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**Urban LandMark Land Release  
Assessment Tool: Comparison between  
the findings of the Western Cape and  
Gauteng case studies**

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Prepared by:

Commissioned by:





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# Executive summary

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## Introduction

PDG was commissioned to apply the Urban LandMark Land Release Assessment (LRA) tool in two Gauteng case studies, namely Cosmo City and Pennyville in order to a) increase the case study application to generate a database of model inputs and outputs, b) to test the model, and c) to compare the Gauteng experience with that of the Western Cape. This report provides a comparison between the findings of the two Western Cape case studies, (Case Study A and Case Study B), and the two Gauteng case studies.

## High level comparison

The scale and complexity of the case studies is an important factor in their ability to be modelled accurately. Cosmo City is far larger than the other case studies, comprising approximately 12,000 housing units, and it took 11 years from project start to completion. While Pennyville is of the same scale as Case Study B, at around 3,000 units, it is important to note that Case Study B is a planned development and has not yet taken place. Case Study A is a small project, at only 682 units, and is the simplest development model, as it only comprises two housing typologies.

Case Study A was the only project where land was actually sold to the developer, as two of the projects, Case Study B and Cosmo City, were undertaken/planned under Land Availability Agreements (LAAs), while Pennyville included a Land Exchange Agreement.

The most distinct difference between the Western Cape and Gauteng case studies concerns the definition and concept of the 'developer'. For the Western Cape case studies the developer was a single entity – the Cape Town Housing Company (CTHC) in Case Study A, and an ABSA/Standard Bank consortium in Case Study B. For the Gauteng case studies, the 'developer' had to incorporate all developers involved through the on-selling of land, or the retention of rental stock. Cosmo City involved multiple developers, while Pennyville included two developers and a social housing institution. This aggregation of entities makes the 'developer' model inputs more difficult to quantify and the results more difficult to assess.

## Differences in model inputs

The model assumptions were kept as constant as possible across the case studies. The financial assumptions were consistent, except for the developer's cost of capital in Case Study A, which was set at 3% lower than the others to reflect the availability of concessionary finance rates on that project. The State operating costs for service provision used in the Gauteng case studies were significantly different to those used in the Western Cape, and these costs need to be interrogated further. The assumed consumption patterns were similar, but slightly lower in Gauteng. Rates and tariffs were set to reflect the actual charges imposed by the two cities, with an important difference being the lower residential property rates exemption in Cape Town.

The most significant difference in project inputs relates to bulk infrastructure costs, which will vary from project to project. In Gauteng, bulk infrastructure was reported to cost up to ten times more than the bulks required in the Western Cape projects. This may reflect an under-recovery of costs on the Western Cape projects. The unit capital costs of housing construction and the value of the housing subsidies were not significantly different in the two sets of case studies.

## **Results comparison: State perspective**

The State performance for the two sets of case studies is vastly different. In the Western Cape, the model predicts positive returns on investment of 6% on Case Study A, and 68% on Case Study B. While the projection for Case Study B is undoubtedly unrealistic, the figure for Case Study A is possible, given adequate cost recovery through services in the long term. The Gauteng case studies, in contrast, show negative returns of -32% and -75% on Cosmo City and Pennyville respectively. This is a result of the large up-front capital outlays from the State on these two projects, with little or no cost recovery in the long term. The total subsidies provided for Pennyville are similar to those provided for Case Study A, while the subsidies for Cosmo City are 33% higher in real terms, largely due to the high land and bulk infrastructure subsidies.

## **Results comparison: Developer perspective**

Developer performance, as measured by return on investment, is very similar for Case Study A and Cosmo City (14% and 13% respectively), but is a modest 8% for Case Study B. The return on investment for Pennyville is calculated to be 29%, but this is skewed by the assumption that rental stock is retained for 20 years and then sold. The Gauteng figures are also difficult to interpret because of the aggregation of 'developers'. All projects except for Case Study A show some level of internal cross-subsidy, with losses on the subsidy units being compensated for by profits on the higher-value units.

## **Results comparison: Household perspective**

Owner households are calculated to derive a positive return on investment over 20 years, with the strongest benefit accruing to subsidy beneficiaries in all cases. There is a general trend of declining benefit with increase in property value, driven by lower subsidies and higher operating costs. Social rental units show a net positive return on investment because of the subsidised rent, while market rental units, predictably, reflect a net cost to tenant households.

## **Conclusions**

The State results for the Gauteng case studies indicate that these projects were heavily subsidised through implicit land and bulk infrastructure subsidies. Of concern are the ongoing costs to the State over time, which brings into question the financial viability of this development model to the State in the long term.

