

# January 10, 2024

Submission to Regional Municipality of Niagara  
Planning and Economic Development Committee  
ROPA for Port Colborne Quarries Pit 3 Extension

In this presentation, “we” refers to my wife and I.

PDS-C 4-2024

We recognize the importance of aggregates in our lives today, and see the continuing need for aggregate in the future.

We are asking that the expansion of Pit 3 by Port Colborne Quarries be conducted with respect for the natural environment, and the groundwater and surface water on which all rural residents rely, and the immediate community.

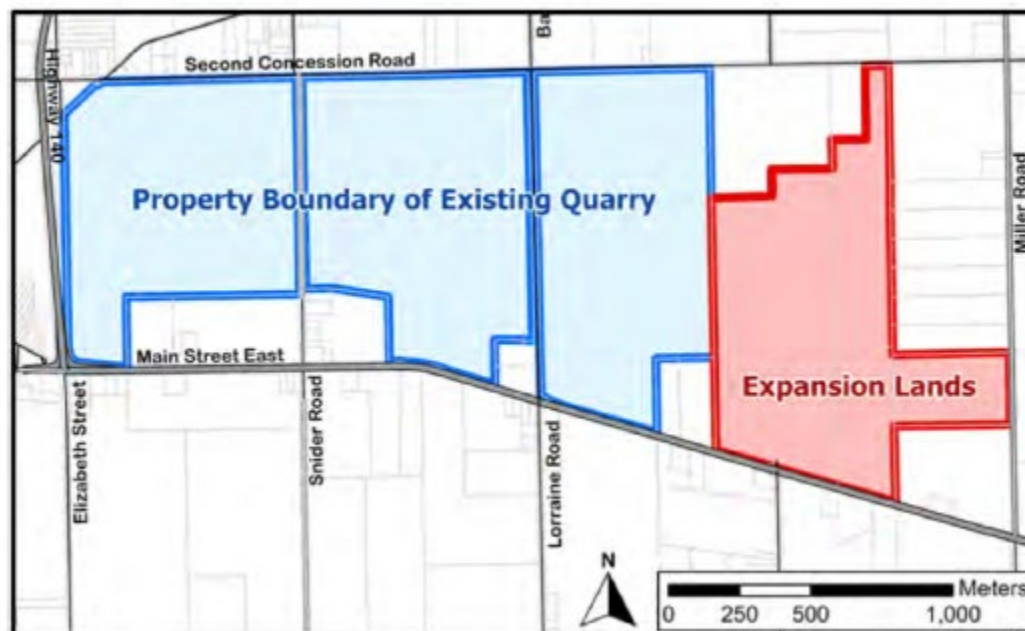
An important action that can be taken by the Region, with no impact to the quarry operation, is the elimination of the threat to the wetland, by not condoning the realigning the Municipal Drain until immediately before the area north of it would be required.

