ENVIRONMENTAL ASSESSMENT REPORT

431 Masonite Road, Heatherbrae

Sandvik Mining and Construction Australia P/L

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SECTION 1

EXECUTIVE SUMMARY

Sandvik Mining and Construction Australia P/L (Sandvik) seek to establish a Manufacturing, Assembly, Aftermarket Service, Regional Distribution Centre and Training Facility (including research and development and regional head office) on a 16 hectare industrially zoned site located at No. 431 Masonite Road, Heatherbrae, New South Wales.

Sandvik form part of a multinational organisation who have a primary focus on manufacturing advanced special alloys and ceramic materials, industrial tools and mining equipment. Sandvik is a world leading high-technology engineering group with a world leading market share in three (3) core areas on a global scale:-

- Cemented – carbide and high – speed steel tools for metal working applications and components made of cemented carbide and other hard materials;
- Machinery, equipment and tools for rock excavation, conveyer systems and materials handling solutions; and,
- Stainless and high – alloy steels, special metals, resistance materials and process systems.

The proposed development is a 'Major Development" to which the Major Development SEPP (and Part 3A of the Act) applies on the basis of it being a manufacturing industry employing more than 100 people with a capital investment value of more than $30 million.

This project includes the following:

- Clearing 14.3 hectares of vegetation from the site, install sediment and erosion control measures during construction and site regrading;
- Construction and use of industrial scale workshop buildings, office, training and amenities buildings, car parking areas, concrete hardstand areas, machinery testing areas; on site wastewater management system and stormwater/water harvesting/water quality infrastructure.

This project has an estimated capital investment value of more than $30 million. The proposal will employ up to 80 staff during construction and 500-600 staff when operational. The facility has the potential to employ up to 750 staff over the next 5 years when operating at full capacity.

The Director General on 19th May 2010 issued requirements in relation to the proposed development which have formed the basis of the matters addressed in this Environmental Assessment (EA) report. Investigations for the entire site have been undertaken and the findings and the recommendations of a number of specialist reports and plans have been prepared in response to the current site conditions, the proposed development and the Director Generals requirements.

The key issues addressed as part of this EA include:

- Biodiversity;
- Soil and Water
- Traffic
- Noise
- Hazards
- Air quality;
- Bushfire;
- Waste;
- Greenhouse Gas Emissions; and
- Heritage.

The EA provides the basis for the Department of Planning and other government agencies to assess the proposal.

Consultation with key agencies, including the Department of Planning, Department of Environment, Climate Change and Water, Department of Transport and Infrastructure (Roads and Traffic Authority), Hunter Water and Port Stephens Council has been undertaken during the process of preparing this report.

In addition, where relevant, reference has been made to the development assessment undertaken by Port Stephens Shire Council under Part 4 of the Environmental Planning and Assessment Act, 1979 for substantially the same development on this site which was approved by Port Stephens Shire Council on the 15th September, 2009 but has not been acted upon.

The EA also includes a draft Statement of Commitments outlining all the proposed environmental management and monitoring measures.

The EA shows that on balance, the project can proceed with minimal environmental impact while providing significant socio-economic benefits for the Port Stephens community and the wider region of the Hunter Valley.

Figure 1: Site Plan

Amendment	Description	Drawn	Appd	Date
8	GENERAL REVISION	K.C.	K.C.	16.06.10
6	LEASE PROPOSAL	K.C.	K.C.	18.05.10
5	CLIENT AMENDMENTS	K.C.	K.C.	09.05.10
4	TEST TRACK ADDED, BUILDINGS & CARPARKING AMENDED	K.C.	K.C.	29.04.10
3	CLIENT CHANGES	K.C.	K.C.	22.04.10
2	BUILDINGS & ROADBASE AMENDED	K.C.	K.C.	20.04.10
1	ORIGINAL ISSUE	K.C.	K.C.	08.04.10

Designed: K.C. | Cad Reference: 10096A d A01r8
Scale: 1:1000 (A1 SHEET), 1:2000 (A3 SHEET)
Project Approval: IAN HILL (HIL) Consulting Civil Engineer

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PROPOSED INDUSTRIAL DEVELOPMENT
431 (LOT 32) MASONITE ROAD, HEATHERBRAE
SITE PLAN
SANDVIK MINING AND CONSTRUCTION AUSTRALIA PTY LTD
PROJECT BY HUNTER LAND DEVELOPMENTS

Project No: 10096A
Drawing No: A01
Revision: 8

SECTION 2

CERTIFICATION BY AUTHOR

Project to which Part 3A Applies

Application Number	MP 10_0073
Project Name	Heatherbrae Machine Manufacturing and Maintenance Project
Project Address	Lot 32 DP 1014864, 431 Masonite Road, Heatherbrae
Applicant Name	Sandvik Construction and Mining Australia Pty Ltd
Applicant Address	PO Box 595, RAYMOND TERRACE NSW 2324

I certify that I have prepared the content of this Environmental Assessment and to the best of my knowledge it is in accordance with the Environmental Planning and Assessment Act and Regulation and is not false or misleading.

Author

Name	Tanya Gurieff
Qualifications	BSc
	Grad Dip Urb Reg Plan

Signature

SECTION 3

THE SITE & LOCALITY

3.1 Introduction

Sandvik Mining and Construction Australia proposes to establish a Manufacturing, Assembly, Aftermarket Service, Regional Distribution Centre and Training Facility (including research and development and regional head office at 431 Masonite Road, Heatherbrae. The Director General has confirmed that this proposal is a Major Project and issued the Director General's Requirements on 19th May 2010. The Director General's Requirements are attached as Appendix A. This Environmental Assessment Report has been prepared to enable the Department of Planning and other relevant government agencies to assess the proposed development.

3.2 Property Description

The land is described as Lot 32 DP 1014864, 431 Masonite Road, Heatherbrae. The site is owned by Port Stephens Council.

The site has a street frontage of 132 metres and an approximate depth of 350 metres. The site is generally level, rectangular block with frontage to Masonite Road and has an area of 16 hectares.

The Certificate of Title and the Deposited Plan are attached as Appendix B.

3.3 Locality

The site adjoins an established industrial area to the north, east and west and has a frontage to Masonite Road. The adjoining property to the south is undeveloped and also zoned 4(a) Industrial General.

3.4 Current Uses on the Development Site

The site is vacant land and is currently largely vegetated. Most of the vegetation on site will be cleared as part of the development proposal.

Figures 2 to 4 comprise aerial photographs of the site.

Figure 2: Locality Plan – Regional Context

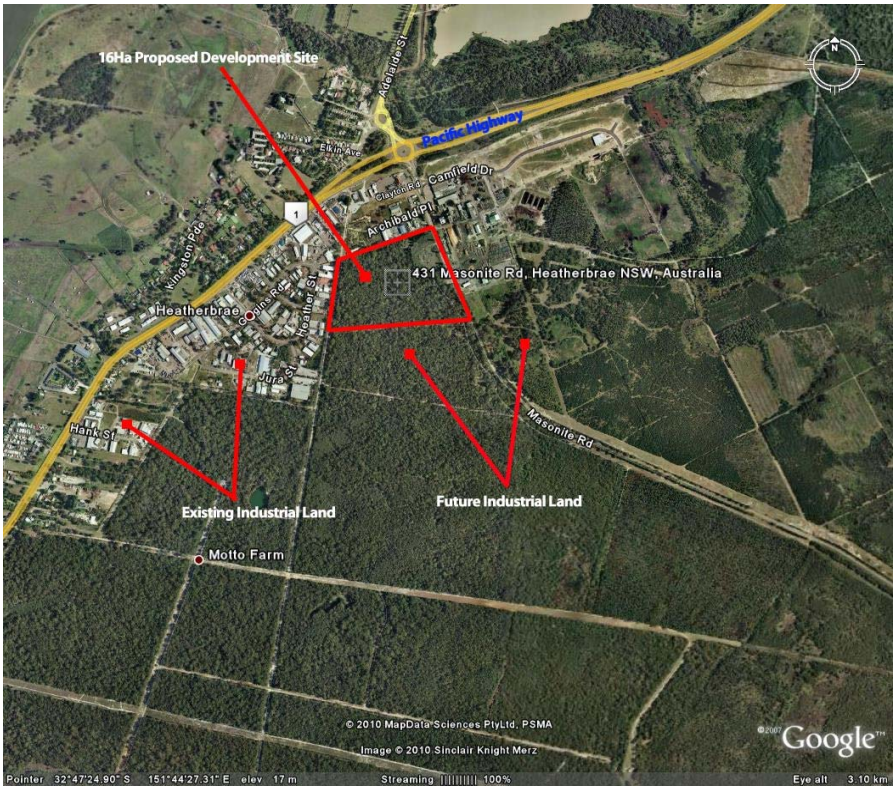

Figure 3: Aerial Photo of Site

Figure 4: Aerial Photo of Site

3.5 Adjoining Lands

Directly opposite the site is a Weathertex factory. Weathertex Pty Ltd manufactures external wall cladding products for all domestic and commercial uses.

A range of industrial and commercial uses are located within the adjoining industrial area.

The site is located in the Heatherbrae/Tomago area. The Tomago Aluminium Smelter and other mining industries and general support service light industries and businesses are located within the vicinity. An existing asphalt batching plant and proposed WesTrac mining equipment facility are located a short distance away.

The Pacific Highway lies to the north of the site. The site is located in close proximity to the National Highway, including the key junction of the New England Highway and the Pacific Highway. The Pacific Highway provides access to northern NSW, Sydney and to the west of NSW, which is in close proximity to mining facilities in the Hunter. The site is in an excellent position, both strategically and locationally.

To the south the land is currently vacant and heavily vegetated. This land is zoned for industrial purposes but is not yet developed.

The site is in close proximity to the Newcastle Airport which is a major regional airport.

3.6 Topography and Drainage

The land is generally low lying and relatively flat with minor variations in topography in the southeast corner of the site. This southeast corner of the study area has no defined creeklines; however, this area may be an ephemeral drainage line during heavy rain.

3.7 Vegetation and Threatened Species

The site comprises 16 hectares of generally heavily vegetated land except for an area of approximately 2 hectares in the north east corner fronting Masonite Road which has been cleared for many years.

In the past three years, two ecological assessments have been undertaken for the site to support slightly different development layouts. The two reports include:

- GHD (2007) *Heatherbrae Industrial Concept Plan, Ecological Assessment,* Port Stephens Council; and
- Orogen (2009) Addendum Ecological Assessment Lot 32 DP 1014864, Masonite Road, Heatherbrae, ATB Morton.

RPS Australia East Pty Ltd (RPS) has prepared an updated Ecological Assessment Report, (June 2010), to address the Director Generals Environmental Assessment Requirements for this project. This report uses the detailed ecological information that already exists for this site in addition to the information already presented within the previous reports above. This report is attached as Appendix C.

The site was found to consist of two vegetation communities being:

- Eucalyptus pilularis (Blackbutt) – Angophora costata (Smooth-barked Apple) Dry Sclerophyll Dune Forest; and
- Cleared Land.

The original vegetation mapping (GHD, 2007) mapped three vegetation communities as occurring within the site, being Smooth-barked Apple / Blackbutt Forest, Blackbutt Moist Forest and Cleared/Disturbed Lands. However, further flora surveys by Orogen (2007) indicated that the more moist habitats within the site did not warrant consideration as a separate vegetation community.

The vegetation communities present within the site are not considered to be consistent with any EECs listed under TSC Act 1995 or EPBC Act 1999 as verified by a review of recent listings as part of this report.

Threatened Flora Species

No threatened flora species were recorded within the site during surveys. However, marginal habitat for two threatened flora species (*Diuris praecox* and *D. arenaria*) was considered to be present along tracks within the site. The Newcastle Doubletail (*Diuris praecox*) is listed as Vulnerable under the TSC

Act 1995 and EPBC Act 1999 and the Sand Doubletail (*Diuris arenaria*) is listed as Endangered under the TSC Act 1995.

Fauna Species

Previous flora and fauna surveys recorded a range of fauna species using the site at the time of survey. GHD (2009) recorded 118 fauna species, consisting of 72 bird, 32 mammal, seven reptile and seven amphibian species. No additional species were detected during subsequent surveys. Full details can be obtained from the previous reports.

Threatened Fauna Species

Of the 118 fauna species recorded within or immediately adjacent to the site during previous investigations, a total of eight fauna species are listed under TSC Act 1995 and/or EPBC Act 1999.

A revised assessment of likelihood of occurrence of threatened species was undertaken as part of the RPS report. This assessment was prepared using the ecological information contained within previous flora and fauna surveys undertaken within the site, local knowledge of RPS Ecologists and an updated review of threatened species records in the locality. This revised assessment has found that in addition to the eight threatened fauna species recorded within or immediately adjacent to the site previously, a further 10 are considered likely to occur within the site.

