2. Introduction and Planning

This section provides background information on the proponent and an outline of the proposed development and its regional setting. The project objectives, the environmental planning and approval process and the consultation program for the development are also described.

2.1 Project Outline

Newnes Kaolin Pty Limited (NKPL) propose to develop an open pit operation to extract and primary crush friable sandstone at Newnes Junction, on the Newnes Plateau some 10 km east of Lithgow, between the existing Clarence Colliery and Rocla Quarry (see **Plate 1** and **Figure 2.1**). The primary crushed sandstone is to be transported off-site for subsequent extraction and processing of constituent kaolin and quartz sands.

This EIS covers the extraction and primary crushing of friable sandstone as well as the subsequent stockpiling, materials handling, conveying, train loading and dispatch of the primary crushed sandstone. The downstream processing of the primary crushed sandstone will be the subject of a further EIS and is addressed conceptually only in this document.

NKPL holds Exploration Licence 4192 (EL4192) covering investigations relative to the mineral kaolin which forms the matrix of the friable sandstone. Geological test work within this licence area has shown that the area contains deposits of a friable quartz sandstone that is highly weathered and consists of fine to coarse graded ('fully graded') quartz grains loosely bonded by a matrix of fine graded silt sized silica and kaolin. Deposits of friable sandstone on the Newnes plateau have not been previously worked for kaolin, although adjacent areas are currently being extensively quarried for concrete sand (Rocla and Kable Sands Quarries). Previous test work done by the Department of Mineral Resources (DMR) and others has proven that the kaolin is of high quality and has considerable, potential commercial value.

NKPL has applied to the Department of Mineral Resources (DMR) for a Mining Lease over a portion of EL4192 to allow for extraction of the friable sandstone resource as a prerequisite for off-site extraction of kaolin. NKPL has also applied to the Department of Land and Water Conservation (DLWC) for an Extractive Industries Licence over the same area to extract the friable sandstone for off-site processing of silica sand.

The proposal consists of developing a silica sand and kaolin extractive operation on the flank of the ridgeline running between the Rocla Quarry and Clarence Colliery pit top (see **Figure 2.2**). The proposed extraction area is bounded on the west by Clarence Colliery's rail loop, to the south by Rocla Quarry, to the north by a coal reject emplacement within the Clarence lease and to the east by the Blue Mountains National Park.

The proposed operation will produce kaolin and a high quality silica sand product.

Key activities at the site will involve:

- removal and stockpiling of topsoil using bulldozers;
- extraction of friable sandstone by ripping and/or excavating ;
- loading ripped sandstone to haul trucks for transport to the crushing station;
- primary crushing ripped sandstone at the crusher station; and
- conveying material to covered stockpiles before removal off site via train to the processing site.

Extraction will be undertaken in stages, with the activities progressing from the north to the south. Rehabilitation of the pit walls would be carried out progressively after the completion of extraction from individual pit benches.

Since the processing of the friable sandstone will be conducted off site, large stockpiles of material will not be required on site. However, temporary stockpiling of material will occur on site before the material is loaded for transportation to the processing site.

The proposed Mining Lease area will be developed as an open cut pit from which the friable sandstone will be extracted, a primary crushing and materials handling infrastructure area (containing conveyors and a crusher), a crushed sandstone stockpile as well a demountable site office and amenities block.

Friable sandstone will be won by selectively stripping and ripping a series of shallow benches using a bulldozer. Ripped material will be stockpiled using front end loaders. It will then be trucked to a small primary crusher and conveyed to covered stockpiles. From here the crushed sandstone will be conveyed to a surge bin adjacent to the Clarence railway loop and loaded onto trains for transportation to the processing site.

Heads of Agreement are in place between NKPL and Centennial Coal Company Limited to allow NKPL to install a loading facility and use the rail loop on a toll basis. The rail loop has more than sufficient capacity to cater for the colliery and NKPL operations both now and in the foreseeable future.

Other than the topsoil, all material extracted will be primary crushed then transported off-site for processing. There will be no waste generated at the Newnes Junction site by scalping or screening of fines and other material.

Whilst year one kaolin sales are projected at less than 30,000 tonnes, it is estimated that average sales will be around 88,000 tpa over the 21 year period of the initial mining lease. Kaolin product will be supplied to the building materials industry, the ceramic and refractories industries, as well as being sold as a cement pozzolan and as a mineral filler.

Silica sand sales are projected to increase from less than 300,000 tonnes in year one to an average of nearly 1.034 Mtpa over the 21 year period, peaking at 1.28 Mtpa. Sales of premium quality, fully graded sand to the construction industry will account for an average 90% of total sand sales, with the bulk of these going to the ready mixed

concrete and concrete product sectors. High quality industrial sands, will be principally sold for glass manufacture and as filter medium.

An off-site processing plant will be constructed within the greater Sydney region to process the material. NKPL is at an advanced stage in negotiating for the use of one of four possible sites identified to date, adjacent to rail, within the Sydney region. All of the identified sites have the required rail access and unloading facilities, stockpile capacity and sufficient area to house the processing plant. Two of them have approvals in place for the processing of sand and/or crushed sandstone. End products will be transported to markets by either road or rail. Approvals for this facility will be sought separately.

2.1.1 Development Objectives

The objectives of the proposed extractive operation are to:

- develop the commercially viable resource of silica sand and kaolin at Newnes Junction to supply existing and projected shortages in the Sydney Metropolitan area;
- optimise the resource by off-site processing and beneficiating all of the constituent minerals into saleable products;
- establishing a long term source of white firing kaolin in relative proximity to Sydney markets currently supplied from remote NSW localities, interstate and/or, from overseas;
- develop and manage the proposed operation in a manner that minimises associated environmental and social impacts ;
- undertake extraction in a way that will result in a well drained, stable landform able to be successfully and progressively rehabilitated;
- provide direct long-term employment for 6 to 10 people at Newnes Junction and 12 to 15 people in Sydney; and
- provide indirect employment to a substantial number of drivers, tradesman, suppliers, consultants and other associated persons, both in Sydney and (to a lesser extent) in the Newnes Junction areas.

