

Section 1

Introduction

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This section introduces the plans for the development and operation of the Cudgen Lakes Sand Extraction Project at Cudgen, south of the Tweed River.

This section provides information on the following.

- *The scope and format of the document.*
- *The Proponent, Gales-Kingscliff Pty Ltd.*
- *The format of the Environmental Assessment.*
- *The relevant background to the Project.*
- *A summary of the approval process.*
- *An overview of the ongoing documentation.*
- *The personnel involved in the Project design, document preparation and specialist consultant investigations.*



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1.1 SCOPE

Gales-Kingscliff Pty Ltd (“the Proponent”) proposes to develop and operate a sand extraction and processing operation within Lot 21, DP 1082482 and Lot 2, DP 216705. The development would provide for the hydraulic delivery of sand within two pipeline corridors for use as fill at nominated locations within the local area and the supply of construction materials to the surrounding region. The combined sand extraction and processing operation is proposed within a Project Site located in northeastern NSW, 8km south of the New South Wales/Queensland Border (**Figure 1.1**). **Figure 1.2** presents the local setting of the Project Site near Cudgen, south of the Tweed River and 1km south of the Pacific Highway.

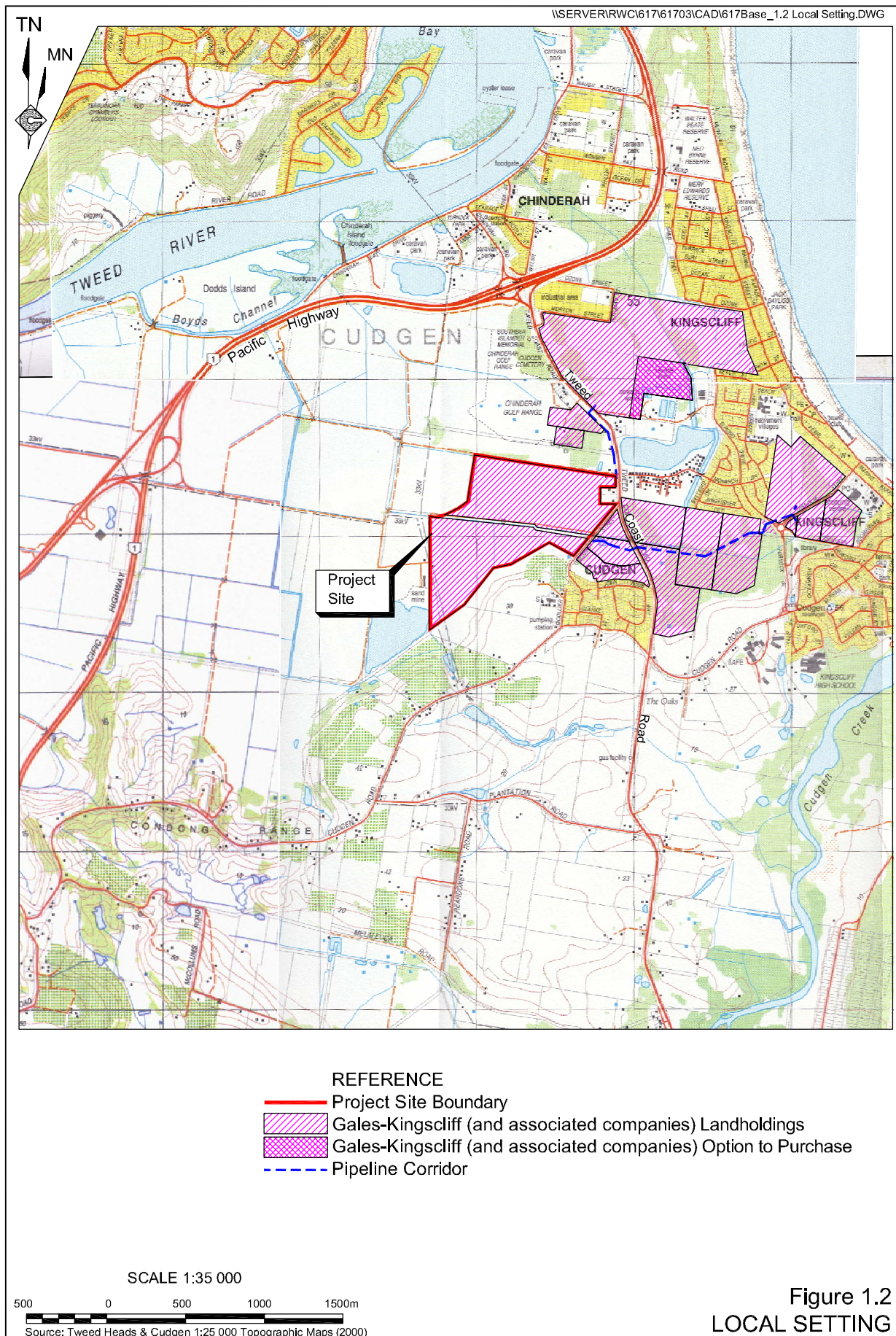
This *Environmental Assessment* has been prepared to support the Proponent’s application for project approval from the Minister for Planning for the Cudgen Lakes Sand Extraction Project (“the Project”). The *Environmental Assessment* describes the Project and provides information on key environmental issues relevant to the Project and the mitigation measures and management controls that the Proponent would adopt to avoid or reduce potential impacts on the Project Site and surrounding environment. The residual impact(s) are then described together with an environmental risk analysis of the mitigated environmental impacts and the proposed monitoring outlined to verify the assessed impacts. The *Environmental Assessment* has been prepared in accordance with State Environmental Planning Policy (Major Projects) 2005 and the provisions of Part 3A, Section 75 of the *Environmental Planning and Assessment Act 1979*.

In brief, the Project would involve the following.

- Progressive removal of topsoil from the proposed extraction sites to expose the loamy sand resource.
- Extraction of the loamy sand for use in production of mortar sand products.
- Extraction of the fine-grained sand resource for production of construction materials and use as fill material.
- Hydraulic delivery of sand used for fill material to nominated fill sites.
- Receipt, storage and treatment or internment of virgin excavated natural materials (VENM).
- Washing and/or dry screening of the fine-grained and loamy sand resource and suitable VENM to produce concrete and mortar sand products.
- Progressive backfilling, shaping and rehabilitation of the extraction sites to provide a combination of sporting fields, recreational facilities, and surrounding parkland.