Land subsidies, in the form of LAAs, and bulk infrastructure subsidies were present in all cases, but higher in the Gauteng case studies, which is indicative of the State's commitment to the success of these projects. While land costs are a fairly small cost of the development, the LAAs help to keep holding costs to a minimum. Bulk infrastructure costs, on the other hand, are significant, and can make or break these types of projects. The levels and form of subsidisation are therefore important to the developers, and can be costly to the State. It is notable that if land and bulk infrastructure costs are applied universally to integrated developments, they are regressive in that they favour the higher-value properties with larger areas and greater consumption of services.

A key factor of success of integrated developments is getting the housing mix right in order to achieve the State imperative for housing delivery, while maintaining a financially viable product for the developer. The risk of the 'gap' market was highlighted in the Cosmo City study, and was notable in its absence in Pennyville. The Western Cape case study reports also noted the significant financial difficulties in this market. The Gauteng case studies seem to indicate that social rental housing may be a more viable solution to subsidising this market.

Where the Western Cape case studies first highlighted the issues around internal cross-subsidisation in integrated housing projects, the Gauteng case studies confirmed that this form of subsidisation is necessary in order to make these types of developments work.

# 1 Introduction

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In co-operation with the Western Cape Department of Human Settlements and the City of Cape Town, Urban LandMark commissioned 80/20 and PDG to develop an approach to evaluate the cost effectiveness of public land release. A Land Release Assessment (LRA) model was developed and used to assess the cost effectiveness of the two case studies in the Western Cape. The model is an Excel-based financial model which undertakes a cost benefit analysis (CBA) from the perspectives of the State, developer and resident households. PDG has been commissioned to apply the LRA model in two Gauteng case studies, namely Cosmo City and Pennyville in order to a) increase the case study application to generate a database of model inputs and outputs, b) to test the model, and c) to compare the Gauteng experience with that of the Western Cape.

This report provides a comparison between the findings of the two Western Cape case studies (Case Study A and Case Study B), and the two Gauteng case studies of Cosmo City and Pennyville. Separate reports cover the application of the model to the Cosmo City and Pennyville case studies, and an assessment of the LRA/CBA model itself.

## 2 High-level comparison

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### 2.1 Overview of project characteristics

Table 1 provides an overview of the scale and the content of each of the four case studies.

*Table 1: Overview of project characteristics*

	<i>Western Cape</i>		<i>Gauteng</i>	
	<b>Case Study A</b>	<b>Case Study B</b>	<b>Cosmo City</b>	<b>Pennyville</b>
<b>No. of housing opportunities</b>	682	3406	11785	2751
<b>Total area (ha)</b>	14	75	1105	100
<b>Project period (years)</b>	3	N/A	11	4.5
<b>Housing products</b>				
Subsidy units	341	352	4992	1552
FLISP units		703	669	
Gap units	341	796	2483	
Bonded units		1555	3360	
Social rental units				395
Market rental units			281	804

The first obvious difference between the case studies is the scale of the projects. Cosmo City is vast project, which took place over 11 years, while Case Study A is a relatively small development of only 682 units constructed over three years. Case Study B and Pennyville are of the same scale, but with the important distinction that

Case Study B is a proposed future project, which differentiates it from the other three. This makes the results for Case Study B more speculative.

All four projects include a significant portion of fully subsidised units, but the housing mix is varied across the case studies. Case Study A is the simplest model, with only two distinct housing types, while Cosmo City provides housing opportunities across the whole range of housing typologies<sup>1</sup>.

## 2.2 Land transfer arrangement

The land arrangements for the four case studies are summarised below:

**Case Study A:** The land was purchased from the City by the developer. The land for the subsidy units was sold at a discounted rate, while the remainder was sold at market value.

**Case Study B:** The Land Availability Agreement between the province and the developer released the land for development by the developer, with payment of an assessed market value on transfer.

**Cosmo City:** The Land Availability Agreement between the City and the developer released the land for development by the developer, with payment of an agreed fixed value per erf on transfer of subsidised units, and a fixed value plus 50% of profits on bonded and commercial sites.

**Pennyville:** A Land Exchange Agreement between the City and the developer meant that the land originally owned by the developer was transferred to the City, but with the developer having rights to develop and transfer the property to subsidy beneficiaries. The market rental units were sold to the developer at an assessed market value.

## 2.3 Developer

The most distinct difference between the Western Cape and Gauteng case studies concerns the definition and concept of the 'developer'. For Case Study A the Cape Town Housing Company (CTHC) was the developer, and was responsible for negotiating the land transfer and managed the project construction (through contracts with contractors). The CTHC remained the owner of the properties during the period of instalment sale for the subsidy units. This simple arrangement meant that modelling was fairly straightforward. For Case Study B the developer is the ABSA/Standard Bank consortium, which has appointed BKS as project managers. As no development has taken place, it is assumed that the consortium will retain ownership and develop the land as a single entity. Again, this is a very simple situation to model.