2.1.2 EIS Objectives

The objectives of this EIS are to:

- identify and where possible, quantify the environmental impacts of the proposed mining operation to assist government authorities assess the project;
- identify appropriate environmental protection measures so that the proponent can develop an environmentally acceptable project; and

- provide a basis for the development of ongoing environmental management and impact verification.

2.2 The Proponent

NKPL was formed for the specific purpose of developing an extractive industry operation including the ripping and primary crushing of the friable sandstone resource at Newnes Junction. The company has been formed to develop and manage the extraction and downstream processing of the resource as well as the marketing and sales of the refined sand and kaolin products. NKPL directors have retained the services of a number of highly qualified and experienced consultants in relation to all key aspects of the project. It is the intention of the company to develop the prospect into a world class industrial minerals and construction materials operation, producing a range of high quality kaolin and quartz sand products for sale to domestic and potentially international markets.

2.3 Development Application Area

The Development Application supported by this EIS covers all activities described in Chapter 3 as well as all environmental mitigation measures described in Chapters 5, 6, 7, and 8. The area covered by the Development Application is the same as the Mining Lease Application Area shown on **Figures 2.2** and **3.1** to **3.8**.

2.4 Land Ownership

The majority of the land designated for the proposed extractive operation is currently vacant crown land (see **Figure 2.3**). A portion of the proposed conveyor route from the pit to the existing Clarence rail loop, and the rail loading facilities themselves, will be located on land currently leased by Centennial Coal Company. The land was formally owned by the Commonwealth (Department of Defence) and title has been recently transferred to Lithgow City Council. Transfer of the land to Centennial Coal Company is now underway.

The parcel of land covers a portion of the rail loop, Centennial's coal loading bin and water storage tanks. These facilities have been used for mining purposes since the late 1970's. There is also a pumping station owned by Lithgow City Council which will be covered by a lease within the land owned by Centennial. All other land affected by the project is owned by the Crown.

2.5 Legislative Framework

2.5.1 Integrated Development

Although the Minister for Infrastructure and Planning will be the consent authority for the proposed Kaolin Mine, additional approvals will be required from other government authorities. These additional approvals define the project as Integrated

Development, that is, before the project can proceed it requires development consent and one or more approvals from other government agencies. When consent is issued for the project, the conditions attached to the approval will also include any conditions specified by Integrated Development Agencies.

Integrated approval bodies will be: Environment Protection Authority (EPA) and the Department of Land and Water Conservation (DLWC). The Department of Mineral Resources (DMR) is required to approve the issue of a mining lease but is not an Integrated Approval body.

The requirements of these approval bodies are described below.

An Environment Protection Licence issued under the *Protection of the Environment Operations Act, 1997* will be sought from the Environment Protection Authority. The licence will cover emissions such as noise and dust, and discharge of water.

Based on the flora and fauna surveys and eight part tests included in the associated reports prepared for this EIS, approval under the *Threatened Species Conservation Act, 1995* is not required from NPWS, since species of conservation significance, or their habitat will not be significantly affected by the project. The project will however be referred to National Parks and Wildlife Service for comment.

Approval from DLWC for the clearing of vegetation is not required, since approved mining operations are exempt under Section 12 of the *Native Vegetation Conservation Act, 1997*. Licensing details and information requirements under the *Water Management Act 2000* have yet to be finalised. Approval to mine from the DMR (see below) exempts the project from the Crown Lands Act, 1989. The project affects some ephemeral creeks on the site. Under a mining lease, it will not be subject to the Rivers and Foreshores Act 1948. In their review of the EIS, DLWC will assess whether the open cut extension will require a groundwater interference licence under the *Water Management Act 2000* and a licence for production and monitoring bores (*Water Act 1912*).

Approval of the general mine plan for the project will be sought from the DMR. Further ongoing approvals will be required from the DMR including the Lease application and Mining Operations Plan.

2.5.2 Summary of Statutory Procedures

Commonwealth Legislation

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) came into effect on 16 July 2000 and emphasises aspects of the environment that are considered to be of national significance. It was introduced to give the Commonwealth greater control and input in development approvals. The main provision of the Act requires that Commonwealth approval be obtained for any actions that are likely to have a significant impact on a matter of National Environmental Significance (NES), in addition to any State approvals.

Areas of World Heritage are considered to be of national significance and the Greater Blue Mountains World Heritage Area, located to the east of the proposed development, was declared on 29 November 2000.

Under the *Commonwealth Environment Protection Biodiversity Conservation Act, 1999*, approval from the Commonwealth Minister for the Environment is required for developments that may have a significant impact on matters of National Environmental Significance (except in circumstances set out in the EPBC Act). Under the Act, matters of National Environmental Significance include: World Heritage properties; RAMSAR wetlands; threatened species or ecological communities listed in the EPBC Act; migratory species listed in the EPBC Act; the environment in a Commonwealth marine area and nuclear actions.

The assessment and approval process in the Act is triggered by any proposal that may have a significant impact on a matter of national environmental significance. Since the proposed kaolin mine is located near the Greater Blue Mountains World Heritage Area, the EPBC Act may be invoked and the Commonwealth Environment Minister may have decision-making powers in regard to the project.