The Project forms not only an integral part of the Proponent's wider development plans for its landholdings within the Kingscliff / Chinderah / Cudgen area but would provide the fill material needed for the development of approximately 125ha of land for a range of intended land uses. With a project approval for the extraction and hydraulic delivery of sand to the fill sites, the Proponent can confidently proceed to progressively seek the necessary approvals for the filling and development of the various landholdings in the Kingscliff / Chinderah / Cudgen area.

1.2 THE PROPONENT

Gales-Kingscliff Pty Ltd is a private company that owns a substantial landholding in the Kingscliff / Chinderah / Cudgen area together with an associated Company, Gales Holdings Pty Ltd. These two companies own the landholdings shown on **Figure 1.2** and are involved in the management, planning for development and release of the land for a range of intended land uses.

The Proponent's major interest in developing the Cudgen Lakes Sand Extraction Project is to provide:

- the necessary sand resources to raise the level of its landholdings in the Kingscliff / Chinderah / Cudgen area in accordance with its proposed development strategy;
- a source of construction materials to the regional construction industry; and
- a licenced facility capable of accepting, treating, storing and/or processing VENM.

Furthermore, the Proponent wishes to create sporting fields, a recreational lake and wetlands and surrounding parkland and walkways consistent with the planned recreational and environmental land uses of the area.

The Proponent firmly believes that the removal, processing and transportation of the sand products needed by the wider community should not be achieved to the detriment of its own properties and the local community around the source of the sand. The Proponent intends the Cudgen Lakes Sand Extraction Project and its wider development plans to become a best practice venture providing benefits for both the local and wider community and the construction industry.

1.3 DOCUMENT FORMAT

The *Environmental Assessment* has been structured to address the specific environmental assessment requirements nominated by the Director-General of the Department of Planning (the Director-General's requirements (DGRs), which themselves have been based on the requirements of the Department of Planning and other relevant State and local government agencies. The *Environmental Assessment* has been compiled in a single volume which includes eight sections of text, including a reference section and glossary, and a set of appendices.



The *Environmental Assessment* is supported by a two volume *Specialist Consultant Studies Compendium* incorporating the reports prepared by 12 specialist environmental consultancies engaged to assess specific aspects of the Project.

The format of the *Environmental Assessment* has been structured as follows.

- Section 1:** introduces the Project, the Proponent and relevant background information including the Proponent's strategic plans for its landholdings. Information on the approvals process is also provided together with information on the management of investigations for the *Environmental Assessment*.
- Section 2:** describes the Proponent's objectives, proposed site establishment and construction, sand removal, processing, transportation, waste management and rehabilitation activities and provides information on the available sand and VENM resources.
- Section 3:** provides a summary of the consultation undertaken with the local community and relevant government agencies, identifies relevant State legislative and statutory requirements, summarises and prioritises key environmental aspects and issues for assessment and provides an environmental risk analysis of these issues prior to the implementation of mitigation measures.
- Section 4:** presents a description of the existing environment, proposed management and mitigation measures, and assesses the potential impacts and maintenance /monitoring requirements for the key issues identified in Section 3.
- Section 5:** provides a draft statement of commitments made by the Proponent in relation to environmental management and monitoring for the entire Project.
- Section 6:** evaluates and justifies the Project in terms of biophysical, economic and social considerations, and the goals and guidelines of Ecologically Sustainable Development. A conclusion regarding the overall assessment of the Project completes this section.
- Section 7:** presents a Glossary of Technical Terms, Acronyms, Symbols and Units explaining the technical terms, acronyms, symbols and units used throughout the *Environmental Assessment*.
- Section 8:** presents a Reference list for the various source documents referred to for information and data used during the preparation of the *Environmental Assessment*.
- Appendices:** present the following additional information.
- (i) A copy of the Proponent's Major Projects Application.
 - (ii) The Director-General's Requirements.
 - (iii) A summary of the coverage of the Director-General's Requirements.
 - (iv) A copy of media articles and reports.
 - (v) A copy of resource quality test reports.



The *Environmental Assessment* has been prepared with the input of 17 specialist consultancies, 12 of which have prepared stand-alone specialist environmental assessments. Their assessments have been compiled into a two volume *Specialist Consultant Studies Compendium* which has been placed on exhibition with the *Environmental Assessment*. The contents of the 12 stand-alone reports are summarised into the appropriate section(s) of the *Environmental Assessment*.

1.4 PROJECT BACKGROUND

1.4.1 Introduction

The Project Site has a history of failed agricultural enterprises and a number of development applications for sand extraction proposals. An understanding of factors relating to these previous land uses and development applications both surrounding and covering the Project Site, as well as existing approvals and the proposed overall strategy for development in the Kingscliff / Chinderah / Cudgen area provides useful and relevant background information to the Project.

1.4.2 Agricultural History

The land within the Project Site was previously used as a wet grazing block until 1964 when the land was partially drained and developed as a tropical grass and legume seed nursery and farm by Anderson Seed Ltd. However, great difficulty was experienced both growing and harvesting the legume and seed grain due to the high water table and waterlogging. Subsequently, Anderson Seed Ltd entered into liquidation and the land was sold in December 1971.

In 1973, the land was developed as a sugar cane farm during a period of high sugar prices and rapid expansion of cane land. By 1984, the enterprise was determined as non-viable due to a history of production costs exceeding income. Due to the soil and drainage problems associated with the land, the land has only been used for cattle grazing since that time.

