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Illawarra-Shoalhaven Feasibility Analysis Model

Revision 1.0

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1.0 Introduction

1.1 *Purpose*

This document has been prepared to summarise the inputs and assumptions that underpin the Illawarra-Shoalhaven Feasibility Model, prepared for the NSW Department of Planning, Infrastructure and Environment (DPIE). The Illawarra-Shoalhaven Feasibility Model has been prepared as a tool to assess the potential impact of Special Infrastructure Contributions (SIC) in the Illawarra-Shoalhaven regions.

The feasibility model focuses on residential development, as this is the only land use and metric for which it is possible to determine a consistent charge across all local government areas.

The model provides some view of the potential capacity for application of a SIC, assessing greenfield and infill development around key greenfield development areas and designated Urban Release Areas (URAs).

It is important to consider that the feasibility model assesses assumed expenditure against assumed sales revenue, but does not assess local or regional growth projections, which have a significant impact on the demand for land development in specific areas affecting cashflow and return on investment profiles.

The cost assumptions from the feasibility model are general in nature, and for this reason the use of the feasibility model results should be *comparative*, rather than *determinative*. That is, the model outputs should help to inform and understand the cumulative impact of contributions on development feasibility, and are not intended to be used to set a specific contribution rate.

The outputs of the model are based on generalised assumptions, and will not reflect the experience of all development in the region. Site specific factors, constraints, and other limiting factors vary between development sites, resulting in significant variance between costs for land development within a region.

1.2 *Industry Discussion – 12/8/2020*

A discussion was held with the industry on the 12th of August 2020 to review and refine assumptions and inputs into the Feasibility Model. The issues & feedback outlined in Table 1 was provided.

Table 1. Summary of Feedback from Industry Discussion

Model Input	Feedback	Outcome in Model
Development Timeframe	The time from land purchase to development commencing should be increased from one year to at least three years	Holding period for development land has been increased to three years
Land Purchase Values	Some development land will not appear in sale searches due to the structure of agreements (i.e. Joint ventures with current owners to avoid land transfer)	No change
	No specific feedback received on englobo land rates	
Land Sale Values	GST should be considered	Due to the significant variation in possible GST payable, no GST allowance has been included, however functionality to apply GST to the profit from land sales has been included in the model as an optional inclusion
	No specific feedback received on land sale values	
Development Yield	From an area of zoned land, up to 55% can be undevelopable as a result of site constraints, various planning controls, and asset protection zones	Increased the assumed site constraint to 40%, when combined with the assumption for provision of infrastructure/services, this results in site yield area of 48%
Lot Formation Costs	Formation costs range between $60,000-$90,000 per lot, depending on site conditions.	The professional fee assumption has been increased from 7% to 12%. This results in professional fees being close to $8,000, and overall lot production cost assumed at $82,500, towards he high end of the ranges identified
	Retaining is a significant requirement in the Dapto region	
	Professional fees are typically around $8,000 per lot	
Location Factor	Lot construction costs are not higher in Shoalhaven LGA than other areas	5% location factor for Shoalhaven LGA has been removed
Biodiversity Credits	Recent experience in relation to biodiversity costs have been around $4,500 per lot	Increased Biodiversity Credit assumption to $4,500 per lot
Estate Major Works	$45,000 allowance for Estate Major Works appears high	Estate Major Works costs have been reduced or removed, and stormwater works have been included. Total EMW costs are now $25,000 per lot
	Allowance for stormwater works should be included	
Developer Charges	Shoalhaven Water & Sewer headworks charges should be included. These currently offer a discount, but it is unclear how long this will be the case	These charges were previously included, with the current 50% discount appliced.

2.0 Feasibility Methodology

2.1 *Calculation Methodology*

In simple terms, the modelling assesses input costs to development against the revenues from the sale of developed lots in the region, outlined in equation 1.

Equation 1. Feasibility ratio

$$Feasibility\ Ratio = \frac{Revenue}{Expenses\ (incl.\ nominal\ profit)}$$

Where the ratio is ***greater than 1***, the scenario has a ***residual revenue margin***, where revenues are not consumed by development cost, including a nominal developer profit. This residual amount may account for additional costs that are otherwise unknown or unaccounted for in the model, or may be additional profit over the assumed nominal profit margin.

