GRECH PLANNERS

# Submission to Department of Planning

## Proposed National Ceramic Industries Australia Expansion

## Project Application No MP09_0006

Prepared for

Heritage Green Residential Estate Pty Ltd

August 2010

Project No 10027

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**Cover Photograph**: Taken from the western side of the mound on the Heritage Green site near to the boundary with the NCIA site (2009).



## Document history and status

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# 1.0 INTRODUCTION

## 1.1 General

This submission has been prepared in relation to a Major Project Application (MP09_006) which has been submitted to the Minister for Planning (the Minister) for consideration by National Ceramic Industries Australia (NCIA) pursuant to Part 3A of the Environmental Planning and Assessment Act 1979 (the Act).

The Department of Planning (DoP) placed the application on public exhibition between 15 July and 18 August 2010 and invited submissions from interested parties.

## 1.2 Commission

Grech Planners (GP) was engaged by the Heritage Green Residential Estate Pty Ltd (part of the McCloy Group) to review the Project Application together with specialist consultants to determine whether the proposal was acceptable and if there was a basis to make a submission. Having reviewed the application it was concluded that there are significant issues associated with the proposal and that a submission should be made.

GP has prepared this submission in conjunction with a team of specialist consultants. Their reports are referred to and appended as relevant.

Heritage Green Residential Estate Pty Ltd is the owner of the adjoining property known as Heritage Green located to the east of the development site.

## 1.3 Purpose of this Report

The purpose of this submission is to identify the issues of concern arising from our review of the documents which comprise the Environmental Assessment.

Our review of the documentation accompanying the application reveals that:

- insufficient detail has been provided by the Proponent to fully assess the impacts of the proposal;
- the application fails to address the Director General's Requirements issued pursuant to Section 75F of the Act;
- potentially inappropriate / incorrect use of environmental criteria and other anomalies;
- unacceptable environmental impacts on adjoining properties and in particular, the Heritage Green site; and
- **unless the proposal can be shown to have no adverse impact in adjoining residential area, it is prohibited development pursuant to Maitland LEP 1993, and the project application cannot be approved**.

The following sections of this report provide detailed comments with regard to the issues identified above, with reference to specialist reports which have been appended as appropriate.

## 1.4 Background to Heritage Green

The Heritage Green site is located in the Rutherford urban area and has an area in the order of 102 hectares. It directly adjoins the NCIA property to the south and west, as illustrated in ***Figure 1***.

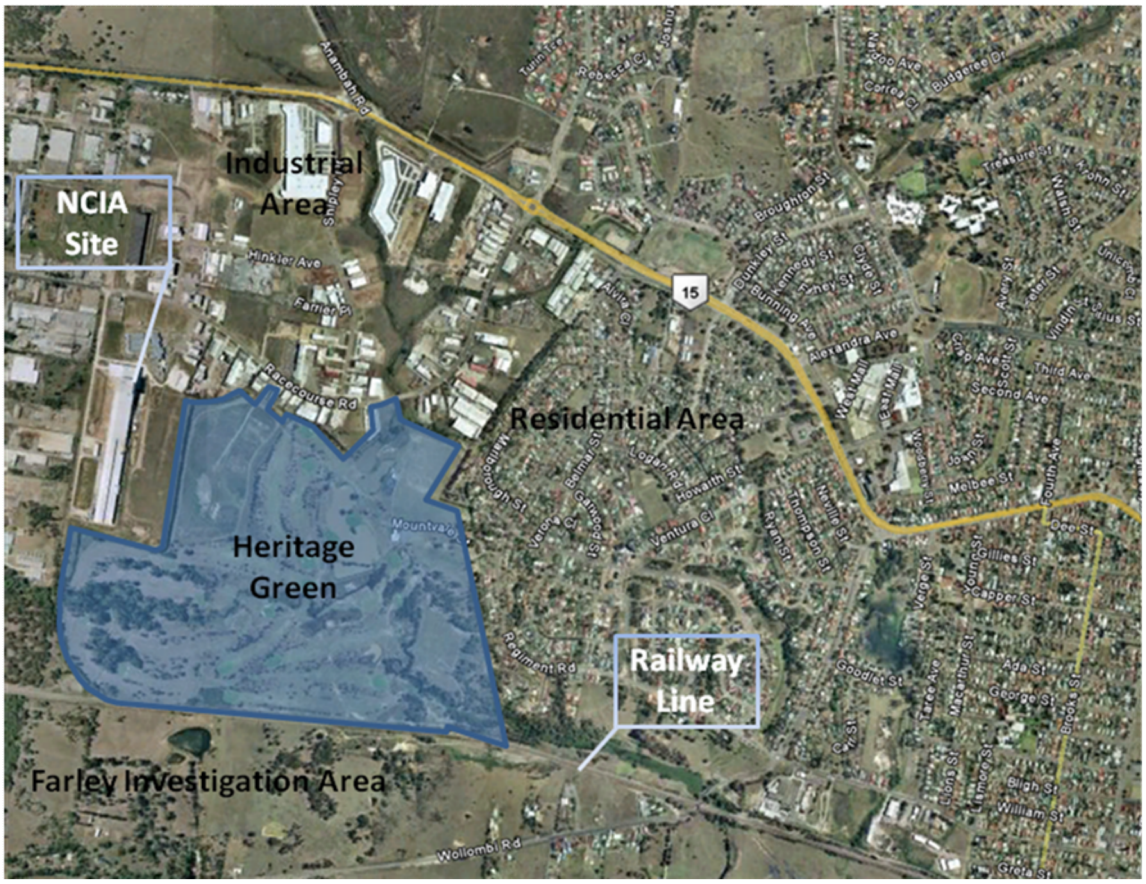


*Figure 1 – Site Context*

A large part of the site includes what was previously the Westside Golf Course. The Golf Course became economically unviable in the early 2000's and due to its urban context it was considered by Maitland City Council to be suitable for residential development. Consequently, Maitland Local Environmental Plan 1993 (Amendment No 75) was gazetted on 10 June 2005, to permit development of up to 450 dwellings and commercial uses on the site, in addition to various uses already permitted within the private recreation zone.

To facilitate the orderly redevelopment of the site, the McCloy Group acquired a number of contiguous properties to enable the rationalisation of land uses in the area and make provision for safe and efficient vehicular access. The acquisitions included land zoned for Residential and Industrial purposes, some of which was in Council ownership. The diagram at ***Figure 2*** illustrates the extent of the site and summarises the chronology of land acquisition.

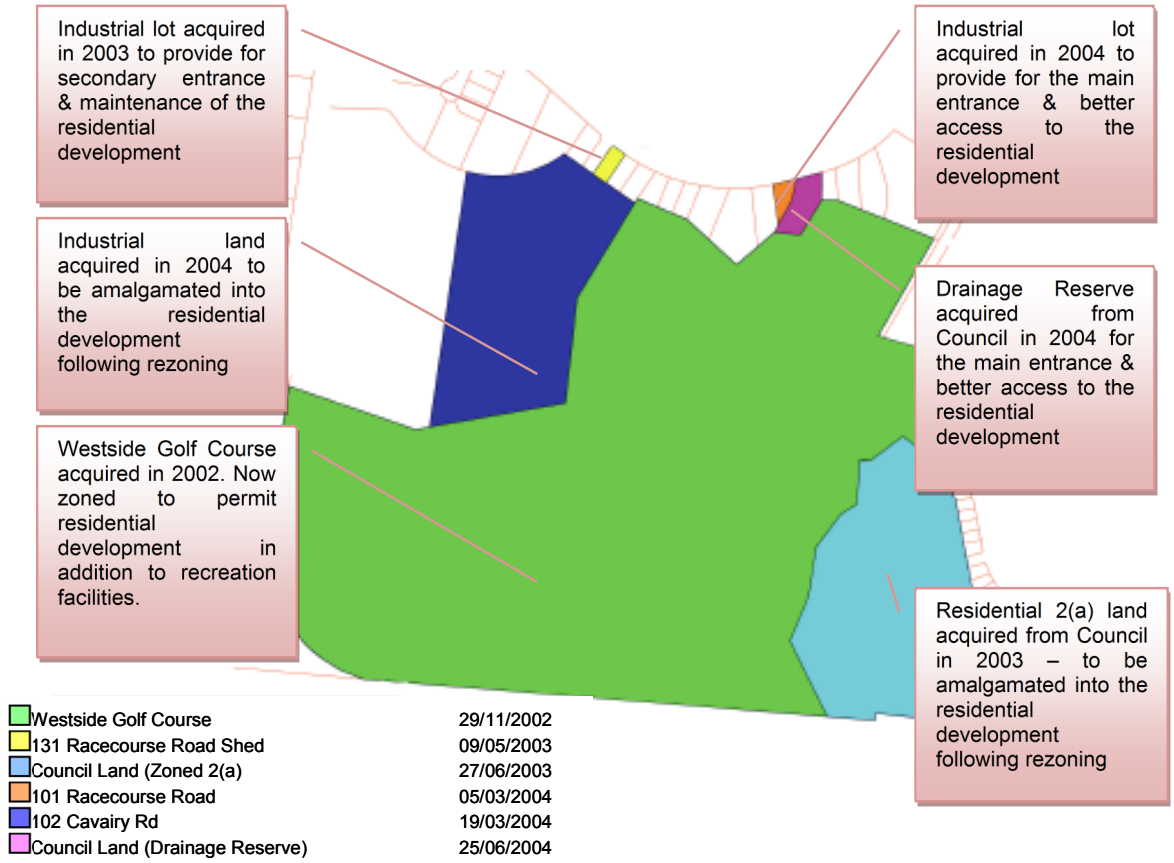


*Figure 2 Heritage Green Site – History of Land Acquisitions*

In accordance with clause 25 of the LEP, the range of permissible uses in the 6(b) zone is as follows:

> *Aerodrome; Agriculture; Animal Establishment;* ***Bed and Breakfast Accommodation****;* ***Camp or Caravan Sites****;* ***Child Care Centre****; Club; Communications Facility; Community Centre; Community Facility;* ***Dwelling House****;* ***Educational Establishment****; Entertainment Facility; Forestry; Home Activity;* ***Home Based Child Care Establishment****; Hotel; Market; Plant Nursery; Recreation Area; Recreation Facility; Refreshment Room; Road; Tavern;* ***Tourist Accommodation****; Utility Undertaking; Wetlands Conservation.* [Bold is our emphasis]

In addition to the above, Clause 52 of the LEP also allows for the development of "*not more than 450 dwellings, in a maximum of 6 community parcels"* and "*development for commercial purposes or retail purposes, or both"* on the subject land. The consent authority must be satisfied that the commercial or retail component of the proposed development is required as an integral part of a major tourist recreation facility, being a golf course. Subdivision is a separate activity which is permissible with consent pursuant to Clause 8 of the LEP.

The above provisions of Clause 52 were introduced by Amendment No. 75 to Maitland LEP 1993 was gazetted on 10 June 2005. Clause 52 permits the development of 450 dwellings and commercial uses on the site in addition to a range of uses already permissible in the 6(b) zoning of the site. The effect of the amendment was to rezone

those areas previously zoned Residential and Industrial to 6(b) Private Recreation, to rationalise the range of zones into the principal preceding zoning notwithstanding the intent was to allow for an integrated residential development.

The Heritage Green site is identified by the DoP in the current Metropolitan Development Program (MDP) as a "Major Site"[1] and indeed applicable planning controls implicitly identify that the site has the environmental capacity to yield in the order of 450 dwellings. The site has ready access to facilities and infrastructure to meet an escalating need for housing in the region.

In late 2008, the McCloy Group lodged a development application with Maitland City Council for subdivision of the Heritage Green site incorporating open space and recreation facilities and 441 community title lots (1 community association lot, 1 development lot and 439 neighbourhood lots for residential housing). This application has been the subject of various reviews by Council and the applicant, as is to be expected for a proposal of this scale.

The Heritage Green application is currently pending determination. The current development plan is depicted as ***Figure 3***.

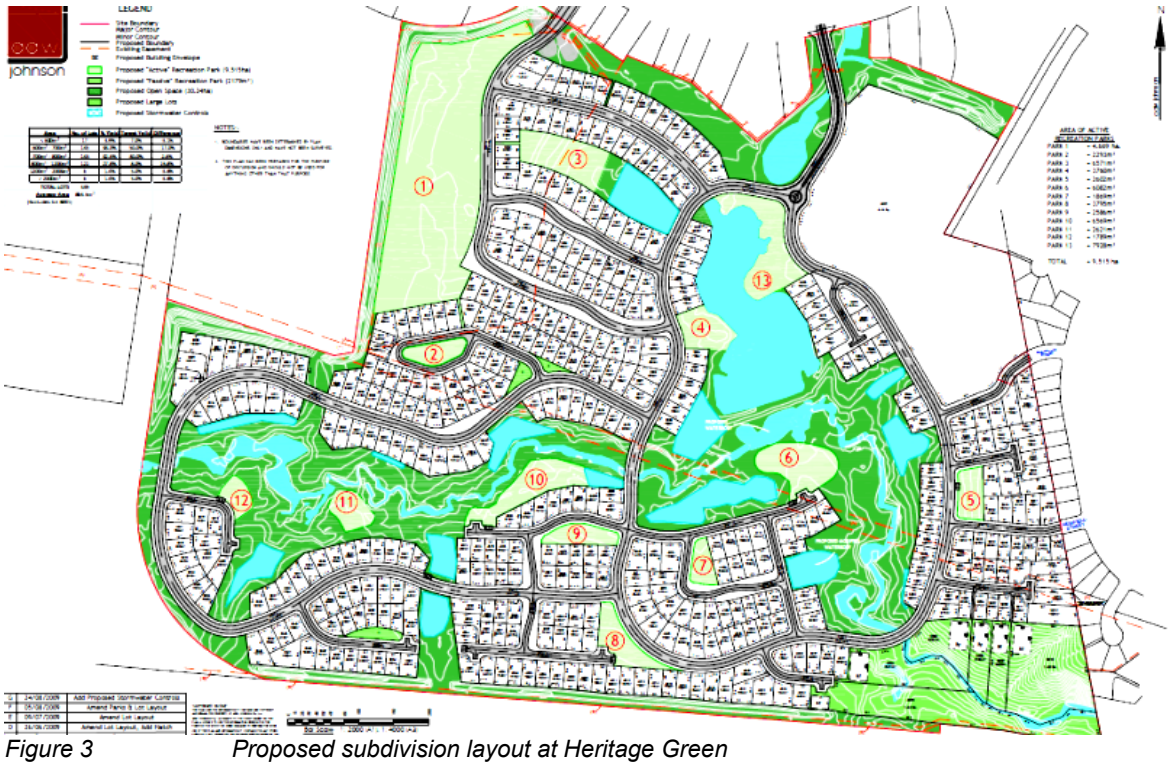

*Figure 3* *Proposed subdivision layout at Heritage Green*

During the public consultation process submissions were lodged on behalf of NCIA on the basis of the anticipated impact of possible future expanded operations of NCIA on the future residents of Heritage Green. The NCIA submission effectively sought the site to be sterilised as a buffer should their future expanded operations have non-compliant emissions. Notwithstanding the inappropriateness of such submissions in principle, the

1 MDP 2008-09 Report Residential Forecasts 2008 / 09 – 2017 / 18, Department of Planning (p.243)

Heritage Green proposal was amended to provide extensive buffer land adjacent to the NCIA site despite detailed assessments which concluded that this was not necessary.

## 1.5 The NCIA Site

NCIA is a 70% owned subsidiary of Ceramic Industries Limited (CIL) (South Africa). The remaining 27.5% is Australian owned and 2.5% is Italian owned.

NCIA acquired the subject site at Racecourse Road in 2002 and obtained consent from the Minister for Planning in 2003 for the construction and operation of the existing ceramic tile manufacturing facility.

The integrated residential development of Heritage Green site has been known since the time of the first stage of the NCIA development. We are instructed that during construction, arrangements were reached between the McCloy Group and NCIA, resulting in excess spoil from the NCIA development being used for construction of landscaped acoustic mounds. These mounds are in excess of 4m in height and now incorporate mature screen vegetation.

The existing NCIA facility has approval to operate up to 4 production lines, to be implemented in stages. To date only half the approved development has been constructed (ie. two production lines), which produces in the order of 6.4 million square metres of tiles per annum. The original approval provided that upon completion of the other two approved production lines, the facility could generate some 12.8 million square metres per annum.

The existing facility is contained within a building which is 488m long, 80m wide and up to 28m high. The eastern part of the site is currently vacant.

The tile manufacturing facility is an exceptionally large, heavy industrial development that will be constructed over a number of years with the potential for construction and operational impacts upon surrounding existing and future residential areas.

The current proposal seeks a new approval for the overall development and specifically, an additional four (4) production lines (known as Stages 5 – 8). The project plan Environmental Assessment (EA) submits that the expanded facility will result in a total production rate of 25.6 million square metres of tiles per annum (more than the twice existing production capacity). The Proponent has indicated its willingness to surrender the existing consent issued by the Minister in 2003 and operate under any approval issued in respect of the current Major Project Application.

The consent granted by the Minister for Planning on 2 July 2003 in respect of DA 449-12-2002-I for Stages 1 to 4 was issued subject to compliance with a range of environmental performance conditions in terms of air and water quality, noise and waste. In addition, the consent imposed stringent requirements for monitoring air quality, meteorological conditions and noise, as well as regular auditing of performance.

NCIA is required to prepare an Annual Environmental Management Report (AEMR) to address the environmental compliance and performance of the facility in relation to the conditions of the existing approval and the Environment Protection Licence (EPL) No. 11956 issued by the Department of Environment, Climate Change and Water (DECCW).

The existing consent stipulates a stringent feed-forward / feedback mechanism to confirm the air emissions performance of the facility at each stage (feedback), and to use established monitoring data to demonstrate acceptable air emissions performance prior to the progression to each subsequent stage of the facility (feed-forward).

Based on our review of the Independent Environmental Audits for the years 2003/04, 2004/05, 2005/06, 2006/07, 2007/08 and 2008/09, it is apparent that the facility has a record of poor environmental performance against the conditions of the development consent and the associated Environmental Licences. This aspect is discussed further later in this submission.

The EA seeks to eliminate the requirement to apply the feed-forward / feedback mechanism to the proposed expansion on the basis of the facility's demonstrated operational performance. We are of the view that the size and the consequent potential impacts of a development of this nature, together with the past questionable environmental performance of the facility, warrants a careful and thorough assessment and consideration of the potential impacts upon the existing and future surrounding Rutherford community.

# 2.0 ISSUES

## 2.1 General

### 2.1.1 Description of the Existing Environment

No topographic detail is provided in the form of a site survey. In view of the significant size of the proposed building (almost 500 metres long), a detailed contour plan is essential to understanding the extent of cut and fill required, visual impacts and in assessing the areas required for site drainage.

As described in later sections of this report, the Proponent has failed in its obligation to consult with the nearest (major) land owner and as a result has not adequately described the existing or future conditions on the Heritage Green site.

### 2.1.2 Description of the Proposed Development

The application does not provide sufficiently detailed plans of the proposal to enable a competent assessment of the potential impacts of the development. In particular the following is considered necessary prior to enabling the consent authority to undertake a proper assessment and meaningful public consultation to ensue:

- a detailed site survey, including topographic details;
- appropriately scaled architectural drawings;
- details of bulk earthworks, erosion and sedimentation controls;
- a detailed landscape plan which illustrates proposed treatments at the boundary, particularly at the interface with the adjoining Heritage Green site;
- stormwater management details;
- description of staging and how and when this is to be implemented;

We note that the DGRs (page 3) require "*plans of any proposed building works*". The plan documentation submitted as part of the Environmental Assessment is considerably less than that which would normally be required by Maitland Council for standard industrial development.

We contend that the documentation prepared as part of the EA for the proposed expansion of the NCIA facility as identified in this submission is insufficiently detailed to make an informed assessment and subsequent determination of the Major Project Application. Notwithstanding, from the information submitted significant obvious inadequacies with the proposal can be identified as discussed below.

## 2.2 Director General's Requirements

The Director General's Requirements (DGRs) for this project were issued on 25 February 2009 with a compilation of the Department of Planning's requirements and any issues / matters raised by other government departments and statutory authorities.

In accordance with Division 2 of Part 3A of the EPA Act, the Proponent is required to address each of the matters identified in the DGR's in its Environmental Assessment.

The Environmental Assessment fails to fully address all the matters specified in the DGR's, as summarised in the following table and discussed further below.

| DGR Ref: | DGR Requirement | Comment |
|---|---|---|
| General Requirements | The EA **must** include a **detailed** description of the project, **including** plans of any proposed building works. | • Detailed plans of proposed works omitted |
| | A detailed assessment of the key issues....which includes: a description of the existing environment; | • Detailed description of existing environment omitted. |
| | A detailed description of the need for the project, alternatives considered, including justification on economic, social and environmental grounds. | • Justification for the need for the project has not been adequately addressed or demonstrated.<br>• Existing development has reached only 50% of production capacity (2 0f 4 lines).<br>• The published NCIA Annual Report states production levels which appear to exceed current approved production capacity and meet future production needs submitted within EA. |
| | A description of the measures that would be implemented to avoid, minimise, mitigate, rehabilitate/remediate, monitor and/or offset the potential impacts of the project, including detailed contingency plans for managing any potential significant risks to the environment | • The EA fails to adequately address the means of mitigating the environmental impacts (noise, emissions and visual).<br>• If unable to ensure no adverse impact in adjoining residential areas, the project application is prohibited development pursuant to Maitland LEP 1993, and cannot be approved. |
| Key Issues | Noise & Vibration: Impact of | • Assessment inadequate particularly in |

| | | |
|---|---|---|
| | the proposed development to sensitive receptors (both current and proposed) | regard to proposed receptors (future residential development within Heritage Green). |
| | Air Quality and Odour: Impact of the proposed development to sensitive receptors (both current and proposed) | • Assessment inadequate particularly in regard to proposed receptors (future residential within Heritage Green). |
| | Traffic & Parking | No justification provided in relation to:<br>• Employee density, including details of shift overlap periods when the demand for on-site parking is higher.<br>• The possible need for (and the space requirements associated with) the provision of additional on-site parking as the result of incremental intensification by changes in future operations (or use) of the facility. |
| | Assess the visual impact | • Inadequate visual assessment particularly with regard to the future residential areas within the Heritage Green site.<br>• No landscape plan. |
| | Greenhouse Gas and Energy Efficiency: demonstrate the proposal is energy efficient. | • No consequential energy efficiency measures proposed. |
| | Soils and Water | • Insufficient detail provided to demonstrate adequate area available on-site to provide stormwater controls.<br>• No erosion and sediment controls.<br>• No evaluation of the potential for rainwater harvesting / recycling. |
| | Hazards & Risks | • The development is "potentially offensive" and will need to employ mitigation measures in order to reduce or minimise its impact on the adjoining land uses and on the likely future development. This is core to the principle of impact containment which has been implicitly rejected by the proponent. The resultant design of proposal is consequentially approached in contravention to the DGRs. |
| Consultation | During the preparation of the EA consult with....*affected land owners*. | • Consultation by applicant not undertaken with Heritage Green land owner. |

In our opinion, the Environmental Assessment has not adequately addressed the matters stipulated in the DGR's which is a requirement under the Act and any consent issued on the basis of this information could be deemed invalid.

## 2.3 Consultation

The DGRs require the Proponent to consult with "*the relevant local, State or Commonwealth Government authorities, service providers, community groups or **affected landowners***." [Bold is our emphasis]

Section 6.3 of the EA describes the extent of community consultation undertaken by the Proponent which included:

- hand delivery (on 20 May 2009) of a description of the proposal and an invitation to comment to "approximately 100 houses in proximity to the existing facility";
- surrounding industrial neighbours in the Rutherford Industrial Estate and relevant agencies and other stakeholders on 23 and 24 June 2009.

The EA states that no submissions were received from the residential community or surrounding industrial neighbours. In our view the evidence reflects that the consultation said to have been undertaken was disingenuous and consequently non-compliant with the intent and substance of the DGRs and the specific objects of the Act.

The Proponent failed to consult with the McCloy Group, despite numerous attempts on the part of executives of the McCloy Group to contact the CEO of NCIA by telephone as well as a written invitation to participate in discussions about the proposed expansion of the tile manufacturing facility. A copy of the correspondence from the McCloy Group is included as **Appendix A**.

The lack of consultation with the largest (and potentially most affected) adjoining landowner is contrary to the DGR's for the project and represents a fundamental flaw in the Environmental Assessment. Either an actual failure or constructive failure to undertake the required consultation would constitute a failure to perform in accordance with the DGRs. As confirmed by advice obtained from Senior Counsel by the McCloy Group, in such a situation the grant of consent to the Project Application would be flawed.

It is essential that prior to any further assessment of the application being undertaken by the DoP, the Proponent be required to engage in meaningful consultation with the McCloy Group to achieve an acceptable environmental outcome in relation to the likely impacts on the development potential on the adjoining site. This process and outcome is explicitly sought by the DGRs.

## 2.4 Need for the Project

The development consent issued in respect of DA 449-12-2002-I granted approval to the construction of the building in two stages and the building fitout in four stages, including:

> *Installation, commissioning and operation of one spray drier, one clay mill and two kilns with each kiln built at approximately 8 month intervals and the capacity*

> *to produce 3.2 million square metres of ceramic tiles each per annum (fitout stages 1 and 2).*
>
> *Installation, commissioning and operation of a second spray drier, second clay mill and two more kilns built at approximately 8 month intervals and the capacity to produce 3.2 million square metres of ceramic tiles each per annum (fitout stages 3 and 4).*

The implementation of this consent will yield a maximum annual production of 12.8 million m² (3.2 million m² / kiln). At the present time, only two of the four approved production lines are operational and it is noted that Line 2 has only been operational since August 2009.

