

APPENDIX 12

Social Impact Assessment

SOCIAL IMPACT AND OPPORTUNITY ASSESSMENT

For Lynwood Quarry Extraction Area
Modification

November 2015



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For Lynwood Quarry Extraction Area
Modification

Prepared by
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on behalf of
Holcim Australia (Australia) Pty Ltd

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1.0 Introduction

This report documents the outcomes of a Social Impact and Opportunities Assessment (SIOA) undertaken by Umwelt Australia on behalf of Holcim Australia, as part of an Environmental Assessment (EA) for the Extraction Area Modification Project (hereafter referred to as the Project).

Holcim Australia was granted development consent under Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) in December 2005 by the [then] NSW Minister for Planning, to construct and operate the Lynwood Quarry west of Marulan, NSW (refer to **Figure 1.1**). Lynwood Quarry has an approved production rate of up to 5 million tonnes per annum (Mtpa). The key features of the existing approved operations are shown in **Figure 1.2**.

In 2012, Holcim Australia commenced operational readiness works in the approved Lynwood Quarry pit (the Approved Pit), which is an ignimbrite resource, as part of the construction works. Material extracted from the approved Lynwood Quarry pit (the Approved Pit) was used in the onsite civil works and to prepare the quarry pit ready for operation (e.g. removing overburden to expose the ignimbrite resource).

During the operational readiness works, further drilling and material testing has revealed that the resource in the Approved Pit is more variable with substantial areas characterised by more significant concentrations of either intense fracturing, alteration, clay, or a combination of these characteristics, than was detected during the earlier resource assessment investigations. The variability and complexity of the approved Lynwood Quarry resource will challenge Holcim Australia's ability to consistently supply in-specification products from Lynwood Quarry to the market.

1.1 Project Overview

Holcim Australia is therefore seeking approval to extract quarry resources on Holcim Australia-owned land, with the proposed modified extraction area (the proposed Granite Pit) to be located approximately two kilometres to the north west of the Approved Pit (measured from pit centre to pit centre). It is proposed to extract a granite resource, which has different properties and mineralogy to the currently approved ignimbrite resource. Extensive drilling and testing of the granite resource has revealed that it is homogeneous, relatively unaltered and unfractured. The proposed granite resource will enable Holcim Australia to consistently produce the in-specification products required to be delivered by Lynwood Quarry to supply the local, regional and Sydney markets.

The proposed modification is being sought under Section 75W of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

The proposed Extraction Area Modification comprises development of the following key features:

- The Granite Pit extraction area to the west of the existing Approved Pit.
- Reduction of the Approved Pit to reflect limitations within the ignimbrite resource.
- Revised overburden emplacement areas.
- Haul roads and water management system structures.
- Additional amenity bund and vegetative screen.
- A maximum operational workforce of 115 persons, consistent with approved operations.

The key features of the Modification Project are shown in **Figure 1.2**. Other than the proposed changes to the layout or footprint of the development, Lynwood Quarry from an operational perspective will be largely unchanged from the currently approved operations. **Table 1.1** compares the proposed modified development to the existing approved operations.

Table 1.1 Comparison of Approved Project and the Modification Project

Major Project Components/Aspects	Approved Project	Proposed Modification Project
Quarry Life	Quarry operations to cease on 1 January 2038	No change.
Limits on Production	5 Mtpa saleable product	No change.
Maximum Transportation of Product by Rail	5 Mtpa	No change.
Maximum Transportation of Product by Road	1.5 Mtpa	No change.
Rail Facilities	Rail spur and loading facility	No change.
Infrastructure (e.g. processing plant, rail infrastructure, truck loading infrastructure, workshop, offices etc.)	No change to approved infrastructure.	Additional haul road to connect to new Granite Pit (refer to Figure 1.2) and water management structures.
Hours of Operation	Topsoil / overburden removal / emplacement; drilling: <ul style="list-style-type: none"> • 7am to 6pm Blasting <ul style="list-style-type: none"> • Mon to Sat - 9am to 5pm • Sunday and public holidays – none Extraction <ul style="list-style-type: none"> • 7am to 10pm Processing, loading, delivery and distribution; maintenance <ul style="list-style-type: none"> • 24 hours per day 	No change.
Employment	Employment at maximum production of approximately 115 people (including road transport drivers).	No change.

Major Project Components/Aspects	Approved Project	Proposed Modification Project
Quarry Footprint	As shown on Figure 1.2	Development of new Granite Pit to the west of the existing Approved Pit (refer to Figure 1.3). Reduction of the Approved Pit footprint by approximately 55 hectares.
Overburden and Excess Product Emplacement Areas	As shown on Figure 1.2	<p>The approved Western and Eastern Overburden Emplacement Areas will no longer be required.</p> <p>Instead, emplacement areas to handle overburden from the Granite Pit will include backfilling the Approved Pit (refer to Figure 1.2), emplacement within part of the currently approved quarry limit, and a proposed emplacement area adjacent to the Granite Pit.</p> <p>A visual bund will also be developed to west of the Granite Pit (refer to Figure 1.2).</p>
Total Disturbance Footprint	As shown on Figure 1.2 (approximately 383 hectares)	The disturbance footprint will extend to the west to provide for the proposed Granite Pit and associated infrastructure and decrease in the east through a reduction in the Approved Pit disturbance footprint and associated overburden storage and haul roads to the east. Total disturbance footprint approximately 499 hectares.
Construction Phase	Largely completed, quarry currently in commissioning phase.	Construction limited to construction of haul road to proposed extraction area, visual bund and water management infrastructure.



FIGURE 1.1
Locality Plan

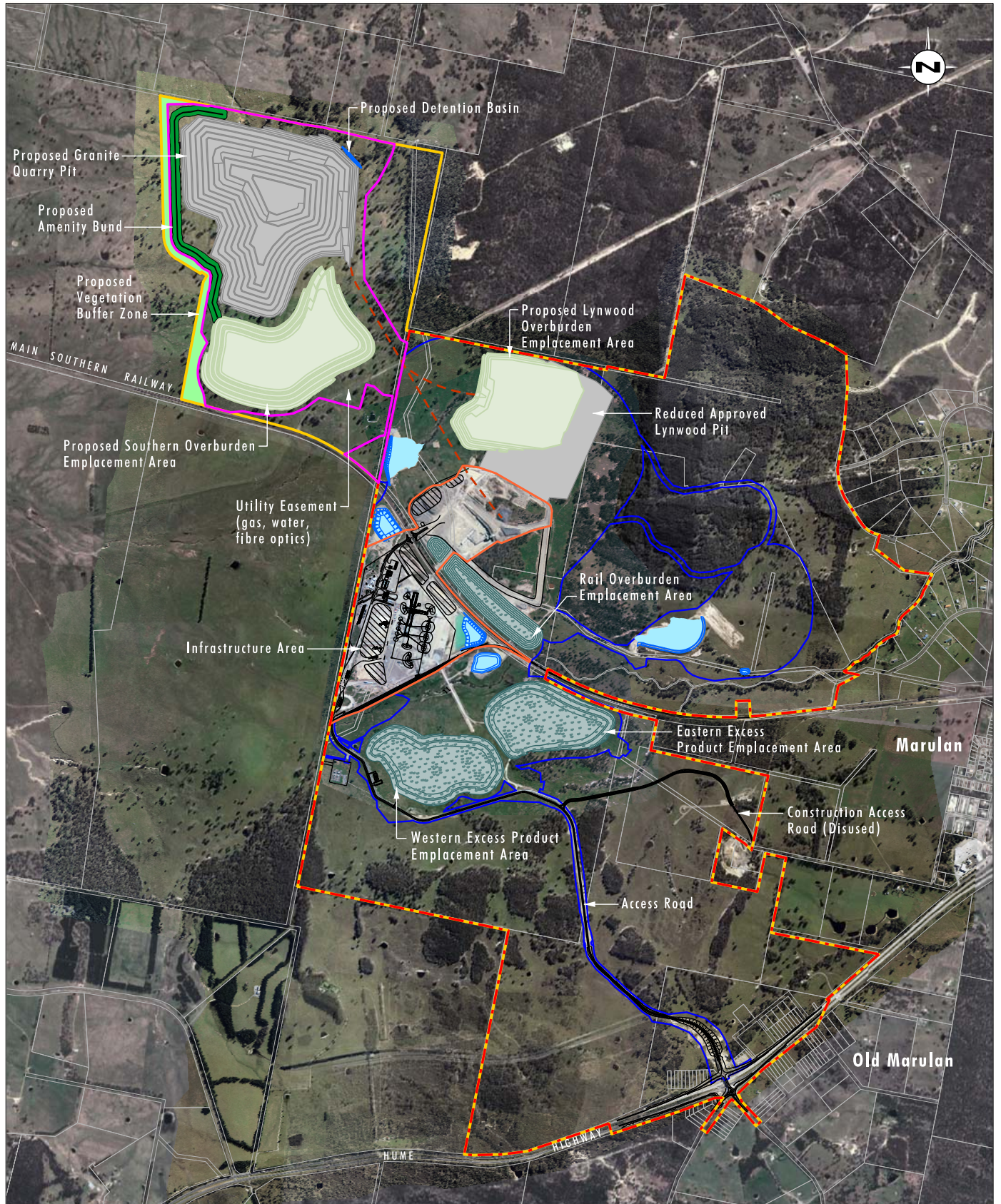


Image Source: Google Earth (2012), Holcim (2012, 2014)
Data Source: LPI (2014), Holcim Australia (2015)

0 0.5 1.0 1.5 km
1:30 000

Legend

- Approved Project Area
- Modification Project Area
- Lynwood Infrastructure Area
- Approved Disturbance Footprint
- Proposed Granite Pit Disturbance Footprint
- Lynwood Infrastructure Layout

- Quarry Pit
- Emplacement Area
- Dam
- Proposed Overburden Emplacement Area
- Proposed Vegetation Buffer Zone
- Proposed Amenity Bund

- Proposed Haul Road

FIGURE 1.2

Proposed Extraction Area
Modification Project
Conceptual Stage 6 (Life of Project)

1.2 Social Impact and Opportunity Assessment Framework

Consistent with the methodology outlined within the Preliminary Environmental Assessment (PEA), the (SIOA) program has been designed to:

- Identify potential social impacts and opportunities, including cumulative impacts
- Identify relevant management and enhancement strategies to address social impacts associated with the Project
- Ensure effective integration of study outputs with other environmental assessment studies to inform broader Project design and planning.

Engagement with the community has been a key component of the program at key phases of the assessment, notably in the scoping of project issues / impacts and the development of appropriate strategies to address and/or enhance impacts.

2.0 Methodology

SIOA is an approach of assessing and predicting the likely consequences of a proposed action in social terms. While economic assessment emphasises the monetary effects of an action or proposal, social impact assessment is concerned with assessing benefits and costs in non-monetary terms; this involves understanding impacts from the perspectives of those involved in a personal, community, social or cultural sense. Social assessment processes work together to provide a complete picture of potential impacts and their context and meaning.

2.1 International Principles for Social Impact Assessment

The International Association for Impact Assessment (IAIA) defines Social Impact Assessment (SIA) as:

“ the processes of analysing, monitoring and managing the intended and unintended social consequences, both positive and negative, of planned interventions (policies, programs, plans, projects) and any social change processes invoked by those interventions. Its primary purpose is to bring about a more sustainable and equitable biophysical and human environment.”
(Vanclay, 2003)

The IAIA identifies social impacts as issues affecting, directly or indirectly:

- People’s way of life, that is: how they live, work, play and interact with one another on a day to day basis
- Their culture, that is: their shared beliefs, customs, values and language or dialect
- The community, that is: its cohesion, stability character, services and facilities
- Their political system, such as: the extent to which people are able to participate in decisions that affect their lives, the level of democratisation that is taking place, and the resources provided for this purpose
- Their environment, such as: the quality of the air and water people use, the availability and quality of the food they eat, the level of hazard or risk, dust and noise they are exposed to, the adequacy of sanitation, their physical safety, and their access to and control over resources
- Their health and wellbeing: health is a state of complete physical, mental, social and spiritual wellbeing and not merely the absence of disease or infirmity
- Their personal and property rights: particularly whether people are economically affected or experience personal disadvantage which may include a violation of their civil liberties
- Their fears and aspirations, that is: their perceptions about their safety, their fears about the future of their community, and their aspirations for their future and the future of their children.

As is the case with any type of change, some individuals or groups within the community may benefit, while others may experience negative impacts. If negative impacts are predicted, it is the role of the SIOA to determine how such impacts may be addressed effectively to reduce the degree of social disruption to those affected. If positive impacts are predicted, the aim of the SIOA is to utilise these opportunities and identify how these impacts might be further enhanced. Monitoring and evaluation is also a key component of an SIOA process to monitor impacts over time and identify any unanticipated impacts that may arise as a result of the Project.

2.2 Scope of the SIOA for the Project

The phases of the SIOA developed for the Project have been developed to build a well-evidenced assessment of social impacts by:

- *Developing a profile of the social and economic context in which the Project is located*, at a local and regional scale to highlight key community capital strengths and vulnerabilities and summarise social/community issues of relevance to the Project. It is important to note that the Project involves the continuation of an existing operation and impacts of the Project (and the associated change) need to be specifically identified.
- *Identifying the impacts and opportunities associated with the Project* through engagement and consultation with near neighbours, village residents and regional stakeholders within the Goulburn Mulwaree LGA, and specifically the communities of Marulan and Towrang. This information has been used to inform Project planning and design in a proactive way and to ensure that issues of relevance to the community are considered adequately in the EA for the Project.
- *Assessing and predicting the significance of impacts associated with the Project* through the application of a 'risk-based' approach; integrating both perceived and technical assessments of risk. Where available, relevant data sets have been used to inform the assessment of impacts associated with the Project and to explore perceptions raised in consultation with the community. The application of this approach is relatively new within the SIOA field; it affords greater integration with the broader environmental assessment work and ensures that impacts of relevance to technical specialists and community members are adequately discussed and considered in the impact assessment process.
- *Developing strategies that address and manage the predicted social impacts associated with the Project* and which may enhance opportunities in a manner that values existing community aspirations and assets.
- *Identifying what will require monitoring should the Project be approved* and how any unanticipated social impacts, that may result from the Project, will be identified.

2.3 Community Engagement and Consultation

Engagement with the community has been a key component of the SIOA program at key phases of the assessment, namely in the scoping of Project issues and impacts and the development of appropriate strategies to address and/or enhance impacts.

Holcim Australia has an established relationship with near neighbours, village residents and community groups surrounding the operations, as well as broader regional stakeholders; and consequently, engagement has been a key component of Holcim Australia's activities.

The following table summarises the social assessment and consultation / engagement mechanisms specifically utilised during each phase of the SIOA program. This consultation has been further complimented by engagement undertaken by the broader project team with Government agencies and other key stakeholders in the course of other operational and assessment activities.

Table 2.1 Summary of social assessment and engagement methods

Methodology/Approach	Description/Detail
Assessment Methods	
Phase 1	Program Planning
Development of Stakeholder Engagement Strategy	Development of a tailored stakeholder engagement strategy for the Project. The strategy was informed by previous consultation activities, existing data on perceived issues and opportunities and preliminary social risk rankings undertaken in the pre-feasibility Project phase.
Phase 2	Community Profiling
Community Capitals Analysis (socio-demographic analysis)	Assessment and analysis of ABS Census data and other relevant social and community indicators and data sets to develop a detailed social profile of the communities of interest.
Historic and contemporary issues and opportunities	Review and analysis of historical accounts of the region and local media sources to understand historical and emerging issues and opportunities within the community.
Phase 3	Scoping of Issues and Opportunities
Community Attitude Survey	<p>In late 2014, prior to the formulation of the project, a random community telephone survey was undertaken across the Marulan and Towrang communities and the wider Marulan area to:</p> <ul style="list-style-type: none"> • determine how Holcim Australia and the Lynwood Quarry are currently perceived by the local community • identify any further social issues and impacts associated with the operation that may have arisen through the construction and commissioning phases • identify those issues of most concern to the community to assist Holcim Australia in prioritising these issues • assess the perceived effectiveness of engagement and communication mechanisms currently being utilised by Holcim Australia • obtain an improved understanding of community views on how Holcim Australia can best contribute to the community.
Local community issues analysis	Personal interviews with near neighbours of the Lynwood Quarry and other community residents and organisations to identify perceived issues and opportunities relating to the current Lynwood Quarry operation and the proposed Project. Perceived issues and opportunities were then ranked by relative frequency.

Methodology/Approach	Description/Detail
Community Information Sessions	Facilitation of local community information sessions and regular meetings with the CCC (existing mechanism of Holcim Australia) to present information relating to the Project and to obtain an understanding of perceived issues and opportunities in relation to the Project from residents within the local communities of Marulan and Towrang.
Phase 4	Assessment of Impacts and Opportunities
Impact Assessment and Management	Prediction and assessment of social risks and impacts associated with the Project and identification of mitigation and management strategies.
Phase 5	Strategy Development
Social Impact Monitoring	Identification and development of appropriate monitoring for high and medium social risks.
Consultation and Communication Methods	
Near neighbour interviews and door knocks	Personal interviews with near neighbours to outline Project aspects and door knocks of proximal residents.
Regional stakeholder consultation	Personal meetings with key regional stakeholders drawn from across key community service sectors within the Marulan and Towrang LGA i.e. education and health.
Government briefings and consultation	Briefings and personal meetings with relevant government representatives (local, state and federal) to present the Project and obtain feedback on Project aspects.
Community Newsletters	Development of Community Newsletters (including feedback form) summarising key aspects of the Project and progress/outcomes of the environmental and social assessment program – distributed to neighbouring community residents and relevant stakeholders.
Community Information Displays	Facilitation of 6 community information sessions in Marulan and Towrang has provided the opportunity to present the Project and document perceived issues and opportunities (held in June and August 2015); and to present EA outcomes (held in October 2015).
Focus Groups	Hosting of 3 small focus groups and personal meetings on key issues identified by key stakeholders e.g. lighting.
Project EA Summary Booklet	Summary of the key outcomes of the EA for the Project distributed to all households in the local villages and key stakeholders on the project database.

In order to ascertain community attitudes and perceptions in relation to their operations, Holcim Australia (then Readymix) in 2005 undertook a community attitude survey to identify community issues in relation to the original Lynwood Quarry Project proposal. This survey was repeated in 2014 as a means for Holcim Australia to evaluate its social and environmental performance and keep track of community issues, informing targeted engagement mechanisms to be employed across its operation and to provide means of identifying areas of community need and contribution. In general, the survey affords the tracking of a number of key indicators relating to the company's social and environmental performance and, as has been highlighted, provides an evaluation of the approach the operation has adopted in relation to stakeholder engagement and consultation to date.

In the current project context, the 2014 survey has also afforded a wider group of community stakeholders the opportunity to have input regarding their values and concerns in relation to the Lynwood Quarry so that issues can be proactively identified to inform assessment and project planning. The wider survey has also complemented the more direct consultation undertaken with proximal neighbours and key community stakeholders in relation to the Project (refer to **Section 2.3.1** for further detail). The 2014 telephone survey involved random sampling of residents in the wider Marulan and Towrang communities. Outcomes of the survey, and the broader consultation program, can be found in **Section 4** of this report.

2.3.1 Participants / Stakeholders in the SIOA

Social impact assessment involves the cooperation and coordination of a number of 'social partners' or 'stakeholders'. As Burdge (2004) outlines, stakeholders may be affected groups or individuals that:

- Live nearby the resource/project
- Have an interest in the proposed action or change
- Use or value a resource
- Are interested in its use and/or
- Are forced to relocate.

As part of the SIOA program for the Project, a wide range of stakeholders have been identified and involved in the program. These stakeholders have been grouped as follows:

- Near neighbours – landholders and residents residing in proximity to the current quarry operation in the neighbouring village of Marulan and in Towrang, given visual impact issues.
- Local community groups and organisations
- Aboriginal stakeholders
- State and Commonwealth Government agencies
- Local Government representatives
- State and Federal Elected Representatives
- Local business and business chambers/groups
- Service providers, including education, health, emergency services.

Table 2.2 provides an overview of the number of stakeholders consulted across each stakeholder group category. A total of 300 stakeholders participated in the consultation process. The consultation mechanisms utilised as part of the SIOA varied and, where possible, were matched to stakeholder groups to facilitate participation in the assessment program. A timeline of engagement activities is provided in **Figure 2.1**.

Table 2.2 Project SIOA consultation summary

Stakeholder Category	Number of Participants
Wider Marulan and Towrang community residents survey	150
Proximal/Neighbouring Landholders / Residents – Marulan <ul style="list-style-type: none"> • Munro Road • Graham Lane • Muclura Drive • Merino Road • Suffix Street • Loseby Avenue • Collins Street Incl. residents from Tallong and other locations that attended community information sessions.	41
Landholders / Local Residents – Towrang <ul style="list-style-type: none"> • Narelle Lane • Apps Lane • Towrang Road • Carrick Road Incl. residents that attended community information sessions	23
Goulburn Mulwaree Council Administration Representatives and elected local Councillors	2
Marulan and Towrang Community Groups Business and Service Providers*	11
State Government Agencies	2
Political Members –State and Federal	2
Aboriginal stakeholder groups	4
Industry	2
Lynwood Quarry employees	52
Suppliers	5

Stakeholder Category	Number of Participants
Customers	4
Media & Industry Publication	2
<i>Total</i>	<i>300</i>

** It should be noted that some stakeholders consulted as landholder also hold key positions in community groups and consequently have been consulted in both a personal and group capacity.*

The following figure also illustrates a timeline of the various consultation activities that have been undertaken since the Project's inception.

Consultation Timeline

Government & Aboriginal Cultural Heritage Consultation		Neighbours and Key Stakeholders Consultation
	DEC 2014	Community Perception Survey undertaken
	FEB 2015	Community Consultative Committee meeting
	APR 2015	Community Perception Survey summary distributed
Department of Planning and Environment meeting	MAY 2015	
Federal Member briefing	JUN 2015	Key stakeholder phone calls to advise of Modification Project
State Member briefing		Modification Project - Media release
Goulburn Mulwaree Council briefing		Distribution of community newsletter No. 13
PEA lodgement & publicly available		Community Consultative Committee meeting
Calls to Aboriginal groups to discuss Project		Door knocking of proximal neighbours commenced
Office of Environment and Heritage briefing		Stakeholder calls and interviews commenced
Modification Project letter sent to Aboriginal groups		Lighting Focus Group meeting No.1
Letters of support received from Aboriginal groups		Marulan Community Information Display No.1
Office of Environment and Heritage briefing		Towrang Community Information Display No.1
Meeting with Aboriginal groups to discuss the Modification Project		
Aboriginal Cultural Heritage (ACH) Survey	JUL 2015	Door knocking of proximal neighbours continued
Meeting at lynwood Quarry Office complex to discuss the results of the ACH survey		Stakeholder interviews concluded
		Lighting Focus Group meeting No.2
		Letter and invitation to August Community Information Display
Federal Member update	AUG 2015	Community Consultative Committee meeting
State Member update		Marulan Community Information Display No.2
Goulburn Mulwaree Council update		Towrang Community Information Display No.2
Draft report provided for review by all registered Aboriginal parties		
	SEP 2015	Lighting Focus Group meeting No.3
	OCT 2015	Chamber of Commerce Site Tour
	NOV 2015	Marulan Community Information Display No.3
		Towrang Community Information Display No.3

ACH - ref Appendix 2 for more detail

Figure 2.1

Consultation Timeline

3.0 Understanding the Social Context

3.1 Overview

The project is located near the towns of Marulan and Towrang, north of Goulburn, New South Wales. The region is strategically located along the Hume Highway, approximately two hours (196 kilometres) drive South-West of Sydney and approximately an hour (90 kilometres) drive from Canberra.

The City of Goulburn, with an estimated population of 21,092 (ABS, 2011) is the largest settlement in the region and serves as a regional service centre for the district.

Marulan, located 27 kilometres from Goulburn, is the next largest township in the area, with an estimated population of 587 in 2011 (refer to **Figure 3.1**).

This section provides profiles of the local area¹. The profiles are of Marulan, consisting of the State Suburb of Marulan, with additional detail on the township itself (Marulan Urban Centre Locality) and the State Suburb of Towrang. Both the Marulan and Towrang communities are located within the wider Goulburn Mulwaree Local Government Area (LGA).

The profiles that have been developed include:

- A summary of local history and governance frameworks
- Demography
- Consideration of wider capitals as understood within a sustainable communities framework (Hart, 1999)
- Review of infrastructure and housing provision in the area.

Data sources utilised in the preparation of this profile section have included:

- *ABS Australian Census of Population and Housing* (ABS, 2011, 2006);
- Local and State Government reports
- Previous Environmental Assessments/ Environmental Impact Statement undertaken for the Lynwood Quarry on behalf of Holcim Australia and its predecessors
- Relevant research reports and publications
- Other social indicator datasets e.g. Social Health Atlas (PHIDU, 2014) and Bureau of Crime Statistics and Resources (BOCSAR, 2015)
- Media Review and analysis.

