



ST VINCENT ST

Part Lot 1 DP872058

R.O.C.  
(DP 845468)

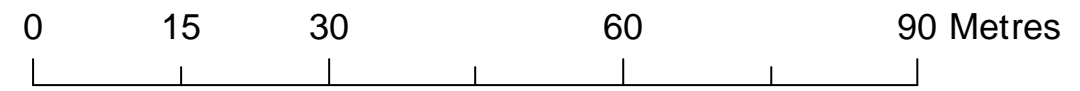
R.O.W. (DP 839)

RIGHT OF ACCESS  
EASEMENT FOR SERVICES

RIGHT OF WAY OVER WHOLE LOT

S.E.

(DP 1169420)  
E.E.



Shoalhaven City Council

Part Boree Street, Ulladulla  
Lot 1 DP872058

Map Printed : Thursday, January 21, 2016





PLAN FORM 2

SIGNATURE AND SEALS ONLY.



*Paula Hooper Director*  
 Paula Hooper Director

MARK	SURVEY PRACTICE REGULATION 1996 - CLAUSE 39(2)		ZONE	AC
	EASTING	NORTHING		
SEM42023	251 940 528	1085 359 201	54/1	3
SEM17278	251 850 843	1085 373 144	54/1	3
PM 21740	252 164 105	1086 054 445	54/1	3
PM 21397	252 182 326	1085 709 296	54/1	3
PM 21356	252 072 405	1085 292 117	54/1	3

COMBINED SEA LEVEL SCALE FACTOR = 0.999996  
 SOURCE: I.S.G. COORDINATES ADAPTED FROM L.C. ON 19 JUNE 1997

Plan Drawing only to appear in this press

- α - EASEMENT FOR WATER SUPPLY 3 WIDE.
- β - EASEMENT FOR ELECTRICITY PURPOSES 3 WIDE.
- γ - EASEMENT TO DRAIN WATER 3 WIDE.
- δ - RIGHT OF CARRIAGEWAY 16.43 WIDE.
- ε - POSITIVE COVENANT OVER THE WHOLE OF LOT 1

\* OFFICE USE ONLY

DP 872858  
 Registered: 16-10-1997  
 Title System: TORRENS  
 Purpose: CONSOLIDATION  
 Rel. Map: W4680-2<sup>nd</sup>  
 Last Plan: DP213883, DP184000, DP546873, DP867311  
 PLAN OF CONSOLIDATION OF LOTS 1 & 2, DP215008, LOT 1, DP184000, LOTS 250, 251, DP546873 AND LOT 2, DP867311  
 Lengths are in metres. Reaction Ratio 1:500  
 LGA: SHOALHAVEN  
 Locality: ULLADULLA  
 Parish: ULLADULLA  
 County: ST VINCENT.

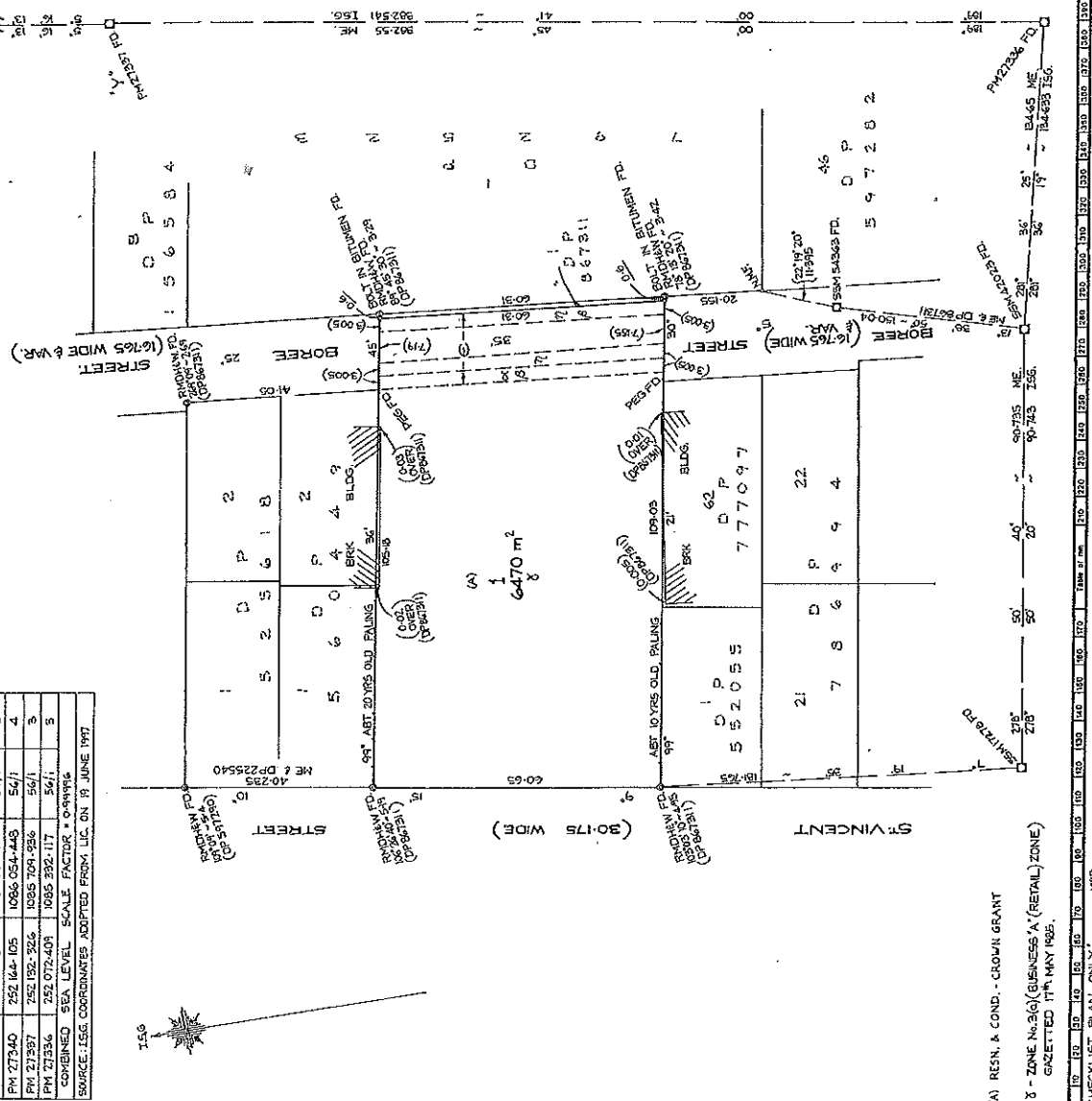
This is drawn in accordance with the provisions of the Survey Act, 1985.  
 I, STEPHEN MICHAEL ROBINSON, Surveyor General, do hereby certify that this plan is a true and correct copy of the original plan as deposited in my office on 25 JUNE 1997.  
 Signature: *[Signature]*  
 Date: 25 JUNE 1997  
 Office: Surveyor General, 100 St Vincent Street, Adelaide, SA 5000.

Plans used in preparation of survey/consolidation:  
 DP 867311  
 DP 215008  
 DP 184000  
 DP 546873.

NOTE: FOR USE ONLY for alteration of location to correct errors, to create public reserves, drainage easements, restrictions on the use of land or easements, or to correct errors in the original plan. IT IS INTENDED TO CREATE:  
 1) EASEMENT FOR WATER SUPPLY 3 WIDE.  
 2) EASEMENT FOR ELECTRICITY PURPOSES 3 WIDE.  
 3) EASEMENT TO DRAIN WATER 3 WIDE.  
 4) RIGHT OF CARRIAGEWAY 16.43 WIDE.  
 5) POSITIVE COVENANT OVER THE WHOLE OF LOT 1.

AND AS SET OUT IN THE ACCOMPANYING INSTRUMENT SIGNED BY THE GENERAL MANAGER.

DP 872858



(A) RES. & COND. - CROWN GRANT  
 Z - ZONE No.2(G)(BUSINESS A (RETAIL) ZONE)  
 GAZETTED 17th MAY 1982.

WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION  
 CHECKLIST PLAN ONLY

This negative is a photograph made as a permanent record of a document in the custody of the Registrar General this day, 17 October 1997

10 20 30 40 50  
 70 Table of mm 110 120 130 140

Surveyor's Reference: SR 35/94 96/2276

Consent's Certificate  
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/Doc:DP 0872058 B /Rev:16-Oct-1997 /Sts:OK.OK /Prt:05-May-2010 16:26 /Pgs:ALL /Seq:1 of 8  
 -bperry Alex Love /Src:W

**INSTRUMENT SETTING OUT TERMS OF EASEMENTS AND  
 RESTRICTIONS ON THE USE OF LAND INTENDED TO BE CREATED  
 PURSUANT TO SECTION 88B OF THE CONVEYANCING ACT 1919**

Lengths are in metres

(Sheet 1 of 8 Sheets)

Consolidation covered by Council Clerk's Certificate No. 2276 of 1996 being the plan of Consolidation of Lot 1 in DP 213083, Lot 2 in DP 213083, Lot 1 in DP 194000, Lot 250 in DP 569873, Lot 251 in DP 569873, Lot 2 in DP 867311, Parish of Ulladulla, County of St Vincent and City of Ulladulla

**DP 872058**

**PART 1**

Full name and address of proprietor of the Land

Sheffield Crest Pty Limited  
 ACN: 006 268 739  
 12 Harnett Avenue  
 MOSMAN NSW 2088

1. Identity of easement firstly referred to in abovementioned plan Easement for water supply 3 wide

Schedule of Lots etc. affected

Lots Burdened

Lots and Authority benefited

Lot 1

Council of the City of Shoalhaven

2. Identity of easement secondly referred to in abovementioned plan

Easement for Electricity <sup>Purposes</sup> 3 wide

Schedule of Lots etc. affected

Lots Burdened

Lots and Authority benefited

Lot 1

Integral Energy Australia

3. Identity of easement thirdly referred to in abovementioned plan

Easement to drain water 3 wide

Schedule of Lots etc. affected

Lots Burdened


Lots and Authority benefited

Lot 1

Council of the City of Shoalhaven

4. Identity of easement fourthly referred to in abovementioned plan

Right of Carriageway 16.165 wide

  
 .....  
 Consent Authority

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Schedule of Lots etc. affected

Lots Burdened

Lots and Authority benefited

Lot 1

Council of the City of Shoalhaven

- 5. Identity of positive covenant firstly referred to in the abovementioned plan Positive covenant

Schedule of Lots etc. affected

Lots Burdened

Lots and Authority benefited


Lot 1

Council of the City of Shoalhaven

**PART 2**

- 1. Terms of Easement for Water Supply 3 wide firstly referred to in abovementioned plan.

- (a) Full and free right and liberty for the Authority benefited its officers servants and agents and every person authorised by it to lay down pipes for water supply purposes and use and maintain such pipes through and under the area of the easement on the land burdened together with full and free right and liberty from time to time and at all times to inspect the condition of the pipes and to cleanse maintain mend repair and relay such pipes or any part thereof and for such purposes or any of them at all reasonable times with or without surveyors workmen materials machinery implements and other persons and things to pass and re-pass and with or without vehicles to enter into and upon the land burdened and to bring and place and have thereon to remove therefrom carry away use and leave any of the clay, sand, gravel, stones and earth which shall be taken out of the land burdened and to do all such acts and things which may be deemed necessary for the above purposes by the Authority benefited PROVIDED THAT in carrying out or performing any such inspection, cleansing, maintenance, mending, renewing, repairing, relaying or replacing such lines of pipes and excavating, taking up, renewing, repairing, relaying or replacing the surface of the land burdened the Authority benefited shall made as little disturbance on or do as little damage as possible to the land burdened and shall with all practicable speed restore and make good all or any such damage or disturbance and as far as practicable and with all reasonable speed restore

  
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Consent Authority

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the surface of the land burdened to its former state and condition as existed prior to the undertaking of any works on the land burdened and the owner covenants with the Authority benefited that it will not:-

- (i) Do permit or knowingly suffer to be done an act deed matter or thing whereby the said pipes shall or shall be likely to become damaged or injured or whereby the Authority benefited shall be prevented from or hampered in mending repairing or relaying the said pipes or any part thereof.
- (ii) Interfere in any way with the free flow of water through the said pipes.
- (iii) Erect or permit to be erected on or over any part of parts of that part of the land burdened any building or other erection of any kind without the consent in writing of the Authority benefited.

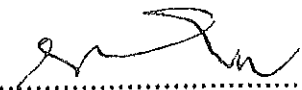
AND IT IS HEREBY DECLARED that if the owner shall in any way breach these covenants then the owner for the time being shall at its expense properly and substantially repair and make good such damage and restore the free flow of water through the said pipes and do all things necessary and expedient for such purposes.

- (b) Owner means the registered proprietor of the land burdened and its successors and assigns.

Purposes

2. Terms of Easement for Electricity 3 wide secondly referred to in abovementioned plan.

- (a) Full and free right and licence for the authority benefited to erect electricity equipment under the land burdened by this easement for the purpose of the transmission of electricity and incidental purposes and to cause or permit electricity to be transmitted through the electricity equipment together with the following rights:
  - (i) to enter, pass, and repass on the land burdened (with or without vehicles) at all reasonable times (and at any time in the event of an emergency) to gain access to the area of the easement and to remain there for any reasonable time with or without workmen, materials or machinery;

  
 .....  
 Consent Authority

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- (ii) to cut, trim, remove, and lop trees, branches, and other foliage which encroach on the area of the easement or prevent reasonable access to the easement or the electricity equipment;
  - (iii) to remove any other obstructions of any kind which encroach on the easement or prevent reasonable access to the easement or the electricity equipment; and
  - (iv) to excavate the land burdened for the purposes of this easement.
- (b) In exercising its rights under this easement the authority benefited will take all reasonable precautions to ensure as little disturbance as possible to the surface of the land burdened and will restore that surface as nearly as practicable to its original condition.
- (c) The owner covenants with the authority benefited that it will not:
- (i) erect or permit to be erected any structure on or under the land burdened;
  - (ii) alter the surface level of the land burdened or carry out any form of construction affecting its surface, undersurface or subsoil; and
  - (iii) do or permit to be done whereby access by the authority benefited is restricted.

