



Centre for Affordable  
Housing Finance  
in Africa

# Analysing the Economic Impact of South Africa's Subsidy Housing Instruments:

## COST BENCHMARKING AND IMPACT ON THE ECONOMY

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**HOUSING AND THE  
ECONOMY**

**DAVID GARDNER, KEITH LOCKWOOD & JACUS PIENAAR**  
CONSULTANTS TO THE CENTRE FOR AFFORDABLE HOUSING FINANCE IN AFRICA

## Executive Summary

Housing subsidies provide necessary basic support that facilitates access to decent, affordable accommodation for people otherwise unable to afford it. However, the impacts of subsidies on national economies run much deeper than the impact on households themselves. This paper uses CAHF's housing cost benchmarking and housing economic value chain analysis frameworks to quantify the impact of South Africa's housing subsidy system on the national economy.

The housing cost benchmarking analysis undertaken for 2018 shows that the total cost of different subsidised housing products ranges from R158 000 for a fully-subsidised serviced site in an Upgrading of Informal Settlement Programme (UISP) development to R690 000 for a house partially subsidised by the Finance Linked Individual Subsidy Programme (FLISP). This analysis shows that, at current prevailing development costs, there is a significant shortfall between the total cost of subsidised houses and the designated subsidy amounts. These 'unfunded mandates' create inefficiencies in many of the housing subsidy programmes.

A theoretical understanding of subsidies also clarifies that, while well-designed subsidies should increase the supply of subsidised accommodation at any given price range and hence improve affordability, it is likely that the benefit of subsidies will be split between the ultimate beneficiary (consumer) and the producers of that accommodation depending on the dynamics of the particular housing system being subsidised.

The analysis shows that delivery statistics for the main subsidised housing products including subsidised serviced sites (UISP), Breaking New Ground (BNG) houses, Community Residential Units (CRU) and FLISP subsidised houses have remained roughly static over the last four years at between 180 000 and 160 000 units per annum. At this rate of delivery, housing products to the value of ZAR42.7 billion were delivered in the 2017/18 fiscal year – comprising ZAR26.2 billion of intermediate inputs purchased from other sectors of the economy and ZAR 16.5 billion of gross value added (GVA) during the construction process. Intermediate inputs accounted for 61 percent of the value of domestic production, and GVA comprises the remaining 39 percent. 83 percent of intermediate inputs were sourced from secondary (mainly manufacturing) sectors, with 13 percent from tertiary (services) sectors and the remaining 4 percent from primary sectors of the economy. The GVA consisted of ZAR6.4 billion of labour remuneration (39 percent of sector GVA), ZAR4.4 billion of gross operating surplus (27 percent of GVA) and ZAR5.6 billion in indirect taxes (34 percent of GVA).

South Africa's subsidised housing value chain has a significant direct impact multiplier of 2.58 due to the ratio of GVA to intermediate inputs. While this figure does not consider import leakages, these are deemed to be low given the basic levels of materials generally used in subsidised accommodation production. 83 percent of intermediate inputs are from secondary (mainly manufacturing) sectors, showing that subsidised housing provides important stimulus to South Africa's re-industrialisation strategy through the growth of local manufacturing. Further, without considering personal and corporate taxation generated through subsidised housing construction, R5.6 billion of the subsidised housing construction value chain flows back to the fiscus through indirect taxes (mostly as VAT).

This analysis highlights the critical role that South Africa's subsidised housing programme plays beyond the constitutionally enshrined right of all South African households to progressively realise access to decent accommodation. Subsidised housing contributed an estimated 50 percent to the economic impact of South Africa's entire housing construction output in 2017, playing an important role in stabilising a shrinking construction sector. Subsidised housing directly accounts for half a percent of GDP. Importantly, a high proportion of expenditure on subsidised housing stimulates local upstream manufacturing sectors. While the direct contribution of housing to the South African economy declined from 3.9 percent of GDP to 3.7 percent between 2016 and 2017, in nominal terms housing construction grew 7.5 percent over this period. Taking account of a higher than CPI building cost inflation, this implies a very low or slightly negative rate of housing sector value added. This supports the significant impact that subsidised housing has on providing a stable stimulus to a shrinking construction sector as well as to upstream industry. Housing construction accounted for 29 percent of total construction value added, and subsidised housing accounts for 42 percent of housing construction value added. The subsidised housing programme therefore provides a relatively consistent investment into South Africa's construction sector, and as a consequence provides a level of intermediate input stability to the country's secondary and tertiary sectors too.

Notwithstanding this generally positive impact, the analysis identifies a number of problem areas in South Africa's subsidised housing system. An important constraint of the subsidy approach in South Africa is the high

level of subsidy money in most of the housing products developed. A programme that facilitated greater amounts of private and household capital contributions would assist to improve the overall impact of the subsidy programme, both in terms of the scale of construction impact and the number of beneficiaries it could reach. Furthermore, a subsidy approach that allowed for larger numbers of smaller projects could ensure engagement of many more contractors and developers (including households themselves) in the development process, so spreading the impact from the subsidy value chain.

The focus on ownership limits the potential impact of the subsidised rental housing as an economic driver, with only 121 000 social housing units under regulation by the Social Housing Regulatory Authority. However, the number of subsidised houses that enter the rental market is substantial, and this plays a critical role in enabling the better utilisation of subsidised housing assets at a national scale. South Africa's subsidised housing approach also creates various anomalies and inefficiencies in the housing market. The need to align many competing sources of financing at national, provincial and local government levels creates bottlenecks and funding gaps. Specifically, the need to coordinate land, infrastructure and housing funds can lead to complex project funding arrangements. Importantly, most of South Africa's subsidy arrangements are developed to ensure the initial production of subsidised housing. This often does not consider the life cycle costs in sufficient depth, as well as the potential positive and negative externalities that could arise from alternative subsidy arrangements. Finally, unspent housing budgets reduce the potential housing and economic impact that the subsidy programme could achieve.

## Contents

1	Introduction.....	1
2	The Impact of Housing on South Africa’s Economy.....	2
2.1	South Africa’s housing construction economic value chain in 2017 .....	4
2.2	South Africa’s housing rental economic value chain in 2017.....	5
3	Cost Benchmarking of Subsidised Housing Products .....	6
3.1	Overview of South Africa’s housing subsidy programme .....	6
3.2	Specifying housing types for analysis .....	7
3.3	Calculated cost of subsidised housing products .....	8
3.4	Construction standards benchmarking.....	10
1.	Analysing South Africa’s Housing Subsidy System.....	10
3.5	Most prevalent housing subsidy instruments .....	11
3.6	Urban infrastructure grants .....	13
3.7	Implementation of subsidy instruments .....	13
3.8	Subsidy quanta per house type.....	15
3.9	Subsidy quanta per disbursing agency.....	22
4	Determining the Economic Impact of Different Housing Subsidies .....	23
4.1	Understanding the theory of housing subsidies and their incidence.....	23
4.2	Economic value chain breakdown of subsidised housing costs .....	25
4.3	Industry sector and product / service breakdowns of subsidised house types.....	26
5	Subsidised Housing Delivery.....	29
6	Economic Impacts of Subsidised Housing Delivery .....	31
6.1	Conclusions and Policy Implications .....	38
6.2	Beyond the social impact of subsidising houses.....	38
6.3	Direct economic impact of subsidised houses.....	38
6.4	Limited subsidised rental impact but large rental impact from subsidies .....	39
6.5	Indirect and induced impacts of subsidised housing .....	39
6.6	Subsidy funding gaps .....	39
6.7	Anomalies and inefficiencies .....	40
6.8	Life cycle and externality costs of subsidised housing.....	40
6.9	Gearing of subsidies with private funds .....	41
6.10	Conclusion .....	41
	References.....	44
	Annexure A: Theoretical overview of the housing economic value chain .....	46
	Annexure B: Benchmarked housing plans and specification sheets .....	48
	Annexure C: Factors influencing housing cost benchmarking.....	77
	Annexure D: Subsidised housing delivery (2014/15 to 2018/19).....	78

## List of Tables

Table 1: Housing market segmentation and housing specifications for cost benchmarking .....	8
Table 2: Key housing subsidy instruments in South Africa .....	11
Table 3: Subsidy quanta per house type disaggregated to Level 1 housing elements .....	18
Table 4: Subsidy quanta - Detailed subsidy breakdown (Level 2) for owned serviced site products.....	19
Table 5: Subsidy quanta - detailed subsidy breakdown (Level 2) for owned housing products .....	20
Table 6: Subsidy quanta - Detailed subsidy breakdown (Level 2) for Social Housing products .....	21
Table 7: Economic value chain breakdown of subsidised housing products.....	26
Table 8: International Standard Industrial Classification (ISIC) breakdown of subsidised housing products ....	27
Table 9: ISIC and Product/Service breakdown of subsidised housing products .....	28
Table 10: Subsidised housing delivery statistics (2014/15 to 2017/18).....	29
Table 11: Value chain contributions in 2017/18 by type of subsidised product, based on units delivered.....	33
Table 12: The composition of the value chain elements by subsidised product type in 2017/18 .....	34
Table 13: The relative scale and composition of subsidised housing construction compared with all housing construction.....	36

## List of Figures

Figure 1: Estimated combined economic value chain of housing construction and housing rental in 2017 .....	3
Figure 2: Estimated economic value chain for housing construction in 2017 .....	5
Figure 3: Estimated economic value chain for residential housing rental activities in 2017 .....	6
Figure 4: Calculated costs of subsidised housing products in South Africa (2019) .....	9
Figure 5: Conceptual framework for spatial targeting grant alignment.....	14
Figure 6: House type costs versus subsidy allocations per Level 1 cost element (2019) .....	16
Figure 7: Subsidy quanta per disbursing agency (provincial, metro, SHRA).....	22
Figure 8: Other funding required (total cost less subsidy quanta) .....	23
Figure 9: The incidence of a subsidy is shared between producers and consumers irrespective of its statutory incidence .....	25
Figure 10: Subsidised housing-related delivery statistics (2014/15 to 2017/18) .....	30
Figure 11: Estimated economic value chain for subsidised housing in South Africa in 2017/18.....	32
Figure 12: Composition of housing subsidies by value in 2017/18 and composition of subsidised products delivered in 2017/18 by number.....	34
Figure 13: Delivery of subsidised housing products in 2017/18 contrasting value chain elements with source of funding.....	35
Figure 14: Economic value of subsidised housing products delivered from 2014/15 to 2017/18 contrasting value chain elements with sources of funding .....	36
Figure 15: Total housing construction value chain showing the portion contributed by subsidised housing ....	37
Figure 16: Subsidised housing delivery (1994/95 to 2013/14).....	78
Figure 17: Subsidised housing delivery (2014/15 to 2017/18) .....	78

## Glossary

**Domestic production:** The local (in this case, South African) production of goods and services within a particular geographic area – whether for consumption in that area, or for export.

**Domestic supply:** The supply of goods and services for consumption within a country's (in this case, South Africa's) borders - regardless of whether those products were produced locally or imported.

**Economic value chain:** An interlinked set of value-adding activities that convert inputs (for example, raw materials, or labour) into outputs (for example, window frames, or geysers) in the process of producing both intermediate inputs for use within other economic value chains, and final products.

**Factor income:** Income received from the different factors of production, including land (rent), labour (wages) and capital (profit).

**Final demand:** The total value of goods and services that are purchased in their final form in an economy in a given period. In national accounts terms, this includes products that are consumed by households and by government, capital goods that form part of gross capital formation, and products that are exported.

**Full-time equivalent employment:** The hours worked by a "typical" full-time employee in a particular sector or industry in a given period (day/week/month/year). The concept is used to convert the hours worked by part-time employees into the hours worked by full-time employees. For example, if a particular industry sector currently operates on a basis where full-time employees work 40 hours per week, and three people are employed on a part-time or casual basis to work 20 hours per week, their labour collectively represents 1.5 full-time equivalent employment opportunities.

**Government consumption:** Government expenditure used for the purchase of final goods and services. This excludes government expenditure on capital assets, which are accounted for under gross fixed capital formation.

**Gross domestic product (GDP):** The value of all goods and services produced within a particular geographic area (usually a country, in this case South Africa) within a particular period. It can be measured in three ways: i) as the sum of all factor incomes (labour remuneration, interest, rent and profits) earned within the defined geographic area (the income method); ii) as the value added in each sector of the economy (the production method); and iii) as expenditure on goods and services in their final form (the expenditure method). The first two methods measure the value of aggregate supply in the economy, while the third measures aggregate demand. Differences in the valuation of each method arise because of the levying of indirect taxes and subsidies at different stages of the production process, and at the final point of sale. The expenditure method is usually valued at market prices and takes account of all indirect taxes and subsidies. The production method is usually valued at basic prices and includes only indirect taxes and subsidies on production processes.

**Gross fixed capital formation (GFCF):** The expenditure on capital assets (buildings, civil works, machinery and equipment, transport equipment, computer and telecommunications equipment, research and development, computer software, mineral exploration, cultivated biological resources that yield repeat products - such as vineyards and orchards) - and transfer costs. It does not account for the consumption (depreciation) of fixed capital, and also does not include land purchases. The value of housing construction in a particular period (adjusted for work on hand at the start of the period) is included in GFCF.

**Gross operating surplus (GOS):** Represents the aggregate of returns to land (rent), capital (interest) and entrepreneurial endeavours (profits). This is often referred to generically as 'returns to capital'. It reflects that part of the value added by a company that is not attributable to labour.

**Gross value added (GVA):** Represents the payments (returns) made to the owners of the different factors of production (labour, land, capital and entrepreneurship) by a producer of goods and services in a particular period. It reflects the difference between the sales/income of the producer and the payments made to third-party suppliers of intermediate goods and services. The sum of the value added by each sector or industry in an economy is equivalent to the GDP of that economy, but differences in valuation can arise due to the inclusion or exclusion of indirect taxes and subsidies on production processes and products. GVA is typically valued at basic prices or factor cost, while GDP is usually valued at market prices (inclusive of all indirect taxes and subsidies).

**Highly skilled employment:** Employment requiring a high level of skill, often at a senior management or professionally certified level.

**Household consumption expenditure:** Expenditure on final goods and services by households, or on behalf of households (for example, when the state subsidises the cost of housing which is transferred to a household). The purchase of these goods and services may be facilitated by the factor incomes of the households themselves (earned income), or from transfers and subsidies from government or individuals outside the household unit (unearned income).

**Imports and Exports:** An import is a good or service brought into a country from another country. An export is a good or service taken from a country to another. These imports and exports may be in either a final, or intermediate form. For simplicity, we consider houses themselves to be supplied and demanded only within the domestic market, albeit that small numbers of prefabricated houses may be exported or imported.

**Imputed rent (also referred to as owners' equivalent rent):** Represents the opportunity cost of owning and living in a property. Choosing to occupy a property that you own means that any rent that could have been earned on that property is foregone. You are also saved from having to pay an explicit rent as a consequence of your occupation of the property that you own. According to the OECD, "Imputed rents are defined as rental equivalents – that is, the estimated rent that a tenant would pay for identical accommodation let unfurnished, taking into consideration factors such as the type of dwelling (single-family or multi-family), its size (useable surface, number of rooms), its facilities (running water, indoor toilet and bathroom, electricity, central heating, etc.), its location (city centre, suburban or rural) and neighbourhood amenities."<sup>1</sup> Failure to take account of imputed rents in the national accounts makes it difficult to compare the GDP of countries with significantly different levels of private home ownership, and – in the case of a single country with rapidly changing home ownership patterns – to compare GDP from one period to the next. For this reason the rental equivalent value of owner-occupied dwellings are imputed and the GDP of the country (and its components) is adjusted accordingly. Methods of determining the imputed rent vary depending on the nature and extent of the rental market in that country and the data available. The accuracy of these estimates depends on the efficient functioning of rental markets across the entire spectrum of housing options and locations. In South Africa, some rental market segments are well developed, making it easier to identify relatively accurate rental-equivalents. It is harder to identify equivalent properties for rent in less developed market segments and in particular geographic locations – such as in smaller towns – where the range of properties available for rent may be limited. The Consumer Price Index 2016 Weights<sup>2</sup> determined that on average across all households in South Africa, imputed rents were equivalent to 11.93 percent of household expenditure in 2016.

**Informal employment:** The informal sector or informal economy represents that part of the total economic activity that is not registered with, and directly monitored by, relevant government departments and agencies and not directly taxed (it will typically be subject to at least some forms of indirect taxation such as value added tax). Informal employment relates to all people deriving income from this informal activity. Because of its prevalence, most countries (including South Africa) incorporate some estimate of the economic contribution of the informal sector in the construction of their national accounts.

**Intermediate demand:** Demand for a product that undergoes further transformation through value adding activities during a production process. For example, housing construction would involve intermediate demand for cement and roof trusses. The output of a particular sector or industry can be used to satisfy either intermediate demand from other sectors and industries, or final demand.

**Intermediate inputs:** Goods and services that are inputs into a production process and that undergo further transformation as a result of value-added activities during the production process. For example, bricks, sand and cement are just some of the intermediate inputs that are used in the process of producing a house by the construction sector.

**International Standard Industrial Classification (ISIC):** ISIC is the United Nations International Standard for industrial classifications of all economic activities.

<sup>1</sup> Eurostat-OECD (2012). "Housing". In Eurostat-OECD Methodological Manual on Purchasing Power Parities, OECD Publishing. Pg. 138.

<sup>2</sup> Statistics South Africa (2017).

**Labour:** Economic measure of work done by human beings. Labour is a factor of production that is remunerated by wages and salaries that constitutes one possible source of income for households. Other possible income sources include interest, rent and profits.

**Multiplier effect:** A multiplier effect is an economic impact that arises from an initial economic stimulus – such as the sale of a house – that causes changes in other related economic variables (value added, output, employment, tax collections, imports etc.). The cumulative impact of these changes is typically greater than (a multiple of) the initial stimulus that caused them.

**System of National Accounts (SNA):** The implementation of complete and consistent accounting techniques for measuring the economic activity of a nation. Most countries have adopted an SNA that complies with guidelines collectively developed by the European Communities, International Monetary Fund, Organisation for Economic Co-operation and Development, United Nations and World Bank.<sup>3</sup>

**Net indirect taxes:** The value of indirect taxes paid, less any subsidies received, by an economic actor. An indirect tax may be levied on part of a production process (such as a skills levy on labour remuneration) or on a product (such as an excise duty or value added tax). Unlike direct taxes (corporate tax and personal tax) – which are levied on income - indirect taxes are levied on expenditure.

**Primary sector:** A collective term for those sectors of the economy related to primary industries including agriculture, forestry, fishing and mining and quarrying. They are often referred to as extractive industries because they extract resources and products from the environment. These extracted products may be “renewable” or “repeatable” - as in the case of sustainable agriculture and fishing - or “non-renewable” - such as metals and minerals extracted by mining and quarrying.

**Secondary sector:** A collective term for those sectors of the economy related to secondary industries including manufacturing, electricity, gas and water and construction works.

**Semi-skilled and unskilled employment:** Employment requiring less skills than skilled employment.

**Skilled employment:** Employment requiring a special skill, training, knowledge, and (usually acquired) ability to be productive. Organisationally, skilled employment typically includes artisans, supervisors and lower levels of management.

**Tertiary sector:** A collective term for those sectors of the economy that produce and sell a wide range of services including wholesale and retail trade, transport, storage and communication, financial, insurance, professional business advisory, and community and personal services. Because of this the tertiary sector is often referred to as the services sector.

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<sup>3</sup> European Communities, International Monetary Fund, Organisation for Economic Co-operation and Development, United Nations and World Bank (2009).

## 1 Introduction

The decision to use public resources to subsidise the development of housing is a key social question across the world. Housing subsidies provide necessary basic support that assists members of society to access decent, affordable accommodation that they would otherwise not have the opportunity to occupy. However, while housing subsidies are generally accounted for as expenditure in national accounts, the impacts that they have on the economy generally are less often considered. Furthermore, many countries' subsidies are not always explicitly identified and quantified, and public bodies and state corporate entities provide 'hidden', or implicit subsidies as well.

This report analyses the economic impact of the implementation of the main government housing subsidy instruments in South Africa. Through a rigorous analysis of the detailed cost breakdown of the accommodation units they contribute to building - using the Centre for Affordable Housing Finance in Africa (CAHF) Housing Cost Benchmarking (HCB) methodology<sup>4</sup> - the impact of government subsidies on the overall costs of accommodation is outlined. Based on this, the impact of these subsidies on the affordability of houses to beneficiary households are assessed, and therefore households' ability to access these houses. Using this benchmarking information and results from CAHF's Housing Economic Value Chain (HEVC) methodology,<sup>5</sup> the direct impact of government housing subsidies on South Africa's economy is quantified.

This analysis shows the composition of South Africa's subsidy instruments (what components of accommodation they pay for and who pays for this); which subsidy instruments create the most accommodation; what the accommodation outcomes of each one are; the extent to which public subsidies are geared with private finance; and the economic impact generated from each subsidy instrument. In order to achieve its objective, the report is structured to answer the following key questions:

1. What is the impact of all housing construction and rental on South Africa's economy?
2. What housing subsidy instruments are used to deliver accommodation in South Africa at present?
3. What types of housing do they contribute to constructing, and at what cost to government and households?
4. What economic impact does the construction of each of these housing types have?
5. How many subsidised houses does each subsidy instrument cause to be constructed?
6. What therefore is the total economic impact of government housing subsidies in South Africa?

Arising out of this analysis, a number of additional questions arise, the most pressing of which may well be: Has this extensive, 25-year subsidy programme been worth it? Has the state's investment of hundreds of billions of rands into subsidised housing in South Africa yielded the expected results? Were the expenditure approaches and choices made the most efficient for achieving these outcomes? Another important question following from this is: Did the approach adopted yield the most desirable outcomes? Could greater investments and better outcomes have been catalyzed with the same level of investment?

These are important questions as we look forward into future investments that the state may wish to make in housing. The answers are, of course, not static. They are influenced, profoundly in some cases, by the structure and performance of the wider economy, constraints on fiscal resources, and their changes over time. The key challenge facing the state, therefore, is how to calibrate its use of public resources to leverage existing private resources towards the nation's (or city's, or local neighbourhood's) overall housing goals, from one year to the next.

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<sup>4</sup> A detailed outline of the housing cost benchmarking analysis can be found on CAHF's website: Gardner, D. and Pienaar, J. (2019). Using CAHF's Housing Cost Benchmarking Methodology to Analyse Housing Costs in Fifteen African Countries. CAHF. <http://housingfinanceafrica.org/documents/using-cahfs-housing-cost-benchmarking-methodology-to-analyse-housing-costs-in-fifteen-african-countries/>

<sup>5</sup> See: Gardner, D., and Lockwood, K. (2019). Comparing Housing Economic Value Chains in Four Africa Countries. CAHF. <http://housingfinanceafrica.org/documents/comparing-housing-economic-value-chains-in-four-african-countries/>

## 2 The Impact of Housing on South Africa's Economy<sup>6</sup>

### *What is the impact of all housing construction and housing rental on South Africa's economy?*

Before we assess the economic impact of subsidised housing on South Africa's economy, it is necessary to understand the overall impact of housing on the economy. The economic impact of housing on the South African economy generally arises from two activities: the construction, maintenance and improvement of dwellings; and activities associated with the occupation of houses – which may be by the owners themselves, or through some form of explicit rental arrangement. This impact has traditionally not been very well understood in developing economies such as South Africa's, prompting CAHF to commission earlier studies that sought to construct economic value chains for housing construction and housing rental activities and to estimate their individual and combined contributions to the economy. Readers requiring greater understanding of CAHF's methodology and approach to estimating South Africa's housing economic value chain (HEVC) are encouraged to refer to these sources.<sup>7</sup> A theoretical overview of the housing economic value chain is also provided at **Annexure A**.

An economic value chain describes the linkages – both on the input (upstream) and output (downstream) sides of a particular economic activity – and quantifies the economic value creation in an economy arising from that activity. Housing economic value chains therefore describe the extent to which economic actors add value to the economy during the process of building, improving and renting houses of all types through the addition of various factors of production: their intellect, skills and physical endeavours (captured in how much their *labour* is remunerated) and their payments of rent and interest, and their generation of profits (*gross operating surplus*). The valuation of these activities may be impacted by the extent to which they are subjected to indirect taxes, or are subsidised by government (net indirect taxes less subsidies).

Neither of these two housing-related activities are specifically and comprehensively quantified in the current System of National Accounts (SNA). The process of constructing their associated value chains therefore involves a combination of "top down" disaggregation of relevant national data, data from the latest supply and use (SUT) tables<sup>8</sup> that reflect upstream and downstream links between sectors, and – where necessary – additional assumptions and data sources. An important reason for CAHF to develop this HEVC methodology is to lobby for changes to South Africa's SNA to provide better disaggregation of housing data in the future.

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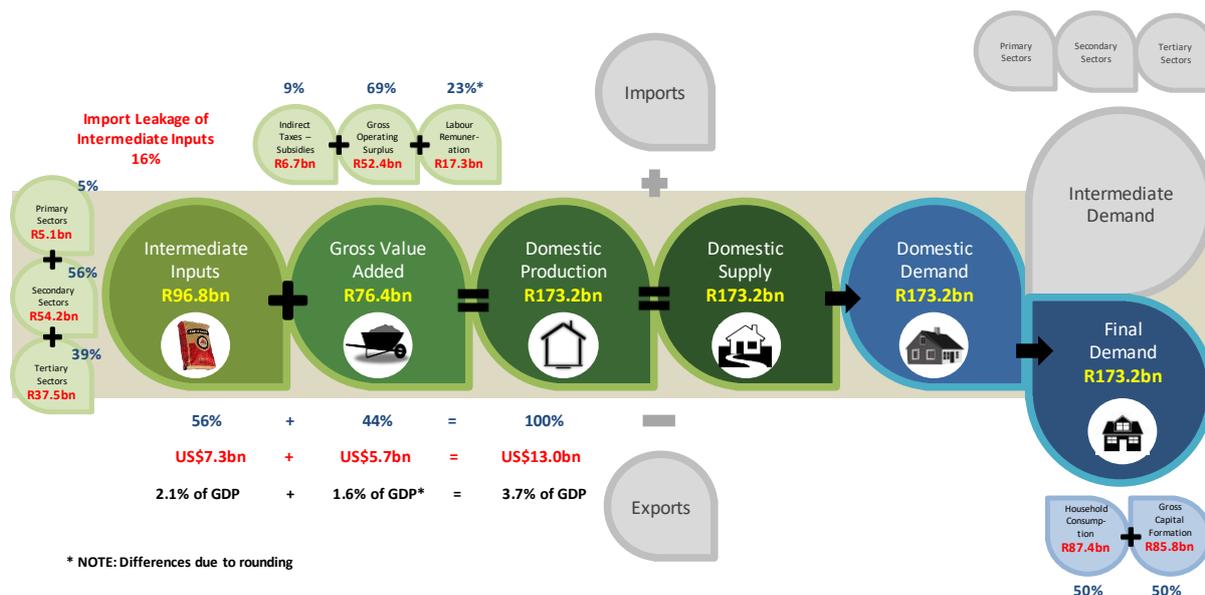
<sup>6</sup> The information in this section is taken from CAHF's publication: Lockwood, K. (2019). The Estimated Contribution of Housing Construction and Residential Rental Activities to the South African Economy in 2017. CAHF.

<http://housingfinanceafrica.org/documents/estimated-contribution-of-housing-construction-and-residential-rental-activities-to-the-south-african-economy-in-2017/>

<sup>7</sup> CAHF has produced an overall report: Comparing Housing Economic Value Chains in Four Africa Countries (2019). This document provides more background to the methodology and approach used to assess the impact of housing on the developing economies of various African countries. A series of *blogs* on Housing and the Economy are also available on CAHF's website—see <http://housingfinanceafrica.org/projects/housing-and-the-economy/>

<sup>8</sup> Statistics South Africa published supply and use tables for South Africa for the years 2015 to 2017 in early 2019. See [http://www.statssa.gov.za/?page\\_id=1854&PPN=P0441&SCH=7645](http://www.statssa.gov.za/?page_id=1854&PPN=P0441&SCH=7645)

**Figure 1: Estimated combined economic value chain of housing construction and housing rental South Africa in 2017**



Source: CAHF (2019). [The Estimated Contribution of Housing Construction and Residential Rental Activities to the South African Economy in 2017](#).

Figure 1 reflects the estimated combined economic value chain for housing construction and rental-related activities in South Africa in 2017. It indicates GVA of ZAR76.4 billion (US\$5.7 billion),<sup>9</sup> intermediate purchases of ZAR96.8 billion (US\$7.3 billion) and total domestic production of ZAR173.2 billion (US\$13 billion). Compositionally, *intermediate inputs* accounted for 56 percent of the value of output, with GVA at market prices contributing the balance (44 percent). Thirty-nine percent of the intermediate inputs were sourced from *tertiary sectors*, with 56 percent from *secondary sectors* and the remaining 5 percent from *primary sectors*. Sixteen percent of intermediate inputs were imported, meaning that 84 percent were sourced locally.

*Labour remuneration* totalled ZAR17.3 billion (US\$1.3 billion) and supported 732 000 employment opportunities in 2017. This is likely to represent a substantial undercount of total employment because the available data does not accurately capture informal employment.<sup>10</sup> The sector is estimated to have contributed ZAR6.7 billion (US\$0.5 billion) in *net indirect taxes less subsidies*, and to have generated an *operating surplus* (a combination of interest, rent and profit incomes) of ZAR52.4 billion (US\$3.9 billion).

The gross value added contributed by these activities was equivalent to 1.6 percent of national GDP in 2017 – making it almost as significant as the agriculture, forestry and fishing sector, similar in contribution to telecommunications, but larger than gold mining, other mining and 69 other sub-sectors of the South African economy. When intermediate inputs including imports are taken into account, the combined contribution is equivalent to 3.7 percent of GDP, and when the import leakage is excluded, this falls to 3.4 percent of GDP.

The impact of all housing construction and housing rental on South Africa’s economy comprises the housing construction economic value chain and the housing rental economic value chain. These are each explored below.

<sup>9</sup> All conversions to US\$ were done at the average ZAR/US\$ exchange rate for 2017 as published by the South African Reserve Bank (2018). This rate was ZAR13.31/US\$.

<sup>10</sup> In the rental sector alone, it is estimated that around one million second dwellings and backyard rooms and shacks are rented out by homeowners, many in South Africa’s townships and middle income suburbs. This implies between 300 000 and 500 000 informal household landlords manage this stock. This is a form of informal employment that is not fully captured in national statistics.

## 2.1 South Africa's housing construction economic value chain in 2017

Producing residential housing involves construction value-adding activities (digging and laying foundations, bricklaying, plastering carpentry, plumbing, electrical work, tiling, roofing etc.) that are typically coordinated and undertaken by construction contractors. However, in order to engage in these value adding activities, contractors need to purchase material and service inputs from other sectors of the economy. These inputs can range from sand procured from the primary (mining and quarrying) sector; to cement, bricks, window frames, doors, plumbing, tiles, timber and electrical equipment procured from various manufacturing sub-sectors; to electricity and water; and to transport, financial, architectural and even legal services provided by various tertiary (services) sectors.

The combined value of the intermediate inputs purchased in a particular period and the value added by the different factors of production engaged in the construction process itself represents the output or value of domestic production of the housing construction "sector" in that period. These values can vary depending on which of the indirect taxes and subsidies levied on production and products are included. This output is then used to meet the demand for housing from households, but is classified as gross fixed capital formation because it forms part of the fixed capital stock of the country. If – on a common pricing basis – the value of additional housing constructed in a particular period exceeds that which is "consumed" through use (depreciation) or destroyed, then the value of the country's housing stock increases – implying more people can be housed, and/or that there are qualitative improvements in the housing in which people are accommodated. This should contribute to an increase in the productive capacity of the economy as a whole.

**Figure 2** is a representation of the estimated structure and value of the housing construction value chain in South Africa in 2017. It indicates that contractors (both formal and informal) produced housing valued at ZAR85.8 billion (US\$6.4 billion) in 2017 by purchasing intermediate inputs valued at ZAR59.2 billion (US\$4.4 billion), or 69 percent of total domestic construction value and adding value to those purchases of ZAR26.6 billion (US\$2 billion), or 31 percent of total domestic production. Since the nature of the housing product means that domestic production is neither supplemented by imports, nor reduced by exports, this is also the value of housing used to meet final demand – all of which is classified as *gross fixed capital formation*.