For the Gauteng case studies, the 'developer' had to incorporate a number of entities because of sub-division and on-selling of land. At Cosmo City, CODEVCO was the main developer, but sold serviced and un-serviced sites to other developers (who in turn sold serviced sites to 'top-structure' developers. For the rental stock at Cosmo City, the site was sold to the Johannesburg Housing Company, which built and now manages the property, and therefore has to be included in the analysis under the banner of 'developer' in order to capture these costs and benefits. At Pennyville, the situation was simpler, with only three entities grouped together as the 'developer', but this was complicated by the fact that one of these was a State-owned company, the

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<sup>1</sup> It is not clear whether the rental units in Cosmo City are classified as Social Rental Housing, but for the purposes of the model they have been classified as market rental units.

Johannesburg Social Housing Company (JOSHCO). The inclusion of JOSHCO as a developer was necessary because it manages the rental stock. However, JOSHCO did not take transfer of the land because it is owned by the City, and also receives generalised subsidies through its business model, which are not captured in the LRA model.

The difference therefore, between the Western Cape and Gauteng case studies, is that in the Western Cape, the conclusions regarding the costs and benefits to the 'developer' relate to a single entity and can thus be more easily verified and evaluated. In the Gauteng Case studies, the necessary amalgamation of many entities makes the model inputs more difficult to quantify and the results more difficult to assess.

### 3 Discussion around model inputs

In both sets of case studies, the analysis was undertaken over 20 years, and all units were assumed to be sold after 20 years. The table below provides a comparison of some of the primary financial inputs to the models.

*Table 2: Primary financial inputs*

	<i>Case Study A</i>	<i>Case Study B</i>	<i>Cosmo City</i>	<i>Pennyville</i>
State's cost of capital	REPO	REPO	REPO	REPO
Developer's cost of capital	PRIME -3	PRIME	PRIME	PRIME
Household cost of capital	PRIME +1	PRIME +1	PRIME +1	PRIME +1
Property value escalation	10%	10%	10%	10%
Long-term CPI	4.5%	4.5%	4.5%	4.5%
Long- term electricity inflation	4.5%	4.5%	4.5%	4.5%
Long-term prime rate	12%	12%	12%	12%
Long-term Repo rate	9%	8%	8%	8%
Collection assumptions	80%-95% <sup>2</sup>	80%-95%	80% <sup>3</sup>	65%-95% <sup>4</sup>
Imputed rent %	7%	7%	6.5%-7.2%	7%-8.7%

The developer's cost of capital was assumed to be Prime in all cases except for Case Study A, where a rate of Prime -3 was used to match the rate of interest on the project finance provided by the NHFC. Property value escalation was assumed to be 10% per annum in all case studies. The reason for the long-term Repo rate being 9% for Case Study A, while 8% was used for Case Study B, is not known. Collection rates vary between 80% and 95%, but in Pennyville the reported collection rate for the social rental housing is much lower. Imputed rent was kept constant in all cases, except for the rental units in Cosmo City and Pennyville where it was specifically calculated for the rental units.

<sup>2</sup> 80% on subsidy housing and 95% on gap housing

<sup>3</sup> Estimate - no data available

<sup>4</sup> 65% reported for JOSHCO units, 95% reported for market rental

*Table 3: State operating and capital costs*

	<b>Western Cape</b>	<b>Gauteng</b>
<b>Operating Cost of Service Provision</b>		
Water Infrastructure Maintenance (R/unit, per month)	-	38.00
Water bulk supply (c/kl)	832.00	354.00
Sanitation Infrastructure Maintenance (R/unit, per month)	-	45.00
Sanitation: Water treatment plant costs (c/kl)	587.00	17.50
Electricity Infrastructure Maintenance (R/unit, per month)	89.00	191.00
Electricity Bulk Supply (c/kWh)	32.40	41.00
Solid waste kerbside collection (per housing unit, per month)	41.00	26.00
Waste Removal: Landfill (R/ton)	69.40	90.00
Waste Removal: Transfer station (R/ton, per day)	27.30	
Waste Removal: Recycling Facility (R/ton, per day)	50.00	
<b>Capital Expenditure</b>		
Waste Removal: Landfill (per housing unit)	100	65
Waste Removal: Transfer station (per housing unit)	1,000	
Waste Removal: Recycling Facility (per housing unit)	2,500	

