Menangle Pastoral

25 January 2011

Menangle Structure Plan

Traffic and Transport Overview

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Traffic and Transport Overview

Prepared for

Menangle Pastoral

Prepared by

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3	01-Nov-2010	Revised Final Report (with updated master plan)	Dan Bright Associate Director	Original Signed
4	25-Jan-2011	Revised Final Report (with updated master plan)	Dan Bright Associate Director	

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1.0 Introduction

1.1 Report Purpose

AECOM has been commissioned by the landowners (Menangle Pastoral) to prepare a traffic and transport overview for a proposed development site at Moreton Park Road in Menangle.

This report has been prepared to determine key constraints and opportunities from a traffic and transport perspective for the proposed development, at Moreton Park Road south of the existing Menangle Village. A concept plan has been prepared by Cox Richardson Architects and Partners (Cox) and is shown in **Figure 1.1**. The concept plan will be used to guide the traffic overview to highlight the key issues of the proposed development in terms of traffic, transport and access as well as determine sustainable transport principles for the development to reduce the potential vehicular impacts of developing the site.

1.2 Study Area

The study area is located within the local government area of Wollondilly. The existing Menangle Village and Railway Station is approximately 10km south west of Campbelltown, between Menangle Road and the Nepean River. As shown in **Figure 1.1**, the study area is bounded to the north and east by the Nepean River, by Menangle Road and the Main Southern Rail Line to the west and by the RTA corridor reserve to the south. The Hume Highway bisects the study area in the north-south direction connecting Sydney's south-west with the Southern Highlands and Canberra.

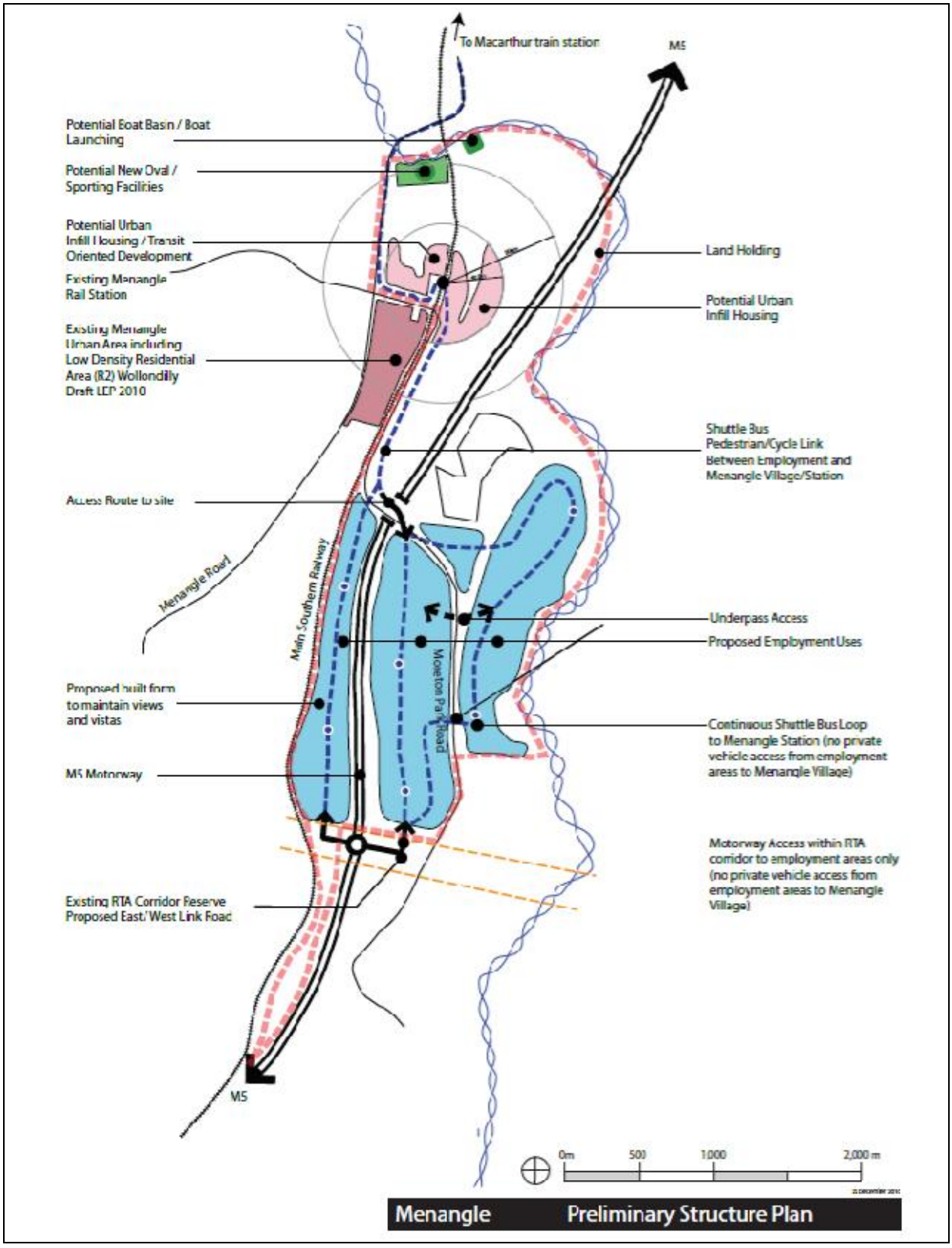
The study area currently includes rural lots surrounding the existing Menangle Village urban area. The RTA has also recently constructed a rest area for light and heavy vehicles on the southbound carriageway of the Hume Highway at the southern end of the study area.