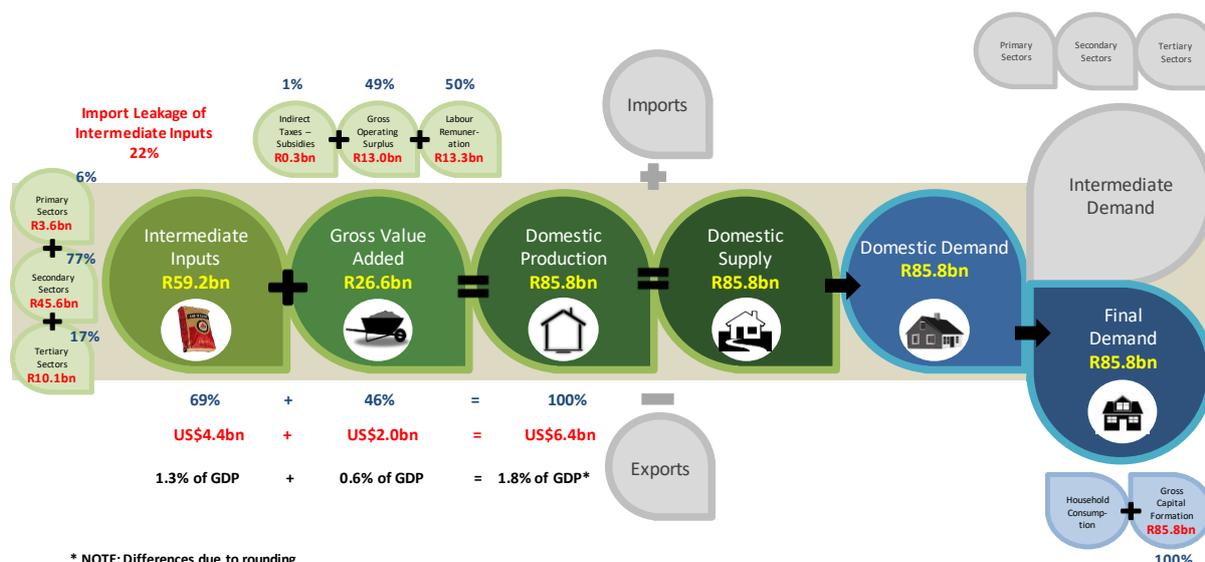
Seventy-seven percent of the intermediate inputs purchased were procured from secondary sectors (manufacturing, utilities and construction), with a 17 percent from the tertiary (services) sectors and a much less significant share from the primary (mining, quarrying and agriculture) sectors (6 percent). An estimated 22 percent of intermediate inputs used in housing construction were imported. The value of intermediate inputs used in housing construction was equivalent to 1.3 percent of South Africa's GDP if imports are included, and to 1 percent when the import leakage is taken into account.

The market value of the gross value added (GVA) of housing construction comprised labour remuneration (50 percent), gross operating surplus (49 percent) and net indirect taxes less subsidies (1 percent), and contributed 0.6 percent of South Africa's total GDP at market prices in 2017.

Based on the estimated value of labour remuneration in the housing construction sector (as reflected in the housing construction value chain in **Figure 2**), and the prevailing average remuneration rates for the construction sector as a whole,<sup>11</sup> and assuming that all informally-employed construction workers are employed in housing construction (as opposed to other forms of construction where formal employment is the norm), it is estimated that around 497 000 people were employed in housing construction during 2017.

<sup>11</sup> Quantec Standardised Regional Database (2019).

Figure 2: Estimated economic value chain for housing construction in 2017



Source: CAHF (2019). [The Estimated Contribution of Housing Construction and Residential Rental Activities to the South African Economy in 2017.](#)

## 2.2 South Africa’s housing rental economic value chain in 2017

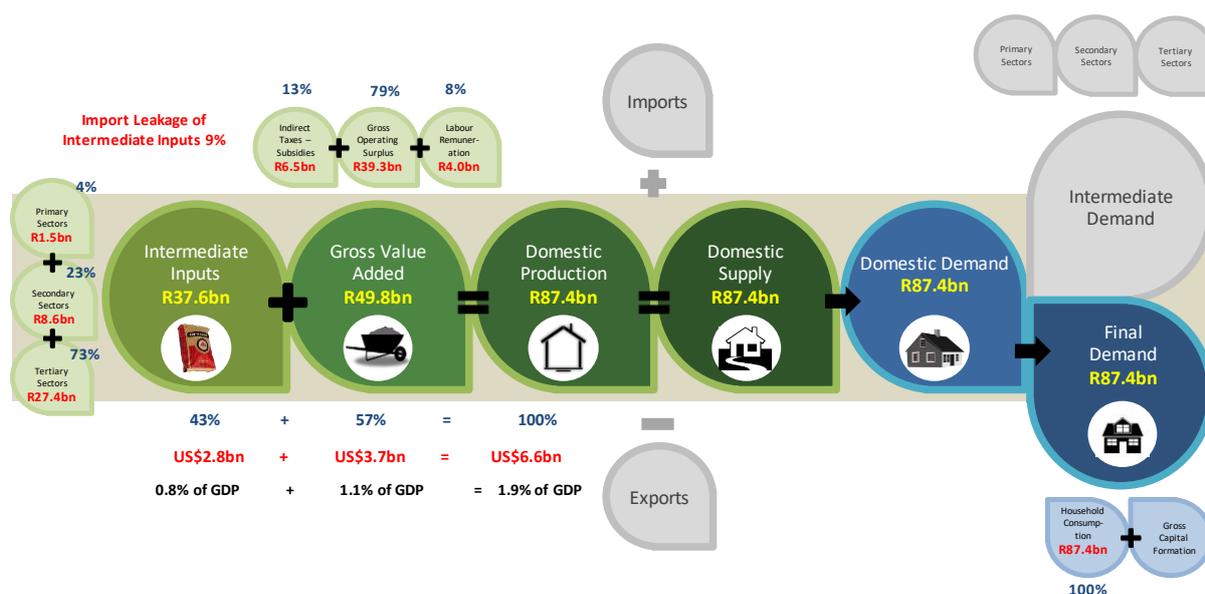
The value added and employment associated with the construction of particular housing stock persists only for the duration of the construction. To be sustained, the completed projects must be replaced with orders for new construction. This is why it is so important for a housing construction sector to consistently receive the same or growing levels of investment if the value chain is to sustain or grow its economic impact. By contrast, rental activities associated with the letting of residential properties tend to persist, and are derived from that proportion of the **total** housing stock that is made available for rental, not just from new additions to the housing stock in a particular period. For example, if 5 percent is added to a country’s stock of rental housing in a particular year, the number of units available for rental in the subsequent year will be 105 percent of the previous years’ number – all the rental units accumulated over previous years, plus the addition to stock in that year.

The housing rental value chain is fundamentally different from the housing construction value chain. Apart from some overlap in relation to some maintenance and service activities, housing rental and associated real estate activities require different intermediate inputs and have links with different upstream sectors. Intermediate inputs that are required in support of housing rental activities can range from gardening and landscaping materials, to cleaning materials and products associated with housing maintenance (paints, plumbing and electrical hardware) to cleaning, gardening, security and management services – depending on what is included in the rental agreements.

The estimated economic value chain for housing rental and associated activities is shown in **Figure 3**. It reflects output valued at ZAR87.4 billion (US\$6.6 billion), consisting of *intermediate inputs* of ZAR37.6 billion (US\$2.8 billion) and *GVA* of ZAR49.8 billion (US\$3.7 billion) – all of which went to satisfying household demand for rental accommodation.

Seventy-three percent of intermediate inputs were sourced from the tertiary sectors, with the remainder 23 percent from the secondary sectors and 4 percent from the primary sectors. It is estimated that 9 percent of these intermediate inputs were imported.

Figure 3: Estimated economic value chain for residential housing rental activities in 2017



Source: CAHF (2019). ["The Estimated Contribution of Housing Construction and Residential Rental Activities to the South African Economy in 2017."](#)

The ZAR49.8 billion of GVA at market prices is estimated to have consisted of ZAR4 billion (US\$0.3 billion) of labour remuneration (8 percent of GVA), ZAR39.3 billion (US\$3 billion) of gross operating surplus comprising 79 percent of GVA and ZAR8.7 billion (US\$0.7 billion) in net indirect taxes less subsidies (making up the balance of 13 percent of GVA). The GVA of housing rental-related activities overall contributed 1.1 percent of national GVA in 2017, while the intermediate inputs (inclusive of imports) were equivalent to 0.8 percent of national GDP, and to 0.7 percent when the import leakage is taken into account.

If it is assumed that the average remuneration of labour inputs used in housing rental is similar to the average for real estate as a whole, then around 234 000 jobs were supported in 2017.

### 3 Cost Benchmarking of Subsidised Housing Products

*What types of housing do housing subsidies contribute to constructing, and at what cost?*

In keeping with South Africa's national housing programme, housing subsidies are applied to the development of a range of different housing products in South Africa including serviced sites (both in upgraded informal settlements and in newly developed areas), housing components (including slabs, ablutions and core structures) and fully-completed houses that are either fully or partially subsidised. This section identifies a range of subsidised housing typologies and outlines the specifications of the housing products each subsidy programme is intended to produce.

#### 3.1 Overview of South Africa's housing subsidy programme

The progressive right of South Africans to access to adequate housing is included in the Constitution, and forms the basis of all human settlements sectoral policies and plans. This right to housing has, since the dawn of the democratic dispensation in South Africa, been interpreted as a key role of South Africa's developmental state.

As a concurrent competency, national, provincial and local governments are engaged in the delivery of human settlements. National government sets the overall policy, legislative and funding framework. Provincial human settlements departments set a provincial delivery agenda within the national framework and coordinate, monitor and review human settlements implementation by metros and local municipalities. In respect of urban development, land identification and release (especially for subsidised housing), basic service provision and urban management are primarily functions of municipal government. However increasingly the responsibility

for the management of urbanization, housing and service delivery vests at local level. A range of specialist state entities assist with certain aspects of housing development.

While South Africa's housing paradigm is described in policy as a government-aided, private sector-driven approach, in essence it has been implemented as a state-dominated housing provision approach for lower-income households. This includes the provision of fully-subsidised houses for lower-income households, as well as significant investment in the upgrading of informal settlements. A smaller programme of institutionally-managed social housing provision provides lower-income households with subsidised rental accommodation.

A private sector driven housing market with limited state intervention (limited to the Finance-Linked Individual Subsidy Programme (FLISP) that provides a limited capital amount inversely scaled with increasing income) is intended to supply middle-income and higher-income households on a supply meets demand basis. Private sector, non-profit, community and other bodies are also engaged in the delivery of human settlements either as delivery agents (developers, financiers and Social Housing Institutions), stock holders and managers (Social Housing Institutions) or non-profit organisations engaged in community development, construction or policy advocacy.

Funding provided by national and provincial government for human settlements is channelled through three funding streams. First, the Division of Revenue Act (DORA) allocates funds raised by the government through taxes and income earned in accordance with a formula to determine an equitable share to national, provincial and local government. The primary objective of the equitable share grant is to ensure that all South Africans have access to basic services. This is an unconditional transfer i.e. local and provincial governments can decide how they want to use it. Second, Conditional Grants (most importantly the Human Settlements Development Grant and Urban Services Development Grant) are allocated to provinces and metros and must be used for the purposes specified. Other Human Settlements-Related grants for engineering infrastructure, urban integration and sustainability and social services are allocated directly to municipalities. Thirdly, municipalities collect and spend own sources of revenue on capital and operating expenditure. This generally includes revenues from trading services (electricity, water, refuse removal), property rates and municipal borrowing. This document focuses on the direct grants provided for the purchase of land, installation of infrastructure and construction of housing top-structures.

### 3.2 Specifying housing types for analysis

**Table 1** outlines a range of accommodation types and specifications that have been costed using CAHF's housing cost benchmarking (HCB) methodology. Benchmarked products have been identified that closely fit South Africa's current subsidised housing specifications, both in respect of owned and rented housing.

Three key types of housing product are used:

- Firstly, *serviced sites* provided through in-situ informal settlement upgrading or serviced site programmes, including products that provide certain elements of construction (such as slabs, wet cores and/or building materials).
- Second, *houses on serviced sites* that include fully-subsidised houses and market-produced products that attract a level of subsidy.
- Third, *Social Housing units* intended for long-term institutional management and rental to targeted beneficiary groups.

**Table 1** also identifies the major subsidy programme related to each benchmarked product. These subsidy programmes are discussed in detail in the next section. Given that seven of these seventeen products do not have any subsidy contributions linked to them, they have been excluded from the rest of the analysis, as the focus of this document is on government-subsidised accommodation.

**Table 1: Housing market segmentation and housing specifications for cost benchmarking**

No.	Generic description	Short description	Gross density (units/ha)	Net density (units/ha)	Site size	House size	Construction approach	Subsidy type	Code	Subsidy name	
<b>A</b>	<b>OWNERSHIP</b>										
A7	House - free standing low density	A7. OWNERSHIP 65m2 market unit	26	40	250 m2	65 m2	New build	No subsidy	N/A	None	
A6.2	House - free standing low density	A6.2. OWNERSHIP 52m2 FLISP high	26	40	250 m2	52 m2	New build	Part subsidy	FLISP	Finance Linked Individual Subsidy	
A6.1	House - free standing low density	A6.1. OWNERSHIP 40m2 FLISP low	43	66	250 m2	40 m2	New build	Full subsidy	FLISP	Finance Linked Individual Subsidy	
A.2	Basic house - duplex medium density	A5.2. OWNERSHIP BNG med density	108	166	60 m2	42 m2	New build	Full subsidy	BNG	Breaking New Ground Subsidy	
A5.1	Basic house - free standing	A5.1. OWNERSHIP BNG free standing	43	66	240 m2	40 m2	New build	Full subsidy	BNG	Breaking New Ground Subsidy	
A4	Serviced site - slab & toilet	A4. OWNERSHIP site, slab & WC	27	41	240 m2	40 m2	New build	Full subsidy	S&S	Serviced Site Subsidy	
A3	Serviced site - bldg mats & support	A3. OWNERSHIP PHP site only	27	41	240 m2	0 m2	New build	Full subsidy	PHP	Peoples' Housing Process Subsidy	
A2	Serviced site - in-situ upgrading	A2. OWNERSHIP UISP site only	27	41	240 m2	0 m2	New build	Full subsidy	UISP	Upgrading of Informal Settlements Subsidy	
A1.2	Shack - used corrugated iron	A1.2. OWNERSHIP wood shack	212	250	40 m2	16 m2	New build	No subsidy	N/A	None	
A1.1	Shack - used wood	A1.1. OWNERSHIP metal shack	212	250	0 m2	16 m2	New build	No subsidy	N/A	None	
<b>B</b>	<b>RENTAL</b>										
B8	Apartment - low rise walkup	B8. RENTAL TUHF new build	192	192	52 m2	61 m2	New build	No subsidy	N/A	None	
B7	Apartment - low rise walkup	B7. RENTAL TUHF conversion	232	232	43 m2	60 m2	Existing - conversion	No subsidy	N/A	None	
B6	Apartment - low rise walkup	B6. RENTAL TUHF refurbishment	288	288	34 m2	41 m2	Existing - refurbishment	No subsidy	N/A	None	
B5.2	Apartment - high-rise high density	B5.2. RENTAL social new high rise	280	280	35 m2	49 m2	New build	No subsidy	SH	Social Housing Subsidy	
B5.1	Apartment - low-rise med density	B5.1. RENTAL social new low rise	180	180	55 m2	46 m2	New build	No subsidy	SH	Social Housing Subsidy	
B4	Rooms - shared ablutions	B4. RENTAL CRU new low rise	540	540	18 m2	13 m2	New build	No subsidy	CRU	Community Residential Unit Subsidy	
B3	Rooms - shared ablutions	B3. RENTAL TUHF 8 room block	320	320	31 m2	21 m2	Existing site - new build	No subsidy	N/A	None	

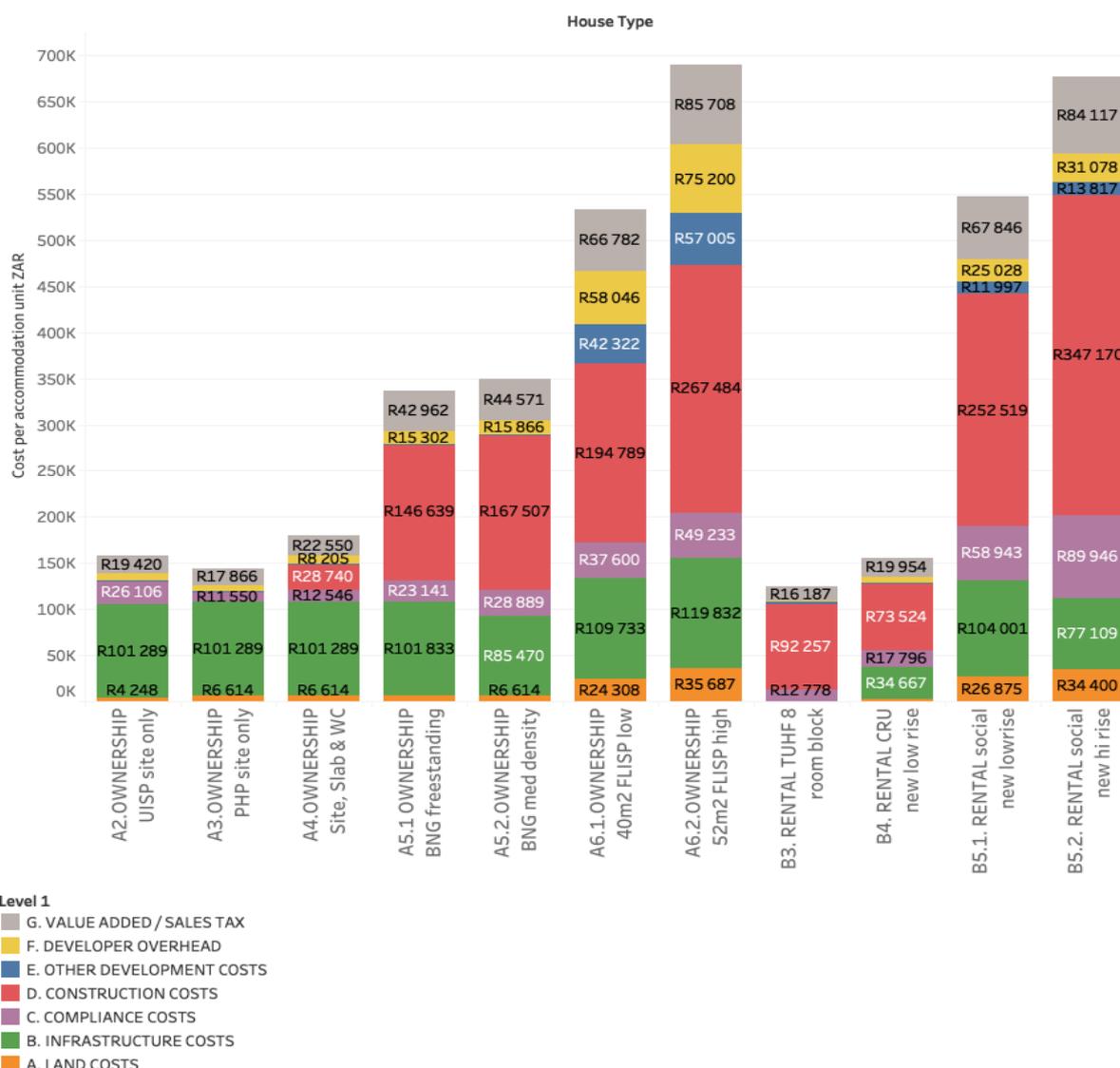
### 3.3 Calculated cost of subsidised housing products

CAHF’s Housing Cost Benchmarking (HCB) methodology defines a standardised house, and then breaks down the costs for that unit into its component costs. Five levels of cost breakdown are used to ensure that every aspect of construction that contributes to the cost of a house is defined and captured. This costing is done in a controlled way with clear assumptions, in order that different elements of the units costed can be compared against each other, as well as across cities and countries.<sup>12</sup> The costs calculated using CAHF’s HCB methodology are shown in **Figure 4**.

There are a few notable observations from these cost estimates. The cost differentials between the lowest-subsidised product (A2. UISP regularized and serviced site) and the highest-cost product (B5.2. High-rise new-build social housing unit) is nearly five times. This difference in cost shows the high fiscal impact of driving a restructuring agenda using subsidised rental housing at scale as a spatial restructuring instrument. This ‘breadth’ versus ‘depth’ trade-off has resulted in social housing delivery being limited to a very small proportion (less than 2 percent) of the total subsidy housing delivery programme.

<sup>12</sup> See Gardner, D. and Pienaar, J. (2019): Using CAHF’s Housing Cost Benchmarking Methodology to Analyse Housing Costs in Fifteen Africa Countries. CAHF. <http://housingfinanceafrica.org/documents/using-cahfs-housing-cost-benchmarking-methodology-to-analyse-housing-costs-in-fifteen-african-countries/>

**Figure 4: Calculated costs of subsidised housing products in South Africa (2019)<sup>13</sup>**



Source: Own analysis from CAHF housing cost benchmarking data.

A further issue is the very limited cost difference between a freestanding BNG unit and a medium-density (duplex, attached and semi-detached) BNG configuration. Given the density increases accruing from the latter, more attention should be given to this typology as a way of improving urban form and potentially accessing better-located land.

Regarding the cost of social housing units, the differential in cost between a BNG house and a social housing unit results from higher quality, higher-density construction of social housing, as well as provisions for higher land costs. The cost increase between medium-density and high-rise social housing units clearly shows that there is also a significant cost premium on vertical development, due to South Africa’s prevailing construction standards and safety requirements. If a higher-rise construction typology is required, this will require higher levels of investment. Currently, the SH subsidy determination does not adequately account for this difference in cost, implying that there is a negative pressure on verticalization of social housing units as this typology requires significantly more equity and debt to finance projects, which in turn create worse cashflow implications for such projects. The difference in cost of the BNG and Social Housing unit (and of the subsidy provided through these two programmes) illustrates the importance and price tag attached to the city spatial

<sup>13</sup> Note that this Figure only includes the housing products that attract some form of government subsidy, as indicated in Table 1 above.

restructuring potentials of the social housing product. During the design of this programme, this cost differential was also qualified due to each subsidised unit benefiting multiple households over its effective lifespan of 40 to 60 years.

A further trade-off in South Africa's subsidised housing dispensation is the extent to which up-front capital cost contributions to creating housing opportunities lead to long-term income-generating opportunities or ongoing unfunded mandates for municipalities. SH is also a "shared cost" type programme. Institutionalised management means rates and taxes and service charges are regularly collected and paid to municipalities, which is not common for most other subsidy programmes. Other subsidised housing programmes often lead to on-going unfunded mandates for municipalities, given that subsidy beneficiaries are unable to contribute regularly to municipal service charges and property taxes, or are not required to pay these due to free basic service policies. SH therefore can play an important long-term role in converting unused or derelict land into municipal revenue sources and housing opportunities. It is important to note that this analysis considers the impact of the initial construction activity on economic activity, and does not consider life cycle economic impacts.

The calculated cost of the notional FLISP house (a new-build product) is also notable. This unit is specified as starting at the same size, but with higher specifications than the BNG product, and is modelled on an assessment of the lowest-priced bonded housing in Gauteng being produced at reasonable volumes at present. Bearing in mind that at a R3 500 monthly income, a house is given away for free and that at a R3 501 monthly income, a financeable product that is available on the market must be found and must be affordable, even if a FLISP subsidy is available, it is clear why the 'gap' in the new-build housing market results. It is for this reason that CAHF has been focusing on mechanisms to support the growth of the resale market, which may well offer supply opportunities to this gap market.<sup>14</sup>

Bulk and internal service installation are significant cost components. The bulk service costs are based on the City of Cape Town's Development Contribution Calculator developed and updated by PDG.<sup>15</sup> However, these costs are generally the responsibility of cities, and are funded through other grant programmes and cities' own resources, mostly the Urban Settlements Development Grant (USDG) and Municipal Infrastructure Grant (MIG). It is notable that bulk and internal servicing costs are very similar across the subsidised housing products – it is primarily the top structure costs that vary significantly.

### 3.4 Construction standards benchmarking

In order to quantify the costs of each identified subsidised housing type, specific designs and standards have been set for each one. These plans and specifications are included in **Annexure B**. In most cases these are defined from the subsidy standards themselves. This ensures that the underlying assumptions that contribute to the detailed housing cost benchmarking work are clear. **Annexure C** also sets out assumptions and factors underpinning the housing cost benchmarking.

## 1. Analysing South Africa's Housing Subsidy System

### *What housing subsidy instruments are used to deliver accommodation in South Africa at present?*

Over the last 25 years, South Africa has developed a multi-faceted housing subsidy system that targets a number of different housing sub-markets, tenure types and household affordability levels. This section identifies the most important subsidies that deliver the majority of housing opportunities across South Africa, and analyses the types and levels of financial support provided by each instrument.

<sup>14</sup> For further information on the Transaction Support Centre pilot project in Khayelitsha, Cape Town, see <http://housingfinanceafrica.org/projects/transaction-support-centre/>

<sup>15</sup> To view the City of Cape Town Development Charges Calculator, go to: <https://www.capetown.gov.za/work%20and%20business/planning-portal/tariffs-and-charges/development-charges#Heading1>

### 3.5 Most prevalent housing subsidy instruments

Programmes funded by the Human Settlements Development Grant (HSDG) include a set of Financial Interventions (FI), Social and Rental Programmes (SR), Incremental Interventions (II), Rural Interventions (RI) and National Spatial Programmes. Given the focus of this assignment, only key Financial Interventions, Social and Rental Interventions and Incremental Interventions are considered.<sup>16</sup> Table 2 below outlines the most important housing subsidy instruments that are allocated the bulk of housing funds and deliver the majority of subsidised housing units. The intended targeted beneficiary household income groups are also shown. In addition, the scale at which these subsidies are currently implemented across South Africa is indicated. The table also shows broad market (unsubsidised) housing sub-markets, and their pervasiveness in South Africa at present. Note that the Formal Market Housing (MH) category is included to provide a link to major unsubsidised (market) housing sub-markets, but operates without government intervention other than through normal regulation. No subsidies are provided in the formal market housing sub-markets, and housing delivery is not through programmes, per se, but rather as part of the normal property market cycle.

Table 2: Key housing subsidy instruments in South Africa

No.	Subsidy Programme / Sub-Market	Code	Income Group		
			Low Income (<R3,500)	Med Income (R3501-R15,000)	High Income (>R15,000)
<b>1.0</b>	<b>FORMAL MARKET HOUSING (MH)</b>	<b>MH</b>			
1.1	Market Housing Very Large (< 200m <sup>2</sup> )	MH-X			Y
1.2	Market Housing Large (100-200m <sup>2</sup> )	MH-L			Y
1.3	Market Housing Medium (50-100m <sup>2</sup> )	MH-M		Y	Y
1.4	Market Housing Small (<50m <sup>2</sup> )	MH-G		Y	Y
1.5	Subdivided Properties	MH-SD		Y	Y
1.6	Second Dwelling Units	MH-2D		Y	Y
<b>2.0</b>	<b>FINANCIAL INTERVENTIONS (FI)</b>	<b>FI</b>			
2.1	Individual Subsidies	FI-IS		Y	
2.2	Finance Linked Individual Subsidy	FI-FLISP		Y	
2.3	Inclusionary Housing	FI-INH	Y	Y	
<b>3.0</b>	<b>SOCIAL &amp; RENTAL INTERVENTIONS (SR)</b>	<b>SR</b>			
3.1	Institutional Subsidies	SR-IS	Y	Y	
3.2	Social Housing	SR-SH	Y	Y	
3.3	Community Residential Units	SR-CRU	Y		
<b>4.0</b>	<b>INCREMENTAL INTERVENTIONS (II)</b>	<b>II</b>			
4.1	Integrated Residential Development	II-IRD	Y	Y	
4.2	Enhanced Peoples Housing Process	II-EPHP	Y		
4.3	Serviced Site Programme	II-S&S	Y	Y	
4.4	Informal Settlement Upgrading	II-UISP	Y	Y	
<b>KEY</b>					
Y	Programme implemented at scale				
Y	Programme implemented at limited scale				
Y	Programme not currently implemented				

Source: Own analysis.

<sup>16</sup> A number of programmes that are not central to the current delivery programme are excluded from this analysis. These include (but are not limited to) the Consolidation Subsidy Programme (CSP), Enhanced Extended Discount Benefit Scheme (EEDBS), Housing Chapters of an Integrated Development Plan (HIDP), Housing Assistance in Emergency Circumstances (HEP), The Rural Housing Programme (RHP) and Farm Residents Housing Assistance Programme (FRHAP). A full review of many of the subsidy instruments is provided in Gardner (2018). "South African Urbanisation Review: Analysis of the Human Settlement Programme and Subsidy Instruments".

The two main Financial Interventions (FI) are described below:<sup>17</sup>

- **The Individual Housing Subsidies Programme (II-IS)** enables eligible individuals to obtain subsidies for house purchase on the secondary housing market, or for purchase of a serviced site linked to a construction contract, where they do not or cannot access housing finance.
- **The Finance Linked Individual Subsidy Programme<sup>18</sup> (FI-FLISP)** provides a reducing sliding scale of capital subsidy to households who purchase first-time bonded houses, in proportion with their income. It has recently (July 2018) been re-calibrated, and this analysis is based on the new subsidy parameters.

The three main Social and Rental (SR) Interventions are:

- **The Institutional Subsidies Programme (SR-IS)** finances the development of institutional housing, but is most commonly matched with the SHIP programme as provinces' contribution to social housing projects, in order to make units more affordable for the primary market of households earning less than R3 500 per month.
- **The Social Housing Investment Programme (SR-SHIP)** is delivered via a combination of projects funded by the Social Housing Regulatory Authority (SHRA) and implemented by accredited Social Housing Institutions (SHIs) and so-called private for-profit sector "Other Delivery Agents" (ODAs) in approved projects. This programme is managed by SHRA, who obtains 'top-sliced' financing directly from the National Department of Human Settlements (NDHS).
- **The Community Residential Units Programme (SR-CRU)** is aimed at providing public-sector owned rental stock to households earning below R3 500 per month.

The four main Incremental Interventions (II) that result in the delivery of accommodation (or components of accommodation) are:<sup>19</sup>

- **The Integrated Residential Development Programme (II-IRDP)** is the main delivery programme for project-based delivery of subsidised housing in South Africa at present. Certain provinces still implement the older Project-Linked Subsidies Programme.<sup>20</sup>
- **The Enhanced Peoples Housing Process Programme (II-EPPH)** mobilises the collective energies of the state, communities and households in the house building process through managed projects. This programme has separate institutional capacity within the NDHS, but this is currently being combined with the in-situ upgrading capacity within the Housing Development Agency (HDA) and the National Upgrading Support Programme (NUSP).
- **The Serviced Site Programme (II-S&S)**, which provides titled land and services to beneficiaries.

<sup>17</sup> Two other FI programmes are also used, but do not result in completed accommodation. This document considers the impacts of these through considering the full price of housing delivered using subsidy instruments and providing for additional subsidy. The **OpsCap Programme (FI-OpsCap)** is used to 'oil the wheels' of project delivery via other programmes (this programme does not deliver units). The **Land Procurement Programme (FI-LP)** is intended to assist with procurement of land for subsidised housing programmes. However this function has now primarily been passed on to the HDA and is accommodated in the USDG. A further two FI subsidies are not included in this analysis: **The Inclusionary Housing Programme (FI-IHP)** (and Gauteng Inclusionary Housing Programme) are intended to support the development of inclusionary housing projects, where a mix of tenures and housing types are developed within the context of a single development; and **The Provision of Social and Economic Facilities Programme (FI-SEFP)** provides capital for the development of key social and economic basic amenities within human settlements projects that are normally funded by municipalities, in cases where municipalities are unable to provide such facilities.

<sup>18</sup> This programme is not set out in the Housing Code 2009 but was introduced separately afterwards. The programme has recently been restructured and is administered by the National Housing Finance Corporation (to form part of the new National Housing Development Bank) and provincial departments.

<sup>19</sup> The Emergency Housing Programme (II-EHP) provides temporary assistance in the form of secure access to land and/or basic municipal engineering services and/or shelter in a wide range of emergency situations including relocation of informal settlements where the location poses a risk to the inhabitants' health. As it does not provide permanent sites or dwellings, it is not included in this analysis.

<sup>20</sup> The IRDP was first implemented in 2004 and provides for planning and developing an integrated project, providing for the housing, social and economic needs of different income categories. It does away with the requirement found in other policy programmes to identify subsidized housing recipients up front and provides for both subsidized, as well as finance-linked housing, social and rental housing, commercial, institutional and other land uses to be developed. Replaces the project-linked subsidy programme.

- **The Upgrading of Informal Settlements Programme (II-UISP)**<sup>21</sup> is a growing programme aimed at upgrading services and providing houses for households within existing informal settlements.

### 3.6 Urban infrastructure grants

The above HSDG programmes are complemented by other grants from other line departments that focus on the provision of infrastructure including roads, sanitation, water, electricity and public transport. These are managed by the Department of Cooperative Governance and Traditional Affairs (COGTA), the Department of Public Works (DPW), National Treasury, the Department of Water and Sanitation (DWS), the Department of Energy (DoE) and the Department of Transport (DoT) amongst others. These infrastructure-related instruments are not explicitly included in this analysis but are accounted for through the inclusion of provisions for bulk infrastructure expenditure related to each accommodation type. There are four main Urban Form Grants:

- **The Municipal Infrastructure Grant (MIG)** is aimed at assisting the poor to gain access to infrastructure. MIG funds can only be used for infrastructure for basic levels of service.
- **The Urban Settlements Development Grant (USDG)** is a schedule 4 supplementary grant for the metropolitan municipalities, that supports the development of infrastructure and public services, as well as the purchase of land.