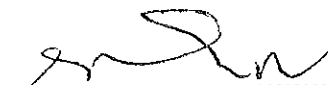
without the written permission of the authority benefited and in accordance with any conditions that the authority benefited may reasonably impose.

- (d) *Authority benefited* means Integral Energy Australia, its successors, employees, agents, contractors, and persons authorised by it.

*Owner* means the registered proprietor of the land burdened (including those claiming under or through the owner).

*Electricity equipment* means underground electricity cables, ducts, and ancillary electrical equipment.

*Erect* includes construct, repair, replace, maintain, modify, use and remove.

  
 .....  
 Consent Authority

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(Sheet 5 of 8 Sheets)

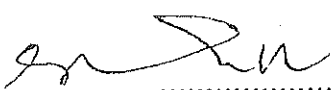
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3. Terms of Easement to drain water 3 wide thirdly referred to in abovementioned plan.

FULL AND FREE RIGHT AND LIBERTY for the Authority benefited, its officers, servants, agents and every person authorised by it to lay down drains and/or pipes and to use and maintain such drains and/or pipes through and under the Easement for the purpose of conveying and carrying drain waters surface waters and storm waters TOGETHER WITH FULL AND FREE RIGHT AND LIBERTY from time to time and at all times to inspect the condition of the drains and/or pipes and to cleanse maintain, mend, repair and relay such pipes or drains or any part thereof and for such purposes or any of them at all reasonable times with or without surveyors, workmen, materials, machinery implements and other persons and things to pass and re-pass and with or without vehicle to enter into and upon the land burdened and to bring and place and have thereon to remove therefrom carry away use and leave any of the clay, sand, gravel, stones and earth which shall be taken out of the land comprising the Easement and to do all such acts and things which may be deemed necessary for the above purposes by the Authority burdened PROVIDED THAT in carrying out or performing any such inspection, cleansing maintenance, mending, renewing, repairing, relaying, replacing and excavating the Authority benefited shall make as little disturbance on or do as little damage as possible to the land burdened and shall with all practicable speed restore and make good all or any such damage or disturbance and as far as practicable and with all reasonable speed restore the surface of the land burdened to its former state and condition as existed prior to the undertaking of the works and the owner of the lot burdened for their successors DO HEREBY COVENANT with the Authority benefited and its successors that they will not:

- (a) Do permit or knowingly suffer to be done any act, deed, matter or thing whereby the said drains and/or pipes shall or shall be likely to become damaged or injured or whereby the Authority benefited shall be prevented from or hampered in mending, repairing or relaying the said pipes or any part thereof.
- (b) Interfere in any way with the free flow and passage of soil or water through the said drains and/or pipes.
- (c) Erect or permit or suffer to be erected on or over any part or parts of that part of the easement any building or other erection of any kind without the consent in writing of the Authority benefited.

  
 .....  
 Consent Authority

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AND IT IS HEREBY AGREED AND DECLARED that if the owner or owners for the time being of the land burdened shall in any way breach the foregoing covenants then the owner or owners of the land burdened for the time being shall at their, his or her expense properly and substantially repair and make good such damage and restore the free flow of water through the said drains and/or pipes and do all things necessary and expedient for such purposes.

4. Terms of Right of Carriageway 16.165 wide fourthly referred to in abovementioned plan.

- (a) Full and free right for the Authority benefited, and every person authorised by it, to pass and repass at all times and for all purposes with or without animals or vehicles or both over the land burdened PROVIDED always the Authority benefited will accept use of seven (7) metres of the width of the carriageway along the length of the carriageway "the reduced carriageway" in lieu of use of the full width of the carriageway if the owner of the land burdened first obtains the written consent of the Authority benefited to the route of the reduced carriageway (or any reduced carriageway in substitution to an existing reduced carriageway), in lieu of its right to use the whole carriageway.
- (b) In making the determination as to whether to agree to the route of the reduced carriageway the Authority benefited is only to have regard to issues of proper traffic management including but not limited to traffic flows, turning circles and safety to pedestrians.

5. Terms of Positive Covenant fifthly referred to in abovementioned plan.

The owner of the land burdened shall:

- (a) Provide no less than eighty (80) designated car parking spaces to permit the parking of eighty (80) saloon cars at one time at, above or below ground level of the land with vehicular and pedestrian access to a public road.
- (b) Provide such designated car parking spaces in such a manner<sup>ly</sup> as to permit ingress and egress to and from the car park at all times for each vehicle.
- (c) Permit vehicles on the land burdened to remain for a period of not less than two (2) hours at any one time free of charge during such local business hours as may be prescribed from time to time.

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 Consent Authority

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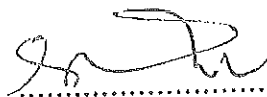
- (d) Maintain such designated carparking spaces and ingress and egress thereto in good order and condition to the reasonable satisfaction of the Authority benefited.

Without limiting the right of the Authority benefited to enforce the covenants to be observed or performed by the owner of the land burdened, in the event that for any reason the number of available designated carparking spaces on the land is reduced below eighty (80) the owner of the land burdened will pay to the Authority benefited a sum equal to the unit rate applying under the carparking code of the Authority benefited for the provision of carparking spaces for each designated carparking space by which the number available is reduced below eighty (80) and in the event that the Authority benefited agrees to the reduction in the number of carparking spaces provided by the owner of the land burdened pursuant to this clause the Authority benefited hereby undertakes and agrees that upon payment of the sum calculated in accordance with this clause the Authority benefited (at the cost of the owner of the land burdened) in all respects will vary or modify this positive covenant so as to reduce the number of carparking spaces referred therein from eighty (80) carparking spaces to a number which equals eighty (80) carparking spaces less the number of carparking spaces for which the said unit rate has been paid.

The Authority benefited agrees to extinguish the positive covenant upon receipt from the owner of the land burdened the monetary equivalent of the actual cost of providing spaces at the time of payment. The actual cost of providing eighty (80) undercover carparking spaces shall be as agreed between the Authority benefited and the owner of the land burdened and failing agreement as determined by a Valuer appointed by the President for the time being of the Institute of Valuers.

The person or persons or body having the right to release, vary or modify the terms of the easements firstly, thirdly, fourthly and fifthly referred to is the Council of the City of Shoalhaven.

The person or persons or body having the right to release, vary or modify the terms of easement secondly referred to is Integral Energy Australia.

  
.....  
Consent Authority

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bperry Alex Love /Src:W

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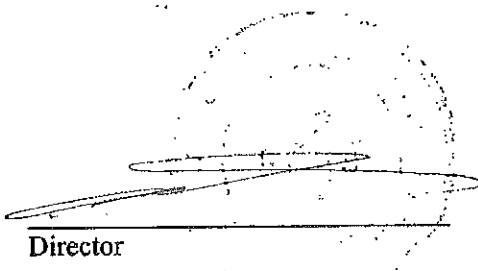
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(Sheet 8 of 8 Sheets)

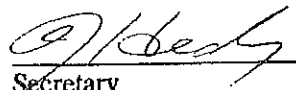
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DP 872058

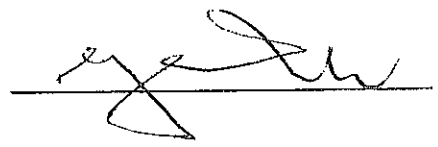
THE COMMON SEAL of SHEFFIELD CREST )  
PTY LIMITED, ACN: 006 268 739, was affixed )  
in accordance with a resolution of the Board of )  
Directors in the presence of )

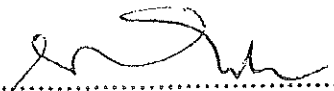


Director

*ding*  
  
Secretary

SIGNED by )  
as duly authorised Officer of the Council of the City )  
of Shoalhaven )



  
.....  
Consent Authority

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REGISTERED  16-10-1997 *JP*

*Diary*

24A - 1

REPORT OF GENERAL MANAGER

SCANNED

Ulladulla City Council

POLICY AND PLANNING COMMITTEE

14 FEB 2017

TUESDAY, MARCH 18, 1997

File No: DA97/25.03

Referred To: Peter Johnston

DEVELOPMENT SERVICES

1. Development Application - Proposed Supermarket and Shops - Lots 1 & 2 DP 213083, Lot 1 DP 194000, Lots 250 & 251 DP 569873, Proposed Closed Road (part Boree Street), Ulladulla. Applicant: Lamtring Pty Ltd File DA97/0025

**PURPOSE**

This report will present an assessment of a proposed supermarket and shops on land owned by Council between Boree and St Vincent Streets in central Ulladulla. It will also outline a strategy, prepared by Planning Services Division, for the provision of public car parking in central Ulladulla.

This matter is presented to the Policy & Planning Committee for the following reasons:

- Council is the land owner and therefore has a direct interest in the determination of the application;
- The proposal has attracted a high level of community interest; and
- The proposal is significant in terms of its estimated cost, scale, and its influence on the pattern of commercial development and associated public car parking in the Ulladulla CBD.

**PROPOSAL**

Consent is sought for a shopping complex in a two storey building (plus mezzanine) comprising:

supermarket (excluding mezzanine)	2,929m2 GLFA*
specialty shops	552m2 GLFA
car parking	188 spaces #

\* Gross Leasable Floor Area  
# see full parking assessment below

# The original, exhibited proposal is illustrated by *Attachments 1, 2 and 3.*

The site is a parcel owned by Council with frontage of approximately 60 metres to both Boree Street and St Vincent Street. It is bounded on the north by a commercial building currently being used for a gymnasium and place of public worship, and a dwelling owned by Council currently being occupied by the Ulladulla Family Day Care Centre. On the southern boundary is the Ulladulla Medical Centre and a dwelling-house fronting St Vincent Street.



24A - 2

The site is currently used as a public parking area accommodating approximately 146 spaces with a gravel surface, and a dwelling house known as No.92 St Vincent Street which is currently occupied by Milton-Ulladulla Community Resources Centre.

### *Amendments*

On 23 January, 1997 the application was amended by the applicant to include a freestanding pylon sign at the Boree Street frontage approximately 10 metres high and 2.5 metres wide. This proposal was publicly exhibited with the original application. Such sign, and the others associated with the development as proposed, comply with Council's Advertising Code. The actual wording of these signs will be determined in conjunction with building consent.

On 3 March, 1997, the applicant advised of a proposed amendment to the application in relation to the number of specialty shops. The original application showed a total of nine (9) shops around the market square at Boree Street. Without altering the total floor area, it is proposed to reduce the number of such shops to five (5) comprising two shops with floor areas of 200m<sup>2</sup> and 250m<sup>2</sup>, and another three with floor areas averaging 50m<sup>2</sup>. No objection is raised to this amendment, nor should it jeopardise the interests of objectors to the proposal.

Further amendments were made to the application on 12 March, 1997, following a meeting between the applicant, his consultants and staff. These amendments involve:

- re-configuring the lower ground floor car park to comply with parking space and isle dimensions in Council's Car Parking Code (DCP 18);
- enlarging the public open space in the market square and adding "sails" over part of these areas to provide shelter.
- limiting the amount of paving in Boree Street to three pedestrian corridors (compared with full paving as originally proposed).

The applicant also expressed a willingness to upgrade the existing toilet block in the east Boree Street car park, and to erect open gateway structures at each end of the closed road to clearly define the proposed "slow way". The prospect of defraying refurbishment works to the toilet block against possible car parking contributions was canvassed.

To increase safety and approve amenity for shoppers the applicant proposes to create a "slow way" over the closed section of Boree Street. Whilst two-way traffic movement will be retained, traffic speed will be limited. This will be achieved by clearly defining the space through paving, changes in paving height and the gateway structures described above.

### *Additional Information*

At the request of Development Services Division the applicant furnished a traffic impact study and hydraulic assessment of the site. These will be discussed later in this report.

### **SITE**

- # The freehold part of the site has an area of 5480m<sup>2</sup>. With the proposed road closure the total development area is 6584m<sup>2</sup> (see Plan No. 1).

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## SECTION 90 ASSESSMENT

### *Shoalhaven Local Environmental Plan 1985*

The freehold land is zoned part 3(a) Business (retail) and, over a strip of land 2 metres wide on the eastern boundary, part 5(e) Special Uses (proposed local roads reservation and widening of local roads reservation) under Shoalhaven Local Environmental Plan 1985. Shops and associated uses are permissible with consent in both zones.

The closed section of Boree Street is uncoloured under SLEP 1985. Parking and paving as proposed is permissible with consent in this "zone".

### *Development Control Plan No.56*

The site is within the area affected by Development Control Plan No.56 - Ulladulla Town Centre Strategy (effective from 12 January, 1995).

The proposal complies fully with the objectives of this DCP and its planning policies relating to building height, land use in the retail core, traffic/pedestrian movement and service access. Minor changes through conditions of consent can be made to the proposal to comply with the more specific policies relating to landscaping and pavement selection. The DCP's planning policy on parking within the CBD will be addressed in the section on parking strategy later in this report. The major departure with the DCP is in relation to a proposed vehicular link between Boree Street and St Vincent Street on the southern boundary of the site. This cannot be achieved under the proposal, but a link will exist through the proposed lower ground floor car park. It should also be noted that the DCP shows the affected section of Boree Street to be closed.

### *Land classification*

The site, and other similar parcels throughout the city, are the subject of a draft local environmental plan (LP 258) to reclassify the land from "community" to "operational" under the Local Government Act, 1993. Public exhibition closed on 21 February, 1997. Because a change in classification is a prerequisite to the land being sold and developed.

## PUBLIC CONSULTATION

Owners of neighbouring properties were notified of the proposal by letter and invited to make written submissions. Notices were also placed in the local press on 29 January, and 5 February inviting members of the public to view the application in Council's Ulladulla Office and make written submissions.

A notice inviting the public to an information meeting convened by Council was placed in the local press on 22 January, 1997. This meeting was held in the Ulladulla Civic Centre on the evening of 28 January, 1997. It was chaired by Cllr Kilner in his capacity as head of the Development Committee.