1.3 Proposed Development

The proposal is for approximately 237ha of employment lands (blue areas in **Figure 1.1**), 25ha of residential lands to the north of the existing village (pink areas in **Figure 1.1**) providing approximately 300 dwellings in the vicinity of the existing Menangle Station and 10ha of open space (green area in **Figure 1.1**).

The main access to the proposed employment lands is from an interchange at the proposed RTA east/west link which will have a direct connection with the Hume Highway. A shuttle bus is proposed to run between the employment lands and Menangle Station / Macarthur Station. The new residential area and open space will have direct access from Menangle Road.

Figure 1.1: Menangle Concept Plan



Source: Cox Richardson Architects and Partners, January 2011.

2.0 Constraints and Opportunities

2.1 Regional Transport and Planning Context

2.1.1 The Metropolitan Plan for Sydney 2036 (Department of Planning, December 2010)

The Metropolitan Plan for Sydney 2036 draws on the strength and principles of the 2005's Metropolitan Strategy and the 2010 Metropolitan Transport Plan: Connecting the City of Cities. It is a strategic planning document that will guide Sydney's growth to 2036. It incorporates public feedback on the Metropolitan Transport Plan and the first five-yearly review of the Metropolitan Strategy to form a single, integrated Metropolitan Plan for Sydney 2036. It seeks to address the growth and development challenges facing Sydney over the next 25 years through an integrated, long-term planning framework.

The Metropolitan Plan forecasts Sydney's population will reach 6 million by 2036 - an increase of 1.7 million since 2006, therefore a need for 770,000 additional homes by 2036 and a need to expand Sydney's employment capacity by 760,000 to 2.85 million jobs. The location of new home and jobs will need to be considered with transport capacity as it will have significant impacts on how effectively Sydney develops as a compact and connected city and how it manages congestion and its related issues including economic efficiency, social costs, equity, air quality and climate change.

In addressing the sustainable city challenge, the plan proposes that at least 70% of new homes should be located in existing suburbs and at least 80% of all new homes should be located within walking catchments of existing and planned centres of all sizes with good public transport.

The Plan also highlights the importance to provide employment lands for freight logistics industry close to freight clusters, intermodal terminals and freight corridors.

The study area has not been identified as potential employment lands for investigation in the broader Metropolitan Plan. However, given its potential proximity to the Hume Highway, its potential to supply additional employment lands will assist the region to cater for the targeted employment growth.

2.1.2 The Metropolitan Transport Plan - Connecting the City of Cities (Department of Planning, February, 2010)

The 2010 Metropolitan Transport Plan is a 25 year vision for land use planning for Sydney, and a 10 year fully funded package of transport infrastructure to support it. The Metropolitan Transport Plan has now been consolidated with the Metropolitan Strategy into one Metropolitan Plan.

The plan sets the vision, approach and funding guarantees to effectively integrate transport and land use planning for Sydney to ensure it is a city of diversity, with a variety of renewed neighbourhoods and ample transport options.

