

175 Northern Highway, Wallan

Expert Witness Report of
Robert Mellor, BIS Oxford
Economics

Focus of Assessment

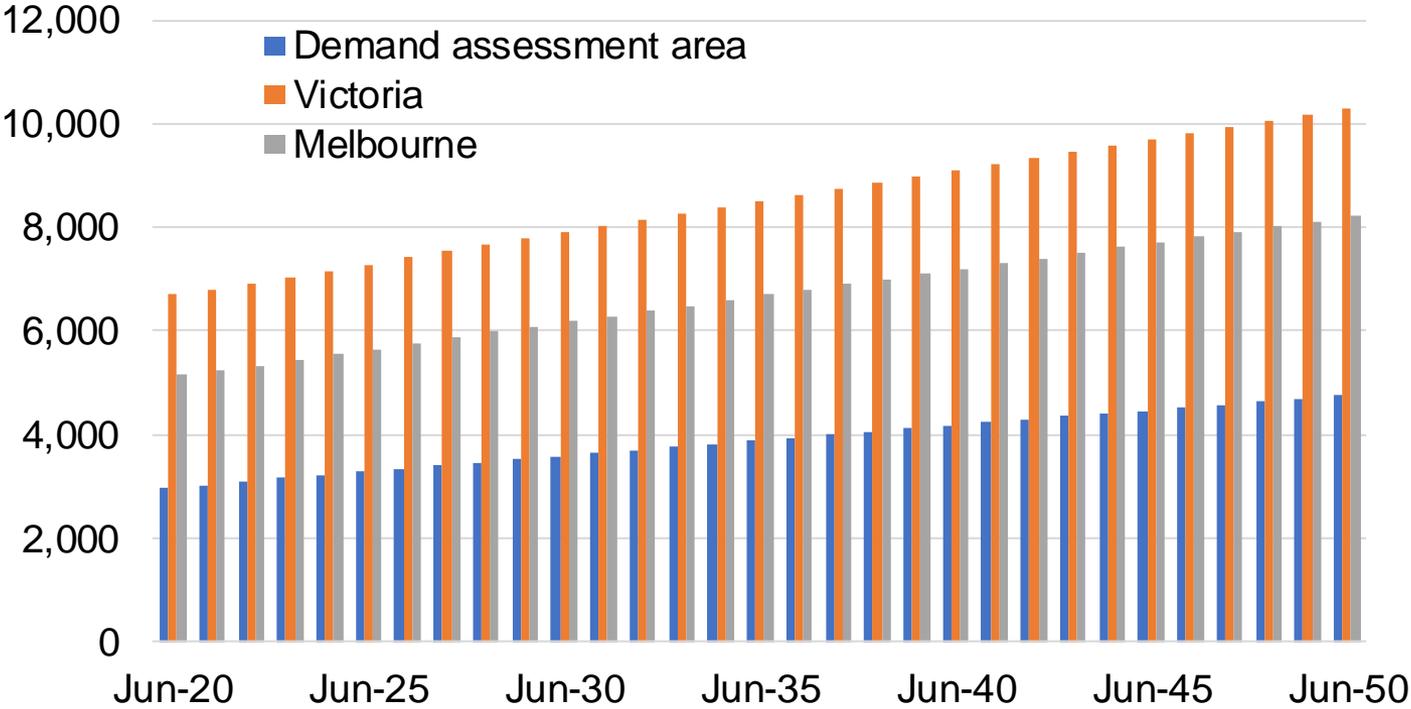
- BIS Oxford Economics' assessment focuses on the long-term demand for quarry products in the Melbourne market, within a 50km radius of the proposed quarry.
- This 50km radius was determined to provide cost-effective supply based on an assessment of the capacity and distribution of supply across Greater Melbourne and the North Growth Corridor, including the northern part of Melbourne and the CBD.

Methodological Approach

- Our methodology for providing demand projections for quarry products in the defined region is a bottom-up approach based on our population projections for Victoria and in turn Melbourne and then the defined region.

