7. Social and Economic Considerations

The potential positive and negative implications of the proposed development on the existing social and economic framework of the region are discussed in this section.

7.1 Existing Social Framework

The proposed development site lies within the City of Greater Lithgow. The population has remained reasonably steady over the last decade with the 1996 census population being 19,248 as compared with the 1986 population of 19,785. The region covers an estimated area of 3,516 km ^{2} with Lithgow being the major population centre. Smaller urban centres area located at Cullen Bullen, Wallerawang, Portland and Capertee.

The population information outlined below has been derived from the Australian Bureau of Statistics census data for the Greater Lithgow local government area (LGA).

7.1.1 Population Numbers

Between 1986 and 1996 the population of Greater Lithgow has declined slightly with a decrease of approximately 3%. This is in contrast to the previous decade (1976-1986) when the population increased in the area by 60.3%. This increase in population was attributed to mining and power station developments. The minor decrease in the population indicates that growth in such areas has declined, leading to a relatively stable population in the area.

In terms of age distribution, the vast majority of the population in the area is aged less than 45. The age bracket with the greatest number of people is 35-39, followed by the 5-9 and then the 10-14 age brackets. This reflects a high number of families with young children in the area.

In the order of 15 people generally live within the village of Newnes Junction and others use the village for weekend purposes.

7.1.2 Occupational Structure

In the decade from 1976 to 1986 the number of people employed in the area rose from 4,993 to 8,367, an increase of 68%. In the last decade, from 1986 to 1996, employment in the area declined by 10% to 7,498. The male population employed in the workforce decreased from 5,786 (1986) to 4,522 (1996). The female population experienced an increase in employment numbers, from 2,579 (1986) to 2,976 (1996). There is a higher proportion of females working in part-time positions than that occurring in the male population.

The main sources of current employment in the area (in decreasing order) are mining, retail trade, manufacturing, health and community services, and transport and storage.

These figures reflect the high number of females employed in the retail trade and community services. Mining and transport and storage employ the greatest number of males in the area.

The total number of people unemployed in the work force in 1996 was 850, of which 530 were male and 320 were female. This represents an unemployment rate of approximately 10%.

7.1.3 Housing

The vast majority of people in the Lithgow LGA live in separate houses (11%). The remainder, in decreasing order, live in semi detached dwellings (or town houses), flats or apartments and caravans.

Newnes Junction village has 6 dwellings located within it, 5 of which are permanently occupied and one of which is used for weekends and holidays. A few sites in the village may be built on in the future.

7.2 Services

A range of services for the local community are available in the Lithgow region, including meals on wheels, homecare, child care centres, sheltered workshops, St Vincent de Paul and the Salvation Army.

Long day care facilities and preschool kindergartens are available for families with young children. For older children a number of state and private primary schools are located in the area in addition to state and private high schools within the region. Tertiary education is provided at the Technical and Further Education which offers courses in academic, commercial, technical and lifestyle subjects.

A new hospital has recently been constructed on the Great Western Highway just east of the town centre that will provide improved medical facilities to the community of the Lithgow region.

Many other community groups also exist for a variety of craft or artistic disciplines and include arts and theatre groups, music groups and craft groups.

7.3 Recreation and Tourism

The Lithgow area is a popular tourist destination as it is located within a region that also contains national parks, state forests, areas of historical interest such as Hartley Vale Historical Village, the Small Arms Factory, Esbank House, Hoskins Church, rainforest areas, waterfalls, picnic facilities and areas of natural beauty. It is approximately two hours drive from Sydney and is easily accessible by road via the Great Western Highway and rail services. Consequently, it is an attractive destination for day trippers and longer stay tourists. A variety of accommodation is available in the large and smaller centres in the region.

Attractions that are located close to Lithgow include the Zig Zag Railway and viaducts and the Jenolan Caves. Both these sites have a high number of visitors every year. Other popular attractions include the Wallerawang and Mount Piper Power Station, Lake Wallace and Lake Lyell. Tourists can visit the remains of former shale mining towns of Glen Davis and Newnes, now only ruins.

A number of scenic drives are available in the area including the Lithgow City Drive, Hartley Valley Drive, Newnes Historic Ruins, Glen Davis, Portland, Hampton, Sunny Corner, Mount Tomah Botanic Gardens and Oberon Dam.

In addition to the above attractions the national parks and state forests in the area attract a large number of tourists each year. There are three main national parks in the area: Kanangra Boyd, Blue Mountains and Wollemi National Parks. There area also areas of State Forest which are well used by both local and non-local visitors. The usage of these areas remains fairly constant over the year, with an autumn high reflecting the importance of mushroom picking, and a slight winter low, reflecting the cool tableland climate.

7.4 Economic and Social Impacts

7.4.1 Employment Generation

The proposed mine will employ a number of workers both during the construction and operational phases.

