LOGAN CITY COUNCIL

LOCAL GOVERNMENT INFRASTRUCTURE PLAN (LGIP)

Process followed to prepare and populate the online SoW model

September 2016
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1 Purpose of document

The purpose of this document is to describe the process followed to prepare and populate the on-line Schedule of Work (SoW) model\(^1\), as part of the requirement to prepare Council’s Local Government Infrastructure Plan (LGIP).

2 Background

The LGIP has to be prepared in accordance with the statutory guideline (03/14), which includes an Excel based template for an online model, and a user manual (Appendix C) to assist with populating and operating the model. The purpose of the model is firstly assist Council in preparing the LGIP, and secondly to promote transparency in calculating the establishment cost of planned infrastructure and projecting future revenue (from infrastructure charges).

A council may choose to design and develop its own SoW model, provided that it includes all the information and functionality of the template provided by Department of State Development, Infrastructure and Planning (DSDIP).

Logan Council performed an assessment of the template, and established that some elements of the design did not suit the data available in Council. A meeting was arranged with DSDIP (Jan Cilliers) on the 10th of December 2014 to discuss the concerns, and to reach an in-principle agreement on certain modifications to the model. A follow-up meeting was held on the 19th of February 2015 to present the modifications. DSDIP agreed to the proposed modifications. Based on the outcome of these two meetings, Logan Council decided to use the template, but with the modifications as agreed-to with DSDIP (refer S2.1 below for a high level overview of the most significant modifications).

Section 2.5.5 (3) of the statutory guideline states that the model must be available for viewing or downloading in Excel format on Council’s website.

2.1 Overview of the most significant modifications to the template

The most significant modifications to the template can be summarised as follows:

- Items are costed using the ‘unique costs’ (not the ‘unit rate’ approach). The methodology followed to calculate the ‘unique costs’ are provided in the extrinsic material (in the documents called ‘Summary of extrinsic material’).
  - Modification – The tab called ‘Units rates’ is not used and is therefore hidden. The exception is the Parks network, with the unit rate sheet providing the cost per park type (fully embellished). The sheet also provides the various levels of embellishment (levels 0 to 4).
- The model allows for land to be acquired and infrastructure to be developed in different years, and over more than one year.
  - Modification – An additional sheet was added for each network called ‘(network name) – NPV calcs’ to calculate the nominal and NPV cost.
- Generally, all columns included in the original template that are not used (populated) are hidden to ensure each sheet presents the information in a logical and systematic manner.
  - Modification – Only show columns that are populated.

Based on advice provided by the independent reviewer (PIE Solutions) appointed by Logan Council, a number of further amendments were made to the two sheets\(^2\) where the future revenue streams are calculated (refer S3.2 for more detail).

To offer a competitive investment option to the development industry, Logan Council has decided not to apply the maximum charge for residential development across the city\(^3\). In addition, not all areas in Logan City are serviced with the full spectrum of networks. This has created a number of ‘unique charge

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\(^1\) DM#10216422 – LGIP – Online SoW Model.

\(^2\) The two sheets called ‘Anticipated Gwth – Residential’ and ‘Anticipated Gwt – Non-residential’

\(^3\) Logan Council applies the maximum charge for non-residential development (but not residential development)
areas’ for residential and non-residential development. Maps 12.6 and 12.7 of the Logan Infrastructure Charges Resolution (No 5, 2015) show the location of the various network charge areas. The amendments recommended by the independent reviewer allow for the future revenue to be calculated per unique charge area (i.e. on a lot-by-lot basis).

3 Overview per sheet

3.1 General input sheet

The comments are provided per data field.

- **General inputs:**
  - **Base year** – The base year is 2014, meaning the 2013/14 financial year. This year was chosen as it provides the most recent ‘current replacement cost’ (CRC) of existing trunk assets as per the various asset registers.
  - **Term** – The term is 12 years, with 2026 being the end year. This term was chosen as it meets the requirement that the PIA must accommodate growth for at least 10 years, but not more than 15 years.