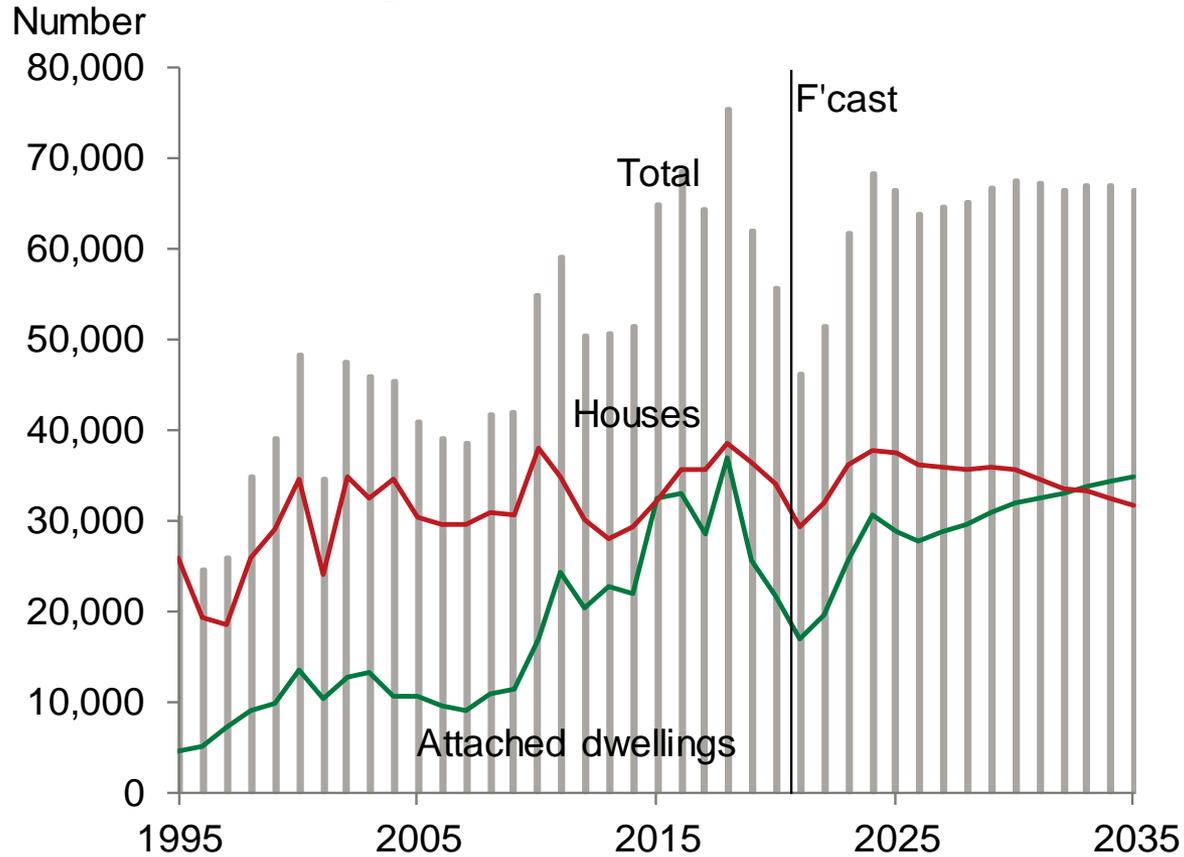
- Forecasts for end-use demand sectors out to 2050 are estimated for:
 - Detached Houses
 - Medium Density Dwellings
 - High Density Dwellings
 - Alteration and Additions to Dwellings
 - Non-Residential Building
 - Engineering Construction
 - Roads
 - Other

Residential population (number, '000s)