The following threatened species have been recorded within (in **bold**), or immediately adjacent (marked in **bold with ***) or considered likely to occur within the site:

- **Squirrel Glider** (***Petaurus norfolkensis***) – listed as Vulnerable under TSC Act 1995;
- **Grey-headed Flying Fox** (***Pteropus poliocephalus***) – listed as Vulnerable under TSC Act 1995 and EPBC Act 1999;
- **Eastern False Pipistrelle** (***Falsistrellus tasmaniensis***) – listed as Vulnerable under TSC Act 1995;
- **Eastern Bentwing Bat** (***Miniopterus schreibersii oceanensis***) – listed as Vulnerable under TSC Act 1995;
- **Greater Broad-nosed Bat** (***Scoteanax rueppellii***) – listed as Vulnerable under TSC Act 1995;
- **East Coast Freetail Bat** (***Mormopterus norfolkensis***) – listed as Vulnerable under TSC Act 1995;
- **Powerful Owl** (***Ninox strenua***) * – listed as Vulnerable under TSC Act 1995;
- **Glossy Black-Cockatoo** (***Calyptorhynchus lathami***) * – listed as Vulnerable under TSC Act 1995;
- Square-tailed Kite (*Lophoicitinia isura*) – listed as Vulnerable under TSC Act 1995;
- Gang-gang Cockatoo (*Callocephalon fimbriatum*) – listed as Vulnerable under TSC Act 1995;
- Swift Parrot (*Lathamus discolor*) – listed as Vulnerable under TSC Act 1995;

- Little Lorikeet (*Glossopsitta pursilla*) – listed as Vulnerable under TSC Act 1995;
- Masked Owl (*Tyto novaehollandiae*) – listed as Vulnerable under TSC Act 1995;
- Brush-tailed Phascogale (*Phascogale tapoatafa*) – listed as Vulnerable under TSC Act 1995;
- Long-nosed Potoroo (*Potorous tridactylus*) – listed as Vulnerable under TSC Act 1995 and EPBC Act 1999;
- Koala (*Phascolarctos cinereus*) – listed as Vulnerable under TSC Act 1995;
- Little Bentwing Bat (*Miniopterus australis*) – listed as Vulnerable under TSC Act 1995; and
- Yellow-bellied Sheathtail Bat (*Saccolaimus flaviventris*) – listed as Vulnerable under TSC Act 1995.
- Additionally, the Varied Sittella (*Daphoenositta chrysoptera*), of which marginal habitat exists within the site is currently a preliminary determination for listing as Vulnerable under TSC Act 1995.

A discussion of the potential impacts of habitat removal for threatened species recorded or considered likely to occur within the site is presented in section 5.4 and 6.1 of this EA report

3.8 Traffic, Access and Road Network

The main access route to the site will be via Masonite Road to the Pacific Highway. The site is located approximately 300 metres south east of the Pacific Highway and is adjacent to an existing industrial subdivision.

The site has frontage to Masonite Road. Transport connections to the site will be via Masonite Road north west to the Pacific Highway which represents the main and most direct transport connection for origins and destinations generated by the development or to the south east to Tomago Road.

All heavy vehicle movements will be via the Pacific Highway with only a small percentage of employee traffic expected to utilise the Tomago Road connection to the site.

A detailed Traffic Impact Assessment has been prepared by Insite Engineering Services P/L (June 2010) and is attached as Appendix D.

3.9 Bushfire

Buildings within this type of development are classified as Class 5 – 8 within the BCA. Therefore, the provisions of PBP 2006 do not strictly apply. The site is however is within an area that is classified as Bushfire Prone, and the surrounding vegetation represents a potential threat to the proposed development.

RPS Australia East Pty Ltd (RPS) undertook a Bushfire Threat Assessment (June 2010) which is attached as Appendix E. Notably the assessment and recommendations contained within this report are based on Industrial Development.

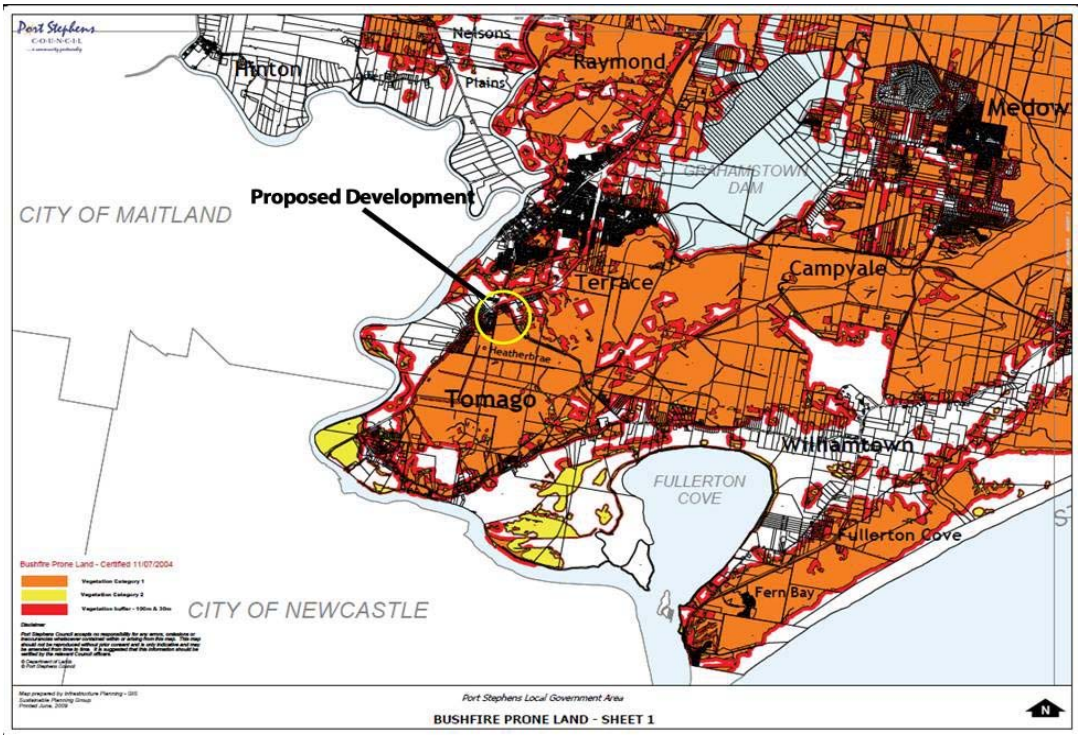

Figure 5: Extract from Port Stephens – Bushfire Prone Map

3.10 Aboriginal Archaeology

An Aboriginal Heritage Impact Assessment was prepared for the site by RPS P/L (June 2010) and is attached as Appendix F. This report found that there were no Aboriginal sites identified during the survey. The Archaeology Assessment recommended that *"no further archaeological investigation is required in advance of the proposed development, although the Proponent should provide the opportunity to inspect the Study Area after vegetation clearance has taken place."*

3.11 European Heritage

Under the Australian Heritage Council Act, 2003, the Australian Heritage Council is requireed to maintain a register of places with significant heritage values within the Register of the Natioanl Estate. The commonwealth Minister for the Environment is required to have regard to the heritage significance of places listed on the register.

The subject site is not listed on the National Heritage Register.

3.12 Flooding and Drainage

There are no established watercourses on the site, with the south east corner being the only area in which an ephemeral drainage line may form during periods of high rainfall. Most of the rainfall across the site would appear to infiltrate into the under laying sandy strata.

The development proposes to discharge stormwater from the roof area of the buildings ultimately to the infiltration ponds. The option to discharge into rainwater tanks prior to discharge into the infiltration ponds has been investigated as a possible water cycle improvement measure. These rainwater tanks, if installed, will provide storage from which reusable supply will be extracted. An overflow pipe will be provided at the obvert of the rainwater tanks to convey stormwater overflow to the developments drainage system. The stormwater runoff from the car parking and driveway areas are to be collected through a conventional pit and pipe system. Overflows from the car parking and driveway areas, and hence the rainwater tanks, are directed to stormwater infiltration ponds through a conventional pit and pipe system.

3.13 Contamination

At its meeting of 15 September 2009, Port Stephens Council considered the issue of the historical land uses of the site and whether there is a need for preliminary contamination investigation. In the planning assessment of the development application, Council stated in its report that the site has not had any approved uses that would give rise to contamination of the site, and therefore a preliminary investigation of the site was not required.

3.14 Mine Subsidence

The land is not identified as being located within a Mine Subsidence District under the Mine Subsidence Compensation Act 1961.

3.15 Geotechnical Overview

The site is currently primarily covered in natural vegetation with a small area in the north eastern corner that appears to have been used for stockpiling of garden mulch in the past and is currently covered by numerous tall pines, large stands of lantana, medium sized trees and shrubs, tall weeds and grass.

Topographically the site is located on a sand plain with some small dunes to the south of the site. The site is flat to slightly sloping to the south. Drainage appears to be by direct infiltration into the sandy soils with no evidence of overland flow across any part of the site.

The Geotechnical Report prepared by Coffey Geotechnics (June 2010) is attached to this Environmental Assessment as Appendix G.

3.16 Acid Sulphate Soils

The subject site is identified as being Class 4 Acid Sulphate Soils (ASS). Reference to the Acid Sulphate Soils Risk Map for Beresfield indicates that the site is in an area of low probability of occurrence of acid sulphate soil materials greater than 3m below the ground surface. Boreholes were taken to depths of between 2m to 3m by Coffey Geotechnics in its Geotechnical Assessment Report (Appendix G).

Samples obtain during the field investigation by Coffey Geotechnics were screened for the presence of actual and potential acid sulphate soils using methods 21Af and 21Bf of the ASSMAC Guidelines.

Following the screening tests, a sample field undertook a SPOCAS analysis, and results indicate the sample tested is not an actual or potential acid sulphate soil.

The results of the ASS screening tests indicate that all the samples tested are not actual or potential ASS. And furthermore the sandy soils above the water table would be considered oxidised and hence not potentially ASS.

Therefore an ASS management plan for works involving disturbance of site soils to the depth of the investigation is not considered necessary.

3.17 Air Quality

The NSW Department of Environment, Climate Change and Water (DECCW) specify impact assessment criteria and the Protection of the Environment Operations (Clean Air) Regulation 2002 specifies limits for emission air impurities from activities and plant for both scheduled and non-scheduled premises.

An assessment of the background air quality data in the vicinity of the proposed development was undertaken by Advitech P/L (June 2010), as a number of potentially sensitive receivers were identified adjacent to the site. This has resulted in an Air Quality Impact Assessment being prepared for this proposal attached to this assessment as Appendix H.

The assessment demonstrates that emission concentrations and predicted Ground Level Concentrations for air pollutants achieve compliance with Schedule 6 of the Protection of the Environment Operations (Clean Air) Regulation 2002, and the design criteria specified in the Approved Methods for the Modelling and Assessment of Air Pollutants in NSW 2005.

The proposed development does not require an Environment Protection Licence under the Protection of the Environment Operations Act 1997 and is therefore a 'non-scheduled premises'.

The assessment concluded that the development and operation of the proposed Sandvik facility will achieve the regulatory requirements for the management of air emissions and as such, it is concluded that the development will not pose a significant impact on air quality in the locality.

3.18 Services

The site is capable of being fully serviced to the needs of the proponent in terms of telephone lines, sewer mains, water, gas and power.

Services will be provided to the site during construction works.

SECTION 4

PROPOSED DEVELOPMENT

4.1 The Proposal

The proposal is for the construction of a Manufacturing, Assembly, Aftermarket Service, Regional Distribution Centre and Training Facility (including research and development and regional head office) for Sandvik Mining and Construction Australia Pty Ltd. The proposal will include the construction of industrial scale workshop buildings, office, training and amenities buildings; 569 car parking spaces, concrete hardstand areas and a machinery testing area. The proposal includes the following:

Buildings including but not limited to:

- Aftermarket – 9854m²
- Assembly – 3782m²
- Manufacturing – 3693m²
- Fabrication – 1725m²
- Main office – 3002m²
- Warehouse – 3350m²
- Training – 578m²
- Amenities building – 1262m²
- Motorbike shed–200m²
- Guard House – 41m²
- Diesel and Oil Storage – 32m²
- Compressor Shed – 55m²
- Gym/Sauna – 150m²

Total building footprint is 27,724m² (2.78 ha)

Pavement and road base (car park areas, footpaths, external concrete pavements driveways, etc) is approximately 100,000 m² (10.00ha)

Other areas include detention basins, open space ancillary to infrastructure and the remaining vegetation on site.

17,000m² (1.70ha) of the site will not be cleared.

The proposal will also include:

- 569 car park spaces, 8 truck spaces and 51 motorbike and 38 bicycle parking spaces.
- A maximum building height of 14.04 (to the ridge).
- The facility will operate 24 hours per day, 7 days per week and 365 days per year when operating at full capacity.
- The proposal will employ up to 80 staff during construction and 500-600 staff when operational. The facility has the potential to employ up to 750 staff over the next 5 years when operating at full capacity.
- Upgrades to road infrastructure in the immediate vicinity of the site.
- Current 'Best Practice' water quality control and management to utilise existing roofwater harvesting opportunities to minimise runoff

Plans of the development prepared by Geoff Craig and Associates are attached as Appendix I.

