



Walmer Housing Project

SOCIO-ECONOMIC IMPACT ASSESSMENT

October 2017

DEMACON Market Studies
PO BOX 95530
WATERKLOOF
0145

Tel: +27 12 460 7009

Fax: +27 12 346 5883

Cell: +2782 898 8667

E-mail: hein@demacon.co.za

Website: www.demacon.co.za



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The information contained in this report has been compiled with the utmost care and accuracy within the parameters specified in this document. Any decision based on the contents of this report is, however, the sole responsibility of the decision maker.

This document represents an amended report relative to the 2015 study, specifically responding to comments regarding security and the amended layout.

Enquiries:

Hein du Toit

+27 12 460 7009 (t)

+27 12 346 5883 (f)

+27 82 8988 667 (c)

hein@demacon.co.za

www.demacon.co.za

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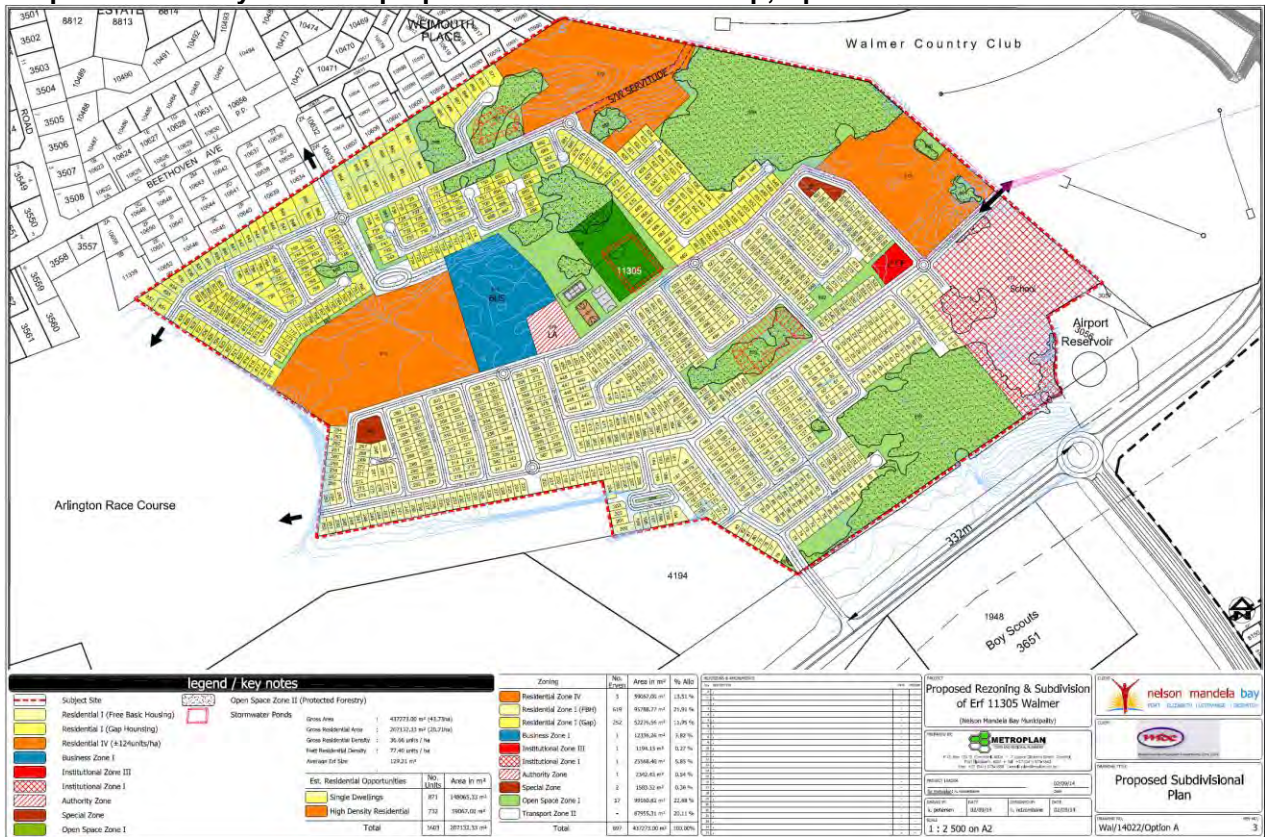
EXECUTIVE SUMMARY

➤ PROJECT BRIEF

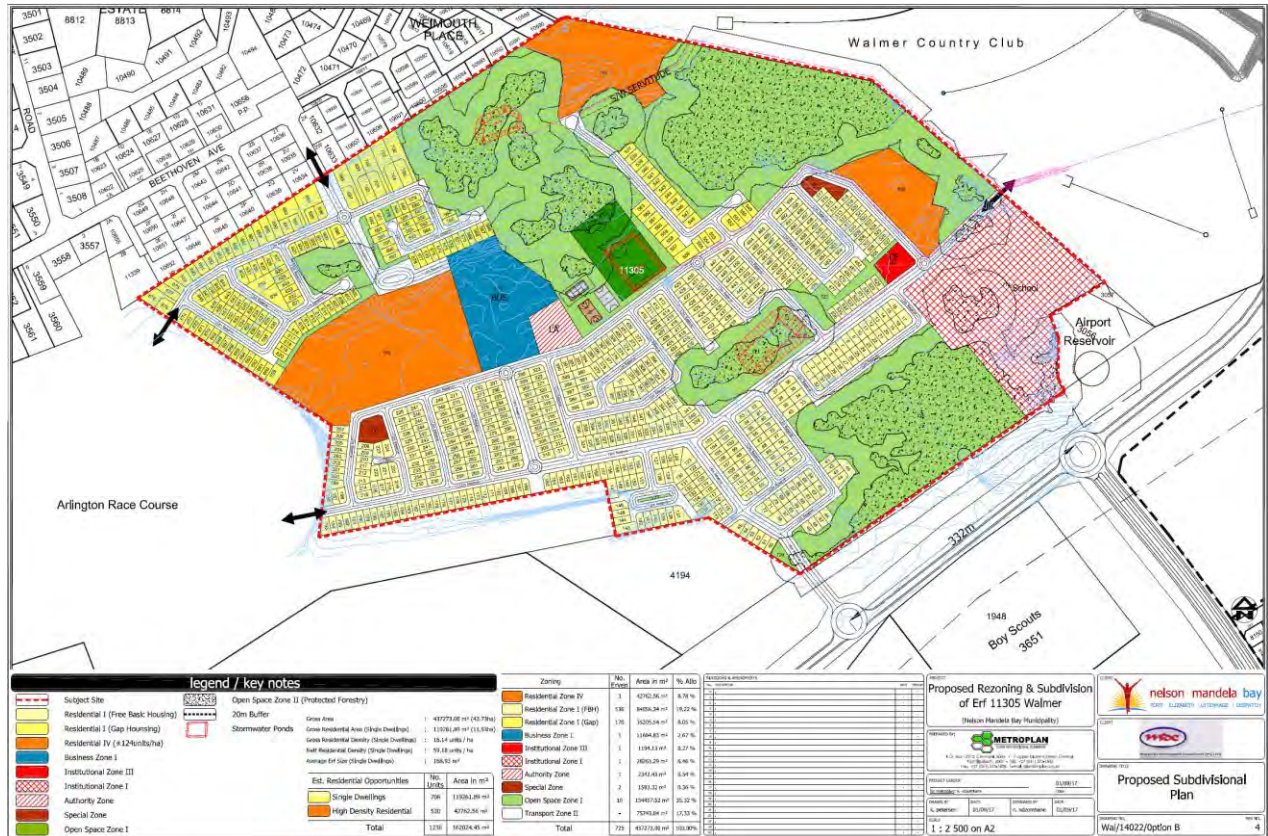
Demacon Market Studies were commissioned by **SRK Consulting (South Africa) (Pty) Ltd.** to compile a proposal for a socio-economic impact assessment pertaining to the proposed **Walmer Housing Development**. Based on an initial brief received, it is understood that the client requires a proposal for a **Socio-Economic Impact Assessment** pertaining to the abovementioned proposed project, including, *inter alia*, the following:

- ✓ Define the area potentially directly affected either socially or economically by the proposed project;
- ✓ Describe the baseline socio-economic conditions and character of this area, including property values;
- ✓ Comment on the appropriateness of the location of the development in light of the social and economic gradients of the area, as well as policy and other relevant considerations;
- ✓ Assess the potential impacts of the development proposal on socio-economic conditions in the surrounding areas including:
 - Projected effect on property value of adjacent neighbourhoods, and the associated impact on municipal rates in the area; and
 - Projected effect on security, crime and social ills in adjacent neighbourhoods;
- ✓ Address comments raised by IAPs from surrounding areas relating to the above
- ✓ Make recommendations and provide advice to the team regarding appropriate management of impacts identified and how best to incorporate these into the proposed development.

Map 1: Revised layout of the proposed residential township, Option A



Map 2: Revised layout of the proposed residential township, Option B

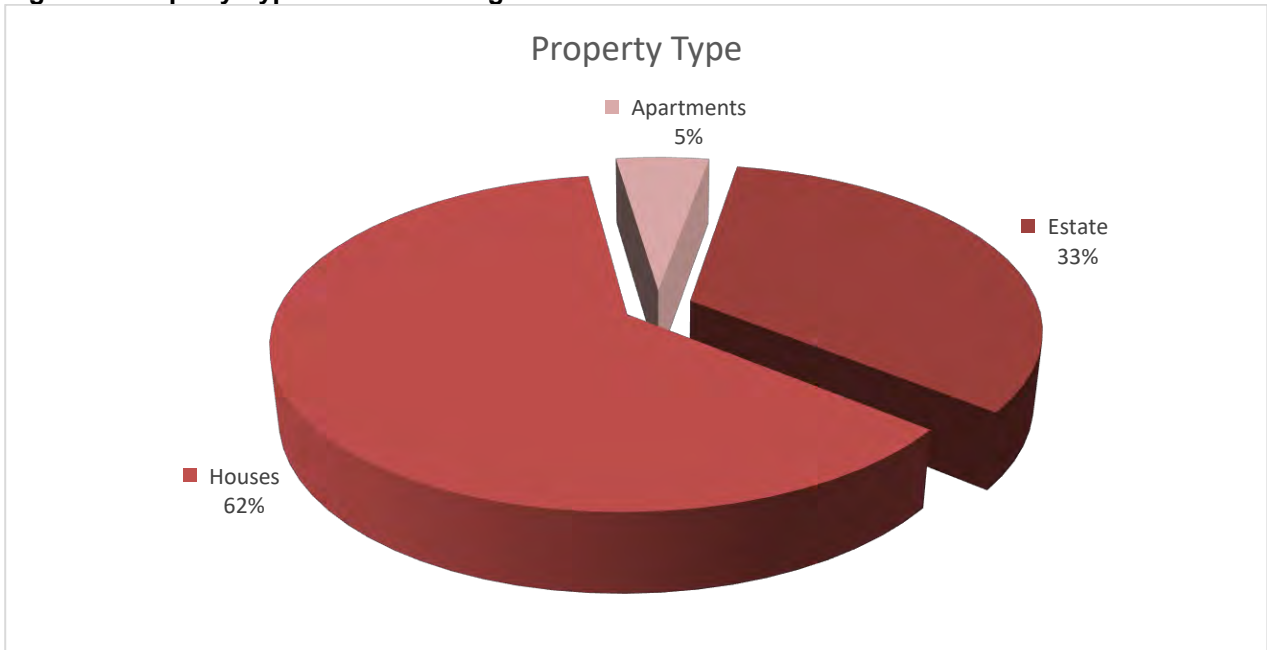


➤ **SITE ASSESSMENT**

The following site characteristics are evident:

- ✓ The site is situated in Ward 1 of the municipal area.
- ✓ The site itself is situated adjacent Walmer Heights, the Walmer Country Club, Arlington Horse Race Course and Victoria Drive.
- ✓ The area is mainly characterised by low density formal houses. The expanding areas to the east is mostly characterised by new townhouse developments while the Port Elizabeth CBD area has a large segment of flats/townhouses. Gqebera is characterised by a mixture of formal (mostly subsidy) and informal structures.
- ✓ The majority of new residential development is taking place to the east at Lovemore Heights, Kamma Park and Lorraine Manor.
- ✓ The site lend itself to a residential development as it is adjacent an existing residential suburb to the north a golf course to the east and a race track on the west, while road access to major economic nodes via Victoria Drive (M18) to the south
- ✓ The Victoria Drive provides road access between the periphery of the urban area with economic nodes such as the airport, industrial areas adjacent the airport and commercial / retail activity.
- ✓ The proximity of the site to the Port Elizabeth airport, with associated noise impact does impact the value of the site. High-income suburbs are mostly located in quiet, pristine and aesthetic locations.
- ✓ The proximity of Gqebera to the site implies that the site is not optimally located for exclusive high-income residential development but rather a mixture of bonded and affordable bonded units. The layout of such a development will be crucial for successful development
- ✓ Walmer Heights is characterised as a mostly low-density suburb with houses and estates with limited apartments.

Figure 1: Property Type in Walmer Heights



Source: Demacon ex. Deeds data, 2015

Map 2: Study Area



➤ SOCIO-ECONOMIC PROFILE

Table 1 summarises the socio-economic characteristics of the study area.