The proposal was submitted to NSW Roads and Traffic Authority, The Shoalhaven Traffic Committee, Milton-Ulladulla Mainstreet and divisions of Council.

### *Public Submissions*

Eleven (11) public submissions were received. Two(2) offered unqualified support, two (2) offered qualified support, and seven (7) objected to the proposal.

The issues raised in objection to the proposal (with the number of times occurring) are summarised as follows:

• effect of Boree Street closure on local businesses	1
• loss of public car parking	6
• reported selling price of land	2
• plan to spend proceeds of sale on community facilities	1
• process of proposed sale of land	3
• proposal will not curtail escape spending	1
• no nett increase in jobs	1
• no room or need for additional supermarket	3
• inaccuracies in JHD report with DA	1
• insufficient proceeds to replace car parking	1
• lack of 3 hour parking in proposed development	1
• development contrary to DCP No.56 in terms of St Vincent Street streetscape, CBD car parking and building height and bulk	1
• South Street site is preferable	1
• exacerbate congestion at Wason Street traffic signals	1
• traffic congestion in St Vincent Street	1
• loss of existing pathway from St Vincent to Boree Streets	2
• pedestrian conflict at loading dock	1
• additional traffic, including heavy vehicles in St Vincent Street	1
• proposal will draw pedestrian traffic away from existing shops	1

### **ASSESSMENT - SITE RELATED MATTERS**

#### *Building design*

In common with modern supermarkets the main trading space is essentially a large windowless box. In this case, however, the building's designer has made a commendable effort to soften these hard lines, at least for the front and rear elevations. At the front the market court and its attendant shops are defined by a colonnade and pedestrian walkway, with "sails" added in the latest amendment, to provide shade and shelter. Pedestrian access to this level is available at grade in front of the southern shops, via steps to the northern shops or by way of a trolley ramp from the north-eastern corner of the site. The front elevation is broken by shallow, curved rooflines and strong horizontal elements on the specialty shop exteriors. A small amount of planting adds further interest.

Exterior colours are generally muted and in line with DCP No.56 which suggests beige, cream or ochre colours. Exterior walls of the main building, corresponding with the supermarket itself, will be constructed of precast concrete elements with strong horizontal features, finished with a textured paint.



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At the elevation to St Vincent Street, the basic building form is broken by horizontal and curved elements enclosing the loading dock and forming an awning over the car park entrance. Planting will further soften the building form.

The southern and northern elevations are dominated by basically unrelieved walls about 5 and 9 metres high respectively. Whilst this can be unattractive, especially on the southern side, the form is relieved to a certain extent by the existing single storey building on the northern boundary now occupied by a gymnasium. Further development on the Ulladulla Family Day Care site to the north will also tend to break the monolithic profile. Similarly the southern elevation will be screened by the medical centre on the southern boundary, and established gardens in the property behind. Given the nature of the building and what appear to be design imperatives for modern supermarkets, the overall building design is considered to be acceptable.

To achieve consistency throughout the CBD, paving within Boree Street should comply with DCP No.56. Other paving, such as in the Market Square, should be selected to harmonise with the Boree Street paving.

### *On-site parking*

Under Council's Car Parking DCP (No. 18) the proposed development generates the need for 177 car parking spaces. The applicant has furnished a revised car parking layout which provides for 188 spaces. The amended proposal provides for one less space in the market court but, after discussions, this space was replaced by a new staff parking space in the loading dock area.

*Table 1: Parking provision as proposed  
(with 90 degree angled spaces in Boree Street)*

Location	Nett Provision (spaces)
lower ground	154*
market court	14 <sup>□</sup>
Boree Street	14 <sup>⊗</sup>
<b>Total Provision</b>	<b>182</b>
<b>Requirement</b>	<b>177</b>
<b>Surplus</b>	<b>5</b>

\*includes 3 spaces shown on the DA as a link to a possible future car park on Council's land to the north

⊗6 of the 20 spaces proposed are taken up for landscaping and the retention of mature street trees

□ excluding space designated for loading bay

However, if all existing kerbside parking in Boree Street is retained, as discussed in more detail below, the parking provision will be reduced to 178 spaces, resulting in a surplus of 1.

*Table 2: Parking provision  
(kerbside parallel parking Boree Street only)*

Location	Nett Provision (spaces)
lower ground	154*
market court	14 <sup>□</sup>
Boree Street	10
<b>Total Provision</b>	<b>178</b>
<b>Requirement</b>	<b>177</b>
<b>Surplus</b>	<b>1</b>

\*includes 3 spaces shown on the DA as a link to a possible future car park on Council's land to the north

□ excluding space designated for loading bay

### ***Boree Street closure and re-development***

The proposal provides for the closure and purchase by the developer of that section of Boree Street adjacent to the main site. This land is to retain its function as a thoroughfare, albeit as a paved slow way. The proposal includes twenty (20) angled car parking spaces at 90 degrees on the eastern side. It is proposed to use this land and the adjoining open paved area in front of the building as a market square for community, promotional and civic activities following an agreed programme prepared in advance in consultation with Council and community groups such as Milton-Ulladulla Mainstreet. Oversized steps on the western side of Boree Street between the vehicular entrance to the upper and lower levels are designed to provide seating during community activities and other times.

Closure and purchase of this section of Boree Street are imminent, but will be subject to its retention as a public thoroughfare. Specifically such an arrangement needs to allow for:

- its retention as a two-way public thoroughfare
- the enforcement of motor traffic and parking regulations
- an appropriate procedure for preparing a programme of proposed temporary closures and notification of same e.g. special events
- the provision of appropriate easements for public utilities
- future maintenance and repair of paving and other assets

These objective are likely to be best accomplished through a lease-back to Council for a "peppercorn" rent.

### ***Parking arrangements and street trees in Boree Street***

As the above section on parking advises, the applicant proposes twenty (20) ninety degree angled parking spaces on the eastern side of Boree Street, in place of ten (10) existing kerbside spaces. The proposal also calls for the removal of the existing footpath and ten (10) mature eucalypts to allow for the full use of the road reserve. The drawings lodged with the application show

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landscaping between Boree Street and the eastern Boree Street public car park. This can only be accomplished by the realignment of the existing spaces in the eastern Boree Street parking area, with an associated 2 metre reduction in the width of the existing paved pedestrian pathway at the eastern edge of the car park, i.e. the rear of the commercial development fronting the highway.

There are serious concerns over the applicant's proposal for parking in Boree Street, particularly in relation to conflict between through traffic, vehicles reversing from the angled spaces, and vehicles entering and exiting the market court and lower ground floor parking areas. There is also concern over the loss of ten (10) mature street trees.

### *Drainage*

A drainage strategy as been lodged by the applicant. This features the use of the lower ground floor car park as a stormwater retention structure in the event of a 1 in 100 year storm. The maximum water depth is estimated to be less than 200 millimetres. Initial assessment of this strategy shows that it is generally acceptable, subject to detailed design and approval by Engineering Works.

Under these arrangements a contribution towards local drainage works under *Contributions Plan 1993* will still be required.

### *Utilities*

The existing sewer pipeline which traverses the site from south to north will need to be repositioned, most probably under the proposed lower ground floor. Provision for maintenance and inspection of the pipe at the southern boundary of the site will need to be incorporated. Access to the pipeline will be by way of the lower ground floor car park. All pipework under the lower ground floor will be concrete encased. These arrangements are acceptable to Shoalhaven Water.

Water and electricity reticulation can be adequately provided.

### *Loading*

The loading dock design has been amended, principally in relation to entrance and exit arrangements, to meet the requirements of Council and Shoalhaven Traffic Committee. The new design also provides for improved pedestrian safety by reducing exposure to traffic movements.

A car parking space for supermarket staff can be provided in this area without compromising its main function.

Heavy vehicles will be required to enter and leave the loading dock only in a forward direction.

### *Waste management*

The disposal of trade waste will be the responsibility of the applicant. This will require the engagement of a suitable contractor.



Waste likely to be generated by the supermarket, and to a lesser extent the specialty shops, will be paper and packaging materials, mostly cardboard, organic material such as vegetable waste, bones and meat trimmings. The paper material and perhaps some of the other waste should be recycled, and appropriate facilities provided accordingly. Conditions of consent will be framed to indicated performance standards for the handling and disposal of waste. Waste collection and transfer for the supermarket will be confined to the loading dock area. A separate garbage holding area for the specialty shops is proposed. Each waste area should incorporate a wash-down facility comprising hose cock and sump with removable grate.

### *Economic effects*

The application was accompanied by a report entitled *Ulladulla NSW Assessment of Supermarket Potential* by, December 1996. In summary it found:

- *a new 3,000m<sup>2</sup> major chain supermarket would reduce escape spending on food, liquor and groceries (FLG) by about \$10.5 million, including market growth;*
- *the new supermarket would have an estimated turnover of \$21.4 million, equivalent to about \$7,140/m<sup>2</sup>/year. This would comprise 33.5% of FLG market share plus an additional 20% drawn from beyond the trade area, largely visitors. An allowance of 7% for general merchandise trade was also made.*
- *"...the Ulladulla trade area can successfully accommodate a major chain supermarket. A national chain supermarket at Ulladulla would be expected to significantly reduce the large amounts of FLG spending currently being directed to supermarkets located outside the trade area."*

To provide an independent assessment of the Jebb Holland Dimasi report Leyshon Consulting Pty Ltd was commissioned. Before the completion of his report Mr Peter Leyshon met with representatives of the local business community at a meeting arranged by Council. Many of the issues raised at that meeting were subsequently addressed in the final report. Mr Leyshon was required to critically assess the JHD report and, if substantial differences of opinion emerged, provide an alternative assessment.

The Leyshon report finds in part as follows:

*"If the benefits to the Ulladulla community of increased price competition and range of choice in food shopping are taken into account it is likely that, at worst, the proposal will be neutral in terms of its net community economic effect. At best it will generate some positive outcomes as far as the Ulladulla community is concerned."*

A full copy of this report will be made available at the meeting.

### *Pedestrian link*

The proposal provides for a pedestrian link from St Vincent Street to Boree Street at the northern boundary of the site. The first 45 metres from St Vincent Street is over Council's adjoining land occupied by Ulladulla Family Day Care Centre (which is not part of the development site) before continuing through a 1.5m wide corridor about 16m long between the proposed building and the existing gymnasium building, emerging at the bottom of the trolley ramp to the upper level.

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Pedestrians can either take the ramp or proceed to Boree Street at grade. Adequate lighting along the new pedestrian link, particularly where it narrows between the buildings be important in maximising pedestrian safety.

Council's agreement to the use of its land for the first part of the proposed link is crucial to its provision. This will involve the relocation or rebuilding of the existing boundary fence to separate the pedestrian pathway from the existing children's play area.

A pedestrian refuge has been recently installed in St Vincent Street just to the south of the site. If this is retained pedestrians from the high school would cross St Vincent Street before turning north along the footpath to the proposed pedestrian link. This will involve the negotiation of the loading dock and lower ground floor car parking entrances. This should be taken into account in the design of these facilities, particularly the loading dock, to minimise pedestrian conflict.

Concern was raised by two objectors over the loss of the existing pathway along the southern boundary of the site and the potential conflict with vehicles as pedestrians walk to the proposed link from the existing refuge, as discussed above.

On balance, the proposed pedestrian link is satisfactory, but requires Council's support for the use of part of its property to the north of the site.

### *Consolidation of lots*

The land within the 3(a) zone should be consolidated into one lot. The proposed Boree Street closure and the land zoned 5(e) should be consolidated into another lot. All necessary easements for public utilities should be created at this stage. A condition of consent should be framed accordingly.

## ASSESSMENT - OFF SITE ISSUES

### *Traffic management*

After detailed consultation with Engineering Works, all traffic matters directly related to the site have been resolved. The main focus of these efforts has been on St Vincent Street where the main features are:

- a. the retention of the existing pedestrian refuge on St Vincent Street just south of the site and the incorporation of marked crossings and other devices to define a pedestrian route from the pedestrian refuge to the proposed pedestrian link on the northern boundary of the site;
- b. no restriction on the movement of vehicles between St Vincent Street and the lower ground floor parking area. A left turn slip land for south bound traffic is proposed. No measures to direct merging traffic northbound before the Green Street roundabout are presently considered necessary. This will be monitored;
- c. a raised central median in St Vincent Street opposite the loading dock is proposed. This will prevent right turns to and from the loading dock.

It has been agreed with the applicant that heavy vehicles approaching the loading dock from Princes Highway will use Green Street only. Vehicles leaving the loading dock will return to the highway by way of South Street or Deering Street. This arrangement will meet the requirements of the Shoalhaven Traffic Committee.

### *Intersection improvements*

The proposal will hasten the need for improvements at the intersection of Princes Highway and South Street on one hand and Princes Highway and St Vincent Street on the other. The RTA have indicated a medium term plan to install traffic signals at the South Street intersection. Based on previous arrangements, a financial commitment by Council, at least for associated roadworks is anticipated.

A roundabout at the St Vincent Street intersection is planned for this year. The proposed development will increase the need for such works.

## **PARKING STRATEGY FOR ULLADULLA CBD**

### **CBD Parking**

#### **Planning Services Comment on Public Car Parking**

The application is over 5 allotments between Boree Street and St Vincent Street which have been purchased by Council to provide approximately 147 gravel parking spaces to date. In addition, a section of Boree Street is proposed to be closed and purchased resulting in a further loss of 10 parallel kerb side spaces. Marginally over half the parking west of Boree Street is signposted with a 3 hour limit, with the balance being all-day parking. Parking surveys indicate the whole car park is well utilised at the moment. Funding has also been allocated to construct an additional 22 spaces on the fifth allotment.

The majority of this existing car park was included in the Section 94 Plan as a part of project 05 CARP 0001 being three car parking projects in Ulladulla (at-grade car park between Boree St and St Vincent St, extension of at-grade car park behind Payless South St, multi-level car park Boree St east). No contributions have been received for this project since the adoption of the S94 Plan in 1993.

The Section 94 Plan assumed that Council would provide 70% of future parking (386 spaces) for which contributions would be taken and 30% (159 spaces) would be provided on-site by developers.

