

# UTILITIES INVESTIGATION REPORT

## RESIDENTIAL SUBDIVISION

### WEST CULBURRA

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**CLIENT: REALTY REALIZATIONS**



**allen, price & associates**  
land and development consultants

**Ref: 25405**  
**November 2012**  
**Rev: 00**

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Rev	Date	Details
P0	November 2012	Issued for client review
00	29 November 2012	Issued for Development Application

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## 1. INTRODUCTION

Realty Realizations are proposing a residential subdivision over lot 5 DP1065111, lot 6 DP1065111 & Por 61 61 DP755971 off Culburra Rd, West Culburra. The expected lot yield of the proposal is approximately 784 residential allotments, 27 industrial allotments, 13 higher density allotments and 3 tourist sits, plus associated public reserves, sporting fields, electrical zone substation and residues.

The site is located within the coastal zone (under SEPP71) and is therefore defined as a Major Project under Part 3A of the Environmental Planning and Assessment Act, 1979. (EPA Act)

The Minister for Planning has formed an opinion that the proposal is a Major Project and the Director General of the Department of Planning has issued Environmental Assessment Requirements (EAR) under s75F of the EPA Act.

The purpose of this report is to address EAR's 4 Infrastructure Provision, the details of which are outlined below:

- 4.1 Address existing capacity and any required augmentation of sewerage, water, electricity, waste disposal, telecommunications and gas infrastructure, in consultation with relevant agencies. Identify and describe staging, if any, of infrastructure works. Ensure proposed infrastructure (such as stormwater basins, wetlands, cycling/walking tracks) are located on private land and outside of any riparian corridors/ecological buffers.
- 4.2 Identify any existing easements over the site.
- 4.3 Address proposed contingency measures to ensure sewage infrastructure does not negatively impact on water quality of the adjacent wetlands and the Crookhaven River.
- 4.4 Address and provide the likely scope of any planning agreements and/or development contributions with Council/Government agencies (including relevant community/state infrastructure contributions).

The site has been identified by Shoalhaven City Council as being zoned for residential development and has been included in various growth management documents.

Council has prepared a draft Shoalhaven Local Environment Plan 2009 that proposes to modify the current zoning of 2(c) to R1 General Residential Zone and perimeter waterway areas as E2 Environment Conservation Zone.

## 2. THE SITE

The existing site comprises land which is identified

- Lot 61 DP755971 (Portion 61);
- Lot 6 DP1065111
- Lot 5 DP1065111

The site is primarily located on the northern side of Culburra Road and is generally within the Crookhaven River catchment and comprises approximately 127Ha of land. A small section of the site is located on the southern side of Culburra Rd. The site is located adjacent to and west of Culburra Beach CBD, extending approximately 3km along Culburra Road (see figure 1).

The site is bounded by Culburra Road to the south, Crookhaven River to the north, private property to the west and Canal St to the east.

The site is accessed from a number of tracks from Culburra Rd and surrounding streets.



Figure 1: Site Plan

The site predominantly is comprised of gently sloping land falling to the Crookhaven River to the north.

The site is generally vegetated land that has been zoned for residential development since 1992. There are some patches of clearing which have been used for agriculture.

### 3. INFRASTRUCTURE REVIEW

The following infrastructure has been reviewed and discussions held with each service provider as outlined below:

- Sewer – Shoalhaven Water
- Water Supply – Shoalhaven Water
- Electricity Reticulation – Endeavour Energy
- Waste Collection and Disposal – Shoalhaven City Council
- Telecommunications – Telstra and or/NBN Co
- Gas – Jemena Pty Ltd
- General Infrastructure – Shoalhaven City Council

### **3.1. SEWERAGE INFRASTRUCTURE**

#### **3.1.1 PHYSICAL INFRASTRUCTURE**

The site is generally unserviced with sewerage reticulation. However, as part of Shoalhaven Water's Development Servicing Plans for Sewerage Services (November 2005), it has been identified that four sewerage pumping stations (SPS) and rising mains (RM) are required to service the site.

Shoalhaven Water has proposed four pumping stations which will be positioned to allow the site to drain towards the Crookhaven River. The SPS's will be sized to cater for the proposed development areas and are proposed to be constructed from east to west allowing an expansion of the site in a westerly direction.

The area to the south of Culburra Rd will require another SPS to drain back to the Sewerage Treatment Plan which is located on the northern side of Culburra Rd.