1.4.3 Previous Sand Extraction Proposals

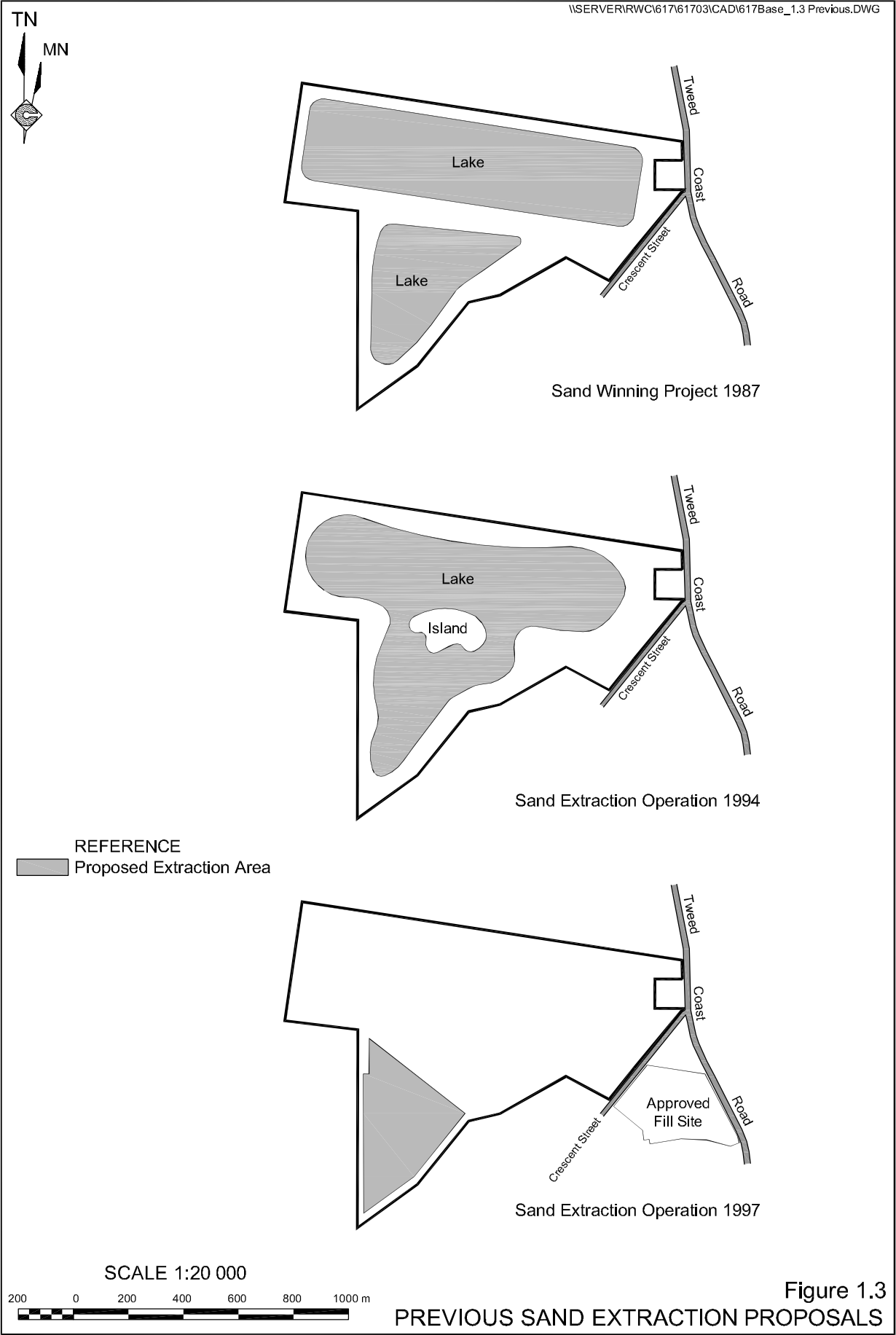
1.4.3.1 Introduction

Three development applications have previously been submitted over part or all of the Project Site. Details of each proposal are set out in the following sub-sections with the location and proposed extent of extraction for each proposal presented in **Figure 1.3**.

1.4.3.2 Proposed Sand Winning Project 1987

In December 1987, a development application and accompanying Environmental Impact Statement (Keown & Drummond, 1987) was lodged by Keown & Drummond Pty Ltd on behalf of Besef Properties Pty Limited for a sand winning project located within Lot 2, DP 611021 (now Lot 20 and 21, DP 1082482) and Lot 2, DP 216705 covering an approximate area of 84ha.





It was proposed that sand be dredged and stockpiled for transportation by truck or pipeline to land being developed within the Tweed Heads area that required fill to raise its elevation. At that time, the total filling requirements in the Tweed Local Government Area (LGA) was identified as being approximately 8 185 000m³ whilst the total filling resources approved totalled 575 000m³. The proposal aimed to satisfy the diminishing availability of sand resources and provide benefits through the eventual creation of a public open space and waterway.

The sand resource within the subject land was identified to extend to a relatively uniform depth of approximately 20m across the entire site though it was proposed that sand would only be excavated over an area of 55ha to a depth of 11m yielding approximately 4 500 000m³ of sand. It was anticipated that a maximum extraction rate of 200 000m³ per annum could be achieved giving a conservative estimate for the project life of 20 years. The operation would have proceeded in two stages with Stage 1, excavation of Lot 2 DP 216705 (south of existing Altona Drive), to take place in the first 6 years. Subsequently, Stage 2, the excavation of Lot 2 DP 611021 (now Lot 21 DP 1082482 – north of existing Altona Drive), would have been completed 14 years after the completion of Stage 1.

It was proposed that the remaining 29ha of land be retained for open space while the excavation areas in the northern and southern lots would create two recreational lakes.

It is understood that the development application was refused.

1.4.3.3 Proposed Sand Extraction Operation 1994

In November 1994, a development application was lodged by Keown & Drummond Pty Ltd on behalf of Bradshaw Developments Pty Ltd for a sand extraction operation located within the same land parcel as the 1987 application.

The proposal on that occasion also involved the dredging, stockpiling and transportation of sand by trucks or pipeline for the purposes of filling low-lying land in the Tweed Heads area. At that time, an assessment of resource demand and availability identified filling requirements in the Tweed LGA and Gold Coast region to be in the order of 9 750 000m³ over a 10 year period. The total supply from approved operations totalled approximately 3 000 000m³ with a further potential sand resource of 2 800 000m³ in the lower Tweed Estuary.

It was proposed that 48ha of the subject land would be used to extract fill material to a depth of 14m yielding approximately 4 000 000m³ of fill. Depending on demand, the anticipated project life ranged between 10 and 20 years with corresponding sand extraction rates ranging from 400 000m³ to 200 000m³ respectively.

As in the case of the 1987 application, it was proposed that the operation would occur in two stages with Stage 1 involving the recovery of approximately 3 000 000m³ of sand from the northern lot whilst Stage 2 would involve the recovery of approximately 1 000 000m³ of sand from the southern lot. It was proposed that the remaining 36ha would be retained for open space while the excavation areas would join to form a recreational lake and facilities and a wildlife habitat.



The development application was submitted to Tweed Shire Council but was placed in abeyance until further notice to allow processing of, and a decision on, the amended development application by Torrac Investments Pty Ltd (see Section 1.4.3.4).

1.4.3.4 Proposed Sand Extraction Operation 1997

In January 1997, Torrac Investments Pty Ltd submitted a development application revising the 1994 proposal submitted by Keown & Drummond Pty Ltd. At that time, Torrac Investments Pty Ltd held a contract to purchase the subject land parcel from Bradshaw Developments Pty Ltd.