The following three Infrastructure Grants are also allocated to municipalities:

- **Regional Bulk Infrastructure Grant (RBIG):** The RBIG supplements the financing for the development of regional bulk water infrastructure and regional bulk sanitation collection as well as regional water and waste water treatment works.
- **Integrated National Electrification Programme (INEP):** To manage the electrification planning, funding and implementation process with the aim of addressing electrification backlog.
- **Municipal Water Infrastructure Grant (MWIG):** The MWIG is to facilitate the planning, acceleration and implementation of various projects that will ensure water supply to communities identified as not receiving a basic water supply service.

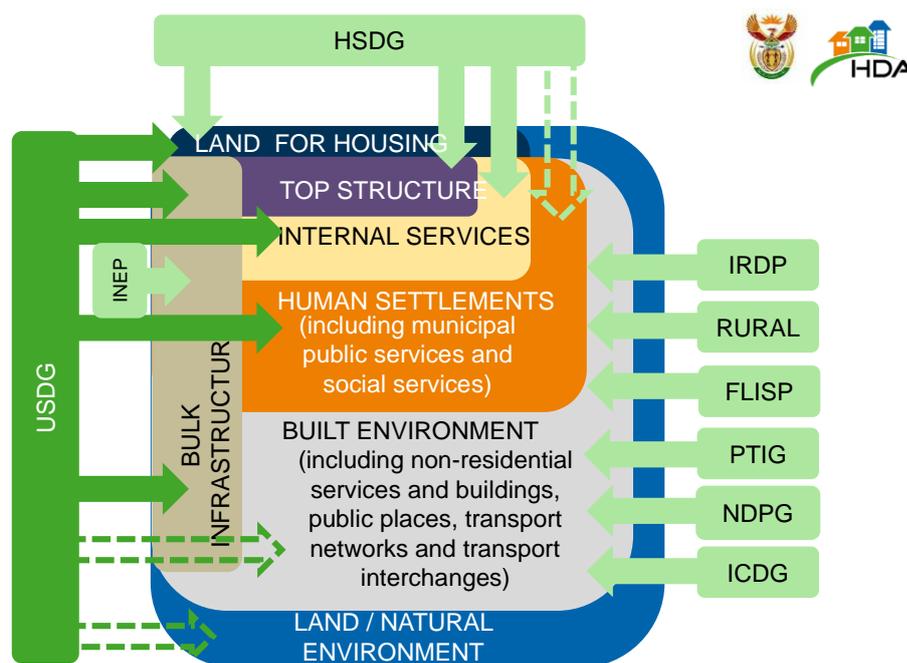
### 3.7 Implementation of subsidy instruments

The abovementioned subsidy instruments are seldom implemented in isolation from others. To construct new housing areas requires access to planned, zoned and registered sites, linking these to bulk services, installing internal services and constructing accommodation or components of accommodation such as foundations, slabs, ablution facilities or complete houses on these sites. The complex interfaces required between these different grant instruments for the creation of sustainable settlements, and to ensure restructuring of urban areas, is shown in **Figure 5**. But even this diagram does not adequately indicate the complexities of multiple subsidy instruments being implemented by municipal, provincial and national government entities, as well as specialist state corporate institutions.

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<sup>21</sup> The UISP was first implemented from 2004 to facilitate the structured in situ upgrading of informal settlements as opposed to relocation. Provides funding for all activities to provide households with a serviced site. UISP allows provision of services for households that do not qualify for other subsidies but does not allow the transfer of the property to non-qualifying households on an ownership basis. Does not include a top structure.

Figure 5: Conceptual framework for spatial targeting grant alignment



Source: Housing Development Agency (2014).

For example, finances from one or more of the infrastructure grant programmes could be used to service land for development. The HDA or municipality could use their own resources or grant programmes to purchase land. Then, one or more subsidy programmes could be applied to the provision of internal services and constructing one or more elements of a house such as foundations and a slab, an ablution facility, a semi-complete or complete house or providing the household with resources for self-building. This complex flow of funds is further complicated by the application of resources (money and human resources) to housing projects that are not funded through any direct subsidy programme, such as the time and efforts of housing officers and project managers.

Clearly, it is not practical to trace all public resources invested in subsidised housing for this exercise.<sup>22</sup> It is therefore important to explicitly outline the intentions of the various subsidy programmes in relation to the components of subsidised housing they are intended to subsidise, and the capital allocated to each one. **Figure 6** and **Tables 3, 4 and 5** below set out the subsidy instruments included in this analysis and breaks them down into their component costs.

Where the subsidy delineations are not clear or provide for a range of costs to be covered, a specific figure has been entered for the purposes of this analysis, based on the prevailing application of that instrument. The total benchmarked costs of each of these products is also shown in order to indicate the differences between the deemed costs (based on CAHF's benchmarking) and the current subsidy quantum. The subsidy delineations are based on the prevailing subsidy levels in terms of the Housing Code and other statutory determinations. The following important assumptions are used to create consistency across the subsidy allocations per benchmarked product.

- National housing subsidy funds are deemed to be disbursed at the provincial level. While the PHP, BNG and FLISP subsidies are allocated from the HSDG which is a national grant programme, these subsidies are disbursed via provinces and are therefore shown as provincial subsidies. The exception to this is the UISP subsidy that is provided by national government, but is a grant to municipalities specifically, therefore it is allocated as a municipal subsidy.

<sup>22</sup> A number of Performance and Expenditure Reviews have been undertaken on the national housing programme by National Treasury, that conclude that there are anomalies as to how subsidy programmes are applied and differences in the product outcomes they subsidise.

- Land subsidies are provided through different programmes. Land costs are included as provincial subsidies under the UISP, PHP, BNG, and FLISP. However, for social housing (SH), the cost of acquiring land is included in the overall funding package of grant, equity and debt. Where municipalities donate land to SHs for free, or sell it at substantially lower than market prices, such contributions are considered as municipal subsidies. CRU will usually be developed on municipal land or land donated to the municipality by the provincial government, and these contributions are considered as municipal subsidies. For the UISP the prescribed quantum guidelines have been used. For the other subsidy programmes, there is no explicit subsidy quantum for land, but it was possible to identify R6000 as the indicative land cost from the province. It is therefore assumed here that the land subsidy amount is equal to the deemed land cost in the cost benchmarking exercise. The issue of how land is funded, and the different funding channels through which land costs are covered, is a key issue that affects the spatial development patterns of many subsidised housing developments. The minimal amounts made available for land costs, combined with the necessity of identifying other ways of securing and financing land, are a major factor in the continued peripheralization of subsidised areas.
- National bulk infrastructure funds are deemed to be disbursed at the local level. Bulk service contributions are all considered to be disbursed by municipalities (provided by national government under infrastructure funds such as USDG and MIG). However bulk services are sometimes funded via municipalities' capital budgets sourced from own revenue or the equitable share grant from national government.
- Internal infrastructure subsidies for UISP, PHP and BNG have guideline amounts in the subsidy determinations but also allow actual costs to be claimed. Therefore, where appropriate, actual costs calculated in the cost benchmarking are used as the subsidy amounts.
- Social housing subsidies are calculated as per designated mechanisms. However, CRU figures are based on a 2015 programme review exercise intended to regularize expenditure through this programme to provide a range of product offerings, including basic level rental rooms with shared ablutions. It is noted that at this stage, CRU schemes were halted by the Minister of Human Settlements, so this scheme is provided for comparative purposes only as an alternative subsidised rental product. Subsidy levels are based on calculated benchmarked costs.
- FLISP subsidies are calculated based on household affordability using 30 percent of income for mortgage repayments on a loan at 11.5 percent interest over 20 years. Our upper income threshold is set at R17 000 per month, while the prescribed upper limit at R22 000 per month. This is because the mortgage instalment at the threshold level is higher than 30 percent of income - which is a real issue the FLISP programme is facing, when it is applied to new build units.<sup>23</sup>

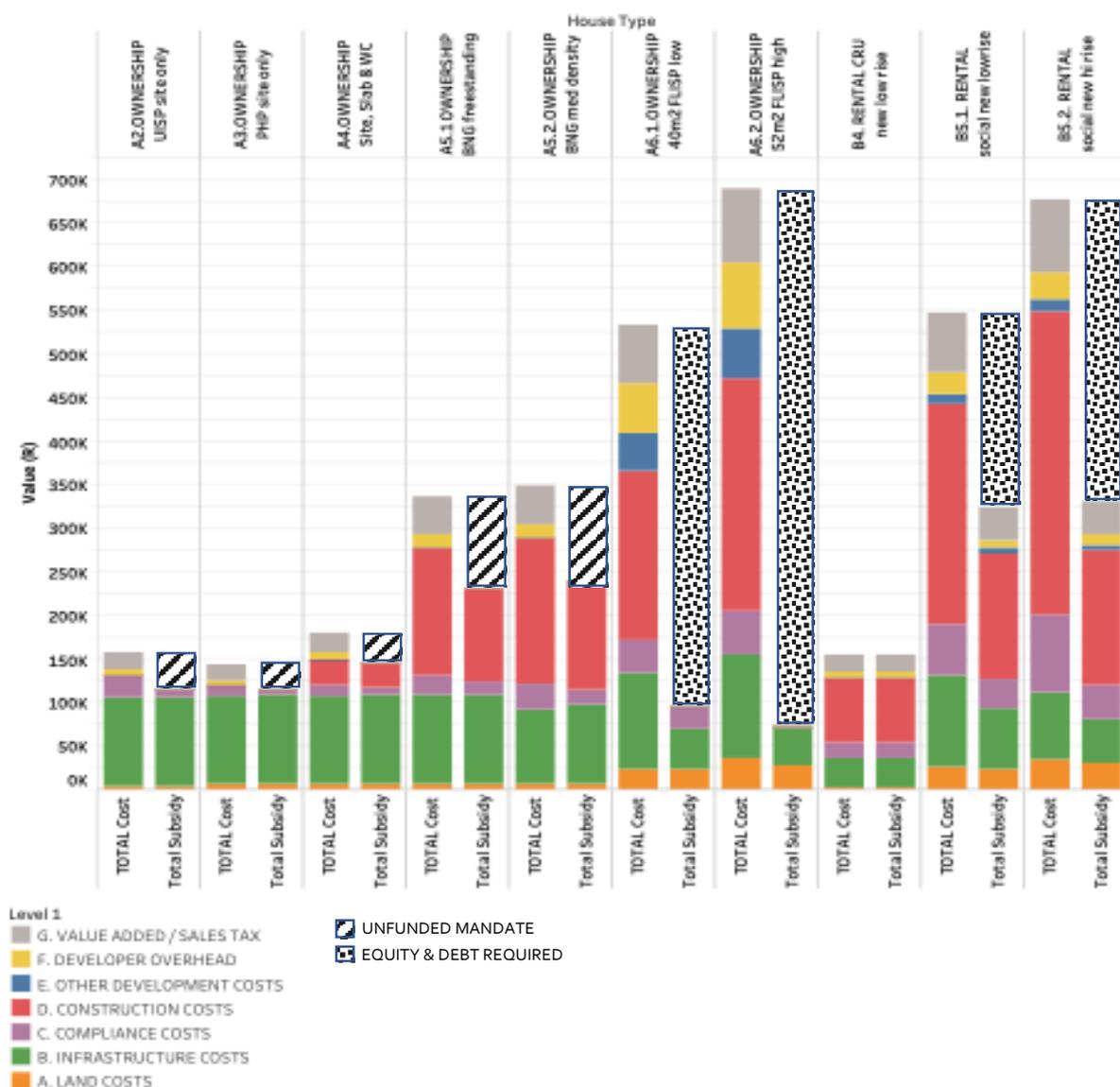
### 3.8 Subsidy quanta per house type

Figure 6 illustrates the levels of subsidy available through different programmes in relation to the calculated costs of each of the benchmarked housing products. Tables 3, 4, 5 and 6 following show the actual quanta of subsidies applied to each house type versus the calculated costs of each Level 1 cost.<sup>24</sup>

<sup>23</sup> The potential for FLISP to reach the bottom threshold of eligibility, that is, households earning from R3501/month, is achievable through the resale market. This is something that CAHF has been exploring in its other work.

<sup>24</sup> The Level 1 cost breakdown disaggregates total cost into the component costs of land, infrastructure, compliance costs, construction costs, other development costs, developer overheads and Value Added Tax.

Figure 6: House type costs versus subsidy allocations per Level 1 cost element (2019)



Source: Own calculations using national subsidy determinations and policies and cost benchmarking data.

The figure shows that - across all but one of the product types<sup>25</sup> - subsidy determinations do not cover the actual cost of subsidised housing products, leaving significant gaps between the amount provided by the national government and the amount that is spent by the implementing agent (provincial government or municipality) e.g. 'unfunded mandates'. Most critical here are the serviced site products and BNG houses, which are intended to be fully-subsidised units (UISP, PHP and BNG subsidies). This implies that either costs of construction are being reduced, and/or additional subsidies or funds are being procured to make up the difference. It is known that other subsidy allowances (such as geotechnical allowances and other legitimate and non-transparent additions) and other subsidy programmes (such as OpsCap) are often applied to make up cost shortfalls to make projects work financially. Unfunded mandates may also be funded through cross subsidies achieved in an integrated project. These 'hidden' subsidies create a continued difficulty in accounting for the true cost of subsidised housing in South Africa.

Where subsidies are not designed to cover the total costs of construction (such as Social Housing and FLISP products), it is still worth noting the large differentials between the calculated subsidy size and the reasonable

<sup>25</sup> The only exception to this is CRU, where subsidy levels have been deemed to be exactly equal to the calculated costs.

cost of the product subsidised. For instance, a 40m<sup>2</sup> FLISP house is only eligible to attract subsidies of just under R97 000 which is not even equal to the cost of land and services in a serviced site programme. Social housing programmes are meant to raise geared funds to make up the shortfall between subsidy and full cost. However, the figures above indicate that subsidies cover around 59 percent of total cost for a low-rise social housing unit, and only 49 percent of a high-rise social housing unit. Given income band determinations, this places significant pressure on the feasibility of developments. SH projects are expected to deliver a post-grant IRR of prime plus 4.5 percent over 20 years, and a minimum debt service cover ratio of 1.3. Low-rise SH developments are made viable through substantial contributions from municipalities, mainly in the form of free or reduced cost land, waivers/discounts on bulk services development contributions, town planning applications costs, and building plan fees, and also by applying the various types of variations (Geotech, topography, etc.) possible under the Institutional Subsidy (IS) component of the Consolidated Capital Grant (CCG).

High-rise SH projects have to receive the same benefits, but in addition appear to work only when they form part of larger mixed use, mixed income developments, with an element of capital cross-subsidisation from the sale of “for profit” market products such as sectional title apartments, shops, offices, etc. Some of these initiatives are underway in cities such as Cape Town and eThekweni but are still in early stages of planning so the concept has not been proven to work fully as expected.

**Table 3: Subsidy quanta per house type disaggregated to Level 1 housing elements**

Level 1	House Type																			
	A2.OWNERSHIP UISP site only		A3.OWNERSHIP PHP site only		A4.OWNERSHIP Site, Slab & WC		A5.1.OWNERSHIP BNG freestanding		A5.2.OWNERSHIP BNG med density		A6.1.OWNERSHIP 40m2 FLISP low		A6.2.OWNERSHIP 52m2 FLISP high		B4. RENTAL CRU new low rise		B5.1. RENTAL social new lowrise		B5.2. RENTAL social new hi rise	
	TOTAL Cost	Total Subsidy	TOTAL Cost	Total Subsidy	TOTAL Cost	Total Subsidy	TOTAL Cost	Total Subsidy	TOTAL Cost	Total Subsidy	TOTAL Cost	Total Subsidy	TOTAL Cost	Total Subsidy	TOTAL Cost	Total Subsidy	TOTAL Cost	Total Subsidy	TOTAL Cost	Total Subsidy
A. LAND COSTS	R4 248	R4 423	R6 614	R7 042	R6 614	R7 042	R6 614	R7 042	R6 614	R7 042	R24 308	R24 308	R35 687	R27 960	R2 267	R2 267	R26 875	R24 250	R34 400	R31 040
B. INFRASTRUCTURE COSTS	R101 289	R101 289	R101 289	R101 289	R101 289	R101 289	R101 833	R101 833	R85 470	R90 914	R109 733	R44 929	R119 832	R44 929	R34 667	R34 668	R104 001	R69 708	R77 109	R49 493
C. COMPLIANCE COSTS	R26 106	R10 629	R11 550	R7 558	R12 546	R9 079	R23 141	R14 813	R28 889	R16 012	R37 600	R27 589	R49 233	R0	R17 796	R17 838	R58 943	R32 418	R89 946	R39 577
D. CONSTRUCTION COSTS	R0	R0	R0	R0	R28 740	R28 740	R146 639	R108 513	R167 507	R126 272	R194 789	R0	R267 484	R0	R73 524	R73 761	R252 519	R144 189	R347 170	R154 346
E. OTHER DEVELOPMENT COSTS	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R42 322	R0	R57 005	R0	R0	R0	R11 997	R6 598	R13 817	R6 598
F. DEVELOPER OVERHEAD	R7 240	R0	R6 570	R0	R8 205	R0	R15 302	R0	R15 866	R0	R58 046	R0	R75 200	R0	R7 067	R7 067	R25 028	R9 433	R31 078	R12 636
G. VALUE ADDED / SALES TAX	R19 420	R0	R17 866	R0	R22 550	R0	R42 962	R0	R44 571	R0	R66 782	R0	R85 708	R0	R19 954	R19 954	R67 846	R37 315	R84 117	R37 011
Grand Total	R158 304	R116 341	R143 891	R115 889	R179 945	R146 150	R336 492	R232 201	R348 918	R240 240	R533 579	R96 826	R690 149	R72 889	R155 275	R155 555	R547 209	R323 911	R677 638	R330 701

Source: Own calculations using national subsidy determinations and policies and cost benchmarking data.

**Table 4: Subsidy quanta - Detailed subsidy breakdown (Level 2) for owned serviced site products**

Level 1	Level 2	House Type														
		A2.OWNERSHIP UISP site only					A3.OWNERSHIP PHP site only					A4.OWNERSHIP Site, Slab & WC				
		Provincial Subsidy (Provided by national, disbursed via province)	Municipal subsidy (provided by national e.g. USDG/MIG, disbursed via municipality)	SHRA Subsidy	Total Subsidy	TOTAL Cost	Provincial Subsidy (Provided by national, disbursed via province)	Municipal subsidy (provided by national e.g. USDG/MIG, disbursed via municipality)	SHRA Subsidy	Total Subsidy	TOTAL Cost	Provincial Subsidy (Provided by national, disbursed via province)	Municipal subsidy (provided by national e.g. USDG/MIG, disbursed via municipality)	SHRA Subsidy	Total Subsidy	TOTAL Cost
<b>A. LAND COSTS</b>	A.1 Land Acquisition	R0	R3 423	R0	R3 423	R3 248	R6 000	R0	R0	R6 000	R6 000	R6 000	R0	R0	R6 000	R6 000
	A.2 Stat & Prof Fees	R0	R1 000	R0	R1 000	R1 000	R1 042	R0	R0	R1 042	R614	R1 042	R0	R0	R1 042	R614
	<b>Total</b>	<b>R0</b>	<b>R4 423</b>	<b>R0</b>	<b>R4 423</b>	<b>R4 248</b>	<b>R7 042</b>	<b>R0</b>	<b>R0</b>	<b>R7 042</b>	<b>R6 614</b>	<b>R7 042</b>	<b>R0</b>	<b>R0</b>	<b>R7 042</b>	<b>R6 614</b>
<b>B. INFRASTRUCTURE COSTS</b>	B.1 Bulk, Link, Connector Infrastructu..	R0	R44 929	R0	R44 929	R44 929	R0	R44 929	R0	R44 929	R44 929	R0	R44 929	R0	R44 929	R44 929
	B.2 Internal Infrastructure	R0	R56 360	R0	R56 360	R56 360	R56 360	R0	R0	R56 360	R56 360	R56 360	R0	R0	R56 360	R56 360
	B.3 Common Services & Facilities	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0
	<b>Total</b>	<b>R0</b>	<b>R101 289</b>	<b>R0</b>	<b>R101 289</b>	<b>R101 289</b>	<b>R56 360</b>	<b>R44 929</b>	<b>R0</b>	<b>R101 289</b>	<b>R101 289</b>	<b>R56 360</b>	<b>R44 929</b>	<b>R0</b>	<b>R101 289</b>	<b>R101 289</b>
<b>C. COMPLIANCE COSTS</b>	C.1 Compliance & Approvals	R0	R1 155	R0	R1 155	R4 703	R1 404	R0	R0	R1 404	R4 609	R1 548	R0	R0	R1 548	R5 132
	C.2 Social Facilitation	R0	R2 949	R0	R2 949	R5 168	R634	R0	R0	R634	R300	R634	R0	R0	R634	R300
	C.3 Prof Fees & Specialist Studies	R0	R2 656	R0	R2 656	R6 811	R3 933	R0	R0	R3 933	R5 473	R5 310	R0	R0	R5 310	R5 630
	C.4 Project Management Fees	R0	R3 869	R0	R3 869	R9 425	R1 587	R0	R0	R1 587	R1 168	R1 587	R0	R0	R1 587	R1 483
	<b>Total</b>	<b>R0</b>	<b>R10 629</b>	<b>R0</b>	<b>R10 629</b>	<b>R26 106</b>	<b>R7 558</b>	<b>R0</b>	<b>R0</b>	<b>R7 558</b>	<b>R11 550</b>	<b>R9 079</b>	<b>R0</b>	<b>R0</b>	<b>R9 079</b>	<b>R12 546</b>
<b>D. CONSTRUCTION COSTS</b>	D4. Contractor overhead	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R622	R0	R0	R622	R0
	D5. Contractor profit	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R1 866	R0	R0	R1 866	R0
	D.1. Construction - Labour	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R7 771	R0	R0	R7 771	R7 771
	D.2. Construction - Materials	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R17 112	R0	R0	R17 112	R17 112
	D.3 Indirect Costs - Contractor	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R1 369	R0	R0	R1 369	R3 857
	<b>Total</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R28 740</b>	<b>R0</b>	<b>R0</b>	<b>R28 740</b>	<b>R28 740</b>
<b>E. OTHER DEVELOPMENT COSTS</b>	E.1 Marketing, Selling, Letting	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0
	E.2 Finance & Holding Costs	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0
	<b>Total</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>
<b>F. DEVELOPER OVERHEAD</b>	F.1. Developer Overhead, Mngt Fee & ..	R0	R0	R0	R0	R7 240	R0	R0	R0	R0	R6 570	R0	R0	R0	R0	R8 205
	<b>Total</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R7 240</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R6 570</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R8 205</b>
<b>G. VALUE ADDED / SALES TAX</b>	G.1 Value Added / Sales Taxes	R0	R0	R0	R0	R19 420	R0	R0	R0	R0	R17 866	R0	R0	R0	R0	R22 550
	<b>Total</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R19 420</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R17 866</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R22 550</b>
<b>Grand Total</b>		<b>R0</b>	<b>R116 341</b>	<b>R0</b>	<b>R116 341</b>	<b>R158 304</b>	<b>R70 960</b>	<b>R44 929</b>	<b>R0</b>	<b>R115 889</b>	<b>R143 891</b>	<b>R101 221</b>	<b>R44 929</b>	<b>R0</b>	<b>R146 150</b>	<b>R179 945</b>

Source: Own calculations using national subsidy determinations and policies and cost benchmarking data.

Table 5: Subsidy quanta - detailed subsidy breakdown (Level 2) for owned housing products

Level 1	Level 2	House Type																			
		A5.1 OWNERSHIP BNG freestanding					A5.2.OWNERSHIP BNG med density					A6.1.OWNERSHIP 40m2 FLISP low					A6.2.OWNERSHIP 52m2 FLISP high				
		Provincial Subsidy (Provided by national, disbursed via province)	Municipal subsidy (provided by national e.g. USDG/MIG, disbursed via municipality)	SHRA Subsidy	Total Subsidy	TOTAL Cost	Provincial Subsidy (Provided by national, disbursed via province)	Municipal subsidy (provided by national e.g. USDG/MIG, disbursed via municipality)	SHRA Subsidy	Total Subsidy	TOTAL Cost	Provincial Subsidy (Provided by national, disbursed via province)	Municipal subsidy (provided by national e.g. USDG/MIG, disbursed via municipality)	SHRA Subsidy	Total Subsidy	TOTAL Cost	Provincial Subsidy (Provided by national, disbursed via province)	Municipal subsidy (provided by national e.g. USDG/MIG, disbursed via municipality)	SHRA Subsidy	Total Subsidy	TOTAL Cost
A. LAND COSTS	A.1 Land Acquisition	R6 000	R0	R0	R6 000	R6 000	R6 000	R0	R0	R6 000	R6 000	R22 050	R0	R0	R22 050	R22 050	R27 960	R0	R0	R27 960	R33 440
	A.2 Stat & Prof Fees	R1 042	R0	R0	R1 042	R614	R1 042	R0	R0	R1 042	R614	R2 258	R0	R0	R2 258	R2 258	R0	R0	R0	R0	R0
	Total	<b>R7 042</b>	<b>R0</b>	<b>R0</b>	<b>R7 042</b>	<b>R6 614</b>	<b>R7 042</b>	<b>R0</b>	<b>R0</b>	<b>R7 042</b>	<b>R6 614</b>	<b>R24 308</b>	<b>R0</b>	<b>R0</b>	<b>R24 308</b>	<b>R24 308</b>	<b>R27 960</b>	<b>R0</b>	<b>R0</b>	<b>R27 960</b>	<b>R35 687</b>
B. INFRASTRUCTURE COSTS	B.1 Bulk, Link, Connector Infrastructu..	R0	R44 929	R0	R44 929	R44 929	R0	R44 929	R0	R44 929	R44 929	R0	R44 929	R0	R44 929	R44 929	R0	R44 929	R0	R44 929	R44 929
	B.2 Internal Infrastructure	R56 904	R0	R0	R56 904	R56 904	R45 985	R0	R0	R45 985	R40 541	R0	R0	R0	R0	R64 804	R0	R0	R0	R0	R74 902
	B.3 Common Services & Facilities	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0
	Total	<b>R56 904</b>	<b>R44 929</b>	<b>R0</b>	<b>R101 833</b>	<b>R101 833</b>	<b>R45 985</b>	<b>R44 929</b>	<b>R0</b>	<b>R90 914</b>	<b>R85 470</b>	<b>R0</b>	<b>R44 929</b>	<b>R0</b>	<b>R44 929</b>	<b>R109 733</b>	<b>R0</b>	<b>R44 929</b>	<b>R0</b>	<b>R44 929</b>	<b>R119 832</b>
C. COMPLIANCE COSTS	C.1 Compliance & Approvals	R1 604	R0	R0	R1 604	R6 844	R1 604	R0	R0	R1 604	R7 788	R27 589	R0	R0	R27 589	R10 777	R0	R0	R0	R0	R14 865
	C.2 Social Facilitation	R634	R0	R0	R634	R300	R634	R0	R0	R634	R300	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0
	C.3 Prof Fees & Specialist Studies	R7 189	R0	R0	R7 189	R10 820	R7 743	R0	R0	R7 743	R15 053	R0	R0	R0	R0	R20 169	R0	R0	R0	R0	R25 300
	C.4 Project Management Fees	R5 386	R0	R0	R5 386	R5 177	R6 032	R0	R0	R6 032	R5 748	R0	R0	R0	R0	R6 654	R0	R0	R0	R0	R9 068
	Total	<b>R14 813</b>	<b>R0</b>	<b>R0</b>	<b>R14 813</b>	<b>R23 141</b>	<b>R16 012</b>	<b>R0</b>	<b>R0</b>	<b>R16 012</b>	<b>R28 889</b>	<b>R27 589</b>	<b>R0</b>	<b>R0</b>	<b>R27 589</b>	<b>R37 600</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R49 233</b>
D. CONSTRUCTION COSTS	D4. Contractor overhead	R4 213	R0	R0	R4 213	R0	R4 459	R0	R0	R4 459	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0
	D5. Contractor profit	R3 664	R0	R0	R3 664	R0	R3 664	R0	R0	R3 664	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0
	D.1. Construction - Labour	R39 385	R0	R0	R39 385	R38 360	R46 268	R0	R0	R46 268	R41 974	R0	R0	R0	R0	R49 702	R0	R0	R0	R0	R73 998
	D.2. Construction - Materials	R52 209	R0	R0	R52 209	R88 600	R61 331	R0	R0	R61 331	R103 054	R0	R0	R0	R0	R118 159	R0	R0	R0	R0	R156 530
	D.3 Indirect Costs - Contractor	R9 042	R0	R0	R9 042	R19 679	R10 550	R0	R0	R10 550	R22 479	R0	R0	R0	R0	R26 927	R0	R0	R0	R0	R36 957
	Total	<b>R108 513</b>	<b>R0</b>	<b>R0</b>	<b>R108 513</b>	<b>R146 639</b>	<b>R126 272</b>	<b>R0</b>	<b>R0</b>	<b>R126 272</b>	<b>R167 507</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R194 789</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R267 484</b>
E. OTHER DEVELOPMENT COSTS	E.1 Marketing, Selling, Letting	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R13 763	R0	R0	R0	R0	R18 242
	E.2 Finance & Holding Costs	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R28 559	R0	R0	R0	R0	R38 763
	Total	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R42 322</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R57 005</b>
F. DEVELOPER OVERHEAD	F.1. Developer Overhead, Mngt Fee & ..	R0	R0	R0	R0	R15 302	R0	R0	R0	R0	R15 866	R0	R0	R0	R0	R58 046	R0	R0	R0	R0	R75 200
	Total	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R15 302</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R15 866</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R58 046</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R75 200</b>
G. VALUE ADDED/ SALES TAX	G.1 Value Added / Sales Taxes	R0	R0	R0	R0	R42 962	R0	R0	R0	R0	R44 571	R0	R0	R0	R0	R66 782	R0	R0	R0	R0	R85 708
	Total	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R42 962</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R44 571</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R66 782</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R85 708</b>
Grand Total		<b>R187 272</b>	<b>R44 929</b>	<b>R0</b>	<b>R232 201</b>	<b>R336 492</b>	<b>R195 311</b>	<b>R44 929</b>	<b>R0</b>	<b>R240 240</b>	<b>R348 918</b>	<b>R51 897</b>	<b>R44 929</b>	<b>R0</b>	<b>R96 826</b>	<b>R533 579</b>	<b>R27 960</b>	<b>R44 929</b>	<b>R0</b>	<b>R72 889</b>	<b>R690 149</b>

Source: Own calculations using national subsidy determinations and policies and cost benchmarking data.