All SPS will be owned and operated by Shoalhaven Water.

Possible locations of the SPS and routes of the RM are shown indicatively on the plan attached in Appendix A.

As the SPS and RM are included in Shoalhaven Water's DSP2005, the construction of this infrastructure will be the responsibility of Shoalhaven Water. The work will be funded by developers through the contribution of Section 64 charges paid by developers within the Shoalhaven.

DSP2005 outlines the timing of the work to be as follows:

SPS "A" and RM – 2009/10

SPS "B" and RM – 2014/15

SPS "C" and RM – 2020/21

SPS "D" and RM – 2026/27

Stage 1 of the proposal is the area to the south of Culburra Rd so the SPS for this area will need to be brought on line first.

Sewerage reticulation to the individual allotments will be installed by the developer.

The sewerage treatment plant is proposed to have its capacity increased to cater for the growth area. This work was proposed for completion in 2011-2013 but has been delayed as the development has not yet proceeded.

The site does contain an existing RM which transports sewerage from Greenwell Point to Culburra STP. This RM may require some realignment to avoid some of the proposed development. This work will be undertaken by the developer in consultation with Shoalhaven Water.

In conclusion, the sewerage infrastructure that is proposed to be installed by Shoalhaven Water and the developer will adequately service the development and provides no constraints to development proceeding.

#### **3.1.2 DEVELOPMENT CONTRIBUTIONS - SEWER**

The development contributions payable are in accordance with DSP2005 indexed to current rates. At the time of writing, the current Section 64 Contribution (2012/2013) is \$8,339/ET.

This contribution is paid to Shoalhaven Water prior to the release of the Subdivision Certificate.

### **3.2. WATER SUPPLY INFRASTRUCTURE**

#### **3.2.1 PHYSICAL INFRASTRUCTURE**

The site is currently not serviced with water supply infrastructure.

As part of Shoalhaven Water's Development Servicing Plans for Water Supply Services (November 2005), it has been identified that an additional trunk main will be required to service the proposed development on the site.

Shoalhaven Water has proposed a single DN300 spur main from the existing trunk main located in Culburra Rd. The location of the proposed trunk main appears to be through Council's STP site which is private property owned by Shoalhaven City Council.

The location of the proposed trunk main is shown indicatively on the plan attached in Appendix B.

As the trunk main is included in Shoalhaven Water's DSP2005, the construction of this infrastructure will be the responsibility of Shoalhaven Water. The work will be funded by developers through the contribution of Section 64 charges paid by developers in the Shoalhaven.

DSP2005 outlines the timing of the work to be in 2013/2014.

Water supply reticulation to each allotment will be the responsibility of the developer. APA has not prepared a draft water supply reticulation layout for the site. Water mains will be provided in each roadway adjacent to proposed lots and will be sized to cater for the necessary requirements of Shoalhaven Water for pressure and flow and will also be provided with hydrants in accordance with AS2419.1 to ensure suitable water is available for fire fighting purposes.

In conclusion, the water supply infrastructure that is proposed to be installed by Shoalhaven Water and the developer will adequately service the development and provides no constraints to development.

#### **3.2.2 DEVELOPMENT CONTRIBUTIONS - WATER**

The development contributions payable are in accordance with DSP2005 indexed to current rates. At the time of writing, the current Section 64 Contribution (2012/2013) is \$6,578/ET.

This contribution is paid to Shoalhaven Water prior to the release of the Subdivision Certificate.

### **3.3. ELECTRICITY INFRASTRUCTURE**

#### **3.3.1 PHYSICAL INFRASTRUCTURE**

The site is currently not serviced with electricity supply.

The expected load for this development is significant and Endeavour Energy (previously Intergral Energy) has identified that significant upgrading works are required.

Advice from the electricity supplier is outlined below:

*At present there is no capacity within the existing Integral Energy network to make supply available to the proposed development or any stage of the proposed development.*

*A new 33kV/11kV zone substation would be required to be established to make supply available to the proposed development. The zone substation would be required to be established within the proposed development adjacent to the existing industrial estate off Strathstone Street and Regmoore Close, West Culburra.*

*The zone substation site would require a parcel of land measuring 100m x 100m. Depending on adjacent land uses, site constraints and a more detailed investigation, there may be opportunities to reduce or alter these dimensions to suit specific site constraints. The parcel of land should not be close to schools, child care centres or major metallic underground pipelines, should be essentially level & not flood affected, and have a dedicated all weather road to the zone substation site.*

