Gold Coast Quarry

Request for Significant Project Declaration

INITIAL ADVICE STATEMENT

Boral Resources (Qld) Pty Limited

08 December 2009

INITIAL ADVICE STATEMENT

REQUEST FOR 'SIGNIFICANT PROJECT' DECLARATION BY THE COORINATOR- GENERAL UNDER THE *STATE DEVELOPMENT AND PUBLIC WORKS ORGANISATION ACT 1971*

GOLD COAST QUARRY

Prepared for:

BORAL RESOURCES (QLD) PTY LIMITED

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08 December 2009

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Executive Summary

Boral Resources (Qld) Pty Limited ("Boral"), the Proponent, is seeking to establish a new extractive industry operation on a greenfield site at Tallebudgera Valley, near Reedy Creek on the Gold Coast, as a 'Significant Project' under the *State Development and Public Works Organisation Act 1971* (SDPWOA).

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 and significant expansion and diversification of the region's economic base. This strong population growth within the region will continue to generate significant demand for residential dwellings over the next two decades, during which it is projected that Gold Coast City will experience a demand for almost 135,000 dwellings (representing some 67% of its current dwelling stock). This level of growth equates to a projected demand for 100 million tonnes of aggregate between 2008 and 2026 across the Gold Coast region, at an average of 5.5 million tonnes per annum.

In addition, the State Government, through the *South East Queensland Infrastructure Plan and Program 2009–2026* (SEQIPP), has identified in excess of 300 infrastructure projects for South East Queensland (totalling $124 billion), of which $12.4 billion is committed to infrastructure projects across the Gold Coast region. The building and construction industry will therefore continue to be a major employment and income generator for the region as residential, commercial, retail and major infrastructure projects are constructed to meet the infrastructure demands of the region's growth.

Extractive resources are the foundation of all urban and infrastructure development as they are the primary source of materials used for building communities. The continued availability of extractive resources is therefore critical to the continued development of our communities and our economies.

The proposed Gold Coast Quarry is the last opportunity to secure and activate a State-significant resource deposit on the southern Gold Coast. The significance of the site to the State has been established by its designation as a Key Resource Area under the *State Planning Policy 2/07 – Protection of Extractive Resources*. The site contains the largest unexploited deposit of high grade hardrock resource within the region. Boral estimates that approximately 84 million tonnes (Mt) of indicated and inferred exploitable hardrock is unconstrained and available for extraction on the site.

The development will involve a $111 million investment by Boral and is a unique opportunity to secure an appropriate replacement for Boral's existing West Burleigh Quarry which has sufficient reserves for only a further 8.5 to 11 years of production. These remaining consented resources are insufficient to adequately cater for the future population and associated infrastructure growth within the region.

Under Boral's best assessment, if a standard development assessment process is pursued under the *Integrated Planning Act 1997* (which would involve assessment against an exceedingly complex legislative framework by multiple authorities, each with different and potentially conflicting objectives), then the supply of resources from the West Burleigh Quarry will be fully depleted several years before the proposed Gold Coast Quarry could start producing a replacement supply of materials. Such a delay in the supply of extractive resources would have a severe impact on the development and infrastructure growth identified for the region. The development of the proposed Gold Coast Quarry is therefore critical to ensure that an uninterrupted, cost-effective and sustainable supply of construction materials is available for critical infrastructure and development projects of the Gold Coast region over at least the next 40 years.

The Project will contribute significantly to the local and State economies through Boral's quarry related expenditure, investment in infrastructure, ongoing employment and opportunities for external support businesses. The development will provide the opportunity for 390 jobs in the Gold Coast region.

The purpose of this Initial Advice Statement (IAS) is to provide the Coordinator-General with the information necessary to consider whether the Project should be declared a Significant Project (requiring an Environmental Impact Statement (EIS)) under Section 26 of the SDPWOA. In summary, the Proponent submits that the Project satisfies the requirements of Section 26 of the SDPWOA and should be declared a Significant Project principally because:

- this IAS demonstrates that the extractive resources contained within the site are of State and regional significance;
- the Project is the only opportunity to properly compensate for the scheduled winding down of Boral's existing West Burleigh Quarry and to ensure that an adequate, uninterrupted and efficient supply of construction materials remains available to supply the demand for at least 5.5 million tonnes of aggregates per annum which is forecast to be necessary to deliver critical infrastructure projects and urban growth in the Gold Coast region;
- the Project is meritorious and consistent with the high level policy direction of the statutory planning framework but is nevertheless faced with a complex array of assessment instruments, each seeking to achieve different planning and environmental objectives. A coordinated, whole-of-government assessment, facilitated by the Coordinator-General under the SDPWOA is therefore considered necessary to deliver the Project;
- the Project is located close to market and can therefore make efficient use of existing and planned infrastructure. The Project will be largely self-sufficient in terms of site infrastructure and will therefore require little support from the State or local government infrastructure networks;
- in addition to maintaining the certainty of up to 100 full time employment positions, it is estimated that an additional 290 full-time equivalent jobs will 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;

- over the development of the quarry, the proposed maintenance and enhancement of conservation values in the surrounding landscape, along with the completion of extensive offset and rehabilitation works, will appropriately ameliorate any long term impacts and will reconcile the ecological values of the site with the relevant economic and social considerations in achieving a sustainable development outcome. In addition, the ongoing strengthening of fauna habitat values through the management and improvement of buffer vegetation over the operational life of the quarry will further offset any unavoidable impacts of the development;
- it is estimated that the Project avoids the creation of at least an additional 160,000 tonnes of greenhouse gas emissions that would otherwise be produced over the operational life of a quarry as a direct consequence of having to transport construction aggregates from alternative locations;
- the proposed Gold Coast Quarry is necessary in order to deliver critical infrastructure projects across the region and to meet a demonstrated economic need for extractive materials that continues to be generated by strong urban growth; and
- whilst increasing the capacity of other existing quarries may be viewed as an alternative means of replacing the supply from the existing West Burleigh Quarry, increasing the operational capacity of other quarries serves only to further shorten the operational life of those existing operations and does not address the underlying shortage of extractive resources on both the Gold Coast, and across the South East Queensland region.

In the event that the Coordinator-General declares the Project a Significant Project, this IAS will then provide a basis on which the State Government can draft TOR for the subsequent EIS.

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Abbreviations

ACH Act	*Aboriginal Cultural Heritage Act 2003*
Boral	Boral Resources (Qld) Pty Limited
CHMP	Cultural Heritage Management Plan
DERM	Department of Environment and Resource Management
DEWHA	Department of Environment, Water, Heritage and the Arts (Federal)
DIP	Department of Infrastructure & Planning
DNRW	Department of Natural Resources and Water
EIS	Environmental Impact Statement
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
EP Act	*Environmental Protection Act 1994*
EP Regs	*Environmental Protection Regulations 2008*
ERA	Environmentally Relevant Activity
IAS	Initial Advice Statement
IPA	*Integrated Planning Act 1997*
IP Regs	*Integrated Planning Regulations 1998*
Koala Plan	Koala Habitat Area Nature Conservation (Koala) Conservation Plan 2006 and Management Program 2006 – 2016
Koala SPRPs	South East Queensland Koala State Planning Regulatory Provisions – July 2009
KRA	Key Resource Area
Mt	Million tonnes
Mtpa	Million tonnes per annum
NCA	*Nature Conservation Act 1992*
NES	National Environmental Significance
PMAV	Property Map of Assessable Vegetation
Project	Proposed Gold Coast Quarry
SEQIPP	South East Queensland Infrastructure Plan and Program 2009–2026
SDPWOA	*State Development and Public Works Organisation Act 1971*
SPA	*Sustainable Planning Act 2009*
SPP 2/07	State Planning Policy 2/07: Protection of Extractive Resources
TOR	Terms of Reference
VMA	*Vegetation Management Act 1999*

1. Introduction

Boral Resources (Qld) Pty Limited ("Boral"), the Proponent, has prepared this Initial Advice Statement (IAS) for submission to the Coordinator-General in support of its request that the establishment of the proposed Gold Coast Quarry be declared a "Significant Project" under the *State Development and Public Works Organisation Act 1971* (SDPWOA).

Boral operates over one hundred operational sites including thirty quarries, forty-eight concrete batching plants, and sixteen asphalt plants across Queensland. The business is geographically diverse with operations in all major coastal centres from the Gold Coast to Cairns and westward as far as Longreach. Boral has held a key position supplying construction materials across South East Queensland for a number of years with numerous quarries, concrete plants and asphalt operations serving the infrastructure and construction markets from strategic locations, close to market, across the region.

Boral is seeking to establish a new extractive industry operation on a greenfield site at Tallebudgera Creek Road, Tallebudgera Valley, on the Gold Coast. The proposed Gold Coast Quarry is necessary to compensate for the scheduled winding down of Boral's existing West Burleigh Quarry, which has sufficient reserves for only a further 8.5 to 11 years of production (13 million tonnes (Mt) of consented reserves at an extraction of between 1.2 to 1.5 million tonnes per annum (Mtpa)). Given the lead times which are involved (in gaining development and environmental approvals; establishing the operation and completing preliminary site works in order to enable full scale production), it is necessary for Boral to commence the relevant approval processes to ensure that an adequate, uninterrupted and efficient supply of construction materials remains available for critical infrastructure and construction projects in the Gold Coast region.

The site of the proposed Gold Coast Quarry is located on the western side of the Pacific Motorway approximately two kilometres south west of Boral's existing West Burleigh Quarry, and contains the last and largest known deposit of hardrock resource on the southern Gold Coast. Boral's resource investigations estimate the size of the indicated and inferred exploitable hardrock deposit at approximately 84 Mt.

The designation of the site as a Key Resource Area (KRA) under the *State Planning Policy 2/07 – Protection of Extractive Resources (*SPP 2/07) acknowledges that the resource is one of State significance, on the basis of its potential contribution to the development of the South East Queensland region. At the anticipated production rate of 2 million tonnes per annum, the proposed Gold Coast Quarry has the potential to supply the Gold Coast with high grade construction materials for in excess of 40 years. There are no other KRAs south of Nerang. Consequently, the proposed Gold Coast Quarry is the last remaining opportunity to secure a cost effective and long term supply of extractive material for the southern Gold Coast region.

The purpose of this IAS is to provide the Coordinator-General with the information necessary to consider whether the Project (the proposed Gold Coast Quarry) should be declared a "Significant Project" (requiring an Environmental Impact Statement (EIS)) under Section 26(1)(a)) of the SDPWOA. The aim of the EIS process is to ensure that potential environmental, social and economic impacts of the proposed project are examined and addressed. In the event that the Coordinator-General declares the Project a Significant Project, this IAS will then provide a basis on which the State Government can draft Terms of Reference (TOR) which would be released for public and advisory agency comment. The TOR will set out the requirements (both general and specific) that Boral will address in preparation of an EIS.

2. The Project

2.1 The Proponent

Boral Resources (Qld) Pty Limited, a wholly owned subsidiary of Boral Limited, primarily serves customers in the building and construction industries through the production and distribution of a broad range of construction materials including quarry products, pre-mix concrete and asphalt.

Boral operates over one hundred operational sites across Queensland, including thirty quarries, forty-eight concrete batching plants, and sixteen asphalt plants. The business is geographically diverse with operations in all major coastal centres from the Gold Coast to Cairns and westward as far as Longreach. Boral has held a key position supplying construction materials across South East Queensland for a number of years with numerous quarries, concrete plants and asphalt operations serving the infrastructure and construction markets from strategic locations, close to market, across the region.

2.2 The Project

Boral is seeking to establish a new extractive industry operation on a greenfield site at Tallebudgera Creek Road, Tallebudgera Valley, on the Gold Coast. The proposal will activate a greenfield extractive resource that is recognised under *State Planning Policy 2/07 – Protection of Extractive Resources* as State-significant.

The proposed Gold Coast Quarry is necessary to compensate for the scheduled winding down of Boral's existing West Burleigh Quarry, which has sufficient reserves for only a further 8.5 to 11 years of production. Given the lead times which are involved (in gaining development and environmental approvals; establishing the operation and completing preliminary site works in order to enable full scale production), it is necessary for Boral to now commence the relevant approval processes to ensure that an adequate, uninterrupted and efficient supply of construction materials remains available for critical infrastructure and construction projects in the Gold Coast region.

The Gold Coast Quarry will represent an investment of $111 million by Boral into the economy of the Gold Coast region and is projected to provide continuity of employment for approximately 100 staff across Boral's integrated quarrying, asphalt, concrete and transport operations. An estimated 290 full-time equivalent jobs will 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 site of the proposed Gold Coast Quarry contains the last and largest known deposit of meta-greywacke quarry rock resources on the southern Gold Coast. Meta-greywacke is of extremely high strength and forms the excavated and

processed quarry product. The meta-greywacke resource is located within a deposit that is favourably surrounded by ridgelines (reducing amenity impacts) and has the benefit of having substantial vegetated buffers on land owned by Boral. In developing this proposal, Boral has attempted to balance the need to secure this hard rock resource with the social and environmental factors of extractive industry development. After taking into account the anticipated environmental constraints and required separation buffers in designing the proposed quarry footprint, it is estimated that 84 Mt of indicated and inferred hard rock material can be secured from this meta-greywacke resource. Boral has voluntarily sterilised a significant proportion of the resource which is known to occur on the site in order to achieve an appropriate balance between environmental, economic and social interests.

The proposed development will operate as a quarry for the extraction and processing of hard rock primarily for use in concrete, asphalt, drainage materials, road base, bricks, pavers, pipes and landscape supplies. Investigations indicate that the quality and consistency of the resource at the site is of equal or better quality than the meta-greywacke deposit situated at Boral's existing West Burleigh Quarry, providing an opportunity to completely replace the current operations at West Burleigh due to the diminishing supply of consented resources at that site. With an anticipated production rate of 2 Mtpa, the proposed Gold Coast Quarry has the potential to supply the Gold Coast region with high grade construction materials for in excess of 40 years whilst maintaining continuity of employment across Boral's integrated quarrying, asphalt, concrete and transport operations.

The greenfield site will be fully developed and operated in accordance with recognised industry best practice. Initial development requires the removal of significant overburden over the first two (2) years of site development, before the introduction of mobile crushing plants to develop the site and value the excavated material. Boral estimates that approximately 11.8 Mt of materials (all types) will be removed from the site to allow the fixed plant to be built.

Initially the proposed Gold Coast Quarry would operate with mobile plant, and be replaced with fixed plant as soon as the plant site infrastructure area and initial pit have been established (estimated to occur between years 6 and 8 of the approved development).