¹ Localities presented here are Australian Bureau of Statistics reference SSC 12304, SSC11413, UCL12106, and LGA13310

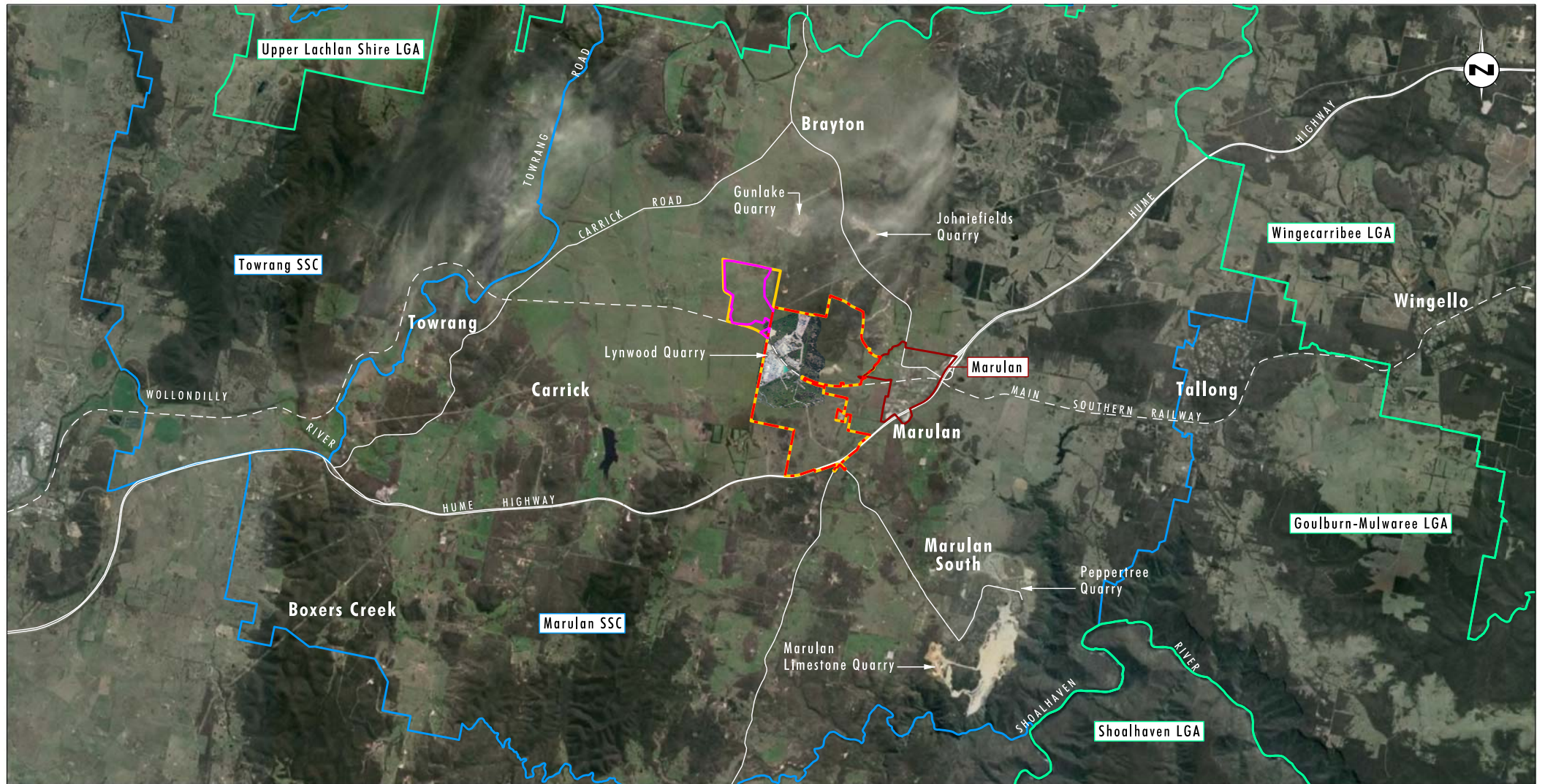


Image Source: Google Earth (2012), Holcim (2014)
Data Source: Holcim (2015), ABGA (2015)

0 2.0 4.0 6.0 km
1:150 000

Legend

- Approved Project Area
- Modification Project Area
- Proposed Granite Pit Disturbance Footprint
- Local Government Boundary
- State Suburb Boundary
- Urban Centres and Localities Boundary

File Name (A4): R16/3330_305.dgn
20151028 9.55

FIGURE 3.1

Geographical Context

3.2 Governance and Local History

The townships of Marulan and Towrang became part of the Goulburn Mulwaree Shire Council in 2004, as part of several regional local government amalgamations and boundary changes.

Political representatives of the locality include the Mayor of Goulburn Mulwaree Council, Geoff Kettle, an independent, who has held the position of Mayor since 2009.

The state electorate, in which the project is based, is Goulburn where the current Liberal Member of Parliament (MP) is Pru Goward, holding the position since 2007.

The federal division is Hume, with the current Liberal member Angus Taylor holding the seat since 2013.

The area surrounding Marulan has been historically important in both Aboriginal and European history, as it offered an easily navigable path across the Great Dividing Range.

3.2.1 Aboriginal Heritage

Marulan is an Aboriginal place name and, according to the Goulburn Historical Society, comes from the original spelling of the name - “Murrawoollan”. Archaeological excavations near Canberra suggest that there has been Aboriginal occupancy of the area for at least 15,000 years (Eddy, 1985).

Marulan is thought to be at the junction of four Aboriginal territories. These include two larger inland territories and two smaller coastal territories. The Gundagarra linguistic group were thought to have occupied the territory inland and to the north of Marulan; whereas the Ngunawal territory was seen to have stretched from Canberra in the south-east and included the current settlement of Goulburn. The Wodi-Wodi’s territory stretched along the coast, north-east of Marulan from Shoalhaven River to Wollongong; while the Wandanian territory was thought to have covered the area south of Marulan, from Ulladulla to Nowra (Eddy, 1985).

Given its location, the Marulan area may have been a common meeting place and crossover point for Aboriginal groups. There are a number of Aboriginal heritage sites in the area including camp sites and a quarry, where material for implements was obtained (Eddy, 1985). Further information regarding Aboriginal heritage is presented in Section 6.9 of the EA.

3.2.2 European Heritage

The history of Marulan has been shaped, like many others, by the development of the railway and the Great Southern Road. Until the mid 1980’s when the current freeway was built, Marulan was a highway town, with its location between Sydney and Canberra resulting in the development of a truck checking station. The first station was built in 1931, upgraded in the 1950s and again in the 1970s. The station is still present today.

The development of the Marulan bypass and corresponding service centre in 1985 has diverted increasing levels of traffic along the Hume Highway over the last 30 years. The services available were reported in interviews as being a major employer in the locality, which is verified by the demographic analysis in **Section 3.3**.

As with transport, the Marulan region also has a long quarrying history. Resource extraction in the area goes back over 180 years to a marble quarry in Brayton in the 1830s. Since this time, over 40 operations spanning gold, silver, copper, coal, iron ore, arsenic, kaolin and hard rock quarries have been in operation (Dubber, 2013).

3.3 Demography, economy and infrastructure

3.3.1 Goulburn Mulwaree Local Government Area

A summary of the demographic, economic, infrastructure and service provision and health aspects of the LGA are summarised below.

3.3.1.1 Population

In 2011, the Goulburn Mulwaree LGA had a population of 27,481 and a median age of 41 years. The gender balance in Goulburn Mulwaree is approximately 50/50 and has been stable since the 2006 ABS Census. In 2011, Aboriginal and Torres Strait Islander people constituted 2.8 per cent of the total population of the LGA.

3.3.1.2 Economy

Goulburn Mulwaree and its surrounding areas have diversified from an economy largely based on agriculture to include substantial employment in services, retail and the public sector.

In 2012, the LGA had over \$86 million allocated in approved construction projects, consisting of:

- \$31.9 million in new residential construction
- \$6.2 million in existing residential construction
- \$47.5 million in non-residential construction (The Public Practice Pty Ltd, 2013)

This is reflected in the LGA's primary industries of employment, with the top three sectors being construction, public administration and safety, and retail trade (ABS, 2011)(refer to **Figure 3.2**).

The three largest occupations of employment include: community and personal service workers (14.9 per cent); technicians and trades workers (14.5 per cent) and professionals (14.2 per cent).

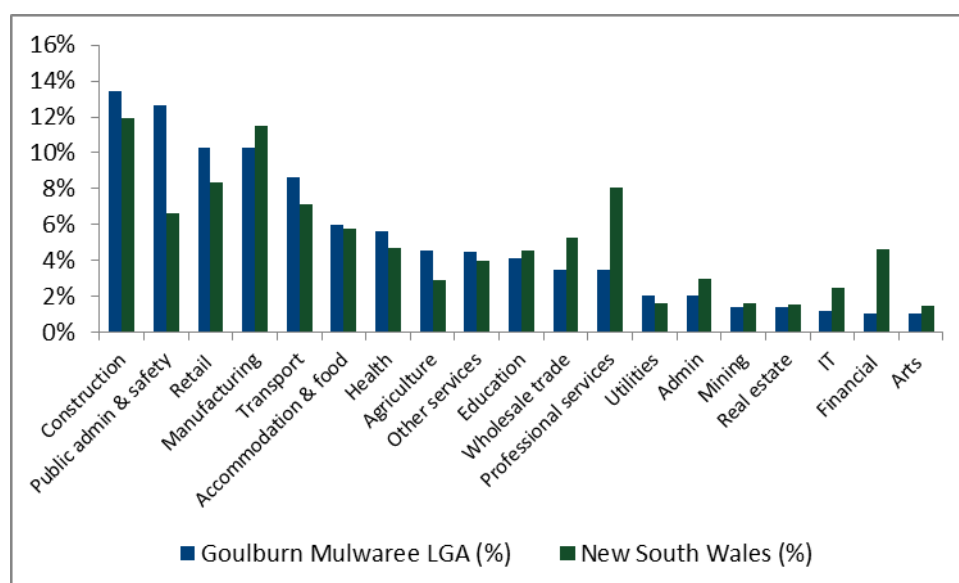


Figure 3.2

Industry of Employment Goulburn Mulwaree and NSW (ABS, 2011)

While agriculture was only the eighth largest industry of employment in 2011, it has been an important contributor to the region's historical economy. In 2001, nearly three quarters (73 per cent) of the land in the Goulburn Mulwaree locality was used for agricultural purposes, such as livestock, and contributed approximately \$36.8 million to the local economy. More recently the agricultural sector has been subject to a series of challenges such as commodity prices and a high Australian dollar, and has been in a gradual state of decline. Mineral and rock deposits have provided increasing opportunities for mining and quarrying, intended for manufacturing and building industries in the Sydney market (IRIS Research, 2008). Noting the smaller population and concentration of employment in fewer industry sectors, the Herfindahl Index² rating for Goulburn Mulwaree (1.3 per cent) is higher than for NSW more broadly (0.83 per cent).

Key features of the Goulburn Mulwaree LGA workforce in the 2011 Census include:

- 77 per cent employed in the private sector
- Over 20 per cent employed in Government, predominantly State Government (19 per cent)
- The majority of workers (83 per cent) are employees, followed by small-business owner-managers (14 per cent) and workers in a family business (2 per cent).

The unemployment rate in the LGA has not followed the wider NSW unemployment rate trend, with lower levels of unemployment in the period 2011 to 2013, and increased unemployment through 2014, before dropping again in early 2015, as shown in **Figure 3.3**.

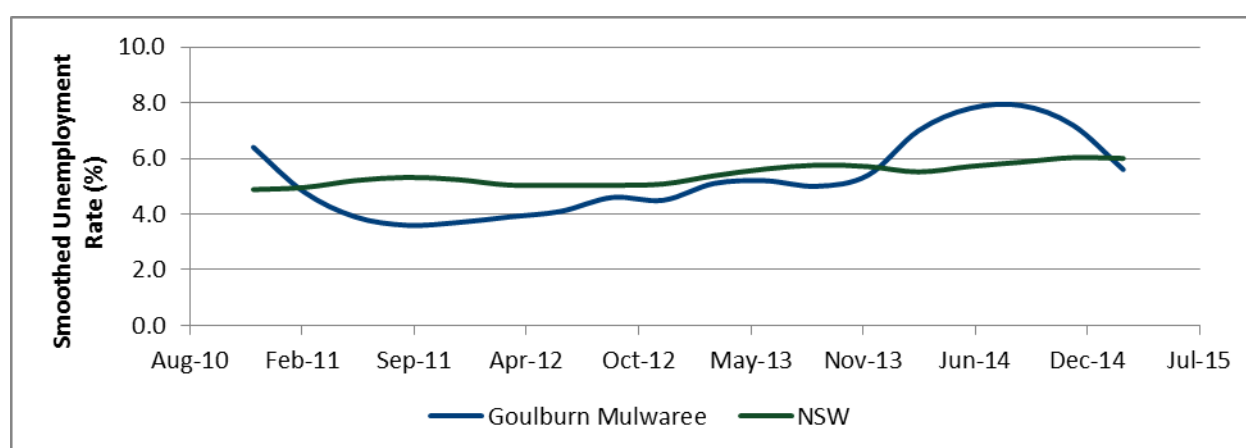


Figure 3.3

Smoothed Unemployment Rates – Goulburn Mulwaree LGA and NSW

3.3.1.3 Education

The LGA is well serviced with primary, secondary and vocational education services. The level of post-secondary education in the LGA (32 per cent) is comparable to the wider NSW state (37 per cent).

In the township of Goulburn there are 12 primary schools, 4 secondary schools, 1 combined and 1 school for children with special needs. Of these schools, 12 are government funded and 6 non-government funded.

² The Herfindahl Index is a measure of market competition or industrial diversity, ranging from 0 to 1.0. It considers the number and size of firms within an industry, or, as with this study, industries within a broader economy. Within the current study a higher percentage indicates higher concentrations of individuals employed in fewer industry sectors.

The closest tertiary education facilities are in Canberra, however the Goulburn TAFE Illawarra campus offers courses in the following areas:

- Automotive, transport and maritime
- Beauty and hairdressing
- Building and construction
- Business and administration
- Electro technology
- Engineering and manufacturing
- Environmental, horticultural, rural and animal studies
- Events, tourism and travel
- Hospitality
- Community and health
- Information Communication Technology and Library Services
- Music, journalism, design, arts, music and fashion.

3.3.1.4 Community Health and Wellbeing

Overall, residents in the Goulburn Mulwaree locality appear to exhibit lower rates of health and wellbeing across a wide range of indicators, relative to residents in NSW generally. For example, the rate of respiratory system disease (including asthma and chronic obstructive pulmonary disease) is higher in Goulburn Mulwaree LGA than in NSW (PHIDU, 2014). It follows that Goulburn Mulwaree LGA (ASR³ 23.3 per 100) also demonstrated a higher proportion of individuals who smoked during pregnancy than NSW (ASR 12.0 per 100). More people also rated themselves as having fair or poor health in Goulburn Mulwaree (ASR 19.9 per 100) than the state average (ASR 16.6 per 100). Adults in Goulburn Mulwaree LGA also reported higher levels of mental and behavioural problems than the NSW average (PHIDU, 2014). The proportion of the adult population with a disability was also higher in Goulburn Mulwaree region (ASR 13.5 per 100) than in NSW (ASR 11.5 per 100).

Residents also reported more difficulty accessing services in the Goulburn Mulwaree LGA (ASR 34.3 per 100) than NSW (ASR 28.4 per 100). This is supported by the absence of a number of health/ medical services outside of Goulburn (see **Table 3.1**). Goulburn Base Hospital is considered a secondment hospital in the ACT Network, with 100 acute medical, surgical, intensive care and psychiatric beds. A wide range of medical/ health services are however available in Goulburn itself (see **Table 3.1**).

Table 3.1 Health Service Facilities in the Area

Facility	Services/ Resources	Facility	Services/ Resources
Kenmore Hospital	Specialist psychiatric hospital	Law Trevor K	General Practice
Goulburn Base Hospital	Gastroenterology Respiratory medicine Cardiology General surgery Intensive care	Goulburn Quit	Quit smoking services

³ Age-specific Rate

Facility	Services/ Resources	Facility	Services/ Resources
Foley-Chell Keith	Acupuncture	Goulburn X-Ray	Radiology
Bradfordville Family Medical Centre	General Practice	Goulburn Osteopathic and Sports Injury	Osteopathic and sport
Argyle Street Medical Centre	General Practice	OPSM	Optometry
Goldsmith Street Surgery	General Practice Dermatology Pathology Paediatrics Orthopaedic surgery Psychology Audiology	Vivid Smile Dental Centre	Dentistry
McNamara Physiotherapy Clinic	Physiotherapy	Goulburn Naturopathic Centre	Naturopathy
Godfrey Douglas	Acupuncture	Canberra Imaging Group	Radiology

3.3.1.5 Transport and Infrastructure

Given the region's location between two major population centres, the area has well-established transport infrastructure (Economic Development Plan, 2008) being serviced by both freeways and rail. The ease and efficiency by which goods can be shipped by road or rail make the region an attractive option for the transport and logistics sectors.

The regions road infrastructure has created a state of reliance for the population, with over 80 per cent of residents travelling to work in a car, up from 77 per cent in 2006. This figure is substantially higher than in NSW broadly (68.3 per cent) generally and may be due to a lack of public transport; the largest issue facing Goulburn Mulwaree as noted in the 2011 Local Government Community Survey. The region also has its own registered airport, located 7km south east of central Goulburn, which is available for commercial flights.

Goulburn Mulwaree has two main dams - Pejar and Sooley (Economic Development Plan, 2008). A water pipeline to the Sydney Catchment Authority supply system in the Southern Highlands was constructed in 2012 to provide the LGA with a sustainable supply of water to cater for future growth.

Natural gas is supplied via a pipeline that runs from South Australia to Sydney. Prices are fixed to the Sydney grid price. Electricity is supplied to the region by Country Energy.

Goulburn has a level of telecommunication service typical of a major metropolitan centre. Currently the National Broadband Network is being rolled out in the Goulburn City centre (NBNC0, 2014). However, broadband and mobile phone coverage is poor beyond Goulburn City, especially in less populated rural areas.

3.3.1.6 Crime

In the Goulburn Mulwaree LGA crime rates are in line with NSW trends and have generally been stable from 2013 to 2015. The rates of some crimes such as assault, sexual offences, property damage, and disorderly conduct and drug offences were higher in the LGA than in NSW generally (BOCSAR, 2015). Some crimes such as drug offences were nearly three times the rate in the Goulburn Mulwaree LGA than in NSW in 2015.

3.3.2 Marulan

Analysis of data relating to Marulan has been split to provide data specific to the township of Marulan as well as the rural balance that makes up the State Suburb (see **Figure 3.1**).

3.3.2.1 Marulan Township

3.3.2.1.1 Population

Marulan is a regional town located approximately 30km east of Goulburn. As is shown in **Table 3.2** the township of Marulan had a population of 587 in 2011. Since 2006, Marulan has demonstrated a modest increase in population (8.7 per cent) in line with the broader LGA (5.3 per cent increase), with net migration into the rural area contributing to population growth. Within the Marulan township, approximately 39 per cent of residents reported having lived at a different address between 2006 and 2011.

The Goulburn-Mulwaree LGA is expected to continue to have modest population growth over the next 5 years (Parsons Brinkerhoff, 2006), however lower levels of growth are expected in the LGAs rural communities, such as Marulan.

The proportion of Aboriginal and Torres Strait Islander (ATSI) individuals is substantially higher in the Marulan township (4.3 per cent), when compared to the Goulburn Mulwaree LGA (2.8 per cent) or NSW (2.5 per cent). There was a 50 per cent increase in the population of ATSI residents in Marulan from 2006 to 2011.

Table 3.2 Demographic Summary Statistics Marulan township (ABS, 2011, 2006)

	Marulan township		Goulburn Mulwaree		NSW	
	2006	2011	2006	2011	2006	2011
Population	540	587	26,086	27,481	6,549,177	6,917,658
Population change (%)	↑ 8.7		↑ 5.3		↑ 5.6	
Gender breakdown (male % / female %)	52.7	49.9	50.6	50.5	49.3	49.3
	48.3	50.1	49.4	49.5	50.7	50.7
Family composition (families with children %/ families without children %)	58.3	57.0	58.5	57.8	62.3	61.8
	41.7	43.0	41.5	42.2	37.7	38.3
Aboriginal and Torres Strait Islander (%)	2.8	4.3	2.2	2.8	2.1	2.5
Marital status (married %)	47.8	43.9	48.7	46.8	50.1	49.4
Median age	39	39	39	41	37	38
SEIFA IRSD (2011) ⁴	924		944		-	
Occupied private dwellings	214	220	10202	10454	2470451	2471299
Tenure – owned (%)	72.9	76.2	65.8	68.7	63.4	66.6
Tenure – rented (%)	22.4	22	27.9	28.1	28.4	30.1

⁴ SEIFA IRSD (Socioeconomic Index for Areas – Index of Relative Social Disadvantage) is a socio-economic index that summaries a range of information about the economic and social conditions of people and households within an area. It has a mean of 1000 and a standard deviation of 100. A score lower than 1000 indicates relatively more disadvantage, and a score higher than 1000 indicates relatively less disadvantage, when compared with other areas across Australia

	Marulan township		Goulburn Mulwaree		NSW	
	2006	2011	2006	2011	2006	2011
Median weekly rent (\$)	165	200	150	185	210	300
Median monthly mortgage repayment (\$)	1,213	1,517	1,187	1,517	1,517	1,993
Post secondary education (%)	19	26	28	32	33	37
Largest industry of employment (%)	Hospitality	Hospitality	Public order	Hospitality	School education	School education
	13.2	9.7	5.9	4.4	4.4	4.4
Herfindahl Index (%)	3.7		1.3		0.833	
Occupation of employment (%)	Machinery operators	Technicians and trade workers	Professionals	Community workers	Professionals	Professionals
	21.4	19.7	14	14.9	21.2	22.7
Unemployed (%)	7.1	3.6	6.1	5.7	5.9	5.9
Median weekly household income (\$)	819	856	840	981	1,036	1,237
Travel to work – one method (largest %)	Car, as driver 81.3	Car, as driver 81.5	Car, as driver 77.7	Car, as driver 80.7	Car, as driver 68.0	Car, as driver 68.3
Volunteering (%)	14.6	13.8	19.9	19.5	19.0	18.4

The age profile of the Marulan township has also been reasonably stable over the period of 2006 to 2011, with approximately the same proportion of individuals in each age category. The median age of the population (39 years) is lower than that for the Goulburn Mulwaree LGA (41 years in 2011).

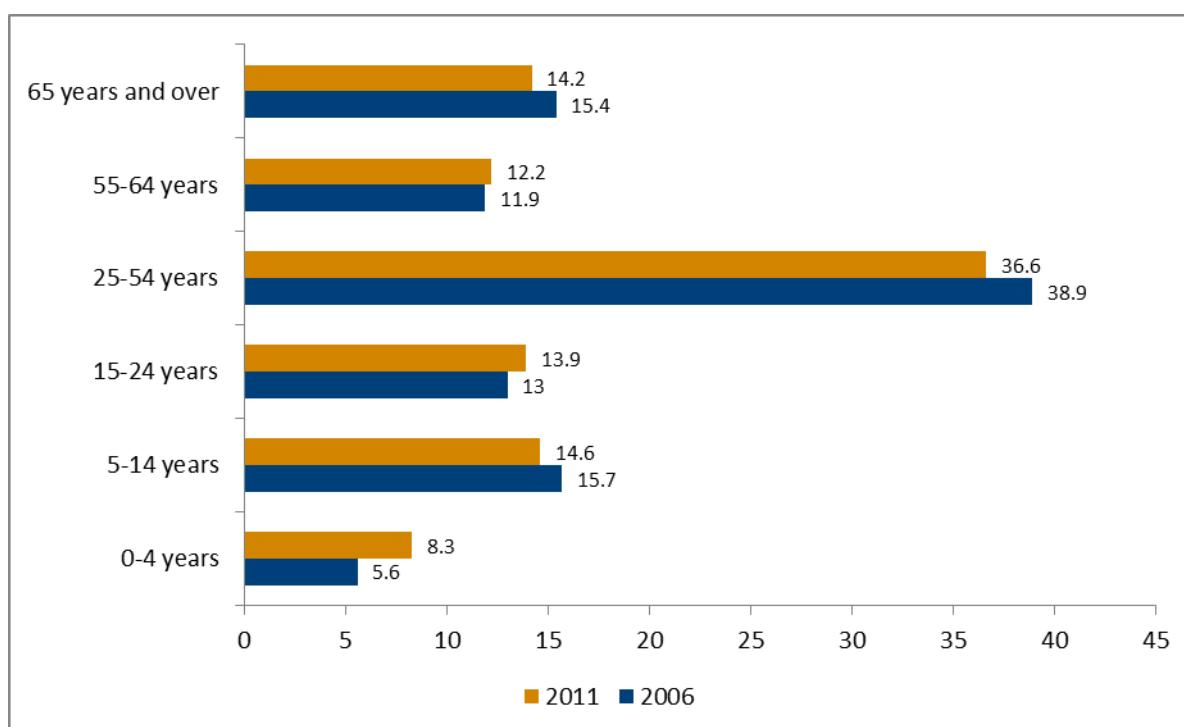


Figure 3.4

Age Profile Marulan Township 2006 - 2011 (ABS, 2006, 2011)

3.3.2.1.2 Economy

The largest industry of employment in Marulan township is hospitality (see **Table 3.2**). Transport and logistics are also important to the township, given its strategic location. Marulan provides employment opportunities for the broader region and is earmarked to be an important area for future growth – particularly within the mining and industrial sectors (Economic Development Plan, 2008). When measured on the Herfindal Index, Marulan Township is less diverse than the LGA, with a rating of 3.7 per cent. Noting that Hospitality is the largest employment sector (see **Table 3.2**), it is likely that a large proportion of Marulan town residents work at the nearby highway service centre. This was anecdotally verified through community interviews (see **Section 4.2**), with the highway service centre noted as being one of the largest employers amongst their wider local networks.

According to the 2011 Census, the median weekly income for households in Marulan at \$856 was below that of NSW at \$1237. However, the unemployment rate was lower than in the state in 2011, having decreased from 2006 – a positive economic indicator. It should be noted that the updated township level data was not available at the time of analysis (see **Figure 3.3** and **Table 3.2**).

3.3.2.1.3 Service Provision

Marulan Public School is the sole primary school that is located within the town of Marulan, providing places for students from Kindergarten to Year 6. Students who attend the school include children from Marulan and outlying farming areas (MySchool, 2015). Children are required to travel to Goulburn for secondary education.

Levels of post-secondary education are lower in Marulan (26 per cent) than in the Goulburn Mulwaree LGA (32 per cent) or NSW (37 per cent), but have increased quite substantially since 2006. The Marulan Medical Centre is the sole general practice medical facility in Marulan. The closest hospital for the township is the Goulburn Base Hospital.

3.3.2.1.4 Sense of Community and Community Values

The proportion of residents in the Marulan township that volunteer has fallen between the 2006 and 2011 census events; down from 14.6 per cent to 13.8 per cent. This is below the volunteerism rate in Goulburn Mulwaree LGA and NSW generally. The Goulburn Mulwaree council provides a resource centre to assist people wishing to become actively involved in the community (Goulburn Mulwaree Council, ND). The council also collects information from organisations that require volunteers and facilitates resourcing these organisations with individuals and appropriate skills.

Marulan has a strong history of preserving heritage structures, many of which were built in the 1800's as illustrated in **Table 3.3**.