# Pit 3 Extension Lands

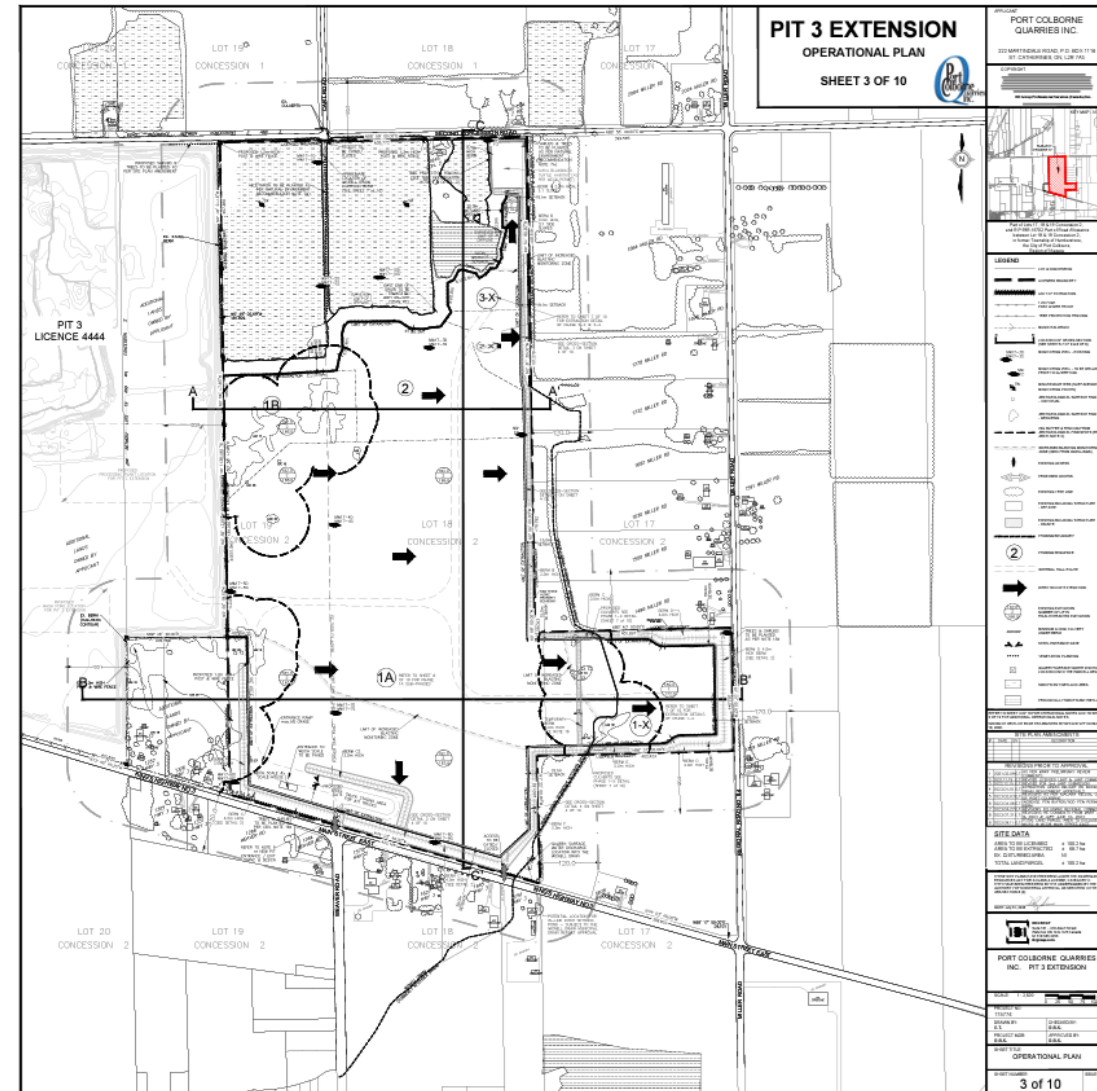


# Expansion Lands

Schedule "A"