- **Application of discounted cash flow:**
  - **Discounted cash flow (DCF)** – The NPV is calculated using the DCF methodology.

- **General financial inputs:**
  - **Education charge adjustment (non-state schools)** – A factor of 27.29% was applied to the school charge to only account for demand placed by private schools (i.e. public schools are not charged). The factor is based on school enrolment data received from the State Department of Education.
  - **Charge factor** – A factor of 59.06% was applied across all charges. The purpose of the charge factor is to account for the difference between the projected revenue⁴, and the value of actual (historic) invoices raised in the few years up to 2014. The difference (the projected revenue exceeds the actual revenue by 59.06%) can be attributed to a number of factors including:
    - Some development reaching trigger for payment but not being invoiced, as Council was at the time not able to identify all development that has reached trigger;
    - The value of invoices raised do not include the value of offsets and trunk infrastructure provided through infrastructure agreements (IA’s); and
    - Whereas the projected revenue is based on the charge rates contained in a particular Resolution (Resolution No 5), the historic income is based on a number of charge regimes including that implemented by the former Beaudesert and Gold Coast Councils (for the transferred areas), Council’s Policy regime, and 4 earlier versions of the current Resolution. The projected revenue stream is therefore not a straight-line continuation of the past revenue streams.

At the time Logan Council started to prepare the LGIP, very little reliable information was available on the financial extent of these factors, and it was decided to base the projected revenue stream on the value of actual invoices raised. This was achieved by applying the charge factor on the projected revenue.

More recent information shows a gradual increase in the value of invoices raised. Ignoring market trends, this upward trend can mainly be attributed to a combination of two factors namely:
  - Council improving its ability to identify development that has reached trigger for payment (to issue an invoice); and
  - Council embarking on an initiative to track development that was not identified as having reached trigger for payment, and issuing an invoice.

Based on the above, it is reasonable to assume that the current difference between projected and actual revenue will gradually decrease in future, eventually disappearing, meaning the actual and projected revenue streams will eventually have the same value. At that point, the need for any ‘charge factor’ will disappear, and it will be removed from the model.

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⁴ The projected revenue was calculated by multiplying the charge applicable to the lot (using the charge rates as per Resolution No 5) with the net increase in development on the lot.
WACC – The weighted average cost of capital (WACC) used to discount the nominal cost was hard entered as a variable and is not calculated by the model. The Queensland Treasury Corporation (QTC) advised that the weighted average cost of borrowings (5.34%) be used as the WACC5.

- Escalation rates:
  - PPI – The product price index (PPI), used to index the cost of infrastructure items, was hard entered as a variable and is not calculated by the model. A rate of 3.87% was entered, being the annual average since December 20046.
  - CPI – The consumer price index (CPI), used to index the cost of land, was hard entered as a variable and is not calculated by the model. A rate of 2.7% was entered, being the annual average since 20047.
  - Charges escalation rate – No provision was made for an increase in the maximum charge rate, as there are too many external variables involved.

- Rates to index cost from cost date8 to base year – The cost of existing assets expressed at the cost date was escalated to the base year (2014) using the actual CPI or PPI indices for land and work items respectively. These rates were sourced from:
  - CPI (All groups CPI, Brisbane), A2325816R; and
  - PPI (Road and bridge construction, Queensland), A2333727L.

3.2 Unit rates

This section was not populated, with the exception parks, which presents the unit rates per park type and hierarchical level. For all the other networks, the ‘unique cost’ approach was followed (instead of the ‘unit rate’ approach) and the cost per planned item is provided in the relevant sheets in the section called ‘Future trunk assets’.

3.3 Catchment demand

The current and projected residential and non-residential demand, as well as the revenue projections are provided on the two sheets called ‘Anticipated growth – residential’ and ‘Anticipated growth – non-residential’.

Both sheets comprise the following sections:

- Network charges- These are the charges as applied in Council’s Adopted Infrastructure Charges Resolution (No 5, 2015)10.
  - As noted elsewhere in this document, Logan Council has decided to levy the maximum charges for non-residential development, but not for residential development. The ‘Anticipated Growth – Residential’ sheet shows the difference between the capped and uncapped charge (L7:L34 and M7:M34 respectively).