4.2 Landscaping

A landscape plan has been prepared by Geoff Craig and Associates and is attached as Appendix J. The plan has been reviewed by Envisage Pty Ltd, an accredited Landscape Architectural Firm.

The landscaping plan proposes to:

- Plant native species, including some local native species;
- Allows for suitable screening to surrounding properties and Masonite Road;
- Existing vegetation on site will be retained where possible; and,
- Retention of two hollow bearing trees.

4.3 Operations

Proposed activities associated with the subject development will be based around the Manufacturing Assembly, Aftermarket Service, Regional Distribution Centre, Training and R & D operations as further described below:

Assembly

A designated assembly building is proposed where new mining machinery will be assembled on site. Products will include underground mining machinery, which can be extended to other product lines within Sandvik's mining machinery at a later stage.

The type of machinery to be assembled on site includes:

- Underground loaders, haulers and trailers;
- Underground bolters and drill rigs: and,
- Flame Proof enclosures.

Manufacturing

A designated manufacturing building is proposed where new mining tools and conveyor components will be manufactured.

Regional Distribution Centre

The Regional Distribution Centre will store and distribute components and spare parts to the operations within the site and to external customers mainly within Australia.

Aftermarket Maintenance and Repair ("Customer Service Centre")

Aftermarket activities include the maintenance and repair of mining equipment including machinery and conveyor systems. All maintenance and repair work will be undertaken within the confines of the building or within designated hard stand areas.

Activities forming part of the maintenance process include fabricating, line boring, welding, rebuilding of components and the like.

Some specialised servicing requirements will be done off site. This outsourcing will be done where resource or skills are not available on site. This outsourcing will in turn create opportunities for other companies to locate within the vicinity of this site.

Once machinery is repaired, it will be tested in the machinery testing areas prior to it leaving the site.

Hazardous and Dangerous Goods Storage

A Dangerous Goods Storage area is proposed to be located on site. The majority of dangerous goods on site will be stored in self-bunded units on the road base area to the north of the assembly building. Small amounts of dangerous goods decanted from the store will be held in manufacturing areas of the site in dangerous goods cabinets.

Metal fabrication will involve the use of acetylene, compressed oxygen and other gases. These will be

stored in appropriately designed storage systems in the gas store.

Diesel and waste oil will be stored in bulk storage vessels located to the north of the assembly building.

Liquid nitrogen will be stored in a bulk tank between the car park and the manufacturing building.

The area for this type of storage has been sized based on a comprehensive audit of the current and expected storage needs of dangerous and hazardous goods.

An assessment by Advitech Pty Ltd was undertaken of the proposal to determine if the development should be considered under State Environmental Planning Policy No.33 – Hazardous and Offensive Development. This assessment is discussed further in this report

Management, Administration and Training

The main office building on site will become the Regional headquarters for Sandvik Mining and Construction in NSW and will contain general offices, executive management offices, boardrooms and training facilities.

A specialised training facility is proposed on site to cater for advanced customer and employee training. This facility provides specialized training broad client base which includes company employees, customers and broader industry groups.

4.4 Project justification

Sandvik currently have a number of existing operations throughout the Lower Hunter but need to consolidate and expand their current manufacturing assembly and customer service operations within the region. The consolidation and expansion of their facilities within the region will increase their operational efficiencies and improve their Occupation Health and Safety issues. These issues have resulted in the need to find a new location which is appropriately located and can accommodate all of their needs to cater for their increased productivity.

Sandvik have a number of existing facilities at sites at Tomago, Hexham, Broadmeadow, Caves Beach, and Mayfield West. On completion of the proposed development, operations at the abovementioned facilities will be transferred and relocated to the site. By relocating within the Lower Hunter, this will enable existing staff to be retained.

Sandvik have identified the Lower Hunter as being an ideal location due to the availability of a highly skilled mine services employment base capable of operating the manufacturing and maintenance facility as well as providing the expertise required for training and management needs.

The subject site was considered the most suitable of those investigated for the following reasons having regard to the following attributes:

- The site is zoned for industrial purposes, permitting the proposed use;
- The site has an area capable of accommodating the proposed development;

- The site has good access to major transport routes including the national highway network with access to the Pacific Highway and the New England Highway with links to Sydney, Newcastle, the Hunter Valley and the north coast of NSW;

- The site is located close to Sandvik's primary customer base being the mining companies operating in the Hunter Valley;

- The site is located in close proximity to the Newcastle Airport to allow efficient connections to outside the Hunter region and to ensure its viability as a Regional Distribution Centre and Training Facility;

- The site has good access to the Port of Newcastle;

- The site area is suitable for the proposed development;

- The site is level for the safe manoeuvring of machinery on site;

- The location of this site within this industrial area allows for the safe testing of machinery on site;

- With good management practices the site has few environmental and physical constraints to development;

- There are few sensitive receiver/receptors within close proximity to the site; and

- The site is in close proximity to existing staff currently employed by Sandvik therefore core staff currently employed by Sandvik will not need to relocate.

Many other sites considered for the proposed development contain few of the attributes the subject site has. The search by Sandvik and their commitment to and extensive due diligence process is strong evidence that there are no real viable alternatives which would accommodate a development of the scale proposed.

The proposed development with a capital investment in building and infrastructure of more than $30 million will provide a number of employment opportunities to the region. The proposal will employ up to 80 staff during construction and 500-600 staff when operational. The facility has the potential to employ up to 750 staff over the next 5 years when operating at full capacity;

The proposed development will create positive economic outcomes in terms of short term employment and activity during construction as well as on-going employment once the site is operational.

In the longer term local employment is positively affected through increased demand for goods and services by staff and visitors.

The proposal will also enable a range of industrial activities to be located within the vicinity of the site. The proposal will attract a number of supporting industries to the area, thereby enhancing the range of industrial activities and employment opportunities to the area.

The proposal will contribute to meeting the employment needs of the Region as provided in the Lower Hunter Regional Strategy. The economic challenges for the Region are to:

- Maximize the economic opportunities associated with the Region's competitive challenges;

- Ensure sufficient employment lands are available in appropriate locations to provide sufficient capacity to accommodate growth in existing and emerging industries and businesses;

- Maintain and improve the employment self sufficiency of the Region;

- Ensure activity within the Lower Hunter complements rather than competes with the economies and communities of adjoining regions.

This proposal is located in an existing industrial area and will pool staff from within the region bringing new employment opportunities to the area. The need for staff for this facility will continue to strengthen. This will contribute to the high level of self sufficient employment within the Region which is a key objective of the Lower Hunter Regional Strategy.

The site is in close proximity to the Newcastle Airport and the Port of Newcastle which will also contribute to the success of its economic activity.

The need for Sandvik to establish this facility will allow the company to continue to meet the demands of its existing clientele and ensure future growth is not threatened by any delays to the establishment of the facility.

In summary, it is considered that given the appropriate landuse zoning, the strategic planning objectives of the Lower Hunter Regional Strategy, combined with the manageable physical and environmental constraints, and taking account of significant employment opportunities and investment, the proposed development is well justified. In particular, it should be noted that there is no realistic alternative that offers the attributes of the site.

The main economic benefits are summarised as follows:

- Significant economic benefits over the construction phase;
- Significant ongoing annual economic and employment benefits;
- Large annual benefits to the local, regional, State and National economies.

The proposal will provide more job diversity with a significant increase for skilled workers. It has the potential to attract and retain high and medium skilled workers in the region, benefitting the region socially and economically. The attraction of such skilled workers will also help in diversifying the economic base of the Hunter Region. The proposal will also create employment opportunities for local residents which have recently experienced above average unemployment rates.

The community perception of Sandvik is positive as the facility injects significant economic benefits to the community through direct and indirect employment opportunities and local procurement of goods and services. Sandvik is expected to strengthen this perception through the development of further economic stimulus and its identity in the Hunter Region.

On balance, the potential socio-economic impacts of the development of a Manufacturing, Assembly, Aftermarket Service, Regional Distribution Centre and Training Facility (including research and development and regional head office) for Sandvik Mining and Construction Australia Pty Ltd are significant for the Port Stephens community and the wider region of the Hunter Valley.

4.5 Consideration of Alternative Design

Development Consent has been issued under Part 4 of the EP&A Act 1979 for the same proponent and substantially the same development but not acted upon. The approved DA proposed the removal of all hollow-bearing trees and minimal vegetation retention within the site. However, in order to minimise potential ecological impacts in line with the original ecological report recommendations (GHD, 2007), this design has been subsequently modified.

The original ecological report (GHD, 2007) recommended that the site design incorporate a 50m retained vegetated buffer along the eastern boundary of the site, in addition to all three hollow-bearing trees to minimise impacts associated with the proposal. Whilst not strictly adhering to these recommendations, the current design aims to reflect the intention of these provisions and can be seen as making improvements to some aspects.

In particular, the current development design provides vegetation retention of approx 1 ha in the south-east of the site. From a review of recent aerial photography of the site and surrounds and the hollow-bearing tree mapping for the site it becomes apparent that this is a favourable ecological outcome in comparison to the approved Part 4 DA relating to the site. The current design allows the retention of two out of the three hollow-bearing trees within a patch (rather than linear which reduces edge effects) of retained vegetation. This retained vegetation patch has connectivity to the south that is wider than would have occurred with the original 50m buffer at this important boundary. Connectivity is also maintained to vegetation to the east across Masonite Road for mobile species able to cross the existing road. This connectivity of retained vegetation patch allows fauna species that may utilise the hollow-bearing trees to move into surrounding areas of habitat to forage.

4.6 Stages of the Project

The construction process will be undertaken in one (1) complete process. The following phases will be completed in accordance with the nominated construction program:

- Clearing and removal of natural vegetation;
- Siteworks / Bulk Earthworks;
- Construction of the workshop buildings, amenities and offices;
- Pavement construction;
- Fitout and Landscaping ; and,
- Sandvik Fitout for operation purposes

4.7 Consultation

As part of the Director General Requirements, consultation has been undertaken with the following agencies:

- Department of Environment, Climate Change and Water;
- Department of Transport and Infrastructure (Roads and Traffic Authority);
- Hunter Water; and,
- Port Stephens Council.

SECTION 5

PLANNING CONTROLS/STATUTORY REQUIREMENTS

5.1 Introduction

The site and proposed development is subject to planning approval pursuant to a range of relevant Commonwealth and NSW planning and environmental legislation and supporting policy framework. The purpose of this section is to outline the applicable planning controls and statutory requirements relating to the site and the proposed industrial facility. This section explores the relevant Commonwealth and State Legislation and Local Planning Controls, provides a brief overview of the approvals required, and the likely approval process for the project.

5.2 Commonwealth Environment Protection and Biodiversity Conservation Act 1999

This Act (EPBC Act) was introduced in 1999, and replaces several dated Environmental Protection and Conservation Acts. The EPBC Act aims to protect seven matters of national significance being:

1. World Heritage Properties
2. National heritage places;
3. Wetlands of international importance (Ramsar wetlands);
4. Migratory species
5. Commonwealth marine areas; and
6. Nuclear actions (including uranium mining).

The proposed development is located on an existing industrial zone site on which the comprehensive environmental assessment by RPS confirms that there will not be an adverse environmental impact on local populations or connectivity of any threatened species recorded or likely to occur within the site. Furthermore, the Part 4 development consent granted to the same proponent for substantially the same development on the land but this has not been acted upon. The assessment of this DA in September 2009 also arrived at the conclusion that the development as proposed would not have potential to have an impact on matters of National Environmental Significance.

It has therefore been determined that the proposed industrial facility is unlikely to have negative impacts on any of the above and does not require further assessments or approvals under the EPBC Act.

5.3 Environmental Planning and Assessment Act, 1979

The Environmental Planning and Assessment Act 1979 is the primary planning legislation in NSW and provides the legislative framework for the assessment and approval of development in NSW.

The proposed development is a Major Project under Part 3A of the EP & Act, 1979 which requires the Minister to determine the proposed development following an assessment of the application by the Director General of the Department of Planning.

Part 3A of the Act is underpinned by State Environmental Planning Policy (Major Projects) 2005 (SEPP Major Projects) which defines the types of developments as being major projects requiring assessment and approval from the Minister of Planning.

The proposed development is considered to be a 'Major Development" to which the Major Development SEPP (and Part 3A of the Act) applies on the basis of it meeting the following legislative criteria:

State Environmental Planning Policy (Major Development) 2005

Schedule 1 – Group 4 – Other Manufacturing industries, distribution and storage facilities

11 Other manufacturing industries

Development that employs 100 or more people or with a capital investment value of more than $30 million for the purpose of:

(f) machinery or equipment manufacturing.

This project has an estimated capital investment value of over $30 million. The proposal will employ up to 80 staff during construction, 500-600 when operational and up to 750 staff when operating at full capacity.

