

Environmental Assessment Report

Coca-Cola Amatil Northmead Redevelopment Project Project Application No. 05-0121

Submitted to
NSW Department of Planning
On behalf of Coca-Cola Amatil (Aust) Pty Ltd

August 2006 ■ 05309

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Statement of Validity

Environmental Assessment

This Environmental Assessment has been prepared and submitted under Part 3A of the *Environmental Planning and Assessment Act 1979* by:

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Project Summary

Applicant	Coca-Cola Amatil (Aust) Pty Ltd 71 Macquarie Street Sydney NSW 2000
Subject Site	Coca-Cola Amatil (NSW) Northmead
Lot & DP	Lot 21 in DP 632950 and Lots 101 & 111 in DP 800504
Address	102-128 Briens Road, Northmead, NSW 2151
Project	Coca-Cola Amatil Northmead Redevelopment Project

Declaration

I certify that I have prepared the contents of the Environmental Assessment in accordance with the requirements of the *Environmental Planning and Assessment Act 1979* and Regulation and that, to the best of my knowledge, the information contained in this report is not false or misleading.

Signature



Name

Vivienne Goldschmidt

Date

30 August 2006

Summary

Background

This Environmental Assessment Report (EAR) for the Coca-Cola Amatil Northmead Redevelopment Project is submitted to the Minister for Planning pursuant to Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act) and State Environmental Planning Policy (Major Projects) 2005.

Approval is sought by Coca-Cola Amatil (Aust) Pty Ltd (CCA) for works at its 13.5 hectare site at Briens Road, Northmead. The proposed development centres on the construction of a new high-bay automated storage facility, 32 metres in height, adjoining the existing manufacturing operation. The existing warehouse area will be vacated, allowing reconfiguration and expansion of the manufacturing operation, including the addition of three new production lines. The capital investment value of the project is \$150 million.

Northmead manufacturing facility

Northmead is CCA's primary manufacturing facility in NSW and the largest CCA operation in Australia. Over the last 30 years, CCA has made a significant investment in site infrastructure at Northmead with an estimated total replacement cost, excluding land, in excess of \$200 million.

CCA has progressively acquired and occupied a series of contiguous properties at Briens Road, Northmead and the site has developed haphazardly now comprising a series of disparate and largely unrelated buildings accommodating various functional groups and activities. Existing buildings and structures, current uses and access and parking are described in Section 2.5 of this report. Currently over 700 people are employed directly at Northmead and a further 300 mobile sales representatives and merchandisers operate from the site.

The capacity of the site has now been reached. This has resulted in an increasing need to import product from other States and a proliferation of external warehouse facilities. Due to space constraints, approximately 40% of total CCA NSW output (250,000 pallets per annum) is double-handled: that is, loaded at Northmead, transferred, and then unloaded at another

location prior to despatch to the customer. This places pressure on the regional road network by generating in excess of 12,500 additional B-double truck movements per annum from the Northmead Site.

Site location and context

The site is located in an industrial zone in the Parramatta local government area at the junction of Briens Road and Old Windsor Road, about 2 kilometres north-west of the Parramatta CBD. Notable features of the locality include Toongabbie Creek and its associated riparian zone along the rear boundary of the site; the Westmead Hospital precinct located immediately to the south across the creek; the Cumberland Highway; and the North-west/Parramatta–Rouse Hill Bus Transit Way, currently under construction.

Surrounding development, including land uses and built form are described and illustrated in Section 2.4 of this report. In summary, the surrounding area is characterised by a mix of land uses including employment and special uses; high-rise apartment buildings; low density and medium density residential uses; and mixed use zones around the Westmead Hospital and station.

Redevelopment strategy

Overview

CCA has extensively investigated various options and strategies to increase the efficiency and reduce the economic and environmental costs of manufacturing, warehousing and distribution arrangements in NSW, including the highly constrained capacity of the Northmead plant. The investigation concluded that Northmead should remain the focus of CCA manufacturing capacity in NSW on an ongoing basis.

The proposed redevelopment is integral to CCA's strategy to expand capability and service forecast growth in sales to 2020 and beyond. The strategy aims to reduce supply chain costs by eliminating unnecessary movement of product, and to provide safer working environments by reducing forklift and manual handling. It consists of the following elements:

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- Relocation of the CCA NSW Equipment Services and CCA Australia Finance Operations to new premises at the Northmead site (not part of this Project Application).
- Consolidation of NSW warehouse operations through construction of a 32-metre high state-of-the-art automated warehouse at the Northmead facility adjoining the manufacturing operation (cost: \$90M). The warehouse will have a 55,000 pallet storage capacity and despatch full-pallet product to Bulk customer distribution centres (Coles, Metcash, Woolworths); CCA operations in other States; and the proposed mixed-pallet distribution centre at Eastern Creek.
- Construction of a purpose-built mixed-pallet distribution centre on a 15ha parcel of land at Eastern Creek, adjacent to the M7 motorway (not part of this Project Application) to cater for all NSW deliveries to Route customers (corner stores, petrol stations, cafes).
- Vacating the existing Northmead warehouse area to enable reconfiguration and expansion of beverage manufacturing with the installation of three new production lines (cost: \$60M) linked directly to the new warehouse.

High-Bay Warehouse design

The 55,000-pallet storage capacity required for Northmead equates to 13 levels of storage. Facilities utilising this high-rise approach to warehousing are commonly referred to as High Bay Warehouses (HBW). The warehouse will be fitted out with racks and pallet-handling cranes for automated storage and retrieval of product.

A high-rise design substantially reduces the footprint of a warehouse. In the case of Northmead more than 80,000 square metres using traditional/current methods reduces to around 15,000 square metres, so enabling co-location of manufacturing and warehousing operations on the existing site and providing space for expansion of the manufacturing facility.

HBW design principles are described in detail in Section 3.2. These principles determined the design of the proposed Northmead warehouse facility and were key factors in considering alternatives.

Need for the proposal at Northmead

The rationale for expanding CCA's manufacturing and warehousing capacity at Northmead is covered in detail in Section 3.3 of the report.

Development at Northmead realises the potential of a well-established existing facility in an industrial zone and takes advantage of the available land, topography and site form. Utilisation of vertical space for storage is highly efficient as it reduces the required building area by a factor of five when compared to conventional warehouse methods. Consolidation of multiple facilities to a single co-located operation and maximum re-use of existing buildings, avoids unnecessary redevelopment and allows CCA to continue to grow at Northmead without increasing its environmental footprint.

Northmead is ideally located at the demographic heart of the Sydney Metropolitan Region which represents approximately 80% of total NSW sales volume, thereby minimising the total amount of road travel incurred in the production and distribution of CCA products.

The option to replace the entire Northmead operation with a greenfield facility was discounted on the basis of the prohibitively high capital cost for complete relocation and minimal operating advantage. Closure of the Northmead operation could result in technical redundancies for up to 700 employees and loss of employment in the local area.

If the proposed new warehouse at Northmead were not to proceed, alternative strategies include locating total warehouse operations at Eastern Creek or foregoing expansion of the manufacturing and instead importing additional product from Queensland and/or Victoria. The former strategy would generate an additional 26,000 B-double movements per annum (2008) to transfer product between Northmead and Eastern Creek, while the latter would result in additional B-double movements on the Hume and Pacific Highways. Both alternatives substantially increase operating costs for CCA, with attendant environmental disbenefits.

Summary

Locating the incremental production lines at a new facility would require an additional capital outlay over and above that already proposed, would fail to leverage existing infrastructure with spare capacity, and result in increased product transport to consolidate inventory holdings between locations.

Alternatives considered

In arriving at the proposal, an exhaustive study of alternative warehouse arrangements and configurations on the Northmead site was undertaken. Details of each and the reasons they were discounted are set out in Section 3.3 of the EAR. Alternatives considered were:

- maintaining the status quo;
- changing the height of the warehouse (40 metres, 32 metres and less than 32 metres);
- adjusting the footprint and using different locations on the site;
- breaking up the mass / bulk of the structure;
- splitting capacity between Northmead and Eastern Creek (or another site);
- sinking the structure; and
- staging the proposal.

Having determined that Northmead is the best economic location for expansion of manufacturing operations, co-location of the primary full goods storage facility is the logical extension of this strategy. Situating the main warehouse immediately adjacent to the primary manufacturing facility is the optimum logistics configuration as it maximises efficiency and avoids unnecessary road movement of product. Significant environmental benefits for the Sydney Metropolitan Region that flow from the preferred redevelopment option include a substantial reduction in B-double truck movements on the regional road network, forklift use at CCA operations and savings in diesel and LPG consumption with attendant reduction in greenhouse gas emissions

Development proposal

Consent is sought for the following:

- demolition (see Section 4.2 of the EAR);
- site preparation works, including excavation and bulk earthworks (see Section 4.3);
- construction and use of a new 32 metre high automated high-bay warehouse and associated staging area (see Section 4.4 and below);
- adaptation of an existing warehouse to accommodate three new production lines and manufacturing services including boiler, refrigeration plant and air compressor (see Section 4.5 and below);
- building envelope for a new building containing a canteen, offices and training facilities (see Section 4.6);
- building envelope for a new gatehouse and driver amenities (see Section 4.7);
- upgrading of the on-site stormwater drainage system (see Section 4.8 and below);
- implementation of access and traffic circulation improvements, including parking and new entrances (see Section 4.9 and below); and
- site landscaping (see Section 4.10).

High-Bay Warehouse

The HBW will have a floor area of approximately 11,900m² (128m x 93m) and capacity to accommodate 55,000 pallets, configured in 13 aisles with 13 levels of double-deep storage. Each aisle is serviced by an independent automatic storage and retrieval machine (crane). The floor level of this facility will be aligned to that of the existing warehouse at RL15.3 and, allowing for conventional gable roof structure, the peak of the HBW roof will be 32metres above finished floor level at RL47.3.

Summary

The adjoining low-level staging area will have a floor area of approximately 3,900m². The equipment to be installed in this area includes pallet conveyors, a recirculating monorail transport system, and automatic truck-loading docks.

To address the visual impact resulting from the height and mass of the HBW, several different design options to clad the automated were developed and assessed (see Section 4.4 of EAR). A simple façade treatment applied to the whole building, as a unified three-dimensional entity was the best measure to minimise visual impact, and was selected for the purposes of this Environmental Assessment.

The design attempts to blend the building with the sky against which it will be viewed. It is elegant and multi-tonal and incorporates a 'wave' similar to the *Coca-Cola* 'Dynamic Ribbon Device'. The shape also mirrors the curved plant superstructure of the nearby Westmead Children's Hospital. The different elevations of the design are shown in Section 4.5 and as photomontages located in Appendix I. The building will be clad in Colorbond metal sheeting commonly used for buildings of this type but the wave itself will be a non-reflective metallic finish that has an iridescent appearance when viewed in full sunlight. Two *Coca-Cola* signs 10 x 3.2 metres in size will be mounted on the northern and eastern façades of the HBW.

Expanded manufacturing facilities

The existing 7,200m² finished goods warehouse building will be adapted to accommodate three new beverage production lines and associated manufacturing services including boiler, refrigeration plant and air compressors. The floor of the warehouse area will be re-graded and drains introduced to service the new wet process area. To support the installation of these lines, the existing syrup preparation and mixing facilities will be expanded and / or augmented by the introduction of new technologies and supporting manufacturing infrastructure will be upgraded to increase capacity to meet the additional demand.

Water cycle management

The water cycle management strategy for the development (see Section 4.8) includes works in relation to flooding, site stormwater management, overland flows, control of discharge from the site, water quality and water usage and re-use management.

The site is flood-free for all storm events up to and exceeding the 1-in-500-year flood event for Toongabbie Creek. Peak stormwater drainage from the redeveloped parts of the site will be limited by using on-site detention tanks. Stormwater quality will be improved by the use of combined gross pollutant trap / oil and silt arrestor devices to provide filtration and sedimentation. Filtered stormwater and roof water will be retained on site for irrigation of landscaped areas.

Access, circulation and parking

Entrances to the site are to be rationalised to reduce the total number of access points, improve their position relative to intersections external to the site, and separate the movement of heavy vehicles from passenger vehicles. Parking for a total of 540 vehicles will be provided at the western end of the site adjacent to the existing office building, and at the eastern end of the site at 102 Briens Road. Additional informal parking will also be available on 102 Briens Road.

Staging

The redevelopment of the Northmead site will be completed in five main stages over a period of approximately 5 years. The stages have been planned to avoid interrupting ongoing manufacturing and accommodate the seasonality of the CCA business (see Section 4.12).

Summary

Consultation

Details of the consultation undertaken in relation to the proposal, the issues raised and CCA's response are set out in Chapter 5. In accordance with the Director-General's Environmental Assessment Requirements, the following public authorities were consulted about the proposal:

- NSW Department of Environment and Conservation;
- Roads and Traffic Authority;
- Department of Natural Resources;
- Parramatta City Council; and
- Westmead Hospital.

In addition, CCA also consulted with the NRMA CareFlight Critical Care Retrieval Service regarding operational issues and a representative of the University of Western Sydney regarding its Westmead campus.

A program of community and stakeholder engagement during preparation of the development proposal was also undertaken, including a dedicated website, a mail drop to 2000 local residents informing them about the project and two Community Information and Feedback sessions. Key issues raised included existing traffic and noise, increased traffic, the height and visual impact of the warehouse, and the consultation process itself.

Environmental Assessment

Consistency with strategic plans

The proposed expansion of the CCA Northmead facility will facilitate the implementation of the Metropolitan Strategy. The project is consistent with the relevant strategies for ongoing development of the Parramatta Primary Centre contained in the Parramatta Regional Planning Strategy 1999 and with the aims for the Parramatta Primary Centre and Westmead Precinct set out in Sydney Regional Environmental Plan 28 (SREP 28) (see Section 7.2).

The proposal is permissible in Zone 4 Employment, meets the zone objectives under Parramatta Local Environmental Plan 2001 (LEP 2001) and is consistent with all relevant provisions in SREP 28, LEP 2001 and Parramatta Development Control Plan 2005 (DCP 2005), except for the 12 metre height control in the DCP.

Impact of HBW

The Visual Impact Assessment of the HBW focused on the views towards the site from surrounding major road arterials and across the site towards Parramatta City centre skyline. The assessment also addressed the impacts on significant district views identified in Parramatta DCP 2005 that are potentially impacted by the proposal (Views 14, 15 and 17). In summary, the assessment concluded that:

- The proposed development would have a limited impact on regional views, but that this is acceptable.
- The impacts on views in the immediate and local contexts are mitigated by the simple façade treatment.
- The form, height and proportions of the HBW are relative to its context, which is an existing employment zone adjacent to Westmead Hospital.
- The proposed development does not affect views of the Sydney and Parramatta CBDs itemised as significant in the Parramatta DCP 2005.
- The design of the HBW had successfully reduced the visual contrast between the proposed development and the existing buildings and public spaces by consideration of building location, proportions and form, and the structures and details.
- Taller thinner trees would increase the mitigating effects of landscaping and augmentation of existing trees would mitigate the impact of terminating views by screening the façade.

Summary

Height, scale and bulk

The proposed development is located in an existing employment zone in close proximity to Westmead Hospital. The existing context comprises large footprint industrial buildings or tall hospital buildings. The proposed development is therefore consistent with its context and the HBW is very similar in height and proportion to the Westmead Children's Hospital.

The proposed HBW at RL 47.3 AHD, is consistent with the median ridgeline RL of other buildings in close proximity, such as Westmead Hospital and the residential buildings next to Westmead Hospital on Bridge Road (see Section 2.4). The visual impact of the height tends to be greater in immediate views than local and regional views and is more apparent where the height is set against existing low scale residential development.

The built form of the HBW is predicated on its function, which requires the form of a large rectangular box. The common approach to reducing mass and articulating form by breaking it down into smaller components can therefore not be employed in this instance. Moreover, complex applied façade treatments have the effect of drawing attention to the size of the building. Therefore, as noted, the proposed simple façade treatment is the best available measure to minimise visual impact.

Exceedance of maximum height control

The DCP imposes a 12 metre maximum height control on the site. At 32 metres, the proposal exceeds the maximum height. The height control is not a development standard which would require a SEPP 1 objection to justify any proposed departure. Strict compliance with the height control is unnecessary and unreasonable for the following reasons:

- The visual impact of the HBW will be able to be mitigated by way of screening by trees planted along the Briens Road frontage and the eastern façade, as well as by the proposed treatment of the façade.
- The form of the high bay warehouse is predicated on its function, that is - to house the racking on which the product is stored. This requires a building form of a large rectangular box.

- The proposal is consistent with applicable planning aims and objectives contained in SREP 28 and it supports the Metropolitan Strategy.
- The proposal, and by extension the height, represents an efficient use of resources - land and existing infrastructure - in an employment zone. It does not change the nature of the facility.
- The proposed height and bulk will not result in adverse overshadowing impacts on the adjoining the Toongabbie Creek riparian zone.
- No unacceptable environmental impacts will flow from the development during both construction and operations.

The departure from the maximum height is supportable on the following grounds:

- The proposed building height achieves a balanced outcome of meeting the future requirements of CCA and minimising environmental impacts, and follows extensive consideration of alternative development strategies and warehouse design options.
- The proposal would have a limited impact on regional views, which is considered acceptable. The façade treatment and tree planting mitigate the impacts on views in the immediate and local contexts.

Approval of the proposed 32 metre HBW would be unlikely to set a precedent for other similar approvals in Parramatta or indeed the immediate locality. Both the need for the CCA facility and its co-location with a manufacturing plant are unique. In order to justify the substantial costs associated with the construction of an automated materials storage system a company needs to have very high product throughput and high storage volumes of pallet-based products. Very few companies in Australia meet these criteria: only the two major supermarket operators and around six large manufacturers of fast moving consumer goods (FMCG).

Summary

It is highly unlikely that either of the big supermarkets would construct a high-bay warehouse in Parramatta, as one (Woolworths) has such a facility at Minchinbury and the other (Coles) is currently constructing a large warehouse at Eastern Creek.

The preferred logistics solution for a FMCG manufacturer would be to construct its primary warehouse alongside the manufacturing facility so that the manufactured product is stored directly off the production lines. It is highly unlikely that any of the large FMCG companies would construct a high-bay warehouse in Parramatta, as none of them (except for CCA) has a manufacturing facility in the area.

Solar access and overshadowing

The extent of shading is minor and a reduction on the existing situation. The proposal, and in particular the HBW, will not have any negative impact as a result of overshadowing.

Traffic

Overall, the CCA redevelopment project will not have adverse traffic impacts during either construction and operations (see Section 7.4).

There will be a marginal increase in heavy vehicle traffic generated by the expanded Northmead facility in the long-term (by 2015) due to the expansion of manufacturing operations. However, despite a 45 percent increase in the output of the facility, the overall increase in daily truck movements will be less than 10 percent. The traffic assessment concluded that the overall minor increase in truck traffic at Northmead would not result in any significant impact on the operation of the surrounding road network.

The proposed expanded facility is anticipated to generate a total of 230 to 240 vehicles per hour two-way during peak periods. This includes truck movements, employee vehicles and an allowance for visitor movements. The forecast traffic generation is equivalent to an increase in traffic of some 40 to 50 vehicles per hour two-way during both the morning and afternoon peak periods. The majority of this additional traffic will be trips generated by the increase in future employees at the start and end of shifts.

An analysis of effects on the surrounding road network indicates that the overall increase in traffic generated by the expanded facility is less than 1% compared to existing traffic flow during the morning and afternoon peak periods. This level of additional traffic will have no negative impacts on local roads and intersections should operate at an acceptable level of service.

Savings in vehicle kilometres travelled (VKT) as a result of the proposal – specifically the effect of storing all product destined bulk deliveries to major customers on site from 2008 and avoiding current double handling/trips between warehouse locations – will result in 460,000 VKT saved in 2008, or 52% of movements, rising to 740,000 VKT by 2020.

Access, circulation and car parking

Site access and circulation has been designed to reduce the total number of access points along Briens Road, improve their position relative to intersections external to the site and separate the movement of heavy vehicles from passenger vehicles. Vehicular circulation will be provided via a one-way road around the perimeter of the site. These arrangements are considered adequate and no mitigation measures are proposed (see Section 7.4).

It is proposed to provide about 540 on-site car parking spaces. The quantum of proposed parking and the method used to derive it are considered adequate (see Section 4.9).

Noise

Noise from operations, that is from mechanical plant and industrial activity, will comply with Department of Environment and Conservation noise criteria and there are no adverse impacts (see Section 7.5).

Additional traffic generated by the development on surrounding roads will not result in any perceptible differential in noise levels and noise from truck movements within the site will generally comply with the DEC noise criteria. However, exceedances are predicted for peak night time truck movements and northern loading dock activities at residences to the north of the site. A barrier a minimum 3.5 metres in height

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is proposed between the truck circulation road and the northern loading dock, and the nearest residences to the north.

A range of general approaches to minimising the potential impact of construction noise and vibration are proposed.

Provided the proposed measures to manage both operational and construction noise are implemented, the impacts of noise from the development are considered acceptable.

Air quality

The proposal will not adversely affect air quality of the local or regional environment during construction or operations provided measures detailed in the Air Quality Management Plan are adhered to throughout the life of the project (see Section 7.6). Air quality impacts associated with the construction phase of the assessment are largely controllable through technical means and are not considered to be a significant issue given the size and nature of the development within an already developed industrial site.

Greenhouse gas assessment

The greenhouse gas assessment (see Section 7.7) was based on emissions from current and future operations and covered road transport of product between warehouses, forklift handling, and electricity consumption (associated with current lighting and proposed future automation of warehouse operations). The HBW will significantly reduce greenhouse gas emissions associated with these activities by over 50% from 2008, representing a total saving of nearly 1,000 tonnes of CO₂ equivalent emissions per year in 2008, rising to over 1,600 tonnes per year by 2020. This contributes to CCA's target for reducing greenhouse gas emissions.

Stormwater runoff and water quality

The quality of stormwater entering Toongabbie Creek will be significantly improved as a result of the proposal (see Section 7.8). The proposed stormwater drainage system incorporates a variety of measures to trap and remove pollutants near the points of discharge to the adjacent waterways. Stormwater runoff from the external catchment outside the CCA site will now also be treated to remove gross pollutants. This will significantly improve the quality of water discharged to Toongabbie Creek over and above the present situation as no filtration is currently being provided for the trunk drainage system.

The runoff from internal catchments will be treated to best practice standards to remove both gross pollutants and fine sediments. This is also a significant improvement over current conditions. Rainwater run-off will be reused onsite for irrigation. Erosion and sedimentation will be controlled both during and after construction to minimise the discharge of silt-laden water from the site. Energy dissipation structures and scour protection at both stormwater outlets will prevent damage to Toongabbie Creek by high flows.

The measures to manage water quality are considered acceptable and no further mitigation measures are considered necessary.

Hazards

Hazards associated with the project have been identified and appropriate control measures provided; the risk of offsite impacts associated with the proposed project can be managed to an acceptable level through the design process; and the risk of escalation from hazards associated with the proposed project to existing hazardous materials on site can be managed (see Section 7.9).

The measures to manage hazards as a result of the proposal are considered acceptable and provided the recommendations of the hazard assessment are implemented, no further mitigation measures are considered necessary.

Summary

Waste

A Waste Management Plan has been prepared to identify and address waste generated as a result of demolition, excavation, construction and operations, and to provide management measures to minimise environmental impacts. Management of waste, proposed further mitigation measures and performance targets for recycling of construction waste are considered acceptable and no further mitigation measures are proposed (see Section 7.10).

Site contamination and remediation

A Preliminary Environmental Site Assessment concluded that the site is suitable for the project subject to implementation of a range of measures to assess and remediate potential site contamination (see Section 7.11).

Flora and Fauna

No threatened species or communities are located on the site and vegetation is highly degraded (see Section 7.13). The site is to be landscaped in accordance with the Landscape Plan (see Section 4.10). A large number of mature trees are to be planted to screen the HBW and existing trees are to be retained where practicable. These measures, along with CCA's ongoing commitment to the rehabilitation of Toongabbie Creek, are considered acceptable to manage the ecological environment of the site and the immediate locality.

