long term risk are slopes near the breccia/sediment contact. Where the slopes have been developed within breccia, the slopes have been largely developed with pre-splitting. However, where in close proximity to the sediments there is

evidence of ongoing block fall out, Plates 2, 8 and 9, and with higher potential than elsewhere within the breccia slopes for block fall out. These areas require ongoing visual observation.

2001 NORTH WALL INSTABILITY

In 2001 there was a moderate scale instability in the north wall. The instability was linked to the contact between sediments and breccia, Plate 5, and with surface water being the primary trigger for the instability. Since the instability the local surface has been reshaped to direct water away from the back of the failure.

At present a rudimentary monitoring system is in place to assess any movement of the large blocks within the failed mass, coupled with a large bund directly below and ongoing visual monitoring.

In the medium term it is anticipated further break up of the large blocks coupled with washing out of fines from the failure mass will result in the majority of the failed material reporting to the catch bund.

In the longer term there is the potential for incipient structures near by to “open up” and with the extent of the instability increasing, Plates 5 and 6. The time frame for this later aspect is unknown and ongoing visual observation is required to monitor this aspect.

LOWER EAST WALL

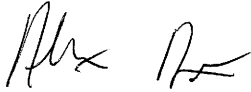
Moderately dipping structures undercutting the toe of the east wall were evident during the site inspection, Plate 7. In the long term loosening of the structures will result in failure of the bench. The area should be cordoned off to within 30m of the toe.

GENERAL ROCK FALLS IN BRECCIA

The majority of the walls within the breccia are steep and have been developed by pre-splitting. Ongoing degradation of the breccia is anticipated and in combination with the steep slopes provides the potential for rock falls to occur throughout the quarry. The majority of these rock falls are likely to be minor and predominantly caught on the berms. However, the risk of a larger rock fall or rocks not being caught on the berm can not be discounted. These risks are typical of hard rock mining. Mitigative measures include procedures to control areas subject to higher rock fall potential in combination with ongoing visual observations.

We trust this letter meets your immediate requirements and please contact the undersigned if you have any queries relating to the above.

For and on behalf of
PELLS SULLIVAN MEYNINK PTY LTD



A. DURAN

Encl: Plates 1 to 12
Figure 1



Plate 1 : Overview of west wall, highlighting predominantly pre-split walls within breccia. Generally flat slopes have been developed in the overlying sediments. In the long term rock falls can be anticipated owing to ongoing degradation of breccia. Highest risk is in upper most bench in the breccia near the contact with sediments.



Plate 2: Small areas of walls within breccia, particularly in upper most benches, have entrapped sediments or are very close to sediment contact. These areas are more prone to block fall out.



Plate 3: Upper west wall highlighting sandstone bed near surface with underlying shale. Sandstone bed is being progressively undercut with time and loss of quarry crest can be expected.



Plate 4: Upper west wall further south of Plate 3. In long term sandstone ledge will break up and fall out. Road above and power poles may need to be relocated.



Plate 5: North wall, highlighting area of instability which initially failed in 2001. In the long term, opening up of incipient structures can be anticipated. Furthermore, existing rill will continue to gravitate downwards.



Plate 6: North wall with comments as per Plate 5 applicable.