*To make 33kV supply available to the new zone substation a new 33kV feeder is required to be established between the new zone substation and Culburra Zone Substation and a new 33kV feeder is required to be established between Culburra Zone Substation and Integral Energy's South Nowra Zone Substation which is located off the Princes Highway approximately 600m north of the intersection of the Princes Highway and BTU Road, South Nowra.*

*In addition, the 33kV supply to the new zone substation from Culburra Zone Substation is contingent upon the Tomerong Transmission Substation being established in Blackbutt Range Road, Tomerong to facilitate capacity at South Nowra Zone Substation for the connection of the new 33kV feeder at South Nowra Zone Substation. At present Tomerong Transmission Substation is programmed to be commissioned by the end of 2014.*

*The establishment of the new zone substation which would include the 33kV feeders would take between 3 to 5 years with commencement of works subject to Integral Energy being provided with an approved Development Application consent for the proposed development, a firm commitment from the customer that the proposed development would proceed, Integral Energy having title of the parcel of land for the new zone substation, the 33kV feeder routes between South Nowra Zone Substation & Culburra Zone Substation and Culburra Zone Substation and the new zone substation being secured and Tomerong Transmission Substation being commissioned. The establishment of the transmission substation, zone substation and the 33kV feeders would be funded by Integral Energy.*

*Some works may be able to be carried out concurrently subject to investigation & works programming and Integral Energy being provided with an approved Development Application consent for the proposed development, a firm commitment from the customer that the proposed development would proceed and Integral Energy having title of the parcel of land for the zone substation. Notwithstanding the previous, the new zone substation cannot be commissioned until Tomerong Transmission Substation is commissioned.*

*Integral Energy supply security standards will need to be met for the proposed development. When the new zone substation is established two new 11kV underground feeders will be required to be established to supply the development from the new zone substation. All electrical infrastructure within the development site must be reticulated with underground cables and padmount substations.*

*The connection to Integral Energy's network would be subject to compliance with Integral Energy's Network Connection Contestable Works General Terms and Conditions, AS/NZS3000 Wiring Rules and the Service and Installation Rules of NSW.*

*The customer will be responsible for the installation and funding of the "Connection Assets" in accordance with Integral Energy's Network Connection Contestable Works General Terms and Conditions and the AER (Australian Energy Regulator) determination for capital contributions. The connection assets include all works to make supply available to the proposed development from the new zone substation.*

*A Level 3 Accredited Service Provider (refer Department of Fair Trading at [www.fairtrading.nsw.gov.au](http://www.fairtrading.nsw.gov.au)) will need to be engaged by the customer to carry out the electrical network design of connection assets. A Level 1 Accredited Service Provider (refer Department of Fair Trading at [www.fairtrading.nsw.gov.au](http://www.fairtrading.nsw.gov.au)) will need to be engaged by the customer to carry out the electrical network construction of connection assets.*

*To proceed with the provision of supply for the proposed development, please complete the attached application and forward to Integral Energy at [CWAdmin@integral.com.au](mailto:CWAdmin@integral.com.au). The customer should submit the application to Integral Energy prior to making any financial commitments or undertaking any works on site. It should be noted that capacity is not reserved and the conditions of supply may change at the time of making an application.*

*The advice provided above is in response to an enquiry only and does not constitute a formal method of supply but an indication of the works required to make the connection.*

This is the normal process for provision of electrical infrastructure to subdivisions of this nature.

To service the site, we have identified a site for the new proposed zone substation that will be suited to Endeavour Energy's requirements.

Low voltage electrical reticulation to each allotment, along with the supporting high voltage network, will be the responsibility of the developer. APA has not prepared draft electrical reticulation layouts for the site at this time as these will not be a constraint to development. However, an overall electrical reticulation strategy will be provided during Stage 1 detailed design stage to limit the developer's infrastructure costs and to rationalise the location of substation infrastructure.

In conclusion, the electrical infrastructure that is proposed to be installed by Endeavour Energy and the developer will adequately service the development.

Timing of the delivery of the Zone substation may be an issue for the first stage and we will work closely with Endeavour Energy to allow staging of the development within their requirements.

### **3.3.2 DEVELOPMENT CONTRIBUTIONS**

The funding arrangements for electrical infrastructure are documented in the IPART report "Capital Contribution and Repayments for Connections to Electricity Distribution Networks in New South Wales" – Final Report - April 2002.