The proposed Gold Coast Quarry's plant is likely to comprise:

- Mobile Crushing Plants

  Proprietary modular trains such as the Sandvik or Metso. The train consisting of Primary Jaw, Secondary and Tertiary Cone Crushers complete with screens, conveyors and stockpiling conveyors. The second train will be the same or similar to the first and may include a vertical shaft impactor. Each train will be targeting to achieve 300 tonnes per hour of aggregate or base course materials. The estimated cost of each train is $6M.

- Fixed Plant

  The plant will be designed as a 'fit for purpose' crushing plant which will target the production of aggregates. It is estimated that the production rate will be between 750 - 900 tonnes per hour to achieve an annual production

of 2 Mt. The estimated cost of the plant is $55M with a construction timeframe of two years.

- Mobile Fleet

  There will be two distinct fleets, firstly a development fleet which will service the development and stripping works through to load and haul service for the mobile crushing trains. The second fleet will be sized to service the 750-900 tonne per hour fixed plant. The site will be serviced in years 1-5 with a bulldozer, water cart and percussion drill.

Once the rock has been blasted, small to medium sized rock will be loaded from the pit floor onto haul trucks, whereas any larger rock fragments will typically be broken by a rock breaker before loading. Haul trucks will generally be operated continuously during the operating hours of the quarry in preparation for processing.

The primary stage of processing involves the use of a jaw crusher and vibratory screens. From this stage, material will be conveyed to several stages of crushing and screening equipment. After processing, the material will be conveyed to individual product stockpiles. The processing plant, including primary and secondary crushers (and screening to separate dust and aggregates) will be located within the pit near the individual product stockpiles.

The quarry pit is likely to be developed over several broad stages, allowing Boral to undertake extractive operations with opportunities to progressively rehabilitate terminated quarry benches during the life of the quarry operation.

It is anticipated that the proposed Gold Coast Quarry would operate within the hours of 6am and 6pm, Mondays to Saturdays, allowing for 12 hours of extraction and processing, load and dispatch to be undertaken, six (6) days per week. Boral would seek that maintenance of equipment be undertaken outside of these hours, possibly during a 24 hour per day window (although it is more likely that maintenance would occur between 6am and 10pm Mondays to Saturdays, and 8am to 6pm on Sundays rather than 24 hours per day). Such operational hours will be the subject of relevant studies as part of the Project's EIS to ensure that the amenity of the surrounding area is appropriately protected.

A preliminary development plan is attached at **Appendix A** which illustrates the scale of the Project on the site, in the form of the delineated disturbance footprint.

2.3 The Site

The following table summarises the particulars of the site on which the Gold Coast Quarry is proposed.

SUMMARY OF SITE PARTICULARS	
Street Address	Tallebudgera Creek Road, Tallebudgera Valley, QLD 4228
RP Description	Lot 105 on SP144215; and Lot 901 on RP907357

SUMMARY OF SITE PARTICULARS	
Total Site Area	219.99 ha
Local Government Area	Gold Coast City Council
SEQ Regional Plan 2009-2031 Designation	Urban Footprint
Local Government Planning Scheme Designations	• Part Urban Residential Strategic Designation; • Part Park Living Strategic Designation; • Part Open Space/Nature Conservation Strategic Designation; • Emerging Communities Domain; • Reedy Creek Structure Plan Area; • Part Urban Residential Structure Plan Precinct; • Part Park Living Structure Plan Precinct; and • Part Open Space/Nature Conservation Structure Plan Precinct.
Owners	Boral Resources (Qld) Pty Limited; and Gold Coast City Council (as trustee).
Proponent	Boral Resources (Qld) Pty Limited
Proponent's Representative	Mr Matthew Schneider Humphreys Reynolds Perkins Planning Consultants Level 20, 344 Queen Street BRISBANE Q AUSTRALIA 4005 P. 07 3221 8833 F. 07 3221 0278 E. matthew.schneider@hrppc.com.au

2.3.1 Location and Contextual Setting

The site of the proposed Gold Coast Quarry is located on the western side of the Pacific Motorway, approximately five kilometres from Burleigh, as shown on **Figure 1 – Location Map**. A wider context map of the site's location on the southern Gold Coast is attached as **Figure 4 – Wider Context Map**.

Topographically, the site contains a number of gullies and vegetated ridgelines, with the resource being located within a central deposit that is favourably surrounded by ridges. The site is of a size and dimension which is sufficient to provide the rare opportunity for substantial vegetation buffer areas to be maintained on land owned by Boral.

2.3.2 Site Area

The irregular shaped site contains a total site area of 219.998 hectares, including a narrow 3.298ha Council-owned parkland allotment (Lot 901 on RP907357) which traverses the site generally in a south east to north west direction between

Tallebudgera Creek Road and Chesterfield Drive (refer to **Figure 2 – Cadastral Map**).

2.3.3 Current Use

The site, under the ownership of Boral (Lot 105 on SP144215) and the Gold Coast City Council (Lot 901 on RP907357), has a history of extensive clearing, grazing and other rural pursuits. At present, the site contains some small cleared areas (developed with nursery sheds, dams and access tracks) set amongst extensive areas of regrowth vegetation and pockets of remnant vegetation (refer to **Figure 3 – Aerial Photograph**).

2.3.4 Land Tenure and Native Title

Lot 105 on SP144215 is subject to freehold title and is not currently burdened or benefitted by any existing easements.

Lot 901 on RP907357 is a reserve administered by the Council of the City of Gold Coast as trustee. It is not currently burdened or benefitted by existing easements.

Native title has been extinguished over both allotments which comprise the site.

2.3.5 Road Frontage and Vehicular Access

The site contains frontages to three constructed roads – Chesterfield Drive to the site's north west, Tallebudgera Creek Road to the south and Old Coach Road to the east. Vehicular access will only be obtained to and from a nominated point on Old Coach Road to be defined by Gold Coast City Council engineering requirements.

Access to and from the site is proposed by Old Coach Road, which connects the site to the Pacific Motorway via an existing interchange to the north. However, Boral understand that the Gold Coast City Council are currently investigating the development of a new road corridor, using parts of Old Coach Road, to link Tallebudgera Creek Road from beyond the east of the site with the existing Bermuda Street / M1 Pacific Motorway interchange to the north of the site (the "future connection road").

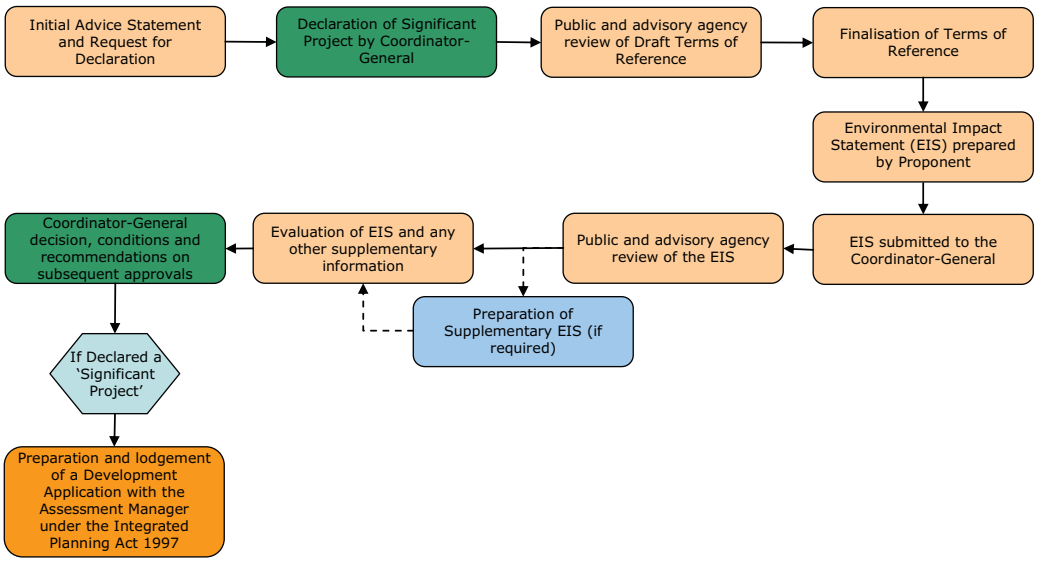
While transportation will occur along the existing Old Coach Road, which is identified as a 'Transport Route' under the SPP 2/07, it is preferred by Boral that, should the alternate future connection road be constructed, transportation and access be taken from this new road alignment. The Project's EIS will therefore consider and assess both access options.

3. Declaration of a Significant Project

3.1 State Development and Public Works Organisation Act 1971

The *State Development and Public Works Organisation Act 1971* (SDPWOA) provides the Coordinator-General with the discretionary power to declare a project as a Significant Project. The SDPWOA draws together a range of powers and functions used by the State to facilitate large scale projects, under the declaration as a 'Significant Project". The declaration of a Significant Project is representative of the significance of a project to the locality, region or State, and takes account of the potential economic, environmental and procedural considerations associated with the development.

The declaration of a Significant Project is not to be a taken as a statement of the State Government's support for the proposed development. Rather, the declaration of a Significant Project represents the State's acknowledgement that the significance and/or complexity of a development project requires comprehensive assessment. Boral has therefore prepared this IAS to provide the Coordinator-General with relevant information in support of their request that the development of the proposed Gold Coast Quarry be declared a Significant Project under the SDPWOA and follow the EIS process defined by this Act as detailed in **Flowchart 3.1** below:



FLOWCHART 3.1 – EIS Process under Part 4 of the SDPWOA

3.2 Criteria for Declaration of a Significant Project

The SDPWOA, at section 27, provides the matters to which the Coordinator-General must have regard in considering whether a project should be declared a Significant Project. Section 27 of the Act requires that regard must be had to one or more of the following:-

(a) detailed information about the project given by the proponent in an initial advice statement;

(b) relevant planning schemes or policy frameworks, including those of a relevant local government or of the State or the Commonwealth;

(c) the project's potential effect on relevant infrastructure;

(d) the employment opportunities that will be provided by the project;

(e) the potential environmental effects of the project;

(f) the complexity of local, State and Commonwealth requirements for the project;

(g) the level of investment necessary for the proponent to carry out the project;

(h) the strategic significance of the project to the locality, region or the State.

A detailed assessment of the proposed Gold Coast Quarry against the criteria for declaration of a Significant Project is submitted at the following **Section 4** of this IAS. This IAS fully addresses all of the criteria identified in Section 27 of the SDPWOA and submits a compelling case for the designation of the project as a Significant Project under the SDPWOA.

4. Assessment of Project Significance

The following Table 4.1 provides a detailed assessment of the proposed Gold Coast Quarry against the matters to which the Coordinator-General must have regard in considering whether the project should be declared a Significant Project under Section 27 of the SDPWOA.

TABLE 4.1 Assessment against the SDPWOA Section 27

CRITERION A **Detailed information about the project given by the proponent in an initial advice statement.**
This IAS is a scoping document which has provided an outline of the proposed project, the potential effects on the existing environment, and the Project's significance to the State and regional economies. Boral has commissioned a number of preliminary studies which have informed the preparation of this IAS, as appropriate and practicable at this preliminary stage, and has sought to provide the most detailed information possible regarding the Project. The IAS demonstrates that the extractive resources contained within the site are of State and regional significance, and that the proposed Gold Coast Quarry should be declared to be a 'Significant Project' under the SDPWOA. The declaration of a Significant Project will represent the State's acknowledgement that the significance and complexity of this development project requires coordination and comprehensive assessment under the SDPWOA.
CRITERION B **Relevant planning schemes or policy frameworks, including those of a relevant local government or of the State or the Commonwealth.**
The development of the proposed Gold Coast Quarry would be subject to the following planning and policy frameworks. A preliminary discussion of the relevance of each instrument to the proposed development is provided at Chapter 6 of this IAS: **Commonwealth Government** • Environmental Protection and Biodiversity Conservation Act 1999; **State Government** • State Development and Public Works Organisation Act 1971; • South East Queensland Regional Plan 2009-2031; • South East Queensland Infrastructure Plan and Program 2009–2026; • State Planning Policy 2/07 – Protection of Extractive Resources;

- Integrated Planning Act 1997;
- Integrated Planning Regulations 1998;
- Aboriginal & Cultural Heritage Act 2003;
- Environmental Protection Act 1994;
- Nature Conservation Act 1992;
- Vegetation Management Act 1999; and
- the forthcoming Sustainable Planning Act 2009.

Local Government

- Gold Coast City Council Planning Scheme v1.2.

The Project is meritorious and consistent with the high level policy direction of the statutory planning framework but is nevertheless faced with a complex array of assessment instruments, each seeking to achieve different planning and environmental objectives. In some instances, the objectives and requirements of the various assessment instruments are mutually inconsistent or outdated. A coordinated, whole-of-government assessment, facilitated by the Coordinator-General under the SDPWOA is therefore considered necessary.

A detailed assessment of the proposal against each of the relevant assessment tools will be provided as part of the EIS

CRITERION C

The project's potential effect on relevant infrastructure.

Hardrock resources are typically high volume, low value products, where the economic viability of the extractive resource depends on its proximity to markets and urban areas. When the extraction of resources cannot be located close to their markets, these raw materials for infrastructure must be sourced from elsewhere in Queensland or northern New South Wales, having a range of flow-on effects which include the passing down of higher transport costs to the consumer, increased congestion and maintenance on State and local roads, and increased greenhouse gas emissions.

Urban Economics estimate that, if the Project were not to proceed, extractive material would need to be sourced and transported from elsewhere within the northern Gold Coast and Greater Brisbane areas. The requirement to source and transport extractive resources from alternative localities more remote from market may require the augmentation or development of additional infrastructure. The location of extractive resources close to market is therefore a critical objective to reduce the impact of extractive industries on infrastructure and the environment. The proposed development of the Gold Coast Quarry in such close proximity to its market achieves this critical objective.

Site-based infrastructure will be developed to independently service the water supply and treatment requirements of the proposed quarry, thereby avoiding any increase in demand on reticulated water and sewer networks. The project is

expected to require little support from State or local government infrastructure networks, other than the Gold Coast City Council's planned access road upgrade. Boral will be required to reach agreement with the relevant electricity distributor and retailer to provide adequate power to the site.

Preliminary designs provided by the Trackstar Alliance Project indicate that in excess of 30% of the remaining consented reserves at Boral's West Burleigh Quarry are likely to be either sterilised or adversely impacted as a direct result of the likely land resumption requirements. The extent of the potential sterilization may significantly bring forward the need for Boral to replace the West Burleigh Quarry with the proposed Gold Coast Quarry in order to avoid a gap in the supply of construction aggregates to the development sector and critical infrastructure projects.

A detailed assessment of the impact of the proposed development on all infrastructure networks will be prepared and submitted as part of the EIS.

CRITERION D

The employment opportunities that will be provided by the project.