Section 3 of the EA discusses the Project Need and Alternatives and states (pg. 13) that [bold is our emphasis]:

> *"The purpose of this project is to increase ceramic tile manufacturing output by 12.8 million m² per annum. Total manufacturing output would increase from the* ***approved maximum*** *of 12.8 million $m^2$ per annum to 25.6 million $m^2$ per annum."*

Further pg. 14 of the EA states:

> *"Since the commencement of operations in 2004 NCIA has produced approximately 3.2 million $m^2$ per annum and from August 2009 have been capable of producing up to 6.4 million $m^2$ per annum. It appears that demand for ceramic tiles in Australia is headed back to 2004 levels and could be in the vicinity of 36 million $m^2$ in 2010."*

This appears to be a direct contradiction of the information presented in the parent company's (Ceramic Industries Limited) Annual Report for the 2009 Financial Year, which states that the total production for its Australian ceramic tile manufacturing business (NCIA) for the 2009 financial year was 10.2 million $m^2$, compared with 14.7 million $m^2$ in 2008. We note that the NCIA web site states that "*our manufacturing plant is located in Rutherford in the NSW Hunter Valley*", so that it appears that the entire 14.7 million $m^2$ has been produced at the Rutherford facility.

This clearly brings into question the purported need for the proposed expansion. It should be noted that in 2008 only one production line and kiln was in operation and according to the annual report, it produced 14.7 million $m^2$ of tiles, some four and a half times more than the 3.2 million $m^2$ allowed under the original development consent.

Based on these figures, if Stages 1 – 4 were brought into operation, the existing **approved** facility could apparently produce somewhere in the vicinity of 58.8 million $m^2$ per annum. The current application seeks approval for an expansion of the operation to enable maximum production capacity of 25.6 million $m^2$ per annum.

Prior to any further consideration of this application the Proponent should be requested to substantiate and fully justify the need for this project. Furthermore, the production figures announced by NCIA within their Annual Report appear to be a clear breach of the development consent, which allows for a maximum production of 3.2 million $m^2$ per annum per kiln.

## 2.5 Potential Land Use Conflicts

It is a generally accepted principle (and as set out in SEPP 33, Maitland LEP 1993 and other guidelines) that individual industrial developments are required to take all reasonable and feasible measures to prevent or minimise emissions from their premises. This entails not only compliance with all applicable environmental protection criteria but also the adoption of best practice measures for prevention or minimisation of adverse environmental impacts.

It is expected that adverse environmental impacts should not extend beyond the boundary of a particular industrial site, to the extent that this would unacceptably impact any other existing or lawfully potential land use. As confirmed within legal advice obtained by the McCloy Group from Senior Counsel, the impact of the proposal on neighbouring land must be considered, and if the impact cannot be properly mitigated, then it should be refused.

As indicated previously in this submission, the McCloy Group has made strategic acquisitions of contiguous parcels of land since purchasing the former Golf Course in 2002, all of which have subsequently been consolidated and rezoned by Council to permit residential development. One of these was an 11.88ha industrially zoned property located immediately to the east of and sharing a common boundary with the NCIA site (shown dark blue on *Figure 2*).

The amended subdivision layout for the Heritage Green site submitted to Council for consideration in late 2009 (refer *Figure 3*) shows residential development has been largely excluded from this part of the site to provide a buffer to the industrial estate. In addition, and in cooperation with NCIA, the McCloy Group has installed a 4m high landscaped mound along the length of the common boundary, utilising spoil from the NCIA site.

As demonstrated above, the McCloy Group has proactively employed measures to mitigate impacts associated with the NCIA development. The necessity for these measures do not arise as a consequence of the Heritage Green development proposal and have the effect of sterilising from residential use a part of the site which would otherwise be considered to have high amenity value.

The layout for the Heritage Green development provides a responsible response to the site opportunities and constraints and the statutory planning context. This is achieved by providing substantial open space and recreational facilities distributed in a manner sympathetic to the physical characteristics of the land, and integrating residential development in a manner which optimises the amenity of future residents and the broader community by providing for the orderly and economic development of the site.

In October 2009 NCIA and others made representations to Council in respect of the 2009 DA for Heritage Green which raised concern about the potential land use conflict issue. The submissions cited a range of "separation guidelines" prepared by various regulatory authorities from other states which they suggest should be applied when a consent authority considers potential land use conflict. These include:

- *Odour Separation Distance Guidelines* (March 2008) prepared by the Clean Air Society of Australia and New Zealand;
- The Victorian Environment Protection Authority's *Recommended Buffer Distances for Industrial Residential Air Emissions* (July 1990);
- The South Australian Environment Protection Authority's *Guidelines for Separation Distances* (December 2007);

- The *Victoria Planning Scheme – Uses with Adverse Amenity Potential*; and
- The Western Australian EPA's *Separation Distances between Industrial and Sensitive Land Uses* (June 2005).

NCIA submitted that the Heritage Green proposal was inappropriate having regard to inconsistency with the above separation guidelines. In our view if these guidelines were to be applied they would be relevant to the expansion of the NCIA operations (being the potential source of pollution emissions) and not Heritage Green or existing residential areas, being potential receptors. Our view is based on the intent expressed by the guideline documents, is consistent with the planning principle discussed above and is legally founded based on advice received by the McCloy Group.

The Minister is required to assess this proposal having regard to the relevant planning controls and standards applicable in NSW as opposed to selectively referencing standards from other states. However it is noted that the Victorian and Western Australian guidelines place responsibility with the industrial activity to contain adverse environmental impacts within the boundary of their particular site.

Clause 52.10 of the Victoria Planning Scheme – Uses with Adverse Amenity Potential states [bold is our emphasis]:

> *"The **threshold distance referred to in the table to this clause is the minimum distance from any part of the land of the proposed use or buildings and works** to land (not a road) in a residential zone, Business 5 Zone, Capital City Zone or Docklands Zone, land used for a hospital or an education centre or land in a Public Acquisition Overlay to be acquired for a hospital or an education centre."*

Clause 52.10 also states that the purpose of this document is:

> *"To define those types of industries and warehouses which if not appropriately designed and located may cause offence or unacceptable risk to the neighbourhood."*

The Western Australian EPA's *Guidance for the Assessment of Environmental Factors – Separation Distances between Industrial and Sensitive Land Uses* states that [bold is our emphasis]:

> *"In line with the requirements of the EP Act, it is necessary for individual industrial developers to take all reasonable and practicable measures to prevent or minimise emissions from their premises. **It is generally expected that, through appropriate site layout, design of facilities and the implementation of engineering and process controls, emissions from an individual land use can be prevented from causing an adverse environmental impact beyond the boundaries of the particular site or beyond the boundaries of an industrial estate.**"*

The NSW Department of Environment Climate Change and Water's (DECCW) *Technical Framework: Assessment and Management of Odour from Stationary Sources in NSW* (November 2006) states that:

> *"Sites should be sufficiently large so that an adequate separation distance to sensitive land uses can be maintained … the operator of an activity that emits*

*odour must ultimately be responsible for managing and minimising any impacts of the operation beyond its boundary."*[2]

We are of the view that the developers of the Heritage Green site have responsibly acknowledged the proximity of the existing NCIA facility. In the careful design of the 2009 Masterplan, the proponents have provided a reasonable physical buffer / separation to mitigate predominantly visual, acoustic and air quality impacts and have located less sensitive land uses at the interface with the industrial zone, despite the obligation for impact abatement lying wholly with NCIA.

Notwithstanding NCIA's inconsistent reliance on "separation guidelines", we are of the view the application of nominal buffers or separation distances is a crude planning tool that can result in unnecessary sterilisation of land or in some cases, an inadequate degrees of amelioration. A more rigorous environmental assessment can identify reasonable and feasible amelioration measures than can be employed by NCIA to ensure the acceptable containment of impacts.

It is therefore imperative that should the project application be permitted to proceed further within the assessment process, then it must be substantially reviewed and modified to provide environmental monitoring and mitigation measures to prevent any adverse impacts on surrounding residential areas associated with noise, odour, air and water emissions and light spill generated by the tile manufacturing operation. This essential to the acceptability of the proposal as required by the DGRs, the LEP, accepted planning principles, the overriding EPA legislation and legal precedent. Should further assessment indicate that additional separation distances or mitigation measures are required, then this needs to be satisfied within the NCIA site as contemplated by the above guidelines.

## 2.6 Statutory Planning Considerations

### 2.6.1 Objects of the Act

The application is contrary to and fails to specifically address certain objects of the Environmental Planning and Assessment Act 1979 (shown in ***bold*** below) which are:

*(a) to encourage:*

- *(i) the proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages for the purpose of promoting the social and economic welfare of the community and a better environment,*
- ***(ii) the promotion and co-ordination of the orderly and economic use and development of land,***
- *(iii) the protection, provision and co-ordination of communication and utility services,*
- *(iv) the provision of land for public purposes,*
- *(v) the provision and co-ordination of community services and facilities, and*
- *(vi) **the protection of the environment**, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats, and*
- *(vii) ecologically sustainable development, and*
- *(viii) the provision and maintenance of affordable housing, and*

2 Technical Framework: Assessment and Management of Odour from Stationary Sources in NSW, DECCW November 2006; Section 1.2 p.5

*(b) to promote the sharing of the responsibility for environmental planning between the different levels of government in the State, and*

***(c) to provide increased opportunity for public involvement and participation in environmental planning and assessment.***

The primary environmental impacts associated with the proposed expansion of the tile manufacturing facility relate to air quality and noise emissions. The information presented in the Environmental Assessment seems to suggest that it is largely the responsibility of the Heritage Green developer to mitigate the impacts of the expansion of the NCIA facility "by sensitive siting and design of any future development within the Heritage Green site".

The proposed development is contrary to point (ii) above insofar as it will adversely affect the likely achievable residential yield on the Heritage Green site and therefore the ability to realise the development potential of that land, thereby inhibiting the economic use and development of land. We note that the Heritage Green site is identified as a major site within the Government's MDP and with development consent pending will provide an important contribution to meeting housing demand in the region.

Furthermore, the scale of the proposed NCIA expansion (and its associated emissions) will use up a large proportion of thresholds for noise and other emissions available to other industrial users. The NCIA proposal will therefore potentially inhibit the ability of the industrial area to realise future economic development.

In relation to point (vi) above, it is a generally accepted principle that individual industrial developments are required to take all reasonable and feasible measures to prevent or minimise emissions from their premises and protect the environment. This entails not only compliance with all applicable environmental protection criteria but also the adoption of best practice measures for prevention or minimisation of adverse environmental impacts. Legal advice obtained by the McCloy Group from Senior Counsel confirms that this principle is legally founded and an imperative to the manner in which the project is assessed and determined.

In relation to point (c) above, the Proponent has failed to meet its obligations for consultation with the adjoining property owner and to enable their active participation in the preparation of the Environmental Assessment as discussed in section 2.3.

### 2.6.2 Maitland LEP 1993

The NCIA site is zoned General Industrial 4(a) under the provisions of Maitland LEP 1993 which provides for a range of industrial activities. Section 5.1.1 of the EA addresses the provisions of the LEP and the permissibility of the proposed development. However, it fails to address the provisions of Clause 23(2), which provides a description of the zone as follows:

> *The 4(a) General Industrial zone caters for a range of industrial development. Traffic generating development is restricted along main roads. Premises of a commercial and retailing nature are limited in the industrial zone, however bulky goods retailing is allowed.* ***Industrial development is allowed only if it does not adversely affect adjacent residential areas***. [Bold is our emphasis]

As confirmed in legal advice to the McCloy Group there is legal precedent (*Council of Sutherland Shire v Bassett [1994] NSWLEC 15)* in which the then Chief Judge of the NSW Land and Environment Court states that permissible uses are interpreted in the context of the objectives and the description of the zone. A prohibition in the description will be applied to prohibit any use, despite its inclusion in a list of permissible uses or omission from a list of prohibited uses, as the case may be, if the prohibition in the description is activated.

In this instance, **the Department must consider the description and take into account if an industrial development "adversely affect(s) adjacent residential areas". If it does so, then it is prohibited.** The description does not specify the degree of affect, and consequently it must interpreted that any adverse affectation.

Consideration as to whether Heritage Green is a 'residential area' is relevant. "Residential area" is not defined. However the term is not used in the descriptions for residential zones. While Heritage Green is not zoned residential, substantial residential development is permitted on the site and therefore the site should be categorised as "residential". This interpretation would be consistent with the intent of the description. Such as purposive interpretation would be appropriate and is an approach taken by the court.

The various specialist reports which form part of the application identify the following off-site impacts associated with the proposed expansion:

- Particulate matter ($PM_{10}$) and hydrogen fluoride levels are predicted to be exceeded over the Heritage Green site;
- Predicted exceedances of $PM_{10}$ at sensitive receptors other than Heritage Green, but no predicted exceedances of hydrogen fluoride (HF) at any other sensitive receptors;
- The $PM_{10}$ levels exceed the recommended criteria in the 24 hour period at 9 of the 16 existing residential sites and also at the 3 boundary receptors. In addition, the receptors within the Heritage Green site also exceed the 24 hour emission requirements.
- In relation to Scenario 2 (proposed Stages 5-8), the EA states that the 24hour average GLC's for hydrogen fluoride are exceeded at Receptor 22 and the 90day average is exceeded at Receptors 1, 20, 21 and 22;
- Two areas (one of which is approx. 2km NW of the kiln stack and the other about 2.5km to the SE) have also been identified as part of the vegetation surveys undertaken by NCIA as being subject to visual HF impacts.
- The EA and review discussed in this report both determine that the Heritage Green site could in some way be adversely affected by noise. The EA noise assessment was reviewed revealing a number of deficiencies and incorrect application of criteria. The cumulative effect of these apparent errors and deficiencies is that the noise criteria are substantially above the noise limits imposed by the current Environment Protection Licence.
- The proposed development will have an adverse visual impact over a wide area of the Heritage Green site. These impacts are greater than suggested by the

EA. Existing consent requirements related to appearance of the development have not been met.

We contend that without the employment of appropriate ameliorative measures the proposal could adversely affect adjacent residential areas, including those which are zoned to permit residential development (Heritage Green). This has not been specifically or adequately addressed in the EA.

Having regard to the above, unless the externalities of the NCIA proposal are mitigated such that no adverse environmental impact would be imposed on the Heritage Green site and other adjacent residential areas, then the Minister has no power to approve the Project Application.

### 2.6.3 State Environmental Planning Policy No. 33

SEPP 33 is designed to ensure that in determining whether a development is a hazardous or offensive industry, any measures proposed to be employed to reduce the impact of the development are taken into account.

The Policy defines ***potentially hazardous industry*** as follows:

> *"means a development for the purposes of any industry which, if the development were to operate without employing any measures (including, for example, isolation from existing or likely future development on other land) to reduce or minimise its impact in the locality or on the existing or likely future development on other land, would pose a significant risk in relation to the locality:*
>
> *(a) to human health, life or property, or*
> *(b) to the biophysical environment,*
>
> *and includes a hazardous industry and a hazardous storage establishment."*

The proposed tile manufacturing operation includes the storage and handling of a number of hazardous materials including natural gas (fed via a pipeline to the factory) and diesel fuel (stored in a 5,000L capacity above ground tank within the existing factory building). A Hazard Analysis report forms part of the Environmental Assessment which indicates that the type and volume of these materials employed on the site do not exceed the threshold levels specified by SEPP 33[3] and on this basis, concludes that the activity does not constitute potentially hazardous industry or hazardous industry and therefore the relevant provisions of the SEPP do not apply in this context.

Under the provisions of the Policy, ***potentially offensive industry*** is defined as:

> *"a development for the purposes of an industry which, if the development were to operate without employing any measures (including, for example, isolation from existing or likely future development on other land) to reduce or minimise its impact in the locality or on the existing or likely future development on other land, would emit a polluting discharge (including for example, noise) in a manner which would have a significant adverse impact in the locality or on the existing or likely future development on other land, and includes an offensive industry and an offensive storage establishment."*

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3 Natural Gas stored on site in excess of $5m^3$; Diesel fuels are classed as C1 combustible liquids are not subject to SEPP 33; Oils are classified and C2 combustible liquids and are not subject to SEPP 33.

The definition of ***offensive industry*** is:

> *"a development for the purposes of an industry which, when the development is in operation and when all measures proposed to reduce or minimise its impact on the locality have been employed (including, for example, measures to isolate the development from existing or likely future development on other land in the locality), would emit a polluting discharge (including, for example, noise) in a manner which would have a significant adverse impact in the locality or on the existing or likely future development on other land in the locality."*

In ascertaining whether a proposal constitutes "potentially offensive industry" it must be determined whether, in the absence of safeguards, the proposal would emit a polluting discharge which would cause a significant level of offence.

The Department's Guidelines indicate that the minimum test to decide whether an industrial activity is "potentially offensive" is:

- Does the proposal require a licence under any pollution control legislation administered by the DECC or other public authority? If so, the proposal should be considered potentially offensive.
- If such a pollution control licence or approval is not required, does the proposal cause offence having regard to the sensitivity of the receiving environment? This will in many cases be a matter for judgement. Consent authorities are advised to consult with the DECC and take into account their views.

It is noted that the facility requires a licence from the Environment Protection Authority (EPA) under section 48 of the *Protection of the Environment Operations Act 1997* (POEO Act) because it is classed as a scheduled activity (Ceramic Works) under Schedule 1 of the POEO Act.

The statement included in Section 5.3.2 of the EA that the proposal is not considered offensive with respect to SEPP 33 is incorrect. We contend that the NCIA development is "potentially offensive" and will need to employ mitigation measures in order to reduce or minimise its impact on the adjoining land uses and on the likely future development. This is core to the principle of impact containment which has been implicitly rejected by the proponent. The resultant design of the proposal is consequentially approached in contravention to the DGRs. This also has the effect of rendering the project a prohibited development and unable to be approved.

As discussed below a more responsible design approach, that was compliant with the both the substance and intent of the DGRs would substantially address the issues raised in this submission. Such an approach is both feasible and required, and would allow for both the reasonable expansion of the NCIA operations and the future residential occupation of Heritage Green with no unacceptable impacts emanating from NCIA in isolation or cumulative with other land uses in the locality.

## 2.7 Environmental Impacts

### 2.7.1 Noise Impacts

The acoustic report prepared by Heggies Pty Ltd which forms part of the EA for the proposed development states:

> *"Noise emission predictions from the NCIA development indicate that there are some areas of the Heritage Green site that may be noise affected. The degree of*

*affectation will depend on the type of development proposed for different areas of the Heritage Green site."*

Renzo Tonin & Associates has reviewed the Heggies report in order to determine the likely impacts on the adjoining Heritage Green site and has identified a number of deficiencies and incorrect application of criteria, including:

- **Incorrect measurement of background noise levels**. In situations where an existing industry intends to expand its operations, the NSW DECCW Industrial Noise Policy has specific guidelines which require noise from that industry to be excluded from the noise measurement. The purpose of this requirement is to ensure that noise from the industry itself does not artificially raise the background noise levels which are used to derive the noise goals for the expanded development;
- **Inconsistency and unexplained use of different monitoring locations for the nearest sensitive receptor**. This makes direct comparisons of current and historical acoustic data difficult to compare and validate;
- **Noise contribution estimates from existing industry in the locality cannot be substantiated for the Evening and Night periods**;
- The Heggies report suggests that the acoustical environment in the general area falls in the "urban" category of residential receiver. This is defined as *an area with an acoustical environment that:*
  - *is dominated by 'urban hum' or industrial source noise*
  - *has through traffic with characteristically heavy and continuous traffic flows during peak periods*
  - *is near commercial districts or industrial districts*
  - *has any combination of the above,*

  *where 'urban hum' means the aggregate sound of many unidentifiable, mostly traffic related sound sources.*

  This is not considered to be characteristic of this area and a more appropriate descriptor would be "suburban" which is defined as *an area that has local traffic with characteristically intermittent traffic flows or with some limited commerce or industry. This area often has the following characteristics:*

  - *decreasing noise levels in the evening period (1800–2200); and/or*
  - *evening ambient noise levels defined by the natural environment and infrequent human activity.*

  The classification is important in establishing the applicable amenity criterion and therefore the extent of noise impact on the adjoining Heritage Green site. In our opinion **the use of the "urban" classification is not appropriate and the "suburban" classification should be adopted** which would necessitate the NCIA investigating all possible means of reducing its night time noise levels to 35dB(A);

The cumulative effect of these apparent errors and deficiencies is that the noise criteria are substantially above the noise limits imposed by the current Environment Protection Licence which stipulates the noise restrictions at various times of the day.

In the event of the application being approved, we are of the opinion that there is no logical reason to deviate from the current Environment Protection Licence noise limits.

NCIA should be required to adopt all reasonable and feasible means of reducing noise levels within the Heritage Green site. As a minimum, these measures would include:

a. construction of the proposed new factory building using tilt-up concrete slabs instead of steel sheeting;
b. thicker steel for the roof sheeting;
c. upgrading of the existing building in a similar manner;
d. bag-houses for the kiln stacks located inside the factory building;
e. noise reduction for dust extraction unit;
f. limitations on the opening of doors in the building, especially at night; and
g. application of appropriate industrial silencing techniques.

A copy of the Renzo Tonin & Associates report is included as **Appendix B** to this submission.

### 2.7.2 Air Quality Impacts

#### 2.7.2.1 General

Air quality is a significant issue for this project, particularly due to the proximity of the NCIA facility to the existing residential areas of Rutherford and the Heritage Green site which has the potential for significant residential development.

The consent issued in respect of Stages 1-4 of the NCIA facility recognised the potential for air quality impacts and imposed an appropriate package of controls to manage and monitor these impacts. To this end, very specific requirements in accordance with DECCW guidelines were imposed for pollutant discharge concentrations, total load discharges and stack discharge design requirements.

Furthermore, a strict monitoring regime for ambient air quality, discharge concentration and fluoride as well as requirements for point source and dispersion monitoring and an assessment air quality mitigation options was required.

The EA suggests that the existing monitoring station in the south eastern corner of the site will need to be removed (pg 57) as the footprint of the expanded facility impinges on its current site and "it would no longer be suitable as a location for ambient air and meteorological monitoring". The report indicates that NCIA will discuss with DECCW whether the monitoring station needs to be relocated or even eliminated from the site.

No further information in this regard is provided in the EA. However we are of the view that since the monitoring station was required for the first four stages of the manufacturing operation, the current proposal which is said to more than double the annual production output, should be required to reinstate / relocate the monitoring station and continue the stringent monitoring regime required under the previous approval.

PAE Holmes Pty Ltd has reviewed the Air Quality Assessment which forms part of the documentation submitted as part of the application. A copy of the Holmes report is included at **Appendix C** to this submission.

This review indicates that the general approach adopted by the Proponent's consultant is consistent with the DECCW approved methods. Modelling was undertaken for both the approved facility - four lines operating (Scenario 1) and also for the proposed expansion – total of eight lines operating (Scenario 2).

The model results demonstrated compliance with all air quality goals apart from particulate matter ($PM_{10}$) and hydrogen fluoride which were predicted to be exceeded over the Heritage Green site. There were also predicted exceedances of $PM_{10}$ at sensitive receptors other than Heritage Green, but no predicted exceedances of hydrogen fluoride (HF) at any other sensitive receptors.

#### 2.7.2.2 Particulate Matter

The modelling is based on ground level concentrations (GLC) of cumulative particulate matter, and the Proponent indicates that the high level of GLC's for Scenario 2 is the result of a high level of ambient particulates from other sources and that the contribution to $PM_{10}$ concentrations by the expanded NCIA facility will not be significant.

The EA (pg. 34) indicates that NCIA "*is continuing to investigate options to reduce its particulate and $PM_{10}$ emissions from its kilns as part of improvement plans for existing operations*", but fails to provide any detail as to the specific options to mitigate the increase in $PM_{10}$ GLC's which is indicative of increased particulate discharge from the stacks.

Of concern is the gradual increase in ground level concentrations of particulates in the Rutherford industrial area and environs, in particular the associated cumulative impacts. Whilst it is noted that the projected $PM_{10}$ contribution from the expanded NCIA facility is only relatively small, it is substantial enough to render 7 additional receptor locations (some of which are well within the boundaries of established residential areas) non-compliant with DECCW criteria.

In addition to the environmental impact on the residential receptors, this could also potentially inhibit the development of other industrial activities within the Rutherford industrial area because the increased and potentially non-complying $PM_{10}$ GLC's would be part of the background $PM_{10}$ for assessing air quality impacts of new development.

The documentation submitted as part of the EA only maps the Scenario 2 $PM_{10}$ GLC contours. Scenario 1 is not mapped and as a result it is difficult to ascertain the spatial difference between the impacts associated with the approved development and the proposed expansion to the facility.

The $PM_{10}$ levels exceed the recommended criteria in the 24 hour period at 9 of the 16 existing residential sites and also at the 3 boundary receptors. In addition, the receptors within the Heritage Green site also exceed the 24 hour emission requirements. Based on the principle of the polluter mitigating impacts at the boundary of their site, the Proponent should be required to demonstrate the measures to be implemented to reduce particular stack emissions with a view to limiting $PM_{10}$ 24hour average GLC exceedances to those nominated in the Scenario 1 modelling.