The IPART determination outlines the manner in which funding for the various aspects of any required works are calculated. Some works are funded by Integral Energy (e.g. zone substation augmentation and high voltage works feeding more than one development), some works are developer funded (e.g. high and low voltage reticulation) and some works are jointly funded.

The final breakdown on funding arrangements will be determined once detailed electrical designs are carried out and works approved by Integral Energy.

## **3.4. WASTE DISPOSAL INFRASTRUCTURE**

### **3.4.1 PHYSICAL INFRASTRUCTURE**

Shoalhaven City Council currently operates waste collection services throughout the LGA through waste disposal contractors, SITA. Council also self-operates waste disposal (landfill) facilities throughout the LGA,

the closest being at West Nowra, approximately 20km (straight line) from the site. Council also has a waste/recycling transfer depot on Coonemia Road, approximately 5km (straight line) from the site.

Council has previously advised that kerbside collection services will be provided on the following conditions:

- The development is in an urban area;
- The roads within the development have been constructed to Council's standards;
- The roads are owned and maintained by Council;
- Properties requiring kerbside collection are residential in nature; and
- Commercial allotments will be assessed at the time of any future development application over the land

As the development proposed to comply with the above requirements, kerbside collection services will be available to the site.

### **3.4.2 DEVELOPMENT CONTRIBUTIONS**

No development contributions for waste disposal services are payable by the developer. The waste collection service is paid by the individual allotment owners via quarterly rates notices.

## **3.5. TELECOMMUNICATIONS INFRASTRUCTURE**

### **3.5.1 PHYSICAL INFRASTRUCTURE**

Telecommunications infrastructure will be provided by the developer to suit NBN Co's requirements.

The design and installation of "pits and pipes" will be at the developers expense with design and installation to be approved by the relevant authority. All pits and pipes will be "NBN Co ready" in accordance with current design standards.

Due to the size of the site and the pending delivery of NBN Co services to the adjacent area, it is highly likely that infrastructure will be delivered by NBN Co. If not, Telstra is the telecommunications provider of last resort

In conclusion, the telecommunications infrastructure will be installed by the developer in accordance with current design and construction standards. All telecommunications infrastructure will be "NBN Co ready" with cables being provided by either Telstra or NBN Co. The decision on which authority will provide the infrastructure will be determined at the design phase of each stage of the subdivision.

### **3.5.2 DEVELOPMENT CONTRIBUTIONS**

No development contributions are payable for telecommunications services.

## **3.6. GAS INFRASTRUCTURE**

### **3.6.1 PHYSICAL INFRASTRUCTURE**

The site is not currently serviced with gas infrastructure.

Gas services do not exist in the wider area, and it is unlikely that Jemenba will supply gas to this site due to the trunk main installation costs.

Jemena Pty Ltd is responsible for the installation and management of the gas reticulation system.

Gas is a non-essential service, so the provision of this service does not affect the suitability of the subdivision.

### **3.6.2 DEVELOPMENT CONTRIBUTIONS**

If Jemena Pty Ltd/Actew AGL decides to install gas to the growth area, the gas reticulation can be installed in two different ways as outlined below:

1. The developer can supply a wider trench when installing electrical reticulation to allow the installation of the gas network by Jemena staff; or
2. Jemena staff will install gas reticulation throughout the subdivision following the creation of individual lots.

The option selected above is dependent upon cost and will be the subject of negotiations during detailed design phase with Jemena staff, if ever required.

## **3.7. GENERAL INFRASTRUCTURE**

### **3.7.1 PHYSICAL INFRASTRUCTURE**

Shoalhaven City Council has previously prepared studies on the necessary infrastructure to support the growth area (albeit the Culburra Growth area also includes land to the south on Long Bow Point which is unlikely to be developed as previously anticipated).

These studies include road, open space and community facilities.

### **3.7.2 DEVELOPMENT CONTRIBUTIONS**

The current Section 94 Contributions Plan 2010 has a total s94 Contribution for this site in the amount of \$4,526.77/ET. A list of projects and amounts covered by Council's Contributions Plan is attached in Appendix C.

These projects will be delivered by Council at a time of their choosing in accordance with the s94 Contributions Plan.

## **3.8. CONCLUSION**

Correspondence with Shoalhaven Water indicates that the sewer transportation system (sewerage pumping station, rising main and gravity main augmentation) will be provided by Shoalhaven Water through its Development Servicing Plan as required by the delivery timeframe of the development. Some tweaking of this plan will be required to cater for the final development footprint and yield. Gravity sewerage reticulation will be provided throughout the estate by the developer.