Table 3.3 Heritage Buildings in Marulan

Structure	Description
Railway Precinct	Opened on 6/8/1868 when three special trains came from Sydney for the occasion
Police station	Cells and house built c.1880. A weatherboard office was added in 1931/2
Marulan Post Office	Originally at Old Marulan and opened 1836
Terminus Hotel	The oldest part of the building is c.1865 and has been added to and altered many times over the past century
All Saints Anglican Church	Built of Wingello sandstone in 1878
St. Patrick's Catholic Church	Built c.1930
Baldock's Store	Built in 1870
Marulan Public School	Founded in 1860
Royal Hotel	Built in the late 1880's
Café	Built in c. 1900

Structure	Description
Aunty May's Shop	Appears in an 1880 photo
Butcher's Shop	Built c. 1880
Wattle Glen	A Georgian-style house built in 1889
Coronation Store	Opened in 1902
"Miner's Cottage"	Built in c. 1880
Morgan's Store	Used as a repair place for horse-drawn vehicles
"Cora-Lynn"	Built by Jack Sieler
St. Stephens United Church	Opened on 2/10/1873
"Waverley"	Operated as a shop during the early years

3.3.2.2 Marulan State Suburb

The Marulan State Suburb area includes the countryside surrounding the Marulan township as shown in **Figure 3.1**.

3.3.2.2.1 Population

As can be seen in **Table 3.4**, in 2011 the Marulan State Suburb area had a population of 1,382 including the outlying rural areas.

The proportion of Aboriginal and Torres Strait Islander individuals is slightly higher in the State Suburb (3.0 per cent), when compared to the Goulburn Mulwaree LGA (2.8 per cent) or NSW (2.5 per cent).

The median age of the population (42 years) is also higher than for Goulburn Mulwaree (41 years) and NSW (38 years) (see **Figure 3.5**).

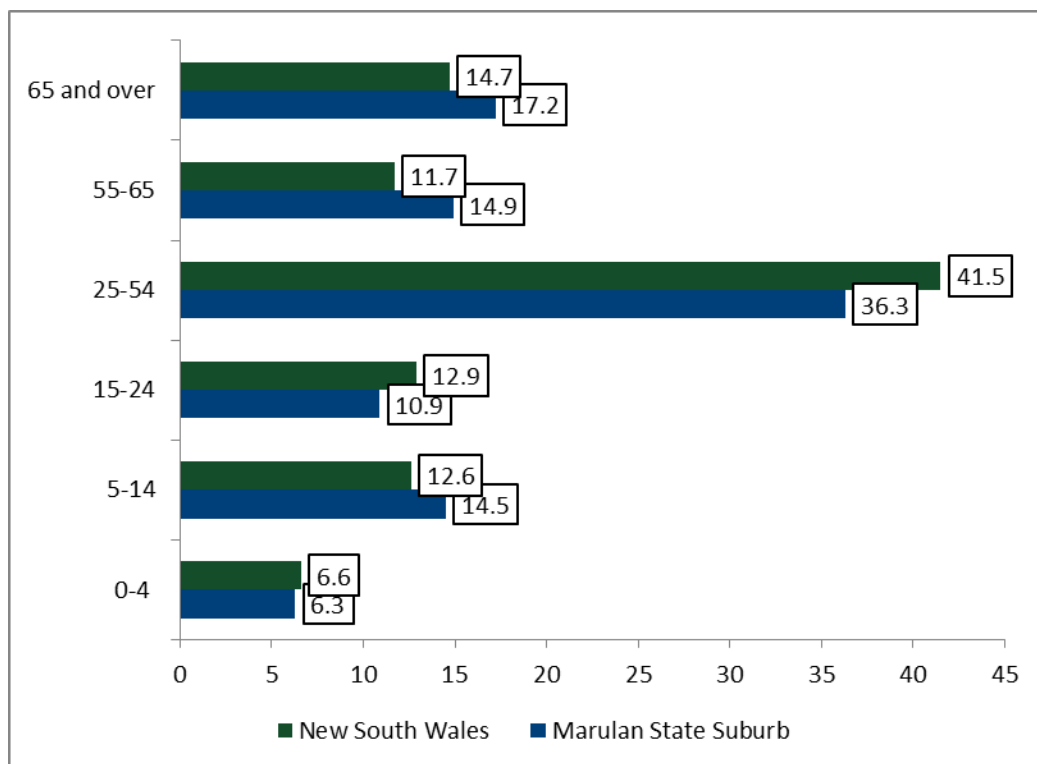


Figure 3.5

Age Profile Broader Marulan v. NSW (ABS, 2011)

Table 3.4 Demographic Summary Statistics Marulan State Suburb(ABS 2011, 2006)

	Marulan State Suburb ⁵	Goulburn Mulwaree		NSW	
	2011	2006	2011	2006	2011
Population	1,382	26,086	27,481	6,549,177	6,917,658
Gender breakdown (male % / female %)	50.6 49.4	50.6 49.4	50.5 49.5	49.3 50.7	49.3 50.7
Family composition (families with children %/ families without children %)	52.0 48.0	58.5 41.5	57.8 42.2	62.3 37.7	61.8 38.3
Aboriginal and Torres Strait Islander (%)	3.0	2.2	2.8	2.1	2.5
Marital status (married %)	53.3	48.7	46.8	50.1	49.4
Median age	42	39	41	37	38
SEIFA IRSD (2011)	957	944		-	
Occupied private dwellings	504	10202	10454	2470451	2471299
Tenure – owned (%)	78.2	65.8	68.7	63.4	66.6
Tenure – rented (%)	19.8	27.9	28.1	28.4	30.1
Median weekly rent (\$)	200	150	185	210	300
Median monthly mortgage repayment (\$)	1,907	1,187	1,517	1,517	1,993
Post secondary education (%)	32	28	32	33	37

⁵ Data from 2006 for Marulan State Suburb has not been included due to boundary changes between 2006 and 2011

	Marulan State Suburb ⁵	Goulburn Mulwaree		NSW	
	2011	2006	2011	2006	2011
Largest industry of employment (%)	Hospitality	Public order	Hospitality	School education	School education
	6.9	5.9	4.4	4.4	4.4
Herfindahl Index (%)	1.7	1.3		0.833	
Largest occupation of employment (%)	Technicians and trade workers	Professionals	Community workers	Professionals	Professionals
	17.6	14	14.9	21.2	22.7
Unemployed (%)	5	6.1	5.7	5.9	5.9
Median weekly household income (\$)	1036	840	981	1,036	1,237
Travel to work – one method (largest %)	Car, as driver 81.9	Car, as driver 77.7	Car, as driver 80.7	Car, as driver 68.0	Car, as driver 68.3
Volunteering (%)	16.9	19.9	19.5	19.0	18.4

3.3.2.2.2 Economy

The level of post-secondary education in Marulan is similar to that of the LGA (33 per cent), although below the level for NSW (37 per cent). This may be due to the growth in construction in the area and the accompanying necessary level of education. In 2011, the largest occupation of employment for the Marulan State Suburb area was technicians and trade workers (17.6 per cent) and hospitality was the largest industry of employment (see **Figure 3.6**).

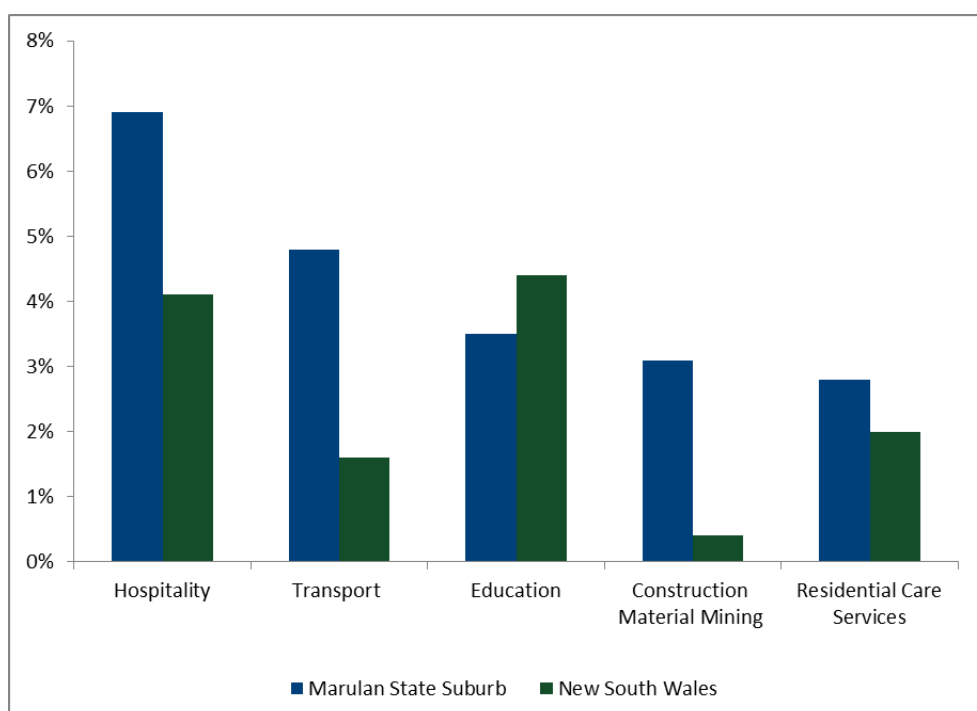


Figure 3.6

Top Industry of Employment Broader Marulan vs. NSW (ABS, 2011)

According to the 2011 Census, the median weekly income for households in the Marulan State Suburb (\$1036) was below that of NSW (\$1237), but above the wider Goulburn Mulwaree LGA (\$981). However, the unemployment rate was lower than the state – a positive economic indicator, noting that updated local level data was not available at the time of analysis.

3.3.3 Towrang

Towrang is a small locality to the west of Marulan within the Goulburn Mulwaree LGA (refer to **Figure 3.1**).

3.3.3.1 Population

In 2011, the population of Towrang was 314, approximately 20 per cent less than the population in 2006 (406 persons). This is in contrast to the increase in the population that has been experienced in the broader LGA and in NSW from 2006 to 2011 (see **Table 3.5**).

The proportion of ATSI residents has increased over the five year period from 2006 to 2011 in Towrang, to be more closely aligned with the Goulburn Mulwaree LGA and NSW.

Table 3.5 Demographic Summary Statistics Towrang (ABS 2006, 2011)

	Towrang		Goulburn Mulwaree		NSW	
	2006	2011	2006	2011	2006	2011
Population	406	314	26,086	27,481	6,549,177	6,917,658
Population change (%)	↓ -22.7		↑ 5.3		↑ 5.6	
Gender breakdown (male % / female %)	53.9	55.1	50.6	50.5	49.3	49.3
	46.1	44.9	49.4	49.5	50.7	50.7
Family composition (families with children %/ families without children %)	52.4	38.8	58.5	57.8	62.3	61.8
	47.7	61.3	41.5	42.2	37.7	38.3
Aboriginal and Torres Strait Islander (%)	1.5	2.2	2.2	2.8	2.1	2.5
Marital status (married %)	60.2	62.2	48.7	46.8	50.1	49.4
Median age	45	52	39	41	37	38
SEIFA IRSD (2011)	1007		944		-	
Occupied private dwellings	145	126	10202	10454	2470451	2471299
Tenure – owned (%)	78.6	76.5	65.8	68.7	63.4	66.6
Tenure – rented (%)	9.7	15.4	27.9	28.1	28.4	30.1
Median weekly rent (\$)	155	220	150	185	210	300

	Towrang		Goulburn Mulwaree		NSW	
	2006	2011	2006	2011	2006	2011
Median monthly mortgage repayment (\$)	867	1,350	1,187	1,517	1,517	1,993
Post secondary education (%)	33	38	28	32	33	37
Largest industry of employment (%)	Public order	Public order	Public order	Hospitality	School education	School education
	8.2	6.7	5.9	4.4	4.4	4.4
Herfindahl Index (%)	3.4		1.3		0.833	
Largest occupation of employment (%)	Managers	Technicians and trade workers	Professionals	Community workers	Professionals	Professionals
	18	19.5	14	14.9	21.2	22.7
Unemployed (%)	2.1	2.9	6.1	5.7	5.9	5.9
Median weekly household income (\$)	933	1,018	840	981	1,036	1,237
Travel to work – one method (largest %)	Car, as driver	Car, as driver	Car, as driver	Car, as driver	Car, as driver	Car, as driver
	84.3	82.7	77.7	80.7	68.0	68.3
Volunteering (%)	22.0	26.1	19.9	19.5	19.0	18.4

The median age of the broader LGA has continued to increase in line with national trends. In the case of the Towrang community, the increase in median age is due to reduced numbers of people in younger age cohorts, and increased numbers in older cohorts, as can be seen in **Figure 3.7**. It is reported that the outflow of young people from the region generally, may be attributed to students leaving to attend university in Canberra, Sydney and Wollongong (IRIS Research, 2008).

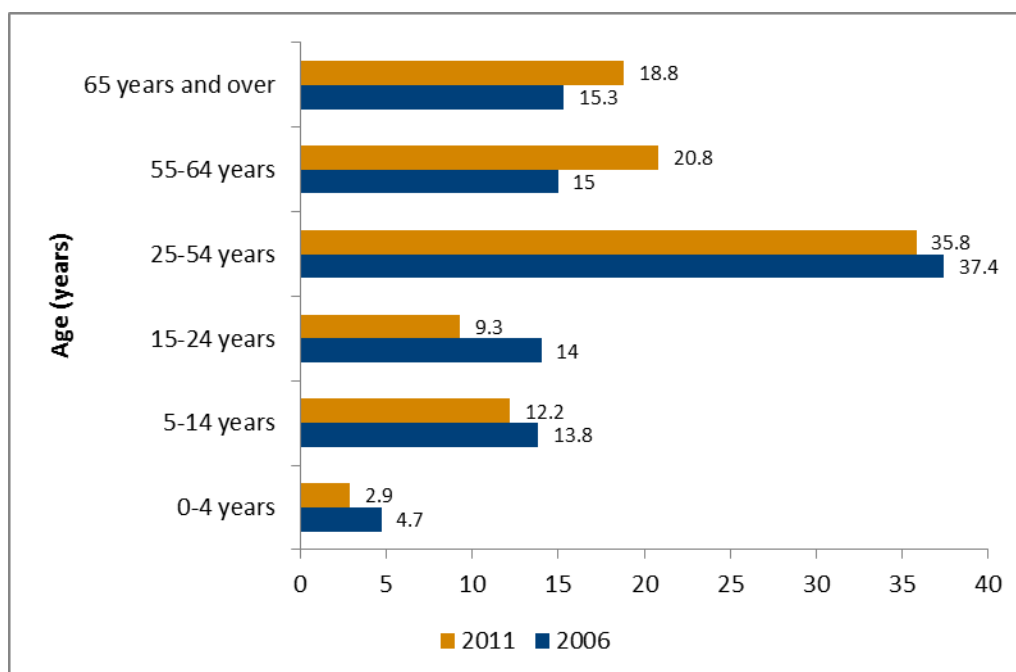


Figure 3.7

Age Profile Towrang 2006 - 2011 (ABS, 2011, 2006)

3.3.3.2 Economy

The largest industry of employment in Towrang is public order and safety (6.7 per cent). Given the small population size, there is also less industrial diversity than the wider LGA, with Towrang having an Herfindal Index rating of 3.4 per cent⁶.

In the 2011 Census, the median weekly household income (\$1018) was similar to, yet below that of the Marulan State Suburb (\$1036), greater than the wider LGA (\$981) and lower than the state (\$1237). Levels of unemployment were also very low in 2011 (2.9 per cent).

Levels of post-secondary education in Towrang were substantially higher than for the LGA in 2011, with 38 per cent of residents in Towrang possessing a post-secondary qualification.

3.3.3.3 Sense of Community and Values

Rates of volunteerism in Towrang are substantially higher than in Marulan, the wider LGA or NSW; and while decreasing in other areas, have increased from 22 per cent in 2006 to 26.1 per cent in 2011. Notably, approximately 46 per cent of persons aged 35-44 years reported being active volunteers in 2011 (see **Figure 3.8**). Local volunteer opportunities include the Rural Fire Service, the Towrang community hall, and involvement with the Towrang Progress Association.

⁶ As per footnote 2

The high rates of volunteerism are indicative of an active and engaged local community. This was verified through interviews (see **Section 4.2**), where Towrang residents noted their close community connections and high regard for the inclusive nature of community.

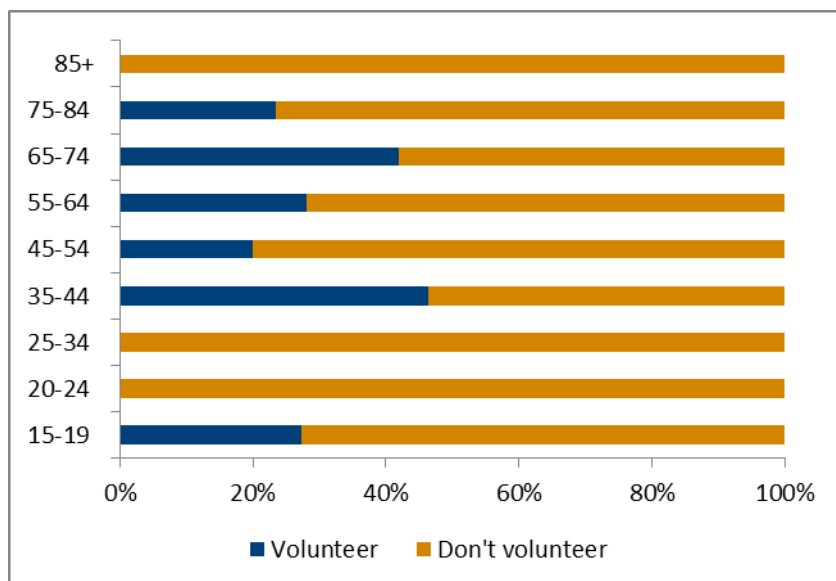


Figure 3.8

Volunteerism Rates Towrang (ABS, 2011)

3.4 Housing

One of the concerns raised by the local community during the consultation phases of the project assessment related to potential impacts to property values; both due to existing operations and the Project (refer to **Section 4.2.8**). Accordingly, additional analysis of housing data for the area has been incorporated in the profiling for the SIOA.

Housing within the LGA is largely constituted by separate dwellings, however increased urban infill of moderate to high density dwellings is anticipated as part of the broader Sydney - Canberra regional strategy (Department of Planning, 2010).

Locally, housing supply in both Marulan and Towrang is almost entirely constituted by separate dwellings, with a higher proportion owned or under mortgage than across the LGA or NSW broadly; and corresponding lower rates of rental accommodation.

Rents and mortgages are marginally higher than within the wider LGA (with the exception of mortgage payments in Towrang), but remain lower when compared to NSW (see **Table 3.4** and **Table 3.5**). There was a notable drop in occupied residences (19) in Towrang, however noting a decrease of only 6 total residences; it is likely that the difference may be a result of weekenders and other part time residents being absent from the area.

Median house values⁷ were assessed over the last 25 years for the State Suburb of Marulan and the wider LGA. Insufficient data was available for the State Suburb of Towrang to afford inclusion within the primary median house value analysis. Median housing values are graphed in **Figure 3.9**. The median value of houses in Marulan was largely consistent with the wider LGA until mid 2012, when house values in Marulan decreased slightly, in contrast with the wider LGA, where house values continued to increase generally in

⁷ Median house values are a value calculated by Residex deemed to be more representative of market trends than median sale prices.

line with the trend since 2005. The difference was as high as \$56,000, or 18 per cent of the wider LGA house value in late 2014. Within the six months to June 2015, the relative difference decreased to \$33,000 or 10 per cent.

It is not known if there has been a particular local cause for the depressed house values in Marulan. The time period coincides with construction works at five local quarry projects, including Lynwood Quarry, as well as quarries operated by Boral and Gunlake (Thistleton, 2014). No evidence was found to substantiate any linking of these occurrences. The local depression in property values also predates concerns raised regarding lighting impacts at Lynwood Quarry that commenced in mid-2014.

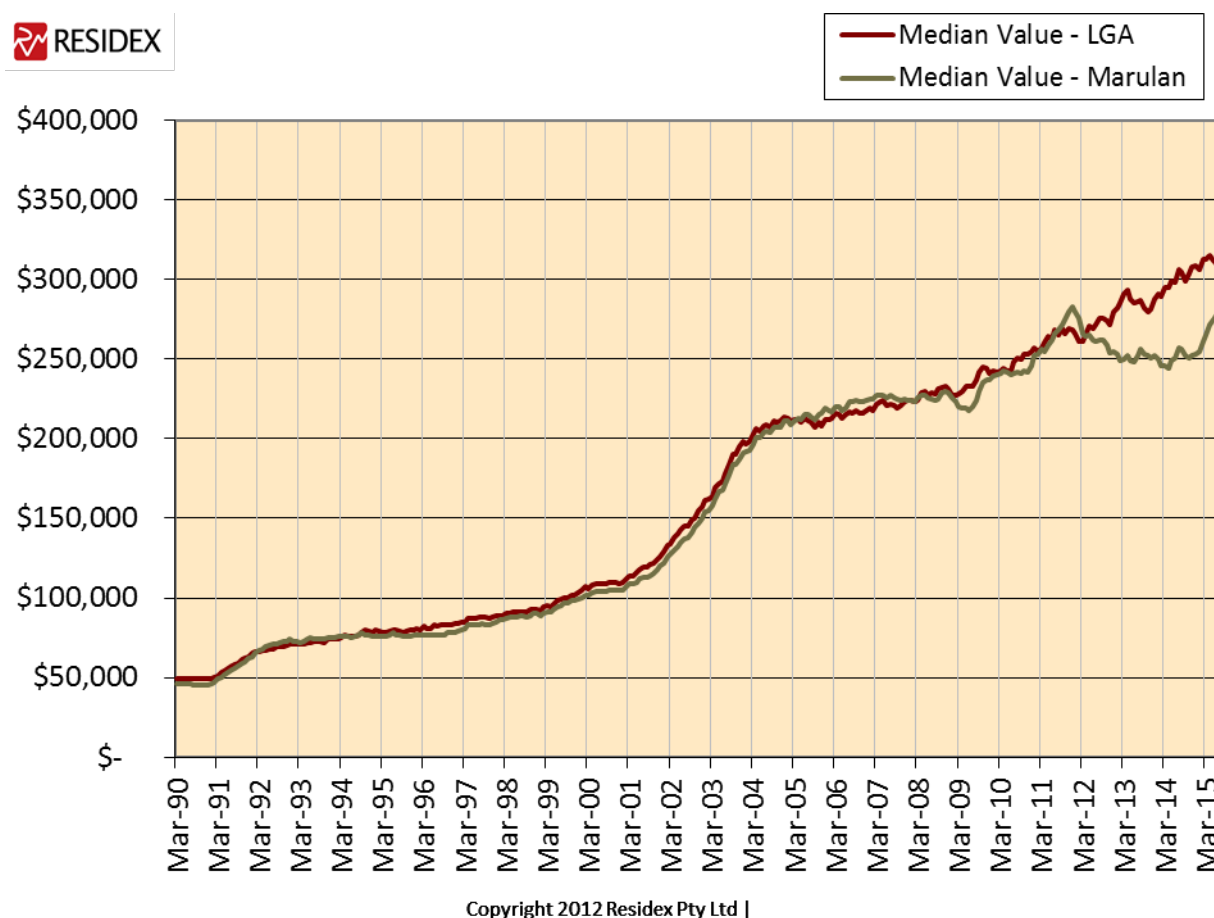


Figure 3.9

Median House Values – Marulan and Goulburn Mulwaree LGA

In order to analyse property values in Towrang additional data was utilised. A total of 50 properties were sold in the State Suburb of Towrang between November 2006 and September 2015, being an average of fewer than 6 sales per year over this period. Given the small number of total sales, the median sale price for each year has been plotted in **Figure 3.10** against the 2006-2015 monthly median sale prices for Marulan and the wider LGA. A linear trend was then applied to each series. The linear trend for median sale prices in Towrang is almost parallel to that of the wider LGA, inferring a consistent relationship in sale prices, noting the low levels of available data. The linear trend for Marulan is indicative of a slower increase in median sale prices over the same time period.

Assessment of the potential impact on property values, as a result of the project, is further detailed in **Section 5.2.2**.

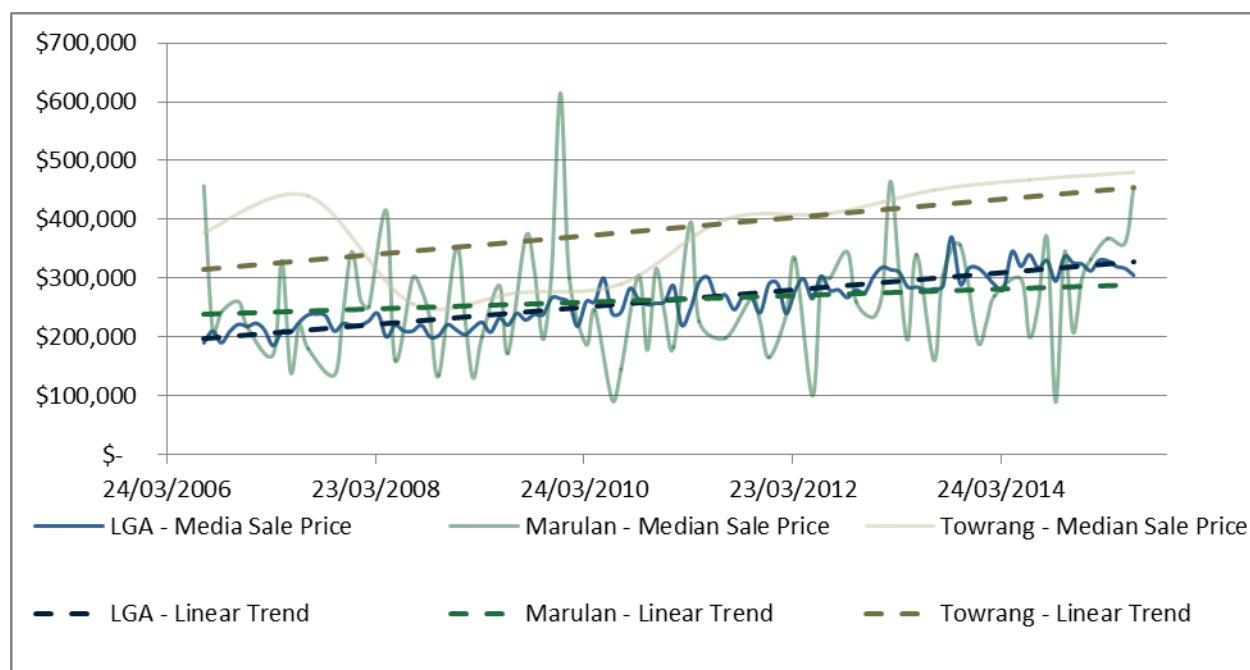


Figure 3.10

Median House Prices, Towrang, Marulan and Goulburn Mulwaree LGA

3.5 Regional Issues, Community Attitudes and Aspirations

3.5.1 Community Attitudes and Aspirations

This section is based on a review of secondary data sources to identify community attitudes and community response to change in the region. Specific community issues relevant to the current project are summarised in **Section 4.0** based on the outcomes of a detailed engagement program.