Table 1: Socio-economic indicators for study area

Variable	Study Area		
Study Area Population (2015)	✓	59 874 people	
	✓	20 248 households	
Average household size (2015)	✓	3 persons per household	
Age & Gender profile (2011)	Age	Female	Male
	0-19	29.5%	30.8%
	20-34	25.7%	26.6%
	35-64	36.2%	35.3%
	64+	8.6%	7.3%
Level of education (2011)	✓	2.6% - No schooling	
	✓	32.5% - Grade 12	
	✓	25.1% - Higher education	
Level of employment (2011)	✓	67.1% - Economically active of which 81.1% is employed and 18.9% is unemployed	
Weighted Average Annual Household income (2015) - All LSM (only income earning households)	✓	R253 554 per annum	
	✓	R21 129 per month	
Weighted Average Annual Household income (2015) - LSM 4-10+	✓	R382 829 per annum	
	✓	R31 902 per month	
Living Standard Measurement 1 – 3 group*	✓	35.5%	
Living Standard Measurement 4 – 10+ group	✓	64.5%	
Dwelling Type	✓	63.4% - House or brick structure	
	✓	16.2% - Informal	
Tenure Status	✓	36% - Occupy rent free	
	✓	33.9% - Owned and not paid off	
	✓	17.8% - Owned and paid	
	✓	12.4% - Rent	

Source: Demacon ex Stats SA, 2015

* The LSM index is an internationally recognised instrument designed to profile a market in terms of a continuum of progressively more developed and sophisticated market segments. The LSM system is based on a set of marketing differentiators, which group consumers according to their standard of living, using criteria such as degree of urbanisation and ownership of assets (predominantly luxury goods). Essentially, the LSM system is a wealth measure based on standard of living, rather than income alone. The market segmentation continuum is divided into ten LSM segments, where LSM 1 signifies the lowest living standard and LSM 10+ signifies the highest living standard. The LSM categories are defined and weighted in terms of the following 29 variables (refer to Table 3.2). It is important to note that the LSM system is widely applied internationally for marketing and branding purposes, and that it is therefore not an instrument developed locally to label or stereotype certain market segments.

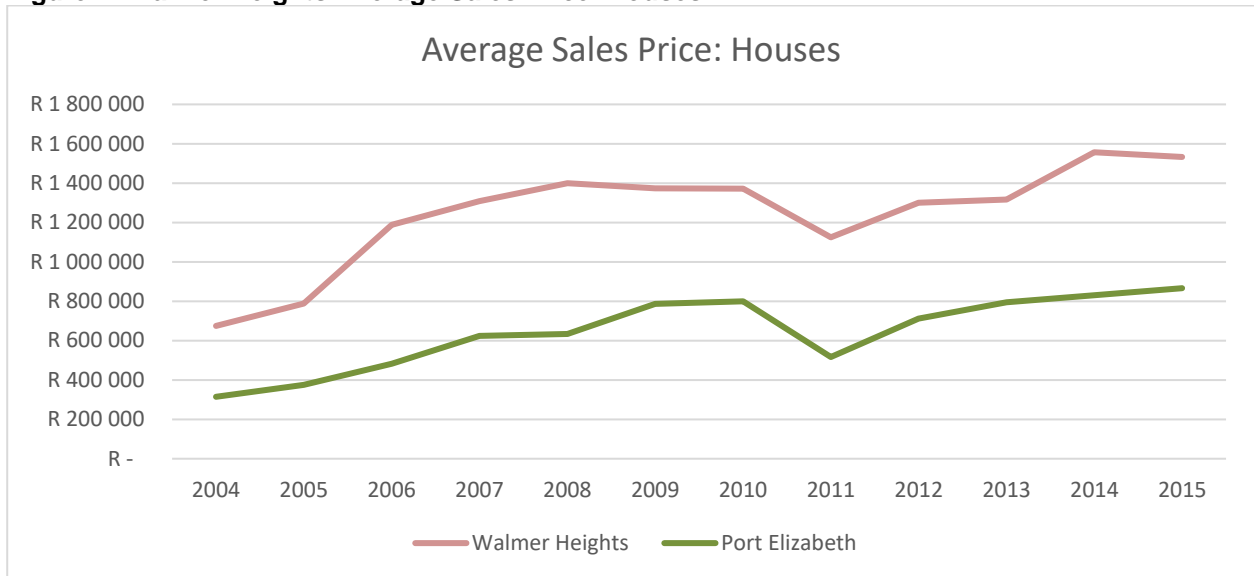
The study areas is mostly a high income, highly educated, high employment area with low density dwellings, the exception is the Gqebera area that have low income, informal dwellings and high density.

➤ RESIDENTIAL MARKET ACTIVITY

The sales price in Port Elizabeth has experienced two periods of growth in the freehold market. The first period was between 2005 and 2010 where growth averaged 20.5% per annum and the

second period was between 2011 and 2015 with a growth rate of 13.7%. A significant decrease in average sales price was evident in 2011 which also impacted the average sales price in Walmer Heights. Figure 2 illustrates the average sales price growth for houses in Walmer Heights and compares it to the average sales price of houses in Port Elizabeth.

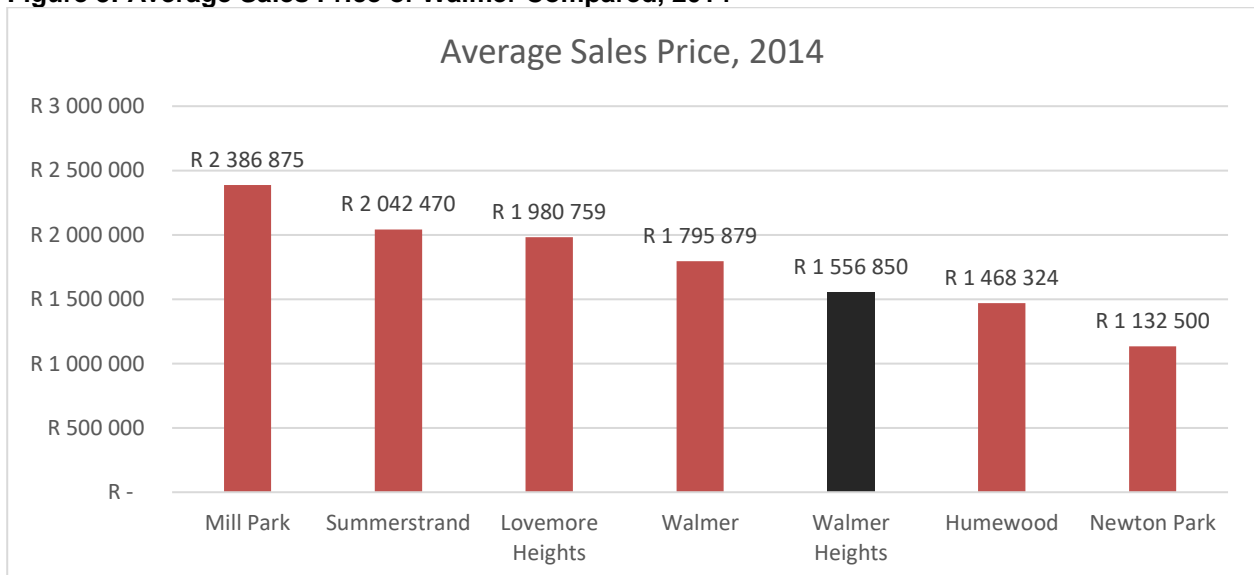
Figure 2: Walmer Heights Average Sales Price: Houses



Source: Demacon ex. Deeds data, 2015

Sales prices of Walmer Heights correlates with that of Port Elizabeth. It is evident that sales prices have increased and doubled when compared to 2004 and that the average sales price for a house in Walmer is higher than the average for Port Elizabeth. Figure 3 shows that Walmer Heights is one of the higher priced suburbs in the municipal area.

Figure 3: Average Sales Price of Walmer Compared, 2014



Source: Demacon ex. Deeds data, 2015

The growth trend is illustrated in Table 2. The long term growth for freehold properties between 2005 and 2015 was 8.5% while the sectional scheme is lower at 5.3%.

Table 2: Sales price growth

	Long Term (2005-2015)
Freehold	8.5%
Sectional Scheme	5.3%

Source: Demacon ex. Deeds data, 2015

➤ **IMPACT ASSESSMENT**

A case study analysis is provided to determine if the development of a lower value property product will have an impact on existing property price trends for a middle to high income suburb. This analysis makes use of a number of case studies throughout South Africa on developments over the past decade, in particular where lower income properties were developed adjacent or near middle to higher income properties. The assessment considers historical price trends and the result (pre- and post- implementation) of the low income project. Based on this research, a price differential range was calculated.

Price Differential

The price differential analysis is used to firstly determine the optimum, open market price distribution price of properties within a suburb. Secondly, it is used as a guideline to identify the impact of the affordable housing development on property prices in Walmer Heights. The price differential analysis for **middle and high-income suburbs**, such as Walmer Heights, should not be **more than 60%** below the average house price value of the suburb. In other words should a new lower income development be implemented the price of the most affordable unit in the new development should not be more than 60% of the average house price of the established surrounding environment.

The price differential for Walmer Heights is illustrated in in Table 3.

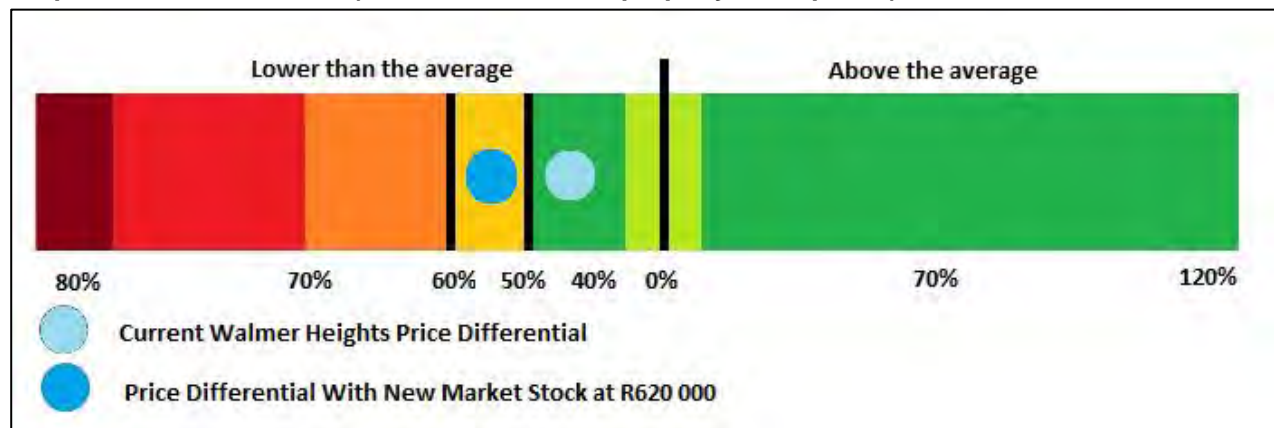
Table 3: Walmer Heights Price Differential, 2013 - 2015

	Lowest	Average	Highest	Price Differential (below the average)	Price Ratio (higher than average)
2013	769 000	1 317 300	2 100 000	42%	59.4%
2014	800 000	1 556 850	2 775 000	49%	78.2%
2015	950 000	1 532 273	2 400 000	38%	56.6%

Source: Demacon ex. Deeds data, 2015

Given the aforementioned, the optimum market based price differential that would not constrain house price growth (and concomitant property rates and taxes income for the metro) would be R620 000. Graph 1 illustrates the price differential for Walmer Heights where the average house price is approximately R1.5 million.

Graph 1: Price Differential, (Based on 2014/2015 property sales prices)



In terms of the analysis there appears to be an opportunity to introduce properties within a slightly broader price band. The current price differential is 40%-50% and could be increased to 50%-60%. This implies that new properties, priced as low as R620 000 will not curb house price growth and therefore municipal income. However, properties below this value will in all probability be harmful to the surrounding environment in terms of healthy price growth and sustained municipal revenue.

Property Rates & Taxes

The draft scoping report indicates the development site is earmarked for affordable residential development which include subsidy houses, social houses (rentals) and gap or affordable houses (FLISP). A total of 1 100 units with a combination of the abovementioned units is proposed for the site. Two scenarios is provided to illustrate the impact of the development next to Walmer Heights. Table 4 illustrates Scenario 1 while Table 5 shows Scenario 2 and a summary with the cumulative impact in Table 6.

Scenario 1 illustrates the current market trends in Walmer Heights. The suburb has a total of 905 properties with an average sales price of R 1.5 million in 2015. The average sales price growth is **8.5% per annum** while property tax is calculated based on NMBM rates.

Walmer Heights has to date been buffered from price deceleration on account of the green belt (Arlington Horse Race Course and the Walmer Country club – this property is however available for sale and redevelopment) between Walmer Heights and Gqebera.

Scenario 2 includes the affordable housing development in the property tax calculation. The scenario assumes the development will take place in 2018/19 with 600 subsidy, 241 affordable and 259 social (rental) units to increase the number of properties to 1 746 including the 905 bonded properties. The sales price growth of the bonded properties will **decelerate to 2% per annum** while the subsidy and affordable units will have annual growth of 5.1%, albeit from a lower base than the bonded properties. The average bonded property sales price will increase from R1.5 million in 2015 to R1.8 million in 2025 which is significantly lower than the property value in Scenario 1.