#### 2.7.2.3 Hydrogen Fluoride

Scenario 1 modelling indicates that the hydrogen fluoride (HG) emissions are within regulatory limits for all but the 90 day average, which is exceeded at Boundary Receptor and Residential Receptors 20, 21 and 22. In relation to Scenario 2, the EA states that the 24hour average GLC's for HF are exceeded at Receptor 22 and the 90day average is exceeded at Receptors 1, 20, 21 and 22. Two areas (one of which is approx. 2km NW of the kiln stack and the other about 2.5km to the SE) have also been identified as part of the vegetation surveys undertaken by NCIA as being subject to visual HF impacts.

It is essential that any consent issued in respect of this application and any subsequent Environment Protection Licence sets stringent benchmarks for HF emissions. It is noted that NCIA has implemented certain measures to improve air quality as described in the Independent Environmental Audits. However we contend that a process of continuous improvement to monitoring (both on-site and off-site) and the implementation of mitigation measures to ensure that the HF emission concentrations are controlled and kept below their licence requirements.

#### 2.7.2.4 Implications

The EA provides inadequate information, however it can be ascertained that the proposal has the potential to emit unsatisfactory levels of air pollution. This outcome is inconsistent with the principle of pollution containment. Further, the description of the General Industrial Zone at Clause 23(2) of Maitland LEP 1993 effectively prohibits industrial development unless it does not adversely affect adjacent residential areas. It is therefore recommended that the Proponent be required to provide further information and to implement all feasible means of mitigating the impacts associated with particulate matter and hydrogen fluoride emissions.

### 2.7.3 Soil and Water Management

The Environmental Assessment includes a Surface Water Assessment for the site which examines stormwater and process water issues. The report acknowledges that the proposed expansion will increase the quantum of impervious area and therefore increase the volume and peak flows of stormwater runoff.

It is noted that a "*conceptual stormwater management strategy*" has been designed to retard the peak flows and to achieve the required results, "conceptual mitigation measures" have been recommended in the form of additional wet detention basins, grass swales and rainwater storage tanks.

ADW Johnson has reviewed the aforementioned report and has indicates that it lacks sufficient detail which brings into doubt whether the potential impacts have been fully assessed. The deficiencies include:

- A general lack of stormwater management details;
- The footprint and size of the rainwater tanks is inconsistent with the text;
- No description of how cut to fill and elevation is accommodated within the site;
- Capacities of the detention basins are questionable and not substantiated.
- Insufficient detail is provided to demonstrate that there is sufficient physical area on the site for both the building footprint and the required stormwater controls;
- Lack of information regarding Surface Water, Erosion and Sedimentation Management has not been adequately addressed. There are generalised statements in the Environmental Assessment (Section 5.2.1) but there are no supporting plans to demonstrate that the length of grass swales of are of sufficient length or that the detention basins are of sufficient surface area and volume to meet the pollutant removal efficiencies quoted in the EA;. There is

no description of the installation and maintenance of the stormwater control infrastructure

A copy of the ADW Johnson report is included as **Appendix D**:

### 2.7.4 Visual Impacts

#### 2.7.4.1 General

The consent issued by the Minister in respect of the application for Stages 1-4 allowed for the removal of two stands of remnant vegetation on the NCIA site, adjacent to the southern and western property boundaries.

The approval was based on a landscape concept plan which was prepared by the Proponent to address the visual impacts of the proposal and would provide the basis for the detailed landscaping plan that would be prepared for implementation.

The assessment report prepared by the Department of Planning stated that:

> *The Applicant states that large canopy trees and dense shrubs would be planted around the perimeter of the facility, with the exception of designated easements. This would screen outside views, including those from nearby residential areas and reduce the scale of the building. Stormwater management features including swales, detention areas and nutrient ponds would be grassed and/or tree lined.*
>
> *It is noted in the EIS that external building construction materials would be coloured dull greys and dull grey-greens so that they blend into the surrounding environment in order to reduce the visual dominance of the building. A range of cladding materials and colours would be used to reduce the scale of the building and break up its monotony. The use of shiny materials that may cause reflection and glare would be minimised.*
>
> *…*
>
> *The Department notes that the ceramic tile manufacturing facility is, by necessity, a large building (approximately 38,000m2 gross floor area). The Department notes that the Applicant intends to use a range of cladding materials to provide visual interest and break up the monotony of the building. The Department is supportive of such measures to reduce the visual impact of the development.*

The existing NCIA development has not implemented required landscaping. The "dull greys and dull grey-greens" that were to be used in the external materials with the express purpose of blending into the surround environment and to minimise the visual dominance of the building have similarly not been implemented. The existing factory building is a light cream colourbond metal (refer *Figure 4* below), which because of its proximity to the Heritage Green site is highly visible.

Furthermore, the "range of cladding materials to provide visual interest and break up the monotony of the building" is not in evidence in the finished product.

*Figure 4 Existing NCIA Facility illustrating non-compliance with landscape and external finishes*

Prior to any further assessment of the current proposal, the Proponent should be required to provide:

(i) a detailed schedule of external materials and finishes, demonstrating the use of more recessive colours (greys and green-greys) for the proposed building. Strict control of the colour palette on the expanded facility will assist in mitigating the visual impact from Heritage Green and environs;

(ii) details of architectural devices, including variety of cladding materials, to be employed to break up the large expanse of wall presenting to the east of the site;

(iii) a detailed landscape plan (refer to previous discussion and below).

The external storage of materials and generally state of the grounds of NCIA site as evidenced by past photos of the site provided by the McCloy Group (refer to **Figures 5 and 6**) do not accord with the objective of maintaining a high quality appearance to the site as implied by the EA.

*Figure 5 View of Existing NCIA Facility*

*Figure 6 View of Existing NCIA Facility*

### 2.7.4.2 Review of Visual Impact Assessment

Terras Landscape Architects have reviewed the Visual Impact Assessment and have identified a number of deficiencies / lack of information (refer report at **Appendix E**).

The Environmental Assessment includes a Visual Impact Analysis which, in relation to the adjoining Heritage Green site notes that *most of the former golf course is sited lower and existing mounding and screen planting around the perimeter provides some screening of the adjoining industrial estate and hence the proposed development. The proposed development would be visible from the elevated entry to Heritage Green off Regiment Road. Due to restrictions on access the visual impact from within the Heritage Green site has not been fully assessed.*

This statement is further evidence that the Proponent has not engaged in adequate consultation with the adjoining property owner resulting in an inability to properly satisfy the assessment requirements of the DGRs.

The proposed development will have a greater visual impact over a wider area of the Heritage Green site than is suggested by the Environmental Assessment. A copy of the current Masterplan for the Heritage Green development has been made available by Council through the DA consultation process. The McCloy Group are prepared to provide access and to participate with NCIA in a thorough visual analysis that identifies those sites / locations within Heritage Green that have views of the existing factory as well as those that are likely to be exposed to views of the expanded facility.

Prior to any further assessment of the application, the Proponent should be required to:

- Engage in detailed consultation with the McCloy Group and gain access to the Heritage Green site to make a full and proper assessment of the visual impact of the proposed development, which should include photomontages from agreed locations within the Heritage Green site;

- As required, undertake modifications to the proposal including: appropriate siting of the proposed development ensuring that setbacks are adequate to allow for the provision of effective landscaping, and a reduction in visible bulk and scale of the building.

- Provide details of proposed materials and finishes that address the above;

- Provide a detailed landscape plan which illustrates proposed soft and hard landscape treatments, including the implementation of screen planting; and

- Undertake an assessment of lighting associated with the NCIA expansion in terms of its impact on the Heritage Green site and provide specific details on how such impacts will be addressed.

It should also be noted that to date all the existing visual screening is provided by the McCloy Group, all of which occurs within the boundaries of the Heritage Green site. NCIA has taken no responsibility for improving the visual or landscape amenity of the wider locality.

### 2.7.5 Traffic and Parking

McLaren Traffic Engineering (MTE) has reviewed the Traffic Impact Assessment which forms part of the application. A copy of the report prepared by McLaren Traffic Engineering is included at **Appendix F** to this submission.

The MTE review generally concurs with the EA findings regarding traffic impacts, namely that the traffic generated by the proposed expansion can be adequately accommodated by the surrounding road network without significant detriment to the levels of service.

In relation to the proposed on-site parking provision Council's Industrial Development Code requires the provision of on-site parking at the rate of 1 space / 2 employees or 1 space per 75sqm of ground floor area, whichever is the greater.

The Proponent seeks a variation to Council's Code requirements on the basis that the quantum of floor area of the facility (in the order of 70,500sqm) would attract a requirement for 940 spaces, which they contend is excessive in view of the number of employees (140). MLE have advised that the staff numbers represent an extremely low employee density of 1 employee / 504sqm. The RTA employee density for factories and warehouses is in the order of 1 employee 60sqm and 120sqm respectively. Whilst it is acknowledged that employee densities can be highly variable, in this instance the NCIA proposal is 9 times lower than a generic factory and some 4 times lower than a warehouse.

In light of the above, it is considered that the Proponent has provided inadequate justification in respect to a proposed significant variation in car parking provision. Information is lacking in relation to details such as employee density, including details of shift overlap periods when the demand for on-site parking is higher.

Further justification should also be provided which examines the possible need for (and the space requirements associated with) the provision of additional on-site parking as the result of incremental intensification by changes in future operations (or use) of the facility.

## 2.8 Sustainability

### 2.8.1 General

The DGRs require the proposal explore and incorporate appropriate water and energy efficiency measures to ensure the longer term sustainability of a substantial industrial development. We submit that the proposal has inadequately responded to these requirements and note:

- NCIA are proposing an 8-year program to bring in the 8 production lines. This period is an excessive period for which to issue as single consent intended that is to regulate the construction of a development. Too many contextual and technological changes could occur within this period. The normal period for implementing a project would be 2-5 years.

- Over this period of time and at this stage, the Proponent should be required to implement a greater degree of sustainability within the design of the project. This should include things such as harvesting and re-use of rainwater, particularly due to the expansive roof catchment.

- Employment of solar technology, and other energy and innovative measures requires further consideration.

These matters are discussed further below.

### 2.8.2 Water Usage

Condition 7.4(c) of the development consent issued in respect of Stages 1 – 4 required the Proponent, as part of the Operational Environmental Management Plan for the facility to prepare and implement an Alternate Water Supply Strategy, with the specific aim of investigating and pursuing options for the use of alternative sources of water, such as treated effluent from sewage treatment plants, as an alternative to the use of potable water supply to the facility.

Seven years after the consent has been issued, there has been no presentation of the water supply alternatives. The Environmental Assessment does not address rainwater harvesting / recycling and there is no justification as to why the process water must be drawn from the mains supply. The report describes the roof water as being essentially clean and is apparently used for washdown and the washdown discharge is reused for process water but not the roof water to process water.

ADW Johnson has reviewed the hydraulic aspects of the Environmental Assessment and has advised in this regard that the technologies in the field of using lower grade water quality for process use matching water quality to water use that the potable supply is cheaper than a treatment plant. There is no discussion in the EA as to why a treatment plant for the rainwater has not been considered for the expanded plant. It is noted that the water use for the NCIA facility is equivalent to approximately 650 homes or a density of roughly 38 homes / hectare[4].

### 2.8.3 Energy

The Preliminary Assessment for this project which was submitted to the Department of Planning in December 2008 (and upon which the DGR's are based) indicated that four (4) electricity co-generation plants would form part of the proposal. Of the four proposed co-generation plants, one was to be fitted to each pair of production lines for Stages One to Two, Three to Four, Five to Six, and Seven to Eight.

Section 4.7 of the Environmental Assessment indicates that the co-generation does not form part of the current application, "but would be subject to a separate application at some stage in the future". It nominates a "likely" location for the plants at the clay preparation spray drier area.

It is noted that the Statement of Commitments indicates that:

> *The project would be designed to allow for the addition of electricity co-generation facilities by way of leaving space and allowing for easy connection and integration at a later date.*

However, due to the aforementioned lack of detailed floor plans for the project there is no means of determining whether adequate provision has been made for the future installation of the co-generation facilities. Further if the project application was approved there would be no incentive for these facilities to be provided in the future.

4 Based on Hunter Water records of water use.

## 2.9 History of Environmental Performance

A review of the Annual Environmental Management Report (AEMR) prepared by ENSR AECOM in September 2008 indicate a number of areas of non-compliance with both the predictions set out in the Environmental Impact Statement and the subsequent consent. It should be noted that the 2009 -2010 AEMR was not available at the time of writing this report.

The AEMR also examines the performance of the facility against the conditions of the original development consent and identifies a range of non-compliances as well as a number of areas where improvements are required. The areas of non-compliances include:

- failure to undertake weekly monitoring and maintenance for the bag-house to ensure optimal performance;
- failure to maintain the meteorological station;
- failure to commission independent audit in a timely manner (4 months late);
- loss of vegetation samples associated with emissions monitoring.

The AEMR also cites exceedances in total particulate concentrations from various equipment for the 2004 / 05; 2005 / 06 and 2006 / 07 reporting periods. In order to overcome the consistent non-compliance, the Proponent obtained a modification of the consent to allow an increase in Total Particulate emission concentration limits for the kiln, dryer and hot air cooler stacks (Stage 1).

The table included in **Appendix G** presents a summary of non-compliance with applicable environmental standards and required mitigation measures specified by development consent conditions. The extent and degree of non- compliances is significant.

This demonstration of NCIA's inability to maintain prescribed performance controls, demands that the design of the proposal incorporate a level of redundancy to ensure compliance can be maintained notwithstanding non-typical or unforeseen operational circumstances.

## 2.10 Social and Economic Impacts

The AIGIS Group has reviewed the social and economic aspects of the proposed development (refer **Appendix H**) based on the information presented in the EA and an examination of the parent company's Annual Financial Statement. A number of issues have been identified which require further clarification by the Proponent, as detailed below.

NCIA is a 70% controlled subsidiary of Ceramic Industries Limited [CIL] (South Africa). 27.5% of the company is owned by Australian interests and 2.5% by an Italian investor. The Rutherford plant is the company's only production facility in Australia and as there is no reported import component to its Australian operations, it is assumed that all financial information relating to CIL's Australian operations relates to NCIA. Based on this ownership structure, it is assumed that the majority of profits are exported to shareholders in South Africa and Italy.

The Major Project Application form states that at the time of lodgement, the NCIA facility employed 70 staff. CIL's 2009 Annual Report states employment coinciding with the time of lodgement as 49 staff. The EA states employment as 50 staff. McCloy Group staff have observed no more than 12 vehicles parked on site at any one time

within the last month which even with the possibility of multiple shifts would indicate the likely employment of less than 40 persons. There is a material discrepancy between employment stated in these various sources which has a bearing on the extent of direct and other economic benefit the expanded plant may generate. In view of this inconsistency, NCIA should be required to provide evidence substantiating its current and projected employment.

The proposed expansion is expected to increase production capacity from a nominal 12.8 million m² to 25.6 million m² per year. Average production over 2008 / 2009 was 12.4 million m², with peak production of 14.7 million m² in 2008. This production was apparently achieved with a staff of around 50 or less, and without full utilisation of existing approved capacity. Given the unused capacity available in the current plant, presently there is no clear economic justification provided by NCIA for the proposed expansion.

The EA indicates that the expanded plant is projected to provide a 100% increase in production capacity. The forecast expansion in the labour force from 50 to 140 personnel represents an increase of 180%. Given the relativities between current employment level and production, NCIA has not adequately explained the economic rationale for this forecast imbalance in the labour input and resulting output.

The Chief Executive Officer's report in the CIL 2009 Annual Report states that 'no further significant capital expenditure is planned for the foreseeable future' within the group. The EA states that commissioning of the expanded plant is contingent on market demand which apparently does not presently exist. These statements indicate that any direct and / or other employment or economic benefit that may be generated by the proposed expansion may not be realised in the foreseeable future.

In light of the above we content that NCIA should be required to disclose more accurate information on its planned program for construction and commissioning of the additional capacity.

### 2.10.1 Impact on Development Potential of Adjoining Sites

Without the implementation of stringent noise and dust mitigation measures, the expanded NCIA facility will adversely affect the likely achievable residential yield (up to a maximum of 450 lots) on the Heritage Green site and therefore the ability to realise the development potential of the land. This will result in an adverse social and economic impact insofar as it will curtail future housing supply in the region as contemplated in the current Metropolitan Development Program, where the Heritage Green development is identified as a "Major Site".

The NCIA proposal can also limit the development potential of other land within the Rutherford industrial estate, with consequent economic and social impacts. Pollution emissions that are not contained within the NCIA site would have the effect drawing down the remaining cumulative environmental capacity of the estate. This would limit the operational potential of future industrial development and the expansion of existing development.

We are instructed that the McCloy Group acknowledges the importance of employment-generating industrial development to the local, state and national economies. However, such activity must be undertaken in a sustainable and environmentally responsible manner. As both Council and the state government have acknowledged the capability of the Heritage Green site to achieve a certain level of residential development, the Proponent should be required to design the proposed

expansion of the NCIA facility in a manner which allows for both uses to proceed, which would be in the broader interests of the state and the Lower Hunter region.

## 2.11 Section 94A Contributions

Maitland LGA continues to experience one of the highest inland growth rates in NSW. Population growth is currently 2.5% per annum and is expected to continue, if not exceed this rate over the following years. Based upon data from the Australian Bureau of Statistics, the Hunter Valley Research Foundation and Council's own statistical analysis of approved developments, the current population of 60,000 people is expected to increase to 77,000 people by 2015.

Maitland, because of its strategic location, is increasingly being recognised as a key centre in the Lower Hunter Region for employment generating development. Significant employment generation brings with it increasing demands on housing and the local infrastructure network.

Council's website acknowledges that the likely population growth, together with new commercial, industrial and other employment generating developments will place increasing pressure on existing public amenities and services as well as creating the demand for new facilities. This additional growth will also diminish the enjoyment and standard of public facilities for the existing population unless additional or augmented facilities are provided to meet the additional demand.

Council currently levies development contributions under Section 94 from a range of development including:

- Subdivision of Land (urban, rural and rural residential);
- Medium Density Housing;
- Expansion or redevelopment of existing residential development; (infill development) that includes either subdivision or additional housing stock);
- Commercial and Industrial Development; and
- Recreation and tourist facilities.

Council has also adopted a Section 94A Contributions Plan which came into effect on 3rd July 2006 and was last amended on 28 July 2008. It applies to all land within the Maitland Local Government Area. The plan authorises Council to require a developer to pay to the Council a levy of 1.0% of the proposed cost of carrying out the development where the cost of the development is greater than $200,000.

The levying of a contribution under Section 94 of the Act does not require a nexus between the levying of the payment and the expenditure of the works. Section 94A (4) of the Act provides that:

> *A condition imposed under this section is not invalid by reason only that there is no connection between the development the subject of the development consent and the object of expenditure of any money required to be paid by the condition.*

The proposed development has an estimated total cost of $65 million, which would attract a contribution of $650,000 pursuant to Section 94A. Section 4.9.6 of the EA seeks an exemption from paying any contribution on the basis that the proposed major expansion of this facility, which more than doubles its production capacity, will not generate the need for new or augmented public services or amenities.

This assertion by the Proponent is not adequately justified. At the very least the proposed development can reasonably be expected to result in a number of economic impacts in the following areas:

- wear and tear on existing road network generated by additional traffic, including heavy vehicles;
- traffic management facilities to accommodate additional traffic; and
- new or upgraded facilities at local commercial / retail centres to accommodate additional demand generated by increased employee numbers.

Notwithstanding the above, the legislation clearly authorises Council to seek contributions pursuant to section 94A of the Act where there is no nexus between the demands that may be generated by development and facilities to be provided by Council. In the current state government policy context where Council is constrained with regard to developer funding sources for public infrastructure due to the cap on residential development contribution requirements, it would be unreasonable to provide dispensation to a major development from the payment of standard and legally authorised contributions to Council.

## 3.0 CONCLUSION

In our view, should the NCIA proposal not be refused, the project application requires further documentation and redesign prior to being a proposal that could be considered sufficiently acceptable to warrant and be capable of approval. A fundamental inadequacy of the proposal is the inability to demonstrate the acceptable containment of visual, air quality and noise impacts as specifically required by reference to:

- SEPP 33 which requires potentially offensive development to mitigate impacts so not to be considered offensive development
- The provisions of clause 23 of Maitland LEP 1993 which states "*Industrial development is allowed only if it does not adversely affect adjacent residential areas.*"
- Various Government Agency requirements, in particular the DECCW guidelines.
- The DGRS which require air/odour and noise / vibration impacts on existing and future sensitive receptors to be addressed.

The following table summarises the deficiencies with the NCIA proposal and outlines additional information or amendments required.

| Issue: | Comment |
|---|---|
| The EA omits a detailed description of the project, including plans of any proposed building works. | • Detailed plans of the proposal are required, including architectural plans, landscape plans and a detailed schedule of materials and finishes. |
| Detailed description of existing environment omitted. environment; | • A detailed assessment of the key issues is required which includes a description of existing and planned surrounding development |

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| | the environment. |
| Justification for the need for the project in the EA apparently contains a number of significant inaccuracies. | • A detailed description of the need for the project, alternatives considered, including justification on economic, social and environmental grounds.<br>• Clarify number of employees.<br>Clarify past, proposed and potential operational capacity.<br>• Evaluate impact on surrounding residential & industrial areas due to pollution emissions. |
| Noise & Vibration Assessment inadequate particularly in regard to proposed receptors (future residential within Heritage Green). | • Review assessment methodology.<br>• Review impact of the proposed development to sensitive receptors (both current and proposed.<br>• Provide ameliorative measures that acceptable contain emissions on site. |
| Air Quality and Odour Assessment inadequate particularly in regard to proposed receptors (future residential within Heritage Green).Impact of the proposed | • Review impact of the proposed development to sensitive receptors (both current and proposed.<br>• Provide ameliorative measures that acceptably contain emissions on site. |
| Inadequate car parking | Provide justification for variation in relation to:<br>• Employee density, including details of shift overlap periods when the demand for on-site parking is higher.<br>• The possible need for (and the space requirements associated with) the provision of additional on-site parking as the result of incremental intensification by changes in future operations (or use) of the facility. |
| Inadequate visual assessment particularly with regard to the future residential areas within the Heritage Green site. | • Provide full assessment of the visual impact including review of impacts when examined from the Heritage Green site. (McCloy Group to provide access).<br>• Provide details of materials and finishes.<br>• Provide landscape plan and incorporate screen landscaping. |
| No consequential energy efficiency measures proposed. | • Provide Greenhouse Gas minimisation and Energy Efficiency measures.<br>• Demonstrate the proposal is energy efficient. |

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| Insufficient Soils and Water Management details | • Provide detail to demonstrate adequate area available on-site to provide stormwater controls.<br>• Provide erosion and sediment controls.<br>• Provide evaluation of the potential for rainwater harvesting / recycling. |
| Hazards & Risks | • Provide mitigation measures in order to reduce or minimise its impact on the adjoining land uses and on the likely future development. |
| Non-compliance with DGRs consultation requirements to consult with....*affected land owners*. | • Undertake meaningful consultation with Heritage Green proponent. |

We consider the above matters must be addressed prior to the proposal being able to be approved, or alternatively the application should be refused. If not refused, the project application requires substantial review and modification to provide mitigation measures and environmental monitoring to prevent any adverse impacts on surrounding residential areas associated with noise, odour, air and water emissions and light spill. An apparent history of non-compliance with environmental requirements and consent conditions emphasises the need for a precautionary approach to such an assessment. These matters are essential to ensuring the acceptability of the proposal as required by the DGRs, and overriding legislation, and must be satisfied to enable the project application to be approved having regard to the prohibition otherwise imposed by the LEP.

Should the project be amended, this will require substantial changes underpinned with extensive additional documentation. Due to the extent if such changes and the public interest already shown in the project we would expect that this will consequently require further notification.

# APPENDIX A
McCloy Group Correspondence

NATIONAL CERAMIC INDUSTRIES AUSTRALIA PTY LTD

*Our tradition is Ceramics*
*Innovation our future*

ACN 100 467 267
ABN 63 100 467 267

3 August 2010

Jeff McCloy
Heritage Green Pty Ltd
PO Box 2214
Dangar 2309

**Re: National Ceramic Industries Australia (NCIA) Proposed Expansion of Ceramic Tile Manufacturing Facility, Rutherford Major Project Application No. 09-0006 Economic Impact**

Dear Mr McCloy

Reference is made to your latest letter dated 29 July relating to our current application. While NCIA has previously attempted to be of assistance, as you would appreciate the items you have requested (the last three years of our Australian Tax Returns and the last three years of our Financial Statements) are commercially sensitive documents which we have no intention of releasing.

Furthermore, as it is evident that there is no reasonable nexus between these documents or some previously requested information and the Environmental Assessment currently on exhibition, we will not be responding to further requests for commercially sensitive information. Should you decide to continue to pursue this information, we would suggest you express your views to the Department of Planning by making such requests directly known to them.

Yours faithfully,

Leonardo Pereira
Managing Director
National Ceramic Industries Australia



175 Racecourse Road, RUTHERFORD NSW 2320 PO Box 765, MAITLAND NSW 2320
Telephone 02 4931 8400 Facsimile 02 4931 8499

NATIONAL CERAMIC INDUSTRIES AUSTRALIA PTY LTD

*Our tradition is Ceramics*
*Innovation our future*

ACN 100 467 267
ABN 83 100 467 267

28 July 2010

Jeff McCloy
Heritage Green Pty Ltd
PO Box 2214
Dangar 2309

**Re: National Ceramic Industries Australia (NCIA) Proposed Expansion of Ceramic Tile Manufacturing Facility, Rutherford Major Project Application No. 09-0006 Economic Impact**

Dear Mr McCloy

Reference is made to your most recent letter in regard to our current application. I am not sure of the relevance of a number of your points of enquiry in the context of a submission on the Environmental Assessment of our project but regardless, I am not in a position to respond - either in respect of the information requested by you or within the timeframe requested by you.

