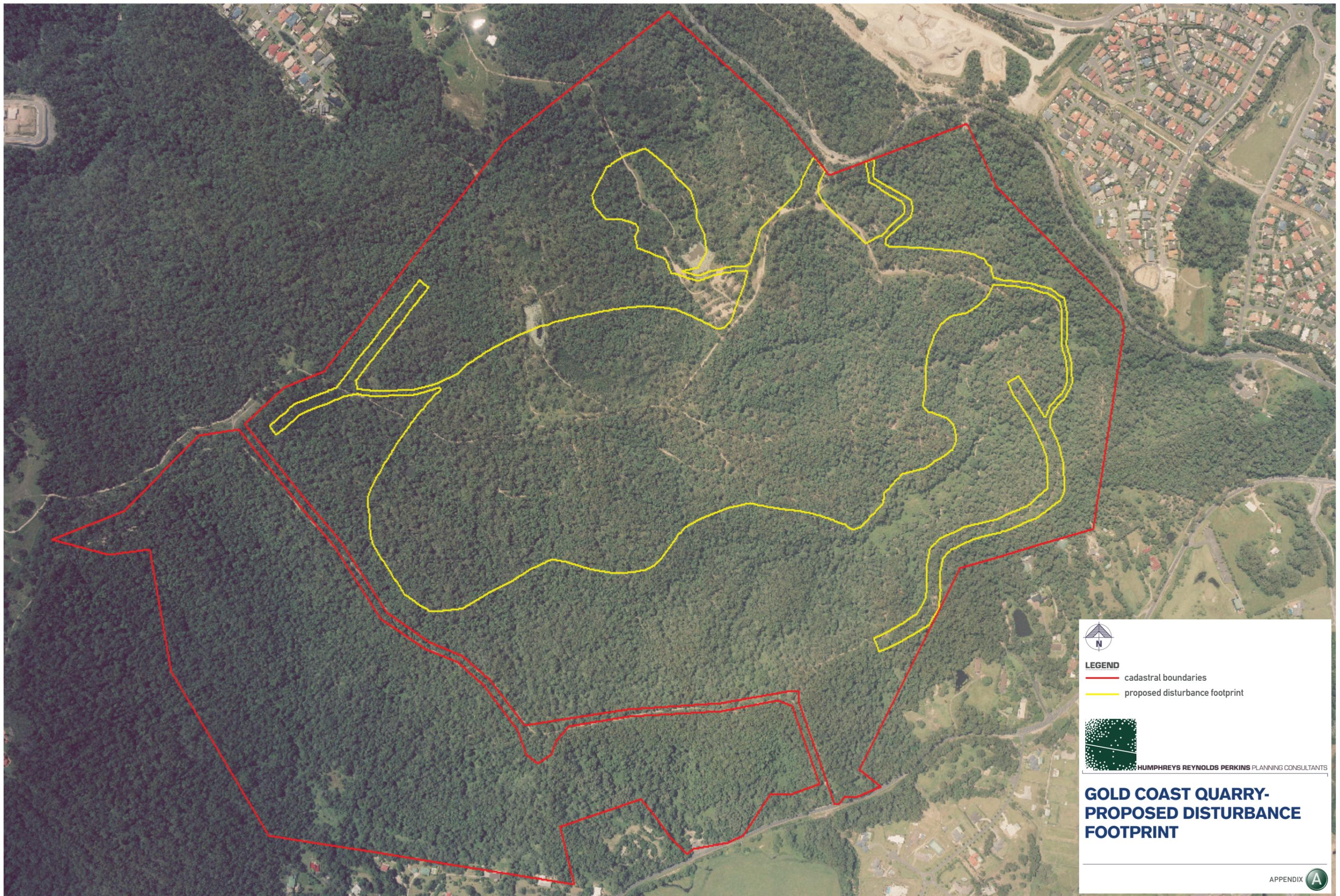


Appendix A

Proposed Disturbance Footprint



LEGEND

- cadastral boundaries
- proposed disturbance footprint



HUMPHREYS REYNOLDS PERKINS PLANNING CONSULTANTS

**GOLD COAST QUARRY-
PROPOSED DISTURBANCE
FOOTPRINT**

APPENDIX **A**

Appendix B

Economic Assessment, prepared by Urban Economics

Gold Coast Quarry

Initial Advice Statement

Economic Assessment

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November 2009
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Warranty

This report has been based upon the most up to date readily available information at this point in time, as documented in this report. Urban Economics has applied due professional care and diligence in accordance with generally accepted standards of professional practice in undertaking the analysis contained in this report from these information sources. Urban Economics shall not be liable for damages arising from any errors or omissions which may be contained within these information sources.

As this report involves future market projections which can be affected by a number of unforeseen variables, they represent our best possible estimates at this point in time and no warranty is given that this particular set of projections will in fact eventuate.

Table of Contents

Executive Summary	ii
1.0 Introduction	1
1.1 BACKGROUND.....	1
1.2 STUDY OBJECTIVES AND METHODOLOGY.....	2
2.0 Regional Profile	5
2.1 POPULATION AND HOUSEHOLD GROWTH	5
2.2 THE LOCAL ECONOMY	6
2.3 MAJOR PROJECTS.....	7
2.4 REGIONAL PLANNING CONTROLS	9
3.0 The Local Quarry Industry	10
3.1 BACKGROUND.....	10
3.2 DEMAND FOR CONSTRUCTION AGGREGATES.....	13
3.3 LOCAL NETWORK OF QUARRY OPERATIONS.....	14
3.4 IMPLICATIONS FOR THE SUBJECT SITE	17
4.0 Strategic Significance of the Gold Coast Quarry	19
5.0 Conclusion	23

Executive Summary

It is widely recognised that the Gold Coast region has been one of the fastest-growing regions in Australia, with the strong population growth translating into a booming urban development sector that is generating significant expansion of the region's economic base across a number of the growing industries. Publications detailing the composition of the Gold Coast economy reveal the importance of the building and construction industry that underpins the region's solid growth performance and prosperity. Consequently, the building and construction industry will continue to be an important employment and income generator for the region and will continue to be an integral part of the growing Gold Coast economy.