Table 4: Scenario 1 – Property tax implication based on continued stable house price growth

Scenario 1: Status Quo (no social housing)	2015	2017	2019	2021	2023	2025
Number of Properties (Bonded)	905	905	905	905	905	905
Property taxes (R'000)	13 370	15 763	18 580	21 896	25 800	30 396

Table 5: Scenario 2 – Property tax calculation based on decelerating property price growth

Scenario 2	2015	2017	2019	2021	2023	2025
Bonded	905	905	905	905	905	905
Affordable		-	170	170	170	170
Social Housing (rentals)		-	490	490	490	490
Subsidy		-	536	536	536	536
Total Number of Properties	905	905	2 101	2 101	2 101	2 101
Average Bonded Price	1 532 273	1 594 177	1 658 582	1 725 588	1 795 302	1 867 832
Average Affordable Price	390 000	430 794	475 856	525 631	580 612	641 345
Subsidy house price		157 665	174 190	192 447	212 618	234 902
Suburb Average Price	1 532 273	1 594 177	1 010 806	1 054 961	1 101 248	1 149 787
Property Rates & Taxes (social rental)		-	433 413	433 413	433 413	433 413

Scenario 2	2015	2017	2019	2021	2023	2025
Property rates & Taxes (affordable/FLISP)	-	-	1 648 348	1 721 438	1 798 055	1 878 402
Property rates & Taxes (bonded)	13 370 187	13 915 683	8 775 030	9 164 125	9 571 997	9 999 727
Total Property Tax (R'000)	13 370 187	13 915 683	10 856 791	11 318 975	11 803 465	12 311 541

Table 6: Net difference between Scenario 1 & 2 property tax modelling on account of the Walmer Housing Project as in Map 1 (R'000)

	2017	2018	2021	2023	2025
Scenario 1: Bonded Housing (no subsidy)	15 763	17 114	21 896	25 800	30 396
Scenario 2: Bonded Housing & Subsidy Development	15 071	15 401	16 441	17 179	17 954
Yearly Difference (loss in tax)	- 691	- 1 712	- 5 454	- 8 621	- 12 442
Cumulative Difference (loss in tax)	- 460	- 2 172	- 14 552	- 30 136	- 53 021

Findings (Scenario 1 & 2)

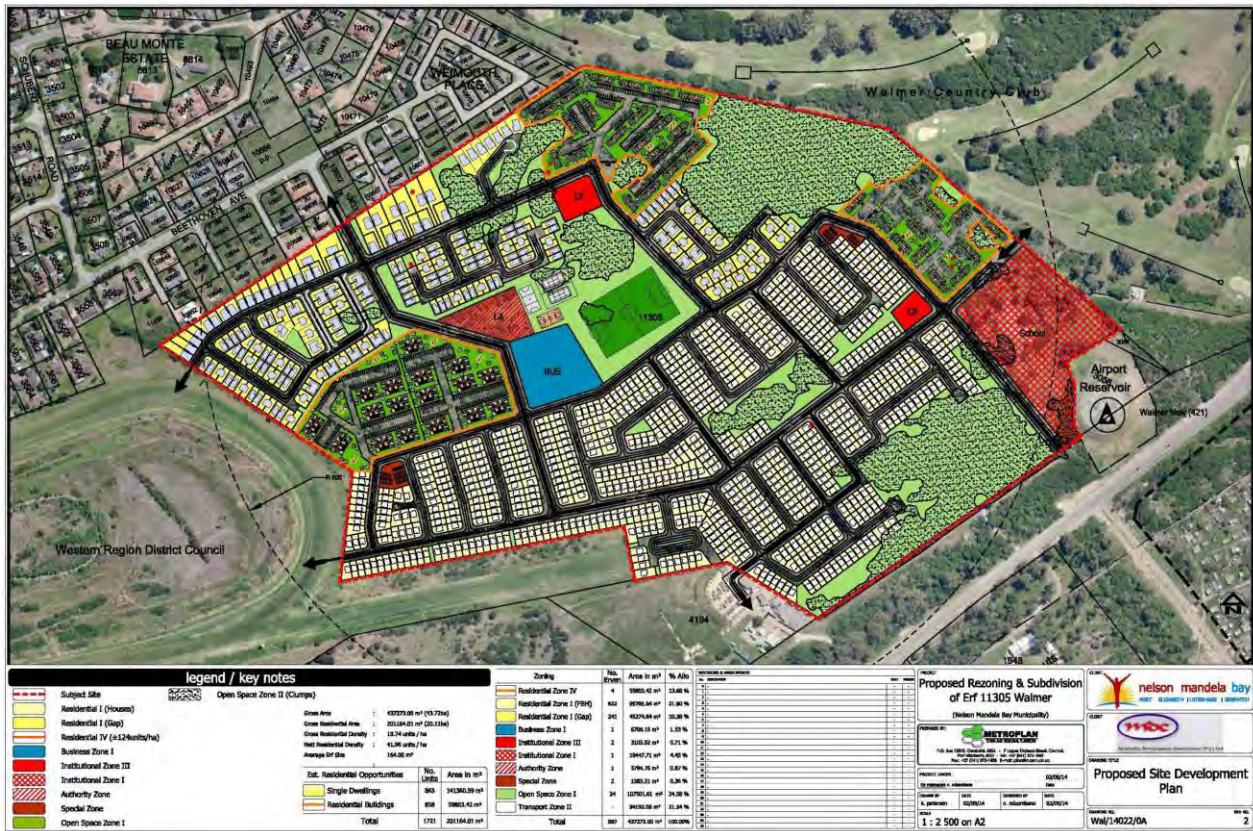
- In Scenario 1
 - Property price growth of between 5% and 8% for properties further than 1000m from the low income housing area (Walmer & Walmer Heights)
 - The property tax increased from R13.3 million in 2015 to R30.3 million in 2025
- In Scenario 2
 - The suburb average price decrease from R1.5 million in 2015 to R1.01 million in 2019 due to the introduction of subsidy, affordable and social houses
 - The yearly price growth of the bonded segment decelerate from 8% to 2% per annum due to the introduction of low-income housing stock. This will result in negative real growth in house prices
 - The bonded property prices shows slower growth, which result in a decrease in property tax collected from the suburb
 - The property tax decreased from R13.3 million in 2015 to R12.3 million in 2025
- Summary
 - The introduction of subsidy, affordable and rental housing will result in a decrease in the amount of tax received from the suburbs to the local authority
 - Cumulative the **NMBM will lose R53 million in property tax over a 10 year period** with the development of subsidy, affordable and social houses adjacent a high-income bonded suburb.
 - Decelerated growth and dampening effect on middle-higher property prices will be evident in Walmer Heights.

This is a significant loss in income for the Nelson Mandela Bay Municipality due to sub-optimal positioning of an affordable, low-income subsidy component. A layout aligned with sound economic principles, including systematic pricing contours can be expected to yield positive impacts leaning more towards scenario 1 (Table 6.2). On the contrary, a low cost / low income and affordable development that does not reflect the necessary sensitivities to surrounding real estate price realities could yield negative impact scenarios. Of the recently (September 2017) revised layouts, Option B can be expected to be the most viable option based on sound economic principles – subject to minor revision.

➤ **RECOMMENDATIONS**

Mitigation can be achieved through project composition, pricing, layout and access considerations. These recommendations are based on the initial layout of 2015.

Map 3: Initial layout of the proposed residential township



Composition

Higher priced properties tend to locate in close proximity to one another – this is consistent with Tiebout theory of the invisible foot (like attracts like). Within this mechanism lies the powerful multiplier mechanism of agglomeration and critical mass (positive growth triggers further growth). The Walmer Heights suburb is regarded as one of the highest income areas in the Nelson Mandela Bay area with sought after low density, high income properties. New residential development adjacent to Walmer Heights should ideally be in keeping with prevalent market prices in order to continue to foster price growth of around 8.5% per annum.

Pricing

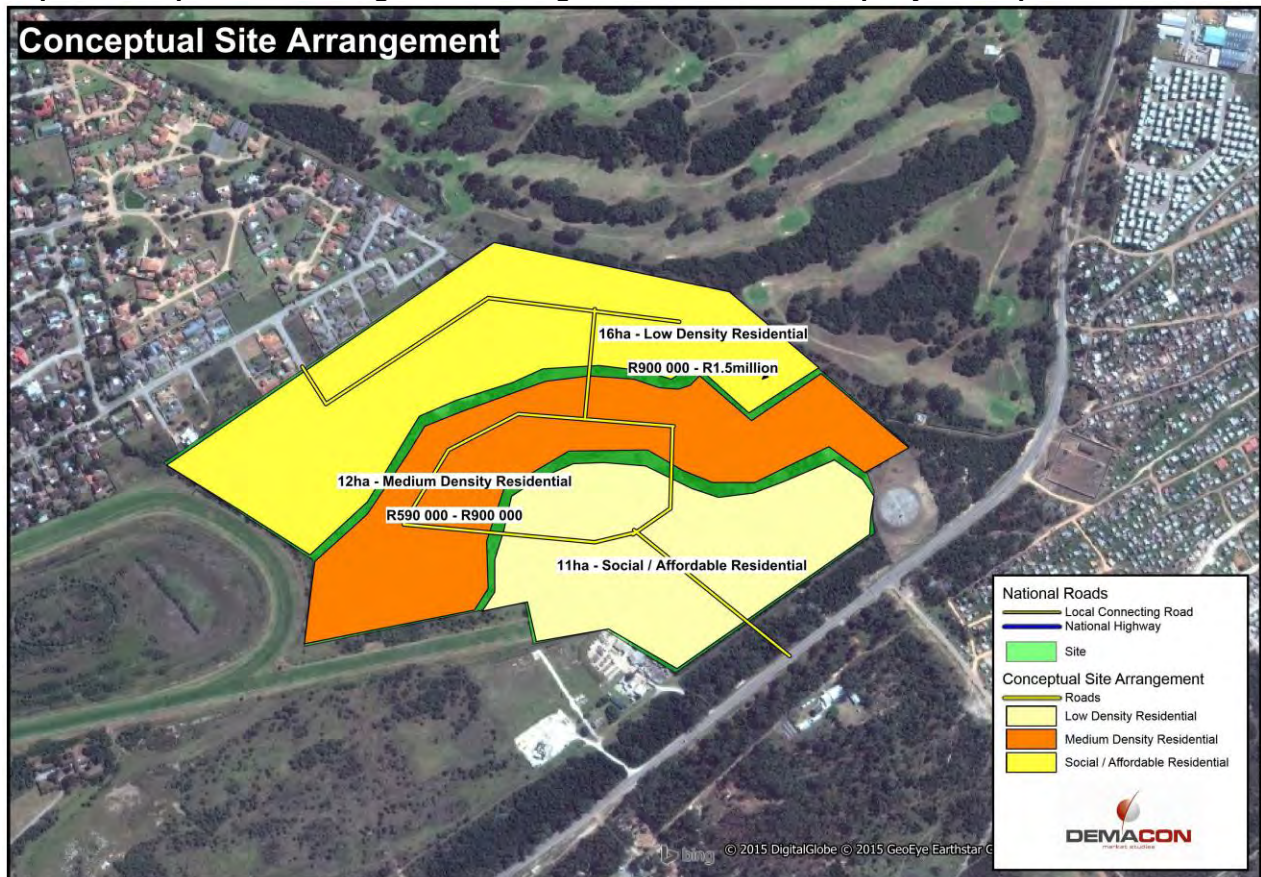
The current price differential in Walmer Heights is 40%-50% and could be increased to be a maximum of 50%-60%. This implies that new properties should be priced from a minimum not below **R620 000** which, consistent with the above, will not decelerate price growth and municipal income in Walmer Heights. However, properties below this minimum entry level value will, in all probability, decelerate prevalent price growth and concomitant municipal property tax income.

The market demand modelling did, however, indicate that there is a potential demand for residential units from as low as ±R400 000 for the area. The appropriate placement of such units will be crucial in order not to exert negative forces on price growth. Through a deliberate, planned arrangement the lower value offering should be situated adjacent Victoria drive opposite Gqebera to mitigate negative price growth and associated impacts.

Layout

The preferred residential typology mix should maximise investment for the buyer, maximise income for the local authority and address the housing needs of the area whilst protecting and nurturing existing upmarket residential investment to which the municipality has an equal responsibility. Based on the above analyses and findings and with the housing needs of the area considered, the following conceptual site arrangement would reflect the necessary sensitivity to property price dynamics and, as a result, yield a “best fit” scenario with minimum negative impacts - real and perceived.

Map 4: Conceptual Site Arrangement to Mitigate Price Growth & Property Tax Impacts



The site arrangement makes provision for low-density, mid- to higher priced properties adjacent the existing Walmer Heights suburb and the Walmer Country Club to mitigate price impacts on the residential assets. The lower priced social and affordable component should ideally be located along Victoria Drive to improve proximity and accessibility to public transport.

The site arrangement ensures that higher density units are in close proximity to major transportation routes and to facilitate access to public transport. The intermediate zone will offer a balanced transition between lower and higher density units. This site configuration reflects the necessary sensitivity towards existing asset owners on the one hand and the optimum blend of more affordable units in the market. As such the revised layout, in particular Option B, reflects a more sustainable solution.

Access

In the context of the aforementioned a dual access configuration is recommended. Lower density, higher priced units could attain access via a Walmer Heights link to and from Beethoven Avenue. On the other hand access to and from the higher density, lower priced units to Victoria Road (M18) is a vital consideration.

Security

According to research¹ subsidized housing doesn't bring crime or disinvestment if it's well designed and managed and if the neighbourhood is safe and stable to begin with. Many communities fight to exclude affordable housing developments because they fear rising crime and declining property values. Some research has found that an influx of subsidized households may affect crime rates, but only in communities that are already struggling with disinvestment and worsening crime. A much larger body of evidence confirms Massey's new findings that crime and property values are unaffected by the construction of subsidized housing.

Mitigations to limit the possible increase in crime rates in the area, include the site arrangement proposed above – locating higher priced units next to Walmer Heights would limit increased crime rates in the area. Another mitigation measure would include the use of defensible space. Defensible space is achieved both through “target hardening,” design features that repel criminal activity such as fences, gates, and locks, and through design elements that encourage residents to assert control over their public spaces and neighbourhood environments (Newman 1972, p.4).

The quantitative research affirms the invisible, though distinctly eroding impacts of the inappropriate positioning and sub-optimal price variance thresholds of low income residential development when introduced to established, middle and high income suburban markets. The price growth and unseen medium to longer term property tax implications contrast the political objectives aspired to through these mixed income housing schemes. The findings clearly illustrate that there is a critical point beyond which a too large price differential erodes future property price growth and, by default, municipal property tax income. In the interest of sustained national fiscus growth, in a country with a narrow tax support base, this is fast becoming a rapidly increasing vital consideration.