I am advised that it is a more normal and appropriate practice for issues such as those raised by you to be included in a submission to the Department of Planning during the exhibition period of the Environmental Assessment. This is one of the purposes of the exhibition period.

As you are aware, under the requirements of the Environmental Planning and Assessment Act, the Department will provide a copy of all submissions received during the exhibition period to National Ceramics Industries Australia and request a response to those submissions. This will ensure that the issues you wish to raise are addressed appropriately and in accordance with due process.

Yours faithfully,

Leonardo Pereira
Managing Director
National Ceramic Industries Australia



175 Racecourse Road, RUTHERFORD NSW 2320 PO Box 765, MAITLAND NSW 2320
Telephone 02 4931 8400 Facsimile 02 4931 8499

McCLOYGROUP

Our Ref: (0085/HG-00-004/2010)

22 July, 2010

Mr Len Pereira
Managing Director
National Ceramics Industries Australia
175 Racecourse Road
Rutherford NSW 2320

Dear Mr Pereira,

**Re: National Ceramics Industries Australia (NCIA)**
**Proposed Expansion of Ceramic Tile Manufacturing Facility, Rutherford**
**Major Project Application No. 09 - 0006**
**Economic Impact**

You are aware that the above referenced application is currently on Public Exhibition.

To assist us in assessing your Environmental Assessment (EA), could you please provide the following information which appears to be missing from the EA:

1. Number of employees retained for Stage 1 for the period 2003 - 2009 and a description of each employees position;

2. Number of employees retained for Stages 1 and 2 for the period June 2009 to present, including a description of each employees position;

3. A breakdown into "administration" and "production" staff for each of items 1 and 2 above;

4. A description of the shift work arrangements including but not limited to the number of shifts per day on a seasonal basis and shift changeover times; and

5. Proposed number of additional employees and a description of their positions for Stages 3 and 4.

**Heritage Green Pty Ltd**
**ABN** 51 611 484 633
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PO Box 2214 Dangar NSW AUSTRALIA 2309
**P** 02 4945 7500 **F** 02 4929 6472 **W** www.mccloygroup.com.au

McCLOYGROUP

Please provide the above information before Friday 30 July, 2010 to allow us sufficient time to review the information and submit a response to the Department of Planning.

Yours faithfully,

for JEFF McCLOY
Chairman

cc. Mr Chris Ritchie
Manager, Manufacturing & Rural Industries
NSW Department of Planning
GPO Box 39
Sydney NSW 2001

cc. Mr David Evans
General Manager
Maitland City Council
PO Box 2250
Maitland NSW 2320

McCLOYGROUP

Our Ref: 0070/HG-00-003/10

30 June 2010

Mr Len Pereira
Managing Director
National Ceramics Industries Australia
175 Racecourse Road
Rutherford NSW 2320

Dear Mr Pereira,

**Re: NCIA Tile Factory, Rutherford**

I am writing to you as the Chairman of the McCloy Group which includes, Heritage Green Pty Ltd, the owner of the proposed Heritage Green Residential Recreation Development adjoining your tile factory at Rutherford.

We are aware of a number of non-compliances with both your Development Consent and EPA Licence conditions that have the effect of polluting our land. Accordingly, we request your advice on what steps you are taking to rectify your non-compliances.

You are aware that we are proposing to develop a Residential Recreation Development on our site that will include 439 residential lots, amongst other things in accordance with the zoning provisions applicable to the land.

Accordingly, you are hereby put on notice that if there is any reduction in yield or other specific land use of our site as a result of your breaches of the relevant law, we will be pursuing damages and compensation from NCIA to the fullest extent.

We look forward to receiving your response.

Yours faithfully

JEFF McCLOY
Chairman

**Heritage Green Residential Estate Pty Ltd**
**ABN** 17 349 679 498

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PO Box 2214 Dangar NSW AUSTRALIA 2309
**P** 02 4945 7500 **F** 02 4929 6472 **W** www.mccloygroup.com.au

McCLOYGROUP

COPY

Our Ref: 0071/HG-00-002/10

1 July 2010

Mr Chris Ritchie
Manager, Manufacturing & Rural Industries
NSW Department of Planning
GPO Box 39
Sydney NSW 2001

Dear Mr Ritchie,

Re: National Ceramics Industries Australia (NCIA)
Proposed Expansion of Ceramic tile Manufacturing Facility, Rutherford

I refer to our correspondence dated 1 February, 2010 (copy attached) regarding the above which was addressed to the applicant's consultant and copied to you.

Having not received a response to that correspondence, I recently followed it up with Mr James McIntyre of AECOM who advised me that he had considered my correspondence but concluded that consultation with us was not necessary.

I draw your attention to the Departments own Director General's Requirements (copy attached) for the project and note that under the heading of Consultation, the applicant is to consult with "affected landowners".

Given that the applicant is not proposing to consult with, can the Department confirm in writing that our land will have nil "effect" as a result of the proposed development. If not, we politely request that the Department ensures that the applicant comply with the Director General's Requirements and consults with us.

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McCLOYGROUP

Regardless of the above, we have a number of concerns with both the existing and proposed Tile Manufacturing Facility and its effect on our land and would like to discuss them with the Department directly. Could you please arrange for the relevant person in the Department to contact me to arrange a mutually convenient time to meet to discuss this matter.

Yours faithfully

BRIAN SWAINE
Managing Director

McCLOYGROUP

Our Ref: (bs/HG-00-002/10)

1 February, 2010

COPY

AECOM
PO Box 73,
HRMC NSW 2310

**Attention: Mr James McIntyre**

Dear Sir,

Re: National Ceramics Industries Australia (NCIA)
Expansion of Ceramic Tile Manufacturing Facility, Rutherford

We are aware that NCIA have made application under Part 3A of the EP&A Act to expand its operations at Rutherford and that AECOM act for them in that endeavor.

We note that you are aware of our Development Application on the neighboring property to develop a residential recreation development which will include up to 450 dwellings set amongst an extensive recreation network. Our Development Application is currently being assessed by Maitland City Council and we expect to receive development consent in the coming months.

In relation to NCIA's application, we are aware that the Director Generals Requirements (DGR's), in relation to Noise & Vibration and Air Quality & Odour, require NCIA to consider the *"impact of the proposed development to sensitive receptors (both current and proposed)"*.

To that end we advise that we are willing and able to consult with you and provide any information necessary.

We look forward to hearing from you in due course.

Yours faithfully,

BRIAN SWAINE
Managing Director

CC: Mr Chris Ritchie
Manager, Manufacturing & Rural Industries
NSW Department of Planning
GPO Box 39
SYDNEY NSW 2001

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NSW GOVERNMENT
**Department of Planning**

Major Projects Assessment
Major Development Assessment
Phone: (02) 9228 6338
Fax: (02) 9228 6466
Email: felicity.greenway@planning.nsw.gov.au
Level 3
23-33 Bridge Street
GPO Box 39
SYDNEY NSW 2001

Mr Leonardo Pereira
Managing Director
National Ceramics Industries Australia
PO BOX 765
MAITLAND NSW 2320

COPY

Dear Mr Pereira

**Director-General's Requirements**
**Expansion of Ceramic Tile Manufacturing Facility**
**Project Application MP09_0006**

The Department has received your application for the Expansion to the existing Ceramic Tile Manufacturing Facility at Racecourse Road, Maitland.

I have attached a copy of the Director-General's requirements for the project. These requirements have been prepared in consultation with the relevant agencies, and are based on the information you have provided to date. I have also attached a copy of the agencies comments for your information.

Please note that the Director-General may alter these requirements at any time.

If your proposal is likely to have a significant impact on matters of National Environmental Significance, it will require an approval under the Commonwealth *Environment Protection Biodiversity Conservation Act 1999* (EPBC Act). This approval is in addition to any approvals required under NSW legislation. It is your responsibility to contact the Department of Environment, Water, Heritage and the Arts in Canberra (6274 1111 or http://www.environment.gov.au) to determine if the proposal requires an approval under the EPBC Act. The Commonwealth Government has accredited the NSW environmental assessment process, so if it is determined that an approval is required under the EPBC Act, please contact me immediately as supplementary Director-General's requirements may need to be issued.

I would appreciate it if you would contact the Department at least two weeks before you propose to submit your Environmental Assessment for the project. This will enable the Department to determine the:

- applicable fee (see Division 1A, Part 15 of the *Environmental Planning and Assessment Regulation 2000*);
- consultation and public exhibition arrangements; and
- number of copies (hard-copy or CD-ROM) of the Environmental Assessment that will be required for exhibition purposes.

Once it receives the Environmental Assessment, the Department will review it in consultation with the relevant agencies to determine if it adequately addresses the Director-General's requirements, and may require you to revise it prior to public exhibition.

The Department is required to make all the relevant information associated with the project publicly available on its website. Consequently, I would appreciate it if you would ensure that all the documents you subsequently submit to the Department are in a suitable format for the web, and arrange for an electronic version of the Environmental Assessment to be hosted on a suitable website during the exhibition period.

If you have any enquiries about these requirements, please contact Felicity Greenway on 9228 6338 or felicity.greenway@planning.nsw.gov.au.

Yours sincerely

13.2.09

Chris Wilson
**Executive Director**
**Major Project Assessment**
As delegate for the Director-General

# Director-General's Requirements

Section 75F of the *Environmental Planning and Assessment Act 1979*

| | |
|---|---|
| **Application number** | MP09_0006 |
| **Project** | Modification and expansion to the existing tile manufacturing facility and associated infrastructure. Additions will comprise of a second factory building with four additional production lines, four co-generation plants and other associated infrastructure. |
| **Location** | Racecourse Road, Maitland, Lot 101 DP 1062820 |
| **Date of Issue** | February 2009 |
| **Proponent** | National Ceramic Industries Australia |
| **General Requirements** | The Environmental Assessment of the project must include:<br>• an executive summary;<br>• a detailed description of the project, including the:<br>– need for the project;<br>– alternatives considered, including a justification for the proposed manufacturing facility on economic, social and environmental grounds;<br>– likely staging of the project; and<br>– plans of any proposed building works.<br>• a risk assessment of the potential environmental impacts of the project, identifying the key issues for further assessment;<br>• a detailed assessment of the key issues specified below, and any other significant issues identified in the risk assessment (see above), which includes:<br>– a description of the existing environment, using sufficient baseline data;<br>– an assessment of the potential impacts of all stages of the project, including any cumulative impacts, taking into consideration any relevant statutory provisions and technical or policy guidelines (see below);<br>– a description of the measures that would be implemented to avoid, minimise, mitigate, rehabilitate/remediate, monitor and/or offset the potential impacts of the project, including detailed contingency plans for managing any potential significant risks to the environment;<br>• a statement of commitments, outlining all the proposed environmental management and monitoring measures;<br>• a conclusion justifying the project on economic, social and environmental grounds, taking into consideration whether the project is consistent with the objects of the *Environmental Planning and Assessment Act 1979*;<br>• a signed statement from the author of the Environmental Assessment certifying that the information contained in the report is neither false nor misleading. |
| **Key Issues** | • **Noise & Vibration** – including construction, operational and traffic noise and particularly the impact of the proposed development to sensitive receptors (both current and proposed).<br>• **Air Quality and Odour** – air quality impacts for construction and operation of the proposed development, particularly in relation to particulates and impacts to sensitive receptors (both current and proposed). Details of proposed mitigation measures.<br>• **Traffic & parking**– including details of access to the site; details of the traffic volumes likely to be generated during construction and operation; an assessment of the predicted impacts of this traffic on the safety and efficiency of the surrounding road network and car parking requirements.<br>• **Visual** – assess the visual impact of design and siting of the facilities & |

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| | buildings, lighting and any signage. Proposed landscaping including details of indigenous vegetation planting to off-set any clearing.<br>• **Soils & Water**– including the proposed erosion and sediment controls (during construction); water quality management; the proposed stormwater management system; water supply including consideration of the potential for rainwater harvesting / recycling; and wastewater disposal.<br>• **Greenhouse Gas and Energy Efficiency** – including an assessment of the energy use on site, and demonstrate what measures would be implemented to ensure that the proposal is energy efficient.<br>• **Hazards and Risk** – including potential hazards and risk implications to the existing operations from the proposed development. |
| References | While not exhaustive, the following attachment contains a list of guidelines, policies, and plans that may be relevant to the project. |
| Consultation | During the preparation of the Environmental Assessment, you should consult with the relevant local, State or Commonwealth Government authorities, service providers, community groups or affected landowners.<br><br>In particular you must consult with the:<br>• Department of Environment and Climate Change;<br>• Department of Water and Energy;<br>• NSW Fire Brigade;<br>• Roads and Traffic Authority; and<br>• Maitland City Council.<br><br>The consultation process, and the issues raised during this process, must be described in the Environmental Assessment. |
| Deemed refusal period | 60 days |

## Technical and Policy Guidelines

| Aspect | Policy/Methodology |
|---|---|
| **Risk Assessment** | |
| | AS/NZS 4360:2004 Risk Management (Standards Australia) |
| | HB 203: 203:2006 Environmental Risk Management – Principles & Process (Standards Australia) |
| **Air Quality** | |
| | Protection of the Environment Operations (Clean Air) Regulation 2002 |
| | Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (DECC) |
| | Approved Methods for the Sampling and Analysis of Air Pollutants in NSW (DECC) |
| **Greenhouse Gas and Energy** | |
| | National Greenhouse Accounts (NGA) Factors |
| | Guidelines for Energy Savings Action Plans (DEUS) |
| **Odour** | |
| | Technical Framework: Assessment and Management of Odour from Stationary Sources in NSW (DEC) |
| | Technical Notes: Assessment and Management of Odour from Stationary Sources in NSW (DEC) |
| **Transport** | |
| | Guide to Traffic Generating Development (RTA) |
| | Road Design Guide (RTA) |
| **Hazards** | |
| | State Environmental Planning Policy No. 33 – Hazardous and Offensive Development |
| | Applying Sepp 33: Hazardous And Offensive Development Application Guidelines (DUAP) |
| | Hazardous Industry Planning Advisory Paper No. 6 (HIPAP No 6): *Guidelines for Hazardous Analysis*, (DUAP) |
| | Hazardous Industry Planning Advisory Paper No. 4 (HIPAP No 4): *Risk Criteria for Land Use Safety Planning* |
| **Soil and Water** | |
| *Surface Water* | Guidelines for Water Savings Action Plans (DEUS) |
| | National Water Quality Management Strategy: Water quality management - an outline of the policies (ANZECC/ARMCANZ) |
| | National Water Quality Management Strategy: Policies and principles - a reference document (ANZECC/ARMCANZ) |
| | National Water Quality Management Strategy: Implementation guidelines (ANZECC/ARMCANZ) |
| | National Water Quality Management Strategy: Australian Guidelines for Fresh and Marine Water Quality (ANZECC/ARMCANZ) |
| | National Water Quality Management Strategy: Australian Guidelines for Water Quality Monitoring and Reporting (ANZECC/ARMCANZ) |
| | Using the ANZECC Guideline and Water Quality Objectives in NSW (DEC) |
| | State Water Management Outcomes Plan |
| | NSW Government Water Quality and River Flow Environmental Objectives (DECC) |
| | Approved Methods for the Sampling and Analysis of Water Pollutants in NSW (DEC) |
| | Managing Urban Stormwater: Soils & Construction (Landcom) |
| | Managing Urban Stormwater: Treatment Techniques (DECC) |
| | Managing Urban Storwater: Source Control (DECC) |

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| | Floodplain Management Manual (DNR) |
| | Floodplain Risk Management Guideline (DECC) |
| | Technical Guidelines: Bunding & Spill Management (DECC) |
| | National Water Quality Management Strategy: Guidelines for Sewerage Systems – Effluent Management (ARMCANZ/ANZECC) |
| | National Water Quality Management Strategy: Guidelines for Sewerage Systems – Use of Reclaimed Water (ARMCANZ/ANZECC) |
| | Environmental Guidelines: Use of Effluent by Irrigation |
| *Wastewater Reuse* | National Water Quality Management Strategy: Guidelines for Sewerage Systems - Effluent Management (ARMCANZ/ANZECC) |
| | National Water Quality Management Strategy - Guidelines For Water Recycling: Managing Health And Environmental Risks (Phase1) (EPHC, NRMMC & AHMC) |
| | National Water Quality Management Strategy Guidelines for Groundwater Protection in Australia (ARMCANZ/ANZECC) |
| *Groundwater* | NSW State Groundwater Policy Framework Document (DLWC) |
| | NSW State Groundwater Quality Protection Policy (DLWC) |
| | Draft NSW State Groundwater Quantity Management Policy (DLWC) |
| | Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites (ANZECC & NHMRC) |
| | National Environment Protection (Assessment of Site Contamination) Measure 1999 (NEPC) |
| *Contamination* | Draft Guidelines for the Assessment and Management of Groundwater Contamination (DECC) |
| | State Environmental Planning Policy No. 55 – Remediation of Land |
| | Managing Land Contamination - Planning Guidelines SEPP 55 – Remediation of Land (DUAP and EPA) |
| Waste | |
| | Waste Avoidance and Resource Recovery Strategy 2007 (DECC) |
| | Environmental Guidelines: Assessment Classification and Management of Non-Liquid and Liquid Waste (DECC) |
| Noise | |
| | NSW Industrial Noise Policy (DECC) |
| | Environmental Criteria for Road Traffic Noise (NSW EPA) |
| | Environmental Noise Control Manual (DECC) |
| Regional Strategies | |
| | Lower Hunter Regional Strategy |
| Flora and Fauna | |
| | Draft Guidelines for Threatened Species Assessment under Part 3A of the *Environmental Planning and Assessment Act 1979* (DEC) |
| | NSW Groundwater Dependent Ecosystem Policy (DLWC) |
| | Policy & Guidelines - Aquatic Habitat Management and Fish Conservation (NSW Fisheries) |
| Visual | |
| | Control of Obtrusive Effects of Outdoor Lighting (Standards Australia, AS 4282) |
| Heritage | |
| *Aboriginal* | Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation (DEC) |
| *Non- Aboriginal* | NSW Heritage Manual (NSW Heritage Office & DUAP) |
| | The Burra Charter (The Australia ICOMOS charter for places of cultural significance) |

McCLOYGROUP

Our Ref: (0084/HG-00-004/2010)

20 July 2010

Mr Chris Ritchie
Manager, Manufacturing & Rural Industries
NSW Department of Planning
GPO Box 39
Sydney NSW 2001

Dear Mr Ritchie,

**Re: National Ceramics Industries Australia (NCIA)**
**Proposed Expansion of Ceramic Tile Manufacturing Facility, Rutherford**
**Major Project Application No. 09-0006**

We refer to our correspondence dated 1 July, 2010 (copy attached), our meeting in your Sydney offices on 9 July, 2010 and your letter referenced S02/01183 (but undated) regarding the above.

We note that despite our representations to the Department regarding the lack of consultation, the Department has now placed the Applicant's Environmental Assessment (EA) on public exhibition for the period 15 July, 2010 to 18 August, 2010.

Given that the Applicant has refused to consult with us we can only conclude one of two outcomes:

1. That our Heritage Green site will not be effected by the application; or

2. That the Applicant has failed to comply with the Director Generals Requirements (DGR's) in relation to consultation and thus has attempted to negate due process.

We consider that item 1 above is unlikely given the recent article that appeared on the front page of the local newspaper (copy attached) and our cursory review of the EA. Therefore, item 2 above is more likely to be the case.

**Heritage Green Pty Ltd**
**ABN** 51 611 484 633

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McCLOYGROUP

Accordingly, we request that the Department withdraw the EA from public exhibition to allow the Applicant the opportunity to properly consult with us as "effected landowners" in accordance with the DGR's before resubmitting their EA for public exhibition.

Failure to do so will most likely render any future determination by the Department invalid.

We also consider that the original approval could potentially be invalid on the basis that the permissible land uses on our site were not considered and that again we were not properly consulted.

Yours faithfully,

BRIAN SWAINE
Managing Director

# APPENDIX B
Review of Acoustic Report

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# NCIA PROPOSED EXPANSION

# ENVIRONMENTAL ASSESSMENT OF NOISE IMPACTS

TE188-08F01 (REV 1) RESPONSE TO NCIA EXPANSION EA

16 AUGUST 2010

Prepared for:

McCloy Group

Suite 1, Level 3 426 King Street

Newcastle West NSW 2300

Attention: Brian Swaine

Member of the Association of Australian Acoustical Consultants

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# DOCUMENT CONTROL

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### List of Tables

# 1 INTRODUCTION

National Ceramic Industries Australia Pty Ltd (**NCIA**) operates a ceramic tile manufacturing facility at Rutherford, NSW. This facility has approval to operate up to four production lines (Nos 1-4), two of which are currently in operation as of the date of this report. When stages 1-4 are operational, the production rate will be 12.8m sqm of tiles per annum. The facility was approved on 2nd July 2003 by the Minister subject to conditions (pertinently conditions 4.12-41.8 Noise Impacts and 5.10-5.11 Noise Monitoring). An Environment Protection Licence was issued in August 2007 containing conditions L6 Noise Limits and U2 Post Commissioning Noise Monitoring.

NCIA has lodged a Major Project Application with the NSW Department of Planning under Part 3A of the EP&A Act 1979 to expand the facility to eight production lines (Nos 5-8). When stages 1-8 are operational, the production rate will be 25.6m sqm of tiles per annum.

An Environmental Assessment report has been prepared in support of the proposal (AECOM 5 July 2010) containing in Appendix E a Noise Impact Assessment prepared by Heggies Pty Ltd (Report No 30-2247-R1 dated 11 March 2010) (**Heggies Report**).

On the eastern and southern boundaries of the NCIA site is presently vacant land known as Heritage Green.

The Heritage Green site is zoned 6(b) Private Recreation pursuant to Clause 25 of Maitland LEP 1993 allowing residential uses such as *Dwelling Houses, Bed & Breakfast Accommodation, Hotel, Tourist Accommodation* and *Caravan Sites* with consent.

In addition, the Heritage Green site enjoys the land uses described in Clause 52 of Maitland LEP 1993 which was included in Maitland LEP1993 as Amendment No. 75 in 2005 and which *inter-alia* permits the erection of up to 450 dwellings.

It is therefore clear that the Heritage Green site enjoys residential use rights under both Clauses 25 and 52 of Maitland LEP 1993.

The Heggies Report in its executive summary states that *"Noise emission predictions from the NCIA development indicate that there are some areas of the Heritage Green site that may be noise affected. The degree of affectation will depend on the type of development proposed for different areas of the Heritage Green site."*

There is a requirement in Clause 23 of Maitland LEP 1993 that *"industrial development is allowed only if it does not adversely affect adjacent residential areas"*. Therefore, there is an overriding obligation for NCIA to ensure that its expansion operations do not adversely affect the proposed residential development on the Heritage Green site.

Renzo Tonin & Associates was engaged to review the Heggies Report for the purpose of providing appropriate comments in relation to the assessment of noise impacts by the proposal on Heritage Green.

The work documented in this report was carried out in accordance with the Renzo Tonin & Associates Quality Assurance System, which is based on Australian Standard / NZS ISO 9001.

# 2 EXISTING ACOUSTICAL ENVIRONMENT

Section 5 of the Heggies Report describes the methodology for measuring the existing acoustical environment.

## 2.1 Inclusion of Existing Industrial Noise Contribution

When measuring noise levels in situations where an existing industry intends to expand its operations, the NSW DECCW Industrial Noise Policy (**INP** - which applies to the proposed development) has specific guidelines which require noise from that industry to be excluded from the noise measurement. The purpose of this requirement is to ensure that noise from the industry itself does not artificially raise the background noise levels which are used to derive the noise goals for the expanded development.

Specifically, at Section 3.1.2 *Definitions to support methodologies*, the following requirement can be found.

*Where an industry in an industrial estate wishes to extend its operations, the measured background noise level may include the general hum of industries nearby, but should not include any noise from the site itself - or noise from any intrusive sources nearby that could affect the LA90,15 minute value.*

In Table 6 of the Heggies Report, background noise levels were measured at the residential Locations 1-3 whilst NCIA was operating. According to the notes in Table 7, NCIA is just audible at the receptor sites during the day-time. According to the NCIA Annual Environmental Management Report 08-09, night-time noise at Kenvil Close (near Location 1) is 34-37 LAeq. This level of industrial noise would without doubt have influenced the reported background noise levels of 36-38 dB(A) reported in Table 6.

As the Intrusiveness Criteria derived in Table 11 are based on background noise levels, the inclusion of noise from the NCIA site in background noise levels would have affected the derived noise criteria making those criteria incorrect.

Heggies should be requested to reanalyse the noise data and determine background noise levels which are not affected by noise from the NCIA site in accordance with INP guidelines.

## 2.2 Evening and Night-time Estimates of Industrial Noise Contribution

Existing noise levels were measured using both attended and unattended instruments at the locations depicted in Figure 5 of the Heggies Report. Noticeably absent is the monitoring location at Kenvil Close depicted as the nearest sensitive receptor in NCIA's Annual Management Reports dating back to 2004. Instead, location No 1 at 3 Mountvale Street Rutherford is used for no obvious reason.

Heggies should explain why Kenvil Close was not chosen as the nearest sensitive receptor given its history as the primary compliance location and why the historical data available for that location would not be useful in validating the acoustic modelling in the Heggies Report.