Source: BIS Oxford Economics, ABS data

Victoria: Dwelling commencements

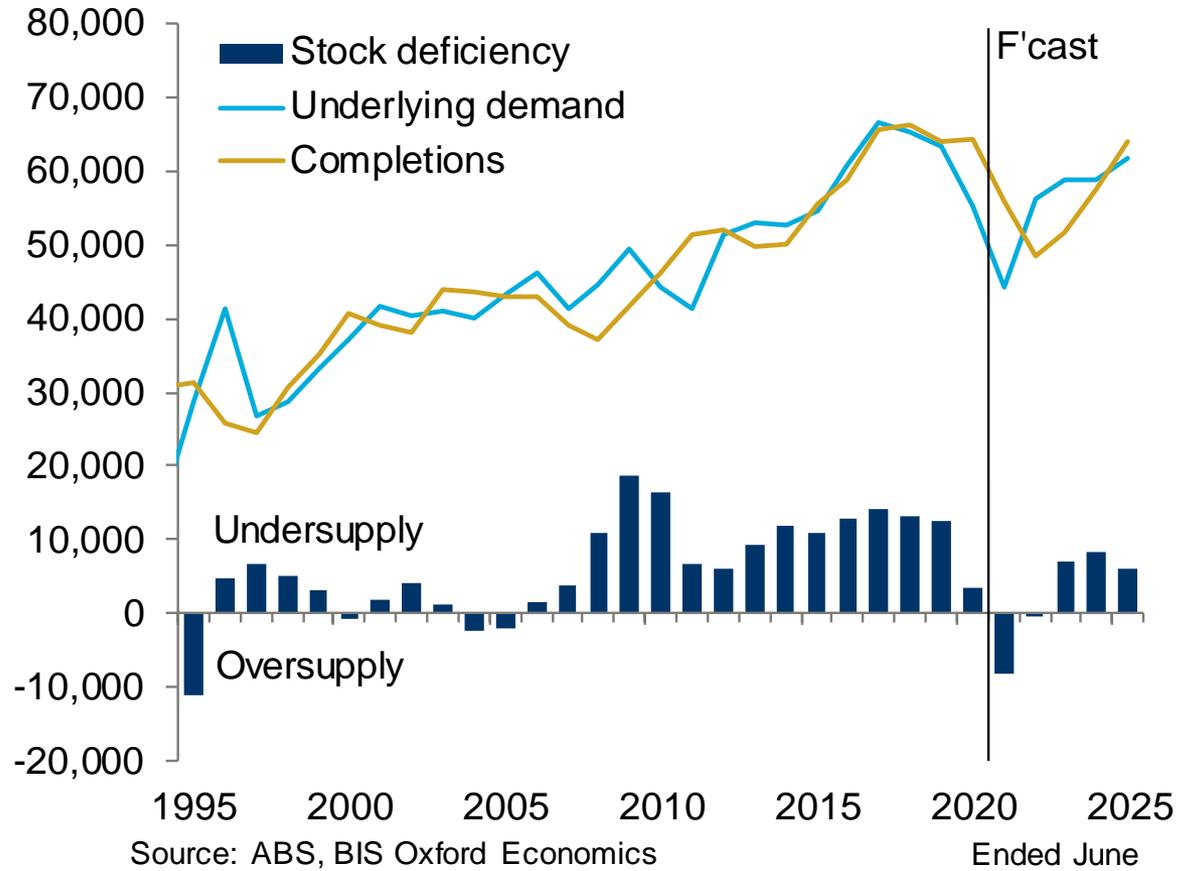


Source: ABS, BIS Oxford Economics

Ended June

Victoria: Dwellings stock balance