- Annual increase demand per unique charge area – This section presents annual increase in demand per unique charge area and development type.
  - The annual increase is based on the current and projected demand sourced from the Logan Development Projection Model (LDPM) as at 2014, 2016, 2021 and 2026. A GIS query was performed to present the demand per unique charge area, projection area and development type.
  - In the case of residential development, the demand is expressed in terms of dwelling numbers (attached, detached and other), with the increase in demand reflecting the increase in dwellings.
  - In the case of non-residential development, the demand is expressed in terms of square meter gross floor area (m²/GFA), with the increase in demand reflecting the increase in GFA.

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5 DM#9435756 – WACC rate to use for LGIP.
6 DM#9448700 – LGIP – CPI & PPI Calculations
7 Ibid
8 This is a new section added to the online SoW model to replace the (original) section called ‘Capital Indexation Rates - Historical (June Qtr.)’. This reason for replacing this section is to allow for items to be indexed over a longer period (e.g. some of the existing land in the LFCC’s have a cost date in the 1990’s).
9 The cost date is defined as the year in which the land or infrastructure item was costed.
10 Logan Adopted Infrastructure Charges Resolution (No 5), 2015
• **Revenue stream per unique charge area** – This section calculates the annual revenue per unique charge area and development type. The column called ‘Charge rate for development’ presents the charge rate applicable to the unique charge area. The revenue is calculated by multiplying this charge rate (applicable to the development type), with the annual increase in demand in the particular development type. The revenue is adjusted by applying the ‘charge factor’ as explained elsewhere in this document.
  
  o A number of charge areas show a negative revenue. In the case of residential development, this mainly applies to the development type ‘other’ (e.g. relocatable home park, etc.). In practice, it means existing (other) residential development is replaced with either attached or detached housing, with the ‘negative’ revenue representing the discount provided for the existing development. Similarly, in the case of non-residential development, it implies existing development (m²/GFA) being replaced / extended, with the ‘negative’ revenue representing the discount provided for the existing development.
  
  o In the case of non-residential development, the following additional comments apply:
    ▪ For the development type ‘Education’, a factor of 27.29% was applied to the charge so that the model only accounts for demand placed by private schools (i.e. public schools are not charged). The factor is based on school enrolment data received from the State Department of Education.
    ▪ When preparing an ICN, the stormwater charge is calculated based on the area of impervious area created by the development. However, for the purposes of projecting future revenue, no information is available on the impervious area to be created. Instead, the increase in GFA is used.

• **Revenue stream per projection area** – This section presents the revenue stream per unique charge area by projection area (and per development type).

The comments are provided per sheet and per section within each sheet.

3.4 **Anticipated growth - Residential:**

• See section 3.2 above – the bullet called ‘Annual increase demand per unique charge area’.

3.5 **Anticipated growth - Non-residential:**

• See section 3.2 above – the bullet called ‘Annual increase demand per unique charge area’.

3.6 **Catchment demand – Water supply:**

• The existing and projected demand was sourced from ‘LGIP – Water and sewer demand for DSDIP model’¹¹.

• The demand includes that in- and outside the PIA, but exclude demand in the PDA’s.

3.7 **Catchment demand – Sewer:**

• The existing and projected demand was sourced from ‘LGIP – Water and sewer demand for DSDIP model’¹².

• The decrease in the demand in the Beenleigh service catchment between 2021 and 2026 is attributable to new infrastructure causing a ‘catchment diversion’ from Beenleigh to Loganholme over this period (i.e. the ‘decrease’ in Beenleigh is offset by the increase in Loganholme).

3.8 **Catchment demand – Transport:**

• The existing and projected demand was sourced from ‘Existing transport infrastructure – future and current demand’¹³.

• The demand stated in the model includes that in- and outside the PIA, but exclude demand in the PDA’s (Flagstone and Yarrabilba).