5.4 Threatened Species Conservation (TSC) Act 1995

The TSC Act 1995 provides a framework for the listing and declaration of threatened species, populations, endangered ecological communities, key threatening processes and critical habitat. It also provides a framework for the preparation and implementation of recovery plans and threat abatement plans for licensing.

As required by the draft Guidelines for TSC Act for Part 3A applications, an assessment of Key Thresholds was undertaken in the Ecological Assessment Report by RPS 2010, to assess if the proposal is likely to have a significant impact on threatened species, populations and ecological communities, and/or their habitat, listed under the Threatened Species Conservation Act. Key Threatening Processes (KTPs) are listed under Schedule 3 of the TSC Act 1995. There are seven KTPs that have the potential to affect the site as a consequence of the proposal, being:

- Clearing of native vegetation;
- Removal of dead wood and dead trees;
- Removal of hollow-bearing trees;

- Human-caused climate change;
- Invasion of native plant communities by exotic perennial grasses;
- Lantana camara; and
- Invasion and establishment of exotic vines and scramblers.

The KTPs are discussed in further detail in the RPS Ecological Report.

Part 3A of the EP&A Act deals with major projects and critical infrastructure. Whilst there is no Assessment of Significance required for major projects under Part 3A of the EP&A Act, 1979, proponents must demonstrate that a proposal will improve or maintain biodiversity outcomes. DECC in conjunction with the NSW Dept. of Primary Industries have prepared Part 3A threatened species assessment guidelines for the NSW Dept. of Planning to ensure that projects provide appropriate impact assessment for Threatened Ecological Communities (as well as threatened species and populations). Assessment under Part 3A allows the use of avoidance and impact mitigation strategies as well as offsets, to achieve maintain-or-improve outcomes and reduce the impacts of these projects on Threatened Ecological Communities.

The Ecological Report assesses the Key Thresholds (four in total) for the Sandvik proposal. These thresholds are assessed below:

1. *Whether or not the proposal, including action to avoid or mitigate impacts or compensate to prevent unavoidable impacts, will maintain or improve biodiversity issues;*

   The proposal will remove approx 13.5ha of native vegetation within the site which provides habitat for a number of threatened species. However, the proposal has been redesigned to include retention of approx 1ha of native vegetation which surrounds two out of three hollow-bearing trees recorded within the site. The retention of hollow-bearing trees within the site will provide ongoing opportunity for hollow-dependent species to persist in the area.

   The recommendations discussed in the Ecological Report have been designed to minimise potential impacts on threatened species recorded or considered likely to occur within the site. Furthermore, the proponent has committed to providing an offsets package to mitigate potential impacts arising from the proposal (See Section 7.3 of the Environmental Assessment).

   Therefore, providing that the recommended mitigation measures are applied, it is considered that the proposal will maintain or improve biodiversity values within the region.

2. *Whether or not the proposal is likely to reduce the long-term viability of a local population of the species, population of the species, population or ecological community.*

   The proposal is considered unlikely to reduce the long-term viability of a local population of threatened species, population or ecological community due to all or a combination of the following factors:

   - Small relative size of the area to be cleared;
   - The mobile nature of the species under consideration;
   - No severance of connectivity, fragmentation or isolation of species;

- Large patch of suitable adjacent habitat likely to support local populations of these species in similar habitats; and
- Retention of some native vegetation and two out of three hollow-bearing trees within the site.

3. *Whether or not the proposal is likely to accelerate the extinction of the species, population or ecological community or place it at risk of extinction.*

   Since the proposal will remove a relatively small portion of habitat for threatened species, with large expanses of similar habitats remaining adjacent to the site it is considered unlikely to accelerate the extinction of threatened fauna species within the site.

4. *Whether or not the proposal will adversely affect critical habitat.*

   There is no declared "Critical Habitat" within 10km of the site.

5.5 The Roads Act

Under this Act, the RTA, the Local Council or the Department of Lands administer the requirements of the Act.

The subject site has frontage to Masonite Road and is located 300 metres south east of the Pacific Highway. Masonite Road is a local road under the care and control of Port Stephens Council. Under a functional road hierarchy it performs a local access role.

Section 138 of the Roads Act applies for the works required on Masonite Road to provide access to the development. These works will be subject of a Roads Act application to Port Stephens Council.

5.6 Protection of the Environment Operations Act 1997

The purpose of this Act is to control pollution and set up a licence regime for pollution management and waste disposal in NSW.

AUSPLUME modelling of air impurities from the proposed Sandvik factory was undertaken by Advitech Pty Ltd to enable an assessment of potential air quality impacts. A copy of this report is attached as Appendix H.

Application of this data set to the proposed development demonstrates that emission concentrations and predicted GLCs for each modelled air pollutant achieves compliance with Schedule 6 of the Protection of the Environment Operations (Clean Air) Regulation 2002, and the design criteria specified in the Approved Methods for the Modelling and Assessment of Air Pollutants in NSW, 2005.

Therefore, no licence is required under the POEO Act 1997.

5.7 State Environmental Planning Policies

Our review of State Environmental Planning Policies (SEPP) indicates that the following SEPPs would apply to the site and this proposal:

- State Environmental Planning Policy (infrastructure) 2007
- State Environmental Planning Policy (Major Development) 2005
- State Environmental Planning Policy No. 33 – Hazardous and Offensive Development
- State Environmental Planning Policy No. 44 - Koala Habitat
- State Environmental Planning Policy No. 55 – Remediation of Land
- State Environmental Planning Policy No. 64 – Advertising and Signage

SEPP (Infrastructure)

The proposal involves the construction of more than 26,000m² of development area and 569 car parking spaces. These sizes trigger Clause 104 and Schedule 3 of the SEPP (Infrastructure) 2007 to become active and require the consent authority to refer the application to the Roads and Traffic Authority.

The development application previously lodged with Port Stephens Council was considered by the Hunter Regional Development Committee at its meeting of 13th August 2009. The committee advised the Council that they had no objection to the proposed development provided that a number of matters are addressed.

The RTA has been consulted during the preparation of the Environmental Assessment. They have advised that previous comments made by the Hunter Regional Development Committee will be taken into consideration. A copy of minutes of the Committee from the previous application dealt with by Port Stephens Council is attached as Appendix K.

SEPP Major Development

The proposed development is considered to be a 'Major Development" to which the Major Development SEPP (and Part 3A of the Act) applies on the basis of it meeting the following legislative criteria:

State Environmental Planning Policy (Major Development) 2005

Schedule 1 – Group 4 – Other Manufacturing industries, distribution and storage facilities

11 Other manufacturing industries

Development that employs 100 or more people or with a capital investment value of more than $30 million for the purpose of:

(f) machinery or equipment manufacturing.

This project has an estimated capital investment value of over $30 million. The proposal will employ up to 80 staff during construction, 500-600 when operational and up to 750 staff when operating at full capacity.

SEPP 33 – Hazardous and Offensive Development

A SEPP 33 Screening Assessment was undertaken by Advitech Pty Ltd of the proposal to determine if the development should be considered under State Environmental Planning Policy No.33 – Hazardous and Offensive Development. A copy of the SEPP 33 Screening Assessment is attached as Appendix L.

The assessment considered the following factors of Dangerous Goods Storage and Handling include:

- The majority of dangerous goods on site will be stored in self-bunded units on the road base area to the north of the assembly building. Small amounts of dangerous goods decanted from the store will be held in manufacturing areas of the site in dangerous goods cabinets.
- Metal fabrication will involve the use of acetylene, compressed oxygen and other gases. These will be stored in appropriately designed storage systems in the gas store.
- Diesel and waste oil will be stored in bulk storage vessels located to the north of the assembly building.
- Liquid nitrogen will be stored in a bulk tank between the car park and the manufacturing building.

The volumes and frequency of dangerous goods deliveries do not exceed the transportation screening threshold and consequently the development is 'not potentially hazardous' with respect to transport.

The Assessment concluded that *"the quantities of dangerous goods proposed for storage at the Heatherbrae site do not result in the screening threshold (storage or transport) being exceeded. As such the development is considered 'not potentially hazardous' and SEPP 33 does not apply".*

SEPP 44 – Koala Habitat

SEPP 44 – Koala Habitat encourages the conservation and management of natural vegetation that provide habitat for koalas to prevent the decline of the koala population. This is achieved through the preparation of koala plans of management, identifying the areas of core koala habitat and including areas of core koala habitat in environmental protection zones.

The koala was not recorded within the site during surveys despite targeted surveys including scat searches, spotlighting and call playback according to the Ecological Assessment Report.

There are no Koala feed trees or preferred tree species listed by Port Stephens CKPoM (2002) located on site.

Therefore, a Koala Plan of Management is not required to be prepared as the proposal is unlikely to have an adverse impact on a local population of Koala since no preferred tree species will be removed and the proposal will not sever connectivity for the species as the site is not located within a movement corridor.

SEPP 55 – Remediation of Land

This SEPP outlines the procedures for remediation of contaminated land.

At its meeting of 15 September 2009, Port Stephens Council considered the issue of the historical land uses of the site and whether there is a need for preliminary contamination investigation. In the planning assessment of the development application, Council stated in its report that the site has not had any approved uses that would give rise to contamination of the site, and therefore a preliminary investigation of the site was not required.

5.8 Regional Planning Controls

5.8.1 Lower Hunter Regional Strategy

The Department of Planning released the Lower Hunter Regional Strategy (LHS) in 2006. The Lower Hunter Regional Strategy applies to the five local government areas of Newcastle, Lake Macquarie, Port Stephens, Maitland and Cessnock. The Lower Hunter Regional Strategy aims to strengthen the Lower Hunter region by harnessing the region's competitive advantage to maximise economic opportunities over the next 25 years. The Strategy was prepared to accommodate an increase of 160,000 persons in the Lower Hunter Region up until 2031, and lists a hierarchy of urban centres to provide for the forecast housing demand of up to 115,000 new dwellings. The Strategy also estimates that an additional 66,000 new jobs will be required, based on the projected population growth.

Regional investigations for employment land use have determined that sufficient employment lands are needed in appropriate locations, including within centres and as traditional industrial land, to provide sufficient capacity to accommodate growth in existing and emerging industries and businesses.

The proposed development is consistent with the objectives of the Strategy to provide for employment opportunities.

Figure 6 below shows that the site is identified as "employment land" in the Regional Strategy. Employment land means "*contains various employment activities such as factories, warehouses. Manufacturing or major storage operations with some associated offices."*

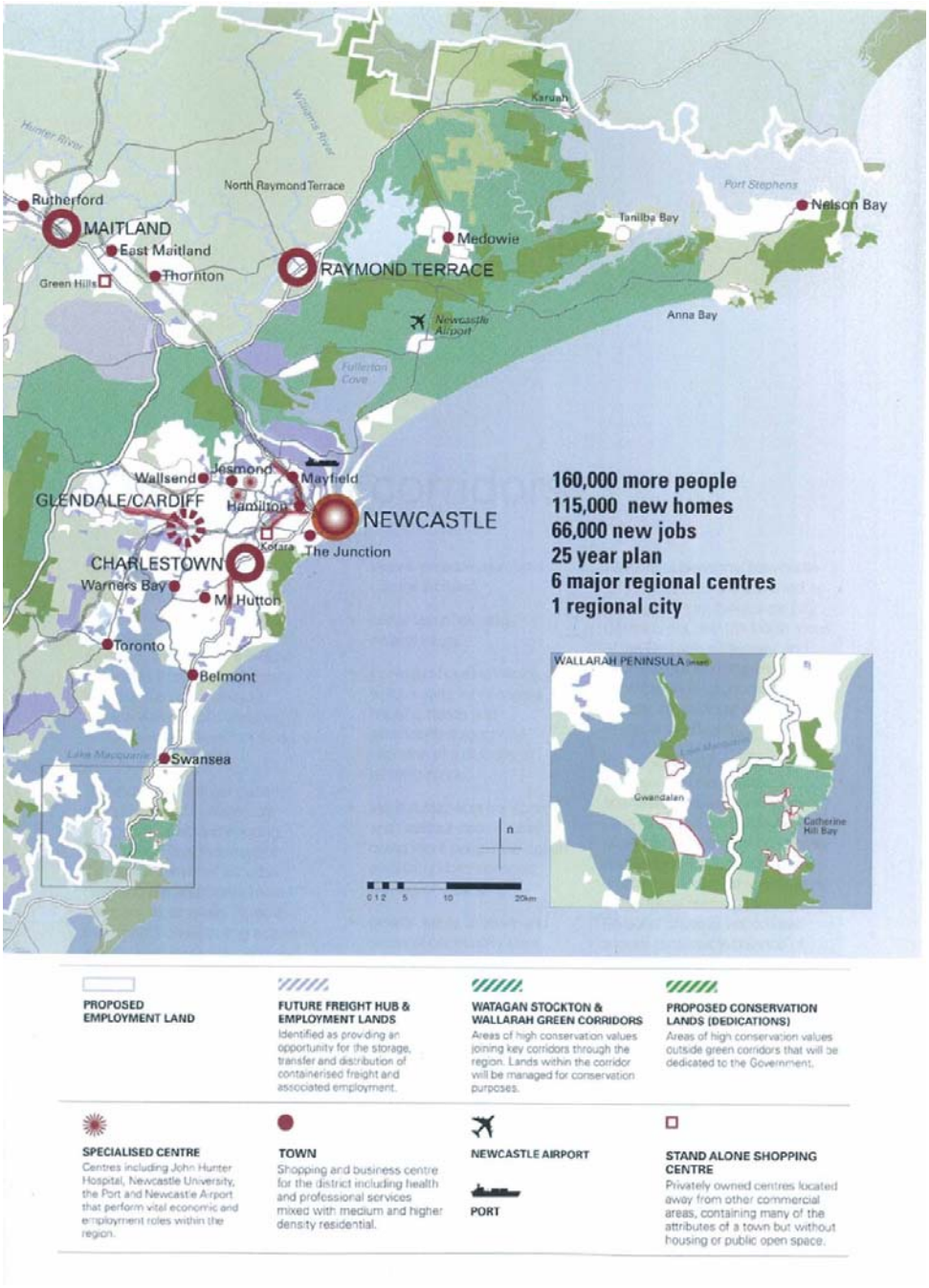

Figure 6: Extract from Lower Hunter Regional Strategy

5.8.2 Lower Hunter Regional Conservation Strategy

This Regional Conservation Plan (RCP) sets out a 25- year program to direct and drive conservation planning and efforts in the Lower Hunter Valley. It is a partner document to the Governments *Lower Hunter Strategy* (LHHRS) that sets out the full range of Government planning priorities, and proposed areas of growth.