The amended development application proposed to remove 800 000m³ of sand from an area of 14.3ha to a depth of 8.5m in the southwestern corner of Lot 2 DP 216705. Of this material, 400 000m³ was to be used to raise the land surface on Lots 1 and 2 DP 828298 which had previously been approved for an 89 lot subdivision (see Section 1.4.4). This initial extraction was required to take place within a 23 week period.

The remaining 400 000m³ was to be available for hydraulic extraction or transportation by truck to other approved fill sites once the adjoining sand extraction operation ceased production.

The development application was determined by Tweed Shire Council and refused, however, the decision was appealed in the Land and Environment Court of NSW. In October 1998, the court ordered that the extraction of 400 000m³ of sand by hydraulic methods to Lot 1 and Lot 2 DP 829298 be conditionally approved and Development Consent DA 96/518 was issued.

The Proponent purchased the subject land approved for sand extraction and the land approved for filling and subdivision on 31 July 2000, and subsequently proceeded to initiate preparatory dredging activities on the land in accordance with DA 96/518. Details of the existing approvals and status of the work on the subject land is present in Section 1.4.4.

1.4.4 Existing Approvals and Operations

The Proponent holds a development consent for the hydraulic extraction and transportation of 400 000m³ of sand from the southwestern corner of Lot 2 DP 216705 (DA 96/518) to Lots 1 and 2, DP 828298 as fill material (Development Consent DA S93/76). Development Consent DA 96/518 provides for extraction within a 12.6ha area, to a depth of 8.5m within a 6 month period. An Environment Protection Licence (EPL 12385) has also been granted for the approved operation.

In order to activate Development Consent DA 96/518, the Proponent commenced initial preparatory works in early October 2003 and further preparatory work was completed in April and May 2006 though operational dredging has not yet commenced. The initial preparatory works undertaken in October 2003 included:

- commencement of baseline monitoring;
- construction of vehicular access to the site, including a piped culvert crossing;



- soil stripping and treatment of soils with alkaline amendments;
- construction of bunds; and
- excavation of a start-up pond.

The further preparatory works undertaken in April and May 2006 included excavation/dredging of the initial dredge pond (approximately 0.5ha and 5m deep) and continued monitoring of groundwater and water within the initial dredge pond.

All sand removed during the preparatory works has been stockpiled adjacent to the initial dredge pond. Bunding approximately 2m high has been constructed surrounding the initial dredge pond and the stockpiled material covered with topsoil and grassed.

The existing Development Consent DA 96/518 would be surrendered in the event that project approval is granted for the Project as outlined in this document.

The Proponent also holds approval for the filling and sub-division of Lots 1 and 2 DP 828298 to create 89 residential lots. Tweed Shire Council has acknowledged the activation of DA S93/76 by letter dated 12 February 1999. The Proponent intends to proceed to fill and develop these sites in accordance with DA S93/76.

1.4.5 Surrounding Developments

1.4.5.1 Hanson Tweed Sand Quarry

In September 1983, development consent DA T4/2562 was granted by Tweed Shire Council for a turf farm and “Brickies Loam” extraction operation operated by Tweed Turf and Sand. A second development consent, DA 0041/2001, was subsequently issued in July 2001 to expand the operation and establish a tourist/recreational fishing facility, principally as a rehabilitated final land use for the operation.

In July 2006, Development Consent DA 152-6-2005 was granted to P. Guinane Pty Ltd by the Minister for Planning to further expand the sand extraction operation and recreational fishing facility. Development Consent DA 152-6-2005 replaces both development consents previously issued and is valid for a period of 30 years. The entire operation and the subject land was sold by P. Guinane Pty Ltd to Hanson Construction Materials Pty Ltd in early 2007 and is now operating as Hanson Tweed Sand.

The approved operation is located within Lot 22, DP 1082435, Lot 23, DP 1077509 and Lot 494, DP 7207450, covering an area of approximately 77ha and incorporating the following activities/undertakings.

- Sand dredging (currently approximately 18ha).
- Ti-tree plantation (currently covering 50ha).
- Ti-tree oil distillery.
- Ti-tree value adding operation which produces water solubilised tea tree oil in a gel form.



These latter activities were established by the former owner of the subject site and are being continued by Hanson Construction Materials, albeit that the area of the ti-tree plantation will gradually diminish as the area of the dredge pond expands.

The approved sand dredging operation includes a total extraction area of approximately 40ha immediately west of the Project Site (see **Figure 1.4** and **Plate 1.1**) and will enable for the extraction of approximately 4.5 million m³ of sand to a depth of approximately 20m. Sand is dredged using two dredges at a rate of approximately 150 000m³ per annum and pumped to a washplant, producing fine washed sand for use as construction material. Sand products are transported using road trucks via an internal site access road, Altona Drive and Crescent Street to Tweed Coast Road and generally the Pacific Highway. The average daily truck movements are approximately 80 per day (ie. 40 loads) with a maximum of 200 truck movements per day (ie. 100 loads).

The final landform will consist of a lake covering approximately 40ha with beaches and wetland fringes. It is proposed that the final lake will be stocked with native fish species and remain as a recreational fishing facility. During the neighbour consultation program for the Project, discussions were held with senior management of Hanson Construction Materials and their consultants to discuss both their issues of concern with the Proponent's Project and the issues of common interest.

The issues of concern related to the following.