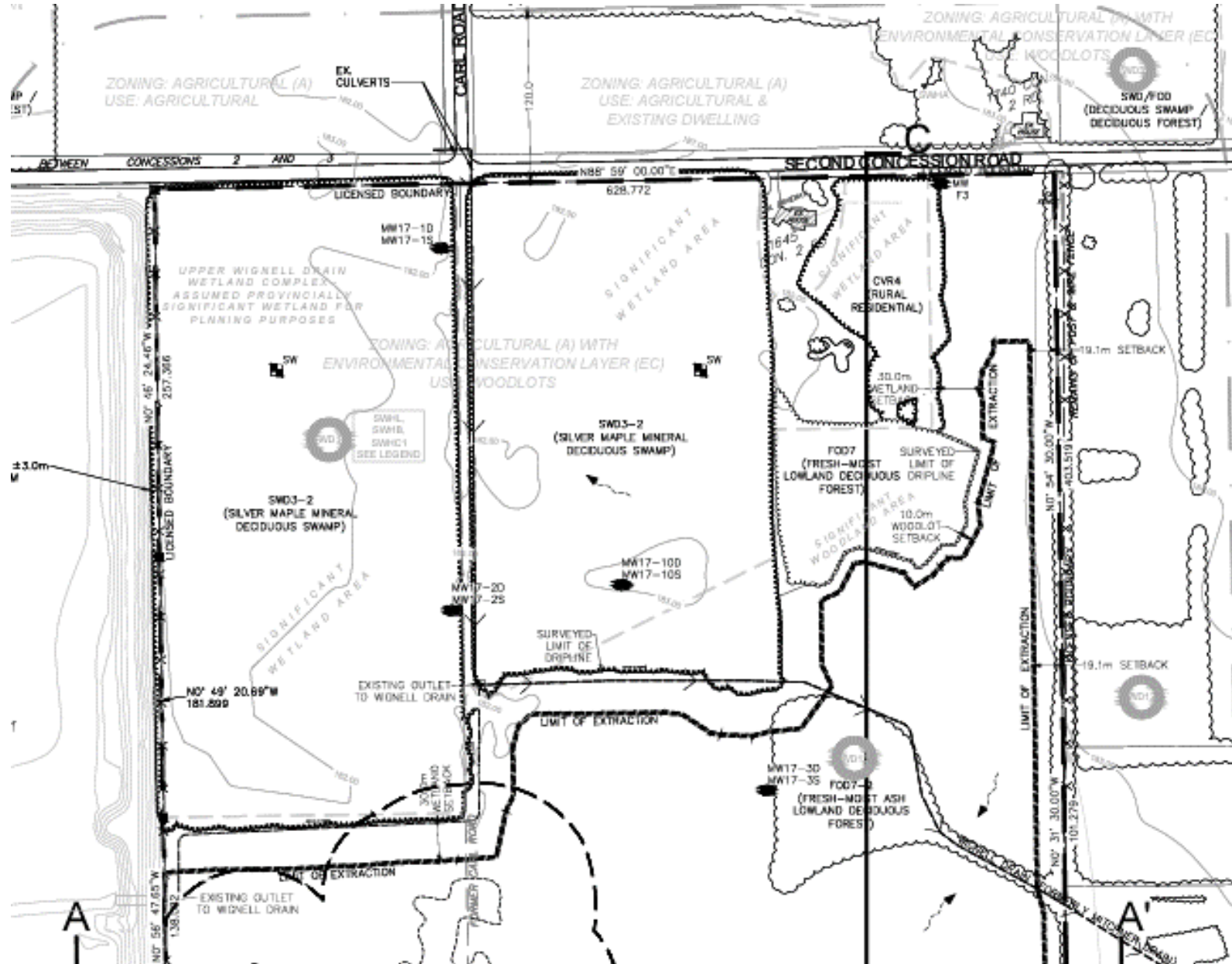
# Extension Lands mining Phasing Plan





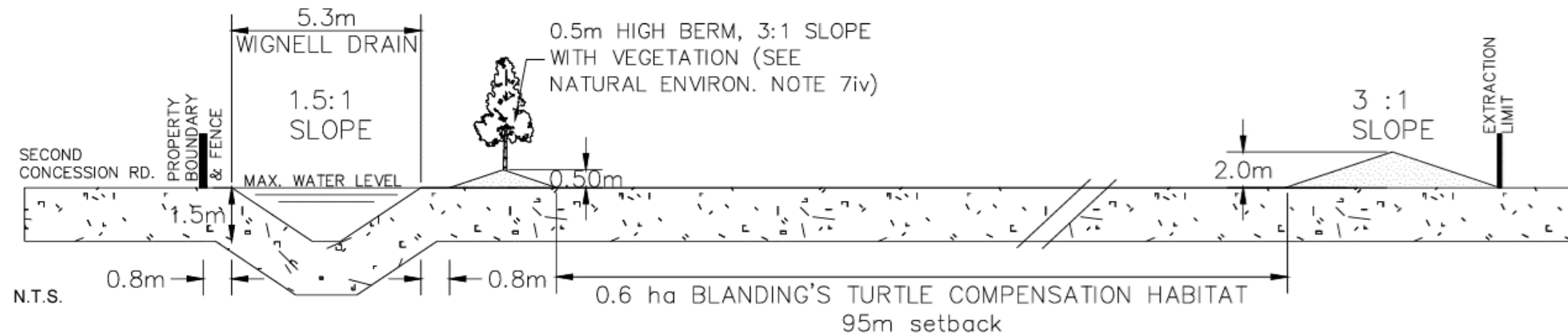
# Extension Lands Phase 3X – In 40 years

