

Appendix G

Traffic assessment

Settlement City Shopping Centre – Port Macquarie
Environmental Assessment proposed Stage 1

ING REAL ESTATE

SUPPLEMENTARY TRAFFIC
INFORMATION IN RELATION
TO PART 3A APPLICATION FOR
EXTENSIONS TO SETTLEMENT
CITY SHOPPING CENTRE,
PORT MACQUARIE

JUNE 2009

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REF: 7407

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I. INTRODUCTION

- I.1 Colston Budd Hunt and Kafes Pty Ltd has been retained by ING Real Estate to prepare supplementary traffic information in relation to traffic and parking aspects of proposed extensions to the Settlement City shopping centre in Port Macquarie. The site is located on the western side of Park Street, north of Bay Street, as shown in Figure I.
- I.2 The existing centre provides 19,157m² retail area, including a Woolworths supermarket, Big W and specialty shops. Vehicular access is provided from Park Street and Bay Street.
- I.3 A Part 3A application for extensions to the shopping centre has been made to the Department of Planning. The proposed extensions provide for an increase in retail area of 7,862m² including a gymnasium, restaurants, and additional specialty retail. In addition, a bowling alley, 1,050 seat cinema complex and 2,748m² commercial offices are proposed. Vehicular access would be retained from Park Street and Bay Street.
- I.4 A previous traffic report¹ has been prepared for the proposed development, which is appended to this report. Council has prepared a structure plan² for the redevelopment of the Settlement City Precinct, in which the site is located.

¹ "Settlement City Shopping Centre Port Macquarie Proposed Expansion and Partial Redevelopment Assessment of Traffic and Parking Implications." Prepared for ING Real Estate by Transport and Traffic Planning Associates, February 2009.

² "Settlement City Precinct Structure Plan". Prepared for Port Macquarie-Hastings Council by MacroPlan, GMU and Urbanhorizon, 5 February 2009.

- I.5 The structure plan is intended to inform the preparation of a new local environmental plan and development control plan for the area. Council has also undertaken a traffic study³ to identify road, traffic and transport requirements to accommodate future development in the precinct.
- I.6 The Department has provided comments on the Part 3A application. In addition, Council has prepared a letter, dated 1 April 2009, in relation to the application. The DoP and Council correspondence includes a number of traffic related matters, as follows:

DoP

4. Traffic and Access

- *Swept path diagrams for the loading dock area should be provided to demonstrate that service vehicles will be able to enter and exit the site in a forward direction.*
- *While it is understood that public access to the foreshore is to be improved, public access is not specifically discussed.*

Council

Carparking

The applicant has submitted a parking assessment in lieu of using Council's Off-street Parking Code to calculate parking requirements. Details of the methodology used to determine the parking numbers should be evaluated.

³ "Proposed Rezoning of Land, Settlement City Precinct, Port Macquarie, Traffic and Transport Assessment." Prepared for Port Macquarie-Hastings Council by TTM Consulting (Qld) Pty Ltd, 8 August 2008.

Traffic and Access

The Traffic Impact Assessment submitted with the proposal is inadequate because:

- *The scale of development proposed on the Settlement City site is not contemplated in Council's Regional Roads Contributions Plan, and while the existing roads and intersections may have capacity to cater for the proposed development, that capacity has been provided to cater for future identified growth within the wider catchment. If that capacity is taken up by the proposed expansion of the Settlement City Shopping Centre, there will be a consequent need for upgrades to the roads and intersections within, and adjoining, the Precinct. It is noted the intersection analysis only allows for the traffic growth associated with the development. Any conclusions on the performance of the intersection in terms of the future should also be taken into account for future traffic growth. It is also noted the intersections are assessed in isolation to existing and future pedestrian movements. The traffic study undertaken for the Settlement City Precinct Structure flags the need for signalised intersections incorporating pedestrian signals to safely cater for pedestrian movements.*
- *It does not address the future pedestrian movements with the planned adjoining developments identified by the Settlement City Precinct Structure Plan 2009. There will need to be connectivity between these developments with requirements in excess of the existing facilities.*
- *The traffic impact assessment does not address the overall impact of the development contemplated under the Settlement City Precinct Structure Plan 2009, which has been adopted by Council. The Plan identifies road and intersection upgrades required as a result of development proposed under the Structure Plan.*

- *It does not address the extension of Aston Street through to Bay Street as shown on the Settlement City Precinct Structure Plan 2009, and how this extension will impact on traffic flows and in particular the western most Bay Street access to the development.*
- *The traffic impact assessment should have regard to the proposed development's proportional responsibility for the identified upgrades. Council is currently in discussions with another major landowner within the precinct to determine responsibility and apportionment of the road and intersection upgrades identified in the Settlement City Precinct. Council would encourage the proponent for the expansion of Settlement City Shopping Centre to engage with Council to discuss the responsibility and apportionment issues for road and intersection upgrades within the Settlement City Precinct, so that an agreed strategy and implementation mechanism can be adopted to provide certainty for all stakeholders, and assist in the smooth passage of development proposals within the Precinct. This discussion should be used to inform the preparation of an adequate Traffic Impact Assessment*

- 1.7 This report has been prepared to respond to the matters raised by DoP and Council. Responses to these matters are set out in the following chapter.
- 1.8 During the preparation of this report, discussions were held with Council officers. We would like to acknowledge their assistance and co-operation.

2. SUPPLEMENTARY TRAFFIC INFORMATION

2.1 The supplementary traffic information is set down through the following sections:

- site location;
- previous traffic report;
- Council structure plan and traffic study;
- identified works;
- response to matters raised by DoP and Council; and
- summary.

Site Location

2.2 Settlement City Shopping Centre is located on the western side of Park Street, north of Bay Street, as shown in Figure 1. It provides 19,157m² retail area, including a Woolworths supermarket, Big W and specialty shops. Vehicular access is provided from Park Street and Bay Street.

2.3 The shopping centre is part of a larger precinct known as the Settlement City Precinct, which includes the shopping centre, as well as the Panthers Club, Sails Resort, marina, some residential development and the school site on the southern side, part of Westport Park and open space along Aston Street.

Previous Traffic Report

- 2.4 A Part 3A application for extensions to the shopping centre has been made to the Department of Planning. The proposed extensions provide for an increase in retail area of 7,862m² including a gymnasium, restaurants, and additional specialty retail. In addition, a bowling alley, 1,050 seat cinema complex and 2,748m² commercial offices are proposed. Vehicular access would be retained from Park Street and Bay Street.
- 2.5 The previous traffic report prepared in association with the Part 3A application is appended to this report. It found that the existing adjacent road network will be able to cater for the additional traffic generated by the proposed development with existing intersections operating at good levels of service.
- 2.6 It also concluded that the proposed parking provision of some 1,400 spaces is appropriate for the proposed development.

Council Structure Plan and Traffic Study

- 2.7 Council has prepared the Settlement City Precinct Structure Plan 2009 which is intended to inform the preparation of a new local environmental plan and development control plan for the area. Some of the land within the precinct requires rezoning to provide for the type of future development envisaged.
- 2.8 Council also commissioned a traffic study to identify road, traffic and transport requirements to accommodate future development in the precinct.
-

- 2.9 One of the key themes of the structure plan is the integration of the Settlement City Precinct with the existing Port Macquarie CBD. It is largely an urban design document that identifies measures to achieve a number of objectives relating to the provision of open space, connections to the CBD, public access along the foreshore, provision and maintenance of views and vistas, built form, improved pedestrian and cycle access and achieve a certain “look and feel” in the area.
- 2.10 The Council traffic study adopts a relatively “broad-brush” approach when considering future traffic volumes and required road and intersection works. It appears to have double-counted traffic increases between the years 2018 and 2028, as the 2018 flows assume the precinct has been redeveloped and is generating its ultimate level of traffic. Therefore any growth beyond that time (for example, as residential development continues to occur in the Hastings area) has already been taken into account as the precinct is generating its ultimate traffic generation in 2018. Alternatively, the 2018 assessed traffic levels are too high because the redevelopment will not have fully occurred by then.
- 2.11 Council’s traffic study envisages the following potential additional development within the precinct:
- 31,100m² retail;
 - 3,700m² commercial;
 - 3,500m² “small office, home office” (“SOHO”);
 - 675 residential dwellings;
 - 150 hotel/motel rooms;
 - 50 marina wet berths;
 - 150 marina dry berths; and
 - a 1,000 seat cinema.
-

- 2.12 It anticipates the closure of the existing school and makes allowance for the associated reduction in traffic generation.

Identified Works

- 2.13 The structure plan identifies a series of improvements and upgrades to streets within the precinct, including:

- Park Street
 - four lane divided carriageway with central planted median/turning lane;
 - clearways during peak periods;
 - widened, upgraded, landscaped footpaths;
 - Bay Street
 - four lane carriageway;
 - clearways during peak periods in the direction of peak traffic flow;
 - widened, upgraded, landscaped footpaths;
 - Warlters Street
 - six lane divided carriageway with central planted median/turning lane;
 - two traffic lanes and one parking lane in each direction;
 - widened, upgraded, landscaped footpaths;
 - Aston Street
 - six lane divided carriageway with central planted median;
 - two traffic lanes and one parking lane in each direction;
 - widened, upgraded, landscaped footpaths/cycle lanes in 4.5 metre verges;
-

- Main Street (new road connecting Warlters Street with Park Street)
 - four lane carriageway;
 - one traffic lane and one parking lane in each direction; and
 - new five metre wide landscaped verges/footpaths.

2.14 Bay Street would be closed at the western end of Settlement City Shopping Centre, Warlters Street would be extended west to connect to Bay Street and Aston Street would be extended north to connect to Bay Street. Five new signalised intersections are identified, including:

- Warlters Street/Park Street;
- Warlters Street/Aston Street;
- Aston Street/Hastings River Drive;
- Park Street/Bay Street; and
- Park Street/Main Street.

2.15 In addition to the above works, the traffic study undertaken for Council and further Council development of the road works strategy identifies the following two additional intersections for signalisation:

- Hastings River Drive/Park Street; and
- Warlters Street/Main Street.