Economic impacts

The proposal would have a positive economic impact on the economy of Western Sydney and NSW. It will generate \$180 million total economic activity directly in construction of the warehouse and through multiplier effects, \$1.8 billion of economic activity annually from wholesale output (operation of 3 new bottling lines) and through multiplier effects, and \$130 million worth of economic impacts directly through capital investment in three production lines and through multiplier impacts.

In addition, the proposal would create 1,600 jobs years directly in construction and through production and consumption induced effects, and almost 1100 additional jobs as a result of expanded operations and production and consumption induced effects.

The project would also result in substantial resource cost savings to the community as a consequence of avoiding urban distribution and importation costs with a combined estimated resource cost savings of \$87 million (2006) including greenhouse gas emissions.

Social impacts

The social impact of the proposal is considered acceptable. The overall benefits outweigh the potential impact of the height and bulk of the HBW on a relatively small number of local residents in the immediate vicinity of the site. No additional mitigation measures are proposed other than those already mentioned in this report.

Ecologically Sustainable Development

The proposal has a number of important features that will contribute to ecologically sustainable development in relation to energy utilisation, water management, resource utilisation and greenhouse gas emissions (see Section 7.16).

Cumulative impacts

There are no negative cumulative impacts as a result of the proposal. The cumulative impacts of reduced transport transfers, greenhouse emissions savings and economic benefits are considered positive.

Summary

Draft Statement of Commitments

CCA has committed to the following range of measures to manage and mitigate any potential environmental impacts from the proposal (see Chapter 8):

- Environmentally sustainable development
- Management of construction noise, vibration, dust and erosion
- Management of construction waste
- Management of construction traffic
- Management of operational noise
- Management of operational traffic
- Hazard management
- Energy efficiency and reduced greenhouse gas emissions
- Screening of the HBW
- Hazard identification marker lights for Careflight helicopter operations
- Restoration of Toongabbie Creek
- Use of the North-west/Parramatta-Rouse Hill Transit Way
- Community and stakeholder engagement
- Development and implementation of an Arts and Cultural Plan relevant to the locality.

Conclusion

Site suitability

The site is considered suitable for the proposed development for the following reasons:

- it is zoned for the proposed use and the project is an extension of a long-term existing use;
- it represents efficient use of existing industrial land and maximises considerable investment in existing infrastructure;
- it consolidates substantial employment alongside new public transport infrastructure;
- it is located in very close proximity to major road transport infrastructure and at the heart of CCA's market;
- proposed operations on the site are neither offensive nor hazardous, do not pose a risk to nearby residents or Westmead Hospital and do not generate excessive waste;
- it does not increase CCA's environmental footprint at Northmead and enables co-location of manufacturing and warehousing activities; and
- the land does not contain any flora or fauna that would be affected by the proposal.

Summary

Reasons why the project should be approved

The project represents the outcome of exhaustive analysis and consideration of numerous design and logistics options. The environmental assessment has demonstrated that the development will result in positive social, environmental and economic benefits. It consolidates the presence in the Parramatta Primary Centre of a major Australian manufacturer, creates over 100 new jobs directly and locates a substantial workforce adjacent to major new public transport infrastructure. It removes a significant number of trucks from the Sydney metropolitan road network by reducing CCA's forecast warehouse-to-warehouse movements by over 50%. This has attendant benefits on air quality and greenhouse gas emissions.

The proposal is consistent with the objectives of relevant environmental planning instruments and strategies. However, the proposed HBW exceeds the applicable height controls to industrial development. Nevertheless, the form, height and proportions of the HBW are relative to its context and the proposed treatment of the façade mitigates the visual impact of the structure. The visual impact on regional views is limited and is considered acceptable. The proposed development does not affect views of the Sydney and Parramatta CBDs identified as significant in the Parramatta DCP 2005.

Approval of the proposed development is sought on the following grounds. The proposal will:

- continue a long existing land use to which the surrounding community is attuned;
- be unlikely to set a precedent for other similar approvals in Parramatta or the immediate locality
- be highly sustainable in resource terms as it maximises existing facilities and infrastructure;
- represent a significant upgrade of existing dated warehouse facilities, increased manufacturing capacity and improvements to site layout and utilisation;

- have a positive economic impact on the economy of Western Sydney – during construction and operations - both directly and through multiplier effects;
- result in benefits to the regional road network, have minimal impact at the local level and result in significant resource cost savings due to avoided transport;
- have no impact on the riparian zone and a positive impact on the water quality of Toongabbie Creek;
- have no negative acoustic and air quality impacts; and
- not generate additional waste or create hazards that cannot be managed.

The proposed development will have no negative impacts on the environment, during both construction and operations, and serves the public interest. We therefore request that the Minister approve this project.

1.0 Introduction

This Environmental Assessment Report (EAR) in relation to the Coca-Cola Amatil Northmead Redevelopment Project is submitted to the Minister for Planning pursuant to Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act) and State Environmental Planning Policy (Major Projects) 2005 (SEPP).

The report has been prepared by JBA Urban Planning Consultants Pty Ltd on behalf of the proponent, Coca-Cola Amatil (Aust) Pty Ltd (CCA). It is based on plans and supporting technical information provided by the proponent. The report describes the site, its environs and the proposed development, and includes an assessment of the proposal in accordance with the Director-General's Environmental Assessment Requirements under Part 3A of the EP&A Act. It should be read in conjunction with the appended supporting information (refer to Table of Contents).

1.1 Overview of project

Approval is sought for the following elements of the Northmead Redevelopment Project:

- demolition;
- site preparation works, including excavation and bulk earthworks;
- construction and use of a new 32 metre high automated high-bay warehouse and associated staging area;
- adaptation of an existing warehouse to accommodate three new production lines and manufacturing services including boiler, refrigeration plant and air compressor;
- building envelope for a new building to house a canteen, offices and training facilities;
- building envelope for a new gatehouse and driver amenities;
- upgrading of the on-site stormwater drainage system;
- implementation of access and traffic circulation improvements, including parking and new entrances; and
- site landscaping.

The capital investment value of the project is \$150 million in total. Capital investment value is defined in the SEPP as the value of development including all costs necessary to establish and operate the development, including design and construction of buildings, structures, associated infrastructure and fixed or mobile plant and equipment (but excluding land costs).

1.2 Background to the project

Coca-Cola Amatil

CCA is an ASX-100 company with a market capitalisation of over \$4.5 billion. Australian owned, headquartered in Sydney and with operations in Australia, New Zealand, Papua New Guinea, South Korea, Fiji, Spain, Thailand and Indonesia, CCA distributes products to the United Kingdom, USA, Canada, Japan, and Germany. In NSW CCA employs more than 1,850 people.

In NSW in 2005, CCA sold in excess of 520 million litres of beverages through 36,000 retail outlets, generating more than an estimated \$1.25 billion in retail sales.

The current CCA NSW supply network comprises two production facilities: one at Briens Road, Northmead (the subject of this report) and the other at Sturt Street, Smithfield, three permanent warehouses (at the two manufacturing plants and at the Smithfield Distribution Centre on McCredie Road), and several outside storage facilities.

More than 80% of CCA's total NSW market volume is contained in, or serviced directly from, the Sydney Metropolitan Region. In Sydney CCA operates a permanent delivery fleet in the order of 150 vehicles ranging from 1-tonne delivery vans through to B-doubles. In addition, interstate and regional NSW locations are serviced through contracted line haul operators.

CCA operates two main distribution channels in NSW:

- **Bulk:** comprising full-pallet / full-truckload deliveries to the distribution depots of major grocery retailers such as Coles, Metcash (IGA), and Woolworths; and
- **Route:** comprising deliveries of mixed product type on a carton-by-carton basis to individual customer outlets such as corner stores, petrol stations and cafes.

In 2005 CCA's average total inventory holding in NSW was 40,000 pallets, with a peak requirement in November of 56,000 pallets. This stock represents approximately 18 days of sales, meaning that, on average, the entire inventory is turned over every 18 days. The stock-holding level is determined on a product-by-product basis following a complex statistical analysis of the volatility of customer demand and allowing for available production capacity.

The Northmead manufacturing facility

CCA's 13.5ha site at Briens Road, Northmead is its primary manufacturing facility in NSW and the largest CCA operation in Australia, producing over 30 million cases (350 million litres) of soft drink in 2005. Of this output, approximately 4 million cases are exported to other states.

Over the last 30 years CCA has made a significant investment in site infrastructure at Northmead with an estimated total replacement cost, excluding land, in excess of \$200 million. This includes a high-volume dedicated water main, water treatment system, waste-water treatment, sugar storage, syrup room, refrigeration and 25,000 square metres of special-purpose buildings.

Since 1972 when the plant was commissioned, CCA has had strong historic links with the locality. Currently over 700 people are directly employed at Northmead, and a further 300 mobile sales representatives and merchandisers operate from the site. In addition, through requirements for supply of plastic bottles, cardboard cartons and aluminium cans, the Northmead plant contributes substantially to employment at a number of other Western Sydney businesses.

The capacity of the site in the current configuration has now been reached. This has resulted in an increasing requirement to import product from other states (6 million cases in 2005) and a proliferation of external warehouse facilities. Currently one in seven CCA products consumed in NSW is imported from interstate.

Due to space constraints, approximately 40% of total CCA NSW output (250,000 pallets per annum) is double-handled: that is, loaded at Northmead, transferred, and then unloaded at another location prior to despatch to the customer. This currently places additional pressure on the regional road network and generates in excess of 12,500 additional B-double truck movements per annum from Northmead.

1.3 Statutory context

State Environmental Planning Policy (Major Projects) 2005 identifies development to which Part 3A of the EP&A Act applies and which therefore requires approval from the Minister for Planning ('the Minister'). Clause 6 of the SEPP states that development, which in the opinion of the Minister is development of a kind referred to in Schedule 1 of the SEPP, is declared to be a project to which Part 3A of the Act applies. The project falls into the class of development described in Clause 3 of Schedule 1, namely "Agricultural produce industries and food and beverage processing", with a capital investment value of more than \$30 million. As stated, for the purposes of the SEPP, the redevelopment project has a capital investment value of \$150 million.

In accordance with Section 75B of the EP&A Act and Clause 6 of the SEPP, the applicant sought the opinion of the Minister as to whether the project is of the kind to which Part 3A of the Act applies. On 25 November 2005 the Director-General of the Department of Planning, as delegate of the Minister for Planning, formed the opinion that the development is of a kind described in Schedule 1 and is thus declared to be a project to which Part 3A of the Act applies for purposes of Section 75B of the Act. Relevant correspondence is attached at **Appendix A**.

Subsequently, the Director-General issued the Environmental Assessment Requirements for the project under Part 3A of the Act. A copy of these requirements is included at **Appendix A**. A table cross-referencing the location in this report where the requirements are covered is located in **Section 7.1**.

1.4 Consultant team

The consultants who contributed to this environmental assessment report are as follows.

Project management	Burns Bridge Services
Architecture	MNIA Architects
Urban planning	JBA Urban Planning Consultants
Visual impact assessment	Architectus
Photomontages	C3D Interactive
Community consultation	Elton Consulting
Economic impacts	Hill PDA
Evaluation of transport costs	Masson Wilson Twiney
Traffic impacts	Colston Budd Hunt & Kafes
Land survey	Cardno Young
Contamination	Douglas Partners
Civil & structural engineering	Robert Bird Group
Water cycle management	Robert Bird Group
Construction management	Robert Bird Group
Landscaping	Clouston Associates
Acoustic assessment	Heggies Australia
Air quality assessment	Heggies Australia
Green house balance assessment	Heggies Australia
Flora & fauna assessment	Cumberland Ecology
Hazard assessment	Sherpa Consulting
Waste management	URS Australia

2.0 Site Description and Location

2.1 Land title and zoning

The site at 102-128 Briens Road, Northmead is owned by Coca-Cola Amatil (Aust) Pty Ltd and is legally described as Lot 21 in DP 632950 and Lots 101 & 111 in DP 800504 (refer to Site Survey Plan at **Appendix C**). The site has a total area of approximately 135,000m² (13.5 hectares), is irregular in shape and fronts Briens Road.

The land at 102 to 128 Briens Road is the subject of this application (see **Figure 1**).

The site is located in the Westmead Precinct under Sydney Regional Environment Plan No. 28 - Parramatta and in Zone 4 Employment under the Parramatta Local Environment Plan 2001 (LEP 2001) (see **Figure 2**). Industries, warehouses or distribution centres are permissible with development consent in this zone.

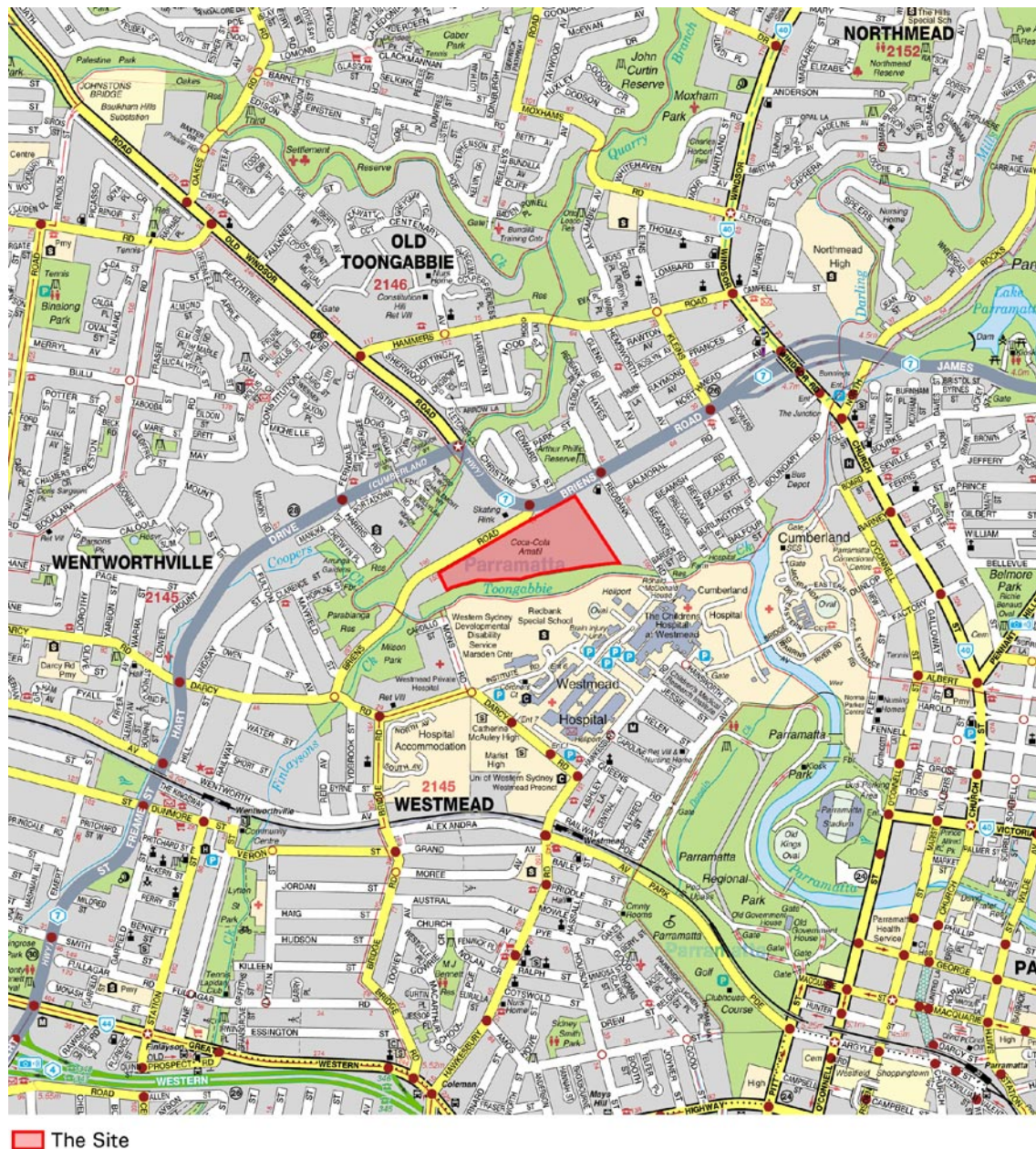


Figure 1 – Locality Plan

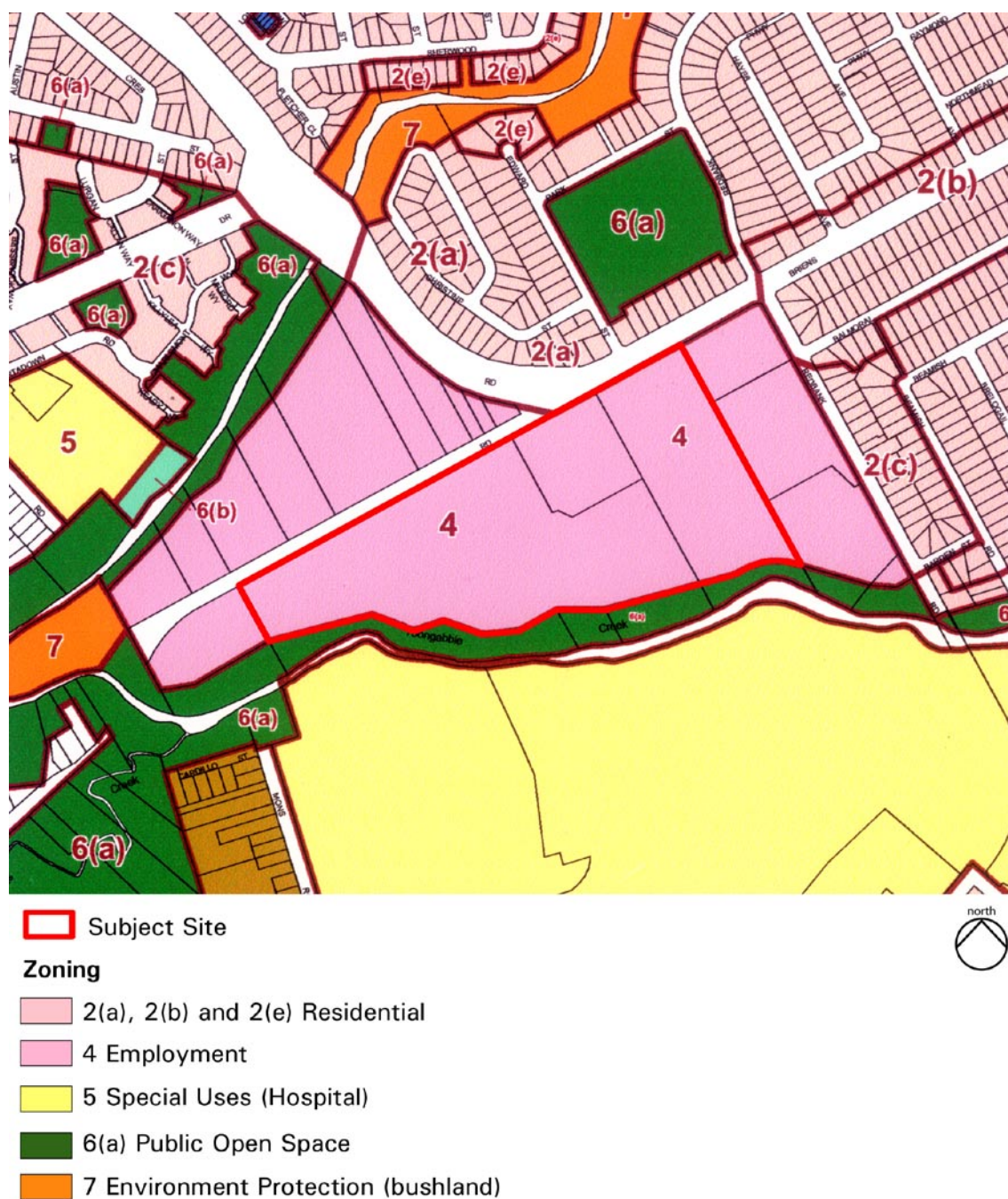


Figure 2 - Zoning Plan (LEP 2001)

2.2 Landform and topography

The site is located in a depression on the northern side of Toongabbie Creek, which forms part of the Upper Parramatta River Catchment. As illustrated in the Site Survey Plan included at **Appendix C**, the overall topography of the site falls from approximately RL 22 along the northern edge (Briens Road), to approximately RL 16 in the middle portion of the site, then falls gently to approximately RL 14 towards the rear of the site (Toongabbie Creek).

The site is overlooked by a number of suburbs at higher elevations: Winston Hills to the far north, Old Toongabbie to the north and Wentworthville to the north and west, and is surrounded by the riparian zones of the Toongabbie Creek system (see **Figure 3**).

2.3 Location and context

CCA Northmead is located in an industrial area in the Parramatta LGA. At the junction of Briens Road and Old Windsor Road, it is about 2 kilometres north-west of the Parramatta CBD and approximately 20 kilometres west of the Sydney CBD. Notable features of the locality include:

- Toongabbie Creek and its associated riparian zone along the rear boundary;
- Westmead Hospital precinct, including the Children's Hospital, located immediately to the south across Toongabbie Creek;
- Cumberland Highway which passes the northern boundary of the site along Briens Road (see **Figure 7**);
- North-west/Parramatta – Rouse Hill Bus Transit Way (T-Way), currently under construction, which wraps around the north-west portion of the site;
- Western railway line and Westmead Station to the south;
- Parramatta Regional Park to the south-east about one kilometre away; and
- Parramatta CBD about 2 kilometres to the south-east.

The site's locational context is shown at **Figures 1 and 3**.

2.4 Surrounding development

Land use

CCA Northmead is situated in an area characterised by a mix of land uses as follows:

- employment uses and special uses to the immediate north, east and south;
- high density apartment buildings (some under construction) to the south-west in the suburb of Westmead;
- low density residential uses to the east and north and new medium density in the suburb of Northmead; and
- mixed use zones in the suburb of Westmead around the hospital.

Non-residential land is characterised by diverse building typologies and site layouts designed for the functional and operational needs of a range of facilities (eg. hospital, corporate park and light industrial). Westmead Hospital, including the Children's Hospital, makes up by far the largest land use in the locality. Light industrial and commercial uses, including some new buildings, are located opposite the site along Briens Road (refer to **Figure 4**) as well as on the land bounding the east side of CCA's land along Redbank Road.

Residential development immediately surrounding the site is generally low density (**Figures 8 and 9**), characterised by single dwellings of one and two storeys to the immediate north across Briens Road and to the east (east of Beamish Road). Eleven dwellings face the site along Briens Road between Redbank Road and Edward Street. Of these, only two have their main frontage off Briens Road and most have acoustic walls along Briens Road. To the north of these dwellings is Arthur Phillip Reserve, a local playing field (refer to **Figure 5**). The land in Northmead along Briens Road and between Redbank and Beamish Roads is undergoing change having been zoned medium density residential.

A number of high-rise apartment blocks are under construction in the vicinity of Bridge Road and Westmead Hospital.

Toongabbie Creek and its associated riparian zone (**Figure 6**) separate the site from the Westmead Hospital campus while the Cumberland Highway generally serves as a physical barrier to the residential development to the north.



Figure 3 – Aerial photograph of the site and surrounds



Figure 4 – Development across Briens Road



Figure 5 – Arthur Philip Reserve



Figure 6 – Toongabbie Creek



Figure 7 – Intersection of Redbank and Briens Roads



Figure 8 – Edward Street



Figure 9 – Balmoral Road looking west

Surrounding built form

The CCA site is generally surrounded by a variety of built form, ranging from tall buildings to the south to lower buildings to the north and east. The tallest buildings (residential and health) are located on the southern side of Toongabbie Creek. Buildings in the Westmead Hospital precinct generally have large footprints associated with the operational needs of the health facilities while the bulk and mass of the new apartment blocks, mostly around Bridge Road, are standard for residential flat buildings.

Commercial high rise buildings located some 2km away in the Parramatta CBD are visible in the background of the CCA site.