**Table 6: Subsidy quanta - Detailed subsidy breakdown (Level 2) for Social Housing products**

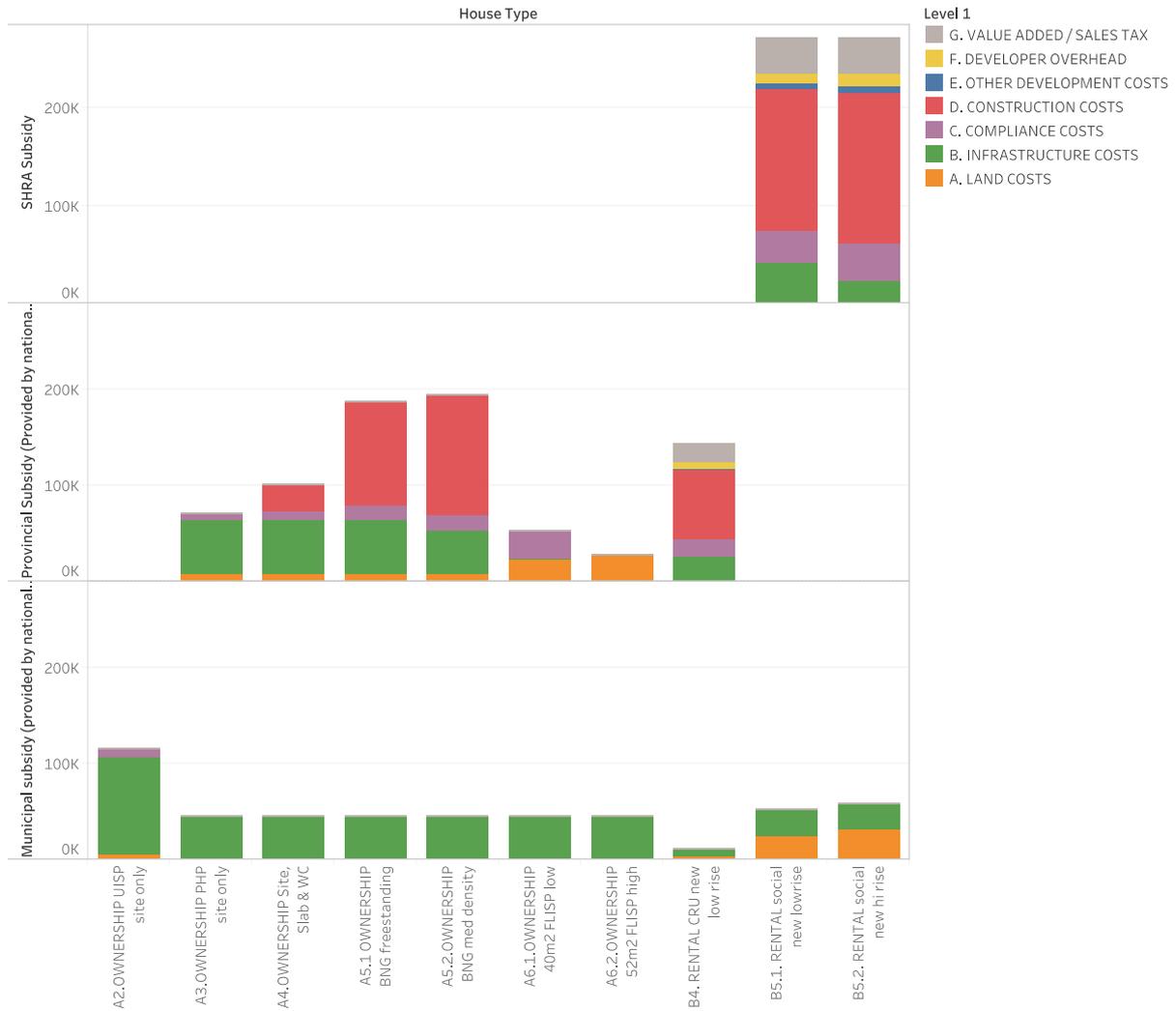
Level 1	Level 2	House Type														
		B4. RENTAL CRU new low rise					B5.1. RENTAL social new lowrise					B5.2. RENTAL social new hi rise				
		Provincial Subsidy (Provided by national, disbursed via province)	Municipal subsidy (provided by national e.g. USDG/MIG, disbursed via municipality)	SHRA Subsidy	Total Subsidy	TOTAL Cost	Provincial Subsidy (Provided by national, disbursed via province)	Municipal subsidy (provided by national e.g. USDG/MIG, disbursed via municipality)	SHRA Subsidy	Total Subsidy	TOTAL Cost	Provincial Subsidy (Provided by national, disbursed via province)	Municipal subsidy (provided by national e.g. USDG/MIG, disbursed via municipality)	SHRA Subsidy	Total Subsidy	TOTAL Cost
<b>A. LAND COSTS</b>	A.1 Land Acquisition	R0	R2 100	R0	R2 100	R2 100	R0	R23 625	R0	R23 625	R26 250	R0	R30 240	R0	R30 240	R33 600
	A.2 Stat & Prof Fees	R0	R167	R0	R167	R167	R0	R625	R0	R625	R625	R0	R800	R0	R800	R800
	<b>Total</b>	<b>R0</b>	<b>R2 267</b>	<b>R0</b>	<b>R2 267</b>	<b>R2 267</b>	<b>R0</b>	<b>R24 250</b>	<b>R0</b>	<b>R24 250</b>	<b>R26 875</b>	<b>R0</b>	<b>R31 040</b>	<b>R0</b>	<b>R31 040</b>	<b>R34 400</b>
<b>B. INFRASTRUCTURE COSTS</b>	B.1 Bulk, Link, Connector Infrastructu..	R0	R9 265	R0	R9 265	R9 264	R0	R27 794	R0	R27 794	R27 793	R0	R27 794	R0	R27 794	R27 793
	B.2 Internal Infrastructure	R25 403	R0	R0	R25 403	R25 403	R0	R0	R41 914	R41 914	R76 208	R0	R0	R21 699	R21 699	R49 315
	B.3 Common Services & Facilities	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0
	<b>Total</b>	<b>R25 403</b>	<b>R9 265</b>	<b>R0</b>	<b>R34 668</b>	<b>R34 667</b>	<b>R0</b>	<b>R27 794</b>	<b>R41 914</b>	<b>R69 708</b>	<b>R104 001</b>	<b>R0</b>	<b>R27 794</b>	<b>R21 699</b>	<b>R49 493</b>	<b>R77 109</b>
<b>C. COMPLIANCE COSTS</b>	C.1 Compliance & Approvals	R4 566	R0	R0	R4 566	R3 550	R0	R0	R6 319	R6 319	R11 489	R0	R0	R5 693	R5 693	R12 939
	C.2 Social Facilitation	R850	R0	R0	R850	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0
	C.3 Prof Fees & Specialist Studies	R7 376	R0	R0	R7 376	R10 786	R0	R0	R19 719	R19 719	R35 852	R0	R0	R27 153	R27 153	R61 711
	C.4 Project Management Fees	R5 046	R0	R0	R5 046	R3 459	R0	R0	R6 381	R6 381	R11 601	R0	R0	R6 731	R6 731	R15 297
	<b>Total</b>	<b>R17 838</b>	<b>R0</b>	<b>R0</b>	<b>R17 838</b>	<b>R17 796</b>	<b>R0</b>	<b>R0</b>	<b>R32 418</b>	<b>R32 418</b>	<b>R58 943</b>	<b>R0</b>	<b>R0</b>	<b>R39 577</b>	<b>R39 577</b>	<b>R89 946</b>
<b>D. CONSTRUCTION COSTS</b>	D4. Contractor overhead	R1 563	R0	R0	R1 563	R0	R0	R0	R2 951	R2 951	R0	R0	R0	R3 261	R3 261	R0
	D5. Contractor profit	R4 688	R0	R0	R4 688	R0	R0	R0	R13 765	R13 765	R0	R0	R0	R9 782	R9 782	R0
	D.1. Construction - Labour	R20 017	R0	R0	R20 017	R20 018	R0	R0	R47 212	R47 212	R70 529	R0	R0	R52 348	R52 348	R86 094
	D.2. Construction - Materials	R42 492	R0	R0	R42 492	R42 255	R0	R0	R70 819	R70 819	R143 362	R0	R0	R78 521	R78 521	R207 720
	D.3 Indirect Costs - Contractor	R5 001	R0	R0	R5 001	R11 252	R0	R0	R9 442	R9 442	R38 628	R0	R0	R10 434	R10 434	R53 357
	<b>Total</b>	<b>R73 761</b>	<b>R0</b>	<b>R0</b>	<b>R73 761</b>	<b>R73 524</b>	<b>R0</b>	<b>R0</b>	<b>R144 189</b>	<b>R144 189</b>	<b>R252 519</b>	<b>R0</b>	<b>R0</b>	<b>R154 346</b>	<b>R154 346</b>	<b>R347 170</b>
<b>E. OTHER DEVELOPMENT COSTS</b>	E.1 Marketing, Selling, Letting	R0	R0	R0	R0	R0	R0	R0	R0	R0	R1 080	R0	R0	R0	R0	R1 080
	E.2 Finance & Holding Costs	R0	R0	R0	R0	R0	R0	R0	R6 598	R6 598	R10 917	R0	R0	R6 598	R6 598	R12 737
	<b>Total</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R0</b>	<b>R6 598</b>	<b>R6 598</b>	<b>R11 997</b>	<b>R0</b>	<b>R0</b>	<b>R6 598</b>	<b>R6 598</b>	<b>R13 817</b>
<b>F. DEVELOPER OVERHEAD</b>	F.1. Developer Overhead, Mngt Fee & ..	R7 067	R0	R0	R7 067	R7 067	R0	R0	R9 433	R9 433	R25 028	R0	R0	R12 636	R12 636	R31 078
	<b>Total</b>	<b>R7 067</b>	<b>R0</b>	<b>R0</b>	<b>R7 067</b>	<b>R7 067</b>	<b>R0</b>	<b>R0</b>	<b>R9 433</b>	<b>R9 433</b>	<b>R25 028</b>	<b>R0</b>	<b>R0</b>	<b>R12 636</b>	<b>R12 636</b>	<b>R31 078</b>
<b>G. VALUE ADDED / SALES TAX</b>	G.1 Value Added / Sales Taxes	R19 954	R0	R0	R19 954	R19 954	R0	R0	R37 315	R37 315	R67 846	R0	R0	R37 011	R37 011	R84 117
	<b>Total</b>	<b>R19 954</b>	<b>R0</b>	<b>R0</b>	<b>R19 954</b>	<b>R19 954</b>	<b>R0</b>	<b>R0</b>	<b>R37 315</b>	<b>R37 315</b>	<b>R67 846</b>	<b>R0</b>	<b>R0</b>	<b>R37 011</b>	<b>R37 011</b>	<b>R84 117</b>
<b>Grand Total</b>		<b>R144 023</b>	<b>R11 532</b>	<b>R0</b>	<b>R155 555</b>	<b>R155 275</b>	<b>R0</b>	<b>R52 044</b>	<b>R271 867</b>	<b>R323 911</b>	<b>R547 209</b>	<b>R0</b>	<b>R58 834</b>	<b>R271 867</b>	<b>R330 701</b>	<b>R677 638</b>

Source: Own calculations using national subsidy determinations and policies and cost benchmarking data.

### 3.9 Subsidy quanta per disbursing agency

Figure 7 illustrates the sources and quanta of subsidy funds. Subsidies are shown (irrespective of whether they are disbursed by provincial or municipal authorities, or the SHRA) according to the actual amount provided for each Level 1 element per house type. It is noted here that the infrastructure costs are generally (but not exclusively) divided between bulk services being funded by municipalities, and internal services being funded through provincial subsidy instruments for serviced site and BNG products. For SH products, land and services are generally expected to be provided by (or at minimum heavily subsidised by) municipalities.

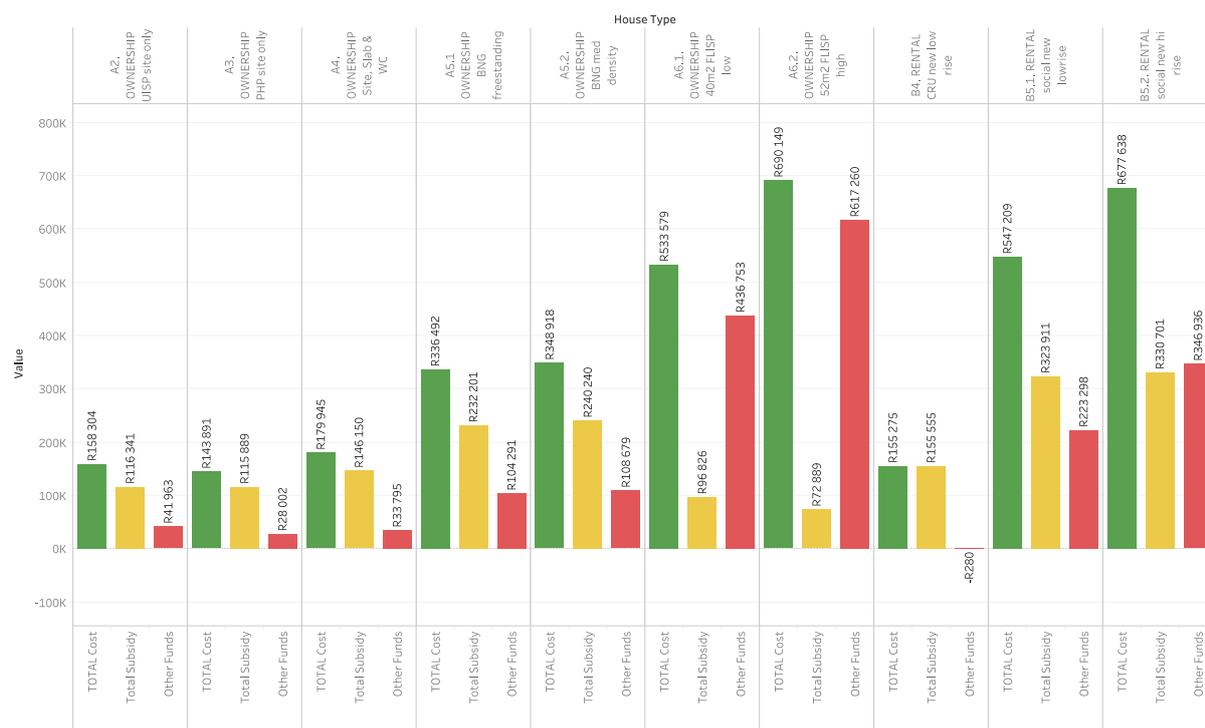
Figure 7: Subsidy quanta per disbursing agency (provincial, metro, SHRA)



Source: Own calculations using national subsidy determinations and policies.

Figure 8 below shows the difference between the calculated product cost and the levels of subsidy available for each product from all sources. The balance between these two costs indicates funding that must be secured from other sources. In relation to fully-subsidised products (serviced sites and BNG houses) this subsidy shortfall is an ‘unfunded mandate’ that must be found from public sector sources to ensure products are completed – either from subsidy variations or municipalities’ own funds. In relation to the FLISP products, this balance would be raised by the purchaser through end-user financing (the FLISP subsidy must be tied to finance) and own resources. For the social housing products, social housing institutions are expected to raise the balance from own equity and geared funds.

**Figure 8: Other funding required (total cost less subsidy quanta)**



Source: Own calculations using national subsidy determinations and policies and cost benchmarking data.

## 4 Determining the Economic Impact of Different Housing Subsidies

*What economic impact does the construction of each of these housing types have?*

CAHF’s housing cost benchmarking methodology builds up the total cost of each housing type from a detailed bill of quantities (BoQ) comprising hundreds of discrete cost elements. From this BoQ, each item – whether materials, labour or other inputs – can be allocated to a specific economic value chain category. This then enables a quantification of the intermediate inputs required for the construction of each housing unit, as well as the gross value added during construction. These discrete mini-housing value chains for each product then form the basis for undertaking calculations of the overall economic impact of the production of all government subsidised housing.

### 4.1 Understanding the theory of housing subsidies and their incidence

Housing plays a critical social, economic and political role in all societies. Hoek-Smit states that the economic and social characteristics of the housing sector are the reason that almost all societies intervene in housing markets through an array of policies intended to increase housing consumption by various groups.<sup>26</sup>

Economic arguments in favour of subsidising housing are usually based on the assertion that home ownership creates positive externalities for others in society because i) home owners take better care of the properties they occupy and this benefits them and their neighbours; and ii) because home owners have a direct stake in the country and its future, home ownership increases social stability. South Africa’s history of land dispossession creates another argument for the subsidisation of housing: subsidies have the potential to redress historical land dispossession, specifically in the context of an urbanising society such as South Africa.

<sup>26</sup>Hoek-Smit, Marja C. An Illustrative Guide to Housing Finance Subsidies: Chapter 2 – Thinking About Housing Subsidies. World Bank / Wharton IHFP, Policy Paper, mimeo, 2008.

Subsidies also have the potential to guide urban and housing development in ways that overcome the legacy of apartheid-era spatial form and the costs that this imposes on large segments of the population who can least afford them, such as very high costs of commuting from distant locations and lack of access to centrally-located services and markets. Subsidies also assist in making home ownership affordable for a greater proportion of households who would otherwise not have access.

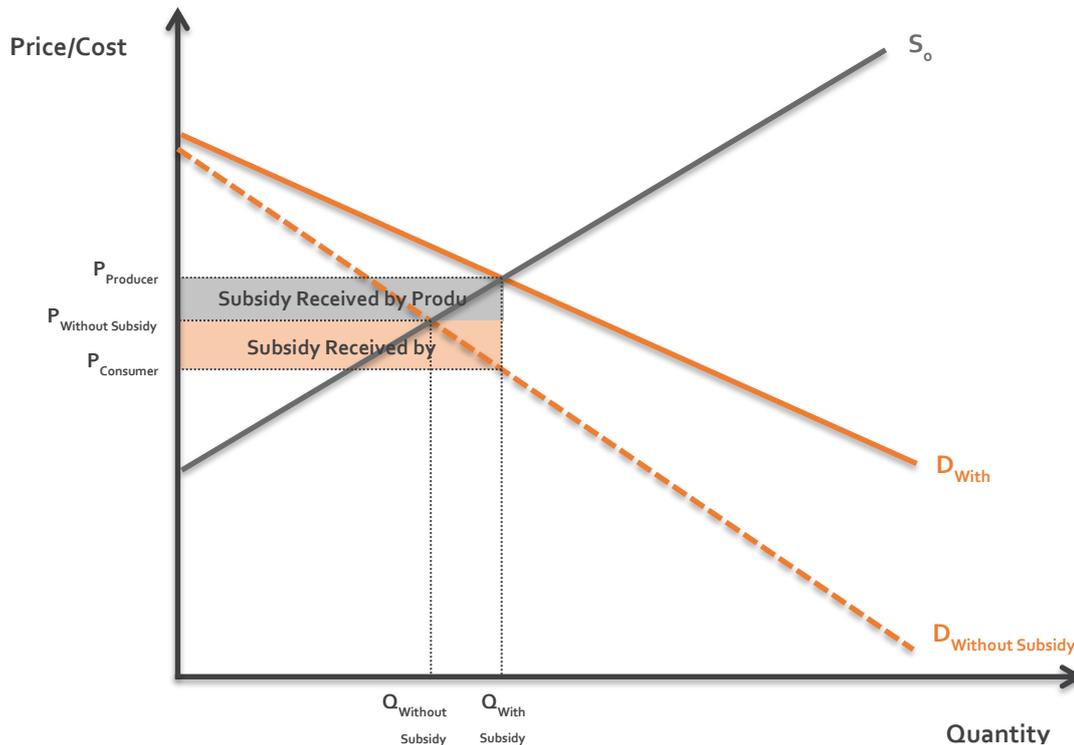
At the same time Rosen (1999) warns that “[E]very subsidy embodies a redistribution of income from taxpayers as a whole to the recipients. Even if the subsidy has good efficiency consequences, the distributional implications may not be desirable.” He goes on to state, “The fact that an activity is beneficial *per se* does not mean that a subsidy is required for efficiency. A subsidy is appropriate only if the market does not allow those performing the activity to capture the full marginal return.” In relation to the claimed positive externalities for home ownership, Rosen goes on to contend that looking after a home may be more of a function of substantially higher incomes than ownership *per se* (noting that the median incomes of home owners in the United States was almost twice that of renters), and that there is little evidence that lower levels of home ownership contribute to social instability (citing Switzerland as an example of a country where the majority of the population rent properties).<sup>27</sup>

In principle, the introduction of a subsidy on a particular product should reduce the equilibrium price (the market price that aligns the quantity demanded with the quantity supplied) for that product in the market and facilitate increased demand for, and consumption of, that product through a combination of price and income effects. In practice, the resulting reduction in price is seldom equal to the value of the subsidy paid because although its statutory incidence (who the subsidy is intended to support) might fall on producers or consumers (depending on who receives the subsidy), the economic incidence (who benefits) is usually split between consumers and producers/suppliers. To the extent that any price reduction is muted as a result of the economic incidence, any benefits of the subsidy will obviously be reduced.

The theoretical determination of the economic incidence of subsidies is illustrated in **Figure 9**. For a given initial supply curve ( $S_0$ ) and demand curve ( $D_{\text{Without Subsidy}}$ ), the equilibrium price and quantity would then be  $P_{\text{Without Subsidy}}$  and  $Q_{\text{Without Subsidy}}$  respectively. If a system of housing subsidies similar to those outlined in Tables 3, 4, 5 and 6 was imposed, the demand curve perceived by suppliers of the product (in this case houses qualifying for subsidies) would shift from  $D_{\text{Without Subsidy}}$  to  $D_{\text{With Subsidy}}$ . The total subsidy paid is represented by the combined shaded areas (blue and pink) but the incidence of the subsidy is shared - with consumers receiving the area shaded in pink and producers receiving the area shaded in blue. The critical determinant of the extent to which the imposition of a subsidy is shared arises from the relative price elasticities of supply and demand in the immediate vicinity of the current equilibrium price ( $P_{\text{Without Subsidy}}$ ). The difference between the price before subsidies are introduced and the price paid by consumers ( $P_{\text{Consumer}}$ ) when the subsidy is introduced does not represent the full value of the subsidy, **even if** the subsidy is actually paid to the consumer in accordance with prevailing legislation. Provided the demand and supply functions remain the same, it would make no difference to the subsidy incidence if the subsidy was paid to the producer.

<sup>27</sup> Rosen (1999), Pg. 107.

Figure 9: The incidence of a subsidy is shared between producers and consumers irrespective of its statutory incidence



In practice this means that the ratio in which the economic incidence of a subsidy is shared between consumers and producers of a product is equal to the ratio of the absolute value of the respective gradients of the demand and supply curves. In the illustration above, the gradients are approximately the same – which is why the subsidy incidence falls almost equally upon both the consumers and the producers of the product. If the gradient of the demand curve within the vicinity of the current equilibrium price is twice that of the gradient of the supply curve over that same price range, then two-thirds of the subsidy incidence will fall on consumers of the product. In this context it is possible to state that the basis on which the subsidy incidence is shared is equal to the ratio of the price elasticities of supply and demand for the product concerned.<sup>28</sup>

In extreme cases where supply is a) perfectly elastic around the prevailing market price, or b) perfectly inelastic around the prevailing market price, the subsidy incidence would accrue a) completely to the consumer, or b) completely to the producer.

In the context of this study, the above analysis implies that the economic impacts of housing subsidies do not depend on who actually receives them, but rather on the dynamics of the housing market, and the sensitivity of both housing demand and housing supply to price changes. This does not imply that it is unimportant who benefits from subsidies (targeting of beneficiaries is a critical outcome of any subsidy policy), but rather that—from a macroeconomic context—it is the *fact* of subsidies being applied rather than the *statutory target* of the subsidy that matters.

#### 4.2 Economic value chain breakdown of subsidised housing costs

Table 7 shows the breakdown of the ten benchmarked subsidy products<sup>29</sup> into their economic value chain components of gross value added (labour and gross operating surplus adjusted to market prices by taking

<sup>28</sup> The price elasticity of demand and supply is determined by the formula  $E_{D/S} = P/Q \times 1/\text{Gradient}$ . Since subsidy incidence is shared according to the ratio of the gradient of the demand function/gradient of the supply function, and P and Q are common to both, the ratio according to which the subsidy incidence is shared between consumers and producers will be equal to  $E_S/E_D$ .

<sup>29</sup> Product A7: Ownership 65m<sup>2</sup> high is a control product that does not receive a subsidy.

account of net indirect taxes less subsidies) and intermediate inputs (from the primary, secondary and tertiary sectors). Note that land is isolated in its own category because it does not create any economic value added in and of itself – only services related to it (such as sales and registrations) and activities that happen on it (construction, rental etc) are generators of economic value. The table indicates the amount of subsidy received in each case, together with the subsidy gap (the difference between the cost of the product and the subsidy) which needs to be made up from other financial contributions. These 'other contributions' could range from explicit or implicit subsidies from other sources, or (in some cases) may be partially made up of contributions from the home owner. The extent of other contributions varies greatly: in the case of B4: Rental CRU new low rise, the subsidy is greater than the calculated costs of the unit – so a net subsidy (grant) is received.<sup>30</sup> In the case of A6: Ownership 52m2 FLISP high, the subsidy amount represents a very small proportion (ZAR72 889) of the total cost, and therefore substantial other contributions totalling ZAR584 820 need to be found.

**Table 7: Economic value chain breakdown of subsidised housing products**

Component of Value Chain	House Type (R millions)										
	A2.OWNERSHIP UISP site only	A3.OWNERSHIP PHP site only	A4.OWNERSHIP Site, Slab & WC	A5.1.OWNERSHIP BNG freestanding	A5.2.OWNERSHIP BNG med density	A6.1.OWNERSHIP 40m2 FLISP low	A6.2.OWNERSHIP 52m2 FLISP high	A7. Ownership 65m2 High	B4. RENTAL CRU new/low rise	B5.1. RENTAL social new/lowrise	B5.2. RENTAL social new/hi rise
<b>Intermediate Inputs</b>	<b>110 518</b>	<b>95 962</b>	<b>114 069</b>	<b>196 153</b>	<b>205 786</b>	<b>276 040</b>	<b>343 712</b>	<b>398 661</b>	<b>86 377</b>	<b>282 366</b>	<b>360 390</b>
Primary			5 804	8 636	8 549	9 272	14 868	18 391	2 275	8 316	7 783
Secondary	85 833	85 833	97 141	165 798	169 770	200 146	240 016	279 075	66 411	214 340	261 894
Tertiary	24 684	10 129	11 124	21 719	27 468	66 622	88 828	101 194	17 691	59 710	90 713
+											
<b>Gross Value Added</b>	<b>44 538</b>	<b>41 928</b>	<b>59 876</b>	<b>134 339</b>	<b>137 132</b>	<b>235 489</b>	<b>312 997</b>	<b>365 368</b>	<b>66 797</b>	<b>238 593</b>	<b>283 648</b>
Labour Remuneration	15 456	15 456	23 227	54 360	52 179	68 176	95 475	114 203	28 134	94 877	100 886
Gross Operating Surplus	8 662	7 992	13 484	36 403	39 767	98 273	129 567	150 345	18 543	75 245	97 844
Indirect Taxes	20 420	18 481	23 165	43 577	45 185	69 039	87 955	100 820	20 121	68 471	84 917
=											
<b>Domestic Production</b>	<b>155 056</b>	<b>137 891</b>	<b>173 945</b>	<b>330 492</b>	<b>342 918</b>	<b>511 529</b>	<b>656 709</b>	<b>764 028</b>	<b>153 175</b>	<b>520 959</b>	<b>644 038</b>
=											
<b>Gross Fixed Capital Formation</b>	<b>155 056</b>	<b>137 891</b>	<b>173 945</b>	<b>330 492</b>	<b>342 918</b>	<b>511 529</b>	<b>656 709</b>	<b>764 028</b>	<b>153 175</b>	<b>520 959</b>	<b>644 038</b>
Subsidy	116 341	115 889	146 150	232 201	240 240	96 826	72 889		155 555	323 911	330 701
Other Contributions	38 715	22 002	27 795	98 291	102 678	414 703	583 820	764 028	-2 380	197 048	313 337

Source: Own calculations based on housing cost benchmarking and economic value chain methodologies.

These cost breakdowns are used later to ascertain the economic impact of each subsidised house produced for the South African economy.

### 4.3 Industry sector and product / service breakdowns of subsidised house types

Analysing this economic impact further, each item in the cost composition of the subsidised house type is allocated to an economic sector and sub-sector in accordance with the International Standard Industrial Classification (ISIC) of all economic activity.<sup>31</sup> These allocations are shown in **Table 8** (ISIC sectors and sub-sectors). **Table 9** provides a further breakdown to a product/service level, taking this breakdown to recognisable intermediate inputs and value added components of house construction.

<sup>30</sup> Note that this is a notional credit, based on the current subsidy quantum versus the calculated delivery cost. Should this programme be implemented in the future, it is highly unlikely such a subsidy credit would occur.

<sup>31</sup> Note that South Africa's SIC categories generally follow the ISIC classification, but do differ in specific instances. CAHF has elected to use the ISIC categorization as the standard due to the cross-continental benchmarking studies it is undertaking, in order to allow for comparisons.

**Table 8: International Standard Industrial Classification (ISIC) breakdown of subsidised housing products**

VC Category	VC Subcategory	SIC: Sector	SIC: Subsector	Country / House Type									
				South Africa									
				A2. OWNERSHIP UJSP site only	A3. OWNERSHIP PHP site only	A4. OWNERSHIP Site, Slab & WC	A5.1. OWNERSHIP BNG Freestanding	A5.2. OWNERSHIP BNG med density	A6.1. OWNERSHIP 40m2 FLUP low	A6.2. OWNERSHIP 52m2 FLUP high	B4. RENTAL CRU new low rise	B5.1. RENTAL social new lowrise	B5.2. RENTAL social new hi rise
Fixed Capital	Land	L. Real Estate Activities	68. Real Estate Activities	R3 248	R6 000	R6 000	R6 000	R6 000	R22 050	R33 440	R2 100	R26 250	R33 600
Gross Value Added	Gross Operating Surplus	F. Construction	41. Construction of Buildings	R8 662	R7 992	R13 484	R36 403	R39 767	R86 588	R113 999	R18 543	R64 328	R85 107
		K. Financial & Insurance	64. Financial Services (not Ins)	R0	R0	R0	R0	R0	R11 685	R15 568	R0	R10 917	R12 737
Labour	F. Construction	L. Real Estate Activities	68. Real Estate Activities	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0
		41. Construction of Buildings	41. Construction of Buildings	R783	R783	R8 554	R39 143	R42 287	R50 486	R75 303	R20 704	R72 588	R87 116
Net Indirect Taxes	M. Professional, Technical, Scientific	42. Civil Engineering (Road, rail, utility, other ci..	42. Civil Engineering (Road, rail, utility, other ci..	R14 673	R14 673	R14 673	R15 217	R9 892	R17 691	R20 171	R7 430	R22 290	R13 770
		69. Legal & Accounting	69. Legal & Accounting	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0
Intermediate Inputs	Primary Sector	O. Public Administration and Defence	84. Public Admin & Defence	R20 420	R18 481	R23 165	R43 577	R45 185	R69 039	R87 955	R20 121	R68 471	R84 917
		A. Agriculture, Forestry & Fishing	01. Crop, Animals, Hunting	R0	R0	R0	R0	R0	R0	R0	R0	R207	R621
Secondary Sector	B. Mining and Quarrying	B. Mining and Quarrying	05. Mining: Coal & Lignite	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0
		08. Mining: Other	08. Mining: Other	R0	R0	R5 804	R8 636	R8 549	R9 272	R14 868	R2 275	R8 316	R7 783
Tertiary Sector	C. Manufacturing	16. Manufacture: Wood, Straw Products	16. Manufacture: Wood, Straw Products	R0	R0	R0	R7 340	R6 440	R19 089	R23 454	R4 302	R17 123	R14 993
		18. Manufacture: Printing & Reproduction	18. Manufacture: Printing & Reproduction	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0
G. Wholesale & Retail Trade	20. Manufacture: Chemical Products	20. Manufacture: Chemical Products	20. Manufacture: Chemical Products	R0	R0	R0	R4 788	R5 145	R5 068	R6 017	R1 309	R4 191	R5 615
		22. Manufacture: Rubber & Plastics	22. Manufacture: Rubber & Plastics	R0	R0	R4 337	R18 995	R20 580	R23 810	R25 928	R8 011	R23 998	R28 863
J. Information and Communication	23. Manufacture: Other Non Metallic	23. Manufacture: Other Non Metallic	23. Manufacture: Other Non Metallic	R32 412	R32 412	R37 139	R56 991	R58 076	R71 552	R95 595	R29 818	R98 789	R83 185
		25. Manufacture: Fabricated Metal Products	25. Manufacture: Fabricated Metal Products	R0	R0	R2 244	R17 201	R18 783	R15 144	R22 199	R8 032	R25 421	R36 702
K. Financial & Insurance	27. Manufacture: Electrical Equipment	27. Manufacture: Electrical Equipment	27. Manufacture: Electrical Equipment	R0	R0	R0	R7 062	R7 325	R12 060	R13 401	R4 844	R14 532	R62 249
		33. Repair & Installation of Machinery & Equipm..	33. Repair & Installation of Machinery & Equipm..	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0
L. Real Estate Activities	D. Electricity, Gas, Steam and Air Co..	36. Water Collection, Treatment & Supply	36. Water Collection, Treatment & Supply	R8 492	R8 492	R8 492	R8 492	R8 492	R8 492	R8 492	R624	R1 872	R1 872
		F. Construction	41. Construction of Buildings	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0
M. Professional, Technical, Scientific	42. Civil Engineering (Road, rail, utility, other ci..	42. Civil Engineering (Road, rail, utility, other ci..	42. Civil Engineering (Road, rail, utility, other ci..	R44 929	R44 929	R44 929	R44 929	R44 929	R44 929	R44 929	R9 264	R27 793	R27 793
		46. Wholesale Trade	46. Wholesale Trade	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0
N. Administrative & Support Services	47. Retail Trade	47. Retail Trade	47. Retail Trade	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0
		J. Information and Communication	58. Publishing Activities	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0
O. Public Administration and Defence	K. Financial & Insurance	64. Financial Services (not Ins)	64. Financial Services (not Ins)	R0	R0	R0	R0	R0	R10 900	R14 552	R0	R0	R0
		65. Insurance, Reinsurance & Pensions	65. Insurance, Reinsurance & Pensions	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0
Grand Total	L. Real Estate Activities	68. Real Estate Activities	68. Real Estate Activities	R0	R0	R0	R0	R0	R13 763	R18 242	R0	R1 080	R1 080
		94. Membership Organisations	94. Membership Organisations	R1 623	R1 529	R1 909	R3 564	R3 695	R4 770	R6 148	R1 646	R5 674	R7 062
Grand Total	M. Professional, Technical, Scientific	69. Legal & Accounting	69. Legal & Accounting	R0	R0	R0	R0	R0	R3 434	R4 415	R0	R0	R0
		71. Architecture & Engineering, Tech Testing	71. Architecture & Engineering, Tech Testing	R14 814	R5 220	R5 692	R14 575	R19 380	R25 208	R32 526	R14 022	R46 782	R76 336
Grand Total	N. Administrative & Support Services	74. Other Prof, Sci & Tech Services	74. Other Prof, Sci & Tech Services	R8 247	R3 380	R3 380	R3 380	R4 099	R5 407	R7 677	R1 640	R4 921	R4 921
		81. Building Services & Landscaping	81. Building Services & Landscaping	R0	R0	R0	R0	R0	R0	R0	R120	R359	R359
Grand Total	O. Public Administration and Defence	84. Public Admin & Defence	84. Public Admin & Defence	R0	R0	R144	R200	R294	R3 140	R5 269	R264	R894	R956
		Grand Total		R158 304	R143 891	R179 945	R336 492	R348 918	R533 579	R690 149	R155 275	R547 209	R677 638

Source: Own calculations based on housing cost benchmarking and economic value chain methodologies.

