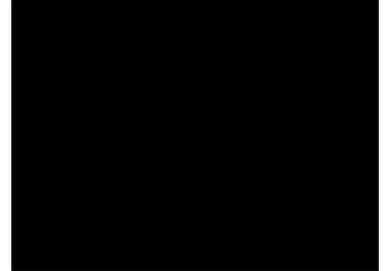




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SERA pilot project taskforce
Department of Environment, Land, Water and Planning
PO Box 500
East Melbourne VIC 8002



Strategic Extractive Resource Area Pilot Project Submission

1. Introduction

Thank you for the opportunity to provide comment on the Strategic Extractive Resource Areas pilot project.

Boral is an international building products and construction materials group with three strong divisions: the well-positioned construction materials business of Boral Australia; USG Boral, a fast-growing plasterboard joint venture in Asia, Australia and the Middle East; and Boral North America, a scaled and growing building products and fly ash business.

Boral's operations span 826 building and construction materials operating and distribution sites globally and employ more than 26,000 employees and contractors.

Boral holds 19 Extractive Industry Work Authority Tenements within Victoria. These quarries produce a range of construction materials from hard rock (predominantly basalt, hornfels and granite) through to sand and limestone.

Boral does not currently operate any Extractive Industry operations within the Wyndham and South Gippsland pilot project areas.

Notwithstanding that, Boral supports the pilot project and the proposed planning framework for Strategic Extractive Resource Areas (SERA). In particular, we:

- Support the introduction of new planning provisions that seek to safeguard potential extractive resources and to protect the operations of existing quarries.
- Support the purpose and intent of the State Resource Overlay at Clause 44.07 and the Schedule to Clause 44.07
- Strongly support the progressive roll out of the SERA's in other suitable areas identified as being strategically important for the supply of extractive resources that are needed to meet expected demand, including the City of Whittlesea, Moorabool Shire, Yarra Ranges and Mitchell Shire Council.

Borals support for the proposed SERA's is outlined below in more detail.

2. Victoria's Extractive Industry

In 2016 the State Government released the *Extractive Resources in Victoria, Demand and Supply Study 2015- 2050 (Demand and Supply Study)*. The Study indicated that demand for extractive resources is





expected to nearly double by 2050 (from 47 million tonnes in 2016 to 88 million tonnes in 2050). Shortfalls in supply are expected within Melbourne from 2026 if appropriately located extractive resource sources are not secured.

A significant share of the production occurs in areas within 50km of metropolitan Melbourne. In the next 30 years, quarries will need to significantly increase their output to support a rapidly growing population, forecast to exceed 8 million people by 2050. Given the likelihood that demand per capita will remain relatively stable, there is a need for 20 additional large quarries (with an annual output of around 2 million tonnes each) to meet increasing population growth. On top of that, more quarries are needed to replace existing quarries as they approach their end of life.

Delivering so many new operations within that timeframe is challenging within the existing approvals process. New quarry developments often attract a significant amount of community interest. Drawn out regulatory approval processes, more often than not, involving the VCAT, highlight growing reluctance by local governments to approve new quarries, based on perceived community and environmental opposition. As a consequence it can take 10 or more years to obtain the statutory approvals required to operate a quarry. This creates a significant local supply risk for extended points in time, noting also that new significant quarries have been approved within the last 25 years.

There is a growing disconnect between the State Planning Policy's objective of protecting Extractive Industry Interest Areas (EIAs) and local government plans and the development assessment framework. Planning schemes in their current form have not been effective in securing extractive resources and protecting operating quarries from incompatible land uses.

This disconnect is particularly evident in the development of Victoria's Growth Corridor Plans, which fail to even recognise EIAs. As a consequence most, if not all Precinct Structure Plans are being prepared and exhibited without any regard to EIAs. The PSP for Cranbourne North for example (C106), was exhibited without any regard to the EIA, or the Extractive Industry Work Plan (WA1437) endorsed by DJRP which is located within the PSP area.

This is despite the Policy Direction at Clause 1.4.2 of Plan Melbourne that seeks to '*Identify and protect extractive resources (such as stone and sand) important for Melbourne's future needs*'

3. Need for the Strategic Extractive Resource Areas Concept

The PwC Demand and Supply Study identified the challenges in obtaining approvals for new Extractive Industry operations. In particular, the report identified that:

Development and land fragmentation has occurred over the top of as-yet undeveloped extractive resources, thereby preventing these resources against future exploration. Again, this issue limits state-wide supply of extractive materials.