Correspondence with Shoalhaven Water indicates that the water trunk mains will be available to the development through Shoalhaven Water's Development Servicing Plan as required by the delivery timeframe of the development. Water reticulation will be provided throughout the development by the developer.

Correspondence with Endeavour Energy indicates that electrical distribution infrastructure will be able to be made available for connection, however extensive upgrades to this network will be required, which may affect the timeframe of the initial stages of the development. Electrical reticulation infrastructure will be provided throughout the development by the developer.

Waste services will not be a constraint to development proceeding as all roads will be public roads to Council standards.

Telecommunications will not be a constraint to development as Telstra or NBN co will supply the necessary services to the development.

Gas services will not be a constraint to development as they area non-essential service.

Other local and regional infrastructure will be provided by Council under a Section 94 Plan currently being prepared for the area.

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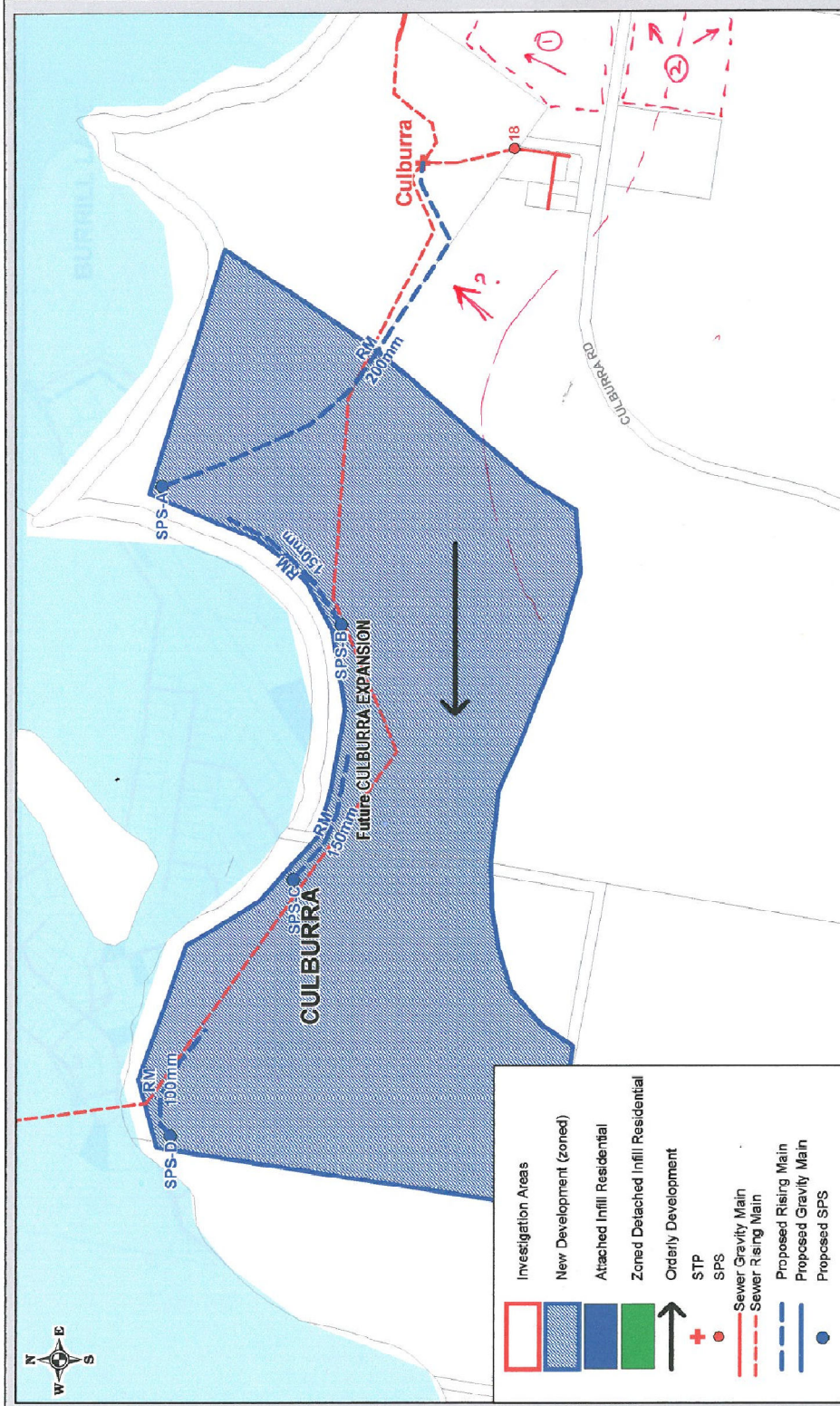
**Appendices:**