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# X-Section at Second Concession Road

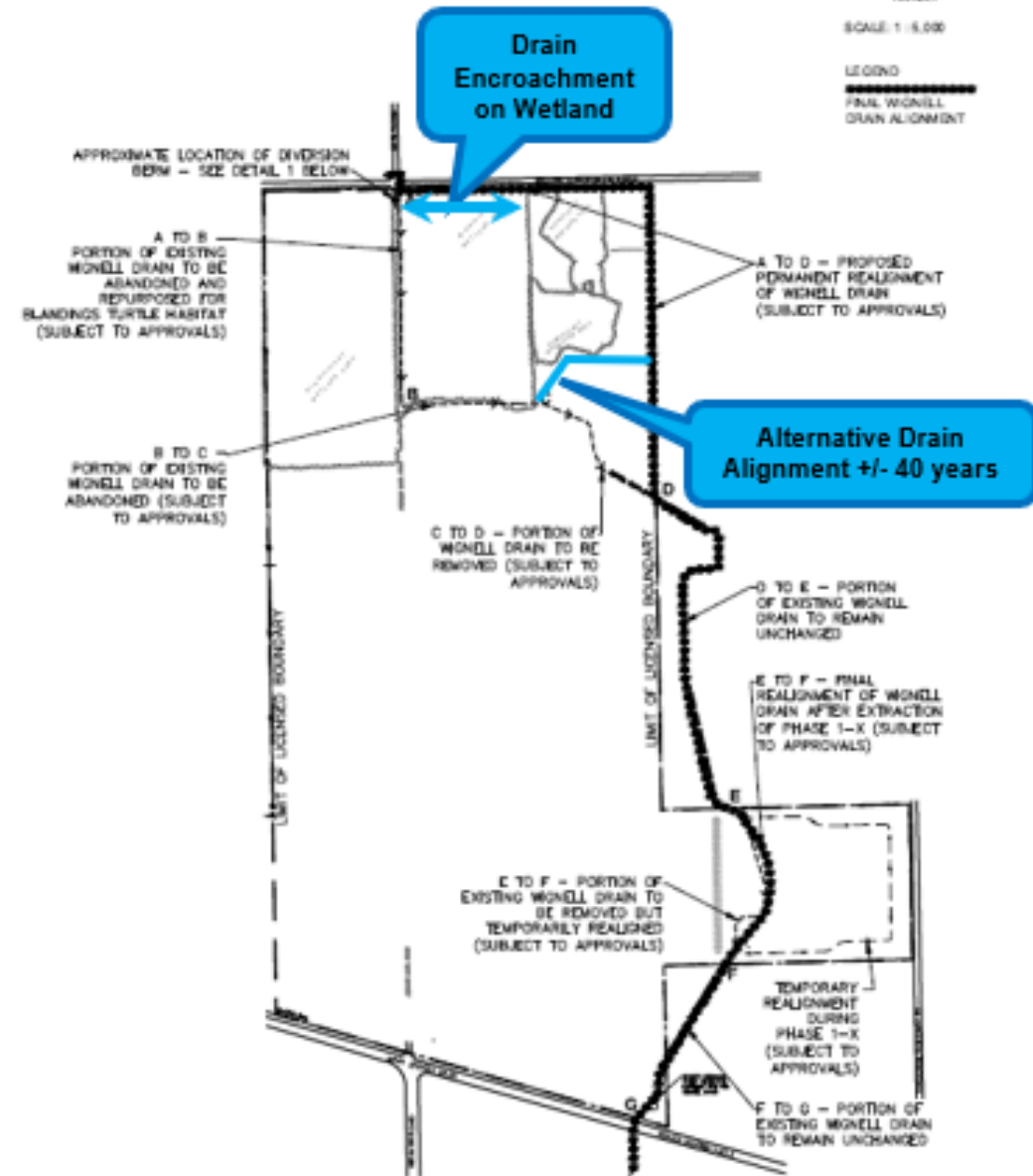
DETAIL 5  
SKETCH OF SECOND CONCESSION  
ROAD SETBACK.