The key transport projects and initiatives that could be relevant to this project includes:

- A new express rail service for Western Sydney which will help increase the capacity across the whole rail network.
- A thousand new buses to be used on the network of 43 strategic bus corridors, which improves bus services to / from the nearest major centres Campbelltown - Macarthur.
- Promotion of active lifestyle, through construction of missing links of the Strategic Cycle Network.
- Enhancing the Nation's Highway Network including the Hume Highway.
- Construction of a dedicated freight route through Sydney including the Southern Sydney Freight Line, with associated benefits for the passenger rail system.

2.1.3 Draft South West Subregional Strategy (Department of Planning, November 2007)

The Department of Planning is undertaking more detailed planning since the development of the Metropolitan Strategy and has developed a draft sub-regional strategy for the South West.

In November 2007, the draft South West Subregional Strategy was published to set out the vision for the management and development of this subregion to 2031. Subregional planning is vital to the implementation of the 2005 Metropolitan Strategy and is a crucial step in bringing the broad objectives set by the plan for all of Sydney down to a local level for Camden, Campbelltown, Liverpool and Wollondilly local government areas.

One of the key directions of this subregional strategy is to provide an additional 89,000 jobs by 2031 of which Wollondilly local government areas are to provide 2,000. The strategy aims to ensure adequate supplies of strategic employment lands within the subregion. The subregion will continue to provide employment in manufacturing, building and construction trades as residential and commercial development continues to expand in Western Sydney over the next 25 years. It will increasingly provide employment in service industries such as health, education, finance and business services as the population of the subregion grows.

The strategy also suggests that efficient commercial vehicle movement, including light commercial vehicles, rigid trucks and articulated trucks, are needed to support centres and employment lands throughout the South West Subregion. This subregional strategy aims to ensure that an adequate supply of employment land is identified and made available within centres and other specialised industrial lands to accommodate the projected jobs capacity. The strategy will protect a number of significant potential or existing industrial sites which have good access to the M5 or M7 Motorways and ensure that an infrastructure delivery plan is developed for them.

The draft subregional strategy identified the Menangle Pastoral lands as Moreton Park Road, Menangle (adjoining the Hume Highway) and is listed in the subregional strategy as one of the potential employment lands that could be investigated. The potential of the study area is high due to its level of exposure and access via road and rail to the Sydney and Illawarra markets and to markets in southern New South Wales, Victoria and Canberra. It is therefore expected to be attractive for logistics, warehousing and manufacturing businesses and will contribute significantly to local employment opportunities close to home for south-western Sydney and Macarthur South residents.

2.1.4 Rail Clearways Plan (NSW Government, 2003)

The Rail Clearways Plan, announced by the NSW Government in 2003, is a NSW Government initiative to improve the reliability of the CityRail network. The program of works to separate Sydney's 14 metropolitan rail routes into five independent clearways will be completed by 2010 at an estimated cost of $1billion dollars. By removing congestion on the network that cause delays, CityRail will be able to operate more reliable and frequent services with reduced passenger crowding whilst having the potential to increase capacity as demand grows into the future.

CityRail services on the Cumberland Line (Blacktown to Campbelltown), South Line (Campbelltown to City Circle) and East Hills Line terminate at Campbelltown, while some services on the East Hills Line (via Sydenham) terminate at Macarthur Station. 'Clearway 3' will enable express services to operate from Campbelltown to the City. Works to facilitate this could be completed by 2010 and include construction of extra tracks between Kingsgrove and Revesby and a new platform at Macarthur. The works will enable additional trains to be introduced on the line, reducing crowding on peak commuter services in the peak direction and improving frequency and reliability of train services to Macarthur.

2.1.5 ARTC – South Sydney Freight Link

The Australian Rail Track Corporation (ARTC) is currently undertaking a program of works to improve the efficiency and cost-effectiveness of rail freight services along the North-South Rail Corridor between Melbourne, Sydney and Brisbane. A major bottleneck in the rail freight network currently exists in southern Sydney, where freight trains share existing rail lines with the Sydney metropolitan passenger services operated by RailCorp. During morning and afternoon peak periods, freight services are not permitted to run due to passenger priority. As a result, freight services cannot arrive or depart Sydney at the optimum times.

The Metropolitan Strategy aims to encourage the upgrade of the metropolitan rail freight network and to maximise the efficiency of freight transport and the proportion of freight transported by rail. As part of the strategy to achieve this, the South Sydney Freight Line will be developed.

