

Simon Francis – IQA Presentation

“Where are the rocks of the future coming from?”

Mineral resources make a major contribution to the NSW and Australian economy and underpin the economic activity in many regional areas. In particular, construction materials (extractive resources) such as sand, gravel, crushed rock and structural clay are essential raw materials used in the construction industry. Large volumes of these materials are needed to provide and maintain the infrastructure required by developed societies. Additionally, with population growth and urban development, greater supply of these resources is needed.

Sourcing Construction Materials

Some key issues emerge with respect to sourcing construction material resources. The availability and supply of construction materials from identified and potential sources is influenced by a number of factors including:

- Resource Characteristics
- Conflict with other land uses, especially as a result of urban encroachment and other development.
- Cost and environmental impacts of extraction and transportation of quarried materials.
- Other factors including social, legal and governmental influences.

NSW and Sydney

The state of NSW has increasing needs for extractive resources. Supply and demand models suggest that in Sydney, NSW's largest market, construction materials will be grossly undersupplied in the next 20 years. Forecasts based on population statistics and predicted production rates predict increasing shortfalls. With many pressures such as land use and transport costs on the increase, securing suitable resources in the future will become more challenging. Therefore an emphasis on identifying significant resources and protecting them will become more important. Both government and industry both have a part to play.

Major changes in the Sydney construction materials market has occurred recently and will continue in the foreseeable future, when significant operations such as Penrith Lakes Scheme (sand and gravel) cease to operate. Unless new deposits are developed, the region will face a greatly increased supply shortage, which will only be made up by increasing 'imports' from further afield. With the impending exhaustion of the major operations (such as Penrith Lakes) there is a need to develop alternative sources of construction materials (especially sand and coarse aggregate) for the Sydney market. Apart from the currently operating quarries, there are limited undeveloped resources within the Sydney planning region. This constraint on available resources is further restricted by land use pressures from urban growth.

Strategy to Address Resource Supply

In 2005, the NSW Department of Planning & Infrastructure was preparing the 'Sydney Construction Materials Strategy' for the management of construction materials in the Greater Sydney region. The strategy aimed to:

- Provide a framework for the management of existing extraction sites and the consideration of new proposals.
- Identify potential sources of construction materials and constraints on extraction, and protect current and potential sources through planning instruments.
- Produce Position Papers which assessed the key alternative resources areas.
- Promote the use of substitute materials to reduce demand for natural aggregates, and provide best practice guidelines for quarrying operations.
- Serve as a model which can subsequently be applied to other areas of the State.

Unfortunately, work on the strategy stalled as a result of the Department of Planning & Infrastructure's priority on planning reforms in 2007-10.

Factors the Strategy may need to address:

- Protection of the currently operating quarries and significant identified (undeveloped) resources from encroachment by incompatible alternative land uses and ensuring that they are not inadvertently sterilised.
- Critical review and re-evaluation of the potential and viability of the key alternative resource areas.
- Identification of potential major long term sources of resources.
- Ensuring that there is access to multiple sources of resource. This would provide a range of product types and guard against the market becoming dominated by a small number of suppliers. Continued competition in the market will reduce price rises and thus benefit the consumer and the community in general.
- Encouraging dialogue between parties in the extractive industry, the transport industry, and local and State Governments to review the potential for alternative modes of transport for quarry products.

The Planning Process

Strategic planning is paramount in securing future resources to maintain supply to a growing market. To advance a prospective resource to an operating quarry many steps are involved. The Planning Approval Process can be challenging in terms of legislation and the process itself. A major overhaul of the NSW Planning System is taking place, and uncertainty regarding approval of development applications can add to the risk and costs of projects. Notwithstanding, it is essential that Local Environmental Plans (LEPs) and Regional Environmental Plans (REPs) take proper account of important known and potential construction materials resources. Additionally, the Mining SEPP (State Environment Planning Policy) is important as it covers extractive industries as well as mineral and petroleum sectors.

The NSW Department of Trade and Investment

The Department of Trade and Investment is responsible for the assessment, development and management of NSW mineral resources. The Department has several legal, official and stewardship roles in the construction materials industry.