Low rise buildings to the north, east and west are largely 1-2 storey dwellings, generally sitting on higher elevations away from the Toongabbie Creek valley (refer to **Figure 4** of the Visual Impact Assessment included at **Appendix N**).

There are 2-3 storey commercial/light industrial uses immediately to the east on the west side of Redbank Road and to the north across Briens Road (see **Figure 4**).

As illustrated in **Figure 10** and the site survey included at **Appendix C**, when viewed from Briens Road (approximately RL 19) the approximate heights (from adjacent ground level to roof level, not including architectural roof features) of notable buildings surrounding the site are as follows:

■ North side of Briens Road

- Six 2-storey office buildings directly opposite the CCA site (approximately RL 28 to RL 30.25).

■ Westmead Hospital precinct

- Westmead Children's Hospital on Hawkesbury Road (approximately RL 45.05);
- Westmead Hospital on the corner of Darcy Road and Hawkesbury Road (approximately RL 57.58).

■ Westmead suburb

- 9-storey St Michael's residential building at 181 Hawkesbury Road (approximately RL 56.27);
- 6-storey residential development on the corner of Mons Road and Cardillo Street (approximately RL 40.74);
- 9-storey Capri residential building at 91A Bridge Road (approximately RL 48.97);
- 15-storey Cannes residential building at 91B Bridge Road (approximately RL 63.6);
- 9-storey St Tropez residential building at 91C Bridge Road (approximately RL 50.42);
- 9-storey residential building at 91D Bridge Road (approximately RL 53.98).

■ Parramatta CBD

- 24-storey residential tower under construction at the corner of Church and Fitzwilliam Streets (approximately RL 97.65);
- 21-storey Jessie Street Centre at 2-12 Macquarie Street CBD (approximately RL 91.65);
- The 18-storey Wentworth Gardens residential building at 15 Campbell Street (approximately RL 80.83).

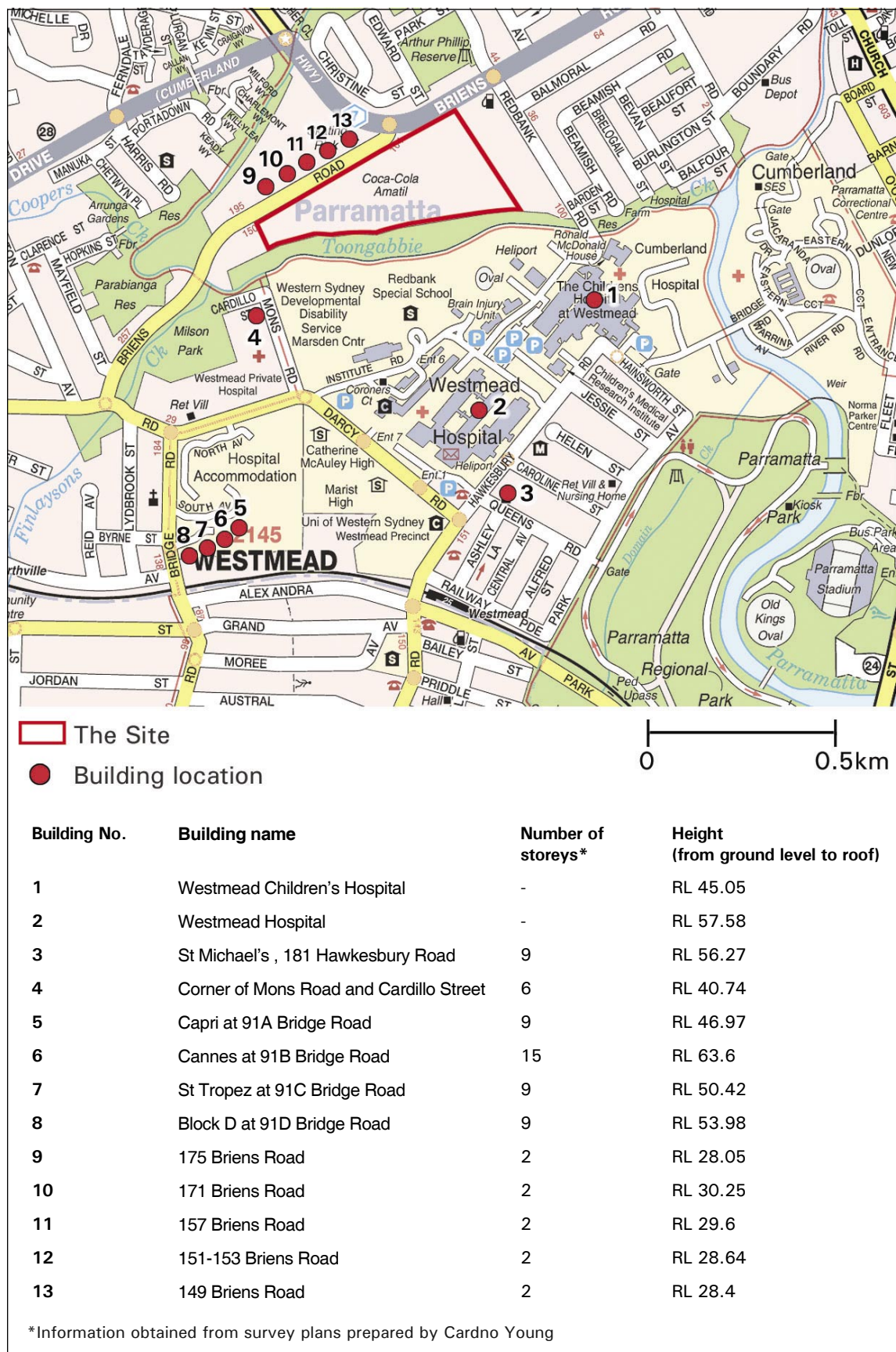
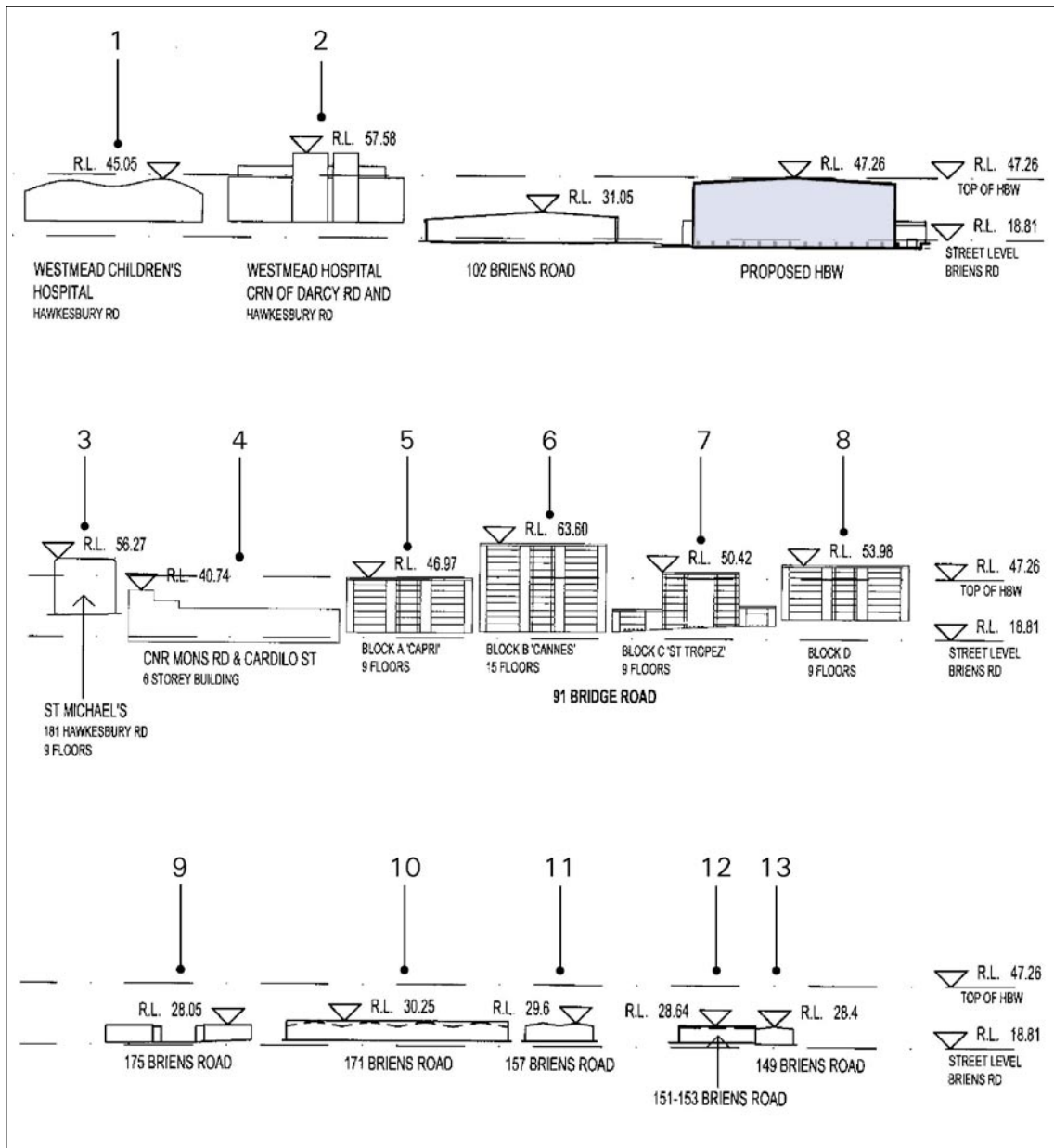


Figure 10 - Surrounding building height



2.5 CCA Northmead site

Flora and fauna

The site is highly modified and cleared of vegetation, except for some mature trees (mainly eucalypts and sheoaks) within a limited area of existing landscaping largely along the front and rear boundaries (refer to **Figure 11**).

Most flora associated with the site is located in the adjoining riparian zone of Toongabbie Creek to the rear/south of the site boundary. The zone is up to approximately 40m wide (from boundary fence to the creek) and comprises a variety of weeds and some remnant native vegetation as noted in the Flora and Fauna Assessment prepared by Cumberland Ecology and included at **Appendix H**.

Existing buildings, structures and uses

CCA has progressively acquired and occupied a series of contiguous properties at Briens Road, Northmead over the course of the last 30 years, commencing with the original 128 Briens Road facility, commissioned in 1972, and culminating in the acquisition in 1999 of the 102 Briens Road facility. Some of these original buildings were modified or extended but, in the main, have been partly refurbished and converted to a new purpose. Consequently, the site has developed rather haphazardly and now comprises a series of disparate and largely unrelated buildings accommodating various functional groups and activities.

The aerial photograph at **Figure 11** and site plan at **Figure 12** show existing structures.



Figure 11 – Aerial photograph of the site showing existing structures

Current functions and uses are described below based on street address. The site can generally be divided into four sections from west to east (see **Figure 9**) as follows:

- The two-level office building at **128-A**, commonly referred to as the “Whitehouse”, has a floor area of 2,200m². It currently accommodates the NSW Sales and Administration functions (approximately 75 people), and approximately 50 staff from the National Finance function that cannot be accommodated at the **104-A** facility described below.
- Building complex **128-B** comprises the main gatehouse and a series of disused portable offices.
- The portable office complex **128-C** accommodates administrative support staff for the NSW manufacturing function, including engineering, quality assurance, process improvement and commercial functions.
- The part two-level building at **128-D** contains four manufacturing lines, offices for line-related staff, the engineering workshop and spare parts store, worker amenities, syrup room and raw ingredient cold storage facilities. An elevated platform at the south of the building supports two large (50 tonne and 70 tonne) sugar silos and the main plant area (refrigeration, condenser, and electrical transformers). Two manufacturing lines (large PET and cans) are situated on the upper floor and two on the lower floor (small PET and postmix syrup). Automatic can and PET bottle unloading docks are arranged at the front of the building to service the upper lines, and at the eastern side of the building to service the small PET line. Sugar, carbon dioxide and raw ingredient deliveries are received in the yard to the east of the building.
- Buildings labelled **128-E**, **128-F** and **120-C** have a total floor area of 12,850m² and comprise the current full goods warehouse; building **120-C** having been added to the original facility following the acquisition of the 120 Briens Road property. The palletisers (discharge) for all four manufacturing lines are contained in building **128-E**, from where product is transported by forklift truck to bulk storage in the warehouse or to the western despatch dock for transfer to other warehouse locations.
- The canteen, auditorium, training rooms and point of sale materials store are located at in a 1,200m² building at **120-A**. These facilities provide some of the few meeting spaces on-site and are used frequently by staff from across the site and as a base for school tours of the facility.

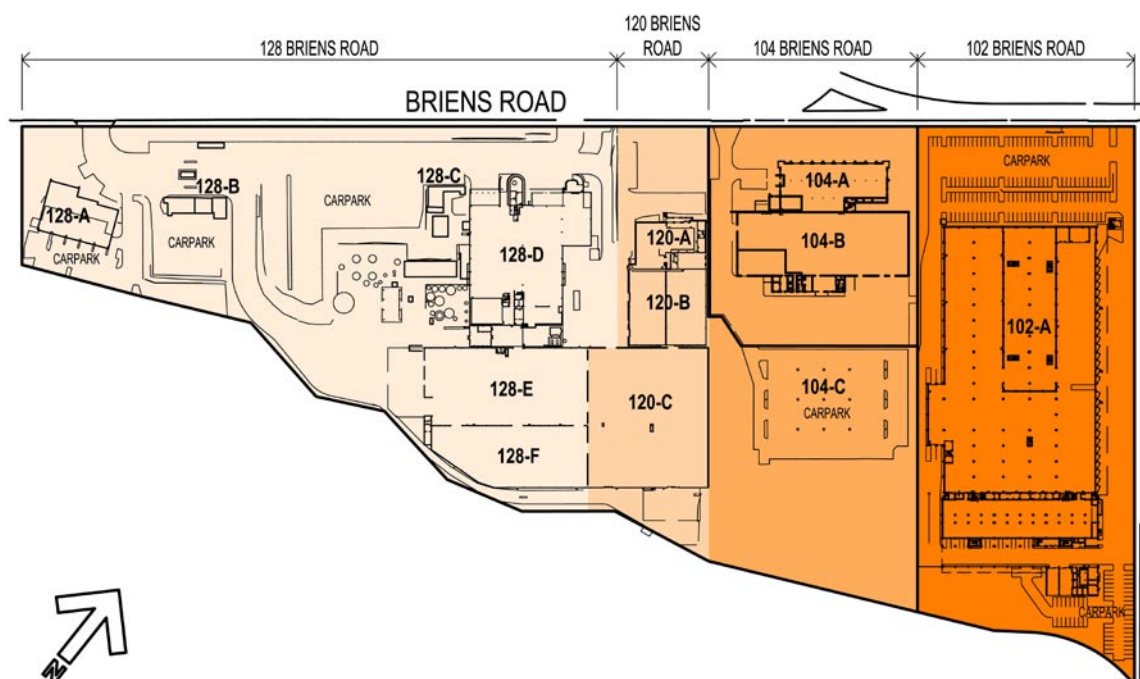


Figure 12 – Existing Site Plan

- The 1,900m² packaging store **120-B** is utilised for storage of cardboard cartons, labels, closures (caps), stretch film and postmix packaging. The building is deteriorating rapidly and needs to be replaced.
- The 1,700m² **104-A** office building currently houses the National Finance Shared Services operation of approximately 170 people. This building is to be demolished.
- The NSW Equipment Services function is accommodated at **104-B**. The operation includes an administrative office area of approximately 500m² and a store and workshop area of approximately 3,600m². Activities conducted at the facility include the repair and refurbishment of refrigeration, vending and postmix dispensing equipment. In addition to the workshop area, much of the surrounding site is utilised for storage of equipment awaiting processing. Due to insufficient internal space, a number of shipping containers have been utilised to store new and sensitive equipment out of the elements. This building is also to be demolished.
- The 17,000m² warehouse and 4,150m² office building at **102-A** is currently utilised for overflow storage of full goods product, due to insufficient space in the primary warehouse area at **120-128**, and by the NSW Equipment Services function for receipt, set-up, testing and despatch of new marketing equipment.

Access and parking

The site has five access points off Briens Road. The western gate is currently the main access to the western part of the site for cars and trucks. A central gate services the Finance and Equipment Services operations at 104 Briens Road. The eastern gate accesses 102 Briens Road via a left-in/left-out arrangement. On the 120/128 boundary opposite the T-way there are two currently disused gates.

The North-west/Parramatta-Rouse Hill Bus T-way, currently under construction, runs alongside the site to the west, then turns east along the site frontage to 155 Briens Road and then continues north on dedicated roadway adjoining Old Windsor Road. Construction is due to be completed in late 2007.

On-site car parking is provided at-grade on various parts of the site adjacent to relevant buildings.

3.0 Redevelopment strategy

3.1 Overview

CCA is seeking to construct a 32-metre high, fully automated warehouse, co-located with manufacturing operations at its existing facility on Briens Road, Northmead. At the same time manufacturing capacity on-site is to be expanded to leverage substantial existing infrastructure.

The re-development of the Northmead site is integral to CCA's strategy to expand capability and service forecast growth in sales to 2020 and beyond. The strategy aims to reduce supply chain costs by eliminating unnecessary movement of product, and to provide safer working environments by dramatically reducing forklift and manual handling.

The strategy would eliminate product transfers between CCA warehouses (permanent warehouses and several outside storage facilities) by consolidating operations, and would avoid additional transfer requirements that would otherwise be created by the expansion of manufacturing operations. In total, more than 50% of inter-facility product transfers forecast using the current CCA network would be avoided.

The development will create around 105 additional full-time jobs over the next decade, with an anticipated initial \$20M investment in manufacturing, delivering 30 jobs within the next 12-18 months.

The strategy consists of the following elements:

- Relocation of the CCA NSW Equipment Services (100 people) and CCA Australia Finance Operations (220 people) to new premises at 102 Briens Road.
- Consolidation of NSW warehouse operations through construction of a 32-metre high state-of-the-art automated Bulk warehouse (described below) at the Northmead facility adjoining the manufacturing operation (cost: \$90M). The Bulk warehouse will have a 55,000-pallet storage capacity and despatch full-pallet product to:

- bulk customer (major grocery retailers such as Coles, Metcash (IGA), and Woolworths) distribution centres;
- CCA operations in other States; and
- the proposed mixed-pallet distribution centre at Eastern Creek to replenish stock (see below).
- Construction of a purpose-built mixed-pallet Route distribution centre on a 15ha parcel of land at Eastern Creek, adjacent to the M7 motorway. This facility has received development consent and is designed to cater for all NSW deliveries of mixed product type on a carton-by-carton basis to Route customers (corner stores, petrol stations, cafes). The Eastern Creek distribution centre will initially operate on a flow-through (minimum inventory) basis, with stock delivered just-in-time from Northmead and Smithfield. Storage capacity at Eastern Creek will be progressively expanded, from an initial 10,000-pallet capacity, to reach a total of 55,000 pallets by 2020.
- Vacating the existing Northmead warehouse area to enable reconfiguration and expansion of beverage manufacturing operations through the installation of three new production lines (cost: \$60M). The 3 new production lines will be linked directly to the new warehouse facility. Long-term, all of the existing manufacturing lines will also be linked directly to the new warehouse, eliminating the need for forklift operations inside the facility.

The minimum 55,000-pallet storage capacity required at Northmead corresponds to the balance of the 70,000 pallets peak CCA NSW inventory forecast for the first year of operation (2008) not stored at the Smithfield manufacturing facility or Eastern Creek distribution centre and to the 2020 forecast inventory requirement for the Bulk channel only.

3.2 Principles of High-Bay Warehouse design

The 55,000-pallet capacity that is required for Northmead equates to 13 levels of storage. Facilities utilising this high-rise approach to warehousing are commonly referred to as High-Bay Warehouses (HBW). The warehouse will be fitted out with racks and pallet-handling cranes allowing automated storage and retrieval of product (see **Figure 13**).

A high-bay design substantially reduces the footprint of the warehouse for a required storage capacity. In the case of Northmead a requirement for more than 80,000 square metres using traditional/current methods reduces to around 15,000 square metres, so enabling co-location of manufacturing and warehousing operations on the existing Northmead site and providing space for expansion of the manufacturing facility.

The two main parameters that together set the performance requirements for a HBW are the quantity of product to be stored (static capacity) and the velocity at which this product moves through the facility (dynamic capacity). The static capacity requirement determines the total number of rack positions required. Racking can be configured as single, double, or multi-deep, with the ideal arrangement determined on a product-by-product basis by the relationship between the quantity to be stored and the rate of turnover. The dynamic capacity requirement determines the minimum number of storage and retrieval machines (cranes) required, based on an ideal layout, since each machine is capable of only a certain number of movements per hour. Due to the relationship between horizontal and vertical operating speeds, crane operations are optimised when the length of each aisle is around 3 times the height of the racking.

The combination of performance requirements for a facility and the physical constraints of a specific site lead to an ideal building configuration (length, width and height). The optimum height of a facility is unique since in each instance the various parameters will necessarily be different. With the maximum building footprint size and relative proportions determined by site constraints, the maximum storage capacity is directly proportional to the building height. Ideally, a facility should be designed with the minimum number of cranes to achieve the required pallet movement rate (as each crane alone costs approximately \$750,000). The optimum height is then determined based on the

number of crane aisles and therefore the number of rows of racking, taking into account the configuration of the racking.

These design principles directly determined the design of the proposed Northmead warehouse facility and were key factors in considering alternatives.

3.3 Need and alternatives

Need for the proposal at Northmead

This section sets out the rationale for expanding CCA's manufacturing and warehousing capacity at Northmead. The analysis presented below was a forerunner to development of the overall strategy for redevelopment discussed in Section 3.1 above.

In summary, expansion of Northmead Redevelopment Project realises the potential of a well established existing facility in an industrial zone. The development takes maximum advantage of the available land, topography and site form to advantage in organising operations. Utilisation of vertical (air) space for storage is highly efficient as it reduces the required building area by a factor of five when compared to conventional warehouse methods. Consolidation of multiple facilities to a single co-located operation, and maximum re-use of existing buildings, avoids unnecessary development and would allow CCA to continue to grow at Northmead without increasing its environmental footprint.

Demographic heart of the Sydney Metropolitan region

Northmead is almost ideally located at the demographic centre of the Sydney Metropolitan Region, which represents more than 80% of total NSW sales volume, thereby minimising the total amount of road travel incurred in the production and distribution of CCA products. Moreover, the Northmead facility is centrally situated to major packaging suppliers located in Western Sydney (aluminium cans from Warwick Farm, cardboard cartons from Revesby, PET bottles from Kings Park, and sugar from Granville), so reducing inbound (primary) freight requirements.



Figure 13 – Interior of a High-Bay Warehouse

Relocation and re-establishment of whole Northmead facility

The option to replace the entire Northmead operation with a greenfield facility has been investigated and discounted on a number of occasions.

The capital cost for complete relocation is prohibitively high: the most recent study, completed in 1999, concluded that the cost for equivalent manufacturing facilities alone (excluding the warehouse, but including land) would be more than \$250 million. The majority of this investment would be needed to recreate facilities that are currently in place at Northmead and detailed analysis indicated minimal operating cost advantage. Practical locations for a greenfield facility are typically all on the outskirts of the Sydney Metropolitan Region, resulting in substantially increased inbound and outbound transport requirements. If a new warehouse were to be included in a full relocation, the capital investment required would be more in the order of \$400 million.

Depending on the alternative location, closure of the Northmead operation could result in technical redundancies for up to 700 employees and substantial loss of employment in the local area.

Alternative warehouse locations and cost of supply

If the proposed new warehouse at Northmead were not to proceed, alternative strategies include locating total warehouse operations at Eastern Creek or foregoing expansion of the manufacturing facility and instead importing additional product from Queensland and/or Victoria.

The former strategy would generate an additional 26,000 B-double movements per annum (2008) to transfer product between Northmead and Eastern Creek, while the latter would result in additional B-double movements on the Hume and Pacific Highways, projected to increase from 900 per year in 2008, to 9,000 per year in 2015. Both alternatives substantially increase operating costs for CCA, with attendant environmental disbenefits.