2.2 *Base Case Scenario*

In calculating the development feasibility for each area, the following scenario has been utilised as a base for assumptions to be calculated:

- A developer purchases 40 hectares of existing rural land, generally zoned, at market rate for the englobo rates within the LGA (or URA, if applicable);
- Lots are developed to the average lot in that LGA (or URA, if applicable) and are sold at an average developed lot rate (per m²);
- The first stages of development are completed within three years, so that rates and land tax (if applicable) are levied on the developer three times. This expense is rolled into a smaller marginal expense in later stages.

3.0 Land Purchase and Sale Values

An assessment of land purchase and sale values has been undertaken for the region, with identified values based on the following:

<u>For Locality based land sale values:</u>

- Sales of urban/residential land over the three (3) year period between 1 July 2017 and 30 June 2020;
- Excluded sales data that has:
  - No reported sale price;
  - No land area identified; or
  - Significant discrepancies between the sale price and land valuation (sale price less than 40% or greater than 200% of valuation)
- Average price (cost per square metre of land) determined for sale of vacant <u>developed</u> lots (700m² or less);
- Average price (cost per square metre of land) determined for sale of vacant <u>undeveloped</u> lots between 1 hectare and 50 hectares;

In addition to the above, average values across each local government area were determined, and used in the Feasibility Model in instances where more detailed locality or growth area data was not available.

For specific development area land sale values (URAs):

- Selection of sites in or directly surrounding growth area boundaries;
- Sales of urban/residential land over the period between 1 July 2016 and the date of assessment (7 July 2020);
- Excluded sales data that has:
    - No reported sale price;
    - No land area identified; or
    - Significant discrepancies between the sale price and land valuation (sale price less than 40% or greater than 200% of valuation)
- Average price (cost per square metre of land) determined for sale of vacant developed lots (700m² or less);
- Average price (cost per square metre of land) determined for sale of vacant undeveloped lots generally between 1 hectare and 50 hectares;
    - Where no undeveloped sites matched the above criteria, smaller undeveloped sites (between 0.3 – 1.0 hectares) were considered for inclusion on a case by case basis

A summary of the average land values has been provided in Annexure A.

4.0 Holding Cost Inputs

4.1 *Council Rates*

Information on Council rates was sourced from local government websites, and was generally comprised of the following charge components:

- Base amount;
- Ad Valorem amount;
- Waste management;
- Stormwater management; and
- Local land services.

For the base case scenario, a land use category of ‘residential’, with a subcategory of ‘average’ was used.

Land values used in the application of rates were assumed to be 75% of the land purchase rates (i.e. englobo purchase price) identified below. This reflects the fact that any party seeking to develop land will generally pay a premium over the land valuation if the land is not to be developed.

The rates applied for each Council area have been identified in Table 2 below.

Table 2. Local government rates

Residential Land Rates	Local Government Area		
	Shellharbour	*Wollongong*	*Shoalhaven*
Base amount	$692	$758	$640
Ad Valorem amount ($/$)	$0.00297	$0.00264	$0.00240
Waste Management Service Charge	$555	$677	$631
Stormwater Management Service Charge	$25	$25	$25
Stormwater Management Service Charge ($/350m²)	$0	$0	$0
Environmental Levy Base Amount	$0	$0	$0
Environmental Levy Ad Valorem Amount ($/$)	$0	$0	$0

4.2 *Transfer Duty Rates*

Transfer duty costs are applied in accordance with the rates identified in Table 3, and were current as at July 2020.

Table 3. Stamp duty rates

Land Value		Rate of duty	
Minimum	Maximum	Flat cost	Percentage over minimum
$0	$14,000	$0	1.25%
$14,000	$31,000	$175	1.50%
$31,000	$83,000	$430	1.75%
$83,000	$310,000	$1,340	3.50%
$310,000	$1,033,000	$9,285	4.50%
$1,033,000	$3,101,000	$41,820	5.50%

Source: NSW Office of State Revenue, 2020, Transfer duty, https://www.revenue.nsw.gov.au/taxes-duties-levies-royalties/transfer-duty

4.3 *Premium Property duty*

Premium property duty costs are applied in accordance with the rates identified in Table 4, and were current as at July 2020.

Table 4. Premium property duty rates

Land Value		Rate of duty		Premium Property Duty Cutoff *Large Parcel Trigger*
Minimum	Maximum	Flat cost	Percentage over minimum	
$3,101,000	NA	$155,560	7.00%	2 hectares

Source: NSW Office of State Revenue, 2020, Transfer duty, https://www.revenue.nsw.gov.au/taxes-duties-levies-royalties/transfer-duty

4.4 *Land Tax*

Land tax rates are included within the model in accordance with the rates identified in Table 5.