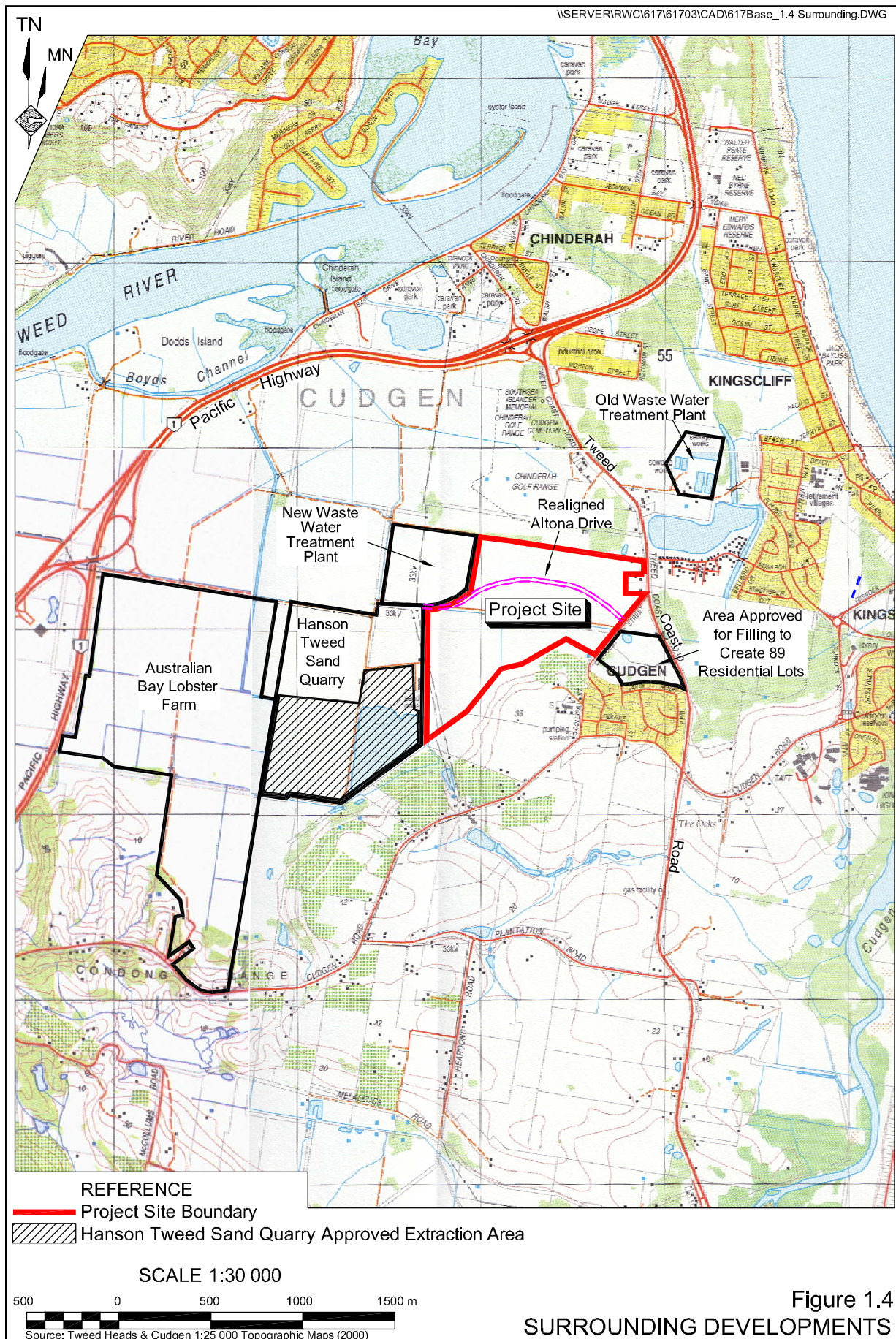
1. The long term groundwater level in the Company's existing (and expanding) dredge pond and the management of water quality, particularly with respect to nutrients and the potential for blue green algae growth.
2. The need for regular / constructive communications between both companies, particularly in the event monitoring identifies an issue that may impact upon the Company's operation or business.

The main issues of common interest related to the re-alignment of Altona Drive and setbacks from the common boundary.

1.4.5.2 Kingscliff Waster Water Treatment Plant

In December 2002, Tweed Shire Council issued Consent DA PTV02/0063 under Part 5 of the *Environmental Planning and Assessment Act 1979* for a new waste water treatment plant (WWTP) located on Lot 20 DP 1082482, ie. immediately west of the proposed processing area (**Figure 1.4** and **Plate 1.1**). The existing WWTP for Kingscliff, located on Lots 2 and 3 DP 1075645, east of Tweed Coast Road has exceeded the nominal design capacity of 8 000 equivalent persons (EP) and hence, a new WWTP is required.





The approved WWTP is being constructed in two stages to cater for an ultimate population of 50 000 EP which includes residents within the northern part of the Tweed Coast. Stage 1 which will serve 25 000 EP has recently been completed and is due to be commissioned during mid to late 2008. Construction of Stage 2 would be completed by approximately 2015 bringing the final capacity to 50 000 EP. The earthworks for the facility involved the importation and compaction of approximately 30 000m³ of earth (GHD, 2002) and the dewatering of water from the underlying sand aquifer at rates of up to approximately 25L/s to enable construction of the effluent and sludge storage ponds.