Increased transport costs resulting from a warehouse dissociated from production also affect longer-term manufacturing expansion in NSW and opportunities to export specialised product interstate. The cumulative cost of additional transport and handling together with substantially higher market rates for outbound freight from Sydney would significantly increase

the cost of supply. Even though NSW is the biggest market in Australia, it would be more cost effective to locate any new specialised manufacturing capacity at CCA facilities in Queensland or Victoria and import product, rather than incur the higher total cost of supply. This is especially the case in relation to small volume or specialised products such as, for example, hotfill (Powerade, juices, products requiring pasteurisation).

This would result in the immediate non-realisation of an additional 30 manufacturing roles in Sydney, and delay and / or restrict long-term expansion.

New production facility

Locating the 3 new production lines at a new facility in Sydney (such as Eastern Creek) would require an additional capital outlay (over and above that already proposed) of more than \$80 million (for land, utilities, basic manufacturing infrastructure, buildings, but excluding the cost of any new production lines) to duplicate facilities already available at Northmead. The introduction of another facility to the CCA network would fail to leverage existing infrastructure with spare capacity, and result in increased product transport to consolidate inventory holdings between locations (as already discussed).

Alternatives considered

In arriving at the proposal, CCA conducted an exhaustive study of all the possible alternative configurations for the NSW logistics network and alternative arrangements on the Northmead site. Details are set out below.

1. Maintain status quo

If CCA was unable to achieve the 55,000-pallet storage requirement at Northmead, the entire investment program consisting of the Northmead Bulk storage facility (\$90M), the first-phase (one bottling line) Northmead production expansion (\$20M), and the Eastern Creek mixed pallet distribution centre (\$50M) would have to be reconsidered. Until a new strategy was formulated, future production expansion to serve NSW would likely occur at existing CCA plants in Queensland and Victoria where there is sufficient infrastructure to expand production. This would result in:

- forgoing the opportunity to immediately eliminate 26,000 B-double movements per annum from the Sydney regional road system;
- the loss of an immediate 30 incremental jobs and potential non-realisation of a further 60 new jobs from the proposed expansion of the manufacturing plant;
- the loss of 15 new jobs associated with the HBW;
- an additional 900 B-double truck movements per annum spread across the Hume, Pacific and New England Highways in 2008, growing to 9,000 movements by 2015, to import product from Queensland and Victoria.

2. Alternative warehouse heights

Ideally, the full-pallet product storage for both the Bulk and the Route distribution channels should be located adjacent to the Northmead manufacturing plant, thereby avoiding unnecessary product movement and minimising total inventory holding. The CCA NSW sales volume projected for the year 2020 requires a storage capacity of 55,000 pallets for the Bulk channel (major supermarkets) and a storage capacity of 55,000 pallets to service the Route channel (individual customer outlets) - a total network capacity of 110,000 pallets by 2020.

40 metres

Given the land area available at Northmead, the automated bulk distribution centre would need to be a minimum height of 40 metres to achieve the total required storage capacity at Northmead (55,000 pallets at start-up in 2008 and 90,000 in 2020). At this height, storage and manufacturing throughput to meet the requirements of the CCA business are perfectly matched and, as such, 40 metres represents the optimal height for the facility on an operational and implementation cost basis.

However, because of the visual impact of such a structure, the 40 metre high option was not considered a viable alternative.

32 metres

The 32 metre high facility provides a 55,000-pallet capacity, which would accommodate the storage required for both Route and Bulk channels in 2008, but precludes any opportunity for expansion to meet future requirements. Under this scenario, future operations at Northmead would be restricted so that ultimately the facility would only store product required to service the Bulk channel. Route customer requirements would be supported by storage capacity added progressively to the Eastern Creek facility as projected incremental demand is realised.

A 32-metre high facility at Northmead is the preferred alternative as it has a significantly less visual impact than the 40 metre option. However, while delivering both distribution and manufacturing efficiencies, it is less optimal than the 40 metre option. The capital cost of the 32 metre development is in the order of \$7 million greater than the 40 metre alternative due to the requirement for three additional cranes and a 30% increase in the building footprint. Moreover, the 32 metre development utilises all available area at the site, and therefore provides no option for future expansion, apart from the three production lines currently planned.

Less than 32 metres

Accommodating the minimum required 55,000-pallet storage capacity at a height of less than 32 metres would require additional cranes and add significant cost to the development (each crane and its associated infrastructure costs in the order of \$750,000). The building footprint would be substantially increased and the additional space requirement would:

- necessitate demolition and relocation of a number of functioning buildings and other infrastructure (existing canteen and school tour centre, packaging store, engineering store and a significant portion of the existing warehouse);
- restrict or prevent the movement of delivery vehicles to the syrup room, sugar and carbon dioxide storage, and Level 1 production lines potentially necessitating their relocation on the site; and
- limit the planned expansion of production lines to only one line in the existing warehouse area, thereby compromising the entire redevelopment plan and necessitating the development of a new supply strategy for NSW.

At building heights of less than 32 metres the machine efficiency of the warehouse system, for the particular product movement requirements of CCA, is severely compromised. To operate efficiently the cranes require a warehouse height of no less than a quarter of the depth or length of the storage aisle. A warehouse length of 128m (as can be achieved on this site) therefore needs a height of 32 metres or greater to achieve the necessary efficiency.

Accordingly, this option was not considered operationally, practically or economically feasible.

3. Different locations on the site

A number of alternatives were examined to reduce height but retain the same capacity by adjusting the footprint and expanding to the west, east, south, or a combination of these.

Expansion to the west was not considered feasible because it would:

- necessitate demolition and relocation of a number of functioning buildings and other infrastructure (existing canteen and school tour centre, raw materials store, engineering store and a portion of the existing warehouse);
- restrict the movement of delivery vehicles to the syrup room and sugar silo; and
- materially limit the opportunity to expand the production lines as planned.

Expansion to the east to the land at 102 Briens Road occupied by an existing industrial building was not considered feasible because it would:

- require demolition of a quality 17,000 square metre warehouse and 4,000 square metre office complex that is currently valued at around \$25 million, and excavation and removal from site of approximately 60,000 cubic metres of material (at an estimated cost of \$6 million) to equalise the level across the two sites;
- remove the opportunity to reuse this existing infrastructure to accommodate the CCA NSW Equipment Service and National Finance operations (320 jobs). These functions currently occupy the site of the proposed HBW. Whilst these functions could move off-site it would be at considerable replacement cost, could entail technical redundancies and could remove these jobs from the Parramatta locality.

Expansion to the south was not considered feasible because the structure would:

- encroach upon the area required for truck manoeuvring and require the loading area to be located to the north. Locating the loading area adjacent to Briens Road increases the likelihood of acoustic interference to the houses to the north at night;
- overshadow Toongabbie Creek, the riparian zone, resulting in potential ecological impacts.

Orientating the warehouse in a different manner (east/west) was also considered but due to the geometry of the site required a greater area to achieve the same capacities and would have the same effect as expansion to the east or west as documented above.

Overall, the proposed building location is considered optimal since it does not affect existing production, existing offices, or the opportunity for future expansion of production. It is also at the lowest point on the site, thus minimising the visual impact of the development.

4. Break up the mass / bulk of the structure

The HBW proposed for Northmead is a “clad-rack” structure where the exterior cladding (walls and roof) of the building is attached directly to the storage racking itself. The exterior of the building is essentially the weatherproof skin of the internal “machine”. This is the most efficient construction method for this kind of facility, minimising the total amount of materials (steel) required in construction, and the overall building envelope. The size and shape of the building is defined by the automatic storage system within and is therefore necessarily uniform in width, length and height.

The automated store uses fixed-height cranes to access the storage racks and this eliminates any opportunity for variation in height or separation of building components in the longitudinal direction (corresponding to the crane aisles). The only means by which to break-up the mass of the warehouse would be to split the facility into two or more (smaller) HBW compartments physically segregated on the site.

Assuming the 32 metre height is retained, a “compartment” design results in a larger overall warehouse footprint to allow adequate separation of the components, creating issues similar to those outlined above in relation to height. Any option that increases the building footprint

beyond that currently proposed precludes the expansion of manufacturing operations and leads to substantial incremental capital cost, for additional floor, walls, and roofing, which in combination would render the Northmead Redevelopment Project infeasible.

To accommodate the required 55,000 pallet positions within the available area, and achieve the necessary segregation, the height of the structure(s) would need to be increased to 40 metres or more. The visual impact of this alternative was not considered acceptable.

5. Split capacity between Northmead and Eastern Creek

Splitting the required warehouse capacity for Bulk customers between Northmead and Eastern Creek (or another site) would lead to stock rotation inefficiencies and necessitate a larger combined warehousing capacity than that planned in this proposal. It has been determined that two warehouses would need a combined 65,000-pallet capacity to achieve the same levels of customer service as the single proposed 55,000-pallet capacity facility at Northmead. The additional capacity is necessitated by:

- increased variability in the demand on each warehouse caused by splitting customer requirements between operations. Fragmenting the demand leads to the loss of the “averaging” or smoothing effect that would be achieved by combining the requirements at a single points;
- duplication of safety stock requirements (stock held as “insurance” against uncertainty in the future demand for a product and changes in the planned schedule of production) to store the same product at more than one facility; and
- reduced storage density caused by multiple holdings (storage locations) for the same product.

Scale economies in automated warehouse construction lead to a minimum feasible facility size, or increment in size, in the order of 25,000 pallet positions. As such, a minimum of 25,000 pallet positions would be required at the second location to make the facility viable. Construction of two facilities with a combined capacity of 65,000 pallets leads to substantial cost duplication (in the order of \$10M), and would result in neither facility being adequately sized to meet ongoing Bulk customer requirements, thereby locking-in forever a compromised operation.

6. Sink the structure

Excavation of the site to sink the floor of the HBW below current ground level is not considered feasible for a combination of cost and practicality reasons. To make a material difference to the visual impact of the HBW, the apparent height of the building would have to be reduced to approximately 26 metres – therefore requiring 6 metres to be “sunk”. The estimated excavation and additional construction cost would be more than \$8 million (representing a 20% increase in construction cost even after allowing for savings in foundations). A final floor level of RL 9.3 Australian Height Datum (AHD) (6 metres below the proposed RL 15.3 AHD level) would be at or below the natural water table, and well below the 1 in 100 flood level of RL 13.8 AHD, giving rise to substantial waterproofing issues.

The reduction of 6 metre in floor height of the 12,000m² HBW would also necessitate the removal of 72,000 cubic metres of material from the site.

The complexity of the automated materials handling system installation would be increased due to difficult access to the sub-ground work area, leading to an associated extension of the timeframe required for installation. These challenges, and additional maintenance equipment requirements, could be expected to add approximately \$1.5 million to the cost of the automated materials handling system.

Because of the 32 metre overall height limitation, the warehouse design and operations are governed by the required storage capacity and not the throughput (cranes). While sinking the building into the ground produces a marginal increase in crane operating efficiency due to mid-height pick-up and despatch, it does not result in an overall efficiency improvement for the warehouse.

With no direct access from ground level, additional access requirements for crane maintenance at the excavated floor level of the HBW will reduce the available warehouse footprint by around 5%. Therefore, in order to maintain the necessary storage capacity, an additional layer of racking will be required, adding 2 metres to the overall height of the building, and increasing the apparent height to 28 metres from ground level.

Extensions to the project timeframe due to excavation activity and construction complexity are estimated at 4 months for building and 2 months for materials handling. Benefit realisation for the project would be delayed by at least 6 months, adding a further \$2 million to the project cost.

7. Stage the proposal

Staging the building is possible at a height of 40 metres as only two thirds of the width would need to be built immediately to achieve the required 55,000-pallet capacity. However, at 32 metres high the entire building area is required immediately to meet the minimum 55,000-pallet capacity. Staging is therefore precluded.

Benefits of preferred option

Having determined that Northmead is the best economic location for expansion of manufacturing operations, co-location of the primary full goods storage facility is the logical extension of this strategy. Situating the main warehouse immediately adjacent to the primary manufacturing facility is the optimum logistics configuration, maximising efficiency, avoiding unnecessary (non-value-adding) road movement of product.

There are a number of significant environmental benefits for the Sydney Metropolitan Region arising from the preferred redevelopment option summarised as follows.

- Associated savings in vehicle loading and unloading requirements generate a saving of 37,000 hours per annum of forklift truck running time from 2008, growing to 54,000 hours in 2020.
- In combination, these efficiencies will save approximately 240,000 litres of diesel and 160,000 litres of LPG in 2008, and provide substantial environmental benefit through a consequent reduction in greenhouse gas emissions equivalent to almost 1,000 tonnes of CO₂, and in the order of 10 tonnes of other noxious chemicals (NO_x, VOC, SO₂ and particulate matter). These environmental benefits will grow in the order of 50% from these bases to reach the ultimate saving by 2020.
- At start-up in 2008, a total of more than 26,000 B-double truck movements per year, or approximately 460,000 vehicle kilometres travelled (VKT), will be removed from the regional road network, easing pressure on the critical Cumberland Highway/M4 and M4/M7 intersections. At the busiest time of year, in the lead-up to Christmas, these savings translate to a reduction of approximately 220 B-double movements per day (and 20 movements in the busiest hour).
- In 2020, by which time the Northmead facility will store product for Bulk deliveries exclusively, and the Eastern Creek facility will be fully developed, a total of more than 40,000 B-double movements (30 movements per hour at peak) and over 740,000 VKT.

4.0 Description of Development Proposal

4.1 Overview

The proposed development centres on the construction of a new high-bay automated storage facility (warehouse), adjoining the existing manufacturing operation, with a building footprint of approximately 16,000m². The existing warehouse area will be vacated, allowing reconfiguration and expansion of the manufacturing operation, including the addition of three new production lines in this area. This section of the report provides a description of the proposed development.

Architectural drawings of the proposed development prepared by MNIA Architects are included at **Appendix D**, engineering drawings prepared by the Robert Bird Group at **Appendix E** and landscape plans prepared by Cloustons at **Appendix F**.

Consent is sought for the following:

- demolition;
- site preparation works, including excavation and bulk earthworks;
- construction and use of a new 32 metre high automated high bay warehouse and associated staging area;
- adaptation of an existing warehouse to accommodate three new production lines and manufacturing services including boiler, refrigeration plant and air compressor;
- building envelope for a new building to house a canteen, offices and training facilities;
- building envelope for a new gatehouse and driver amenities;
- upgrading of the on-site stormwater drainage system;
- implementation of access and traffic circulation improvements, including parking and new entrances; and
- site landscaping.

A site plan of the proposed development is presented at **Figure 14** below, highlighting the extent of new works, and overlaid on an aerial photograph of the existing site at **Figure 15**.

It is anticipated that a number of additional buildings/structures will be required to service increased plant requirements associated with the second and third production lines, but are **not part of this project application**. These works are identified in light shading at **Figure 14** and are anticipated to consist of the following main components:

- expansion/replacement of the water treatment plant;
- expansion/replacement of the waste water treatment plant;
- construction of a new syrup room building and sugar storage; and
- construction of a new packaging store building.

These facilities will not be completely resolved until details of the new lines and technological improvements are known.

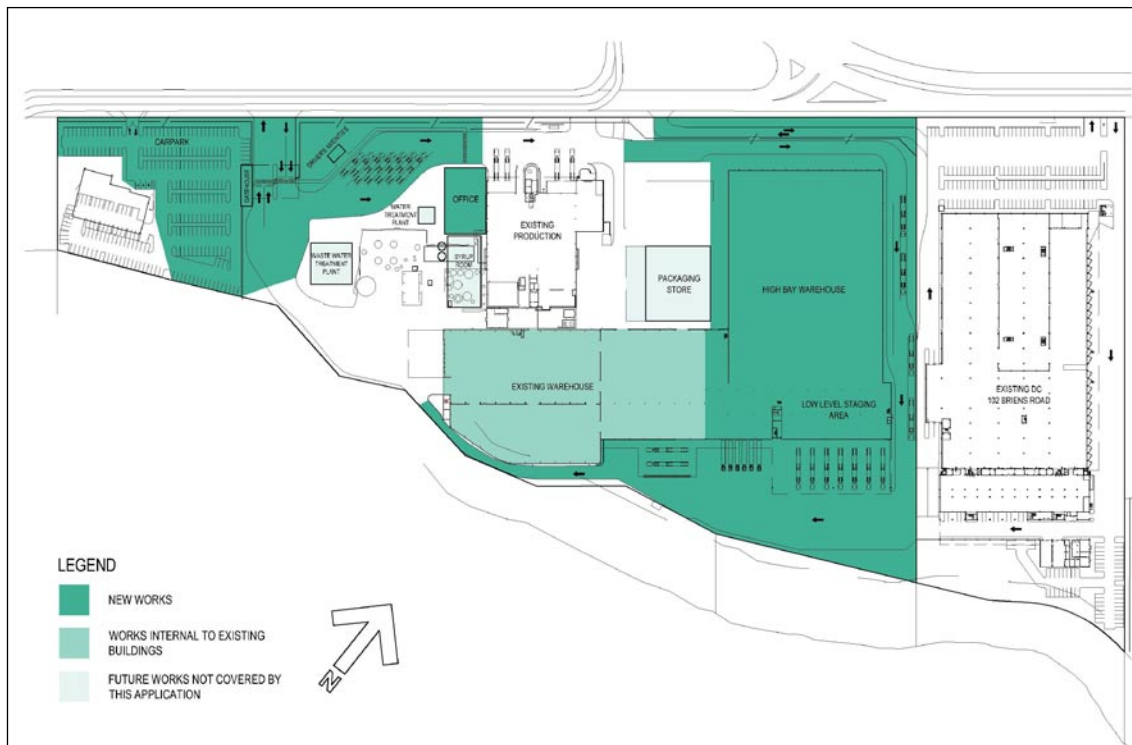


Figure 14 – Plan of proposed development



Figure 15 – Proposed development overlaid on existing site

4.2 Demolition

The buildings and structures to be demolished are highlighted in **Figure 13** below. The following will be demolished or removed to make way for the new HBW:

- the buildings at 104 Briens Road currently housing the National Finance and NSW Equipment Services operations, **104-A** and **104-B**;
- existing buildings at the 120 Briens Road site, currently functioning as a canteen and training rooms (**120-A**) and packaging store (**120-B**);
- the canopy at the south of the warehouse **120-C** and part (approximately 1,000m²) of the existing warehouse building;
- a section of the awning and 50m² attached office and amenities building at the west of warehouse building **128-E**;
- packaging store complex at **120-B** (to provide an area for ancillary construction requirements). The packaging storage function will be relocated to new fire sprinkler-protected selective pallet racking in the northeast corner of the existing warehouse **120-C**, and will continue to utilise the current unloading area and access the facility through an existing entranceway;
- the existing canteen and training room facilities at **120-A**. To allow continuous operation these facilities will be retained temporarily until the replacement building (described later) is commissioned;
- demountable office complex **128-C** adjoining the main production building **128-D** (to be replaced by the new canteen, office and training facility building outlined below); and
- the existing gatehouse and demountable office complex at **128-B** at the western end of the (to make way for the consolidated car park).

A Development Application for refurbishment of the 102 Briens Road facility (**102-A**) to accommodate the National Finance and NSW Equipment Services operations has been approved by Parramatta City Council. CCA aims to complete these works by November 2006.

Some of the buildings at **104** and **120** contain asbestos cement roofing material sheeting, and this will require to be removed by a certified asbestos removal contractor. A hazardous building material removal plan will be prepared prior to the commencement of demolition.

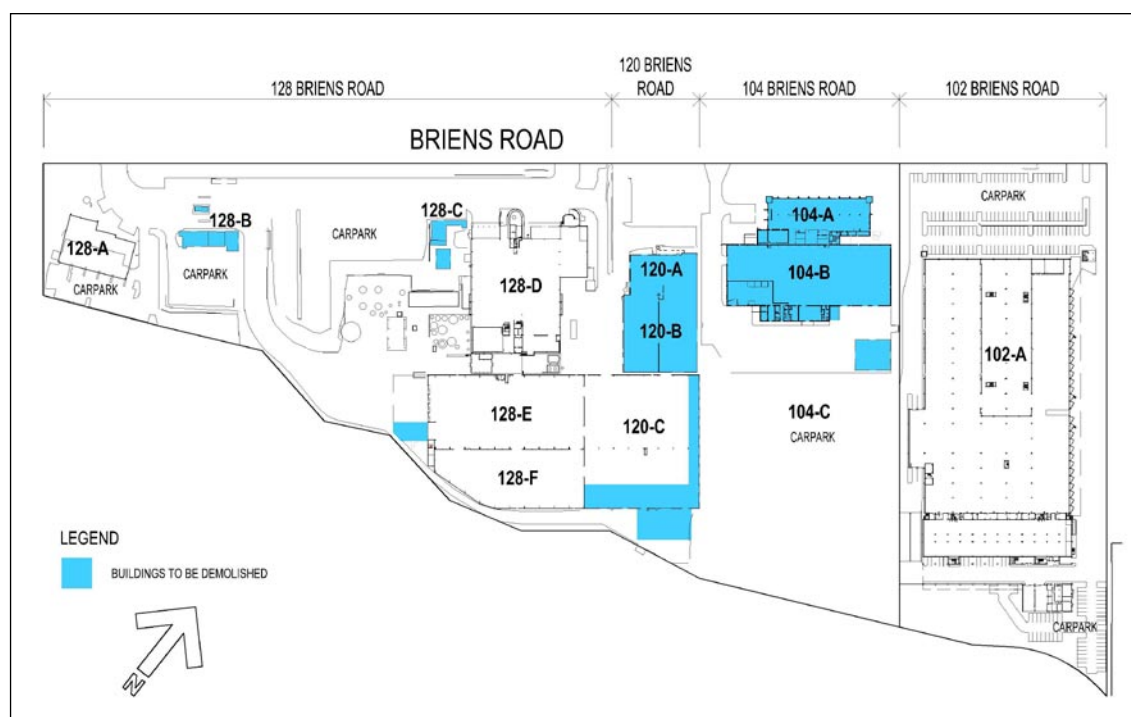


Figure 16 - Demolition Plan

4.3 Site preparation works

A number of preliminary construction activities will be undertaken immediately following demolition of the buildings at **104-A** and **104-B**. These activities will include:

- installation of temporary erosion and sediment controls;
- formation of temporary construction access points, temporary construction roadways and contractor car parking;
- establishment of construction offices and amenities and temporary construction services (power, water, sewer, communications);
- installation of temporary fencing to define the construction area;
- removal of car park pavement at **104-C**;
- relocation of an existing stormwater trunk drain to the eastern boundary; and
- relaying of increased diameter Sydney Water sewer.

Remediation

A Preliminary Environmental Site Assessment has been undertaken by Douglas Partners (see **Appendix M**). An area of uncontrolled fill on the southern portion of the site has been identified. Further assessment will be carried out to verify the nature of the substrate including the presence of asbestos. Any detected contaminants or asbestos will be removed or treated in accordance with NSW guidelines and requirements.

Any excavated material, including asbestos, found to be contaminated will be stockpiled and treated until the soil is bio-remediated to a level suitable for use as clean fill. Any soil that cannot be successfully remediated will be transported off the site to an approved facility in accordance with DEC guidelines.

A hazardous building material inspection will be undertaken by an environmental consultant prior to demolition. All hazardous material will be removed from the site in accordance with NSW legislation and requirements.

Bulk earthworks

Bulk earthworks will be required to establish the required building platform and pavement levels.

Following demolition of buildings, the site will be cleared of all vegetation and topsoil material as well as existing concrete and bitumen pavements. Earthworks to create the building platform and pavement areas will be carried out once the stormwater systems have been installed. Temporary drainage systems and silt control measures will be put in place in the initial earthworks phase.

It is anticipated that there will be an overall net balance of cut and fill materials and minimal requirement to remove excess material from site.

4.4 High-Bay Warehouse

The new automated bulk warehouse will be located on the 104 Briens Road site to the east of the existing manufacturing and warehouse facilities.