If it were declared and approved as a Significant Project, the proposed Gold Coast Quarry would commence extractive operations by the time that resources at West Burleigh become exhausted, providing continuity of employment positions across Boral's integrated quarrying, asphalt, concrete and transport operations. The proposed Gold Coast Quarry is consistent with the State government's priorities of stimulating local and regional economies through infrastructure development.

In addition to maintaining the certainty of up to 100 full time employment positions, the proposed Gold Coast Quarry will have significant flow-on benefits in continuing to generate further employment opportunities. An estimated 290 full-time equivalent jobs will 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.

CRITERION E

The potential environmental effects of the project.

Boral has a strong track record in environmental management and compliance across all of their extractive operations throughout Queensland. The environmental impacts of the Project will be mitigated by careful planning, adherence to strict operational protocols and the implementation of environmental management systems. The commitment to environmental management which Boral has consistently demonstrated provides assurance that the high quality environmental outcomes which will be proposed by Boral as part of this project will be achieved.

Urban Economics estimate that, if the Project were not to proceed, at least an additional 4,000 tonnes of greenhouse gas emissions would be produced per annum as a direct consequence of having to transport construction aggregates

from alternative quarries. Over an operational life of at least 40 years, this equates to an additional 160,000 tonnes of greenhouse gas emissions that would be produced should extractive material need to be sourced and transported from elsewhere within the northern Gold Coast and Greater Brisbane areas.

The Project, by its nature, faces unavoidable social and environmental challenges that have the potential to effect the environment during its construction and operational phases. The EIS will therefore be supported by comprehensive baseline environmental and management plans which address all of the relevant construction and operational considerations to address the environmental effects and mitigate any potentially adverse impacts of the Project on the surrounding environment.

It is acknowledged that the principal emissions will be noise and dust. Boral currently employ a range of control strategies which minimise and manage any potentially adverse acoustic and air quality impacts at their extractive operations, and details of these mitigation measures will be submitted as part of the EIS.

The site contains patches of remnant vegetation mapped under the *Vegetation Management Act 1999* (VMA), and significant species listed under both the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act) and the *Nature Conservation Act 1992* (NCA). The value and location of these ecological features has been taken into account in the formulation of the development proposal and, specifically, in refining the location and boundaries of the proposed extraction area. On the basis of preliminary ecological investigations, the proposed disturbance footprint avoids known areas of high ecological value, including endangered regional ecosystems and threatened species, to the greatest extent practicable, with these features being retained in a broad buffer area.

If the Project is declared a Significant Project, neither the Draft South East Queensland Koala State Planning Regulatory Provisions or the Proposed South East Queensland Koala Conservation State Planning Regulatory Provisions will apply to the Project. However, the general requirements of the *Nature Conservation Act 1992* (NCA) in relation to koalas will remain applicable to the Project. Preliminary site investigations carried out by Professor Frank Carrick AM have indicated that there is evidence of koalas using parts of the site, although that evidence is consistent with a moderate to low intensity of use. The opportunity to achieve an overall net benefit to koalas is available on the site and will be pursued by Boral.

As part of the EIS process, Boral will also prepare a Stormwater Management Plan to assess the potential hydrological impacts of the development proposal in respect to stormwater quality, runoff and management, with consideration to any hydrological impacts on the surrounding environment.

Further detailed investigations will be conducted as part of the baseline environmental studies and presented in the Project's EIS, which will be supported by a comprehensive Rehabilitation Plan that will be implemented over the operational life of the quarry. The primary impact of the quarry operation in the short term will be the temporary dispersion of fauna to surrounding habitat areas

which will include retained and enhanced buffer areas of the site. The short term impacts of the development will be offset by habitat creation and enhancement works, carried out in accordance with habitat offset strategies and a progressive site rehabilitation plan. Over the long term development of the quarry, the maintenance and enhancement of conservation values in the surrounding landscape, the completion of extensive offset and rehabilitation works, and the strengthening of fauna habitats through the management and improvement of buffer vegetation will appropriately ameliorate any long term impacts that might otherwise have been generated. In this way, the environmental considerations which are relevant to the Project will be fully assessed in the Project's EIS and the Project will ultimately reconcile the ecological values of the site with the relevant economic and social considerations in achieving a sustainable development outcome on the site.

CRITERION F

The complexity of local, State and Commonwealth requirements for the project.

The proposed Gold Coast Quarry is necessary to compensate for the scheduled winding down of Boral's existing West Burleigh Quarry, which has sufficient reserves for only a further 8.5 to 11 years of production. Given the lead times which are involved (in gaining development and environmental approvals; establishing the operation and completing preliminary site works in order to enable full scale production), it is necessary for Boral to commence the relevant SDPWOA / EIS approval processes to ensure that an adequate, uninterrupted and efficient supply of construction materials remains available for critical infrastructure and development projects in the Gold Coast region.

Despite the site being mapped as a KRA under the SPP 2/07 (a recognition of the site's strategic importance in containing the largest deposit of hardrock resources on the southern Gold Coast), the Gold Coast Planning Scheme 2003 designates the site as a future residential area and has not yet been amended to appropriately reflect the site's higher and better use for extractive industry, nor the SPP 2/07 as a relevant State matter.

With the understanding that Council do not intend to fully amend the planning scheme to reflect SPP 2/07 (or any other recent State policy) prior to the planning scheme review scheduled for 2011, the lodgement of a development application for extractive industry over the site, while meritorious and achieving the outcomes sought by SPP 2/07 and the higher order provisions of the planning scheme, is inevitably inconsistent with the existing, out-dated land use designations of the Gold Coast Planning Scheme (which in itself does not appropriately reflect State matters).

Amendment No. 7 to the Gold Coast City Council planning scheme is currently at First State Interest Check and proposes to amend parts of the planning scheme to better reflect the SPP 2/07. The amendment package proposes to update the planning scheme overlay mapping and insert a new development code to protect State-significant resources. However, the proposed amendments do not address the existing urban zoning of the subject site under the Reedy Creek Structure

Plan or the substantial level of conflict between the associated assessment provisions and the development of the site for extractive industry purposes. In any event, Amendment No. 7 is not expected to come into effect prior to mid 2011. For these reasons, Amendment No. 7 does not resolve the level of conflict between the outdated planning scheme provisions and the Project. This level of conflict presents a significant risk to the timely delivery of the Project, notwithstanding the merits and planning grounds in support of the development proposal, and must therefore be addressed through a coordinated, whole-of-government assessment under the SDPWO Act.

It is widely recognised that it can take between 5 and 7 years to gain approval to develop a greenfield extractive industry site in South East Queensland under the IDAS and IPA process. Boral has also identified that for the development of the proposed Gold Coast Quarry site, the first 8 years would be spent preparing the site, developing the quarry pit and implementing site infrastructure before full production of source materials could commence to replace the West Burleigh Quarry operations. On this basis, a development application lodged with Council under an amended planning scheme (post 2011) may not obtain all relevant approvals until 2016-2018, with productive operations not commencing for a further 6 to 7 years (possibly 2025) – several years after the expiration of all of the remaining consented reserves at the nearby West Burleigh Quarry.

The proposed Gold Coast Quarry project will require a complex range of approvals and permits from all levels of government, including a number of approvals from various State government departments. The 'Significant Project' declaration will enable the centralisation and coordination of the assessment processes at a "whole-of-government" level. It is estimated that the declaration by the Coordinator-General of this Project's State significance would reduce the approval timeframes to 3 to 4 years under the SDPWOA, allowing site preparation to commence earlier and cutting the production horizon considerably.

The advantages of declaring the Project as one of State significance include the coordinated management of the processes involved in assessing the development application. One of the primary advantages is that the Department of Infrastructure & Planning (DIP) becomes the coordinating State government department for the assessment of the Project through the TOR and EIS phases.

The declaration also provides for the opportunity for the Coordinator-General to tailor the public notification requirements to the particular project. Pursuant to s.37(1)(c) of the SDPWOA, any properly made submission about the EIS is taken to be a properly made submission about the application, which would still be assessed and decided by the Gold Coast City Council as the Assessment Manager under IDAS and the IPA (or forthcoming SPA). This preserves the opportunity for third party submission and appeal rights in line with the IDAS process for Impact Assessable Material Change of Use applications. In this manner, proceeding with declaration would not reduce the level of transparency or accountability associated with the assessment of the application, nor would it fetter the right or ability of third parties to comment on or appeal the proposed development.

CRITERION G

The level of investment necessary for the proponent to carry out the project.

Boral anticipates a significant level of investment will be required for the Project, calculated to be in the order of $111 million, and comprising:

Plant and Infrastructure	$88 million
Government Approvals	$2 million
Land Acquisition and Holding Costs	$21 million

Boral's high level of investment in this project provides the rare opportunity to secure a suitable greenfield site in close proximity to market. Declaration of the proposal's State significance would see the continued investment towards site preparation, best practice plant and external infrastructure by Boral.

CRITERION H

The strategic significance of the project to the locality, region or the State.

The proposed Gold Coast Quarry is the final opportunity to secure a cost effective and long term supply of extractive material for the southern Gold Coast region. The project is critical to the delivery of planned infrastructure and urban growth in the region.

The Gold Coast region has been one of the fastest growing regions in Australia with strong population growth expected to continue over the next two decades. The 2009 edition of the SEQIPP identifies in excess of 300 infrastructure projects for South East Queensland, comprising more than $124 billion in State Government investment in road, rail and public transport projects and studies ($94.6 billion), water infrastructure ($4.6 billion), energy networks ($3.3 billion), and social and community infrastructure ($12.5 billion). The SEQIPP commits $12.4 billion to the delivery of infrastructure projects across the Gold Coast to ensure infrastructure is delivered to support the region's projected growth.

Extractive resources underpin all urban and infrastructure development as they are the primary source of materials used for the building of roads, bridges, railways, factories, hospitals, schools and homes. The building and construction industry will therefore continue to be a major employment and income generator for the region as residential, commercial, retail and major infrastructure projects are constructed.

Boral estimates the size of the exploitable hardrock deposit at approximately 84 Mt, having the potential to supply the Gold Coast with high grade construction materials for in excess of 40 years. Extractive resources are finite, determined by geological conditions and must be accessed where they naturally occur. With diminishing consented reserves remaining at Boral's West Burleigh Quarry, the lack of alternative extractive resources in the southern Gold Coast region and the extensive lead time required to transfer to any replacement extractive operation,

Boral has strategically identified the proposed Gold Coast Quarry development to take over production of its West Burleigh operations and to cater for future demand within the central and southern Gold Coast corridor. Should this transition be delayed or hindered in any way (due to reasons such as environmental and development approval constraints) a number of significant negative transportation and customer cost impacts will be incurred by the community, including the potential delay of critical infrastructure projects.

The proposed Gold Coast Quarry is the final opportunity to secure a cost effective and long term supply of extractive material for the southern Gold Coast region. The Project represents a unique opportunity to develop and operate a new extractive industry on greenfield land, incorporating industry best practice and sustainable design, in close proximity to the market. The Project is expected to contribute significantly to the local and State economies through Boral's quarry related expenditure, investment in infrastructure, ongoing employment (from the existing West Burleigh operations) and opportunities for external support businesses – a total of 390 jobs being maintained in the Gold Coast region.

The proposed Gold Coast Quarry is necessary in order to deliver critical infrastructure projects across the region and to meet a demonstrated economic need for extractive materials that continues to be generated by strong urban growth. It is therefore imperative that the proposed Project be declared a Significant Project under the SDPWOA.

5. Key Considerations

The following sections summarise the key considerations of the IAS associated with the proposed development. Boral will, upon declaration of State significance, prepare a detailed EIS in accordance with Division 3 of the SDPWOA and the TOR prepared by the Coordinator-General.

5.1 Timing and Benefits of Declaration

Due to the complexity of the statutory approvals framework, it can take between 5 and 7 years to secure approval to develop a greenfield extractive industry site in South East Queensland. The current version of the Gold Coast Planning Scheme 2003 presently designates the site as a future residential area, with neither the SPP 2/07, the SEQ Regional Plan nor the site's higher and better use for extractive industry being reflected. The current designation of the site under the planning scheme has been overtaken by events and does not appropriately reflect either the SPP 2/07 or the SEQ Regional Plan, as required by the *Integrated Planning Act 1997*.

Gold Coast City Council has indicated that the planning scheme will not be fully amended to reflect the SPP 2/07 (or any other recent State policy) prior to the planning scheme review scheduled for 2011. Amendment No. 7 to the Gold Coast City Council planning scheme is currently at First State Interest Check and proposes to amend parts of the planning scheme to better reflect the SPP 2/07. The amendment package proposes to update the planning scheme overlay mapping and insert a new development code to protect State-significant resources. However, the proposed amendments do not address the existing urban zoning of the subject site under the Reedy Creek Structure Plan or the substantial level of conflict between the associated assessment provisions and the development of the site for extractive industry purposes. In any event, Amendment No. 7 is not expected to come into effect prior to mid 2011. For these reasons, the lodgement of a development application for extractive industry over the site (while achieving the outcomes sought by the SPP 2/07) would be in conflict with the (outdated) land use designations of the Gold Coast Planning Scheme 2003.

Amendment No. 7 does not resolve the level of conflict between the outdated planning scheme provisions and the Project. This level of conflict presents a significant risk to the timely delivery of the Project, notwithstanding the merits and planning grounds in support of the development proposal, and must therefore be addressed through a coordinated, whole-of-government assessment under the SDPWO Act.

Boral has identified that, for the development of the proposed Gold Coast Quarry site, approximately eight (8) years would be spent preparing the site, developing the quarry pit and implementing site infrastructure before full production of source materials could commence to replace the West Burleigh Quarry operations. On this

basis, a development application lodged with Council under an amended planning scheme (post 2011) may not obtain all relevant approvals until 2016-2018, with productive operations not commencing for a further 6 to 7 years (possibly as late as 2025) – several years after the expiration of all of the remaining consented reserves at the nearby West Burleigh Quarry. This would create a significant gap in the supply of critical extractive resources, requiring raw infrastructure materials be sourced from outside of the local economy for many of the Gold Coast's future infrastructure projects.

Given the substantial lead times which are involved (in gaining development and environmental approvals; establishing the operation and completing preliminary site works in order to enable full scale production), it is necessary for Boral to now commence the relevant approval processes to ensure that employment, investment and an adequate, uninterrupted and efficient supply of construction materials remains available for critical infrastructure and development projects in the Gold Coast region after the expiration of consented resources at the West Burleigh Quarry.

Should alternative resources have to be found and developed beyond the existing identified resources at the West Burleigh Quarry, it is likely they will be located substantial distances from market. Consequently, it is expected that average haulage distances in South-East Queensland would continue to increase over time. This has a range of flow-on effects, including higher transport costs passed down the chain to the consumer, more congestion and maintenance on State and local roads, the increased risk of traffic accidents and increased greenhouse gas emissions. Indeed, the protection and smooth progress of extractive resources within KRAs will have a beneficial effect on future transport related, ecological and social impacts by securing these extractive deposits and minimising such transport distances to urban markets.