The State operating costs vary considerably between the Western Cape and Gauteng Case studies. They are presented in the table as single costs in the Western Cape and Gauteng respectively, which would be the case if the case study projects were implemented in the same year. The operating costs for the two Western Cape studies should have taken the difference in project start date into account. For the Gauteng case studies, the costs in the table, which are based on actual 2010 costs, were deflated back to nominal costs in the year the project started using the historical CPI values, i.e. 2000 for Cosmo City and 2006 for Pennyville. The Western Cape costs are not referenced, but the water and sanitation costs are definitely too high<sup>5</sup>. The Gauteng costs have been derived from a calibrated Municipal Services Financial Model (MSFM) that was run for the City of Johannesburg. Transfer stations and recycling facilities were not included in the Gauteng case studies, as it was indicated that all waste from these sites goes directly to landfill.

<sup>5</sup> For example, in an interview with the Senior Manager for water resource at the City of Cape Town in 2010, a cost for bulk water treatment of 278 c/kl was given, and wastewater treatment has been calculated by PDG as approximately 7.06c/kl.

The assumed household unit consumptions for subsidy units are shown in Table 4<sup>6</sup>. The Gauteng water consumption and refuse generation rate is slightly lower than those used in the Western Cape in order to correlate with the MSFM figure. The wastewater return flow rate is slightly higher, based on low-income urban residential norms.

*Table 4: Household consumption*

	<b>Western Cape</b>	<b>Gauteng</b>
Electricity (kWh per unit, per month)	250	250
Water (kl per unit, per month)	20	12
Refuse removal and cleansing services (kg per unit, per month)	20	9
Sewage return flow percentage of water used	70%	80%

The relevant rates and tariffs used in the case studies are presented in Table 5. While the tariffs for the two Western Cape studies were entered into the model as the same value, these should have been de-escalated for Case Study A to reflect the earlier project start date. The rates are fairly similar and reflect the different pricing strategies of Cape Town and Johannesburg. One important difference, however, is the residential property rates exclusion threshold, which is higher in Cape Town, which means that these households will pay lower property rates, and therefore the city will accrue less income.

*Table 5: Rates and tariffs*

	<b>Western Cape</b>	<b>Gauteng</b>
<b>Electricity Rates</b>		
0-50kWh	0	0
50-150kWh	58.11	53.07
150-450kWh	70.47	53.07
450-1500kWh	93.31	83.06
>1500kWh	79.97	86.83
<b>Waste removal</b>		
R0 - R100 000	0	0
R100 001 - R150 000	18.86	60.42
R150 001 - R350 000	37.72	71.55
R350 001 - R400 000	56.58	76.32
>R400 000	75.44	159.00
<b>Residential property rates</b>		
Residential rate	0.00531	0.004928
Residential exemption	200,000	150,000
<b>Water usage (Cumulative)</b>		
0kl - 6kl	0	0
6kl - 10.5kl	3.99	3.62
10.5kl - 20kl	8.51	5.82

<sup>6</sup> Consumption in higher-income units was assumed to be higher, but is omitted here for clarity

20kl - 35kl	12.61	10.29
35kl - 50kl	15.58	12.93
Over 50kl	20.55	12.93
<b>Sewage (Cumulative)</b>		
0kl - 4.2kl	-	-
4.2kl - 7.35kl	4.67	2.01
7.35kl - 14kl	9.94	2.39
14kl - 24.5kl	10.87	4.12
24.5kl - 35kl	11.41	5.87
Over 35kl	-	9.70

Table 6 shows the relative expenditure on bulk infrastructure (escalated to 2010 Rands for the Gauteng projects). It is notable that very little bulk infrastructure was assumed necessary for Case Study B. While both Gauteng case studies required only upgrades of infrastructure, this amount per unit is significantly more than for the Western Cape case studies. Bulk infrastructure is likely to be highly variable between case studies, and the costs are project-specific. As a comparison, the default costs and consumptions in the MSFM result in estimates for the marginal cost for bulk infrastructure in South African cities of approximately R32,000 per low-income unit. One may therefore conclude that Cape Town is under-recovering on bulk infrastructure through development charges, as has been suggested in the Western Cape case study report.