The HBW will have a floor area of approximately 11,900m² (128m x 93m) and capacity to accommodate 55,000 pallets, configured in 13 aisles with 13 levels of double-deep storage. Each aisle is serviced by an independent automatic storage and retrieval machine (crane). The floor level of this facility will be aligned to that of the existing warehouse at RL15.3 and, allowing for conventional gable roof structure, the peak of the HBW roof will be 32metres above finished floor level at RL47.26. The building envelope of the HBW is summarised in **Table 1**.

Table 1 – High-Bay Warehouse building envelope

Element	Dimensions
Footprint	128m x 93m
Floor area	11,900m ²
Height to top of ridge	32m (RL 47.26)
Internal height	28.5m
Setback	32m from Briens Road boundary

The adjoining low-level (maximum 12.2 metres) staging area will have a floor area of approximately 3,900m². Equipment to be installed in this area includes:

- pallet conveyors to transport product from a series of induction points to the monorail;
- a recirculating monorail transport system for transfer of product to and from the high-bay store;
- a series of conveyors and pallet flow lanes functioning as despatch dock storage (staging); and
- automatic truck-loading docks.

The staging area will incorporate a two-level internal building with a floor area of 320m² comprising a receipt/despatch office, a control office and appropriate amenities facilities. The building will be connected to the rest of the site via an elevated pedestrian walkway serving both personnel and school and community tour groups, and will be fully sprinkler protected. A new 150m² internal maintenance workshop and spare part store will be constructed adjacent to the monorail loop.

Modifications to the building shape at the south of **120-C** will create a new inwards goods unloading area and align these receiving docks with the adjacent despatch dock area, providing increased area for truck circulation to the south of the designated loading/unloading areas.

New awnings and a truck-loading apron to suit B-double vehicle movements will be constructed to the south of the staging area, fronting Toongabbie Creek. The 3,500m² attached canopy will facilitate undercover loading and unloading of vehicles by forklift truck.

Architectural design

In designing the HBW, the architects had to address and balance a number of competing objectives: constraints associated with the layout of the Northmead site and the available land; functional requirements for a HBW; and the visual impact resulting from the height and mass of the structure. The issues associated with the former two were discussed in detail in Chapter 3.

Design options

A number of different design options to clad the automated HBW were developed and assessed. As explained in Section 3.3, the proportions of the HBW are largely dictated by the automated process within. The 'machine' has to be clad with a 'skin' that becomes the facade of the structure.

To improve the aesthetic of the structure within the context of the locality, over 20 architectural treatments were developed and photomontages of six of these options were prepared. Several alternatives were displayed at the Community Information and Feedback Sessions, and on the web site (see Section 5.3). The alternatives included:

- 'pop art' treatments to provide a quirky and distinctive look;
- articulation of the facades to break up the mass, make the large element appear smaller and provide interest;
- use of clear acrylic materials and glazing;
- the wave treatment described in detail below;
- combinations of these on different facades.

In addition to the visual impact of the different options, the practicality of application, cost and energy efficiency of the treatments were considered. The outcome of the assessment was as follows:

- The use of glazing and clear materials was discounted because of poor energy efficiency; the interior of the building would need to be illuminated to reveal the workings within (not an operational requirement), visible internal activity would be very low.
- The various pop art options, while blending to some extent into the horizon were considered too 'in your face' for the locality and worked to draw attention to the building.
- Articulation of the facades provided interest and some aesthetic benefits, and on the northern face simulated a very large commercial building. However, this treatment, too, drew attention to the building and did little to mask the bulk.
- A combination of the wave and articulated designs was of some benefit in addressing visual impacts from different viewpoints and providing interest to the southern façade – but the result lacked coherence and architectural integrity. Complex applied façade treatments have the effect of drawing attention to the size of the building, thereby increasing visual impact rather than reducing it. Applying different façade treatments would result in confusion to long distance views where two different adjoining building walls may be visible.

The proposed simple façade treatment applied to the whole building as a unified single three-dimensional entity was therefore the best available measure by which to minimise visual impact. Accordingly, the wave treatment, described below, was selected for the purposes of this Environmental Assessment. It was also the treatment that received the most positive response at the Community Information and Feedback Sessions because of perceived low visual impact.

Preferred design

The design adopted attempts to blend the building from its foundations on the ground to the elements of the sky against which it will be viewed. The design is smooth, elegant and multi-tonal and incorporates a 'wave' similar to the *Coca-Cola* 'Dynamic Ribbon Device' as per Executive Summary. The shape also mirrors the curved plant superstructure atop the nearby Westmead Children's Hospital. The different elevations of the design are shown in **Figure 17** and in drawing EA06 at **Appendix D**. Photomontages are located at **Appendix I**

The depiction will appear as a grey base indicating the 'earth' or 'hills' through to a white top meant to reflect clouds in the sky but bisected by a vibrant light blue wave that will gleam in the sunlight and provide a distinctive element lighting the appearance of the building when viewed from near or far. In order to highlight the wave element it is to be mounted proud of the other cladding. It will thus become the dominant feature and accentuate the movement of shape and proportion when viewed from different locations.

A Coca-Cola sign 10 x 3.2 metres in size will be mounted on the northern and eastern façades of the HBW as indicated in **Figure 17**.

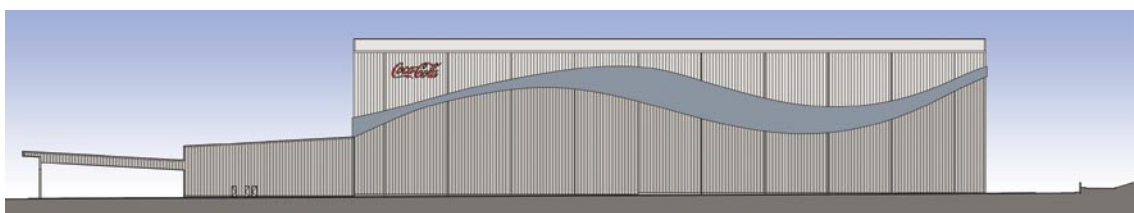
External materials and finishes

The building cladding will be metal which is commonly used for buildings of this type but the wave itself will be a non-reflective metallic finish that has an iridescent appearance when viewed in full sunlight.

The external materials of the HBW will be Colorbond roof sheeting, fascia cladding and wall cladding. The colours are shown in drawing EA06 at **Appendix D**.



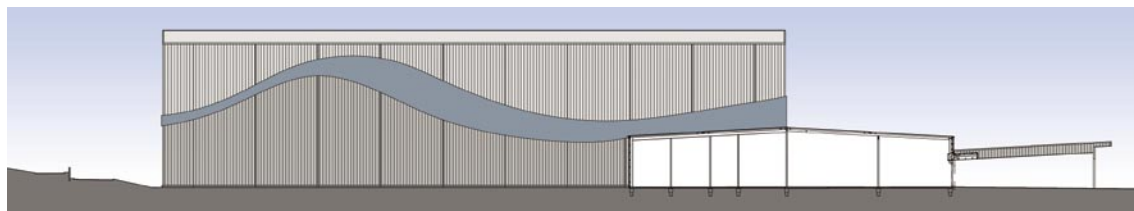
Northern Elevation



Eastern Elevation



Southern Elevation



Western Elevation

Figure 17 - Elevations of the HBW

4.5 Expanded manufacturing facilities

The existing 7,200m² finished goods warehouse buildings at **128-D** and **128-E** will be adapted to accommodate three new beverage production lines and associated manufacturing services including boiler, refrigeration plant and compressors. The floor of the warehouse area will be re-graded and drains introduced to service the new wet process area.

The new production lines will typically consist of:

- automatic inbound bottle / can unloading facilities;
- depalletising machinery;
- washing equipment;
- filler and capper or seamer;
- warmer / pasteuriser;
- labeller(s);
- packaging equipment;
- palletisers; and
- inter-connecting conveyor systems.

To support the installation of these lines, the existing syrup preparation and mixing facilities will be expanded and/or augmented by the introduction of new technologies. Supporting manufacturing infrastructure including refrigeration plant, boilers and compressors will be upgraded to increase capacity to meet the additional demand.

The first stage of manufacturing expansion will entail the installation of one new production line in the existing warehouse building **128-F**. The second stage of expansion will include relocation of the existing palletisers to warehouse building **120-C**, directly interfacing with the in-feed to the new HBV, and the installation of a further two new production lines in the **128-E** building. These works will be undertaken without modification of the exterior building form of the existing warehouse.

Detailed design of a number of additional buildings required to support the installation of the second and third new lines will be addressed in a separate development application when the exact details of these requirements are known.

4.6 Canteen, offices and training facilities

A new two-level 2,000m² building will be constructed adjacent to the main production building **128-D** in the area currently occupied by a series of portable office buildings at **128-C**. The building will have a footprint of 1,000m² and accommodate a canteen, offices for manufacturing and warehouse administrative staff, training facilities, and an auditorium that will be utilised as a base for school and community tours of the facility. Provision for bus parking will be made in the adjoining truck queuing area.

The canteen, auditorium and amenities will be located on the ground floor, and offices, training facility and associated meeting rooms and amenities situated on the first floor. The final design of this building is yet to be fully resolved, **and will require further approval.**

4.7 Gatehouse and driver amenities

A new gatehouse facility will be constructed at the new heavy vehicle access described in Section 4.9 below. The gatehouse will be single level and 175m² in area, including security office, visitor entry and induction area, fire control room, and a collection area for staff drinks issue. The complex will include an awning sufficient to cover the cabs of entering and departing vehicles, boom gates to control vehicle entry and exit, and safe pedestrian access to the rest of the site. The driver amenities building is 60m² (6m by 10m) and includes a lunchroom, male and female toilet facilities, a unisex shower, and an office for contractor administration.

Final design of these facilities is yet to be completed, **and will require further approval.**

4.8 Watercycle management

The Water Management Report prepared by the Robert Bird Group (refer to **Appendix J**) details works proposed in relation to flooding, site stormwater management, overland flows, control of discharge from the site, water quality and water usage and re-use management. Parramatta City Council, the Upper Parramatta River Catchment Trust (UPRCT) and the Department of Natural Resources were consulted during preparation of the water management strategy.

Concept plans have been prepared showing the proposed extent of Trunk and Internal Stormwater Drainage, On-site Detention, Pollution Controls, Erosion and Sediment Controls and creek protection works for the proposed redevelopment. These drawings are included at **Appendices E and J**.

Site drainage and water quality

Data on flood levels obtained from the UPRCT's modelling of Toongabbie Creek indicate that the site is flood-free for all storm events up to and exceeding the 1-in-500-year flood event. All proposed building floor levels will have at least 900mm freeboard above the peak 1-in-100-year flood level.

Peak stormwater drainage from the redeveloped parts of the site will be limited by using on-site detention tanks, controlled by measures outlined in the UPRCT On-Site Stormwater Detention Handbook that has been adopted by Parramatta City Council.

Two separate on-site detention (OSD) tanks are proposed, at the eastern and western ends of the 104 and 128 sites respectively. The eastern OSD tank is designed to handle the catchment from the proposed HBW and its surrounding pavements. The western OSD tank has been sized to handle the catchment of the modified car park area surrounding the administration building **128-A**. Discharge rates to Toongabbie Creek will be attenuated to acceptable levels by means of suitably sized orifice plates. Energy dissipation structures and scour protection at both stormwater outlets will prevent damage to Toongabbie Creek from high flows.

To guard against the risk of contaminated firewater runoff entering the creek in the event of a warehouse fire, an automatic penstock valve, controlled from the fire switchboard, will block discharge from the site. This valve will cause all the firewater runoff to be contained within the site in-ground drainage system and on-site detention tank.

Stormwater quality will be improved by the use of combined gross pollutant trap/oil and silt arrestor devices to provide filtration and sedimentation in accordance with Parramatta City Council policies. Incorporation of gross pollutant trap and filtration/sedimentation will provide a considerable enhancement of the quality of water discharged to Toongabbie Creek as no filtration is currently provided to the trunk drainage system.

Water re-use

Filtered stormwater will be retained on site for irrigation of landscaped areas and stored in a 200 cubic metre underground tank, integrated with the eastern OSD tank. Roof water will be for irrigation of landscaping to the site perimeter. Water efficient tapware and fixtures will be used throughout the new extensions.

4.9 Access and circulation

The number of entrances to the site is to be rationalised to reduce the total number of access points, improve their position relative to intersections external to the site, and separate the movement of heavy vehicles (B-doubles and semi-articulated trucks) from passenger vehicles.

The main site entrance at 128 Briens, currently shared between passenger and delivery vehicles, will be converted to service passenger vehicles (cars) only. The car parking area adjacent to the Sales and Administration office (**128-A**) will be modified and expanded to consolidate in one location, separate from the operational site, the parking requirements for the combined operations on the 104-128 sites (administration, manufacturing and warehouse).

A new heavy vehicle entrance and exit will be constructed at the western end of the Briens Road site, with separate entry for passenger vehicles. The new entrance will be formed to better control the entry and exit of vehicles from the site, and one-way traffic circulation implemented for all vehicles. A truck queuing area capable of simultaneously accommodating seven B-double and / or semi-articulated vehicles will control the movement of delivery vehicles around the site. A call-up system will be implemented to prevent trucks arriving at the rear loading area before they can be processed.

A new passenger vehicle slipway is to be constructed at approximately the same location as the currently disused entrance at 120 Briens Road and along the front of the 104 Briens Road site, to service traffic to the 102 Briens Road site. This entranceway will provide safer access for staff located at the 102 Briens Road facility, being further from the Briens Road / Old Windsor Road intersection than the present 104 entrance, and facilitate entry from the northwest and exit

to the east, not possible at the current 102 Briens driveway position. The current entrance at 102 Briens Road will continue to operate to service entry/exit requirements for delivery and other vehicles of a mass greater than 3.5 tonnes.

The existing roadway to the south of the site will be reconstructed to a standard sufficient to accommodate the forecast volume of vehicle movements, and modifications to the existing warehouse building will be made as necessary to create the required road widths. Part of the awning at the west of the existing warehouse and a portion of the attached amenities block will be removed to increase the width of the circulation road from the current 2.8m to 4.5m to comply with access requirements specified in consultation with the NSW Fire Brigades.

The entrances and circulation pattern at the conclusion of the development is presented at **Figure 18** below.

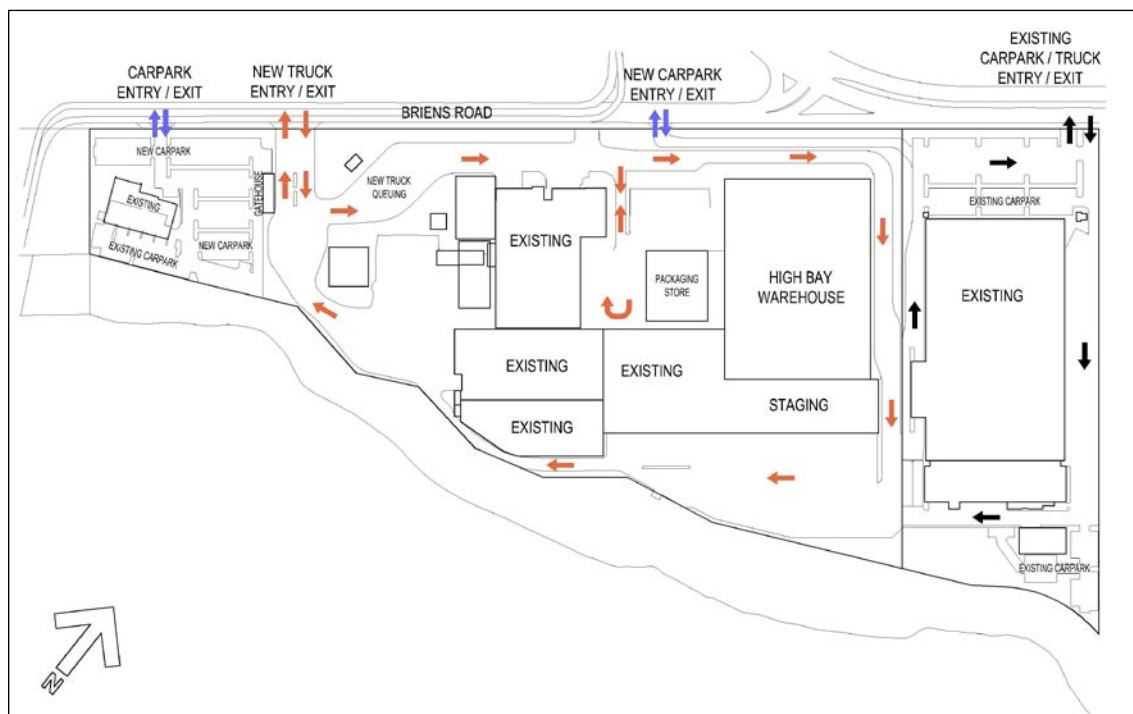


Figure 18 – Final traffic plan indicating entrances and circulation

Car parking

Parking will be provided at the western end of the site (some 255 spaces) adjacent to the existing office building, and at the eastern end of the site (some 285 additional spaces) at 102 Briens Road. It should be noted that additional informal parking will also be available at 102 Briens Road, within a designated area adjacent to Toongabbie Creek.

Signage and lighting

Site entry, directional and site safety signage will be installed across the site.

Two 10 x 3.2 illuminated Coca-Cola signs identifying the site will be installed on the northern and eastern facades of the HBW.

All lighting within the site will be similar to current arrangements in accordance with lux levels under relevant Australian standards. It is intended that lighting be kept to a minimum while meeting requirements for safety, security and truck access.

4.10 Landscaping

Cloustone Landscape Architects have prepared a Landscape Plan (**Appendix F**) and Landscape Design Statement (**Appendix K**) to enhance the overall appearance of the site. This plan includes landscaping the entire Briens Road frontage and other suitable areas on the site, and improved screening of the various buildings, parking and roadways fronting Briens Road.

An avenue of advanced stock fig trees, *Ficus hillii*, will line the Briens Road boundary, providing shade during summer and creating a strong visual boundary between the public footpath and the site. These relatively large fig trees have been chosen to complement the scale/height of the proposed development, including the width of the circulation road. Existing mature trees are to be retained wherever possible and integrated with the new landscape.

A planting buffer between the public footpath and the site has been created by setting the boundary fences back by 8 metres. The buffer is to be planted extensively utilising native plants with groundcover, layers of low hedges, and taller hedge plants at the rear to screen the fence, with gaps in the planting allowing slotted views to the site.

Stormwater and rainwater will be used for irrigation. The irrigation system will incorporate the latest technology in sub-surface irrigation utilising capillary movement by means of a geofabric covering and pressure compensated drip emitters.

Proposed landscape works are in line with Parramatta City Council's Planting Strategy 2002, including use of distinctive plants and retaining existing plantings to conserve and enhance the streetscape.

4.11 Construction management

A Construction Staging Methodology for the proposed development has been prepared by the Robert Bird Group and is included at **Appendix G**.

4.12 Staging

The redevelopment of the Northmead site is proposed to be completed in five main stages over a period of approximately 5 years. The stages have been planned to avoid interruption to ongoing manufacturing operations at the site and to accommodate the seasonality of the CCA business. Works at critical operating areas, such as the main entrance, are programmed to avoid as far as possible the peak summer period of November to March.

Proposed staging is described below and illustrated in **Figure 19**.

- **Stage 1:** Modifications to the existing warehouse, relocation of the packaging store and installation of the first new production line (6 months).
- **Stage 2:** Construction and commissioning of the HBW and slipway to 102 car park (18 months).
- **Stage 3:** Construction of the new building containing offices, canteen and training facilities (9 months).
- **Stage 4:** Construction of the new heavy vehicle entranceway, car park, gatehouse, driver's amenities and truck queuing area (5 months).
- **Stage 5:** Further modifications of the existing warehouse and progressive installation of two further manufacturing lines (36 months).
- **Stage 6:** Additional works, subject to separate approval, including new packaging store, syrup room, water treatment and waste water treatment facilities (21 months).

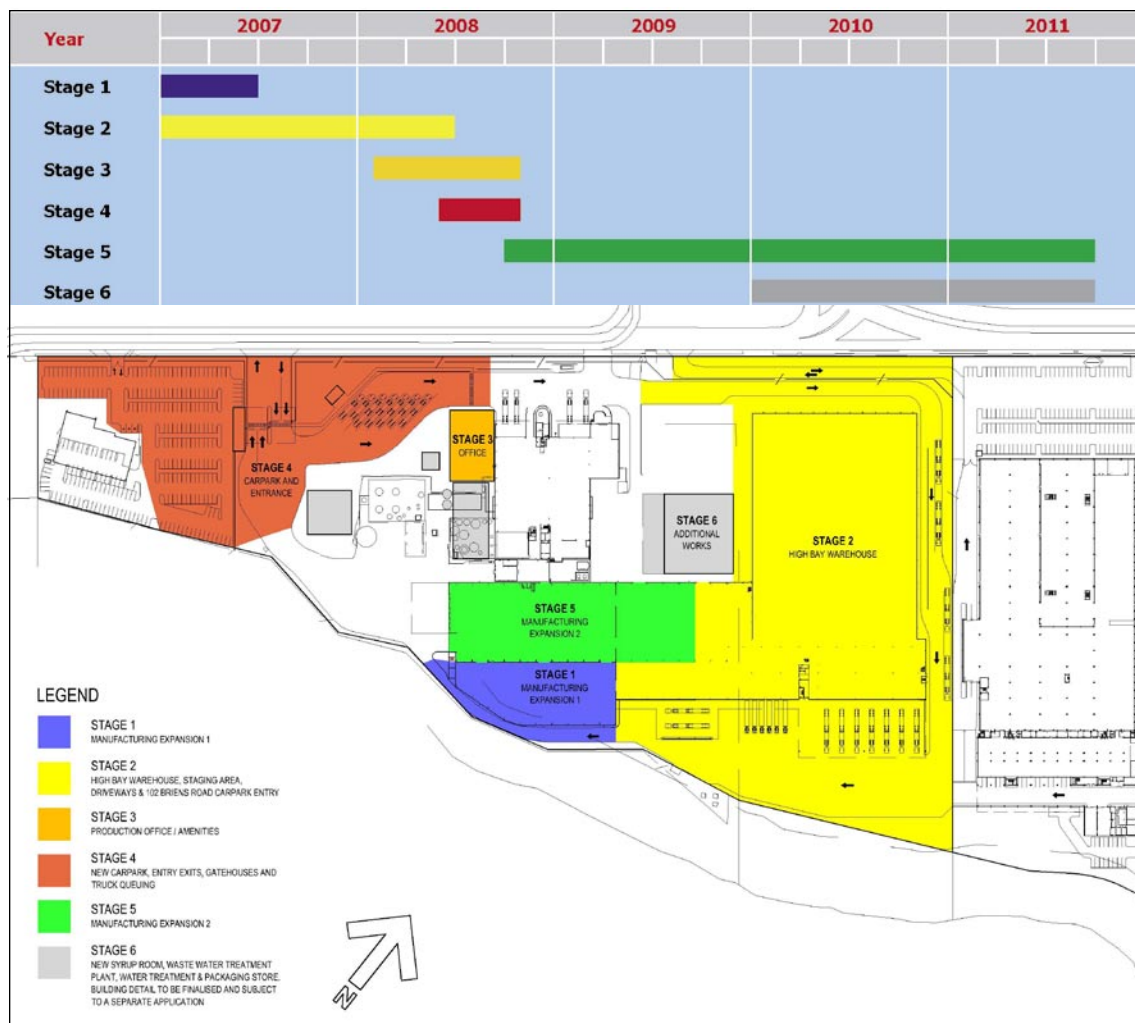


Figure 19 – Staging of Development

5.0 Consultation

This chapter of the report details the consultation undertaken during preparation of the proposal.

5.1 Public authorities

In accordance with the Environmental Assessment Requirements issued by the Director-General for this project, consultation must be undertaken with relevant public authorities and the broader community. The following public authorities have been consulted as required by the Director-General:

- NSW Department of Environment and Conservation (DEC);
- Roads and Traffic Authority (RTA);
- Department of Natural Resources;
- Parramatta City Council; and
- Westmead Hospital.