**Table 9: ISIC and Product/Service breakdown of subsidised housing products**

				Country / House Type										
				South Africa										
VC Category	Subcategory	SIC: Sector	SIC: Subsector	Product / Service	A2. OWNERSHIP USP site only	A3. OWNERSHIP PHP site only	A4. OWNERSHIP Site, Sibb & WC	A5.1 OWNERSHIP BUG freestanding	A5.2. OWNERSHIP BNG med density	A6.1. OWNERSHIP 40m2 FLJSP low	A6.2. OWNERSHIP 52m2 FLJSP high	B4. RENTAL CSU new low rise	B5.1. RENTAL social new lowrise	B5.2. RENTAL social new hi rise
Fixed Capital	Land	L. Real Estate Activities	68. Real Estate Activities	Land Cost	R3 248	R6 000	R6 000	R6 000	R6 000	R22 050	R33 440	R2 100	R26 250	R33 600
			Gross Value Added	F. Construction	41. Construction of Buildings	Mark-Up	R7 240	R6 570	R8 205	R15 302	R15 866	R58 046	R75 200	R7 067
Gross Value Added	Operating Surplus	K. Financial & Insurance	64. Financial Services (not Ins)	Preliminaries	R0	R0	R3 857	R19 679	R22 479	R26 927	R36 957	R11 252	R38 628	R53 357
				Salaries	R1 422	R1 422	R1 422	R1 422	R1 422	R1 615	R1 843	R224	R672	R672
Labour	F. Construction	41. Construction of Buildings	64. Financial Services (not Ins)	Finance	R0	R0	R0	R0	R0	R11 685	R15 568	R0	R10 917	R12 737
			68. Real Estate Activities	Land Rent	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0
Net Indirect Taxes	O. Public Administration and Defence	84. Public Admin & Defence	41. Construction of Buildings	Construction	R783	R783	R783	R783	R313	R783	R1 306	R806	R2 418	R1 382
			42. Civil Engineering (Road, rail, utility, other ci..	Project Management	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0
Intermediate Inputs	Primary Sector	A. Agriculture, Forestry & Fishing	01. Crop, Animals, Hunting	Salaries / Wages	R0	R0	R7 771	R38 360	R41 974	R49 702	R73 998	R19 898	R70 170	R85 735
				05. Mining: Coal & Lignite	On-Site Service	R14 673	R14 673	R14 673	R15 217	R9 892	R17 691	R20 171	R7 430	R22 290
Secondary Sector	C. Manufacturing	16. Manufacture: Wood, Straw Products	69. Legal & Accounting	Professional Fees	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0
				18. Manufacture: Printing & Reproduction	Levies & Taxes	R20 420	R18 481	R23 165	R43 577	R45 185	R69 039	R87 955	R20 121	R68 471
Tertiary Sector	J. Information and Communication	58. Publishing Activities	Service Connection	Service Connection	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0
				01. Crop, Animals, Hunting	Plants	R0	R0	R0	R0	R0	R0	R0	R207	R621
Gross Value Added	B. Mining and Quarrying	05. Mining: Coal & Lignite	08. Mining: Other	Tar Paving	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0
				08. Mining: Other	Sand	R0	R0	R2 582	R5 414	R6 417	R6 050	R10 176	R1 920	R7 138
Gross Value Added	C. Manufacturing	20. Manufacture: Chemical Products	22. Manufacture: Rubber & Plastics	Stone	R0	R0	R3 222	R3 222	R2 132	R3 222	R4 692	R355	R1 178	R811
				23. Manufacture: Other Non Metallic	Wood	R0	R0	R0	R7 340	R6 440	R19 089	R23 454	R4 302	R17 123
Gross Value Added	D. Electricity, Gas, Steam and Air Co..	36. Water Collection, Treatment & Supply	41. Construction of Buildings	Signage	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0
				41. Construction of Buildings	Plastics	R0	R0	R81	R651	R1 707	R804	R1 536	R373	R1 085
Gross Value Added	E. Wholesale and Retail Trade	46. Wholesale Trade	47. Retail Trade	Plumbing	R0	R0	R4 256	R18 344	R18 874	R23 006	R24 392	R7 456	R22 368	R25 884
				46. Wholesale Trade	Signage	R0	R0	R0	R0	R0	R0	R0	R182	R545
Gross Value Added	F. Construction	42. Civil Engineering (Road, rail, utility, other ci..	Bulk Services	Cement	R0	R0	R3 945	R7 856	R7 655	R8 828	R13 627	R2 107	R7 338	R7 350
				42. Civil Engineering (Road, rail, utility, other ci..	Cement Products	R0	R0	R781	R12 939	R18 648	R18 166	R30 314	R6 222	R25 378
Gross Value Added	G. Wholesale and Retail Trade	46. Wholesale Trade	47. Retail Trade	Ceramics	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0
				46. Wholesale Trade	Concrete	R0	R0	R0	R0	R6 372	R0	R0	R4 147	R13 380
Gross Value Added	H. Accommodation and Food Services	55. Retail Trade	56. Retail Trade	Glass	R0	R0	R3 784	R3 557	R6 721	R6 721	R801	R3 066	R3 066	
				55. Retail Trade	On-Site Service	R32 412	R32 412	R32 412	R32 412	R21 844	R37 837	R44 933	R16 543	R49 628
Gross Value Added	I. Real Estate Activities	68. Real Estate Activities	94. Membership Organisations	Aluminium	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0
				68. Real Estate Activities	Steel	R0	R0	R2 244	R17 201	R18 783	R15 144	R22 199	R8 032	R25 421
Gross Value Added	M. Professional, Technical, Scientific	69. Legal & Accounting	71. Architecture & Engineering, Tech Testing	Electrical	R0	R0	R0	R7 062	R7 325	R12 060	R13 401	R4 844	R14 532	R62 249
				69. Legal & Accounting	Fixtures & Fittings	R0	R0	R0	R0	R0	R0	R0	R0	R0
Gross Value Added	N. Administrative & Support Services	81. Building Services & Landscaping	84. Public Admin & Defence	Service Connection	R8 492	R8 492	R8 492	R8 492	R8 492	R8 492	R8 492	R624	R1 872	R1 872
				81. Building Services & Landscaping	Building	R0	R0	R0	R0	R0	R0	R0	R0	R0
Gross Value Added	O. Public Administration and Defence	84. Public Admin & Defence	84. Public Admin & Defence	Facilities	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0
				84. Public Admin & Defence	Facilities	R44 929	R44 929	R44 929	R44 929	R44 929	R44 929	R44 929	R9 264	R27 793
Gross Value Added	P. Information and Communication	63. Information and Communication	64. Financial Services (not Ins)	Authorisation	R1 623	R1 529	R1 909	R3 564	R3 695	R4 770	R6 148	R1 646	R5 674	R7 062
				63. Information and Communication	Finance	R0	R0	R0	R0	R0	R3 434	R4 415	R0	R0
Gross Value Added	Q. Public Administration and Defence	84. Public Admin & Defence	84. Public Admin & Defence	Professional Fees	R14 814	R5 220	R5 692	R14 575	R19 380	R25 208	R32 526	R14 022	R46 782	R76 336
				84. Public Admin & Defence	Authorisation	R8 247	R3 380	R3 380	R3 380	R4 099	R5 407	R7 677	R1 640	R4 921
Gross Value Added	R. Public Administration and Defence	84. Public Admin & Defence	84. Public Admin & Defence	Facilities	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0
				84. Public Admin & Defence	Landscaping	R0	R0	R0	R0	R0	R0	R0	R120	R359
Gross Value Added	S. Public Administration and Defence	84. Public Admin & Defence	84. Public Admin & Defence	Security	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0
				84. Public Admin & Defence	Authorisation	R0	R0	R144	R200	R294	R600	R1 040	R264	R894
Gross Value Added	T. Public Administration and Defence	84. Public Admin & Defence	84. Public Admin & Defence	Levies & Taxes	R0	R0	R0	R0	R0	R2 540	R4 229	R0	R0	R0
				84. Public Admin & Defence	Levies & Taxes	R0	R0	R0	R0	R0	R0	R2 540	R4 229	R0
<b>Grand Total</b>					<b>R158 304</b>	<b>R143 891</b>	<b>R179 945</b>	<b>R336 492</b>	<b>R348 918</b>	<b>R533 579</b>	<b>R690 149</b>	<b>R155 275</b>	<b>R547 209</b>	<b>R677 638</b>

Source: Own calculations based on housing cost benchmarking and economic value chain methodologies.

## 5 Subsidised Housing Delivery

### *How many subsidised houses are constructed and rented each year?*

In quantitative terms, South Africa's Housing Subsidy Programme has delivered millions of subsidised housing opportunities to low income households. The initial target to deliver one million houses in five years was realised in just seven years. Over the 22 years up to 2016/17 the Minister of Human Settlements claims that about 2.8 million completed houses, 986 000 serviced sites and 121 000 social housing units have been delivered. A further 360 000 households have had ownership of their previously state-owned rental properties transferred to them. Further, 69 000 upgraded community rental units have been constructed, and 6 000 finance linked subsidies have been paid out (African News Agency, 22 April 2016). Gardner (2018) calculates that this has provided direct and indirect access to improved housing for nearly a quarter of South Africa's population, and access to land, services and housing for significantly more.

However, accurate subsidised housing delivery numbers are not easy to find. A Performance and Expenditure Review (DPME, 2015) on five key housing programmes showed that the relationships between housing expenditure and actual delivery is not transparent. Units claimed in national statistics are not necessarily clearly recorded in project statistics, and the definition of 'housing opportunities' delivered through different programmes can differ significantly. For instance, delivery of tenure, or water and sanitation, or a serviced site, or a serviced site and a house may be classified as a 'housing opportunity'.

Extracting data from NDHS annual reports, **Table 10** shows a detailed programme-level delivery breakdown for four financial years (2014/15 to 2017/18). **Annexure D** illustrates the best available delivery statistics between 1994/95 and 2013/14.

**Table 10: Subsidised housing delivery statistics (2014/15 to 2017/18)<sup>32</sup>**

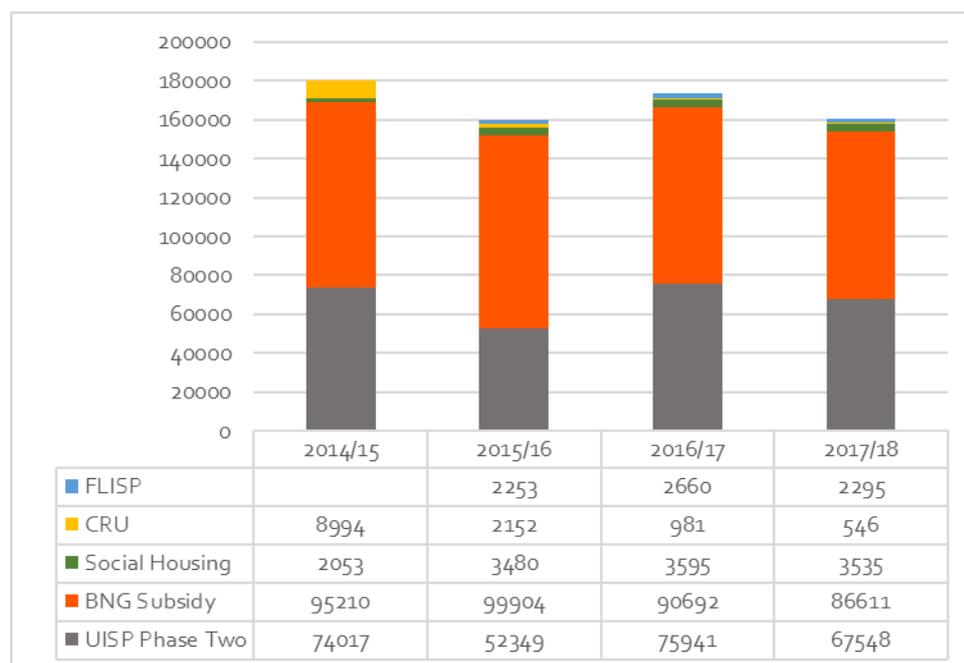
Financial Year	2014/15	2015/16	2016/17	2017/18
UISP Phase Two	74017	52349	75941	67548
BNG Subsidy	95210	99904	90692	86611
Social Housing	2053	3480	3595	3535
CRU	8994	2152	981	546
FLISP		2253	2660	2295
<b>Total Housing Opportunities</b>	<b>180274</b>	<b>160138</b>	<b>173869</b>	<b>160535</b>

Source: NDHS Annual Reports (2014/15 to 2017/18).

Note that the NDHS Annual Report (2017/18) provides two sets of serviced site data – one in the Minister's foreword, and another in the programme statistics. The programme statistics are used above (67 548 households upgraded through UISP Phase Two, in comparison to the 89 670 households upgraded which is cited in the Foreword). The 480 military veteran houses developed in the 2017/18 are included in the BNG subsidy figures, even though specifications and subsidy levels are higher for these houses. **Figure 10** illustrates the relatively consistent delivery of subsidised units over the last four years.

<sup>32</sup> Note that there are discrepancies in the figures in the Annual Report. At one stage, it is quoted that "[these opportunities] ... translates into a total of 135 981 housing opportunities." Yet individually the following figures are quoted: 67 548 UISP households upgraded (contradicted in the table later with 89 670 claimed); 86 131 individual subsidised housing units; 3 506 "affordable rental" units; 480 military veteran houses delivered; 3 535 Social housing units and 546 CRU units.

**Figure 10: Subsidised housing-related delivery statistics (2014/15 to 2017/18)**



Source: NDHS Annual Reports (2014/15 to 2017/18).

While the Human Settlements Development Grant (HSDG) allocations have generally grown over this period, delivery of subsidised housing and serviced sites have both been generally declining over the last decade. From a peak delivery of 235 000 houses and serviced sites in 2006/07, delivery has dropped to under 175 000 houses, sites and subsidised rental units in 2016/17. Over the last three budget years, delivery has dropped below 100 000 fully-subsidised BNG houses and 75 000 serviced sites in UISP and serviced site projects.

Subsidised rental housing delivery has also declined. Restructuring Capital Grant-subsidised Social Housing delivery by social housing institutions has been around 3 500 units per annum for the last two years, and the Community Residential Unit programme (subsidised municipal rental units) has declined from nearly 9 000 units in 2014/15 to under 1 000 in 2016/17.

Reasons for declining delivery of subsidised housing include institutional capacity constraints in municipalities, provincial departments and state entities involved in housing delivery and finance, and project planning and implementation delays due to the shift of focus to 'catalytic projects', or 'mega-projects'. Increasing discrepancies between subsidy levels (which had not been increased for inflation since 2013/14 up until an increase in April 2018) and the actual costs of subsidised houses also constrains project feasibility, notably in the Social Housing programme.

The approach to implementing specific programmes is also not aligning with original intents. UISP projects are intended to regularise tenure and provide services to households in-situ in informal settlements. However, while the scale of tenure and service delivery has become an important component of the human settlements programme, often these settlements are subjected to 'rollover' development whereby residents are removed, a greenfield development is undertaken and beneficiaries are located back into the new units. This displacement of households generally increases costs due to relocation and house delivery, hence limiting the number of households that can be reached with available subsidy budgets.

The Social Housing Restructuring Capital Grant (now known as the Consolidated Capital Grant) is the only subsidy programme that is explicitly focused on spatial restructuring. However, limited capital budgets, constraints on delivery and institutional problems with the SHRA have limited the scale and effectiveness of social housing delivery (SHRA, 2015). In total, SHRA has 36 000 social housing units under regulation (NDHS, 2017), which comprises roughly 1 percent of all subsidised units delivered since 1994. Furthermore, these units are spread out in small projects across many Restructuring Zones in metropolitan areas and secondary towns, reducing the concentration potential that social housing has for urban restructuring and infill.

In addition to this decline in delivery, responsibilities for the financing of land and internal services have also shifted from being a part of human settlements subsidies, to becoming an additional financial responsibility of metros and local municipalities. A combination of other grant instruments (see USDG below) and municipal own resources are required to provide serviced land on which top structures can be built.

Ultimately, the implication of the declining delivery of subsidised accommodation is an increasing number of households having to access accommodation in the unsubsidised housing market, mostly within backyards of existing urban areas and in informal settlements.

## 6 Economic Impacts of Subsidised Housing Delivery

### *What therefore is the total economic impact of government housing subsidies in South Africa?*

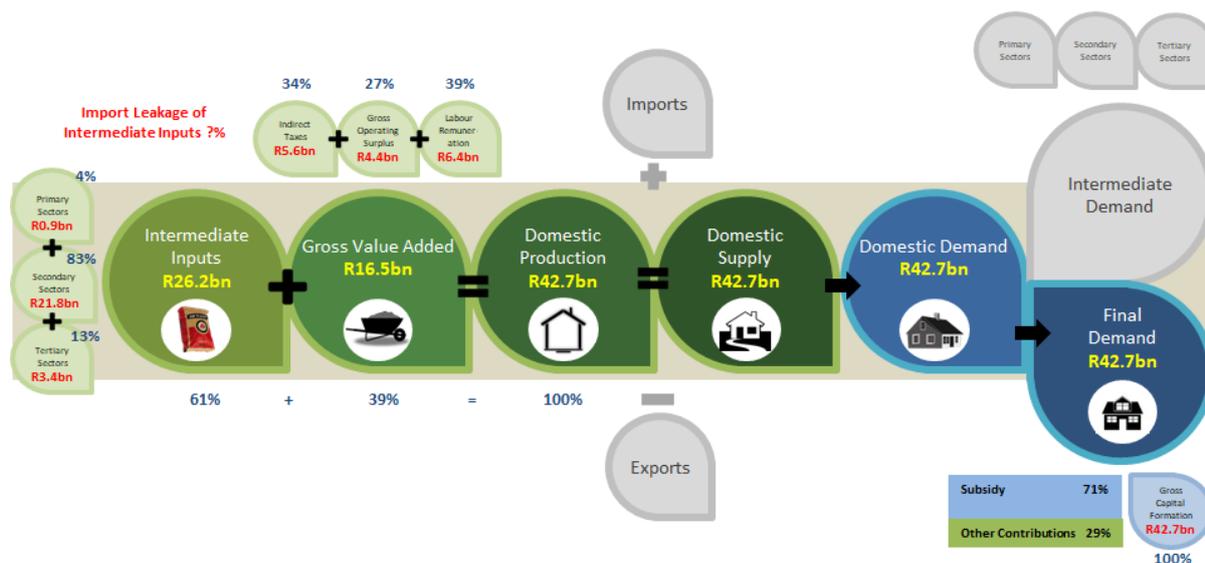
At one level, who pays for a particular capital asset (such as a house) makes little difference to its economic impact—provided that the asset in question is produced with the same levels of efficiency as similar assets paid for by a different group. The net result is that the economy “acquires” an asset that it previously did not have. However, not all assets are created equal when it comes to the returns that they generate, and this matters especially when it is the state that is making the investment. In principle, an economy should invest at the margin in those assets that generate the greatest marginal returns<sup>33</sup> until the last rand invested yields a return equal to its marginal cost. However, when considering returns and costs it is important to not only consider the private cost and returns to the person or organisation (private or public) making the investment (both explicit and implicit) but also any social costs and benefits associated with the investment. The latter are seldom easy to quantify completely and accurately.

As noted above, various arguments are advanced for subsidising home ownership and accommodation—ranging from encouraging positive externalities, to improving affordability, redressing inequality and historical dispossession, improving economic mobility and efficiency, and facilitating downstream economic activity. Objectively quantifying these benefits is not really feasible at this time, which makes it almost impossible to determine whether subsidising housing constitutes the best use of government resources. Instead, housing subsidies need to be judged in terms of metrics such as their cost and efficiency (in relation to unsubsidised housing) and whether they are reaching the right beneficiaries.

**Figure 11** reflects the estimated value chain for subsidised housing in South Africa in the 2017/18 fiscal year. This was determined by calculating the cost of each type of subsidised product—broken down into intermediate inputs sourced from other sectors of the economy and the gross value added of the contractors engaged in the construction of subsidised housing products (as shown in **Table 7** above), and then multiplying each value chain component by the number of units of each type that the National Department of Human Settlements report were delivered (as shown in **Table 10**). Assuming that the subsidised housing delivery statistics given in Figure 10 were delivered in 2017/18, the HEVC for this subsidised market is calculated to have delivered housing products to the value of ZAR42.7 billion in the 2017/18 fiscal year – comprising ZAR26.2 billion of intermediate inputs purchased from other sectors of the economy and ZAR 16.5 billion of gross value added during the construction process. Intermediate inputs accounted for 61 percent of the value of domestic production, and GVA the remaining 39 percent.

<sup>33</sup> The returns on the last rand invested. It is equivalent to the level of investment where the internal rate of return on an investment is equal to the interest rate charged to finance that investment.

Figure 11: Estimated economic value chain for subsidised housing in South Africa in 2017/18



Source: Own calculations using CAHF Housing Cost Benchmarking statistics, CAHF Housing Economic Value Chain methodology and national subsidy housing quanta and delivery statistics.

Eighty-three percent of intermediate inputs were sourced from secondary (mainly manufacturing) sectors, with 13 percent from tertiary (services) sectors and the remaining 4 percent from primary sectors of the economy. The GVA consisted of ZAR6.4 billion of labour remuneration (39 percent of sector GVA), ZAR4.4 billion of gross operating surplus (27 percent of GVA) and ZAR5.6 billion in indirect taxes (34 percent of GVA).

If it is assumed that all subsidised products were delivered by formal contractors (which seems likely given Public Finance Management Act rules) and that contractors delivering subsidised products paid the same average annual remuneration (around ZAR115 000) as the construction sector as a whole, then subsidised housing directly supported around 56 000 formal employment opportunities in 2017/18. While informal employment may not have been directly supported, subsequent activities related to construction on serviced stands and expansion and improvement of the subsidised stock will support informal employment.

The ZAR 42.7 billion contributed to gross fixed capital formation through the development of these subsidised sites and houses was subsidised to the extent of ZAR30.2 billion (71 percent) and required an additional contribution of ZAR12.5 billion (the remaining 29 percent).

This additional contribution is likely to come from one or both of two sources: either through reductions in subsidised house prices to meet subsidy values, and/or through additional (explicit or implicit) subsidy streams contributed to make subsidised housing developments work. This could be, for instance, the use of OpsCap resources, municipalities' own land or capital resources, inputs (labour or capital) from other state institutions (such as SHRA and the Housing Development Agency) or subsidy variation allowances such as the Geotechnical and Coastal Allowances.

The following points relating to this value chain are noteworthy:

- i) As calculated, the subsidy value chain has a significant direct impact multiplier because of the ratio of GVA to intermediate inputs. Without taking import leakages into account, the direct impact output multiplier amounts to 2.58,<sup>34</sup> which means that for every ZAR1 paid to the contractor, a further ZAR1.58 is paid to suppliers of intermediate inputs in other sectors of the economy – most notably manufacturing sectors. The overall housing construction value chain for South Africa in 2017 (Figure 2 above) indicates that 22 percent of intermediate inputs into housing construction were imported.

<sup>34</sup> The direct impact output multiplier is calculated by dividing the value of sales (GVA plus the cost of intermediate inputs) by the value added. It indicates the value of sales that will be experienced by – in this case – the housing contractor and its direct input suppliers combined for every rand of sales received at the contractor level.

Given the nature of the subsidised products delivered, it is likely that the subsidised housing value chain's import leakage will be less than 22 percent, but how much less cannot be accurately estimated with available data.<sup>35</sup>

- ii) A very high proportion (83 percent) of intermediate inputs is sourced from secondary sectors – mainly manufacturing. This means that subsidised housing provides important support to South Africa's objectives of re-industrialising and revitalising the local manufacturing sectors. Consistency of housing subsidy budgets and development of subsidised housing can act as a stabilising influence on the performance of many of these manufacturing sectors at a time when they are under pressure from an otherwise sluggish economy, and increased competition from imports.
- iii) Without even taking account of corporate and personal taxes generated by the subsidised activities, it is noteworthy that a significant amount of money (ZAR5.6 billion) flows directly back to the fiscus as indirect taxes (mostly through the recovery of VAT).

**Table 11** reflects the individual and consolidated value chain elements of each of the subsidised housing products in 2017/18, based on the number of units delivered. *A5.1 Ownership BNG freestanding* accounted for just over half (ZAR21.5 billion out of ZAR42.7 billion) of the impact of subsidies on the fixed assets delivered.

**Table 11: Value chain contributions in 2017/18 by type of subsidised product, based on units delivered**

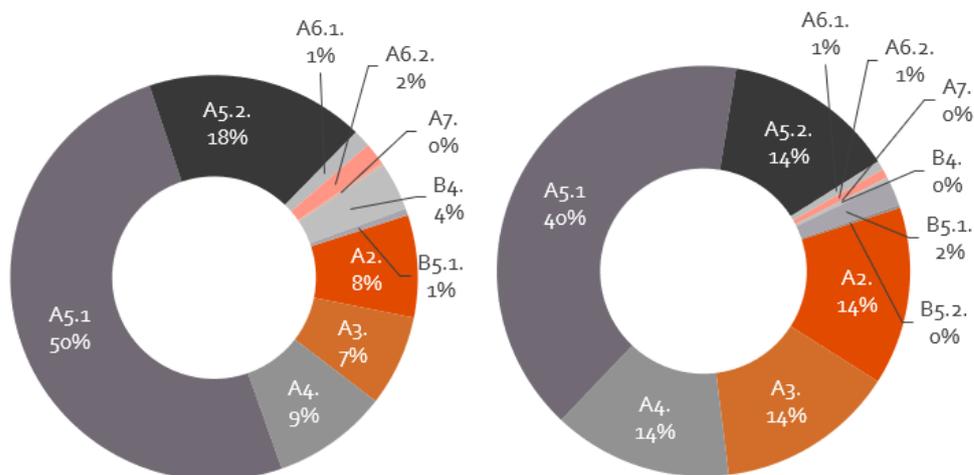
Component of Value Chain	House Type (R millions)									
	A2. OWNERSHIP UISP site only	A3. OWNERSHIP PHP site only	A4. OWNERSHIP Site, Slab & WC	A5.1 OWNERSHIP BNG freestanding	A5.2. OWNERSHIP BNG med density	A6.1. OWNERSHIP 40m2 FLISP low	A6.2. OWNERSHIP 52m2 FLISP high	B4. RENTAL CRU new low rise	B5.1. RENTAL social new lowrise	B5.2. RENTAL-social new hi rise
<b>Intermediate Inputs</b>	<b>2488</b>	<b>2161</b>	<b>2568</b>	<b>12742</b>	<b>4456</b>	<b>317</b>	<b>394</b>	<b>47</b>	<b>898</b>	<b>127</b>
Primary	0	0	131	561	185	11	17	1	26	3
Secondary	1933	1933	2187	10770	3676	230	275	36	682	93
Tertiary	556	228	250	1411	595	76	102	10	190	32
+										
<b>Gross Value Added</b>	<b>1003</b>	<b>944</b>	<b>1348</b>	<b>8726</b>	<b>2969</b>	<b>270</b>	<b>359</b>	<b>36</b>	<b>759</b>	<b>100</b>
Labour Remuneration	348	348	523	3531	1130	78	110	15	302	36
Gross Operating Surplus	195	180	304	2365	861	113	149	10	239	35
Indirect Taxes	460	416	522	2831	978	79	101	11	218	30
=										
<b>Domestic Production</b>	<b>3491</b>	<b>3105</b>	<b>3917</b>	<b>21468</b>	<b>7425</b>	<b>587</b>	<b>754</b>	<b>84</b>	<b>1657</b>	<b>228</b>
=										
<b>Gross Fixed Capital Formation</b>	<b>3491</b>	<b>3105</b>	<b>3917</b>	<b>21468</b>	<b>7425</b>	<b>587</b>	<b>754</b>	<b>84</b>	<b>1657</b>	<b>228</b>
Subsidy	2620	2609	3291	15083	5202	111	84	85	1031	117
Other Contributions	872	495	626	6385	2223	476	670	-1	627	111

Source: Own calculations using CAHF Housing Cost Benchmarking statistics, CAHF Housing Economic Value Chain methodology and national subsidy housing quanta and delivery statistics.

**Figure 12** shows the distribution of the value of different housing subsidies by product. It shows that *A5.1 Ownership BNG freestanding* accounted for half of all housing subsidies, followed by *A5.2. Ownership BNG med density* (18 percent), and *A4. Ownership Site, Slab & WC* (9 percent). *B4. Rental CRU new low rise* accounted for less than 1 percent of the total.

<sup>35</sup> Import leakages are deemed to be low in the subsidised housing market, as products produced generally rely on locally manufactured components due to cost constraints.

**Figure 12: Composition of housing subsidies by value in 2017/18 (left) and composition of subsidised products delivered in 2017/18 by number (right)**



Source: Own calculations, national subsidy housing quanta and delivery statistics.

**Table 12** shows the same information as Table 11, but in percentage composition terms. The contribution of intermediate inputs is highest (71 percent) for A2. *Ownership UISP site only* and lowest (52 percent) in A6.2 *Ownership 52m<sup>2</sup> FLISP high*. The GVA contribution works in the reverse. The level of subsidisation is highest for the B4. *Rental CRU new low rise* – where the subsidy exceeds the estimated cost – and lowest for the A6.2 *Ownership 52m<sup>2</sup> FLISP high* (11 percent).