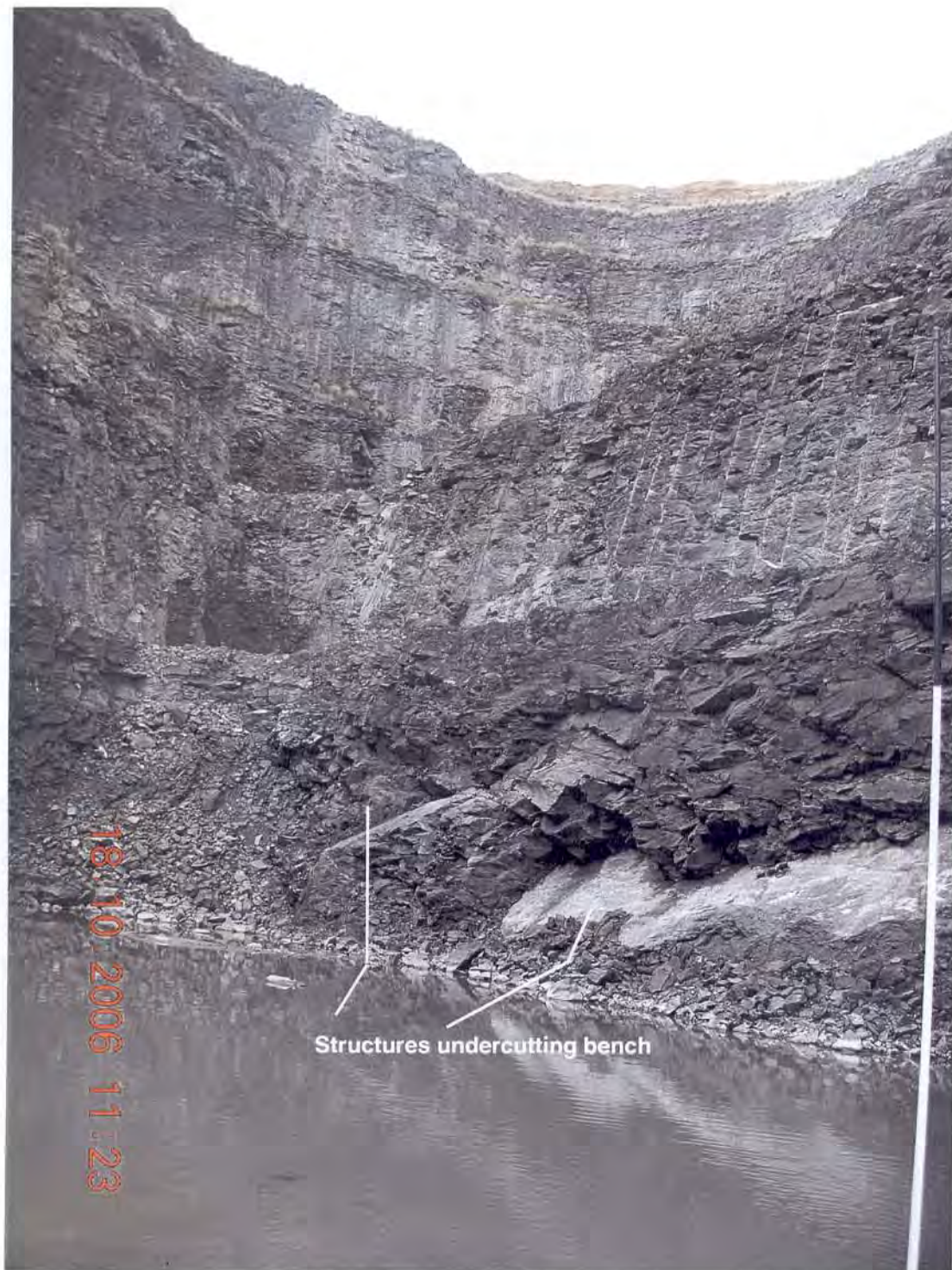


Plate 7 : Lower east wall, highlighting structures undercutting lowest most bench. Loosening of structures will lead to failure of bench.



Plate 8: North east quadrant of quarry. Note large rill slopes developed, above breccia. In long term an overall rill slope will be developed.



Plate 9 : Overview of upper west wall, highlighting sediments and undercutting of sandstone bed in the area.



