LGIP BRIEFING NOTE

SOW MODEL INPUTS & METHODOLOGY

Financial Services Manager

Noosa Council

August 2018

The SOW model has been prepared and populated consistent with the statutory guideline for LGIPs and its User Manual for the SOW model.

This briefing note is provided to assist in further explaining the methodology and applied used to populate the sections of the State Department's excel SOW model.

1. GENERAL INPUTS

The following table summarises the general inputs applied to the SOW model.

Table 1: General Inputs

Item	Value		Detail
Base Year	2016		Aligned to the commencement date of the LGIP.
Term (Years)	15		To align with demand and works forecast planning terms, being from 2016 to 2031.
Discounted Cash Flow	Yes - Applied		Provides a more concise representation of the opportunity cost of investment decisions, and impact from cash flow timing of revenue receipt and capital works spend.
WACC Method	Option 1 (bond rate + basic margin)		This method provided a rate that maximised comparability between networks and other local government authorities. Further, there was limited data available to support a detailed calculation of WACC provided for allowed under option 2.
Average 10 Year Bond Rate	2.51%		Based on the 10-year Bloomberg Ausbond 10 year bond rate average over three years ending June 2016 to align with the base year of the SOW model.
Basic Margin on 10 Year Bond Rate	3.50%		As per guidance provided in *Local Government Bulletin 06/01.*
Capital Escalation	2.98%		The ten (10) year average ending June 2016 for the Roads and Bridges Index (ABS 6427, Table 15, Index 3101) has been applied.
Historical Capital Indexation Rates	2016	107.4	The Roads and Bridges Index (ABS 6427, Table 15, Index 3101) has been applied based on June index for each respective year.
	2015	106.3	
	2014	106.7	
	2013	104.5	
	2012	102.5	
	2011	100.3	
	2010	96.6	
Land Escalation Rate	5.40%		Noosa Council's latest Land Asset Revaluation Report (AssetVal Pty Ltd, 2018) identifies and average regional market value growth for vacant land in the Noosa shire of 5.4% annually.
Charges Escalation Rate	2.58%		The ten (10) year average ending June 2016 for the Brisbane All Groups Consumer Price Index (ABS 6401) has been applied.

2. UNIT RATES

2.1. Cost Unit Rates for Passive Assets

Cost unit rates have been applied to the value of the existing trunk infrastructure networks in the SOW model. These are based on the financial revaluation applied to Council's asset classes as required under *Local Government Regulations 2012* and the *Australian Accounting Standards*. These rates have been developed by independent external valuers and validated by the Queensland Audit Office as part of the annual audit of Council's financial statements.

The following table outlines the most recent revaluation and unit rates derived for each of Council's existing Asset classes under the LGIP.

Table 2: Source of Cost Unit Rates for Existing Passive Assets

Class	Financial Year	Valuer	Valuation Type
Stormwater	2017/18	Aurecon + Desktop Indexation	Full comprehensive + unit rates undertaken in 2014/15, indexed to current year valuation based on ABS 3101 Roads and Bridges Construction Index.
Transportation	2013/14	Aurecon	Full comprehensive + unit rates
Parks and Facilities	2017/18	Aurecon + Desktop Indexation	Full comprehensive + unit rates undertaken in 2015/16, indexed to current year valuation based on ABS 3101 Roads and Bridges Construction Index.

Unit rates have not been applied to future infrastructure works, as the construction cost for all future passive assets has been based actual cost estimates for each item of work.

2.2. Cost Unit Rates for Land

Council has applied an average region-wide cost per square metre to all trunk infrastructure land identified in the SOW model.

This unit is calculated as $47.16 per m^2. Key assumptions underpinning the cost estimate are:

- A valuation rate per m^2 for land parcels greater than 5000 m^2 has been applied.
- The valuation previously applied to the 2014 LGIP for land greater than 5,000 m2 was $42.45 per m^2 as at June 2014.
- When indexed to June 2016 using the land escalation rate in Table 1, this unit rate is revised to $47.16 per m^2.