The RCP amongst other things:-

- Canvasses tools and mechanisms that could be used in the medium to longer term to secure additional lands needed to offset the biodiversity impacts from development proposed in the LHRS and complete the corridors for optimal land management boundaries.
- Identifies a further 65,000 hectares as 'other regional conservation priorities' that should be the focus for voluntary conservation initiatives, areas for future offsetting of development impacts and for government biodiversity investments (such as through the Hunter-Central Rivers Catchment Authority (CMA).
- The 25 year investment strategy recognizes formal reservation as one mechanism to achieve positive outcomes in the Lower Hunter. The strategy also recommends complementary conservation measures which provide for conservation of biodiversity across the region. These include BioBanking, voluntary conservation agreements and protective covenants.
- Employment lands identified in the LHRS and lands currently zoned for development, but not currently developed, can potentially offset their biodiversity impacts through the mechanisms identified in the RCP. It recommends that BioBanking and planning agreements provide the focus of the efforts to offset these impacts, although it is acknowledged that the mechanisms to be adopted will be determined at the discretion of the relevant consent/determining authority and in the context of any future State Contributions Scheme.

5.9 Local Planning Controls

5.9.1 Port Stephens Local Environmental Plan 2000

The site is zoned 4(a) Industrial General pursuant to the Port Stephens Local Environmental Plan 2000.The objectives of the 4(a) Industrial General zone are:

(a) to enable the development of a wide range of industrial, service and storage activities and a limited range of business and retail activities, and

(b) to allow industrial development only after comprehensive hazard analysis and risk assessment provide adequate safeguards designed to protect the surrounding environment and ecological balance, and

(c) to regulate industries in proximity to urban localities and to ensure that adequate buffers are provided in the vicinity of adjacent zones, so that activities near the boundary of an adjacent zone will not have a significant detrimental effect on the amenity of that zone, and

(d) to enable the most efficient and effective industrial development of waterfront industrial land by encouraging associated waterfront land uses sympathetic to the environment and ecology of the waterfront lands, and

(e) to allow commercial, retail, residential, or other development only where it is associated with, ancillary to, or supportive of, industrial development, and

(f) to limit development for the purpose of bulky goods salesrooms or showrooms, and

(g) to encourage a high standard of design and amenity in industrial areas.

Figure 7 is an extract from Port Stephens LEP 2000 and illustrates the site's zoning in the context of the surrounding locality.

The proposed industrial facility is permissible within the 4(a) Industrial General zone with the consent of Council and is considered to be consistent with the objectives of the 4(a) zone.

The proposal will enable a range of industrial activities to be located within the area. The proposal will also attract a number of supporting industries to the area, thereby enhancing the range of industrial activities in the vicinity of the site.

A SEPP 33 assessment was prepared which showed that no specific measures were required for this proposal. A number of reports in support of the application, such as the ecological, air quality and noise report indicated that the construction and operation of this proposal resulted in minimal risk to the surrounding area.

This proposal is located in an industrial zone and is surrounded by land also zoned as industrial land which creates adequate buffers to adjacent zones.

The development does not propose commercial, retail, residential or bulky goods developments.

The proposal is of a high standard of design and amenity in the industrial area.

This proposal meets the objectives of the Industrial zone.

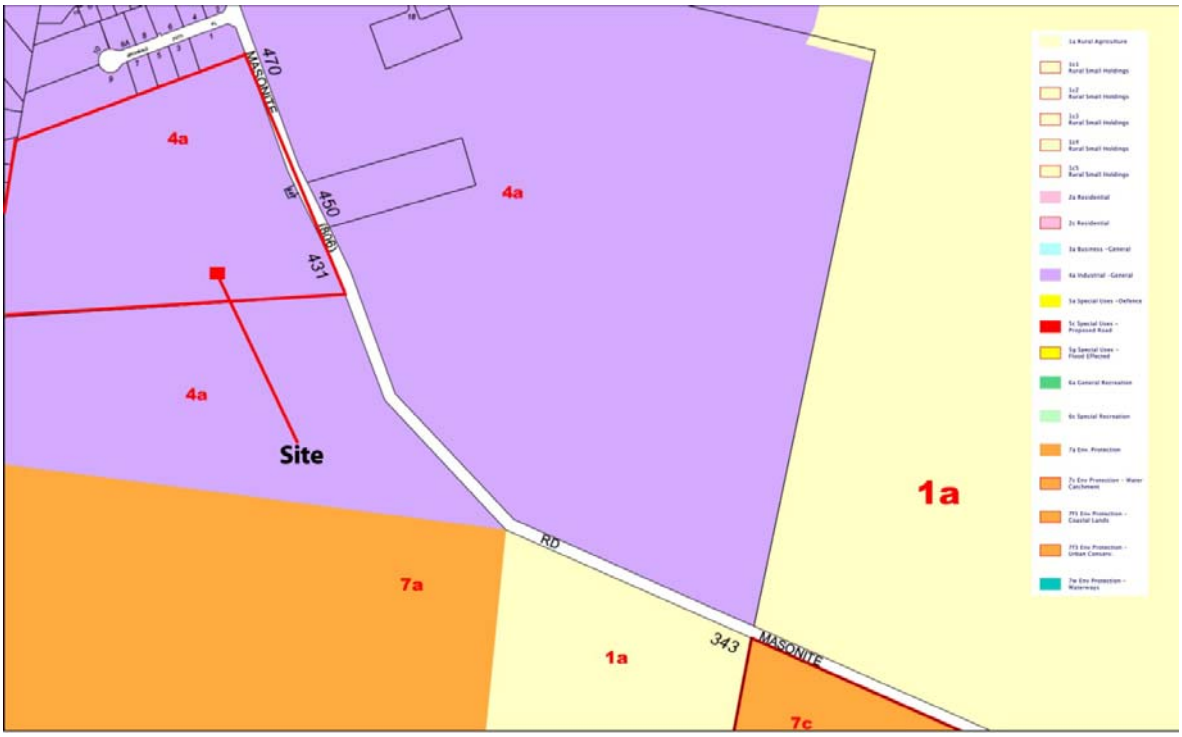

Figure 7: Extract from Port Stephens LEP 2000 – Zoning Map

The applicable land-use definition for the proposed development, based on definitions in Port Stephens LEP 2000, is an "industry".

An industry means:

"the manufacturing, assembling, altering, repairing, renovating, preparing, ornamenting, finishing, cleaning, washing, breaking up, or adapting of any goods or any articles or any part of an article for trade or sale or gain, or as ancillary to any business, but does not include an activity elsewhere defined in this Dictionary."

An industry is a permissible use in the 4(a) Industrial General zone, with the consent of Council.

5.9.2 Specific Port Stephens LEP 2000 Clauses

The following clauses are deemed relevant to the site and proposed development outcome.

Clause 38 - Development of Flood Prone Land

The south east corner of the site, adjacent to Masonite Road is partially flood prone. This represents approximately 0.8% of the subject land. Apart from a small section of the access roadway, there is no development proposed in this flood prone part of the site.

Port Stephens Council have previously indicated that they have no objection to the minor flooding on site.

Clause 47 - Services

Clause 47 of the Port Stephens LEP states that Council shall not grant consent to the carrying out of any development on any land unless water supply and facilities for the removal or disposal of sewage and drainage are available to that land, or arrangements satisfactory to it have been made for the provision of that supply and those facilities.

Hunter Water Corporation has advised that subject to requirements, water and sewerage facilities can be provided to the development. The applicant will be required to obtain a Compliance Certificate under Section 50 of the Hunter Water Corporation Act 991, prior to the issue of any Construction Certificate, as a condition of consent.

Clause 51A - Acid Sulphate Soils

The subject site is identified as being Class 4 Acid Sulphate Soils (ASS). Reference to the Acid Sulphate Soils Risk Map for Beresfield indicates that the site is in an area of low probability of occurrence of acid sulphate soil materials greater than 3m below the ground surface. Boreholes were taken to depths of between 2m to 3m.

Clause 51A(2) states that a person must not, without development consent, carry out works more than 2 metres below the natural ground surface, or works likely to lower the watertable to a depth of more than 2 metres below the natural ground surface on class 4 land.

Clause 51A(3) states that Council must not grant consent unless it has considered the adequacy of an Acid Sulphate Soils Management Plan prepared for the proposed development in accordance with the Acid Sulphate Manual, and the likelihood of the propose development resulting in the discharge of acid water.

Samples obtain during the field investigation were screened for the presence of actual and potential acid sulphate soils using methods 21Af and 21Bf of the ASSMAC Guidelines.

Following the screening tests, a sample field undertook a SPOCAS analysis, and results indicate the sample tested is not an actual or potential acid sulphate soil.

The results of the ASS screening tests indicate that all the samples tested are not actual or potential ASS. And furthermore the sandy soils above the water table would be considered oxidised and hence not potentially ASS.

Therefore an ASS management plan for works involving disturbance of site soils to the depth of the investigation is not considered necessary.

5.10 Development Control Plans

Port Stephens Development Control Plan 2007 (DCP 2007) is the only Development Control Plan applicable to this site and proposal. These elements of DCP 2007 apply to the site:

- B2 - Environmental and Construction Management;
- B3 - Traffic, Parking and Transport;
- B5 - Industrial Development
- B12 – Advertising Signage

5.11 Development Contributions

The Port Stephens Section 94A Development Contribution Plan 2006 came into effect on Monday July 3rd 2006.

The plan allows Council to levee a maximum of 1% of the cost of development for commercial, retail and other employment based development or development including mixed use, that would create a demand for public amenities and services where the proposed cost of carrying out the development is greater than $50,000.

The Section 94A Levy assists Council in providing public facilities required to maintain and enhance amenity and service delivery in the LGA.

SECTION 6

ASSESSMENT OF ENVIRONMENTAL IMPACTS

This section of the Environmental Assessment addresses the key issues identified in the Director Generals Requirements:

- Biodiversity
- Soil and Water
- Traffic
- Noise
- Hazards
- Air Quality
- Bushfire;
- Waste;
- Greenhouse Gas Emissions
- Heritage.

Each issue will be discussed with an outline of measures to be undertaken to mitigate impacts associated with the proposed development.

6.1 Biodiversity

A total of approx 13.5ha of native vegetation (*Eucalyptus pilularis – Angophora costata* Dry Sclerophyll Dune Forest) and one hollow-bearing tree will be removed as a result of the proposal. Additionally, 1.5ha of Cleared / Disturbed land will also be developed. However, approx 1ha of vegetation and two hollow-bearing trees will be retained within the site. It should be noted that the site is bounded to the north, west and majority of east by existing developed land used for industrial and commercial uses. The only vegetated connectivity occurs along the southern boundary of the site and to the south-east. Vegetation to be retained within the site occurs in the south-east corner of the site maintaining linkage for species that may utilise the onsite hollows for roosting and denning habitat and the larger offsite habitat patch for foraging. However, it should be noted that surrounding areas are also zoned for future commercial / industrial development).

General direct and indirect potential impacts associated with the proposal include:

- Road mortality of fauna through increased vehicle movements;

- Short-term light, noise and dust disturbance to fauna species during construction;
- Erosion and sedimentation impacts on retained and adjacent vegetation/habitats during construction and long-term; and
- Weed invasion from the site into adjacent areas through machinery movements.

A discussion of the potential impacts of habitat removal for threatened species recorded or considered likely to occur within the site is dealt with in detail in the RPS Ecological Assessment Report (Appendix C).