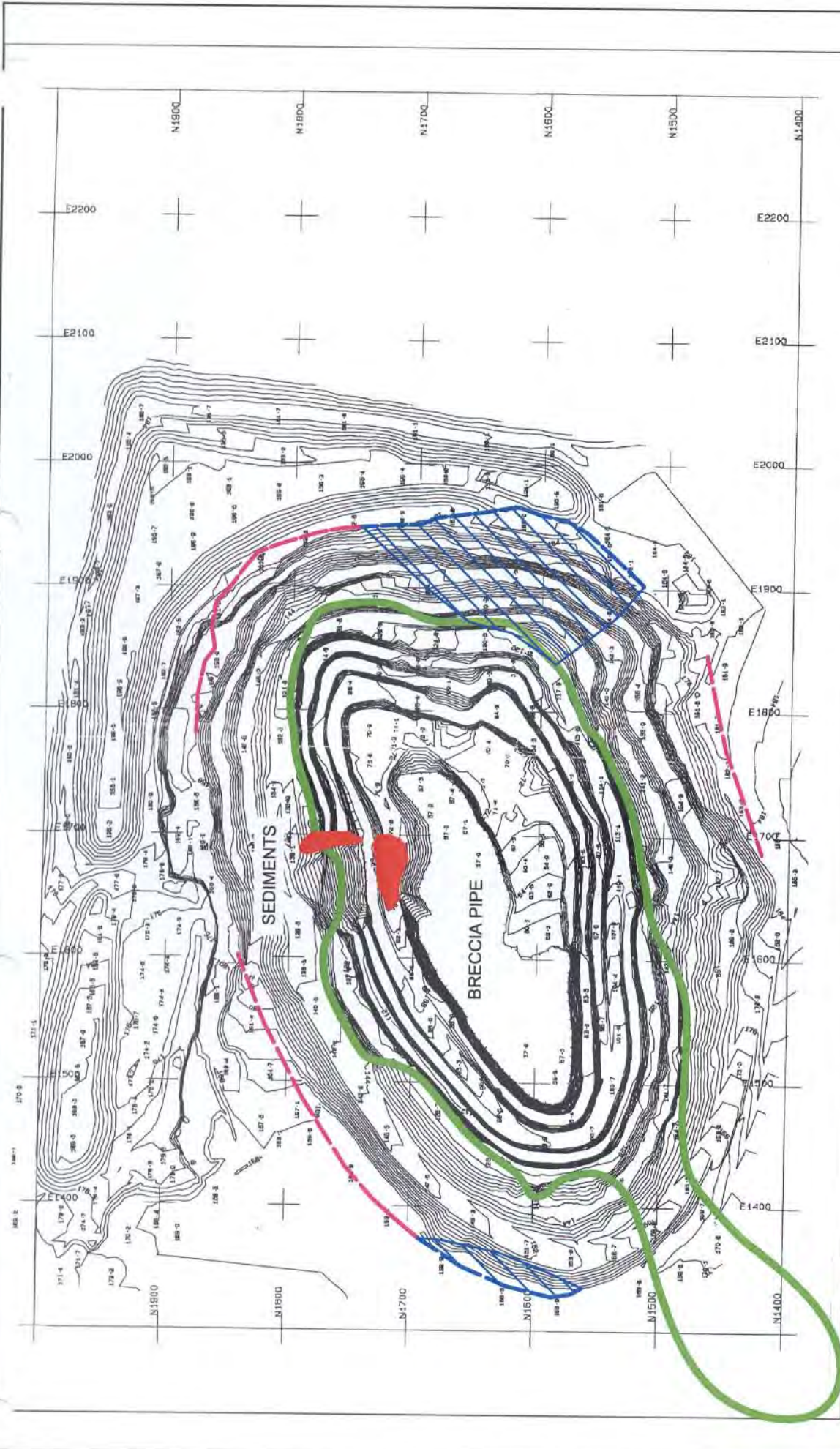
Plate 10: Overview of upper south west wall, highlighting sediments and undercutting of sandstone bed in the area.



Plate 11: West wall looking to the north, highlighting undercutting of sandstone bed. In long term sandstone ledge will continue to be undercut and with further block fall out anticipated. Process will arrest once a continuous rill slope is formed. Potential for cracking and encroachment behind existing crest.



Plate 12: Upper most north wall. Toppling block pointed out as issue in PSM497.R1. Block can either be pulled down or the road closed off.



LEGEND

- POTENTIAL FOR CREST TO EVENTUALLY REGRESS TO THIS DISTANCE
- POTENTIAL FOR SUDDEN CRACKING/FAILURE TO THIS DISTANCE
- POTENTIAL FOR ROCK FALLS FROM SANDSTONE LEDGE
- LONG TERM POTENTIAL FOR INCREASE IN EXTENT OF 2001 INSTABILITY



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LONG TERM RISKS

Pells Sullivan Meynink Pty Ltd

PSM 497.L21

Figure 1