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¹¹ DM#9534494 – LGIP – Water and sewer demand for DSDIP model.
¹² ibid
¹³ DM#9524839 – Existing transport infrastructure – future and current demand.
3.9 Catchment demand – Parks and LFCF’s:
- The existing and projected demand was sourced from the LDPM\textsuperscript{14} (which presents the population per projection area) and re-apportioned to the parks service catchments.

3.10 Catchment demand – Stormwater:
- The existing and projected demand was sourced from the Summary of extrinsic material document’ (Table 2.4.1)\textsuperscript{15}.

3.11 Existing trunk assets

3.11.1 General comments
The model provides the current replacement cost (CRC) of existing trunk at a specific year called the ‘valuation year’. The model escalates this cost to the base year by applying the actual PPI or CPI rates over this period for the infrastructure and land components respectively.

3.11.2 Existing trunk assets – Water:
- The current replacement cost (CRC) was not sourced from the asset register, but was calculated using the asset information in the GIS system (e.g. length, diameter, soil type), and applying the unit rates derived by Cardno (based on their project costs and other industry figures\textsuperscript{16}). The values in the asset register are calculated using the discounted cashflow methodology (DCF). This valuation methodology has passed audit by the Queensland Audit Office. However, for the purposes of the LGIP, calculating the CRC applying the unit rates in the Cardno report is considered more accurate.
- The CRC cost of existing assets only includes the infrastructure component, and no provision was made for the land component.

3.11.3 Existing trunk assets – Sewer:
- Same as for the water supply network.

3.11.4 Existing trunk assets – Movement:
- The current replacement cost of the existing trunk roads was sourced from ‘Existing transport infrastructure – future and current demand’ (see the tab called ‘Existing infrastructure at 2014’)\textsuperscript{17}. The replacement cost used in the above document was sourced from Council’s asset register as at June 2014, which makes a distinction between five components being: surface, pavement, inventory, bridges and public lighting.
- The apportionment across service catchments was calculated using the demand as at 2031, adjusted to exclude the demand in the PDA’s\textsuperscript{18}.
- In the absence of a detailed analysis of the entire network, the apportionment across the service catchments is assumed to be the same for all existing assets. As the movement network is ‘open’, this assumption is, for the purpose of this first LGIP, considered reasonable.

3.11.5 Existing trunk assets – Parks and LFCF’s:
- LFCF’s (land cost) – The land cost was sourced from the document called ‘Base layer – for land valuation’ (refer the sheet called ‘existing trunk for QTC model’)\textsuperscript{19}. The document presents the land cost at the year it was acquired. The SoW model calculates the cost as at the base year, by applying the actual CPI from the valuation year to base year.
- LFCF’s – The land cost was apportioned in the document called ‘Base layer – for land valuation’ using the following rules:
  - Metro facility – apportioned across the sectors as per the demand as at 2014, and then across the precincts per sector.
  - District facility – apportioned across the precincts in the sector as per the demand as at 2014.