Preliminary investigations based on Council's recent decision to delete stand alone multi-level parking options from all parking strategies indicate an at-grade parking contribution rate could be in the order of \$7,000 based on necessary land acquisition and construction i.e. 213 spaces land acquisition \$950,000 and construction cost \$416,000.

The \$400,000 contribution from the developer for the purchase of the 5 lots would relate to the following number of spaces, if a developer opted to contribute rather than provide on site. Council

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currently discounts 30% but several other possible discounts have been discussed during review of the Section 94 Plan and are listed below

Discount	Contribution	Spaces
0	\$7000	57
30%	\$4900	82
50%	\$3500	114
2/3	\$2333	171

(or 1/3,1/3,1/3 principle)

Council will be committed for the shortfall if any discount is allowed.

Council will also be committed to replace the spaces provided for on the existing site.

The traffic committee has raised the issue of short term parking while the development is in the construction stage.

Temporary short term opportunities which could relieve this shortfall could involve the following

1. 35 spaces - Lot 202 St Vincent Street - gravel surface
2. 20 spaces - rear of youth centre St Vincent Street - gravel surface
3. sealing of spaces at Civic Centre - 30 spaces
4. 50 spaces not constructed in South Street car park - gravel surface
5. 50 additional spaces recently provided in St Vincent Street

It may be possible to lease additional temporary parking as has been done over the Christmas peak

In the immediate and longer term it will be necessary for Council to meet the demands as outlined in the Section 94 Plan. If the development is approved it may be necessary to revise figures relating to the ratio of spaces provided by the S94 Plan as against spaces provided on site by developers.

## CONCLUSION

An assessment of the proposed development concludes that development consent, subject to certain conditions, should be granted.

In relation to future parking arrangements in the closed section of Boree Street the proposal was reviewed against the recommendations of the Shoalhaven Traffic Committee and concerns over vehicular conflicts, particularly between through traffic and vehicles reversing from the proposed 90 degree angled parking spaces proposed. On the other hand, was the applicant's desire to create a private shopping environment including a "slow way" in Boree Street. This would result in the downgrading of Boree Street's present function as a thorough fare through the use of traffic calming devices, including paving treatment. This assessment concludes that a compromise between parking provision and traffic safety can be accommodated by permitting 90 degree angled

parking as proposed, but with a reduction in spaces to allow for additional landscaping and the retention of a number of existing mature street trees.

**RECOMMENDED that:**

- A. Development application No.97/0025 for supermarket, shops and associated car parking be granted development consent subject to the following conditions:

*General*

1. This consent relates to supermarket, shops and associated car parking as illustrated on the 5 sheets stamped with a reference to this consent and described in documentation lodged with the application No. 97/0025, except as modified by the following conditions.
2. The development shall be carried out in accordance with the stamped drawings, documentation lodged with the application or as modified by the following conditions.

*Note: Any alteration to the above mentioned plans and/or documentation shall be submitted for the approval of the Development Services Manager prior to submission of the building application. Such alterations may require the lodgement of an application to amend the consent under s102 of the Act, or a fresh application.*

3. The development shall not be occupied or the use shall not commence until such time as all conditions of development, building and/or subdivision consent have been met or unless other satisfactory arrangements have been made with Council (ie. Bank Guarantee or similar security).

*Signs*

4. No signs or advertising structures, except those shown on the drawings stamped with reference to this consent or exempted under Council's Advertising Sign Code, shall be erected on or in conjunction with the proposed use of the premises without the prior consent of Council.

*First Occupancy*

5. So as to determine the legality of future proposed uses of the development, a first occupancy development application shall be submitted for the specialty shops (not the supermarket) for approval prior to any occupation of the premises.

*Note: To avoid the necessity for owner's consent on each subsequent*

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*occasion the owner is urged to consider submitting to Council a standard letter of authority to lodge development applications for occupation of the development. Alternatively, written authority could be given to the agent acting on behalf of the owner or leasing body of the premises.*

### *Building Design*

6. To ensure that the proposed building will comply with the objectives of DCP No.56, a schedule of exterior materials and colours shall be submitted with the building application.

### *Consolidation*

7. To ensure development does not straddle property boundaries and to retain the Boree Street road reserve as a separate entity, the land shall be consolidated before the release of building consent to form three (3) lots comprising:
  - a) the land within the 3(a) and 5(e) zones;
  - b) the proposed Boree Street closure
  - c) a lot sufficient to contain the encroachment of the existing toilet block

### *Easements*

8. All necessary easements for public utilities, including an easement over the sewer main traversing the site, shall be created under the Conveyancing Act, 1919 in conjunction with the consolidation required in Condition 7.

### *Land classification*

9. Evidence of gazettal of the reclassification of the land from "community" to "operational" under the Local Government Act, 1993 shall be provided before the release of any building consent.

### *Traffic Arrangements*

10. All heavy vehicles proceeding to the loading dock from the Princes Highway shall do so via Green Street only. All heavy vehicles proceeding from the loading dock to the Princes Highway shall do so only via South Street for northbound vehicles, and Deering Street for southbound vehicles.
11. Works in St Vincent Street including kerbing, medians and pavement markings, as indicated on sheet 4 of the drawings stamped with reference to this consent, shall be undertaken by the developer prior to the occupation of the building.
12. All vehicles using the loading dock are only to enter and leave in a forward direction.



13. Full design details of the loading dock, associated roadworks, slab specification generally in accordance with sheet 4, are to be submitted with the building application for approval by Development Services Manager.

#### *Paving*

14. To ensure a consistency of paving types and colours throughout the CBD, all exterior paving except the courtyard at the front of the building shall be in accordance with DCP No.56. Courtyard paving shall be selected to harmonise with the paving complying with DCP No.56. A schedule of paving is to be lodged with the building application.

#### *Landscaping*

15. To maintain and enhance the existing amenity of the area, a detailed landscape plan shall be submitted prior to submission of the building application for approval of the Development Services Manager, showing landscape treatment, species and numbers of trees and shrubs proposed to be established and existing trees and shrubs to be retained. Particular attention is to be paid to supplementary planting in the footpath on the eastern side of Boree Street. All proposed landscaping shall comply with the objectives and specific provisions of DCP No.56.

#### *Car Parking*

16. To cater for staff and customer needs, no fewer than 177 car parking spaces are to be provided on site, generally in accordance with the drawings stamped with reference to this consent, with the exception of spaces in the closed section of Boree Street. In the closed section of Boree Street parking spaces 3, 4, 5, 11, 12 & 13 as shown on the sheet stamped with reference to this consent are to be replaced by a landscaped area in which existing mature street trees are retained and additional planting undertaken in accordance with the approved landscaping plan.

17. All car parking spaces, isles and manoeuvring areas are to comply with Council's Car Parking Code (DCP No.18).

18. No fewer than four (4) spaces are to be designed and reserved for disabled persons. Two are to be located as close as possible to the trolley ramp on the lower ground floor. Two are to be located at the market court level as close as possible to the supermarket entrance.

#### *Engineering*

19. Where applicable a grated drain is to be provided where the driveways cross the property boundary. The drain shall be constructed with a rubber insert between the grate and concrete.

20. Accesses to and from the lower ground floor car park on St. Vincent Street

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- and Boree Street to be a Type 3 driveway in accordance with Traffic Authority Guidelines. The St Vincent Street driveway is to be modified to achieve a minimum 6m wide entry and 4m wide exit separated by a suitable raised median at least 1m wide. The Boree Street access is to be modified to achieve a minimum 4m wide entry and 4m wide exit separated by a suitable raised median. The driveway entrance to the market court shall be not less than 5m wide at a maximum grade of 5%. All accesses to be constructed to a concrete finish or using hotmix AC10 on an approved pavement. All redundant accesses and laybacks are to be reinstated with kerb and gutter to the satisfaction of the Engineering Works Manager.
21. All carriageways, car parking and manoeuvring areas, including loading zones are to be constructed to a heavy duty concrete standard or to a hotmix surface having a minimum compacted thickness of 200mm with associated stormwater drainage, and shall include kerb and gutter to assist collection of stormwater runoff.
  22. The driveway access and car park shall be bordered by concrete kerbing, except where surface run-off is concentrated, in which case concrete kerb and gutter shall be constructed.
  23. The parking areas and driveways are to be linemarked and signposted in accordance with Council's Car Parking Code.
  24. In order to collect and dispose of stormwater run-off, roof water shall be piped to and the driveway access and car park shall be graded to gully pits and discharged by pipework from the site and be integrated into Council's stormwater system. The applicant shall demonstrate to Council how the collection and disposal of stormwater will be integrated with Council's infrastructure. The applicant should also be made aware that Council will be carrying out maintenance work in St Vincent Street under its current works program and the applicant should liaise with the Southern District Maintenance Engineer to discuss work schedules.
  25. To ensure all site works are carried out to an acceptable standard the applicant is to submit detailed engineering plans including the following design requirements for certification:-
    - a. Details of design shall include flow rate in pipes, pipe sizes and types, pipe grades and invert levels, proposed pavement materials and thickness, existing and proposed footpath and site levels, existing and proposed pavement and kerb levels for both on-site works and works on public land, and existing or proposed levels at drainage outlets.
    - b. All civil works shall be designed by a qualified Civil Engineer or Surveyor.
    - c. Where bitumen pavement is used, the design of road and car park pavements, both on site and on public land, shall be supported by test results for the insitu subgrade material. These tests shall be carried out by a NATA

approved laboratory, or may be carried out by Council at the applicants expense.

- d. Details of stormwater management strategy to ensure that stormwater flows from the site up to and including a 1 in 100 ARI storm event are no greater than pre-development rates. As an alternative a detailed design, prepared in consultation with Council's Engineering Works Manager, may be prepared incorporating the upgrading of drainage infrastructure downstream of the site in Boree Street, or St Vincent Street or both, to be lodged with the building application.

*Note: drainage works outside the site undertaken by the applicant may reduce s94 drainage contributions.*

26. Detailed engineering plans and specifications for the work referred to in this consent are to be submitted for approval by the Subdivision Development Manager.
  - a. It will be the applicant's responsibility to check and ensure that the proposed works are not affected by Council's, Integral Energy's and/or Telecom's service. Any required alterations to services will be at the applicant's expense. Specification for road and drainage works shall be as specified under Section 9 of Council's Subdivision code and this will be the standard for construction works required. Works-as-executed plans shall be submitted for engineering works within the road reserve.
  - b. Where any works are carried out on or adjacent to a public road, adequate protection should be provided for the travelling public. Warning and protective devices shall comply with the provision of Australian Standard AS 1742. A plan showing details of the proposed safety measures are to be submitted to Council for approval prior to the commencement of work.
  - c. The applicant shall identify construction zones for contractors. This information shall be provided in a public safety plan to be lodged with the building application.
27. Sedimentation and erosion control measures shall be undertaken prior to works commencing on site. Such measures shall include either straw bales or filter fences located around the development site to contain soil erosion and sedimentation from entering Council's stormwater system. Details shall be submitted prior to works commencing on the site.
28. The applicant is to submit with the building application details of existing and finished levels in Boree Street in relation to the eastern car park, western footpath, driveways, accesses and building floor levels. A footpath cross section is to be provided at each entrance point to the development.
29. Building Applications are to be accompanied with engineering

plans as required in the Development Consent. All engineering plans dealing with the construction works within the road reserve are to be referred to the Development Engineer for checking and approval. It is imperative that footpath and floor levels within the commercial development are approved concurrently so as to avoid future disputes.

30. Any damage to Council assets including footpaths, kerb and guttering, stormwater drainage, road pavements, water and sewer lines, caused by construction work associated with this approval shall be rectified and restored to its prior condition to the satisfaction of the Engineering Works Manager of Council.
31. The applicant must submit a design for appropriate traffic and pedestrian safety during the construction phase which must include a construction zone for work vehicles in accordance with Australian Standard AS 1742.3-1996.

#### *Waste Management*

32. All waste material generated by the supermarket shall be sorted, stored and collected to maximise the opportunities for recycling. Full details of waste management shall be lodged with the building application.
33. Each waste handling area is to include a washdown area comprising a hose cock, sump and removable grate, connected to Council's sewer to the satisfaction of Shoalhaven Water.

#### *Pedestrian Areas*

34. To maximise pedestrian safety all pedestrian areas are to be adequately paved and lit.
35. The proposed pedestrian pathway at the southern boundary of Lot 1 DP 560449 is to be constructed, paved and lit to a width of at least 1.5 metres, and the existing fence relocated or reconstructed to the north of the proposed pathway, to the satisfaction of Council's Southern Maintenance Engineer.
36. The closed section of Boree Street and the western footpath is to be paved and adequately drained in accordance with DCP No. 56 with the exception of landscaped areas required under this consent. Paving and trafficable areas are to be designed to the satisfaction of the Engineering Works Manager.

#### *Contributions/Public Utilities*

37. A Certificate of Compliance (CC) under Part 3 Division 2 of the Water Supply Authorities Act, 1987, is to be obtained from Council before the release of the building approval/survey plan of subdivision. The certificate

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will be issued following the payment of contributions and/or completion of works (to the satisfaction of Council's Shoalhaven Water Division) as stipulated on the attached application form.

38. In accordance with Shoalhaven City Council's Section 94 Contributions Plan 1993, Council considers that this development will generate a need for additional services and/or facilities in accordance with the following schedule:-

PROJECT DESCRIPTION	PROJECT NO.	CONTRIBUTION
Bushfire Protection Facilities/SES	CWFIRE0009	\$21.46
Drainage Works - Boree Street	05DRAI0009	\$11,718.00
Drainage Works - St Vincent Street	05DRAI0012	\$8,056.00
Project management	CWMGMT0001	\$131.80
<b>TOTAL</b>		<b>\$19,927.26</b>

These contribution rates shall be adjusted annually in accordance with the indexation formula indicated in the above plan (currently the implicit price deflator) and adjusted at the time of payment.

The developer or applicant shall pay a "once only" contribution to Council currently assessed at the sum of \$19,927.26 (i.e. 1997 rate) or as indexed in future years. This consent is conditional upon satisfactory arrangements being made with Council for payment prior to issue of the building permit.