Table 5. Land tax rates

Component	Land Tax base charge	Land Tax	Premium Land Tax
Rate	$100	1.60%	2.00%
Minimum Threshold	$734,000	$734,000	$4,488,000
Maximum Threshold	NA	$4,488,000	NA

Source: NSW Office of State Revenue, 2020, Land tax, https://www.revenue.nsw.gov.au/squiz-sandbox/land-tax

5.0 Developable Land Area

5.1 *Net Developable Area*

The net developable area is considered to be 60% of the total site area, based on an assumption that 40% of the site area will be constrained, or affected by other planning policies which make portions of the site undevelopable.

Equation 2. Net developable area

$$Net\ developable\ area = [Total\ site\ area]\ x\ 60\%$$

5.2 *Net Site Area*

It is assumed that 20% of the *net developable area* would be required for provision of infrastructure and services (local roads, open space, etc.), and therefore the *net site area* is calculated as 80% of the *net developable area*. When combined with the net developable area assumption (accounting for constrained land), this results in a net site area that is 48% of the ***total site area*** (1 x 60% x 80% = 0.48).

Equation 3. Net site area

$$[Net\ site\ area] = [Net\ developable\ area]\ x\ 80\%$$

6.0 Development Yield

The assumed development yield is calculated by dividing the net site area by the assumed average lot size. Assumed average lot sizes for each area are identified in Annexure A.

Equation 4. Assumed Development Yield

$$[Development\ Yield] = [Net\ site\ area]\ \div\ Assumed\ Average\ Lot\ Size$$

7.0 Lot Formation Costs

7.1 *Formation Works*

The lot formation costs identified in Table 6 are assumed, and include the following works:

- Bulk earthworks, road, and drainage;
- Water and wastewater infrastructure;

- Electrical and communication; and
- Landscaping

Table 6. Lot formation costs

Component	Cost *(per lot)*	Notes
Lot formation	$64,916.98	
Professional fees	$7,790.04	12% of lot formation cost
Contingency	$9,737.55	15% of lot formation cost
Subtotal	***$82,445.56***	

Sources:
Market knowledge;
Hunter Special Infrastructure Contribution Development Cost feedback, ADW Johnson, 2017;
Calibre Civil Cost Benchmark Report, 2016 – Escalated to 2019 using PPI-RBC(NSW); and
Feedback from industry discussion 12/8/2020

7.2 *Retaining*

The lot formation assumptions do not include an allowance for benching and retaining walls. These costs can be highly variable based on the site conditions and building types, therefore the model has assumed a gently graded development site which does not include this as a cost.

8.0 Development Contributions

8.1 *Section 94/94a*

Development contribution plans have been reviewed for the region, with relevant contribution amounts included depending on location.

A summary of the identified contribution plans is provided in Annexure B.

8.2 *Biodiversity Credits*

Assumed biodiversity credit contributions of $4,500 per lot are applied, based on feedback received from discussions with industry on 12/8/2020.

9.0 Estate Major Works

No estate major works have been identified for specific infrastructure projects, however functionality is available in the model to include these if available. In the absence of specific infrastructure requirements, nominal assumptions have been outlined below.

9.1 *Water & Wastewater*

Assumed estate major works requirements for water and wastewater infrastructure have been assumed at $10,000 per lot.

9.2 *Local Government Roads*

Assumed estate major works requirements for local government road infrastructure have been assumed at $10,000 per lot.

9.3 *State Government Roads*

No estate major works requirements are assumed for state government road infrastructure.

9.4 *Stormwater*

Assumed estate major works requirements for stormwater infrastructure have been assumed at $5,000 per lot.

9.5 *Financing Costs*

Given the high variability in company structures, financing sources and costs, and risk profiles, no assumptions for the holding costs related to financing of land purchase or site works were included in the modelling.

Pioneering works (i.e. generally early stage EMW infrastructure) for any development is likely to require significant upfront expenditure that is typically amortised over the overall site and will be recovered more slowly as lots are developed and sold. The financial impact of this misalignment would typically be addressed through an NPV assessment of the projected expenditures and revenues, however given the available information, this could not be undertaken. Therefore, a nominal increase of 10% will be applied to any ***specifically identified*** (of which there are currently none) EMW expenditures in lieu of a detailed NPV assessment, as an assumed financing/cashflow impact.

10.0 Dwelling/Structure Construction Costs

10.1 *Detached Residential*

Construction costs for a detached residential dwelling has been assumed for a 200m² dwelling, based on rates identified in the Australian Construction Handbook published by Rawlinsons, and indexed using CPI to a current value. The assumed construction cost of a detached residential dwelling is $362,740.