*Table 6: Bulk infrastructure cost (per subsidy unit)*

	<i>Case Study A</i>	<i>Case Study B</i>	<i>Cosmo City</i>	<i>Pennyville</i>
Bulk Services upgrade	11,360	2,445	47,236	27,296
Bulk Services in Full	22,720	4,889	-	-

A comparison of the sales prices, subsidy values and rental income (from the developer's perspective) is provided in Table 7. It is encouraging to note that the sales prices are relatively similar across the case studies. The subsidy value paid to the developer is somewhat lower in the Pennyville case study than the others. It is lower than Cosmo City because of the smaller amount of MIG allocated per unit, and it is lower than the Western Cape case studies because of a higher top-structure subsidy amount (as a result of escalation of the subsidy over time), and the other subsidies (SCCA, City subvention grant) that were granted in the Western Cape. Although the housing subsidy was also lower in the Cosmo City case study, the MIG subsidy allocation for bulk infrastructure compensates for this and results in a total subsidy equivalent to the Western Cape case studies.

*Table 7: Sales prices, Subsidy values and rental received by the developer (per unit)*

	<i>Case Study A</i>	<i>Case Study B</i>	<i>Cosmo City</i>	<i>Pennyville</i>
<b>Sales price</b>				
FLISP		176,721	185,000	
Gap	368,421	331,450	238,000	
Bonded		452,552	400,000	
<b>Subsidy value</b>				
Subsidy	108,109	101,106	101,232	77,813
FLISP				77,813
Gap				58,455
Bonded				26,476
<b>Rental</b>				
Social Rental (3-bed)				1,500
Market Rental (3-bed)			3,300	2,100

Table 8 provides the unit capital costs for each housing typology. It is important to note that the costs are nominal in the year of construction, and are therefore difficult to compare.

*Table 8: Unit capital cost (R/m<sup>2</sup>)*

	<i>Case Study A (2008)</i>	<i>Case Study B (2010)</i>	<i>Cosmo City (2005-11)</i>	<i>Pennyville (2006-10)</i>
Subsidy	3,673	3,149	1,927	1,863
FLISP		4,190	2,733	
GAP	5,173	4,497	4,606	
Bonded		5,327	3,243	
Social rental				4,884
Market rental			6,174	4,302

## 4 Comparison of findings: State perspective

The overall results from the State's perspective for the four case studies are shown in Table 9, below. Both Western Cape case studies show a positive return on investment (ROI), with the 68% for Case Study B being particularly optimistic. The Gauteng case studies show significant losses to the state, with -32% and -75% ROIs respectively. This would be expected in projects with large up-front capital subsidy outlays, with little or no return from large portions of those projects that are subsidised units (with subsidised services and rebated property rates). A further cause for the large difference between the Western Cape and Gauteng case studies is the difference in operating costs and tariffs (see Table 3 and Table 5). The net results of the operating cost, tariff and consumption assumptions is that the Western Cape case studies show

municipal cost recovery on services, where the Gauteng case studies show the opposite.

**Table 9: State performance**

	<b>Case Study A</b>	<b>Case Study B</b>	<b>Cosmo City</b>	<b>Pennyville</b>
Total NPV	7,038,344	477,045,588	-784,238,814	-424,187,830
ROI	6%	68%	-32%	-75%

The ROI figures in Table 10 show where the State makes the most loss or profit. The Western Cape case studies show profit on all non-subsidy units, while the Gauteng case studies show losses on all units except for a small positive return on the bonded housing. It is interesting to note that the biggest losses are shown to be made on the social rental housing at Pennyville because of the assumption that the City does not fully recover costs through rental or through tariffs. This assumption needs to be tested in practice.

**Table 10: Return on Investment from the State's perspective**

<b>ROI</b>	<b>Case Study A</b>	<b>Case Study B</b>	<b>Cosmo City</b>	<b>Pennyville</b>
Subsidy	-60%	-59%	-88%	-100%
FLISP		7%	-19%	
Gap	108%	95%	2%	
Bonded		99%	26%	
Social rental				-141%
Market rental			-96%	8%

The total explicit and other subsidies provided for the fully subsidised units in each of the four case studies, are presented in Table 11. It is interesting to note that the total subsidy for Cosmo City is slightly higher than that for Pennyville because of the higher bulk infrastructure subsidy and top-structure subsidy in Cosmo City outweighing the higher land subsidy in Pennyville. Note that additional subsidies are present in the Western Cape that were not paid in Gauteng, but the land subsidies and bulk infrastructure subsidies were significantly higher in Gauteng.