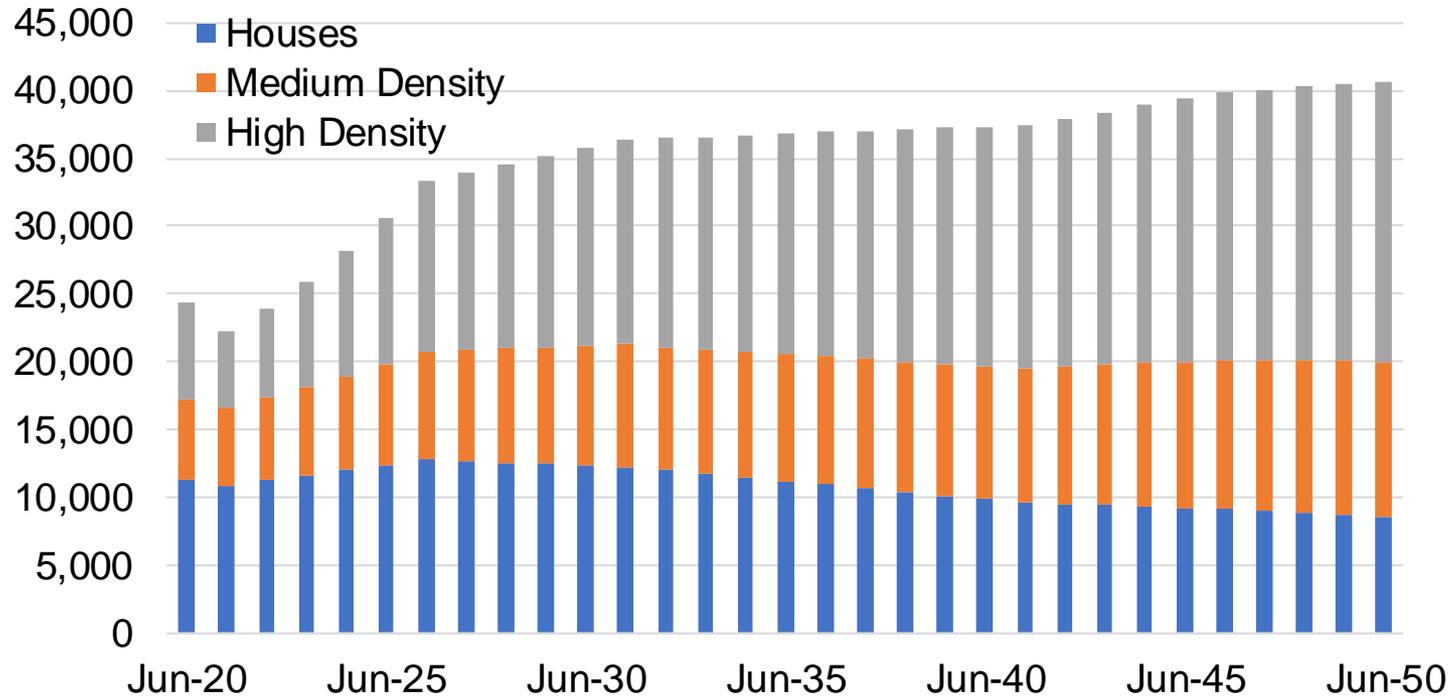
No. of dwellings



Source: ABS, BIS Oxford Economics

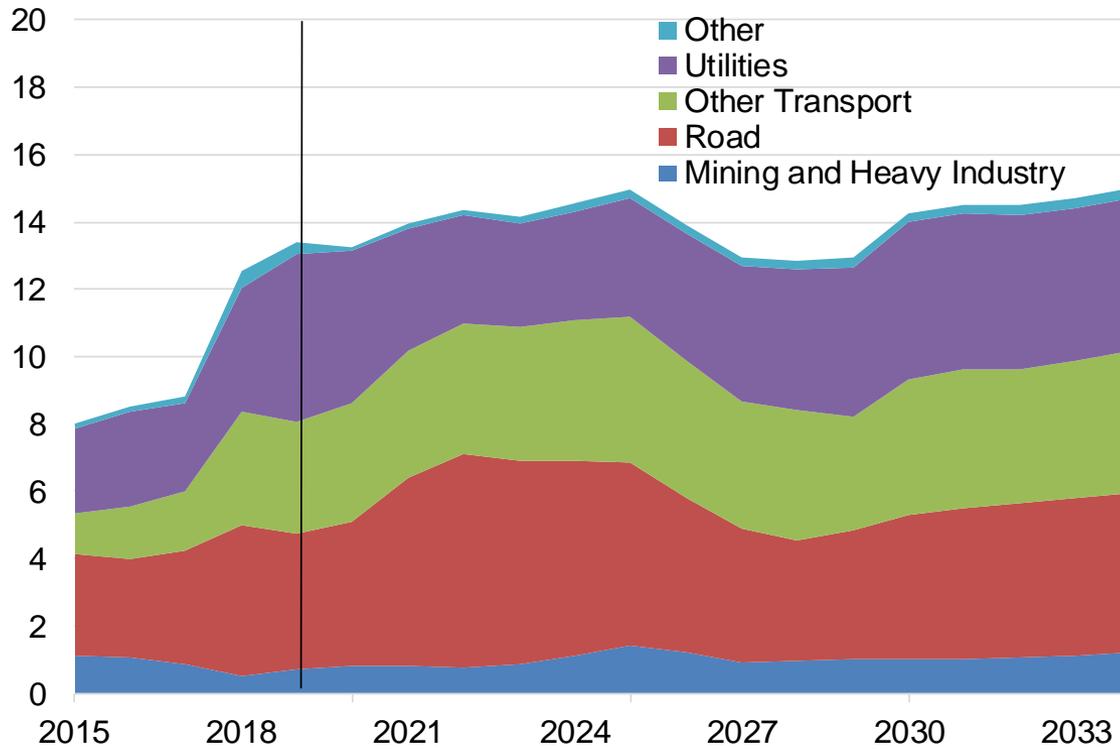
Ended June

Demand assessment area: residential approvals (number)