The proposed realignment of the Wignell Drain along Second Concession Road will encroach into the north of the Locally Significant Wetland. At the south wetland limit the agreement with MNRF is to maintain a 30 m BUFFER between the licensed area and the wetland. 30 m should also apply to the north between the drain and the wetland.

# SKETCH 1 - PROGRESSIVE STATUS OF THE WIGNELL DRAIN

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# Timing

- The currently proposed major realignment of the Wignell Drain north reach is proposed to be conducted immediately even though it is not needed for 40 years
- The proposed alignment will encroach on the north of the wetland east of Carl Road, whereas it should maintain the 30 m BUFFER
- There are very good, non-habitat-threatening options to the major realignment
- A minor realignment, similar to the east tab, is only ¼ as long as the proposed realignment and poses NO risk to the wetland and endangered species therein as it will function exactly as it has for the last century, and can be done just before advancing to these lands.

# Volume of aggregate in Phase 3X

## 7. Phase 3

- a. Calculated Reserves: Comments from the public asking whether it continues to make sense to extract the 'northern finger' (Phase 3) given its ongoing reduction in size and limited width.

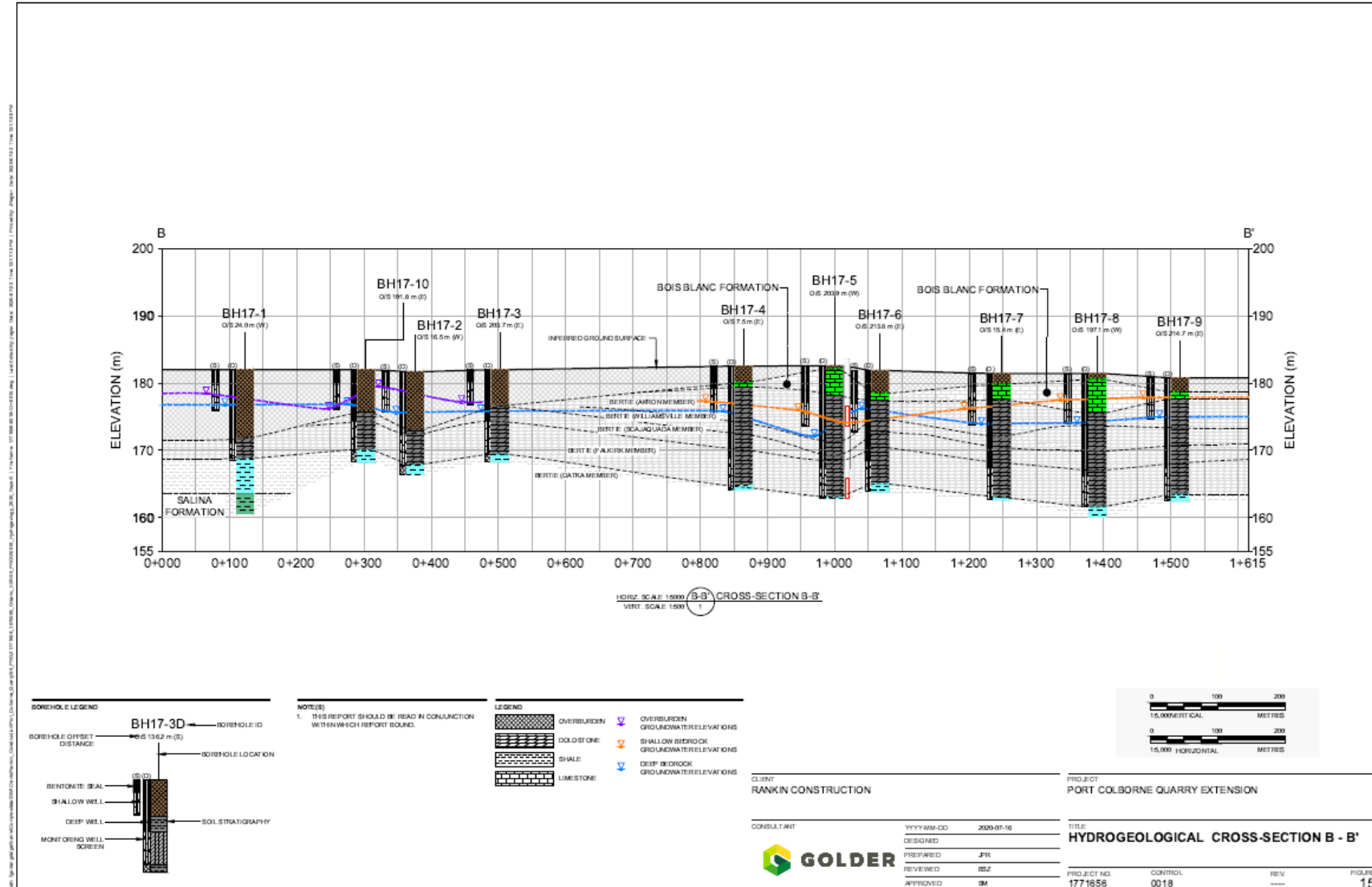
### **Response:**

The initial volume of stone within Phase 3 as part of the 2021 submission was approximately 311,000 tonnes. The area was reduced due to the Blanding's turtle habitat and the increased setback to the Significant Wetland Area, and the volume of stone is calculated to now be approximately 231,000 tonnes. It is PCQ Inc. opinion that this volume continues to be sufficiently large to be economically efficient to extract, and as wise stewards of the resource, is important to make it available to the local market.

# Volume calculation for Turtle habitat compensation

- Per the response to JART
- 311,000 total – minus remainder after habitat space = 231,000 tonnes
- = 80,000 tonnes @ 2.67 tonnes / m<sup>3</sup> = 30,000 m<sup>3</sup>
- Area of turtle habitat = 0.6 ha, plus perimeter = 0.67 ha = 6,700 m<sup>2</sup>
- Thickness of rock formation based on above = 30,000 / 6,700 = 4.5 m
- Actual thickness at north tab from reports and published drawings = 2.0 – 2.5 m which is not accurate as the X-section is at higher rock elevation so the volume is overestimated at this stage by almost 2X.
- The area is based on ground level area, and not the area reduced because of the necessity to slope the overburden

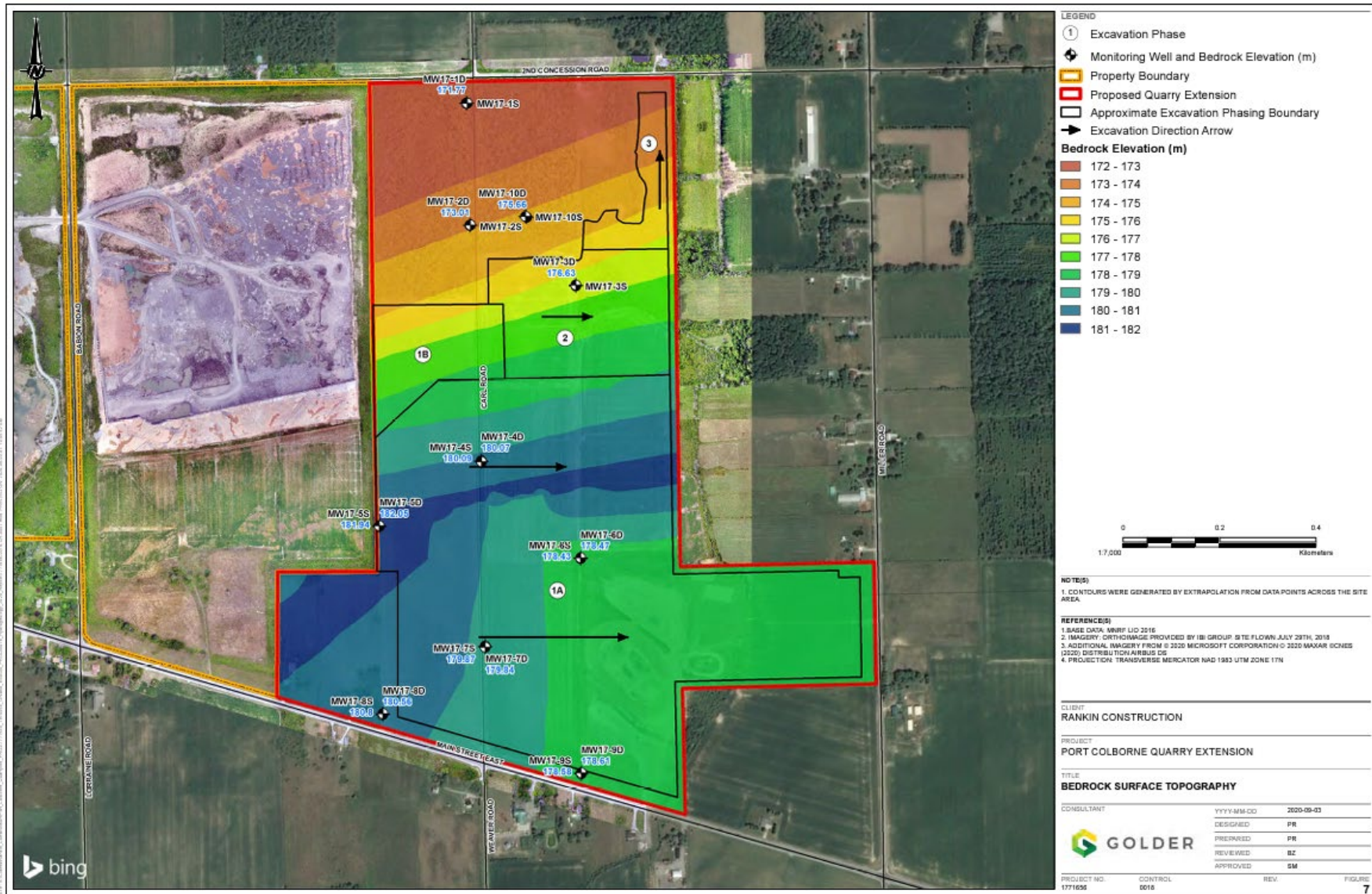
# Overburden Thickness X-section as published