**Table 11: Total State subsidies for fully subsidised units (R per unit – 2010 Rands)**

	<b>Case Study A</b>	<b>Case Study B</b>	<b>Cosmo City</b>	<b>Pennyville</b>
<b>Explicit subsidies</b>				
Institutional subsidy	53,227	55,706	63,258	46,039
Internal services	25,492	25,000	28,285	21,553
City subvention grant	8,600	-		
NHBRC enrolment	1,637	1,298		
SCCCA	10,803	10,602		
Geo-tech variance	8,350	8,500	13,336	8,396
<b>Total explicit subsidies</b>	<b>108,109</b>	<b>101,106</b>	<b>104,879</b>	<b>75,988</b>
<b>Other subsidies</b>				
Land Subsidy	3,740	-	14,610	20,216
Bulk infrastructure	22,720	3,600	59,639	32,679
Land holding costs		2,815		
<b>Total other subsidies</b>	<b>26,460</b>	<b>6,415</b>	<b>74,249</b>	<b>52,895</b>
<b>Total subsidies</b>	<b>134,569</b>	<b>107,521</b>	<b>179,128</b>	<b>128,883</b>

## 5 Comparison of findings: Developer perspective

The developer performance, as calculated by the model, is markedly different in the Western Cape and Gauteng case studies, as shown in Table 12. In Case Study A and Case Study B the ROI is 14% and 8% respectively. In the two Gauteng case studies, the ROIs are 13% and 29% respectively. The variation is largely a function of the agglomeration of entities under the banner of 'developer', which means that profits get captured all along the value chain. It is also a function of a lack of information around actual project cost, and where to draw the line on cost (see LRA Tool Assessment Report). It is unlikely that Pennyville will produce such a high return on investment, and the result could be refined with better information.

**Table 12: Developer performance**

	<b>Case Study A</b>	<b>Case Study B</b>	<b>Cosmo City</b>	<b>Pennyville</b>
Total NPV	20,416,921	74,623,042	152,691,007	150,943,303
ROI	14%	8%	13%	29%

Table 13 provides a breakdown of where the greatest returns and losses occur. It is interesting to note that in all case studies apart from Case Study A, the negative ROI values reflect losses on the subsidised units, and thus internal cross-subsidisation within the projects. The FLISP units in Case Study B show a loss, while in Cosmo City they show a small profit. The gap units in the Western Cape show a profit in the Western Cape, but a small loss in Cosmo City. The point to be made here is that in these two sectors, the results are marginal – reflective of the risk that this market represents to the developer. There is also inconsistency around what is termed 'gap' housing. The -5% ROI on the Pennyville social rental units is a result of the JOSHCO

rental subsidy. The profit on the Cosmo City and Pennyville market rental units includes the assumed sale of the units after 20 years.

*Table 13: Return on Investment from the developer perspective*

<b>ROI</b>	<b>Case Study A</b>	<b>Case Study B</b>	<b>Cosmo City</b>	<b>Pennyville</b>
Subsidy	4%	-18%	-11%	-8%
FLISP		-17%	3%	
Gap	19%	15%	-2%	
Bonded		14%	27%	
Social rental				-5%
Market rental			31%	62%

## 6 Comparison of findings: Household perspective

Households would be expected to derive a positive net benefit of home ownership over the 20-year assessment period, and this is indeed the case in all case studies (Table 14). The negative benefit seen for the market rental units in the Gauteng case studies reflects the fact that imputed rent equals actual rent, therefore the ongoing service costs result in a negative cash flow.

*Table 14: Household NPV*

	<b>Case Study A</b>	<b>Case Study B</b>	<b>Cosmo City</b>	<b>Pennyville</b>
Subsidy	166,222	106,330	147,162	200,431
FLISP		72,623	144,938	
Gap	81,131	66,487	187,800	
Bonded		23,606	322,422	
Social rental				61,879
Market rental			-50,502	-101,188

Table 15 presents the total ROI for each unit type. It is clear that the recipients of the subsidy units benefit the most in all cases. The relative difference between subsidy ROIs for the Western Cape and Gauteng case studies relate to the higher consumptions and service costs assumed for the Western Cape case studies. It is suspected that these may be too high in the Western Cape case studies and too low in the Gauteng case studies. Case Study A also included instalment sale costs and insurance costs (required as part of the instalment sale), which were not present in the other case studies.

*Table 15: Household Return on Investment*

<b>ROI</b>	<b>Case Study A</b>	<b>Case Study B</b>	<b>Cosmo City</b>	<b>Pennyville</b>
Subsidy	116%	141%	301%	313%
FLISP		22%	39%	
Gap	13%	11%	52%	
Bonded		3%	46%	
Social rental				39%
Market rental			-6%	-16%

The Gauteng case studies reflect the same general trend of decreasing benefit with increase in property value, which is due to a combination of the initial capital subsidies, and the subsidised service charges and property rates. Social rental produces some net positive benefit to households because of the rental subsidy (imputed rent is greater than actual rent), while market rental produces a net cost in both cases<sup>7</sup>.

## **7 Conclusion**

Conclusions relating to the costs and benefits of the three financial actors in the case studies have been drawn in the previous sections of the report. This section deals with more general conclusions that can be drawn through the comparison.