There have been several studies commissioned in the Goulburn Mulwaree locality prior to the project, including community attitude surveys, which can provide an indication of community attitudes and response to change. For example, the Council has administered a community survey to its residents during 2006, 2008 and 2011. **Figure 3.11** represents a graphic interpretation of the aspirations and concerns of the Shire community in 2011 (IRIS Research, 2011).



Figure 3.11

Goulburn Mulwaree Community Survey 2011 Word Cloud

A review of the survey reports undertaken have also identified a range of issues that are relevant for the Goulburn Mulwaree LGA in general and also Marulan in particular (refer to **Figure 3.12**). For instance, in the 2011 Community Survey, it was found that the most important issues facing Goulburn Mulwaree at that time were:

- Water supply (37 per cent)
- Attracting business and industries (30.5 per cent)
- Improving employment opportunities' (30.5 per cent)
- Lack of infrastructure (public transport, airport etc.) (9.6 per cent).

Residents of the Goulburn Mulwaree region, especially those from rural areas, also highlighted '*maintaining sealed roads*' as an area of low satisfaction; with the 'Goulburn Airport' having the lowest satisfaction of the 26 identified community services available to residents.

The Community Strategic Plan (Goulburn Mulwaree Council, 2014) has also identified key directions for the Council, which overlap substantially with themes identified in the Community Survey, namely:

- Quality infrastructure
- Business and industry
- Community needs
- Environment
- Culture and leisure
- Image and influence.

One of the key objectives of the Community Strategic Plan is to achieve quality infrastructure in the region. This includes:

- Providing a secure water supply
- Maintaining efficient sewerage systems that allow for expansion
- To provide and maintain safe roads
- Maintain waste management services
- Enhance the qualities of public places
- Investigate provision of more integrated public and community transport.

These identified themes and strategic directions provide insight to the values and services of importance to local residents within their respective communities.

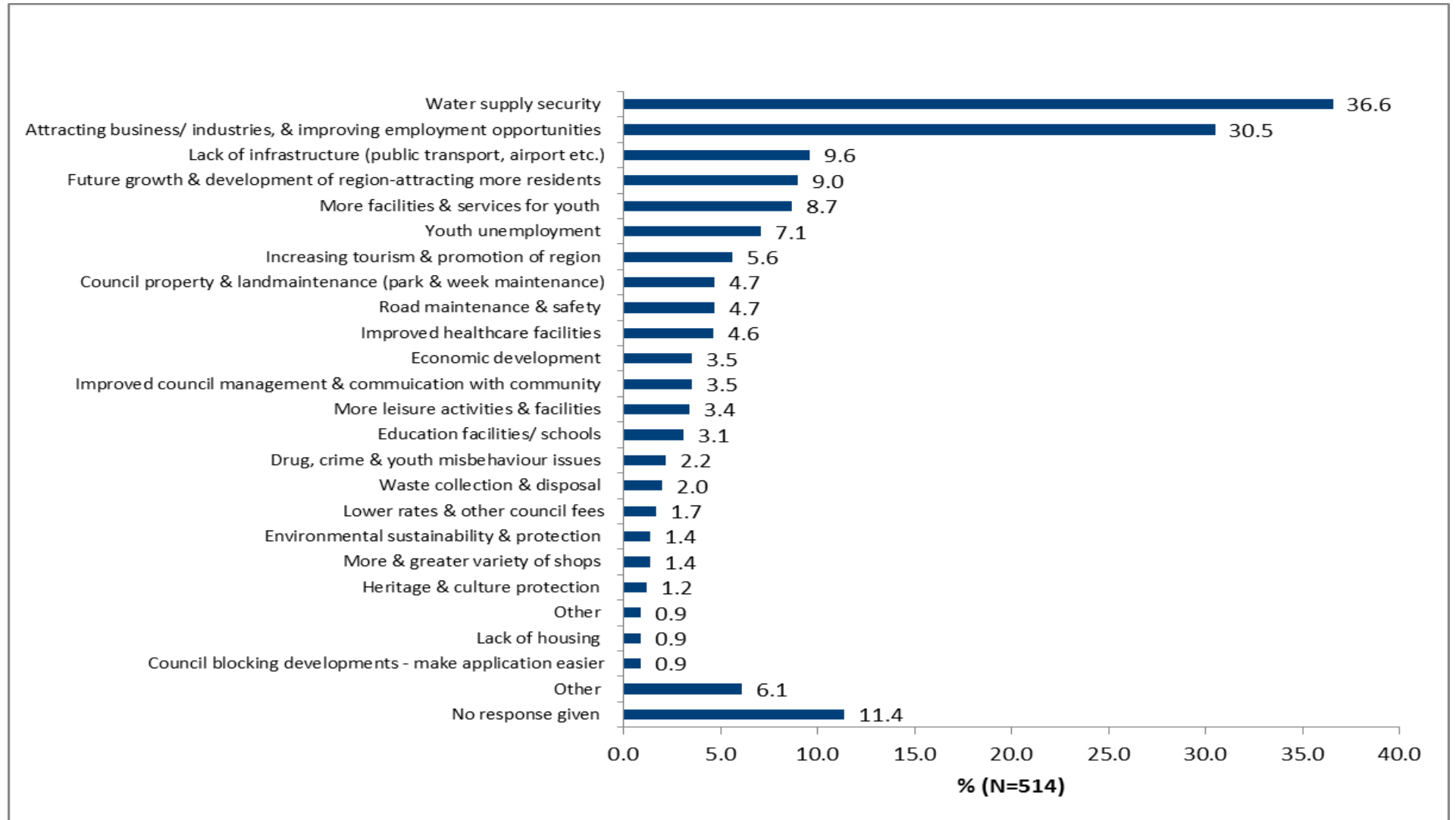


Figure 3.12

Most Important Issues Facing Goulbourn Mulwaree Today (IRIS Research, 2011)

3.5.2 Regional Media Issues

A review of local media was undertaken as part of the profiling phase, to identify general community trends/ attitudes towards development in the Goulburn Mulwaree area. The review focused on online media from 2006 to 2015 through an analysis of the Goulburn Post - this is a daily newspaper focused on events occurring in the Goulburn area. The Post Weekly is included within the Goulburn Post and covers the community news from Marulan and other villages within the LGA.

Development issues received some coverage in the Goulburn Post and centred on the positive aspects that the village of Marulan may receive, or has received, as a result of industry and development. For example, in July 2014, Debbi Rodden the Goulburn Mulwaree Council economic development officer said there would be benefits for young school leavers if the “*industry educated (them) about ongoing careers, including for professional people such as surveyors, geologists, environmentalists and engineers*”. Other articles suggest that Marulan can take advantage of its access to highways and to larger markets, such as Sydney, to improve employment prospects and create further wealth within the locality.

In 2015, resident issues related to further development of the Lynwood quarry by Holcim Australia, continued operation of Boral’s Marulan South Limestone Quarry and the development approval of the Goulburn Composting Facility. Further issues related to damage to roads as a result of quarry truck movements. Some articles outlined general support from the community for existing industry, in particular the industry’s ability to address residents’ concerns and complaints. However, one major ongoing community concern was evident, which related to a community dispute over light pollution generated by Holcim Australia at their Lynwood Quarry (e.g. July 2014).

Table 3.6 summarises some of the key articles reviewed for the purpose of the analysis.

Table 3.6 Media Review 2006 - 2015

Jul-15	Goulburn Composting Facility to go Ahead, Despite Concern From Nearby Landholders ABC News, 9 July 2015 <i>Plans for a composting facility in Goulburn have been given the go-ahead, but there remain concerns the development will produce a bad odour in the district.</i>
	Holcim has Rock Solid Support Goulburn Post, 1 July 2015 <i>Quarry company Holcim has gone "above and beyond" in addressing residents' grievances, says Marulan man David Humphreys</i>
Jun-15	Holcim Quarry's Rocky Future Goulburn Post, 17 June 2015 A \$254 million quarry venture at South Marulan has hit a major hurdle, with claims its pit was put in the wrong place. Residents are worried it will worsen the lighting effects, and raise noise, dust and visibility issues.
May-15	Boral Applies to State Another 30 Years at Marulan South Goulburn Post, 25 May 2015 <i>Boral is applying for State Significant Development (SSD) planning approval for the continued operation of its Marulan South Limestone operations for the next 30 years</i>

Jan-15	<p>People Power Wins Road Repair Pledge Goulburn Post, 2 January 2015</p> <p><i>Residents tired of quarry trucks tearing up country roads have scored a breakthrough. The council has responded with a promised \$1.2 million upgrade of the thoroughfare near Marulan</i></p>
Jul-14	<p>New Quarries Spark Regional Mining Boom ACT News, 28 July 2014</p> <p><i>A \$1 billion mining expansion is swinging into gear near Goulburn, with jobs and business prospects for the wider region.</i></p>
	<p>Holcim Quarry Light Dispute Set to Flare Up Goulburn Post, 16 July 2014</p> <p><i>Just weeks after striking a compromise, a Towrang community group says giant lights from a nearby quarry are about to get "a whole lot worse"</i></p>
Mar-14	<p>Expo Digs Deep for Quarry Spinoffs Goulburn Post, 14 March 2014</p> <p><i>Networking was the order of the day for more than 130 representatives from local businesses who gathered at Goulburn Golf Club for an Extractive Industries breakfast on Wednesday</i></p>
Jan-14	<p>Expo Cashes in on Quarries Goulburn Post, 20 January 2014</p> <p>The proliferation of quarries in the Marulan area could prove an economic boon for local businesses under a council committee's plan</p>
Dec-12	<p>Council Digging in for the Community Goulburn Post, 31 December 2012</p> <p>Council is encouraging major quarry companies to establish a community enhancement program similar to the Veolia Mulwaree Trust</p>
Dec-11	<p>Rock 'n Hole at Marulan Goulburn Post, 15 December 2011</p> <p><i>There is a resources boom right here in the Southern Tablelands, with some of the nation's biggest quarrying companies investing millions in the Marulan district.</i></p>
	<p>Mining: What's in it for Us? Goulburn Post, 13 December 2011</p> <p><i>Mayor Geoff Kettle told Holcim on Monday the council was hoping for a Veolia style community trust</i></p>
Jan-06	<p>Ready to Rock: Hundreds of Quarry Jobs at Marulan Site Goulburn Post, 12 January 2006</p> <p>State planning minister Frank Sartor has given the go-ahead for a \$195 million hard rock quarry at Marulan that is expected to be crucial source of construction materials for NSW over the next 30 years.</p>

4.0 Community Perceptions of the Lynwood Quarry Operation and the Modification Project

Community perceptions regarding the Lynwood quarry were first obtained as part of the SIA process for the original project approval in 2005 through a random community survey in the Marulan area and meetings with key stakeholders and proximal neighbours/landholders. This assessment provides a foundation for the current project proposal in providing a summary of community attitudes towards the Project at that time.

To build on the previous SIA work undertaken in 2005, a number of methods/mechanisms have once again been utilised in the current assessment, to assess community perceptions of both the existing Lynwood Quarry operations (given its recent commissioning) and the proposed Modification Project. Scoping of key stakeholder and wider community issues up front in the assessment process is considered essential to better inform the assessment process and project planning. Gaining an appreciation of issues of relevance and importance to the community early in the assessment process also enables issues to be more comprehensively considered as part of the EA and appropriate strategies developed. Methods that have been used to engage with stakeholders and the wider community are detailed in Section 2.3, but again include:

- A random telephone survey of the Marulan township, broader Marulan area and the village of Towrang
- Personal meetings with neighbouring and interested residents and landholders
- Neighbouring resident door knock surveys
- Key stakeholder meetings and workshops e.g. State and Local Government, community group representatives
- Community Consultative Committee (CCC) Meetings
- Community Information Sessions.

The 2014 community telephone survey provides a good overview of current wider community perceptions regarding Holcim Australia and its Lynwood Quarry operation prior to the formulation of the project; while the more targeted neighbour/landholder and key stakeholder consultation provides an appreciation of the more personal issues expressed by local community residents residing in close proximity to the operation and key groups within both townships.

This section begins with an overview of the key attitudes expressed by the wider community in 2014. Where relevant these findings are compared and contrasted with the findings of the 2005 survey. The section then presents the outcomes of meetings and door knock surveys with neighbouring landholders/residents and representatives of key community groups across both the communities. Any additional issues identified through the community information sessions held in both Marulan and Towrang are then summarised. A summary of the outcomes of consultation with Local and State government can be found in **Section 5.0** of the EA.

4.1 Wider Community Perceptions of Lynwood Quarry and the Proposed Modification Project

In order to better understand local community perceptions relating to Holcim Australia's operations at the Lynwood Quarry ten years after the SIA work for the original proposal, a random telephone survey was conducted with local residents in areas proximal to the quarry. As outlined in **Section 2.0**, the survey was of the state suburbs of Towrang and Marulan as reflected in **Figure 3.1**. The survey area additionally included ABS Statistical Area 1 1100206, which covers the township of Tallong.

The questionnaire contained 22 questions, and commenced on Monday 1 December and concluded on Thursday 11 December 2014. Interviews were conducted between 5 pm and 8 pm, Monday to Thursday, and between 10.30 am and 2.30 pm on Sunday. All randomly selected phone numbers were contacted up to five times in order to obtain a telephone interview and if the time was not suitable to participants, appointments were made to complete the survey at a convenient date and time.

A total of 150 residents participated in the survey, equating to a telephone survey response rate of 54 per cent, which is a relatively reasonable rate for community surveys of this nature. According to Pew Research (2012) the typical response rate for a telephone survey is approximately 10 per cent.

Five surveys were excluded because the people lived outside of the study area and four people declined to be interviewed because they currently work for Holcim Australia.

4.1.1 Community and Respondent Profile

Demographic data from survey participants in 2014 was compared with ABS data for the local area and with demographic data from the 2005 survey where feasible, and is presented in **Table 4.1**.

Table 4.1 Demographic comparison*

	Local Area (ABS 2011)	2014 Survey Sample	2005 Survey Sample
Total population	1700	150	174
Gender breakdown			
Males	872	58	69
	51%	53%	40%
Females	828	52	105
	49%	47%	60%
Age breakdown (%)			
Less than 18 yrs	24%	0%	2%*
18 to 34 yrs	15%	7%	12%
35 to 54 yrs	27%	26%	40%
55 to 64 yrs	17%	30%	23%

	Local Area (ABS 2011)	2014 Survey Sample	2005 Survey Sample
65 yrs and over	18%**	37%	24%**
Same usual address 5 years ago (%)	65%	80%	74%
Tenure Type (%)			
Owned (outright or paying a mortgage)	79%	91%	89%
Rented	21%	9%	11%

*survey was restricted to persons aged over 15 years

** note: percentages may not total to 100 due to rounding error

ABS (2011) Coakes Consulting (2005)

A survey sample of 150 persons from an overall population of 1700 persons relates to a confidence interval, or error margin, of 7.64 per cent, assuming a confidence level of 95 per cent. This is a reasonable level of survey accuracy, noting that sampling and non-sampling related biases are inherent in the methodology which means that there is always some degree of error.

For example, a comparison of the sample and the ABS statistics (2011) indicate that there are a higher proportion of older people and those who own their own homes, and/or have been resident for more than five years in the survey sample than is reported in the 2011 census. This means that the perspectives of these groups may be overrepresented within the survey sample.

Nonetheless, given the obtained confidence interval of 7.64 per cent and the overall demographic stratification of the survey sample, the survey is considered generally representative of the wider local community.

4.1.2 Survey Findings

This section outlines the results of the 2014 survey according to the specific survey item themes.

4.1.2.1 Attitudes towards Holcim Australia

Participants were asked what words or things come to mind when people mention Holcim Australia (**Figure 2.1**). The most common response was *Quarries* (75.3 per cent) followed by *Employment or Jobs* (36.7 per cent). Participants were able to provide more than one response, and all responses have been collated into a word cloud in **Figure 4.1** below.



Figure 4.1
Word Associations Cloud

Participants were also asked to rate their current attitudes towards Holcim Australia, on a 10 point scale ranging from *extremely negative* (0) through to *extremely positive* (10). Results indicated that attitudes towards Holcim Australia were generally positive, with an overall average rating of 7.09 out of 10 obtained (see **Figure 4.2.**). A total of six participants (four per cent) ranked their attitude of Holcim Australia's Lynwood operations at four or below, indicating that very few participants had negative attitudes toward Holcim Australia overall. In comparison, 23 participants (16 per cent) indicated that they had an extremely positive attitude towards Holcim Australia (i.e. a maximum response scale rating of 10).

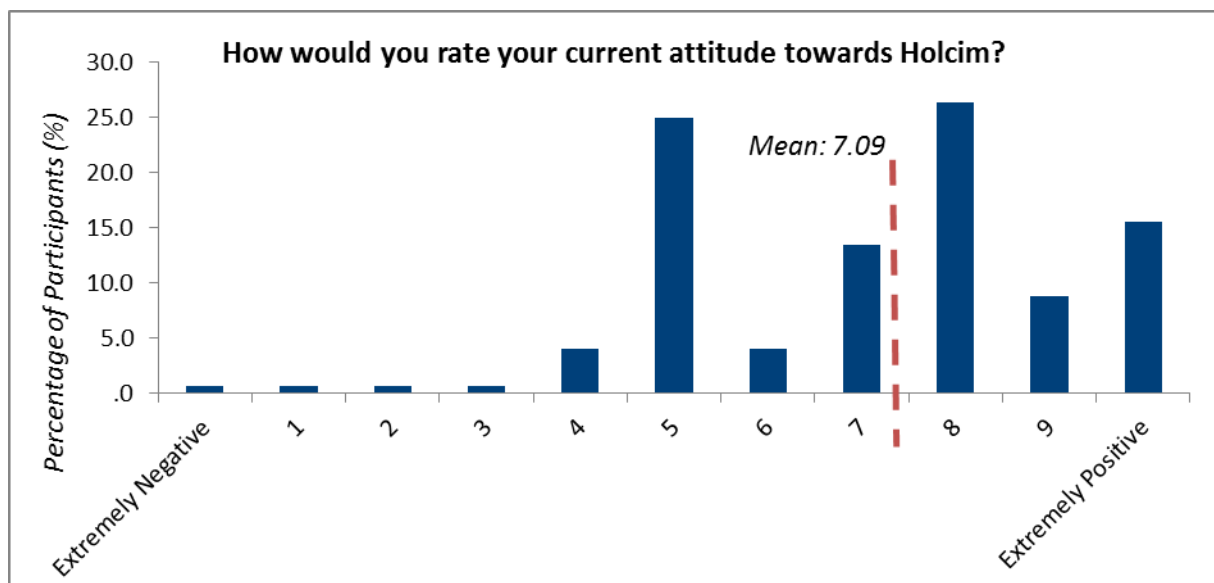


Figure 4.2
Attitudinal Ratings towards Holcim Australia

Positive attitudes towards the company were largely stable over time, with 57 per cent of participants saying that their attitudes towards Holcim Australia had stayed the same over the last few years. One in four participants (28 per cent) report a more positive attitude of Holcim Australia than a year ago, and in contrast only 10.7 per cent (being 16 participants), report a more negative attitude (**Figure 4.3**).

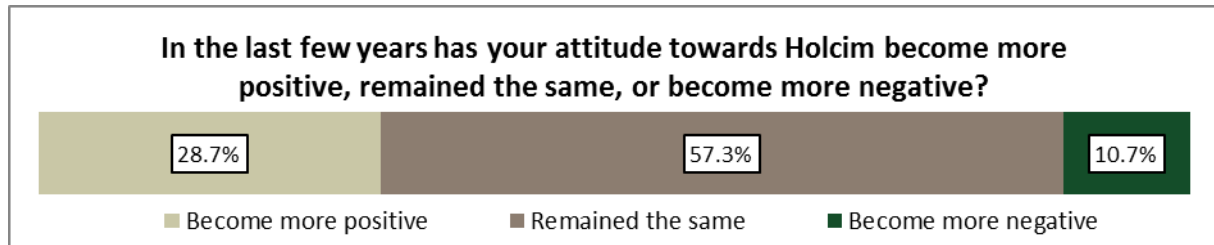


Figure 4.3

Attitudes towards Holcim Australia over Time

Participants were then asked 13 attitudinal statements about Holcim Australia's operations at Lynwood Quarry, and were asked to rate each statement using a scale of 1 (*strongly disagree*) through to 5 (*strongly agree*).

As can be seen in **Figure 4.4**, on average participants agreed with all the statements, with the exception of the statements *people around here don't trust Holcim Australia* and *Holcim Australia's quarry activities in the local area negatively affect me and my family*. These two statements are negatively worded and as such, a higher level of disagreement reflects a positive response.

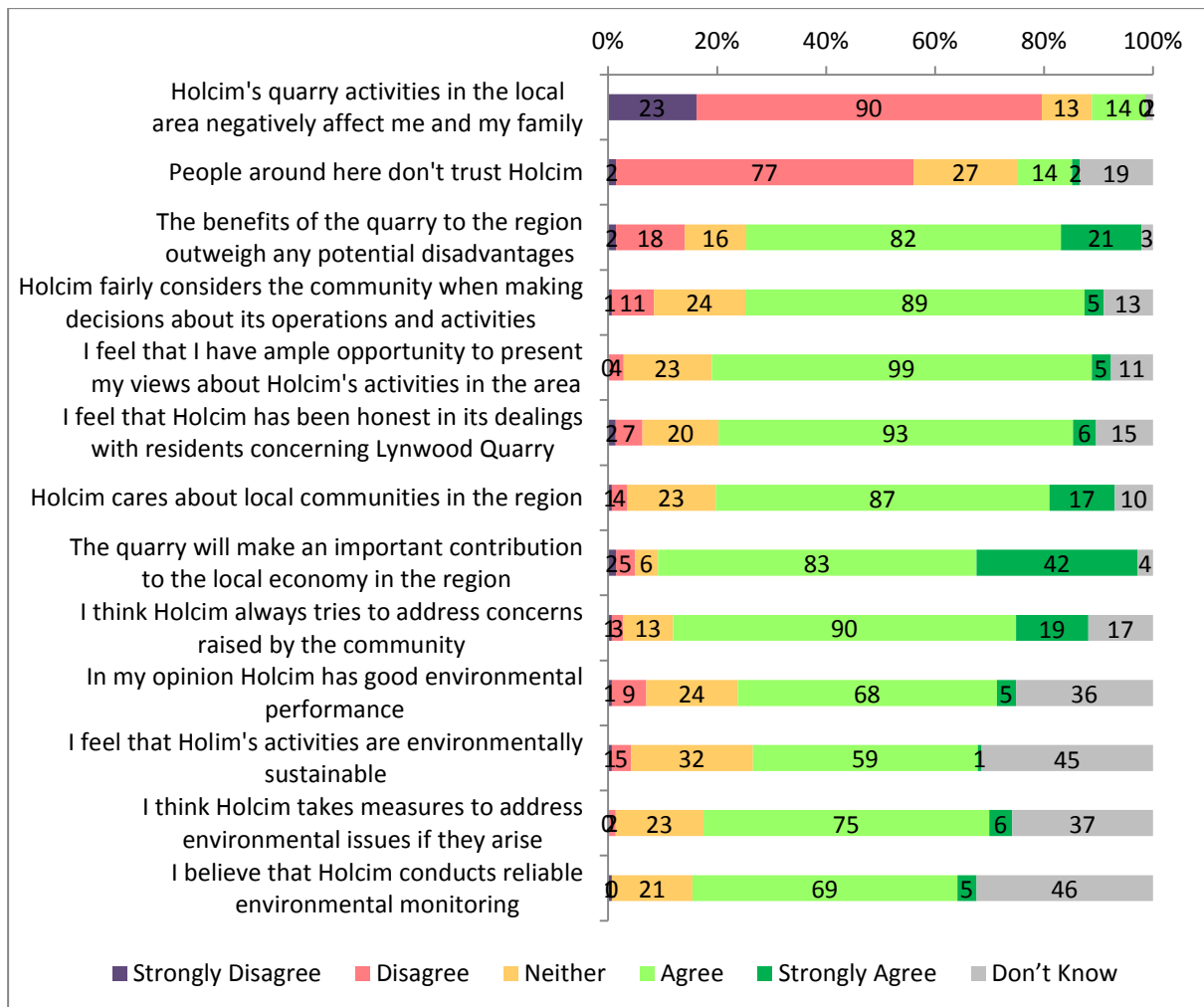


Figure 4.4
Attitudinal Statements relating to company actions and activities

Survey participants most strongly agreed with the statements “I believe that Holcim Australia conducts reliable environmental monitoring” and “I think Holcim Australia takes measures to address environmental issues if they arise”.

While questions that relate to Holcim Australia’s environmental management had the highest overall rankings of all the attitudinal statements, it is worth noting that there were also higher numbers of participants that indicated that they do not know about environmental monitoring at the Lynwood Quarry; indicating that more information provision in this area may be required.

The economic contributions and positive benefits of the quarry were seen as strong in both 2005 and 2014. In 2005, 79.3 per cent of participants agreed with the statement “The quarry will make an important contribution to the local economy in the region” and in 2014 91.9 per cent agreed or strongly agreed that “The benefits of the quarry to the region outweigh any potential disadvantages”.

4.1.2.2 Knowledge of Operations and Local Initiatives

Participants were asked to rate their level of knowledge of Holcim Australia's Lynwood Quarry and its operations, on a 10 point scale ranging from 0 (*no knowledge at all*) through to 10 (*all possible knowledge*) (refer to **Figure 4.5** and **Table 4.2**).