3. DEMAND FORECAST

The key assumptions underpinning the demand forecast are outlined in the table below.

Table 3: Demand Forecast Assumptions

Item	Detail
Residential Growth	• Unit of measure is dwellings. • Development types are categorised as either attached or detached dwellings. • Nine projection catchment areas are applied, comprising seven areas inside the PIA and one outside. • Demand is identified at four cohorts in the demand period at five-year intervals (2016, 2021, 2026 and 2031).
Non-Residential Growth	• Unit of measure is square metres of non-residential floorspace. • Development types are categorised as either retail, commercial, industry, community purpose and other. • Eight projection catchment areas are applied, comprising seven areas inside the PIA and one outside. • Demand is identified at four cohorts in the demand period at five-year intervals (2016, 2021, 2026 and 2031).
Stormwater Network	• Unit of measure is hectares of impervious area. • Seven projection catchment areas are applied. • Demand is identified at five cohorts in the demand period at five-year intervals (2016, 2021, 2026, 2031 plus ultimate).

Item	Detail
Transportation Network	• Unit of measure is vehicle trips per day. • Eight projection catchment areas are applied, comprising seven areas inside the PIA and one outside. • Demand is identified at five cohorts in the demand period at five-year intervals (2016, 2021, 2026, 2031 plus ultimate).
Parks and Facilities Network	• Unit of measure is population. • Eight projection catchment areas are applied, comprising seven areas inside the PIA and one outside. • Demand is identified at five cohorts in the demand period at five-year intervals (2016, 2021, 2026, 2031 plus ultimate).

The following tables summarise the total demand forecasts included in the SOW model.

Table 4: Residential Demand Forecast (Dwellings)

Projection Area	Development Type	2016	2021	2026	2031
Coastal Areas	Detached	12,354	12,614	12,637	12,505
	Attached	9,249	9663	11,443	12,675
	Total	**21,603**	**22,277**	**24,080**	**25,180**
Cooroy	Detached	911	1,069	1,084	1,082
	Attached	200	455	455	614
	Total	**1,111**	**1,524**	**1,539**	**1,696**
Boreen Point	Detached	234	241	260	263
	Attached	8	8	8	33
	Total	**242**	**249**	**268**	**296**
Cooran	Detached	299	301	318	319
	Attached	4	4	4	13
	Total	**303**	**305**	**322**	**332**
Pomona	Detached	450	473	488	503
	Attached	14	26	26	47
	Total	**464**	**499**	**514**	**550**
Kin Kin	Detached	61	62	68	70
	Attached	0	0	0	0
	Total	**61**	**62**	**68**	**70**
Cooroibah	Detached	114	114	116	116
	Attached	0	0	0	0
	Total	**114**	**114**	**116**	**116**
Outside Priority Infrastructure Area (Total)	Detached	5,523	5,624	5,730	5,791
	Attached	541	623	643	650
	Total	**6065**	**6248**	**6373**	**6,441**
Noosa Shire Council	**Detached**	19,947	20,499	20,702	20,649
	Attached	10,016	10,779	12,579	14,032
	Total	**29,963**	**31,278**	**33,281**	**34,681**

Table 5: Non-Residential Demand Forecast (Square Metres Floorspace)

Projection Area	Development Type	2016	2021	2026	2031
Coastal Areas	Retail	212,759	212,461	221,567	235,569
	Commercial	53,674	56,939	70,668	78,431
	Industry	187,889	219,360	240,030	252,829