Table 2 summarises the key issues from the consultation.

Table 2 - Key issues from authority consultation

Authority/agency	Issues/discussion	CCA comment/response
Department of Environment and Conservation (DEC)	No issues in relation to existing trade waste procedures and licences. Saw little impact from proposed development and consider it low risk. Identified that NSW Industrial Noise Policy requirements must be met.	Proposal will comply with all requirements in NSW Industrial Noise Policy.
Roads and Traffic Authority (RTA)	Expansion of facility; proposed access arrangements; parking provision; public transport and North-West T-Way; existing & proposed traffic generation; operation of, and effects of additional traffic on, surrounding network. No issues raised by RTA - will provide formal response on review of formal application	No action required.
Department of Natural Resources	Confirmed that existing vegetated drainage channel is not part of a river or creek. Sediment and erosion control measures are required to protect the riparian zone of the creek. Suggested combining stormwater outlets where possible.	Sediment and erosion control measures will be installed during construction (see Construction Management Plan). Measures to manage water quality discharged to the creek will be implemented (see Section 4.8). Stormwater outlets are to be combined where practicable.
Parramatta City Council	Several meetings held with Councillors and officers. Issues covered were: • Excessive height of building compared to DCP control. • Bulk and visual impact. • Precedent established by proposal. • Consultation process	Height reduced from initial 40m to 32m. Many options were considered to reduce visual impact and bulk of building. The "wave" treatment of the façade designed to reduce the impact of the structure by creating the impression that the building recedes into the sky and aligns with the horizon Precedence unlikely due to lack of companies with criteria to justify HBW (see Section 3.2) Residents will be given a further opportunity to comment on the proposal during the formal exhibition period.
Westmead Hospital	Discussion of CCA proposal in light of redevelopment plans for Westmead Hospital and planned Part 3A submission. No issues were raised.	Consult again once Westmead proposal is further developed to investigate potential synergies, such as a joint cogeneration plant, and avoid possible conflicts. This matter forms part of the draft Statement of Commitments

5.2 Other institutional neighbours

CCA consulted the **NRMA CareFlight Critical Care Retrieval Service**, which is based at Westmead Hospital, in relation to any potential impacts on helicopter operations from the proposed HBW. CareFlight confirmed that at 32 metres the HBW would have no impact on their current approach paths as it is below the minimum descent altitude. The facility should, however, be well identified for avoidance purposes.

This matter forms part of the draft Statement of Commitments.

CCA consulted with a representative of the **University of Western Sydney** to explain its plans for Northmead and canvass the university's plans for its Westmead campus. The representative stated they have no issues at all with CCA's Northmead development plans.

5.3 Community

CCA commissioned Elton Consulting to undertake a program of community and stakeholder engagement during preparation of the development proposal. The process is reported at **Appendix L** and summarised below. The purpose of the process was to provide:

- accurate information about the proposal;
- an opportunity for local residents and key stakeholders to express their points of view;
- an opportunity for these comments to be reviewed by the CCA project team.

The process included:

- Engagement with Members of the NSW Legislative Assembly, community groups such as the Toongabbie Creek Bush Regeneration, the NSW Branch of Sydney Metropolitan Wildlife Service and the local Historic Society.
- A dedicated website (www.ccawest.com.au) which provided information about the project and key features, and outlined design options. The website includes a facility to upload technical information, such as this EA Report and technical studies.
- An email address and contact name and telephone number for comments. Emails were received from members of the public and responded to by the project team.
- A community information sheet, distributed to about 2,000 local residents and businesses, containing a project summary and details of the Community Information and Feedback Sessions, the website and other contact material.
- Two Community Information and Feedback Sessions (CIFS) held on Saturday 15th July (12.00–2.00 pm) and Wednesday 19th July (7.00– 9.00 pm). Members of the public were invited to view the concept plan and specific information on the proposal that was presented in a series of display panels. Project team members attended to answer questions and provide detailed information about features of the proposal. Structured feedback was gathered through feedback forms handed to participants, and anecdotally through notes made by members of the project team. A total of 64 people attended the two CIFS (17 at the Saturday session and 47 at the Wednesday session).

The issues raised and CCA's response are set out in **Table 3**.

Table 3 - Summary of community/stakeholder issues

Issue	Comment/response
Existing traffic - Truck movements in and around Darcy Road. - Safety concerns in relation to B-double and semi truck movements at the 102 Briens Road site	CCA has directed all contractors and suppliers utilising B-double and semi-trailer transport to enter and leave the site only via Briens Road and the Cumberland Highway. No CCA articulated vehicles are permitted to travel on Darcy Road. Conversion of the 102 Briens Road facility to service National Finance and Equipment Service operations will eliminate the requirement for B-double and semi-trailer delivery to/from the 102 Briens Road site.
Increased traffic Changes to the plant and warehouse would create extra truck movements leading to increased congestion and noise in local area	Consolidation of the 102 warehouse to the new HBW will lead to an immediate reduction in the order of 70 large truck movements per day between CCA sites. Future growth in operations results in only 30 additional movements per day between the current and 2015.
Visual impact - Reducing the height - Possibility of sinking building	Height reduced from initial 40m to 32m. Many options were considered to reduce visual impact and bulk of building. The “wave” treatment of the façade designed to reduce the impact of the structure by creating the impression that the building recedes into the sky and aligns with the horizon. Most residents preferred the least obtrusive architectural treatment. Sinking the building has significant cost and construction implications (See Section 3.3)
Existing noise Residents in the immediate vicinity had experienced noise associated with the general running of the plant including: sugar unloading process; trucks entering and leaving 102 Briens Road particularly in summer; truck reversing alarms at northern loading docks.	CCA has altered the unloading process for sugar deliveries to eliminate obtrusive noise and is investigating the use of white noise reversing alarms for delivery vehicles and extending the proposed noise barrier to cover the northern dock area. Conversion of the 102 Briens Road facility to service National Finance and Equipment Service operations will eliminate the requirement for B-double and semi-trailer delivery to/from the site.
Consultation Process - Public meeting, rather than an information session, wanted by some. - Deadline for feedback (three days after the second information session) too short.	Residents will be given a further opportunity to comment on the proposal during the formal exhibition period.

6.0 Relevant Strategic Plans

This chapter details the relevant environmental planning instruments (EPI) applying to the site and the proposal.

6.1 Strategic plans

Metropolitan Strategy

In December 2005, the NSW Government released the Sydney Metropolitan Strategy titled *City of Cities – A Plan for Sydney's Future*. The Metropolitan Strategy provides commentary and direction for the next 25-30 years at a regional level on issues such as land use, economic development, jobs, transport, innovation, centres and corridors, and residential areas within Sydney.

Parramatta is identified in the Metropolitan Strategy as a Regional City. The CCA site is designated as employment land located within the Westmead Health and Education precinct and forms part of manufacturing, transport and warehouse activities in the western suburbs concentrated along major transport corridors.

The Metropolitan Strategy (pp. 52-54) sets the planning and economic context for employment land, much of which is pertinent to the CCA Northmead redevelopment project, in particular:

- Changes in the way businesses operate, driven largely by advances in technology, are having an impact on the way employment land is used.
- Low margins and the shift to just-in-time production are leading to 24 hours a day/seven days a week operations, especially in the warehousing and distribution sector.
- Operations are being consolidated onto single sites, combining head office, back office, manufacturing and distribution activities etc.
- A compact approach to employment land location is required to support Sydney's competitiveness, to make best use of existing and new infrastructure, increase jobs close to where people live and reduce the extent of additional employment land. This means maximising the use of existing employment land.

Parramatta Regional Planning Strategy 1999

The Strategy for Parramatta identifies the vision, a framework for strategies and an Action Plan for ongoing development of the Parramatta Primary Centre. The key strategies relevant to the CCA redevelopment project are as follows:

- Develop employment opportunities and increase Parramatta's competitiveness.
- Ensure that regional private vehicle and freight traffic is catered for on the regional ring road system – James Ruse Drive / Cumberland Highway / M4 – to divert traffic around the Primary Centre.
- Protect, enhance and interpret the natural and cultural heritage of the river system of the Primary Centre, including rehabilitation of natural watercourses and remnant vegetation.
- Control the height of development to conserve Parramatta's significant heritage qualities and to achieve sun access to major public open spaces.
- Monitor the social impact of development on communities and implement actions to minimise adverse conditions.

6.2 Legislation

Environmental Protection and Biodiversity Conservation Act 1999

The Commonwealth *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act) is triggered when there is likely to be a significant impact on matters of National Environmental Significance that include, relevantly, listed threatened species, ecological communities and migratory species.

A Flora and Fauna report, undertaken by Cumberland Ecology, concluded that the site does not contain any matters of National Environmental Significance (refer to **Appendix H**). Therefore, the site and the proposed development are not subject to the provisions of the EPBC Act.

Protection of the Environment Operations Act 1997

The *Protection of the Environment Operations Act 1997* aims to protect, restore, and enhance the quality of the environment in New South Wales and uses a series of mechanisms to prevent environmental degradation such as:

- pollution prevention;
- cleaner methods of production;
- reduction to harmless levels of the discharge of substances likely to cause harm to the environment;
- recycling; and
- progressive environmental improvements.

CCA at Northmead holds an EPA Licence (No. 2911) for waste activities (Hazardous, Industrial or Group A Waste Generation or Storage).

6.3 Environmental Planning Policies

State Environmental Planning Policy 11 – Traffic Generating Development

State Environmental Planning Policy 11 (SEPP 11) aims to ensure that the Traffic Authority is given an opportunity to make representations in respect of development referred to in Schedules 1 or 2 of the Policy. Schedule 2 of SEPP 11 identifies the following development:

“(f) the erection of a building for the purposes of industry where the gross floor area of the building is or exceeds 5 000 square metres, or the enlargement or extension of a building used for the purposes of industry where the gross floor area of that enlargement or extension exceeds 5,000 square metres”.

The proposal involves an additional 7,500 square metres of gross floor area. Therefore, the proposed development must be referred to the Roads and Traffic Authority.

State Environmental Planning Policy 55 – Remediation of Land

SEPP 55 - Remediation of Land applies to the site. This SEPP aims to provide a State-wide planning approach to the remediation of contaminated land in order to reduce the risk of harm to human health or the environment. The SEPP defines when consent is or is not required for remediation work, and requires that remediation work meets certain standards and notification requirements.

A Preliminary Environmental Site Assessment was undertaken by Douglas Partners Pty Ltd on the proposed development site. The assessment concluded that the site is suitable for continued commercial/industrial use subject to further testing of selected items or areas of the site (refer to **Appendix M**).

Draft SEPP 66 – Integration of Land Use and Transport

This draft SEPP aims to ensure that urban structure, development design, building form and land use locations achieve the following objectives:

- improve accessibility to housing, employment and services by walking, cycling and public transport;
- improve the choice of transport and reduce dependence on car travel;
- moderate growth in the demand for travel and the distances travelled, especially by car; and
- support the efficient and viable operation of public transport services.

Draft SEPP 66 applies to the Parramatta LGA and is a relevant consideration as the development proposes a gross floor space of more than 1,000 square metres.

Sydney Regional Environmental Plan No. 28 – Parramatta

Sydney Regional Environmental Plan No. 28 – Parramatta (SREP 28) provides the statutory basis for planning decisions and establishes regional planning aims for the Parramatta Primary Centre. The Primary Centre consists of eight Precincts, Westmead being one. The CCA site is located in this Precinct, which largely consists of the Westmead Hospital, its associated facilities and land owned by the University of Western Sydney.

Part 2 Clause 14 of SREP 28 contains regional planning aims which apply to the whole Parramatta Primary Centre and which provide a framework within which other development controls operate. These aims must be considered by the consent authority in assessing development applications. In addition, SREP 28 (Part 6, clause 39) contains planning aims for the Westmead Precinct that must be considered by the consent authority in assessing development applications.

An assessment of the proposal against the above planning aims is located in **Appendix B**.

Parramatta Local Environmental Plan 2001

This Local Environmental Plan (LEP) applies to the Westmead Precinct and hence the CCA site, which is zoned 4 Employment (Figure 2). This zone allows for a range of uses including commercial premises (which are ancillary to a purpose permissible on the land or which serve the needs of the workforce), industries (other than offensive, hazardous or extractive industries) and warehouses or distribution centres with development consent. Clause 40 of the LEP stipulates a floor space ratio of 1:1 for the site.

Parramatta Development Control Plan 2005

Parramatta Development Control Plan 2005 (DCP) applies to the site. The plan includes design principles and objectives in relation to: built form; views and vistas; the public domain; culture and public art; water management; soil management; air quality; development on sloping land; land contamination; biodiversity; and landscaping. It also includes controls in relation to building envelopes and parking.

Clause 3.2- Preliminary Building Envelope Table sets out the following controls relevant to the project:

- Height – Maximum 12m
- Street setback – to correspond to existing predominant building line in street
- Rear setback – dependent on impact on amenity of adjoining development
- Side Setback – nil where no impact on streetscape or amenity of adjoining development.

Clause 4.1.1 - Views and Vistas sets out the objectives and design principles to preserve and enhance district views, encourage view sharing and ensure visible sites are designed in scale with the City's setting. The views that the development may affect include:

- View 14: Looking south east towards Sydney City, Constitution Road Wentworthville
- View 15: Looking south east towards Parramatta City Centre, Wessex Lane, Wentworthville
- View 17: Looking south east towards Parramatta City Centre, Buckleys Road, Winston Hills.

Clause 4.2.3 - Building Form and Massing outlines the objectives and design principles to ensure building form and mass are compatible with the surrounding area, visual character of the street and have regard to site characteristics and environmental constraints.

An assessment of the proposal against relevant elements of the DCP is included in Section 7.2 and **Appendix B**.

7.0 Environmental Assessment

7.1 Director General's Environmental Assessment Requirements

This chapter of the report assesses the proposal in accordance with the Director-General's Environmental Assessment Requirements. The chapter is structured to mirror as best as possible the order of the requirements. The table below indicates where in this report each requirement is addressed. A copy of the D-G's Environmental Assessment Requirements is attached at **Appendix A**.

Director-General's Requirements	Report Location
General Requirements	
Executive Summary	Page vii
Detailed description of the proposal/project components	Chapter 4
Need for the proposal	Sections 3.1 and 3.3
Alternatives considered	Sections 3.3 & 4.4
Staging	Section 4.12
Consideration of relevant statutory provisions	Chapters 6 & 7
Overview of environmental impacts and detailed assessment of key issues	Chapter 7
Draft Statement of Commitments	Chapter 8
Conclusion and justification of suitability of the site for proposal	Chapter 9
Statement of Validity	Page v
Key Issues	
Strategic Planning	Section 7.2 and Appendix B
Visual	Section 7.3 and Appendix N
Traffic	Section 7.4 and Appendix O
Noise	Section 7.5 and Appendix P
Air quality	Section 7.6 and Appendix Q
Water	Section 7.7 and Appendix J
Waste	Section 7.9 and Appendix T
Hazards	Section 7.8 and Appendix S
Signage and lighting	Section 4.9
Overshadowing	Section 7.3 and Appendix D
References	
Consider relevant State government technical and policy guidelines.	Chapter 7 and specialist reports.
Consultation	
Relevant local, State or Commonwealth government authorities, service providers, community groups or affected landowners. In particular: - NSW Department of Environment and Conservation (DEC); - Roads and Traffic Authority (RTA); - Department of Natural Resources; - Parramatta City Council; and - Westmead Hospital	Chapter 5

7.2 Relevant strategic plans

The proposal is permissible in Zone 4 Employment and meets the zone objectives under the LEP 2001.

It is consistent with all relevant provisions of SREP 28, LEP 2001 and DCP 2005, except for the exceedance of the 12 metre height control contained in DCP 2005 (see **Section 7.3**).

Table 4 provides a summary of consistency with key strategic plans relevant to the project. The consistency of the proposal with other provisions and controls in relevant environmental planning instruments is provided in **Appendix B**.

Table 4 – Summary of consistency with key strategic plans

Instrument/ strategy	Comments
Metropolitan Strategy	The proposed expansion of the CCA Northmead facility will facilitate the implementation of the Metropolitan Strategy. Refer to Appendix B .
Parramatta Regional Planning Strategy	The project is consistent with the key strategies for ongoing development of the Parramatta Primary Centre that are relevant to the Northmead Redevelopment Project. Refer to Appendix B .
PEO Act	CCA Northmead currently holds a DEC Licence for waste activities. No other matters under the Act would arise as a result of the proposal.
SEPP 55	A Preliminary Environmental Site Assessment concluded that the site is suitable for continued commercial/ industrial use subject to further testing of selected items or areas of the site (see Section 7.11).
Draft SEPP 66	The proposal will result in increased employment density on the site, which will help support the North-West T-Way (under construction) and existing bus routes in the vicinity of the site.
SREP 28	The proposal supports and is consistent with the aims for the Parramatta Primary Centre and Westmead Precinct set out in Clauses 14 and 39 of the SREP 28 respectively. Refer to Appendix B .
LEP 2001	
Cl 40: Floor space ratios	Maximum FSR of 1:1. The expanded facility will have an FSR of approximately 0.45:1 (including buildings at 102 Briens Road) which is well under the maximum FSR for the site.
DCP 2005	
Cl 3.2: Preliminary Building Envelope	Maximum height of 12m. See assessment of visual impact in Section 7.3. Street setback is consistent with existing building line. Side setbacks not applicable. Rear (south) setback matches the existing. There is no overshadowing of land and Toongabbie Creek riparian zone to the south.
Cl 4.1.1: Views and Vistas	See assessment of visual impact in Section 7.3 and Appendix N .

7.3 Impacts of HBW

Visual impact

A Visual Impact Assessment of the HBW has been independently undertaken by Architectus (Appendix N). The assessment focused on the views towards the site from surrounding major road arterials and across the site towards the Parramatta City Centre skyline. The assessment also addressed the impacts on significant district views identified in Parramatta DCP 2005 that are potentially impacted by the proposal (Views 14, 15 and 17).

In summary, the assessment concluded that:

- The proposed development would have a limited impact on regional views, but that this is acceptable.
- The impacts on views in the immediate and local contexts are mitigated by the proposed simple façade treatment.
- The form, height and proportions of the HBW are relative to its context, which is an existing employment zone adjacent to Westmead Hospital.
- The proposed development does not affect views of the Sydney and Parramatta CBDs that have been itemised as significant in the Parramatta DCP 2005.
- The design of the HBW had successfully reduced the visual contrast between the proposed development and the existing buildings and public spaces by careful consideration of building location, proportions and form, and the structures and details.
- The selection of trees which are taller and thinner than is currently proposed would increase the mitigating effects of landscaping. In addition, denser planting and augmentation of existing trees would mitigate the impact of terminating views by screening the façade (such as along Windsor Road before the intersection with Briens Road).

Alternative landscaping will be further investigated during detailed design and is dealt with in the draft Statement of Commitments.

The following are the key findings of the report in detail. Photomontages are included in **Appendix I** to illustrate potential visual impacts.

The visual impact of the CCA bulk storage facility will vary with viewing distance, view point location, the number of viewers and the period of time viewed. Generally, the HBW will affect views from the public domain (streets and parks) in the immediate area and more distant vantage points. The development will have a low to high impact on immediate views depending on whether the view is seen in a residential or open space context or in an industrial context. Visual impact is reduced in local and regional views as the development will be viewed in the context of a background of other urban development.

The assessment analysed potential visual impacts from selected viewing points in three viewing zones: selected on the following basis:

- **Immediate vicinity** (within 500m radius) – public streets and significant public open spaces that are either highly trafficked or are socially significant (including Briens/Redbank Road, Edward/Christine Street, Arthur Phillip Park, Westmead Hospital Oval and Redbank Road).
- **Local views** (500m – 1km radius) – key regional streets and significant public open space (including Balmoral Road, Constitution Road and Old Windsor/Hammers Road).
- **Regional views** (beyond 1km radius) – high points of streets and public open space (including Caloola Reserve, Wessex Lane and corner of Buckleys and Oakes Roads).

Immediate vicinity

In the immediate vicinity (<500m) of the HBW, visual impacts range from low to high. Existing development in the immediate area is both residential and larger scale industrial and hospital development. When the proposed development is viewed in the context of a residential street or as a backdrop to a park it tends to have a higher visual impact than when viewed in the context of commercial, hospital or other industrial development. Other commercial and industrial development tends to have a higher level of visual absorption than residential development. Situations where the visual impact in the immediate vicinity (<500m) is **low** are:

- Briens Road at the corner of Redbank Road, Northmead (View 1)
- Redbank Road, Northmead (View 6).

The visual absorption capacity in these instances has been rated high as the surrounding existing development is similarly simple in form with strong colours and in the case of Briens Road there is a lot of signage to focus the view away from the development.

Situations where the visual impact in the immediate vicinity (<500m) is **moderate** are:

- Corner Edwards and Christine Streets, Northmead (View 2)
- Arthur Phillip Reserve, Park Street, Northmead (View 4).

A moderate to high level of visual absorption is provided by existing landscaping that partially obscures the HBW. In addition, in these situations one views only a portion of the total development, therefore resulting in a moderate visual impact rating.

Situations where the visual impact in the immediate vicinity (<500m) has been rated as **high** are:

- Old Windsor Road, Northmead (View 3)
- Westmead Hospital Oval, Westmead (View 5).

The visual absorption capacity in these situations is low with the entire width of the façade visible for two thirds to three quarters of its total height.

In the case of Westmead Oval, the foreground is a grassed field, so the proposed development in this context presents as a contrast. The field is associated with a major public hospital used by a large number of people. The visual impact rating is therefore high. This view will be mitigated by appropriate landscaping.

In the case of Old Windsor Road, the façade of the HBW is the major feature of this view and there is very little to aid visual absorption.

Local views

For local views (500m-1km), the visual impact of the HBW will generally be moderate to low. The visual absorption capacity for local views is moderate to high due to the views being slightly elevated resulting in the proposed development being viewed in the context of other urban development and below the distant ridgelines. Where visual impacts are moderate, it is because the proposed development is being seen in contrast with existing residential development in the immediate vicinity.

The situations where the visual impact for local views (500m-1km) is rated as **moderate** is

- Balmoral Road, Northmead (View 7).

The proposed development terminates the vista down the street. Its visual impact is rated as moderate because the development is significantly higher than existing development in the foreground.

Situations where the visual impact for local views (500m-1km) is rated as **low** are:

- Upper Constitution Road, Wentworthville (View 8, DCP View 14)
- Lower Constitution Road, Wentworthville (View 9).
- Old Windsor Road at the corner of Hammers Road Old Toongabbie (View 10).

The visual absorption capacity in these situations is high as the proposed development appears in the context of other urban development and falls below the distant ridgeline. View 8 shows the proposed development in DCP View 14. This view is specified in the DCP because a view of Sydney CBD skyline appears in the distance. In accordance with the Design Principle P.1 set out in Parramatta DCP 2005, the proposed development preserves the view of the Sydney CBD skyline and it sits well below the ridgeline.

Regional views

For regional views (1-3km), the visual impact of the CCA bulk storage facility is moderate to low. The visual absorption capacity for regional views is moderate to high due to the views being slightly elevated resulting in the proposed development being viewed in the context of other urban development and below the distant ridgelines. Where visual impact has been rated as moderate, the proposed development presents in complete contrast to the context of the view – in this situation, a park view where the foreground is grassed and open.

The situation where the visual impact for regional views (1-3km) is rated as **moderate** is:

- Caloola Reserve, Wentworthville (View 11).

Here, the western façade of the proposed development is viewed almost in its entirety through an opening in the trees that surround the reserve. It is a distant view, however, and the proposed development is viewed in the context of other urban development resulting in a moderate visual impact rating.

The situation where the visual impact for regional views (1-3km) is rated as **low** is:

- Corner Buckleys and Oakes Roads Winston Hills (View 13, DCP View 17).

The visual absorption capacity in this situation is high as the proposed development appears in the context of other urban development and falls below the distant ridgeline. View 13 shows the proposed development in DCP View 17. This view is specified in the DCP because a view of Parramatta CBD skyline appears in the distance. In accordance with the Design Principle P.1 set out in Parramatta DCP 2005, the proposed development preserves the view of the Parramatta CBD skyline and it sits well below the ridgeline.