2.16 A package of measures has therefore been identified to cater for the future redevelopment of the precinct. These works would cater for the additional traffic from the additional development envisaged in the precinct, including the proposed shopping centre extension.

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- 2.17 As part of the proposed development, the applicant intends to enter a planning agreement with Council for appropriate road/traffic works in the precinct.

Response to Matters Raised by DoP and Council

- 2.18 Our responses to the matters raised by DoP and Council are set out below.

4. Traffic and Access

- *Swept path diagrams for the loading dock area should be provided to demonstrate that service vehicles will be able to enter and exit the site in a forward direction.*
- 2.19 Swept paths showing access to the new and modified loading bays by 19 metre semi trailers and rigid trucks are attached as Figures 2, 3 and 4.
- *While it is understood that public access to the foreshore is to be improved, public access is not specifically discussed.*
- 2.20 This matter is being addressed by ING's town planner.

Carparking

The applicant has submitted a parking assessment in lieu of using Council's Off-street Parking Code to calculate parking requirements. Details of the methodology used to determine the parking numbers should be evaluated.

- 2.21 With the proposed extension, the centre will provide some 29,767m² commercial/retail development (19,157m² existing centre plus 7,862m² retail extension plus 2,748m² commercial extension). In addition, a 1,050 seat cinema complex and bowling alley are proposed.
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- 2.22 Hastings Development Control Plan No. 18 – Off-street Parking Code indicates that commercial premises and shops should provide one space per 30m² GLA. On this basis, the retail/commercial development would require some 990 spaces.
- 2.23 DCP 18 does not include rates for bowling alleys. However, the RTA's "Guide to Traffic Generating Developments" indicates that bowling alleys should provide three spaces per lane. Based on 24 lanes, the bowling alley would require 72 spaces. It is likely that the peak parking demands of the bowling alley would occur on Friday and Saturday evenings when retail parking demands are low.
- 2.24 Neither DCP 18 or the RTA guidelines contain a specific requirement for cinemas. Peak cinema parking demand is typically one space per five seats and occurs on Friday and Saturday evenings when retail parking demands are low. This leads to a requirement for the 1,050 seat cinema complex of some 210 spaces. The proposed provision of some 1,400 spaces will therefore readily cater for cinema and bowling alley demands at these times.
- 2.25 At peak retail times, cinemas typically generate a parking demand of about one space per 25 seats. This is equivalent to some 45 spaces for a 1,050 seat cinema complex. The total parking requirement for the centre would therefore be some 1,110 spaces (990 for the retail/commercial, 72 for the bowling alley and 45 spaces for the cinemas). The proposed provision of some 1,400 spaces therefore satisfies this requirement.

Traffic and Access

The Traffic Impact Assessment submitted with the proposal is inadequate because:

- *The scale of development proposed on the Settlement City site is not contemplated in Council's Regional Roads Contributions Plan, and while the existing roads and intersections may have capacity to cater for the proposed development, that capacity has been provided to cater for future identified growth within the wider catchment. If that capacity is taken up by the proposed expansion of the Settlement City Shopping Centre, there will be a consequent need for upgrades to the roads and intersections within, and adjoining, the Precinct. It is noted the intersection analysis only allows for the traffic growth associated with the development. Any conclusions on the performance of the intersection in terms of the future should also be taken into account for future traffic growth. It is also noted the intersections are assessed in isolation to existing and future pedestrian movements. The traffic study undertaken for the Settlement City Precinct Structure flags the need for signalised intersections incorporating pedestrian signals to safely cater for pedestrian movements.*

- 2.26 As previously discussed, Council's structure plan and traffic study for the Settlement City Precinct identify road and traffic works which will cater for the future redevelopment of the precinct, including the proposed shopping centre extension. This study has therefore considered the cumulative effects of future development in the precinct. The proposed development therefore fits within the overarching strategic position identified by Council for the precinct.
- 2.27 As noted in the previous traffic study, the existing adjacent road network will be able to cater for the additional traffic generated by the proposed development with existing intersections operating at good levels of service.
- 2.28 As part of the proposed shopping centre development, the applicant intends to enter a planning agreement with Council for road/traffic works in the precinct.
-

- *It does not address the future pedestrian movements with the planned adjoining developments identified by the Settlement City Precinct Structure Plan 2009. There will need to be connectivity between these developments with requirements in excess of the existing facilities.*

2.29 The architect has prepared a plan (copy attached), which does not form part of the application, showing how pedestrian and cycle connections could be provided in the future to the school site and retail development to the south, as well as the eastern side of Park Street. These links could include:

- a marked pedestrian/cycle crossing on Bay Street adjacent to the site in the existing location, linking to the school site and existing and future retail development to the south; and
- a future signalised intersection of Park Street with Bay Street, as identified by Council, including signalised pedestrian crossings of the three approaches.

2.30 The proposed development therefore does not preclude the future provision of these pedestrian and cycle links, which would occur in association with the redevelopment of the school site.

- *The traffic impact assessment does not address the overall impact of the development contemplated under the Settlement City Precinct Structure Plan 2009, which has been adopted by Council. The Plan identifies road and intersection upgrades required as a result of development proposed under the Structure Plan.*

2.31 This matter is discussed previously in paragraphs 2.26 and 2.27.

- *It does not address the extension of Aston Street through to Bay Street as shown on the Settlement City Precinct Structure Plan 2009, and how this extension will impact on traffic flows and in particular the western most Bay Street access to the development.*

2.32 Council's previous studies have assessed and identified the need for the Aston Street extension, which would occur in association with the future development of the school site. An extended Aston Street would operate in conjunction with Park Street to provide north-south connections to and from the precinct.

2.33 The architect has prepared a plan, which does not form part of the application, showing how this extension could be provided in the future. A t-intersection could be provided at Aston Street/Bay Street, with the existing shopping centre access forming one of the approaches.

2.34 The proposed development therefore does not preclude the future provision of this road extension.

- *The traffic impact assessment should have regard to the proposed development's proportional responsibility for the identified upgrades. Council is currently in discussions with another major landowner within the precinct to determine responsibility and apportionment of the road and intersection upgrades identified in the Settlement City Precinct. Council would encourage the proponent for the expansion of Settlement City Shopping Centre to engage with Council to discuss the responsibility and apportionment issues for road and intersection upgrades within the Settlement City Precinct, so that an agreed strategy and implementation mechanism can be adopted to provide certainty for all stakeholders, and assist in the smooth passage of development proposals within the Precinct. This discussion should be used to inform the preparation of an adequate Traffic Impact Assessment*

2.35 This matter is previously discussed in paragraph 2.27.

Summary

2.36 In summary, the main points relating to the additional traffic information for the proposed development are as follows:

- i) Council has prepared a structure plan and traffic study for the Settlement City Precinct;
 - ii) these studies have identified a series of road and intersection works to cater for future development;
 - iii) these works would cater for the traffic from the additional development envisaged in the precinct, including the proposed shopping centre extension;
 - iv) however, the existing road network and its intersections will be able to cater for the additional traffic from the proposed shopping centre extension;
 - v) the proposed new and modified loading arrangements are considered appropriate;
 - vi) the proposed parking provision is considered appropriate;
 - vii) the proposed extensions would not preclude the future provision of pedestrian links and road extensions through the school site, which would occur in association with the future redevelopment of this site; and
 - viii) the applicant intends to enter a planning agreement with Council for appropriate road/traffic works in the precinct.
-