### **7.1 Longer-term financial viability for the State**

The overall levels of subsidy in both sets of case studies is roughly equivalent (after correcting for differences in project start date), although in the Gauteng case studies the levels of implicit subsidy through land and bulk infrastructure subsidies was higher. In light of this equivalent level of subsidy, it is interesting to note the model's calculation that the Western Cape projects result in a net benefit to the State over 20 years, while the Gauteng cases represent a significant net cost. This would indicate that the State continues to make losses over time in Gauteng, through non-recovery of ongoing costs, while in the Western Cape the situation is reversed. It is very important for the City of Johannesburg to look at the ongoing costs of low-income housing developments, as these are overlooked due to the political imperative for housing delivery. However, in the Gauteng case studies, the model calculates that this may become a serious issue for the City of Johannesburg in future, with increasing losses being made in these areas. The first issue is the generation of a surplus on services, particularly water and electricity. Electricity recovery is aided through pre-payment meters, but water recovery is an area of concern. The second issue is the recovery of property rates once the property value crosses the exclusion threshold of R150 000. The model shows that for Pennyville, the subsidy units are likely to break this threshold in 2012/13. It is not clear whether the City intends to collect rates from these properties, as a developer speculated that area exclusions are applied to subsidised units. If the subsidy values are used to assess eligibility for property rates, instead of actual market values, then the City will be forgoing a significant amount of revenue – and resulting in a further implicit subsidy to these households. Unfortunately, the

<sup>7</sup> It is not the intention of this study to argue the merits of ownership or ownership vs. rental. There are many qualitative benefits to rental that are not captured in this analysis.

moratorium on subsidised housing sales prevents accurate valuations, but there are other independent means of assessing property value.

## **7.2 Land subsidies**

The Gauteng projects were more heavily subsidised implicitly through land and bulk infrastructure than the Western Cape case studies. The reason for this seems to be the strong impetus from the City of Johannesburg to make a success of the projects. The City does not have control over the value of the housing subsidy, but can make investments in bulk infrastructure and land.

The Gauteng case study findings agree with the findings of the Western Cape case studies that the land cost is a small percentage of the overall project cost. From the perspective of the developer, the land cost was only 3% and 2% of the total project cost in Cosmo City and Pennyville respectively. The land was heavily subsidised in both cases – more so than the Western Cape case studies. The land availability/exchange agreements also meant that the developers avoided any holding costs on the land, although the previous study also found these costs to be fairly low. The Western Cape case studies showed the land subsidy to be regressive because it favours bigger units over smaller unit. This was also found to be the case in Cosmo City, but not in Pennyville, where no land subsidy was given on the market rental units. However, the subsidy was greater for the free-standing subsidy units than for the walk-up units.

## **7.3 Bulk infrastructure subsidies**

Bulk infrastructure can form a large part of a total project cost. In the case of Cosmo City, bulk infrastructure made up 20% of the total cost, and in Pennyville, 15% of the total cost. The developers were not required to pay these costs, which were funded through MIG grants and other City funding. On the contrary, the developers, who were contracted to construct the bulk infrastructure in both cases, presumably made profits out of these services. The developers noted, however, that these were exceptional circumstances, as current policy is to charge developers development charges (although usually only for the higher-income units). They noted that development charges have the potential to make or break developments, and are thus crucial to the viability from the developer's perspective. The subsidisation of bulk infrastructure may be an important form of subsidy that the State can provide, but is not often reported explicitly as a subsidy. A further problem is that the subsidy is not targeted directly at the poor, as the infrastructure benefits all residents. In fact, it is a regressive subsidy, as high-income users place a higher demand on the bulk infrastructure. The Western Cape case study report concluded that access to MIG funding for bulk infrastructure was problematic because of the bureaucratic processes and costs involved in the developer managing the application. In the Gauteng cases the MIG funding was handled by the City and administered as separate contracts to the housing process. It therefore created no burden to the developer – as has been mentioned previously, the developer benefited through being contracted to provide these services as well.

## **7.4 Development finance**

The subsidised interest rates on the development finance provided in Case Study A were found to increase the viability of the development. Too little information was available in the Gauteng case studies to gauge the cost of capital to the developer, but the conclusions in this case would be the same: that access to favourable interest rates, particularly on large-scale projects over long time periods, will increase the

viability for developers and increase private sector interest in the low-income housing market.

## 7.5 Timing of funding

The availability of funding from annual housing budgets was noted as a constraint to both Gauteng case studies, but the scale of the project in Cosmo City and the various sources of funding in Pennyville meant that the developers did not experience cash-flow problems and were not delayed by these constraints. A strong message arising out of both case studies was the need for political champions to drive the projects, which was the case in both Gauteng projects.