An analysis undertaken in 2018 of quarry approvals has shown that only a quarter of quarry applicants have been able to secure necessary approvals in the past two years to carry out new production. This indicates there is likely to be even less supply coming on line in some critical districts over the next five years compared to what industry had been anticipating in 2015.

Challenges faced in securing future supply include:

- Identifying resource deposits that are high quality and fit for purpose. Extractive resource locations are based on geology and cannot be extracted from every parcel of land;
- The location of the resource must be close to existing and future markets to minimise transport costs. It is noted that the cost of transporting extractive material is one of the key





factors affecting affordability, typically representing around half of the delivered cost of material to a project;

- In addition, the land must have direct or proximate access to major road infrastructure. Quarry vehicle movements are generally incompatible with local roads;
- The land must either be owned by the proponent or a willing landowner that is prepared to enter into a long-term lease to allow the land to be quarried.
- Nearby sensitive receptors must be minimised and/or appropriately managed; and
- Once the resource is exhausted, the land must be able to be rehabilitated to an agreed state.

Suffice to say it is not easy finding sites that readily satisfy these criteria.

The Commissioner for Better Regulation's report, ***Getting the Groundwork Right – Better regulation of mines and quarries*** (October 2017) outlines actions taken by the Earth Resources Regulation Branch (ERR) of DJPR as part of their Continuous Improvement Project. In relation strategic resources and land use planning, the report identified the following key actions:

- *In partnership with DELWP, DEDJTR has developed a new approach to strategic resource and land use planning. This approach is focused on enabling access to earth resources in geologically promising areas, supporting the efficient allocation of rights, and facilitating jobs and investment.*
- *Recommendation 6 of the report is that: DEDJTR should work with DELWP to develop guidelines for Strategic Resource Areas, to support the option of instituting the Minister for Planning as the Responsible Authority for planning approvals for operations located in Strategic Resource Areas.*

Helping Victoria Grow – Extractive Resources Strategy (DEDJTR, June 2018) was developed with the intent to "ensure high quality extractive resources continue to be available at a competitive price to support Victoria's growth". The objectives of the Strategy are to:

- *Take immediate short-term action to ensure a sufficient supply of extractive resources is available to meet Victoria's immediate infrastructure construction requirements*
- *Provide secure and long-term access to extractive resource areas of strategic importance to the State*
- *Maintain and improve Victoria's competitiveness and provide greater certainty for investors in the extractives sector*
- *Prioritise and implement improvements to streamline regulatory approval processes in the short-term*
- *Raise community understanding about the role of extractive resources in supporting Victoria's growing population and build confidence in the regulatory performance of the sector*
- *Encourage leading-practice approaches to sustainability, environmental management and community engagement*





- *Encourage and support innovation in exploration, extraction and the end use of landforms after quarrying.'*

The **Joint Ministerial Statement on Extractive Resources** (July 2018) implements some of the priority actions identified within **Helping Victoria Grow – Extractive Resources Strategy**. It also gives effect to the recommendations of the Commissioner for Better Regulation, in her report *Getting the Groundwork Right: Better regulation of mines and quarries*.

The Joint Ministerial Statement reinforces the need to identify and protect significant resources as follows:

5. IDENTIFY AND PROTECT EXTRACTIVE RESOURCES OF STRATEGIC IMPORTANCE

Victoria's strategic earth resources will be better identified to inform land use planning and enable planning conditions to be used to secure existing and future strategic earth resources.

The Victorian planning system recognises some important extractive resource areas, known as Extractive Industry Interest Areas (EIIA). However, it has not always been possible to effectively prevent encroachment on these resources.

The Strategic Extractive Resource Areas (SERA) pilot project is, therefore, a key initiative of the Extractive Resources Strategy. The project seeks to assist in securing strategic extractive resources in defined locations by providing:

- *Certainty for quarry operators to know that current and potential future operations will not be impacted by housing or other incompatible land uses.*
- *Certainty for the local community to know that their lives will not be impacted by quarry operations near their homes.*
- *Certainty for the broader Victorian community and business to know that the construction materials required to build the infrastructure the state needs will be safeguarded and affordable.*

The SERA Pilot Project seeks to trial the use of planning provisions to provide the certainty sought in relation to extractive resources.

4. The Catalyst for Change

Victoria has extractive resources in close proximity to population centres (approximately 50 km on average). In contrast, many of the key quarry resources currently supporting the City of Sydney are approximately 150 km to 200 km from the central business district. The short haulage from quarries to construction sites has benefitted Victorian communities for a long time.

Competing developments (such as residential development in and around undeveloped EIIA's) and social pressure generated by interest groups such as environmentalists and neighbouring landowners are delaying or preventing quarry developments. Local government's assessment frameworks are under social and political pressure not to approve quarries. The current trend will lead to location of quarries further afield, away from any residential area, and would increase the economic cost of accessing quarry materials.