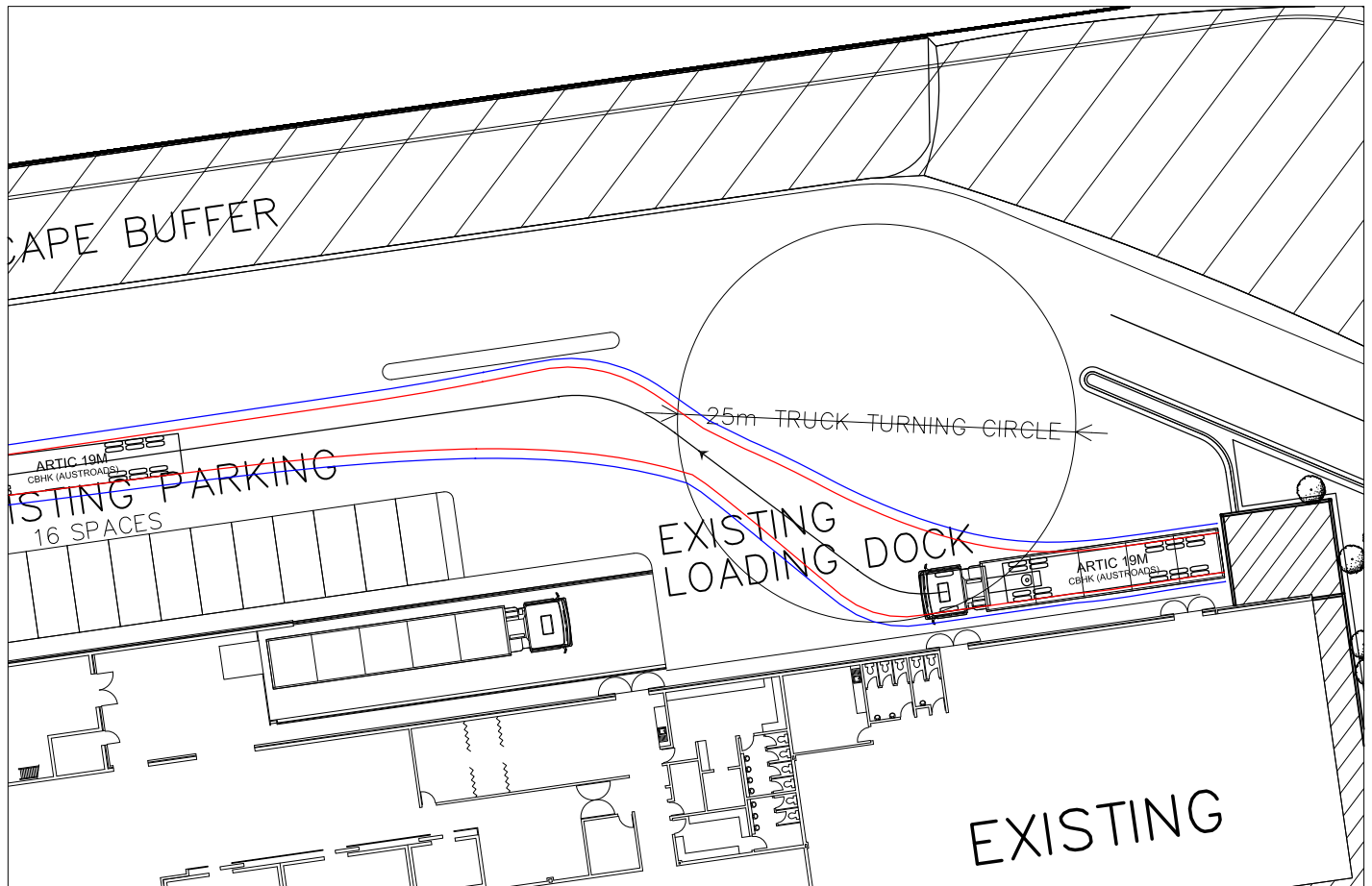
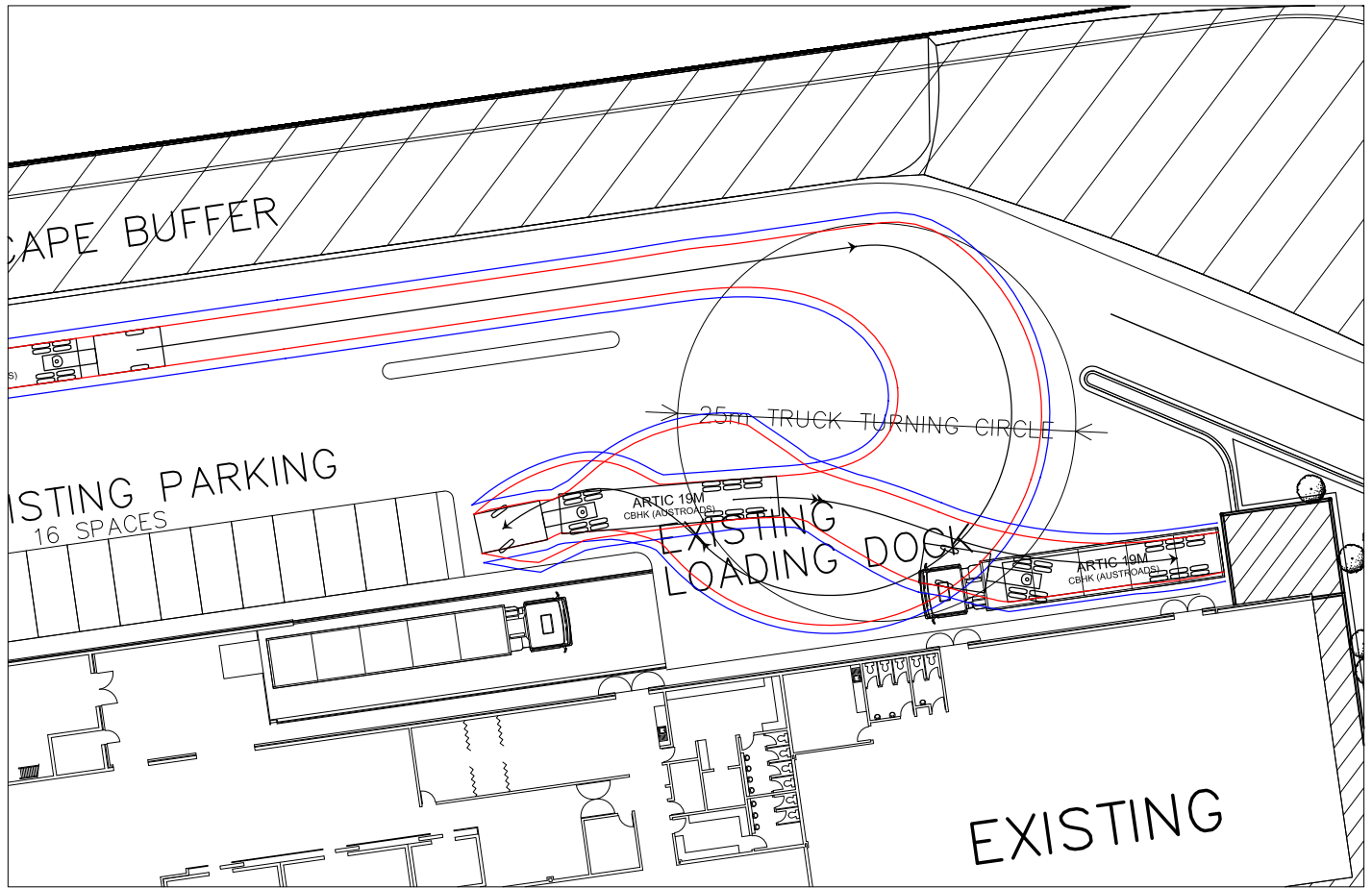
Location Plan

Colston Budd Hunt & Kafes Pty Ltd

DRAWN BY CBHK Pty Ltd_rh Ref: 7407

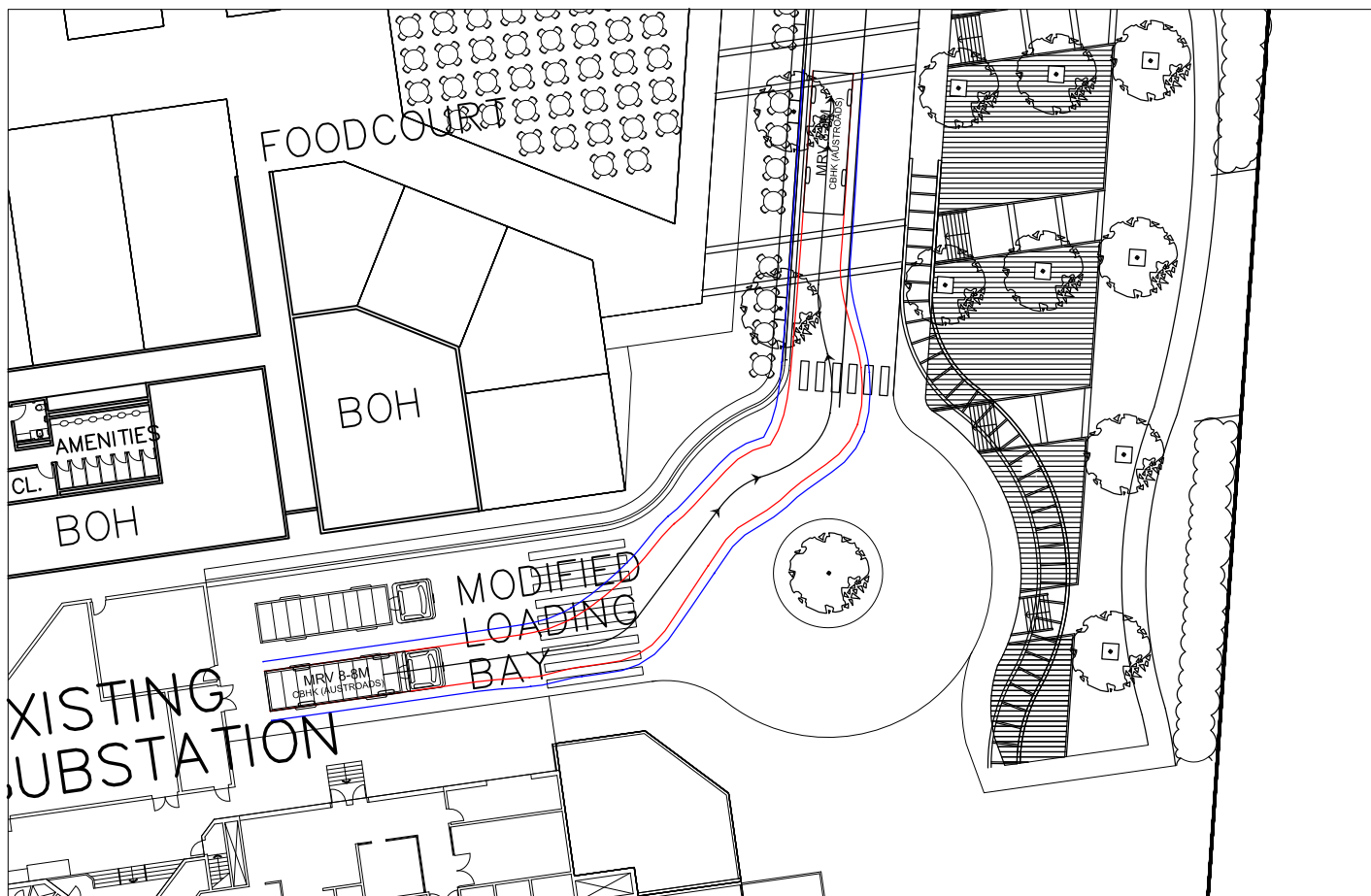
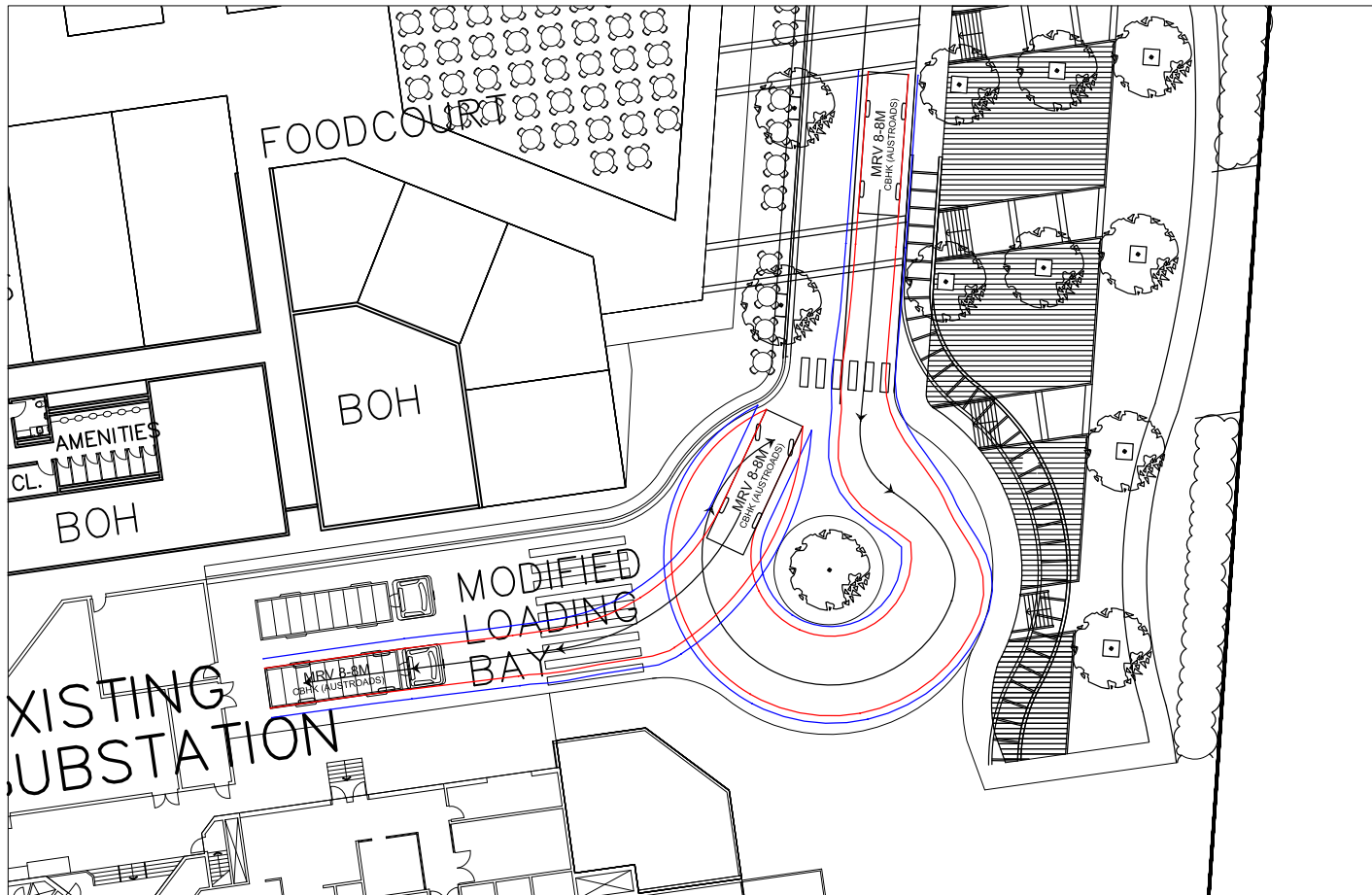
14 MAY 2009