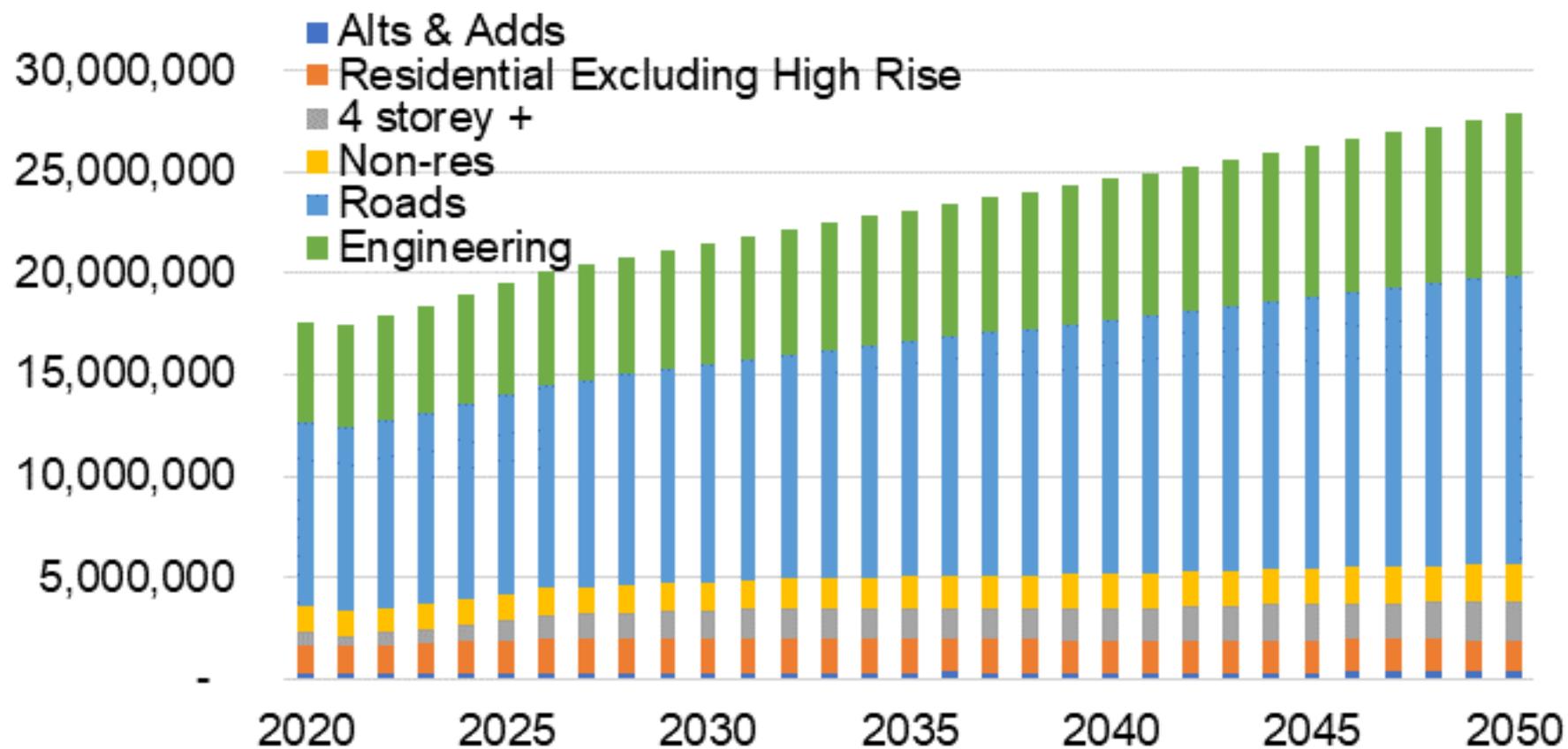
Source: BIS Oxford Economics, ABS data

Victorian Engineering construction activity (FY18 prices, \$ billion)



Source BIS Oxford Economics, ABS data

Coarse aggregate demand by sector (tonnes, '000)



Source: BIS Oxford Economics

**Demand assessment area: Coarse aggregate
demand by application (tonnes)**

	Pre-mixed Concrete	Precast concrete block	Precast Panel / Other	Asphalt	Other	Total	Compound A%ch
2019/20	4,091,390	124,444	214,233	1,011,152	12,135,983	17,577,203	
2024/25	4,690,877	130,913	230,874	1,108,023	13,298,639	19,459,326	2.1%
2029/30	5,337,718	147,239	253,305	1,211,564	14,541,349	21,491,174	2.0%
2034/35	5,654,521	160,363	266,544	1,311,160	15,736,716	23,129,304	1.5%
2039/40	5,860,618	169,277	274,269	1,410,392	16,927,708	24,642,263	1.3%
2044/45	6,199,978	178,921	286,985	1,510,100	18,124,425	26,300,410	1.3%
2049/50	6,466,911	187,878	298,207	1,610,114	19,324,809	27,887,918	1.2%

**Demand assessment area: Coarse aggregate
demand by sector (tonnes)**

	Residential excluding high rise	4 storey +	Non- residential	Roads	Engineering + other	Total	Compound A%ch
2019/20	1,658,359	648,600	1,329,699	8,961,541	4,979,004	17,577,203	
2024/25	1,889,552	987,273	1,306,419	9,820,077	5,456,004	19,459,326	2.1%
2029/30	2,009,214	1,336,732	1,441,652	10,737,728	5,965,849	21,491,174	2.0%
2034/35	1,966,907	1,495,008	1,590,701	11,620,419	6,456,269	23,129,304	1.5%
2039/40	1,892,906	1,616,241	1,688,341	12,499,880	6,944,895	24,642,263	1.3%
2044/45	1,927,078	1,779,430	1,774,463	13,383,569	7,435,870	26,300,410	1.3%