# Reduction of viable rock area

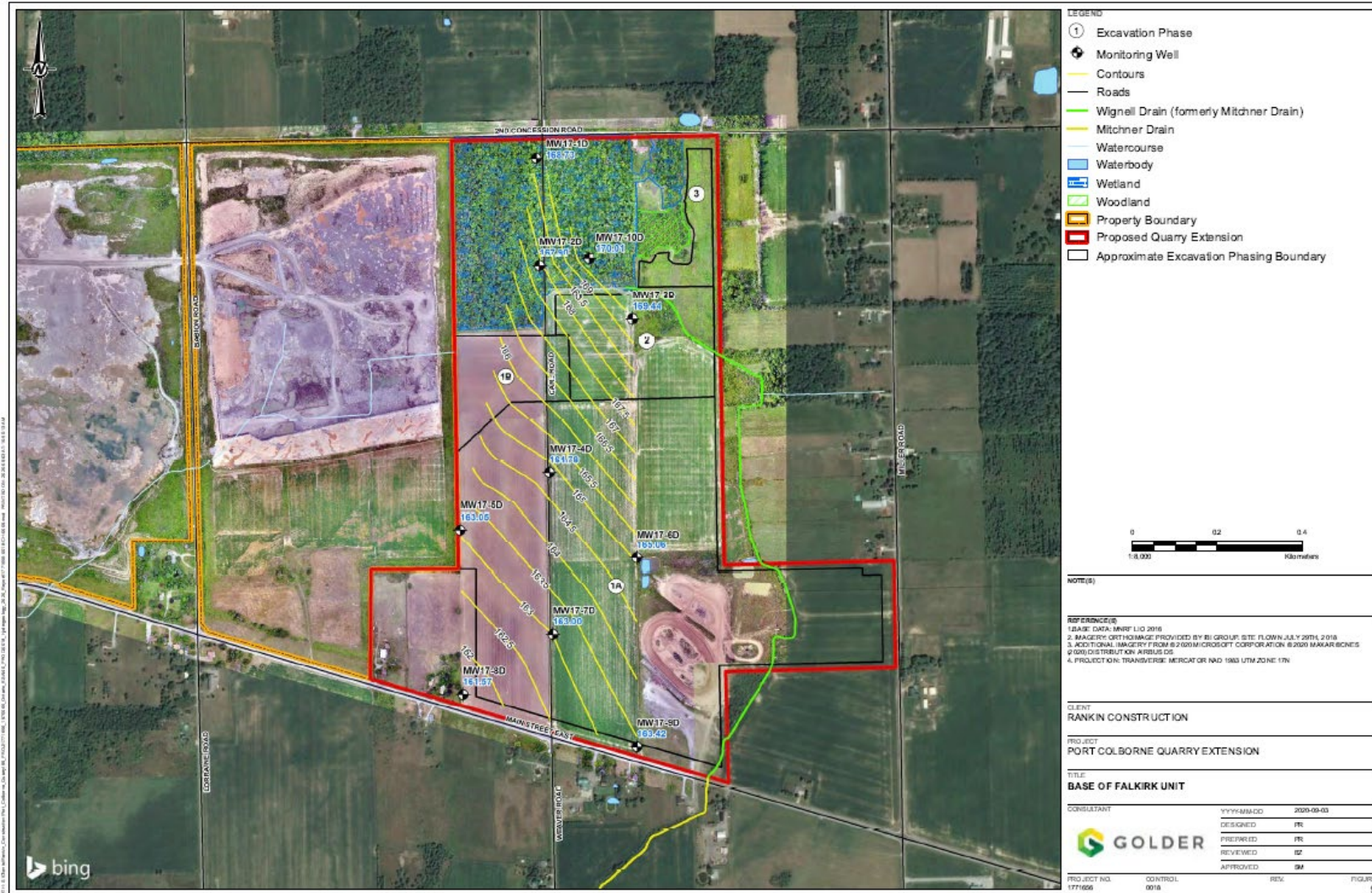
- The north tab has an overburden thickness of 8 – 10 m (see next slide)
- The overburden is earth and clay, and cannot be excavated vertically
- By Ministry of Labour regulations, a 1:1 slope is required
- This means the footprint is reduced by a width equivalent to the overburden depth
- A 6,700 m<sup>2</sup> area of 100 m length has a width of 67 m. This is reduced by 20 m south of the turtle habitat for the proposed drain and maintenance area.
- This is reduced to 47 m to 51 m width at the rock surface, or a reduction of an additional 25 – 30%
- Based on the above and the published maps, the recoverable aggregate has been overestimated by 125% - 130%