10.2 *Attached Residential*

Construction costs for an attached residential dwelling has been assumed for a 150m² dwelling, based on rates identified in the Australian Construction Handbook published by Rawlinsons, and indexed using CPI to a current value. The assumed construction cost of an attached residential dwelling is $300,493.

11.0 Sale Costs and Profit

The following costs have been adopted for sale of land and developer profit requirement:

- Marketing and sales commission – 2.75% of sale price;
- Assumed profit requirement – 20% of sale price.

12.0 Goods and Services Tax (GST)

No assumptions for application of GST has been included within the model. This is on the basis that the amount of GST payable will be highly variable, depending on the company structure.

For example, from the 10% GST applied to a land sale, a company that uses contractors for their construction work will be able to claim the GST from the contractors fees as a credit against the GST payable on the land, whereas a company that employs its own construction staff and owns machinery could be liable for a significantly higher amount.

Although the model does not currently apply GST, an option has been included which will apply GST to the assumed ***profits*** (i.e. ***marginal GST***, assuming GST credits can be claimed for all of the construction costs), should the Department wish to consider the impact of this. Integran recommends that the Department seek professional taxation advice in respect of the likelihood and impact of GST on development in the URA areas.

13.0 Model Outcomes

Tables 7 and 8 summarise the modelled feasibility outcomes based on the assumptions above, in addition to the application of varying Special Infrastructure Charge (SIC) rates. In considering these outcomes the following notes should be considered:

- As noted above, the outputs of the model are based on generalised assumptions, and will not reflect the experience of all development in the region. Site specific factors, constraints, and other limiting factors vary between development sites, resulting in significant variance between costs for land development within a region;
- As noted above, the Feasibility model does not make assumptions about company structures or financing sources/costs, as these can be highly variable.
- Yields in the West Dapto URA make up 95% of modelled yields in Wollongong, and over 60% of modelled yields across the three local government areas. The significant reduction in the 'proportion of feasible lots' identified in Tables 7 and 8 occurs when development in this area moves from being 'marginally feasible', to 'marginally unfeasible' (with the URA ratio varying between 1.03 – 0.97), but overall, the modelled feasibility for the Wollongong LGA remains just over 1;
- A clear observation is that a significant change in the proportion of feasible lots occurs when the potential SIC rate moves from $10,000 to $12,500 (excluding GST, as set out in table 7) or from $5,000 to $7,500 (including marginal GST, as set out in Table 8).

Table 7. Feasibility Model Outputs (excluding GST)

SIC Charge *Per lot*	SIC Charge Equivalent *per NDA*	Proportion of Feasible Lots	Modelled Feasibility			
			Shellharbour	*Wollongong*	*Shoalhaven*	*Weighted Average*
$2,500	$48,169	97%	1.31	1.05	1.05	1.10
$5,000	$96,339	97%	1.29	1.04	1.04	1.09
$7,500	$144,508	97%	1.27	1.04	1.03	1.08
$10,000	$192,678	97%	1.26	1.03	1.02	1.07
$12,500	$240,847	34%	1.24	1.02	1.00	1.06
$15,000	$289,017	34%	1.23	1.01	0.99	1.05

Table 8. Feasibility Model Outputs (including marginal GST)

SIC Charge *Per lot*	SIC Charge Equivalent *per NDA*	Proportion of Feasible Lots	Modelled Feasibility			
			Shellharbour	*Wollongong*	*Shoalhaven*	*Weighted Average*
$2,500	$48,169	97%	1.31	1.05	1.05	1.10
$5,000	$96,339	97%	1.29	1.04	1.04	1.09
$7,500	$144,508	35%	1.27	1.04	1.03	1.08
$10,000	$192,678	34%	1.26	1.03	1.02	1.07
$12,500	$240,847	33%	1.24	1.02	1.00	1.06
$15,000	$289,017	33%	1.23	1.01	0.99	1.05