2049/50	1,936,294	1,888,332	1,864,978	14,269,965	7,928,348	27,887,918	1.2%

Coarse Aggregates Demand Forecasts

- We estimate that total demand for coarse aggregates in 2019/20 in the assessment area of 50kms of the proposed quarry was 17.6 million tonnes. Based on our forecasts for the end-use sectors total demand is forecast to grow by about 2.0% pa out to 2029/30 to 21.5 mill. tonnes, before slowing to around 1.3% pa out to 2049/50 to 27.9. This long term growth rate lines up with population growth rate to 2050.
- Over two thirds of demand comes from other coarse aggregates mainly used for roads.

Supply Comments 1

- Forecasting supply of aggregates is not a simple task. While it is possible to look at existing WA applications, lead times for approvals and the historical approval rate, this does not necessarily provide a reliable indication of future production. It is the approval of medium to large quarries (or expansion of existing ones) which has the potential to significantly increase future productive capacity and it is difficult to make assumptions on the likelihood of these applications being granted given the inherent complexities with regards to environmental and land use issues.
- Based on our assessment of the expected lifespan of existing quarries (including their potential for expansion) and the likelihood of approval for new work authorities, we expect that supply within the demand assessment area (i.e. a 50km radius of the proposed quarry (WA1473)) over the period to 2050 is unlikely to see a significant increase in productive capacity in the absence of the approval for WA1473.