The project was referred to the Commonwealth to determine if the project will have a significant impact on issues of NES and hence require Commonwealth approval. Environment Australia advised that the project is considered a "Controlled Action" under the EPBC Act (refer Appendix A). Environment Australia has also advised that the environmental impact assessment process must be accredited and therefore should proceed in accordance with the NSW Environmental Planning and Assessment Act 1979 and include all requirements set out in Schedule 1 to the most recent bilateral agreement between the Commonwealth and New South Wales.

State Legislation

The provisions of the Environmental Planning and Assessment Act 1979 determine the EIS process for this proposal. The proposed mine will involve disturbance of a total surface area greater than 4 ha and consequently, the mine is a designated development under Schedule 3 of the Environmental Planning and Assessment Regulation 1994. The proposal is also considered to be a designated extractive industry due to the area of extraction (> 2 ha) and large volumes of sand being extracted during the kaolin mining process (in excess of 30,000 m^3 per annum).

The development requires planning consent and, being designated development, an EIS must be prepared to accompany the Development Application.

The Minister for Infrastructure and Planning has declared certain developments to be of state significance. These developments are important to the NSW community and the Minister's approval is required before they can be built.

The Minister for Infrastructure and Planning issued a declaration relating to extractive industry on the 3rd August 1999 whereby extractive industries with a total resource of greater than 5 million tonnes and annual extraction rates of more than 200,000 tpa are considered to be of State Significance. Given that the amount of sand to be obtained through the kaolin mine exceeds these thresholds, the proposal is of State Significance

and has been called in by the Minister, for approval under Section 76A(7) of the Environmental Planning and Assessment Act. Consequently, the State's determining authority will be the Minister for Infrastructure and Planning.

State Environmental Planning Policies

NSW government landuse planning is administered through the Department of Urban and Transport Planning (DUTP), which until recently was known as Planning NSW. DUTP supervises local planning initiatives and undertakes regional planning through State Environmental Planning Policy (SEPP) directives under Section 117 of the EP&A Act and Departmental Planning Circulars. There are four SEPPs potentially relevant to this proposed development:

- SEPP No. 11 - Traffic Generating Developments;
- SEPP No. 44 - Koala Habitat Protection;
- SEPP No. 45 – Permissibility of Mining;
- SEPP No. 58 – Protecting Sydney's Water Supply.

Each of these is discussed below.

SEPP No. 11 - Traffic Generating Developments
SEPP No. 11 - Traffic Generating Developments provides that applications for developments listed in Schedules 1 and 2 of the Policy shall be referred to the Roads and Traffic Authority (RTA) for its view prior to determination. The proposed development, as an *extracting industry or mining* development, is included in Schedule 1, subclause (m) of the policy.

SEPP 11 establishes the RTA as the sole traffic management authority to be consulted and ensures that the RTA is given the opportunity to make representations on a development application before the consent authority makes a determination. Under Clause 7(3) the consent authority is required to forward a copy of the submitted Development Application to the Authority within seven days of receipt.

Consultation has taken place with the RTA during the preparation of this EIS and their comments taken into consideration during the preparation of this document.

SEPP No. 44 - Koala Habitat Protection
SEPP No. 44 - Koala Habitat Protection encourages the conservation and proper management of areas of natural vegetation that provide habitat for koalas, to ensure permanent, free-living populations will be maintained over their present range. To achieve this, it must e determined whether or not the proposed area of development contains core koala habitat, and if so, the habitat must be investigated and a plan of management prepared prior to development consent. The whole of the Lithgow area is covered by the SEPP and therefore this issue has been considered in the flora and fauna report. In summary, no potential koala habitat is found on the site and therefore no koala plan of management is required.

State Environmental Planning Policy No. 45
SEPP 45 ensures that there are clear planning controls to determine the permissibility of mining. The policy allows mining on land with consent, where an environmental

planning instrument requires the consent authority to make a value judgement as to whether such development is permissible. The policy aims to *inter alia* promote economic development in the State, facilitate development of the State's natural resources and facilitate significant export earning industries for the State.

Mining is permissible under the current Rural 1(a) zoning.

SEPP No. 58 - Protecting Sydney's Water Supply
Under State Environmental Planning Policy (SEPP) No 58 - Protecting Sydney's Water Supply, designated developments as defined under Schedule 3 of the *Environmental Planning and Assessment Regulation 2000* may not be carried out in the hydrological catchment from which Sydney's drinking water is drawn without the concurrence of the Catchment Authority.

In assessing the proposed development under SEPP 58, the Catchment Authority is to consider the following:

- whether the development or activity will have a neutral or beneficial effect on the water quality of rivers, streams or groundwater in the hydrological catchment, including during periods of wet weather;

- whether the water quality management practices proposed to be carried out as part of the development are sustainable over the long term; and

- whether the development or activity is compatible with relevant environmental objectives and water quality standards for the hydrological catchment when these objectives and standards are established by the Government.

Sydney's hydrological catchment for its drinking water supply includes the Warragamba, Upper Nepean, Woronora, Blue Mountains and Shoalhaven catchments. The proposed mine site is located within the upper reaches of the Wollangambe River catchment, which flows into the Colo River, and is not included within Sydney's drinking water catchment. It will therefore have no impact on the relevant hydrological catchment and consequently, SEPP 58 does not apply to this project.

Local Government Planning Provisions

The local planning instrument relevant to this project is the Greater Lithgow City Council Local Environmental Plan (LEP), 1994. The aim of the LEP is to recognise and promote the City of Greater Lithgow as a desirable and viable place to live, visit and invest. The LEP also encourages the proper management, development and conservation of natural resources and the built environment, and is designed to facilitate growth and development in the region in an appropriate manner.

This includes:

- ensuring that such developments minimise the environmental cost to the community of fragmented and isolated development of rural land which has less than full provision of services;

- facilitating the efficient and effective provision of amenities and services;
- ensuring that the safety and efficiency of arterial roads is not adversely affected by development on adjacent land;
- encouraging the separation of conflicting land uses; and
- facilitating the protection of catchment areas and preserving the water quality in the regions waterways.