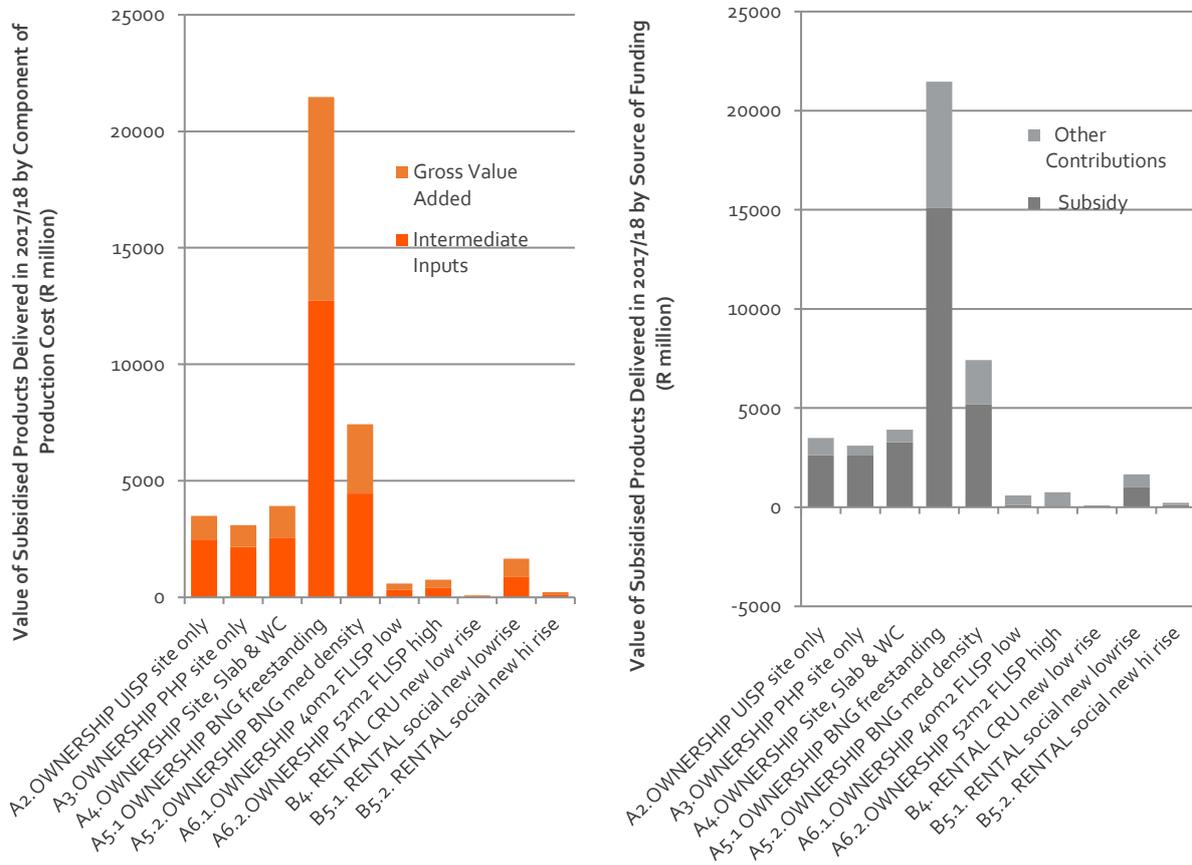
**Table 12: The composition of the value chain elements by subsidised product type in 2017/18**

Component of Value Chain	House Type (R millions)									
	A2. OWNERSHIP UISP site only	A3. OWNERSHIP PHP site only	A4. OWNERSHIP Site, Slab & WC	A5.1. OWNERSHIP BNG freestanding	A5.2. OWNERSHIP BNG med density	A6.1. OWNERSHIP 40m2 FLISP low	A6.2. OWNERSHIP 52m2 FLISP high	B4. RENTAL CRU new low rise	B5.1. RENTAL social new low rise	B5.2. RENTAL social new hi rise
Intermediate Inputs	71%	70%	66%	59%	60%	54%	52%	56%	54%	56%
Primary	0%	0%	5%	4%	4%	3%	4%	3%	3%	2%
Secondary	78%	89%	85%	85%	82%	73%	70%	77%	76%	73%
Tertiary	22%	11%	10%	11%	13%	24%	26%	20%	21%	25%
+										
Gross Value Added	29%	30%	34%	41%	40%	46%	48%	44%	46%	44%
Labour Remuneration	14%	16%	20%	28%	25%	25%	28%	33%	34%	28%
Gross Operating Surplus	8%	8%	12%	19%	19%	36%	38%	21%	27%	27%
Indirect Taxes	18%	19%	20%	22%	22%	25%	26%	23%	24%	24%
=										
Domestic Production	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
=										
Gross Fixed Capital Formation	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Subsidy	75%	84%	84%	70%	70%	19%	11%	102%	62%	51%
Other Contributions	25%	16%	16%	30%	30%	81%	89%	-2%	38%	49%

Source: Own calculations using CAHF Housing Cost Benchmarking statistics, CAHF Housing Economic Value Chain methodology and national subsidy housing quanta and delivery statistics.

Figure 13 shows the same information as contained in Table 12, but this time graphically – contrasting the components of domestic production (graph on the left) with the extent to which products are subsidised (graph on the right).

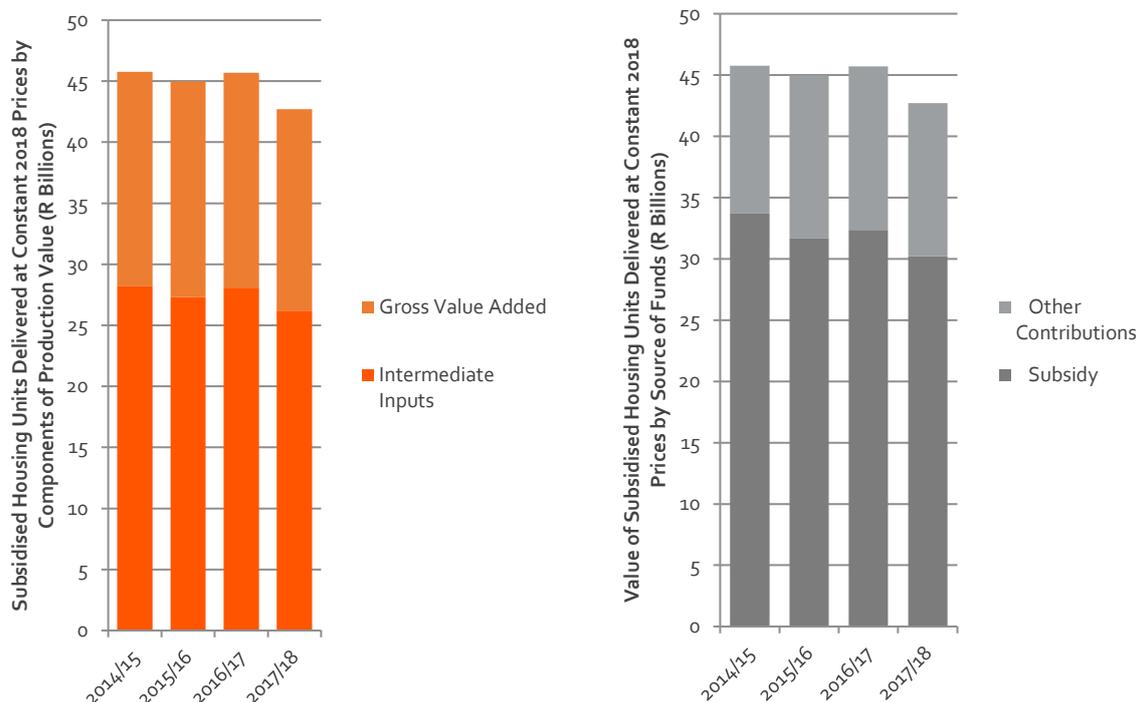
Figure 13: Delivery of subsidised housing products in 2017/18 contrasting value chain elements (left) with source of funding (right)



Source: Own calculations using CAHF Housing Cost Benchmarking statistics, CAHF Housing Economic Value Chain methodology and national subsidy housing quanta and delivery statistics.

Figure 14 shows the trends in subsidised housing provision from 2014/15 to 2017/18. It reflects some decline in the value of domestic production supported on a constant pricing basis – from ZAR45.8 billion in 2014/15 to ZAR42.7 billion in 2017/18. This represents a decline in real terms of 6.6 percent.

**Figure 14: Economic value of subsidised housing products delivered from 2014/15 to 2017/18 contrasting value chain elements (left) with sources of funding (right)**



Source: Own calculations using CAHF Housing Cost Benchmarking statistics, CAHF Housing Economic Value Chain methodology and national subsidy housing quanta and delivery statistics.

**Table 13** contrasts the scale and composition of the subsidised housing construction value chain in 2017/18 with the comprehensive housing construction value chain for South Africa in 2017.

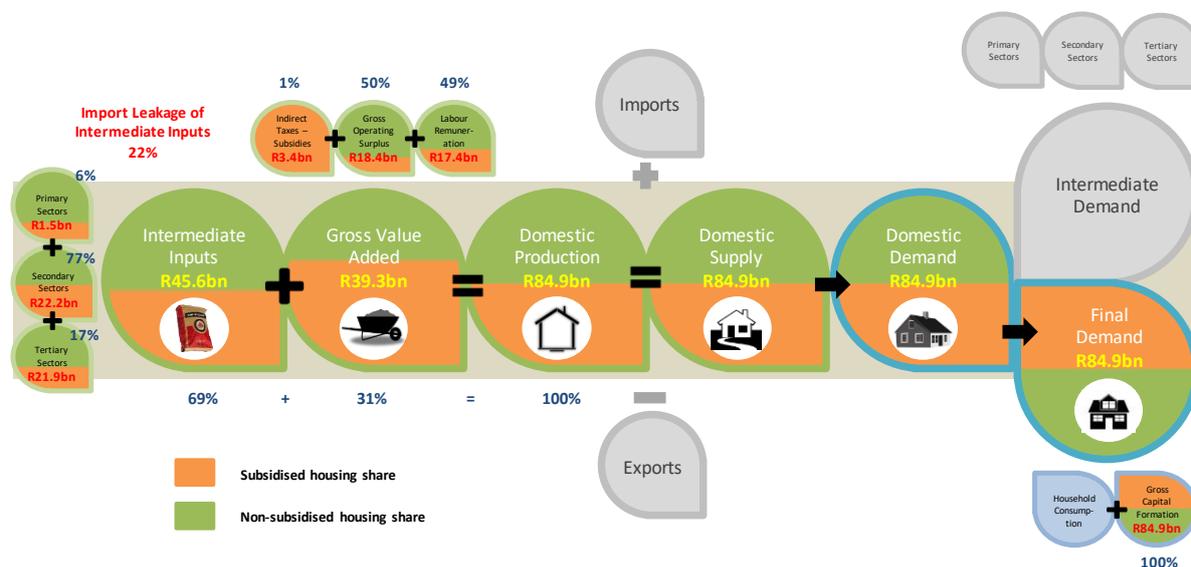
**Table 13: The relative scale and composition of subsidised housing construction compared with all housing construction**

Housing Construction	SA Housing Construction Value Chain 2017		SA Subsidised Housing Construction Value Chain in 2017/18		Subsidised Housing as Share of Total Housing
	Value (R Million)	Composition (%)	Value (R Million)	Composition (%)	
Intermediate Inputs	45647	54%	26199	61%	57%
Primary Sector	1547	3%	935	4%	60%
Secondary Sector	22183	49%	21814	83%	98%
Tertiary Sector	21918	48%	3450	13%	16%
+					
Gross Value Added	39256	46%	16516	39%	42%
Labour Remuneration	17425	44%	6421	39%	37%
Gross Operating Surplus	18406	47%	4450	27%	24%
Net Indirect Taxes less Subsidies	3424	9%	5646	34%	165%
=					
Domestic Production	84903	100%	42715	100%	50%
=					
Final Demand	84903		42715		50%
Household Consumption	0	0%	0	0%	
Gross Capital Formation	84903	100%	42715	100%	50%

Source: Own calculations using CAHF Housing Cost Benchmarking statistics, CAHF South African housing value chain calculations for 2017 and national subsidy housing quanta and delivery statistics.

Figure 15 shows the same information as Table 13 graphically. The portion of each component of the total housing construction value chain contributed by subsidised housing is reflected in orange.

Figure 15: The total housing construction value chain showing the portion contributed by subsidised housing



The following points arise from this analysis.

- Subsidised housing has a slightly lower ratio of intermediate inputs to output than housing construction as a whole (61 percent compared with 69 percent). Conversely, subsidised housing has a higher ratio of value added to output than housing construction as a whole (39 percent compared with 31 percent). The relatively higher contribution of intermediate inputs to output for housing construction as a whole is probably a reflection of more, and higher quality, finishes in non-subsidised housing.
- Secondary sector intermediate inputs for subsidised activities are consistent with their overall share of output. By contrast, subsidised products share of primary and tertiary intermediate inputs is lower than its overall share of output. This may relate to the relative simplicity and standardisation of subsidised products (which then require relatively less inputs of professional services (architects, engineers, quantity surveyors etc). This may also explain the smaller share of primary sector intermediate inputs: less complex construction requiring proportionately less sand, stone and raw timber.
- The valuation adjustment as a result of the inclusion of indirect taxes is more significant (34 percent of GVA) in the case of subsidised housing than for housing construction as a whole (1 percent). This is due in part to the fact that housing subsidies are subtracted from indirect taxes in the case of the overall housing construction value chain, but are shown separately in the case of the subsidised value chain. Nevertheless, the scale of subsidisation captured in the subsidised value chain does not appear to be fully reflected in the overall value chain. The difference in the share of indirect taxes also impacts the labour remuneration and gross operating surplus shares.
- Overall, subsidised housing output is calculated to be equivalent to 50 percent of South Africa's entire housing construction output. While these figures are not entirely comparable (the overall value chain is for 2017 and the subsidised value chain is for fiscal 2017/18), it does emphasise the importance of housing subsidies for the local construction industry, especially at a time when private construction activity is depressed. While the 50 percent share occupied by subsidised housing is significant, it also provides an indication of a private, unsubsidised housing market that is not flourishing at this time.

## 6.1 Conclusions and Policy Implications

### *What does this mean for South Africa's housing strategy and subsidy policy?*

Following are the key findings regarding the impact of subsidies on South Africa's economy.

## 6.2 Beyond the social impact of subsidising houses

Generally low income levels, high levels of income inequality and a significant portion of South African households still living in inadequate housing conditions continue to justify a strong housing subsidy programme. While national GDP growth increased in real terms (inflation-adjusted) from 0.4 percent to 1.4 percent between 2016 and 2017 (SARB, 2018), the real value added by the construction sector dropped by 0.6 percent over the same period. Also, real per capita incomes declined by 0.3 percent per year between 2014 and 2017 and the financial position of most households deteriorated (SARB, 2018). However, it is important that South Africa take stock not only of the social outcomes (that is, housing opportunities created) but also the economic impacts, and how these could be used to leverage much greater overall investment into housing in South Africa.

## 6.3 Direct economic impact of subsidised houses

The subsidised housing market currently comprises about half of South Africa's housing construction economy and directly accounts for approximately 0.5 percent of South Africa's GDP. Subsidised housing also has a high direct impact multiplier of 2.58 when import leakages are excluded. Although the actual multiplier will be lower than this once import leakages are taken into account, the overall leakage is likely to be lower than for housing construction as a whole, due to the nature of intermediate inputs (greater imports) used in higher value houses. The net result is that subsidised housing construction provides a significant stimulus not just to the construction sector – but to numerous “upstream” supplier sectors, especially manufacturing sub-sectors that also suffer during general construction downturns.

It is important to note however that any subsidy allocation creates an opportunity cost in relation to other uses to which subsidy money could have been applied. To assess this we would need to take account of all costs and returns (not just explicit private costs). This would require a comprehensive cost-benefit analysis not just of subsidised housing but of all alternative investments.<sup>36</sup> At face value, however, subsidising housing provides a social safety net, creates fixed capital assets in the economy that can be used for future development and enterprise, and has a positive multiplier effect on upstream industry.

While the direct contribution of housing to the South African economy declined from 3.9 percent of GDP to 3.7 percent between 2016 and 2017, in nominal terms housing construction grew 7.5 percent over this period. Taking account of a higher than CPI building cost inflation, this implies a very low or slightly negative rate of growth in housing sector value added. This again supports the significant potential that subsidised housing has to provide a stabilising influence on both the construction sector and upstream industry. Given that housing construction only accounted for 29 percent of total construction value added in 2017, and subsidised housing accounted for 62 percent of housing construction value added, the subsidised housing programme offers a relatively consistent investment into South Africa's construction sector, and as a consequence provides a level of intermediate input stability to the country's secondary and tertiary sectors too.

However, the lost economic opportunity cost of consistent under-expenditure on capital budgets by municipalities (in relation to bulk infrastructure) and provinces (in relation to housing subsidy budgets<sup>37</sup>) is severe, not only because of the social cost of households not acquiring access to services, land and houses but also because of this ripple effect through South Africa's construction sector and upstream intermediate input sectors specifically in the secondary and tertiary sectors.

<sup>36</sup> A comprehensive Cost-Benefit Analysis was undertaken for Social Rental Housing by Rebel Group South Africa in 2009.

<sup>37</sup> “We have progressively continued to provide access to adequate housing for our people and we have managed to deliver 370 999 housing units to the deserving members of society, during the current MTSF period... Our performance in this regard amounts to approximately 77 percent of the total housing opportunities we had earmarked to provide to our citizens in the 2017/2018 financial year.” Minister of Human Settlements, quoted in National Department of Human Settlements Annual Report 2017/18.

## 6.4 Limited subsidised rental impact but large rental impact from subsidies

Subsidised rental housing plays a limited role in the subsidy value chain. The estimated 121 000 social housing units currently under SHRA regulation contribute very little to South Africa's economy annually, but do offer beneficiary households access to well-located, decent accommodation that they would otherwise not be able to access or afford.

However, rental of fully-subsidised houses is big business. The RDP and BNG subsidy programmes have created a major real estate industry in South Africa. Analysing Census 2011 data, 37 percent of houses occupied by households earning below R6 000 per month were rented across the country. Analysis of specific RDP and BNG subsidised housing areas in the 2011 census show rental rates of between 25 percent and 60 percent (own analysis). While this shows a mismatch between the products delivered through the subsidy programmes and the accommodation needs of households, it has also created a real estate asset class that is generating significant wealth for households who were allocated these units, and enabling households to redistribute expenditures to accommodation in alternative housing types or indeed into more urgent expenditures.

Further, the backyard rental market continues to grow at a faster rate than any other housing sub-market in South Africa, and has created a significant real estate industry accessible to many households who would otherwise not be able to access land, services and basic accommodation. A high proportion of backyard units are developed on the properties of subsidised houses built since 1994.

## 6.5 Indirect and induced impacts of subsidised housing

The subsidised housing value chain analysis above calculates only the direct economic impact of the subsidy housing programme.<sup>38</sup> To calculate the full economic benefit to the economy would require consideration of the indirect impact<sup>39</sup> and the induced impact<sup>40</sup> from this economic activity.

Furthermore, subsidised housing creates a platform for future private or household investment that enhances household wealth and incomes, and hence stimulates the economy. It is well known that housing creates a base from which many households operate and grow livelihood strategies. A healthy and stable home environment can contribute to improved incomes, better educational outcomes, reduced unnecessary living costs and often creates a platform for microenterprises to develop. Having a home, in itself, can also stimulate household expenditure on related goods and services such as furnishings, electronic equipment and other household services.

## 6.6 Subsidy funding gaps

The lack of inflationary increases to most subsidy quanta between 2014 and 2018, while building cost inflation continues to increase above inflation (Gardner, 2018), has led to discrepancies between real construction cost and subsidy available. Inflation alone between 2013 and 2017 has added 25 percent to costs, while building cost inflation (for flats and townhouses, as an example) has increased costs by 42 percent over the same period (own calculations based on BER Building Cost Index figures). This is exacerbated in metropolitan areas (specifically

<sup>38</sup> The initial impact and first round impact combined are referred to as the direct impact of the sale. To supply a good or service that is the subject of an initial order (sale), the firm receiving the order needs to employ different factors of production (labour, capital, land, entrepreneurship). The sales order (and others like it) provides an income stream to other firms or households that provide production factors to the firm in some proportion to the value that each production factor is deemed to add during the production process. These incomes represent the initial impact of the sales order. Inevitably, the firm supplying the product cannot efficiently source all the inputs required to produce that product itself, so it has to place orders with other suppliers of the intermediate inputs required. Each of these suppliers needs – in turn – to employ factors of production so the orders placed with them also give rise to additional household income streams. Collectively this is regarded as the first round impact of the initial sales order.

<sup>39</sup> Indirect impact: In order to fulfil their orders, each of these intermediate suppliers need to order intermediate inputs from their suppliers, which generates additional income streams. This is referred to as the indirect impact of the initial order.

<sup>40</sup> When the households that received income as a direct or indirect consequence of the initial order use that income to purchase goods and services, this gives rise to the generation of further sales in those sectors of the economy that supply household goods and services. This is referred to as the induced impact of the initial sales order.

Cape Town), where land and building costs are significantly higher than the country average, and increasing at a more rapid rate than in other areas.

To cater for this difference, municipalities apply a range of solutions. Geotechnical variations are not included in the subsidy quanta in this analysis but are routinely claimed irrespective of whether they are technically justified. Alternative funding sources may be used, such as the OpsCap programme, and there are indications that in certain cases more than one subsidy may be used to fund some units (DHS & DPME, 2016). It is notable that the Department of Human Settlements continues to repeat the hard lessons learned from two other points in time over the last twenty years where the impacts of inflation have had a significant impact on the delivery rate and quality of subsidised housing (1998 and 2006), as well as from the recent Social Housing Policy Review that shows the impact of the inflationary erosion of the RCG subsidy on the feasibility of Social Housing projects (DPME, 2017).

## 6.7 Anomalies and inefficiencies

Multiple sources of financing must be coordinated to implement a number of separately funded mandates in subsidised housing projects. In the case of Social Housing and FLISP, subsidies must be linked to debt and equity funding, and for Social housing, often coordinated with city contributions of land and services to make projects viable for SHIs. To develop bulk services, metros generally rely on USDG funds. Where this is insufficient, USDG or in non-metro municipalities, Equitable Share and own resources, are used. While municipalities are believed to have sufficient sources of revenue to continue providing services at current levels of investment (Boex, 2018 and PDG in Gardner, 2018), the capital costs of bulk services provision, specifically in the context of distant catalytic 'mega' projects, are often substantial.

The large and increasing funding gap between subsidised housing products and the available subsidy quanta across all subsidy products is evident. The analysis shows that current subsidy levels are not sufficient to meet the inflating costs of the housing products they are intended to finance. Housing subsidies are therefore generally required to be larger than stated in national determinations if projects are to be viable. This in turn results in additional explicit (and often implicit) subsidies being applied to projects. This in turn makes accounting for the full subsidy costs challenging.

## 6.8 Life cycle and externality costs of subsidised housing<sup>41</sup>

Peripheral, low-density subsidised housing developments do not contribute significantly to municipal finances through the payment of rates and service charges, and create life-cycle externalities for government in the form of additional subsidies required to fund and maintain other social programmes. These include the maintenance and provision of municipal services and infrastructure and the subsidisation of (mostly uni-directional) transport services to peripheral settlements.

While all South Africa's policy instruments demand good location and sustainable settlement outcomes for housing, the basis on which land is accessed for subsidised housing negates this from the outset. Land costs remain a very small proportion of total subsidised housing costs, and land cost is a key driver of subsidised housing location. However, as land costs are mainly cities' responsibility, per-unit land costs could be significantly more than shown but are generally not much more than the few thousand Rands per unit indicated here. USDG expenditure on land acquisition by all metros is very small in relation to other categories of infrastructure expenditure (PDG, 2015 in Gardner, 2018), and cities' own resources are often not applied sufficiently to land purchase. Reasons cited for this by city officials are the high cost and low availability of reasonably priced, well-located land, and limiting financial expenditure on land in order to focus on engineering services, which are more quantifiable and often higher political priorities (PDG, 2015 in Gardner, 2018). Yet, a focus group workshop convened by the Urban Real Estate Research Unit at the University of Cape Town in 2018 indicated that private developers are still able to identify and purchase well-located, affordable land for private property development albeit not in very large tracts. It is therefore more the lack of sufficient investment in land by cities and the extensive development methodology pursued (see below), rather than the lack of land, that seems to be the key problem.

<sup>41</sup> Adapted from Gardner (2018).

The scale of subsidised housing projects is a further mitigating factor. The focus on large project implementations also relies on the availability of substantial parcels of vacant land. For instance, a 5 000 unit development with an average property size of 200 m<sup>2</sup> requires a site of a million m<sup>2</sup> (100 Ha) for residential stands alone, or closer to 1.4 million m<sup>2</sup> (140 Ha) including roads and non-residential uses. This creates a 'perverse incentive' of poor location, in order to find such large, available, affordable parcels of land. There is only one way to ensure good access for subsidised projects, and that is to buy it through good land locations, or through accessing available, vacant state landholdings.

The implications of this are that subsidised housing programmes are generally not constructed on well-located (more expensive) land, which perpetuates spatial marginalisation of poorer households. More recently, the City of Cape Town has identified, packaged and partnered with Social Housing Institutions to release and develop 19 strategic landholdings and buildings for social housing development, while the City of Johannesburg has recently called for proposals on 16 parcels of land and buildings for Social Housing and (if not suitable), private housing development. eThekweni has also commenced a process of identifying and releasing strategic land for social housing. In addition, Cape Town has identified and released key strategic landholdings for infill developments, and Johannesburg is in the process of doing this in the inner city and along TOD corridors.

## 6.9 Gearing of subsidies with private funds

Ideally, state subsidies should act as a catalyst to attract and gear other (private and individual) investments into housing. Most housing subsidy expenditures don't explicitly encourage gearing of government resources with household and private sector resources at the initial point of subsidy. In fact, it is regularly suggested that fully-subsidising housing products discourage private investment into housing, due to households waiting for access to subsidised houses rather than investing or co-investing in housing purchase or construction. While this is certainly true at the point of occupation (mostly at little cost to the household), over time subsidised houses do create a platform for longer term household investments.

Critically, the subsidy regime in South Africa is failing to make any significant impact on middle-income households' housing needs. While the FLISP subsidy has recently been re-calibrated, its low levels of implementation indicate that it is not yet offering a sufficient benefit to households to be able to better afford and access entry-level bonded housing.

## 6.10 Conclusion

This analysis shows for the first time the economic outcomes from South Africa's subsidised housing programme, using CAHF's Housing Cost Benchmarking and Housing Economic Value Chain assessments. The significant impact that housing subsidies have on South Africa's construction sector are outlined, as well as the high economic multiplier effect and value-added activities the subsidised housing sector creates, and as a result the important impact of this publicly funded construction activity on South Africa's upstream secondary and tertiary economic sectors. The important role that subsidised housing construction plays in stabilizing South Africa's residential construction sector—and to a lesser extent the civil construction sector—specifically in economic and construction down-cycles is also clear. It is clear that South Africa's subsidy programme catalyzes significant economic activity in the construction sector, as well as key secondary and tertiary upstream economic sectors. It is important to note that this analysis considers the impact of the initial construction activity on economic activity, and does not consider life cycle economic impacts. Assessing these longer term and more pervasive economic externalities would require a different level of analysis.

It is clear too that in many cases the subsidy programme creates a first property platform, as well as a potential place for future fixed capital investments and equity growth by households themselves. In this way, the programme provides important redistributive outcomes to urban households, albeit not always with the same levels of impact and potential. While the bulk of the subsidy expenditure is still focused on developing BNG (basic completed) houses, an increasing amount is focused on provision of serviced sites and upgrading of informal settlements. This redistributive approach to subsidy budget allocation widens the number of households impacted, and also arguably requires greater levels of initial and ongoing concomitant investments from subsidy beneficiaries themselves to develop their accommodation. The extent to which such gearing of public subsidy funds is possible is a fundamental question of both equity and potential coverage of future subsidy approaches.

The housing cost benchmarking also shows that the different subsidy instruments, their quanta and the costs of the products they are intended to fully or partially finance are mismatched. Subsidy levels often fall short of total development costs, resulting in a breakdown of integrity in how public finances are allocated to subsidised products. Where products are intended to stimulate geared funds (equity or finance) from beneficiary households or institutions, these are often out of alignment with what would enable target households to effectively raise such funds. These imbalances limit the potential of such subsidy instruments to open up significant new property markets. Critically, too, the unquantified aspects of many subsidy instruments are the most important. The cost of land remains a low priority in subsidy disaggregation, and as a result available, affordable land purchased for subsidised housing often perpetuates the marginal locations of many subsidised areas. There is a strong argument for fundamentally changing the allocation of funds to prioritise location over other aspects of subsidised housing cost.

A further consideration is that the benefits accrued from the development of subsidised housing are consistently serving a specific type of housing construction value chain. Large scale projects generally require large construction capacity and result in highly formal construction processes and generally sourcing of intermediate inputs from large scale providers. While this can improve operational efficiency and in cases reduces costs, it shuts out many potential smaller actors in the production of housing. The 'massive small' paradigm argues for unleashing the nimbleness and innovation that results from a large number of smaller projects or actors—including households themselves—that are able to better understand and respond to local demands, requirements and development typologies. Finding mechanisms through which subsidies can assist to unleash this sector would yield much improved housing and urban outcomes.

This basic property platform offered to low-income households through subsidy instruments has varied significantly in respect of investment and asset growth potential. Generally, significant investments in land, infrastructure and housing simultaneously create a home base for households and a burden to them through the constraints this fixed asset may bring: is it in an appropriate location, not only for that specific household but also in relation to urban potential overall? Yet it is because of this simplistic approach to applying subsidies to the urban environment that perhaps the greatest inadvertent economic externality has arisen as an unintended consequence of the subsidy programmes. The allocation of fixed property to households with myriad different household structures, economic strategies and urban access requirements creates a mismatch between location, individual household needs and urban amenity. As a consequence, a significant proportion of households choose to, or are forced to adapt this property asset to their specific circumstances. Fully-subsidised houses in reasonable locations are the forum for an explosion of a rental market as well as the secondary development of backyard cottages, rooms and shacks that generally earn rental income for owners. Houses in their totality are rented out in order to allow owners to access alternative accommodation more suited to their needs, affordability or access requirements. This incessant tidal shift of property, people and money across cityscapes is both an indictment of the inflexibility of the initial subsidy investment strategies, as well as a testament to the ingenuity of people to meld available assets and resources to their specific circumstances and needs. This inflexible approach to subsidised housing provision will continue to fail, as will attempts to dictate outcomes to beneficiaries (such as prohibition of sales and rentals, attempts to control backyard developments, etc).

Has this extensive, 25-year investment of hundreds of billions of Rands in the housing subsidy programme been worth it? The fundamental subsidy approach was ground-breaking and impressive in its heyday, and remains mostly unchanged two and a half decades after it was formulated. And in retrospect, most analyses show that—with important qualifications—this subsidy programme has yielded many positive outcomes.

However, time and learning mitigate for an acknowledgement that we now know better and can do better than we have done in the past. Lessons from South Africa and internationally continue to illustrate many other ways subsidies can be applied into the market—both on the supply side and demand side—that create more innovative, more flexible and often superior outcomes that engage more enterprise and non-state investment in the process of initial and subsequent development activity, and that respond better to the more nuanced understandings we now have as a society regarding what 'housing' comprises.

Were the expenditure approaches and choices made in South Africa's subsidised housing programmes the most efficient for achieving these outcomes? To develop a quantifiable number of basic houses, the answer is probably yes, but with the inevitable qualifiers about where these subsidy programmes have also gone wrong. But when considering whether the historical subsidy approach has yielded the best outcomes, there is near universal acknowledgement that we can do much better, in terms of city structure and investment locations, in

terms of gearing of public with private funds, and in respect of adapting investments to meet a much more nuanced set of accommodation and urban challenges facing households heading into the second half of the third decade of democracy.

These are important considerations as we look towards how future housing subsidy capital will be invested, and the yields it will return to government and society. The answers are, of course, not static. They are influenced, profoundly in some cases, by the structure and performance of the wider economy, constraints on fiscal resources, and their changes over time. The key challenge facing the state, therefore, is how to calibrate its use of public resources to achieve human settlement goals, with greater leverage of existing private resources towards the nation's (or city's, or local neighbourhood's) overall housing goals, from one year to the next.

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## Annexure A: Theoretical overview of the housing economic value chain

The economic impact of housing arises predominantly from two activities: the construction, maintenance and improvement of the housing structure; and activities associated with the occupation of the structure – either by the owner, or by a tenant. For the purposes of this analysis, the analysis of the economic impact of house occupation focuses only on those activities that are accompanied by an explicit rent payment. The housing economic value chain (HEVC) is then a consolidation of the economic value chains associated with these two activities, namely: i) the housing construction value chain (HCVC); and ii) the housing rental value chain (HRVC).

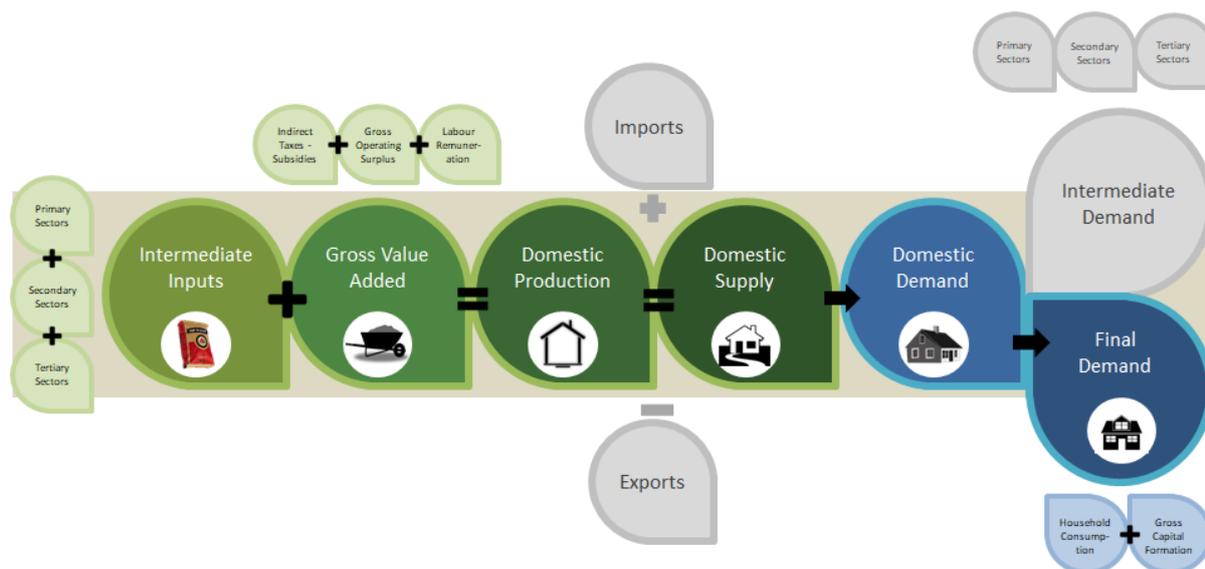
An economic value chain describes the linkages – both on the input (upstream) and output (downstream) sides of a particular economic activity and quantifies the economic value creation in an economy arising from that activity. The HEVC describes the extent to which an array of economic actors add value to the economy during the process of building, improving and renting houses or housing units through the addition of their intellect, skills and physical endeavors (labour), and their payments of rent and interest, and their generation of profits (gross operating surplus). The valuation of these activities may also be impacted by the extent to which they are subjected to indirect taxes or are subsidized by government (net indirect taxes).