Figure 1



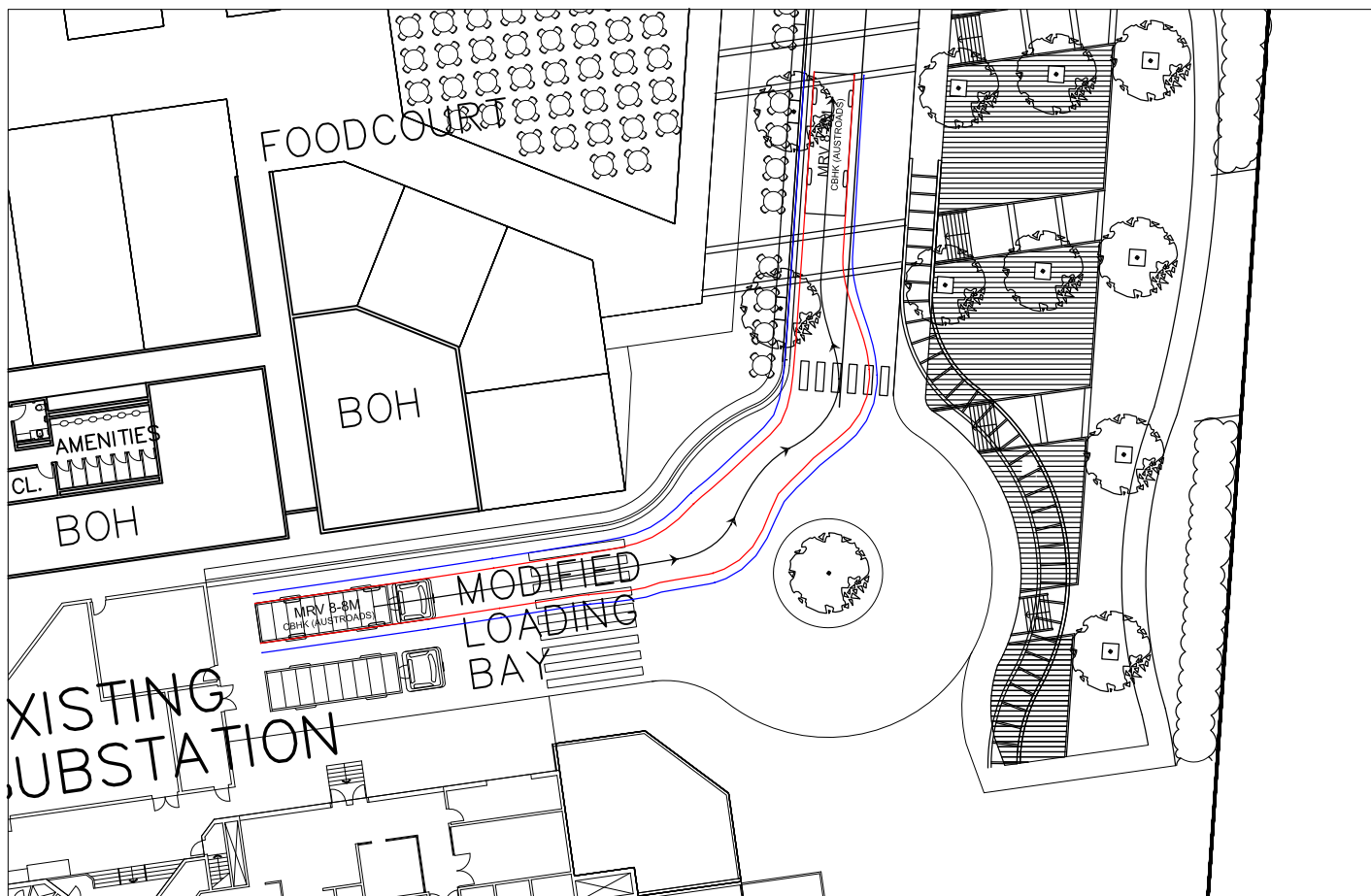
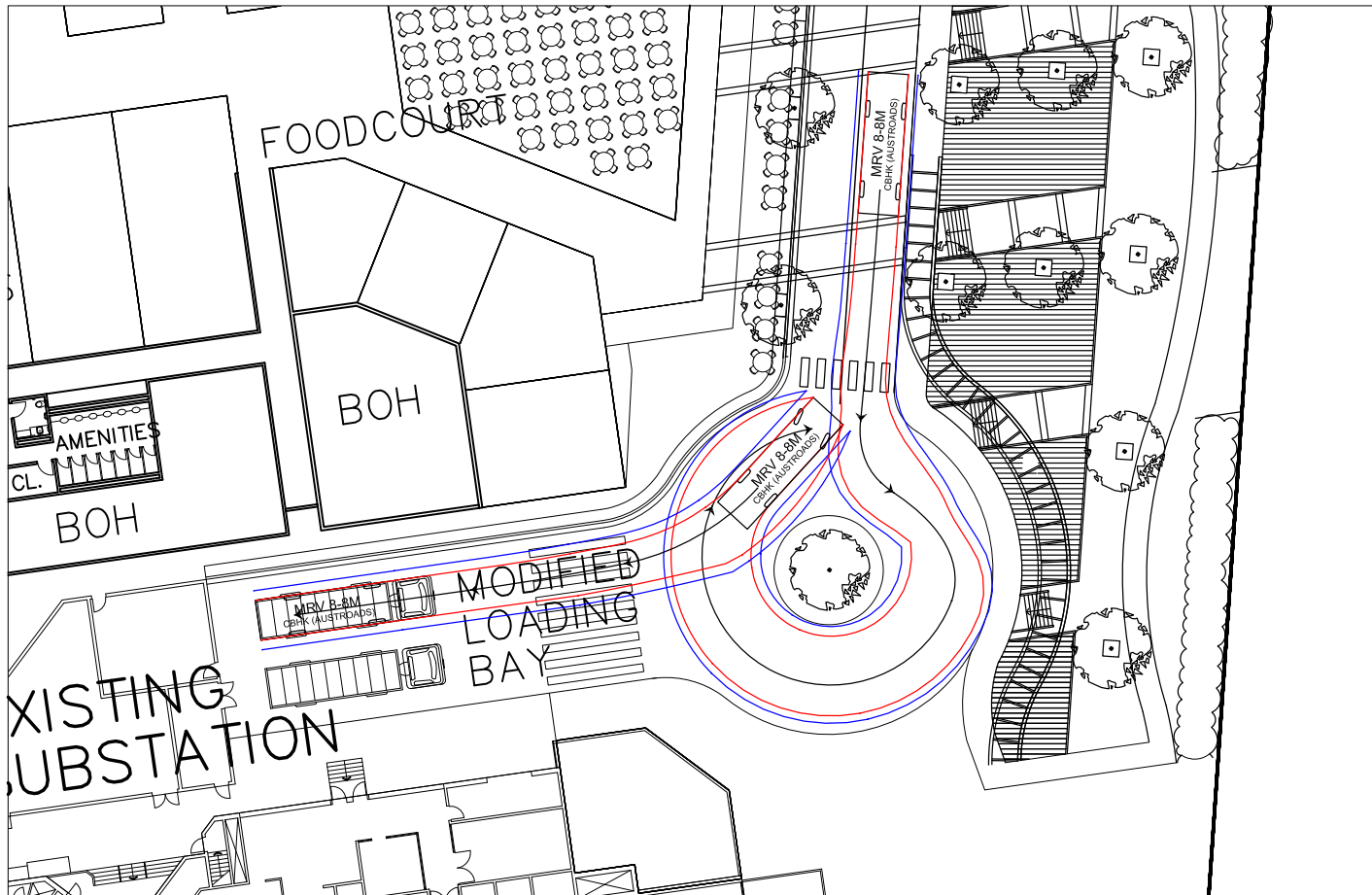
NOTE:
SKETCH PLAN ONLY. PROPERTY BOUNDARIES,
UTILITIES, KERBLINES & DIMENSIONS ARE SUBJECT TO
SURVEY AND FINAL DESIGN. TRAFFIC MEASURES
PROPOSED IN THIS PLAN ARE CONCEPT ONLY AND
ARE SUBJECT TO FINAL DESIGN BY CIVIL ENGINEERS.