During the construction period a significant number of contractors may be employed on site undertaking varied activities. The construction workforce will be a skilled team employed to carry out specialised work. It is anticipated that the workforce employed during construction will include local contractors. This would be for activities such as earthworks, materials provision, installation of specialist equipment, construction of access tracks and fence erection.

As outlined in **Section 3**, the operation of the proposed kaolin mine will result in direct long term employment opportunities for approximately 6-10 people.

The number of people employed at the Kaolin mine on a day to day basis during the operation of the mine is anticipated to fluctuate, depending on production. The single shift workforce will typically require 7 or 8 people, some of whom may be drawn from the local Newnes Junction village providing the relevant skills are available in town.

The workforce for the mine will be readily available locally, as evidenced by the high proportion of unemployed people in the region, many of whom will have mining skills. Consequently, with the exception of some management staff it is expected that project employment can be mainly satisfied from the surrounding region with little or no in-migration.

The proposed development will provide long term job security for the workforce once it becomes established, and as production increases further employment opportunities

may be available. Outside contractors may also be employed to assist with clearing and stripping operations, the establishment of site drainage, sediment catchment, water reticulation and rehabilitation systems.

The mine will also generate indirect employment benefits in the local and regional area. Those involved may include external suppliers, service providers, contractors, marketing personnel and consultants as outlined in **Section 3**.

The construction and operational workforce would contribute to the local economy through purchasing food and other daily requirements, which would usually be supplied through towns and villages in the region.

Factors for indirect employment generation vary according to the type of industry and location. For mining and extractive industries, an employment multiplier of 1.46 has been previously used and is considered appropriate in this case.

On this basis, total indirect employment associated with the operation will be in the order of 9 to 14 people. This figure excludes employment generated by transport operations and processing operations. There are several other areas however, where the mine will supply valuable products to various industries including pharmaceutical, ceramics, building and construction, cement and glass manufacturers.

Consequently, the project will have a positive impact on the employment in the area, and though the numbers to be employed are not regarded as particularly great, the period of employment for the workers will be long term.

7.5 Housing

The mine site will not provide accommodation for its workforce and any workers would be expected to find their own housing in the area. The small number of additional people in the area will not result in any measurable influence on the local housing market.

Arrangements for accommodation would vary according to the preferred practice of contractors and employees undertaking the work. For those requiring temporary or permanent housing, adequate housing is available in local hotels, motels, rented premises or caravan parks. Permanent accommodation would be available in Lithgow.

7.6 Social Amenity Issues

The character of the area will not be significantly altered as a result of the proposed mine since mining and quarrying is a major source of employment in the area, both locally and regionally. However, the mine will nevertheless cause a cumulative affect on the residences of Newnes Junction, particularly from increased noise and general activity at the site. Although some visual screening is available between the mine and the residences, the operation will be visible from elevated vantage points.

The development may also have a negative affect on property values of Newnes Junction however, this effect would not extend to other residential areas not directly affected by the development such as Clarence Village. To mitigate against loss of property value within Newnes Junction, the proponent is prepared to purchase affected residences for a negotiated value which assumes the kaolin mine was not operational. The price would include relocation costs, however, should residences take up the offer but do not wish to move from the area, they will be allowed to continue to reside for a nominal rent.

There may also be some localised effects due to construction activities but these will be limited in nature, and mitigation measures will be employed to minimise these as far as possible. Specifically, a separate construction access road will be developed along a disused track running adjacent to the Clarence Rail Loop which will avoid using the main road in Newnes Junction to bring equipment onto the site.

As requested by residents in Newnes Junction, access to the National Park via the proposed mine site will be established at the southern end of the site. The access will be maintained and will be fenced to ensure the safety of those using it.

7.6.1 Conclusion

From the above discussions, it can be concluded that with the adoption of mitigation measures including the offer of purchase of affected residences in Newnes Junction, socio-economic impacts of the proposed kaolin mine can be mitigated.

7.7 Assessment in Terms of Ecologically Sustainable Development

Ecologically sustainable development (ESD) may be regarded as development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It calls for a balance between conservation and development and is related to using resources in a manner that provides quality of life, equity, biodiversity and maintenance of ecological processes.

Sustainability is essentially about developing a system which is not self-destructive and does not take from the world's future, but which takes account of social, environmental and economic factors in the decision making process. By integrating conservation practices and principles into the development process, a sustainable balance can be achieved between environmental and economic objectives.

The Federal Government released the *National Strategy for Ecologically Sustainable Development* in December 1993. This strategy provided a goal and core objectives relating to ESD.

The Goal

- Development that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends.

The Core Objectives

- To enhance individual and community well being and welfare by following a path of economic development that safeguards the welfare of future generations.
- To provide for equity within and between generations.
- To protect biological diversity and maintain essential ecological processes and life-support systems.