The above contribution plan may be inspected at the Council Administrative Offices, Bridge Road, Nowra and Deering Street, Ulladulla.

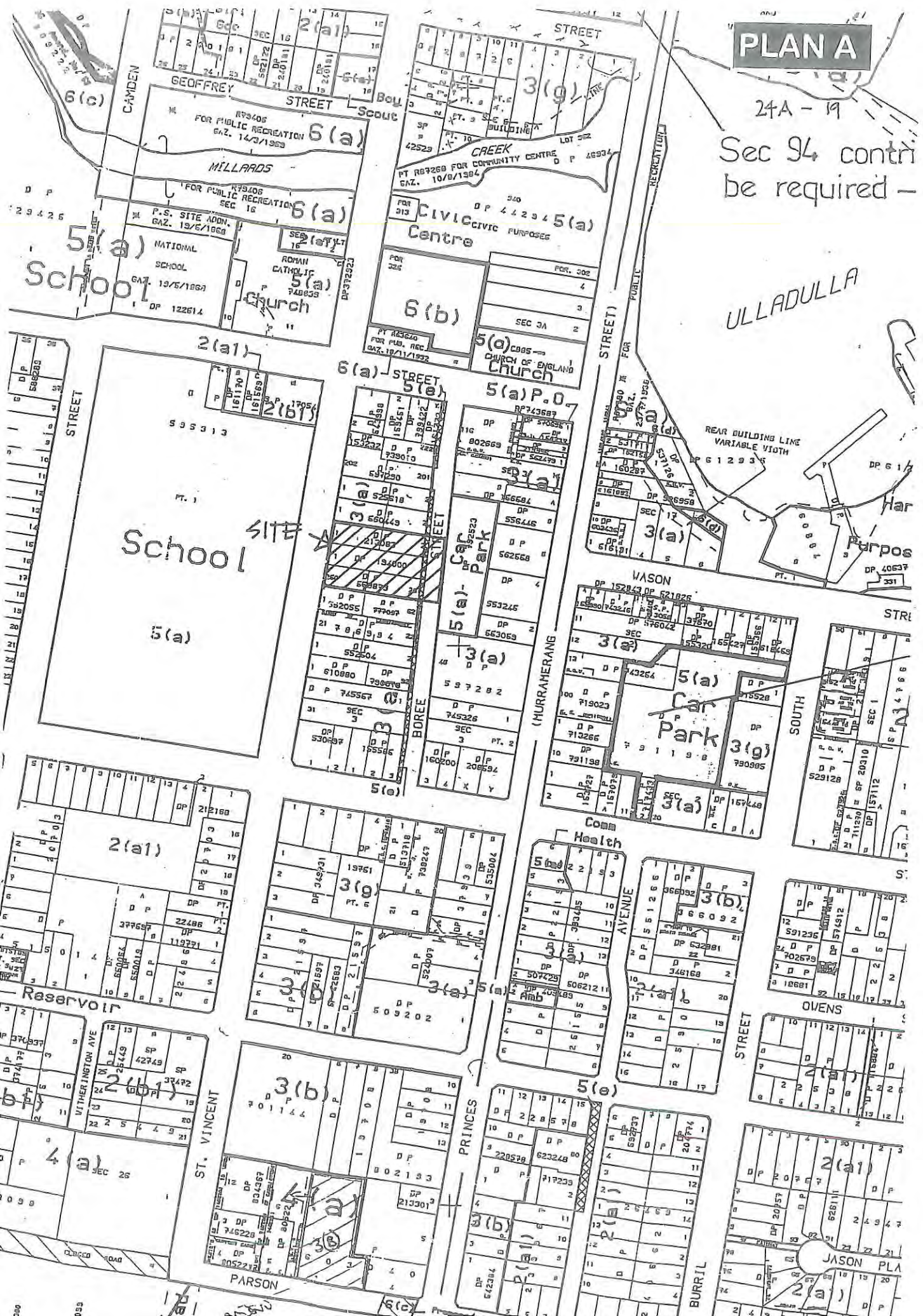
- b) To provide temporary parking during construction (to supplement parking in St Vincent Street and at the Civic Centre) a sum of \$5,000 be set aside from the proceeds of the sale of the subject land to provide gravel parking spaces on Lot 202 DP 579290, and the rear of Lot 1 DP 525618 (Ulladulla Youth Centre).
- c) No objection be raised to the applicant constructing a 1.5m wide paved walkway along the southern boundary of Lot 1 DP 560449 and the relocation or erection of a new fence in association with these works.
- d) Council acknowledge that the need for:
- i. traffic signals at the intersection of South Street and Princes Highway, Ulladulla,
  - ii. a roundabout at the intersection of St Vincent Street and Princes Highway, Ulladulla,
- will be brought forward as a result of the proposed development.



PLAN A

24A - 19

Sec 94 contri  
be required -



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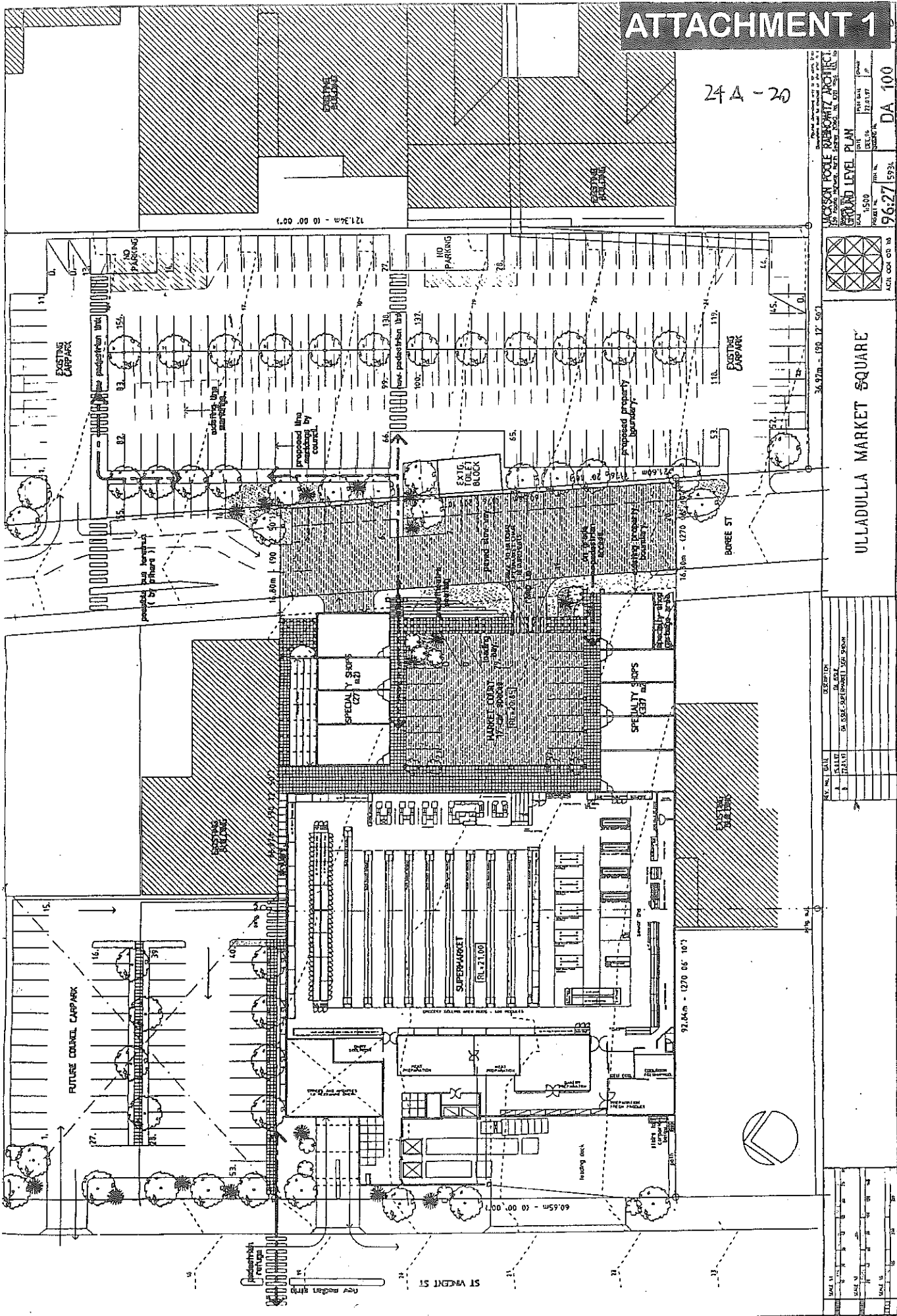
OVENS

STREET

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200  
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# ATTACHMENT 1

244 - 20

JACKSON PEOPLE PROPERTY PROJECT  
 1500  
 96:27 5593 DA 100

BOARD LEVEL PLAN  
 1500  
 96:27 5593 DA 100

ULLADULLA MARKET SQUARE

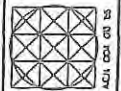
REV.	NO.	DATE	DESCRIPTION
1	AS BUILT	10/10/15	AS BUILT
2	DA 5593-200 (SUBSET) ULL. SQUAR	10/10/15	DA 5593-200 (SUBSET) ULL. SQUAR

SCALE	DATE	BY	CHECKED
1:100	10/10/15	J. SMITH	M. SMITH
1:500	10/10/15	J. SMITH	M. SMITH
1:1000	10/10/15	J. SMITH	M. SMITH