Supply Comments 2

- We note, however, that currently the area within 25km of the proposed quarry is responsible for the bulk of hard rock supply within the overall 50km radius of the proposed quarry. We also refer to the opinion of Coffey Services (specialists in geotechnical engineering) provided on pg. 4 of their report (referenced in item 8) that “... as a result of the sub-surface geology and residential development there are no significant stone resources (operating or planned) north of Craigieburn, in the northern development corridor other than WA1473”
- “WA1473 remains the only significant resource that is available to service this development corridor and the northern half of the Greater Melbourne region.”

Supply Comments 3

- The 2016 PwC demand and supply analysis for statewide extractive resources projected that the cost of supplying aggregates to the North Growth Corridor and Melbourne was set to increase significantly over the forecast horizon 2015-2050 as demand outstripped supply within a cost-effective transport distance.
- The 2018 PwC addendum updated the analysis using more recent production data and found that Victoria-wide demand had been higher than projected under the base case scenario in the intervening years. The addendum also considered the importance of WA1473 in meeting demand within a 25km and 50km radius of the site. The shortfall of hard rock resources within 25km of WA1473 was projected to be upwards of 5.46 million tonnes between 2018 and 2022. The approval of WA1473 was projected to reduce this shortfall by approximately 1 million tonnes.

Conclusions 1

- The nature of construction materials is such that they need to be transported over short distances in order to be cost effective and to minimise wider environmental costs to society. Quarry sources are being exhausted over time. Urban expansion not only places demand on resources for construction, it also reduces access to resources.
- Based on our latest analysis (June 2020), BIS Oxford Economics is forecasting that demand for building aggregate in Melbourne will regain momentum over FY23. Demand from the engineering construction sector (particularly roads) is expected to remain strong over the short term as a result of ongoing mega projects and government stimulus measures.
- Melbourne's North Growth Corridor is forecast to see strong growth in the medium term underpinned by planned greenfield developments. Melbourne's northern suburbs are also expected to see solid growth as a result of urban infill and the major transport investments required to meet the needs of a growing population. We are projecting that demand for hard rock (coarse aggregates) within a 50km radius of the proposed quarry (WA1473) will rise from its current levels of 17.5 million tonnes per annum to around 21.5 million by FY30.

Conclusions 2

- In the long term we expect to see growth in demand for aggregates slow as the major catch-up period of infrastructure investment winds down and population growth moderates. Nevertheless, we expect to see a further pick-up in demand between FY30 and FY50, from 21.5 million tonnes per annum to 27.9 million tonnes.
- The proposed quarry in Wallan would provide ready access to hard rock construction materials to cater to growth in the North Growth Corridor (including the growth in the Beveridge North West Precinct) as well as the northern suburbs of Melbourne. Moreover, the quarry itself does not preclude the realisation of the Beveridge North West Precinct Structure Plan given its limited economic life and its potential to be subsequently rehabilitated for a range of uses including residential/mixed use development.

Conclusions 3

- It is our opinion that in the absence of the approval for WA1473, the cost of supplying construction materials to meet demand from the North Growth Corridor and northern suburbs of Melbourne will be significantly higher than otherwise, as based on our assessment of supply a significant proportion of this additional demand would need to be met from supply outside of a 50km radius.
- The 2018 PWC Addendum report supports my views in relation to the likely future shortfall of rock in the North Growth Corridor and northern suburbs of Melbourne.