It is estimated that the declaration by the Coordinator-General of this Project's significance to the State and regional economies would reduce the approval timeframes to 3 to 4 years under the SDPWOA, allowing site preparation to commence earlier and cutting the production horizon to approximately 10 years (that is, in time to replace the West Burleigh operations). This ongoing supply to the market will continue to allow Boral to provide its economical products to the central and southern urban markets of the Gold Coast region by the time the resources at the West Burleigh Quarry become exhausted.

5.2 Economic Need

The Gold Coast region has been one of the fastest growing regions in Australia with strong population growth expected to continue over the next two decades. In response to this growth, the State government has committed to a $14 billion programme of infrastructure projects across the Gold Coast region over the next 20 years to ensure that the region continues to meet the infrastructure demands of an increasing population.

As a result of the region's growth, the building and construction industry will continue to be a major employment and income generator for the region as

residential, commercial, retail and major infrastructure projects are constructed. The following industry benchmarks are relevant in order to gauge the quantum of extractive resources required for the construction of major infrastructure and urban development:

- 1 kilometre of highway requires 25,000 tonnes of crushed rock;
- 1 kilometre of suburban road requires 5,000 tonnes of crushed rock, 750 tonnes of concrete for footpaths, kerbs and gutters, and 450 tonnes of asphalt for road surfacing;
- 1 kilometre of railway requires 2,000 tonnes of aggregate;
- a high-rise building can use up to 1,000 tonnes of aggregate per floor; and
- construction of a typical house (including driveway and landscaping) uses about 100 tonnes of aggregate.

The increasing population in South East Queensland has led to an increase in demand for housing, major infrastructure and resource related projects, thereby maintaining a high level of demand for extractive resources in the region. It can be inferred that SEQ has a higher rate of demand for aggregate per person due to this increasing population growth. Urban Economics, in preparing the appended Economic Assessment Report, projects that the demand for aggregate within the Gold Coast region is projected at 100 million tonnes between 2008 and 2026, equating to an average of 5.5 million tonnes per annum demanded. A complete copy of the Economic Assessment report is enclosed in **Appendix B** to this IAS.

5.2.1 South East Queensland Infrastructure Plan and Program

The *South East Queensland Infrastructure Plan and Program 2009–2026* (SEQIPP) outlines the State government's infrastructure priorities and commitment to infrastructure delivery for the South East Queensland region. The SEQIPP was first released in 2005 and is updated annually to reflect and align with the latest planning and budget commitments. It sets timeframes and budgets to ensure infrastructure is delivered to support the region's growth.

The 2009 edition of the SEQIPP identifies in excess of 300 infrastructure projects for South East Queensland, comprising more than $124 billion in State Government investment in road, rail and public transport projects and studies ($94.6 billion), social and community infrastructure ($12.5 billion), water infrastructure ($4.6 billion) and energy networks ($3.3 billion). These projects are estimated to support up to 900,000 jobs through to 2026.

Specifically, the 2009 SEQIPP (Part B) identifies a $12.4 billion State government commitment to infrastructure projects across the Gold Coast region over the next 20 years to ensure that the region continues to meet the infrastructure demands of an increasing population. Such infrastructure projects identified by the SEQIPP include, but not limited to:

- the Pacific Motorway upgrade (Nerang to Tugun);
- the southern extension of the Gold Coast Rail Line (Robina to Coolangatta), including the Gold Coast Rapid Transit project;

- the raising of Hinze Dam;
- the extension of the Southern Regional Water Pipeline;
- the Gold Coast University Hospital;
- the expansion of the Robina Hospital and development of the Robina Health Precinct;
- the development of up to 8 new State primary and secondary schools across the Gold Coast region;
- the redevelopment of the Gold Coast Stadium at Carrara and development of the Runaway Bay Sports Precinct; and
- the development of the motorcycle sporting precinct.

Extractive resources underpin all urban and infrastructure development as they are the primary source of materials used for the building of roads, bridges, railways, factories, hospitals, schools and homes. It is evident that, with the Gold Coast's projected population growth, the resulting demand for housing and the State's commitment for infrastructure delivery, a high level of demand for extractive resources in the Gold Coast region will continue. The development of the proposed Gold Coast Quarry is critical to secure an ongoing supply of extractive resources on the Gold Coast and ensure the implementation of the State's infrastructure programme over the next 20 years.

5.2.2 Diminishing Reserves of the West Burleigh Quarry

Boral's existing West Burleigh Quarry is immediately bound by a number of housing estates, an industrial estate and the M1 Pacific Motorway to the south. Boral has operated the West Burleigh Quarry since 1983; however, the site has been operating since 1973. Boral has extracted an estimated 20mt of hard rock resources from this reserve since 1983.

The following infrastructure projects are recent examples of projects supplied by, or being supplied by, Boral's West Burleigh Quarry.

TABLE 5.2 West Burleigh Quarry supply of materials

Project	Boral Supply	Stage	Total Volume (t) of Quarry Materials
Varsity Lakes to Robina Rail line – Trackstar	Quarry material	Completion date December 2009	70,000
Varsity Lakes interchange	Quarry material and asphalt	Completion date June 2010	40,000
Mudgeeraba Interchange	Quarry material	Completion date April 2010	30,000
Nerang South interchange	Quarry material and asphalt	Completed June 2009	70,000

Project	Boral Supply	Stage	Total Volume (t) of Quarry Materials
Coolangatta Airport runway extension	Quarry material	Completed mid 2007	130,000
Barney Point upgrade	Quarry material and concrete	Tendered July 2009	200,000
Desalination pipeline 24km	Quarry material	Completed late 2007	130,000
Desalination Plant	Quarry material	Completed June 2009	100,000
Merrimac Treatment Plant	Quarry material	Completed July 2009	40,000
Pacific H/way upgrade stage 1 Nerang to Varsity Lake	Quarry material and asphalt	Planning for 2012	TBA
Pacific H/way upgrade stage 2 Varsity Lake to Stuart Rd	Quarry material and asphalt	Planning and Funding for 2013	TBA
Nineteenth Av interchange	Quarry material	Planning 2011	TBA
Continuation of Rail line to Coolangatta Airport	Quarry material	Planning/Funding for 2014-2015	TBA

A further 13 million tonnes of consented resource remains available within the quarry and, with Boral producing approximately 1.2 to 1.5 Mtpa, the West Burleigh operation is likely to be exhausted of all consented resources within 8.5 to 11 years. These remaining resources are therefore insufficient to adequately cater for the future population and associated infrastructure growth within the region. It is estimated that the Gold Coast region will require 100 million tonnes of aggregates to the year 2026. The West Burleigh Quarry, while also identified as a KRA under the SPP 2/07 (KRA 70), is not subject to any other consent permits or development approvals which authorise the further extraction of hard rock beyond the remaining 13 million tonnes. While it is unknown whether the deposit contains any more exploitable resources, expansion of the quarry pit and the quarry operations is actively and increasingly constrained.

The operational life of the West Burleigh quarry may be further reduced by a number of new infrastructure projects, including the M1 Pacific Motorway and proposed electricity and rail projects, which have the ability to sterilise significant portions of the consented resource. Boral has reviewed preliminary designs provided by the Trackstar Alliance Project which indicate that in excess of 30% of the remaining consented reserves at Boral's West Burleigh Quarry are likely to be either sterilised or adversely impacted as a direct result of the likely land resumption requirements.

Furthermore, the West Burleigh Quarry is surrounded by transport corridors (M1 Pacific Motorway, the proposed Gold Coast Rapid Transit project) and urban development on all sides, providing minimal buffer areas and separation distances that would be considered inappropriate as part of any proposal to extend the West Burleigh Quarry. The intensification of residential and industrial developments on the site's northern boundaries effectively prejudices any possible expansion of extractive operations in this direction. Adjacent and nearby land would likely be affected by increased blasting and extraction practices with unacceptable amenity impacts as a consequence. It is estimated that, even if additional (exploitable) resources were identified at the West Burleigh Quarry, the volume of those resources would be too limited to warrant the expenditure that would be necessary to obtain the relevant approvals and extend the existing operation.

The increasing imposition of development and operational constraints, along with the prospect of a shortened operational life, at the existing West Burleigh Quarry makes the objective of securing the Gold Coast Quarry (as the only appropriate alternative), critical to the State's infrastructure programme, the development sector and the Gold Coast region.

5.2.3 Alternative Sources

While a number of hardrock deposits are situated north of the Gold Coast/Brisbane Inter-Urban break (Blue Rock (Cedar Creek), Darlington Range and Staplyton), these resources primarily service the metropolitan markets of southern Brisbane, Logan and the western corridor (Ipswich), due to the lack of hardrock quarries situated within those markets.

With the exception of the small scale extractive operations at Oxenford (by Nucon) and the Gold Coast City Council-operated West Burleigh (both of which are low production operations with limited resources), the Hymix-Hanson quarry at Nerang (located some 16km to the north of the site) provides the only other competitive hardrock quarry reserves proximate to the southern Gold Coast. The Nerang (Hymix-Hanson) quarry is the most significant reserve in the competitive network and is central to northern end of the Gold Coast markets.

As a result of the recent completion of the Tugun Bypass, accessibility to the Tweed Shire market has also increased. The Tweed Shire market includes a number of competitive quarries including:

- Tumbulgum (Cowell) – a lower grade quality quartzite reserve with approximately less than 10Mt of reserves remaining; and
- Terranora (Readymix) – a basalt reserve with approximately 5Mt of reserve. This quarry is not operational, although approval to re-open the quarry and service the local market is being actively pursued.

The next most proximate hardrock quarry reserves are located some distance away at Ballina. A summary of the existing hardrock quarries operating across the Gold Coast region is provided in the Economic Assessment report appended at **Appendix B** to this IAS.

With diminishing resources remaining at Boral's West Burleigh Quarry, and the lack of appropriate alternative extractive resources in the southern Gold Coast region, Boral has proposed the Gold Coast Quarry as a genuine replacement for the existing West Burleigh operation and to cater for future demand within the central and southern Gold Coast corridor. Should this transition be delayed or hindered in any way, a significant gap in the critical supply of construction aggregates is likely to emerge in the southern Gold Coast region.

Whilst increasing the capacity of other existing quarries may be seen by some as an alternative means of replacing the supply from the existing West Burleigh Quarry, increasing the operational capacity of other quarries serves only to further shorten the operational life of those existing operations and does not address the underlying shortage of extractive resources on both the Gold Coast, and across the South East Queensland region.

An increased reliance on existing quarries, such as the Nerang Quarry, would only increase the level of demand for product from those quarries in numerous competing markets across the South East Queensland region. The likely consequences of this undesirable situation include reduced levels of service for the central and southern Gold Coast markets and potentially adverse impacts on operational and transport costs (and therefore housing and infrastructure affordability across both the Gold Coast and the South East Queensland region).

5.3 Project Investment

The proposed Gold Coast Quarry represents a $111 million investment by Boral in the local and State economies. Boral's investment in the proposed Gold Coast Quarry is expected to contribute significantly to both economies through quarry related expenditure, investment in infrastructure, ongoing employment (from the existing West Burleigh operations) and opportunities for external support businesses.

At full production, the proposed Gold Coast Quarry will result in a total of 390 jobs being maintained in the Gold Coast region. It is anticipated that Boral would be committing a significant level of expenditure to the proposed Gold Coast Quarry project, as summarised in Table 5.3 below.

TABLE 5.3 Anticipated Capital Expenditure by Boral for the proposed Gold Coast Quarry

Development Component	Investment
Capital Estimates	
Mobile Plants	$13 Million
Fixed Plant	$55 Million
Site Infrastructure	$13 Million
Heavy Mobile Equipment	$ 7 Million

Development Component	Investment
Land Acquisition	
Site Purchase	$14 Million
Acquisition Costs	$ 1 Million
Holding Costs	$ 6 Million
Government Approvals	
State Declaration, Environmental Impact Statement and Development Application	$ 2 Million
Total Anticipated Expenditure	**$111 Million**

The construction phase of the project will take approximately eight (8) years to complete to a point where the Gold Coast Quarry replaces the operations at West Burleigh and will involve site preparation works and the establishment of a range of infrastructure. The construction phase of the project is expected to provide opportunities for local employment in construction, transport and the supply of goods and services. Infrastructure and improvements will include:

- possible improvements to Old Coach Road, upgraded for the purposes of access to and from the Gold Coast Quarry site by haulage vehicles;
- internal access roads;
- car parks;
- office complex and weighbridges;
- crib rooms, ablutions and site offices;
- dam and water management;
- mobile plant; and later,
- fixed plant.

5.4 Acoustic Amenity

The existing ambient noise levels in the areas surrounding the site to the south and west are typical of rural residential areas and are characterised by the noise of birds, wind in the trees and distant traffic. The existing ambient noise levels in the areas surrounding the site to the north and east are typical of low-medium density residential areas. To the north, the major existing noise sources are nearby traffic, domestic activity, birds, wind in the trees and distant traffic. To the east, the same noise sources currently prevail but with the addition of noise from traffic on the Pacific Motorway and distant industrial activity.

Noise impacts from the quarry operations would be limited to machinery and plant operation (both stationary and mobile), and from blasting activities. The level of noise would vary depending on the extent of machinery operation, road traffic from surrounding roads in the area and from climatic conditions (such as wind direction).

Noise monitoring stations will be established throughout the project area concentrating near noise sensitive receptors.

Using this data, a comprehensive acoustic assessment (addressing blasting, operational, road traffic and maintenance noise) will be prepared as part of the Project's EIS and will enable the comprehensive assessment and appropriate management of the acoustic climate in the locality.

5.5 Air Quality

The existing air quality in the locality is anticipated to be good. The characteristics of the existing air quality will be fully assessed and documented in the subsequent EIS.

The main source of dust in the region is likely to be traffic and the wind erosion of exposed soil surfaces. In the operational areas of the quarry, the main sources of dust are likely to be:

- truck loading;
- vehicle movements on unpaved internal haul routes;
- the dumping, crushing and screening of extracted material;
- transfer points on plant conveyor systems;
- material stockpiling; and
- the wind erosion of product stockpiles.

Dust nuisance can occur due to the deposition of larger dust particles in residential areas. The Department of Environment and Resource Management (DERM, formerly the Environmental Protection Agency (EPA)) prescribes maximum limits for dust emissions in the form of both the concentration of total suspended particulates (TSP) and levels of dust deposition.