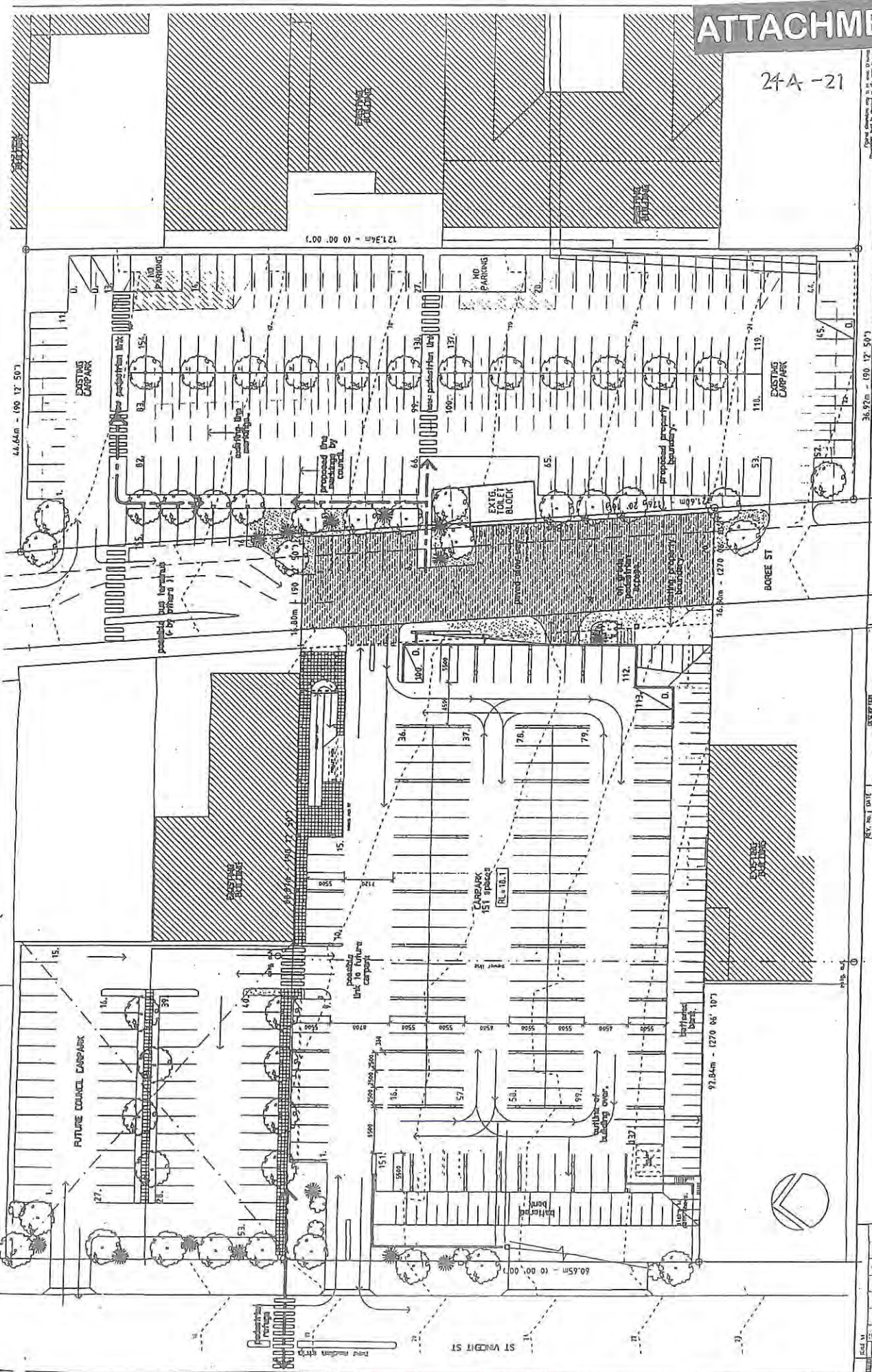
**ATTACHMENT 2**

24A -21

JACKSON POOL RENOVATION PROJECT	
RESIDENT CARPARK PLAN	
DATE	12.03.15
SCALE	1:500
PROJECT NO.	96/27/5935
DA	101



ULLADULLA MARKET SQUARE

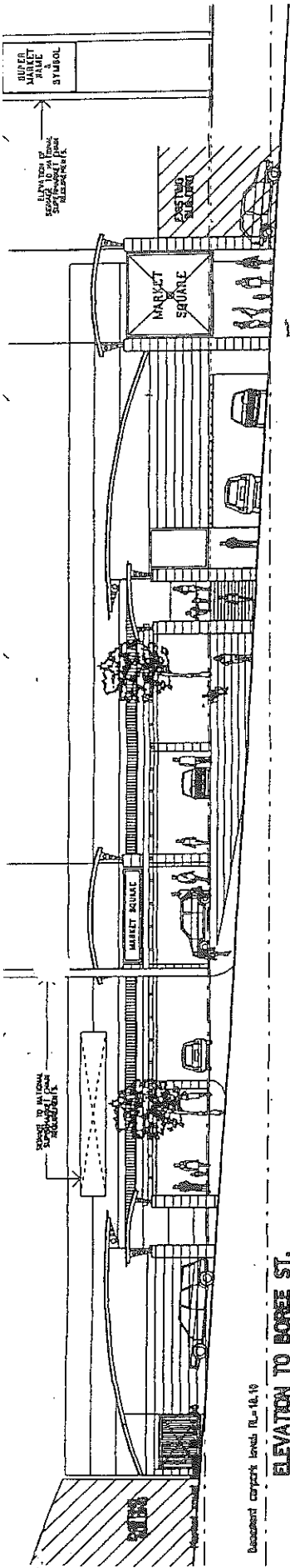


REV.	DATE	DESCRIPTION
1	12.03.15	ISSUE FOR PERMIT
2	12.03.15	ISSUE FOR PERMIT
3	12.03.15	ISSUE FOR PERMIT

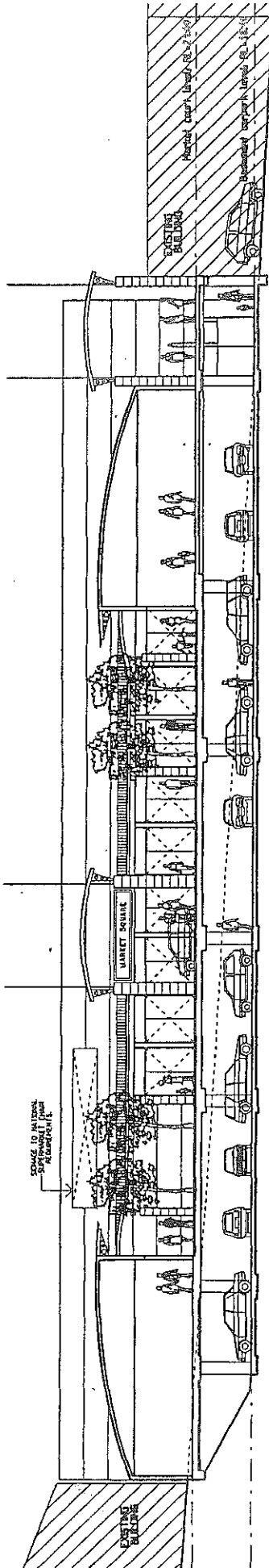
NO.	DATE	DESCRIPTION
1	12.03.15	ISSUE FOR PERMIT
2	12.03.15	ISSUE FOR PERMIT
3	12.03.15	ISSUE FOR PERMIT



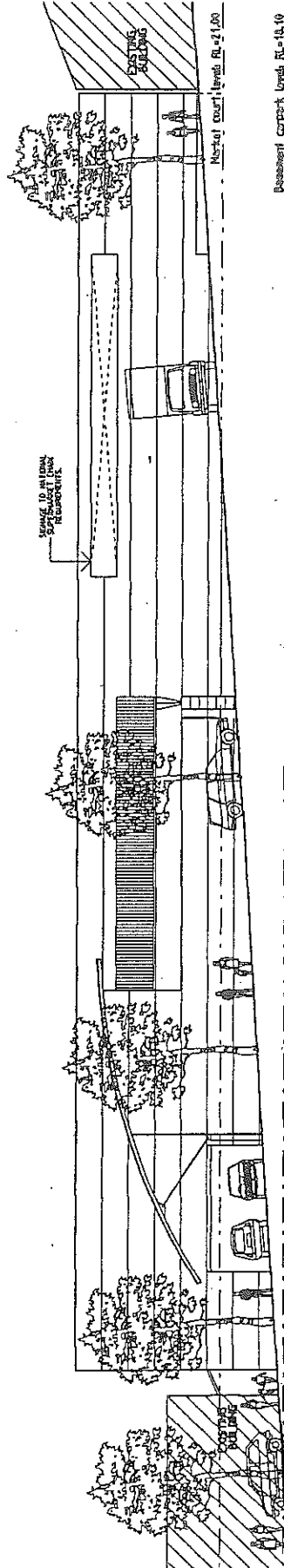
# ATTACHMENT 3



ELEVATION TO BOURKE ST.



SECTION A-A



ELEVATION TO ST. VINCENT ST.

**JACKSON POOLE RABENOWITZ ARCHITECTS**  
15 FLEET STREET, NORTH BRISBANE QLD 4101, AUSTRALIA  
TEL: 07 3851 1100 FAX: 07 3851 1101  
WWW.JRARCHITECTS.COM

**ELEVATIONS - SECTION**

NO. 2600  
DATE: 2/14/16  
SCALE: AS SHOWN  
BY: J.P. / M.H.

PROJECT: ULLADULLA MARKET SQUARE  
JOB NO.: 2600  
SHEET NO.: 26:27

DA 102

ACT 000 00 18

Ulladulla Market Square

Basement carpenter levels RL = 14.10

27-A-27



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### OZWATER'16 REGISTRATION FEES

	<b>Early Bird Registration</b> Until 31 March 2016	<b>Standard Registration</b>	<b>Onsite Registration</b> Does not include Welcome Networking Evening
<b>FULL REGISTRATIONS</b>			
AWA Member	\$1,265	\$1,420	\$1,725
New AWA Individual Membership + Ozwater registration	\$1,470	\$1,620	\$1,970
Non-Member	\$1,510	\$1,665	\$2,015
Full-time student - AWA Member	\$630	\$800	-
Full-time student - Non-Member	\$755	\$830	-
Retired Members	\$630	\$710	\$860
<b>DAY REGISTRATIONS</b>			
AWA Member	\$625	\$700	\$850
Non-Member	\$745	\$820	\$975
<b>YOUNG WATER PROFESSIONALS PROGRAM</b>			
<b>Full Program</b>			
AWA Member & YWP Network Member	\$125	\$125	n/a
Non-Member	\$235	\$235	n/a
<b>Breakfast Only or Workshop Only</b>			
AWA Member	\$70	\$70	n/a
Non-Member	\$125	\$125	n/a

Registration fees are in Australian dollars and are inclusive of 10% GST.

1) AWA Member rates apply to Individual Members or the Nominated Members of a Corporate Membership.

2) Registrations for Full Time Students must be accompanied with a photocopy of a student card and a letter from the university/college declaring full time student status.

## REGISTRATION INCLUSIONS

### FULL REGISTRATIONS

- Attendance at conference sessions & Trade Exhibition (Tues 10 May- Thurs 12 May)
- Satchel including Program Book
- Access to full papers and e-Posters (available to download online)
- Morning tea & Lunch daily
- Afternoon Tea (Tues 10 May & Wed 11 May)
- Welcome Networking Evening (Mon 9 May) - not available for onsite registrations
- Happy Hour (Tues 10 May)
- Closing Drinks (Thurs 12 May)

*Note: Welcome Networking Evening is NOT included in 'onsite' rates. Gala Dinner is NOT included in the registration package - tickets must be purchased separately*

### DAY REGISTRATIONS

Day registrants will be entitled to the following on the day(s) selected:

- Attendance at conference sessions & Trade Exhibition (Tues 10 May - Thurs 12 May)
- Satchel including Program Book
- Access to full papers and e-Posters (available to download online)
- Morning Tea, Lunch & Afternoon Tea (Tues 10 May & Wed 11 May)
- Morning Tea & Lunch (Thurs 12 May)

*Note: If registering for more than one day, only one name badge, satchel and contents will be issued.*