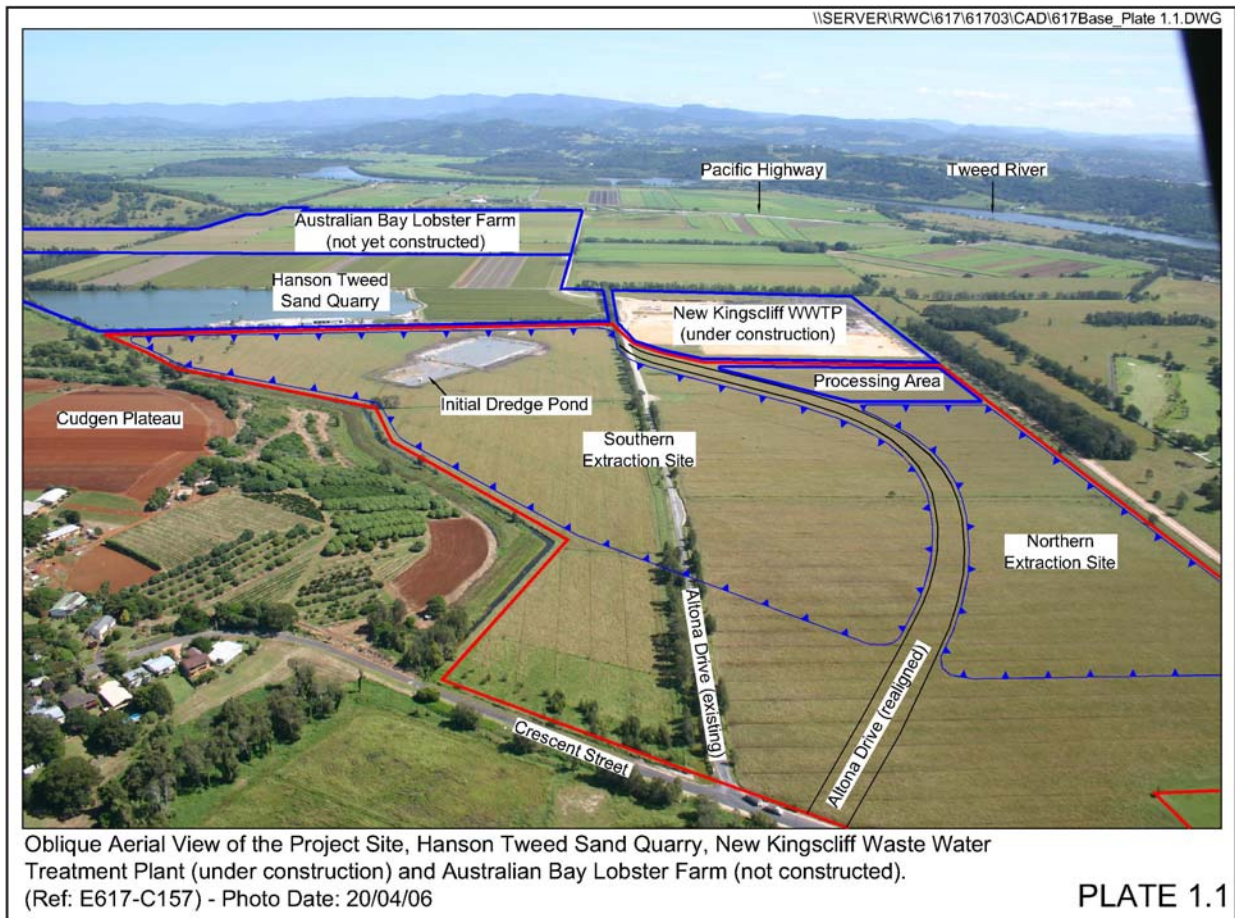


Plate 1.1 Oblique Aerial view of the Project Site, Hanson Tweed Sand Quarry, New Kingscliff Waste Water Treatment Plant and Australian Bay Lobster Farm

1.4.5.3 Australian Bay Lobster Farm

In December 2005, Development Consent DA 282-11-2004-i was granted by the Minister for Planning for the construction and operation of a commercial bay lobster aquaculture facility immediately east of the Pacific Highway and west of the Project Site (see **Figure 1.4** and **Plate 1.1**). The approved development covers an area of 45ha and includes the following.

- Three farms (built in three stages) including a hatchery, growout facilities and water storage tanks capable of producing 3 228 tonnes of Bay Lobster (*Thenus spp.*) per year.



- Processing and administration buildings, workshop facilities and parking.
- The construction and operation of an intake pipeline to pump fresh seawater to the site and a waste water pipeline to the new Kingscliff Waste Water Treatment Plant.
- The extraction of fill materials and construction materials for flood bund construction from within the Company's land.

Development Consent DA 282-11-2000-i, incorporated an approval to locate the intake fresh seawater pipeline within the current alignment of Altona Drive. Given the intention to relocate Altona Drive to its new location shown on **Figure 1.4**, both the proponent for the Australian Bay Lobster farm and the proponent for the Cudgen Lakes Sand Extraction Project recognise it would be beneficial if the pipeline route was adjusted to a new route that would not need the pipeline to be relocated during the life of the sand extraction project.

Accordingly, the proponent for the Australian Bay Lobster Farm is currently seeking project approval under Part 3A of the *Environmental Planning and Assessment Act 1979* to relocate the route of the fresh seawater pipeline to that shown on **Figure 1.6**. This route is generally located within the easement east of the new Waste Water Treatment Plant to be used to convey sewage from Chinderah to the plant. Gales-Kingscliff Pty Ltd supports the relocation of the fresh seawater pipeline to the new route.

1.4.5.4 Realignment of Altona Drive

On 25 July 2006, Tweed Shire Council issued Development Consent DA 05/1450 submitted by Gales Holdings Pty Ltd for the realignment of Altona Drive located between Lot 21 DP 1082482 and Lot 2 DP 216705. The realignment will result in a curved alignment of Altona Drive rather than the existing 'gun barrel' alignment. The drain adjacent Altona Drive, referred to as the 'Western Drain', would also be relocated, initially within the road reserve south of the realigned Altona Drive. Depending on the drainage requirements for future land use within the northern part of the Project Site, the drain may be subsequently relocated or an additional drain installed north of the realigned road.

Pending agreements with Council, Altona Drive will also be raised to approximately 2.2m AHD providing greater flood immunity and hence improved access to existing developments which use Altona Drive for access including the Hanson Tweed Sand Quarry and the Kingscliff Waste Water Treatment Plant. It is noted that it is the Proponent's intention only to proceed with the realignment of Altona Drive in the event a satisfactory project approval is granted for the Project.

It is also noted that the existing alignment of Altona Drive is not located entirely within the subject road reserve, but partly on land owned by the Proponent. A right of access has been established over this section of road and the Proponent and Council have commenced the actions required to adjust the road reserve so that the existing pavement is located fully within the designated road reserve.



1.4.6 Proposed Land Development Strategy

The Proponent, together with an associated company, Gales Holdings Pty Ltd owns a strategic and substantial landholding (approximately 220ha) in the Kingscliff / Chinderah / Cudgen area (see **Figure 1.2**). It is the Proponent's plan to strategically develop approximately 125ha of these landholdings in accordance with current zoning and development expectations and for other beneficial uses now recognised by various parties, including Council, as a critical requirement for the ongoing prosperity of the region. In particular, the provision of "employment generating land" and supporting infrastructure (including residential), have been identified as key elements to be incorporated in Council's master planning (see **Appendix 4**).

The main components of the development strategy are shown on the proposed structure plan prepared for the strategy (see **Figure 1.5**) which includes the following.

- A mixed use district town centre catering for sub-regional retail and commercial needs.
- Higher and mixed density residential estates.
- Open space and nature conservation areas.
- Sporting and recreational facilities.
- Two direct roads from Tweed Coast Road to the Kingscliff coastline.
- A high level road providing emergency flood escape for Chinderah residents.

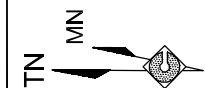
In order for the Proponent to undertake these various developments, it is necessary for the elevations across nominated areas of the various parcels of land to be raised to levels already assessed by WBM (2005) on behalf of the Council as suitable for the planned long term land uses. The Proponent's landholdings have been divided into eight individual fill sites requiring a total of approximately 2.5 million m³ of fill material. Therefore, an economically viable source of fill material must be made available to achieve the required elevations across those sites.

Due to the existing market for fill materials, the most economically viable option to provide the volumes of fill required is the development of the sand resource located on the Proponent's landholdings west of Tweed Coast Road. **Figure 1.6** shows the locations of the various fill sites and the approximate volume of fill material required for each site. It is noted that Fill Site No. 1 incorporates the bulk of the proposed northern extraction site. This filling would be required to raise the level of land following importation of VENM (see Section 2.6) to enable a series of sporting fields to be established in that area.