19.0m ARTICULATED
VEHICLE SWEEP PATHS



NOTE:
 SKETCH PLAN ONLY. PROPERTY BOUNDARIES,
 UTILITIES, KERBLINES & DIMENSIONS ARE SUBJECT TO
 SURVEY AND FINAL DESIGN. TRAFFIC MEASURES
 PROPOSED IN THIS PLAN ARE CONCEPT ONLY AND
 ARE SUBJECT TO FINAL DESIGN BY CIVIL ENGINEERS.

8.8m MEDIUM RIGID VEHICLE
 SWEEP PATHS



NOTE:
 SKETCH PLAN ONLY. PROPERTY BOUNDARIES,
 UTILITIES, KERBLINES & DIMENSIONS ARE SUBJECT TO
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8.8m MEDIUM RIGID VEHICLE
 SWEEP PATHS

May 2009
307050

Settlement City ^{REV A}

Shopping Centre Masterplan

PROJECT NUMBER:
307050

DRAWING TITLE:
**WALTER ST
INTEGRATION**

DRAWING NUMBER:
AMP 103

SCALE:
N / A

DATE:
JUNE 2009



THE BUCHAN GROUP

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APPENDIX

Previous Traffic Report

**SETTLEMENT CITY SHOPPING CENTRE
PORT MACQUARIE
PROPOSED EXPANSION AND
PARTIAL REDEVELOPMENT**

*Assessment of Traffic and
Parking Implications*

February 2009

Reference 08300

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1. INTRODUCTION

This report has been prepared for ING Real Estate to accompany a project plan application to the Department of Planning for the proposed expansion and partial development of the Settlement City Shopping Centre at Port Macquarie (Figure 1).

Settlement City is located some 1.3 kms to the west of the Port Macquarie Town Centre on the southern shore of the Hastings River inlet. The existing centre contains a supermarket, discount department store and specialty shops which together with the Panthers Club occupies a total site of 6.4 ha.

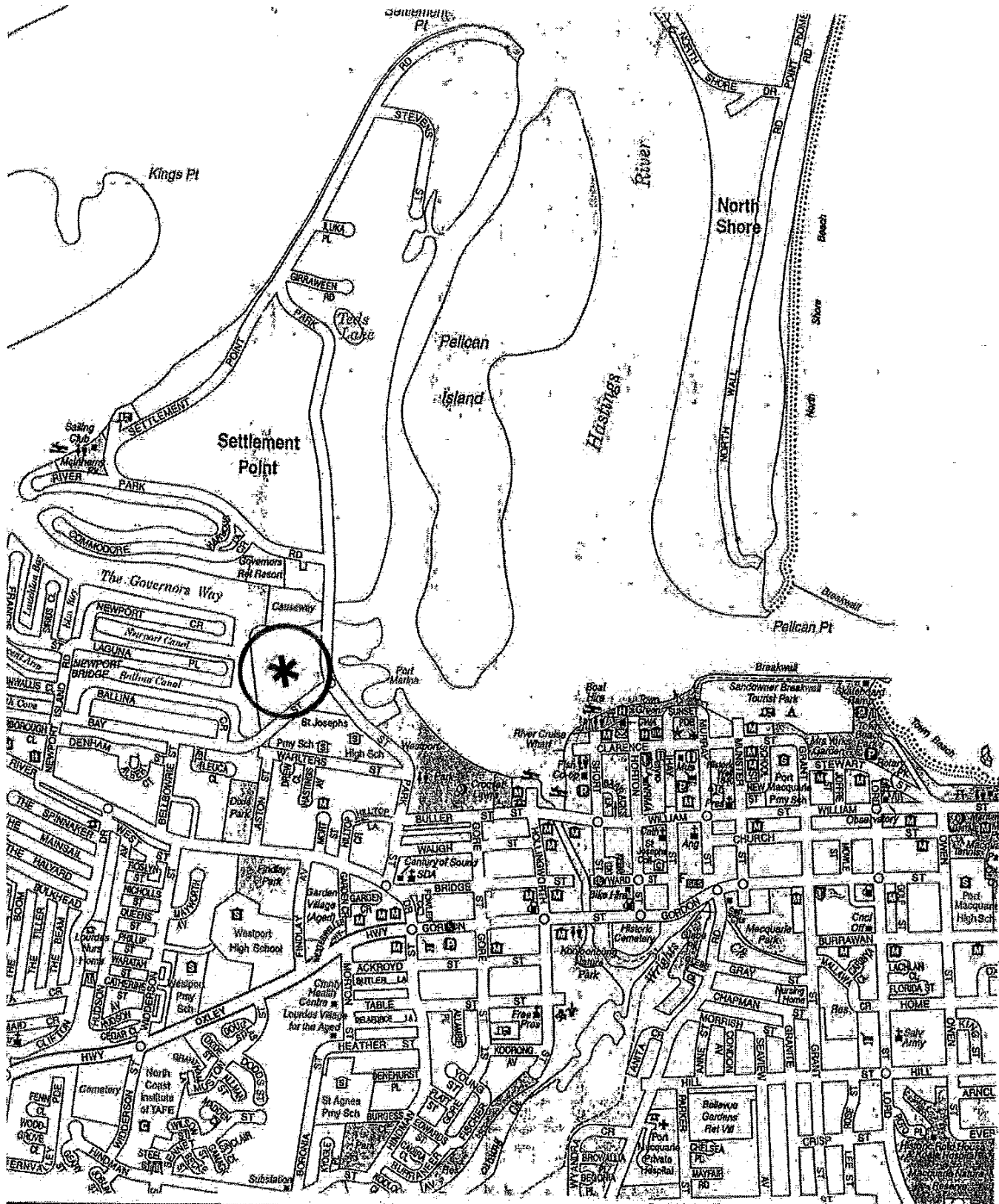
Guidelines, planning framework and development controls for the site are contained in the Settlement City Precinct Structure Plan 2008 document. The proposed development scheme conforms with these principals and the Masterplan for expansion and partial redevelopment comprises an increase in total floorarea from 19,157m² GLFA to 35,918m² GLFA (+ 16,761m² GLFA). Stage 1 of the development scheme, which is the subject of this application, involves an increase of the total floorarea from 19,157m² GLFA to 34,512m² (+ 15,355m²) with a provision of 1,437 parking spaces (129 spaces in the club).

The purpose of this report is to:

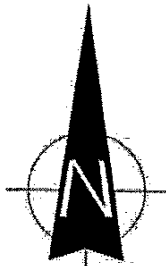
- * describe the site, its context and the existing development
- * describe the Masterplan and the proposed Stage 1 expansion and partial redevelopment
- * describe the existing road network and traffic conditions
- * assess the suitability of the proposed vehicle access arrangements

TRANSPORT AND TRAFFIC PLANNING ASSOCIATES

- * assess the adequacy of the proposed parking provision**
- * assess the potential traffic implications**
- * assess the proposed internal circulation and servicing arrangements.**