**IF YOU HAVE ANY ENQUIRIES ABOUT REGISTERING,  
PLEASE CONTACT US AT [EVENTS@AWA.ASN.AU](mailto:EVENTS@AWA.ASN.AU)**

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10-12 May 2016

Melbourne  
Convention and  
Exhibition Centre

Strategy & Assets Committee - February 2016 - Item 9

AUSTRALIAN  
WATER

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Water: For Liveable  
Communities and  
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0830 - 1000		OPENING CEREMONY   KEYNOTE SESSION						
1000 - 1045		MORNING TEA						
	Room 1	Room 2	Room 3	Room 4	Room 5	Room 6	Room 7	Room 8
1045 - 1215	<b>LIVEABLE &amp; SUSTAINABLE CITIES OF THE FUTURE</b> Tools to support Liveability & Sustainability  <b>284 BEYOND BENCHMARKING: A WATER SENSITIVE CITIES INDEX</b> Lindsey Beck, LindseyB  <b>18 URBAN WATER ENTITLEMENTS - A PATHWAY TO UNLOCKING INVESTMENT IN WATER SENSITIVE URBAN DESIGN</b> Peter Dillon  <b>162 SHOOTING FOR THE (GREEN) STARS - DOES IT ENHANCE THE TRIPLE BOTTOM LINE OF WATER SENSITIVE URBAN DESIGN?</b> Ryan Signor, AECOM	<b>OPERATIONS &amp; ASSET MANAGEMENT</b> Sludge Management  <b>361 ALUM RECOVERY FROM WATER TREATMENT SLUDGE</b> Patrick Maiden, GHD  <b>50 IMPROVED TRADE WASTE CO-DIGESTION</b> Jurgen Thiele, Calibre Consulting  <b>79 PLUG AND PLAY TOOLKIT TO ASSESS BIOSOLIDS MANAGEMENT COSTS</b> Aravind Surapaneni, South East Water	<b>OPERATIONS &amp; ASSET MANAGEMENT</b> Asset Management  <b>24 SYSTEM CAPABILITY FORECASTING - UNDERSTANDING AND DECIDING THE FUTURE FOR OUR ASSETS</b> Kenneth Walker, Water Corporation  <b>40 IMPROVED ASSET MAINTENANCE</b> Rynier Brandt, SA Water  <b>192 QUU ENHANCED CONDITION ASSESSMENT PROGRAM - A NEW MODEL DESIGNED TO IMPROVE ASSET MANAGEMENT OUTCOMES</b> Anton van Staden, Queensland Urban Utilities	<b>LIVEABLE &amp; SUSTAINABLE CITIES OF THE FUTURE</b> Low Carbon Futures  <b>363 QUANTIFYING WATER-ENERGY LINKAGES OPENS NEW PATHWAYS FOR EFFICIENCY</b> Steven Kenway, The University of Queensland  <b>87 MELBOURNE WATER'S LOW CARBON FUTURE</b> David Hardy, Melbourne Water  <b>364 A LESSON IN MANAGING UNCERTAINTY - 5 YEARS OF DEVELOPING AND OPERATING THE MITCHELL RIVER ASR SCHEME</b> Simon Robertson, East Gippsland Water	<b>WATER FOR RURAL, REMOTE AND REGIONAL COMMUNITIES</b>  <b>280 TASMANIA HAS SMALL TOWNS WITH BIG CHALLENGES</b> Pat Cullinane, Resonance Consulting  <b>165 THE DROVER'S RIGHT AND CONTEMPORARY WATER QUALITY MANAGEMENT: COLIBAN WATER'S DRINKING WATER STORAGES AND LAND MANAGEMENT PLAN</b> Meredith Gibbs, HWL Ebsworth Lawyers  <b>364 A LESSON IN MANAGING UNCERTAINTY - 5 YEARS OF DEVELOPING AND OPERATING THE MITCHELL RIVER ASR SCHEME</b> Simon Robertson, East Gippsland Water	<b>CUSTOMERS &amp; COMMUNITY</b> Embracing Technology  <b>336 THE DIGITAL FUTURE OF WATER</b> Stuart Hartley, EY  <b>244 THE URBAN WATER PROJECT: INNOVATION IN COMMUNICATION AND ENGAGEMENT</b> Kelly Hertzog, City of Melbourne  <b>221 LAUNCH OF NEW ONLINE MAP FOR LEAKS AND BREAKS</b> Paul Ambrosoli, Sydney Water	<b>AUSTRALIAN WATER ASSOCIATION PRESENTS: WATER LEADERS FORUM</b>  <b>417 SETTING MEASURABLE, REPORTABLE TARGETS FOR DRINKING WATER CATCHMENT OPERATIONS</b> Water Futures Pty Ltd & UNSW	
1215 - 1315	LUNCH							
1315 - 1515	<b>LIVEABLE &amp; SUSTAINABLE CITIES OF THE FUTURE</b> The Melbourne Experience  <i>To be announced</i>  <i>To be announced</i>  <b>66 DEVELOPING A WATER SENSITIVE CITY LEAPFROGGING PROGRAM</b> Lara Werbeloff, Monash University	<b>OPERATIONS &amp; ASSET MANAGEMENT</b> Treatment Optimisation & Efficiency in Wastewater  <b>131 RISK BASED ODOUR MANAGEMENT</b> Ari Shammai, MWH  <b>156 BENCHMARKING SUSTAINABILITY OF WASTEWATER TREATMENT OPERATIONS TO INFORM THE FUTURE: A CASE STUDY ON QUEANBEYAN</b> Ryan Signor, AECOM  <b>203 REDUCING ENERGY CONSUMPTION OF CHRISTIES BEACH WWTP</b> Amin Malekizadeh, Allwater  <b>256 FACTORS INFLUENCING LOG REMOVAL OF PATHOGENS IN MEMBRANE BIOREACTORS, THE KEY FOR PROCESS VALIDATION</b> Amos Branch, UNESCO Centre for Membrane Science and Technology, The University of New South Wales, Australia	<b>OPERATIONS &amp; ASSET MANAGEMENT</b> Recycled Water  <b>188 REVIEW OF SIZING OF RECYCLED WATER TREATMENT PLANTS</b> Pam Kerry, South East Water  <b>153 VALIDATION OF AN 85ML/D RECYCLED WATER PLANT IN COMPLIANCE WITH VICTORIAN DEPARTMENT OF HEALTH GUIDELINES</b> Sam Costello, Melbourne Water  <b>170 PRACTICAL INNOVATIONS IN WASTEWATER AND RECYCLED WATER TREATMENT PLANT DESIGN AND OPERATION</b> Mark Newland, Downer	<b>LIVEABLE &amp; SUSTAINABLE CITIES OF THE FUTURE</b> Renewable Energy  <b>433 ENERGY SELF-SUFFICIENT PLANTS THROUGH CO-DIGESTION</b> SUEZ  <b>353 THE ROLE OF RENEWABLE ENERGY IN THE AUSTRALIAN WATER SECTOR - THE WATER ENERGY NEXUS</b> Wayne Goodwin, Beca  <b>145 BASKING IN THE SUN: GETTING THE MOST FROM SOLAR POWER</b> Ruben Muller, Sydney Water  <b>196 WASTEWATER GROWN ALGAL BIOMASS FOR RENEWABLE ENERGY PRODUCTION: MELBOURNE WATER PILOT STUDY</b> Howard Fallowfield, Flinders university	<b>WATER FOR RURAL, REMOTE AND REGIONAL COMMUNITIES</b> Water Treatment  <b>155 BIOLOGICAL IRON AND MANGANESE TREATMENT FOR REMOTE COMMUNITIES: CASE STUDY IN NORTHERN TERRITORY</b> Veronique Bonnelle, SUEZ  <b>118 AN ALTERNATIVE SOLAR-POWERED POINT-OF-USE WATER DISINFECTION SYSTEM</b> Gough Lui, UNSW Water Research Centre  <b>348 WORLD FIRST COMMERCIAL USE OF HOLLOW FIBRE NANOFILTRATION FOR TREATMENT OF HIGH COLOUR SURFACE WATER</b> Geoffrey Frost, Parsons Brinckerhoff Australia  <b>160 WATER TREATMENT FOR THE SMALL RURAL TOWN OF QUAMBATOOK</b> Chaitanya Tokekar, GWMWater	<b>CUSTOMERS &amp; COMMUNITY</b> Customer Driven Solutions  <b>220 CUSTOMER EXPERIENCE DESIGN - TRANSFORMING INTO A CUSTOMER CENTRIC ORGANISATION</b> Michael Storey, Sydney Water  <b>133 BARWON WATER'S CUSTOMER TRANSACTION MONITOR</b> James Garriock, Insync  <b>78 FINDING THE CONNECTION BETWEEN CUSTOMERS/COMMUNITY &amp; INFRASTRUCTURE INVESTMENT DECISIONS</b> Peter Seltsikas, SA Water  <b>302 VALUES-BASED SOLUTIONS: EMBEDDING STAKEHOLDER VIEWS INTO INTEGRATED WATER INFRASTRUCTURE</b> Lindsey Beck, Lindsey B & Ben Asquith, Decentralised Water Consulting	<b>WLF CONTINUED</b>  <b>418 MAKING CAPITAL WORK - WHO HAS THE MONEY FOR FUTURE WATER INFRASTRUCTURE INVESTMENT</b> Aither Pty Ltd	<b>WORKSHOP 2</b>
1515 - 1600	AFTERNOON TEA							
	<b>LIVEABLE &amp; SUSTAINABLE CITIES OF THE FUTURE</b> Integrated Water Solutions  <b>19 OUTCOMES FROM INTEGRATED WATER PLANNING</b> Robert Considine, Melbourne Water  <b>218 INTEGRATED WATER SOLUTIONS FOR PAKENHAM EAST</b> Heath Baker, South East Water  <b>250 MELTON AND WYNDHAM NORTH INTEGRATED WATER MANAGEMENT ANALYSIS</b> Michelle Pinan, City West Water	<b>OPERATIONS &amp; ASSET MANAGEMENT</b> Modelling  <b>148 THE USE OF RHODAMINE WT IN A DRINKING WATER RESERVOIR TO VALIDATE A 3D HYDRODYNAMIC MODEL</b> Kathy Cinque, Melbourne Water  <b>223 INNOVATIVE TWO STAGE APPROACH TO MODELLING DISTRIBUTION SYSTEM WATER QUALITY</b> James Goode, Yarra Valley Water  <b>109 USING IMPROVED SEWER MODELS TO DETERMINE TRADE WASTE CONTRIBUTIONS TO DOWNSTREAM CORROSION AND ODOUR</b> Amy McDonald, CH2M	<b>OPERATIONS &amp; ASSET MANAGEMENT</b> Asset Optimisation & Efficiency in Water  <b>35 SINGAPORE'S DEEP TUNNEL SEWERAGE SCHEME - PHASE 2</b> James Currie, Black & Veatch - AECOM JV  <b>158 UNDERSTANDING OPERATIONAL PERFORMANCE THROUGH NEURAL NETWORK MODELLING</b> Peter Hillis, AECOM  <b>229 CHLORINE RISK REDUCTION AND RENEWAL STRATEGY</b> Igor Posenjack, Melbourne Water	<b>LIVEABLE &amp; SUSTAINABLE CITIES OF THE FUTURE</b> Resource Recovery & Waste to Energy Solutions  <b>372 INNOVATIVE WASTE TO ENERGY BIOREFINERY CONCEPT FOR THE UTILISATION OF WASTEWATER AND HOUSEHOLD WASTE</b> Ivan Reolon, Veolia Water Technologies & Solutions  <b>117 MOVING WASTEWATER TREATMENT FACILITIES TO RESOURCE RECOVERY FACILITIES</b> Dr Art Umble of MWH, Denver, USA  <b>67 ENERGY AND NUTRIENT FACTORY AT AMERSFOORT WWTP IN THE NETHERLANDS</b> Luc Kox, Blue Horizon Solutions	<b>SUSTAINABLE INDUSTRIES</b> Developing the North  <b>197 IS THE "VISION FOR NORTHERN AUSTRALIA" DAMMED?</b> Thomas Neame, CH2M  <b>227 TROPICAL HIGHS: APPLYING LESSONS LEARNT FROM EXISTING GROUNDWATER RECHARGE SCHEMES TO INFORM NORTHERN AUSTRALIA'S PROPOSED INCREASING DEMAND FOR WATER</b> Carly Waterhouse, CH2M  <b>198 INCENTIVISING INNOVATION WITH PRIVATE PARTNERS: THE VICTORIAN DESALINATION PROJECT EXPERIENCE</b> Peter Sammut, Department of Environment, Land, Water and Planning Capital Projects Group	<b>GOVERNANCE, REGULATION &amp; STRUCTURE</b> Economic Issues  <b>93 ECONOMIC LEVEL OF WATER CONSERVATION</b> Jessica Hanna, IPART  <b>253 INNOVATIVE "VALUE CAPTURE" AND "TAX INCREMENT" FINANCING FOR AUSTRALIAN WATER UTILITIES</b> Jonathan Anstey, Coliban Water	<b>WORKSHOP 3</b>	<b>WORKSHOP 4</b>  <b>409 ENHANCING BUSINESS OUTCOMES THROUGH EDUCATION</b> Australian Water Association Water Education Network
1730 - 1830	HAPPY HOUR AT THE CLUBHOUSE IN EXHIBITION HALL							



0900 – 1000	KEYNOTE SPEAKER SESSION		
1000 – 1045	MORNING TEA		
	Room 1	Room 2	Room 3
1045 – 1215	<b>LIVEABLE &amp; SUSTAINABLE CITIES OF THE FUTURE</b> Stormwater Management	<b>OPERATIONS &amp; ASSET MANAGEMENT</b> Data Management & Decision Support Tools	<b>OPERATIONS &amp; ASSET MANAGEMENT</b> Pumps
	<b>383 COMMUNITY PERSPECTIVE ON CONSULTATION ON URBAN STORMWATER MANAGEMENT: LESSONS FROM BROWN HILL CREEK</b> Peter Dillon	<b>12 HEALTH-BASED TARGETS PERFORMANCE REPORTING - USING VIRTUAL SCADA TAGS TO FACILITATE DATA ANALYSIS</b> Peter Prevos, Coliban Water	<b>112 OPTIMISATION OF PUMPING STATIONS TO REDUCE OPERATION AND MAINTENANCE COSTS</b> Darren Cash, Sydney Water
	<b>74 USING MARKET BASED INSTRUMENTS TO DELIVER COST-EFFECTIVE STORMWATER MANAGEMENT OUTCOMES</b> Jeremy Cheesman, Marsden Jacob	<b>37 OPTIMISATION OF CHEMICAL DOSING IN SEWER NETWORKS USING ONLINE MONITORING EQUIPMENT</b> Gino Iori, Sydney Water	<b>127 IMPROVING SYSTEM OPERABILITY AND BENEFITS OF ASSET REUSE - THE ALFRED STREET PUMP STATION UPGRADE PROJECT</b> Anthony Domanti, WSP Parsons Brinckerhoff
	<b>323 SYDNEY CITY AREA 29 STORMWATER RENEWAL</b> Joe Rezac, Insituform Pacific Pty Limited	<b>386 MANUFACTURING WATER: CHALLENGING THE PARADIGM FOR OPERATIONAL DATA MANAGEMENT</b> Robran Cock, TRILITY	<b>213 DYNAMIC OPERATING BOUNDS FOR SEWER PUMP STATIONS: GRAPHIC LIVE</b> Karl Blackhall, City West Water
1215 – 1315	LUNCH		
1315 – 1515	<b>LIVEABLE &amp; SUSTAINABLE CITIES OF THE FUTURE</b> Waterways & Open Space	<b>OPERATIONS &amp; ASSET MANAGEMENT</b> Desalination	<b>OPERATIONS &amp; ASSET MANAGEMENT</b> Pipe Assets
	<b>75 AMENITY AND ECOLOGICAL VALUES OF MELBOURNE'S WATERWAYS</b> Bethany Cooper, La Trobe University	<b>190 BUSINESS RULES FOR OPERATING THE DESAL PLANT</b> Nathan Taylor, CEDA	<b>136 HIGH PRECISION GPS AIDED IN-PIPE DISTANCE CALIBRATION FOR SATELLITE IMAGE-BASED PIPELINE MAPPING</b> Lei Shi, University of Technology, Sydney
	<b>144 BEST PRACTICE GUIDELINES IN FUNCTIONAL OPEN SPACE</b> Damien Frankling, City West Water	<b>375 LIFECYCLE ASSET MANAGEMENT OPTIMISATION OF DESALINATION PLANT</b> Frederic Blin, AECOM Australia Pty Ltd	<b>32 PREDICTING THE CORROSION OF CAST IRON PIPES</b> Robert Peterson, The University of Newcastle
	<b>228 GENERATING LIVEABILITY BENEFITS FROM INVESTMENTS IN WATER AUTHORITY LAND ASSETS</b> Kym Whiteoak, RMC	<b>129 A NOVEL APPROACH FOR WASTE MANAGEMENT IN DESALINATION</b> Susanthi Liyanaarachchi, RMIT university	<b>270 USE OF AERIAL DRONES (UAV'S) FOR ASSET INSPECTION</b> Amanda Mussared, SA Water
	<b>261 OUR PLACE, YOUR SPACE: OPENING WATER UTILITY LAND FOR LIVEABILITY</b> Kathryn Naylor, Melbourne Water	<b>191 SEQWATER OPTIMISING FILTER DESIGN THROUGH PILOT TRIALS</b> Mathew Clements, Seqwater	<b>427 EVALUATION OF TRENCHLESS PRESSURE-PIPE REHABILITATION PRODUCTS</b> John Everton, ALS
1515 – 1600	AFTERNOON TEA		
1600 – 1730	<b>LIVEABLE &amp; SUSTAINABLE CITIES OF THE FUTURE</b> Flood Resilience and Management	<b>OPERATIONS &amp; ASSET MANAGEMENT</b> Asset Management	<b>OPERATIONS &amp; ASSET MANAGEMENT</b> Modelling
	<b>61 GREEN SQUARE: PROTECTING COMMUNITIES AND ENABLING URBAN RENEWAL THROUGH EFFECTIVE FLOOD RISK MANAGEMENT</b> Nick Taylor, WSP Parsons Brinckerhoff	<b>333 A NEW STRATEGIC APPROACH TO WATERMAIN MANAGEMENT</b> Dr Peter Zeman, Sydney Water	<b>36 LIVE MODELLING WITH REMOTE CONTROL ASSETS</b> Ranga Fernando, Yarra Valley Water
	<b>94 FROM FLOODPLAINS TO WATER SENSITIVE CITIES: ARE WE INVESTING ENOUGH TO ENABLE LIVEABLE COMMUNITIES FOR THE FUTURE?</b> Suresh Bajracharya, Melbourne Water	<b>332 SERVICE-DRIVEN ASSET MANAGEMENT: ENABLING THE FUTURE STATE</b> Dave Robinson, Assetic	<b>268 DEVELOPMENT OF AN OPERATIONAL 7-DAY STREAMFLOW FORECAST SERVICE FOR AUSTRALIA</b> Aynul Kabir, Bureau of Meteorology
	<b>76 AN INTEGRATED APPROACH TO ENHANCING URBAN FLOOD RESILIENCE IN ELWOOD, MELBOURNE</b> Briony Rogers, CRC Water Sensitive Cities, Monash University	<b>9 HOW TO REDUCE CONCRETE SEWER PIPE CORROSION - FINDINGS FROM A RECENT AUSTRALIA WIDE FIELD STUDY</b> Tony Wells, The University of Newcastle	<b>371 RISK-BASED PERFORMANCE ANALYSIS OF FINAL SETTLING TANKS</b> Craig Pregalato, MMI Engineering