In order to engage in value-adding activities, housing construction contractors (both formal and informal) need to purchase material and service inputs from other sectors of the economy. These inputs can range from sand procured from the mining and quarrying sector to cement, bricks, window frames, doors, plumbing, tiles, timber and electrical equipment procured from various manufacturing sub-sectors and to transport, financial, architectural and even legal services provided by various tertiary sectors. The HCVC sets out what raw materials and manufactured goods and services (intermediate inputs) are required to support housing construction and identifies where these inputs are sourced from in the economy. Similarly, the renting of accommodation units may entail payments to third party letting and managing agents, cleaners and gardeners, security firms, and lawyers (to name a few) for their services that are required inputs into the provision, maintenance and management of rental housing stock. In less formalized rental markets, many of these activities may be vertically integrated and are provided to a lesser or greater extent by the owner of the rental unit/s themselves.

While owner-occupied dwellings and rented accommodation incur similar maintenance and operating costs, and support similar activities (gardening, repairs, security, household management etc.), the principal difference is that rental agreements explicitly capture an income stream (the rent) against which many/some of these costs can be offset. This is part of the reason why many systems of national accounts impute a rent to owner-occupied dwellings that should approximate the market value or user cost of the rent for an equivalent dwelling and property.

The HEVC calculates the economic value of the housing stock produced and rented in a given period (domestic production). In many other economic value chains, this production may be supplemented through imports of products and reduced by exports. However, the nature of products in the HEVC (that is, immovable property in the form of accommodation) means that international trade makes no discernible difference, with the result that the value of domestic production is also the value of domestic supply. This supply is required to meet domestic demand in the economy – irrespective of whether that demand arises from a citizen or foreigner, provided that the product is consumed within the country. In most economic value chains, this demand may arise from producers in other sectors of the economy (intermediate demand) such as the demand for electric motors being an input into fridge manufacture and from demand from households, governments and expenditure on fixed capital assets (final demand). However, in the case of the HEVC all housing construction forms part of fixed capital formation and all accommodation rents form part of the final consumption expenditure of households. The entire domestic supply of the HEVC is therefore used to meet final demand.

This economic process is illustrated in the conceptual economic value chain in the figure below.



Because neither imports and exports, nor intermediate demand are features of the housing value chains, they are reflected in grey in the value chain diagram.

Just as there are linkages between different sectors of the economy (both upstream and downstream) within economic value chains, there are also linkages across sectors and value chains. What starts out as a sales order to a firm in one sector ultimately has – to varying degrees - an impact on all sectors of the economy. These are referred to as multiplier effects and give rise to economic multipliers that can be used to estimate the typical impact of spending in one sector on the sales, value added, employment, imports and tax collections in other sectors and across the whole economy. These multipliers are usually calculated using supply and use tables (SUT) or input-output (I-O) tables. The different types of multiplier effects are:

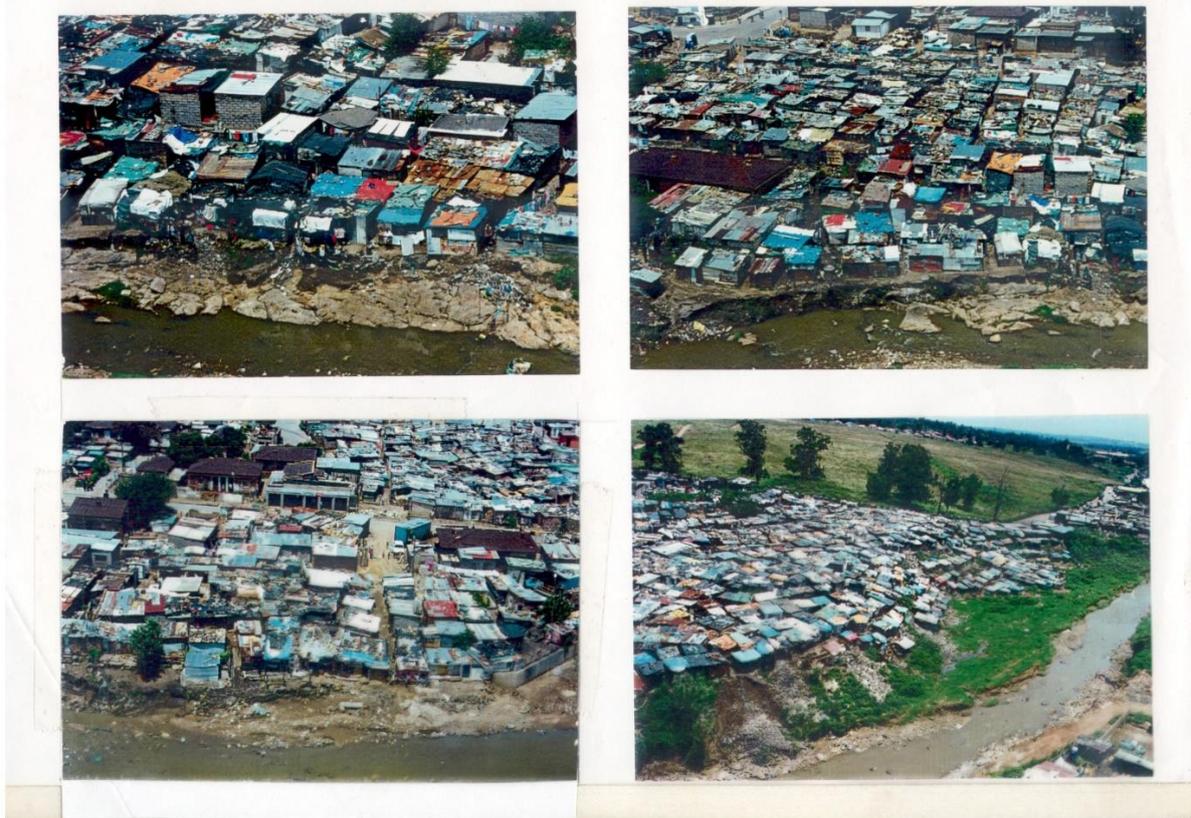
- **Direct impact:** To supply a good or service that is the subject of an initial order (sale), the firm receiving the order needs to employ different factors of production (labour, capital, land, entrepreneurship). The sales order (and others like it) provides an income stream to other firms or households that provide production factors to the firm in some proportion to the value that each production factor is deemed to add during the production process. These incomes represent the initial impact of the sales order. Inevitably, the firm supplying the product cannot efficiently source all the inputs required to produce that product itself, so it has to place orders with other suppliers of the intermediate inputs required. Each of these suppliers needs – in turn – to employ factors of production so the orders placed with them also give rise to additional household income streams. Collectively this is regarded as the first-round impact of the initial sales order. The initial impact and first round impact combined are referred to as the direct impact of the sale.
- **Indirect impact:** In order to fulfil their orders, each of these intermediate suppliers need to order intermediate inputs from their suppliers, which generates additional income streams. This is referred to as the indirect impact of the initial order.
- **Induced impact:** Finally, when the households that received income as a direct or indirect consequence of the initial order use that income to purchase goods and services, this gives rise

## Annexure B: Benchmarked housing plans and specification sheets

PRODUCT	A2	RSA UPGRADE OF INFORMAL SETTLEMENT PROGRAMME (UISP) SERVICED SITE ONLY
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REF TO COST SHEET	ELEMENT/COMPONENT	BRIEF SPECIFICATION (Based on locally available materials equivalent in type and quality to the descriptions below)
A	LAND – PLOT SIZE	240m <sup>2</sup> ; density 42 du/ha
B1	BULK/TRUNK INFRASTRUCTURE	Fully connected to all bulk services: Water, sewer, electricity, roads, transportation and solid waste removal
B2	INTERNAL INFRASTRUCTURE:	Full reticulation of all services as below by developer
B2.1	Water	Full supply and reticulation by developer
B2.2	Sanitation	Full reticulation and connection to bulk by developer
B2.3	Energy	Full electrical supply and reticulation by developer
B2.4	Access and internal roads	Paved roads and sidewalks with street lighting by developer
B2.5	Stormwater disposal and sediment control	Kerb inlets and piped storm water disposal system connected to bulk by developer
B3	Common facilities provided by developer on site for all users	N/a
D1, D2	BUILDINGS	No buildings
	Informal shack by owner	Removed
	Toilet structure on serviced site	N/a
	Foundations	N/a
	Ground floor construction	N/a
	Structural elements	N/a
	Superstructure (walls, etc)	N/a
	Windows	N/a
	Doors	N/a
	Roofs – construction and covering	N/a
	Roofs – eaves, verges, rain water goods	N/a
	Ceilings	N/a
	External finishes	N/a
	Internal finishes	N/a
	Floor finishes	N/a
	Fittings - kitchen	N/a
	Fittings – built-in bedroom	N/a
	Fittings - general	N/a
	Plumbing and drainage	N/a
	Domestic hot water	N/a
	Fire protection	N/a
	Electrical installation and lighting	N/a
	Perimeter security and access control	N/a
	Lifts	N/a
	Other	N/a

UNIT PLANS (WITH ACKNOWLEDGMENT TO THE NATIONAL DEPARTMENT OF HUMAN SETTLEMENTS, AND BIGEN AFRICA ENGINEERING, REPUBLIC OF SOUTH AFRICA):



**PRODUCT A3 RSA EXPANDED PEOPLES HOUSING PROCESS (EPHP) SERVICED SITE ONLY**

REF TO COST SHEET	ELEMENT/COMPONENT	BRIEF SPECIFICATION (Based on locally available materials equivalent in type and quality to the descriptions below)
A	LAND – PLOT SIZE	240m <sup>2</sup> ; density 42 du/ha
B1	BULK/TRUNK INFRASTRUCTURE	Fully connected to all bulk services: Water, sewer, electricity, roads, transportation and solid waste removal
B2	INTERNAL INFRASTRUCTURE:	Full reticulation of all services as below by developer
B2.1	Water	Full supply and reticulation by developer
B2.2	Sanitation	Full reticulation and connection to bulk by developer
B2.3	Energy	Full electrical supply and reticulation by developer
B2.4	Access and internal roads	Paved roads and sidewalks with street lighting by developer
B2.5	Stormwater disposal and sediment control	Kerb inlets and piped storm water disposal system connected to bulk by developer
B3	Common facilities provided by developer on site for all users	N/a
D1, D2	BUILDINGS	No buildings
	Informal shack by owner	N/a
	Toilet structure on serviced site	N/a

	Foundations	N/a
	Ground floor construction	N/a
	Structural elements	N/a
	Superstructure (walls, etc)	N/a
	Windows	N/a
	Doors	N/a
	Roofs – construction and covering	N/a
	Roofs – eaves, verges, rain water goods	N/a
	Ceilings	N/a
	External finishes	N/a
	Internal finishes	N/a
	Floor finishes	N/a
	Fittings - kitchen	N/a
	Fittings – built-in bedroom	N/a
	Fittings - general	N/a
	Plumbing and drainage	N/a
	Domestic hot water	N/a
	Fire protection	N/a
	Electrical installation and lighting	N/a
	Perimeter security and access control	N/a
	Lifts	N/a
	Other	N/a

UNIT PLANS (WITH ACKNOWLEDGMENT TO THE NATIONAL DEPARTMENT OF HUMAN SETTLEMENTS, AND BIGEN AFRICA ENGINEERING, REPUBLIC OF SOUTH AFRICA):



**URBAN DESIGN FRAMEWORK**



**PRODUCT A<sub>4</sub> RSA SERVICED SITE, 40m<sup>2</sup> CONCRETE FLOOR SLAB AND PRECAST TOILET**

REF TO COST SHEET	ELEMENT/COMPONENT	BRIEF SPECIFICATION (Based on locally available materials equivalent in type and quality to the descriptions below)
A	LAND – PLOT SIZE	240m <sup>2</sup> ; density 42 du/ha
B1	BULK/TRUNK INFRASTRUCTURE	Fully connected to all bulk services: Water, sewer, electricity, roads, transportation and solid waste removal
B2	INTERNAL INFRASTRUCTURE:	Full reticulation of all services as below by developer
B2.1	Water	Full supply and reticulation by developer
B2.2	Sanitation	Full reticulation and connection to bulk by developer
B2.3	Energy	Full electrical supply and reticulation by developer
B2.4	Access and internal roads	Paved roads and sidewalks with street lighting by developer
B2.5	Stormwater disposal and sediment control	Kerb inlets and piped storm water disposal system connected to bulk by developer
B3	Common facilities provided by developer on site for all users	N/a
D1, D2	BUILDINGS	No buildings – floor slab and precast toilet only
	Informal shack by owner	N/a

	Toilet structure on serviced site	Yes, connected to local authority sewer system, and with wall-mounted wash trough and water supply
	Foundations	Reinforced concrete raft foundation per engineer design
	Ground floor construction	75mm Thick integral with raft concrete surface bed power floated/steel trowelled to smooth finish, on insect-proofed compacted fill. Concrete apron 500mm wide around house
	Structural elements	N/a
	Superstructure (walls, etc)	N/a
	Windows	N/a
	Doors	N/a
	Roofs – construction and covering	N/a
	Roofs – eaves, verges, rain water	N/a
	Ceilings	N/a
	External finishes	N/a
	Internal finishes	N/a
	Floor finishes	N/a
	Fittings - kitchen	N/a
	Fittings – built-in bedroom	N/a
	Fittings - general	N/a
	Plumbing and drainage	N/a
	Domestic hot water	N/a
	Fire protection	N/a
	Electrical installation and lighting	N/a
	Perimeter security and access	N/a
	Lifts	N/a
	Other	N/a

UNIT PLANS (WITH ACKNOWLEDGMENT TO CHARL LOUW, THE WESTERN CAPE PROVINCIAL DEPARTMENT OF HUMAN SETTLEMENTS, AND GEORGE MUNICIPALITY, REPUBLIC OF SOUTH AFRICA):





<b>PRODUCT</b>	<b>A5.1</b>	<b>RSA BNG FREESTANDING 40M2 HOUSE IN FORMAL SERVICED AREA (40m2 Two bed, one bath house)</b>
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<b>REF TO COST SHEET</b>	<b>ELEMENT/COMPONENT</b>	<b>BRIEF SPECIFICATION (Based on locally available materials equivalent in type and quality to the descriptions below)</b>
<b>A</b>	LAND – PLOT SIZE	240m2
<b>B1</b>	BULK/TRUNK INFRASTRUCTURE	Fully connected to all bulk services: Water, sewer, electricity, roads, transportation and solid waste removal
<b>B2</b>	INTERNAL INFRASTRUCTURE:	Full reticulation of all services as below by developer
<b>B2.1</b>	Water	Full supply and reticulation by developer
<b>B2.2</b>	Sanitation	Full reticulation and connection to bulk by developer
<b>B2.3</b>	Energy	Full electrical supply and reticulation by developer
<b>B2.4</b>	Access and internal roads	Paved roads and sidewalks with street lighting by developer
<b>B2.5</b>	Stormwater disposal and sediment control	Kerb inlets and piped storm water disposal system connected to bulk by developer
<b>B3</b>	Common facilities provided by developer on site for all users	N/a
<b>D1, D2</b>	BUILDINGS	40m2 Dwelling
	Informal shack by owner	N/a
	Toilet structure on serviced site	N/a
	Foundations	Reinforced concrete raft foundation per engineer design
	Ground floor construction	75mm Thick integral with raft concrete surface bed power floated/steel trowelled to smooth finish, on insect-proofed compacted fill. Concrete apron 500mm wide around house
	Structural elements	N/a
	Superstructure (walls, etc)	External: 140mm thick load bearing walls of cement maxi blocks; Internal: 90mm thick non-load bearing walls of cement maxi blocks
	Windows	Frames: Steel residential profile, painted, with solid brass fittings Glazing: 3mm and 4mm clear and textured obscure glass (bathroom) as per National Building Codes, fixed with putty
	Doors	Frames: Pressed steel rebated frames, painted

Roofs – construction and covering	0.4mm Thick “Fullhard” galvanised steel S-rib (corrugated) long sheets local equivalent, unpainted, double pitched roof fixed at 10 degrees on 38 x 152mm timber rafters with ends built into walls.
Roofs – eaves, verges, rain water	Eaves/verges: None
Ceilings	Nailed up ceiling of 6,4mm Thick gypsum boards, painted, fixed on timber branderling, and with glass or mineral wool blanket insulation as required by NBR for applicable climatic region
External finishes	One coat cement plaster and exterior quality acrylic paint
Internal finishes	One coat cement plaster and interior quality PVA paint. Glazed ceramic wall tiling in showers and splashbacks above basins and sinks
Floor finishes	None
Fittings - kitchen	One 1000mm long enamelled steel floor cabinet, with doors, shelves, and single bowl stainless steel sink top
Fittings – built-in bedroom	Main bedroom: None
Fittings - general	Curtain tracks to windows, toilet paper holder, towel rail, shower curtain rail
Plumbing and drainage	Sanitary fittings, taps: One WC suite with flushing cistern and seat, one basin on pedestal with hot and cold pillar cocks, one shower set, one kitchen sink set of bib taps,  Water supply: 22mm Incoming main, metered, 22 and 13mm copper tubing to fittings, with all necessary valves, etc  Sanitary waste: 50mmPVC waste pipes, 110mm UVPVC soil stacks and 110mm PVC underground soil drains with all necessary inspection and rodding eyes. PVC gulley trap in precast concrete encasing, with PVC grating
Domestic hot water	Evacuated tube thermo-syphon solar hot water geyser with integrated 100 litre storage tank, mounted at 26 degrees on steel stand on roof, with gravity feed
Fire protection	N/a
Electrical installation and lighting	Wall-mounted distribution board with 40A main circuit breaker, earth leakage, overload trip switch, stove isolator, 10A and 15A circuit breakers, pre-paid meter, one single socket power outlet per bedroom (double in kitchen and living room), one light per room and one outside light at front and back door
Perimeter security and access	N/a (to be provided by owner for own account)
Lifts	N/a
Other	N/a



<b>PRODUCT</b>	<b>A5.2</b>	<b>RSA BNG MEDIUM-DENSITY 45M2 HOUSE IN FORMAL SERVICED AREA (45m2 Duplex two bed, one bath row house)</b>
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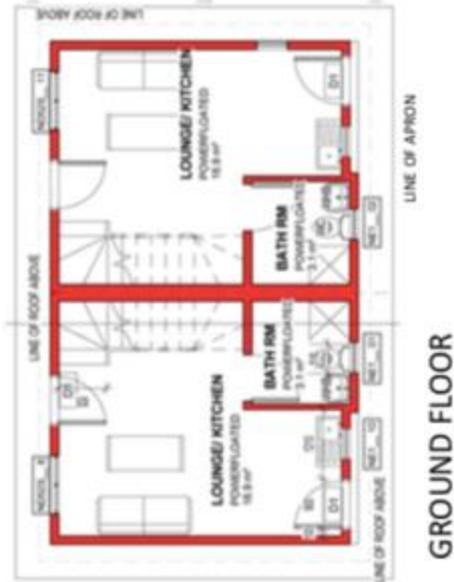
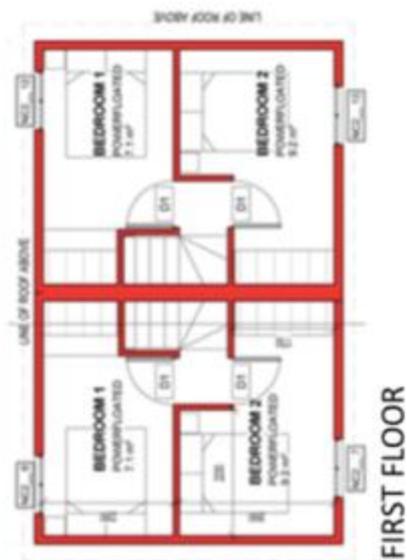
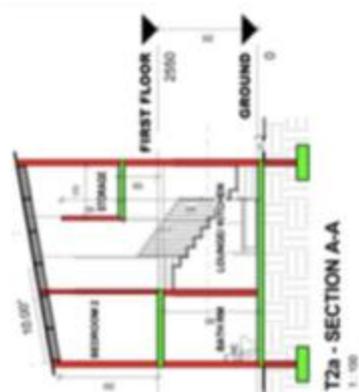
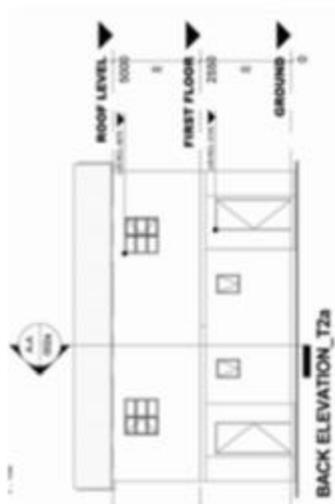
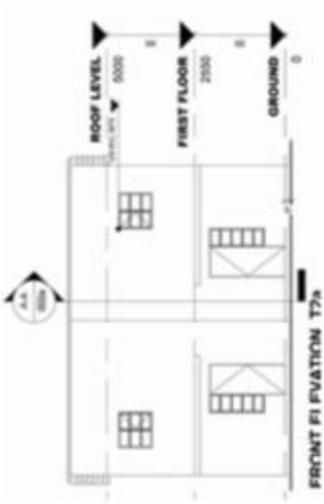
REF TO COST SHEET	ELEMENT/COMPONENT	BRIEF SPECIFICATION (Based on locally available materials equivalent in type and quality to the descriptions below)
<b>A</b>	LAND – PLOT SIZE	60m2
<b>B1</b>	BULK/TRUNK INFRASTRUCTURE	Fully connected to all bulk services: Water, sewer, electricity, roads, transportation and solid waste removal
<b>B2</b>	INTERNAL INFRASTRUCTURE:	Full reticulation of all services as below by developer
<b>B2.1</b>	Water	Full supply and reticulation by developer
<b>B2.2</b>	Sanitation	Full reticulation and connection to bulk by developer
<b>B2.3</b>	Energy	Full electrical supply and reticulation by developer
<b>B2.4</b>	Access and internal roads	Paved roads and sidewalks with street lighting by developer
<b>B2.5</b>	Stormwater disposal and sediment control	Kerb inlets and piped storm water disposal system connected to bulk by developer
<b>B3</b>	Common facilities provided by developer on site for all users	N/a
<b>D1, D2</b>	BUILDINGS	45m2 Dwelling
	Informal shack by owner	N/a
	Toilet structure on serviced site	N/a
	Foundations	Reinforced concrete raft foundation per engineer design
	Ground floor construction	75mm Thick integral with raft concrete surface bed power floated/steel trowelled to smooth finish, on insect-proofed compacted fill. Concrete apron 500mm wide around house
	Structural elements	Precast concrete hollow core suspended floor slabs on load-bearing masonry
	Superstructure (walls, etc)	External: 140mm thick load bearing walls of cement maxi blocks; Internal: 90mm thick non-load bearing walls of cement maxi blocks
	Windows	Frames: Steel residential profile, painted, with solid brass fittings Glazing: 3mm and 4mm clear and textured obscure glass (bathroom) as per National Building Codes, fixed with putty
	Doors	Frames: Pressed steel rebated frames, painted External doors: 44mm Thick Solid hardwood single door, varnished or oiled, with 3-lever mortice locks and chrome plated door furniture Internal doors: 40mm Thick hollow-core, hardboard door, painted, with two-lever mortice lock and chrome-plated door furniture
	Roofs – construction and covering	0.4mm Thick “Fullhard” galvanised steel S-rib (corrugated) long sheets local equivalent, unpainted, mono pitched roof fixed at 10 degrees on 38 x 152mm timber rafters with ends built into walls.
	Roofs – eaves, verges, rain water goods	Eaves/verges: None Rainwater goods: None
	Ceilings	Groundfloor: Concrete off-shutter finish, painted

		First floor: Nailed up ceiling of 6,4mm Thick gypsum boards, painted, fixed on timber branderling, and with glass or mineral wool blanket insulation as required by NBR for applicable climatic region
	External finishes	One coat cement plaster and exterior quality acrylic paint
	Internal finishes	One coat cement plaster and interior quality PVA paint. Glazed ceramic wall tiling in showers and splashbacks above basins and sinks
	Floor finishes	None
	Fittings - kitchen	One 1000mm long enamelled steel floor cabinet, with doors, shelves, and single bowl stainless steel sink top
	Fittings – built-in bedroom cupboards/wardrobes	Main bedroom: None Second bedroom: None
	Fittings - general	Curtain tracks to windows, toilet paper holder, towel rail, shower curtain rail
	Plumbing and drainage	Sanitary fittings, taps: One WC suite with flushing cistern and seat, one basin on pedestal with hot and cold pillar cocks, one shower set, one kitchen sink set of bib taps, Water supply: 22mm Incoming main, metered, 22 and 13mm copper tubing to fittings, with all necessary valves, etc Sanitary waste: 50mmPVC waste pipes, 110mm UVPVC soil stacks and 110mm PVC underground soil drains with all necessary inspection and rodding eyes. PVC gulley trap in precast concrete encasing, with PVC grating
	Domestic hot water	Evacuated tube thermo-syphon solar hot water geyser with integrated 100 litre storage tank, mounted at 26 degrees on steel stand on roof, with gravity feed
	Fire protection	N/a
	Electrical installation and lighting	Wall-mounted distribution board with 40A main circuit breaker, earth leakage, overload trip switch, stove isolator, 10A and 15A circuit breakers, pre-paid meter, one single socket power outlet per bedroom (double in kitchen and living room), one light per room and one outside light at front and back door
	Perimeter security and access control	N/a (to be provided by owner for own account)
	Lifts	N/a
	Other	N/a

UNIT PLANS (WITH ACKNOWLEDGMENT TO THE NATIONAL DEPARTMENT OF HUMAN SETTLEMENTS, REPUBLIC OF SOUTH AFRICA):

**TYPE 2A**

This unit has a bathroom on the ground floor, resulting in more generous bedrooms on the upper floor. The Living /Kitchen area is the tightest of the three types, with entry to the unit via the kitchen. The unit can expand laterally



**AREA PER UNIT\_TYPE 2a**

TOTAL AREA PER UNIT (GROUND):	23.5 m <sup>2</sup>
TOTAL AREA PER UNIT (FIRST FLOOR):	21.5 m <sup>2</sup>
Grand total	45.0 m <sup>2</sup>



<b>PRODUCT</b>	<b>A6.1</b>	<b>RSA FINANCE LINKED INDIVIDUAL SUBSIDY PROGRAMME (FLISP) HOUSE - 40M2 BASED ON 500-UNIT DEVELOPMENT IN FORMAL SERVICED AREA (40m2 Two bed, one bath house)</b>
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REF TO COST SHEET	ELEMENT/COMPONENT	BRIEF SPECIFICATION
<b>A</b>	LAND – PLOT SIZE	150m2
<b>B1</b>	BULK/TRUNK INFRASTRUCTURE	Fully connected to all bulk services: Water, sewer, electricity, roads, transportation and solid waste removal
<b>B2</b>	INTERNAL INFRASTRUCTURE:	Full reticulation of all services as below by developer
<b>B2.1</b>	Water	Full supply and reticulation by developer
<b>B2.2</b>	Sanitation	Full reticulation and connection to bulk by developer
<b>B2.3</b>	Energy	Full electrical supply and reticulation by developer
<b>B2.4</b>	Access and internal roads	Paved roads and sidewalks with street lighting by developer
<b>B2.5</b>	Stormwater disposal and sediment control	Kerb inlets and piped storm water disposal system connected to bulk by developer
<b>B3</b>	Common facilities provided by developer on site for all users	N/a
<b>D1, D2</b>	BUILDINGS	40m2 Dwelling
	Informal shack by owner	N/a
	Toilet structure on serviced site	N/a
	Foundations	Reinforced concrete strip footings under walls
	Ground floor construction	100mm Thick concrete surface bed wood floated to receive cement plaster screed, steel mesh reinforced, on damp course membrane on insect-proofed compacted fill
	Structural elements	N/a
	Superstructure (walls, etc)	External: 230mm thick load bearing walls of cement bricks; Internal: 115mm thick non-load bearing walls of cement bricks
	Windows	Frames: Steel residential profile, painted, with solid brass fittings Glazing: 3mm and 4mm clear and textured obscure glass (bathroom) as per National Building Codes, fixed with putty
	Doors	Frames: Pressed steel rebated frames, painted External doors: 44mm Thick Solid hardwood single door, varnished or oiled, with 4-lever mortice locks and chrome plated door furniture Internal doors: 40mm Thick hollow-core, hardboard door, painted, with two-lever mortice lock and chrome-plated door furniture
	Roofs – construction and covering	Concrete roof tiles, double pitched roof fixed at 22.5 degrees on 38 x 38mm timber battens on 38 x 114mm timber trusses.
	Roofs – eaves, verges, rain water goods	Eaves/verges: 10 x 200mm Fibre cement fascias and barge boards, painted Rainwater goods: Galvanised sheet iron eaves gutters and downpipes, painted with precast concrete rainwater channel to each downpipe
	Ceilings	Nailed up ceiling of 6,4mm Thick gypsum boards, painted, fixed on timber brandering, and with glass or mineral wool blanket insulation as required by NBR for applicable climatic region
	External finishes	One coat cement plaster and exterior quality acrylic paint

	Internal finishes	One coat cement plaster and interior quality PVA paint. Glazed ceramic wall tiling in showers and splashbacks above basins and sinks
	Floor finishes	Glazed ceramic tiling fixed with adhesive on cement plaster screeds
	Fittings - kitchen	One 1500mm long melamine coated chipboard floor cabinet, with doors, shelves, drawers, and single bowl stainless steel drop-in sink and extended 600mm granite top on stainless steel leg with space for dishwasher/washing machine under; one ditto, but without sink, with granite top
	Fittings – built-in bedroom cupboards/wardrobes	Main bedroom: Melamine-surfaced chipboard three-door built-in cupboard with doors, shelves and hanging rail Second bedroom: None
	Fittings - general	Curtain tracks to windows, toilet paper holder, towel rails
	Plumbing and drainage	Sanitary fittings, taps: One WC suite with flushing cistern and seat, one basin on pedestal with hot and cold pillar cocks, one acrylic bath with mixer, one kitchen sink mixer Water supply: 22mm Incoming main, metered, 22 and 13mm copper tubing to fittings, with all necessary valves, etc Sanitary waste: 50mmPVC waste pipes, 110mm UVPVC soil stacks and 110mm PVC underground soil drains with all necessary inspection and rodding eyes. PVC gulley trap in precast concrete encasing, with PVC grating
	Domestic hot water	Evacuated tube thermo-syphon solar hot water geyser with integrated 100 litre storage tank, mounted at 26 degrees on steel stand on roof, with gravity feed
	Fire protection	N/a
	Electrical installation and lighting	Wall-mounted distribution board with 60A main circuit breaker, earth leakage, overload trip switch, stove isolator, 10A and 15A circuit breakers, pre-paid meter, one single socket power outlet per bedroom (double in kitchen and living room), one light per room and one outside light at front and back door
	Perimeter security and access control	N/a (to be provided by owner for own account)
	Lifts	N/a
	Other	N/a