The well being of our current community is associated with the ability to mine resources for manufacturing of numerous products and construction purposes. In order to gain the associated benefits, these resources must be removed from the ground. The current productivity and land uses of the area will not be significantly altered and the land will be available following rehabilitation for the use of future generations. Biological diversity will be maintained, as will essential ecological processes and life-support systems in the area. Although the site contains faunal habitat it is not critical habitat for rare or endangered species.

The proposal effectively takes into account long and short-term considerations regarding economic, environmental, social and equity considerations. The proposed timing of the works is designed to ensure that valuable resources currently on site are not wastefully managed. The proposal will contribute to a strong, growing and diversified economy that enhances the capacity for environmental protection. The well being of the current generation will be enhanced through the development of this resource.

The extraction of kaolin will be carried out in an environmentally sound manner and will help to maintain and enhance Australia's international competitiveness, providing for the well-being of both existing and future generations. The sand component will be used within the Greater Sydney Region, which will increasingly experience a shortfall of construction sand as well as industrial grade silica sand.

7.7.1 Precautionary Principle

The precautionary principle, as defined by the EP&A Regulation (incorporating the *Intergovernmental Agreement on the Environment and National Strategy for Ecologically Sustainable Development* (Commonwealth of Australia, 1992) definition), dictates:

.....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.

The precautionary principle is based on the premise that many of the potential benefits of the natural environment may be unknown and it is prudent and ethical to keep options open for current and future generations (DUAP, 1997).

Application of the precautionary principle to mining proposals involves ensuring that there has been careful evaluation of the proposal and that decision making for the

proposal has been predictable and transparent. This EIS documents the extensive and careful evaluation of project components. Detailed assessment of all potential impacts and necessary management procedures has been conducted and is also comprehensively documented in this EIS.

The kaolin mine proposal has integrated the precautionary principle in the operation, along with adopting mitigation measures to prevent significant environmental degradation associated with the project.

The studies undertaken prior to and during the preparation of this EIS have not indicated any threats of serious or irreversible environmental damage. However, where risk of potential degradation has been identified, mitigation measures have been developed to ensure that significant adverse impacts do not occur. Similarly, the topography following mining will be different to the existing topography of the site but rehabilitation plans have been developed to ensure that the area is revegetated with native species indigenous to the local area. Consistent with the requirements of the precautionary principle, the mitigation measures incorporated into the proposed development form an integral component of the operation.

7.7.2 Intergenerational Equity

Under the EP&A Regulation, the principle of intergenerational equity requires:

...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.

The Rio Declaration on Environment and Development (Agenda 21) also adopted the principle that:

...the right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations.

The principle of intergenerational equity identifies a need to ensure that the requirements of the present generation can be met without precluding options for future generations. The mining project will not prejudice future use of the land in the area nor affect the landuse of adjacent areas.

Mitigation measures to ensure that the environmental impacts associated with the operation are minimised are also required under the principle of intergenerational equity. Protection of the air, water, biological and noise environment of the area will contribute to meeting the requirements of intergenerational equity, protecting the quality of the environment for both the existing and future generations. Such mitigation measures will help ensure that the land following mining activities will be left in a manner that enables other land uses to be carried out.

A key objective of the development will be overall project management and investment in plant and equipment that minimises pollution and waste and is efficient. Where possible, recyclable materials will be used in the operation and employees will be educated regarding waste minimisation, re-use and recycling

NKPL will develop an Environmental Management System based on ISO 14,000 for the kaolin mine. Once implemented the system will assist in maintaining current best practice in environmental management in accordance with responsible environmental practice.

7.7.3 Conservation of Biological Diversity and Ecological Integrity

There is a need to maintain the biological diversity and ecological integrity of the region within which the operation is located. Conservation of ecological integrity requires that natural processes in the area continue to function. The proposed development incorporates measures to minimise potential impacts on vegetation communities and habitat value. The nearby Blue Mountains National Park/World Heritage Area and Wollangambe Wilderness Area are located to the east of the site will not be significantly affected by the proposed development.

Rehabilitation initiatives and stringent water management controls that form part of the project will also assist in maintaining the biological diversity and ecological integrity of the area.

A range of specific management initiatives have been proposed to minimise the disturbance to existing natural resources of the site. These and other measures discussed in the EIS will assist in conservation of ecological integrity.

7.7.4 Improved Valuation and Pricing of Environmental Resources

The goal of improved valuation of natural capital has been included in Agenda 21 of Australia's Intergovenmental Agreement on the Environment. The principle of improved valuation and pricing refers to the need ot determine proper values of services provided by the natural environment.

The proposed operation improves the valuation and pricing of the resources on the Newnes Plateau by:

- optimising available use of the resource and minimising resource sterilisation;
- allowing a valuable resource to be mined without permanent degradation of existing environmental resources;
- using existing transport facilities to transport product to a processing site and then to existing markets;
- cost effective use of a potential resource that has been marked for development. The separation of the kaolin from the insitu friable sandstone significantly increases the value of the resource.