The zoning of the land within the proposed mining lease is 1(a) Rural (general). The main objective of the Rural General zoning is to promote the proper management and use of natural resources. Within this zone, agriculture, bushfire hazard reduction and forestry activities are permissible without development consent. Mining developments are permissible with development consent.

Lands zoned Rural (1) where industrial developments are permitted under the LEP are also covered by the *Greater Lithgow Development Control Plan (DCP) No. 6*. The plan provides detailed guidance for the development of land for industrial purposes. This EIS has been prepared in accordance with and meets the relevant requirements of DCP No 6.

2.5.3 Environmental Assessment Process

The EIS forms one component of the environmental impact assessment (EIA) process for State Significant Developments. The key elements of the process that are relevant to this proposal are listed below and shown in **Figure 2.4**.

- Initial inquiry to the Department of Urban and Transport Planning to determine requirements;
- review of the development by government authorities, the public and community groups through the Planning Focus Meeting and associated documentation;
- Department of Urban and Transport Planning seeks the requirements of other integrated approval bodies for the EIS and incorporates them into the Director-General's requirements;
- EIS preparation;
- Development Application lodged with the Department of Urban and Transport Planning together with EIS;
- Public exhibition of the Development Application and EIS by the Department of Urban and Transport Planning;
- Consideration by the Department of Urban and Transport Planning of submissions made by the public and government agencies in response to the EIS;
- Assessment of the project by the Department of Urban and Transport Planning;

- Determination of the project by the Minister for Infrastructure and Planning in light of public submissions and project scrutiny.

The purpose of the EIS is to provide information to decision makers on environmental factors in order to weigh these factors against other considerations in making project decisions. The environmental impact assessment process provides the opportunity for public review and comment, and forms part of the decision making process. This systematic review process, leading to an ultimate determination by the Minister, aims at providing a balanced approach to impact assessment.

Key features of an EIS are the identification of environmental issues, the prediction of potential impacts and the commitment to incorporate protection measures that will safeguard against adverse impacts on the biophysical and social environment. In broad terms, the EIS must contain sufficient information to enable an informed decision on the proposed development. The commitments made in this EIS will be incorporated into the Environmental Management Plan (EMP) for the project that will provide the basis for ongoing environmental management on site.

As with all development projects, the proposed Newnes Junction Kaolin Project will have some environmental impact. The EIS has evaluated both potential negative and positive impacts in order to provide a balanced information base to assist in the decision making process.

2.5.4 Scope of This Development Application

The DA accompanying this EIS covers the proposal to develop a kaolin mine on vacant Crown Land to the north of Newnes Junction as described in **Section 3**. Mining methods will involve ripping the ore with a dozer and loading it by Front End Loader (FEL) onto trucks to transport it to a crushing and conveying system. The crushed ore will be directed to a rail loading facility so it can be conveyed off site by rail. The DA covers only the proposed mining and rail loading operations. The unloading and processing operations associated with the proposed development will be subject to a separate approval process.

Approval is sought to mine and rail transport off-site of up to 1.4 Mtpa of friable sandstone which will generate approximately 119,000 tpa of kaolin and approximately 1.154 Mtpa of construction sand and 0.127 Mtpa of high grade silica sand as described in Section 3. The resource is extensive and although approval is sought for a 21 year mine plan, there will be significant remaining resources which could easily extend mining operations well beyond this period.

2.5.5 Environmental Planning and Assessment Procedures

The form and content of this EIS are in accordance with the requirements of the *Environmental Planning and Assessment Regulation*. The Director-General of the Department of Urban and Transport Planning has been consulted pursuant to the requirements of the Regulation and the document has been prepared in accordance with the Director's Requirements, a copy of which is included as **Appendix A**.

All relevant government departments and authorities have been contacted and their comments, where appropriate, have been incorporated into the document (see **Appendix B**). Consultation with various government agencies commenced early in the planning stages of the project and their input over this period has been taken into account during the preparation of this EIS.

This document will be publicly exhibited and will act as an invitation for comment. The public should forward submissions to the Department of Urban and Transport Planning, for review prior to assessment and ultimate determination by the Minister.

2.5.6 The Environment Impact Statement

The EIS is the culmination of the studies undertaken to date in the assessment of the proposed mine development. Further work on refining the details of the mine plan and environmental management aspects of the project will continue prior to mining commencing but the development concept, as described in this study, is considered adequate to enable the prediction and evaluation of potential environmental impacts.

An essential component in the assessment of environmental impacts of proposed developments is the issue of verification. The impact statement, in some respects, needs to make certain value judgements based on available information and generalised assumptions. It is important, therefore, for monitoring to be undertaken to verify the impact predictions made and further refine the projects impacts.

Additional data gathered during monitoring of the project will assist in verifying the predicted impacts. The mine plan, extraction methodologies, and the environmental protection measures associated with the development can also be fine tuned in response to monitoring results. These results will be reported annually as part of the regular reporting required by the DMR.

This EIS is structured to provide an initial summary of the EIS findings, existing and proposed development descriptions followed by several chapters assessing potential impacts of the project. The impact assessment chapters have been grouped into key issues relevant to the project. An expanded structure of the EIS is as follows:

Section 1 - Executive Summary - briefly outlines the proposed mine development, the environmental aspects of the project and the resultant impacts likely to arise due to the proposal.

Section 2 - Introduction and Planning - outlines the project, describes the objectives of the development, introduces the main aspects of the development proposal, and gives a resume of the legislative framework and environmental assessment procedures.