The problem lies in local governments not always recognising the full social cost and benefit of quarry developments to the community, often favouring outcomes that tend to benefit local and sectional interests.

5. Assessment of Economic Costs

In Victoria, not only is there a risk that the region will suffer from a shortage of consented supply in 20 years or more, but that the economic and environmental costs of sourcing quarry materials will increase as it is required to come from further afield.

Quarries primarily provide materials to their local communities. They need to be located at sites that contain suitable material with ready access to transport infrastructure, principally roads, to get the materials to market. Transport cost is a substantial component of the price of any quarry material. As such, the key economic and environmental priority with quarrying is to minimise the transportation of quarry materials.

To assess the potential economic cost of the regulatory framework, the difference in the net economic costs between a best practice resource planning and assessment framework and the current framework needs to be properly considered. A lack of quarries near key areas of major construction work will inflate the cost of housing and infrastructure projects for the state and the building industry.

The Victorian Government's FY20 budget listed \$28.9 billion in new infrastructure projects and \$32.7 billion in existing projects, a total of \$61.7 billion. CCAA estimates that if the average haulage distance increased from 50 to 100 kilometres then the cost of quarry material would increase by approximately 18%.

As material costs comprise approximately 35% of typical construction projects, a Victoria Government infrastructure spend of \$61 billion per year would see an overall increase in material costs by approximately \$3.8 billion annually by 2040.

With longer transport distances, direct transport costs increase, driving up the cost of supplying extractive resources. The indirect cost from dust, noise, greenhouse gas emissions, and road safety risk would also increase. Broadly, the additional impacts associated with transporting quarry materials over greater distances and be grouped as follows:

Direct cost of transport

As future demand for quarry material increases, so does truck movements, and in turn, congestion and damage to local roads and highways. If total production increased to 73 million tonnes in 2036, this translates to 520 million kilometres per year in truck movements (compared to the current 153 million kilometres per year).

If that material is sourced from 100 kilometres away instead of 50 kilometres, this translates to 782 million kilometres per year in truck movements. As a result of the lack of new quarry approvals close to markets, this greater travel distance increases the risk of road trauma since heavy vehicles are associated with more severe injury outcomes. Severe transport impacts could be reduced significantly by reducing transport distances,

Transport cost is a substantial component of the price of any quarry material. According to Access Economics' 2006 report to Cement Concrete and Aggregates Australia (CCAA), the cost of transporting one tonne of quarry material is \$0.15 per km. According to CCAA's submission to a 2013 Productivity Commission Inquiry, transportation equates to approximately 20 to 25 percent of the total cost of quarry materials, based on the marginal cost of transporting one tonne of quarry material at \$0.17 per km. The direct cost outlined above is only the first order cost impact from sub-optimal resource planning and management.





For example, if the resource in the Whittlesea LGA for example, is not developed and instead the resource is sourced from Seymour (in Mitchell Shire) 75 km away, this sets in motion a series of impacts over time. The first order impact is the additional cost of transporting quarry material from Seymour, which could have been supplied from within the Whittlesea LGA.

Where SERAs can not be secured close to Melbourne or other regional centres, increased emphasis should be placed on securing SERAs in close proximity to the regional rail network. Utilising the rail network would provide substantial benefits in relation to reduced truck volumes with flow on effects resulting in reduced Co2 emissions and less road maintenance and other transport impacts.

And whilst it is difficult to calculate the cost of a series of impacts from the sterilisation of an extractive resource, it is important to recognise the long-term and widespread implications and develop regional and local plans accordingly. At the same time, Infrastructure Victoria needs to invest significantly in rail infrastructure upgrades to support the development of extractive industry operators utilising the existing distribution infrastructure. Fit-for-purpose rail infrastructure is essential in supporting supply chains for extractive industries and reducing the reliance on the notoriously inefficient road network. This challenge would require multidisciplinary planning and decision-making across portfolios and may take decades to achieve. In the meantime, and in the absence of a suitable rail network, SERAs need to be established close to where the material is most needed.

Increased greenhouse gas emissions

Significant increases in truck movements will result in increased greenhouse gas emissions. Carbon dioxide (CO₂) emissions associated with haulage from a large quarry with an average haulage distance of 50 kilometres are approximately 6,000 tonnes of CO₂ per year. A large quarry with an average haulage distance of 100 kilometres is approximately 14,000 tonnes of CO₂ per year, and one with 150 kilometres average haulage distance is 22,000 tonnes of CO₂ per year. Therefore, an additional 20 large quarries (as anticipated to be required to meet the demand for the additional 41 million tonnes per year required in 2050) located within a 100 kilometres average haul distance would result in an additional 160,000 tonnes of CO₂ emissions per year.