Boral currently employ a range of dust control strategies across their quarry operations which minimise potentially adverse air quality impacts at all of their extractive operations. Dust impacts at the proposed quarry are to be managed through design measures and operational procedures which may include:

- dust suppression and treatment of internal roads and access ways;
- the use of water sprayers at loading and unloading transfer points;
- the use of fabric filters during drilling;
- tarping of loads and trucks;
- on-site vehicle wheel wash;
- partial enclosure of crushing and screening plant; and
- maintaining vegetated buffers.

The cumulative effect of these measures will be a good level of air quality, including acceptable concentrations of suspended particulates and levels of dust deposition

which will be well below the maximum levels prescribed by the DERM at all sensitive receptors within the locality.

An assessment of the existing air quality and the Project's dust control measures will be provided in the detailed Air Quality Assessment report which will be submitted as part of the Project's EIS.

5.6 Blasting Operations, Overpressure and Vibration

The main control for blasting practices is the requirement to maintain compliance with the regulatory limits for vibration and overpressure (set by the DERM), irrespective of production rates and blast frequency. An assessment of blasting operations and impacts will be undertaken as part of the Project EIS. The assessment report will nominate the blasting techniques which will be employed by Boral to ensure that blasting activities comply with the relevant limits for noise, ground vibration and overpressure, and appropriately control the risk of flyrock.

5.7 Site Access and Traffic Impacts

The site currently has frontage to both Old Coach Road and Tallebudgera Creek Road, both of which are considered to serve an arterial function, principally for private vehicles. A detailed assessment of the current hierarchal function and vehicle distribution of both Old Coach Road and Tallebudgera Creek Road will be provided as part of the Traffic Impact Assessment which will be presented in the Project's EIS.

Access to the site is proposed from Old Coach Road, through a vegetated buffer area. This access arrangement will effectively restrict sight lines along the quarry access road to maintain the existing levels of visual amenity from opposite the proposed quarry entrance. A Traffic Impact Assessment will be undertaken to assess the potential impacts of the proposed Gold Coast Quarry on the safety and efficiency of the existing road network (particularly the SPP 2/07 designated haulage route of Old Coach Road towards the M1 Pacific Motorway interchange to the north). The Traffic Impact Assessment will also examine the alternative Tallebudgera Connection Road access being proposed by the Gold Coast City Council. The alignments of both access routes are illustrated at **Figure 6.**

The Traffic Impact Assessment will be presented in the Project's EIS.

5.8 Site Infrastructure Assessment

In respect to the specific arrangements for water supply and sewerage infrastructure, water supply will be provided by rainwater tanks, onsite dams and in the case of drinking water, spring water provided from offsite. Sewage will be treated onsite with disposal through modern septic tank systems and absorption trenches.

The proposed Gold Coast Quarry will be able to operate without requiring an extension to the city's water supply or sewerage networks to service the site. A detailed assessment of the site infrastructure will be submitted as part of the EIS.

5.9 Stormwater Management

Given the nature of the proposed development, stormwater management and, in particular, sediment control, is a significant consideration. As part of the EIS process, Boral will prepare a Stormwater Management Plan to assess the potential hydrological impacts of the development proposal in respect to stormwater quality, runoff and management.

5.10 Landslide, Slope Stability and Erosion Hazard

Boral will implement a range of landslide, erosion hazard and geotechnical practices at the site to manage any risk to personal safety or environmental hazard. These operational and management procedures will be identified in a Geotechnical Assessment which will be prepared as part of the EIS process.

5.11 Scenic Amenity

The proposed Gold Coast Quarry will not have a significant visual impact on surrounding land. The proposed quarry pit, processing equipment and stockpiles will all be located so as to minimise views from any adjacent land or roads.

In addition to the favourable topographic containment, the majority of operational areas of the proposed Gold Coast Quarry will be well screened by the retained vegetated buffer areas around the perimeter of the site. The SPP 2/07[1] acknowledges the opportunities for effective visual screening on the site in noting that the site:

> *"is large enough and has the topographic features to almost completely self-buffer the resource, providing a separation distance of between 300 and 500 metres. Given the topographic screening provided by perimeter ridges, this distance should be sufficient to mitigate adverse impacts".*

Boral's willingness to voluntarily sterilise a significant portion of the extractive resource in order to provide extensive vegetation buffer areas on the site is demonstrative of its commitment to achieving an appropriate balance between the economic, environmental and social values of the site to the State and the region.

A detailed evaluation of the visual impacts of the proposed Gold Coast Quarry will be undertaken as part of the EIS process.

5.12 Bushfire Management

The Gold Coast Planning Scheme's 'Potential Bushfire Hazard Areas Overlay' maps the site as having a potential bushfire hazard rating of Medium to High, on the basis of the existing site conditions in terms of slope, aspect, vegetation communities and bushfire history. Given the nature of the proposal, these site characteristics which define bushfire risk will all be subject to extensive alteration as the quarry operations commence. As a result, operational areas of the site will

[1] State Planning Policy 2/07 Guideline, Reedy Creek Key Resource Area - KRA 96, p116

be well removed and the risk of bushfire damage to life and site infrastructure will likely be considered low.

Notwithstanding, a Bushfire Management Plan will be developed for the proposed Gold Coast Quarry which will identify the management practices that Boral will undertake to further reduce and maintain a low and acceptable risk of bushfire hazard across the whole of the site, particularly towards the site boundaries and within the vegetated buffer areas. The Bushfire Management Plan will be prepared as part of the EIS process.

5.13 Preservation of Cultural Heritage Values

A preliminary review of the site's cultural heritage values has been undertaken by Boral's specialist heritage consultant, Converge Heritage & Community. The report, which is appended to this IAS (at **Appendix E)**, acknowledges previous cultural heritage studies undertaken across the site in 1995 (Davies) and 2005 (ARCHAEO).

The previous studies have indicated that, despite significant historical ground disturbance, the potential for Aboriginal cultural heritage exists on portions of the site. The levels of cultural significance associated with this material will only be ascertained through consultation with the Aboriginal Parties for the Burleigh area and through further field assessment. This work will be undertaken during the EIS process.

A Cultural Heritage Management Plan (CHMP) which outlines management strategies will be prepared pursuant to part 7 of the ACH Act and submitted as part of the EIS process. The CHMP will achieve compliance with Boral's cultural heritage duty of care and directions for appropriate management of cultural heritage values

As part of standard operational procedures across their extractive sites, Boral ensure that employees have completed a Cultural Heritage Induction Program, which outlines the operational procedures which are to be followed in the unlikely event of the accidental discovery of Indigenous cultural heritage material or values.

5.14 Ecological Values

Preliminary investigations commissioned by Boral has provided an indication of some ecological values on the site. Initial assessments by both CEPLA (2008) (refer **Appendix C**) and Gold Coast Botany (2005), have confirmed the presence of remnant and regrowth vegetation that have established since large portions of the site were cleared in the 1970s. Although the site has a history of significant vegetation disturbance, it has been found to support a number of ecologically significant flora and fauna species scheduled under the EPBC Act and NCA.

The site is subject to a current Property Map of Assessable Vegetation.

The site is also located in the State Significant "Burleigh Heads/Springbrook NP Terrestrial Corridor" identified as part of the South East Queensland Biodiversity Planning Assessment (EPA, 2006). The disturbed vegetation and remnant regional ecosystems are connected to a much broader habitat network and are therefore likely to support habitat for a diversity of species including threatened taxa.

Although the certified regional ecosystem mapping identifies Essential Habitat for the NCA 'Vulnerable' Koala (*Phascolarctos cinereus*) over portions of the site, preliminary investigations (carried out by both Professor Frank Carrick AM in 2009 (refer **Appendix H**) and ddwfauna in 2005) have found only a relatively low koala usage on the site. Additional, more detailed ecological assessments will be undertaken during the course of the EIS and will further investigate the potential impacts of the proposed Gold Coast Quarry on koala habitat. However, it is expected that a net benefit for koalas can be achieved as part of the development proposal. Significantly, Professor Carrick is of the opinion that the Project provides the opportunity to achieve a far better outcome for koalas on the site than would otherwise be presented by standard urban development (particularly the nature of residential development currently anticipated on the site under the planning scheme).

Neither the draft *South East Queensland Koala State Planning Regulatory Provisions* of the *Proposed South East Queensland Koala Conservation State Planning Regulatory Provisions* will apply to the Project, if it is declared to be a Significant Project. Boral nevertheless remains committed to investigating the delivery of a net benefit for koalas as part of the Project.

The NCA 'Vulnerable' Glossy Black Cockatoo (*Calyptorhynchus lathami*) and EPBC Act Migratory Species the White-bellied Sea Eagle (*Haliaeetus leucogaster*) have previously been recorded in the broader Reedy Creek / Tallebudgera Valley area. Further detailed assessments will be necessary to identify the extent of these and other species, the likely impacts on species and appropriate mitigation measures where required.

In order to adequately understand EPBC Act and NCA issues and mitigate potential impacts on threatened plant species, additional survey work will be carried out as part of the baseline EIS studies to identify the species, localities and numbers of threatened plant species on site. Boral has also elected to voluntarily commence the EPBC Act referral process.

The primary impact of the quarry operation in the short term will be the temporary dispersion of fauna to surrounding habitat areas which will include retained and enhanced buffer areas of the site. The short term impacts of the development will be offset by habitat creation and enhancement works, carried out in accordance with habitat offset strategies and a site rehabilitation plan. Over the long term development of the quarry, the maintenance and enhancement of conservation values in the surrounding landscape, the completion of extensive offset and rehabilitation works and the management of buffer vegetation will appropriately ameliorate any long term impacts that might otherwise have been generated.

The value and location of these ecological features have been taken into account in the formulation of the development proposal and, specifically, in refining the location and boundaries of the proposed extraction area. On the basis of preliminary ecological investigations, the proposed disturbance footprint avoids known areas of high ecological value, including endangered regional ecosystems and threatened species, as far as practicable, with these features being retained in a broad buffer area. The intrusion of the proposed disturbance footprint into areas of sub-dominant vegetation has also been minimised to the greatest extent

practicable. The proposed footprint limits conflict between the development area and Endangered Regional Ecosystems to one minor location which is necessary to accommodate site access via the Gold Coast City Council's planned connection road.

5.15 Site Rehabilitation

As part of the EIS, Boral will prepare a Rehabilitation Plan which will schedule the progressive rehabilitation of terminal quarry benches over the life of the quarry. The Rehabilitation Plan will include a rehabilitation strategy, management, and monitoring performance indicators which define the proposed rehabilitation of the site. The objectives of the Rehabilitation Plan will primarily include:

- managing the revegetation of the site including buffer zones, quarry benches and other non-operational areas of the quarry;
- increasing vegetated links and fauna habitat;
- stabilising quarried areas; and
- protecting visual amenity and water quality.

5.16 Stakeholder and Community Consultation

Boral has engaged specialist communications firm Three Plus to design and implement an independent Community and Stakeholder Engagement Program for the proposed Gold Coast Quarry EIS process, should declaration as a Significant Project be forthcoming. During the EIS process, Boral will promote stakeholder participation in consultation to inform stakeholders about the study objectives, drivers, processes and consultation opportunities and add value to the study's decision-making process.

A copy of the **Community and Stakeholder Engagement Processes** report, prepared by Three Plus, is appended to this IAS at **Appendix D**.

5.16.1 SDPWOA Consultation Program

The SDPWOA provides a schedule of consultation activities which Boral will carry out over the course of the assessment process. Firstly, once the Coordinator-General has declared the proposal as a Significant Project, draft TOR will be developed to indicate the scope of the EIS. A Community and Stakeholder Engagement Plan will be presented to the Coordinator-General for review prior, to the draft TOR being advertised, at which point the community will be invited to provide comment on the draft TOR.

Having prepared an EIS to address the finalised TOR, Boral will publically notify the EIS in accordance with the SDPWOA (for a minimum period of time as prescribed by the Coordinator General (the 'submission period')), during which time the public and advisory agencies have the opportunity to provide comment on the EIS. A detailed Community and Stakeholder Engagement Plan report will be included as a key component in the Proponent's EIS report.

5.16.2 Community Consultation Programs

In recognition of their corporate responsibilities and partnerships, Boral has committed significant time and resources to stakeholder engagement and management activities throughout South East Queensland over recent years. As detailed the **Community and Stakeholder Engagement Processes** report (**Appendix D**), Boral has established seven community liaison groups and more than 15 community engagement projects across their key quarry operations within Queensland. A similar community and stakeholder engagement strategy will be rolled out in support of the proposed Gold Coast Quarry.

The primary objectives of the consultation strategy, which will be undertaken in addition to the statutory notification of the EIS required by the SDPWOA, are to:

- establish transparent communication between all stakeholders;
- identify stakeholder concerns with the project;
- address stakeholder concerns; and
- facilitate stakeholder understanding of the proposal.

Boral's professional approach in respect of the management of its operations is evidenced by proactive environmental management and a demonstrated commitment to sustainable development. Boral's 'Changing Perceptions' strategy provides a holistic approach to conducting sustainable business. Boral has been a finalist in both the 2007 and 2008 EPA Sustainable Industries Awards for this sustainable approach to its Queensland operations.

Boral's open and transparent approach to engagement with local communities and interest groups is resulting in unprecedented support from local communities for the continuation and future development of Boral's extractive resource assets.

The advantages of declaring the Project as one of State significance also includes the coordinated management of the processes involved in assessing the proposal. One of the primary advantages is that the Department of Infrastructure & Planning (DIP) becomes the coordinating State government department for the assessment of the Project through both the TOR and EIS phases. The declaration also provides the opportunity for the Coordinator-General to tailor the public notification requirements to the particular project. Pursuant to s.37(1)(c) of the SDPWOA, any properly made submission about the EIS is taken to be a properly made submission about the application which would still be assessed and decided by the Gold Coast City Council as the Assessment Manager under IDAS and the IPA processes. In this manner, proceeding with State significance declaration would not reduce the level of transparency or accountability associated with the assessment of the application, nor would it fetter the right or ability of third parties to comment on or appeal the proposed development.

6. Further Approval Processes

Given the nature, scale and location of the Project, the proponent will be required to obtain various approvals from Local, State and Commonwealth authorities and agencies. The following section identifies key legislation and identifies other documents and guidelines relevant to the environmental management and compliance of the Project.

6.1 Commonwealth Government

6.1.1 Environment Protection and Biodiversity Conservation Act 1999 (Cth)

The Commonwealth Government's *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (the EPBC Act) provides for the protection of the environment, especially matters of National Environmental Significance (NES). Under the EPBC Act, a person must not take an action that has, will have, or is likely to have a significant impact on any of the matters of NES without approval from the Commonwealth Environment Minister.

To obtain approval from the Commonwealth Environment Minister, a proposed action should be referred, where the Minister can decide whether a proposed action will need formal assessment and approval under the EPBC Act.