Section 3 - Description of the Proposed Development - provides a description of the Company's proposals for the kaolin mine, extraction methods, material handling systems and transportation of the material. The geological characteristics of the resource and proposals for rehabilitation are described in sufficient detail to enable the environmental consequences to be addressed.

Section 4 - Project Justification and Alternatives - an overview of the market for the kaolin and sand products generated by the project is provided and the reasons for developing the resource are given. Possible alternatives to the development are also discussed.

Section 5 - Land Use and Environmental Effects - this section describes the existing land use, flora, fauna, archaeological and heritage environments occurring within the future mining area and assesses the potential impacts on these systems.

Section 6 - Emissions and Environmental Effects - emissions from the plant associated with the mine have been addressed and where possible, quantified. Specifically, the issues of air, water and noise emissions associated with the mining and transportation operations are covered.

Section 7 - Social and Economic Considerations - the existing social framework within the area is described in sufficient detail to assess the potential effects of the development of the mine. Ecologically sustainable development issues are also discussed.

Section 8 – Environmental Management and Conclusions - this section discusses management issues and summarises the key findings of the various environmental studies contained in this EIS in a format consistent with the requirements of the Department of Urban and Transport Planning. The mechanism for verifying the impact predictions made in this document is also provided.

2.6 Consultations

An integral component of the project has been the consultation program that has included both government agencies and the local community.

2.6.1 Authority Consultation

In accordance with the EP&A Act, the Director General of the Department of Urban and Transport Planning was consulted regarding the form and content of the EIS. A copy of the response received from the Director General is provided in **Appendix A**.

As required by the Department of Urban and Transport Planning, this EIS has been prepared in accordance with Part 4 of the Environmental Planning and Assessment Act 1979. The EP&A Regulation 2000 outlines matters that must be considered in preparing a Part 4 EIS. Clause 72 of the Regulation (cf Cl 54 of the EP&A Regulation 1994) sets out matters that should be included in this EIS as outlined in Schedule 2 of the Regulations to the Act. **Table 2.1** shows the requirements of Schedule 2 and indicates where each requirement is addressed in the EIS.

Table 2.1 - EIS Statutory Requirements

Matters to be considered in the EIS Under Schedule 2 EP&A Regulation 2000	EIS Section
1 A summary of the environmental impact statement.	Chapter 1

Table 2.1 - EIS Statutory Requirements

Matters to be considered in the EIS Under Schedule 2 EP&A Regulation 2000		EIS Section
2	A statement of the objectives of the development or activity.	S2.1.1
3	An analysis of any feasible alternatives to the carrying out of the development or activity, having regard to its objectives, including:	S4.7
	(a) the consequences of not carrying out the development or activity; and	S4.9
	(b) the reasons justifying the carrying out of the development or activity.	S4.1-4.8
4	An analysis of the development or activity, including:	
	(a) a full description of the development or activity; and	Chapter 3
	(b) a general description of the environment likely to be affected by the development or activity, together with a detailed description of those aspects of the environment that are likely to be significantly affected; and	Chapter 5, 6
	(c) the likely impact on the environment of the development or activity, having regard to:	
	(i) the nature and extent of the development or activity	
	(ii) the nature and extent of any building or work associated with the development or activity	Chapter 5, 6
	(iii) the way in which any such building or work is to be designed, constructed and operated; and	
	(iv) any rehabilitation measures to be undertaken in connection with the development or activity; and	
	(d) a full description of the measures proposed to mitigate any adverse effects of the development or activity on the environment.	Chapter 5, 6
5	The reasons justifying the carrying out of the development or activity in the manner proposed, having regard to biophysical, economic and social considerations and the principles of ecologically sustainable development.	Chapter 3, 5, 6, 7
6	A compilation (in a single section of the environmental impact statement) of the measures referred to in item 4(d).	S8.3
7	A list of any approvals that must be obtained under any other Act or law before the development or activity may lawfully be carried out.	S8.4
8	For the purposes of Schedule 2, the principles of ecologically sustainable development are as follows:	
	(a) The precautionary principle - namely that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.	S7.7.1
	(b) Inter-generational equity - namely, that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations.	S7.7.2
	(c) Conservation of biological diversity and ecological integrity.	S7.7.3
	(d) Improved valuation and pricing of environmental resources.	S7.7.4

Specific areas were identified by the Director-General as needing to be addressed in the EIS, under the *Environmental Planning and Assessment Regulation*. These issues and the section of the EIS in which they are addressed are provided below in **Table 2.2**.