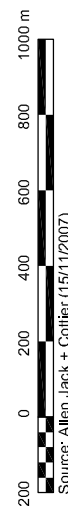
Approval for the filling of the nominated sites and subsequent development in accordance with the proposed development strategy and structure plan will be sought under separate applications and do not form part of the current application for project approval. However, due to the inter-relationship of the development strategy and sand extraction operation, consideration of the proposed strategy and structure plan within the *Environmental Assessment* is given, where appropriate.



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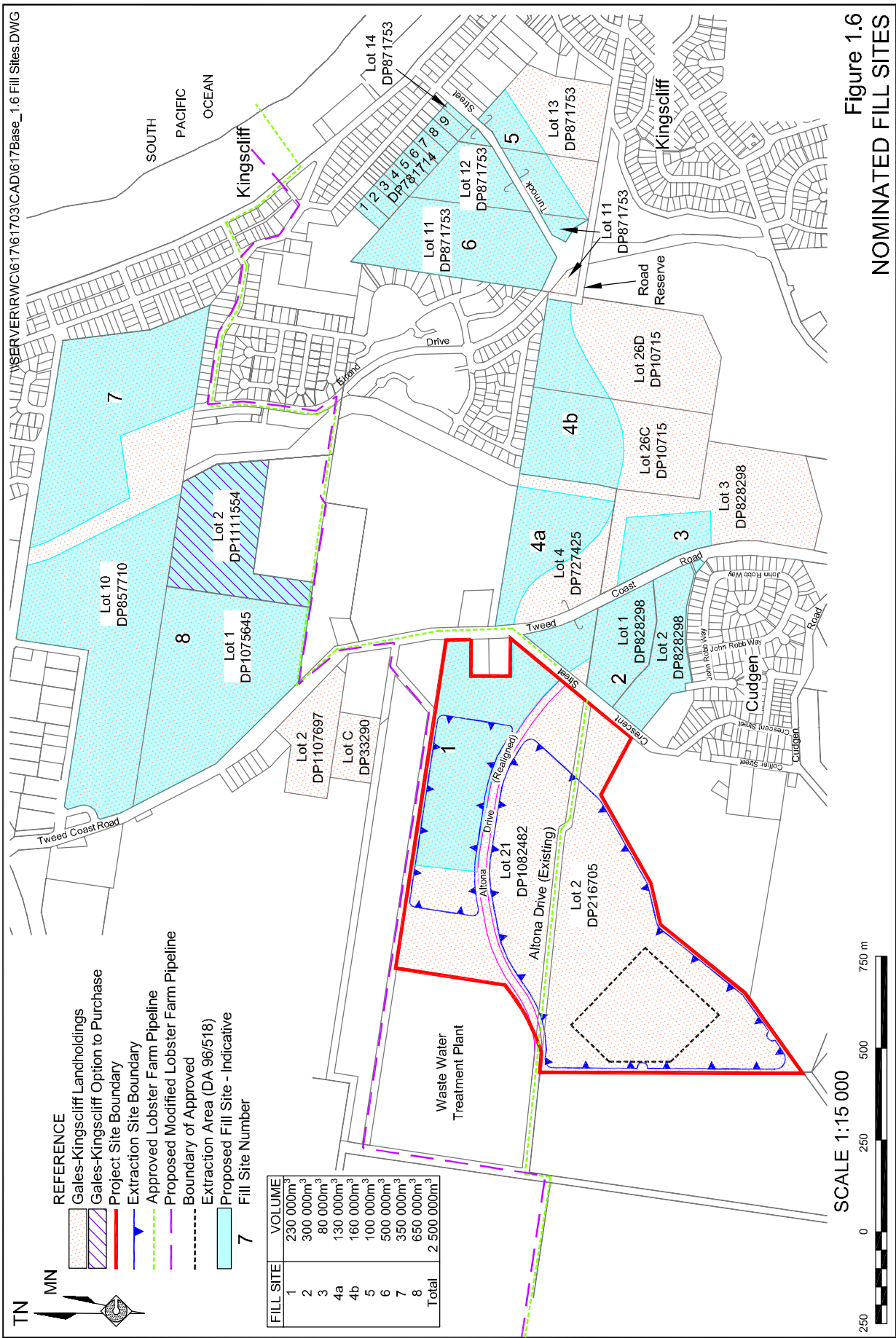
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Source: Allen Jack + Collier (15/11/2007)

Figure 1.5
STRATEGIC DEVELOPMENT PLAN





1.4.7 Strategy for Project Design

Whilst the Proponent recognises the principal focus of the Project would be upon the supply of fill sand to raise the elevation of defined areas of its landholdings (Section 1.4.6), the type of extraction operation envisaged would provide further business opportunities for the Project. The main two additional opportunities relate to:

- (i) supply of construction sand to the region's construction industry through the processing of the proportion of the sand resource not required for use as a fill material; and
- (ii) the development of a licenced facility for the receipt of VENM, ie. both non-acid generating (VENM(a)) and acid-generating (VENM(b)).

Whilst much of the sand to be extracted from the Project Site would be comparable to that recovered from the adjoining Hanson Tweed Sand Quarry, emphasis would be placed upon greater production of mortar sand and a range of products produced from blending the various sands recovered on site with imported VENM(a) or treated VENM(b) materials. The development of licenced VENM receipt facility would provide an important asset to the thriving construction industry in northeastern NSW and southeastern Queensland.

Given the projected level of growth in the region, the combined operations on the Project Site and the adjoining Hanson Tweed Sand Quarry would collectively become a long term source of construction materials for the region.

The occurrence of two or more adjoining sources of construction sand is a common feature in the construction industry. The level of industry interest in the sale of the former Tweed Turf and Sand operation (now owned by Hanson Construction Materials) also supports the need and benefit of the development of a second sand source at Cudgen.

An assessment of the existing and future sand market and need for a VENM receipt facility has been undertaken by Ecoroc (2007).

1.5 THE APPROVALS PROCESS

An overview of the approvals process is provided to assist readers to understand the steps to be followed by the Proponent, government agencies, particularly the Department of Planning and the community during the period from the commencement of the public exhibition of the *Environmental Assessment* until the determination of the Project by the Minister for Planning.

An important feature of the approvals process under Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act) will be the transparency / availability of information for all stakeholders throughout the process. Emphasis will be placed upon the inclusion of as much material as possible on the web sites of the Department of Planning, the Proponent and R.W. Corkery & Co. Pty Ltd.



The approvals process reflects all formal stages involved in the assessment of the Project, some of which have already been completed by the Department of Planning and the Proponent. The introduction of the Part 3A process post-dated the commencement of environmental studies for the Project under Part 4 of the EP&A Act, hence, some of the stages set out below reflect the period prior to the gazettal of Part 3A. The Proponent has regularly consulted with the Department of Planning throughout the course of the overall process regarding the Project.