The results of the unattended surveys are summarised in Table 6 and the results of the attended surveys are summarised in Table 7. Turning first to the latter table, it is clear that all the attended noise surveys were conducted in the daytime between the hours of 12:50pm and 14:17pm. In the first row of the table (Location 1), the measured LAeq is 52dB(A) which (as the notes attest) comprises noise from residents, birds, wind, local traffic, an excavator in Heritage Green and existing industry. The noise contribution from *existing industry* is estimated to be LAeq 41.

In Table 6, in the first row at Location 1, the noise from *existing industry* is denoted as 41dB(A) for day, evening and night periods. However, if that contribution was measured for day-time only, how can it be assumed that it is also a valid estimate for evening and night-time?

Our observations based on manned surveys at night on a number of occasions reveals that most industries on Racecourse Road are not operational at night and that industrial noise other than from NCIA is insignificant at Location 1.

Furthermore, in the NCIA Annual Environmental Management Report 08-09 at Annexure E is a recent noise survey report prepared by Spectrum Acoustics. At Table 1 of that report is a description of attended noise levels at Kenvil Close. The first two rows of that table summarise noise levels measured in the evening and night-time periods on the 23rd July 2008. The identified noise sources are Traffic, NCIA, insects & frogs. At these times, there are no other industrial noise sources identified.

Therefore, the level of 41dB(A) shown for "Evening" and "Night" for Location 1 in Table 6 cannot be substantiated.

Similarly, the industrial contribution at Locations 2 and 3 are based on the day-time attended measurements and cannot be substantiated for the evening and night periods.

Heggies should therefore be requested to revise the industrial contribution estimates in Table 6 for the evening and night periods and base these estimates on actual attended measurements in those times.

The importance of this requirement will become evident in the next section.

# 3 PROJECT SPECIFIC NOISE CRITERIA

Project specific noise criteria are derived in Section 6 of the Heggies Report on the basis of the INP. As described in the Heggies Report at Section 4, the basis of deriving acceptable noise criteria involves the derivation of two goals, namely the Intrusiveness Criterion and an Amenity Criterion both of which must be satisfied.

## 3.1 Applicable Amenity Category of Residential Receivers

In deriving the amenity criterion for noise sensitive receivers (i.e. residential receivers), the first step involves the characterisation of those receivers as one of the following:

- Rural
- Suburban
- Urban, or
- Urban/Industrial Interface

In the third paragraph of Section 6.1 of the Heggies Report, the following classification is made:

*The acoustical environment typifies an urban environment, with residences near existing industrial districts. Therefore, the residences in the general area have been assessed as "urban" receiver types as defined in the INP.*

On this basis, the noise limits indicated in the following table apply.

**Table 1 - INP Amenity Criteria - Recommended LAeq Noise Levels from Industrial Noise Sources – Urban Category**

| Type of Receiver | Indicative Noise Amenity Area | Time of Day | Recommended LAeq(Period) Noise Level (dBA) | |
|---|---|---|---|---|
| | | | Acceptable | Recommended Maximum |
| Residence | Urban | Day | 60 | 65 |
| | | Evening | 50 | 55 |
| | | Night | 45 | 50 |

*Note:*
*Daytime 7.00 am to 6.00 pm; Evening 6.00 pm to 10.00 pm; Night-time 10.00 pm to 7.00 am*
*On Sundays and Public Holidays, Daytime 8.00 am - 6.00 pm; Evening 6.00 pm - 10.00 pm; Night-time 10.00 pm - 8.00 am.*
*The LAeq index corresponds to the level of noise equivalent to the energy average of noise levels occurring over a measurement period.*

According to the Heggies Report, an urban classification is appropriate for all residences in proximity of the subject site including the residential neighbourhood of Rutherford and the residence on Wollombi Road, Farley.

In the INP, the following definition for *urban* can be found:

***Urban*** *- an area with an acoustical environment that:*

- *is dominated by 'urban hum' or industrial source noise*
- *has through traffic with characteristically heavy and continuous traffic flows during peak periods*
- *is near commercial districts or industrial districts*
- *has any combination of the above,*

*where 'urban hum' means the aggregate sound of many unidentifiable, mostly traffic-related sound sources.*

*This area may be located in either a* ***rural****,* ***rural-residential*** *or* ***residential*** *zone as defined on an LEP or other planning instrument, and also includes mixed land use zones such as mixed commercial and residential uses.*

In respect of the first bulleted requirement above, the proposition that residents in Rutherford or on Wollombi Road are *dominated* by urban hum or industrial source noise cannot be substantiated. This is evident from the following data extracted from Table 6 of the Heggies Report.

**Table 2 – Comparison of Total Measured Ambient Noise and Industrial Noise**

| Location | Period | Total Ambient Noise LAeq(Period) (dBA) | Industrial Noise Contribution LAeq(Period) (dBA) | Difference (dBA) |
|---|---|---|---|---|
| 1 Mountvale St, Rutherford | Day | 55 | 41 | 14 |
| | Evening | 50 | 41 | 9 |
| | Night | 48 | 41 | 7 |
| 2 115 Regiment Rd, Rutherford | Day | 57 | 33 | 24 |
| | Evening | 53 | 33 | 20 |
| | Night | 49 | 33 | 16 |
| 3 256 Wollombi Rd, Farley | Day | 55 | 39 | 16 |
| | Evening | 51 | 39 | 12 |
| | Night | 51 | 39 | 12 |

This table shows, for each of the measurement locations, the total measured noise level from all noise sources (i.e. resident, birds, wind, local traffic, excavator, train, dogs, frogs and industrial) with the estimated industrial noise contribution only.

In circumstances where the industrial noise is 7-24dB(A) below the total measured noise, it is not possible to conclude that industrial noise can be said to *dominate* the acoustic environment.

In respect of the second bulleted point, none of residential locations can be said to have through traffic with characteristically heavy and continuous traffic flows during peak periods.

In respect of the third bulleted point, what is meant by *near*? Is a separation of 50m, 100m, 200m or 1km "near"? There is no guidance in the INP as to what *near* means.

Therefore, rather than categorize the sensitive receivers purely on a whim, we look at whether another category may apply, and the most obvious one is that of *suburban*. In the INP, this category is defined as follows:

***Suburban*** *- an area that has local traffic with characteristically intermittent traffic flows or with some limited commerce or industry. This area often has the following characteristics:*

- *decreasing noise levels in the evening period (1800–2200); and/or*
- *evening ambient noise levels defined by the natural environment and infrequent human activity.*

*This area may be located in either a rural, rural-residential or residential zone, as defined on an LEP or other planning instrument.*

In respect of categorizing the nearby receivers, as *suburban*, we note that firstly all the sensitive receivers have local traffic with characteristically intermittent traffic flows.

In respect of the first bullet point, as evident in column 3 of Table 2 above, the Total Ambient Noise decreases in the evening period.

In respect of the second bullet point, on the assumption that industrial noise does not *dominate* the environment and that local traffic is light and intermittent then the ambient noise is defined by the natural environment and infrequent human activity.

In the INP at section 2.2.2 *Determining the receiver type*, the following guideline can be found in respect of deciding how to differentiate between *suburban* and *urban* residential uses:

*In deciding whether a receiver area should be allocated to the suburban or urban categories, it may be necessary to examine the predominant manner of development in the area and the prevailing noise climate. The definitions of suburban and urban provide guidance on this. For example, small communities such as villages or towns are likely to be closer in noise climate to a suburban category. Urban receivers are*

*usually those located in densely populated areas where multi-dwelling developments such as townhouses, units, flats and apartments are the norm. Areas near noise generators (for example, roads, railways and industry) would normally be considered to be urban-receiver type for the purpose of the amenity criteria. The rural category is more representative of more isolated single dwellings on large lots (for example, 2 hectares). The population density for an area may provide a guide as to which of the residential receiver categories apply.*

On the basis of this guidance, if *urban* receivers as usually typified as being located in densely populated areas (where multi-dwelling developments such as townhouses, units, flats and apartments are the norm), then Rutherford and Farley cannot reasonably be categorised as being highly populated and therefore cannot reasonably be ascribed the definition *urban*.

In our view, the justification for selection of the *urban* classification on the basis that residences are *near* existing industrial districts cannot be substantiated because what constitutes *near* has not been defined.

Heggies should therefore justify their selection of the *urban* category for the residential receivers and should give reasons why the *suburban* category is not applicable.

## 3.2 Applicable Noise Criteria for Suburban Category

If the suburban category applies then the following amenity criteria would apply:

**Table 3 - INP Amenity Criteria - Recommended LAeq Noise Levels from Industrial Noise Sources – Suburban Category**

| Type of Receiver | Indicative Noise Amenity Area | Time of Day | Recommended LAeq(Period) Noise Level (dBA) | |
|---|---|---|---|---|
| | | | Acceptable | Recommended Maximum |
| Residence | Suburban | Day | 55 | 60 |
| | | Evening | 45 | 50 |
| | | Night | 40 | 45 |

*Note:*

*Daytime 7.00 am to 6.00 pm; Evening 6.00 pm to 10.00 pm; Night-time 10.00 pm to 7.00 am*

*On Sundays and Public Holidays, Daytime 8.00 am - 6.00 pm; Evening 6.00 pm - 10.00 pm; Night-time 10.00 pm - 8.00 am.*

*The LAeq index corresponds to the level of noise equivalent to the energy average of noise levels occurring over a measurement period.*

The applicable criteria in Table 11 of the Heggies report would then be as follows:

**Table 4 – NCIA Revised Project Specific Noise Criteria**

| Location | Period | Intrusiveness Criteria LAeq(15min) | INP Acceptable Levels | Industrial Noise Contribution | Amenity Criteria LAeq(Period) | Project Specific Noise Criteria LAeq(15min) | Table 11 Heggies Report |
|---|---|---|---|---|---|---|---|
| 1<br>Mountvale St,<br>Rutherford | Day | **48** | 55 | 41 | **55** | 48 | 48 |
| | Evening | **48** | 45 | 41 | **43** | 43 | 48 |
| | Night | **43** | 40 | 41 | **32** | 32 | 43 |
| 2<br>115 Regiment Rd,<br>Rutherford | Day | **47** | 55 | 33 | **55** | 47 | 47 |
| | Evening | **44** | 45 | 33 | **45** | 44 | 44 |
| | Night | **41** | 40 | 33 | **40** | 40 | 41 |
| 3<br>256 Wollombi Rd,<br>Farley | Day | **43** | 55 | 39 | **55** | 43 | 43 |
| | Evening | **43** | 45 | 39 | **44** | 43 | 43 |
| | Night | **42** | 40 | 39 | **34** | 34 | 42 |

In the table above, the second last column represents the Project Specific Noise Criteria on the basis of a *suburban* category and the last column represents the Project Specific Noise Criteria proposed in the Heggies Report at Table 11 based on the *urban* category.

For example, at Location 1 for the night-time, the applicable criterion in the Heggies Report based on *urban* category is 43dB(A) whereas it would be 32dB(A) if based on *suburban* category.

As noise from NCIA is essentially constant in nature, the limiting criterion becomes the night-time criterion where, according to the second last column of Table 4 above, a level of 32-34dB(A) is required if the receivers are re-categorized as *suburban*. In accordance with INP policy, the minimum goal is 35dB(A) which therefore becomes the Project Specific Noise Criterion.

This goal should apply to all residential receivers including those proposed in Heritage Green. According to Appendix C2 of the Heggies Report (Noise Contours – Proposed Operations – Temperature Inversion), the location of the 35dB(A) contour essentially encompasses most of the Heritage Green land. This is unreasonable and therefore, in accordance with INP policy, all reasonable and feasible means should be employed by NCIA to mitigate noise levels.

On the basis that Heritage Green is classified as *suburban*, Heggies should be requested to provide information on all reasonable and feasible means of reducing noise levels from NCIA to 35dB(A).

## 3.3 Environment Protection Licence

The Environment Protection Licence issued for the existing site operations (**Licence**) requires as follows:

***Noise Limits***

*L6.1 Noise from the premises must not exceed:*

*(a) 41dB(A) LAeq(15 minute) during the day (7am to 6pm) Monday to Saturday and (8am to 6pm) Sunday and public holidays; and*

*(b) 39dB(A) LAeq(15 minute) during the evening (6pm to 10pm) Monday to Sunday and public holidays; and*

*(c) at all other times 35dB(A) LAeq (15 minute) , except as expressly provided by this licence.*

*Where LAeq means the equivalent continuous noise level – the level of noise equivalent to the energy-average of noise levels occurring over a measurement period.*

*L6.2 Noise from the premises is to be measured at the most affected point on or within the receptor site boundary to determine compliance with this condition.*

*L6.3 Noise from the premises shall not exceed the LA1(1 minute) noise level of 45 dB(A) at the nearest residential receiver most affected by noise from activities at the premises. The noise limit applies 1 metre from the dwelling façade and shall apply during the night period only.*

*L6.4 The noise emission limits specified above apply under all meteorological conditions except:*

- *during rain and wind speeds greater than 3 m/s; and*
- *from 6pm to 7am during intense inversions, which are indicated by cloud cover less than 40 per cent and wind speeds less than 1.0 m/s*

*Note: Wind data should be collected at 10m height*

The following table shows for comparison the existing Licence limits and the project specific noise criteria proposed in the Heggies Report for existing Rutherford residents located to the east of the NCIA plant.

**Table 5 Comparison of Existing Licence Limits and Proposed Project Specific Noise Criteria**

| Period | Existing Environment Protection Licence Limits for Rutherford Residents | Proposed Project Specific Noise Criteria for Rutherford Residents |
|---|---|---|
| Day | 41 | 47 |
| Evening | 39 | 44 |
| Night | 35 | 41 |

It is clear from this table, for example, that the Heggies Report adopts an LAeq(15minute) night time noise goal of 41dB(A) for the Rutherford residential area, an increase of 6dB above the existing consent of 35dB(A) – this is a significant increase which is not substantiated.

Furthermore, for the Heritage Green site, the Heggies Report adopts an LAeq(15minute) night time noise goal of 43dB(A). Given the potential of the Heritage Green site to accommodate up to 450 residential dwellings, it is difficult to appreciate the difference in the noise goals.

If the proposed night-time acoustic limit of 43dB(A) is to be adopted for the Heritage Green development (compared with the 35dB(A) limit imposed in the Licence), this would set a reduced level of acoustic amenity for this residential area. The environmental impact associated with this proposal on future residents in Heritage Green is simply avoided in the Heggies Report.

It is not clear why the Licence conditions should not also apply to the expanded development. If the answer is that noise levels in the area (unrelated to NCIA operations) have changed since NCIA commenced operations in 2004, then evidence should be provided in support of such a proposition.

Furthermore, as the Licence conditions apply *at the most affected point on or within the receptor site boundary*, this should include any new dwellings constructed in Heritage Green.

Heggies should therefore be requested to give reasons as to why the current Licence conditions should not apply to the expanded development and, in the event that those conditions apply to dwellings constructed in Heritage Green, what reasonable and feasible measures they propose to comply with those conditions.

# 4 ASSESSMENT OF NOISE IMPACTS

The results of noise calculations and assessment of noise impacts is discussed in Section 7 of the Heggies Report. Noise contours are provided for calm and adverse meteorological conditions for the operation of the total expanded development Stages 1-8.

Our first observation is that the Heggies Report is particularly deficient in defining the specific sources of noise in the NCIA premises. For example, there is no table of noise sources, their physical location and their sound power levels, only a reference in Section 7.1.1 of the Heggies Report to *"noise source data"*. There is no verification of existing measured sound levels within the premises to confirm the adopted sound power levels are correct. We would have thought that this basic information is paramount to demonstrating that a proper assessment has been made. The reader is left uninformed as to whether the assumptions made in the modelling are accurate or not.

The report concludes at Section 7.1.3 that:

*Operational noise levels are predicted to be significantly below the project specific noise criteria at all existing residential locations under calm and prevailing weather conditions.*

*It is noted that the Heritage Green residential subdivision is proposed immediately east and south of the subject site. Noise emission predictions from the NCIA development indicate that there are some areas of the Heritage Green site that may be noise affected.*

*The degree of affectation would depend on the type of development proposed for different areas of the proposed Heritage Green (i.e. the site layout and orientation). Other important factors influencing affectation include the implementation of proposed noise attenuation measures identified in the 2006 Heritage Green Statement of Environmental Effects (SEE), to mitigate the acknowledged industrial noise across parts of the Heritage Green site. These measures included noise barriers, buffer distances and the design of residential building envelope.*

However, as pointed out in this report, there are a number of assumptions made in the Heggies Report that are erroneous or unsubstantiated and result in noise criteria which are substantially above the noise limits imposed by the current Licence.

In particular, if the development is approved, we are of the opinion that there is no logical reason to deviate from the current Environment Protection Licence noise limits. As stated earlier, if dwellings at Heritage Green are approved and if those limits apply at the dwellings, then NCIA would be required to adopt all reasonable and feasible means of reducing noise levels at Heritage Green.

This would include the following:

i) construction of the proposed new factory building using tilt-up concrete slabs instead of steel sheeting;

ii) thicker steel for the roof sheeting;

iii) upgrading of the existing building in a similar manner;

iv) bag-houses for the kiln stacks located inside the factory building;

v) noise reduction for dust extraction unit;

vi) limitations on the opening of doors in the building, especially at night;

vii) use of industrial silencing techniques generally for mechanical equipment.

Failing that, there should be reasonable acoustic benchmarks set for the development which are achievable in a practical sense given the technology currently available and also having regard to maintaining as close as possible the existing acoustic amenity of the lands both adjacent to and within the vicinity of the NICA site that either are developed or are capable of being developed for residential purposes.

Heggies should be requested to explore reasonable and feasible methods of noise reduction and predicted noise benefits for evaluation.

# 5 CONCLUSION

Renzo Tonin & Associates has completed an assessment of the noise impacts predicted for the proposed expansion of the NCIA factory facility at Rutherford.

We note that the Heritage Green site enjoys residential use rights under both Clauses 25 and 52 of Maitland LEP 1993.

The Heggies Report in its executive summary states that *"Noise emission predictions from the NCIA development indicate that there are some areas of the Heritage Green site that may be noise affected. The degree of affectation will depend on the type of development proposed for different areas of the Heritage Green site."*

There is a requirement in Clause 23 of Maitland LEP 1993 that *"industrial development is allowed only if it does not adversely affect adjacent residential areas"*. Therefore, there is an overriding obligation for NCIA to ensure that its expansion operations do not adversely affect the proposed residential development on the Heritage Green site.

In particular, we see no reason as to why the current Environment Protection Licence noise limits should not continue to apply unchanged in respect of the expanded development and that they should also apply to any residential development proposed for Heritage Green.

Failing that, there should be reasonable acoustic benchmarks set for the development which are achievable in a practical sense given the technology currently available and also having regard to maintaining as close as possible the existing acoustic amenity of the lands both adjacent to and within the vicinity of the NICA site that either are developed or are capable of being developed for residential purposes.

In other words, noise levels predicted for the expanded development will not comply with reasonable amenity goals for the Heritage Green site and therefore all reasonable and feasible means of noise reduction should be explored by NCIA to reduce noise levels.

We furthermore conclude that the Heggies Report prepared in respect of that expansion contains errors and unsupported assumptions.

We therefore recommend that further information be sought from NCIA and that the development should not be approved in its current form.

## APPENDIX A - GLOSSARY OF ACOUSTIC TERMS

The following is a brief description of the technical terms used to describe noise to assist in understanding the technical issues presented.

| | |
|---|---|
| Adverse Weather | Weather effects that enhance noise (that is, wind and temperature inversions) that occur at a site for a significant period of time (that is, wind occurring more than 30% of the time in any assessment period in any season and/or temperature inversions occurring more than 30% of the nights in winter). |
| Ambient Noise | The all-encompassing noise associated within a given environment at a given time, usually composed of sound from all sources near and far. |
| Assessment Period | The period in a day over which assessments are made. |
| Assessment Point | A point at which noise measurements are taken or estimated. A point at which noise measurements are taken or estimated. |
| Background Noise | Background noise is the term used to describe the underlying level of noise present in the ambient noise, measured in the absence of the noise under investigation, when extraneous noise is removed. It is described as the average of the minimum noise levels measured on a sound level meter and is measured statistically as the A-weighted noise level exceeded for ninety percent of a sample period. This is represented as the L90 noise level (see below). |
| Decibel [dB] | The units that sound is measured in. The following are examples of the decibel readings of every day sounds:<br>0dB The faintest sound we can hear<br>30dB A quiet library or in a quiet location in the country<br>45dB Typical office space. Ambience in the city at night<br>60dB Martin Place at lunch time<br>70dB The sound of a car passing on the street<br>80dB Loud music played at home<br>90dB The sound of a truck passing on the street<br>100dB The sound of a rock band<br>115dB Limit of sound permitted in industry<br>120dB Deafening |
| dB(A): | A-weighted decibels The ear is not as effective in hearing low frequency sounds as it is hearing high frequency sounds. That is, low frequency sounds of the same dB level are not heard as loud as high frequency sounds. The sound level meter replicates the human response of the ear by using an electronic filter which is called the "A" filter. A sound level measured with this filter switched on is denoted as dB(A). Practically all noise is measured using the A filter. |
| Frequency | Frequency is synonymous to pitch. Sounds have a pitch which is peculiar to the nature of the sound generator. For example, the sound of a tiny bell has a high pitch and the sound of a bass drum has a low pitch. Frequency or pitch can be measured on a scale in units of Hertz or Hz. |
| Impulsive noise | Having a high peak of short duration or a sequence of such peaks. A sequence of impulses in rapid succession is termed repetitive impulsive noise. |
| Intermittent noise | The level suddenly drops to that of the background noise several times during the period of observation. The time during which the noise remains at levels different from that of the ambient is one second or more. |
| Lmax | The maximum sound pressure level measured over a given period. |
| Lmin | The minimum sound pressure level measured over a given period. |
| L1 | The sound pressure level that is exceeded for 1% of the time for which the given sound is measured. |
| L10 | The sound pressure level that is exceeded for 10% of the time for which the given sound is measured. |

| | |
|---|---|
| L90 | The level of noise exceeded for 90% of the time. The bottom 10% of the sample is the L90 noise level expressed in units of dB(A). |
| Leq | The "equivalent noise level" is the summation of noise events and integrated over a selected period of time. |
| Reflection | Sound wave changed in direction of propagation due to a solid object obscuring its path. |
| SEL | Sound Exposure Level (SEL) is the constant sound level which, if maintained for a period of 1 second would have the same acoustic energy as the measured noise event. SEL noise measurements are useful as they can be converted to obtain Leq sound levels over any period of time and can be used for predicting noise at various locations. |
| Sound | A fluctuation of air pressure which is propagated as a wave through air. |
| Sound Absorption | The ability of a material to absorb sound energy through its conversion into thermal energy. |
| Sound Level Meter | An instrument consisting of a microphone, amplifier and indicating device, having a declared performance and designed to measure sound pressure levels. |
| Sound Pressure Level | The level of noise, usually expressed in decibels, as measured by a standard sound level meter with a microphone. |
| Sound Power Level | Ten times the logarithm to the base 10 of the ratio of the sound power of the source to the reference sound power. |
| Tonal noise | Containing a prominent frequency and characterised by a definite pitch. |

# APPENDIX C
Review of Air Quality Assessment

# AIR QUALITY IMPACT ASSESSMENT

## NATIONAL CERAMICS INDUSTRIES AUSTRALIA, RUTHERFORD

**The McCloy Group**

**Job No: 5156**

**12 August 2010**

| | |
|---|---|
| **PROJECT TITLE:** | **NATIONAL CERAMICS INDUSTRIES AUSTRALIA, RUTHERFORD** |
| **JOB NUMBER:** | **5156** |
| **PREPARED FOR:** | Brian Swaine<br>**THE MCCLOY GROUP** |
| **WRITTEN BY:** | Kerry Holmes |
| **DISCLAIMER & COPYRIGHT:** |  |

**DOCUMENT CONTROL**

| VERSION | DATE | AUTHOR/S | REVIEWED BY |
|---|---|---|---|
| FINAL | 12.08.10 | K Holmes | K Holmes |

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# 1 INTRODUCTION

The McCloy Group has requested PAEHolmes to review the Air Quality Assessment undertaken for the proposed expansion of National Ceramics Industries Australia's (NCIA) operations at Racecourse Road, Rutherford

The following provides our comments regarding air quality issues associated with the proposed expansion.

# 2 APPROACH TO ASSESSMENT

NCIA operate a ceramic tile factory at Racecourse Road Rutherford in the Hunter Valley. They have approval for four production lines two of which currently are operational. NCIA propose to expand their existing approved operations by adding four additional lines to be housed within a new factory building. NCIA are also looking for a new Development Consent which would allow the operation of all eight production lines.

The air quality impact assessment (AQIA) for the current project was undertaken by **AECOM, 2010** (formerly HLA-Envirosciences) who have also undertaken air quality monitoring for the approved operations as well as the preparation of Annual Environmental Management Reports (AEMR) since the plant began operating in 2004.

The methodology used for the assessment generally followed the DECCW Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales.

The following summarises the approach adopted:

- The model used was AUSPLUME Version 6.0 which is an appropriate model for the local conditions;
- Meteorological data was sourced from CSIRO TAPM model and nudged with data collected by the Bureau of Meteorology. On-site data was considered to be compromised by local factors and to be unrepresentative of the region. The TAPM data is likely to be adequate;
- Emissions estimates for particulate matter, oxides of nitrogen, sulfuric acid, sulfur dioxide and heavy metals were based on the most recent round of stack monitoring data. Hydrogen fluoride (HF) emissions were based on the higher value of the licence limit for the approved project. This is discussed in more detail below;
- Background levels of air pollutants were estimated from project-related monitoring data as well as other regional sources. This is also discussed further below; and
- Other factors such as terrain, building wake and emission source characteristics were incorporated into the modelling.