Comments on Opposing Evidence

Mr Chris Abery-Deep End Services

- He suggests the take up of 277 lots p.a. adopted by Tract Planning is too low, based on id Consulting forecasts and that the Beveridge North West PSP could be more popular and therefore the 500m buffer zone would be reached at an earlier date than Tract suggest. However, there are alternative sites for development to occur prior to the quarry reaching the end of its life and this doesn't represent a net social cost to Victoria. Development could occur in other parts of Mitchell Shire or Greater Melbourne.
- Point 115- Refers to Craigieburn and Merrifield West exhausting their land stocks in 5-10 years. From our Melbourne land analysis based on Vic. Govt. data the Hume LGA has about 13 year's supply, so it is not imperative that home buyers will have to move further north in to Mitchell Shire as Chris states as early as he suggests as supply will be sufficient to meet demand out 13 years for the whole of Hume.

Mr Chris McNeil- Ethos Urban

- Mr McNeil's economic impact assessment fails to consider the economic impact of the quarry in terms of its construction or ongoing operation.
- Mr McNeill acknowledges that this does not necessarily imply a loss in economic terms to Victoria as the urban development postponed as a result of the quarry will likely be accommodated elsewhere in the state, but his opinion is that there will be inefficiencies associated with not fully developing the precinct plan as it currently stands.
- However, these inefficiencies need to be weighed up against the inefficiencies associated with transporting hard rock large distances on the cost of construction activity Victoria-wide.

- In 4.14 I agree with assumptions from Vic. Govt. Urban Development Program in the Hume-Mitchell Northern Corridor that there are available greenfield lots of 109,877 and based on projected demand this would be about 30 years of supply..
- In 6.10 in Summary Mr McNeill admits that if there was postponed development as a result of the quarry that development would happen elsewhere in Melbourne anyway, which would be my key argument against most of these expert reports. This is a whole of Melbourne or even Victoria decision regarding the possible supply of aggregates versus where residential lots can be developed.

Mr Alex Hrelja- HillPDA

- .Mr Hrelja's main argument which he summarises in his Conclusion in Point 70 is around the fact that there will be insufficient demand to justify the full development of the town centres and planned community spaces until the quarry's end of life.
- This is probably true, but this is only delayed investment and only really an issue if there is insufficient critical mass of demand from the population that does proceed to see sufficient retail development and other services to meet their needs.
- This is an economic impact assessment that ignores the benefits of the quarry, although Mr Hrelja admits this. It's all delayed investment and in the meantime it just benefits another part of Mitchell Shire or Victoria.

Mr Hrelja's Cont.

- Point 36 Mr Hrelja states that “Scenarios could be proposed whereby the quarry ceases operation before urban development reaches the quarry buffer area”. So he is suggesting that the rate of residential lot development may not be an issue in terms of being negatively impacted by the proposed quarry. Based on the dwelling projections Mr Hrelja quotes in the Tables 1 & 2 below Points 38 & 39 we wouldn't disagree with the projections quoted from “Victoria in Future” or ID Consulting's forecasts for Mitchell Shire Council

Mr Justin Ganly-Deep End Services

- Mr Ganly in his statement has assumed that the majority of demand for hard rock resources extracted from WA1473 would be generated by the Hume, Whittlesea and Mitchell LGAs. He has used the estimates from the EY demand analysis undertaken for DEDJTR for hard rock demand in Hume and Whittlesea and estimated the demand for Mitchell based on EYs analysis.
- Mr Ganly then undertakes a supply analysis and concludes that there is sufficient supply to meet demand within the Hume, Whittlesea and Mitchell LGA without WA1473 proceeding.
- The 2016 PwC demand and supply analysis for Statewide extractive resources which incorporates the EY demand analysis identifies Whittlesea and Hume as the LGAs expected to experience the 3rd and 6th largest shortfalls of supply in aggregates over the 2015-2050 period.
- The 2018 PwC addendum updated the analysis using more recent production data and found that Victoria-wide demand had been higher than projected under the base case scenario in the intervening years (Mr Ganly used the base case for his demand analysis). The addendum also considered the importance of WA1473 in meeting demand within a 25km and 50km radius of the site. The shortfall of hard rock resources within 25km of WA1473 was projected to be upwards of 5.46 million tonnes between 2018 and 2022. The approval of WA1473 was projected to reduce this shortfall by approximately 1 million tonnes.