The approvals process is outlined as follows. For stages completed to date, the relevant date is recorded, whereas for the remaining stages beyond the commencement of the exhibition of the *Environmental Assessment*, an estimate of the elapsed weeks is provided as an indication of the likely duration of each subsequent stage.

1. 26 August 2004	⇒	The Proponent formally wrote to the then Department of Planning and Natural Resources (DIPNR) seeking Director-General's requirements for an Environmental Impact Statement – supported by Form A and draft Background Paper.
2. 17 October 2004	⇒	A Planning Focus Meeting was convened to brief all relevant government agencies about the Project (based upon a final Background Paper) and a site inspection.
3. 6 December 2004	⇒	DIPNR (now Department of Planning) issued the Director-General's requirements for the Project.
4. 1 August 2005	⇒	Part 3A of the EP & A Act 1979 assented to by the NSW Parliament and gazetted in Government Gazette. Note: The DIPNR was dissolved in August 2005 and the functions relating to the administration of the EP&A Act were transferred to the Department of Planning.
5. 25 November 2005	⇒	The Proponent formally wrote to the Department of Planning lodging its Major Projects Application for Planning Approval (see Appendix 1).
6. 6 January 2006	⇒	Director-General's requirements were issued by the Department of Planning for the Project (see Appendix 2).
7. October 2007	⇒	<i>Environmental Assessment</i> lodged with Department of Planning to assess adequacy for exhibition and assessment.
8. May 2008	⇒	Department of Planning advises <i>Environmental Assessment</i> is adequate for exhibition and assessment and extends the life of the Director-General's requirements to 6 January 2010.

9. Weeks 1 and 2	⇒	<i>Environmental Assessment</i> submitted to Department of Planning for exhibition and assessment. Following receipt of the document (hard copies and CDs), the Department of Planning will make all documents publicly available. The Proponent will notify neighbours and other stakeholders about the Project and opportunity to make a submission about the Project.
10. Weeks 3 to 6	⇒	Review of <i>Environmental Assessment</i> during the exhibition period by government agencies and the community.
11. Weeks 7 to 10	⇒	The Department of Planning would seek from the Proponent, a response / clarification of various issues raised in the submissions from government agencies and the community.
12. Weeks 10 to 12	⇒	The Proponent would provide responses to the issues raised – and if necessary, submit a revised Statement of Commitments and / or a Preferred Project Report.
13. Weeks 13 to 18	⇒	The Department of Planning would prepare its assessment report based on all documentation submitted by the Proponent, government agencies and the community – A maximum period of 60 days as nominated in the Director-General's Requirements.
14. Weeks 19 and 20	⇒	Determination by the Minister. If approved, the Project Approval would be accompanied by a comprehensive set of conditional requirements.

1.6 MANAGEMENT OF INVESTIGATIONS

The preparation of this document has involved a study team managed by Mr Rob Corkery, M.Appl.Sc., B.Sc (Hons), Principal of R.W. Corkery & Co Pty Limited, assisted by Mr Scott Hollamby, B.Env.Sc (Hons), Environmental Scientist with the same company.

On behalf of the Proponent, Dr Stephen Segal, MB, BS(Hons), MRCP(UK), Diploma Imperial College, Director of Gales-Kingscliff Pty Ltd, has been involved with the compilation and review of this document.



A strong emphasis has been placed upon a multi-disciplinary team approach to the design of the Project, the description of the existing environment and impact assessment. A wide range of specific studies were commissioned by Gales-Kingscliff Pty Ltd through the following specialist consultants.

- A. Piper – Aboriginal Heritage Assessment
 - Adrian Piper, BA.BLitt.
- Australasian Groundwater & Environmental Consultants Pty Ltd – Groundwater Assessment
 - Errol Briese, BSc (Hons), Grad Dip (Management).
 - James Tomlin, M.Sc, B.Sc.
- Darren Gibson Planning Statutory Planning overview and Socio-economic Assessment
 - Mr Darren Gibson, B.TP(Hons).
 - Mr Ian Rigby, MPIA, CPP.
- Ecoroc Pty Ltd – Sand and VENM Market Assessment
 - Mr Dugald Gray, B.E.
- HMC Environmental Consulting Pty Ltd – Acid Sulphate Soils, Soil Contamination & Agricultural Suitability Assessments
 - Mr Mark Tunks, B.App. Sc. (Env. Hlth.).
- Idyll Spaces – Flora Assessment
 - Mr Greg Elks, M.Litt (Ecology), B.Sc (Botany).
- Kendall & Kendall Ecological Services Pty Ltd – Fauna Assessment
 - Mr Keith Kendall, B.A (Biology), Dip. Ed.
- Ron Rumble Pty Ltd – Noise Assessment
 - Mr Michael Lanchester, B.Sc, Grad. Dip (Env. Qlty).
 - Mr Matthew Terlich, B.Eng (Mechanical) (Hons).
- Simmonds and Bristow Pty Ltd, formerly (Envirotest Health Environment and Workplace Pty Ltd) – Air Quality Assessment
 - Dr Greg Miller, PhD, B.App.Sc, M.Phil.
 - Ms Shelly Anderson, B.Sc, Grad Dip, Env Qual.
- Stephen N Webb & Associates Pty Ltd – Flooding Assessment
 - Dr Stephen Webb, PhD, B.E. (Hons).
- The Ecology Lab Pty Ltd – Aquatic Ecology Assessment
 - Dr Marcus Lincoln-Smith, PhD, M.Sc, B.A, B.Sc(Hons) .
 - Dr Craig Blount, PhD, B.Sc(Hons).



- Veitch Lister Consulting Pty Ltd – Traffic Assessment
 - Mr Gary Hunter, M.Eng.Sc (Highways), B.E. (Civil).
- Wallarah Minerals Pty Ltd – Glass Sand Assessment
 - Mr Ross Druitt, B.Sc.

A copy of each of the specialist consultant reports is presented in the separate two volume supporting document titled *Specialist Consultant Studies Compendium*.

The following professionals also provided assistance in the design and planning for the Project.

- Knobel Consulting Pty Ltd – Civil Engineering
 - Mr Bill Knobel, DipCE.
- Neumanns Dredging Company Pty Ltd – Dredging Advisors
 - Mr Bill Neumann, B. CE.
 - Mr David Neumann.
- B & P Surveys Pty Ltd – Surveying
 - Mr Keith Savage, Assoc. Dip. Eng. (Survey Drafting).