The EPBC Act allows for bilateral agreements between the Commonwealth and other jurisdictions, relating to environmental assessments. A key function of bilateral agreements is to "*reduce duplication of environmental assessment processes between the Commonwealth and States or Territories, relating to the same development proposals*"[2]. In effect, the bilateral agreement between the State and Commonwealth governments allow the Commonwealth to delegate to the State the responsibility for conducting environmental assessments under the EPBC Act and, in certain circumstances, the responsibility for granting environmental approvals under the EPBC Act. Under the bilateral agreement, proposed actions that would otherwise require assessment under the EPBC Act can be assessed using the SDPWOA where the Coordinator-General declares, for the purposes of section 26 of the SDPWOA, that the proposed action is a significant project for which an EIS is required.

In order to understand the EPBC Act and the NCA issues, additional survey work will be conducted as part of the baseline environmental studies and presented in the Project's EIS. Of relevance to this site is the presence of listed threatened and migratory species, namely Durobby (*Syzygium moorei*) and the White Bellied Sea Eagle (*Haliaeetus leucogaste*) respectively.

[2] http://www.environment.gov.au/epbc/assessments/bilateral/qld-draft.html

The EIS process will fully describe the site's existing environmental values, the potential adverse and positive impacts of the construction and operation of the proposed Gold Coast Quarry on the existing environment, and the proposed measures and strategies which Boral will implement to prevent or mitigate any adverse environmental impacts.

Boral has voluntarily commenced the EPBC Act referral process with a view to obtaining the views of the Commonwealth in sufficient time to allow the incorporation of those views in the draft TOR under the bilateral agreement.

Subsequent EIS reporting will also identify the species, important habitats and likely extent of population of threatened fauna species on the site, including specialist investigations with regard the importance of the area to koalas.

6.2 State Government

6.2.1 Integrated Planning Act 1997

The *Integrated Planning Act 1997* (IPA) provides the framework for Queensland's planning and development assessment system. Notwithstanding any approval issued by a State or Commonwealth agency, development approval for the establishment of a new 'Extractive Industry', associated facilities and Environmentally Relevant Activities (a 'Material Change of Use') would be sought from the Gold Coast City Council as an Assessment Manager under the IPA.

In respect of the assessment procedures to which the subsequent Material Change of Use development application will be subject, the SDPWOA (s.37) prescribes that:

(1) To the extent the application is for a material change of use, or requires impact assessment, under the Integrated Planning Act, or both —

(a) the information and referral stage and the notification stage of IDAS do not apply to the application; and

(b) there are no referral agencies, under the Integrated Planning Act, for the application; and

(c) a properly made submission about the EIS is taken to be a properly made submission about the application under IDAS; and

(d) despite paragraph (b), until the development approval applied for has effect—

(i) the Coordinator-General's report is taken to be a concurrence agency's response for the application under IDAS; and

(ii) the Coordinator-General may exercise any power of the entity that, other than for paragraph (b), would have been the concurrence agency for the application.

(2) Subsection (1)(c) does not apply if the application involves only a material change of use requiring code assessment under the Integrated Planning Act.

In addition to the Material Change of Use Development Permits, it is expected that development approval may also be sought for the carrying out of Operational Work, Building Work and/or Plumbing and Drainage Work.

6.2.2 Integrated Planning Regulation 1998

The *Integrated Planning Regulations 1998* (IP Regs) stipulate referral triggers, the relevant assessment agencies and their jurisdictions. The Project would trigger referral to a number of Concurrence and Advice Agencies under the ordinary procedures of the Integrated Development Assessment System. However, if the Project is declared to be a Significant Project, the ordinary Information and Referral Stage of the IPA's Integrated Development Assessment System will be replaced by the whole-of-government EIS process coordinated by the Department of Infrastructure and Planning.

6.2.3 Sustainable Planning Act 2009

The Queensland Government passed the *Sustainable Planning Bill 2009* on 16 September 2009. Upon its anticipated commencement on 18 December 2009, the *Sustainable Planning Act 2009* will supersede the *Integrated Planning Act 1997* as the preeminent planning legislation in the State. The assessment of the Project under the SDPWOA will therefore be integrated with the SPA instead of the IPA.

Although a detailed assessment of the Project against the relevant requirements and provisions of the SPA will be included in the Project's EIS, a preliminary review of the SPA indicates few, if any, relevant changes from the existing IPA assessment framework.

6.2.4 Aboriginal Cultural Heritage Act 2003

The *Aboriginal Cultural Heritage Act 2003* (ACH Act) is the primary piece of legislation which seeks to ensure that Aboriginal cultural heritage is not harmed. The legislation also establishes a duty of care on any person carrying out an activity, requiring that all reasonable and practical measures are taken to ensure that the activity does not harm Aboriginal cultural heritage.

As discussed in this IAS, Boral initiates a Cultural Heritage Induction Program as part of standard operational procedures, outlining the operational procedures which are to be followed in the unlikely event of the accidental discovery of indigenous cultural heritage material or values. In addition, a full CHMP will be prepared pursuant to part 7 of the ACH Act and submitted as part of the EIS process.

6.2.5 Environment Protection Act 1994

The *Environmental Protection Act 1994* (EP Act) is primarily concerned with environmental pollution, and has been developed to protect Queensland's environment, while allowing for ecologically sustainable development. The EP Act gives the DERM (formerly the EPA) the power to regulate 'Environmentally Relevant Activities' (ERA's), which are activities that have been identified as having the potential to cause environmental harm.

The definitive list of Environmentally Relevant Activities for which application will be made will be submitted as part of the Project's EIS. However, it is anticipated that

application will be made for at least the following ERAs prescribed under the *Environmental Protection Regulation 2008*:

- 8. Chemical Storage;
- 16. Extractive and screening activities:
  - 2(d) Extracting rock or other material: >1 million t/yr; and
  - 3(c) Screening rock or other material: >1 million t/yr; and
- 21. Motor Vehicle Workshop Operation.

6.2.6 Nature Conservation Act 1992

The *Nature Conservation Act 1992* (NCA) was developed to conserve nature, and is based on the principles of conserving biological diversity, the ecologically sustainable use of wildlife, ecologically sustainable development and international criteria for establishing and managing protected areas.

In order to understand the considerations relevant to the NCA, additional survey work will be conducted as part of the baseline environmental studies that will be submitted as part of the Project's EIS.

6.2.7 Vegetation Management Act 1999

The site is covered by a PMAV which was certified by the former DNRW (now DERM) on 4 March 2009. The proposed disturbance footprint will largely impact on areas of Category X (i.e. non-remnant) vegetation. However, where the disturbance footprint unavoidably impacts on either remnant or regulated regrowth vegetation, appropriate vegetation offsets will be provided in accordance with the requirements of the *Vegetation Management Act 1999* (VMA). Subject to the further field validation which will be carried out as part of the baseline EIS studies, it is anticipated that any necessary vegetation offsets can be accommodated within the bounds of the site.

6.2.8 State Planning Policy 2/07: Protection of Extractive Resources

In 2007 the Queensland Government introduced the *State Planning Policy 2/07: Protection of Extractive Resources* (SPP 2/07) to protect and maintain the long-term availability of key extractive resources. The SPP 2/07 (a statutory instrument under the *Integrated Planning Act 1997* (IPA)) recognises that the main markets for extractive resources are the urban communities of Queensland which are experiencing high and sustained population growth, such as the Gold Coast and South East Queensland.

The locations of these finite extractive resources are limited in occurrence by geological conditions and must therefore be accessed where they naturally occur. Where the extractive resources are considered to be essential to the State and regional economies, the extractive resources are referred to as Key Resource Areas (KRAs). The site has been identified under the SPP 2/07 as a KRA (Reedy Creek Key Resource Area - KRA 96) (refer **Figure 6 – Key Resource Area Map Extract)**. The site is therefore recognised as an extractive resource which is of State significance.

The SPP 2/07 recognises that the Key Resource Area in which the site is located contains a high quality resource in the form of a major meta-greywacke band, the quality of which has been confirmed by investigative drilling and analysis. The resource deposit on the site contains significant volumes of quarry rock (the largest known greenfield resource on the southern part of the Gold Coast) and its significance is enhanced by its proximity to the markets of the Gold Coast (refer to **Figure 5 – Rural Production and Natural Resources Map Extract (for the Southern Gold Coast))**.

The significance of the site is further increased by virtue of it being the only KRA south of Nerang, in one of Australia's most rapidly growing regions. The proposed Gold Coast Quarry is therefore the last opportunity to secure a cost effective and long term supply of extractive material for the southern Gold Coast region, and will achieve the policy outcomes sought by the State Government in SPP 2/07.

6.2.9 Draft State Planning Policy – Coastal Protection 2009

The site is not located in a Coastal Management District but is situated in the Coastal Zone under the draft *State Planning Policy – Coastal Protection* (the "draft Coastal Protection SPP"). The site contains some small, dispersed patch areas of High Ecological Significance under the draft Coastal Protection SPP.

Because the Project will involve the clearing of vegetation in an area of High Ecological Significance (but within in urban area), the draft Coastal Protection SPP will be applicable to the Project should it become a SPP. If this were to occur, the Project would be required to achieve the outcomes sought at Section 4.6 of the draft Coastal Protection SPP which relevantly require that the development:

- avoids adverse effects of areas of High Ecological Significance, or where those effects cannot be avoided:
  - those impacts are minimised; and
  - an environmental offset is provided for any remaining environmental impacts;
- avoids significant adverse effects on 'ecological values' or, where significant adverse effects on ecological values cannot be avoided, those effects are minimised;
- avoids adverse effects on areas of high and locally important 'scenic preference'.

More specifically, the Project would be required to demonstrate compliance with the relevant Specific Outcomes of the Development Assessment Code contained at Annex 3 of the draft Coastal Protection SPP.

Demonstrating compliance with the relevant provisions of the Development Assessment Code will likely require the provision of an Environmental Offset, principally to offset the minimised but unavoidable requirement to clear vegetation in an area of High Ecological Significance. Subject to the further field validation which will be carried out as part of the baseline EIS studies, it is anticipated that any necessary offset can be accommodated within the bounds of the site.

The draft Coastal Protection SPP also seeks to assess the impact of development on Scenic Preference Values. A detailed Visual Impact Assessment will be prepared and submitted at part of the Project's EIS and will assess the Project in terms of any impact on Scenic Preference Values in accordance with the draft Coastal Protection SPP.

6.2.10 South East Queensland Regional Plan 2009-2031

The *South East Queensland Regional Plan 2009-2031* (SEQ Regional Plan) was released on 28 July 2009 as a formal review of the SEQ Regional Plan 2005 in accordance with sections 2.5A and 2.5C of the IPA. The purpose of the SEQ Regional Plan is to manage regional growth and change in the most sustainable way to protect and enhance quality of life in the region. The SEQ Regional Plan does this through the Regional Vision and Strategic Directions, the Regional Land Use Pattern, Regional Policies and the Regulatory Provisions.

The subject site is included in the Urban Footprint regional land use category under the SEQ Regional Plan. The Urban Footprint is a broad land use category which identifies land that can meet the region's urban development needs to 2031 in a more compact form.

The site is also designated as an extractive resource under the SEQ Regional Plan, as illustrated at **Figure 5**.

The SEQ Regional Plan promotes the sustainable management of natural resource areas by protecting them from incompatible development. It also acknowledges that natural resources underpin major economic activities, sustain diverse industries and support the livelihoods of people who work in, and depend on, natural resource-based industries.

The proposed Gold Coast Quarry is consistent with the Desired Regional Outcomes expressed by the SEQ Regional Plan. The Project is necessary to meet the demonstrated economic need for high quality and accessible construction aggregates that continues to be generated by strong urban growth and critical infrastructure projects.

6.3 Local Government

6.3.1 Gold Coast City Council Planning Scheme

The *Gold Coast Planning Scheme 2003 Version 1.2* ('the Planning Scheme') commenced on 11 May 2009 and is considered to be the current Planning Scheme for the Gold Coast City Council. The Gold Coast Planning Scheme acts as a framework for managing development in a way that advances the purpose of the IPA by –

- identifying assessable and self-assessable development; and
- identifying outcomes sought to be achieved in the local government area as the context for assessing development.

IPA planning schemes are required to coordinate and integrate the planning and land use matters that local authorities deal with, as well as to incorporate the State

and regional dimensions of those matters. Despite the site being mapped as a KRA under the SPP 2/07 (a recognition of the site's strategic importance in containing the largest deposit of hardrock resources on the southern Gold Coast), the Gold Coast Planning Scheme has not yet been amended to appropriately reflect all of these State matters.

The current land use designations which apply to the site under the Gold Coast Planning Scheme are identified in Table 6.1 below.

TABLE 6.1 Gold Coast Planning Scheme land use designations

Planning Scheme Component	Land Use Designation
Strategic Designation	Part Urban Residential Part Park Living Part Open Space/Nature Conservation
Domain	Emerging Communities
Structure Plan Area	Reedy Creek
Structure Plan Precinct	Part Urban Residential Part Park Living Part Open Space/Nature Conservation

Previous discussions with the Gold Coast City Council have indicated that the planning scheme will not be amended to fully reflect the SPP 2/07 (with the direct effect of maintaining a residential "zoning" of the site), prior to the full planning scheme review currently scheduled for 2011.

Notwithstanding those previous discussions, Gold Coast City Council has recently released Amendment No. 7 to planning scheme. The amendment package proposes to update the planning scheme overlay mapping and insert a new development code to protect State-significant resources. However, the proposed amendments do not address the existing urban zoning of the subject site under the Reedy Creek Structure Plan or the substantial level of conflict between the associated assessment provisions and the development of the site for extractive industry purposes. In any event, Amendment No. 7 is currently at First State Interest Check and is not expected to come into effect prior to mid 2011. For these reasons, Amendment No. 7 does not resolve the level of conflict between the outdated planning scheme provisions and the Project. This level of conflict presents a significant risk to the timely delivery of the Project, even despite the merits and planning grounds in support of the development proposal.

The proposed Gold Coast Quarry is necessary in order to meet a demonstrated economic need for extractive materials generated by strong urban growth and critical infrastructure projects across the region. It is therefore imperative that the Project be declared a Significant Project so that a holistic and coordinated whole-of-government assessment can be carried out in an open and transparent manner, incorporating community input and consultation.