Table 2.2 - Requirements of the Director General

Specific Issues to be Addressed	EIS Section

Table 2.2 - Requirements of the Director General

-	Detail impacts on Blue Mountains National Park and Wollangambe Wilderness Reserve and mitigation measures to prevent any part of the proposed facility from intruding into the National Park.	Chapter 5
-	Details of the proposed location of the processing plant, including an outline of transportation methods and any upgrades necessary.	Concept in S3.10 & App C. Separate EIS will cover this
-	Details of any Native Title claims in relation to Crown Land	S5.7
-	Details of cumulative environmental impacts	S8.2.2
-	Consideration of objectives and relevant provisions of SEPPs and REPs, in particular SEPP 58 and SEPP 11	S2.4.1
-	Impact on flora and fauna, including threatened species and critical habitat	S5.6.6
-	Issues raised at the Planning Focus Meeting	S2.5.1
-	Provide details of a nominated contact who will be available to answer public enquiries about the proposal	S2.5
-	Community Consultation	S2.5.2
-	Consultation with Local Council and advise regarding the most appropriate newspapers circulating in the area affected by the proposal	S2.5.1
-	Particular attention should be given to the visual impact of the proposal, including an assessment of the proposal from the Blue Mountains National Park, and the cumulative visual impact with other development located in the Newnes Junction and Clarence areas.	S5.5
-	An assessment of the proposed means of access to the site for employees and consideration of how the development will interact with the transport systems currently operating from the Clarence Rail loop.	S6.5
-	Consideration of the final land use of the site, with attention to security and safety issues.	S3.12
-	The proposal has been determined by Environment Australia to be a controlled action under the EPBC Act due to potential impacts on the Blue Mountains World Heritage Area. Details of this should be included.	Noted
-	Discuss the cumulative impacts the development will have on the surrounding environment, including cumulative impacts associated with other sand and mining activities in the surrounding area. Cumulative impacts that should be discussed include noise, visual impact, ground and surface water and traffic.	S6.2, S6.3, S6.4, S6.5, S8.2.2
-	Include a comprehensive assessment of potential direct and indirect impacts on flora and fauna and their habitats. Should include the Blue Mountains Water Skink and the Bathurst Copper Butterfly.	S5.6
-	The Aboriginal cultural heritage assessment should be in accordance with the attached NPWS guidelines.	Noted
-	A greenhouse gas assessment should be included, incorporating the following: a. A quantitative model showing the tonnages of each greenhouse gas produced per year. These figures should be expressed as a percentage of the total national greenhouse gasses produced for that year; b. A discussion of the types of greenhouse gases being emitted; c. A discussion of the alternative options considered for the chosen fuel source used, and the technology adopted to reduce greenhouse gas emissions; d. Justification for the chosen fuel source and technology in terms of	Appendix F

greenhouse gas emissions.

Other Consultation

During the formulation of the proposal a Planning Focus Meeting was organised to present the proposal to relevant government authorities and was attended by representatives of the following organisations:

- Department of Mineral Resources;
- Greater Lithgow City Council;
- Department of Land and Water Conservation; and
- Environment Protection Authority.

The Planning Focus Meeting was held in March 2000 and involved a series of presentations that described the background to the proposal, site geology and constraints, proposed mining operations and associated infrastructure and environmental considerations. A site inspection of the mining and surface infrastructure area followed. Issues and concerns these authorities wished to see addressed in the impact assessment process were identified at this meeting and have been considered during the EIS preparation.

Throughout the project planning and assessment phase, consultation was also undertaken with other relevant local and state government authorities and interested parties, including the National Parks and Wildlife Service. Relevant comments and requirements have been included as **Appendix B**.

Matters raised as a result of the planning focus meeting, follow-up letters and discussions, have been addressed in this EIS.

2.6.2 Community Consultation

Prior to undertaking the field component of the EIS studies, each residence within Newness Junction was visited. If they were home, discussions were held with the residents outlining the project and informing them of the proposed works. Those who were not home were left details and were invited to contact IEC personnel to discuss the project if they wished to. A number of residents took up this offer.

Following further development of the project, further discussions were held with affected residents in May 2001, outlining the proposed mine plan and environmental issues associated with the project.

The proposal has received a mixed reaction with some vehemently opposed, some reserved and others supportive. Key issues raised by the Newnes community included:

- potential for employment opportunities at the mine;

- noise and dust emissions from the operation;
- reduced privacy and loss of amenity;
- reduced land values;
- proximity to National Park and loss of vegetation communities;
- local assess to the National Park currently obtained via EL4192;
- general environmental impacts of the operation.

The noise impact assessment has shown that the operation will exceed noise criteria from approximately year 10 onwards on some residences in Newnes Junction. NKPL will offer compensation in the form of additional noise treatment at these identified residences or outright purchase. The offer of purchase and lease back should the residences not wish to be relocated will also be offered, and if required, the offer will be extended to all residents of Newnes Junction as at the lodgement date of this EIS.

Should community members wish to contact the proponent in relation to this EIS the following contact will be available:

Ian Wisken
The Fifth Estate
Telephone (02) 9232 8282
Fax (02) 9232 8275

Dr Ron Goldbery
NKPL
Telephone (02) 9439 1411

2.7 Project Team

This EIS has been prepared and managed by International Environmental Consultants Pty Ltd. The project team is listed below and the various experts have provided material in the relevant sections of the document:

Robert Byrnes	IEC	Project Director
Margot Jamieson	IEC	Project Manager
Don Reed	Don Reed and Associates	Sand Market Research, Financial Modelling & Project Justification
Igor Bojanic	Mine Consult Pty Ltd	Mine Planning and Modelling
Roger Smith	Roger Smith and Associates	Process Design
Murray Lines	Stratum Resources	Marketing & Justification, Kaolin and Specialty Sands
Peter Stitt	Peter Stitt and Associates	Kaolin Marketing & Justification
Jane Barnett	Holmes Air Sciences	Air Quality Assessment
Graham Atkins	Atkins Acoustics	Noise Assessment
Julie Gander	IEC	Flora & Fauna Assessment
Arthur White	Biosphere Environmental	Frog Survey
Franz Kalf	Kalf & Associates Pty Ltd	Hydrogeological Assessment
Robynne Mills	Consulting Archaeologists	Archaeological Assessment
Dean Oliver	Dean Oliver Graphics	EIS Figures and Graphics

Ron Goldbery of NKPL has also provided valuable assistance in the preparation of this document.