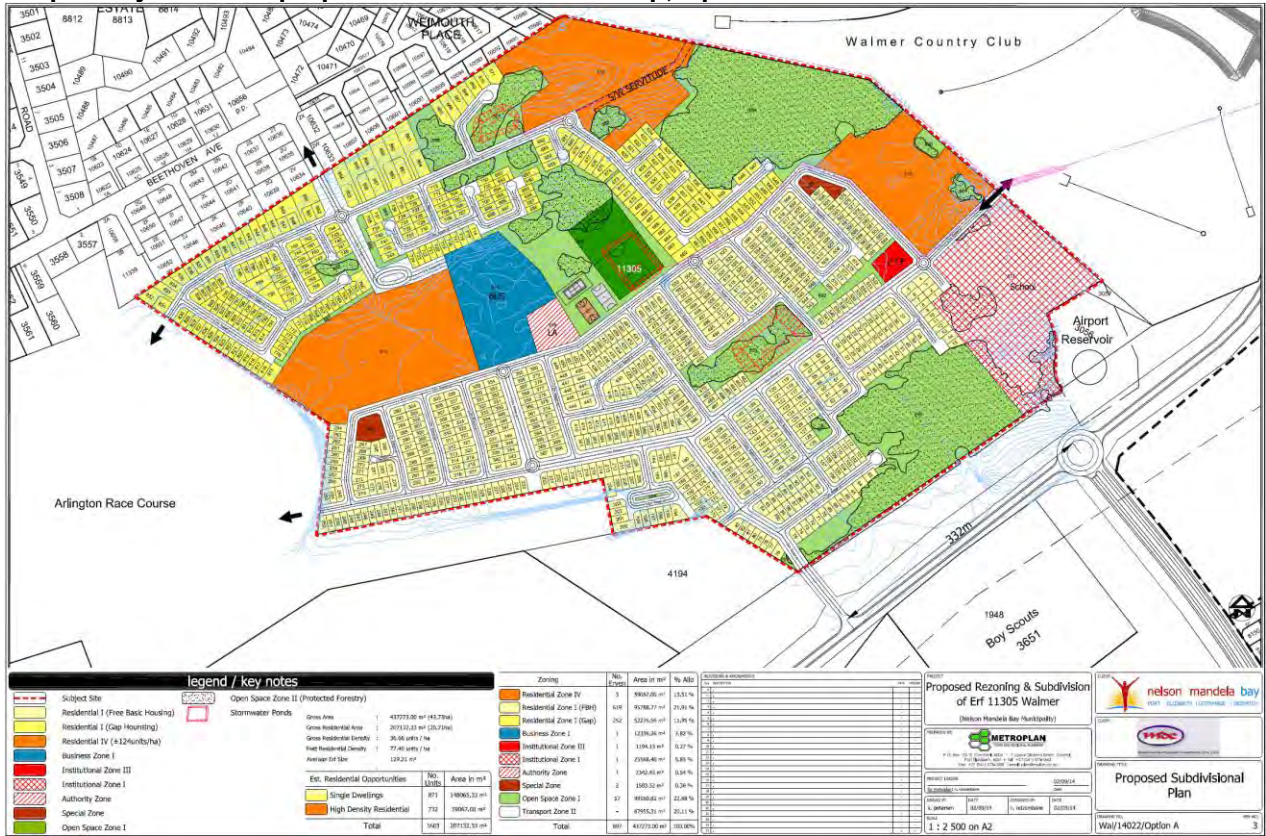
Revised 2017 layout – Option A and Option B

After these recommendations, amended layouts (Option A and Option B) were provided. The revised layout options of the township can be seen in Map 4 and Map 5. The impact was assessed for the revised layouts Option A and Option B.

The main issues have been addressed to a large extent. Option B closely aligns with the comments provided in the socio-economic impact report. The development still encompasses a large subsidy component, but an attempt has been made to create price contours that will be sensitive to possible price impacts due to the low income housing. From an economic perspective, the option most likely to have the least negative impact is Option B.

¹ <https://www.urban.org/urban-wire/affordable-housing-safe-neighborhoods-four-lessons-success>

Map 5: Layout of the proposed residential township, Option A



Map 6: Layout of the proposed residential township, Option B

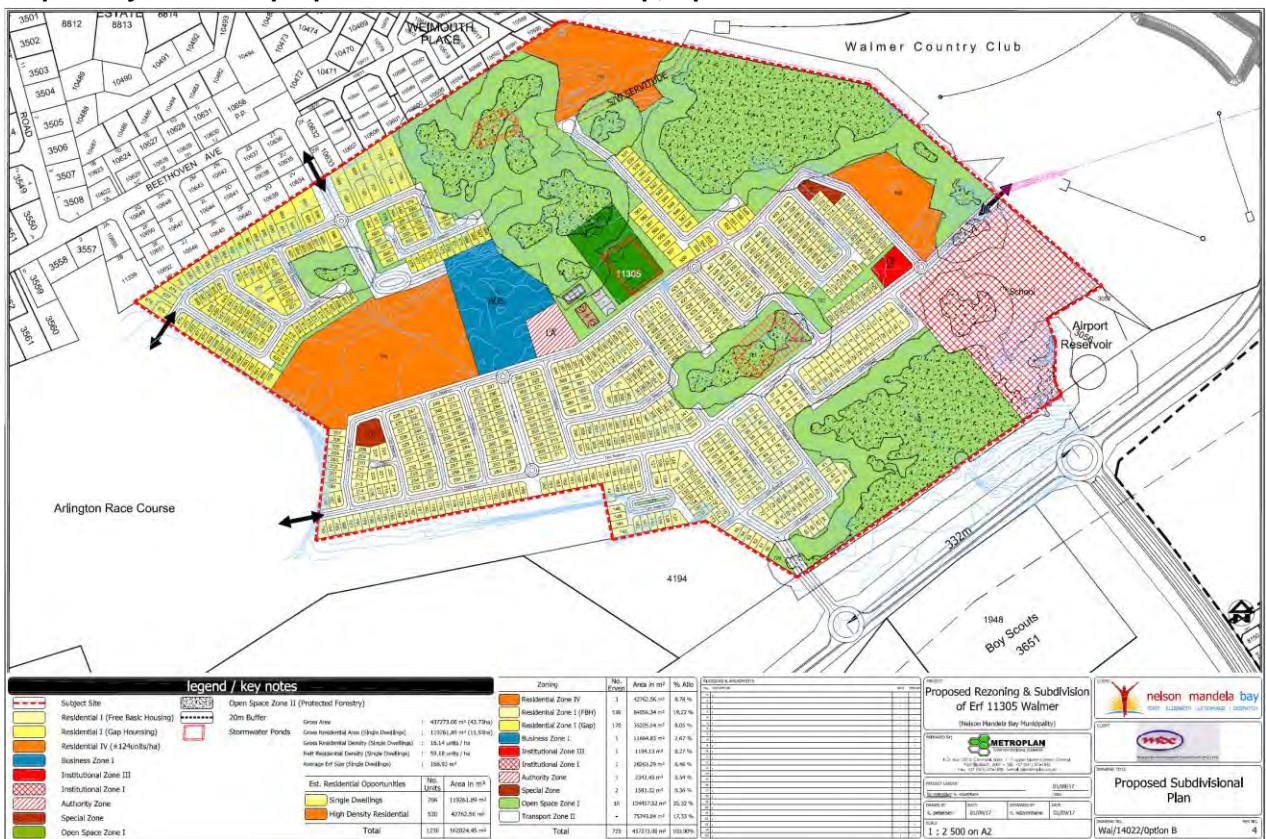


Table 7: Impact Table – Walmer Housing Project Revised Layout Option A

THEME	SPECIFIC IMPACT	STATUS OF IMPACT	IMPACT SIGNIFICANCE PRIOR TO MITIGATION					DESCRIPTION & MITIGATION MEASURES	IMPACT SIGNIFICANCE POST MITIGATION	
			EXTENT	DURATION	MAGNITUDE	PROBABILITY	SIGNIFICANCE		MAGNITUDE	SIGNIFICANCE
CONSTRUCTION PHASE										
Housing Development	Job creation	+	3	2	3	5	Medium	The construction of the proposed development may create new employment opportunities for the local economy. Ensure that local employees are used during the construction phase.	3	Medium
	Local Economic Growth	+	3	2	3	5	Medium	New construction activity will create capital investment that will in turn benefit the local economy. The project will furthermore make a positive contribution in respect of the creation of productive, rateable real estate assets.	3	Medium
	Infrastructure Investment & Development	+	2	2	2	5	Medium	The proposed development will facilitate investment in infrastructure development and expansion. Albeit that the initial infrastructure investment constitutes a short-term impact, prolonged benefits are created in the local economy.	2	Medium
OPERATIONAL PHASE										
Housing Development	Job creation	+	2	5	2	5	Medium	Increased production as a result of the Walmer Housing Project will create and sustain new job opportunities in various sectors of the economy.	3	Medium
	Local Economic Growth	+	2	5	2	5	Medium	The proposed development will facilitate investment in key local sectors, which will translate into additional business sales and additional GGP.	2	Medium
	Rates & Tax Base Expansion	-	2	5	4	5	High	The development will facilitate limited real estate investment, job creation and economic growth, which, in turn will contribute to the limited creation of productive, rateable assets.	3	Medium

THEME	SPECIFIC IMPACT	STATUS OF IMPACT	IMPACT SIGNIFICANCE PRIOR TO MITIGATION					DESCRIPTION & MITIGATION MEASURES	IMPACT SIGNIFICANCE POST MITIGATION	
			EXTENT	DURATION	MAGNITUDE	PROBABILITY	SIGNIFICANCE		MAGNITUDE	SIGNIFICANCE
								The status of the impact could be reversed from a negative to a positive		
	Property Prices	-	2	5	4	4	Medium to High	The development of low income housing next to the upper class area of Walmer Heights will negatively impact property prices in the area. The inclusion of definite pricing contours will ensure a less negative impact. The area directly adjacent Walmer Heights should be reserved for higher income households.	2	Medium
	Addressing Housing Need	+	2	3	3	4	Medium	The development will provide housing opportunities for households currently occupying informal dwellings, thereby alleviating the housing backlog of NMBM.	3	Medium
	Security	-	2	3	3	4	Medium to High	The incidences of crime may decrease over time, as the community becomes increasing socially upward mobile. The inclusion of target hardening aspects will minimize crime. Development of vacant land in itself could be utilised as a mitigation measure in itself and will result in a positive impact.	2	Medium
	Reduced risk of illegal land invasion	+	2	5	3	5	Medium to High	Vacant land in metropolitan regions will continue to be subjected to risks associated with land invasion. Although it is not a deciding consideration for the development, the benefit of having productive development that contribute towards rates and taxes could potentially outweigh the benefit associated with illegal land occupation. If developed as a secure access controlled estate which is increasingly becoming common practice, even in lower income communities, the risk will be minimum	2	Medium

Source: Demacon, 2017

Table 8: Impact Table – Walmer Housing Project Revised Layout Option B

THEME	SPECIFIC IMPACT	STATUS OF IMPACT	IMPACT SIGNIFICANCE PRIOR TO MITIGATION					DESCRIPTION & MITIGATION MEASURES	IMPACT SIGNIFICANCE POST MITIGATION	
			EXTENT	DURATION	MAGNITUDE	PROBABILITY	SIGNIFICANCE		MAGNITUDE	SIGNIFICANCE
CONSTRUCTION PHASE										
Housing Development	Job creation	+	3	2	3	5	Medium	The construction of the proposed development may create new employment opportunities for the local economy. Ensure that local employees are used during the construction phase.	3	Medium
	Local Economic Growth	+	3	2	3	5	Medium	New construction activity will create capital investment that will in turn benefit the local economy. The project will furthermore make a positive contribution in respect of the creation of productive, rateable real estate assets.	3	Medium
	Infrastructure Investment & Development	+	2	2	2	5	Medium	The proposed development will facilitate investment in infrastructure development and expansion. Albeit that the initial infrastructure investment constitutes a short-term impact, prolonged benefits are created in the local economy.	2	Medium
OPERATIONAL PHASE										
Housing Development	Job creation	+	2	5	2	5	Medium	Increased production as a result of the Walmer Housing Project will create and sustain new job opportunities in various sectors of the economy.	3	Medium
	Local Economic Growth	+	2	5	2	5	Medium	The proposed development will facilitate investment in key local sectors, which will translate into additional business sales and additional GGP.	2	Medium
	Rates & Tax Base Expansion	-	2	5	3	5	Medium to High	The development could facilitate real estate investment, job creation and economic growth, which, in turn will contribute to the creation of productive, rateable assets.	2	Low to Medium

THEME	SPECIFIC IMPACT	STATUS OF IMPACT	IMPACT SIGNIFICANCE PRIOR TO MITIGATION					DESCRIPTION & MITIGATION MEASURES	IMPACT SIGNIFICANCE POST MITIGATION	
			EXTENT	DURATION	MAGNITUDE	PROBABILITY	SIGNIFICANCE		MAGNITUDE	SIGNIFICANCE
								The status of the impact could be reversed from a negative to a positive if the house pricing contours are included and the northern section should be priced R620 000 and upwards and the layout should not be permeable		
	Property Prices	-	2	5	2	4	Medium	The development of low income housing next to the upper class area of Walmer Heights will negatively impact property prices in the area. The inclusion of definite pricing contours will ensure a less negative impact. The area directly adjacent Walmer Heights should be reserved for higher income households. Positive but neutral	0	Low to Medium
	Addressing Housing Need	+	2	3	3	4	Medium	The development will provide housing opportunities for households currently occupying informal dwellings, thereby alleviating the housing backlog of NMBM.	3	Medium
	Security	-	2	3	2	4	Medium to High	The incidences of crime may decrease over time, as the community becomes increasing socially upward mobile. The inclusion of target hardening aspects will minimize crime. Development of vacant land in itself could be utilised as a mitigation measure in itself and will result in a positive impact.	1	Low
	Reduced risk of illegal land invasion	+	2	5	3	5	Medium to High	Vacant land in metropolitan regions will continue to be subjected to risks associated with land invasion. Although it is not a deciding consideration for the development, the benefit of having productive development that contribute towards rates and taxes could potentially outweigh the benefit associated with illegal land occupation.	1	Medium

THEME	SPECIFIC IMPACT	STATUS OF IMPACT	IMPACT SIGNIFICANCE PRIOR TO MITIGATION					DESCRIPTION & MITIGATION MEASURES	IMPACT SIGNIFICANCE POST MITIGATION	
			EXTENT	DURATION	MAGNITUDE	PROBABILITY	SIGNIFICANCE		MAGNITUDE	SIGNIFICANCE
								If developed as a secure access controlled estate which is increasingly becoming common practice, even in lower income communities, the risk will be minimum		

Source: Demacon, 2017

The business site is still positioned to allow through-traffic. The business site should ideally not be internalised, as an internalised business site does, generally, not function optimally and the development does not have sufficient critical mass to independently sustain a business site. The business site should ideally be located directly adjacent the M18.