No threatened flora species were recorded within the site during surveys; however, two species have potential habitat within the site, being Newcastle Doubletail (*Diuris praecox*) and Sand Doubletail (*Diuris arenaria*). These species are unable to be detected outside of their flowering period and may not flower every year. Previous flora surveys were not undertaken during the flowering period of these species (August – September) and as such no targeted surveys have been undertaken for these species. On balance, RPS concludes that the site constitutes marginal habitat for the species and the proposed development would incrementally contribute to habitat loss in the locality. On this basis, it is concluded that it is unlikely that the proposal would have a significant impact on a local population of this species.

The RPS report concludes that the proposal is not considered likely to have an adverse impact on the local populations or connectivity of any threatened species recorded or considered likely to occur within the site due to all or a combination of the following factors:

- Small relative size of the area to be cleared;
- The mobile nature of the species under consideration;
- No severance of connectivity, fragmentation or isolation of species;
- Large patch of suitable adjacent habitat likely to support local populations of these species in similar habitats; and
- Retention of some native vegetation and two out of three hollow-bearing trees within the site.

The proposed mitigation measures from the RPS report are recommended to minimise the potential impacts of the proposal on threatened flora and fauna species and their habitats. These mitigation measures include:

- Retain the two hollow-bearing trees identified in site plans;
- Retain native vegetation as identified on site plans;
- Ensure an erosion and sediment control plan has been developed and appropriate controls are in place prior to commencement of vegetation clearing within the site;
- Implement the following clearing protocol:
    - Ensure that vegetation to be retained is accurately marked out and fenced prior to the commencement of vegetation clearing (using temporary fencing such as barrier tape) to ensure that vehicles and machinery do not accidently damage this area;
    - All hollow bearing trees to be removed within the site is to be located and marked by a qualified ecologist, prior to the commencement of vegetation clearing;

- The removal of hollow-bearing trees is to be supervised by a qualified ecologist to minimise potential impacts on resident fauna (including visual inspection, tapping tree trunk gently with machinery and observing, inspection after felling and fauna recovery);

- Nestboxes should be installed at a 1:1 ratio for each hollow removed. Nestboxes should reflect the range of sizes removed;

- Hollows from removed hollow-bearing trees should be placed on the ground within retained habitat under the supervision of a qualified ecologist to provide terrestrial shelter habitat for fauna;

- Ongoing weed management should occur within retained vegetation on site.

RPS also recommends that an offset strategy be implemented to further minimise potential impacts. In this regard, an offset strategy is currently being finalised and will involve the dedication of land for the purposes of conservation in perpetuity to ensure that the principle of maintain or improve biodiversity values is met.

The Offset Strategy forms part of the Statement of Commitments in relation to this project.

6.1.1 Offset Strategy

The development of the site will result in the removal of approximately 13.5 hectares of native vegetation within the site which provides foraging and some breeding habitat to a number of threatened species.

Whilst no EEC's or endangered populations were found to occur or have habitat within the site, potential ecological impacts can be further minimised by the provision of appropriate offset lands which will result in a net improvement in biodiversity values of the region in the medium to long term.

The Lower Hunter Regional Conservation Plan (RCP) sets out a 25 year program to direct and drive conservation planning and efforts in the Lower Hunter Valley – it is a partner document to the Lower Hunter Regional Strategy that sets out the planning priorities and identifies the prospect areas of growth.

Chapter 6 of the RCP identifies strategic regional conservation priorities to maximise the conservation of biodiversity in the Lower Hunter, An effective reserve system (creation of national park or nature reserves) is widely recognised as the most effective and secure means protecting biodiversity.

The focus of identifying a suitable offset site reflects the key priorities identified in the RCP. Map 1 of the RCP identifies the conservation status of vegetation communities in the Lower Hunter Region. Map 3 identifies regional investment priorities for the Lower Hunter Region.

A site comprising 54 hectares of land has been identified at Duns Creek, which is located within the Port Stephens L.G.A and directly adjoins land presently (or imminently) reserved under the NPW Act and is a high priority conservation area under the RCP.

The land contains an extant vegetation community identified on Map1 as being a "*reservation target not yet met*'. The land is identified on map 3 as a regional investment priority because of current "*poorly reserved vegetation communities*",

Sandvik formally offers the 54 ha parcel at Duns Creek as an additional offset measure which will result in a net improvement in biodiversity values of the region in the medium to long term.

When combined with the on-site mitigation measures, it is considered that the overall conservation outcome would be more than adequate. Benefits of the granting of this land to DECCW would include:

- It would increase Columbey National Park by an additional 54 ha in size, connected through lands previously granted to DECCW for Columbey National Park. This would increase the total size of Columbey National Park to 1210ha;
- The increase in size of Columbey National Park would in term provide greater protection to the core habitats due to a decrease in edge to area ratio. It would provide a greater contiguous block of protected habitat for fauna requiring large expanses of habitat;
- This land has been identified in the DECCW Biodiversity Investment in the Lower Hunter plan and is therefore assumed to be suitable for offsetting;
- This area has been identified in the Lower Hunter Regional Conservation Plan as containing extant vegetation for which the DECCW reservation target has not been met.
- Based on adjacent ecological reporting by EcoHub (2009) and vegetation floristic analysis prepare by Bell (2009), is likely to contain affinities of Forest Red Gum Forest (HLRF equivalent) and Spotted Gum – Ironbark Forest (LHSGIF equivalent or similar);and
- According to reporting on adjacent land by EcoHub, the 54ha land to be offered is likely to contain habitat for over 50 threatened species that occur in the vicinity.

In summary, it is considered that the combined proposed offset lands both on-site and off-site would:

- Improve and maintain the biodiversity values of the Lower Hunter region;
- Meet the objectives of the Lower Hunter Regional Strategy;
- Meet the objectives of the Lower Hunter Regional Conservation Plan;
- Be consistent with the with the Lower Hunter Regional Conservation Plan 25 yr Investment Strategy;
- Provide habitat for threatened species and one or more endangered ecological communities;
- Protect land adjacent to other land presently (or imminently) reserved under the NPW Act; and
- Protect land in the Lower Hunter CMA subregion identified as a Biodiversity Investment Layer on the Map.

6.2 Soil and Water

6.2.1 Stormwater Quantity Management

The proposed development will result in an increase in stormwater runoff on the site due to the increased percentage of impervious surfaces. These impervious surfaces, namely roof areas, concrete pavements and gravel hardstand areas, require mitigating measures to minimise the negative impact on the surrounding environment. Geoff Craig and Associates (GCA) have created a report titled “Stormwater Calculations” attached as Appendix M and address the increased runoff from the site through the provision of infiltration basins. The

infiltration basins have been sized to infiltrate the developed 100 year discharge from the site, ensuring that emergency overflow from the site will only occur during storm events of larger magnitude than the 100 year storm event. The minimum infiltration surface area was calculated in accordance with EPA's Managing Urban Stormwater, "Treatment Techniques".

Rainwater tank storage has also been provided in the report to capture runoff from the roof areas of the development for reuse. The rainwater tanks are to overflow to the infiltration basins in larger storm events.

GCA has created a Concept Drainage Plan which details the proposed drainage measures for the site. The Drainage Plan is also detailed in Appendix M.

6.2.2 Stormwater Quality Management

The proposed development will result in an increase in pollutant runoff in the stormwater on the site due to the increased percentage of impervious surfaces. These impervious surfaces, namely concrete pavements and gravel hardstand areas, require mitigating measures to minimise the negative impact on the surrounding environment. The development's roofed areas are considered to be "clean".

The GCA "Stormwater Calculations" report has addressed the increased pollutant runoff from the site through the provision of a bio-retention swale and the before mentioned infiltration basins. The bio-retention swale and infiltration basins are tertiary treatment devices and require an end-of-line gross pollutant trap (GPT) immediately upstream of the location or the provision of entrapment baskets within the upstream drainage pits to collect the gross pollutants.

The Concept Drainage Plan details proposed stormwater quality improvement measures for the site.

6.2.3 Erosion and Sedimentation Control

A key component of the proposed project is the effective and appropriate management of erosion and sedimentation resulting from the construction process. The key to effective erosion prevention and sedimentation control is to minimise the amount of disturbed natural surface at any one time and to have an effective management approach that incorporates the use of various control measures in sequence to manage stormwater during the construction process.

During construction, the site will be protected from erosion and sedimentation by the installation and maintenance of standard erosion and sediment control measures, such as silt fences, lip drains and hay bale sediment traps. These control measures are to be designed and constructed in accordance with Managing Urban Stormwater: Soils and Construction 4th Edition – Vol 1 (the "Blue Book") Landcom, 2004.

An Erosion and Sedimentation Control Plan by GCA is included as Appendix M.

6.2.4 Construction Environmental Management Plan

A Construction Environmental Management Plan (CEMP) has been prepared and is included in Appendix N. The CEMP details objectives, mitigation measures and measurable tasks to prevent or ameliorate impacts, persons responsible for each task, how each task will be completed and the timeframe for completion. The CEMP will include, but will not be limited to the following measures:

- Environmental Management System:
- Environmental Issues Management:
- Maintenance Activities:

The CEMP follows the philosophy of adaptive management. by continually improving and learning from the outcomes of previous work. The process is iterative and aspects of the management process are revisited and reviewed. As part of the adaptive management process the management measures provided by the CEMP will also include a review and assessment program where works and monitoring are regularly reviewed and reassessed to ensure the environmental outcomes are achieved.

6.3 Traffic

Insite Engineering Services Pty Ltd prepared a Traffic Impact Assessment (June 2010) to support this proposal. (Appendix D). The assessment included:

- An outline of the existing situation in the vicinity of the site;
- An assessment of the traffic impacts of the proposed development including the predicted traffic generation and its impact on existing road and intersection capabilities. This assessment will also consider construction traffic;
- Reviews parking, public transport, pedestrian and cycle way requirements for the proposed development.

The assessment is based on staffing numbers and the peak hour traffic volume at the start and end of the shift. The assessment was based on 2015 staffing levels which are predicted to be 750 persons with the AM peak period being from 5 am to 6 am and the PM peak traffic period it 3.00pm to 4.00pm.

The main access route to the site will be via the Pacific Highway and Masonite Road. The current peak hour traffic volume on the Pacific Highway is approximately 1005vph in the PM (3.15pm to 4.15pm) and 2306 vph in the AM (7.30am to 8.30am). The Pacific Highway is a four lane two way dual carriageway road with a likely mid block capacity of 3800vph. Therefore it currently has spare capacity to cater for development in the area. Masonite Road has a current peak hour traffic volume of approximately 327vph in the PM (3.15pm to 4.15pm) and 242vph in the AM (7.45am to 8.45am). Masonite Road is a two lane two way road with a mid block capacity of 1200vph. Therefore, it also has spare capacity to cater for development in the area.

The assessment found that the traffic generation in the AM peak is approximately 317 vehicles per hour and is made up entirely of employee arrivals for commencement of the day shift. The PM peak traffic generation is

approximately 322 vehicles per hour and is made up of employee departures with the completion of the day shift and approximately 10 heavy vehicle movements.

The assessment has been prepared on the basis that the PM peak period for the road network and the development almost coincides and should be considered to coincide for development impact assessment. The AM peak traffic generation period for the road network and for the development is considered separately for the development impact assessment.

During the AM peak traffic period (7.30am – 8.30am), traffic generation from the site will be in the order of 201 vehicles per day made up of staff arrivals and 40 heavy vehicle movements.

During the AM peak development traffic period (5am to 6am), the road network hourly volumes are approximately 1512 vph on the Pacific Highway and 164 VPH on Masonite Road.

Traffic associated with the construction for the facility are significantly less than the traffic volumes generated by the development itself and it is expected the existing road network would be able to easily cater for these volumes. The peak period would occur during the pouring of slabs when concrete trucks will be delivering to the site. But will occur in sort sharp peaks prior to the AM road network peak when traffic volumes on the road network are much lighter.

The analyses were undertaken using the intersection analysis model, SIDRA. The SIDRA model shows that for each peak hour period the level of service that would be experienced (immediately post development and also +10 years) remains satisfactory.

The main intersections to be impacted by the development are the Pacific Highway/Masonite Road roundabout and the Masonite Road/Camfield Drive roundabout. SIDRA modelling of these intersection post development has shown that both roundabout will continue to operate satisfactorily post development and with predicted ten year traffic growth for all likely peak traffic periods.

The proposal provide three separate accesses to the site which separates heavy and light vehicle movements

This report, based on SIDRA analysis recommends that due to the high number of turning movements a channelized right turn bay (CHR intersection type) should be constructed which provides storage for at least three vehicles or one (1) heavy vehicle.

The internal car park and heavy vehicle areas proposed for the development comply with RTA standards and Australian Standards.

The report recommends that a concrete pedestrian footpath should be constructed from the main office to the start of the existing pedestrian facilities at the Masonite Road/Canfield Drive Roundabout.

The proposal will provide parking for 51 motorbikes and 38 bicycles.