The ARTC proposes to construct the Southern Sydney Freight Line (SSFL), which would provide a dedicated freight line for a distance of 30 kilometres between Macarthur and Sefton in southern Sydney. The SSFL would provide a third track in the rail corridor specifically for freight services, allowing passenger and freight services to operate independently, increasing the competitiveness of rail freight.

2.2 Existing Traffic and Transport Conditions

2.2.1 Existing Travel Behaviour

Travel characteristics for NSW residents travelling to work are gathered through the national census. The most recent Journey to Work (JTW) data set available was obtained from the 2006 Census. The JTW data set includes details of the origin and destination zones of trips, as well as characteristics of the journey such as mode of travel.

Menangle lies within the Wollondilly Statistical Local Area (SLA) and the 2006 JTW data found the following characteristics in the Wollondilly region:

- Wollondilly SLA Population (2006 Census) - 40,344
- Proportion of Wollondilly SLA population under 25 (2006 census) - 38%
- Total Labour Force in Wollondilly SLA (2006 census) - 20,292

2006 JTW data shows that 33% of trips are self contained meaning they remain within Wollondilly SLA. Other important destinations include Campbelltown (14%), Camden (13%) and Liverpool (6.2%). This means that over 66% of JTW trips originating from Wollondilly leave the shire but remain in the South West subregion. Some of the other destinations outside the subregion include Bankstown, Fairfield, Parramatta, Penrith, Sydney, Wingecarribee and Wollongong. All these SLAs account for another 21% of trips from Wollondilly.

Two thirds of trips that have Wollondilly SLA as a destination originate in Wollondilly SLA (66%) and other origins include Wollongong (10%), Camden (6%), Campbelltown (6%) and Wingecarribee (4%). These SLAs account for over 92% of all trips having Wollondilly SLA as a destination.

Of the 13,925 daily work trips made by residents in Wollondilly in 2006:

- 86% were made by car, truck or motorbike;
- 6% were made as a vehicle passenger;
- 5% were made by train;
- 1% was made by bus; and
- 2% were made by other modes (i.e. walk/cycle).

Menangle lies within Travel Zone (TZ) 1439 (Menangle Station) and of the 103 trips made by residents in TZ 1439:

- 87% were made by car, truck or motorbike;
- 6% were made as a vehicle passenger;
- 4% were made by train; and
- 3% were made by bus.

The above statistics suggested that over 90% of the work trips made by residents in Menangle and Wollondilly are private vehicular trips.

Travel characteristics of a major employment area have also considered in the southwest sub-region to provide an understanding of travel behaviour for the proposed employment lands within the study area. Minto is a major employment area in Campbelltown which lies within TZ 1257. Of the 233 trips made to TZ 1257:

- 80% were made by car, truck or motorbike;
- 9% were made as a vehicle passenger;
- 3% were made by train; and
- 8% were made by other modes i.e. walk /cycle (excluding buses).

Therefore, it is apparent that the majority of workers in the southwest region travel to work by private vehicles.

2.2.2 Walking

Existing infrastructure for pedestrians is non-existent in the Menangle area, reflecting the low number of residents that currently live in Menangle and the rural nature of the area. Footpaths are not provided on local roads in Menangle, such as Moreton Park Road, Menangle Road and Station Street. There are also no proper footpaths between Menangle Village and Menangle Station.

2.2.3 Cycling

The Wollondilly Shire Cycleway/Shared Path Route Map (dated June 2008) suggests that cyclists are allowed on Menangle Road, Station Street and Moreton Road. However, it is not evident that there are any dedicated cycle facilities along these routes specified by Council.

The Campbelltown cycleway network consists of both on and off-road signposted routes and is being expanded. Currently an on-road cycle route is provided on Menangle Road from the Hume Highway overbridge near Medhurst Road into Macarthur. Cyclists are also allowed on the shoulder lanes of the Hume Highway.

2.2.4 Bus Services

The study area is currently serviced by Busways route 889 from Menangle to Campbelltown, a low frequency route. From Campbelltown the bus travels via Macarthur Square and along Menangle Road, Station Street and Moreton Park Road. There is a total of 12 buses that stop in Menangle throughout the weekday and four that stop on a Saturday.