Although subsidy housing is not rateable for at least 8 years, the rating of social housing is entirely up to the discretion of the local authority. Most local authorities opt not to rate social housing purely based on the principle of subsidisation. The financial sustainability of the development will ultimately hinge on the effectiveness with which the local authority collects taxes from the area.

➤ **CONCLUSION**

Beaumont Estate and Walmer Heights is currently buffered from direct property price impacts of the nearby Quebera by a green zone of approximately 800m wide. The vacant land in itself, however, poses a significant threat in terms of land invasion. Development of a mixed typology housing development may, to an extent, mitigate this risk. The aspiration should, however, be to create sensible pricing contours in order to mitigate the decelerating price growth effect of low income housing on high income housing. Erroneously, the location of low income households in close proximity to high income households does not in itself effect socio-economic upliftment or improve access to job opportunities. The ideal minimum price for properties adjoining the high income Walmer Heights is recommend from R620 000. In order to mitigate security and associated socio-economic concerns, the revised layout should respond to pricing contours and permeability of the development should be limited. It is also recommended that the business site should not be internalised: retail sales performance can be significantly enhance simply by positioning the business site adjacent or close to the M18.

1

CHAPTER 1: INTRODUCTION

1.1 BACKGROUND

Chapter one provides an introduction and concise roadmap of the **Walmer Housing Development Socio-Economic Impact Assessment**. The chapter also provides concise background to the project, the study methodology as well as a report outline.

1.2 PROJECT BRIEF & OBJECTIVES

Demacon Market Studies were commissioned by **SRK Consulting (South Africa) (Pty) Ltd.** to compile a proposal for a socio-economic impact assessment pertaining to the proposed **Walmer Housing Development**.

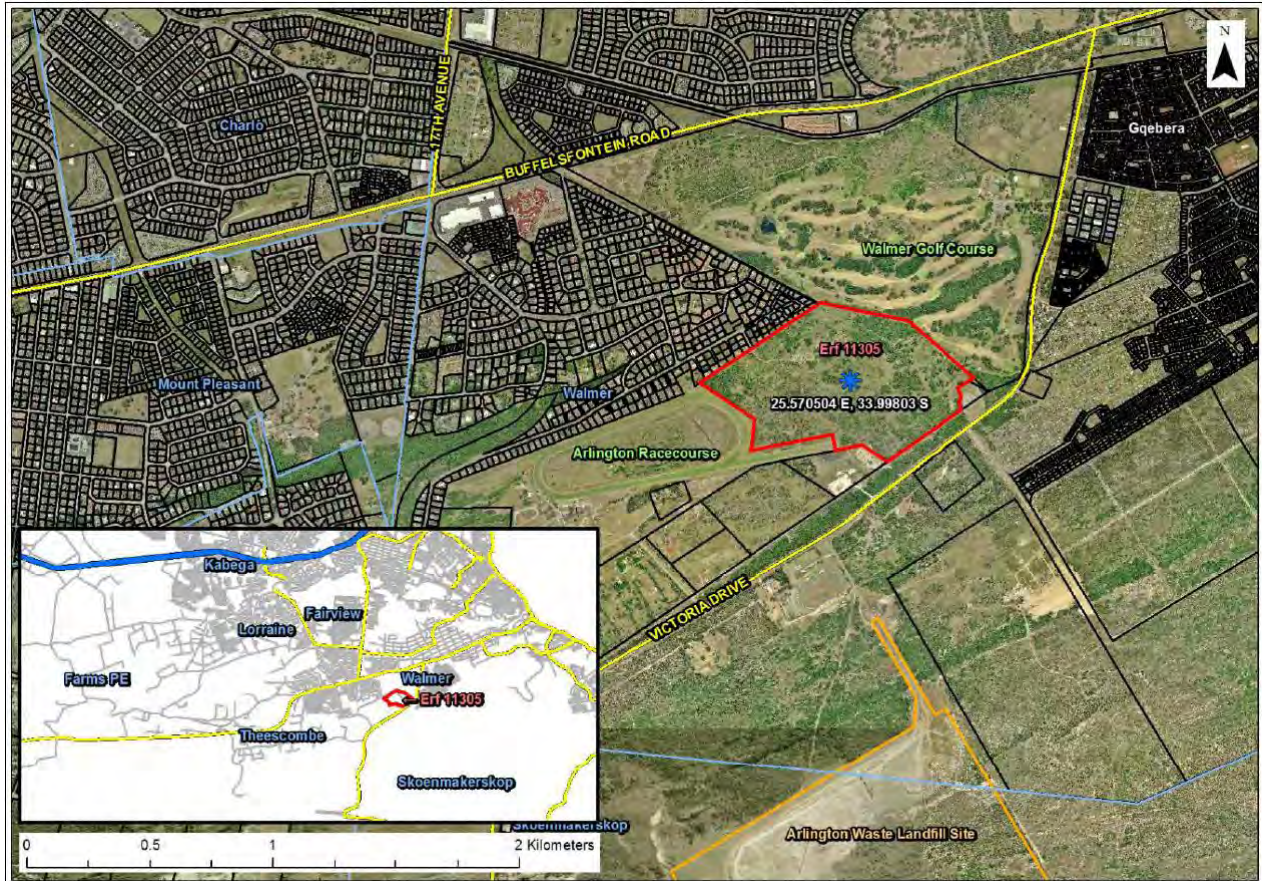
Based on an initial brief received, it is understood that the client requires a proposal for a **Socio-Economic Impact Assessment** pertaining to the abovementioned proposed project, including, *inter alia*, the following:

- ✓ Define the area potentially directly affected either socially or economically by the proposed project;
- ✓ Describe the baseline socio-economic conditions and character of this area, including property values;
- ✓ Comment on the appropriateness of the location of the development in light of the social and economic gradients of the area, as well as policy and other relevant considerations;
- ✓ Assess the potential impacts of the development proposal on socio-economic conditions in the surrounding areas including:
 - Projected effect on property value of adjacent neighbourhoods, and the associated impact on municipal rates in the area; and
 - Projected effect on security, crime and social ills in adjacent neighbourhoods;
- ✓ Address comments raised by IAPs from surrounding areas relating to the above
- ✓ Make recommendations and provide advice to the team regarding appropriate management of impacts identified and how best to incorporate these into the proposed development.

1.3 DEVELOPMENT SITE

The development site is situated in Walmer in Port Elizabeth. Map 1.1 shows the location of the site.

Map 1.1: Site Map



1.4 NATURE OF THE PROJECT

The Nelson Mandela Bay Metro proposes to construct a mixed typology housing development together with associated facilities and infrastructure on erf 11305, Walmer, to cater for the overflow of residents currently living in informal settlements in the Walmer Gqebera area. Approximately 1 196 (Option B) to 1 603 (Option A) residential units are proposed (see preliminary layout in Map 1.2), along with associated community facilities and services infrastructure. The development will connect onto existing bulk services infrastructure in the area. The proposed site is 43.74 ha in size and located on municipally owned land which has been previously disturbed (through activities such as farming).

The layout provides for the development of formal residential units to accommodate beneficiaries to be relocated from informal settlements in Walmer Gqebera. The beneficiaries will receive a formal structure (Free basic house/RDP, of which approximately 600 units are allowed for) to be built in accordance with NHBRC Standards and National Building Regulation. The remainder of the units (approximately 1,100) will be offered to beneficiaries who qualify for Socially Housing, GAP Housing and Open Market once the needs of the target groups are met. A portion of the layout abutting the suburb of Walmer Heights has been set aside for either social housing or GAP housing (possibly Finance Linked Individual Subsidy Programme (FLISP) units) to allow for a transition area between the Free Basic House and Walmer Heights. Images of what the development is anticipated to look like are provided in Figure 1.1, and descriptions of the proposed housing typologies are provided below.

Free Basic House/RDP

- Fully State Subsidised Housing – for beneficiaries earning up to R3,500 per month;(Still the same income bend)

- Each unit at least 40 m², and costing approximately R160,000 each to build (made up of R43000,00 for serviced sites and plus/minus R120 000.00 for the top structure);
- Beneficiaries will depend entirely on being housed by the state without any expectation of making financial contributions towards the house/services/ transfer/ registration costs for the property to be received; and
- Units will be either free standing or semi-detached single storey buildings.

GAP / FLISP Housing

- Partially Subsidised housing, where the state subsidy is supplemented by private funding;
- Each unit >40 m²;
- For financially employed individuals who can afford mortgage loans of up to R300,000; and
- Units will be detached, semi-detached single storey or double storey buildings.

Social Housing

- Units offered for rent to beneficiaries earning between R1,500 and R15 000 per month. Policy stipulates that the rentals paid should not exceed 30% of the gross income of the tenant. This would determine the size of unit allocated to the beneficiary. The units will be owned and managed by an accredited Social Housing Institution that will hold the stock for a minimum of 15 years, and may either re-finance for another 15 years or sell it off to tenants thereafter; subject to providing remaining tenants who still wish to rent with equivalent rental (social) accommodation for another period of 15 years
- Each unit ±30-45 m²; 1-2 bedroom apartments
- Units will be in 3 or 4 storey apartment buildings, in an access controlled complex, similar to those in the nearby Walmer Link development.

Open market housing

- Stand-alone units priced at above R400,000, for beneficiaries earning above R15,000 per month. The so called GAP Market