6.4 Summary

In summary, it is anticipated that the Project will require at least the following approvals and licenses under the statutory planning framework:

- referral to, and if required approval from, the Commonwealth Environment Minister under the EPBCA;
- the endorsement of the Coordinator-General by way of an Evaluation Report under the SDPWOA;
- a Development Permit for Material Change of Use – Extractive Industry, obtained under the IPA (or SPA) and the Gold Coast City Council Planning Scheme;
- Development Permit for Material Change of Use – Environmentally Relevant Activities under the IPA, EPA and the Gold Coast City Council Planning Scheme, including:
    (i) ERA 8(3)(a) – Storing 10m3 to 500m3 of class C1 or C2 combustible liquids under AS1940;
    (ii) ERA 16(2)(d) – Extracting, other than by dredging, in a year, more than 1,000,000 tonnes of material;
    (iii) ERA 16(3)(c) – Screening, in a year, more than 1,000,000 tonnes of material; and
    (iv) ERA 21 – Motor Vehicle Workshop.
- Development Permit for Operational Works (Vegetation Clearing) under the IPA, VMA and the Gold Coast City Council Planning Scheme;
- Development Permit for Operational Works (Changes to Ground Level) under the IPA and the Gold Coast City Council Planning Scheme;
- Development Permit for Operational Works (Infrastructure and Landscape Work) under the IPA and the Gold Coast City Council Planning Scheme;
- Development Permit for Plumbing and/or Drainage Work under the IPA and the Gold Coast City Council Planning Scheme; and
- Development Permit for Building Work under the IPA, Building Act and Gold Coast City Council Planning Scheme.

The definitive list of approvals and permits which are required for the Project will be resolved and submitted as part of the Project's EIS.

7. Recommendation

Boral is seeking to establish a new extractive industry operation on a greenfield site at Tallebudgera Valley, near Reedy Creek on the Gold Coast, as a 'Significant Project' under the State Development and Public Works Organisation Act 1971 (SDPWOA).

The Gold Coast region has been one of the fastest growing regions in Australia with strong population growth expected to continue over the next two decades. The *South East Queensland Infrastructure Plan and Program 2009–2026* (SEQIPP) outlines the State government's infrastructure priorities and commitment to infrastructure delivery for the South East Queensland region, including an investment of $12.4 billion in infrastructure projects across the Gold Coast region. The building and construction industry will therefore continue to be a major employment and income generator for the region as residential, commercial, retail and major infrastructure projects are constructed.

Hardrock resources are typically high volume, low value products and the economic viability of extractive operations depends on a close proximity to market (principally urban growth areas). The resources are finite, determined by geological conditions, and must be accessed where they naturally occur. Significantly, where extractive operations cannot be located close to market, raw material for infrastructure and urban development must be sourced from alternative, less proximate sources which has a number of undesirable consequences (including the passing down of higher transport costs to the consumer, increased congestion on, and maintenance of, State and local roads, and increased greenhouse gas emissions).

Boral estimates the size of the exploitable hardrock deposit at the proposed Gold Coast Quarry at approximately 84 Mt, having the potential to supply the Gold Coast with high grade construction materials for in excess of 40 years.

The proposed Gold Coast Quarry, a $111 million investment by Boral, represents a unique opportunity to develop and operate a new extractive industry on greenfield land, incorporating industry best practice and sustainable design, in close proximity to the market. The Project is expected to contribute significantly to the local and State economies through quarry related expenditure, investment in infrastructure, ongoing employment and opportunities for external support businesses. The Project would maintain a total of 390 jobs in the Gold Coast region.

Like most extractive industries, the Project faces social and environmental challenges that must be addressed and mitigated. The EIS which will be subsequently prepared and submitted will demonstrate that the Project can incorporate a range of measures to address, or appropriately manage, any potentially adverse environmental or amenity impacts. The EIS will demonstrate that the Project is able to strike a balance between the critical need for hardrock resources and construction aggregates in this high growth urban area and environmental considerations and other federal, state and local interests through

the implementation of sensitive design and operational procedures, appropriate impact mitigation measures and best practice management.

The proposed Project is meritorious and is consistent with the State's regional planning framework and policy direction. During a coordinated whole-of-government assessment of the Project, the minutiae of the applicable statutory planning instruments will be appropriately addressed.

The proposed Gold Coast Quarry is necessary in order to meet the demonstrated economic need for high quality and accessible construction aggregates that continues to be generated by strong urban growth and critical infrastructure projects. The Project will provide the only suitable supply of extractive resources to replace the existing West Burleigh Quarry which has provided a long-term supply of construction aggregates to the Gold Coast since its commencement but which now has sufficient reserves for only a further 8.5 to 11 years of production. The Project will enable the extraction of high grade construction aggregates within the last remaining unexploited KRA on the southern end of the Gold Coast from a site in close proximity to the M1 Pacific Motorway and the Gold Coast market (there are no other KRA's south of Nerang). Consequently, the proposed Gold Coast Quarry is the final opportunity to secure a cost effective and long term supply of extractive material for the southern Gold Coast region.

Given the lead times which are involved in gaining development and environmental approvals, establishing the operation and completing preliminary site works in order to enable full scale production, it is necessary for Boral to now commence the relevant approval processes to ensure that an adequate, uninterrupted and efficient supply of construction materials remains available for critical infrastructure and development projects in the Gold Coast region.

The advantages of declaring the Project as one of State significance include the coordinated management of the processes involved in assessing the development application, led by the Department of Infrastructure & Planning through the TOR and EIS phases. The declaration also provides for the opportunity for the Coordinator-General to tailor the public notification requirements to the particular project.

The declaration of a Significant Project is representative of the significance of the project to the locality, region and State and takes account of the potential economic, environmental and procedural considerations associated with the development. It is submitted that this IAS has demonstrated that the Project satisfies the requirements of the SDPWOA in respect of the declaration of a Significant Project. The Coordinator-General is therefore respectfully requested to consider this application favourably and designate the Project as a Significant Project (requiring an EIS) under the SDPWOA.

Figures

N

0 200 400 600 800 metres

1:20,000

LEGEND

Subject Site

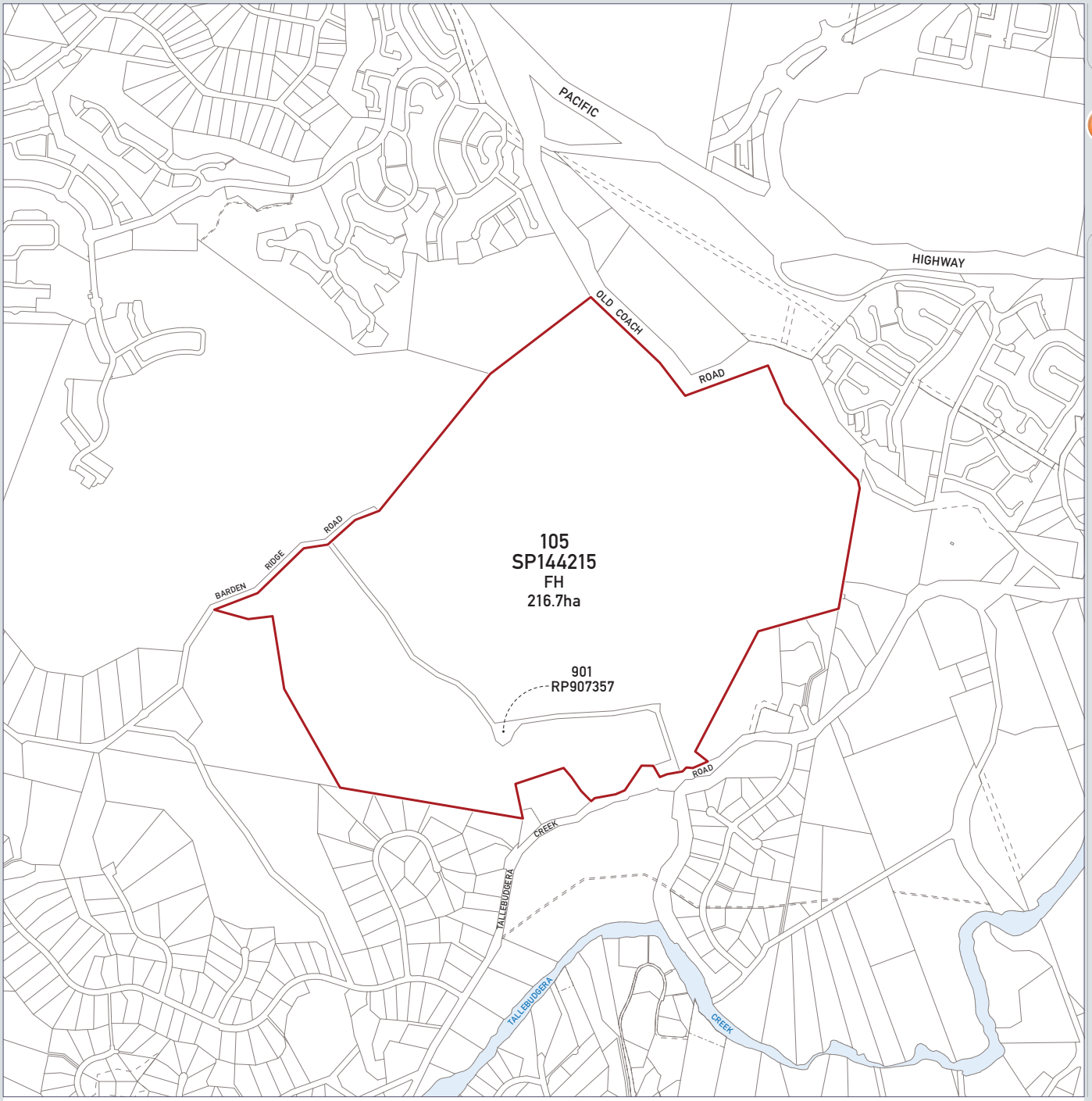
HUMPHREYS REYNOLDS PERKINS PLANNING CONSULTANTS

PROPOSED GOLD COAST QUARRY,
TALLEBUDGERA VALLEY

LOCATION MAP

FILENAME >	LOCATION MAP	DATE >	16 JUNE 2009
JOB NO. >	063069	AMENDED >	N/A
SCALE >	1:20,000	VERSION >	1.0
SOURCE >	UNIVERSAL PUBLISHERS - Australian City Streets (ver. 6.0)		

FIGURE 1



N

0 200 400 600 800 metres

1:20,000

LEGEND

Subject Site

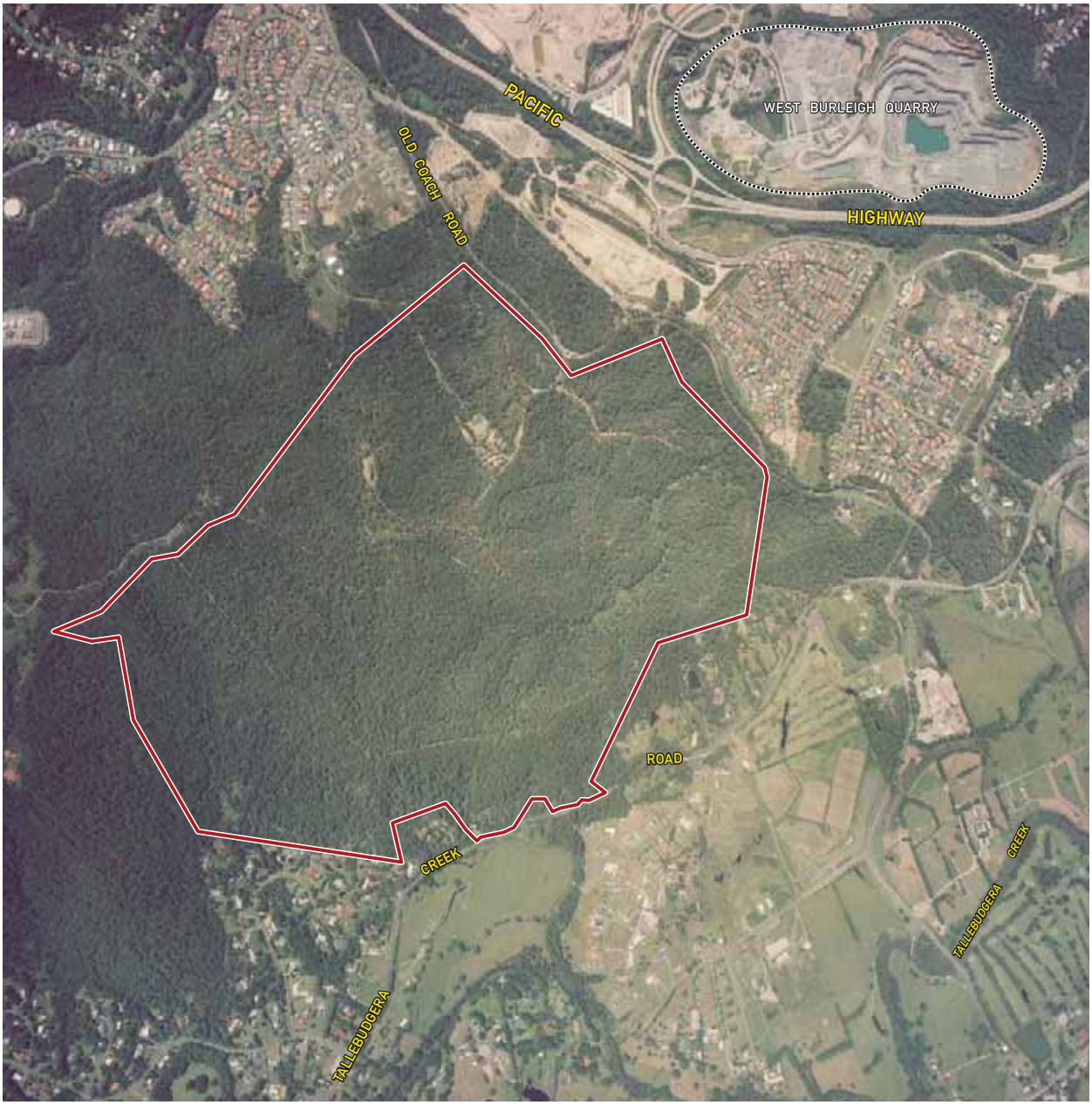
HUMPHREYS REYNOLDS PERKINS PLANNING CONSULTANTS

PROPOSED GOLD COAST QUARRY
TALLEBUDGERA VALLEY

CADASTRAL MAP

FILENAME >	CADASTRAL MAP	DATE >	16 JUNE 2009
JOB NO. >	063069	AMENDED >	N/A
SCALE >	1:20,000	VERSION >	1.0
SOURCE >	QUEENSLAND GOVERNMENT SmartMap (dated 15.06.2009)		