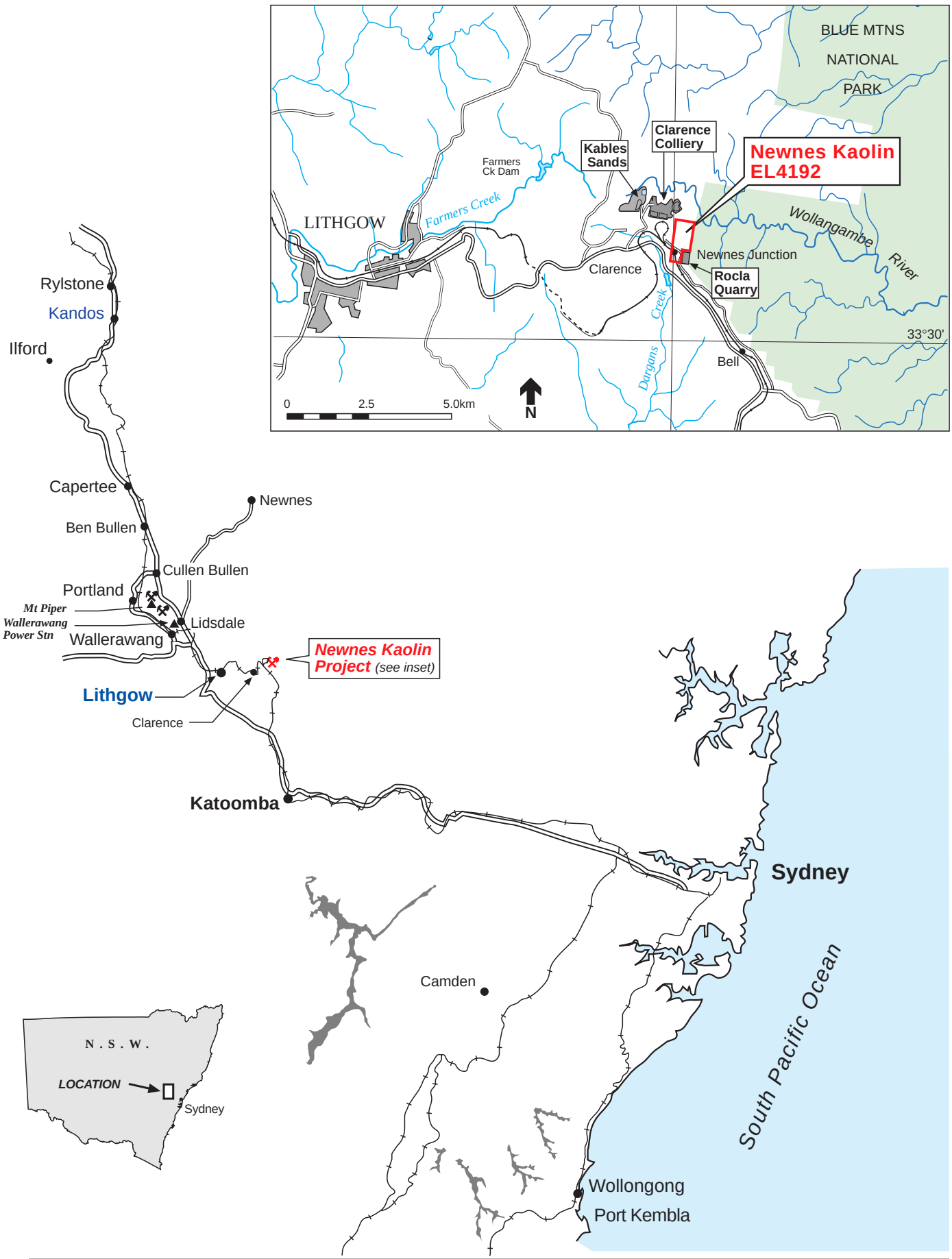


FIGURE 2.1
Regional Locality Plan

Mining Lease Application
(Development Application Area - location approximate)

Exploration Licence 4192 (location approximate)