\textsuperscript{14} DM\#9488773 – Summary of planning assumptions and Priority Infrastructure Area (April 2015)
\textsuperscript{15} DM\#9908359 - Summary of extrinsic material for the stormwater quantity network.
\textsuperscript{16} DM\#7701455 – Priority infrastructure plan unit rates review.
\textsuperscript{17} DM\#9975281 – Transport network – demand and current replacement cost.
\textsuperscript{18} Ibid.
\textsuperscript{19} DM\#7995161 – Base layer – for land valuation.
- Local facility – 100% to the precinct.
- LFCF’s (other than land) – For the purposes of the LGIP, the LFCF’s network only comprises the land component and not the cost associated with the actual facility (e.g. library). The ‘infrastructure’ cost component is therefore not populated.
- Parks (land cost) – The land cost as at valuation year was calculated using the ‘Existing parks land value’ (see the sheet called ‘Land cost of existing – LGIP’). The model uses the same data as the Parks land valuation model (see the sheet called ‘Final parks network calculation’). These costs were reviewed to account for considerations such as flood affected land and a number of the values were adjusted downward were appropriate. The cost is expressed as at June 2009. The model indexes the cost up to the base date by applying the actual CPI over the period June 2009 to June 2014.
- Parks (embellishment cost) – The value of embellishments at valuation year was calculated using the unit rate per park type (as at 100% embellished), and multiplying that with the percentage associated with the actual level of embellishment of the particular park (refer to the column called ‘unit rate’).
- Parks - The unit rate per type of park at 100% embellishment is (June 2009):
  - Recreation Local - $474,129
  - Recreation District - $2,095,295
  - Recreation Metropolitan - $6,160,241
  - Recreation Corridor (linear metre rate) - $533
  - Recreation Local - Civic (Plaza) - $404,761
  - Recreation Local - Civic (Village Green) - $582,231
  - Recreation Local - Civic (Town Square) - $1,396,790
  - Sport District - $4,281,190
  - Sport Metropolitan - $13,831,388
- Parks – The embellishment cost was indexed from the valuation date (June 2009) to the base date (June 2014) by applying the actual PPI over this period.
- Parks - The percentage per level of embellishment is (refer to the column called ‘embellishment level’):
  - Level 0 – 10%
  - Level 1 – 100%
  - Level 2 – 75%
  - Level 3 – 50%
  - Level 4 – 25%
- Parks – The document ‘Parks typical embellishment cost calculations – procedure and working’ provides a detailed overview of the process followed to calculate the unit rates per park type.
- Parks – In broad terms, the apportionment across service catchments was done by applying the following general rules:
  - Metropolitan facility – Apportioned across all planning sectors on the basis of the relative size of their demand, and across the precincts that make-up each sector on the basis of their demand.
  - District facility – 100% to the specific planning sector and apportioned across the precincts that make-up the planning sector based on the relative size of their demand.
  - Local facility – 100% to the specific precinct.
- The detailed methodology is described in ‘Parks LGIP Catchment apportionment benefit methodology’.

20 DM#9960488 – Existing parks land value.
21 DM#8058649 – Park land valuation model.
22 DM#10130137 – Parks typical embellishment cost calculations – procedure and workings.
23 DM#9771898 – Parks LGIP catchment apportionment benefit methodology.
3.11.6 Existing trunk – Stormwater:

- The current replacement cost was sourced from an asset register developed by the River and Catchment program. Only the items located in the planned stormwater catchments are included.  
- No allowance was made for land cost.  
- The cost is fully apportioned to the particular service catchment area.

3.12 Future trunk assets

3.12.1 General comments

- In the case of stormwater, movement and parks, a distinction is made between the infrastructure and land components of a future trunk item.  
- The model has the ability to calculate the cost of land to be acquired, or the infrastructure to be developed, over more than one year.  
- The model calculates the costs as follows:
  - Cost at valuation year – This is the cost of the item valued at the ‘valuation year’. The valuation year varies across the networks.  
  - On-cost for work – 20% (except for cycle ways were 10% was applied)  
  - Contingencies for work –  
    o Project delivery in 0 to 5 years – 7.5%  
    o Project delivery in 5 to 10 years – 15%  
    o Project delivery in 10 to 20 years – 20%  
    o Project delivery in 20+ years – 25%  
  - No provision was made for oncost and contingencies in land acquisition  
  - Current cost – The current cost is calculated by indexing the cost as at ‘valuation year’ to the base year, with the actual PPI or CPI index for the infrastructure and land components respectively.  
  - Nominal cost – The nominal cost is calculated by indexing the cost from the base year (current cost) to the planned date(s), at a rate of 3.87% and 2.7% for the infrastructure and land components respectively. In the event of the planned date involving multiple years, the model assumes the cost will be spend in equal amounts per annum over the period, and a cost is calculated for every year. The nominal cost is the total of these annual costs. 
  - NPV – The NPV is calculated by discounting the nominal cost from the planned date to the base year using the WACC (5.34%). In the event of the planned date involving multiple years, the model calculates the NPV for each year, and then sum it to calculate a total NPV.  