Appendix A: Shoalhaven Water DSP2005 Sewer Infrastructure

Appendix B: Shoalhaven Water DSP2005 Water Infrastructure

Appendix C: Shoalhaven City Council – S94 Contributions Plan Project List

## **Appendix A**



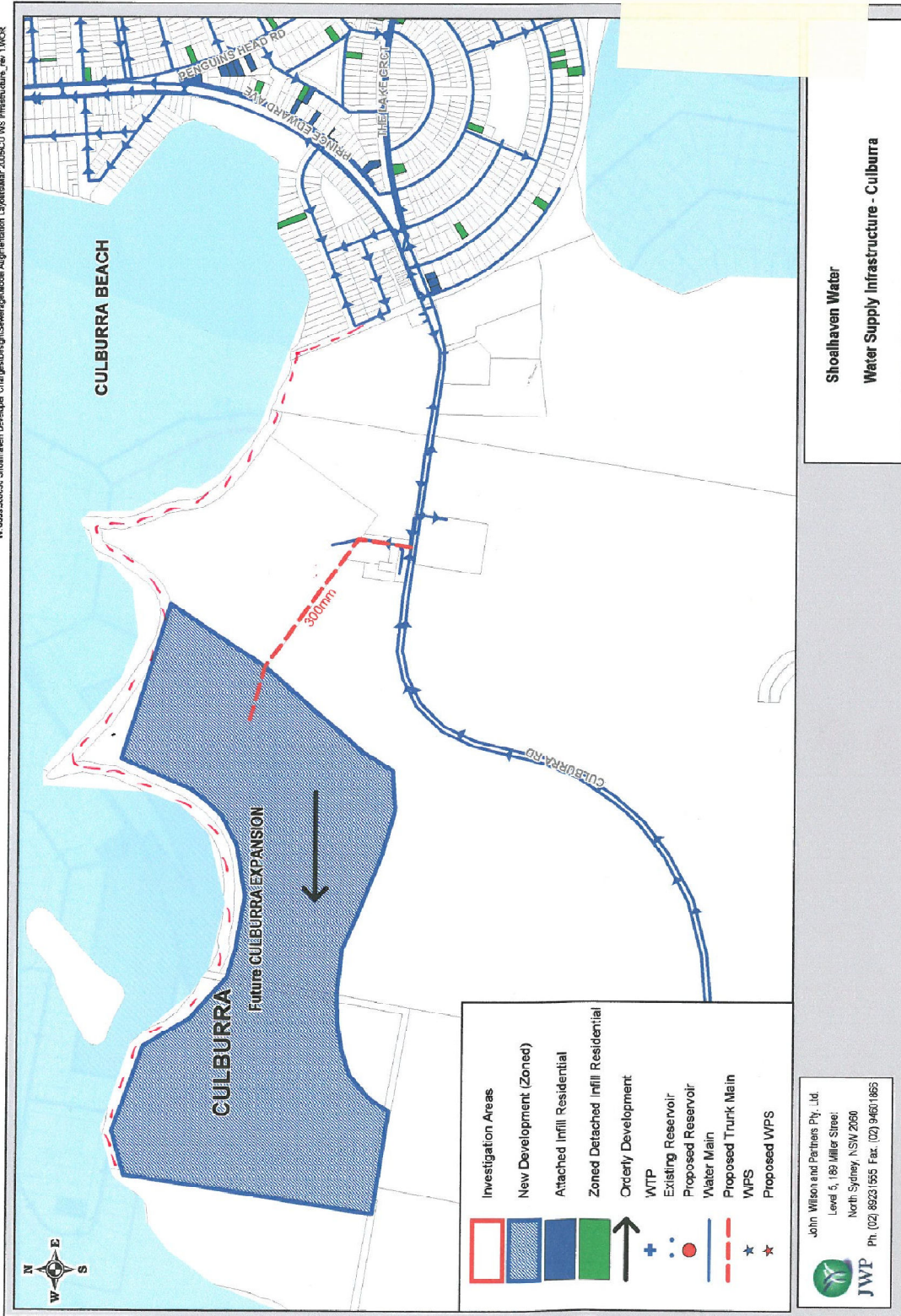
**Shoalhaven Water**

**Sewerage Infrastructure - Culburra**

John Wilson and Partners Pty. Ltd.  
 Level 5, 169 Miller Street  
 North Sydney, NSW 2060  
 Ph: (02) 8623-5555 Fax: (02) 9465-1695