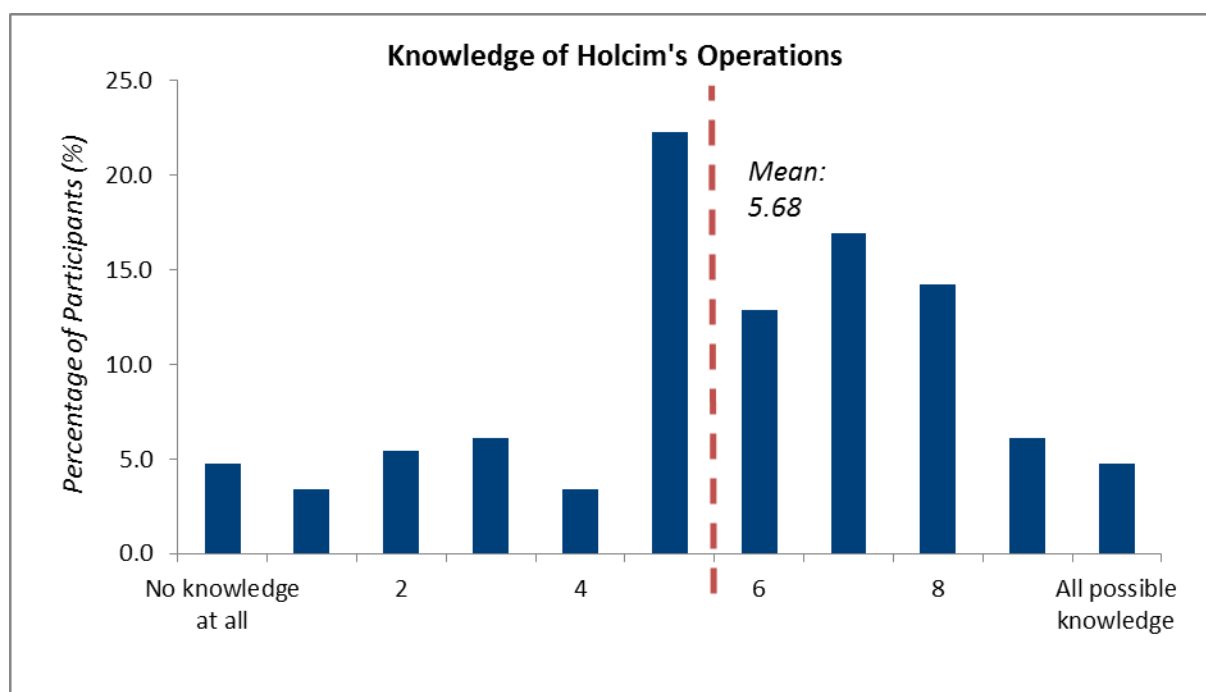


Figure 4.5

Knowledge of Holcim Australia

Table 4.2 Knowledge of Holcim Australia

	Frequency Count	Per cent of Participants (%)
0 No knowledge at all	7	4.7
1	5	3.4
2	8	5.4
3	9	6.1
4	5	3.4
5	33	22.3
6	19	12.8
7	25	16.9
8	21	14.2
9	9	6.1
10 All possible knowledge	7	4.7

Most participants indicated that they had at least a moderate degree of knowledge about Holcim Australia's operations (i.e. selected a rank of 5 or higher), with the mean response being 5.68 out of a possible 10.

With regard to local initiatives that Holcim Australia has been a part of, or contributions they have made to the local community; 100 participants were able to name at least one local initiative supported and/or contributed to by Holcim Australia. The top recalled responses included the Kite Festival, the local school; local soccer and the overpass (see **Figure 4.6**). A total of 50 respondents (32 per cent), did not know of, or could not recall any initiatives or contributions that Holcim Australia has made in the local community.

A proportion (16 per cent) of participants indicated that they were 'Already Satisfied' when asked *what initiatives or programs do you think it would be good for Holcim Australia to contribute to or support*, following suggestions for general community contributions and further support for sporting clubs. Other responses obtained are graphed in **Figure 4.7**.

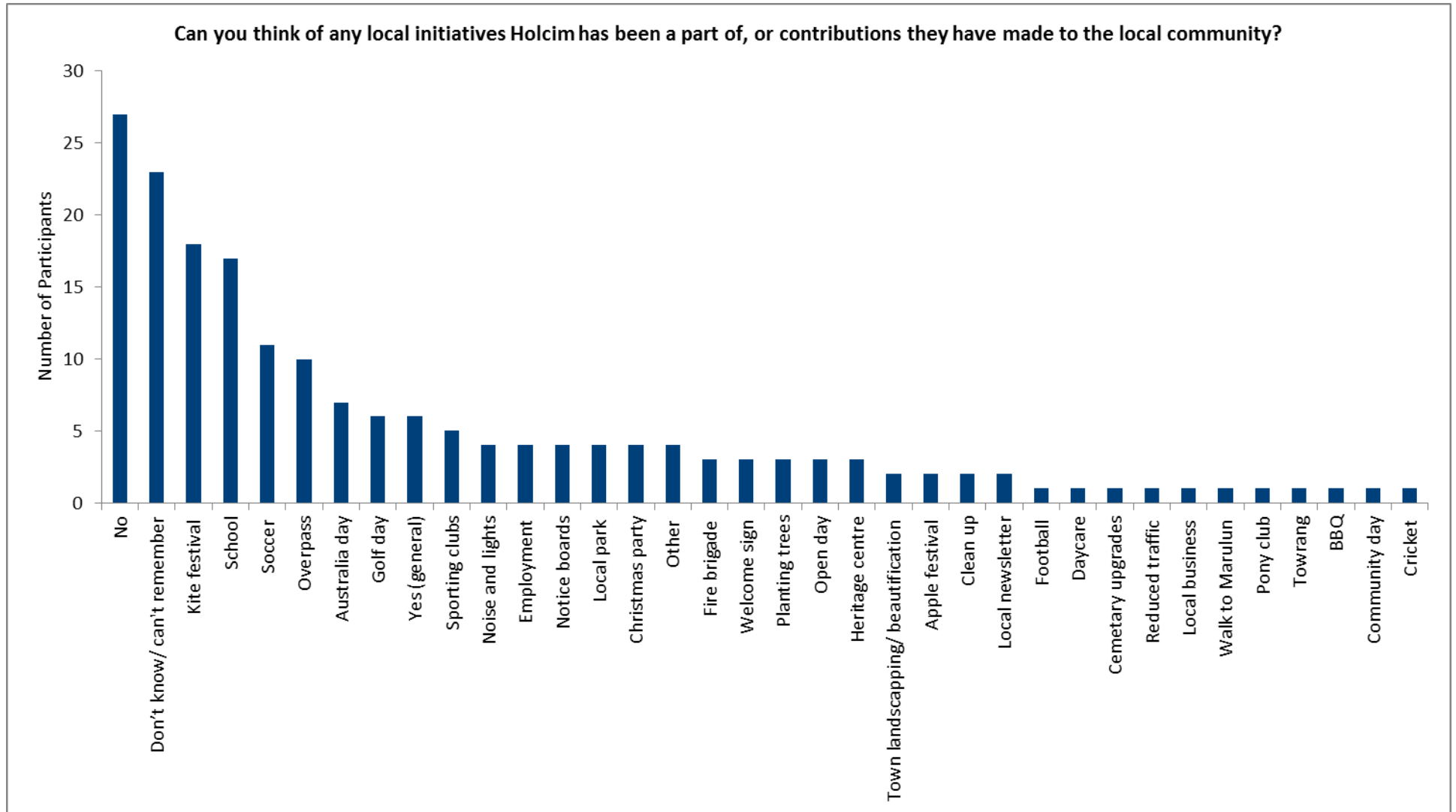


Figure 4.6

Local initiatives Holcim Australia has been a part of or contributions they have made to the local community (multiple responses allowed)

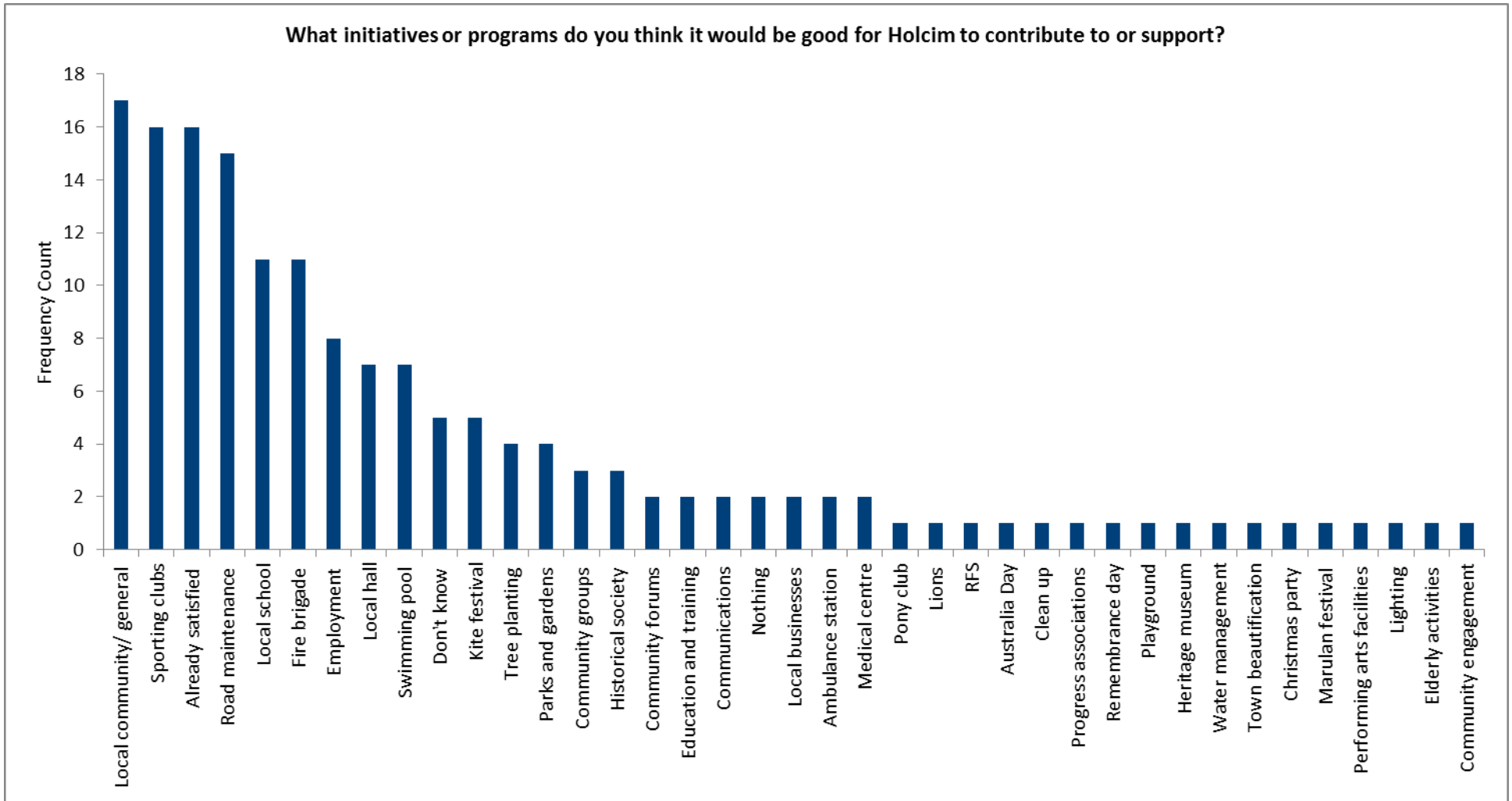


Figure 4.7

What initiatives or programs do you think would be good for Holcim Australia to contribute to or support? (multiple responses allowed)

4.1.2.3 Potential Impacts and Concerns

Participants were asked if they were concerned about any potential impacts associated with the quarry and the transport of quarry materials. Two thirds of participants, being 95 participants, indicated that they had no concerns.

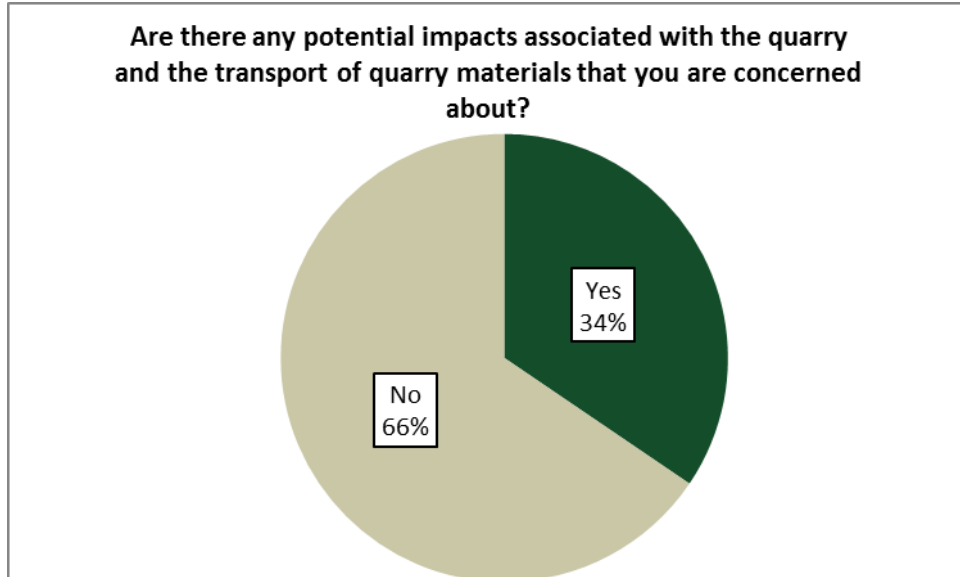


Figure 4.8

Issues of concern?

Participants with concerns (50 participants) were asked to identify their top three issues of concern (unprompted) with the responses categorised into the following issue themes.

- Road damage (52 per cent)
- Safety (particularly road safety) (34 per cent)
- Noise (24 per cent)
- Traffic (24 per cent).

Dust and lighting were also identified but to a lesser extent.

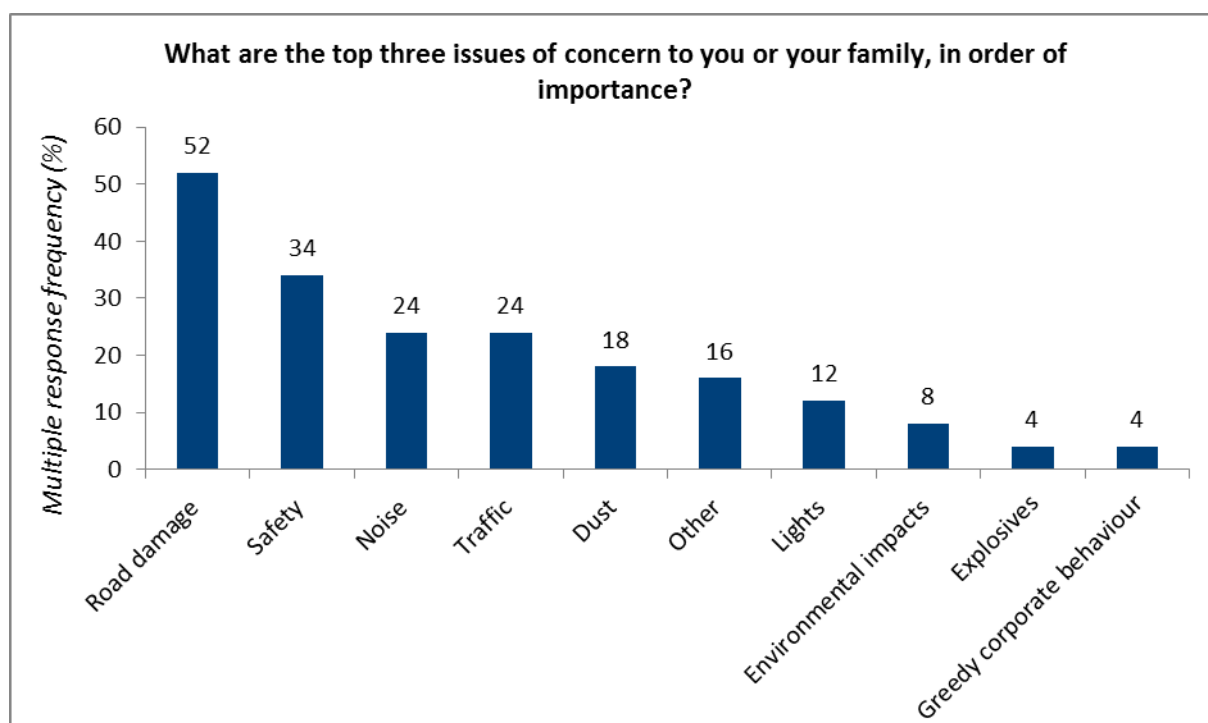


Figure 4.9

Top three issues of concern

All participants were then asked to indicate if they had *low*, *medium* or *high* levels of concern for a number of potential issues listed in **Table 2.2** and presented in **Figure 4.9**. Lighting was addressed separately within the survey but has also been included within **Table 2.2** and **Figure 4.9**.

As can be seen in **Figure 4.10**, a 'low' level of concern was the most common response for all listed issues. The issues of dust, traffic and transport and water were ranked as having the highest levels of concern, with concern ranked as 'high' for 19 to 24 per cent of participants, and 'medium' for a further 20 to 24 per cent of participants.

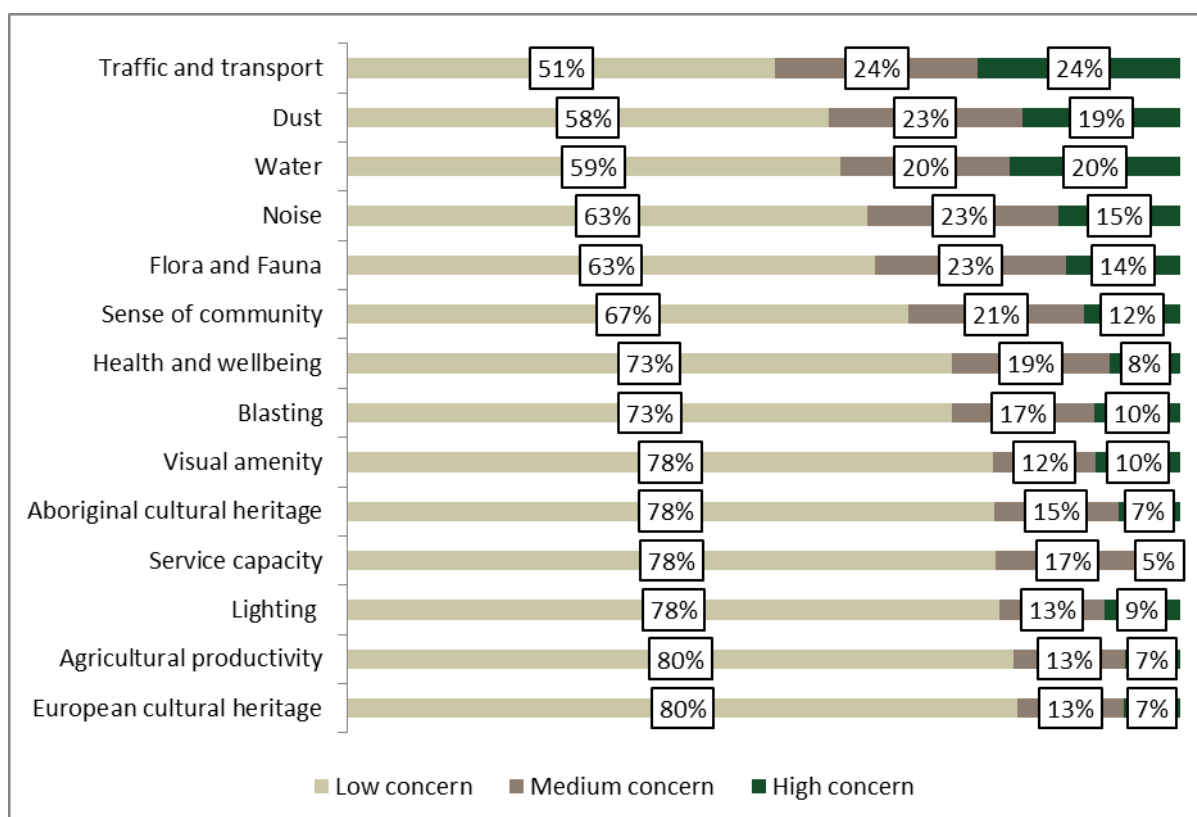


Figure 4.10

Perceived level of Concern relating to potential impacts

Table 4.3 Perceived level of Concern relating to potential impacts

	Level of Concern			
	Low	Medium	High	Total Responses
Traffic and transport	73	35	34	142
Dust	80	33	26	139
Water	81	28	28	137
Noise	88	33	20	141
Flora and Fauna	88	32	19	139
Sense of community	93	29	16	138
Health and wellbeing	103	27	12	142
Blasting	98	23	14	135
Visual amenity	107	17	14	138
Aboriginal Cultural Heritage	104	20	10	134
Service capacity(impact on local services)	108	23	7	138

	Level of Concern			
	Low	Medium	High	Total Responses
Lighting	112	18	13	143
Agricultural productivity	108	18	9	135
European Cultural Heritage	107	17	9	133

A spatial analysis of reported levels of concerns was undertaken to assess the regional significance of the potential impacts. The analysis indicated that levels of concern relating to traffic and transport, water, dust and noise are not spatially differentiated. Rather, persons reporting 'medium' or 'high' levels of concern were broadly dispersed across the local area and were not resident in particular geographic areas around the operation.

Key issues or concerns were similar between the 2005 and 2014 surveys, with the three most commonly reported impacts from 2005 being transport related, including trucks on the road (44 per cent), road deterioration or damage (19 per cent) and transport noise (13 per cent).

In 2014, traffic and transport, dust and noise accounted for a significant percentage of all free recall (unprompted) concerns, and were three of the top four issues of concern when ranked. It is notable that the overall level of concern for these issues has decreased since 2005, as presented in **Figure 4.11**.

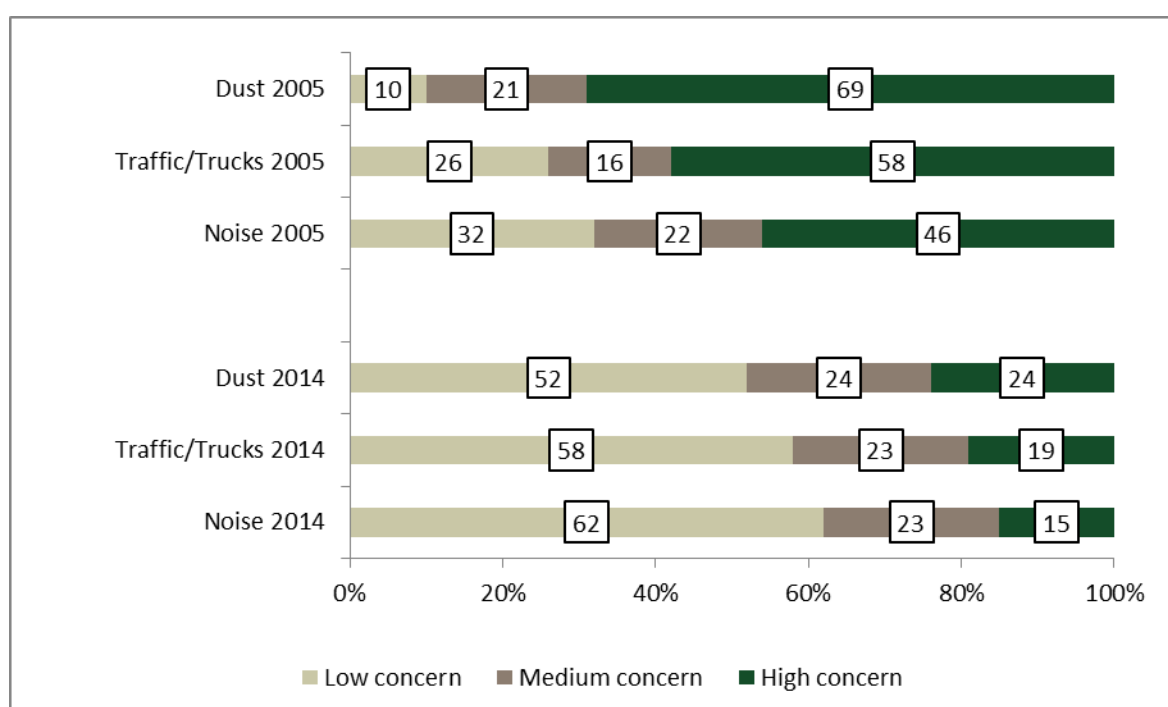


Figure 4.11

Changes in level of concern for traffic/trucks, dust and noise 2005-2014 (approximate per cent)

4.1.2.4 Lighting Issues

As can be seen in **Figure 4.12** a 'low' level of concern around lighting was most common (78 per cent across the survey sample; with less than 6 per cent (8 participants) being dissatisfied with the management of lighting impacts.

With regard to the 13 participants who had a high level of concern in relation to lighting:

- three also identified lighting as a key word association when asked about Holcim Australia
- four indicated that their attitude toward Holcim Australia had become more negative over the past year – one of which was as a result of lighting
- five mentioned lighting as one of their three primary concerns
- six were dissatisfied with the management of lighting impacts, four were neither satisfied nor dissatisfied, and two were satisfied.

A spatial analysis was also undertaken regarding level of concern about lighting, and satisfaction with Holcim Australia's management of lighting issues. As with other potential impacts, lighting impacts and the satisfaction of management of lighting issues were not spatially differentiated; in other words people in certain areas were not more/less concerned about lighting impacts or lighting impact management.

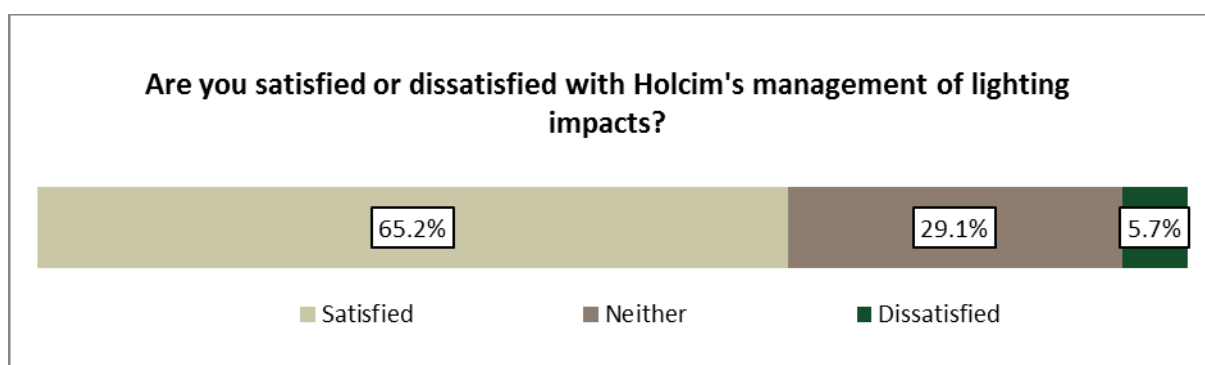


Figure 4.12

Satisfaction with Lighting Management

4.1.2.5 Information Provision and Engagement

Ninety-one per cent (124 participants) responded that Holcim Australia has engaged with the community well so far in relation to the Lynwood Quarry project, with 12 participants (nine per cent) indicating that Holcim Australia had not engaged the community well. A spatial analysis of satisfaction with consultation was undertaken, and indicated that satisfaction was also not spatially differentiated⁸.