## 7.6 Getting the housing mix right

The Western Cape case study report concluded that it may be preferable to stipulate housing product mixes based on price, rather than income level, as this eliminates the risks to the developer in requiring households to access end-user finance at the lower end of the borrowing market. This seems to be the *de facto* case in Cosmo City where the housing product price of the second phase of 'credit-linked' units was determined based on viability rather than City stipulations. The danger of this is that these units are available to any purchaser, but are still heavily subsidised through implicit subsidies. The latent demand for housing will mean that downward raiding is very likely to occur, forcing the intended beneficiaries of a particular house-price bracket out of the development. The conclusion from the Western Cape case study that the lack of information kept by the State puts it in a weak position when negotiating housing product mixes with developers, certainly holds true for Gauteng as well. The stipulation of product price, rather than beneficiary income, however, will not help the State solve the issue of the huge housing demand from the gap market, as they have no means of affording even the minimum housing product that is equal to or better than a subsidised unit<sup>8</sup>. This then raises the possibility of focussing on the role of social rental housing to satisfy this market. The experience of Pennyville seems to indicate that social rental housing may be a viable option, as it enables other forms of subsidies (Social Housing Capital Grant, rental subsidies) to benefit these households. The Pennyville model shows that the per unit costs to the State are less for social rental units than for the fully subsidised BNG units, although the overall return on investment is approximately equal for the social rental family units and the BNG units and far worse for the social rental rooms. It is therefore important that a full assessment of the sustainability of this housing typology is undertaken before it is adopted at scale.

The conclusion from the Gauteng case studies regarding the attractiveness of the gap market for developers is the same as for the Western Cape. The evidence from actual project experience points to the fact that the FLISP subsidy does not work in its current form. Only half of the beneficiaries of the first phase of credit-linked units in Cosmo City accessed the FLISP subsidy. The lack of end-user finance in this market forced the developers to change the housing product to appeal to higher-income residents in the R15 000+ income range, who were actually able to access a bond. It is clear that banks are unwilling to lend in the FLISP market, and indications are that the lower threshold for banks' lending appetites is constantly climbing.

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<sup>8</sup> The debate around the need to differentiate gap housing from subsidised housing, or the possible need to lower the specifications of subsidy units, is discussed in the Western Cape case study report and is not repeated here.

## **7.7 Internal cross-subsidisation**

A strong theme arising out of the Western Cape case studies is the need for cross-subsidisation from the gap and affordable housing to the subsidy units to make the scheme viable for the developer. The report notes that these cross-subsidies are problematic for a number of reasons. Internal cross-subsidies were apparently required in both Cosmo City and Pennyville from the market-driven and market rental units to the subsidy and credit-driven units. The economy of scale possible in Cosmo City helped, as well as the ability to on-sell the subsidy units to developers who were willing to take smaller margins. A level of cross-subsidy was also present from the commercial and industrial sites, which made the development more viable for CODEVCO but, as noted in the Western Cape report, these types of cross-subsidy are only possible in the largest integrated developments.

## **7.8 General comments**

The high demand for housing in Cosmo City and for rental units in Pennyville is reflective of a chronic shortage of well-located affordable housing in Johannesburg, and in South African cities more generally. The developers therefore seem to have struck the right balance between providing a cheap enough product to capture the demand in this market, and still achieve sufficient margins – aided greatly by significant State subsidy in these projects. What is important for the State to assess is whether the total amount of subsidy is justifiable for the amount of benefit to the actual target households. Through this model of integrated housing development, the State aims to invest the minimum required to provide the most low-income housing opportunities through private-sector turnkey projects. This balance is difficult to achieve without discouraging the private sector. One developer did concur with the finding of the Western Cape case studies, that the ratios need to change to make these developments more attractive to the private sector. He believed that the ratios of subsidised housing to bonded housing should be 40:60.

The application of the LRA model to the Gauteng case studies has been instructive in both the similarities and differences that have emerged in relation to the Western Cape case studies. The Gauteng case studies are more complex projects at a larger scale and have introduced the dynamics of incorporating rental stock into integrated developments. The Gauteng projects were both strongly backed, both politically and financially, by the City, which has ensured their success. The bureaucratic difficulties described in Cape Town did not seem to be a major issue. However, similarities have emerged relating the challenge of incorporating gap and affordable housing into integrated developments, while still providing an incentive for private-sector participation. In both sets of case studies it is very informative to explicitly show the costs and benefits of the particular projects to all the parties involved. This allows for an informed analysis of the impact of these projects and the planning of future land release projects.