**JWP**

## **Appendix B**



## **Appendix C**

# shoalhaven contributions plan 2010

## Contributions Calculator

**Note:** Clicking the "Calculate ET" button will open a Pop-Up window. Please ensure that your browser allows pop-ups for this site.

**Address:** Culburra Rd, CULBURRA BEACH

**Location:** Lot 6 DP 1065111

**Step 2.** Select "Calculate ET's" from above the project list.

**UTE:** 98008



Calculate ET

Calculate Total

**Contributions Estimate: \$4,526.77**

Project	Description	Catchment Area	Contribution Amt	Qty	Contribution
<a href="#">01ROAD2096</a>	Pyree Lane, Culburra Road	04 Equivalent Tenement	\$129.86	<input type="text" value="1"/>	\$129.86
<a href="#">01ROAD2099</a>	Greenwell Point Road	04 Equivalent Tenement	\$34.44	<input type="text" value="1"/>	\$34.44
<a href="#">02AREC0002</a>	CULBURRA & DISTRICT SPORTING COMPLEX SITE	01 Equivalent Tenement	\$0.00	<input type="text" value="0"/>	\$0.00
<a href="#">02CFAC0004</a>	Long Bow Point Village Community Hall	01 Equivalent Tenement	\$914.36	<input type="text" value="1"/>	\$914.36
<a href="#">02OREC0005</a>	CULBURRA EXPANSION AREA-Environmental Protection	01 Equivalent Tenement	\$557.35	<input type="text" value="1"/>	\$557.35
<a href="#">02ROAD2001</a>	Culburra Road/ Princes Highway	01 Equivalent Tenement	\$213.69	<input type="text" value="1"/>	\$213.69
<a href="#">CWAREC2004</a>	Synthetic Hockey Field Facility	01 Equivalent Tenement	\$72.06	<input type="text" value="1"/>	\$72.06
<a href="#">CWCFCAC0003</a>	Shoalhaven City Arts Centre	01 Equivalent Tenement	\$32.43	<input type="text" value="1"/>	\$32.43
<a href="#">CWCFCAC0004</a>	Shoalhaven Mobile Childrens Services	01 Equivalent Tenement	\$10.74	<input type="text" value="1"/>	\$10.74
<a href="#">CWCFCAC0005</a>	Shoalhaven Multimedia & Music Centre	01 Equivalent Tenement	\$10.66	<input type="text" value="1"/>	\$10.66
<a href="#">CWCFCAC0006</a>	Shoalhaven City Library Extensions	01 Equivalent Tenement	\$282.68	<input type="text" value="1"/>	\$282.68
<a href="#">CWCFCAC2002</a>	Shoalhaven Multi Purpose Cultural & Convention Centre	02 Equivalent Tenement	\$1,310.76	<input type="text" value="1"/>	\$1,310.76
<a href="#">CWFIRE2001</a>	Citywide Fire & Emergency services	01 Equivalent Tenement	\$117.52	<input type="text" value="1"/>	\$117.52
<a href="#">CWFIRE2002</a>	Shoalhaven Fire Control Centre	01 Equivalent Tenement	\$171.94	<input type="text" value="1"/>	\$171.94
<a href="#">CWMGMT3001</a>	Contributions Management & Administration	01 Equivalent Tenement	\$488.72	<input type="text" value="1"/>	\$411.53
<a href="#">CWOREC2001</a>	Embellishment of Icon and District Parks and Walking Tracks	01 Equivalent Tenement	\$210.03	<input type="text" value="1"/>	\$210.03
<a href="#">MACFAC2002</a>	Northern Shoalhaven Community Transport and Family Support Services	01 Equivalent Tenement	\$6.62	<input type="text" value="1"/>	\$6.62
<a href="#">MACFAC4001</a>	Northern Shoalhaven Integrated Children's Services	01 Equivalent Tenement	\$40.11	<input type="text" value="1"/>	\$40.11