In alignment with the overall levels of satisfaction with Holcim Australia's engagement program, 76 per cent of participants indicated that there was no additional information about the quarry and its operations that they would like to receive from Holcim Australia. Participants that indicated they would like additional information about the quarry and its operations, were most likely to mention 'employment' (21.6 per cent), 'general information' (13.5 per cent) or 'lighting' (10.8 per cent) as desired information.

⁸ Maps from the spatial analysis have not been included to ensure participants' privacy

Survey participants were also asked to rate the effectiveness of a number of different methods of consultation currently utilised by Holcim Australia, on a scale of 1 to 10, with 1 being least effective and 10 being most effective. Participants indicated that ‘notification letters’ (7.48) were the most effective method of consultation while ‘a website’ (3.31) was considered the least effective, as illustrated in **Figure 4.13**.

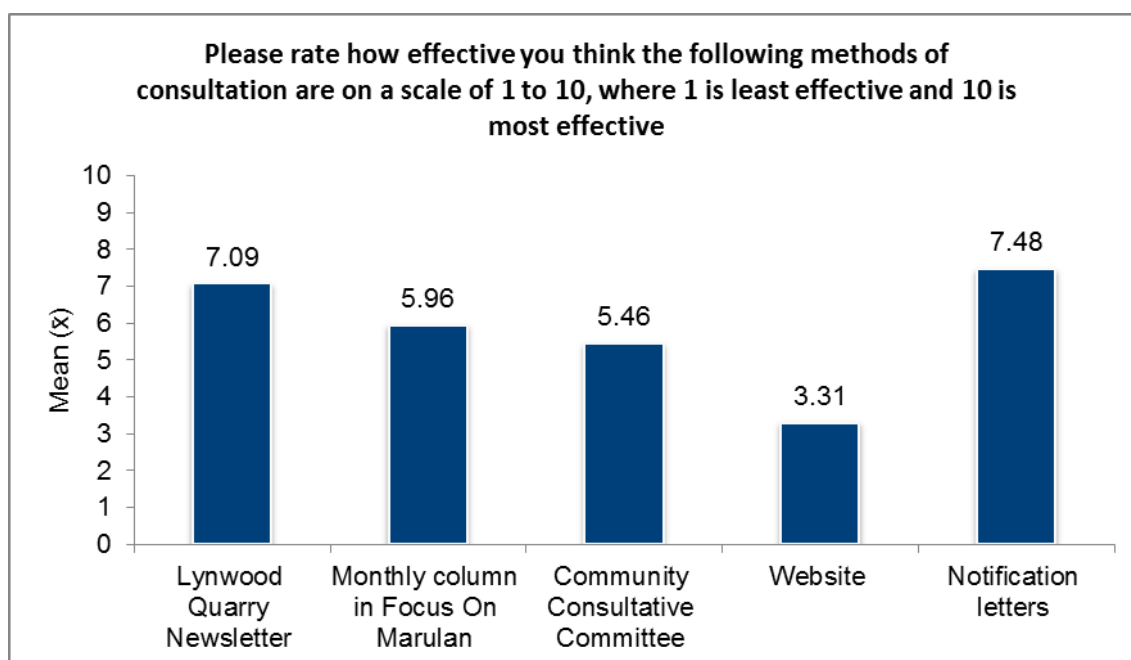


Figure 4.13

Efficacy of Consultation Methods

When participants were questioned about whether there were any other ways that they would prefer to hear from Holcim Australia, more than three quarters said ‘no’ (78 per cent). Of those who indicated that there were other ways they would prefer to hear about Holcim Australia’s operations, the most common responses were ‘flyers in the mail’ (34.5 per cent), ‘local newspaper’ (17.2 per cent) and via an ‘open day’ (13.8 per cent).

4.1.2.6 Open Comments

Participants were asked whether they had any additional comments that they would like to make regarding Holcim Australia and the Lynwood Quarry operation and these comments are summarised in **Table 2.3**. A total of 69 participants (73 per cent) provided further comments (see **Figure 4.14**).

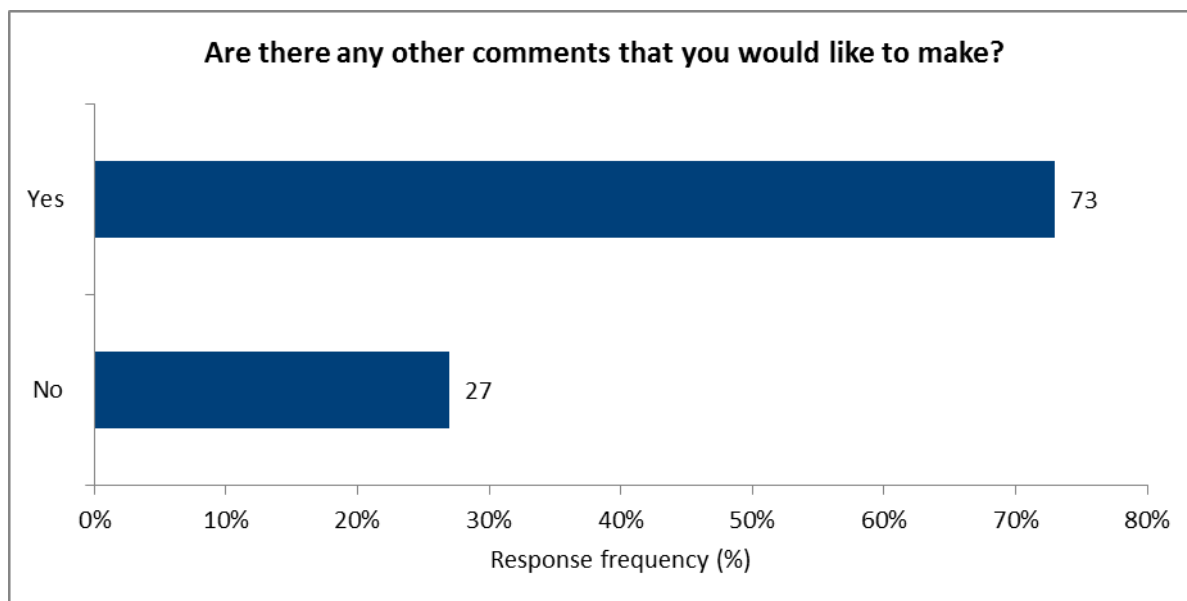


Figure 4.14

Are there any other comments that you would like to make?

Table 4.4 Are there any other comments that you would like to make?

Employment
<p>"I have worked in quarries am now retired but I would like my son to get a job in the new quarry"</p> <p>"Not really going to impact this person and see it as a good venture because of employment for locals as it has a flow on effect"</p> <p>"I would like them to employ more local workers"</p> <p>"They could offer some apprentices for the young ones who live in the area"</p>
Traffic
<p>"Traffic will go on the new road. The old quarry was a worry not this new one"</p> <p>"Stop some of the contractors using the exhaust brakes at 7am in the morning. Its not everyone but it is very annoying"</p> <p>Hung up half way through as very annoyed by trucks commencing work at 6am and affecting sleep time for the family</p>
Roads
<p>"Damage to the roads particularly Brayton Road"</p> <p>"The company has paid thousands to the council to be able to operate the mine and it's up to the council to fix the roads and sort out any problems"</p>

Dust management
<p>“Concerned about the dust from the quarry and long term effects on people’s health”</p> <p>“Air pollution, smell after blasting. Dust into the house on the western side, landscape changes colour things look hazy”</p> <p>“Worried about the westerly winds there will be a lot of trouble with the dust when they start”</p> <p>“Good dust management of new mine”</p> <p>“Suppression of the silicon dust would help dust control”</p> <p>“More information about the operations and more knowledge about the project”</p> <p>“Worried about the westerly winds there will be a lot of trouble with the dust when they start”</p>
Consultation
<p>“Very happy with Holcim Australia and the way that they have engaged the community in every step of the way”</p> <p>Quite happy with the way they have notified her by mail</p> <p>“Very satisfied with the way it is being handled”</p> <p>“I find them a great company in my experience; they always give plenty of notice and speak very nicely to the community. No water problems it runs off and there is no build-up of water therefore no problems and no flooding as we are sitting on a water table”</p> <p>“Just more communication with the community”</p> <p>“Keep the open day going as some people were away and there are new people coming into the area”</p> <p>“More information about the operations and more knowledge about the project”</p> <p>“More newsletters”</p>
Lighting
<p>“My gripe is the lighting issue which hasn't been addressed”</p> <p>“Shields (to) be placed on the lights that shine in the wrong place. The company is going to listen to the people who are complaining (because the lights are shining in their windows) and have made appointments to speak to the affected people this week”</p>
Safety
<p>“Keep up the good safety work”</p>
Environmental management
<p>“Weed control do something about that and potential fire hazard (notify neighbours and develop land management plan)”</p>
Community support and investment
<p>“Would like a swimming pool and very pleased about the over pass”</p> <p>“Build the swimming pool for the kids”</p>

4.1.2.7 Summary

Results of the current 2014 survey, along with comparisons from the 2005 survey (where possible), indicate that generally the community retains a high level of satisfaction with Holcim Australia's community engagement and generally positive attitudes towards the company. Attitudes towards Holcim Australia were relatively positive and stable across the survey implementation years.

Perceived impacts of the operations appear to be largely focused on traffic and road related impacts.

While knowledge of the operations is reasonably good, there was lower participant recall of the areas in which the company supports and contributes to the local community and a desire for further information relating to environmental monitoring.

4.2 Neighbouring Resident/Landholder and Community Group Perspectives

A total of 56 neighbouring/interested residents and 11 community groups representatives (including business and services providers) were consulted as part of the Project's specific consultation program (see **Table 2.2**). This section summarises the views of these individuals and group representatives.

In general, local residents had spent an average of 16 years in their property of residence and had spent an average of 18 years in the local area, noting that some interviewees had retained their property of residence within their family for multiple generations.

Of the 18 interviewees who discussed previous contact with Holcim Australia, seven residents indicated that their interactions were complaint related with reference to lighting impacts in Towrang. Other issues included land management practices, construction related dust impacts and donation requests.

Detailed responses provided in the interviews are provided in **Section 4.2.1** to **Section 4.2.9**. Further detail in relation to the information sessions is provided in **Section 4.3**.

4.2.1 Issues Analysis – General

In relation to current operations at the Lynwood Quarry, 51 per cent of those consulted stated that they had no concerns. This included 64 per cent of interviewees in Marulan and 23 per cent in Towrang.

In relation to the proposed Extraction Area Modification specifically, 56 per cent raised concerns, with 44 per cent expressing no concern with the proposed project. Two additional residents who were contacted as part of the consultation program, outlined that they did not wish to participate in an interview as they had no current concerns with the operation or the Project.

The numbers of interviewees who raised concerns, and the specific concerns noted are summarised in **Table 4.5** and **Table 4.6**, with further discussion provided by issue theme in **Section 4.2.2** to **Section 4.2.9**.

Table 4.5 Current Concerns – interview participants only

	Marulan		Towrang		Combined	
By Interviewee						
Interviewees who raised concerns	10	36%	10	77%	20	49%
Interviewees who did not raise concerns	18	64%	3	23%	21	51%
Total interviewees	28		13		41	
By Concerns Raised						
Noise	5	29%	3	16%	8	22%
Visual / Lighting	1	6%	6	32%	7	19%
Traffic	5	29%	1	5%	6	17%
Reputation	1	6%	3	16%	4	11%
Blasting	1	6%	2	11%	3	8%
Dust	2	12%	0	0%	2	6%
Property Value	0	0%	2	11%	2	6%
Land Management	1	6%	1	5%	2	6%
Water	1	6%	1	5%	2	6%
Tourism	0	0%	1	5%	1	3%
Total issue mentions	17		19		36	

Stronger colouring in cells indicates higher values

Table 4.6 Project Related Concerns

	Marulan		Towrang		Combined	
By Interviewee						
Interviewees who raised concerns	10	37%	12	100%	22	56%
Interviewees who did not raise concerns	17	63%	0	0%	17	44%
Total interviewees	27		14		39	
By Concerns Raised						
Noise	8	31%	6	15%	14	21%
Dust	4	15%	8	20%	12	18%

	Marulan		Towrang		Combined	
Visual	2	8%	6	15%	8	12%
Reputation	1	4%	5	12%	6	9%
Land Management	2	8%	4	10%	6	9%
Property Value	2	8%	3	7%	5	7%
Tourism	1	4%	4	10%	5	7%
Blasting	1	4%	3	7%	4	6%
Water	2	8%	2	5%	4	6%
Traffic	3	12%	0	0%	3	4%
Total Mentions	26		41		67	

Stronger colouring in cells indicates higher values

As outlined in **Table 4.5**, 77 per cent of interviewees in Towrang raised concerns in relation to the current project, in comparison with 36 per cent of interviewees in Marulan. This is indicative of a higher rate of overall concern with the Lynwood Quarry operation in the Towrang community than in the Marulan community. This trend is also consistent in relation to the Project, with 37 per cent of Marulan interviewees raising concerns, and all Towrang interviewees raising concerns when proposed project details were presented.

The most commonly raised current operational concerns of interviewees included noise, visual, traffic and Holcim Australia's reputation (e.g. corporate approach and contributions).

The most commonly raised project related concerns included noise, dust, visual and issues relating to Holcim Australia's reputation (i.e. trust in the company, transparency and future growth).

The proceeding sections summarise each of these issue themes in more detail. To highlight the points raised, qualitative quotes from the interview process have been utilised.

4.2.2 Noise

Overall, noise (including traffic noise) was the most commonly raised concern in relation to both current operational practice at Lynwood Quarry and in relation to the proposed project. The issue ranked the highest in Marulan but was the second highest issue raised for the Towrang Community.

In essence, a potential concern for noise impacts were perceived largely in relation to whether the proposed project was moving closer or further away from community residents; and the ability to hear or potentially hear, site machinery as well as sirens and train noise.

Where the quarry was seen to be moving away from a residents location, particularly in parts of Marulan, a reduced impact was anticipated; with the reverse being the case in Towrang, where it was considered by two residents that the quarry operations would be moving closer to their properties. Selected quotes from interviewees in relation to noise are provided in **Table 4.7**.

Table 4.7 Quotes relating to noise

Quotes Relating to Noise
<i>it is moving further away from us so it is not an issue</i>
<i>we heard a noise the other day like a blast</i>
<i>of the people affected we would be the least</i>
<i>I can hear the rock breaker and the siren is constant when outside</i>
<i>removal of the dump/load point on the railway has reduced noise impacts for me</i>
<i>we weren't aware it's a 24 hour operation</i>
<i>noise is a potential issue for the new estate</i>
<i>the quarry is moving closer</i>

4.2.3 Visual and Lighting

Visual impacts were not significant to Marulan interviewees, but were the most commonly raised concerns for Towrang interviewees, both in relation to the current Lynwood operations and the proposed Project.

Six of the 14 interviewees in Towrang (42 per cent) noted that visual impacts were of importance to them. While current operational concerns were largely in relation to lighting impacts; Project related concerns were more focused on seeing the quarry pit itself and associated impact to the rural outlook and impacts from truck lights.

Concern about visual impacts for Marulan based interviewees related to impacts to the rural outlook with additional mention of the progress on beautification for lands owned adjacent to the infrastructure site. Selected quotes from interviewees in relation to visual impacts are provided in **Table 4.8**

Table 4.8 Quotes relating to visual impacts

Quotes relating to visual impacts
<i>we came here for the solitude and lifestyle now our views will be ruined</i>
<i>we're worried about seeing into the quarry and truck lights</i>
<i>when is site beautification to occur [with lands owned adjacent to the infrastructure site]</i>
<i>we don't want our valley to become a moonscape</i>
<i>We notice the quarry but there's no significant impact – it doesn't stop us from enjoying life</i>
<i>the lights on the plant and road are an issue for us</i>
<i>lighting is likely to remain an issue until the fence is built</i>
<i>I can see it but I planted trees years ago when there was first talk of any development and that helps</i>

4.2.3.1 Lighting

Given Towrang residents' concerns regarding lighting impacts (see **Section 3.5.2**), community residents were further questioned about their level of concern about lighting and their perception of how Holcim Australia have managed the existing issue. Interviewees were asked if they had a low, medium or high level of concern or no concern. In relation to management of lighting, interviewees were asked how satisfied /dissatisfied they were with Holcim Australia's response to lighting issues. Responses were given are presented in **Figure 4.15** and **Figure 4.16**.

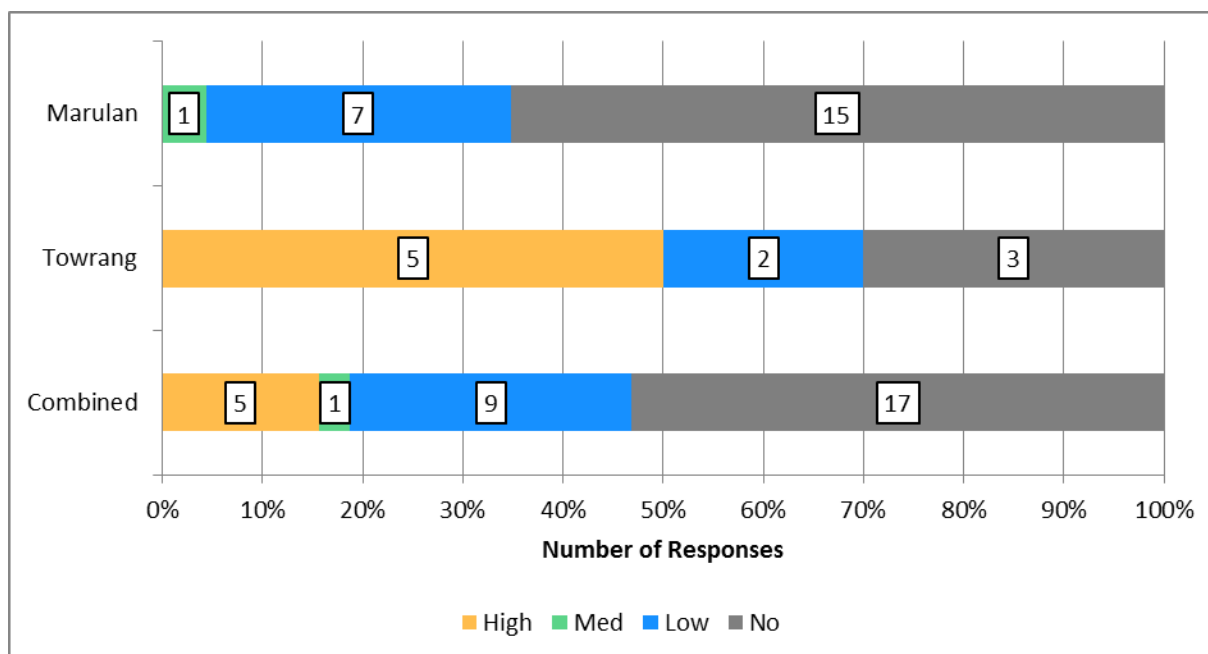


Figure 4.15
Level of Concern about Lighting

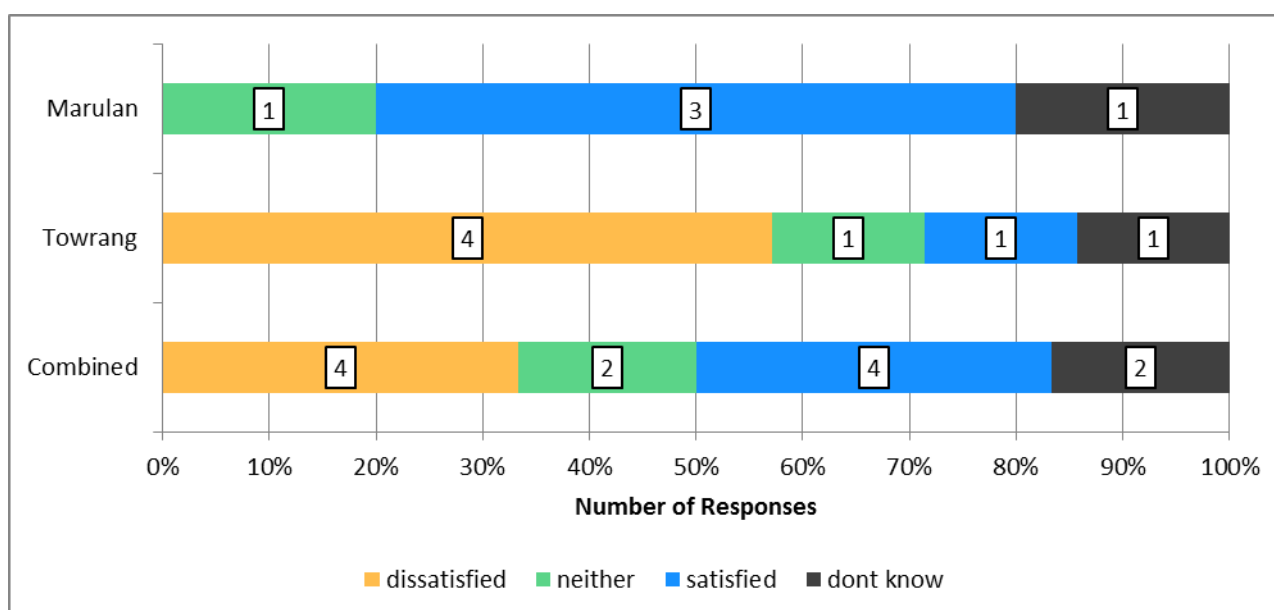


Figure 4.16
Level of Satisfaction with Management of Lighting Issues

As **Figure 4.15** illustrates, the reported level of impact is somewhat polarised, with only one interviewee in Marulan providing a ‘medium’ level of concern. Half of all Towrang interviewees who answered the question had a high level of concern, with half having low or no concern. Overall, 19 per cent of interviewees had a high or medium level of concern, and 81 per cent had a low level or no concern about lighting impacts.

In relation to management of lighting issues, interviewee opinions were mixed and many interviewees chose not to comment. When comments were given, they were often qualified. For example, some interviewees in Marulan and Towrang are satisfied with the effort that Holcim Australia is making in managing lighting issues, but have chosen to withhold judgement until all solutions have been fully implemented. Other interviewees are dissatisfied with Holcim Australia in that they think the company has done too much, and that funds would have been better spent on something else. A range of quotes from interviewees in relation to lighting impacts is provided in **Table 4.9**.

Table 4.9 Quotes about lighting impacts and management

Quotes about lighting impact and management
<i>I don't mind seeing the lights</i>
<i>lighting of machinery is unavoidable but the car park lighting is ridiculous</i>
<i>I live with it – planted trees early in development</i>
<i>Holcim need to put shades on light bulbs</i>
<i>We have no concern at all</i>
<i>Satisfaction with management depends on the effectiveness of screen</i>
<i>I'm not worried about lighting as I can't see it but think we'll be able to see the granite pit</i>
<i>I like seeing them</i>
<i>We're concerned on behalf of friends who are impacted</i>
<i>Management of issues is plodding along – slower than we hoped</i>
<i>To date we have not joined with other people who have these concerns. Now might be different</i>
<i>We wanted a bund and were unhappy that commitment was reneged</i>
<i>I would have preferred the money spent on something else like other local initiatives and suppliers</i>

4.2.3.2 Visual Impact Workshop

A workshop with interested members of the Towrang community in relation to visual impacts was held once the visual assessment was at a draft stage, on 21 September 2015. At the workshop anticipated visual impacts were discussed with community members, and participants were afforded the opportunity to input into aspects of project design and visual impact mitigation measures. Additional commitments arising from the workshop have been included within Section 6.8 of the EA.

4.2.4 Traffic

Current concerns regarding traffic were largely specific to Marulan, and related to road safety and/or cumulative impacts of traffic on the bypass, along Brayton Road, and in the surrounding area. Some interviewees also noted concerns with truck movements from other quarry operations and the disruption and quality of work currently underway on Brayton Road. Project related concerns related to a general perceived increase in truck movements on the overpass. Quotes regarding truck movements are provided in **Table 4.10**.

Table 4.10 Quotes about Traffic Concerns

Quotes about Traffic Concerns
<i>vehicles misuse the interchange and approach too fast, it needs better signage</i>
<i>there is a cumulative issue of trucks and traffic on overpass</i>
<i>I have concern at school time otherwise no, nothing</i>
<i>Traffic was a previous issue but it has stopped</i>

4.2.5 Reputation and Practice

Issues in this theme largely related to company reputation and practice in the community through engagement and monetary contribution. Interviewees in Marulan largely spoke positively of Holcim Australia and the Lynwood Quarry. Interviewees in Towrang also spoke positively of Holcim Australia's community contributions; however some interviewees felt that the relationship between Holcim Australia and their community could be improved and be more transparent. Overall, less than 10 per cent of interviewees raised concerns regarding Holcim Australia's engagement and sincerity with current operations, and less than 15 per cent expressed concern with the justification for the Project, that being the unforeseen irregularities with the resource and distrust around the extent of future development.

4.2.5.1 Community Engagement

When asked *do you feel that Holcim has engaged the community well, so far, in relation to Lynwood Quarry?* 18 of 23 interviewees (78 per cent) said yes and five (22 per cent) said no, as per **Table 4.11**.

Table 4.11 Do you feel that Holcim had engaged well, so far, in relation to Lynwood Quarry?

Response	Marulan	Towrang	Combined
Yes	15	3	18
No	3	2	5

Quotes in relation to concerns about the relationship Holcim Australia has with the community are presented in **Table 4.12**.