Projection Area	Development Type	2016	2021	2026	2031
	Community	181,789	196,169	210,487	214,342
	Other	1,431	1,431	1,431	1,431
	Total	**637,541**	**686,359**	**744,182**	**782,601**
Cooroy	Retail	25,409	25,430	25,660	28,797
	Commercial	1,550	1,625	1,625	1,625
	Industry	24,966	35,231	48,862	61,504
	Community	53,623	55,658	56,010	57,467
	Other	844	844	844	844
	Total	**106,392**	**118,788**	**133,000**	**150,237**
Boreen Point	Retail	1,304	1,270	1,270	1,770
	Commercial	0	0	0	0
	Industry	0	0	0	0
	Community	853	853	853	853
	Other	46	46	46	46
	Total	**2,203**	**2,169**	**2,169**	**2,669**
Cooran	Retail	469	469	469	3,791
	Commercial	0	0	0	0
	Industry	1,184	1,184	1,184	1,184
	Community	5,276	5,276	5,276	5,276
	Other	0	0	0	0
	Total	**6,929**	**6,929**	**6,929**	**10,251**
Pomona	Retail	8,311	9,194	11,455	12,292
	Commercial	896	896	896	896
	Industry	13,448	13,448	13,448	13,448
	Community	15,495	15,946	15,946	15,946
	Other	217	217	217	217
	Total	**38,367**	**39,701**	**41,962**	**42,799**
Kin Kin	Retail	1,805	1,805	1,805	1,805
	Commercial	0	0	0	0
	Industry	0	0	0	0
	Community	1,960	1,960	1,960	1,960
	Other	0	0	0	0
	Total	**3,765**	**3,765**	**3,765**	**3,765**
Cooroibah	Retail	0	0	0	0
	Commercial	0	0	0	0
	Industry	0	0	0	0
	Community	0	0	0	0
	Other	0	0	0	0
	Total	**0**	**0**	**0**	**0**
Outside priority infrastructure area (total)	Retail	6,691	8,241	8,741	9,241
	Commercial	1,127	801	801	801
	Industry	31,549	41,661	42,573	42,573
	Community	52,642	57,562	57,748	57,748
	Other	17,230	17,230	17,230	17,230
	Total	**109,239**	**125,495**	**127,093**	**127,593**

Projection Area	Development Type	2016	2021	2026	2031
Noosa Shire Council	**Retail**	256,747	258,869	270,967	293,264
	Commercial	57,247	60,261	73,990	81,753
	Industry	259,037	310,885	346,097	371,538
	Community	311,637	333,423	348,279	353,591
	Other	19,768	19,768	19,768	19,768
	Total	**904,436**	**983,206**	**1,059,100**	**1,119,914**

Table 6: Stormwater Demand Forecast (Hectares Impervious Area)

Catchment Name (*)	2016	2021	2026	2031	Ultimate Demand
Boreen Point	10.63	10.92	11.72	13.00	14.66
Kin Kin	8.14	8.24	8.82	9.02	13.48
Cooroibah	4.55	4.55	4.63	4.63	4.67
Cooroy	82.01	101.25	107.65	120.15	181.07
Coastal Area	808.49	840.16	908.67	951.16	1172.41
Cooran	28.10	28.27	29.71	31.70	34.18
Pomona	60.20	63.50	66.26	69.22	92.63
Noosa Shire Council	**1,002.12**	**1,056.89**	**1,137.46**	**1,198.88**	**1,513.10**

Table 7: Transportation Network Demand Forecast (Vehicle Trips per Day)

Catchment Name (*)	2016	2021	2026	2031	Ultimate Demand
Boreen Point	2,591	2,616	2,740	3,159	6,418
Cooroibah	741	741	754	754	761
Cooroy	39,674	42,875	43,898	47,472	59,492
Pomona	13,504	14,366	15,820	16,504	20,581
Kin Kin	2,068	2,074	2,113	2,126	4,144
Cooran	3,883	3,896	4,006	6,042	7,099
Coastal Areas	321,765	331,603	352,961	369,091	426,000
Outside PIA	59,718	63,536	64,707	65,431	78,247
Noosa Shire Council	**443,944**	**461,708**	**486,999**	**510,580**	**602,742**

Table 8: Parks and Facilities Demand Forecast (Population)