The general approach is consistent with the DECCW Approved Methods. Modelling was undertaken for the approved facility, that is four lines operating (Scenario 1) and for the proposed expansion, that is eight lines operating (Scenario 2). The model results demonstrated compliance with all air quality goals apart from particulate matter ($PM_{10}$) and hydrogen fluoride which were predicted to

be exceeded over the Heritage Green site. There were also predicted exceedances of $PM_{10}$ at sensitive receptors other than Heritage Green, but no predicted exceedances of HF at any other sensitive receptors.

The interpretation of the $PM_{10}$ results was that the background levels were the dominant factor. This is likely to be the case. The modelled results for the 8-line operation were lower than previously predicted in the 2002 EIS for the 4-line operation. This is because the PM emissions have been controlled beyond that assumed in the 2002 EIS. Nevertheless it is appropriate in these circumstances to apply best-practice mitigation measures to minimise impacts as there is potential for exceedances of $PM_{10}$ air quality goals.

In terms of HF, the approach adopted for emission estimation and accounting for background is in this case critical to the conclusions and is discussed further below.

It should be noted that the air quality goals for HF are based on effects on vegetation, not human health.

# 3 ESTIMATE OF EMISSIONS

The AQIA report provides a discussion of the major sources of emissions. Estimates were based on stack testing conducted between 2007 and 2009 on the single production line which has been operating since 2004. The second line was commissioned in August 2009 and it was considered that testing from this line was not yet reliable. From previous AEMR, it appears that the first line required additional mitigation measures and the stack monitoring data from 2007 to 2009 would reflect current operating conditions. It is presumed that similar mitigation measures would be applied to any subsequent lines if required.

The maximum of the measured stack emissions was used for the modelling. One exception was the HF emissions which were modelled at their licence limit of 5 $mg/m^3$ rather than the 2.2$mg/m^3$ which has been achieved in recent stack testing according to Section 7.2.3 of the AECOM report.

It was argued that HF was the one emission that had the potential to approach its licence limit. It was also argued that other emissions were significantly below their licence limits and modelling them at their limits would present an unrealistically conservative result.

This argument has some limited merit; however, if modelling at the licence limit demonstrates exceedance of air quality goals, it is then appropriate to model at an emission rate which would result in compliance with goals. AECOM should provide this additional modelling.

In this instance, there is a modelled non-compliance with HF goals over the Heritage Green site which has been interpreted in the AQIA as an impact. As discussed above, the non-compliance with $PM_{10}$ criteria at both the Heritage Green site and at other receptors has been treated as a regional background air pollution issue and not an impact from the NCIA facility. The second point is reasonable. The first point needs further examination.

# 4 ACCOUNTING FOR BACKGROUND

Background levels of air pollution can be difficult to take into account in air quality assessments based on dispersion modelling. Adding the maximum measured background level to the maximum

predicted level can be very conservative for short-term impacts, particularly if the source is already contributing to the measured levels.

In the case of the NCIA expansion, it is reasonable to assume that there is some contribution from the existing plant to measured ambient background levels. However for most of the monitoring period only one line has been operating. We understand from the AQIA that operation of the second line commenced in August 2009. The ambient monitoring data therefore do not include contributions from the "stabilised" operations of the second production line but would include emission during the commissioning phase of this line.

This analysis focuses on the calculation by AECOM of HF background levels.

Monitoring data collected at the SE and NW corners of the site was reviewed as well as data collected at the Wyndham Estate by Hydro Aluminium approximately 12 km NW of NCIA. These latter data were considered to be representative of background HF levels, with no contributions from NCIA.

It appears from the data provided in Table 7 of the AQIA that data from Wyndham Estate did not include 24-hour measurements. To overcome this AECOM have subtracted the 7-day regional HF from the 7-day average at NCIA to determine the percentage contribution of NCIA. This percentage contribution was then subtracted from the 24-hour measured value at NCIA to determine the background 24-hour average.

In Table 8 of the AQIA an example calculation was presented which showed 7-day results at the NCIA NW monitoring station compared to the 7-day results at the Wyndham Estate. It is assumed that these are maximum 7-day data in both cases. This is consistent with Figure 6 of the AECOM 2009 monitoring report which shows the recorded weekly fluoride levels at the NW monitor. As both the 7-day HF level for the Wyndham Estate and the NW monitor were the same in 2009, it has been assumed that there was no contribution to the NW monitor from emissions from NCIA. This is a very different result from the estimates made for 2007 and 2008 where contributions were calculated to be 82 and 84% respectively. On the basis of zero contribution from NCIA, the 24-hour background was set at the maximum of 0.9 $\mu g/m^3$ measured at the NW monitor in 2009.

However what is also shown in Figure 7 of the same report is the weekly fluoride monitoring data for the NCIA SE monitor. Monitored levels here are about half (or less) those at the NW monitor. Given the proximity of these monitors it is reasonable to assume that they are subject to similar regional influences. Therefore some analysis of these data with respect to wind patterns may provide a more robust measure of NCIA contributions and hence background concentrations. The maximum measured 24-hour fluoride level at the SE monitor was approximately 0.5 $\mu g/m^3$ in 2009 which is less than the assumed background of 0.9 $\mu g/m^3$. On this basis it is likely that 0.9 $\mu g/m^3$ is an overestimate of background, particularly given that the SW monitoring data is representative of the Heritage Green site where exceedances are predicted.

# 5 CONCLUSIONS

The AQIA for the NCIA expansion concluded that air quality goals for all emissions apart from $PM_{10}$ and HF would be met at all existing and proposed sensitive receptors. In the case of $PM_{10}$ the exceedances at both existing receptors and on the Heritage Green site were attributed largely to regional impacts. The highest $PM_{10}$ predicted at existing or potential residential receptors was at the NW corner of the Heritage Green site, similar to the location of maximum impact at potentially sensitive receptors in the 2002 EIS Air Quality Assessment (**Holmes Air Sciences, 2002**). The

design of the Heritage Green site has taken this into account with a buffer zone in that area. Nevertheless, mitigation measures should be incorporated into the design of the proposed expansion to ensure that no impacts beyond the current approved operations occur. This would be reflected in lowering of the approved stack limits for particulate matter.

Exceedances of the HF goal are predicted across the Heritage Green site and this is considered in the AQIA to be an impact area, although based on potential vegetation damage rather than human health effects. The reasons for the predicted exceedances are discussed above in terms of assumptions about HF emission rates and background. It is considered that there is likely to have been an overestimate in background concentrations, particularly over the Heritage Green site and in the achievable HF emission rates.

While it is appropriate to present a conservative assessment, if this results in exceedances of air quality goals at sensitive receptors, effective mitigation measures must be included in the proposal.

My understanding is that Rutherford Estate is zoned 4(a) General Industrial under the Maitland LEP. This zoning prohibits industrial development if it adversely affects adjacent residential land. In the case of the NCIA expansion it must be demonstrated that there is no adverse impact on the adjacent land. The modelling provided by AECOM should include operating scenarios that demonstrate compliance with air quality goals, and the mitigation measures that would be needed to achieve this compliance. It appears from the information on measued emissions provided in the AECOM report that compliance can be achieved with feasible and reasonable control measures.

# 6 REFERENCES


AECOM (2009)

Annual Environmental Management Report 2008-2009 Racecourse Road Rutherford" prepared for National Ceramic Industries Australia 29th October 2009

AECOM (2010)

"Air Quality Impact Assessment NCIA Expansion" prepared for National Ceramic Industries Australia 15th June 2010

Holmes Air Sciences (2002)

"Air Quality Assessment: Proposed Ceramic Tile Manufacturing Facility at Rutherford" prepared for Parsons Brinckerhoff, 11th December 2002.

# APPENDIX D
Surface Water Management Review

Our Ref:SD:238449
*N:\238449\Admin*\Corro\Letters\Client\Aug10,L01,Swaine(NCIA).doc

16 August 2010

McCloy Group
PO Box 2214
Dangar NSW 2309

Emailed to: brian@mccloygroup.com.au

**ATTENTION: BRIAN SWAINE**

Dear Brian,

**RE: NATIONAL CERAMIC INDUSTRIES AUSTRALIA EXPANSION (NCIA) – MP09_0006 PART 3A PROJECT AT RACECOURSE ROAD, RUTHERFORD COMMENTARY ON APPENDIX G – SURFACE WATER MANAGEMENT**

In accordance with your instruction, we have reviewed Appendix G - Surface Water Management prepared by AECOM (Ref 60099477, dated 26 February 2010 for NCIA expansion of facility at Racecourse Road, Rutherford.

In our opinion, Appendix G is lacking several necessary details for environmental assessment which raise concern as to whether potential impacts from the proposed development of NCIA have been properly assessed.

Director-General's Requirements (DGR's) for MP09_0006 were issued February 2009 listing stormwater management matters for assessment. In our opinion, these matters are not adequately addressed.

There are two (2) main concerns with Appendix G. The most apparent matter is that the proposed development is using significant potable water quantities for process water supply. This is not a sustainable practice. The second matter is that the basis of stormwater control sizing is incomplete and there has been no adequate demonstration of space provisioning for the stormwater controls sized. Both of these matters are likely to affect the proposed building footprint extents but more significantly, the sustainability matter raises concern whether the development proposal is in the communities' best interests.

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In regard to compliance with the DGR's we see the following issues remaining outstanding:

- *a description of the existing environment, using sufficient baseline data;* we were unable to find a topographical detail survey for the site. Figure 2 of the AECOM report shows contours but no labels or interval. Considering that the building footprint of the proposed development is to be level over a length of approximately 400m downslope, contours are essential to determining cut/fill extents, visual impacts (retaining wall heights, etc), site constraints and allocation area for site drainage and components.

- *An assessment of the potential impacts of all stages of the project.* There is no demonstration of adequate space available for stormwater runoff from the building footprint during construction prior to roof drainage being installed. The main basins for stormwater control proposed with the development suit finished surface levels but areas of the building footprint will not gravitate to these basins. A larger basin is required along the southern boundary for this intermediate stage for proper stormwater runoff/sediment control. Otherwise, there are potential off site impacts of erosion of the downstream watercourses from increased flows not adequately attenuated on site.

- *Soils & Water- including the proposed erosion and sediment controls (during construction); water quality management, the proposed stormwater management system; water supply including consideration of the potential for rainwater harvesting/recycling; and wastewater disposal.* There are generalised statements regarding erosion and sediment control in Section 5.2.1 of the AECOM report, but there is no plan to demonstrate that these can be adequately addressed – in particular, the space availability for an adequately sized sediment basin for runoff control during earthworks, site preparation and slab construction is of concern. In addition, we don't consider that stormwater harvesting/recycling has been adequately addressed. There is no justification of the process water use needing to be potable from mains supply. There is significant roof area available for harvesting stormwater runoff. A system of collection tanks for roofwater and on site treatment package system could be used for supply of the process water. A higher level of water reuse would be a sustainable outcome for the region and meet the DGR's objectives. The use of potable water for the full developed site at the process water supply rates provided in Appendix G is equivalent to the water use by approximately 650 homes based on Hunter Water records of water use, or a density of approximately 38 homes per hectare on the NCIA site.

Appendix G makes reference to the existing development consent for the existing facility issued by the Minister for Planning in 2003 (File Ref S02/01183). It is considered likely that this would form the basis for compliance of the proposed works on the site, as reflected by the calculations and issues documented in Appendix G. In our opinion, these matters are also not adequately addressed in the reporting, potentially affecting the building footprint and operations area available.

From Table 1 of Section 2.2.1 – Conditions of Consent,

No. 4.23 – No increase in the rate of stormwater discharge. We don't consider this requirement has been met for the following reasons; Figure 3 indicates a pre development catchment boundary of approximately two-thirds of the site to the watercourse, whereas the last paragraph of Page 9 (Section 4.1.2 of the AECOM report) states "the catchment areas within XP-RAFTS were then expanded to encompass the full property size.....used to determine the pre-development site discharge characteristics for the entire property". From the description and figure, there is an indication that detention storage has not been calculated to the correct pre development peak flows, since the figure indicates some pre development peak flow to the east, not through the watercourse to the south. The potential effect is that the detention storage will not fit within the site, affecting the building footprint and operations area available.

No 4.24 Stormwater Infrastructure. Secondary flowpaths from spillways and their batters, maintenance access and alike are not shown. This is required to demonstrate that there is adequate space available on site for the building footprint, all stormwater controls and their ongoing maintenance for protection of the watercourses and property downstream in the future.

No. 7.4 (b) Surface water, erosion and sedimentation management has not been adequately addressed as described above.

Stormwater management infrastructure is not demonstrated to comply given there is no detail of grass swale length, grade to fit within site. No details are provided to demonstrate that the basins shown are of sufficient surface area and volume to meet the pollutant removal efficiencies quoted. There are no pollutant removal targets for water quality improvement reported, no evidence of water quality modelling to prove that the targets are being met for the protection of the downstream receiving watercourses and property downstream. The concern is that there is insufficient space for these stormwater controls to fit within the site adjacent to the building footprint proposed. One wet detention basin volume is shown, but not all site runoff passes through this basin for water quality improvement.

There are no descriptions of installation and maintenance of the stormwater control infrastructure. There are no gross pollutant traps shown. These are essential for heavy sediment removal from stormwater and longevity of the stormwater controls proposed. This is essential for protection of the watercourses and property downstream in the future.

Process Water Management & No 7.4 (c) – describes water reuse, recycling and alternatives to potable water use. There is no presentation of these alternatives in Appendix G although 7 years have passed after the initial consent issue. There are large quantities of roofwater being generated from the significant roof areas proposed. There are treatment systems available for water quality improvement of collected roofwater as required to obtain the quality required for process water.

Our general commentary on Appendix G:

The footprint and size of the rainwater tanks is inconsistent with the text. The report states 105KL rainwater tanks and that they are 25% full for reuse. Figure 6 indicates 4 OSD tanks with a total volume of 470m$^3$ x 2 – 940m$^3$. This does not match the text description and would result in tank beings approximately 5m high or more tanks with greater footprint area is required to achieve the quoted storage based on the plan presented.

The longitudinal grades of the site are quoted as 1%, however this is approximately 4m of elevation change over the building slab footprint length shown. There is no description or reference as to how this cut to fill and elevation is accommodated within the site matching to the flat level building slab.

A New Detention Basin is quoted as approximately 15,900m$^3$, refer to Figure 6. Although there is no scale shown on Figure 6, the area of this basin scales at approximately 5000m$^2$ based on the site boundary dimensions. The depth is described as 2m, when a 3m depth will be required to achieve the volume quoted. Will this basin still be drainable if it were deeper to accommodate the storage or does the footprint of the basin need to expand?

A New Detention Basin is quoted as approximately 835m$^3$, refer to Figure 6. The footprint for this basin is awkward given the existing moderate slopes, level differences and the proposed floor level of the building. It is not adequately demonstrated that this basin will fit within the allocated area shown.

**Conclusion**

In summary, we consider Appendix G on stormwater reporting is not compliant with the DGR's and is deficient in the following matters:

- Water Quality modelling;
- Detention modelling for peak flow attenuation;
- Sustainability issues of using significant potable water resources for process water supply;
- Demonstrated space provisioning for stormwater controls surrounding the building footprint;
- Stormwater controls for interim runoff control from slab prior to roof completion;
- Soil and water management; and
- Maintenance regime.

These matters are all essential to confirm that adequate environmental assessment has been completed in regard to stormwater management from the proposed development and that there are no adverse effects on the downstream receiving watercourses and property downstream. Accepting that these matters can be addressed with further stormwater work and potential adjustment to the development building footprint as required, there are longer term sustainability concerns with the development proposal where large quantities of potable water are being used for process water.

Please do not hesitate to contact me if you have any questions.

Yours faithfully

**SCOTT DAY** BE Env (Hons), MIEAust CPEng NPER, Member No.1465150
**SENIOR ENGINEER**

# APPENDIX E
Review of Visual Impact Assessment

terras
landscape architects

# visual impact assessment:
# ncia facility expansion - review

project no: 8733.5
date: Monday, 16 August 2010
revision: Final

terras
landscape architects

date: Monday, 16 August 2010
project no: 8733.5
to: McCloy Group
address: 4226 King Street, Newcastle West, 2302
attention: Mr Brian Swaine

# visual impact assessment: ncia facility expansion - review

## 1. introduction

Terras Landscape Architects [TLA] has been asked by the McCloy Group [McCloys] to undertake a review of the Environmental Assessment (AECOM, 2010) for a Major Project Application submitted to the NSW Department of Planning (MP 08-0006). The proposal is for an expansion of the manufacturing facility accommodating National Ceramic Industries Australia [NCIA] located at Rutherford. This review deals specifically to the Visual Impact Assessment contained within the report.

McCloys is the developer of Heritage Green which is a redevelopment of the former Westside Golf Course which adjoins the NCIA site to its east. It is proposed that Heritage Green will become a 440 lot residential estate to be built around existing and improved native vegetation with an emphasis on the provision of a range of open spaces and recreational facilities for the benefit and enjoyment of its residents.

The review has been carried out in two stages. First, an evaluation of the relevant documents pertaining to visual quality contained within the Environmental Assessment as posted on the Department of Planning's website[1]. Second, the undertaking of site investigations to confirm, or otherwise, the findings of the VIA and to identify any shortcomings, should they exist, that relate specifically to the Heritage Green site.

## 2. review of environmental assessment including visual impact assessment

The Visual Impact Assessment (Moir Landscape Architecture, 2010) [VIA] seems to be a reasonable assessment of the proposal's visual impact when related to the general visual catchment. The basic argument being promoted in the VIA is that the proposed development is occurring within an existing industrial estate. The development will result in changes to the existing visual environment. The inference being, although not stated in the VIA, that the visual quality will not be made worse by the proposed expansion of the factory as it is located in an already degraded visual environment.

[1] http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=3550 (accessed 26/07/10)

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The Environmental Assessment, however, makes a better assessment of the proposal's visual impact when it states:

> *The project would be viewable from locations that already have viewing location of the existing facility, hence a reduced visual impact would result from these locations as the sensitivity of the viewing locations is lower due to the existing industrialised views* (Page xix)

> *As the views towards the project would be considered similar to the existing views the overall visual impact from the proposed Heritage green* (sic) *is seen as similar to the existing situation.* (Page 87)

The assessment makes note that:

> *Most of the former golf course is sited lower and existing mounding and screen planting around the perimeter provides some screening of the adjoining industrial estate and hence the proposed development. The proposed development would be visible from the elevated entry to Heritage Green off Regiment Road. Due to restrictions on access the visual impact from within the Heritage Green site has not been fully assessed. (Page 28).*[2]

It is considered that not enough regard has been given to assessing the impacts on the Heritage Green site considering that it has the potential to affect approximately 1,100 residents.

The reference to "existing mounding and screen planting around the perimeter" acknowledges the work done by McCloys; however, it does not address the need for NCIA to undertake screening within its own site.

The VIA makes recommendations on requirements for lighting, however, there has been no assessment of the impact of lighting on adjoining properties, such as Heritage Green.

Finally, the VIA includes recommendations on landscaping and colour and materials selection, however, the recommendations tend to be generic and therefore they are not sufficiently detailed to ensure that appropriate measures are being taken to adequately address possible visual impacts.

## 3. site investigations

The second stage of the review was the undertaking of fieldwork to consider in detail possible impacts that the proposed NCIA expansion may have on the Heritage Green site. This involved travelling around the site marking locations where the existing NCIA development could not be seen or where it could be seen, either the tower element only or the tower and factory shed. Figure 1 shows the results of the fieldwork.

---

2 McCloys has advised that no approaches were made by the consultant to obtain acess to the Heritage Green site. McCloys has further advised that access would have been freely given had it been requested.

# viewpoint analysis

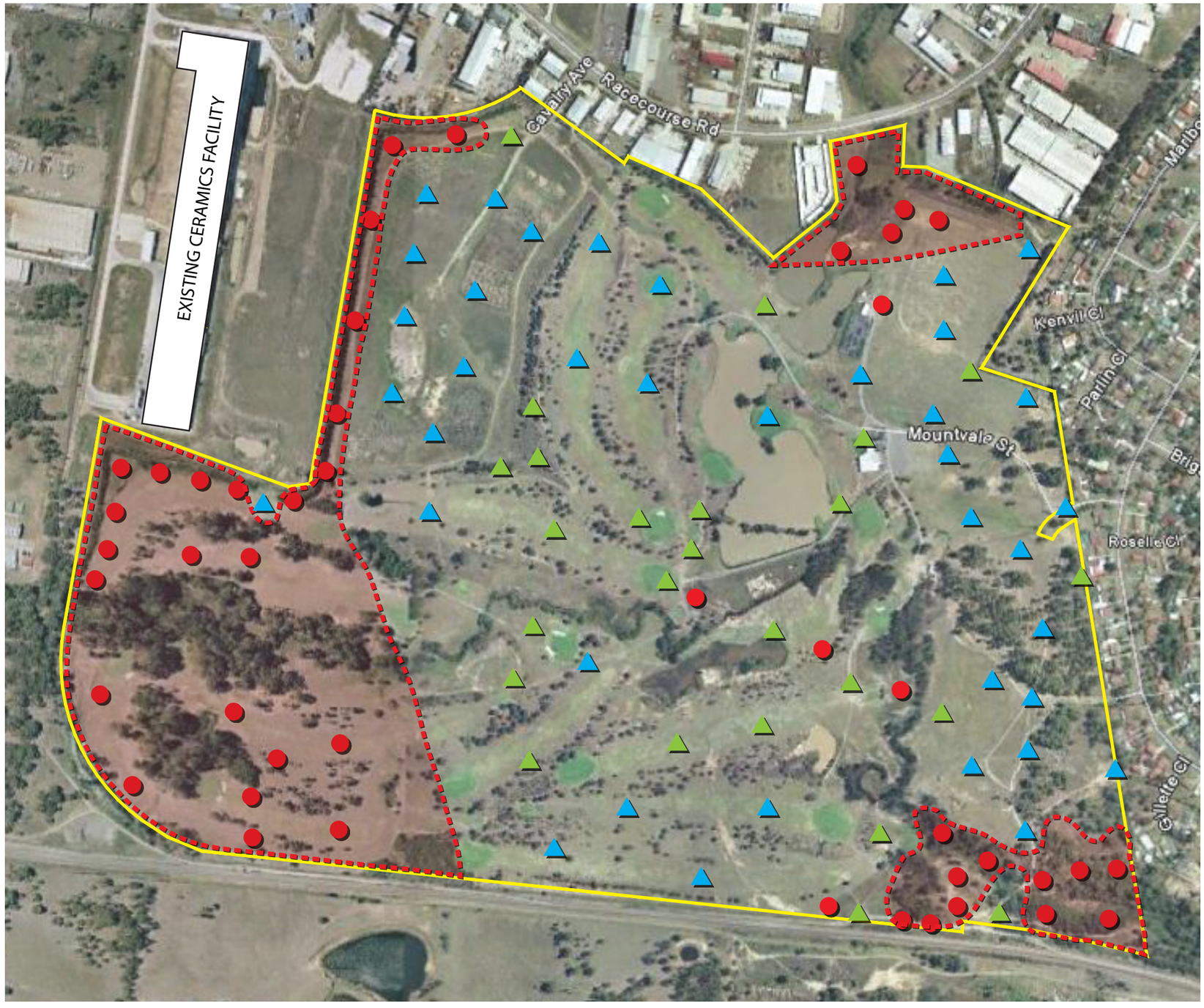
## **heritage green** - landscape concept

01

august 2010

**Views to National Ceramic Industries Australia Facility**

- Not available
- Tower and shed
- Tower only
- NCIA generally not viewable from these areas

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scale

0 25 50 100 200

**Site Details:**
Racecourse Rd, Rutherford
**Client:**
McCloy Group
**Date:**
09 August, 2010
**Job Number:**
8733.5
**Revision:**
A
**Sheet:**
1/2

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As can be noted, three main areas exist where the facility could not be seen due to topography and/or the presence of existing vegetation. It is unlikely that these areas will be affected by the proposed expansion. In locations near to the western boundary or on the higher parts of the site to the east, it is possible to see both the tower element and the factory shed (refer Figure 2).

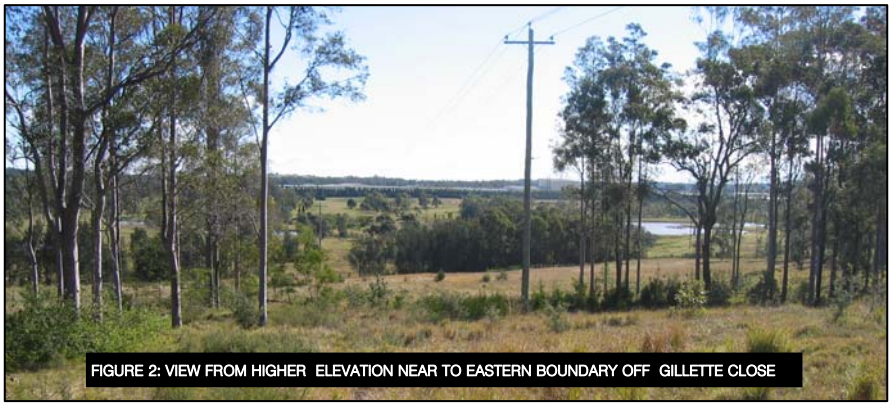


FIGURE 2: VIEW FROM HIGHER ELEVATION NEAR TO EASTERN BOUNDARY OFF GILLETTE CLOSE

Towards the centre of the site, views of the existing facility tend to be confined to the tower element (refer Figure 3) and occasionally, stacks located further south along the factory shed.