LEGEND



LOCATION

FIG 1

2. PROPOSED DEVELOPMENT

2.1 SITE, CONTEXT AND EXISTING DEVELOPMENT

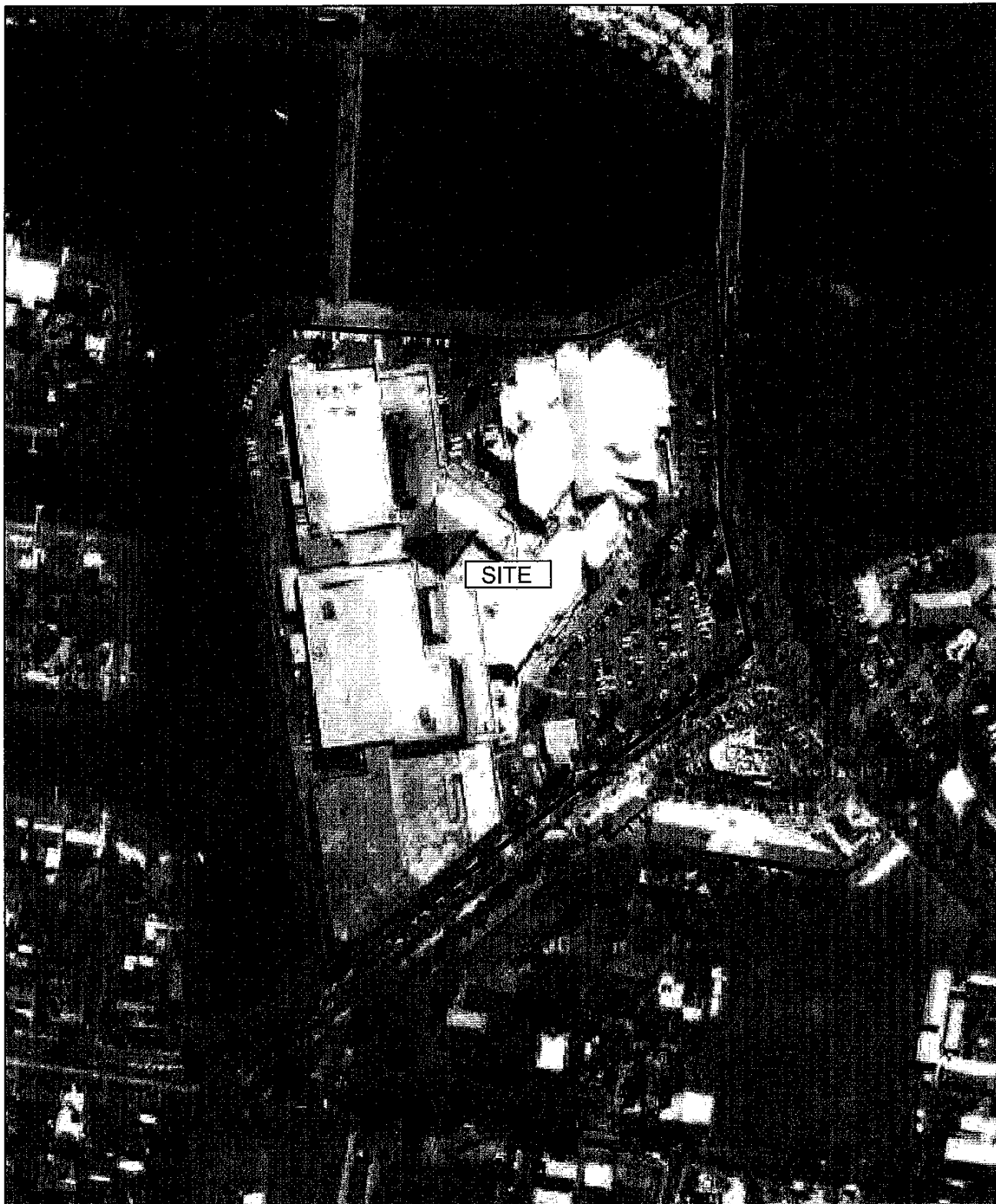
The Settlement City Shopping Centre site (Figure 2) is located on the western edge of the Port Macquarie Town Centre occupying a major portion of the block bounded by Bay Street, Park Street and the Governors Way inlet (flood overflow) of the Hastings River. The centre has a total retail floorspace of 19,157m² GLFA and details of the existing development including the Panthers Club of 11,214m² are provided on the plan overleaf. The existing centre comprises:

-	Supermarket	4,253m ²
-	Discount department store	6,618m ²
-	Large format retail	2,171m ²
-	Speciality shops	6,195m ²
-	Parking	1,190 spaces (including 129 spaces in Panthers Club)

Vehicle access comprises:

- * an ingress/egress driveway shared with service vehicles located on Bay Street at the western boundary
- * an ingress/egress (by right-of-way) shared with the service station and service vehicles located on Bay Street at the centre of that frontage
- * an ingress/egress driveway (by right-of-way) shared with the club located on Park Street at the centre of that frontage.

The Panthers Club occupies the north-eastern part of the site with frontage to Park Street and the 2 level club building (formerly an RSL) has a total floorarea of 11,214m²

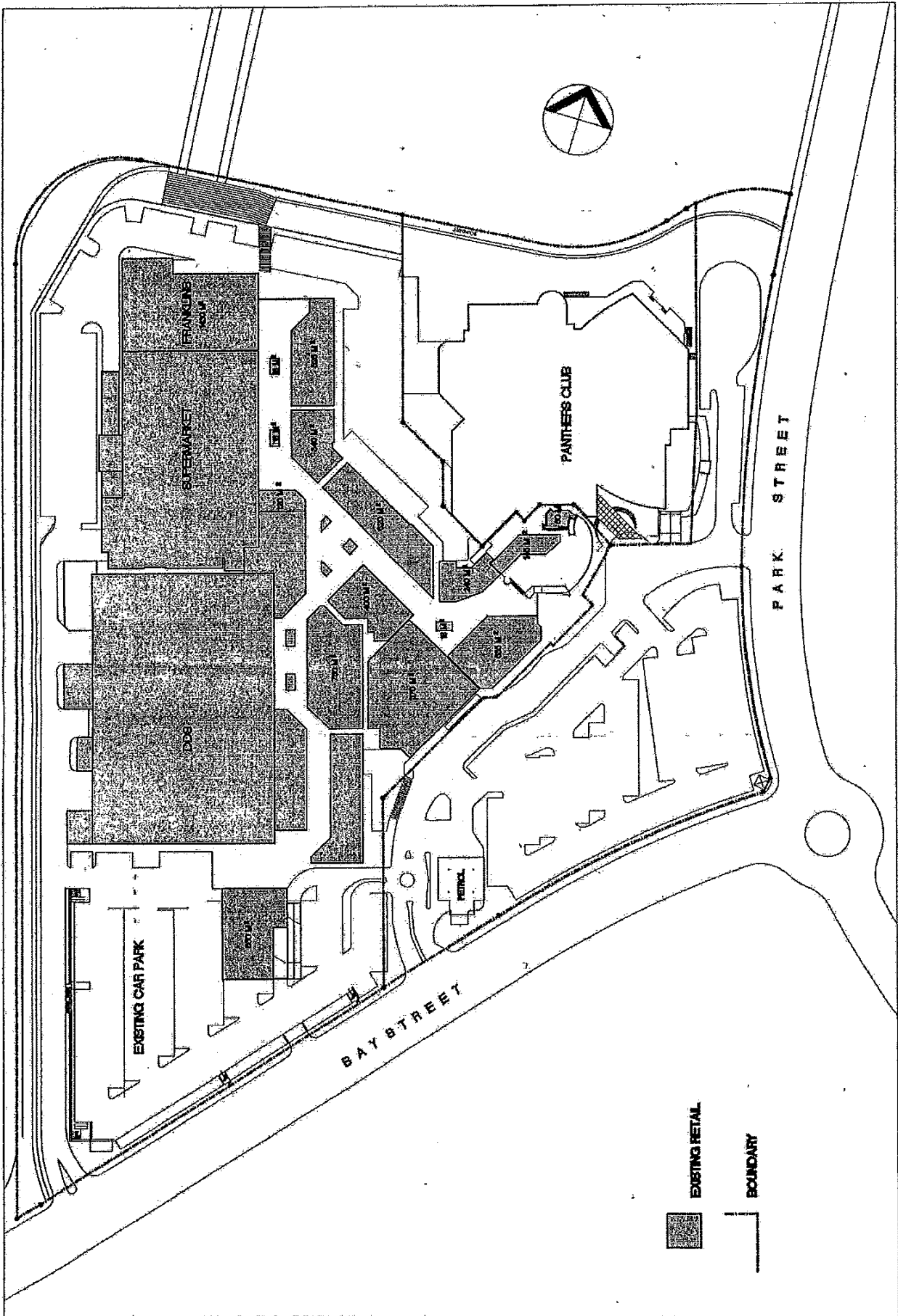


LEGEND



SITE

FIG 2



with parking for 129 cars located in an open carpark and small basement level. A service station is located centrally on the Bay Street frontage and there is an internal access road connecting between Bay Street and Park Street as well as a carpark and service vehicle access road running along the western boundary connecting to Bay Street.

The consolidated site is somewhat separated from its surrounds due to the road and water barriers with the nearby uses comprising:

- * the 'canal' style residential development to the west
- * the Settlement Point residential and mixed uses to the north
- * the small commercial complex (Shores Mall and McDonalds) on the southern side of Bay Street and the St Josephs School complex further to the south
- * the town centre to the east with its waterfront parkland and walkway.

2.2 DEVELOPMENT MASTERPLAN

The Masterplan for the site conforms with the principals and controls documented in the Precinct Structure Plan particularly in relation to vehicle, pedestrian and bicycle movement provisions. The Masterplan provides for:

- * additional retail floorspace and leisure/gym/health spa of 16,761m² GLFA
- * cinemas of 3,579m² (1,050 seats)
- * ten pin bowl of 1,363m²
- * commercial offices of 2,787m²
- * modifications to the club reducing floorspace from 11,214m² to 9,334m²
- * provision of 1,530 parking spaces including 129 spaces for the club
- * provision of a revised internal access road system involving pedestrian dominated routes
- * provision of new loading dock facilities.

It is envisaged that the Masterplan would be undertaken in 2 stages with Stage 1 comprising the greater part of the works and Stage 2 comprising the north-eastern corner of the site. Details of the Masterplan are provided on the plans prepared by The Buchan Group reproduced in Appendix A.

2.3 STAGE 1 DEVELOPMENT

The Stage 1 scheme for expansion and upgrading of the centre would increase the total floorspace to 45,726m² GLFA, including the existing 11,214m² of club, with the following new features:

- * upgrading of the existing shopping centre building realigning existing malls and creating an alfresco waterfront food court
- * retail expansion, restaurant precinct, cinemas, speciality retail, gym, commercial suites and multi-deck carpark
- * specialty retail expansion and parking at the corner of Park Street and Bay Street.

The proposed composition of the Stage 1 development is compared to the existing elements of the centre in the following:

Retailer	Area (GLFA) m ²		
	Existing	Added	Total
Major traders	10,871		10,871
Mini majors/large specs	2,171	-1,175	996
Leisure/gym/health spa		2,300	2,300
Speciality retail	5,941	4,746	10,687
Food – restaurant		815	815
Food – food court	174	76	250
Retail showrooms		864	864
Overall retail total	19,157	7,626	26,786

	Area (GLFA) m ²		
	Existing	Added	Total
Cinemas		3,579	3,579
Bowling		1,363	1,363
Commercial offices		2,787	2,787
Total	19,157	15,355	34,512
Panther's Club	11,214		11,214
OVERALL TOTAL	30,371	15,355	45,726

The overall carparking provision would be reconfigured incorporating new multi-deck and roof top parking with an interlinked total provision of 1,525 spaces as follows:

Carpark Numbers as Proposed	Existing	Added	Total
Existing deck carparking	699	112	811
On-grade carparking	362	-330	32
New carparking		553	553
Panther's carparking	129		129
Overall Total	1,190	335	1,525

A feature of the access provisions will be the establishment of an internal road system providing for through site pedestrian linkage (as identified in the Precinct Plan) with limited vehicle access (set-down/pick-up and taxis etc). The Stage 1 provision will comprise Entertainment Street and the southern section of Leisure Street (the northern section will be completed in Stage 2 providing connection to the waterfront).