Figure 1.1: Description of proposed housing typologies



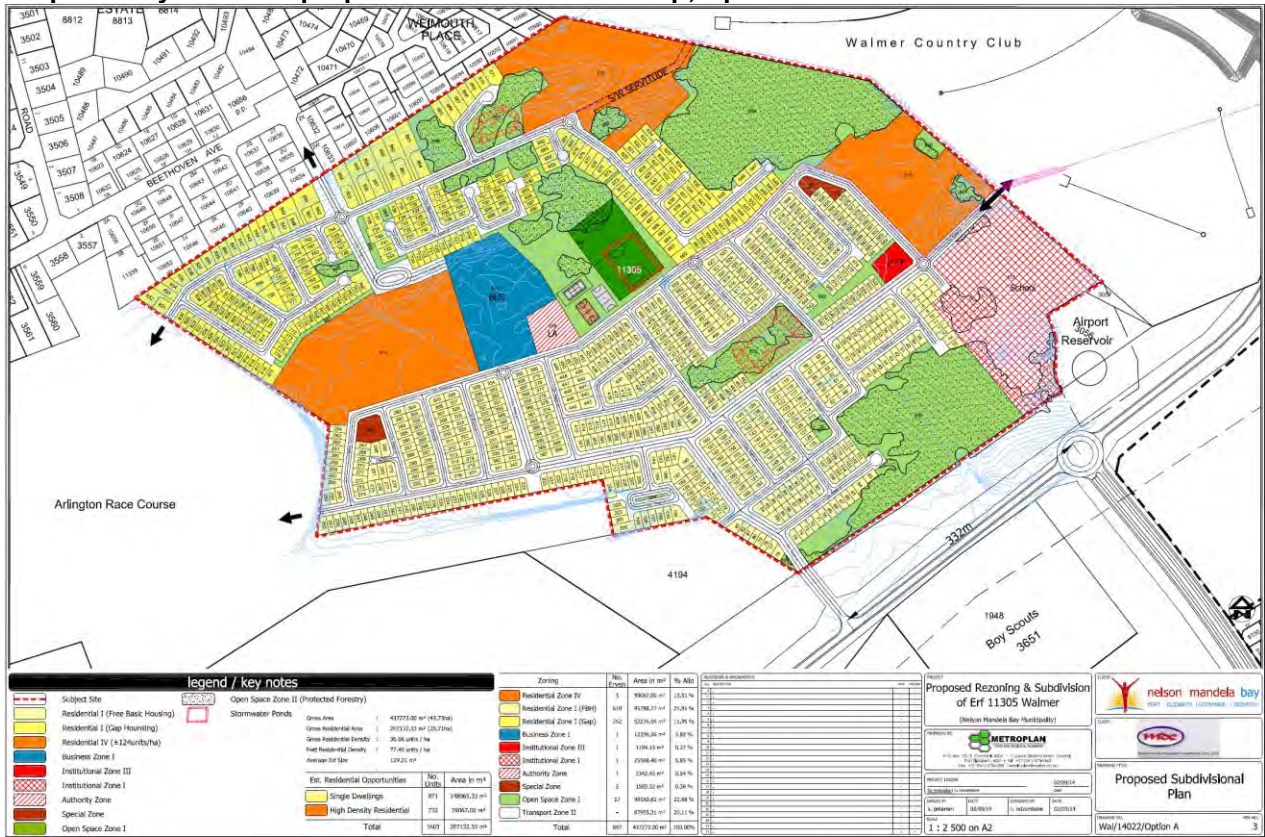


View to the southeast over the development from Walmer Heights in the foreground

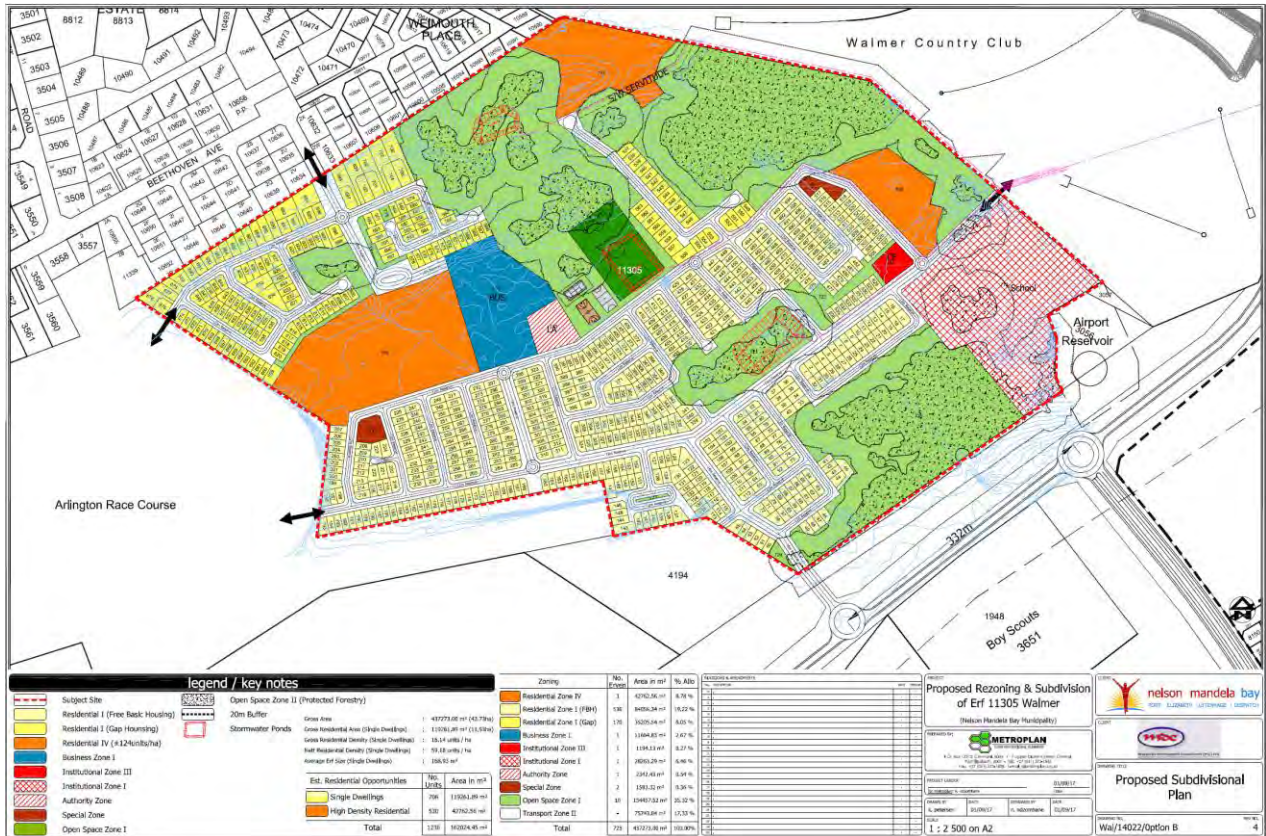
View over the development from the southeast

The layout of the township is evident in Map 1.2

Map 1.2: Layout of the proposed residential township, Option A



Map 1.3: Layout of the proposed residential township, Option B



1.5 REPORT OUTLINE

The remainder of the report is structured in terms of the following main headings:

- Chapter 2: Location Profiling
- Chapter 3: Socio-Economic Profile
- Chapter 4: Residential Market Analysis
- Chapter 5: Case Study Analysis
- Chapter 6: Impact Assessment
- Chapter 7: Findings & Mitigation

2

CHAPTER 2: LOCATION PROFILING

2.1 INTRODUCTION

The aim of this chapter provide an overview of the location characteristics of the site. The location of the site within the Nelson Mandela Bay Municipality (NMBM) is shown in Map 2.1.

Map 2.1: Site in Context

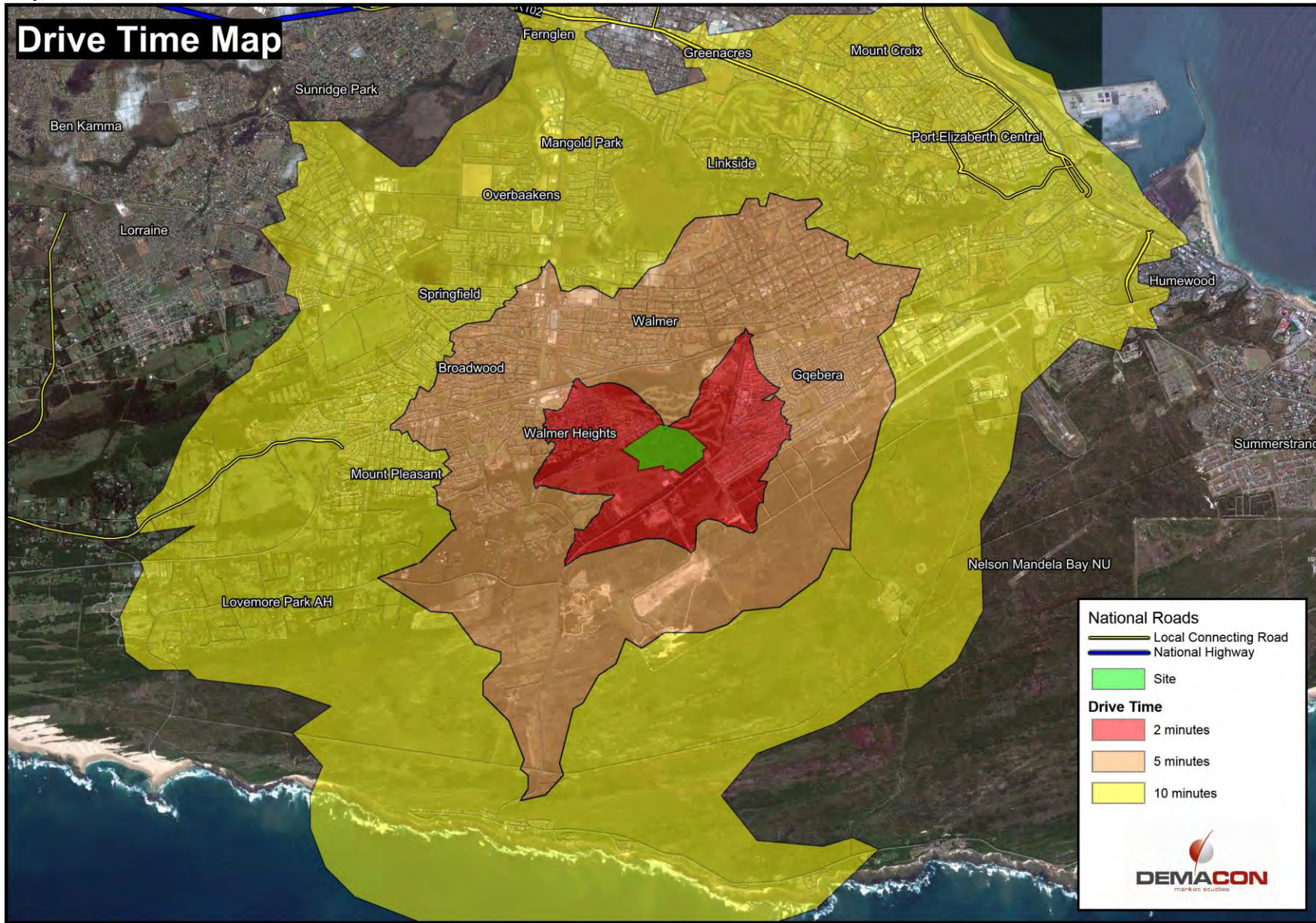


The site is situated in Ward 1 of the municipal area. A portion of Walmer Heights (Beaumont Estates) is also located in this ward, while the largest part of Walmer Heights is located in Ward 3 that includes the Walmer suburb. Gqebera, to the south east of the site is located in Ward 4.

The site itself is situated adjacent Walmer Heights, the Walmer Country Club, Arlington Horse Race Course, which is currently vacant, and Victoria Drive in Ward 5. The accessibility to and from the site is illustrated in Map 2.2.

A 2km drive time from the site has access to the local suburbs of Walmer Heights and Gqebera which is adjacent to the site. The 5km drive time have access to suburbs within the larger area and where some commercial and retail activity is present. The larger industrial nodes, CBD and access to major roads is 10 minutes' drive from the site.

Map 2.2: Drive Time



2.2 UNDERSTANDING THE REAL ESTATE MARKET²

In a number of North American cities it is obvious that poor households tend to stay in close proximity to the CBD as they cannot afford high transport cost and needs to stay close to working opportunities. These areas have high site rent due to the proximity to the CBD resulting in higher densities as people occupy less horizontal space and consequently are stacked vertically to afford the rent. This is characterised as the **prisoner's dilemma**, where poor people live on some of the most potentially expensive land and cannot afford to escape (relocate).

One of the main reasons for the development of erf 11305 adjacent Walmer Heights is to accommodate the overflow of residents from Gqebera. The area has experienced significant densification in an area adjacent an established high income residential node and is in close proximity to economic activity. Gqebera represent a similar situation as those in North America where the poor has settled in an area characterised by high land values and is in close proximity to employment opportunities.

Furthermore, the **setting created by surrounding land uses** has an effect on any individual parcel of land. An individual parcel of land is affected by the surrounding land uses which implies that any piece of land does not exist in isolation and that its economic value are inextricably linked to its surroundings. A change in the surrounding land uses results in a break in the existing neighbourhood associations. In real estate there is a connection between adjacent properties and the **stability of one site is associated with the stability of others**, much the same way as an ecological chain that is sensitive to change.

The environment have a significant impact on the location of land uses throughout a city. First there is the physical environment and often it is evident that residential areas are attracted to hilly section as the elevation provides good views. Secondly the social environment plays an important role during the location decision for residential uses. Residential neighbourhoods illustrate the tendency for similar income or occupational groups to live together³. Thirdly the economic environment is the sum of the individual activities as the link to one another.

The reality of space in real estate means that room is created for each individual land use, taking into consideration the activity, location and environment to optimise the economic value of each individual activity. **Without the existence of space all real estate would have been in the one place without a regard of location and location optimisation.** Taking the above aspects of interdependence into consideration provides an opportunity to better evaluate risk and opportunity for gain within local real estate markets.

The movement of consumers between neighbourhoods is a function of the “Invisible Foot” theory provided by Tiebout (1956). According to Tiebout (1956) if the tax-expenditure mixes of local communities differ, individuals may move between communities to find the one that best matches their own preferences and lifestyles. Tiebout (1956) states that each locality has a revenue and expenditure pattern that reflects the desires of its residents i.e. “theory of the Invisible Foot”. It means that the level and composition of local public expenditures and associated tax rates are very important – the individual will choose the community that best satisfies his public goods preference pattern. Hence, increasing urban restructuring by spending on previously marginalised areas tends to have the converse effect of its original intent.

Consumers therefore tend to move to an area or neighbourhood that satisfies his preference pattern. Any change to these preference would result in the possibility of movement away or out of the neighbourhood to a similar neighbourhood where his preferences are addressed.

² Modern Real Estate, C.H. Wurtzebach & M.E. Miles, 2004

³ There are notable exceptions. Such as Oak Lawn in Dallas (USA) are known for their heterogeneity, but they are clear exceptions to the general tendency.

2.3 INSTITUTIONAL OVERVIEW

According to the draft Spatial Development framework (2015) the repeal of the notorious “influx control” regulations during the 1990’s resulted in extremely rapid urbanization from the rural areas into the city. As people moved into the city, informal settlements established themselves in areas not suitable for residential development and the resultant poor quality of life in these areas became planning, social and economic issues. The development of Gqebera is most likely as a result of the above conditions.

The Nelson Mandela Bay IDP (2011 – 2016) have highlighted a number of areas within the metro for the development of social housing. The IDP states that social housing must take the form of medium density multi-unit complex that require institutionalised management. The areas that have been identified include:

- Nelson Mandela Development Agency mandate area
- Walmer
- Mount Croix
- Fairview
- Uitenhage CBD
- Despatch CBD

The IDP further states that the Human Settlements Standing Committee recommended that all areas within the NMB urban edge should be interpreted as restructuring zones which will allow funding from the Social Housing regulatory Authority for any social housing within the urban area.

2.4 LOCATION THEORY AND BEHAVIOUR

What must be borne in mind is that different land uses compete for land in the same urban areas. This is where the concept of **highest and best use** plays a role. In a free-market society, on-going competition between different land uses is regulated by the market mechanism. Every site in the urban system has a highest and best economic use and equilibrium in the market will only be reached when the highest and best uses are allocated to the site.

This highest and best economic use is a function of physical and economic factors. Physical factors refer to the location of the site, the size thereof, visibility etc. Economic factors mainly refer to the productivity of the land use, including the return on investment and site rent achievable.

Residential Market - The residential market is not classified in the same economic market category as the preceding urban markets. The residential market is a complimentary urban market to various economic activities. For this reason residential development will not take place in the activity spine/core of a node/corridor but rather around the core.

To ensure successful residential development it is important that the location factors, which are considered by prospective home owners, are addressed by the development.

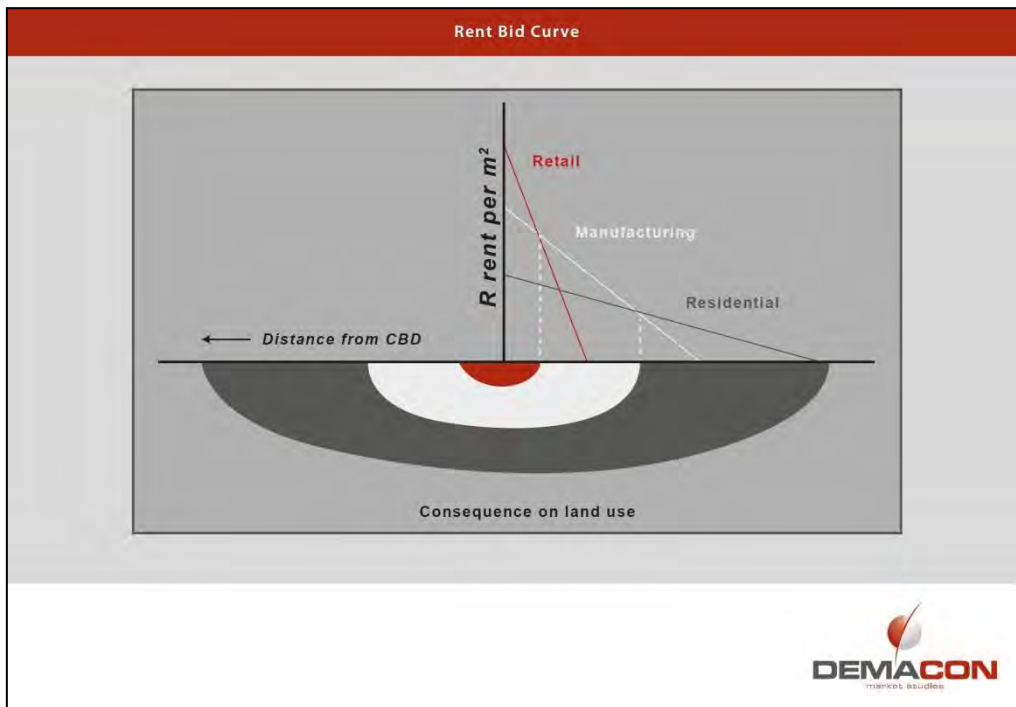
The location factors which are important for home owners include:

- Affordability and quality of housing
- Investment potential
- Safety and Security
- Proximity to the workplace
- Accessibility to educational and social facilities
- Proximity to retail facilities
- Socio-economic clustering.