Menangle Village is also currently serviced by Busways route 47, which occasionally travels along Woodbridge Road, Finns Road and Menangle Road.

2.2.5 Rail Services

CityRail services to the south west generally terminate at Campbelltown, although some services on the East Hills Line terminate at Macarthur Station. Electrification of the rail line ceases to the south of Macarthur Station and services to the Menangle Station are provided by diesel trains on the Southern Highlands Line. One diesel service runs from Menangle Park to the city in the peak hour.

Menangle is serviced by the Southern Highlands Line, however the train services are very infrequent with only 2 trains in the AM peak hour and 1 train in the PM peak hour. There are no formal interchange facilities at Menangle Station, given the lack of train services and passengers to this station.

2.2.6 Road Network

Hume Highway (SH31)

The Hume Highway (SH31) is a National Highway and therefore has an emphasis on catering for freight and inter-regional trips between Sydney, the Southern Highlands and Canberra. However, it also provides trunk commuter access between south western Sydney, the Sydney CBD and industrial areas along the M5 Motorway. The Westlink M7 provides a connection between the south west and areas to the north of Sydney, including Parramatta, Blacktown and the Hills District. Current accesses to the SH31 from Menangle are 9km north at Narellan Road and 15km south at Picton Road.

The Hume Highway is a four-lane road with shoulder lanes on both sides of the carriageways.

Menangle Road

Menangle Road is critical to the site, as it is currently the sole provider of external access to the north. It performs as a two-way two-lane rural arterial road with a 100km/hr speed limit south of the Broughton Anglican College, with a reduction to 60km/hr in the Menangle Village area.

Current traffic volumes (approximately 6,000 veh/day at Nepean River Bridge) are well below capacity due to limited land use activity southwest of Campbelltown, especially in the vicinity of Menangle Village and the availability of the Hume Highway for longer distance trips. All vehicles on Menangle Road travel through the Macarthur Square town centre to access the surrounding regional road network. Therefore, traffic volumes at Menangle Road accumulate up to approximately 9,000 veh/day (west of Geary Road). Due to the amount of potential and committed developments in Macarthur and Menangle Park, capacity of Menangle Road may become an issue that need to be considered.

Moreton Park Road

Moreton Park Road is a two lane, undivided road that runs north to south from Menangle to Douglas Park. It provides an alternative route to Menangle Road to the south and runs parallel to the Hume Highway.

Traffic Flows and Network Performance

RTA traffic data has been obtained for station 07.737, which is located on the Hume Highway (SH31) at Menangle, 15km north of the Picton Road interchange. Annual Average Daily Traffic (AADT) at this station in 2005 was approximately 37,900 vehicles per day.

Average two-way weekday traffic (Monday to Thursday) in the AM peak in 2005 was approximately 2,100 vehicles per hour and in the PM peak was approximately 2,200 vehicles per hour. The peak hour weekend traffic fell between 5pm and 6pm on Sunday in the northbound direction with 1,950 vehicles per hour and between 5pm and 6pm on Friday in the southbound direction with 1,800 vehicles per hour. The weekend traffic data shows the high volume of vehicles travelling between Sydney and Canberra/the Southern Highways during the weekends.

Table 2.1 highlights the peak hour traffic volumes in each direction at station 07.737.

Table 2.1: Traffic Volumes on the Hume Highway

Direction	Average Weekday (Mon-Thurs) Peak Hour Traffic Flow (veh/hr)		Weekend Peak Hour Traffic Flows (veh/hr)
	AM peak hour	PM peak hour	Peak hour
Northbound	1,175	1,004	1,954 (Sunday 5pm to 6pm)
Southbound	947	1,214	1,808 (Friday 5pm to 6pm)
Total	2,121	2,218	-

Source: RTA AADT Volume data, 2005/2006

The Austroads Guide to Traffic Engineering Practice – Roadway Capacity states that a multi-lane road with uninterrupted flow has a capacity of 2,000 vehicles per hour per lane for a design speed of 100km/hr or greater. As the section of the Hume Highway in the vicinity of Menangle has two lanes in each direction, it is considered to be operating well within capacity during the average weekday and weekend peak hours.

2.3 Future Transport Infrastructure Plans

2.3.1 Hume Highway Interchange and East-West Link

The RTA currently owns a number of parcels of land along an east-west corridor immediately to the south of the proposed development and it is envisaged an interchange with the Hume Highway will be constructed within this east-west corridor.