Annexure A: Average Land Sales Assessment

LGA	Locality (GF=Greenfield Area)	Englobo Land ($/m²)	Developed Land	
			Vacant Residential ($/m²)	Assumed Average Lot Size
Wollongong	Weighted Average	$71	$731	
Kiama	Weighted Average	$40	$960	
Shellharbour	Weighted Average	$44	$689	
Shoalhaven	Weighted Average	$29	$409	
Shellharbour	Albion Park	$43	$676	574
	Albion Park (GF)	$36	$636	522
	Blackbutt	No Data	$784	579
	Calderwood (GF)	$52	$695	441
	Flinders	No Data	$861	519
	Flinders (GF)	No Data	$1,253	530
	Mount Warrigal	No Data	$1,093	573
	Oak Flats	$51	$818	653
	Shellharbour	No Data	$1,011	567
Shoalhaven	Bomaderry	$32	$393	623
	Cambewarra	$23	$702	650
	Cambewarra (GF)	$19	$445	576
	Cambewarra Village	No Data	No Data	661
	North Nowra	No Data	No Data	624
	North Nowra (GF)	$19	$445	576
	Nowra	$93	$408	630
	Nowra (GF)	$19	$445	576
	West Nowra	No Data	No Data	613
	Worrigee	$38	$549	645
	Worrigee (GF)	$30	$362	645
Wollongong	Avondale	No Data	$2,288	650
	Cordeaux Heights	$25	$58	614
	Dapto	No Data	$729	574
	Dapto (GF)	$84	$748	519
	Haywards Bay	No Data	No Data	512
	Haywards Bay (GF)	$12	$566	572
	Horsley	No Data	$774	537
	Horsley (GF)	$84	$748	519
	Kembla Grange	$74	$732	449
	Koonawarra	No Data	$474	607
	Mount Kembla	No Data	$712	648
	Unanderra	No Data	$515	581

Annexure B: Developer Contribution Plans

Local Government Area	Contribution Plan Name	Plan Type	Residential Contribution Type	Detached Residential	Attached Residential
Shellharbour	2016 s94 - 8th Review - Warilla	Section 94	per lot	$8,607	$8,607
Shellharbour	2016 s94 - 8th Review - Shellharbour	Section 94	per lot	$11,381	$11,381
Shellharbour	2016 s94 - 8th Review - Blackbutt	Section 94	per lot	$7,752	$7,752
Shellharbour	2016 s94 - 8th Review - Oak Flats	Section 94	per lot	$9,043	$9,043
Shellharbour	2016 s94 - 8th Review - Albion Park Rail	Section 94	per lot	$9,471	$9,471
Shellharbour	2016 s94 - 8th Review - Rural East	Section 94	per lot	$7,114	$7,114
Shellharbour	2016 s94 - 8th Review - Albion Park	Section 94	per lot	$15,705	$15,705
Shellharbour	2016 s94 - 8th Review - Rural West	Section 94	per lot	$12,878	$12,878
Shellharbour	2016 s94 - 8th Review - Calderwood	Section 94	per lot	$15,468	$15,468
Wollongong	West Dapto	Section 94	per lot	$68,734	$53,699
Wollongong	Indirect Contributions - 100-200k	Section 94a	Development Cost (%)	0.5%	0.5%
Wollongong	Indirect Contributions - >200k	Section 94a	Development Cost (%)	1.0%	1.0%
Shoalhaven	Berry	Section 94	per lot	$4,314	$4,314
Shoalhaven	Bomaderry	Section 94	per lot	$4,314	$4,314
Shoalhaven	North Nowra	Section 94	per lot	$11,279	$11,279
Shoalhaven	Nowra	Section 94	per lot	$4,314	$4,314
Shoalhaven	Huskisson	Section 94	per lot	$6,505	$6,505
Shoalhaven	Sussex Inlet	Section 94	per lot	$4,943	$4,943
Shoalhaven	Ulladulla	Section 94	per lot	$3,296	$3,296
Shoalhaven	Kioloa	Section 94	per lot	$5,715	$5,715
Shoalhaven	Infill Average s94	Section 94	per lot	$5,585	$5,585
Shoalhaven	Greenfield Average s94	Section 94	per lot	$13,765	$13,765
Shoalhaven	Badgee Lagoon (Sussex Inlet)	Section 94	per lot	$7,576	$7,576
Shoalhaven	Bayswood	Section 94	per lot	$8,046	$8,046
Shoalhaven	Burill Lake	Section 94	per lot	$9,748	$9,748
Shoalhaven	Mollymook Beach	Section 94	per lot	$23,409	$23,409
Shoalhaven	Moss Vale Road South URA	Section 94	per lot	$23,007	$23,007
Shoalhaven	Mundamia URA	Section 94	per lot	$16,767	$16,767
Shoalhaven	South Nowra	Section 94	per lot	$9,464	$9,464
Shoalhaven	Berry URA	Section 94	per lot	$12,100	$12,100
Shoalhaven	Water & Sewer Headworks	Section 64	per lot	$7,459	$7,459