The Mineral Resources Division administers the Mining Act 1992 and related mining legislation, however, most construction materials, with the notable exceptions of structural clay and marine aggregate, are not defined as minerals under the Mining Act and their extraction is therefore not governed by the Mining Act. Accordingly, the Department has no statutory role in authorising or managing the exploitation of these commodities (apart from the oversight of mine safety issues for all mines and quarries). However, the Department does have a recognised, longstanding role of assessing the State's extractive resources and advising State and local government agencies on these resources and their management.

Land Use Planning decisions have the potential to affect access to mineral and extractive resources. It is essential that such decisions are made with the benefit of informed advice on the potential impacts on known and potential mineral and extractive resources in order to make the most effective use of the State's resources and minimise the potential for conflict between extraction and other land uses.

The Department's input to the land use planning process aims to identify significant mining and quarrying operations, resources and potential resources. Accordingly, it provides advice to Councils and other State Government agencies on policy and legislation, and planning instruments such as LEPs, regional land use strategies, other state and regional assessments. Advice and assistance is also provided to industry and the community.

NSW Mineral Resource Audit

A useful instrument used in the identification and protection of extractive resources is the NSW Government's Mineral Resource Audit. A Direction from the *Environmental Planning and Assessment Act 1979* requires NSW DTIRIS to notify local government agencies in relation to mineral and extractive resources. This includes the location of current operations and resources of state or regional significance. The primary aims of the MRA are to:

- 1) **Protect operating mines and quarries from sterilisation or hindrance by encroachment of incompatible adjacent development.**
- 2) **Protect known resources and areas of identified high mineral potential from unnecessary sterilisation by inappropriate zoning or development.**
- 3) **Maintain access to land for mineral exploration and possible development over as much of the planning area as possible.**

The MRA classifies resources into three categories, including Identified Resource Area, Transition Area and Potential Resource Area. An example of an existing operation is displayed below in Figure 1. The information produced for each LGA includes a map displaying the resources, a GIS Database and an audit report.

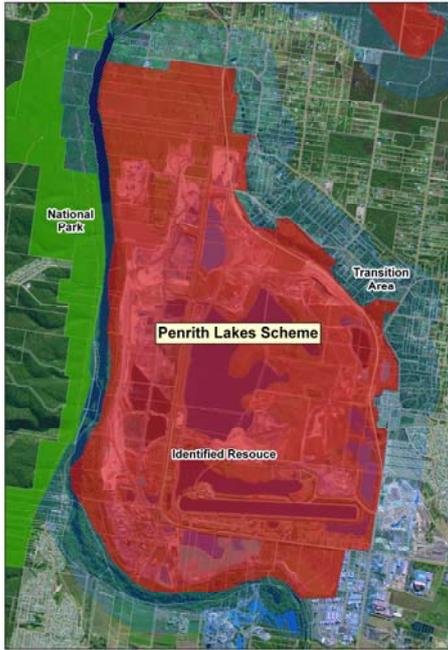


Figure 1 – Mineral Resource Audit Example - The Penrith Lakes Scheme

There are distinct benefits and outcomes in developing and applying this type of planning instrument for extractive industry resources:

- Protection of resources, prevent loss of 'significant' resources.
- Better planning - minimise conflict and incompatible development.
- Provide adequate resources to meet future needs of the community and industries which serve the community.
- Relevance to other planning instruments, such as LEPs and the NSW Strategic Regional Land Use Plans (new initiatives designed to address concerns around land use conflicts in regional areas).

The current version of the MRA has 90% of mapping completed and 30% finalised and provided to councils. Both councils and the Department of Planning & Infrastructure have received the information well. With the current version of the MRA being well on the way to completion, a review of the audit will follow. Future improvements may incorporate the identification of further potential areas. With this in mind, there is a reliance on industry knowledge, and the effective collaboration between industry and government in this process.

Conclusion

It can be seen that effective strategies for sourcing future extractive resources are needed. To adequately assess the current and future resources across the state, instruments such as the MRA are useful. However, further work is required to ensure future demands are better understood, and strategies devised to meet them. Strategies such as the Sydney Construction Materials Strategy need to be pursued to address supply concerns, and cope with increasing land use pressures. Associations such as the IQA will be key players in working with government to devise these appropriate strategies.