The Macarthur South Regional Environmental Study also proposed a major east-west transport link through this land, providing access from the proposed urban areas in the Appin Development Area (to the south east of Menangle) to the Hume Highway, the Main Southern Rail Line and Menangle Road.

The feasibility of an interchange with the Hume Highway at this location was discussed between the landowners and the RTA in 2004. Refer to Appendix A for the correspondence from the RTA on their view of the proposal. At that stage, the RTA in principle had no objection to the proposal of constructing an interchange at this location.

AECOM had a phone discussion with the RTA on 3 September 2009 to seek their view on the likelihood of constructing an interchange with the Hume Highway along the east-west corridor immediate to the south of this proposed development. They confirmed that there will be an interchange at this location in the future which will be further investigated with the planning of Appin Road/Bypass and its connection with the Hume Highway. The constructability of an interchange at this location will not be a major issue, however no funding has been set aside by the RTA for the construction of this interchange. The RTA encouraged the project team and the landowners to have further discussion with them on this matter as the project develops.

At this stage, the RTA has no preference with the layout of the intersection of Moreton Park Road and Menangle Road with the future east-west link so the intersections could be either at-grade or grade-separated subject to further investigations. Menangle Pastoral is proposing to build the interchange with direct connectivity between its employment lands and the Hume Highway but with no direct connections between the Hume Highway and Menangle Road/Moreton Park Road. Should this be implemented there will be no increase in vehicular traffic on Moreton Park Road/Menangle Road generated by the proposed employment areas and from the Hume Highway.

Currently there is no future funding for the widening of the Hume Highway south of Narellan Road.

2.3.2 Appin Road Upgrade

Appin Road serves as a freight connection between Illawarra/Port Kembla and southwest Sydney/Campbelltown. Potential infrastructure upgrades for Appin Road include additional overtaking lanes in the short term and two lanes in each direction with the possibility of an Appin Bypass and link to the Hume Highway in the long term.

2.3.3 Bus Network Upgrades

In consultation with NSW Transport and Infrastructure and the bus operator Busways, it was found that currently there are no planned bus network upgrades in and around the Menangle area. However, further discussions should be made with these agencies at a later stage to investigate the possibility of bus route diversion or improved service frequencies to serve the proposed development.

2.3.4 Passenger Rail Network Upgrades

There are no planned rail upgrades south of Macarthur Station as electrification of the rail line to Menangle is unlikely to be financially viable due to lack of demand and the significant construction costs.

2.3.5 Freight Rail Network Upgrades

The Federal Government has committed to move to the next stage of assessing the feasibility of a rail line between Maldon and Port Kembla via Dombarton. The feasibility study will fund detailed planning and engineering work needed to obtain firm costings and determine the viability of this project.

The pre-feasibility study previously commissioned by the Federal Government has found that completing the rail line between Maldon and Port Kembla via Dombarton has long term economic merit. The study has found the line could:

- Provide a strategic alternative to the current Moss Vale-Unandarra and Illawarra line for freight trains;
- Support the Port's rapidly expanding commercial activities; and
- Generate considerable employment within the local construction industry.

Given the study area's proximity to Maldon, the completion of the freight line will strengthen the position/feasibility of the proposed employment lands in the study area.

2.3.6 Cycleway Upgrades

Wollondilly Council has recently adopted a shared cycleway plan for the whole shire. The adopted plan will complement the existing number of shared cycle ways networked throughout the Shire.

2.4 Transport Context Summary

This review of transport context in the vicinity of the study area has noted a number of constraints including:

- Local residents in Menangle and in the Wollondilly LGA are heavily reliant on car use;
- Heavy reliance of car use by employees working in major employment areas in Sydney's south west;
- Limited existing pedestrian facilities and lack of connectivity to rail stations due to low number of residents;
- Lack of dedicated cycle facilities;
- Low public transport mode share, caused in part by the low population densities and the low public transport frequencies;
- Lack of interchange facilities at Menangle Station;
- No planned bus and passenger rail network upgrades; and
- Lack of direct connection to the Hume Highway under existing conditions.