Evidently, the **best-located land** will be offered to the land use with the **greatest potential site rent**. Land that is most accessible and visible will be offered for retail, office and industrial/warehousing uses due to the ability of these markets to pay higher rents for well-located land. Higher profit can be obtained when land is allocated to the optimum economic use.

The free market mechanism will continuously adjust land uses on a specific site until equilibrium is achieved. This equilibrium is reached when the **highest and best use** is assigned to a **specific site**. This will also indicate that the site is optimally used. This concept is illustrated in terms of the Rent-Bid Curve (Refer to Figure 2.1).

Figure 2.1: Rent Bid Functions for Urban Land Uses



Source: Tiebout, 29165

Figure 2.1 illustrates the highest land rent that would be bid by each of these economic activities at various distances from the CBD. An equilibrium land use pattern emerges from the above and land will be devoted to the land use that provides the highest rent and in which its productivity is the highest.

From this it is evident that suitable well-located land is, in most cases, not allocated to housing developments: in terms of economic value and returns of investment, residential land is relatively unproductive. Retail, offices and industrial uses represent more productive uses for valuable land.

2.5 SITE ASSESSMENT

Map 2.3 shows the residential growth in the area. The map indicates that formal housing development (mostly subsidy) has taken place in Gqebera over the past decade and that there is still significant informal structures in this suburb. Adjacent the site, at Walmer Heights, new residential development is evident while expanding residential development on the eastern suburbs at Lovemore Heights, Kamma Park and Lorraine Manor.

The residential typology map (Map 2.4) shows that the area is mainly characterised by formal houses which is mostly low density compared to flats/townhouses. The expanding areas to the east is mostly characterised by new townhouse developments while the Port Elizabeth CBD area has a large segment of flats/townhouses. Gqebera is still characterised by informal structures.

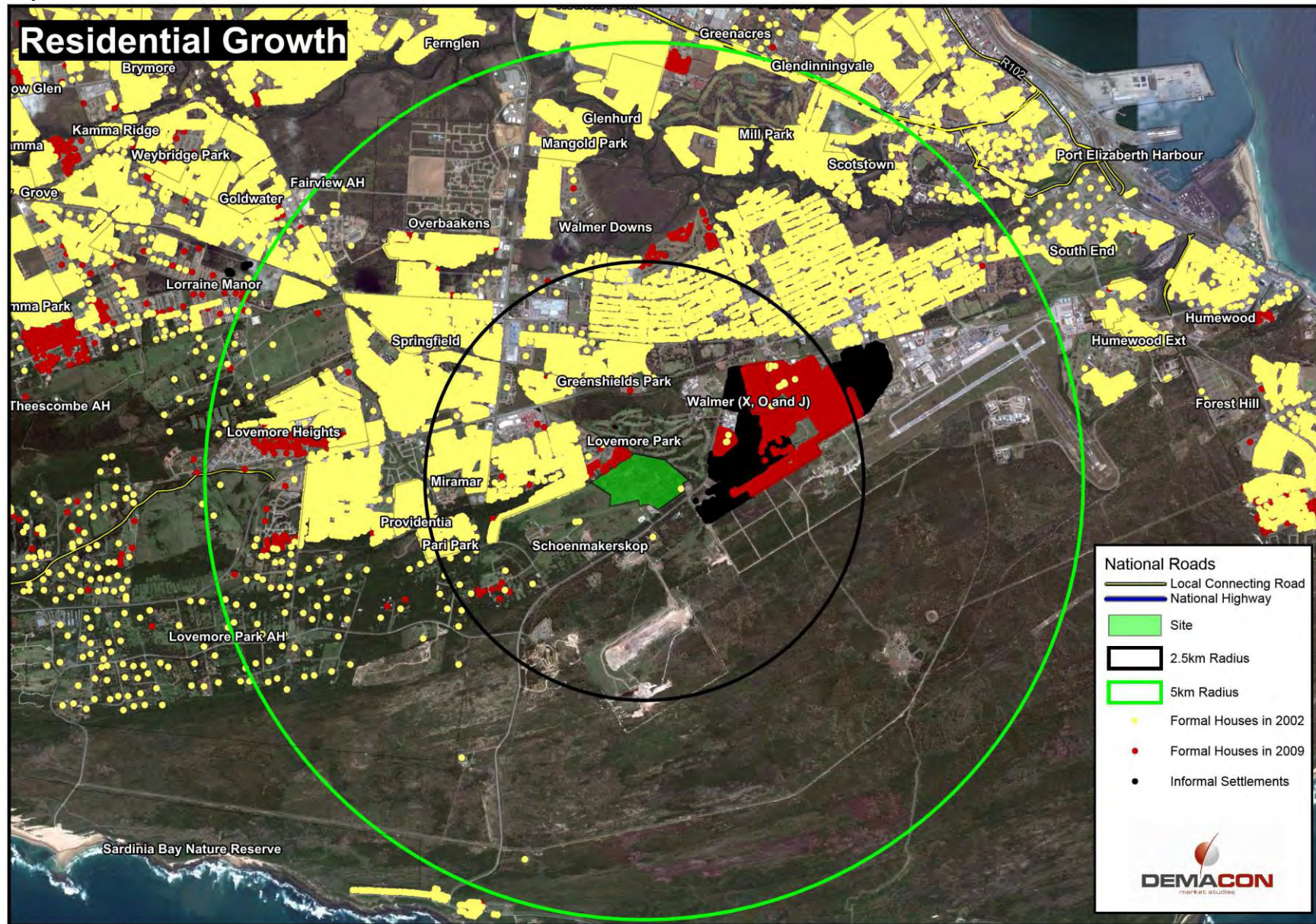
The following site characteristics are evident:

- The site lend itself to a residential development as it is adjacent an existing residential suburb to the north a golf course to the east and a race track on the west, while road access to major economic nodes via Victoria Drive (M18) to the south
- The Victoria Drive provides road access between the periphery of the urban area with economic nodes such as the airport, industrial areas adjacent the airport and commercial / retail activity.
- The proximity of the site to the Port Elizabeth airport, with associated noise impact do impact the value of the site. High-income suburbs are mostly located in quiet, pristine and aesthetic locations.

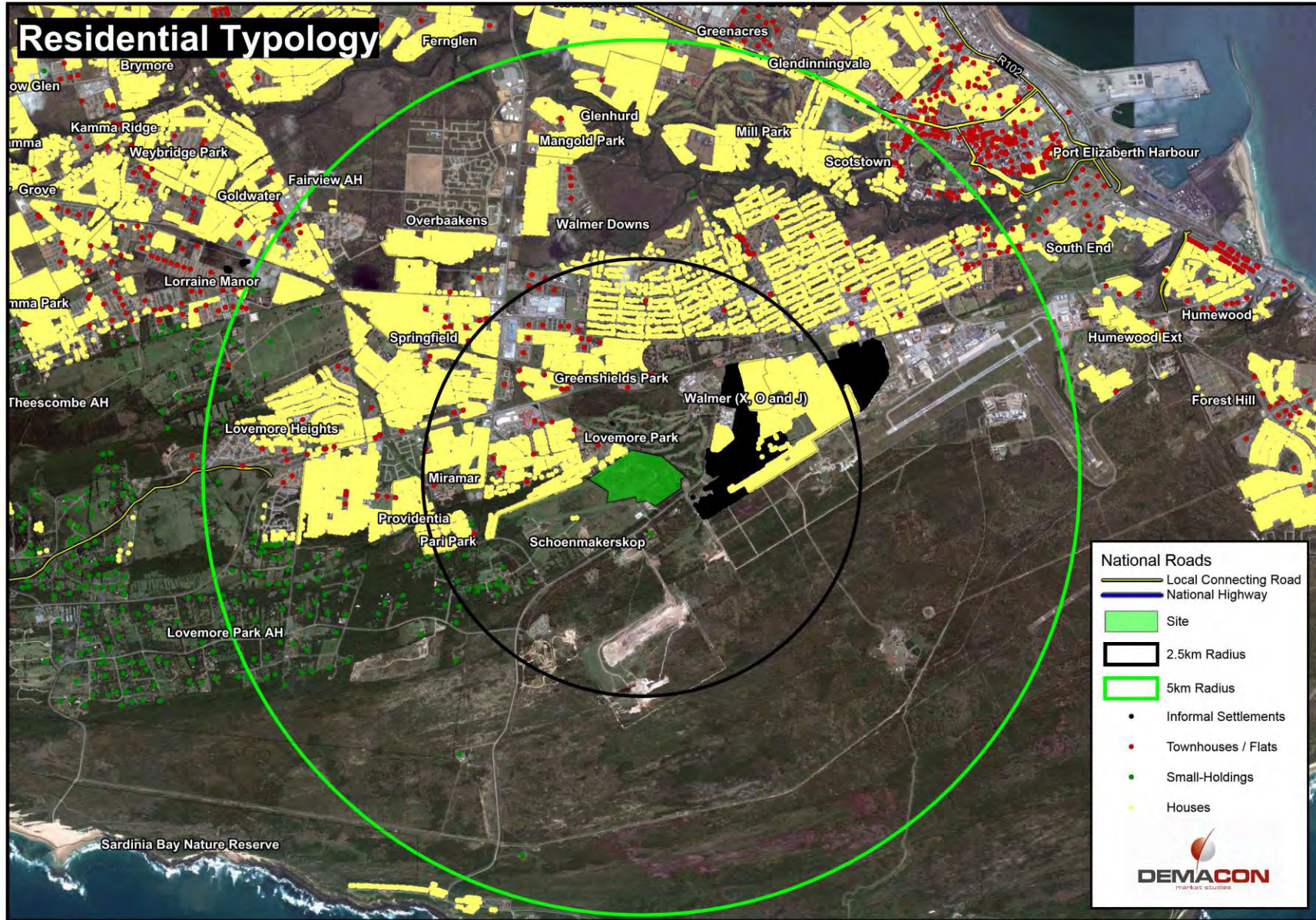
2.6 SYNTHESIS

The reality of space in real estate means that room is created for each individual land use, taking into consideration the activity, location and environment to optimise the economic value of each individual activity. An individual parcel of land is affected by the surrounding land uses which implies that any piece of land does not exist in isolation. A change in the surrounding land uses results in a break in the existing neighbourhood associations. Consumers therefore tend to move to an area or neighbourhood that satisfies his preference pattern. **Any change to these preference** would result in the possibility of movement away or out of the neighbourhood to a similar neighbourhood where his preferences are addressed.

Map 2.3: Residential Growth



Map 2.4: Residential Typology



3

CHAPTER 3: SOCIO-ECONOMIC PROFILE

3.1 INTRODUCTION

The purpose of this chapter is to provide a socio-economic overview of the area adjacent the development site.

3.2 STUDY AREA POPULATION

A selected primary market area has been identified for the residential development based on empirical research of customer origins. The primary trade area for the proposed project was informed by a number of factors:

- ✓ Located along major arterial roads with a median drive time.
- ✓ Social Economic Groups.
- ✓ Consumer market behaviour and expenditure trends.
- ✓ Regional and sub-regional levels of accessibility.
- ✓ Geographic barriers.
- ✓ General consumer mobility patterns and drive times.

Trade area is based on proximity and scale – a too large trade area distorts the pricing analysis of real estate in the immediate surrounding suburbs and the growth is calibrated to the trade area. Typically, approximately 70-80% of potential buyers come from the primary trade area. An inflow of 20-30% has been incorporated in the demand modelling. As metro wide sales data distorts localised property trends and prices, to accurately establish local profiles a more focused trade area is required for the supply side dynamics. In terms of modelling, the supply and demand side variables (and therefore geographic spread) needs to correspond.

Table 3.1 provides an indication of the sub-places that are part of the study area with their respective population and household totals. Map 3.1 indicates the study area used for the socio-economic base profiling.