The situation where the proposed development has no visual impact on regional views (1-3km) is:

- Wessex Lane, Wentworthville (View 12 DCP View 15).

This view is specified in the DCP because the view down the lane is terminated by a skyline view of the Parramatta CBD. The proposed development falls to one side and is obscured by trees in the foreground, thus, in accordance with the Design Principle P.1 set out in Parramatta DCP 2005, the proposed development preserves the view of the Parramatta CBD skyline and it sits well below the ridgeline.

Height, scale and bulk

The proposed development is located in an existing employment zone in close proximity to Westmead Hospital. The existing context comprises large footprint industrial buildings or tall hospital buildings. The HBW is therefore consistent with its context and is very similar in height and proportion to the Children's Hospital on the Westmead Hospital campus.

The proposed HBW at RL 47.3 AHD, (or 9 storeys/32 metres equivalent), is consistent with the median ridge line RL of other buildings in close proximity, such as Westmead Hospital (RL 57.6 AHD) and the residential buildings next to Westmead Hospital on Bridge Road which vary from 9 to 15 storeys with a maximum ridgeline of RL 54 AHD (see Section 2.4).

The visual impact of the height tends to be greater in immediate views than local and regional views and is particularly apparent where the height is set against existing low scale residential development to the north.

The built form of the HBW is predicated on its function which requires the form of a large rectangular box. The common approach to reducing mass and articulating form by breaking it down into smaller components can therefore not be employed in this instance. Moreover, complex applied façade treatments have the effect of drawing attention to the size of the building, so the proposed simple applied façade treatment is therefore the best available measure by which to minimise visual impact.

Façade treatment

Architectus concluded that the proposed simple façade treatment assists in mitigating visual impacts. Colours have been selected to minimise the visual impact of the HBW. A long shallow serpentine curve bisects the façade close to ground level and continues smoothly around corners in order to reduce the visual impact of the building when viewed from a distance. The same shallow curves are used on short and long facades. The bottom part of the curve is broken by the ground line anchoring the building and colours graduate upward from the ground, where darkest is at the base and lightest at the top, with the roof being the same colour as the top band. The dark colours near the base relate to darker colours of surrounding development and landscaping, whilst the lighter colour near the top relates to the light blue of the sky.

Parramatta DCP 2005 – Maximum height control

Parramatta DCP 2005 sets a 12 metre maximum height control for industrial development in Parramatta. The proposal involves the construction of a 32 metre high fully automated warehouse, and therefore exceeds the maximum height control. It is noted that the height control is a **not a development standard** which would require a SEPP 1 objection to justify any proposed departure.

In this instance, strict compliance with the height control is unnecessary and unreasonable for the following reasons:

- The visual impact of the HBW will be able to be mitigated by way of screening by trees planted along the Briens Road frontage and the eastern façade, as well as by the proposed treatment of the façade, as discussed in Sections 4.3 and 7.3.
- The form of the HBW is predicated on its function, which is to house the racking on which the product is stored, and this requires a building form of a large rectangular box.
- The proposal is consistent with applicable planning aims and objectives contained in SREP 28 and it supports the Metropolitan Strategy.
- The proposal, and by extension the height, represents an efficient use of resources - land and existing infrastructure – in an employment zone. The proposal does not change the nature of the facility.
- The shadow analysis (see Section 7.3 and **Appendix D**) demonstrates that the proposed height and bulk will not overshadow the adjoining Toongabbie Creek riparian zone.
- No other unacceptable environmental impacts will flow from the development during both construction and operations.

In our opinion, the departure from the maximum height is supportable on the following grounds:

- The proposed building height achieves a balanced outcome of meeting the future requirements of CCA while minimising environmental impacts and follows extensive consideration of alternative development strategies and warehouse design options (refer to Sections 3.3, 4.4 and 7.3).
- As detailed in Section 7.3 below, the proposal would have a limited impact on regional views, which is considered acceptable. The impacts on views in the immediate and local contexts are mitigated by the facade treatment and tree planting.

Approval would not set a precedent

Approval of the proposed 32 metre HBW would be unlikely to set a precedent for other similar approvals in Parramatta or indeed the immediate locality, as discussed below.

Both the need for the CCA facility and its co-location with a manufacturing plant are unique. In order to warrant and financially justify the substantial costs associated with the construction of an automated materials storage system (HBW), a company needs to have very high product throughput (inwards and outwards) and high storage volumes of pallet-based products. This would be in the order of approximately 4,000 pallets on an average day with required storage volumes in the order of 50,000 pallets.

Very few companies in Australia have operations that meet these criteria. They are the major supermarket operators (Woolworths and Coles) and the large manufacturers of fast moving consumer goods (FMCG) (Fosters Group, Lion Nathan, Coca-Cola Amatil, Schweppes Cottees, SCA [formerly Carter Holt Harvey], and Kellogg's).

It is highly unlikely that Woolworths or Coles would construct a HBW in Parramatta, as Woolworths has such a facility at Minchinbury and Coles is currently constructing a large warehouse at Eastern Creek.

The preferred logistics solution for a FMCG manufacturer is to construct the primary warehouse alongside the manufacturing facility. This achieves the efficiency of storing the manufactured product (normally on pallets) directly off the production lines. It is highly unlikely that any of the abovementioned companies would construct a high-bay warehouse in Parramatta, as none of them (except for Coca-Cola Amatil) has a manufacturing facility in the area.

Solar access and overshadowing

Shadow analysis diagrams have been prepared by C3D (refer to Drawing No. 0538 AR/EA/7 at **Appendix D**) to address the potential impacts of the development on the Toongabbie Creek riparian zone. The diagrams show the outline of shadows cast by the proposed buildings on June 21st (winter solstice) at 9am, 12 noon and 3pm. As illustrated in the diagrams, only a small triangular shadow from the new awning to the existing warehouse will fall outside of the site boundary and within the Toongabbie Creek riparian zone by a maximum of 4.8 metres at midday and 14.3 metres at 3pm. At other times, shadows cast by the new buildings will fall within the site boundaries.

The extent of shading is minor and unlikely to effect the health of the riparian zone. Moreover, it is a reduction on the existing situation. Accordingly, the proposal, and in particular the HBW, will not have any negative impact as a result of overshadowing.

7.4 Traffic and access

Colston Budd Hunt and Kafes (CBHK) has assessed the proposal and concluded that overall, the CCA redevelopment project will not have adverse traffic impacts during both construction and operations (see Traffic Report at **Appendix O**).

Construction traffic

A detailed Construction Traffic Management Plan will be prepared when a builder/contractor has been appointed. The plan will include signage details, traffic management and the control of pedestrians and construction vehicles in the

vicinity of the site incorporate the following principles for traffic management during construction:

- provide a convenient and appropriate environment for pedestrians;
- minimise effects on pedestrian movements and amenity;
- provide appropriate safety fencing around the perimeter of the construction zones;
- manage and control vehicular movements to and from the site;
- maintain traffic capacity at intersections and mid-block in the vicinity of the site;
- maintain access to properties adjacent to the site;
- restrict construction vehicle activity to designated truck routes through the area;
- construction vehicles to enter and exit the site in a forward direction;
- construction vehicles will not be permitted to queue on-street in the vicinity of the site;
- all construction activity, including the loading and unloading of trucks, is to be provided for on-site within the designated construction zone;
- construction work will be restricted to the approved hours of construction;
- the movement of trucks on and off the site is to be managed and controlled by appropriately qualified site personnel;
- pedestrian activity across the site access driveways will be managed and controlled by qualified site personnel;
- pedestrian warning signs and construction safety signs/devices to be utilised in the vicinity of the site and to be provided in accordance with WorkCover requirements; and
- prepare a Construction Traffic Management Plan.

The builder will be responsible for the preparation of the traffic management plan, which will be submitted to the relevant authorities for approval prior to the commencement of construction.

Management of construction traffic forms part of the draft Statement of Commitments

Operational traffic

Heavy vehicle traffic generation from Northmead site

There will be a marginal increase in heavy vehicle traffic generated by the expanded Northmead facility in the long-term (by 2015) due to the expansion of manufacturing operations (summarised in **Table 5**). However, despite a 45 percent increase in the output of the facility, the overall increase in truck movements is less than 10 percent.

Table 5 – Overall truck movements generated by expanded CCA facility

	Daily	Morning peak	Afternoon peak
Existing	470	35	20
2008	450	40	20
2015	500	45	20

The main reason for this apparent discrepancy is an immediate decrease in truck movements since product is no longer needs to be decanted by road from the production area at 128 Briens Road to the warehouse at 102 Briens Road. This generates a saving of 70 vehicle movements per day.

Between 2005 and 2008, there is an increase in traffic due to expected increased production. This leads to an increase in truck movements delivering supplies (mostly smaller rigid trucks) and additional trucks distributing finished product, including to interstate CCA operations. As a result, the net reduction in truck movements is only 20 per day, from 470 in 2005 to 450 in 2008.

By 2015, inbound deliveries from interstate CCA operations will be re-directed to the Eastern Creek facility due to the limited number of docks available at the Northmead site. The forecast growth in production output during the period 2008 to 2015, translating to around 110 movements per day, is therefore partly offset by the elimination of inbound interstate traffic, and a consequent reduction in outbound delivery from Northmead, equivalent to 60 movements per day. The net growth in heavy

vehicle movements between 2008 and 2015 is therefore only 50 per day, increasing from 450 in 2008 to 500 in 2015.

The Traffic Report concludes that the overall minor increase in truck traffic at Northmead will not result in any significant impact on the operation of the surrounding road network.

Total traffic generation

Based on the anticipated growth in employee numbers, the proposed expanded facility is anticipated to generate some 230 to 240 vehicles per hour two-way during the afternoon peak periods. This includes truck movements, employee vehicles and an allowance for visitor movements. The forecast traffic generation is equivalent to an increase of some 40 to 50 vehicles per hour two-way during both the morning and afternoon peak periods. The majority of this additional traffic will be cars at the start and end of shifts generated by the future increase in employees.

An analysis of the overall impact of the increase in traffic (40 – 50 vehicles per hour) on the surrounding road network (namely Old Windsor Road, Briens Road, Redbank Road and Darcy Road) indicates that the overall increase in traffic generated by the expanded facility is less than 1% compared to existing traffic flow during the morning and afternoon peaks. This level of additional traffic will have no negative impacts on traffic on local roads. The two sets of traffic signals on Briens Road, currently being constructed in association with the North-West T-Way, will not adversely affect traffic flows on Briens Road and the intersections should operate at an acceptable level of service.

In terms of impacts on Darcy Road, the CBHK report recommended a more rigorous traffic management plan be developed and enforced by CCA to prevent heavy vehicles approaching or departing the site via Darcy Road. CCA has written to the RTA and the Parramatta Traffic Committee to support resident requests for a weight limit to be introduced in the vicinity of Darcy Road. The only increase in traffic flow on Darcy Road associated with the expanded facility will be staff/worker vehicles only (some 10 additional vehicles per hour during the morning and afternoon peak periods or an increase of less than 1% compared to existing traffic flows).

Management of vehicles accessing the site forms part of the draft Statement of Commitments.

Regional road network savings

CCA has calculated the savings in vehicle kilometres travelled (VKT) as a result of the proposal – specifically the effect of storing all product destined for the Bulk market on site from 2008 and avoiding current double handling/trips between warehouse locations. The figures are based on projected sales volumes and exclusive use of 32-pallet B-double transports. The alternative for comparison assumes location of bulk warehousing at the CCA site at Eastern Creek some 17.5 kilometres from the Northmead site.

As shown in **Table 6**, Bulk transfers account for over 50% of transfer movements forecast under the current network. With the removal of the need to move product for this market, some 24,000 of movements or 460,250 VKT are saved in 2008. This rises to more than 42,000 movements and 742,00 VKT by 2020.

Table 6 - Forecast transport savings

Inter-warehouse transfers	2005	2008	2015	2020
Route Transfer Movements	21,300	23,800	30,800	37,100
Bulk Transfer Movements (double handling)	13,200	26,300	34,900	42,400
Total Transfer Movements	34,500	50,100	65,700	79,500
Double handling movements saved due to proposal	-	26,300	34,900	42,400
% total forecast movements avoided	-	52%	53%	53%
VKT Saving	-	460,250	610,750	742,000

Access arrangements

As shown in **Figure 18**, proposed access has been designed to reduce the total number of access points along Briens Road, improve their position relative to intersections external to the site and separate the movement of heavy vehicles from passenger vehicles. Separate access driveways will be constructed for trucks and passenger vehicles to improve safety through separation between trucks, cars and personnel movements. In summary:

- the main site entrance to 128 Briens Road, currently shared between passenger and delivery vehicles, will be converted to provide for passenger vehicles only;
- a new dedicated heavy vehicle entrance and exit will be constructed approximately 50m east of the (converted) 128 Briens Road site entrance;
- access to 102 Briens Road will be maintained via the existing left in and left out access driveway adjacent to the eastern boundary of the site and will provide access to the new refurbished facilities for the relocated equipment services and finance operations;
- a new secondary access driveway and service road will also be constructed adjacent to the northern boundary of the site, providing access to 102 Briens Road, which will replace the existing driveway serving 104 Briens Road and will be located some 100 metres west of Old Windsor Road.

These arrangements have been designed in accordance with the Australian Standard for Off-Street Car Parking Facilities (AS2890.1-2004) and for Off-Street Commercial Vehicle Facilities (AS2890.2-2002).

These arrangements are considered adequate and no mitigation measures are proposed.

Internal circulation

Proposed car parking areas, vehicle aisles, loading docks, truck queuing areas and manoeuvring areas have been designed in accordance with relevant Australian Standards. Vehicular circulation within the expanded facility will be provided via a one-way circulation road around the perimeter of the site. This circulation road will provide access to the existing production and warehouse facilities and to the proposed HBW and despatch staging area. Truck access and circulation within the site has been assessed for 19 metre semi-trailers and 25 metre B-doubles.

These arrangements are considered adequate and no mitigation measures are proposed.

Car parking

Given the nature of the CCA facility, CBHK considers it appropriate to derive the number of on-site parking spaces required for the expanded CCA facility in accordance with the RTA Guide to Traffic Generating Developments, rather than adopting the Parramatta DCP car parking rate which is based on the amount of industrial and commercial floor space. The RTA guide bases parking demand on actual need derived from surveys.

Overall, some 700 people are employed full time at the CCA facility and 300 representatives visit the site periodically. Because of shift work, this translates to an equivalent of 500 employees. The expanded facility is anticipated to result in increased staff numbers from the current 500 employees to 525 (5% increase from existing) by 2008 and 570 employees in total (15% increase from existing) by 2015.

The assessment of required on-site car parking spaces assumed an increase of some 15% in staff numbers. Based on this, the proposed parking requirement for the proposed development would be some 440 vehicles at peak times by 2008 and some 485 vehicles at peak times by 2015. There are currently 540 on-site car parking spaces, which satisfies this requirement.

The quantum of proposed parking and the method used to derive it are considered acceptable.

Public transport

The Traffic Report concludes that the proposed expansion will make a positive contribution to the North-West T-Way that passes outside the CCA site as well as other existing bus routes in the vicinity of the site (including Westbus service numbers 609, 706, 711 and 717). The development would strengthen the demand for public transport services (specifically the T-way) by increasing employment densities at the site.

Appropriate bicycle parking will be provided on-site.

These arrangements are considered adequate and are consistent with State Government policy of:

- improving accessibility to employment and services by walking, cycling and public transport;
- improving the choice of transport and reducing dependence solely on cars for travel purposes;
- supporting the efficient and viable operation of public transport services; and
- moderating growth in demand for travel and the distance travelled, especially by car.

7.5 Noise

A Noise Impact Assessment has been prepared by Heggies Australia Pty Ltd and included at **Appendix P**. The assessment reviewed the following matters in accordance with relevant NSW regulatory requirements (including NSW Industrial Noise Policy, Environmental Criteria for Road Traffic Noise and Environmental Noise Control Manual):

- Impacts from the operation of the expanded facility on nearby residential land and other noise sensitive receivers (including Redbank School and Casuarina Lodge), including machinery, equipment and loading activities;
- Impacts from any increased truck traffic; and
- Impacts from construction activities.

The key findings of this assessment are outlined below.

Operational plant noise

Noise from operations will comply with Department of Environment and Conservation (DEC) noise criteria and there are no adverse impacts as summarised below.

Mechanical plant noise

Indicative maximum sound power levels of mechanical plant have been calculated based upon an assumed plant size and location and the DEC noise criteria. The results indicate that without shielding or any other forms of attenuation maximum sound power levels of 104 dBA during the daytime period for mechanical plant will comply with the DEC criteria. It is expected that noise from mechanical plant will be controllable by common engineering methods if so required.

A detailed assessment of plant noise emission will be conducted once the type and placement of mechanical plant is confirmed.

Industrial noise

The primary source of industrial noise will be internal from manufacturing and packaging operations. As detailed in the Noise Impact Assessment, the calculated industrial noise levels are expected to be below the DEC criteria for a typical reverberant noise level within a typical industrial warehouse.

Measures to manage and mitigate operational noise forms part of the draft Statement of Commitments.

Trucks and loading activities

Additional traffic generated by the development

The major road route for vehicles to and from the proposed industrial development site would be along Old Windsor Road and Briens Road. Additional traffic generated by the proposed development has the potential to impact on existing residential receivers along these major arterial roads.

Based on the traffic generation data in the aforementioned Traffic Report prepared by CBHK the proposal will not result in any perceptible differential in noise levels as the change is expected to be less than 0.5 dBA. As such, no mitigation measures are proposed.

Truck movements

The assessment concludes that noise from truck movements within the site will generally comply with the DEC noise criteria. However, an exceedance of up to 13 dB is predicted for peak night time truck movements at residences to the north of the site.

Preliminary calculations indicate that a barrier of minimum height of 3.5 metres is required between the truck site circulation road and the nearest residences to the north. The proposed location of the noise barrier is indicated in Figure 3 of the Noise Impact Assessment. The barrier height and location is indicative and will be optimised during the detailed design phase.

Measures to manage and mitigate the impacts of noise from truck movements on local residences forms part of the draft Statement of Commitments.

Loading dock activities

Typical noise sources from loading activities are truck engines, reversing alarms, forklifts, people talking and raised voices. Based on information provided in the Traffic Report prepared by CBHK, noise from loading dock activities will typically comply with the noise criteria. However, a 2dB exceedance is predicted for peak night-time southern dock activities at Casuarina Lodge. Given the existing night-time noise levels this is not considered to be significant and no specific noise mitigation treatments to address southern loading dock activities are expected to be required.

An exceedance of 6dB is predicted for peak night-time northern dock activities at residences to the north of the site. A 3.5 metre barrier between the northern loading dock and the residential boundary is proposed to ensure compliance with the site noise emission criteria and will be optimised during the detailed design phase.

Measures to mitigate the impacts of noise from loading dock activities forms part of the draft Statement of Commitments.

Sleep disturbance

Noise events associated with car park activities, truck movements and loading dock activities during the night-time period have the potential to cause sleep disturbance. The assessment concludes that maximum noise levels from these events will typically comply with the noise criteria. However, an exceedance of up to 10 dB is predicted for night-time truck movements and 3 dB for northern loading dock activity at residences to the north of the site.

The indicative 3.5 metre barrier proposed above will also mitigate the maximum noise levels and satisfy the sleep disturbance criteria. The noise impacts from operational plant and trucks loading activities are considered acceptable provided the aforementioned mitigation measures are implemented.

Construction noise

Noise levels have been predicted for typical construction equipment and Typical maximum expected Sound Power Levels of construction plant with the units operating at maximum load are detailed in the Noise Impact Assessment. The analysis shows that the construction noise criteria will be exceeded in the worst case situation of equipment working close to the site boundary. As such, a range of general approaches to reducing the impact of construction noise and vibration are proposed to minimise impacts (Section 6.0 of the Noise Impact Assessment). These strategies are consistent with Australian Standard AS 2436-1981 "Guide to Noise Control on Construction, Maintenance and Demolition Sites".

All these strategies will be applied during construction, where reasonable and feasible. The impacts from construction noise are considered acceptable provided the above measures are implemented.

Measures to mitigate the impacts of construction noise form part of the draft Statement of Commitments.

7.6 Air quality

The Air Quality Assessment prepared by Heggies Australia Pty Ltd (included in **Appendix Q**) includes an assessment of the background air quality applicable to the urban environment of the site, a construction and operational phase air quality assessment and recommendations for air quality control and mitigation where required.

Construction

The assessment concludes that air quality impacts associated with the construction phase of the assessment are largely controllable through technical means and are not considered to be a significant issue given the size and nature of the development within an already developed industrial site. Nonetheless, recommended air quality control and mitigation measures for construction of the proposed development are detailed in an Air Quality Management Plan.

Operations

Assessment of the potential impacts on air quality associated with the operation of the facility concludes that the increase in productive capacity of the site will result in a marginal increase in heavy vehicle movements in and around the site. Any increase in air pollutants associated with heavy vehicle movements, such as CO₂, NO₂, SO₂, PM₁₀ and VOCs, are anticipated to be insignificant. Furthermore, a net decrease in emissions was calculated from the reduction in forklift use associated with the new operations.

It is anticipated that the proposed industrial development will not adversely affect air quality of the local or regional environment during construction or operations provided measures detailed in the Air Quality Management Plan are adhered to throughout the life of the project.

7.7 Greenhouse gas emissions

A Greenhouse Gas (GHG) Assessment based on current operations and operations under the proposed development for 2008, 2015, and 2020 was conducted by Heggies Australia (see **Appendix R**). The assessment covers emissions from road transport of product between warehouse facilities, forklift product handling, and electricity consumption associated with current (lighting) and proposed (automated) warehouse operations.

Greenhouse gas emissions were quantified for each of the three key greenhouse gas generating activities and compared against a baseline scenario representing operations if the HBW were not to be commissioned. **Table 7** presents a summary of the total predicted CO₂-equivalent emissions for the baseline and projected scenarios.

The assessment concluded that construction of the HBW would enable a significant reduction in greenhouse gas emissions associated with CCA warehouse operations at Northmead – of more than 50%. This is mostly due to the significant reduction in the transfer of product off-site for storage and distribution, and the reduction in double and triple-handling of product prior to delivery. This anticipated greenhouse gas saving represents a significant saving for the food and beverage industry, and for national and NSW greenhouse reduction objectives.

Key objectives of the NSW Greenhouse Plan are to put NSW on track to meet its target of limiting 2025 emissions to 2000 levels and reducing emissions by 60% by 2050. Heggies note in their report that the HBW proposal would contribute to CCA achieving its required target for limiting future emissions to 2000 levels, and is close to the 60% reduction in GHG emissions by 2020, not 2050. The proposal place CCA in an advantaged position with regard to achieving emissions reductions into the future to meet both State objectives and their requirements under the *Greenhouse Challenge Plus* program.

Table 7 - Summary of Greenhouse Gas Reductions

Year	Predicted CO ₂ -Equivalent Emissions (tonnes/year)			
	Baseline Scenario	Projected Scenario	Total Saving	Percentage Saving
2008	2,212	1,239	973	56
2015	2,876	1,541	1,335	54
2020	3,462	1,803	1,660	52

7.8 Stormwater runoff and water quality

The Water Management Report and accompanying concept plans prepared by the Robert Bird Group (**Appendix J**) set out the following for the proposed redevelopment:

- trunk and internal stormwater drainage;
- on-site detention;
- pollution controls;
- erosion and sediment controls; and
- creek protection works.

As detailed in the Water Management Report stormwater quality entering Toongabbie Creek will be significantly improved as a result of the proposal. Devices to provide filtration and sedimentation in accordance with Parramatta City Council policies will now include filtration of stormwater conveyed by the external trunk drainage system as well as from the internal redeveloped areas.

To guard against the risk of contaminated water runoff from fire fighting entering the creek an automatic penstock valve will block discharge from the site. All firewater runoff will be contained within the site in-ground drainage system and on-site detention tank.