MORNING TEA				
Room 4	Room 5	Room 6	Room 7	Room 8
<b>WATER FOR RURAL, REMOTE AND REGIONAL COMMUNITIES</b> Water Management	<b>CUSTOMERS &amp; COMMUNITY</b> Consumer Attitudes and Influencing Behaviours	<b>CONTEMPORARY MANAGEMENT</b> Innovation & Change Management	<b>WORKSHOP 5</b>	Australian Water Association / WSAA presents: <b>CUSTOMER VALUE &amp; ENGAGEMENT</b>
<b>362 QUEENSLAND'S NEW WATER SECURITY PARTNERSHIPS</b> Ian White, Queensland Government Department of Energy and Water Supply	<b>358 CONSUMER ATTITUDES AND THE WATER SECTOR: FINDINGS FROM THE AWA / ARUP WATER CONSUMER SURVEY</b> Daniel Lambert, ARUP	<b>146 INCORPORATING NEW TECHNOLOGY INTO RESISTANT MINDSETS: A CASE STUDY OF THE RIVERDALE BRANCH SEWER</b> Anna Kosovac, Yarra Valley Water/ The University of Melbourne	<b>419 VALIDATING WATER TREATMENT IN INTEGRATED URBAN WATER MANAGEMENT: INTRODUCING 'WATERVAL'</b> Australian Water Recycling Centre of Excellence	
<b>311 INCORPORATING REGIONAL CONTEXT AND ITERATIVE APPROACHES INTO WHOLE-OF-WATER-CYCLE MANAGEMENT</b> Simon Roberts, E2Designlab	<b>308 TRANSFORMING CUSTOMER PERCEPTIONS OF DRINKING WATER QUALITY ONE SIP AT A TIME</b> Kelly Newton, SA Water	<b>54 BEHAVING LIKE AN INNOVATIVE ORGANISATION</b> Stuart Waters, Twyford		
<b>80 ASSESSING DRINKING WATER QUALITY RISKS ACROSS DIVERSE REGIONAL SCHEMES</b> Andrew Wyber, Water Corporation	<b>260 KEEP WIPES OUT OF PIPES - INFLUENCING CUSTOMER BEHAVIOUR</b> Keiran Smith, Sydney Water	<b>245 CHANGE MANAGEMENT</b> Mae-Lin Han, Yarra Valley Water		
LUNCH				
<b>WATER FOR RURAL, REMOTE AND REGIONAL COMMUNITIES</b> Rural and Remote Success Stories	<b>CUSTOMERS &amp; COMMUNITY</b> Innovative Approaches to Engagement: Pricing and Projects	<b>CONTEMPORARY MANAGEMENT</b> Transformations & Behavioural Change	<b>WORKSHOP 6</b>	Australian Water Association / WSAA presents: <b>CUSTOMER VALUE &amp; ENGAGEMENT (CONT.)</b>
<b>264 NSW ABORIGINAL COMMUNITIES WATER AND SEWERAGE PROGRAM</b> Paul Byleveld, NSW Health	<b>360 IS THE PRICE RIGHT? UNDERSTANDING CUSTOMER VALUE</b> Lauren Mittiga, Melbourne Water	<b>11 TAP CRAWL: USING TASTE TESTING AS A TOOL TO TRANSFORM EMPLOYEE PERCEPTIONS OF THE CUSTOMER EXPERIENCE</b> Peter Prevos, Coliban Water	<b>423 TRANSITIONING TO A WATER SENSITIVE CITY PART 1: BENCHMARKING PERFORMANCE</b> CRC for Water Sensitive Cities	
<b>215 SUCCESS FACTORS FOR IMPLEMENTING SMALL COMMUNITY WATER SUPPLIES IN THE FAR NORTH OF NEW ZEALAND</b> Francesca Nicklin, Beca	<b>132 BEYOND ECONOMICS: USING SOCIAL RESEARCH IN WATER PRICING</b> Alex Lawrie, University of Technology Sydney	<b>96 CO-CREATING SYDNEY WATER'S SIGNATURE BEHAVIOURS - BUILDING TRUE BLUE BEHAVIOURAL CHANGE</b> Craig Davis, Sydney Water		
<b>368 SHORT TERM EMERGENCY WATER SUPPLY FOR BROKEN HILL NSW</b> Hendrik Van Rhijn & Terry Schubach, NSW Water Solutions	<b>251 PARK ORCHARDS SEWERAGE PROJECT - COLLABORATING WITH CUSTOMERS TO TRIAL NEW SOLUTIONS</b> David Diaz, Yarra Valley Water	<b>274 YARRA VALLEY WATER'S PURPOSE LED TRANSFORMATION</b> Matt Balfie, Yarra Valley Water		
<b>345 WATER SUPPLY FOR RURAL, REMOTE AND FROZEN COMMUNITIES: TALES AND LESSONS FROM NORTHERN MONGOLIA</b> Sam Barnes, WSP   Parsons Brinckerhoff	<b>350 SMALL TOWN, MAJOR SUCCESS</b> Catherine Baird, Gippsland Water	<b>278 SCANNING OUR FUTURE</b> Gwyneth Elsum, Melbourne Water		
AFTERNOON TEA				
<b>SUSTAINABLE INDUSTRIES</b> Innovation, Sustainability & Efficiency	<b>GOVERNANCE, REGULATION &amp; STRUCTURE</b> Stormwater Management	<b>CONTEMPORARY MANAGEMENT</b>	<b>WORKSHOP 7</b>	Australian Water Association presents: <b>INTERNATIONAL WORKSHOP</b>
<b>354 INNOVATIONS IN WATER REUSE AND RECYCLING IN DAIRY PROCESSING</b> Rachel Shaw, Beca Tom Bamford, Fonterra	<b>266 DEVELOPMENT OF A RISK BASED APPROACH FOR THE MANAGEMENT AND REGULATION OF WET WEATHER OVERFLOWS</b> Catherine Port, Sydney Water	<b>172 THE AROONA INTEGRATED ALLIANCE STRATEGY FOR DELIVERING COST EFFICIENCIES AND IMPROVING THE PERFORMANCE</b> Jerome Douzich, Water Corporation	<b>TRANSITIONING TO A WATER SENSITIVE CITY PART 2: DELIVERING YOUR VISION</b> CRC for Water Sensitive Cities	
<b>140 SUSTAINABLE MINING OPERATIONS AND THE PROSPECTIVE ROLE OF MEMBRANE BIO-REACTOR IN MINE WATER MANAGEMENT</b> Harish Ravishankar, RMIT University	<b>174 FINANCING LIFECYCLE COSTS OF STORMWATER WATER QUALITY ASSETS</b> Joel Byrnes, Marsden Jacob Associates	<b>44 MANAGING RELATIONSHIPS IN COLLABORATIVE CONTRACT PROCUREMENT</b> Davin Shellshear, Shellcom Services		
<b>232 SUSTAINABLE EFFICIENCY - IT'S A CULTURAL JOURNEY</b> Shaun Cumming, Barwon Water	<b>22 CO-GOVERNANCE TO FACILITATE THE INTEGRATION OF STORMWATER HARVESTING INTO TRADITIONAL STORMWATER MANAGEMENT</b> Guiliano Andy, City West Water	<b>194 A DIGITAL STRATEGY FOR LAND DEVELOPMENT</b> Amy Alchin, Yarra Valley Water		

	Room 1	Room 2	Room 3
<b>0900 – 1030</b>	<b>LIVEABLE &amp; SUSTAINABLE CITIES OF THE FUTURE</b> Climate Resilience	<b>OPERATIONS &amp; ASSET MANAGEMENT</b> Innovations	<b>OPERATIONS &amp; ASSET MANAGEMENT</b> Failure & Lessons Learnt
	<b>351 THE ROLE OF CLIMATE RESILIENT WATER SOURCES IN AUSTRALIA</b> Matthew Hardy, Bureau of Meteorology	<b>287 NATIONAL GUIDELINE FOR MANAGING FOOD, FATS, OILS AND GREASE (FFOG)</b> John Ryan, Yarra Valley Water	<b>150 EVERY CLOUD HAS A SILVER LINING - ASSET MANAGEMENT LESSONS FROM A SIGNIFICANT CHANNEL FAILURE</b> Shaun Cumming, Barwon Water
	<b>111 BUILDING A CLIMATE RESILIENT BULK WATER SUPPLY FOR SOUTH EAST QUEENSLAND</b> Cameron Wearing, Seqwater	<b>273 USING TREE CANOPY MAPPING TO IMPROVE EFFICIENCY OF WASTEWATER NETWORK CCTV PROGRAMS</b> Mark McGowan, Sydney Water	<b>319 PROSPECT REMEDIATION 2014</b> Koen Windey, Stark Engineering Consulting
	<b>200 DOWNSCALED CLIMATE DATA FOR PROJECTING CLIMATE CHANGE IMPACTS ON RESERVOIRS</b> Leon van der Linden, SA Water	<b>69 FUTURE PROOF DECENTRALISED SLUDGE RECYCLING - PYREG</b> Bert Geraats, Eliquo Water & Energy	<b>217 LESSONS LEARNT ON PIPE FAILURE MECHANISMS FROM OBSERVATION OF EXHUMED CI PIPES</b> Benjamin Shannon, Monash University
<b>1030 – 1115</b>	<b>MORNING TEA</b>		
<b>1115 – 1245</b>	<b>LIVEABLE &amp; SUSTAINABLE CITIES OF THE FUTURE</b> Climate Adaptation	<b>OPERATIONS &amp; ASSET MANAGEMENT</b> Sewage Treatment/Optimisation	<b>OPERATIONS &amp; ASSET MANAGEMENT</b> Distribution Systems
	<b>320 ARE WE IN DEEP WATER? WATER SCARCITY &amp; IT'S LIMITS TO ECONOMIC GROWTH</b> Scott Kelly, Institute for Sustainable Futures	<b>255 WHEN DO WE REPLACE DIFFUSERS AT WWTPS?</b> Dr Nirmala Dinesh, SA Water	<b>98 BENEFITS AND SAVINGS FROM THE DISTRIBUTION OPTIMISATION TOOL</b> Alana Duncker, MWH
	<b>73 IMPROVING ADAPTION TO OUR CHANGING CLIMATE – A NEW FRAMEWORK WITH CRITICAL SUCCESS MEASURES FOR WATER UTILITIES</b> Robert Humphries, Auriga Consulting	<b>269 FROM CONCEPT TO OPERATIONAL PLANT – MT MARTHA STP DIGESTER UPGRADE AND SOLAR DRYING FACILITY</b> Peter Insole, AECOM	<b>202 IMPROVING LARGE BULK WATER MEASUREMENTS BY INNOVATIVE LASER DOPPLER VELOCIMETRY (LDV) TECHNIQUE</b> Edgar Johnson, GHD Pty Ltd
		<b>151 BENCH SCALE INVESTIGATION OF MAINSTREAM DEAMMONIFICATION BY ANAMMOX AT LOW TEMPERATURES</b> Thomas Yeager, Victoria University	<b>211 UNDERSTANDING AND REDUCING THE RISK OF DIRTY WATER COMPLAINTS IN DISTRIBUTION SYSTEMS</b> Amanda Mussared, SA Water
<b>1245 – 1345</b>	<b>LUNCH</b>		
<b>1345 – 1445</b>	<b>KEYNOTE PANEL SESSION</b>		
<b>1445 – 1515</b>	<b>CLOSING SESSION</b>		
<b>1515 – 1600</b>	<b>CLOSING DRINKS</b>		

Room 4	Room 5	Room 6	Room 7
<b>GOVERNANCE, REGULATION &amp; STRUCTURE</b> Achieving Water Quality Improvements	<b>ASSET MANAGEMENT</b> Case Studies	<b>WORKSHOP 8</b>	<b>WORKSHOP 9</b>
<b>30 COLLABORATING FOR A HEALTHIER MERRI CREEK</b> Glen Carter, Yarra Valley Water	<b>225 CITY TUNNEL INSPECTION AND REPAIR 2015</b> Jeyatharsini Rajjilingam, Sydney Water	<b>DELIVERING OUTCOMES THROUGH COLLABORATIVE RESEARCH – COMMON LESSONS LEARNT FROM THE WATER INDUSTRY</b> Smart Water Fund	<b>412 NEW INSIGHTS INTO FAILURE PREDICTION, CONDITION ASSESSMENT AND CORROSION ON CRITICAL PIPES TO BENEFIT CUSTOMERS</b> The Critical Pipes Project
<b>343 TRADING FOR A BETTER FUTURE OF MORETON BAY</b> Ed Beling, Arup	<b>33 USING DIGITAL METERING TO FIND LEAKS AND BUILD A BUSINESS CASE</b> Virginia Collins, Yarra Valley Water		
<b>325 DRINKING WATER QUALITY MANAGEMENT - NEW ZEALAND CASE STUDY</b> Joey Loke, Mott MacDonald	<b>113 CONSERVING WATER BY PRESSURE MANAGEMENT - SYDNEY WATER'S EXPERIENCE</b> Darren Cash, Sydney Water		
<b>MORNING TEA</b>			
<b>GOVERNANCE, REGULATION &amp; STRUCTURE</b> Infrastructure & Governance	<b>WATER FOR RURAL, REMOTE &amp; REGIONAL COMMUNITIES</b>	<b>WORKSHOP 10</b>	<b>WORKSHOP 11</b>
<b>39 ENHANCING CORPORATE GOVERNANCE - THE EXECUTIVE'S ROLE</b> Lisa Coletta, Sydney Water	<b>41 PUMP OPTIMISATION OF THE SOUTHERN MORNINGTON PENINSULA PRESSURE SEWER SCHEME</b> Garrath James, KBR	<b>403 DEVELOPING GREAT STRATEGIES FOR WATER UTILITIES</b> SA Water	<b>416 DUAL PIPE RECYCLED WATER SCHEMES – CONSTRUCTION AND MANAGEMENT OF BURIED ASSETS FOR CROSS CONNECTIONS- PLUMBING AND DISTRIBUTION PIPES</b> National Recycled Water Regulators Forum
<b>246 QUEENSLAND URBAN UTILITIES DEVELOPMENT SERVICES</b> Ben McDonnell, Queensland Urban Utilities	<b>20 ADAPTIVE WATER MANAGEMENT PATHWAYS IN KIRIBATI</b> Pierre Mukheibir, Institute for Sustainable Futures		
<b>382 PARTNERING WITHIN GOVERNMENT TO PROVIDE SUCCESSFUL COMMISSIONING OF COMMONWEALTH-FUNDED PROJECTS</b> Gavin Hanlon & Daniella McKenzie, NSW Water Solutions	<b>106 SUNLIGHT PHOTODEGRADATION OF MICROPOLLUTANTS IN WASTEWATER EFFLUENT</b> Yufei Wang, RMIT University		