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The existing loading dock areas at the western and northern sides of the centre will be retained while some on-street loading will occur along Entertainment Street and Leisure Street.

Details of the proposed scheme is provided in the plans prepared by The Buchan Group Architects which accompany the Application and are reproduced in part overleaf.

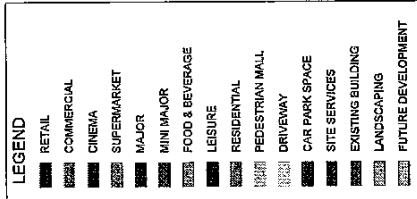
SETTING THE CITY SHOPPING CENTRE MASTERPLAN

THE BUCHAN GROUP

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DRAWING NO: ATP 201 [-]



SEATTLE CENTER CITY SHOPPING CENTRE MASTERPLAN

THE BUCHANAN GROUP

[illegible]

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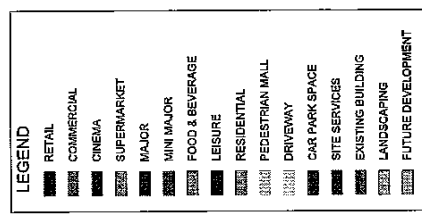
STAGE 1

FLOOR PLAN

.....

DATE : 6 FEBRUARY 2009

THE FUTURE OF THE COMPANY



3. ROAD NETWORK AND TRAFFIC CONDITIONS

3.1 ROAD NETWORK

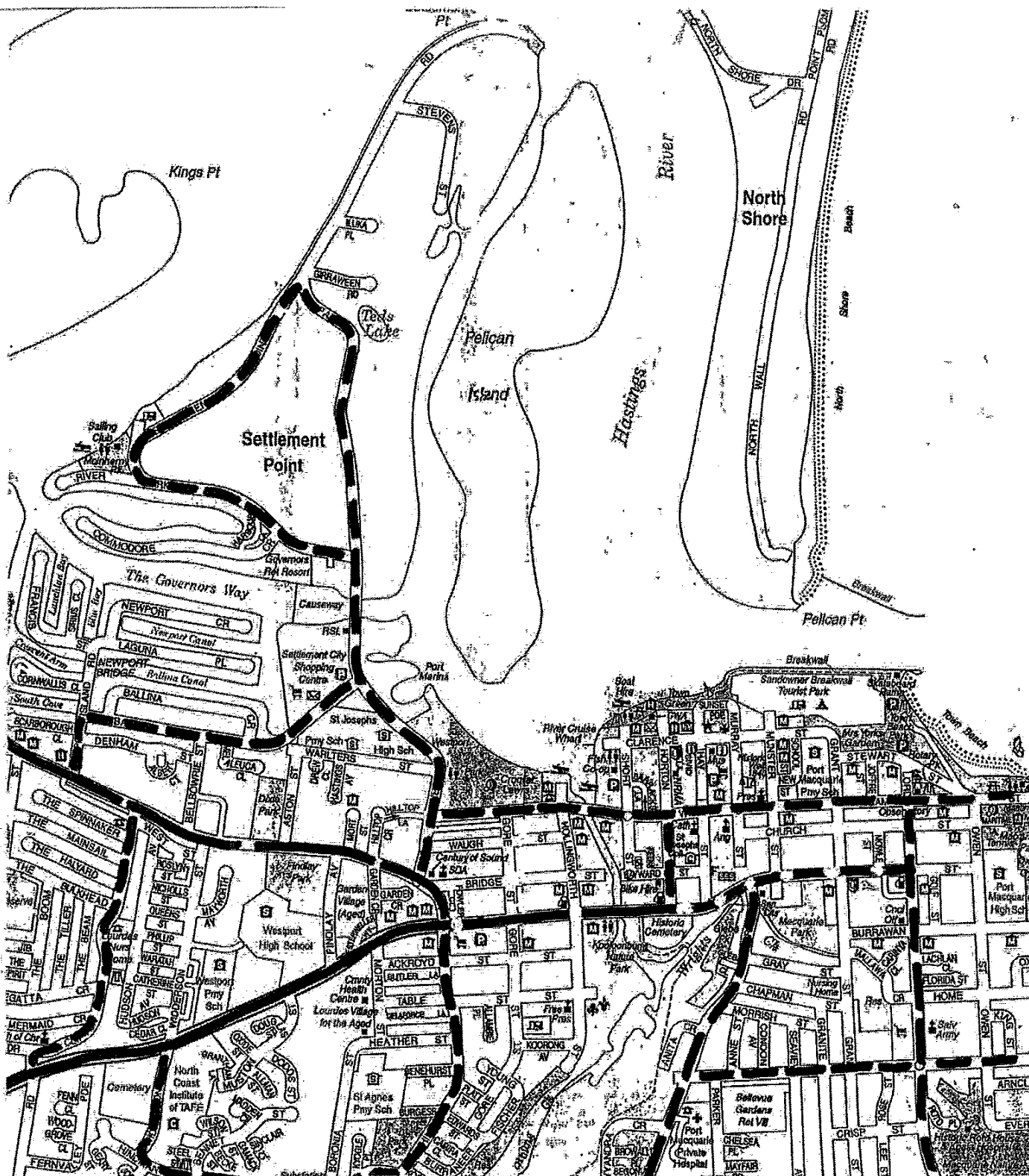
The road network serving the Port Macquarie town Centre (Figure 3) comprises:

- * *Oxley Highway* – a State Highway and arterial route linking between the New England Highway, Pacific Highway and Port Macquarie
- * *Hasting River Drive and Gordon Street* – a State Road and sub-arterial route linking between the Pacific Highway and Port Macquarie the connecting along the coast to Kew
- * *Buller Street/William Street* – a major collector route through the town centre
- * *Park Street/Settlement Point Road/River Park Road* – a minor collector route serving Settlement Point
- * *Bay Street* – a minor collector route connecting between Hastings River Drive and Park Street.

3.2 TRAFFIC CONTROLS

The existing traffic controls on the road system in the vicinity of the site (Figure 4) include:

- * traffic control signals at the Park Street and Buller Street intersection
- * the roundabouts at the Park Street and Bay Street intersection and on Bay Street at the shopping centre access



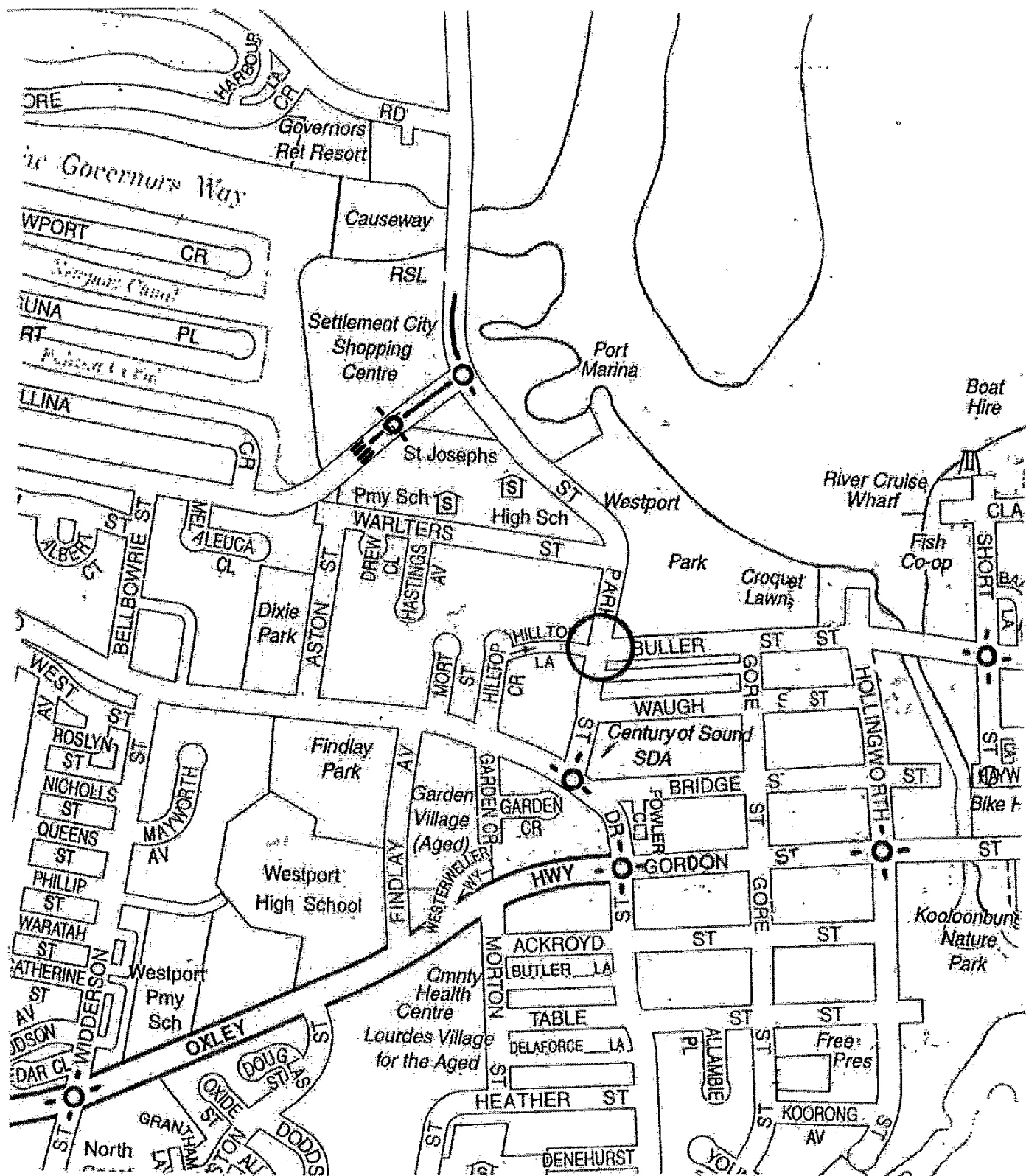
LEGEND

- ARTERIAL
- SUB-ARTERIAL
- COLLECTOR






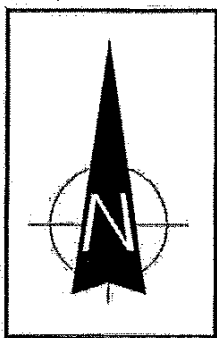
ROAD NETWORK

FIG 3



LEGEND

-  TRAFFIC SIGNALS
-  MARKED FOOTCROSSING
-  ROUNDABOUT



TRAFFIC CONTROLS

FIG 4

- * the roundabouts at the Oxley Highway/Gordon Street/Hastings River Drive and Hastings River Drive/Park Street intersections
- * the marked footcrossing on Bay Street
- * the 50 kmph speed restrictions on the local road system
- * the traffic management controls along the western section of Bay Street.