Table 4.12 Quotes about Holcim Australia's Reputation and Community Engagement

Quotes about Holcim Australia's Reputation and Community Engagement
<i>It's a white wash</i>
<i>To suddenly say that you have dug up in the wrong spot seems very suspicious</i>
<i>Holcim are visible in the community and work hard to be a part of things – they have a generally positive reputation in the community.</i>
<i>Their behaviour is deceptive, they couldn't be that stupid to get it in the wrong place</i>
<i>If our friends move, it destroys what we've come here for</i>
<i>No one wants to move, we just want Holcim not to intrude on [our street]</i>
<i>We didn't buy next to a mine, what else are they planning</i>
<i>We value contributions through contributions such as the notice board, BBQ at election day etc.</i>
<i>The response to the community outcry [about lighting] has galvanised agitators</i>
<i>Holcim need to monitor the things people care about like dust at our property and put better signage earlier for the end of [Brayton] road</i>
<i>We feel lied to and just want the facts, can they commit to not building other thing [bitumen plant, smoke stacks]</i>
<i>The volunteer gardeners were really good</i>
<i>Communication is poor with little follow up</i>

4.2.6 Blasting, Water and Land Management

Concerns about blasting impacts were not raised by the majority of interviewees in Marulan and Towrang. Those who did raise blasting issues as a concern (8 per cent) generally did not rank them highly. However this does not discount the impacts experienced by some interviewees who live closer to the operation.

Water, primarily surface water, was raised as a concern by four interviewees (6 per cent), with note of the Wollondilly River being part of the Sydney water catchment, and the need to ensure proper water management on site.

Only two interviewees raised concerns about land management and general environmental impact for current operations. Six interviewees raised concerns about future land management for the Project. They focused on land management practices such as control of vertebrate pests (e.g. kangaroos), potential for general environmental and land management impacts associated with quarrying and the loss of agricultural land. Quotes obtained that related to blasting, water and land management are provided in **Table 4.13**.

Table 4.13 Quotes about Blasting, Water and the Land Management

Quotes about Blasting
<i>not sure if tremors or blasting</i>
<i>shook the house</i>
Quotes about Water
<i>this area is part of the Sydney water catchment, there needs to be testing regimes in place</i>
<i>the creek used to be clear</i>
Quotes about Land Management and General Environmental Impacts
<i>we have no issues so long as criteria are met at the Lockersly Homestead</i>
<i>would you consider moving the quarry area to where it has less impact on the community</i>
<i>Holcim need to keep the kangaroo numbers down and improve fire management - consider grazing</i>
<i>Kangaroos are ridiculous now. No one is looking after the land.</i>

4.2.6.1 Final Landform

With regard to the final landform, interviewees largely expressed a desire to see the site effectively rehabilitated, with a range of different uses suggested. Suggested uses varied from filling in the void and returning the site to grazing land, to becoming a scenic lake or other form of tourist destination. Two interviewees indicated that the site could be used for landfill, while others were strongly opposed to this land use.

4.2.7 Dust

Impacts due to dust from current operations at Lynwood were only raised as an issue by two interviewees, but was the second most common concern raised in relation to the Project. Concerns in Marulan and Towrang focused on concern for others, such as livestock and crops for nearby landholders, downstream users of the Wollondilly River, and health impacts. One interviewee expressed serious concern in relation to their individual health impacts due to dust. Quotes about dust are provided in **Table 4.14**.

Table 4.14 Quotes about Dust

Quotes about Dust
Dust is our only real concern
We're not concerned about here but elsewhere e.g. in water supply
I'm concerned about impact on crops and cattle
Of the people affected we would be the least, I don't mind quarries
Holcim need reduction mechanisms like sprays

4.2.8 Property Value and Tourism

Concerns relating to impacts on property value and impacts to the tourism industry were not ranked highly in comparison with other issues or concerns. Both perceived and potential property value impacts were raised, more often, as concerns in Towrang than in Marulan. Assessment of property values has been undertaken and is discussed more fully in **Section 5.3.1**.

Concerns were raised by three Towrang interviewees in relation to the Project impacting on other industry sectors, such as farm stays and tourist accommodation or other ventures that depend on the rural outlook and lifestyle. The remaining two interviewees who raised Project related concerns with the economy were in relation to ensuring local employment growth, and maximising potential for further development should the Project be approved. Quotes relating to property value and tourism are provided in **Table 4.15**.

Table 4.15 Quotes about Property Value and Tourism

Quotes about Property Values
<i>We are concerned about the long term impact on our collective property values</i>
<i>Property value isn't a concern for me but more for new development areas</i>
<i>We don't want an asphalt or cement plant near our property</i>
<i>Have Holcim investigations included other parts of the district?</i>
Quotes about the Tourism
<i>I operate a farm stay and am concerned the quarry will turn away customers</i>
<i>The Project will lead to further development which is good for the community</i>
<i>This development will reduce the other land uses in the area</i>

4.2.9 Quarrying and the Local Area

With the presence of Lynwood and five other quarries in the region, interviewees were asked what they thought were the costs and benefits of quarrying in their local area. Results are presented in **Figures 4.17** and **4.18**.

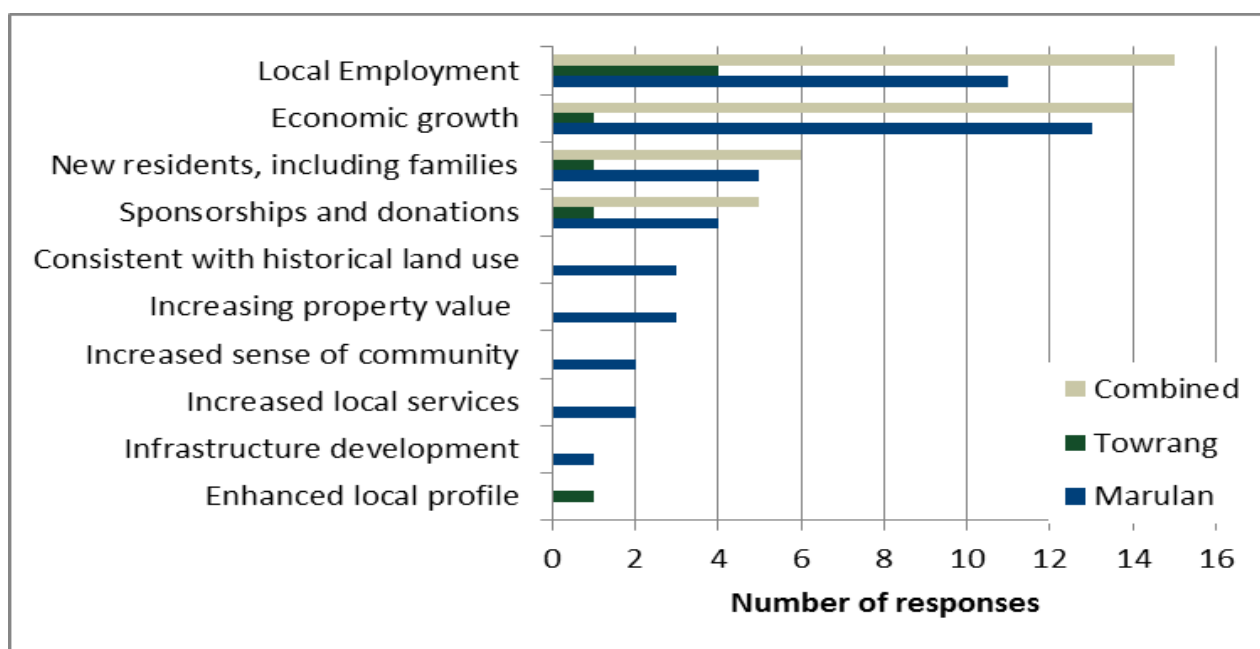


Figure 4.17

Benefits of Quarrying to the Local Area

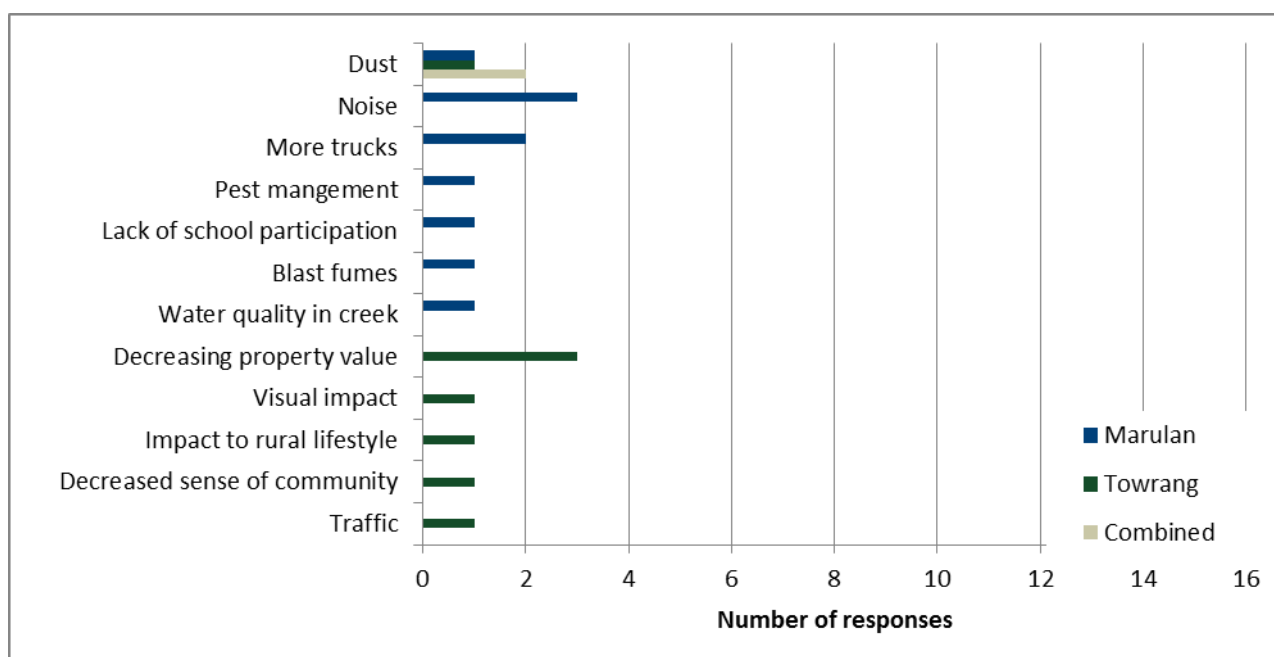


Figure 4.18

Costs of Quarrying to the Local Area

As seen in **Figures 4.17** and **4.18**, the most significant benefits are reported to be local employment and economic growth, population increase as a result of new residents and their families moving to the area, and sponsorships and donations from Holcim Australia e.g. to the local soccer team, Historical society, volunteer gardening program.

Overall there were substantially less costs identified by interviewees; a total of 18 responses compared with 52 responses for benefits. In addition to the issues identified above, costs included new families sending their children out of town for schooling, changes to the sense of community and potential for blast fume impacts. As such, the costs identified were more diverse, however no identified cost had more than three responses.

It is noted that three interviewees from Marulan suggested that quarrying results in an increased sense of community in the local area and two believed that quarrying increased property values due to more buyers seeking houses. Conversely, decreased property value was the most significant cost for Towrang interviewees (three responses), and one Towrang interviewee believed quarrying resulted in a decreased sense of community.

Interviewees were asked whether the 'disadvantages of quarrying outweigh the advantages?'. Responses from interviewees are presented in **Figure 4.19**.

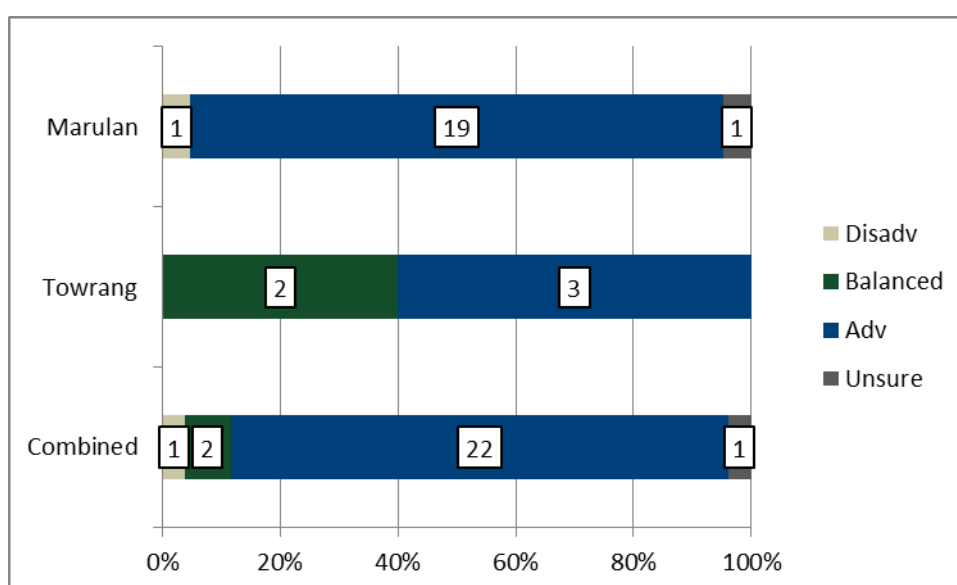


Figure 4.19

Advantages and disadvantages of quarrying

As shown in **Figure 4.19**, one interviewee responded that the disadvantages of quarrying outweighed the advantages overall. Two responded that advantages and disadvantages were balanced and one responded that they were unsure. The remaining 22 interviewees (85 per cent) said that the advantages outweighed the disadvantages. When asked what might be done to make things more balanced (if disadvantages outweighed advantages), the responses received are provided in **Table 4.16**.

Table 4.16 Quotes on how to improve impacts from quarrying in the area

Quotes on how to improve impacts from quarrying in the area	
It would be great if Holcim allowed access into the east of their site for walking tracks	
We don't want to see this place become like the Hunter Valley. We don't have a problem if the quarrying is done right	
We came here to retire now all has gone to hell	
It would be good if Holcim were more like Peppertree or Carrick Quarry as they have smaller impact and give back to the community	

In addition to the role of quarrying in the local area, interviewees were asked to identify areas of community strength and need. Identified community strengths are depicted in **Figure 4.20**, and identified needs are depicted in **Figure 4.21**.

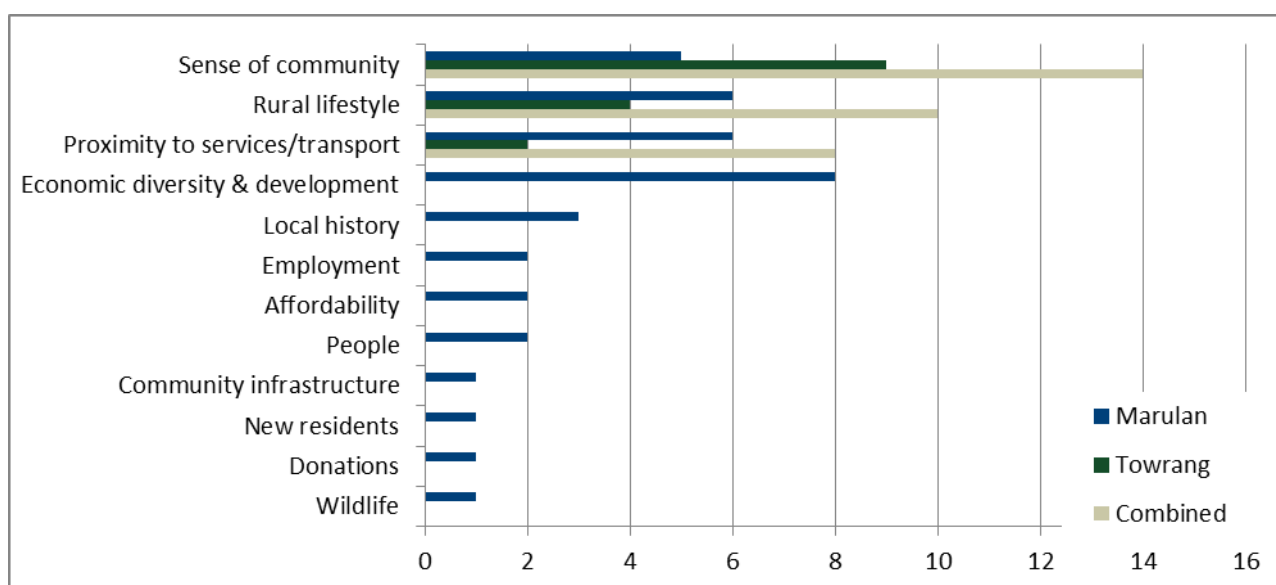


Figure 4.20

Identified Community Strengths

Sense of community and rural lifestyle were two of the key strengths identified by interviewees of both Marulan and Towrang. This is especially true of Towrang, where all interviewees who responded to the question (9 interviewees) described a strong sense of community in Towrang, where people looked after each other and were very inclusive. In addition to these strengths, economic diversity and development and proximity to services and transport were also regularly identified amongst interviewees from Marulan.

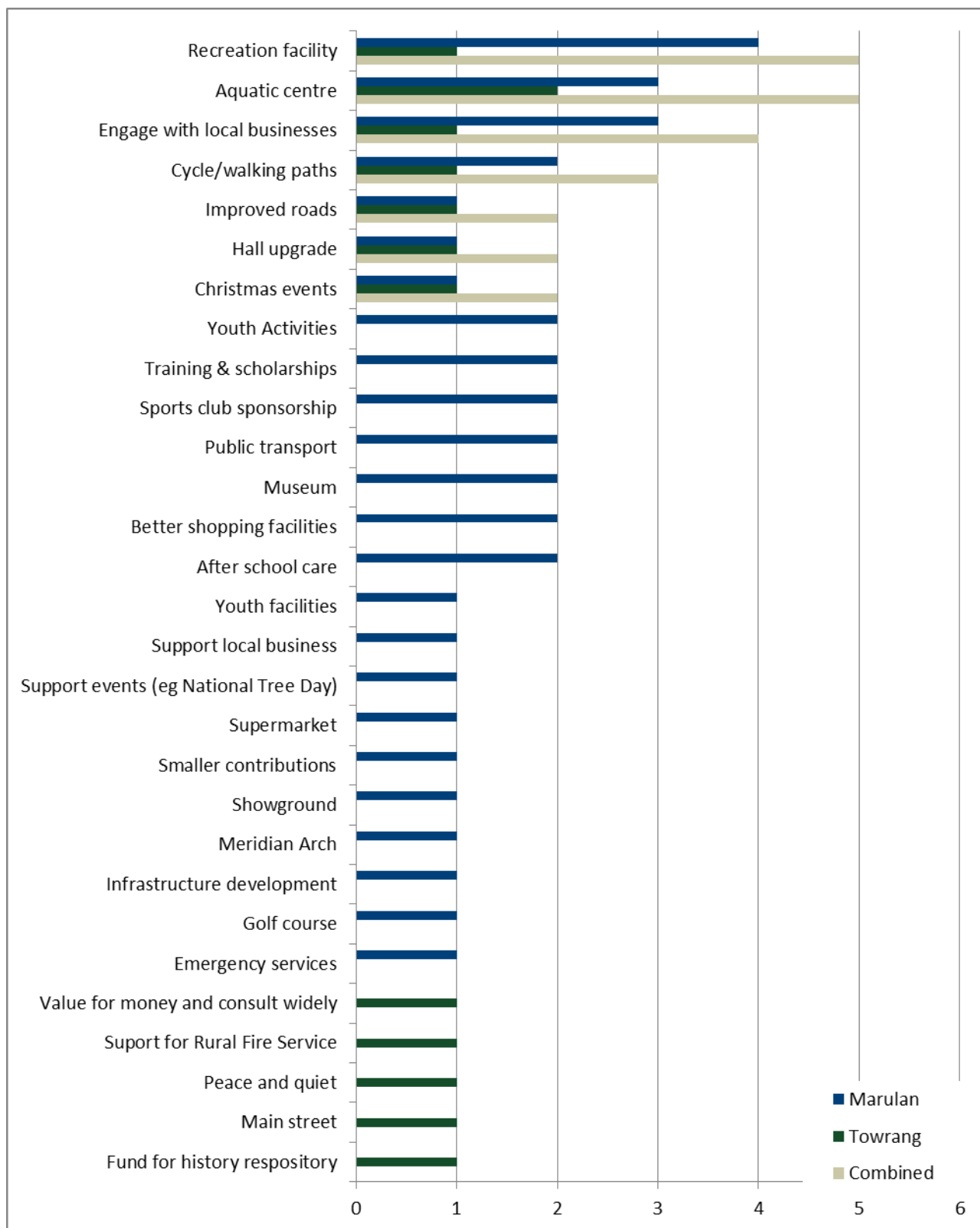


Figure 4.21

Identified Community Needs

A wide range of community needs were identified in both Marulan and Towrang. Interviewees expressed a desire for more recreation facilities, such as football fields and other sporting facilities, or the development of a local aquatic centre or pool. Interviewees from the local Marulan business community indicated a desire to engage with Holcim Australia to provide goods and services to support their local community more appropriately. While some Towrang residents were proud that they source and fund their own initiatives, a wide range of other community needs were also identified by one or two interviewees in either/both of Marulan or Towrang as outlined in **Figure 4.21**.

4.3 Community Information Sessions

Throughout the scoping phase of the assessment process, community information sessions have also been held in both the Marulan and Towrang communities. The information sessions were undertaken to complement the broader engagement program and to afford local residents with the opportunity to meet more directly with the company and consultants undertaking the assessment studies.

Table 4.17 summarises the number of information sessions undertaken, their dates and the number of attendees at each of the sessions. Some attendees of the information sessions had also previously been interviewed as part of the engagement program, and as a result this number is also noted.

Table 4.17 – Attendance at community information sessions

Date	Location	Total Attendees	Attendees who were also interviewed
13/06/2015	Marulan	10	2
25/06/2015	Towrang	8	2
10/08/2015	Marulan	7	0
10/08/2015	Towrang	16	6
7/11/2015	Marulan	13	0
4/11/2015	Towrang	9	2
	Total Attendees:	63 ⁹	12

Issues identified in the community information sessions were very similar to the issue themes outlined in the sections above. Issues included lighting, traffic, potential impacts to health and/or wellbeing, as well as issues relating to Holcim Australia's reputation in the community.

⁹ Note that six people attended multiple information sessions, and have only been counted once in calculation of total attendees.

5.0 Assessment of Social Impacts and Opportunities and Management Approaches

Acknowledging the constantly changing nature of communities, the aim of the current SIOA is to assess any changes to the current baseline social environment as a result of the Project proceeding. To do so, the data presented in **Section 3.0** and **Section 4.0** has been assessed to develop a layered picture of the potential social risks and impacts due to the Project. Data used in the assessment includes project details, data relating to the existing community, and issues and concerns of local landholders and other key stakeholders in relation to the current operation and the proposed Modification Project.

In order to prioritise the identified potential social impacts, a risk-based framework has been adopted. This decision was taken to reflect best practice methods and to afford a more seamless integration of the outputs of the SIOA in the EA. Risks and impacts that may arise due to the project have been assessed as:

- **Environmental and amenity impacts:** Being impacts due to the undertaking of the project itself, such as noise and dust production, increases in traffic or visual impact
- **Population change:** Being impacts largely due to changing population flows as a result of the project on housing, infrastructure and other service provision
- **Economy:** Being impacts that may arise due to interactions of the project with the local and wider economy, as well as consideration of differing land uses and industry sectors
- **Sense of Community:** Being impacts to the lifestyles and lived experiences and values of individuals and communities that may arise due to the project and/ or
- **Trust and reputation:** Being outcomes of engagement and relationship management between Holcim Australia and the local community.

Each assessed impact theme is presented in **Figure 5.1**, which presents a social impact plot, comparing the technical and stakeholder risks assessed. Themes are then presented in table format, including:

- The importance of each theme for project stakeholders as identified through the consultation program, with the level perceived stakeholder concern rated according to the following categories:
 - High (red) - high level of current or potential for future concern
 - Moderate (amber)– moderate level of current or potential for future concern
 - Low (green)– low level of current or potential for future concern
- The assessment of social risks and impacts, including relevant secondary data review, and identification of any opportunities that arise within each theme
- The outcomes of specialist Environmental Studies that have implications for the SIOA
- Current and proposed mitigation and management measures to improve project operation and social/community impact outcomes.

		Technical Risk		
		Low	Medium	High
Stakeholder Risk	High		Visual & Lighting Impact	
	Medium	Trust & Reputation Property Value Dust Noise Traffic	<i>Economy (positive)</i>	
	Low	Sense of community Infrastructure & Services Housing Heritage Land Management Land use and industry diversity Water Blasting		

Figure 5.1

Social Impact Plot – Assessed impacts

5.1 Environmental and Amenity Impacts

Environmental and amenity impacts are presented in **Table 5.1** through to **Table 5.8**. Overall, there are generally negligible social impacts arising from the direct undertaking of operations as part of the project, taking into consideration existing and proposed management approaches to ensure minimal impacts in the wider community and environment. Each impact theme has been colour coded in relation to the level of anticipated risk identified by stakeholders through the consultation program, within the EA, or as part of the SIOA assessment.

Table 5.1 Noise Impacts

Theme	Noise
Perceived Stakeholder Assessment	Noise was ranked the third most common issue of concern during the 2014 phone survey, and was the most commonly raised concern regarding current operations and the Modification Project during the modification project consultation program (Section 4.2.2).
Social Impact Assessment	It is considered that noise impacts due to the project will not have a significant social impact on the surrounding community, given the minimal level of noise related impact predicted as part of the Modification Project. It is noted that for most surrounding residences noise impacts are predicted to decrease as a result of the Modification Project as the location of quarrying is further away from the majority of nearby residences.
EA Assessment	The noise impact assessment for the Modification Project has identified that the noise impacts from the project will meet the existing development consent criteria at all locations except for one residence to the south, under easterly wind conditions at night. The potential for exceedence of existing criteria at this residence would be due to already approved operations.
Existing Management Approaches	A range of management mechanisms are already used as part of current operations, including time based restrictions on particular quarrying activities and use of broad band reversing alarms.
Further Management Approaches	No further noise management approaches are recommended from a social perspective. The noise controls proposed to be implemented as part of the Modification Project are outlined in Section 7.0 of the EA main text.

Table 5.2 Dust Impacts

Theme	Dust
Perceived Stakeholder Assessment	Dust was ranked as one of the most significant issues of concern for the local community during the 2014 phone survey, and was raised by some community stakeholders during the consultation program.
Social Impact Assessment	It is considered that dust impacts due to the project will not have a significant social impact on the surrounding community, given the minimal level of dust related impact predicted as part of the Project.
EA Assessment	Lynwood Quarry will comply with the relevant dust criteria at all residential locations. It is noted that for most surrounding residences dust impacts are predicted to decrease as a result of the Modification Project as the location of quarrying is further away from the majority of nearby residences.