Aerial photography date : May 2000

0 200 400metres

approximate

N

FIGURE 2.2
Project Location

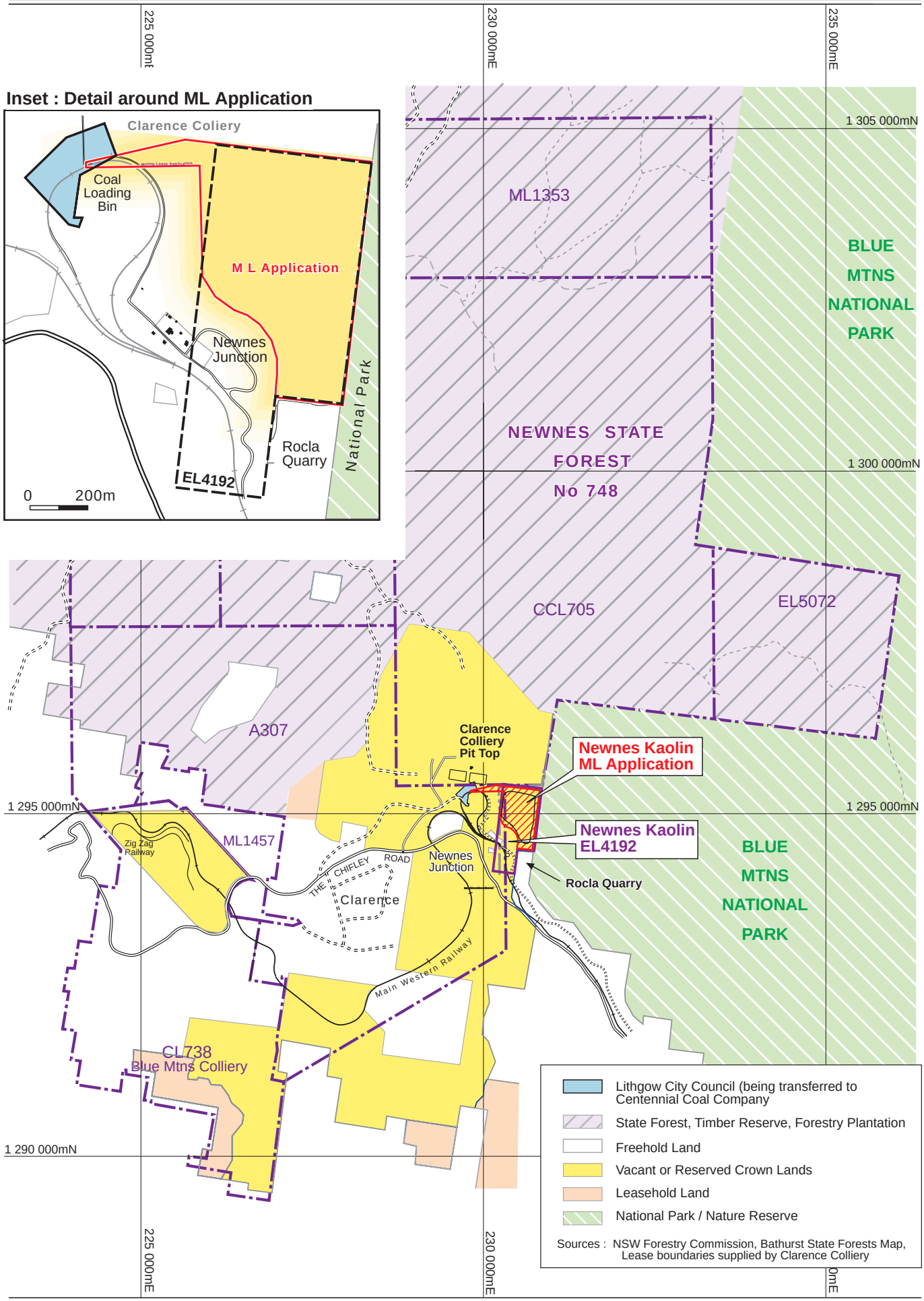
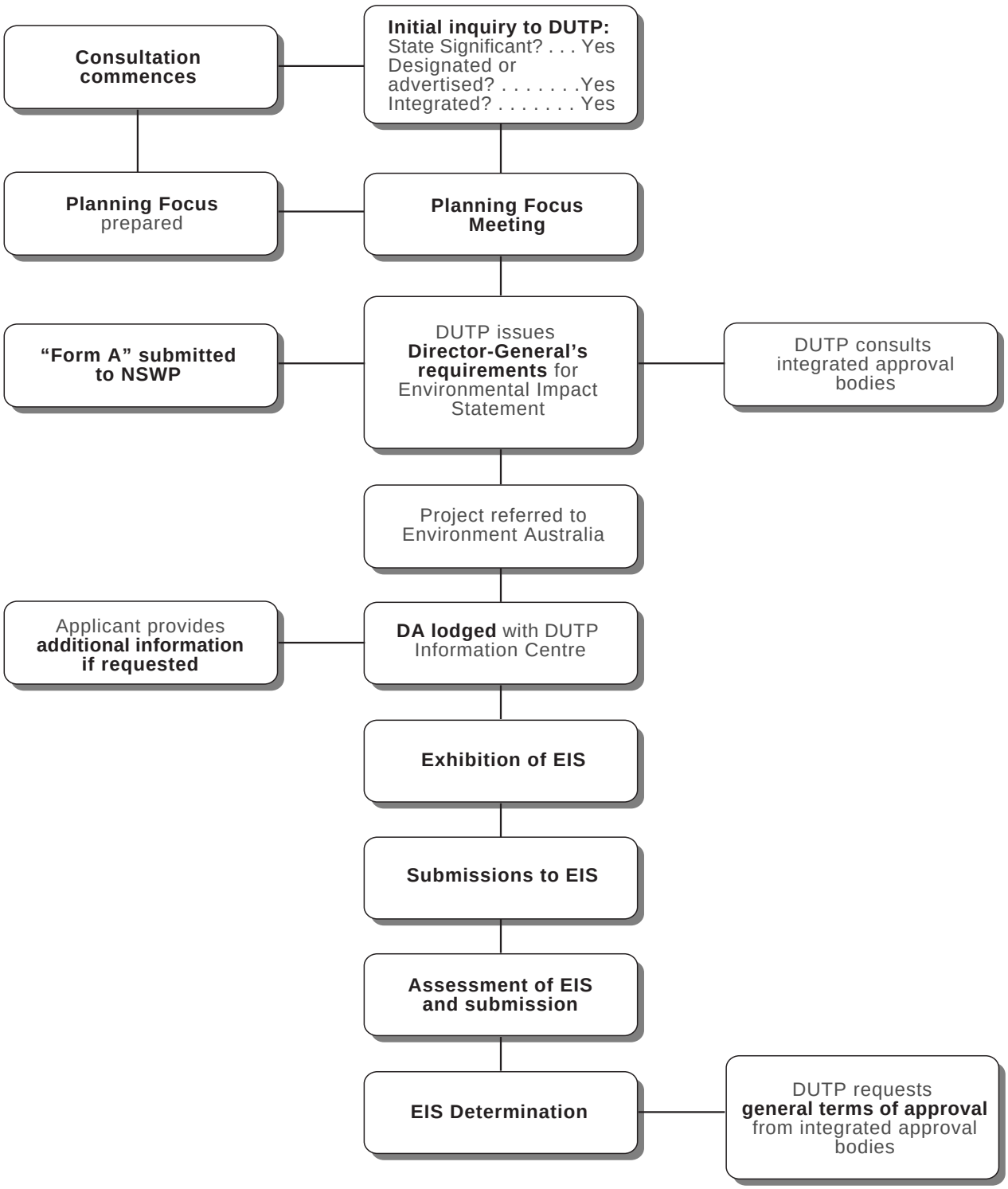


FIGURE 2.3
Land Ownership



DUTP = Department of Urban and Transport Planning
(formerly NSW Planning)

FIGURE 2.4
Summary of Development Application Process