Overall the Traffic Impact Assessment found that the proposal can be supported as it will not adversely impact on the local and state road network in the vicinity of the site both during construction and post development and complies with all relevant Port Stephens Council and RTA requirements.

The Hunter Regional Development Committee considered the previous application lodged with Port Stephens Council on 13 August 2009 under the requirements of State Environmental Planning Policy (Infrastructure) 2007. (Appendix K). The committee had no objection to the proposed development provided that the following matters were addressed:

- "Each access point to the development should be constructed as an at-grade intersection with a Chanellised Right Turn (CHR) treatment. The length of the deceleration lane for each access should be determined by Council.
- Each access point should be located to minimise conflicts with other accesses to Council satisfaction and to comply with Safe Intersection Sight Distance (SISD) requirements.
- The accesses should accommodate the swept paths of the design vehicle.
- Sufficient parking should be provided to comply with Council requirements.
- Parking Areas should be appropriately signposted and linemarked to assist in directing vehicles.
- Consideration should be given to provision of bicycle and motorcycle parking.
- Provision should be made for pedestrian footpaths to link to existing facilities.
- Street lighting should be provided between the site and the Pacific Highway in accordance with the relevant Australian Standard.
- A construction Traffic Management Plan should be provided to Council prior to any site works.
- All of the above to Council requirements.

The RTA has advised that the minutes of the previous meeting for this proposal will be taken into consideration as part of this proposal.

All of the above matters except for the street lighting have been adopted as part of the preparation of this Environmental Assessment. It was determined that Masonite Road was a local road and the site was adequately lit from within. Council, in its determination of the development application, did not include street lighting as a condition of consent.

6.4 Noise

The subject site is well located for industrial development being separated from any significant residential areas and within an industrial area. There are however a number of potentially noise sensitive receivers adjacent to the proposed development site that require consideration in terms of potential from noise impacts associated withy the proposed development. The facility will also operate 24 hours per day, 365 days per year when operating at full capacity.

An acoustic assessment was undertaken by Advitech Pty Ltd (June 2010) to demonstrate that the proposal will meet the amenity and intrusive criteria in the NSW EPA Industrial Noise Policy. A copy of the report is attached as Appendix O.

The detailed analysis has measured existing background noise levels and determined noise outputs for the proposed development.

The area at the rear of the site is shown on the site plan as Roadbase. This area will be used for machinery testing during day time periods. The potential noise impacts associated with machinery testing on this part of the site was undertaken as part of this assessment and found to comply with all criteria during daytime hours.

The modelling results indicate that the predicted LAeq, 15 minute noise levels will be achieved during the day and evening under all operational scenarios.

Operation of mining machinery during the night period is likely to generate an impact exceeding the Project Specific Noise Levels at adjacent residential receivers. Compliance with the Project Specific Noise Levels is dependent on ensuring the operation of mining machinery is restricted to the day period. This will also ensure compliance with Sleep Disturbance Criteria.

The noise impact assessment recommended that;

- testing of mining machinery, specifically underground mining vehicles, continuous miners and drill rigs should be restricted to the day (7:00 to 16:00) period;
- testing of the DR460 drill rig, specifically purging of the drill head should not be undertaken within 30m of the site boundary; and
- ensuring external (drive-in and personal access) doorways on the western and northern façade remain closed during the hours 22:00 to 7:00 on all buildings.

Further, assessment of the construction noise impact indicates that proposed development will comply with the Construction Noise Guideline if construction activities are restricted to the standard hours 7.00 to 18:00.

6.5 Hazards

Preliminary risk screening of the proposed development is required under NSW State Environmental Planning Policy No. 33 (SEPP 33). SEPP 33 requires potentially hazardous and/or offensive developments to undertake a Preliminary Hazard Analysis (PHA) to determine the level of risk to people property and the environment at the proposed location and in the presence of controls.

Advitech Pty Ltd prepared a preliminary risk screening of the proposed development to determine if the development should be considered under SEPP 33 (Appendix L)

This assessment considered the following factors of Dangerous Goods Storage and Handling include:

- The majority of dangerous goods will be stored in self-bunded units on the road base area to the north of the assembly building. Small amounts of dangerous goods decanted from this area will be held in manufacturing areas of the site in dangerous goods cabinets.
- Metal fabrication will involve the use of acetylene, compressed oxygen and other gases. These will be stored in appropriately designed storage systems in the gas store.
- Diesel and waste oil will be stored in bulk storage vessels located to the north of the assembly building.
- Liquid nitrogen will be stored in a bulk tank between the car park and the manufacturing building.

The volumes and frequency of dangerous goods deliveries do not exceed the transportation screening threshold and consequently the development is 'not potentially hazardous' with respect to transport.

The Assessment concluded that *"the quantities of dangerous goods proposed for storage at the Heatherbrae site do not result in the screening threshold (storage or transport) being exceeded. As such the development is considered 'not potentially hazardous' and SEPP 33 does not apply".*

6.6 Air Quality

The NSW Department of Environment, Climate Change and Water (DECCW) specify impact assessment criteria in the publication *Approved Methods for the Modelling and Assessment of Air Pollutants in NSW,* 2005. The *Protection of the Environment Operations (Clean Air) Regulation 2002*, specify limits for emission air impurities from activities and plant for both scheduled and non-scheduled premises. The proposed development does not require an Environment Protection Licence under the Protection of the Environment Operations Act 1997 and is therefore a 'non-scheduled premises'.

Advitech Pty Ltd has prepared an Air Quality Impact Assessment for this proposal. AUSPLUME modelling of air impurities from the proposed Sandvik facility was undertaken to enable an assessment of potential air quality impacts. (Appendix H)

The assessment demonstrates that emission concentrations and predicted Ground Level Concentrations for air pollutants achieve compliance with Schedule 6 of the Protection of the Environment Operations (Clean Air) Regulation 2002, and the design criteria specified in the Approved Methods for the Modelling and Assessment of Air Pollutants in NSW 2005.

The assessment concluded that the development and operation of the proposed Sandvik facility will achieve the environmental and regulatory requirements for the management of air emissions and as such, it is concluded that the development will not pose a significant impact on air quality in the locality.

6.7 Bushfire

The proposed site is identified as being in a Bushfire Prone Area and the surrounding vegetation represents a potential threat to the proposed development. Buildings within this type of development are classified as Class 5 – 8 within the BCA. Therefore, the provisions of PBP 2006 do not strictly apply.

RPS Australia East Pty Ltd (RPS) undertook a Bushfire Threat Assessment (Appendix E). Notably the assessment and recommendations contained within this report are based on Industrial Development.

This BTA found the majority of land surrounding the site to support vegetation consistent with Open Forest as described by PBP (2006). In summary, the following key design recommendations have been generated to enable the proposed development to comply with PBP 2006:

- 10m Asset Protection Zones (APZ's) are recommended between the proposed industrial subdivision and the vegetation to the South, South-east and west of the site. These will be established within the site and will be maintained to the standard of an IPA.

- Any vegetation within the development area, not including the 1ha parcel of retained vegetation situated in the south-east of the site should be managed in accordance with specifications for an IPA as listed in Section 5.1.
- Access roads as a minimum be formalised to a width capable of being used by fire fighting vehicles (standard minimum width is 8m kerb to kerb with shoulders on each side).
- Future buildings should have due regard to the specific considerations given in the Building Code of Australia and recommendations made in Section six.

A similar Bushfire Threat Assessment was prepared and referred to the local NSW Rural Fire Service for comment as part of the development application lodged with Port Stephens Council (under Part 4 of the EP&A Act 1979). The Rural Fire Service had no objection to the proposal. However, the Service did recommend that a number of conditions be imposed on the consent, in relation to water and utilities, access, evacuation and emergency management and landscaping.)

6.8 Waste

The proposal will comply with Council's requirements for the management of waste including storage, handling & disposal of waste and recyclable materials on the site. All putricible waste will be disposed of in large commercial bins located around the site. Sandvik will manage and remove waste through a commercial contractor while all recyclable waste will be removed by recycling contractors. No other waste is anticipated to be removed from the site. A Waste Management Plan has been prepared in accordance with Port Stephens DCP and is included in Appendix P.

6.9 Greenhouse Gas Emissions

A Scope 1, 2 and 3 Greenhouse Gas and Energy Assessment for the Project was undertaken by SEE Sustainability to assess the potential Greenhouse Gas and Energy Impacts associated with the construction of this proposal. This report is attached as Appendix Q.

The assessment was prepared regarding:

- Estimated annual production schedule;
- Annual natural gas, electricity and LPG consumption at existing Lower Hunter sites; and
- Estimated volumes of on-site and end user diesel consumption.

As a result of the findings, the Greenhouse Gas and Energy Assessment provided a number of strategies to the proponent to implement, where possible, as energy and greenhouse management initiatives during project design, construction and operation. These strategies include energy conservation plans (with specific targets) and greenhouse gas management programs.

The Energy and Greenhouse Assessment to minimise energy consumption include the following recommendations:

- Designing buildings with regard to energy efficiency. Strategies include:
  - Orientation of the building, insulation in roofs and walls, window glazing and shading to reduce the load on air conditioning systems;
  - Maximising the use of natural light where possible;
- Equipment selection with regard to energy efficiency. Strategies include:
  - Installing energy efficient lighting;
  - Installing energy efficient heating, ventilation and air conditioning (HVAC) systems;
  - Using energy efficient appliances such as computers, monitors and fridges;
  - Using high efficiency motors on pumps, fans and conveyors (where possible);
  - Using appropriately sized motors on pumps, fans and conveyors – electric motors are considerably less energy efficient when operating below 40% of their full rated load, so motor oversizing can lead to unnecessary energy costs as well as a higher initial purchase price;
  - If variable loads are expected, installing variable speed drives (VSD's) on electric motors may provide significant energy savings by matching the performance of the motor to the required load. Depending on the application, industrial experience has shown that VSD's can reduce energy costs by 25 to 40%, resulting in significant savings over and above the initial purchase cost of a VSD;
  - Selecting energy efficient forklift models and operating them efficiently;
  - Installing energy efficient air compressors;
- Consider the use of cogeneration / trigeneration for electricity and heating / cooling requirements.
- Maintaining equipment with regard to energy efficiency. Strategies include:
  - Ensuring that furnaces are properly insulated, leaks are sealed and they are tuned for maximum efficiency;
  - Maintaining air compressor systems at the minimum required air pressure, and ensuring the system is maintained to eliminate leaks;
- Educating staff to ensure lights and equipment are turned off when not in use.

6.10 Heritage

6.10.1 Aboriginal Archaeology

An Aboriginal Heritage Impact Assessment was prepared for the site by RPS (Appendix F).

This assessment comprised of a detailed review of the preliminary archaeological assessment completed for the Study Area, analysis of previous archaeological reports, environmental data, and search results from Aboriginal Heritage Information Management Systems (AHIMS) as well as a detailed site survey of an archaeologically sensitive landform identified in the previous assessment. This assessment has been conducted in accordance with the Department of Environment, Climate Change and Water's (DECCW) Interim Community Consultation requirements for Applicants (2004). Aboriginal community members were contacted and present during the survey and this report reflects their commetns and views.

The Aboriginal Heritage Impact report found that there were no Aboriginal sites identified during the survey. The Archaeology Assessment recommended that no further archaeological investigation is required in advance of the

proposed development, although the Proponent should provide the opportunity to inspect the Study Area after vegetation clearance has taken place.

6.10.2 European Heritage

Under the Australian Heritage Council Act, 2003, the Australian Heritage Council is requireed to maintain a register of places with significant heritage values within the Register of the Natioanl Estate. The commonwealth Minister for the Environment is required to have regard to the heritage significance of places listed on the register.

The subject site is not listed on the National Heritage Register.

6.11 Geotechnical Assessment

Topographically the site is located on a sand plain with some small dunes to the south of the site. The site is flat to slightly sloping to the south.

Drainage appears to be by direct infiltration into the sandy soils with no evidence of overland flow across any part of the site.

The Geotechnical Assessment Report (Appendix G) prepared by Coffey (June 2010) makes reference to the 1:100,000 scale Newcastle Coalfield Regional Geological Series Sheet 9231 which indicates that the site is underlain by Quaternary aged deposits comprising sand associated with the Tomago Sand Beds an inner barrier dunal system.

Field work was undertaken for the site which included boreholes, Dynamic Penetrometer (DCP) Testing and Two Double Ring infiltration tests.

Site preparation advice was provided in the Coffey Geotechnical Assessment, recommending proposed building areas be stripped to remove all vegetation, root affected, topsoil and existing fill to a depth to be determined by the foundation option that is adopted. Following stripping, the exposed subgrade materials should be proof rolled. Any wet or excessively deflecting material should be over excavated and backfilled with an approved select material. Approved sand fill beneath structures should be placed in compacted layers. Earthworks should be carried out in accordance with the recommendations outlined in AS3798 - 2007.