Increased community uncertainty and inefficient quarry operations

Uncertainty about new quarry developments or significant expansions of existing quarries can cause a significant amount of concern for residents close to quarries or EIAs. Greater investment certainty is needed for companies so that optimal decisions on plant and equipment can be made. A lack of certainty can result in delayed investment in more efficient modern equipment, which can bring pressure to production rates and maintenance costs and impact on competitiveness.

Indirect cost from noise and dust

All quarries regardless of where they are situated will result in noise and dust, and the social costs associated with these impacts are perceived by the community in different ways. The cost of managing dust and noise impacts (for example - lost productivity through restricted operating hours) are invariably passed onto customers resulting in higher costs for quarry materials. Such restrictions need not apply if strategic extractive resource areas are protected from encroachment by sensitive uses.

In practice, the social cost associated with alternative quarrying options can not be easily factored in by Responsible Authorities, either because the alternative quarry option is not located in their jurisdiction or its development approval is still some years away. The failure to recognise the social cost of alternative quarrying options makes it difficult to achieve outcomes consistent with the state's interests.

Other indirect costs





Sterilisation of extractive resources and sourcing materials from further afield results in other indirect costs, such as increased road congestion, road safety risks, greenhouse gas emissions and subsidisation of road user charges (if any) for heavy vehicles. These indirect costs are not always fully considered in development assessments. Development decisions that lead to transporting quarried materials over longer distance transfer cost to the wider community and future generations.

Intergenerational cost

Sterilisation of extractive resources results in an intergenerational transfer of cost. There are two elements to this. Additional transport cost is one component (discussed above). The second component is the cost associated with not utilising a natural resource effectively; forgoing employment and regional development opportunities.

Ideally, resources should be allocated in a way that provides the most benefits to society. In relation to extractive resources, this involves a framework that enables sequential development, where for the most part quarrying precedes other development. Under such a framework, quarrying approvals would be conditioned to facilitate beneficial use of the quarried area and its surroundings at the end of the quarry's life. This approach could be incorporated in regional and local government plans as a master plan or a strategy for developing quarries including their beneficial post-quarrying developments.

6. Post-quarrying development

Successful adaptations of old quarries into sites that promote community engagement, housing, and nature reserves adds to the social benefit derived from natural resource development. Quarrying need not be assessed as an alternative to other developments (such as residential development) or nature conservation. Benefits from both can be obtained in many cases.

Through effective long-term regional planning, governments can first realise the benefits from quarrying and then develop the area for residential or other employment based uses. If it is not feasible for other development to proceed, the quarried area can be rehabilitated as a green-space or natural reserve, enhancing the biodiversity values of the area.

There are many examples of old quarries that have been adapted into nature reserves and recreational areas in Victoria. These include the Royal Botanic Gardens Cranbourne (11 km from CBD), which hosts a contemporary landscaped space that showcases the diversity of Australian flora. Another example is the former Boral quarry in Niddrie, which supplied basalt to pave the roads of Melbourne from the 1940s to 1975. Purchased by Places Victoria in 2000, it is now home to over 580 dwellings.

There are many other examples in Victoria of old quarries being converted to parklands or residential communities.

7. Conclusion

Demand for extractive resources is expected to nearly double by 2050 (from 47 million tonnes in 2016 to 88 million tonnes in 2050). Shortfalls in supply are expected within Melbourne from 2026 if appropriately located extractive resource sources are not secured.

The combination of social and economic impacts that a lack of affordable quarried material will have on infrastructure, housing and other state interests needs to be carefully examined and quantified.

Regionally important deposits of extractive materials should be protected against conflicting land uses by appropriate planning measures so that they remain available for extraction in the future, particularly in proximity to major growth areas.





Better articulation of the importance of extractive resources to the community and government (i.e. fundamental to domestic dwellings, social infrastructure, safe and adequate transport infrastructure etc) is also needed. If improved community engagement could be undertaken, and if communities had greater certainty in planning and approval processes, then a significant amount of angst could be reduced.

To strike a balance between resource availability and local amenity, processes that engage local communities more formally in decisions about resource identification and management of development options within EIAs need to be considered. The long-term supply of strategic extractive resources also needs to be secured today, in areas close to where they will be used to keep down transportation and construction costs.

Boral submits that if the SERAs pilot project is rolled out across relevant Local Government areas in Victoria, it will substantially achieve these objectives.