Catchment Name (*)	2016	2021	2026	2031	Ultimate Demand
Boreen Point	601	620	669	717	754
Cooroibah	295	295	300	300	303
Cooroy	2,680	3,505	3,544	3,798	5,541
Pomona	1,188	1,267	1,306	1,379	1,819
Kin Kin	158	161	176	181	212
Cooran	781	786	830	847	901
Coastal area	38,224	39,506	42,175	43,789	52,634
Outside PIA total	14,562	14,874	15,180	15,348	18,954
Noosa Shire Council	**58,491**	**61,014**	**64,180**	**66,360**	**81,026**

4. ASSET INPUTS

4.1. Existing Infrastructure

The separate report, LGIP (SOW Costs & Network Demands), provides detailed explanation of the assumptions underpinning the identification of trunk infrastructure. Once identified, the location of these assets has been verified spatially through the GIS and reconciled to the financial records in the corporate financial system, Technology One.

Other key assumptions relating to existing infrastructure are:

- In instances where items of existing trunk infrastructure have been identified and verified spatially in GIS but not yet capitalised in the finance system, the costs of these items has been calculated based on unit rates. Ultimately all these items will be recognised on the financial asset register in accordance with the Australian Accounting Standards.

- Each asset has been allocated to one or more catchments based on its purpose, location and hierarchy.

- No multipliers have been applied to costs given limited availability of information to support its inclusion.

- No escalation has been applied to existing assets, except where costs have been escalated and discounted to derive a 2016 present year value as at the base date of the SOW.

4.2. Proposed Future Infrastructure

All works included in the SOW model align to Council's capital works plan that underpins its long-term financial plan. The Asset Management Plans are currently being updated for each asset class, and will be aligned to the SOW model future works schedule upon update.

In addition, all future works included in the SOW model have been allocated to one or more catchments based on its purpose, location and hierarchy. No multipliers have been applied to costs, however costs have been escalated to the year of construction and discounted to derive a 2016 present year value as at the base year of the SOW model.

4.3. Total Infrastructure Cost

The following table summarises the total asset costs discounted to present day value.

Table 9: Total Asset Costs ($ Present Value 2016)

Network	No	Catchment	Existing	Future	Total
Stormwater	1	Boreen Point	$55,530	$0	$55,530
	2	Kin Kin	$33,798	$0	$33,798
	3	Cooroibah	$0	$0	$0
	4	Cooroy	$2,747,571	$0	$2,747,571
	5	Coastal Areas	$24,842,217	$2,734,818	$27,577,035
	6	Cooran	$11,064	$0	$11,064
	7	Pomona	$271,141	$2,610,591	$2,881,732
		Total	**$27,961,321**	**$5,345,409**	**$33,306,730**
Transport	1	Boreen Point	$1,401,265	$498,604	$1,899,868
	2	Cooriobah	$246,864	$1,470	$248,335
	3	Cooroy	$18,374,589	$1,459,910	$19,834,499
	4	Pomona	$5,090,400	$381,319	$5,471,719
	5	Kin Kin	$601,091	$408,223	$1,009,314
	6	Cooran	$2,551,002	$94,092	$2,645,094
	7	Coastal Areas	$194,060,593	$29,425,368	$223,485,961
	8	Outside PIA	$40,968,174	$1,107,731	$42,075,905
		Total	**$263,293,979**	**$33,376,716**	**$296,670,695**

Network	No	Catchment	Existing	Future	Total
Parks and Community	1	Boreen Point	$1,579,168	$364,344	$1,943,513
	2	Cooroibah	$515,921	$83,573	$599,494
	3	Cooroy	$10,585,902	$3,516,901	$14,102,803
	4	Pomona	$8,245,089	$439,341	$8,684,431
	5	Kin Kin	$568,677	$109,752	$678,429
	6	Cooran	$4,943,267	$252,686	$5,195,953
	7	Coastal Area	$95,478,553	$15,523,606	$111,002,159
	8	Outside PIA	$34,474,195	$4,897,466	$39,371,662
		Total	**$156,390,773**	**$25,187,670**	**$181,578,443**
Noosa Shire		**Total**	**$447,646,073**	**$63,909,795**	**$511,555,868**