<b>PRODUCT</b>	<b>A6.2</b>	<b>RSA FINANCE LINKED INDIVIDUAL SUBSIDY PROGRAMME (FLISP) HOUSE - 52M2 BASED ON 500-UNIT DEVELOPMENT IN FORMAL SERVICED AREA (52m2 Three bed, one and a half bath house)</b>
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REF TO COST SHEET	ELEMENT/COMPONENT	BRIEF SPECIFICATION
<b>A</b>	LAND – PLOT SIZE	250m2
<b>B1</b>	BULK/TRUNK INFRASTRUCTURE	Fully connected to all bulk services: Water, sewer, electricity, roads, transportation and solid waste removal
<b>B2</b>	INTERNAL INFRASTRUCTURE:	Full reticulation of all services as below by developer
<b>B2.1</b>	Water	Full supply and reticulation by developer
<b>B2.2</b>	Sanitation	Full reticulation and connection to bulk by developer
<b>B2.3</b>	Energy	Full electrical supply and reticulation by developer
<b>B2.4</b>	Access and internal roads	Paved roads and sidewalks with street lighting by developer
<b>B2.5</b>	Stormwater disposal and sediment control	Kerb inlets and piped storm water disposal system connected to bulk by developer
<b>B3</b>	Common facilities provided by developer on site for all users	N/a
<b>D1, D2</b>	BUILDINGS	52m2 Dwelling
	Informal shack by owner	N/a
	Toilet structure on serviced site	N/a
	Foundations	Reinforced concrete strip footings under walls
	Ground floor construction	100mm Thick concrete surface bed wood floated to receive cement plaster screed, steel mesh reinforced, on damp course membrane on insect-proofed compacted fill
	Structural elements	N/a
	Superstructure (walls, etc)	External: 230mm thick load bearing walls of cement bricks; Internal: 115mm thick non-load bearing walls of cement bricks
	Windows	Frames: Steel residential profile, painted, with solid brass fittings Glazing: 3mm and 4mm clear and textured obscure glass (bathroom) as per National Building Codes, fixed with putty
	Doors	Frames: Pressed steel rebated frames, painted External doors: 44mm Thick Solid hardwood single door, varnished or oiled, with 4-lever mortice locks and chrome plated door furniture Internal doors: 40mm Thick hollow-core, hardboard door, painted, with two-lever mortice lock and chrome-plated door furniture
	Roofs – construction and covering	Concrete roof tiles, double pitched roof fixed at 22.5 degrees on 38 x 38mm timber battens on 38 x 114mm timber trusses.
	Roofs – eaves, verges, rain water goods	Eaves/verges: 10 x 200mm Fibre cement fascias and barge boards, painted Rainwater goods: Galvanised sheet iron eaves gutters and downpipes, painted with precast concrete rainwater channel to each downpipe
	Ceilings	Nailed up ceiling of 6,4mm Thick gypsum boards, painted, fixed on timber brandering, and with glass or mineral wool blanket insulation as required by NBR for applicable climatic region
	External finishes	One coat cement plaster and exterior quality acrylic paint

	Internal finishes	One coat cement plaster and interior quality PVA paint. Glazed ceramic wall tiling in showers and splashbacks above basins and sinks
	Floor finishes	Glazed ceramic tiling fixed with adhesive on cement plaster screeds
	Fittings – kitchen	One 1500mm long melamine coated chipboard floor cabinet, with doors, shelves, drawers, and single bowl stainless steel drop-in sink and extended 600mm granite top on stainless steel leg with space for dishwasher/washing machine under; one ditto, but without sink, with granite top
	Fittings – built-in bedroom cupboards/wardrobes	Main bedroom: Melamine-surfaced chipboard three-door built-in cupboard with doors, shelves and hanging rail Second bedroom: Ditto, but two doors Third bedroom: Ditto, ditto
	Fittings – general	Curtain tracks to windows, toilet paper holder, towel rails
	Plumbing and drainage	Sanitary fittings, taps: One WC suite with flushing cistern and seat, one basin on pedestal with hot and cold pillar cocks, one acrylic bath with mixer, one kitchen sink mixer Water supply: 22mm Incoming main, metered, 22 and 13mm copper tubing to fittings, with all necessary valves, etc Sanitary waste: 50mmPVC waste pipes, 110mm UVPVC soil stacks and 110mm PVC underground soil drains with all necessary inspection and rodding eyes. PVC gulley trap in precast concrete encasing, with PVC grating
	Domestic hot water	Evacuated tube thermo-syphon solar hot water geyser with integrated 100 litre storage tank, mounted at 26 degrees on steel stand on roof, with gravity feed
	Fire protection	N/a
	Electrical installation and lighting	Wall-mounted distribution board with 60A main circuit breaker, earth leakage, overload trip switch, stove isolator, 10A and 15A circuit breakers, pre-paid meter, one single socket power outlet per bedroom (double in kitchen and living room), one light per room and one outside light at front and back door
	Perimeter security and access control	N/a (to be provided by owner for own account)
	Lifts	N/a
	Other	N/a

UNIT PLANS: WITH ACKNOWLEDGEMENT TO VALUMAX AND GWA STUDIO ARCHITECTS, REPUBLIC OF SOUTH AFRICA:

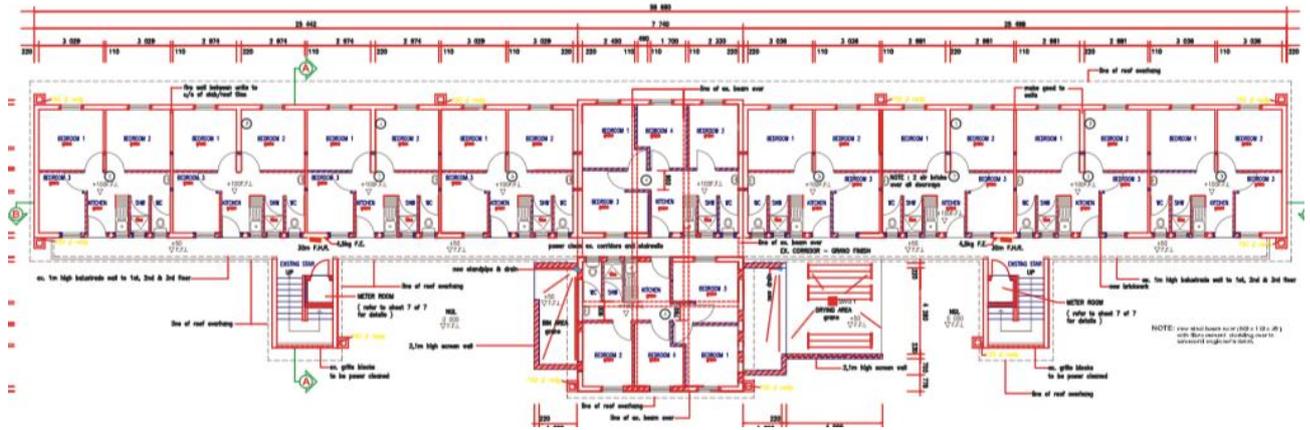


<b>PRODUCT</b>	<b>B<sub>4</sub></b>	<b>RSA RENTAL CRU LOW-RISE WALK-UPS IN FORMAL SERVICED AREA (756 ROOMS IN SETS OF THREE SHARING ABLUTIONS – 252 WET CORES)</b>
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REF TO COST SHEET	ELEMENT/COMPONENT	BRIEF SPECIFICATION
<b>A</b>	LAND – PLOT SIZE	14000m <sup>2</sup> Total; 19m <sup>2</sup> /unit; density 540 du/ha
<b>B<sub>1</sub></b>	BULK/TRUNK INFRASTRUCTURE	Fully connected to all bulk services: Water, sewer, electricity, roads, transportation and solid waste removal
<b>B<sub>2</sub></b>	INTERNAL INFRASTRUCTURE:	Full reticulation of all services as below by developer
<b>B<sub>2.1</sub></b>	Water	Full supply and reticulation by developer
<b>B<sub>2.2</sub></b>	Sanitation	Full reticulation and connection to bulk by developer
<b>B<sub>2.3</sub></b>	Energy	Full electrical supply and reticulation by developer
<b>B<sub>2.4</sub></b>	Access and internal roads	Paved roads and sidewalks with street lighting by developer
<b>B<sub>2.5</sub></b>	Stormwater disposal and sediment control	Kerb inlets and piped storm water disposal system connected to bulk by developer
<b>B<sub>3</sub></b>	Common facilities provided by developer on site for all users	Washlines and drying yards; refuse bin washing and storage; recreational and play areas with playground equipment; central satellite TV dish
<b>D<sub>1, D<sub>2</sub></sub></b>	BUILDINGS	756 x 9m <sup>2</sup> rooms in 252 sets of three sharing ablutions (total area per set 40m <sup>2</sup> ) infour-storey walk-up blocks (no lifts)
	Informal shack by owner	N/a
	Toilet structure on serviced site	N/a
	Foundations	Reinforced concrete strip footings under walls
	Ground floor construction	100mm Thick concrete surface bed power floated or steel trowelled to smooth finish, steel mesh reinforced, on damp course membrane on insect-proofed compacted fill
	Structural elements	Pre-cast concrete hollow core suspended floor slabs on load-bearing masonry; reinforced concrete stairs and fire escape stairs
	Superstructure (walls, etc)	External: 200mm thick load bearing walls of cement maxi blocks; Internal: 100mm thick non-load bearing walls of cement maxi blocks
	Windows	Frames: Steel residential profile, painted, with solid brass fittings Glazing: 3mm and 4mm clear and textured obscure glass (bathroom), and toughened wired glass next to walkways as per National Building Codes, fixed with putty
	Doors	Frames: Pressed steel rebated frames, painted External doors: 44mm Thick Solid hardwood single door, varnished or oiled, with 4-lever mortice locks and chrome plated door furniture Internal doors: 40mm Thick hollow-core, hardboard door, painted, with two-lever mortice lock and chrome-plated door furniture
	Roofs – construction and covering	0.5mm Thick “Fullhard” pre-painted clipped fixing profiled long sheets, double pitched roof fixed at 15 degrees on 38 x 1114mm timber trusses
	Roofs – eaves, verges, rain water goods	Eaves/verges: 10 x 200mm Fibre cement fascias and barge boards, painted

		Rainwater goods: Seamless extruded pre-painted aluminium eaves gutters and downpipes, with precast concrete rainwater channel to each downpipe
	Ceilings	Slab soffits ground to second floors: Concrete pre-cast slab soffits, painted Third floor: Nailed up ceiling of 6,4mm Thick gypsum boards, painted, fixed on timber branderling, and with glass or mineral wool blanket insulation as required by NBR for applicable climatic region
	External finishes	One coat cement plaster and exterior quality acrylic paint, mixed with semi-face brick
	Internal finishes	One coat cement plaster and interior quality PVA paint. Glazed ceramic wall tiling in showers and splashbacks above basins and sinks
	Floor finishes	None
	Fittings - kitchen	One 1200mm long enamelled steel floor cabinet, with doors, shelves, one drawer, and single bowl stainless steel sink top, and extended granite work top on stainless steel leg, total length 1800mm with space for dishwasher or washing machine under
	Fittings – built-in bedroom cupboards/wardrobes	Main bedroom: None Second bedroom: None Third bedroom: None
	Fittings - general	Curtain tracks to windows, toilet paper holder, towel rail, post boxes, central satellite TV dishes
	Plumbing and drainage	Sanitary fittings, taps: One WC suite with flushing cistern and seat, one wall-mounted basin on brackets with hot and cold pillar cocks, one shower set, one kitchen sink mixer Water supply: 22mm Incoming main, metered, 22 and 13mm copper tubing to fittings, with all necessary valves, etc Sanitary waste: 50mmPVC waste pipes, 110mm UVPVC soil stacks and 110mm PVC underground soil drains with all necessary inspection and rodding eyes. PVC gulley trap in precast concrete encasing, with PVC grating
	Domestic hot water	Centralised electrical heat pump and storage tank systems per block with insulated ring mains feeder to units
	Fire protection	30m Wall-mounted fire hose reels, fire service riser mains, booster pumps and CO <sub>2</sub> fire extinguishers in walkways
	Electrical installation and lighting	Wall-mounted distribution board with 60A main circuit breaker, earth leakage, overload trip switch, stove isolator, 10A and 15A circuit breakers, pre-paid meter, one single socket power outlet per bedroom (double in kitchen and living room), one light per room and one outside light at front and back door
	Perimeter security and access control	Welded steel mesh powder coat finished fencing 2100mm high, manned guard house, motorised entrance gates
	Lifts	N/a
	Other	N/a

UNIT PLANS: WITH ACKNOWLEDGEMENT TO CITY OF ETHEKWINI, REPUBLIC OF SOUTH AFRICA:

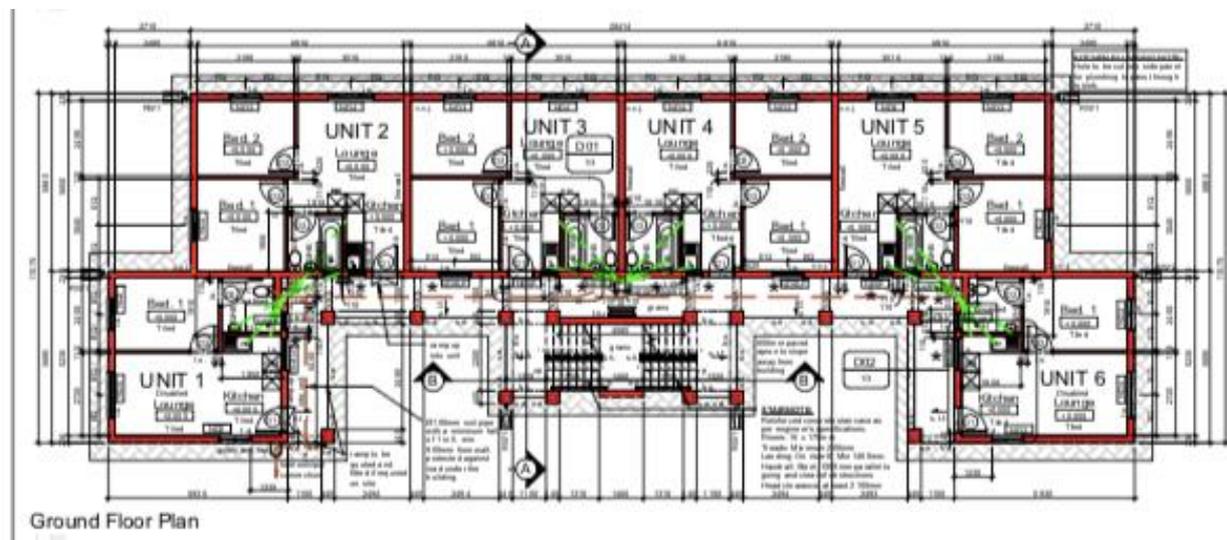


**PRODUCT** B5.1 **RSA RENTAL SOCIAL HOUSING LOW-RISE WALK-UPS IN FORMAL SERVICED AREA (252 x 40m2 two bed, one bath apartments)**

REF TO COST SHEET	ELEMENT/COMPONENT	BRIEF SPECIFICATION
<b>A</b>	LAND – PLOT SIZE	14,000m <sup>2</sup> Total; 56m <sup>2</sup> /unit; density 180 du/ha
<b>B1</b>	BULK/TRUNK INFRASTRUCTURE	Fully connected to all bulk services: Water, sewer, electricity, roads, transportation and solid waste removal
<b>B2</b>	INTERNAL INFRASTRUCTURE:	Full reticulation of all services as below by developer
<b>B2.1</b>	Water	Full supply and reticulation by developer
<b>B2.2</b>	Sanitation	Full reticulation and connection to bulk by developer
<b>B2.3</b>	Energy	Full electrical supply and reticulation by developer
<b>B2.4</b>	Access and internal roads	Paved roads and sidewalks with street lighting by developer
<b>B2.5</b>	Stormwater disposal and sediment control	Kerb inlets and piped storm water disposal system connected to bulk by developer
<b>B3</b>	Common facilities provided by developer on site for all users	Washlines and drying yards; refuse bin washing and storage; recreational and play areas with playground equipment; central satellite TV dish
<b>D1, D2</b>	BUILDINGS	252 x 40m <sup>2</sup> apartments in four-storey walk-up blocks (no lifts)
	Informal shack by owner	N/a
	Toilet structure on serviced site	N/a
	Foundations	Reinforced concrete strip footings under walls
	Ground floor construction	100mm Thick concrete surface bed wood floated to receive cement plaster screed, steel mesh reinforced, on damp course membrane on insect-proofed compacted fill
	Structural elements	Pre-cast concrete hollow core suspended floor slabs on load-bearing masonry; reinforced concrete stairs and fire escape stairs
	Superstructure (walls, etc)	External: 230mm thick load bearing walls of cement and clay bricks; Internal: 110mm thick non-load bearing walls of cement bricks
	Windows	Frames: Steel residential profile, painted, with solid brass fittings Glazing: 3mm and 4mm clear and textured obscure glass (bathroom), and toughened wired glass next to walkways as per National Building Codes, fixed with putty
	Doors	Frames: Pressed steel rebated frames, painted External doors: 44mm Thick Solid hardwood single door, varnished or oiled, with 4-lever mortice locks and chrome plated door furniture Internal doors: 40mm Thick hollow-core, hardboard door, painted, with two-lever mortice lock and chrome-plated door furniture
	Roofs – construction and covering	0.5mm Thick “Fullhard” pre-painted clipped fixing profiled long sheets, double pitched roof fixed at 15 degrees on 38 x 1114mm timber trusses
	Roofs – eaves, verges, rain water goods	Eaves/verges: 10 x 200mm Fibre cement fascias and barge boards, painted Rainwater goods: Seamless extruded pre-painted aluminium eaves gutters and downpipes, with precast concrete rainwater channel to each downpipe

	Ceilings	Slab soffits ground to second floors: Concrete pre-cast slab soffits, painted Third floor: Nailed up ceiling of 6,4mm Thick gypsum boards, painted, fixed on timber branderling, and with glass or mineral wool blanket insulation as required by NBR for applicable climatic region
	External finishes	One coat cement plaster and exterior quality acrylic paint, mixed with semi-face brick
	Internal finishes	One coat cement plaster and interior quality PVA paint. Glazed ceramic wall tiling in showers and splashbacks above basins and sinks
	Floor finishes	Glazed ceramic tiling fixed with adhesive on cement plaster screeds
	Fittings - kitchen	One 1200mm long enamelled steel floor cabinet, with doors, shelves, one drawer, and single bowl stainless steel sink top, and extended granite work top, total length 2400mm with space for dishwasher or washing machine under
	Fittings – built-in bedroom cupboards/wardrobes	Main bedroom: Melamine-surfaced chipboard three-door built-in cupboard with doors, shelves and hanging rail Second bedroom: None
	Fittings - general	Curtain tracks to windows, toilet paper holder, towel rail, shower door, post boxes, central satellite TV dishes
	Plumbing and drainage	Sanitary fittings, taps: One WC suite with flushing cistern and seat, one basin on pedestal with hot and cold pillar cocks, one shower set, one kitchen sink mixer Water supply: 22mm Incoming main, metered, 22 and 13mm copper tubing to fittings, with all necessary valves, etc Sanitary waste: 50mmPVC waste pipes, 110mm UVPVC soil stacks and 110mm PVC underground soil drains with all necessary inspection and rodding eyes. PVC gulley trap in precast concrete encasing, with PVC grating
	Domestic hot water	Centralised electrical heat pump and storage tank systems per block with insulated ring mains feeder to units
	Fire protection	30m Wall-mounted fire hose reels, fire service riser mains, booster pumps and CO2 fire extinguishers in walkways
	Electrical installation and lighting	Wall-mounted distribution board with 60A main circuit breaker, earth leakage, overload trip switch, stove isolator, 10A and 15A circuit breakers, pre-paid meter, one single socket power outlet per bedroom (double in kitchen and living room), one light per room and one outside light at front and back door
	Perimeter security and access control	Welded steel mesh powder coat finished fencing 2100mm high, manned guard house, motorised entrance gates, pedestrian turnstiles with biometric access control
	Lifts	N/a
	Other	N/a

UNIT PLANS: WITH ACKNOWLEDGEMENT TO JOSHCO AND CALGRO M3, REPUBLIC OF SOUTH AFRICA:



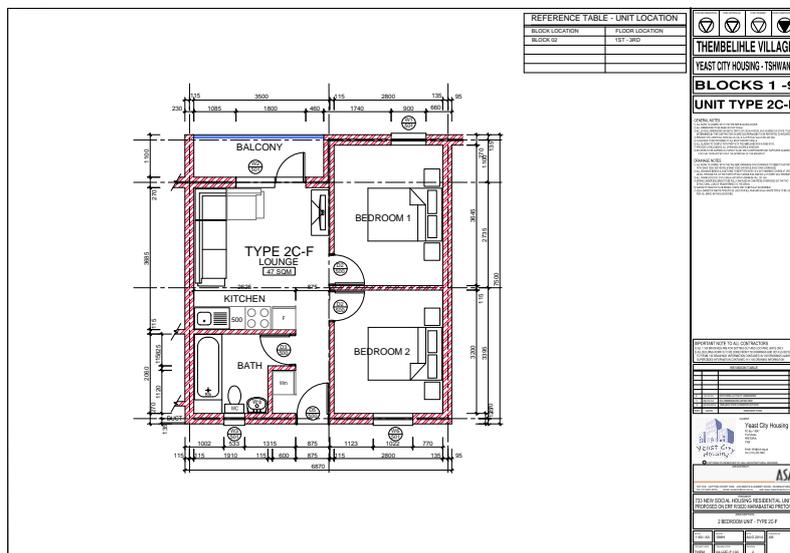


<b>PRODUCT</b>	<b>B5.2</b>	<b>RSA RENTAL SOCIAL HOUSING HIGH-RISE TOWERS IN FORMAL SERVICED AREA (252 x 40m2 two bed, one bath apartments in 10-storey blocks with lifts)</b>
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REF TO COST SHEET	ELEMENT/COMPONENT	BRIEF SPECIFICATION
<b>A</b>	LAND – PLOT SIZE	9000m2 Total; 36m2/unit; density 280 du/ha
<b>B1</b>	BULK/TRUNK INFRASTRUCTURE	Fully connected to all bulk services: Water, sewer, electricity, roads, transportation and solid waste removal
<b>B2</b>	INTERNAL INFRASTRUCTURE:	Full reticulation of all services as below by developer
<b>B2.1</b>	Water	Full supply and reticulation by developer
<b>B2.2</b>	Sanitation	Full reticulation and connection to bulk by developer
<b>B2.3</b>	Energy	Full electrical supply and reticulation by developer
<b>B2.4</b>	Access and internal roads	Paved roads and sidewalks with street lighting by developer
<b>B2.5</b>	Stormwater disposal and sediment control	Kerb inlets and piped storm water disposal system connected to bulk by developer
<b>B3</b>	Common facilities provided by developer on site for all users	Washlines and drying yards; refuse bin washing and storage; recreational and play areas with playground equipment; central satellite TV dish
<b>D1, D2</b>	BUILDINGS	252 x 40m2 apartments in 10-storey tower blocks (with lifts)
	Informal shack by owner	N/a
	Toilet structure on serviced site	N/a
	Foundations	Reinforced concrete strip footings under walls and reinforced concrete bases under columns
	Ground floor construction	100mm Thick concrete surface bed wood floated to receive cement plaster screed, steel mesh reinforced, on damp course membrane on insect-proofed compacted fill
	Structural elements	Reinforced concrete frame (columns and flat slabs, stairs and fire escape stairs) with infill non-load bearing masonry
	Superstructure (walls, etc)	External: 230mm thick non-load bearing walls of cement and clay bricks; Internal: 110mm thick non-load bearing walls of cement bricks
	Windows	Frames: Steel residential profile, painted, with solid brass fittings Glazing: 3mm and 4mm clear and textured obscure glass (bathroom), and toughened wired glass next to walkways as per National Building Codes, fixed with putty
	Doors	Frames: Pressed steel rebated frames, painted External doors: 44mm Thick Solid hardwood single door, varnished or oiled, with 4-lever mortice locks and chrome plated door furniture Internal doors: 40mm Thick hollow-core, hardboard door, painted, with two-lever mortice lock and chrome-plated door furniture
	Roofs – construction and covering	Torch on waterproofing on cement screeds to falls and outlets on flat concrete slabs
	Roofs – eaves, verges, rain water goods	Rainwater goods: “Fulbore” type outlets with domed gratings, connected to rain water hoppers and downpipes cast into columns
	Ceilings	Slab soffits ground to ninthth floors: Concrete pre-cast slab soffits, painted

		Tenth floor: Nailed up ceiling of 6,4mm Thick gypsum boards, painted, fixed on timber brandering, and with glass or mineral wool blanket insulation as required by NBR for applicable climatic region
	External finishes	One coat cement plaster and exterior quality acrylic paint, mixed with semi-face brick
	Internal finishes	One coat cement plaster and interior quality PVA paint. Glazed ceramic wall tiling in showers and splashbacks above basins and sinks
	Floor finishes	Glazed ceramic tiling fixed with adhesive on cement plaster screeds
	Fittings - kitchen	One 1200mm long enamelled steel floor cabinet, with doors, shelves, one drawer, and single bowl stainless steel sink top, and extended granite work top, total length 2400mm with space for dishwasher or washing machine under
	Fittings – built-in bedroom cupboards/wardrobes	Main bedroom: Melamine-surfaced chipboard three-door built-in cupboard with doors, shelves and hanging rail Second bedroom: None
	Fittings - general	Curtain tracks to windows, toilet paper holder, towel rail, shower door, post boxes, central satellite TV dishes
	Plumbing and drainage	Sanitary fittings, taps: One WC suite with flushing cistern and seat, one basin on pedestal with hot and cold pillar cocks, one shower set, one kitchen sink mixer Water supply: 22mm Incoming main, metered, 22 and 13mm copper tubing to fittings, with all necessary valves, etc Sanitary waste: 50mmPVC waste pipes, 110mm UVPVC soil stacks and 110mm PVC underground soil drains with all necessary inspection and rodding eyes. PVC gulley trap in precast concrete encasing, with PVC grating
	Domestic hot water	Centralised electrical heat pump and storage tank systems per block with insulated ring mains feeder to units
	Fire protection	30m Wall-mounted fire hose reels, fire service riser mains, booster pumps and CO <sub>2</sub> fire extinguishers in walkways; rooftop water storage tanks; compartmentalised floors separated by fire doors
	Electrical installation and lighting	Wall-mounted distribution board with 60A main circuit breaker, earth leakage, overload trip switch, stove isolator, 10A and 15A circuit breakers, pre-paid meter, one single socket power outlet per bedroom (double in kitchen and living room), one light per room and one outside light at front and back door
	Perimeter security and access control	Welded steel mesh powder coat finished fencing 2100mm high, manned guard house, motorised entrance gates, pedestrian turnstiles with biometric access control
	Lifts	One passenger and one fireman’s lift to each block
	Other	N/a

UNIT PLANS: WITH ACKNOWLEDGEMENT TO YEAST CITY HOUSING AND ASA ARCHITECTURAL DESIGN, REPUBLIC OF SOUTH AFRICA:





## Annexure C: Factors influencing housing cost benchmarking

The cost benchmarking exercise required a standardised set of assumptions in order that like-for-like costings could be developed. However, there are a multitude of factors that influence costings across typologies and geographies that ultimately influence costs. Outlined below are the most important factors that were standardised for this analysis.

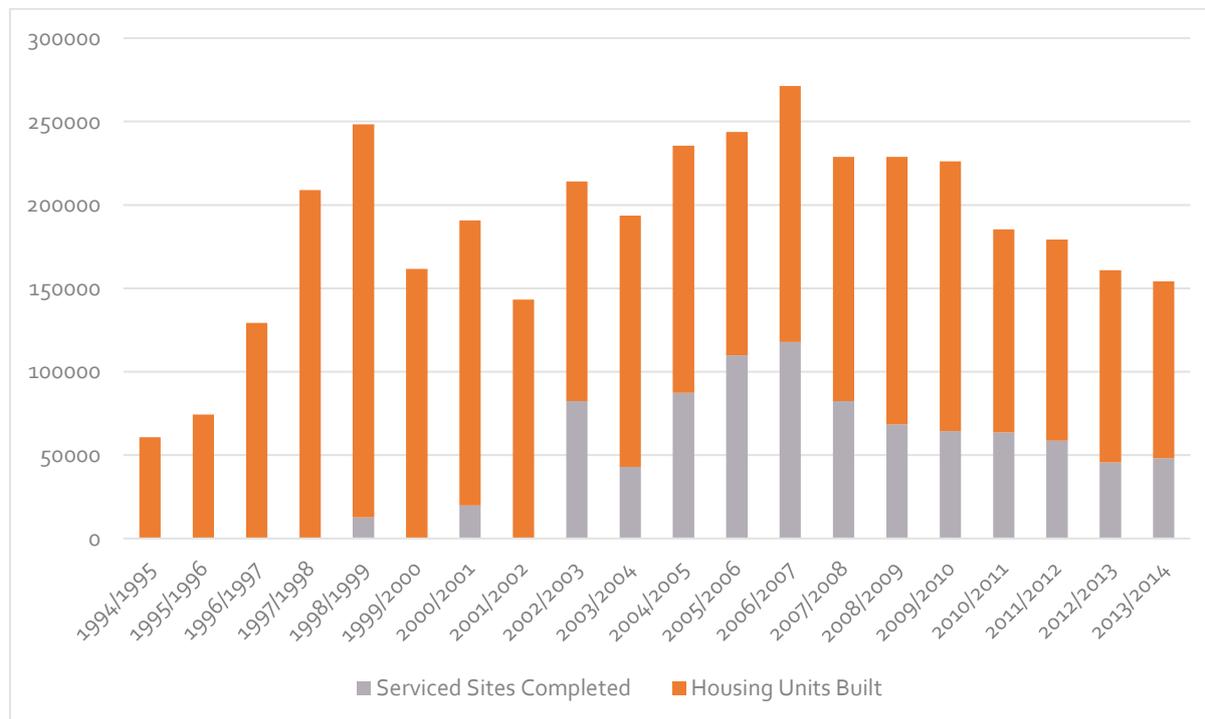
- Many **locational factors** influence construction costs (including proximity to central business areas, maturity of area, maturity of market, zoning, etc.)
- Non-locational **regulatory factors** influence overall construction costs (including town planning and building plan approvals, development contributions, etc.)
- Specific **cost components may not be directly comparable** (such as land costs, which may be influenced by existing rights to land, existing structures requiring demolition, site aspects and underlying geology)
- The specific **type and grade** of space developed influences ultimate construction costs of a development and may not be exactly comparable between developers and regions.
- Specific **design parameters** influence ultimate costs (for example, top-grade residential accommodation can be priced from, say, R25 000 to over R100 000 /m<sup>2</sup>).
- **Development models** may differ and could influence ultimate costs (such as REITs that acquire existing built stock) or developer-contractor models with alternative mark-up structures, and developer-contractor-sales models (such as via housing developers developing for market sale vs holding for rental).
- **Construction processes** can also influence ultimate costs of a development (cashflows, construction delays, weather factors, holding costs, etc.).
- **Project costing and feasibility approaches** across companies and professionals can make direct comparisons of different developments problematic.

In addition to this, using a specific set of properties as benchmarks pose additional difficulties:

- **Obtaining detailed costing information** from private developers may be challenging, and even if available, ensuring accurate comparability may be difficult.
- Specific developments may not be developed during the same construction time frame, and hence will be influenced by prevailing market conditions at the time of construction.

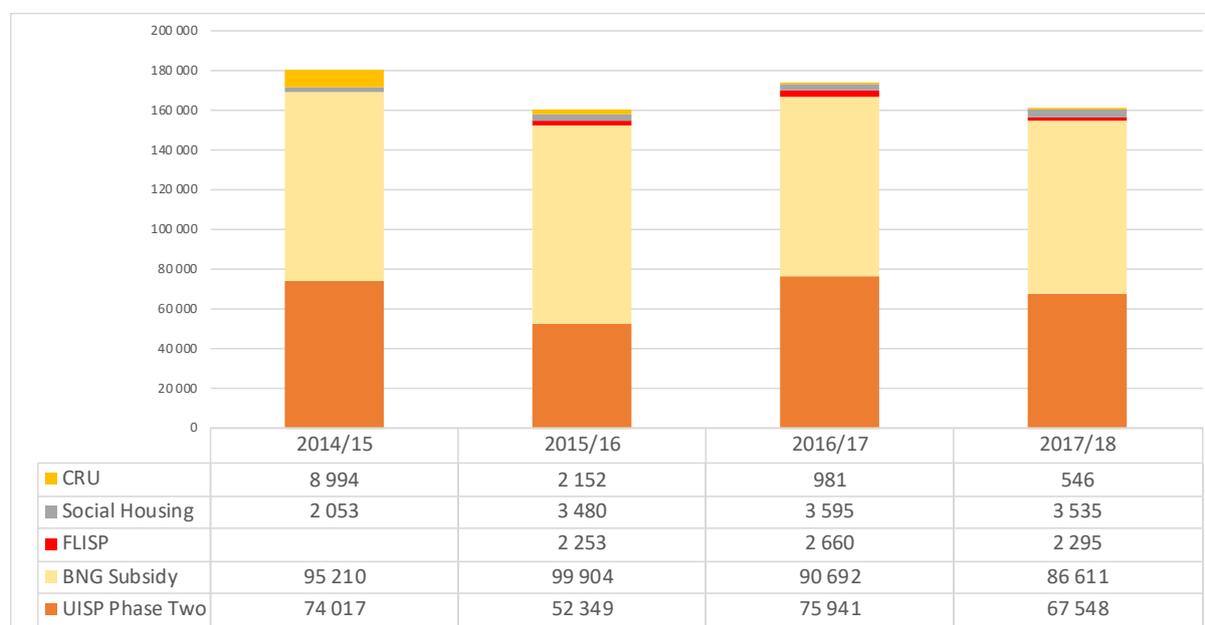
## Annexure D: Subsidised housing delivery (2014/15 to 2018/19)

Figure 16: Subsidised housing delivery (1994/95 to 2013/14)



Source: Department of Human Settlements (2017) and AfricaCheck (2015).

Figure 17: Subsidised housing delivery (2014/15 to 2017/18)



Source: Department of Human Settlements Annual Reviews (2015/16 to 2017/18).