Theme	Dust
Existing Management Approaches	A range of management mechanisms are already used as part of current operations to reduce dust, including reduction in exposed areas, dust suppression and enclosure of aspects of the plant with the potential to be dust generating.
Further Management Approaches	No further dust management approaches are recommended from a social perspective. The dust controls proposed to be implemented as part of the Modification Project are outlined in Section 7.0 of the EA main text.

Table 5.3 Blasting Impacts

Theme	Blasting
Perceived Stakeholder Assessment	Blasting impacts were not generally a key concern among community stakeholders involved in the consultation process.
Social Impact Assessment	It is considered that blasting impacts due to the project will not have a significant social impact on the surrounding community, given the minor level of blasting related impact predicted as part of the Modification Project.
EA Assessment	All relevant criteria are predicted to be met by blasting in the Granite Pit, with no adverse impacts predicted on surrounding residences, infrastructure or heritage sites.
Existing Management Approaches	Blasts are managed through blast design, timing, monitoring and notifications, as per the existing development consent.
Further Management Approaches	No further blasting management approaches are recommended from a social perspective. The blasting controls proposed to be implemented as part of the Modification Project are outlined in Section 7.0 of the EA main text.

Table 5.4 Water Impacts

Theme	Water
Perceived Stakeholder Assessment	Maintaining a secure water supply is a very important issue for the wider Goulburn Mulwaree community, and is a key aspect of the Community Strategic Plan for the LGA (See Section 3.3). Potential for surface water impacts was also raised by the local community during the 2014 phone survey and to a lesser extent through the direct key stakeholder consultation. Negligible concern was raised in relation to groundwater specifically.
Social Impact Assessment	It is considered that water impacts due to the project will not have a significant social impact on the surrounding community, given the minimal level of water related impact predicted as part of the Project.

Theme	Water
EA Assessment	The outcomes from the surface water assessment of the Modification Project indicate that the proposed changes will not significantly alter the flow regimes or annual flow volumes in downstream creek systems in terms of peak discharges, flood levels or peak in-stream velocities. The assessment also found that the Modification Project will not adversely impact upon water quality in the downstream drainage systems.
Existing Management Approaches	Surface water will be managed through the separation of clean and dirty water systems. Dirty water systems, which includes runoff from quarry related exposed areas, will be managed in accordance with industry standard procedures and government agency requirements.
Further Management Approaches	No further water management approaches are recommended from a social perspective. The water management measures proposed to be implemented as part of the Modification Project are outlined in the EA main text.

Table 5.5 Traffic Impacts

Theme	Traffic
Perceived Stakeholder Assessment	Traffic impacts, as well as road damage and road safety due to approved or project operations were key issues raised during all consultation activities. Concern during the interview phases of consultation was largely confined to roads in Marulan, such as cumulative impacts of quarry trucks along Brayton Road.
Social Impact Assessment	It is considered that traffic impacts due to the project will not have a significant social impact on the surrounding community, given that there will be no changes to traffic as a result of the Modification Project.
EA Assessment	The Modification Project does not propose any changes to the currently approved traffic movements, times or routes and will continue to use the existing access road that joins directly with the Hume Highway.
Existing Management Approaches	As there are no changes to traffic proposed as part of the Project, no management approaches are required.
Further Management Approaches	No further traffic management approaches are recommended from a social perspective.

Table 5.6 Visual and Lighting Impacts

Theme	Visual Impact Including Lighting
Perceived Stakeholder Assessment	<p>Visual impacts and especially lighting impacts were identified through the regional media analysis as a key issue for some landholders nearby to the approved Lynwood operations. Within the 2014 telephone survey of the surrounding community, lighting impacts were also identified as an issue, however was a less important issue than other issues identified such as road damage, noise, or dust (see Figure 4.9).</p> <p>Further analysis on lighting (Section 4.1.2.4) and results of the consultation program indicate that while not a significant issue for the wider community, lighting and visual impacts are a very significant issue for a segment of the Towrang community. For this reason a specific visual impact and lighting workshop was held with the Towrang community to explore management strategies for these particular residents/residences (refer to Section 4.1.2.4).</p>
Social Impact Assessment	<p>For the wider community it is considered that there will be minimal social impacts arising from changes to current views, including lighting due to the project. For many residents in the Marulan area visual impact will be reduced due to the Eastern Overburden Emplacement Area not being constructed. However, for a number of residents who have line of sight from their homes to current operations and the project area, impacts may be more significant.</p> <p>Assessment of the subjective <i>experienced</i> impact needs to take into consideration the changing geographic context (both prior to and including approved operations) and the ongoing relationship of Holcim Australia with specific residents experiencing visual impacts. The scenic nature and rural outlook are highly valued aspects for community members choosing to live in the area, and a lack of trust in Holcim Australia for some of the residents concerned about lighting was a theme that arose during consultation (Section 4.2.5). Noting this wider context, it is considered that the level of experienced visual impact in relation to the project may differ substantially between community residents and/or resident groups.</p> <p>The implementation of already proposed impact mitigation and management measures are important for the minimisation of impact to the wider community. The level of mitigation required to avoid the subjectively high levels of visual impact at some affected residences, may not be feasible for the scale of operations.</p> <p>The social impacts due to changes in visual amenity cannot be separated from wider impacts associated with the Project. These relationships are discussed further in Section 5.3 and Section 5.4.</p> <p>While visual impacts may be experienced significantly by some affected residents, when seen in the wider scale of the combined Marulan and Towrang area, LGA or state, social impact due to visual changes in the landscape are considered to generally remain low to negligible, with moderate level impacts for some residents to the northwest, west and southwest.</p>

Theme	Visual Impact Including Lighting
EA Assessment	<p>A visual impact assessment was undertaken by Umwelt as part of the wider EA process. The visual impact assessment details the visual impacts due to the Project, including mitigation measures proposed. The assessment found that impacts for the majority of viewing locations around Marulan, will be reduced. For viewing locations to the northwest, west and southwest some of the upper benches of the new Granite Pit and the Southern Overburden Emplacement Area will be visible over distances generally ranging between 5km and 7km. The proposed amenity bund will screen much of the view of the quarry pit itself and will also screen the majority of views of operating equipment. Over time the rehabilitation of disturbed ground will reduce the level of visual impact with the rehabilitation strategy assisting to blend the rehabilitated quarry areas into the surrounding environment.</p> <p>No fixed night lighting is proposed in the Granite Pit Area and controls will be put in place to minimise the potential for mobile lighting to be visible during the period from dusk to 10pm when the quarry pit will be operating. No operations will occur after 10pm. No significant night lighting impacts are therefore predicted.</p>
Existing Management Approaches	<p>Holcim Australia have undertaken significant works to reduce the lighting impacts on community members, as described in Section 6.8 of the EA. In addition, given the issue has been raised early in the assessment process, lighting impacts have been comprehensively taken into consideration during the development of the project; and overburden management and development of an amenity bund wall are also proposed to ameliorate visual impacts and provide visual screening of operations.</p>
Further Management Approaches	<p>Detailed visual and lighting impact management measures are proposed as part of the Modification Project as outlined in Sections 7.1 and 7.2 of the main text of the EA. The objectives and commitments in Section 7.2 specifically relate to the outcomes of the working group established between the Towrang community and Holcim Australia.</p> <p>Additional commitments to manage impacts include:</p> <ul style="list-style-type: none"> • ongoing liaison with interested members of the Towrang community with regard to lighting and other visual impacts as appropriate, and • ongoing discussion with key residents in Marulan and surrounds.

Table 5.7 Land Management Impacts

Theme	Land Management
Perceived Stakeholder Assessment	Two stakeholders raised concerns regarding ongoing land management as part of the Modification Project, largely in relation to control of kangaroos and potential for offsite agricultural impacts.
Social Impact Assessment	It is considered that land management impacts due to the Modification Project will not have a significant social impact on the surrounding community, or to the wider agricultural industry, given the negligible level of land management related impact predicted as part of the Modification Project.
EA Assessment	No adverse impacts affecting agricultural productivity are predicted on the surrounding agricultural land uses, including the ongoing productive use of portions of Holcim Australia's land (currently agisted for dryland sheep grazing).
Existing Management Approaches	Holcim Australia has committed to appropriate ongoing agriculturally productive use of the portions of its landholding that are not required for quarrying and associated activities; or those areas that need to be protected due to their ecological, cultural or archaeological values.
Further Management Approaches	Where appropriate, consult with neighbouring landholders when undertaking pest and weed management activities.

Table 5.8 Heritage Impacts

Theme	Heritage
Perceived Stakeholder Assessment	As summarised in Section 3.2 , the Marulan/Towrang community has strong links to the Aboriginal and European heritage of the area. However, little concern was raised during any consultation activities in relation to heritage impacts of the project.
Social Impact Assessment	It is considered that heritage impacts due to the project will not have a significant social impact on the surrounding community, given the negligible level of heritage related impact predicted as part of the Modification Project.
EA Assessment	Impacts to a range of sites of low and moderate archaeological and Aboriginal cultural significance are anticipated as part of the modification project. In addition, no direct and no significant indirect impacts to Lockyersleigh Homestead and gardens are anticipated due to the Modification Project.
Existing Management Approaches	Salvage, analysis or conservation is proposed for all items and sites of Aboriginal and/or archaeological significance as relevant, in accordance with government guidelines. No additional management procedures beyond those for current operations are required to manage potential impacts to items and sites of European heritage.

Theme	Heritage
Further Management Approaches	No further heritage management approaches are recommended from a social perspective. The heritage management measures proposed to be implemented as part of the Modification Project are outlined in Section 7.0 of the EA main text.

5.2 Population Change

Changes to the population of an area can have profound impacts on aspects of everyday life such as infrastructure, services and housing capacity, the sense of community, and the affordability of local goods and services. As outlined in **Section 1.0**, there is a proposed maximum workforce of 115 persons proposed for the project i.e. the same number required for the current site at full production.

A total of approximately 32 persons currently work at Lynwood. As such maximum operations have the potential for an increase of 83 employees. In relation to current employees of the operation, 44 per cent of employees currently live in Marulan, 28 per cent live in Goulburn, with the remaining 28 per cent residing further afield throughout the wider region.

The approximate number of total additional persons (employees and family members) assuming an average family size per employee household of 2.4 persons (consistent with that of the LGA) is presented in **Table 5.9**.

Table 5.9 Family Size Analysis

Anticipated Employee Place of residence (based on existing employee residential distribution)	Number of employees	Total persons (employee and family members)*
Marulan	37	89
Goulburn	23	55
Wider Region	23	55
Total	83	199

*As noted, family size of 2.4 has been utilised for modelling purposes (ABS, 2011)

As the table outlines, the additional 83 employees that would be engaged as the site reaches maximum production, would equate to a total of 199 persons (employees and their family members) which may be drawn from either within or outside the area.

Population changes are commonly assessed in relation to potential impacts to infrastructure and services (**Table 5.10**) and Housing (**Table 5.11**) as detailed in the subsections below.

5.2.1 Infrastructure and Services

Table 5.10 Infrastructure and Services

Theme	Infrastructure and Services
Perceived Stakeholder Assessment	Infrastructure and service provision was raised by a few stakeholders as an issue, especially in regard to roads. Service providers were also consulted as part of the assessment process. It is considered that there is a low overall concern in relation to potential for infrastructure and service provision related impacts within the local community.
Social Impact Assessment	<p>Negligible additional impact to currently provided infrastructure and services beyond those of approved operations is anticipated as part of the project. Marulan has an increasing level of service provision, and substantial services located close by in Goulburn. Towrang community infrastructure is limited to the RFS and community hall, neither of which are anticipated to be negatively affected by the project. While there are no anticipated land releases in Towrang, an increase in locally employed people might offset a large part time resident or 'weekender' population and increase community participation.</p> <p>Overall it is considered that the potential increases in population associated with maximum production through the project are sufficiently catered for within existing planning and development processes.</p>
Existing Management Approaches	As part of development of the approved project, Holcim Australia constructed a significant intersection and overpass of the Hume Highway to improve connectivity for the quarry and township. In addition, Holcim Australia currently contributes \$50,000 annually to the local community through their social investment program.
Further Management Approaches	Continued implementation of the community fund.

5.2.2 Housing

Table 5.11 Housing

Theme	Housing
Perceived Stakeholder Assessment	Shortages/oversupply in housing stock and/or provision of incorrect types of housing stock was not of high concern during the stakeholder engagement activities undertaken. One participant noted potential increases to property prices, discussed further in Section 5.3.2 .
Social Impact Assessment	It is considered that there is enough current or planned future housing supply to cater for a maximum production workforce and their families. Should maximum production be reached, or a large contract construction workforce come into the area rapidly, before additional housing supply can be developed, there is substantial capacity in Goulburn and the surrounding region to ensure sufficient housing supply if required.
Existing Management Approaches	Appropriate housing development in the LGA has been considered as part of wider local government planning processes with reference to the Sydney to Canberra corridor strategy. Residential development within the township of Marulan and surrounding area is continuing, noting current development opportunities to the north and east of the Marulan town centre. Additionally, 178 dwelling units were constructed across the Goulburn Mulwaree LGA in the 2014-2015 financial year (ABS, 2015).
Further Management Approaches	No further management approaches are proposed.

5.3 Economy

The construction program at Lynwood Quarry is largely complete and the project has resulted in significant capital expenditure of \$178M, which has contributed to the local, regional and State economies.

There has also been a significant contribution to the local economy through local expenditure, local employment and the implementation of the community fund which currently invests \$50,000 per annum into local initiatives.

Employee wages of approximately \$2.35 million are also paid annually; being approximately \$1 million in Marulan, \$0.65 million in Goulburn and \$0.65 million in the wider region. This figure would increase to approximately \$8.4 million annually, 3.6 million in Marulan, \$2.4 million in Goulburn and \$2.4 million in the wider region when the site reaches maximum production.

When operating at full capacity Lynwood Quarry will provide direct employment for approximately 115 people, plus additional indirect employment within the local and state communities. These significant benefits were recognised by the NSW Minister for Planning when the quarry was approved in 2005 and the Modification Project will enable these benefits to be fully realised.

The economic contribution of the Project is assessed in **Table 5.12**

Table 5.12 Local Economy

Theme	Economy
Perceived Stakeholder Assessment	Local employment was recognised as a key benefit of the proposal by the local community. Potential impacts to other industry sectors are discussed further in Table 5.13 .
Social Impact Assessment	<p>The provision of meaningful employment at the quarry is anticipated to enable current and residents looking for work to remain in the area, and may encourage new residents to reside locally. The growth of the local community in Marulan was seen as a key opportunity afforded by the Project.</p> <p>With regard to local employment, the opportunity for Holcim Australia to preference local content, both through employment and supplier contracts, would further contribute to the local economy and economic capital of the local area.</p>
EA Assessment	The project will realise significant benefits recognised within the 2005 approval.
Further Management Approaches	Continued engagement with the Chamber of Commerce.

5.3.1 Land Use and Industry Diversity

A number of stakeholders raised concerns regarding the potential for impact to other industries in the area, namely tourism and agriculture. Potential impacts to tourism are assessed in **Table 5.13**. Impacts to agriculture are assessed in **Table 5.7**

Table 5.13 Impacts on Other Industry Sectors

Theme	Land Use and Other Industry Sectors
Perceived Stakeholder Assessment	Concerns relating to impacts to other industry sectors – namely tourism and agriculture - were raised during the consultation program. Concerns raised regarding tourism were due to the visual impact of the quarry site negatively affecting the commercial viability of farm stays, where a key determinant is the rural outlook. Concerns relating to agriculture were in regard to both onsite and offsite agricultural impacts.
Social Impact Assessment	<p>There is insufficient small area data to undertake meaningful analysis of tourist numbers within the Goulburn region. Two farm stays were found in Towrang using an online search, with low and moderate levels of bookings over the next 3 to 6 months (inclusive of the spring and summer school holidays).</p> <p>Analysis of tourist numbers within Goulburn indicates an occupancy rate of 0.5 per cent less than NSW generally within the March quarter 2010 to 2014 (ABS 2015b).</p> <p>While visibility of the Project may be an additional factor in tourist location choice at the two identified farm stay locations within Towrang, it is considered that the Project is unlikely to significantly impact tourist businesses of Towrang or the wider local area.</p> <p>Impacts to agriculture are assessed in Table 5.7</p>
Further Management Approaches	Consider potential benefits to the local tourist industry when determining community contributions, in consultation with relevant community and business stakeholders as relevant throughout the life of operations.

5.3.2 Property Value

Concerns raised during the consultation program regarding potential impacts to property values were assessed, as per **Table 5.14**.

Table 5.14 Property Value

Theme	Property Value
Perceived Stakeholder Assessment	Potential for impact to property values due to amenity impacts were of concern to a subset of the Towrang community (Section 4.2.8). Concern was raised due to visual impacts on the rural outlook of particular properties, where the outlook was a determining factor in the original purchase of the property.
Social Impact Assessment	<p>Noting the lack of available property sale data in Towrang, available data is indicative of a property value trend consistent with the wider LGA, compared with a lower growth linear trend indicated for Marulan (Figure 3.10).</p> <p>Overall, the project is considered unlikely to negatively impact property values in the local area. For specific properties where the rural outlook is a key determinant in the value of the property, it is considered that the assessed landscape is unlikely to significantly affect property prices in most cases. While it is likely that some potential buyers may choose to purchase elsewhere due to the visibility of the quarry site, this is not universally applicable. As such, while in some cases significant devaluation of properties is unlikely, there may be the potential for an increased time on market for particular properties due to the Project.</p> <p>Time on Market in Goulburn (as a nearby suburb where there is sufficient data to calculate a value) is an average of 88 days. A rule of thumb for property times on market is a maximum 90 days. This is indicative of long times on market for properties in the area.</p> <p>It is not possible to quantify an average additional time on market due to the project, owing to the small number of affected properties. Given the long average time on market, residents within potentially affected properties would be anticipated to have long times on market regardless of the Project.</p> <p>Overall it is considered that there would be negligible impact to property prices in the local community due to the Project.</p>
Existing Management Approaches	No management processes specifically relating to property value maintenance are in place.
Further Management Approaches	No further management approaches are proposed, given the lack of data for suitable analysis.

5.4 Sense of Community

Sense of community across the two townships – Marulan and Towrang - was seen to differ based on feedback from the consultation process and statistics on volunteering. For example, 26.1 per cent of people in Towrang volunteer, compared to 19.5 per cent for Marulan. Towrang was characterised by residents through the consultation process, as a relatively close-knit, inclusive, caring and welcoming community. It was also noted by some residents that the sense of community within Towrang was also changing, as long-time residents leave the area and new residents move in, often on a part time or weekend basis.

Marulan has a larger town centre, a strong history and heritage in the quarrying and transport industries and a growing population, which influences the sense of community locally. Increasing residential development, to cater for anticipated population increases, is expected to change the sense of community over the coming years as the community grows and further develops. Potential for the Project to change the sense of community in Marulan and Towrang is assessed in **Table 5.15**.

Table 5.15 Sense of Community

Theme	Sense of Community
Perceived Stakeholder Assessment	Interview participants in both Marulan and Towrang noted a strong sense of community, with strengths specific to each locality. Marulan was characterised by participants as a growing township with good transport links, local service provision and a long history of quarrying. Towrang was characterised as being a relatively close knit, inclusive, caring and welcoming community.
Social Impact Assessment	<p>The potential for a changing sense of community due to population increases brought about by the Project are assessed as being of negligible to minor impact. Given the zoning and land release planning process within local and state government, it is anticipated that the population of Marulan is likely to increase regardless of the Project. Project related increases should operations reach maximum production would not make a significant change to the already growing population. There are no population changes anticipated for Towrang.</p> <p>Additionally, development of the Project is unlikely to significantly impact on the opportunity for individuals and groups to actively participate in civic life.</p> <p>Within a sustainable development framework (c.f. Hart 1999) the Project is unlikely to significantly impact on any of the key community capitals, with the exception of visual impacts (see Table 5.6).</p>
Further Management Approaches	Continued implementation of the community fund.

5.5 Trust and Reputation

The way Holcim Australia relates and engages with the local community is assessed in **Table 5.16**. In general terms, outcomes of the wider community survey indicated that residents in the wider Marulan area are relatively satisfied with Holcim Australia's social performance and engagement practice. However, this was not consistent with comments from particular stakeholders obtained through the personal consultation process, with a small number of participants, particularly in the Towrang community, indicating a lack of trust in the company and its activities.

Table 5.16 Trust and Reputation

Theme	Trust and Reputation
Perceived Stakeholder Assessment	Interviewees in Marulan largely spoke positively of Holcim Australia and the Lynwood quarry. Interviewees in Towrang also spoke positively of Holcim Australia's community contributions; however some interviewees felt strongly that the relationship between Holcim Australia and their community could be improved and be more open and transparent.
Social Impact Assessment	<p>The Modification Project was largely unanticipated within the local communities. The strength of Holcim Australia's reputation within Marulan as a visible and contributing corporate citizen, and the long history of quarrying in the local area has meant that the need to secure a different resource was generally understood by interview participants within the Marulan community.</p> <p>In contrast, in Towrang, where there appears a level of distrust of Holcim Australia by active members in the local community, the announcement of the Project has met increased scepticism by some interview participants.</p> <p>These differing experiences of Holcim's engagement practice and perspectives of the company's reputation has the potential to be a point of division (e.g. 'them and us') between the Towrang and Marulan communities.</p> <p>Given the diversity of opinions in relation to the trustworthiness of Holcim Australia, particularly in Towrang, the Project may also have potential to be a point of disagreement between individuals and/or groups within the Towrang community itself.</p> <p>While Holcim Australia is not accountable for the actions of community members, it is recommended that the company continue to actively engage with individuals and groups to mitigate any potential for wider trust and reputational issues and continue to monitor their social and environmental performance biannually.</p>
Existing Management Approaches	Holcim Australia have an extensive range of regular engagement mechanisms, including newsletters, open days, information sessions, personal meetings, and the Lynwood CCC (see Section 5.1 of the EA). These engagement mechanisms extend to both the Towrang and Marulan communities.

Theme	Trust and Reputation
Further Management Approaches	<p>Existing engagement to continue as appropriate, with a focus on respectful, honest and open communications.</p> <p>Assuming Modification Project approval, continue to communicate regularly with nearby and interested stakeholders regarding:</p> <ul style="list-style-type: none"> • Ongoing operations on site • residents' experience of impacts such as dust, noise, blasting, traffic, heritage and impacts to water • visual impacts, particularly with interested members of the Towrang community <p>Furthermore, Holcim Australia will periodically review the operation and membership of the CCC, in line with the 2007 <i>Guidelines for establishing and operating Community Consultative Committees for Mining Projects</i>, so that membership is appropriate for the issues discussed and that matters discussed and minutes are distributed (for example via email) to all interested community stakeholders more widely, where possible.</p> <ul style="list-style-type: none"> • Utilise additional communication channels such as local newsletter and updates.

6.0 Monitoring and Evaluation

A key aspect of any social impact assessment is the development of tools and methods to monitor a project's impact over time. To ensure a robust approach it is recommended that the management measures outlined in **Section 5.0** and the following monitoring and evaluation methods should be integrated into existing site stakeholder engagement plans and aligned with broader company business drivers and sustainable development standards.

Part of this process should include the collection of social data to monitor:

- Changes in the local social and economic context, through
 - the collection of relevant census and social indicator data at appropriate levels of analysis
 - monitoring of local vs non-local employee recruitment and supplier contracts
 - documentation and analysis of social and economic contributions of the operation in the community
- Evaluation of actions, communications and investments through community donations and other contributions.

It is strongly recommended that stakeholder perceptions continue to be monitored through periodic community survey. To ensure the maximum benefit, findings should be considered at the beginning of the sites business planning cycle to allow for integration of the findings.

In addition evaluation should be undertaken of the effectiveness of current engagement mechanisms and methods further developed for continuous improvement. This process could also be undertaken in consultation with the local community. Communications should also be focused on key issues identified through monitoring.

Table 6.1 summarises the recommended social monitoring methods proposed.

Table 6.1 Monitoring Strategies

Theme	Perceived Stakeholder Assessment	Perceived Risk Level	Monitoring and Evaluation Methods
Environment and Amenity	Visual & Lighting Impacts	High	<ul style="list-style-type: none"> Ongoing engagement regarding visual and lighting impacts via the CCC (and directly with interested residents as appropriate) including the effectiveness of mitigation measures.
	Noise	Moderate	<ul style="list-style-type: none"> Monitoring of noise impacts and communication of outcomes via the CCC (and directly with interested residents as appropriate) including the effectiveness of mitigation measures.
	Dust	Moderate	<ul style="list-style-type: none"> Monitoring of dust impacts and communication of outcomes via the CCC (and directly with interested residents as appropriate) including the effectiveness of mitigation measures.
	Traffic	Moderate	<ul style="list-style-type: none"> It is noted that this issue is a general concern about local quarry operations raised by the community, however, s traffic from the quarry will continue to directly access the Hume Highway and avoid local roads. Ongoing engagement is proposed with the CCC to monitor any specific concerns relating to Lynwood Quarry.
Trust and Reputation	Reputation	Moderate	<ul style="list-style-type: none"> Completion of periodic community surveys to review community perception over time. Continued implementation of community engagement program including seeking feedback on engagement effectiveness and on the community's preferred engagement mechanisms. Continued effective operation of the CCC. Newsletter content to focus on key community issues identified as of most interest to the community. Community survey outcomes and feedback from the CCC to be used to inform and update engagement and broader business planning.

7.0 Conclusion

Consistent with the international principles for SIA, this SIOA has assessed the potential identified impacts, both positive and negative, of the proposed project. The Modification Project is an alternation to the existing project development consent obtained in 2005 and is anticipated to realise a number of significant economic and corresponding social benefits for the local community, region and state.

Taking into consideration the range of specialist assessments that have been completed as part of the EA; local stakeholder perspectives and experiences; the collation and analysis of secondary data; and assessment of the social impacts that may arise from the project, it is considered that the Modification Project will not result in a significant change in the local communities of Marulan and Towrang, other than the impacts noted in this assessment.

Mitigation measures have been outlined to address predicted impacts or enhance associated benefits. Where issues have a high and medium level of perceived impact, as assessed by stakeholders, monitoring mechanisms have been recommended for integration into the sites existing community engagement plan and broader business planning processes.

8.0 References

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