The key strengths of the existing transport networks in the Menangle area include:

- A trend of journey-to-work containment within the local government area;
- Opportunities to create a high quality and connected transport network for non-motorised modes of travel;
- An existing public transport framework, with scope for improvement in frequency and quality;
- Relative proximity to the suburban rail network (Macarthur Station);
- A planned increase in CityRail services to Macarthur Station and the near completion of interchange facilities upgrade at Macarthur Station;
- Availability of spare capacity on the Hume Highway;
- Potential to have direct connection to the Hume Highway via the construction of the east-west link and its interchange with the Hume Highway; and
- Majority of employees (given their likely trip origins from the South West Sub-region, Wingecarribee and Wollongong) would arrive at the study are via the Hume Highway with the construction of the interchange at the proposed east-west link.

These strengths and weaknesses will provide ample opportunity for leverage towards a package of measures for the proposed Menangle development.

3.0 Sustainable Transport Principles

Developing sustainable transport principles for a development will help to achieve a mode shift away from the car driver, which the latest journey to work data shows is dominant in Menangle/Wollondilly at present. The concept plan should consider sustainable transport principles as part of its development, including the following objectives:

- Providing an integrated transport network between modes and land uses;
- Providing a choice of travel mode by developing a comprehensively accessible transport network;
- Providing a safe and secure transport network;
- Providing a system that is efficient and equitable;
- Providing a system that is sustainable;
- Supporting the local economy; and
- Providing a safe and healthy environment.

The bus mode share for journey to work trips is low at 3% in the Menangle area. To achieve a higher bus mode share, bus service improvements that are responsive to the proposed development should be implemented. A community intranet would provide a good source of public transport information to residents.

Upgrade of Macarthur Station and its interchange facilities are underway and construction is anticipated to be completed by 2010. This will allow additional train services to terminate at Macarthur, thus increasing the frequency of peak hour services. To complement the additional train services terminating at Macarthur Station, it is recommended that a shuttle bus service be provided between the proposed development and Macarthur Station via the F5/Hume Highway to encourage a higher train and bus mode share and to reduce the amount of potential car trips to the proposed development based on the current trends.

The implementation of a travel plan (or Green Travel Plan) for the employment area will assist in delivering greater mode shift from private car to more sustainable travel methods. Travel planning involves the use of work based travel plans, which can be tailor-made for individual developments or areas in order to manage travel demand and to achieve mode shift targets. A workplace travel plan is an employer-based package that helps businesses promote sustainable travel options to their staff. By setting up workplace travel plans that encourage alternatives like walking, cycling, public transport and car pooling, companies of all sizes can save themselves and their staff both time and money.

Encouragement of cycling in the employment area can be achieved through measures such as; the provision of bike racks, bike parking, showers, lockers, changing rooms, bike pools, ‘bike buddy’ schemes for inexperienced riders, onsite bicycle maintenance service, financial assistance for bike purchases or interest free loans for the purchase of bikes. Information and education on cycle routes in the local area and negotiations with council if routes need upgrading should also be considered.

Encouragement of walking can be achieved through improvement of pedestrian facilities and accessibility to rail stations, other public transport facilities and Menangle Village. Consideration should be given to footpaths, lighting, visibility, streetscape, way-finding and connections with public transport facilities.

With regard to the employment area, providing bus/ shuttle connections to Macarthur Station and Menangle Station, together with cycle parking, cycling facilities and comprehensive directional signage at the stations would encourage cycling and public transport use. Connections to Menangle village should also be considered. Other measures within the Menangle employment area can be implemented such as car sharing, car riding or instantaneous car hire schemes to encourage a shift away from individual car trips.

4.0 Review of Concept Plan

The key transport opportunities and constraints for the current concept plan are considered and are summarised in **Table 4.1**.

Table 4.1: Key Transport Opportunities and Constraints for the Concept Plan

Opportunities	Constraints
• Proximity of study area to south western Sydney growth area and the Illawarra Region. • Supply of employment lands within the Wollondilly LGA. • Potential to have direct access to the Hume Highway – reducing the amount of vehicular traffic in particular heavy vehicles on local road. • Proximity to Menangle/Macarthur Stations and potential to run a shuttle service between the development and these stations to increase public transport mode share for the employment areas. • Potential for improved public and active transport network between the employment area, Menangle Village and rail stations.	• Relying on a potential interchange with the Hume Highway for easy access to the regional road network. Funding and timing arrangements to be negotiated with the RTA. • Developing practical measures to restrict/limit vehicular access to Moreton Park Road and Menangle Road from the proposed employment lands. • Infrequent and diesel only train service to Menangle Station. • Potential need to upgrade access and interchange to Menangle Station to cater for additional demand.