FIGURE 3: VIEW FROM EXISTING CLUB HOUSE LOOKING WEST

In both these cases, as elsewhere on the site, the NCIA facility appears to be in the middle distance with space separating the site and the factory. The concern exists that with the proposed expansion occurring close to the shared boundary, this sense of separation will not be maintained and that the proposed development will appear to be more noticeable and therefore more dominant. Consequently the NCIA expansion will have a more significant impact on the visual quality of the site.

Figure 4 seeks to demonstrate how the existing mounding and screening will be less effective when development occurs closer to the adjoining boundary suggesting that better screening will be required.

Therefore, the size of the proposed development, especially the height of the roof elements and the massing of the tower element; its location relative to the common boundary; extent and adequacy of screen landscaping; and, colour and type of external cladding will all need to be assessed to determine the full extent these items will have on the visual quality of the Heritage Green site with sufficient detail provided to demonstrate how any impacts on visual quality will be mitigated.

# impact of screening

## **heritage green** - landscape concept

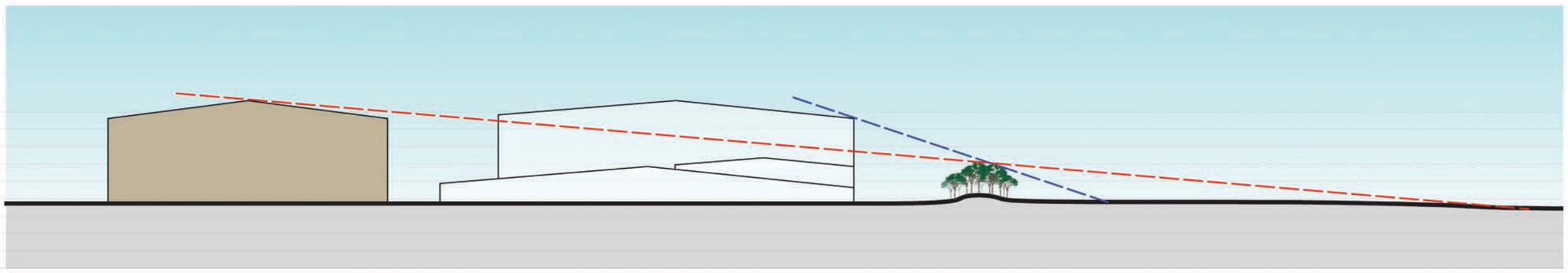



**Key**

Current extent of protection from screen mound.

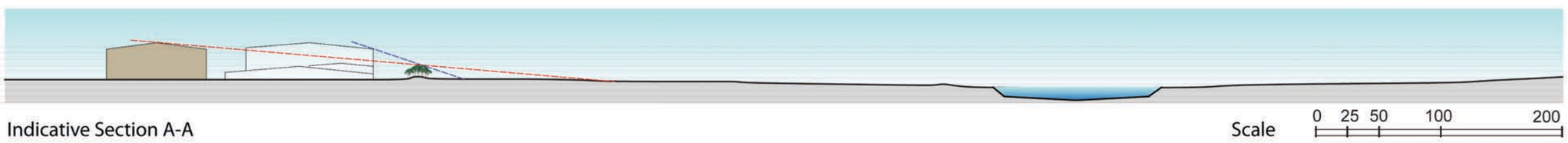
Future extent of protection from screen mound.

N




Indicative Section a-a

Scale 0 25 50 100 200



Indicative Section A-A

Scale 0 25 50 100 200

**Site Details:**
Racecourse Rd, Rutherford
**Client:**
McCloy Group
**Date:**
09 August, 2010
**Job Number:**
8733.5
**Revision:**
A
**Sheet:**
2/2

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## 4. maitland city council planning documents

It is a requirement of the *Maitland Local Environmental Plan* 1993 (MCC, 2010) [LEP] that development located upon land zoned "4(a) General Industrial" must not adversely affect adjacent residential areas (Page 21). Further, *Maitland City Council Industrial Development Code* (MCC, 2007) [IDC] states that one of its objectives is:

> *To encourage visual and operational compatibility between industrial development and residential areas.* (Page 4).

Other clauses within the IDC specifically make reference to the need for buildings to be treated to minimise their visual impact (Page 13) and for side and rear setbacks to be landscaped when visible from residential areas (Page 14). To this end, a detailed landscape plan is required to be submitted with the development application showing the location and species of all planting and other landscape works to be carried out.

It would seem that the information required to be able to make a proper assessment of the proposal and its ability to meet with the aims of the LEP and IDC, has not be supplied or supplied with insufficient detail. The VIA should, therefore, be expanded to clearly indicate how the requirements of the LEP and IDC have been addressed.

## 5. conclusions

Based on the above evaluation, it is considered that the Environmental Assessment, including Visual Impact Assessment, does not adequately address the following issues regarding visual quality:

- a detailed analysis of the likely impact that the proposed NCIA expansion will have on areas contained within the Heritage Green site having regard to its use as a residential subdivision;
- an assessment of what impacts lighting may have on the Heritage Green site;
- the provision of more prescriptive recommendations that provide details on proposed landscape works and building treatment including colours and material selections for the purpose of minimising impacts on the site's visual quality; and,
- confirmation that the requirements of the LEP and IDC have been properly met.

To address the above, it is suggested that the proponent be asked to carry out the following:

- undertake a more detailed assessment of the likely impacts that the proposed development may have within the Heritage Green site ;
- undertake an assessment of lighting associated with the NCIA expansion in terms of its impact on the Heritage Green site and provide specific details on how such impacts will be addressed;
- if required, undertake modifications to the proposal including: appropriate siting of the proposed development ensuring that setbacks are adequate to

allow for the provision of effective screen landscaping; and, a reduction in the bulk and scale of the building.

- prepare photomontages particularly from viewpoints located between the common boundary and the existing water-bodies and addressing issues of visual quality on lots located within this area comparing conditions before and after development;
- provide a schedule of colours and materials that demonstrate how the proposed development will "blend with the surrounding environment and reduce the visual dominance of the building" (VIA, Page 29); and,
- provide a landscape plan with details regarding plant selections, locations, sizes, densities, soil preparation and maintenance to demonstrate how landscaping will be used to screen effectively the proposed development and minimise any associated impacts to the visual environment.

Once such details have been provided, the assessors of the proposal and other interested parties will be better able to determine whether the proposed impact minimisation measures will be adequate to ensure that the NCIA expansion will not have a negative impact on the existing visual quality of the area and that the objectives of Maitland City Council's planning polices seeking to address visual impact, have been properly met.

Phillip Williams
director
**terras landscape architects**

## references


| | |
|---|---|
| AECOM | *National Ceramic Industries Australia Expansion: Environmental Assessment,* 05/07/10. |
| Maitland City Council | *City Wide Development Control Plan: Industrial Development Code,* 2007 |
| Maitland City Council | *Maitland Local Environmental Plan 1993* [with amendments], 2010. |
| Moir Landscape Architecture | *Visual Impact Assessment: Expansion of Ceramic Tile Manufacturing Facility, Rutherford, NSW,* 16/02/10. (aka Appendix H, *National Ceramic Industries Australia Expansion: Environmental Assessment)* |

# APPENDIX F
Traffic and Parking Assessment

# APPENDIX G

## Summary of Non-compliances with Environmental Standards & Consent Conditions

# Summary of Non-compliances with Environmental Standards

| DESCRIPTION OF BREACH | | ACTION TAKEN – MITIGATE | ACTION TO PREVENT RECURRENCE |
|---|---|---|---|
| **Annual Return 2003 - 2004** | | | |
| **L3.1** | Concentration of Solid Particles assessed within Dryer Stack air emissions exceeded the prescribed concentration limit. Licence concentration limit is 3mg / $m^3$ (dry, 273 K and 101.3 kPa) Assessed concentration limit is 20.4 mg / $m^3$ (dry, 273 K and 101.3 kPa) | Review efficiency of ventilation controls. Improve housekeeping to ensure dust doesn't become suspended in the vicinity of the Drier intake air vents. | Cause of elevated particulate emissions discharged from the Dryer will be rectified. |
| **L3.1** | The concentration of Solid Particles assessed with Spray Dryer stack air emissions exceeded the prescribed concentration limit. Licence concentration limit is 20mg/$m^3$ (dry, 273 K and 101.3 kPa) Assessed concentration limit is 32.7 mg/$m^3$ (dry, 273 and 101.3 kPa) | Rigorous inspection and evaluation of Spray Dryer baghouse undertaken | Identify cause of particulate emission concentrations and rectify. |
| **L2.1** | The actual load of Coarse Particulates (Air) exceeded the prescribed load limit. Licence load limit is 559kg. Assessed concentration limit is 1809kg. | Attention to the Spray Dryer dust collection performance is currently being undertaken. | Correct operation and maintenance of the dust collector. Monitor equipment. |
| **L3.1** | The concentration of Solid Particles assessed within Kiln stack air emissions exceeded the prescribed concentration limit. Licence concentration limit is 3mg/$m^3$ (dry, 273K, 101.3 kPa and 7% o2). Assessed concentration limit is 6.6 mg/$m^3$ (dry, 273 K, 101.3 kPa and 7% o2. | Refinement of the combustion process and dust collection performance. | If refinements result in improved emissions performance these conditions will be maintained. Operate plant processes in accordance with manufacturer's specifications. |
| **M2.1** | Assessment of air emissions associated with Vacuum Plant stack (EPA identification No.111) was not performed. | Emissions stack not installed. | Licence variation. |
| **M2.1** | The number of ambient, ground-level 24-hr PM10 samples collected and analysed from NW monitoring location (11) was less than the number required by licence (18) | Underground electricity cable damaged. Interim diesel generator considered but not implemented. | |
| **M2.1** | The number of ambient, ground-level 24-hr HF samples collected and analysed from the NW monitoring location (11) was less than the number required by Licence (16) | Underground electricity cable damaged. Interim diesel generator considered but not implemented. | |
| **M2.1** | The number of ambient, ground-level, continuous (weekly) HF samples collected and analysed from the NW monitoring location (10) was less than the number required by Licence (15) | Underground electricity cable damaged. Interim diesel generator considered but not implemented. | |
| **M8.1** | Meteorological monitoring data was not sourced from the existing weather station. | | On-site meteorological station being maintained and logged data retrieved regularly. |

| DESCRIPTION OF BREACH | | ACTION TAKEN – MITIGATE | ACTION TO PREVENT RECURRENCE |
|---|---|---|---|
| **Annual Return HLA 2004 - 2005** | | | |
| **L2.1** | The actual load of Fluoride (Air) exceeded the prescribed load limit. Licence load limit is 925kg. Assessed load is 2154kg. | | Commissioned a new lime dosing system. Attention to the suitability and efficiency of the kiln baghouse is also being undertaken in consultation with the suppliers of the baghouse system to ensure that particulate-bound fluoride is not bled from the bags. |
| **L2.1** | The actual load of Oxides of Sulphur (Air) exceeded the prescribed load limit. Licence load limit 18,414kg. Assessed load 21336kg. | | Review of gas consumption rates and sulphur content of clays and other raw materials. Prediction emissions rates will be reviewed and operations altered, where possible to ensure that the load limit is not exceeded. |
| **L3.1** | The concentration of Solid Particles assessed within Dryer stack air emissions exceeded the prescribed concentration limit. Licence concentration limit 3mg/$m^3$. Assessed concentration is 10.2mg/$m^3$. | | The efficiencies of ventilation controls at the Pressers will continue to be reviewed. Housekeeping within the Main building will be maintained to ensure that dust does not become suspended in the vicinity of the Dryer intake air vents. The suitability of use of pre-filters on the Dryer intake air vents may also be investigated. |
| **L3.1** | The concentration of Solid particles assessed with Hot Air Cooler stack air emissions exceeded the prescribed concentration limit. Licence concentration limit is 2mg/$m^3$. Assessed concentration limit is 3.0mg/$m^3$ | Nil | Nil |
| **L3.1** | The concentration of Solid Particles assessed within Kiln stack air emissions exceeded the prescribed concentration limit. Licence concentration limit 3 mg/$m^3$. Assessed concentration is 14.0 mg/$m^3$. | | Potential for the build up of salts and corrosion products within the kiln stack is currently being investigated. Construction of a new stainless steel stack may be required to eliminate the discharge of corrosion products. Attention to the suitability and efficiency of the Kiln baghouse is also currently being undertaken in consultation with the suppliers of the baghouse system. |

| DESCRIPTION OF BREACH | | ACTION TAKEN – MITIGATE | ACTION TO PREVENT RECURRENCE |
|---|---|---|---|
| **L3.1** | The concentration of Fluoride assessed within kiln stack air emissions exceeded the prescribed concentration limit. Licence concentration limit is 5 mg/m$^3$. Average assessed concentration is 19.3 mg/m$^3$ | | Commissioned a new lime dosing system. Operators are refining the dosing rates to optimize fluoride scrubbing efficiencies. |
| **M2.1** | The number of ambient, ground-level 24hr PM10 samples collected and analysed from the Northwest monitoring location (59) was less than the number required by Licence (60) | | Timer checked for correct operation. Programming procedure reviewed and reinforced to field staff to ensure that programming errors do not occur. |
| **M2.1** | The number of ambient, ground-level 24hr HF samples collected and analysed from the Northwest monitoring location (58) was less than the number required by Licence (60) | | Timer checked for correct operation and replaced on a proactive and routine basis. |
| **M2.1** | The number of ambient, ground-level 24hr HF samples collected and analysed from the SE monitoring location (58) was less than the number required by Licence (60) | | Timer checked for correct operation and replaced on a proactive and routine basis. |
| **M2.1** | The number of ambient, ground-level, continuous HF samples collected and analysed from the NW monitoring location (51) was less than the number required by Licence (52) | | Nil |
| **M2.1** | The number of ambient, ground-level, (weekly) HF samples collected and analysed from the SE monitoring location (51) was less than the number required by Licence (52) | | Nil |
| **M8.1** | Meteorological monitoring was not performed on a continuous basis throughout the 2004/2005 reporting period. | | NCIA to provide surge protection to monitoring system. Integrity of the onsite meteorological station is currently being re-investigated to indentify whether ongoing issues are hardware or software related. Replacement systems may need to be installed. |
| **Annual Return HLA 2005 - 2006** | | | |
| **L2.1** | The actual load of Course particulates (Air) exceeded the prescribed load limit. Licensed load -559kg. Assessed load – 11985.9kg. | Filters replaced. Repairs to sections of kiln baghouse shell undertaken. | Construction of new stainless steel baghouse. Annual inspection of filters. |
| **L2.1** | The actual load of Fluoride (Air) exceeded the prescribed load limit. Licensed load -925kg. Assessed load – 4085kg. | Filters replaced. Repairs to sections of kiln baghouse shell undertaken.<br>Lime dosing system checked. | Investigate suitability of filters. Consult with baghouse suppliers to ensure that particulate-bound fluoride is not bled from the bags |
| **L3.1** | The concentration of Solid Particles assessed within Drier stack (EPA ID No. 5) air emissions exceeded the prescribed concentration limit.<br>Licensed limit 3mg/m$^3$. (dry, 273 k and 101.3 k Pa)<br>Assessed concentration 31.1mg/m$^3$ av. (dry, 273 k and 101.3kPa) | Exhaust flow rates were increased. Consider licence limit impractical. Request modification of development consent. | Review efficiency of ventilation controls. Improve housekeeping to ensure dust doesn't become suspended in the vicinity of the Drier intake air vents. |

| DESCRIPTION OF BREACH | | ACTION TAKEN – MITIGATE | ACTION TO PREVENT RECURRENCE |
|---|---|---|---|
| **L3.1** | The concentration of Solid Particles assessed within Spray Drier stack (EPA identification no. 12) air emissions exceeded the prescribed concentration limit.<br>Licensed limit 20mg / $m^3$ (dry, 273 k and 101.3 k Pa)<br>Assessed concentration 154.8mg / $m^3$ av. (dry, 273 k and 101.3kPa) | Baghouse filters inspected. Filters with holes and leaks replaced. | Replace baghouse filters. Monitor particulate loads within Spray Drier |
| **L3.1** | The concentration of Solid Particles assessed within Kiln stack (EPA identification no. 14) air emissions exceeded the prescribed concentration limit.<br>Licensed limit 3mg/m3 (dry, 273 k and 101.3 k Pa and 7% o2)<br>Assessed concentration 101.0mg / $m^3$ (average) (dry, 273 k and 101.3kPa and 7% o2) | Baghouse filters replaced. Repairs to sections of kiln baghouse shell undertaken.<br><br>Consider licence limit impractical. Request modification of development consent. | Construction of new stainless steel baghouse. Annual inspection of filters. |
| **L3.1** | The concentration of Fluoride assessed within Kiln stack (EPA Identification No.14) air emissions exceeded prescribed concentration limit. Licensed concentration limit is 5mg / $m^3$ (dry, 273 K & 101.3kPa).<br>Average assessed concentration 28.6mg / $m^3$ (dry, 273 K & 101.3kPa). | Lime dosing system checked. Baghouse filters replaced.<br>Repairs to sections of kiln baghouse shell undertaken. | Investigate suitability and efficiency of Kiln baghouse and filters. Consult with baghouse suppliers to ensure that particulate-bound fluoride is not bled from the bags |
| **L3.1** | The concentration of Nitrogen Oxides assessed within Kiln stack (EPA Identification No. 14) air emissions exceeded the prescribed concentration limit.<br>Licence concentration limit 100mg / $m^3$ (dry, 273 K and 101.3 kPA).<br>Average assessed concentration is 114mg / $m^3$ (dry, 273 K and 101.3kPa and 7 % o2). | Several additional gas burners installed at the kiln front-end to improve combustion profile. | Regular checking of gas burners within the kiln. Exhaust temperatures maintained above dew point to ensure condensation does not occur within the kiln baghouse (mitigating corrosion) |
| **L3.1** | The concentration of Mercury assessed within Kiln stack (EPA identification no. 14) air emissions exceeded the prescribed concentration limit.<br>License concentration limit is 0.1 mg / $m^3$ (dry, 237 K and 101.3kPa).<br>Av. assessed concentration is 0.1741 mg/m3 (dry, 273 K & 101.3kPa) | Baghouse filters replaced. Repairs to sections of kiln baghouse shell undertaken. | Construction of new stainless steel baghouse. Annual inspection of filters. |
| **M2.1** | The number of ambient, ground-level 24-hr PM10 samples collected and analysed from the Northwest (EPA identification no. 22) monitoring location (57) was less than the number required by Licence (61). | | Procedures reviewed and reinforced to field staff to ensure that all samples are analysed. |
| **M2.1** | The number of ambient, ground-level 24-hr PM10 samples collected and analysed from the Southeast (EPA identification no. 22) monitoring location (58) was less than the number required by licence (61) | | Procedures reviewed and reinforced to field staff to ensure that all samples are analysed. |

| | DESCRIPTION OF BREACH | ACTION TAKEN – MITIGATE | ACTION TO PREVENT RECURRENCE |
|---|---|---|---|
| **M2.1** | The number of ambient, ground-level 24-hr HF samples collected and analysed from the Northwest (EPA identification no. 23) monitoring location (57) was less than the number required by licence (61) | | Procedures reviewed and reinforced to field staff to ensure that all samples are analysed. Meter replaced after failure. Timers to be checked. |
| **M2.1** | The number of ambient, ground-level 24-hr HF samples collected and analysed from the Southeast (EPA identification no. 23) monitoring location (56) was less than the number required by licence (61) | | Procedures reviewed and reinforced to field staff to ensure that all samples are analysed. Timers to be checked. |
| **M2.1** | The number of ambient, ground-level, continuous (weekly) HF samples collected and analysed from the Northwest (EPA identification no. 23) monitoring location (49) was less than the number required by licence (653) | | Procedures reviewed and reinforced to field staff to ensure that all samples are analysed. Timers to be checked. |
| **M2.1** | The number of ambient, ground-level, continuous (weekly) HF samples collected and analysed from the Southeast (EPA identification no. 23) monitoring location (49) was less than the number required by licence (653) | | Procedures reviewed and reinforced to field staff. |
| **M8.1** | Meteorological monitoring was not performed on a continuous basis throughout the 2005/2006 reporting period at EPA identification no. 24. | Backup battery commissioned. | Investigate the integrity of the meteorological station. Ensure data regularly retrieved. |
| **Annual Return HLA 2006 - 2007** | | | |
| **L2.1** | The actual load for Fluoride (Air) exceeds the prescribed load limit. The licence load of Fluoride is 925kg. The assessed load is 1988.55kg | Air quality Mitigation Study prepared. Alteration of tile manufacturing process. Installation of new bag house. | Regular monitoring and maintenance. |
| **L2.1** | The actual load for Coarse Particulates (Air) exceeds the prescribed load limit. Licence load is 559kg. Assessed load is 12657.09kg | Air quality Mitigation Study prepared. Alteration of tile manufacturing process. Installation of new bag house. | Regular monitoring and maintenance. |
| **L3.1** | The concentration of Solid Particles assessed within Drier stack (EPA identification no. 5) and kiln stack (EPA identification no. 14) air emissions exceeded the prescribed concentration limit. The licence concentration limit is 3mg/m3. The assessed concentrations from the dryer stack and kiln stack are 12.8mg/m3 (average) and 9.6mg/m3. | Air quality Mitigation Study prepared. Alteration of tile manufacturing process. Installation of new bag house. | Regular monitoring and maintenance. |

| | DESCRIPTION OF BREACH | ACTION TAKEN – MITIGATE | ACTION TO PREVENT RECURRENCE |
|---|---|---|---|
| **M2.1** | The number of ambient, ground-level 24-hr PM10 samples collected and analysed from the northwest (EPA ID no. 22) monitoring location and Southeast (EPA ID no 22) monitoring location (60) was less than the number required by licence (62). The number of ambient, ground-level 24-hr HF samples collected and analysed from the Northwest (EPA ID no. 23) monitoring location and Southeast (EPA ID no. 23) monitoring location (60) was less than the number required by licence (61). The number of ambient, ground-level, continuous (weekly) HF samples collected and analysed from the Northwest (EPA ID no. 23) monitoring location (52) was less than the number required by Licence (53). | Procedures reviewed and communicated to field staff to ensure operator error is avoided and that equipment pump hoses are frequently checked. | |
| **M8.1** | A full data set of meteorological conditions was not obtained for the 2006/2007 reporting period at EPA identification no. 24. | Integrity of the onsite meteorological station is currently being re-investigated to indentify whether ongoing issues are hardware or software related. Replacement systems may need to be installed. | |
| **Annual Return HLA 2007 - 2008** | | | |
| **M2.1** | The number of ambient, ground level 24 hour PM10 samples collected and analysed from the Northwest (EPL identification no. 22) monitoring location (60) and Southwest (EPL identification no. 22) monitoring location (59) was less that the number required by the EPL (61). | No adverse effects caused by the non-compliance. The non-compliance represents a loss of monitoring data. | Procedures reviewed and communicated to field staff to ensure re-scheduling of the run-day if sampling is missed in the future. Procedures reviewed and communicated to field staff to ensure that a spare replacement gas pump is kept as sampling equipment. |
| **M2.1** | The number of ambient, ground level 24 hour HF samples collected and analysed from the Northwest (EPL identification no.23) monitoring location (58) and Southwest (EPL identification no.23) monitoring location (55) was less that the number required by the EPL (61). | No adverse effects caused by the non-compliance. The non-compliance represents a loss of monitoring data. | Procedures reviewed and communicated to field staff to ensure re-scheduling of the run-day if sampling is missed in the future. Procedures reviewed and communicated to field staff to ensure that a spare replacement gas pump is kept as sampling equipment. |
| **M2.1** | The number of ambient, ground level weekly HF samples collected and analysed from the Northwest (EPL identification no.23) monitoring location (51) and Southwest (EPL identification no.23) monitoring location (51) less that the number required by the EPL (53). | No adverse effects caused by the non-compliance. The non-compliance represents a loss of monitoring data. | Procedures reviewed and communicated to field staff to ensure re-scheduling of the run-day if sampling is missed in the future. Procedures reviewed and communicated to field staff to ensure that a spare replacement gas pump is kept as sampling equipment. |

| | DESCRIPTION OF BREACH | ACTION TAKEN – MITIGATE | ACTION TO PREVENT RECURRENCE |
|---|---|---|---|
| **M8.1** | A full data set of meteorological conditions was not obtained for the 2007/2008 reporting period at EPL identification no.24 | No adverse effects caused by the non-compliance. The non-compliance represents a loss of monitoring data. However, data from a nearby meteorological station located at Cessnock (Nulkaba) can be used for the period of lost data. | Regular maintenance and calibration performed to ensure no future breakdown. The onsite meteorological station is currently functioning correctly with no maintenance data losses since 11 September 2007. |
| **L2.1** | The actual load of Course Particulates (Air) exceeded the prescribed load limit. | No adverse effects are caused by the non-compliance. | Installation of new stainless steel Kiln baghouse and plant maintenance has considerable decreased the assessable load report for course particulates from 12657kg last reporting to 3880kg for current reporting period. Regular monitoring and maintenance will continue to be undertaken at the plant with the aim of further course particulate reductions. |
| **L3.1** | The concentration of Hydrogen Fluoride assessed within Kiln stack (EPA identification no.14) air emissions exceeded the prescribed concentration limit. | As a result of measured exceedance of Hydrogen Fluoride within the kiln stack emission a study was undertaken to identify the ideal concentration of lime dosing in the kiln baghouse. The study identified the ideal lime dosing for compliance of Hydrogen Fluoride within the kiln baghouse emissions as such there is expected to be no further exceedance of the Hydrogen Fluoride concentration limit in the kiln stack. | |
| **L3.1** | The concentration of Nitrogen Oxides assessed within Kiln stack (EPA ID No.14) air emissions exceeded the prescribed concentration limit. | | |
| **Annual Return HLA 2008 - 2009** | | | |
| **L3.1** | Av. concentration of solid particulates emitted from Spray Dryer Stack 1 (EPA ID No. 12) exceeded the prescribed concentration limit. The licence concentration for Solid Particulates is 20 mg / $m^3$. Assessed concentration was 120mg / $m^3$ | Baghouse maintenance | Installation of a static leak detector. Internal monitoring and reporting on the baghouse pressure drop to ensure efficient operation. |