- Instead of calculating the nominal cost and NPV on a single sheet, a separate sheet was inserted for all networks to calculate these costs.  
- For the purposes of the LGIP SoW’s, the cost as shown in the columns titled ‘INFRASTRUCTURE Cost at base year’, and ‘LAND Cost at base year, is used.

3.12.2 Notes per column for all sheets

- Establishment cost of infrastructure – The establishment cost of future infrastructure was calculated using the methodology as described in the following sections:
  - Water and sewer  
    - Section 7.1.2 of the ‘Summary of extrinsic material for the water and sewerage networks’  
  - Movement

24 DM#9848741 – LGIP - Existing stormwater assets in Park Ridge.  
25 DM#9832663 – LGIP - Existing stormwater infrastructure – Abang avenue  
26 DM#9832725 – LGIP - Existing stormwater infrastructure – Berrinba 1  
27 DM#9832743 – LGIP - Existing stormwater infrastructure – Berrinba 2  
28 DM#9832764 – LGIP - Existing stormwater infrastructure - Jimboomba  
29 DM#9832827 – LGIP - Existing stormwater infrastructure - Logan Village  
30 DM#9832846 – LGIP - Existing stormwater infrastructure - Loganlea  
31 Current cost is defined as the cost at the base year (June 2014).  
32 Nominal cost is defined as the cost at the planned date.  
33 DM#9805333 – Summary of extrinsic material for the water and sewerage networks.
3.12.3 Future trunk assets – Water:
- The items and cost estimations were sourced from ‘LGIP – Water SoW template’. Refer to the sheet called ‘water – planned infra’ and the column called ‘INFRA Cost that can be included in LGIP’.
- The cost are also included in the 10 year capital works program of the Logan Water Business.
- All items were 100% apportioned to their particular service catchment (serving demand both inside and outside the PIA, but excluding demand served in the PDA’s).

3.12.4 Future trunk assets – Sewer:
- The items and cost estimations were sourced from ‘LGIP – Sewerage SoW template’. Refer to the sheet called ‘sewerage – planned infra’ and the column called ‘INFRA Cost that can be included in LGIP’.
- The cost are also included in the 10 year capital works program of the Logan Water Business.
- All items were 100% apportioned to their particular service catchment (serving demand both inside and outside the PIA, but excluding demand served in the PDA’s).

3.12.5 Future trunk assets – Movement:
- The items and cost estimations were sourced from ‘LGIP – Transport SoW template’. Refer the sheet called ‘transp – planned infra’ and the columns called ‘LAND Cost at base year’ and ‘INFRA Cost that can be included in LGIP’ for land and infrastructure respectively.
- Land – The land value was determined using the valuations done by the State Valuation Service of the Department of Natural Resources and Mines (DNRM). The State Valuation Service valuation provides current improvement values (CIV) ($/m²) for most lots within Logan City which represents the value of a land parcel ‘brought to the market’. In this definition, the CIV does not include any structures on the land (e.g. houses) but reflects the value of the raw land (which varies by location) and all other costs associated with subdivision and preparation. Unit rates were applied to capture the value of improvements that are not covered by the CIV unit rates (as at June 2010). These unit rates include:
  - Dwelling estimates;
  - Non-residential structures estimates;
  - Survey cost estimate of $2,500 per acquisition; and
  - Legal cost estimate of $4,000 per acquisition.
- Infrastructure - The Trunk Road Investment Processor (TRIP) was used to calculate the establishment cost of future local government road projects required up to 2026. TRIP estimates the cost of separate elements of a road; carriageway, bridges, structures, land, lighting, drainage, paths, allowing the designer to select a default unit rate and/or quantity of each element, or override the rate or quantity.
- The original demand apportionment makes provision for the PDA’s, external demand and demand post 2026. For the purposes of the LGIP, the demand was treated as follows:
  - External and demand post 2026 was re-apportioned to the various service catchments in accordance with their relative demand.
  - Demand is the PDA’s was excluded.