FIGURE 2



N

0 0.2 0.4 0.6 0.8 kilometres

1:20,000

LEGEND

Subject Site

HUMPHREYS REYNOLDS PERKINS PLANNING CONSULTANTS

PROPOSED GOLD COAST QUARRY
TALLEBUDGERA VALLEY

AERIAL PHOTOGRAPH

FILENAME >	AERIAL PHOTOGRAPH	DATE >	16 JUNE 2009
JOB NO. >	063069	AMENDED >	N/A
SCALE >	1:20,000 approx.	VERSION >	1.0

FIGURE 3

N

0 1.25 2.5 3.75 4.0 kilometres

1:125,000

LEGEND

Subject Site

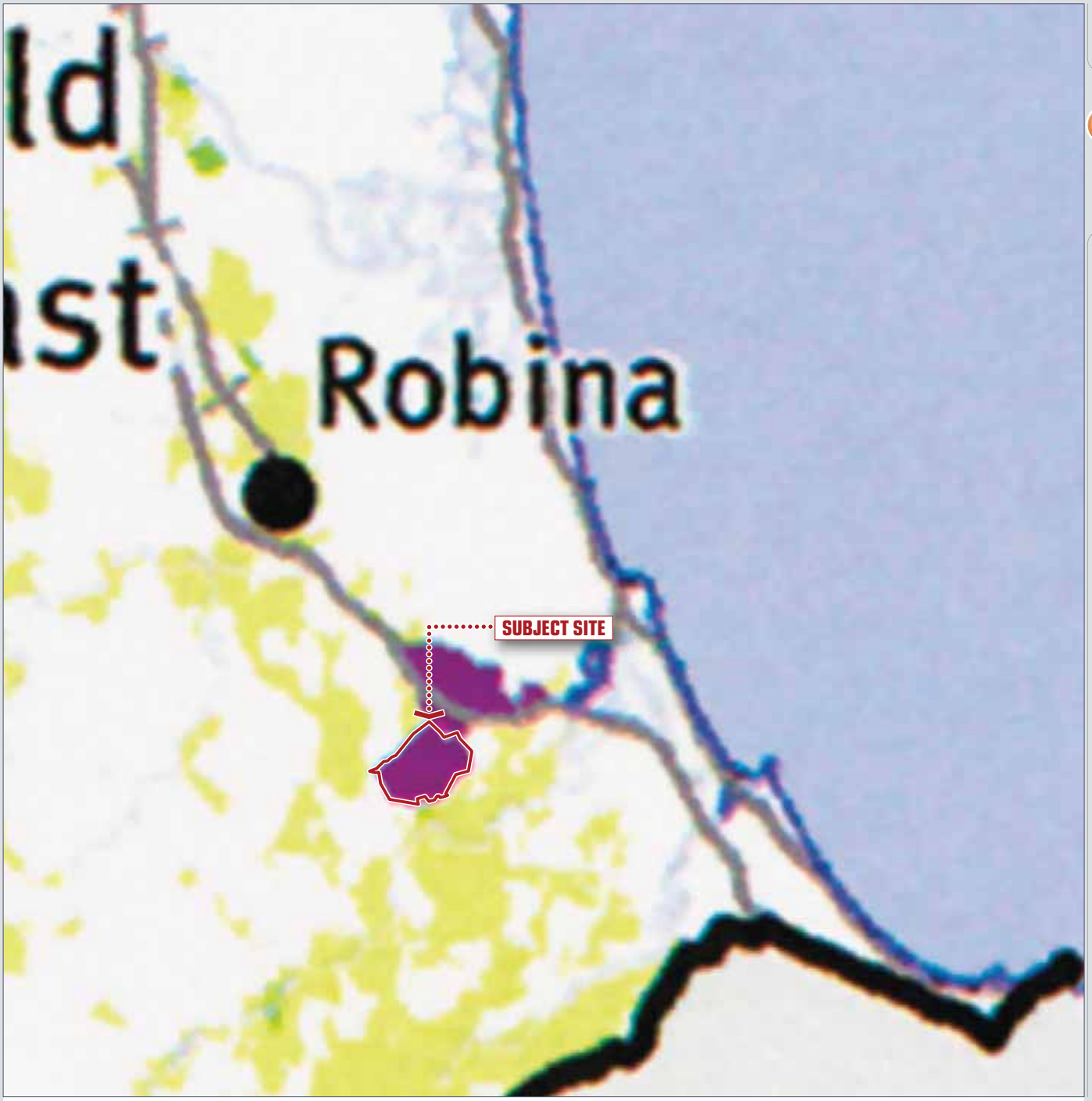
HUMPHREYS REYNOLDS PERKINS PLANNING CONSULTANTS

PROPOSED GOLD COAST QUARRY
TALLEBUDGERA VALLEY

WIDER CONTEXT MAP

FILENAME >	WIDER CONTEXT MAP	DATE >	16 JUNE 2009
JOB NO. >	063069	AMENDED >	N/A
SCALE >	1:125,000	VERSION >	1.0
SOURCE >	UNIVERSAL PUBLISHERS - Australian City Streets (ver. 6.0)		

FIGURE 4



N

0 1.25 2.5 3.75 4.0 kilometres

1:125,000

HUMPHREYS REYNOLDS PERKINS PLANNING CONSULTANTS

LEGEND

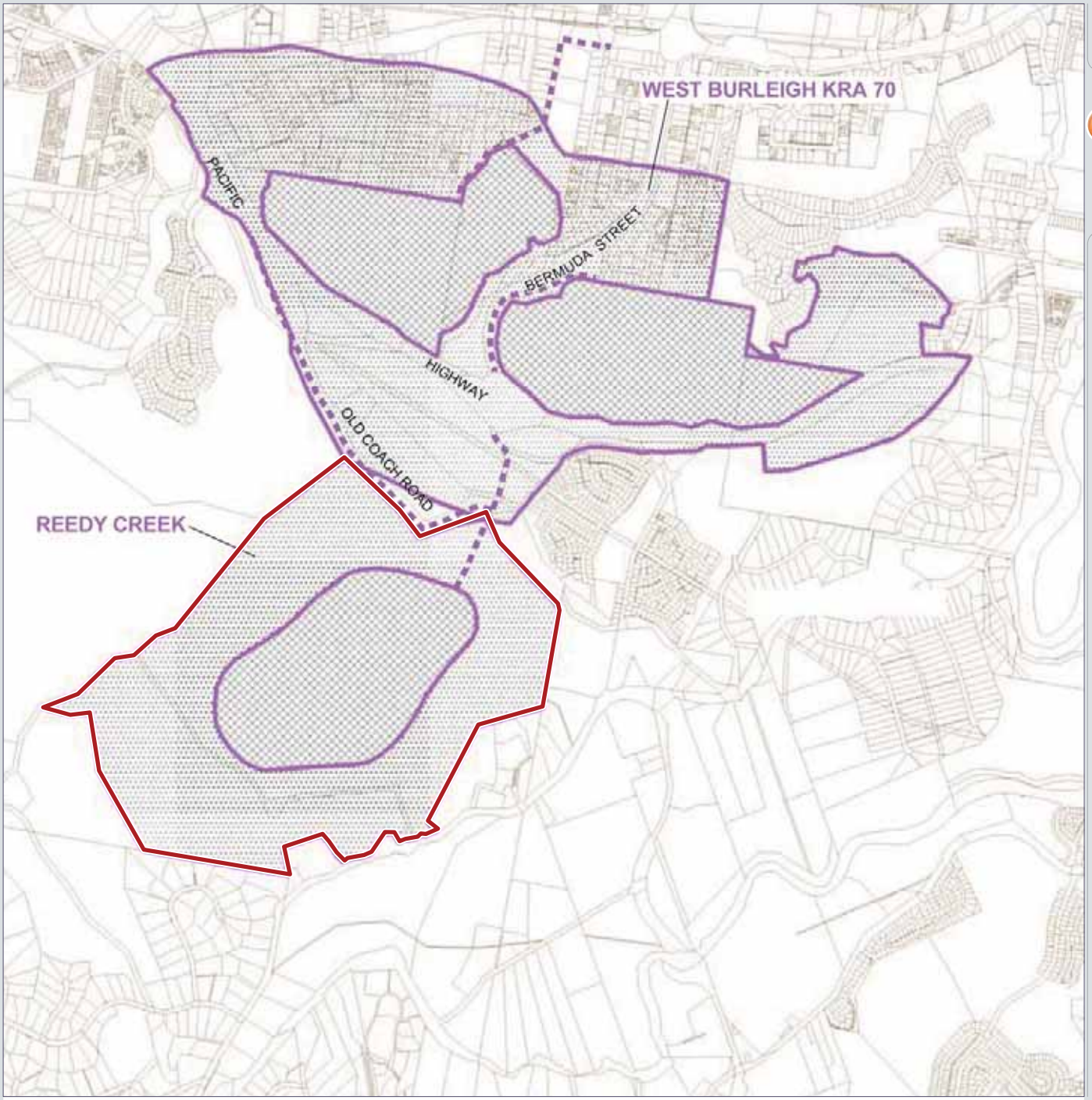
- Subject Site
- Extractive Resource
- Grazing/Intensive Animal Production
- Waterbody and Waterway
- Major Road
- Railway
- SEQ Boundary

PROPOSED GOLD COAST QUARRY
TALLEBUDGERA VALLEY

RURAL PRODUCTION AND NATURAL RESOURCES MAP EXTRACT

FILENAME >	NATURAL RESOURCES MAP	DATE >	16 JUNE 2009
JOB NO. >	063069	AMENDED >	N/A
SCALE >	1:125,000	VERSION >	1.0
SOURCE >	QUEENSLAND GOVERNMENT; SOUTH EAST QUEENSLAND REGIONAL PLAN 2009-2031 - Map 8: Rural Production and Natural Resources		

FIGURE 5



N

0 250 500 750 1000 metres

1:25,000

LEGEND

- Subject Site
- Resource/Processing Area
- Separation Area
- Transport Route Centreline (Separation Area not shown)

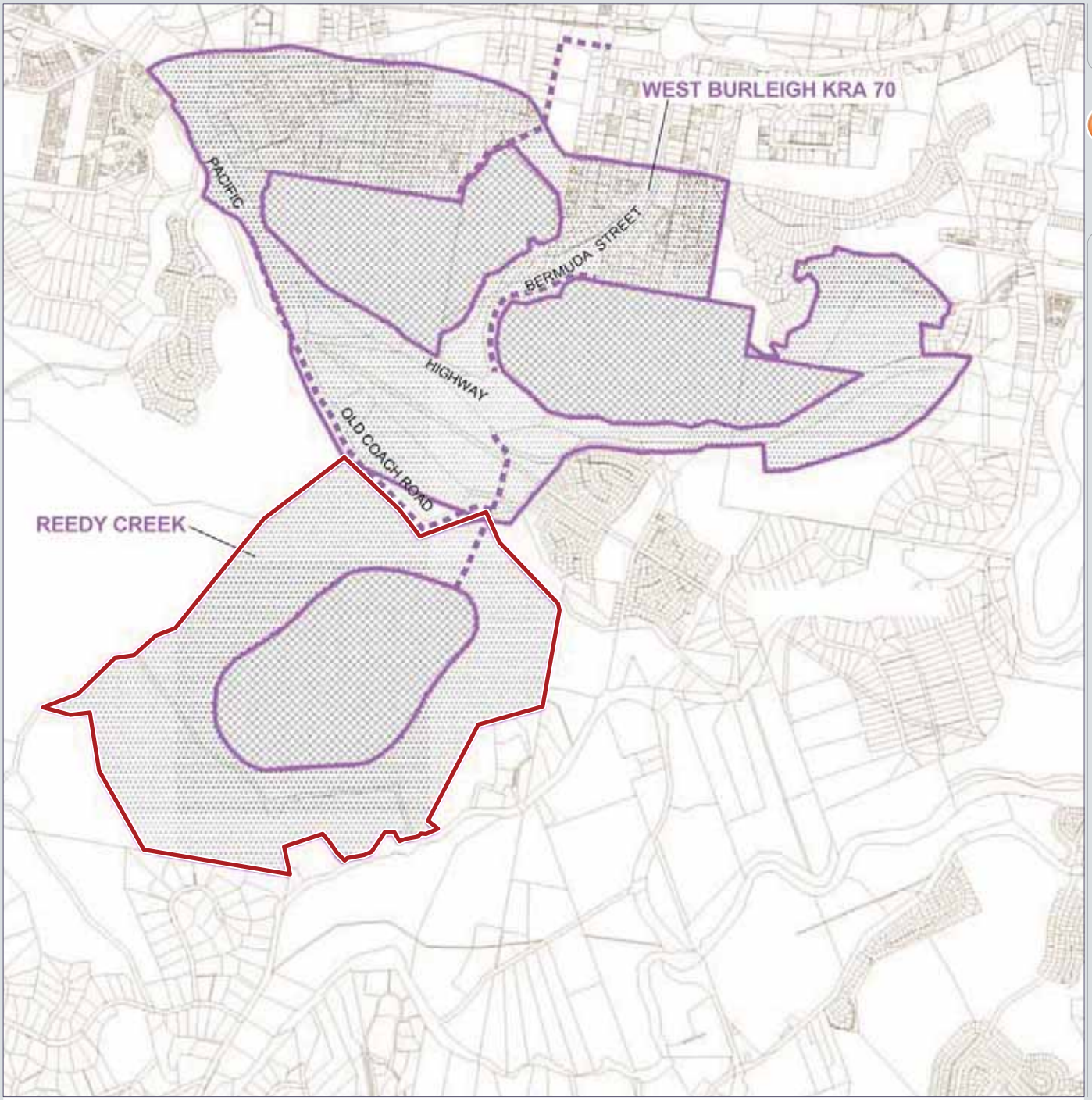
HUMPHREYS REYNOLDS PERKINS PLANNING CONSULTANTS

PROPOSED GOLD COAST QUARRY
TALLEBUDGERA VALLEY

KEY RESOURCE AREA MAP EXTRACT

FILENAME >	KRA 96 MAP	DATE >	16 JUNE 2009
JOB NO. >	063069	AMENDED >	N/A
SCALE >	1:25,000	VERSION >	1.0
SOURCE >	QUEENSLAND GOVERNMENT (Dept. Mines and Energy): SPP 2/07		
	Reedy Creel Key Resource Area Map KRA 96		

FIGURE 6



N

0 250 500 750 1000 metres

1:25,000

LEGEND

- Subject Site
- Resource/Processing Area
- Separation Area
- Transport Route Centreline (Separation Area not shown)

HUMPHREYS REYNOLDS PERKINS PLANNING CONSULTANTS

PROPOSED GOLD COAST QUARRY
TALLEBUDGERA VALLEY

KEY RESOURCE AREA MAP EXTRACT

FILENAME >	KRA 96 MAP	DATE >	16 JUNE 2009
JOB NO. >	063069	AMENDED >	N/A
SCALE >	1:25,000	VERSION >	1.0
SOURCE >	QUEENSLAND GOVERNMENT (Dept. Mines and Energy): SPP 2/07		
	Reedy Creel Key Resource Area Map KRA 96		

FIGURE 6