# Overburden Thickness





# Quarry floor slope

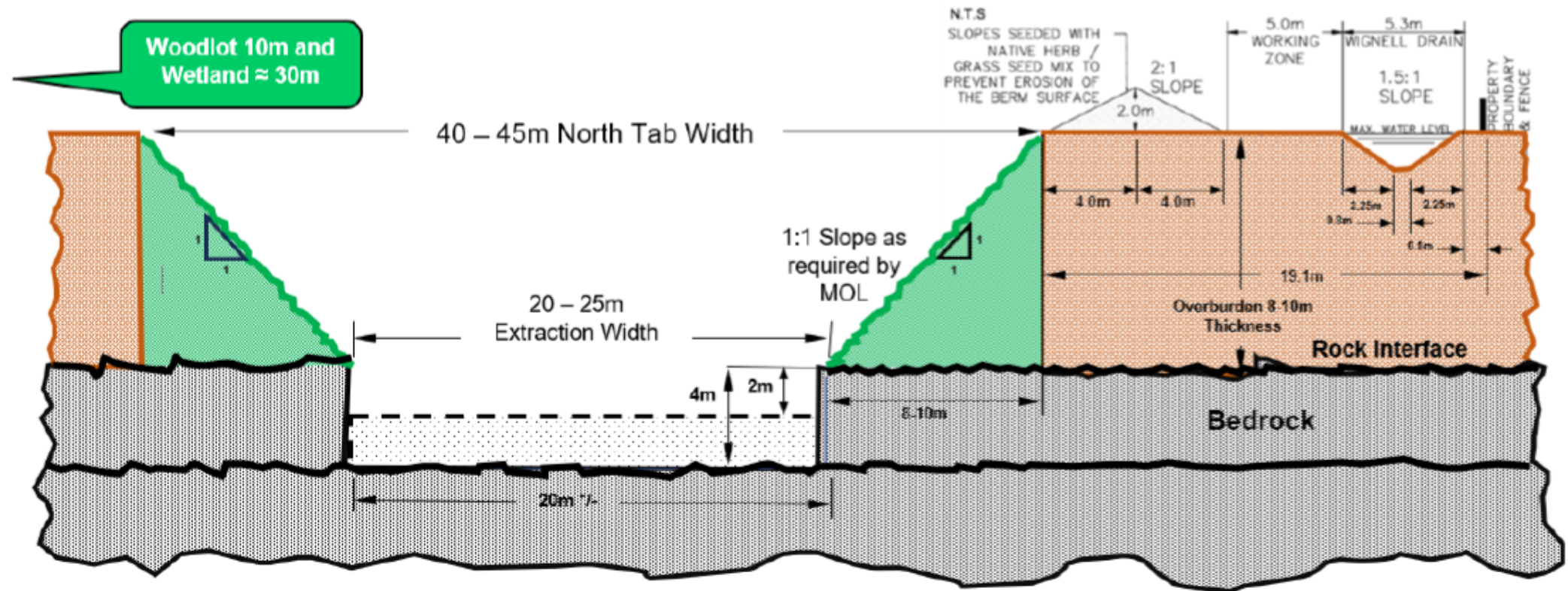




# X-section of recoverable rock below overburden

### DETAIL 3

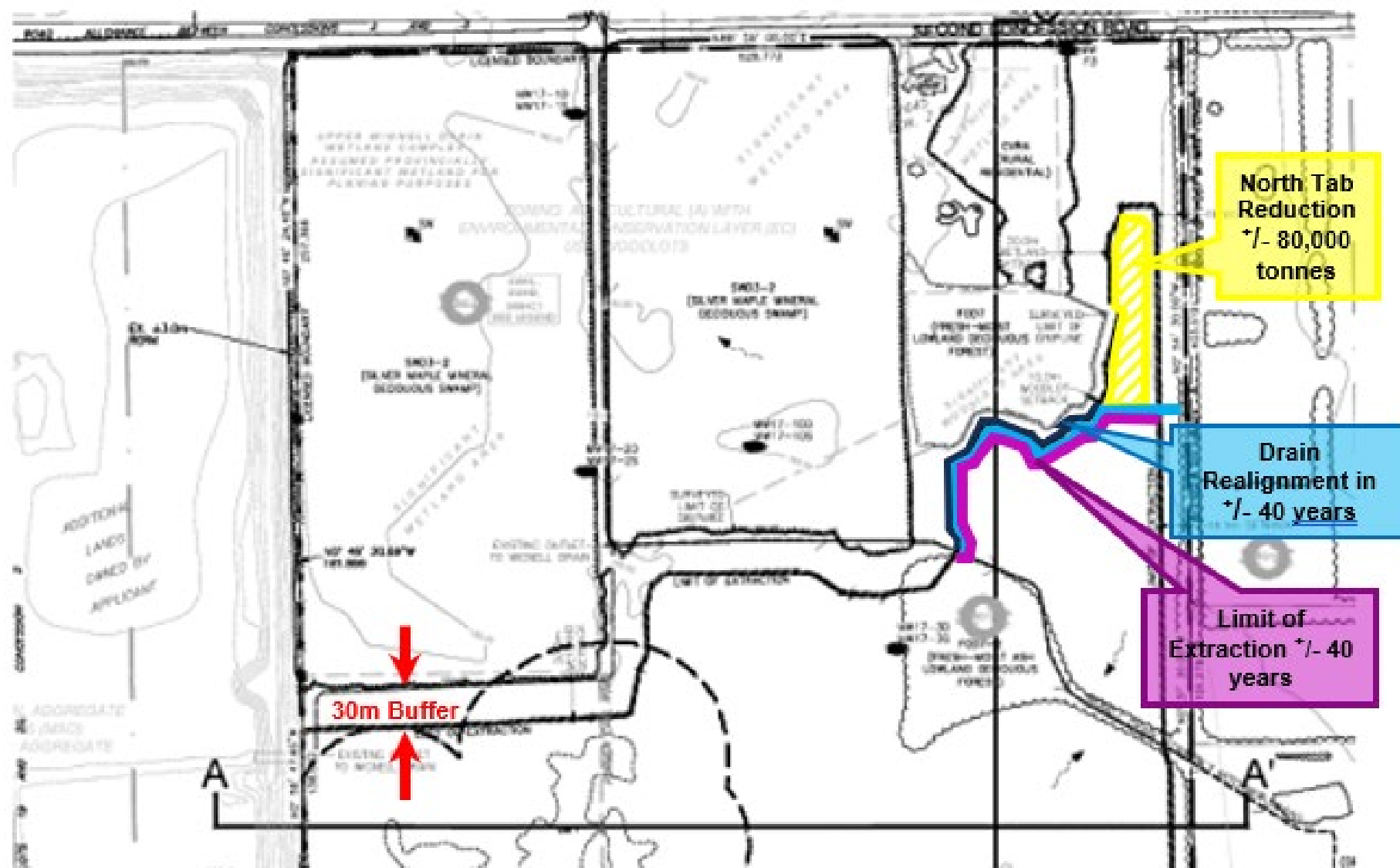
SKETCH OF BERM ABUTTING PROPERTY  
BOUNDARY WITH WIGNELL DRAIN.





# “Significant Volume” of Rock in North Tab

- The Proposed Turtle habitat pond takes up 95m of the North Tab (Slide 11) and reduced the available aggregate resource volume by 80,000 tonnes (Previous Slide (13))
- Reducing the North Tab another 95m will potentially reduce the available aggregate resource by another 80,000 tonnes, not including the reduction due to **sloping requirements for the 8 – 10 meters of overburden**
- The total estimated volume of the Pit 3 extension/expansion is 40,000,000 tonnes over the 40+ years (480+ months) of estimated quarry life
- A further reduction of 95m of the north tab is equivalent to 0.2% (80,000/40,000,000) or 0.96 months of aggregate reserve in a 480+ months estimated quarry life. Just 1 month in 40 years.
- THIS IS NOT A SIGNIFICANT VOLUME AND DOESN'T WARRANT A THREAT TO THE WETLAND, ESPECIALLY NOT AT THIS TIME. A SIMPLE REALIGNMENT IN 40 YEARS SIMILAR TO THE EAST TAB REALIGNMENT WILL SUFFICE



# Summary

- Phase 3X will not be approached for 40+ years. There is no justification for a drain realignment which will threaten the wetland and Species at Risk (SAR) until then, if ever.
- There is minimal aggregate to recover in Phase 3X, and it is under 8 – 10 m of overburden.
- If deemed viable in 40 years, the aggregate in Phase 3X can be accessed by a temporary drain realignment, similar to Phase 1X, over a period of just a couple of months. This will eliminate the encroachment on the wetland, and minimize the risk to the wetland and the SAR.



# REQUEST

- **The Committee should amend the proposed Region Official Plan Amendment (ROPA), and should similarly approve the City Official Plan Amendment with amended wording as follows:**

**“The realignment of the North branch of the Wignell Drain must be delayed until such time as the quarry excavation approaches the Phase 3X area, and after an assessment of the viability of removing the heavy overburden assessed against the volume of aggregate available.”**

- The projected life of this quarry expansion is 40 – 50 years. However, the impact will last for centuries.

Thank You