Extractive resources underpin all urban and infrastructure development as they are the primary source of materials used for building roads, bridges, railways, factories, hospitals, schools, homes, etc. They are vital in satisfying society's growing requirements in constructing our built environment. It is clearly evident that the projected population growth, the resulting demand for housing, and the need for major infrastructure and resource-related projects proposed for the Gold Coast region are set to continue the high level of demand for extractive resources.

Numerous local contractors rely upon Boral's existing West Burleigh quarry for the critical supply of extractive material for a number of major infrastructure projects within the surrounding region. TABLE 2.3 (page 6) provides a list of past, current and future major infrastructure projects that rely upon extractive material sourced from this quarry and is demonstrative of the vital presence of Boral's local quarrying operations within the central and southern Gold Coast corridor as part of the critical delivery of recently completed and, more importantly, upcoming infrastructure projects that are planned for the future. Indeed, the proposal would continue this critical supply of extractive material for major infrastructure projects within this region.

With finite quarry resources remaining at Boral's West Burleigh Quarry and extensive lead time required for transition to another extractive resource, Boral has strategically identified the proposed Gold Coast Quarry development at Talgebudgera Valley to continue its West Burleigh operations and to cater for future demand within the central and southern Gold Coast corridor, maintaining an economical provision of aggregate to customers within this region. Should this transition be delayed or hindered in any way (due to reasons such as environmental and development approval constraints) a number of negative transportation and customer cost impacts will be incurred within the South East Queensland region as a result.

It is estimated that the set-up costs by Boral in undertaking the transitioning of its West Burleigh quarrying operations to the proposed Gold Coast Quarry development at the subject site would be in the order of \$111million, with the indirect flow-on multiplier effects to the Gold Coast regional economy projected to be in the order of \$85million. Furthermore, the proposed Gold Coast Quarry is projected to provide continuity of up to 100 full time employment positions across Boral's integrated quarrying, asphalt, concrete and transporting operations. An estimated 290 full-time equivalent jobs would be maintained in other industry (supporting and consumptive) sectors, resulting in a total 390 jobs being maintained in the Gold Coast region as a result of the proposed Gold Coast Quarry.

The proposal would allow Boral to capitalise upon the identified opportunities in the construction materials market, achieving increased levels of revenues, production and employment, and satisfy increasing levels of demand within the Gold Coast LGA whilst preventing reliance upon northern Gold Coast quarry sites which are increasingly being utilised to satisfy demand from the Brisbane, Ipswich and Logan LGAs, amongst others. Existing extractive resources located at West Burleigh are insufficient to adequately cater for future population and associated infrastructure growth within the region. Indeed, it is recognised that the subject site is the last remaining significant greenfield resource located within the southern Gold Coast corridor and is identified by State Planning Policy 2/07 as a Key Resource Area.

There are no other Key Resource Areas south of Nerang. Consequently, the proposed Gold Coast Quarry is the last and only opportunity to secure a cost effective and long term supply of extractive material for the central and southern Gold Coast region. It follows that should the proposal be refused, the Gold Coast market will increasingly rely upon the single remaining resource in Nerang, the productivity of which (for the Gold Coast market) is constrained by the demands placed upon it by other markets.

Major infrastructure projects are planned within the region as a result of the increasing demand from a growing population within the southern and wider Gold Coast region. Furthermore, significant infill development is planned across Gold Coast City (including the central and southern urban areas), with Council's Draft Local Growth Management Strategy indicating that *"about 60% of the city's growth to 2026 will be achieved through infill and redevelopment of existing developed areas"* (page 9). Urban Economics estimates that the proposed Quarry development could achieve production levels in the order of 1.4Mt to 1.5Mt per annum. This on-going supply to the market will continue to allow Boral to provide its economical products to the central and southern urban markets within the Gold Coast, by the time the resources at West Burleigh become exhausted. Given that per GHD's Report for Availability of Extractive Resources in South East Queensland (released in 2007), commissioned by Cement, Concrete and Aggregate Australia, South East Queensland has only enough approved aggregate resources to satisfy demand until 2015, the proposal would help to alleviate growing pricing pressure on aggregates for the entire South East Queensland region.

Should the proposed Gold Coast Quarry development not be realised before the resources at West Burleigh become exhausted alternative extractive material has to be sourced from elsewhere, which is likely to be located some substantial distances in comparison to the subject site and West Burleigh operation. This outcome would result in the increased costs and impacts associated with transporting equivalent material from outside this region, including higher transport costs passed down the chain to the consumer, more congestion and maintenance on State and local roads, increased potential for traffic accidents and increase greenhouse gas emissions. Further, it would induce greater reliance upon the existing Nerang quarry and the Stapylton/Darlington quarries, which are currently constrained in their ability to cater to the Gold Coast market due to the fact that a significant proportion of their production is supplied to Brisbane, Logan and other markets, creating a monopoly situation for the Nerang quarry. This can be avoided if the proposed Gold Coast Quarry development would continue sustaining the affordability of future growth and urban development for the central and southern Gold Coast region.