3.3 TRAFFIC CONDITIONS

An indication of the prevailing traffic conditions on the road system serving the site is provided by data published by the RTA¹ and traffic surveys undertaken as part of this study. The RTA data, in the form of Annual Average Daily Traffic (AADT), is reproduced in the following:

	AADT
Oxley Highway (west of Hastings River Drive)	11,033
Hastings River Drive (north of Oxley Highway)	14,784
Buller Street (east of Park Street)	18,519
Gordon Street (west of Horton Street)	23,501

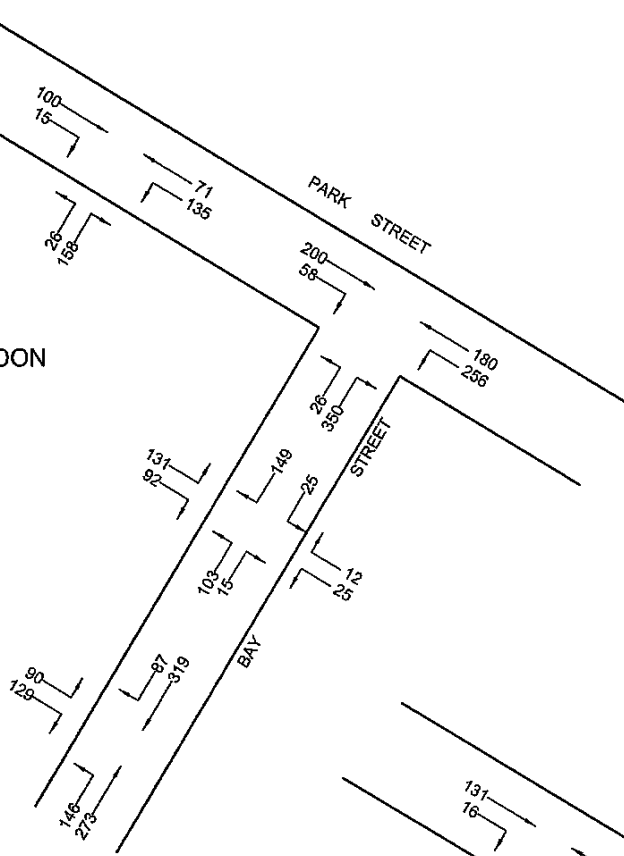
The recorded traffic movements on the road system around the Settlement City Shopping Centre during the peak Thursday afternoon and Saturday midday periods are provided in Appendix B and summarised on Figure 5.

The operational performance of the Park Street/Bay Street and Bay Street/access intersections under the existing circumstances has been assessed using the SIDRA traffic analysis model. The results of that evaluation are provided in the following and the criteria for interpreting SIDRA results are reproduced overleaf. The satisfactory performances indicated by the modelling results is reflected in the observed day to day operational conditions at the site.

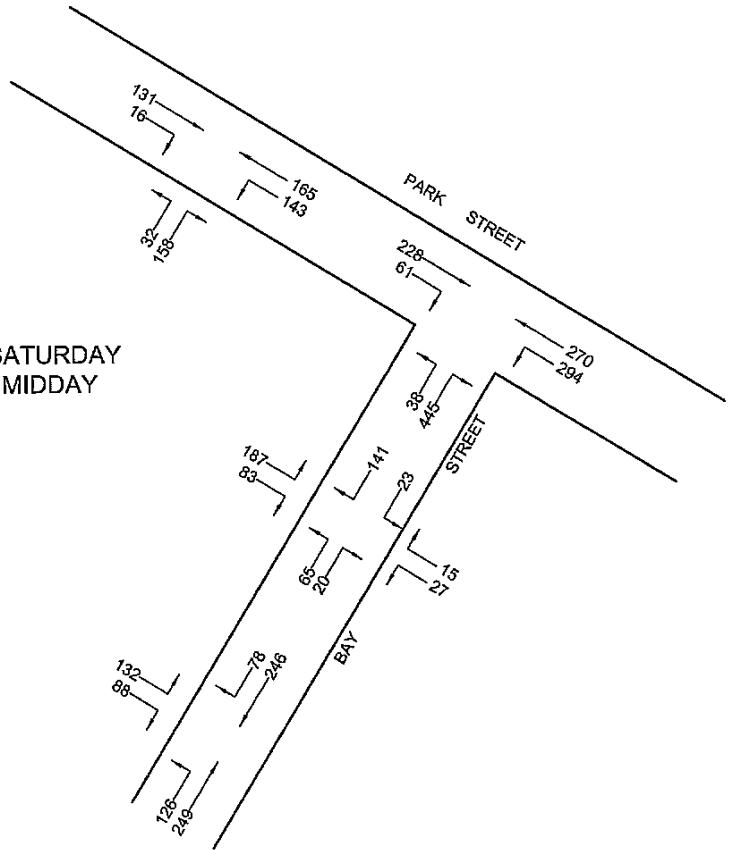
¹

*Traffic Volume Data for Northern Region
Roads and Traffic Authority of NSW*

AFTERNOON
PEAK



SATURDAY
MIDDAY



LEGEND



EXISTING PEAK
FLOWS

FIG 5

Criteria for Interpreting Results of SIDRA Analysis

1. Level of Service (LOS)

LOS	Traffic Signals and Roundabouts	Give Way and Stop Signs
'A'	Good	Good
'B'	Good with acceptable delays and spare capacity	Acceptable delays and spare capacity
'C'	Satisfactory	Satisfactory but accident study required
'D'	Operating near capacity	Near capacity and accident study required
'E'	At capacity; at signals incidents will cause excessive delays. Roundabouts require other control mode	At capacity and requires other control mode
'F'	Unsatisfactory and requires additional capacity	Unsatisfactory and requires other control mode

2. Average Vehicle Delay (AVD)

The AVD provides a measure of the operational performance of an intersection as indicated on the table below which relates AVD to LOS. The AVD's listed in the table should be taken as a guide only as longer delays could be tolerated in some locations (ie inner city conditions) and on some roads (ie minor side street intersecting with a major arterial route).

Level of Service	Average Delay per Vehicle (secs/veh)	Traffic Signals, Roundabout	Give Way and Stop Signs
A	less than 14	Good operation	Good operation
B	15 to 28	Good with acceptable delays and spare capacity	Acceptable delays and spare capacity
C	29 to 42	Satisfactory	Satisfactory but accident study required
D	43 to 56	Operating near capacity	Near capacity and accident study required
E	57 to 70	At capacity; at signals incidents will cause excessive delays Roundabouts require other control mode	At capacity and requires other control mode

3. Degree of Saturation (DS)

The DS is another measure of the operational performance of individual intersections.

For intersections controlled by **traffic signals**² both queue length and delay increase rapidly as DS approaches 1, and it is usual to attempt to keep DS to less than 0.9. Values of DS in the order of 0.7 generally represent satisfactory intersection operation. When DS exceeds 0.9 queues can be anticipated.

For intersections controlled by a **roundabout** or **GIVE WAY** or **STOP** signs, satisfactory intersection operation is indicated by a DS of 0.8 or less.

² the values of DS for intersections under traffic signal control are only valid for cycle length of 120 secs

	Thursday PM			Saturday Midday		
	LOS	DS	AVD	LOS	DS	AVD
Bay Street/Park Street (RAB)	A	0.359	9.0	A	0.501	9.4
Bay Street/access (RAB)	A	0.317	8.7	A	0.330	8.6

3.4 TRANSPORT SERVICES

Public transport services for the site are provided by Busways with a total of 8 routes accessing the centre (Routes 332 – 340). These routes extend throughout the Port Macquarie area and further afield to Wauchope, Kempsey, Lake Cathie, Bonny Hills and Laurieton.

The Busways services are shown on the diagram and timetables provided in Appendix C, indicating very comprehensive and frequent bus servicing arrangements for the Settlement City Centre.

3.5 PRECINCT PLAN

The Settlement City Precinct involves an irregular shaped area bounded to the north, east and west by Hastings River and tributaries and to the south by Warlters Street and Aston Street. The precinct currently contains the Settlement City Shopping Centre, Panther's Club, Sails Resort/Marina, school, some residential dwellings and portion of Westport Park and open space.

Council has prepared the Settlement City Precinct Structure Plan 2008 to provide guidelines and planning framework for future development in the precinct including landuses, road hierarchy and function.

Details of the Precinct Plan in relation to street hierarchy and movement are shown on the extract overleaf along with Design Option № 3. Features of this plan are:

- * a pedestrian/cyclist route running along the foreshore (the northern and western bounds of the site)

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- * pedestrian open air laneways through the site linking to the sites to the south and east

- * vehicle access points for the site.