Source: AECOM, 2010

5.0 Summary

The existing traffic and transport network in the vicinity of the study area in Menangle has been reviewed. The networks have the potential to be upgraded to cater for the proposed development, in particular the interchange with the Hume Highway at the south end of the study area.

With the provision of the interchange and required local traffic management measures, there will be negligible impact on the local road network from the proposed employment areas. The potential traffic impacts on Menangle Road due to traffic generated by the proposed urban infill areas will be carefully managed through allocating appropriate housing mix, enhancing accessibility to public transport routes and facilities as well as recommending other sustainable transport measures during the detailed master planning process.

A review has also been undertaken for the existing concept plan in a transport context to highlight the constraints and opportunities of the existing concept plan. These constraints and opportunities would be incorporated to further develop the concept plan.

Appendix A

RTA Correspondence (2004)

496.5314 Pt 6

Lynn Morris - (02) 42212438

1 2 2004

Mr E A Dupere
PO Box 875
St Ives NSW 2075

PROPOSED INTERMODAL INTERCHANGE AT MENANGLE

Dear Sir

I refer to your letters dated 6 and 8 July 2004 and subsequent meeting on 28 July regarding your proposal for an intermodal rail freight hub and ancillary warehousing and handling facilities in the neighbourhood of Moreton Park Road, Menangle.

It is understood from the discussion that as the proponent you are proposing to construct an interchange solely for the use of the intermodal terminal and do not explicitly seek to provide access for the general public. In principle the RTA has no objection to such a proposal provided the development does not impede access to the road corridor for future development and does not interfere with the RTA providing access to SH2 Hume Highway between MR95 Picton Road and MR178 Narellan Road at some future time.

The RTA notes that your proposal, as presented on 28 July 2004, is largely strategic in nature and accordingly provides two levels of comment.

Necessary RTA provisions for a direct connection from the proposed development to the freeway section of the Hume Highway would include:

- The location and design of any access ramps, overpass or identified mitigation works (including traffic management devices) to or adjoining the freeway must be in accordance with RTA standards and requirements;
- When establishing requirements, the RTA will take into account the impact any ramps, overpass or other traffic device would have on traffic efficiency and safety on the freeway, including the operation of ramps to the general road network within 5 kilometres of the development;
- The RTA to approve all specifications, plans and drawings;
- All road and bridgeworks be carried out by an RTA prequalified contractor(s);

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- The RTA to bear no cost in development of the proposal or for surveillance of the construction work;
- Construction of necessary works to be at the full cost of the developer, including RTA costs for supervision;
- A formal Deed of Agreement (DOA) with a Works Authorisation Deed (WAD) be prepared to document the agreement and responsibilities of each party, such deed to apply to subsequent owners or operators of the facility.

Additional comments on the proposal are:

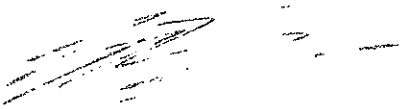
- The RTA recognises the community value of a multi-user intermodal terminal that facilitates inter capital, in particular Sydney–Melbourne, freight shifting from road to rail.
- The RTA may be prepared to consider entering into an agreement, possibly a lease, allowing part of the development to use RTA land. Any agreement would be subject to the agreement of the Minister. At a minimum, the RTA would wish to retain the right to construct a link across your development between the freeway and the road network.
- It is appropriate that the RTA continue to be consulted in the development of the proposal to ensure there is agreement to identification, planning, management and delivery mechanisms.
- It should be noted that there is a current lease with the Service Centre at Pheasants Nest that contains an exclusion clause precluding any other service centres between Sally's Corner (approximately 3 kilometres south of the Illawarra Highway) to The Cross Roads at Ingleburn, a total distance of approximately 85 kilometres. This lease is in effect for approximately ten more years.

For your information, the annual average daily traffic on that section of the highway is approximately 35,300 with an annual growth rate of approximately 4%. This information may be accessed from the Internet link for station 07.737 at:

http://whome.rta.nsw.gov.au/trafficinformation/downloads/aadtdata_dl1.html

If you have any further enquiries please ring me on 0242 212 445.

Yours faithfully



Dr Graham Brisbane

6 August 2004