The geotechnical assessment provides a number of recommendations for the site including:

- Site preparation and earthworks;
- Foundation recommendations;
- Retaining wall (up to 2m height) design parameters;
- Trafficability of the site during excavation and construction;
- The suitability of site soils for reuse as engineered fill;
- Infiltration rates;
- Acid sulphate soil conditions and requirements for an acid sulphate soil management plan.

SECTION 7

DRAFT STATEMENT OF COMMITMENTS

The following draft Statement of Commitments outlines the measures that will be implemented with regard to the management and monitoring of the key environmental issues identified in the Environmental Assessment.

7.1 Plans, Documentation and Approvals

The proposed development will be completed in accordance with the submitted plans and descriptions of the proposed development provided in the Environmental Assessment.

It is noted that any changes to the proposed development will require further approval of the relevant authorities.

The proposed development will be carried out in accordance with all approvals granted by relevant authorities.

7.2 Environmental Management

A Construction Environmental Management Plan for the proposal will be implemented in accordance with the Construction Environmental Management Plan prepared by Drayton Building and Construction P/L.

7.3 Flora and Fauna

The proposed development will seek to minimise the impact on Flora and Fauna by adopting the recommendations made in the Ecological Assessment Report (June 2010) prepared by RPS Australia East Pty Ltd . This will involve the following:

- Retain the two hollow-bearing trees identified in site plans;
- Retain native vegetation as identified on site plans;
- Ensure an erosion and sediment control plan has been developed and appropriate controls are in place prior to commencement of vegetation clearing within the site;
- Implement the following clearing protocol:

    - Ensure that vegetation to be retained is accurately marked out and fenced prior to the commencement of vegetation clearing (using temporary fencing such as barrier tape) to ensure that vehicles and machinery do not accidently damage this area;

    - All hollow bearing trees to be removed within the site are to be located and marked by a qualified ecologist, prior to the commencement of vegetation clearing;

- The removal of hollow-bearing trees is to be supervised by a qualified ecologist to minimise potential impacts on resident fauna (including visual inspection, tapping tree trunk gently with machinery and observing, inspection after felling and fauna recovery);

- Nestboxes should be installed at a 1:1 ratio for each hollow removed. Nestboxes should reflect the range of sizes removed;

- Hollows from removed hollow-bearing trees should be placed on the ground within retained habitat under the supervision of a qualified ecologist to provide terrestrial shelter habitat for fauna;

- Ongoing weed management should occur within retained vegetation on site.

7.4 Offsets

The offset strategy involves the dedication of land for the purposes of conservation in perpetuity and to ensure that the principle of maintain or improve biodiversity values is met. The details include:

- The proponent will provide offset land to compensate for loss of biodiversity as a consequence of the proposed development. The offset land must:

    1. Have a minimum area of 54 hectares;

    2. Meet the objectives of the Lower Hunter Regional Conservation Plan (RCP), in particular:-

        a) Be identified on the RCP Map 1 as an extant vegetation community being a "reservation target not yet met";

        b) Identified on the RCP Map 3 as a regional investment priority

        c) Adjoin or be adjacent to land granted or proposed to be granted to DECCW for addition to the Columbey National Park

7.5 Traffic and access

The recommendations contained in the Traffic Impact Assessment prepared by Insite Engineering Services Pty Ltd dated June 2010. This plan includes the following measures:

- Reconstruction and upgrade of Masonite Road along the frontage of the site to a suitable standard for industrial development and in accordance with Council's requirements.

- Each access point to the development will be constructed with a channelized right turn bay (CHR intersection type). These right turn bays should provide storage for at least three (3) vehicles or one (1) heavy vehicle.

- The internal car park and heavy vehicle areas proposed for the development comply with the requirements of the RTA's Guide to Traffic Generating Development, PSDCP 2007 Part B3 – Parking, Traffic & Transport as well as AS 2890.1-2004 and AS 2890.2-2002.

- A concrete footpath will be provided from the main office to the start of the existing pedestrian facilities at the Masonite Road/Camfield Drive roundabout.

- The provision of a covered parking area to accommodate 51 motor cycles and 38 bicycles.

7.6 Acoustics

The proposed development will comply with the requirements of DECC in relation to criteria for noise emissions. In particular, the proposed development will comply with the recommendations provided in the Noise Impact Assessment prepared by Advitech Pty Ltd, dated 18 June 2010.

The Construction Environmental Management Plan will be prepared to manage noise emissions.

More specifically, the following will be included:

- testing of mining machinery, specifically underground mining vehicles, continuous miners and drill rigs should be restricted to the day (7:00 to 16:00) period;
- testing of the DR460 drill rig, specifically purging of the drill head should not be undertaken within 30m of the site boundary;
- ensuring external (drive-in and personal access) doorways on the western and northern façade remain closed during the hours 22:00 to 7:00 on all buildings; and,
- Construction activities will be restricted to 7:00 to 18:00.

7.7 Air Quality

The proposed development will comply with the recommendations provided in the Noise Impact Assessment prepared by Advitech Pty Ltd, dated 18 June 2010 comprising:-

- All vehicles and machinery will be maintained to minimise emissions to air.

- All spray-painting will be contained within the proposed spray booths. The spray booths will be designed to meet the specifications and standards of Workcover and DECCW.

- Dust will be controlled during the construction phase through implementation of appropriate management measures. Filling operations will involve the use of larger or heavier type of fill material, thus minimising the opportunity for smaller particulates to be carried by wind.

- The Construction Environmental Management Plan will be prepared to manage potential air emissions and submitted as required prior to construction. The plan will address dust control.

  Dust control measures include the following:

  - Covering loads when required;
  - Changing operations under excessive wind conditions including ceasing of operations if required;
  - Use of water tankers as required to control dust;
  - Rehabilitation through vegetation of surfaces to be left unsealed;
  - Truck wheel washes or other dust removal measures;
  - Ensuring that all service areas are sealed, or as a minimum treatment, covered with gravel;
  - Dirt tracked onto access routes will be cleaned away as soon as practicable;
  - Vehicles will be regularly washed when practicable.

7.8 Water Quality

Water quality measures will be installed in accordance with the report prepared by Geoff Craig and Associates (June 2010)

The Concept Drainage Plan details proposed stormwater quality improvement and proposed drainage measures for the site.

Rainwater tank storage will be provided to capture runoff from the roof areas of the development for reuse. The rainwater tanks are to overflow to the infiltration basins in larger storm events.

7.9 Soil Erosion and Sedimentation

During construction, the site will be protected from erosion and sedimentation by the installation and maintenance of standard erosion and sediment control measures, such as silt fences, lip drains and hay bale sediment traps. These control measures are to be designed and constructed in accordance with Managing Urban Stormwater: Soils and Construction 4th Edition – Vol 1 (the “Blue Book”) Landcom, 2004.

7.10 Acid Sulphate Soils

In the event that it is necessary to disturb acid sulphate soils, an Acid Sulphate Soils Management Plan will be prepared and submitted to the Department of Planning prior to the disturbance of such soils.

7.11 Waste Management

All waste as identified in the Environmental Assessment will be stored on-site with the waste stream separated into recyclable and non recyclable and disposed of or recycled by approved contractors. The proposed development will comply with the Waste Classification Guidelines (DECC) and the Waste Management Plan prepared by Drayton Building and Construction P/L.

7.12 Hazardous Material

Hazardous Materials will be stored in accordance with the requirements contained within the SEPP 33 Screening report prepared by Advitech and Workcover Requirements.

7.13 Archaeology

The proposed development will comply with the recommendations made in the Aboriginal Heritage Impact Assessment prepared by RPS (June 2010). These include:

- Ensuring all staff and contractors working on the site are:
    - Made aware that Aboriginal sites are found in the local area;
    - Provided sufficient training so that they are able to identify an Aboriginal site is uncovered;
    - Made aware of their legal obligations and who to report any such finds to.

- Aboriginal representatives will be consulted and given the opportunity to inspect the site after the vegetation has been removed and before other earth moving works commence.

- If any Aboriginal sites or objects are identified during future works, works in the vicinity must cease immediately. A suitably qualified archaeologist should inspect the site and determine an appropriate course of action for the site.

- If any skeletal remains are identified at any stage during the proposed works, all works in the vicinity must cease immediately. A suitably qualified forensic archaeologist and the Police should be contacted immediately and a suitable course of action determined.

7.14 Further Approvals

The proponent will obtain a Construction Certificate prior to the implementation of the engineering and building works.

7.15 Services

The proponent will obtain and comply with the requirements of relevant public authorities regarding connection to, relocation and/or adjustment of services required by or affected by the construction and operation of the proposed development.

7.16 Outdoor Lighting

All outdoor lighting will be designed to comply with the requirements of AS 4282, Control of Obtrusive Effects of Outdoor Lighting.

7.17 BCA

The proposed development will comply with either the 'deemed to satisfy' provisions of the Building Code of Australia, or alternatively provide a performance-based solution prepared by a suitably qualified person.

7.18 Landscaping

All landscaping will be carried out in accordance with the landscape concept prepared by GCA and included as Appendix J.

7.19 Section 94 Contribution

The proponent will pay contributions in accordance with the Port Stephens Section 94A Development Contribution Plan 2006.

The payment of this contribution will be made to Port Stephens Council prior to the issue of a Construction Certificate.

SECTION 8

CONCLUSION

Sandvik Mining and Construction Australia P/L seek to establish a Manufacturing, Assembly, Aftermarket Service, Regional Distribution Centre and Training Facility (including research and development and regional head office) on a 16 hectare industrially zoned site located at No. 431 Masonite Road, Heatherbrae, New South Wales.

The Lower Hunter is an ideal location due to the availability of a highly skilled mine services employment base capable of operating the manufacturing and maintenance facility as well as providing the expertise required for training and management needs.

The subject site was considered the most suitable of those investigated for the following reasons having regard to the following attributes:

- The site is zoned for industrial purposes, permitting the proposed use;
- The site has an area capable of accommodating the proposed development;
- The site has good access to major transport routes including the national highway network with access to the Pacific Highway and the New England Highway with links to Sydney, Newcastle, the Hunter Valley and the north coast of NSW;
- The site is located close to Sandvik's primary customer base being the mining companies operating in the Hunter Valley;
- The site is located in close proximity to the Newcastle Airport to allow efficient connections to outside the Hunter region and to ensure its viability as a Regional Distribution Centre and Training Facility;
- The site has good access to the Port of Newcastle;
- The site area is suitable for the proposed development;
- The site is level for the safe manoeuvring of machinery on site;
- The location of this site within this industrial area allows for the safe testing of machinery on site;
- With good management practices the site has few environmental and physical constraints to development;
- There are few sensitive receiver/receptors within close proximity to the site; and
- The site is in close proximity to existing staff currently employed by Sandvik therefore core staff currently employed by Sandvik will not need to relocate.

The proposed development is a Major Development to which the Major Development SEPP (and Part 3A of the Act) applies. Accordingly, a comprehensive Environmental Assessment has been undertaken for the proposed development based on the findings of an extensive range of technical studies. The Environmental Assessment has identified and addressed the key issues relevant to the proposed development including those outlined in the Director General requirements. A range of management measures have been recommended to ensure that no significant adverse impacts will occur as a result of the development proposed.

The Statement of Commitments proposed will ensure that the development operates within acceptable regulatory parameters.

The socio-economic impacts of the development by Sandvik are significant to the Port Stephens community and the wider region of Port Stephens. In summary, it is considered that given the appropriate landuse zoning, the strategic planning objectives of the Lower Hunter Regional Strategy, combined with the manageable physical and environmental constraints, and taking account of significant employment opportunities and investment, the proposed development is well justified. In particular, it should be noted that there is no realistic alternative that offers the attributes of the site.

The main economic benefits are summarised as follows:

- Significant economic benefits over the construction phase;
- Significant ongoing annual economic and employment benefits;
- Large annual benefits to the local, regional, State and National economies.

The proposal will provide more job diversity with a significant increase for skilled workers. It has the potential to attract and retain high and medium skilled workers in the region, benefitting the region socially and economically. The attraction of such skilled workers will also help in diversifying the economic base of the Hunter Region. The proposal will also create employment opportunities for local residents which have recently experienced above average unemployment rates.

The community perception of Sandvik is positive as the facility injects significant economic benefits to the community through direct and indirect employment opportunities and local procurement of goods and services. Sandvik is expected to strengthen this perception through the development of further economic stimulus and its identity in the Hunter Region.

On balance, the potential socio-economic impacts of the development of a Manufacturing, Assembly, Aftermarket Service, Regional Distribution Centre and Training Facility (including research and development and regional head office) for Sandvik Mining and Construction Australia Pty Ltd are significant for the Port Stephens community and the wider region of the Hunter Valley.

It is considered that this report identified the proposed development as being of significance to the Hunter Region, and the state of NSW, both in terms of its initial investment value through construction but also in terms of its ongoing contribution to the economy through the Sandvik business operations.

Importantly, the project represents a significant employment generator to the region. The potential economic benefits and employment opportunities arising from this proposal in combination with the comprehensive measures to be undertaken to minimise any adverse impacts on the receiving environment render the proposed development as justified and worthy of approval.