The proposed stormwater drainage system incorporates a variety of measures for the trapping and removal of pollutants near the points of discharge to the adjacent waterways. These measures include:

- an off-line combined gross pollutant trap (GPT) or oil and silt arrestor (OSA) structure for treatment of external catchment flows into the trunk drainage system;
- in-line combined GPT or OSA structures for treatment of internal catchment flows into the eastern and western on-site detention tanks;
- in-line filters for fine sediments, located upstream of each on-site detention tank; and
- trash racks in the on-site detention control pits.

Stormwater runoff from the external catchment outside the CCA site will now be treated to remove gross pollutants including cigarette

butts, plastic bags and the like. This strategy will significantly improve the quality of water discharged to Toongabbie Creek over and above the present situation as no filtration is currently being provided for the trunk drainage system.

The runoff from internal catchments will be treated to best practice standards to remove both gross pollutants and fine sediments. This is also a significant improvement over current conditions.

Rainwater run-off will be reused onsite for irrigation.

Erosion and sedimentation will be controlled both during and after construction to minimise the discharge of silt-laden water from the site. Energy dissipation structures and scour protection at both stormwater outlets will prevent damage to Toongabbie Creek by high flows. This will be a significant improvement on the current situation, where no scour protection has been provided at the outlet from the existing trunk drainage system.

The proposed measures to manage water quality are considered acceptable and, no further mitigation measures are considered necessary.

7.9 Hazards

An Hazard Assessment has been prepared by Sherpa Consulting (**Appendix S**) to identify and document the operational hazards associated with the project in the context of land use planning safety. The report has been developed in line with the “Multi-Level Risk Assessment” guidance supplied by the NSW Department of Planning with reference to the State Environmental Planning Policy No 33 – Hazardous and Offensive Development (SEPP 33) which covers “potentially hazardous” and “potentially offensive” facilities.

Based on the screening criteria set out in SEPP 33, the distance to site boundary of the inventory and storage location for the compressed natural gas supply would result in the site being classified as “potentially hazardous”. However, the assessment notes that whilst the separation distance to the site boundary is below the SEPP 33 screening criterion, the land to the south of the site is open connecting to a creek, with no industrial or residential developments within the screening distance. In addition, it is proposed that the compressed natural gas storage tanks will be relocated as part of the development.

The key findings of the assessment are:

- Hazards associated with the proposed project have been identified and appropriate control measures provided;
- The risk of offsite impacts associated with the proposed project can be managed to an acceptable level through the design process;
- The risk of escalation from hazards associated with the proposed project to existing hazardous materials on site can be managed to an acceptable level through the design process; and
- CCA is taking the opportunity to upgrade systems and redesign the site to reduce existing hazards.

The following recommendations made in the hazard assessment seek to ensure that changes as a result of the project do not increase the potential for incidents to impact on the existing dangerous goods stores:

- The design process should include verification that codes and standards have been applied as appropriate;
- During detailed design, the project should ensure the risks associated with the storage of compressed natural gas are managed to an acceptable level;
- The project should undertake a construction safety study in line with HIPAP No. 7. The construction safety study should assess risks due to demolition, construction, simultaneous operations. The potential for incidents to impact on the existing hazardous materials and underground utility lines should also be included. Specific issues associated with asbestos are further discussed in the Waste Management Plan for CCA Northmead (refer to **Appendix T**); and
- The project should undertake a Fire Safety Study in line with HIPAP No. 2, which should include assessment of both offsite impacts and escalation of incidents to existing hazardous materials.

These measures will be implemented by CCA and form part of the draft Statement of Commitments.

7.10 Waste

A Waste Management Plan (WMP) has been prepared by URS Australia Pty Ltd (**Appendix T**) to identify and address waste generated as a result of demolition, excavation, construction and operations and to provide management measures to minimise environmental impacts. The WMP was prepared in accordance with the requirements of Parramatta City Council where applicable, DEC's Environmental guidelines – Assessment and Classification and Management of Liquid and Non-liquid Wastes, DEC's Waste Avoidance and Resource Recovery (WARR) Strategy and CCA's Environmental Management System (EMS) as it pertains to waste management and recycling.

Table 8 sets out the preliminary estimates of waste generation and recycling potential for each phase as listed in the WMP:

The WMP concluded that:

- a high percentage of demolition, excavation and construction waste can be reused or recycled;
- operational wastes for the proposed development will increase by 25% and are similar in nature to the current operational wastes;
- liquids from product destruction activities will increase by 3.75% per annum in line with growth of production volumes, whilst sludges will increase by 11% to 2015; and
- the existing on-site wastewater facility has the capacity to service the expected increase in wastewater.

Management of waste is considered acceptable and no further mitigation measures are proposed. However, CCA will undertake to meet the following performance targets for the construction of the project:

- 80% off-site recycling for demolition wastes;
- 90% recycling for excavation wastes; and
- 70% off-site recycling for construction wastes.

The management of operational wastes from the proposed development will be incorporated into the existing CCA Environmental Management System. In particular, CCA will continue to improve liquid waste management on-site; increase QA and reduce the need for product destruction; and have the wastewater treatment facility sludge tested and re-classified.

Table 8 - Estimate of waste generation and recycling

Phase	Waste generated	Recycling
Demolition	Approx. 6,940m ³	– Recyclable secondary resource material (i.e. >80% recovered)
Excavation	Quantities not determined at this stage	– Recycling or reuse – Vegetation for composting – Excavated clean fill for reuse on site
Construction	Approx. 705m ³	– High level of recycling – Waste management aspects to be incorporated into the modular building system and high-bay stacking system. – Minimum wastage with steel structure panelling, cladding and roofing systems – Some concrete and formwork wastage – Large quantities of packaging materials for recycling – Returnable packaging and pallets
Operational	1,250 tonnes per annum	– High level of recycling currently undertaken at the site – Additional waste quantities to be incorporated in to existing EMS – Site green waste separated to maximise off-site recycling

7.11 Site contamination and remediation

A Preliminary Environmental Site Assessment has been prepared by Douglas Partners (refer to **Appendix M**). The investigation included soil sampling and analysis of a targeted set of contaminants from 20 test bores.

Based on site observations and analytical findings, the assessment concluded that the site is suitable for the project subject implementation of the following measures to assess and remediate potential site contamination:

- Further assessment in the southern portion of the site, once the clearing of dense vegetation has been completed, to verify the nature of the substrate including the presence of asbestos. Any detected contaminants or asbestos will be removed or treated in accordance with NSW guidelines and requirements.
- Sampling of stockpile materials located on the south eastern part of the site upon clearing of dense vegetation. Any contaminated material will be disposed of or treated in accordance with NSW government guidelines and requirements.

- The extent of the benzene contamination detected at Test Bore 14 will be established, followed by removal, or appropriate treatment, including validation by a suitably required environmental consultant.
- A hazardous building material inspection will be undertaken by an environmental consultant prior to conducting demolition at the site. All hazardous material will be removed from the site in accordance with NSW legislation and requirements.

7.12 Utility services

Existing utility services have the capacity to support the expanded facility.

7.13 Flora and Fauna

A Flora and Fauna Assessment undertaken by Cumberland Ecology (refer to **Appendix H**) included a survey of the nature, distribution and variation of plant communities in the adjacent riparian zone of Toongabbie Creek and the open stormwater drain extending from the riparian zone into the middle section of the site. No threatened species or communities were located in the study area. The report found that the vegetation in the study area is highly degraded, with little left of the original vegetation community. A large number of weed species and few native species were recorded.

The site is to be landscaped in accordance with the Landscape Plan and Landscape Design Statement (see **Appendices F and K**). A large number of mature trees are to be planted to screen the HBW and existing trees are to be retained where practicable and feasible.

These measures, along with CCA's ongoing commitment through Parramatta Council to the rehabilitation of Toongabbie Creek, are considered acceptable to manage the ecological environment of the site and the immediate locality.

7.14 Economic impacts

Two elements of the economic impact of the proposal were examined: the multiplier effect on the economy as a result of the expanded CCA facility and resource cost savings because of avoided transport. Based on the two assessments the proposal would have a positive economic impact on Western Sydney and NSW, as discussed below.

Economic multipliers and employment generation

Hill PDA (see **Appendix U**) quantified both employment and economic multiplier benefits on the national economy generated from the construction and the likely production of the proposal. In addition to the construction multiplier effect, an assessment was made of the growth in production that would come from the installation of three additional production lines at CCA's Northmead facility.

Economic multipliers

Multipliers refer to the level of additional economic activity generated by a source industry. Input-output multipliers are summary measures used for predicting the total impact on all industries in an economy of changes in the demand for the output of any one industry. They describe average effects, not marginal effects, and thus do not take account of economies of scale, unused capacity or technological change. Multiplier effects are nation-wide, and not necessarily local. Care is needed in interpreting multiplier effects as their theoretical basis produces estimates which somewhat overstate the actual impacts in terms of output and employment. Nevertheless, the estimates illustrate the high flow-on effects of construction and manufacturing industry to the rest of the economy.

Hill PDA notes that the construction will necessarily boost the economy of Western Sydney as materials, such as concrete, will be sourced locally and the construction will employ the local labour force.

In addition, CCA sources a large majority of its materials locally from Western Sydney plants such as aluminium cans from Warwick Farm, cardboard cartons from Revesby and PET bottles from Kings Park.

Construction costs are estimated at \$90 million including cranes and racking which are manufactured in Europe and are to be imported and elements of the production plant which will be manufactured interstate and overseas. Accordingly, the net production figure was reduced to \$62 million.

Hill PDA concluded that the proposal will generate over 18 months the following economic benefits:

- \$178 million total economic activity directly in construction (\$62 million) and through multiplier impacts (\$116 million) from building the HBW;
- \$1.821 billion of economic impacts by 2015 directly from wholesale output and through multiplier effects; and
- \$129 million worth of economic impacts directly through capital investment in three production lines and through multiplier impacts.

Employment generation

Hill PDA also quantified the employment generated by construction and operation of the Northmead production facility and concluded that:

- based on an estimated cost of \$62 million in construction the development proposal will generate 1,598 job years directly in construction (389) and through production and consumption induced effects (1209); and
- long term employment of 90 full time equivalent employees for the 3 new bottling lines would result in 450 additional jobs in production induced effects and a further 450 in consumption induced effects, totalling 990 jobs.

Transport cost savings

Masson Wilson Twiney evaluated the transport costs and benefits of the proposed redevelopment (refer to **Appendix V**). The analysis considered the incremental economic costs and benefits of the project case, with the inclusion of road user costs and benefits and specific externalities, and estimated the resource cost of the transport that would be avoided as a result of the project being implemented. It did this through:

- estimating the net amount of truck travel avoided;
- estimating the distribution of the avoided truck travel between rural and urban settings, as well as within NSW and interstate; and
- applying unit rates to different elements of transport.

The report concluded that the project would result in substantial resource cost savings to the community as a consequence of avoiding urban distribution and importation costs as follows:

- net present value of avoided urban distribution travel over 20 years is \$25.6M in 2006, when discounted at 7% per annum;
- net present value of avoided importation over 20 years is \$45.7M in 2006 in NSW and \$15.9M interstate, discounted on the same basis; and
- the combined estimated value of resource cost savings due to avoided transport of the project is \$87.2 million, in 2006 including greenhouse gas emissions. Of this, \$8.1 million is estimated to be derived from avoided air pollution.

The above estimates are likely to underestimate the full value of the cost savings, due to the exclusion of savings from urban noise and air pollution (other than greenhouse gases).

7.15 Social impacts

CCA has been at Northmead for over 30 years. The proposal represents an extension of the same use of the site - manufacture and warehousing - on land zoned for this purpose. The local community is attuned to these uses and the presence of CCA in Northmead. As demonstrated in this report any potential impacts on the surrounding community as a result of operational noise and truck traffic can be managed and mitigated. Moreover, the operation of the site is neither offensive nor hazardous and emits neither odours nor noxious gases.

The local community has raised issues in relation to the current operation of the plant – specifically, noise at night and trucks using local roads en route to the site. CCA has acknowledged these issues and taken immediate steps to address them.

The HBW will be visible from the homes of a small number of people living in the immediate locality of the site, essentially along Briens Road, in the vicinity of Edwards Street and Arthur Phillip Reserve, and around Balmoral Road. The effect is potentially visually intrusive. However, the proposed treatment of the façades of the HBW and the planting of mature trees will help mitigate this impact. As demonstrated in this report the HBW will not impact on the medium and long distance views of the vast majority of people living in the visual catchment.

CCA is a significant employer in the Parramatta area and the proposal will create a further 105 new direct jobs as a result of the operation of the extended facility. As described above, a further 900 jobs would be created as an indirect result of the proposal – excluding jobs during construction. In addition, the viable and ongoing presence of CCA at Northmead provides the certainty and continuity for over 700 current employees. These are considered positive impacts of the proposal with benefits that extend well beyond the Parramatta local government area.

Facilities on the site, such as the current (and proposed new) canteen, are able to cater for the increased number of employees and the new T-way will provide a new public transport option for all staff. The proposal will not impact on local community services and facilities.

The social impact of the proposal is considered acceptable. The overall benefits outweigh the potential impact of the height and bulk of the HBW on a relatively small number of local residents in the immediate vicinity of the site. No additional mitigation measures are proposed other than those already mentioned in this report.

7.16 Ecologically Sustainable Development

As discussed throughout this report the proposal will have a number of important features that contribute to ecologically sustainable development. The key elements are summarised below.

Energy utilisation

- Natural ventilation will be utilised in the HBW. At night air will flow through the south facing loading bay doors and vents will discharge hot air at the high level.
- No lighting will be required in the HBW – other than emergency lighting.
- Photocell and time clock control of external lighting will be installed.

Water management

- Rainwater will be harvested and used for irrigation.
- A reduction in peak stormwater discharge from the site together with water quality management will assist in the overall rehabilitation of Toongabbie Creek and bring it closer to its natural state.

Resource utilisation

- The 'clad-rack' design of the HBW - that is, the racking forms the structural frame for the building - saves substantially in use of structural steel. The building has no independent steel structure.
- The minimal building footprint and the utilisation of vertical (air) space for storage are highly efficient, reducing the required building areas by a factor of five when compared to conventional warehouse methods.

Greenhouse emissions

- The saving in transfer movements will produce a reduction in greenhouse gas emissions equivalent to almost 1,000 tonnes of CO₂ in 2008 and a reduction in other noxious vehicle emissions in the order of 10 tonnes.
- From 2020 onwards, over 1,600 tonnes of CO₂ equivalent emissions per year would be prevented.

It is noted that a Water Savings Action Plan, approved by the Department of Energy, Utilities, and Sustainability on 29 May 2006, is currently being implemented at the CCA Northmead facility. It was noted to be one of the best in the State. CCA is committed to annual progress reporting as required under the Guidelines for Water Savings Action Plans. The Northmead operation was recently awarded the Sydney Water Sustainable Business Award for its achievements in water conservation under the Every Drop Counts program.

7.17 Cumulative impacts

There are no negative cumulative impacts as a result of the proposal. The cumulative impacts of reduced transport transfers, greenhouse emissions savings and economic benefits are considered positive.

8.0 Draft Statement of Commitments

In accordance with the Director-General's Environmental Assessment Requirements, the proponent is required to include a Draft Statement of Commitments in respect of environmental management and mitigation measures on the site. The following are the commitments made by CCA to manage and minimise potential impacts arising from the project.

8.1 Environmentally sustainable development

CCA is committed to the principles of sustainability as defined in *the Environmental Planning and Assessment Act 1979*. The proposed development will incorporate the following measures in support of the principles of ESD:

- Low energy and resource use building design;
- Rainwater harvesting for irrigation and to minimise impact on stormwater infrastructure;
- Natural ventilation of the HBW;
- Filtration of water entering Toongabbie Creek from the CCA site and externally.

In addition, CCA continues to explore potential co-generation initiatives either solely or in partnership with Westmead Hospital.

8.2 Management of construction noise, vibration, dust and erosion

Management of noise, vibration, dust, soil and erosion arising from the proposed construction will be undertaken in accordance with the Construction Management Plan for the development.

Hours of construction will be limited to 7.00 am to 6.00 pm Monday to Friday, and 8.00 am to 5.00 pm on Saturday.

8.3 Management of construction waste

CCA undertakes to adopt the following targets as performance requirements for the management of construction waste:

- 80% off site recycling for demolition wastes;
- 90% recycling for excavation wastes; and
- 70% off site recycling for construction wastes.

8.4 Management of construction traffic

A Construction Traffic Management Plan will be prepared prior to issue of the Construction Certificate. The plan will include the principles set out in this report to minimise construction traffic impacts at different stages of the construction process.

CCA undertakes to ensure that the management of access, traffic and parking during construction will be in accordance with the Construction Traffic Management Plan, the requirements of the Roads and Traffic Authority and Parramatta City Council, and relevant Australian Standards.

8.5 Management of operational noise

Plant will be designed, selected and operated in accordance with the DEC Industrial Noise Policy Guidelines and the *Protection of Environment Operations Act*.

CCA will conduct during design a detailed assessment of plant noise emissions once the type and placement of mechanical plant is confirmed.

CCA will install an appropriate noise barrier on the north side of the facility to attenuate noise to nearby residents and will investigate the use of white noise reversing alarms for delivery vehicles. The proposed location and height of the noise barrier will be optimised during the detailed design phase.

CCA will monitor noise arising from the ongoing operations of the facility, and establish formal mechanisms to record and respond to any complaints from the public about operational noise. This will include publicising a complaints handling facility such as a freecall telephone number.

8.6 Management of operational traffic

CCA undertakes to ensure that its own truck fleet and that of any contractors do not use local roads to access the Northmead facility, and will consult with the RTA and the Parramatta Traffic Committee regarding restrictions and enforcement.

CCA undertakes to establish formal mechanisms to record and respond to any complaints from the public about trucks using local roads. This will include publicising a complaints handling facility such as a freecall telephone number.

8.7 Hazard management

CCA will undertake the following in relation to managing hazards during construction and operations:

- verifying during the design process that codes and standards have been applied appropriately;
- ensuring during detailed design that the risks associated with the storage of compressed natural gas are managed to an acceptable level;
- undertaking a construction safety study in line with HIPAP No. 7 to assess risks due to demolition, construction and simultaneous operations.
- undertaking a Fire Safety Study in line with HIPAP No. 2, including an assessment of offsite impacts and escalation of incidents to existing hazardous materials.

8.8 Energy efficiency and greenhouse gas emissions

CCA will develop and implement an Energy Management Plan focused on the containment and/or reduction of greenhouse gas emissions, energy conservation and use of alternative energy sources.

8.9 Visual impacts of HBW

CCA undertakes to investigate during detailed landscaping design the use of different trees, such as tall and narrow species, to screen the HBW.

8.10 Helicopter operations

CCA undertakes to install markers, obstruction lighting or similar mechanisms on the HBW for avoidance purposes. This will be undertaken in consultation with CareFlight and on the advice of an aviation consultant to ensure that the design and specification will assist CareFlight in identifying their landing area, particularly when using instruments at night or during poor visibility.

8.11 Restoration of Toongabbie Creek

CCA undertakes to continue actively participating with the Department of Natural Resources and Parramatta City Council in upgrading the riparian zone of Toongabbie Creek in the vicinity of its operations, including contributing funds.

CCA will also continue its association with Parramatta City Council and the Toongabbie Creek Restoration Group to extend the walking track along the creek beyond its current point of termination to link with Redbank Road. This could include the restoration of the bushland and banks in a similar fashion to that already undertaken.

8.12 Use of the North-west/ Parramatta-Rouse Hill Transit Way

CCA undertakes to investigate establishment of an incentive program to encourage Northmead employees to use the new T-way to get to work with a target 10% reduction in the number of private vehicles visiting the site.

8.13 Community and stakeholder engagement

CCA undertakes to establish a complaints handling mechanism to record and address issues in relation to the construction program and ongoing operations of the Northmead plant.

CCA undertakes to hold an 'Open Day' once a year at the Northmead facility CCA to give the local community an opportunity to view the operations of the plant and to raise any matters of interest.

CCA will keep residents informed about construction through a newsletter distributed from time to time in the local area.

CCA will consult with Westmead Hospital once the hospital's development proposals are further developed to identify and explore possible synergies and mutual opportunities, and avoid possible conflicts.

8.14 Arts and culture

CCA will consult with Parramatta City Council regarding the development and implementation of an Arts and Cultural Plan relevant to the locality. Opportunities to integrate with the aforementioned Toongabbie Creek works will be explored.

9.0 Conclusion

The proposal represents the outcome of exhaustive analysis and consideration of numerous design and logistics options.

The assessment of the proposal has demonstrated that the development will result in positive social, environmental and economic benefits. It consolidates the presence in the Parramatta Primary Centre of a major Australian manufacturer, creates over 100 new jobs and locates a substantial workforce adjacent to major new public transport infrastructure. It removes a significant number of trucks from the Sydney metropolitan road network by reducing CCA's forecast warehouse-to-warehouse movements by over 50%. This has attendant benefits on air quality.

The proposal is consistent with the objectives of relevant SEPPs and SREP 28 and supports the Metropolitan Strategy. However, the proposed HBW exceeds the height control applicable to industrial development. Nevertheless, the form, height and proportions of the HBW are relative to its context - an existing employment zone adjacent to Westmead Hospital. The proposed treatment of the façade mitigates the visual impact of the structure in the immediate and local contexts by blending the mass of the building with the skyline and tree line from most viewpoints. The visual impact on regional views is limited and is therefore considered acceptable. The proposed development does not affect views of the Sydney and Parramatta CBDs that have been itemised as significant in the Parramatta DCP 2005.

The design of the HBW has successfully reduced the visual contrast between the proposed development and the existing buildings and public spaces by careful consideration of building location, proportions and form, and the structures and details.

9.1 Site suitability

The site is considered suitable for the proposed development for the following reasons:

- it is zoned for the proposed use and the proposal is an extension of a long-term existing use;
- it represents efficient use of existing industrial land and maximises considerable investment in existing infrastructure;

- it is consolidated substantial employment alongside new public transport infrastructure;
- it is located in very close proximity to major road transport infrastructure and at the heart of CCA's market;
- proposed operations on the site are neither offensive nor hazardous do not pose a risk to nearby residents or Westmead Hospital and do not generate excessive waste;
- it enables co-location of manufacturing and warehousing activities; and
- the land does not contain any flora or fauna that would be affected by the proposal.

9.2 Reasons why the project should be approved

Approval of the project is unlikely to set a precedent for other similar approvals in Parramatta or indeed the immediate locality – as both the need for the CCA facility and its co-location with a manufacturing plant is unique within the Parramatta locality. In order to warrant the substantial costs associated with the construction of an automated materials storage system, a company needs to have very high product throughput and high storage volumes of pallet-based products. Only the major supermarket operators and the large manufacturers of fast moving consumer goods (FMCG) meet these criteria. It is highly unlikely that Woolworths or Coles would construct a HBW in Parramatta. The preferred logistics solution for FMCG manufacturers is to construct the primary warehouse alongside a manufacturing facility and only CCA has a manufacturing facility in the area. It is therefore highly unlikely that any large FMCG manufacturer would construct a high-bay warehouse in Parramatta, or indeed the immediate locality.

Approval of the proposed project is sought on the following grounds. The proposal will:

- continue a long existing land use to which the surrounding community is attuned;
- be highly sustainable in resource terms as it maximises existing facilities and infrastructure;

- represent a significant upgrade of existing dated warehouse facilities, increased manufacturing capacity and improvements to site layout and utilisation;
- have a positive economic impact on the economy of Western Sydney – during construction and operations - both directly and through multiplier effects;
- result in benefits to the regional road network, has minimal impact at the local level and results in significant resource cost savings due to avoided transport;
- have no impact on the riparian zone and a positive impact on the water quality of Toongabbie Creek;
- have no negative acoustic and air quality impacts; and
- not generate additional waste or create hazards that cannot be managed.

The proposed development will have no negative impacts on the environment, during both construction and operations, and serves the public interest. We therefore request that the Minister approve this project.