DM#9810720 – Summary of extrinsic material for the movement network.
DM#9908359 – Summary of extrinsic material for the stormwater quantity network.
DM#9821706 – LGIP - Summary of extrinsic material for the parks network.
DM#9828960 – LGIP - Summary of extrinsic material for the LFCF network.
DM#9441500 – LGIP - Water SoW template.
DM#9441998 – LGIP – Sewerage SoW template.
Water and sewer 10 year capital works program.
DM#9440645 – LGIP – Transport SoW template.
In the sheet titled ‘Transp – Nom & NPV infra cost’ in the source document, the nominal cost for project 7 (Chambers Flat Road (Entrance Street to Park Ridge Road / School Road) (4 lane urban arterial) was hard entered. This is the actual cost provided by the contractor, which is more accurate than the cost estimated by the model.

3.12.6 Future trunk assets – Parks and LFCF’s:
- LFCF’s – the items and cost estimations were sourced from ‘LGIP – LFCF SoW template’. Refer to the sheet called ‘LFCF - planned infra’ and the column called ‘LAND Cost at valuation year’.
- LFCF’s – the land cost is based on a land valuation performed by a qualified land valuer, using the ‘before and after’ methodology.
- LFCF’s – no provision was made for on-cost of contingency.
- Parks – the items and cost estimates were sourced from ‘LGIP – Parks SoW template’. Refer to the sheet called ‘parks – planned infra’, and the columns called ‘LAND Cost at valuation year’ and ‘INFRA Revised cost at valuation year’ for the cost for land and infrastructure respectively.
- Parks (land cost) - The land acquisition cost is based on the $/m2 rate calculated by the Parks land value model. The value is presented as at June 2010, and the current cost is calculated by indexing the cost to June 2014 using the actual CPI index over this period.
- Parks (embellishment cost) – The value of embellishments was calculated in the same manner as for existing parks.
- Parks – The apportionment was done in the same manner as for existing parks.

3.12.7 Future trunk assets – stormwater:
- The items and cost estimations were sourced from ‘Stormwater network LGIP revision’. Refer to the sheet called ‘s.water planned infra’ and the columns called ‘LAND Cost at base year’ and ‘INFRA Cost that can be included in LGIP’ for land and infrastructure respectively.
- Land – The land value was determined using the valuations done by the State Valuation Service of the Department of Natural Resources and Mines (DNRM). The State Valuation Service valuation provides current improvement values (CIV) ($/m2) for most lots within Logan City which represents the value of a land parcel ‘brought to the market’. In this definition, the CIV does not include any structures on the land (e.g. houses) but does include the value of the raw land (which varies by location) and all other costs associated with subdivision and preparation. The cost of each item of land was calculated by multiplying the area of the land by the cost per square metre (CIV) for that land. In those cases where there is not a CIV for the particular property, the average of the surrounding properties was used.
- Infrastructure – The cost of the infrastructure is based on the costs provided in the relevant engineering reports, as well as the unit rates provided in the document ‘Stormwater Management Unit Cost Rates for Logan’. In some cases, the rates reflected in industry publications such as ‘Rawlinsons (Australian Construction Handbook)’ was used.

3.13 Summary cost schedule
- This sheet is populated with data from the demand forecast and asset input sheets and provides a summary of the demand and cost (both existing and future trunk).
- The sheet also calculates the ‘cost per unit demand’ (based on the ‘average’ approach), per network and per service catchment.

3.14 Cash Flow projections
- This sheet is automatically populated with data from the demand forecast and asset input sheets.
- The cashflow shows an average annual expenditure of just over $32 million, compared with an average annual revenue of $22 million.

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42 DM#9440645 – LGIP – Transport SOW template
43 DM#9439485 – LGIP – LFCF SoW template.
44 DM#9436466 – LGIP – Parks SoW template
45 DM#9771891 – Parks LGIP catchment apportionment methodology.
46 DM#9674875 – Stormwater SoW template.
47 DM#9175182 – Stormwater management unit cost rates for Logan.
This revenue sufficiency analysis (RSA) showed that the LGIP is affordable, as the shortfall can be financed with loans.