| | DESCRIPTION OF BREACH | ACTION TAKEN – MITIGATE | ACTION TO PREVENT RECURRENCE |
|---|---|---|---|
| **L3.1** | Concentration of Hydrogen Fluoride emitted from Kiln 1 stack (EPA ID No. 14) exceeded the prescribed concentration limit. Licence concentration for Hydrogen Fluoride is 5mg / $m^3$. Assessed concentration was 6.5 mg / $m^3$. | | Review of previous study undertaken to identify the ideal concentration of lime dosing in kiln baghouse. |
| **L3.1** | The concentration of Nitrogen Oxides emitted from Kiln 1 stack (EPA ID No. 14) air emission exceeded the prescribed concentration. The licence concentration limit for Nitrogen Oxides is 100 mg / $m^3$. The assessed concentration was 265.4 mg / $m^3$. | | |
| **L2.1** | The actual load of Coarse Particulates exceeded the prescribed load limit. Licence load for coarse particulates is 559 kg. Assessed load is 2564 kg. | | Investigation underway aimed at optimising the kiln and associated baghouse operation. Proposes to recommend operational strategies to achieve compliance with both the concentration limits along with the assessable load limit. |
| **L2.1** | The actual load of Total Fluoride exceeded the prescribed load limit. The licence load of Total Fluoride is 925 kg. Assessed load is 1528.9kg | | Investigation is underway aimed at optimising the kiln and associated baghouse operation. Proposes to recommend operational strategies to achieve compliance with both concentration limits & the assessable load limit. |
| **L2.1** | The actual load of Sulphur Oxides exceeded the prescribed load limit. The Licence load is 18414kg. The assessed load is 70564.6kg. | | Investigation is underway aimed at optimising the kiln and associated baghouse operation. Proposes to recommend operational strategies to achieve compliance with both concentration limits & the assessable load limit. |
| **L2.1** | The actual load of Nitrogen oxides exceeded the prescribed load limit. The Licence load is 18414kg. The assessed load is 62426.2kg. | | Investigation is underway aimed at optimising the kiln and associated baghouse operation. Proposes to recommend operational strategies to achieve compliance with both concentration limits & the assessable load limit. |
| **M2.1** | The number of ambient, ground-level 24-hr PM10 samples collected and analysed from the Northwest (EPL ID No. 22) monitoring location (58) and Southeast (EPL ID No. 22) monitoring location (60) were less than the number required by the EPL (61). | Due to power outage, malfunctioning unit, timer malfunction etc. | Procedures reviewed and reinforced to field staff to ensure re-scheduling of the run-day if sampling is missed. |

| DESCRIPTION OF BREACH | | ACTION TAKEN – MITIGATE | ACTION TO PREVENT RECURRENCE |
|---|---|---|---|
| **M2.1** | The number of ambient, ground-level 24-hr HF samples collected and analysed from the Northwest (EPL ID No. 23) monitoring location (60) and Southeast (EPL ID No. 23) monitoring location (60) were less than the number required by EPL (61). | Due to power outage, malfunctioning unit, timer malfunction etc. | Procedures reviewed and reinforced to field staff to ensure re-scheduling of the run-day if sampling is missed. |
| **M2.1** | 24-hr PM10 Guideline Criterion is 50 ug / $m^3$. In four instances, this was exceeded. | Due to power outage, malfunctioning unit, timer malfunction etc. | Procedures reviewed and reinforced to field staff to ensure re-scheduling of the run-day if sampling is missed. |
| **M8.1** | A full data set of meteorological conditions was not obtained for the 2008/09 reporting period at EPL ID No. 24 | | More regular downloads of on-site meteorological station to ensure it is currently functioning correctly with no data losses. |

# Summary of Non-compliances with Consent Conditions

| CONDITION NO. | CONSENT CONDITION | COMMENTS |
|---|---|---|
| 1.1 | **Obligation to Minimise Harm to the Environment**<br>The applicant shall implement all practical measures to prevent or minimise any harm to the environment that may result from the construction, commissioning and operation of the ceramic tile manufacturing facility. | The Applicants Annual Returns and AEMR's detail a history of various environmental breaches of discharge limits that cause unnecessary harm to the environment. |
| 1.2 | **Scope of Development**<br>The applicant shall carry out the development generally in accordance with out the development generally in accordance with:<br>a) Development Application No. 449-12-2002-i, lodged with the former Department of Planning (now Department of Urban and Transport Planning) on 16 December, 2002;<br>b) *Ceramic Tile Manufacturing Facility at Rutherford NSW – Environmental Impact Statement* prepared by Parsons Brinckerhoff Australia Pty Ltd and dated 10 December, 2002;<br>c) Additional information supplied to the Department from Parsons Brinckerhoff Australia Pty Ltd regarding noise and air quality impacts and dated 24 January, 2003;<br>d) Additional information supplied to the Department from Parsons Brinckerhoff Australia Pty Ltd regarding hazards, traffic, and flora and fauna impacts, and water reuse and dated 30 January, 2003;<br>e) Additional information supplied to the Department from Parsons Brinckerhoff Australia Pty Ltd regarding fluoride emissions and dated 10 April, 2003; and<br>f) The conditions of this consent. | The Applicant has failed to implement the many of the mitigation measures described in the EIS. |
| 1.3 | At the conclusion of all construction works, the ceramic tile manufacturing facility shall be limited to the production of 12.8 million square metres of ceramic tiles per annum. | The 2009 Annual Company Report from the major shareholder in NCIA reports that 14.7 million square metres of tiles were produced in financial year 2008. Note that only one production line was commissioned in 2008. In addition, the capacity of the tile factory at each stage of construction is not in accordance with that described in the EIS. |

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| 1.4 | **Staging of the Works**<br>Prior to commencement of construction of stages 2, 3 and 4 of the ceramic tile manufacturing facility, the Applicant shall submit for the approval of the Director – General, a predictive air quality assessment for the operation of the stage of the Ceramic Tile Manufacturing Facility to be constructed. The predictive air quality assessment shall:<br>a) Utilise the findings of performance monitoring and verification required under condition 5.6 of this consent, and any Air Quality Mitigation Study prepared in accordance with the condition 5.7, to predict the air quality performance of the stage of the ceramic tile manufacturing facility to be constructed. Where performance monitoring and verification has yet to be undertaken (i.e. within 90 days of the commencement of operation of the current stage of the ceramic tile manufacturing facility), the Applicant shall undertake equivalent performance monitoring and verification to satisfy this condition;<br>b) Employ contemporaneous background air quality data, representative of the background air quality likely to be experienced during the operation of the stage of the ceramic tile manufacturing facility to be constructed. Depending on the period since undertaking performance monitoring and verification required under condition 5.6 of this consent, background air quality date may or may not be the same as that applied to the performance monitoring and verification. The Applicant shall provide justification for the background air quality date employed;<br>c) Assess the air quality performance of the stage of the ceramic tile manufacturing facility to be constructed in accordance with *Approved Methods and Guidance for Modelling and Assessment of Air Pollutants in New South Wales*(EPA, 2001);<br>d) Detail additional air emissions mitigation measures to be applied to the stage of the ceramic tile manufacturing facility to be constructed, in the event that the air quality criteria in *Approved Methods in New South Wales* (EPA, 2001) are predicted to not be met. | In order to commence stage 2, the Applicant produced the requisite predictive air quality assessment for stage 2 of the development. Unfortunately the Applicant has been unable to operate at the level predicted and in order to ensure compliance has recently been granted consent to a section 96 amendment to increase its air quality discharge limits in lieu of implementing additional mitigation measures as contemplated by conditions 1.4 and 5.7 of the Consent. |

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|---|---|---|
| | The Applicant shall not commence construction of the relevant stage of the ceramic tile manufacturing facility until it has received the Director – General's written approval of the predictive air quality. | |
| | **Air Quality Impacts** | |
| 4.2 | The applicant shall design, construct, operate and maintain the ceramic tile manufacturing facility in a manner that minimises or prevents the emission of dust from the site. | The Applicants AEMR's detail a history of the Applicant being unable to operate and maintain the facility in a manner that minimises or prevents the emission of dust from the site. |
| 4.4 | All trafficable areas and vehicle manoeuvring areas on the site shall be maintained in a condition that will minimise the generation or emission of wind blown or traffic generated dust from the site at all times. | The Applicant has failed to maintain trafficable areas and manoeuvring areas in a condition that minimises dust generated from the site as many of the access tracks are not sealed as required by Consent condition No.4.28. |
| 4.5 | The applicant shall design, construct, operate and maintain the ceramic tile manufacturing facility to ensure that emissions of pollutants to air only occur from the discharge points listed in Table 1, and that for each discharge point, the concentration of each pollutant listed does not exceed the maximum allowable discharge concentration limit for that pollutant at the discharge point. All concentration limits specified in the table are based on 101.3kPa, dry reference conditions, or as otherwise indicated in this condition, and are to be determined in accordance with the monitoring requirements described under conditions 5.1 and 5.3. | The Applicants Annual Returns and the AEMR's detail a history of environmental breaches of both the Development Consent and the PoE Licence discharge limits. |

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| 4.14 | **Noise Impacts**<br>The Applicant shall operate and maintain the manufacturing facility to ensure that for the most affected residential receiver, the noise level at the receptor does not exceed the maximum allowable noise contribution limit specified in Table 4. | The Applicants Annual Returns and the AEMR's detail a history of environmental breaches of both the Development Consent and the PoE Licence discharge limits. |
| 4.25 | **Water Quality Impacts**<br>Where stormwater discharge from the site is proposed in any location other than existing drainage lines, the Applicant shall create or have created any easements over the downstream connection point(s) such that the stormwater can legally be drained onto privately –owned adjoining property. | The Applicant discharges stormwater runoff into the Heritage Green property without having created easements over the land affected. |
| 4.28<br><br><br><br>4.30 | **Traffic & Transport Impacts**<br>All driveways, parking areas and vehicular turning areas shall be constructed to a standard of bitumen sealed gravel pavement or higher.<br><br>All loading and unloading of material associated with the ceramic tile manufacturing facility shall be carried out wholly within the site. | The Applicant has failed to construct many of the access areas of bitumen sealed gravel or higher as many of the access tracks are of no construction and are merely "dirt tracks".<br><br>It appears from a review of aerial photography that the Applicant is using adjacent lands to the north east, not included in the consent, for loading, unloading and storage of raw materials and waste products. |
| 4.52<br><br>4.53 | **Landscaping**<br>Landscaping works at the site shall incorporate those species endemic to the area.<br><br>Landscape areas at the site shall be kept clear of parked vehicles, stored goods, garbage and waste material. | The Applicant has failed to provide landscaping on the site including that specifically required by the EIS to mitigate visual impact.<br><br>The Applicant has failed to keep garbage and waste material clear of the proposed landscape areas. |

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| 5.11 | **Noise Monitoring**<br>In the event that a program undertaken to satisfy condition 5.10 of the consent indicates that the operation of any stage of the ceramic tile manufacturing facility, under normal operation conditions 4.14 and 1.47 of this consent, then the Applicant shall provide details of remedial measures to be implemented to reduce noise impacts levels required by that condition | The Applicant has failed to implement mitigation measures to reduce noise to the levels required by the Consent. |
| 5.12 | **Auditing**<br>Within three years of the commencement of Stage 1 of the operation of the ceramic tile manufacturing facility, and every three years thereafter or as otherwise required by the Director – General, the Applicant shall commission an independent person or team to under and Environmental Audit of the ceramic tile manufacturing facility. The independent person or team shall be approved by the Director – General, prior to the commencement of the Audit. An Environmental Audit Report shall be submitted for comment to the Director – General, the EPA and Council, within one month of the completion of the Audit. The Audit shall:<br>a) be carried out in accordance with *ISO 14010 – Guidelines and General Principles for Environmental Auditing* and *ISO 14010 – Procedures for Environmental Auditing;*<br>b) assess compliance with the requirements of this consent, and other licences and approvals that apply to the ceramic tile manufacturing facility;<br>c) assess the ceramic tile manufacturing facility against the predictions made and conclusions drawn in the EIS; AND<br>d) review the effectiveness of the environmental management of the ceramic tile manufacturing facility, including any environmental impact mitigation works.<br>The Director – General may, having considered any submission made by the EPA and/or Council in response to the Environmental Audit Report, require the Applicant to undertake works to address the findings or recommendations presented in the Report. Any such work shall be completed within such time as the Director – General may agree. | The Applicant has failed to provide an Independent Environmental Audit Report. The tri-annual Environmental Report has been prepared by AECOM who also prepare the AEMR's for the facility. The Audit should be undertaken by an independent party appointed by the Consent Authority and not the Applicant. (See for e.g. *Dayho v Rockdale City Council [2004] NSWLEC 184).* |
| | **Community Information & Involvement** | |

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| 6.1 | Subject to confidentiality, the Applicant shall make all documents required under this consent available for public inspection upon request. This shall include provision of all documents at the site for inspection by visitors, and in an appropriate electronic format on the Applicant's internet site, should one exist. | The Applicant has failed to make all documents required under the consent available for public inspection upon request. |
| 6.2 | **Complaints Procedure**<br>Prior to the commencement of construction of Stage 1 of the ceramic tile manufacturing facility, the Applicant shall ensure that the following are available for community complaints:<br>a) a telephone number on which complaints about operations on the site may be registered;<br>b) a postal address to which written complaints may be sent; and<br>c) an email address to which electronic complaints may be transmitted, should the Applicant have email capabilities.<br>The telephone number, the postal address and the email address shall be displayed on a sign near the entrance to the site, in a position that is clearly visible to the public. These details shall also be provided on the Applicant's internet site, should one exist. | The Applicant has failed to display a sign near the entrance to the site displaying details of the complaints procedure and further the Applicant has failed to provide same on its website. |
| 6.3 | The Applicant shall record details of all complaints received through the means listed under condition 6.2 of this consent in an up-to-date Complaints Register. The Register shall record, but not necessarily be limited to:<br>a) the date and time, where relevant, of the complaint;<br>b) the means by which the complaint was made (telephone, mail or email);<br>c) any personal details of the complaint that were provided, or if no details were provided, a note to the effect;<br>d) the nature of the complaint;<br>e) any action(s) taken by the Applicant in relation to the complaint, including any follow-up contact with the complaint; and<br>f) if not action was taken by the Applicant in relation to the complaint, the reason(s) why no action was taken.<br>The Complaints Register shall be made available for inspection by the EPA or the Director – General upon request. | The complaints register, if any, kept by the Applicant is ineffective given it has not provided the public with an appropriate complaints procedure. |

# APPENDIX H
## Social and Economic Analysis

# Assessment of National Ceramics Industries

# Australia Pty Ltd

# Rutherford NSW Plant

# Major Project Application

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# ***Assessment of Major Projects Application National Ceramics Industries Australia Pty Limited Rutherford NSW Plant***

## Executive Summary

**ES1:** This report provides a critique of a Major Projects Application (MPA) lodged with the NSW Department of Planning. The MPA relates to the proposed expansion of the National Ceramics Industries Australia Pty Ltd (NCIA) ceramic tile manufacturing plant at Rutherford, NSW.

**ES2:** NCIA is a 70 percent controlled subsidiary of Ceramic Industries Limited [CIL] (South Africa). 27.5 percent of the company is owned by Australian interests and 2.5 percent by an Italian investor.

**ES3:** The MPA states that at the time of lodgement, the NCIA facility employed 70 staff. CIL's 2009 Annual Report states employment coinciding with the time of lodgement as 49 staff. The Environmental Assessment (EA) currently on public exhibition (dated 5 July 2010) states employment as 50 staff. There is a material discrepancy between employment stated in these various documents which has a bearing on the extent of direct and other economic benefit the plant may generate. In view of this inconsistency, NCIA should be required to provide evidence substantiating its current and projected employment.

**ES4:** The proposed expansion is expected to increase production capacity from a nominal 12.8 million m² to 25.6 million m² per year. Average production over 2008/2009 was 12.4 million m², with peak production of 14.7 million m² in 2008. This production was achieved with a staff of around 50, and without full utilisation of existing approved capacity. Given the unused capacity available in the current plant, presently there is no clear economic justification provided by NCIA for the proposed expansion.

**ES5:** The expanded plant is projected to provide a 100 percent increase in production capacity. The forecast expansion in the labour force from 50 to 140 personnel represents an increase of 180 percent. Given the relativities between current employment level and production, NCIA has not adequately explained the economic rationale for this forecast imbalance in the labour input and resulting output.

**ES6:** NCIA's ownership structure is such that the majority of profits are assumed to be exported to shareholders in South Africa and Italy.

**ES7:** The Chief Executive Officer's report in the CIL 2009 annual report states that 'no further significant capital expenditure is planned for the foreseeable future' within the group. The EA also states that commissioning of the expanded plant is contingent on market demand

which apparently does not presently exist. These statements indicate that any direct and/or other employment or economic benefit that may be generated by the expansion may not be realised in the foreseeable future. NCIA should be required to disclose more accurate information on its planned program for construction and commissioning of the additional capacity.

# 1. Scope

This report provides a critique of information on economic impacts of the abovementioned project as contained in Major Project Application [MPA] documents lodged with NSW Department of Planning [DoP].

# 2. Methodology

Information contained in the MPA documents is assessed in the context of additional publicly available information in respect of National Ceramics Industries Australia [NCIA]. Related party information has also been examined in preparing this assessment.

# 3. NCIA Corporate Profile

NCIA is a 70-percent owned subsidiary of Ceramic Industries Limited [CIL] (South Africa). 27.5 percent is Australian-owned and 2.5 percent Italian-owned. Information specific to NCIA is largely consolidated into CIL group reporting and generally reported as CIL's Australian operations, or under its Australian brand-name, Centaurus. The Rutherford plant is the company's only production facility in Australia and as there is no reported import component to its Australian operations, it is assumed that all financial information relating to CIL's Australian operations relates to NCIA.

The current application relates to an expansion of the existing NCIA plant at Rutherford. The assessed capital cost of these works is $65 million.

# 4. Information on current operations - NCIA Rutherford

## *4.1 Scale of operations*

CIL's 2009 Annual Report[1] reported FY2009[2] revenues for its Australian ceramic tile manufacturing business [NCIA] at approximately $34.2 million. Total production was 10.2 million m², compared with 14.7 million m² in FY2008. Information from the Major Project Application [MPA] (point 4.13) states that the existing plant operates 24 hours a day, seven days a week.

## *4.2 Assessment of stated current employment*

The MPA (p3) and Environmental Assessment (EA) (p xviii) lodged for public exhibition include stated employment at the time of lodgement as 70 FTE positions. An additional 70 FTE positions in relation to the proposed expansion are forecast.

CIL's 2009 Annual Report (p66) states the number of employees in its Australian operations as 49 as at 2008. These data are contemporaneous with submission of the MPA (dated 27 June 2008),

[1] http://gator496.hostgator.com/~tvw001/ceramic/images/stories/downloads/2009_Annual_Report.pdf
[2] 1 April – 31 March.

which states 70 FTE. The EA (version of 5 July 2010, p107) states that the current facility employs 50 staff, with potential for an additional 20 on commissioning of the full capacity of the 'approved' (i.e. existing) facility. As such, the current employment figure of 70 included in the MPA document appears to be overstated. As part of its application, NCIA should be reasonably expected to address this conflicting information and substantiate its current and forecast employment statistics.

## 5. Information on planned expansion

### *5.1 Additional employees relating to planned expansion*

The accuracy of the estimate of additional employment is difficult to ascertain. The proposed expansion involves the construction of an additional four production lines (EA, p xviii). The EA also states that the proposed system has advantages over the existing system, although these are described as relating to product quality, rather than explicitly stated improvements in efficiency or productivity. Production is only expected to double (from 12.8 million m² to 25.6 million m²) and current stated production, averaging 12.4 million m² 2008/2009 (refer section 2), is achieved with around 50 staff.

The prospect of the introduction of new capacity resulting in a reduction in labour efficiency as compared to output requires further explanation. Effectively, the MPA proposes a 180 percent increase in the labour factor to service a lesser 100 percent increase in production.

It is noted that in FY2008, the plant was able to produce 14.7 million m² with a workforce of around 50 staff. This result was also achieved without full approved capacity being utilised. This indicates that the plant may be capable of significant additional production without requirement for the proposed expansion subject of the current application.

### *5.2 Timing of capital investment and related employment impacts*

With respect to the actual timing of construction-related employment (stated 50 FTE) and the additional 70 FTE operations positions, it is unclear as to when these positions will actually become operative. Furthermore, there is no clear statement as to when the additional 20 positions related to currently approved but unused capacity will become operative.

The EA (p xviii) notes an anticipated commencement of construction of the plant upgrade in 2011 with an ensuing 8 month construction program. However, factory fit out is described as 'market driven and dependent'. Clearly, this indicates that installation and commissioning of the additional plant capacity and the related construction, fit out, and it follows, operations employment, all remain contingent.

The CIL annual report (Chief Executive Officer's report, p9) states that 'no further significant capital expenditure is planned for the foreseeable future' for the group. The FY2009 financial statements disclose approximately $AUD27 million in capital works in progress group-wide (annual report,

p54)[3]. While costs related to obtaining necessary approvals for the plant expansion may be capitalised, it is unlikely that any substantial part of the estimated $65 million cost of the NCIA upgrade is included in the capital works in progress item for FY2009.

It is concluded that commencement of the project and the associated construction and operations employment increases claimed in the MPA may not become operative in the foreseeable future, as at present NCIA and its major equity-holder do not appear likely to release the required capital.

## 6. Additional financial information

### *6.1 NCIA profit and Australian taxation liability*

The annual report (p63) provides an overview of the financial performance of Australian operations. The income statement indicates that operating profit (EBIT) for FY2009 was $AUD 587,000. Net finance expenses of $639,000 are declared. The result is a loss of $52,000. As such, no tax is payable in respect of FY2009.

In circumstances where profits are generated and tax becomes payable in respect of NCIA, the following taxation rates apply. Under the existing tax treaty between Australia and South Africa (2008 South African Protocol), which applies to 70 percent of NCIA earnings, Australian withholding tax payable on profit (dividend) is 5 percent[4]. The tax treaty with Italy (Double Tax Agreement, 1983) relating to 2.5 percent of NCIA provides for a rate of 15 percent. The 27.5 percent Australian holding in NCIA is assumed to be taxed at the full corporate rate of 30 percent. Overall, the effective tax rate is approximately 12 percent. A significant proportion of NCIA's earnings is assumed to accrue to overseas entities.

It is assumed that NCIA pays other taxes such as GST (Commonwealth), payroll tax (State) and rates (local government), however these are not quantified in the application documents in support of the application.

### *6.2 Extended economic impact*

The extended impacts on local and regional economies projected in the EA are not quantified. As such the true extent of the claimed benefit of expanded operations to these economies cannot be established.

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[3] Annual report states capital work in progress at SAR 179,146,000 (p54). Weighted average exchange rate (p41) of SAR 6.58:$AUD 1, is applied, thus approximately $AUD 27.2 million.

[4] A brief description of the provisions of the tax treaty effective 1 January 2009 is; 'Source country taxation on dividends beneficially owned by a resident of the other country is limited to 5% where the beneficial owner of the dividend is a company is resident in the other country and holds directly at least 10% of the voting power of the company paying the dividends [Article 10, subparagraph 2(a)]; and limited to 15% in all other cases [Article 10, subparagraph 2(b)]'. Sources: Australian Taxation Office: http://www.ato.gov.au/corporate/content.asp?doc=/content/00181969.htm ; Commonwealth Treasury: http://www.treasury.gov.au/contentitem.asp?pageId=&ContentID=625

As with the direct economic impacts discussed above, the point at which these positive impacts are likely to be realised cannot be established due to the stated contingency of fit out and commissioning, and the conservative position of CIL/NCIA with respect to capital investment in the foreseeable future.

## 7. Conclusions

A brief summation of findings in relation to NCIA's application for the proposed plant expansion is:

- There are discrepancies between stated current employment as presented in the MPA, the EA, and in the contemporaneous annual report of CIL, the major shareholder. These discrepancies indicate that the MPA data are inconsistent with CIL's key statutory document and thus appear to be overstated. These inconsistencies should be addressed by NCIA as part of their MPA.
- The forecast increases in employment relating to the proposed expansion are open to question, as, if fulfilled, they may lead to significant labour cost inefficiencies when viewed in the context of the forecast increases in production capacity associated with the plant expansion. NCIA has not adequately explained this imbalance.
- Statements made in CIL's Annual Report indicate that there is no likelihood of significant capital expenditure within the Group in the foreseeable future. As such, the actual expansion and associated increases in economic activity and construction and operations employment are highly contingent in terms of when these are likely to be realised.
- NCIA's ownership structure is such that the majority of profits is assumed to be exported to shareholders in South Africa and Italy.
- The point at which flow-on economic benefit to the local and regional economies will eventuate is contingent. In particular, the stated conservative position in respect of capital expenditure indicates that it may be some time before the expansion is completed, commissioned and economic benefits flow.

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