Table 3.1: Study Area: Population & Household Total, 2011

Sub-Place	Population	Households	Household Size
Greenshields Park	2 949	1 016	2.9
Broadwood	2 998	1 151	2.6
Lovemore Heights	1 899	653	2.9
Lovemore Park	203	90	2.3
Walmer (X, O and J)	3 648	1 115	3.3
Gqebera	18 821	5 701	3.3
Providentia	407	143	2.9
Pari Park	385	139	2.8
Lovemore Park AH	183	65	2.8
Fairview AH	79	25	3.2
Mangold Park	911	298	3.1
Walmer	6 792	2 596	2.6
Walmer Downs	1 095	458	2.4
Overbaakens	2 522	797	3.2
Springfield	2 527	943	2.7
Lorraine	800	328	2.4
Lorraine Manor	733	324	2.3

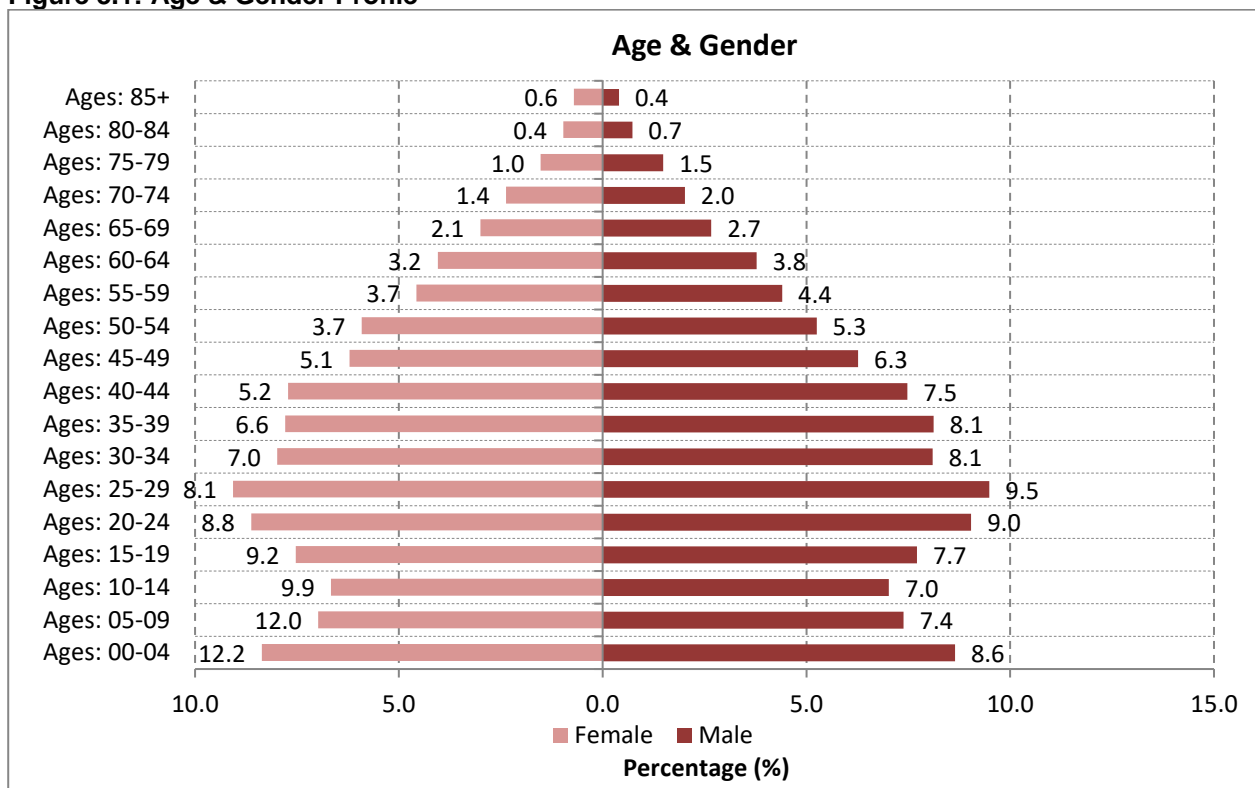
Sub-Place	Population	Households	Household Size
Walmer G South	3 977	1 149	3.5
Walmer Heights	1 963	770	2.6
Miramar	969	381	2.5
Mount Pleasant	2 319	622	3.7
Total (2011)	56 183	18 763	3
Total (2015)	59 874	20 248	3

Source: Demacon & Census 2011

The study area has an estimated **59 874 people or 20 248 households** in 2015. The average household size amounts to approximately **3 members per household**. The annual population and household growth rate is at 1.8% and 2.3% respectively. Map 3.2 illustrates the population per sub-place for the corresponding area.

3.3 AGE & GENDER PROFILE

Figure 3.1: Age & Gender Profile

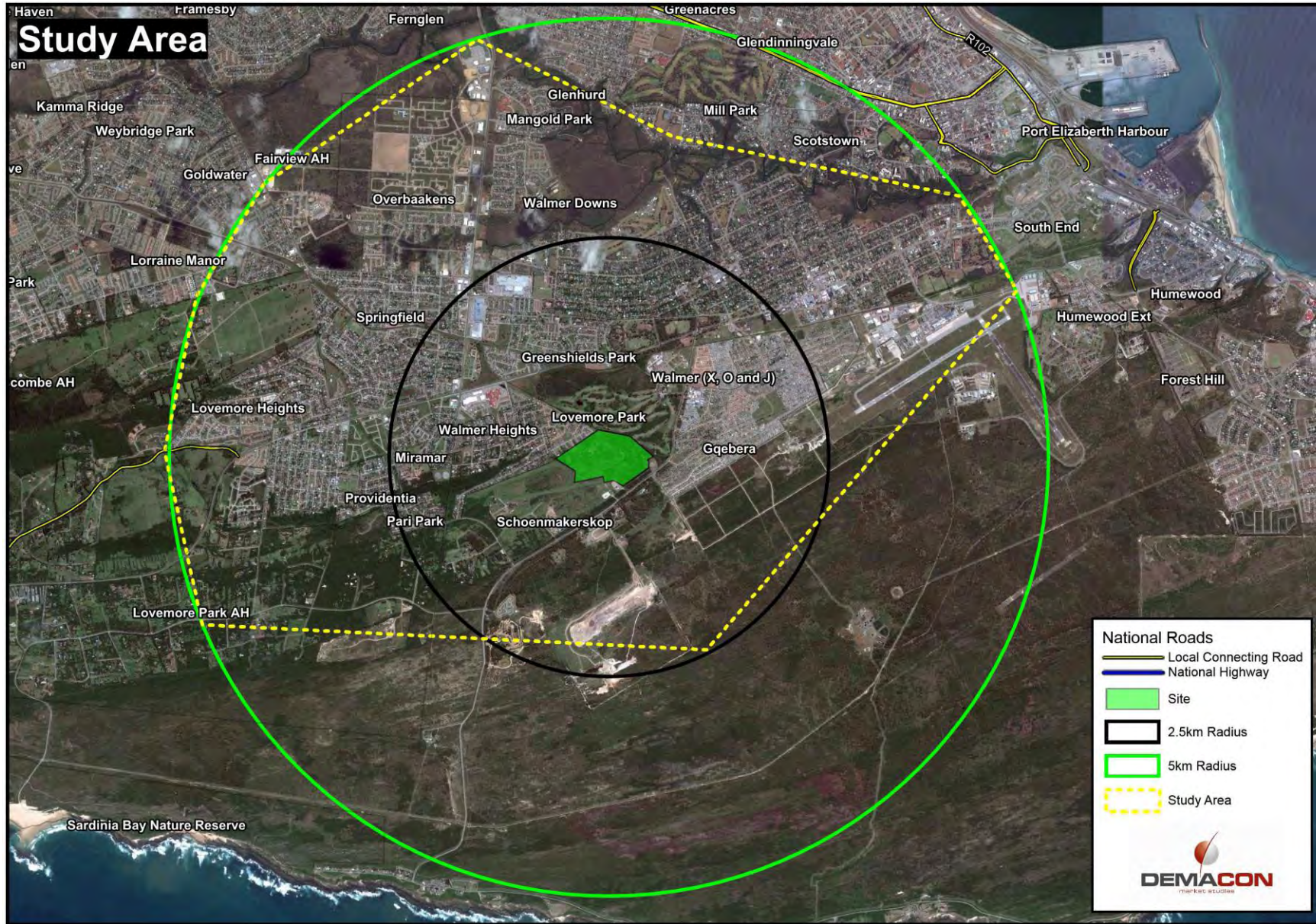


Source: Demacon ex Stats SA, 2015

Findings (Figure 3.1)

- ✓ Up to the age of 19, there are more males (30.8%) than females (29.5%) in the study area. From the age of 20 the number of females is more than the male counterparts in all age groups.
- ✓ The study area is characterised by a large segment of people within the working ages, especially between the ages of 20 and 44.

Map 3.1: Study Area Map

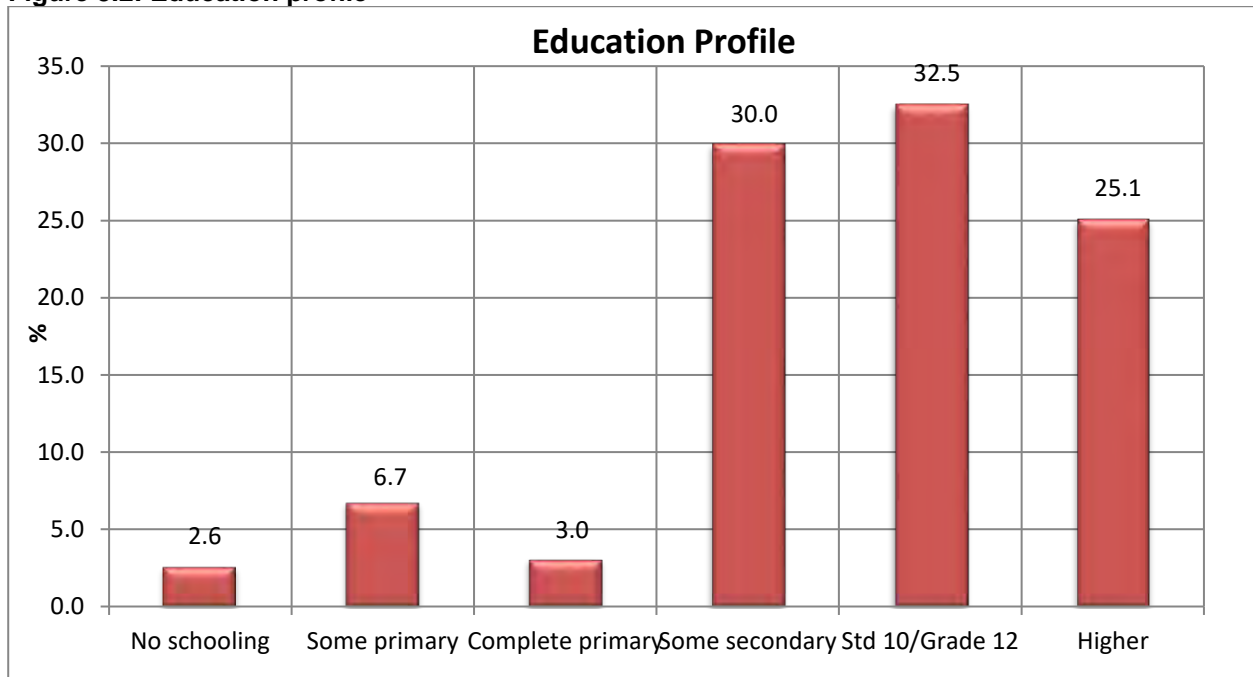


Map 3.2: Population Size Map



3.4 EDUCATION PROFILE

Figure 3.2: Education profile



Source: Demacon ex Stats SA, 2015

Findings (Figure 3.2)

- ✓ Figure 3.2 indicates that 58% of the study area population has at least Grade 12 (32.5%) or obtained higher educational levels (25.1%).
- ✓ A total of 30% has some level of secondary education, while 3% has completed their primary education and 6.7% of the population has some form of primary education.
- ✓ 2.6% of the population has no form of education.

The market area shows low figures of illiteracy with only 2.6% of the population with no schooling (the national average is 6%). The lower levels of education are most often compared to lower income types of work and people working in elementary occupations such as cleaners, gardening and unskilled mining labour. Higher education is comparable to higher income, white collar job opportunities such as managers, clerks and retail sales workers.

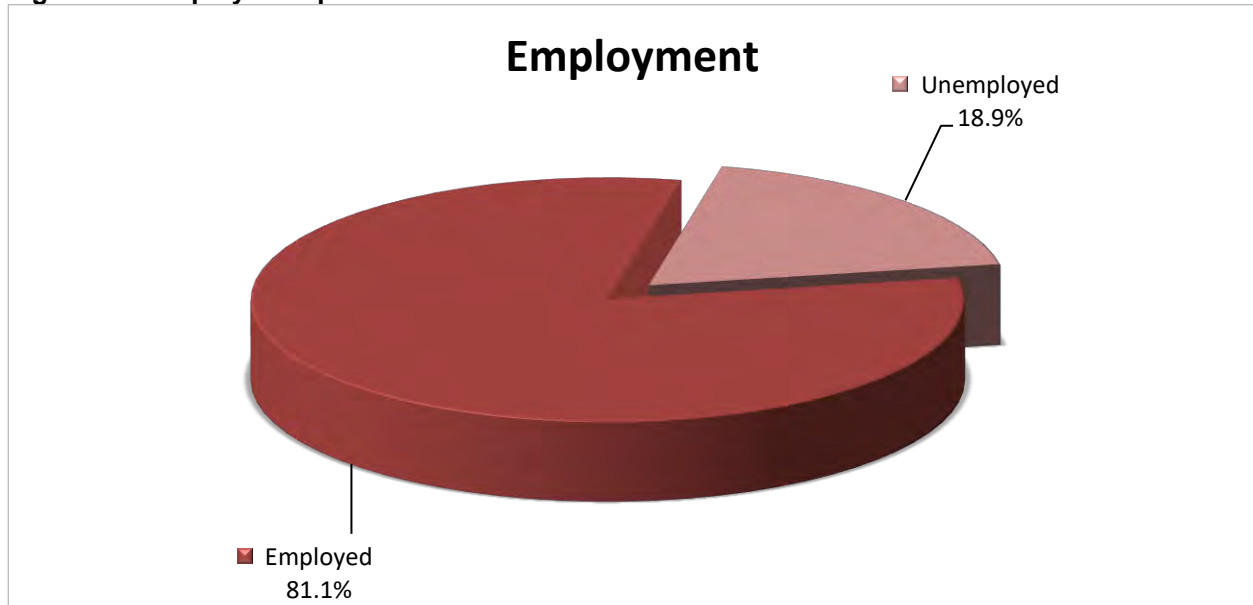
3.5 EMPLOYMENT PROFILE

Findings (Figure 3.3)

- ✓ The majority of the market population (67.1%) is economically active.
- ✓ Of the 67.1% of the population that are economically active **81.1% is employed** while 18.9% is unemployed.

The number of people not economically active increases the dependency ratios on those that do work and receive an income. This puts more pressure on breadwinners to support those who earn no income. The study area has a low level of unemployment compared to the national average of 25.2%.

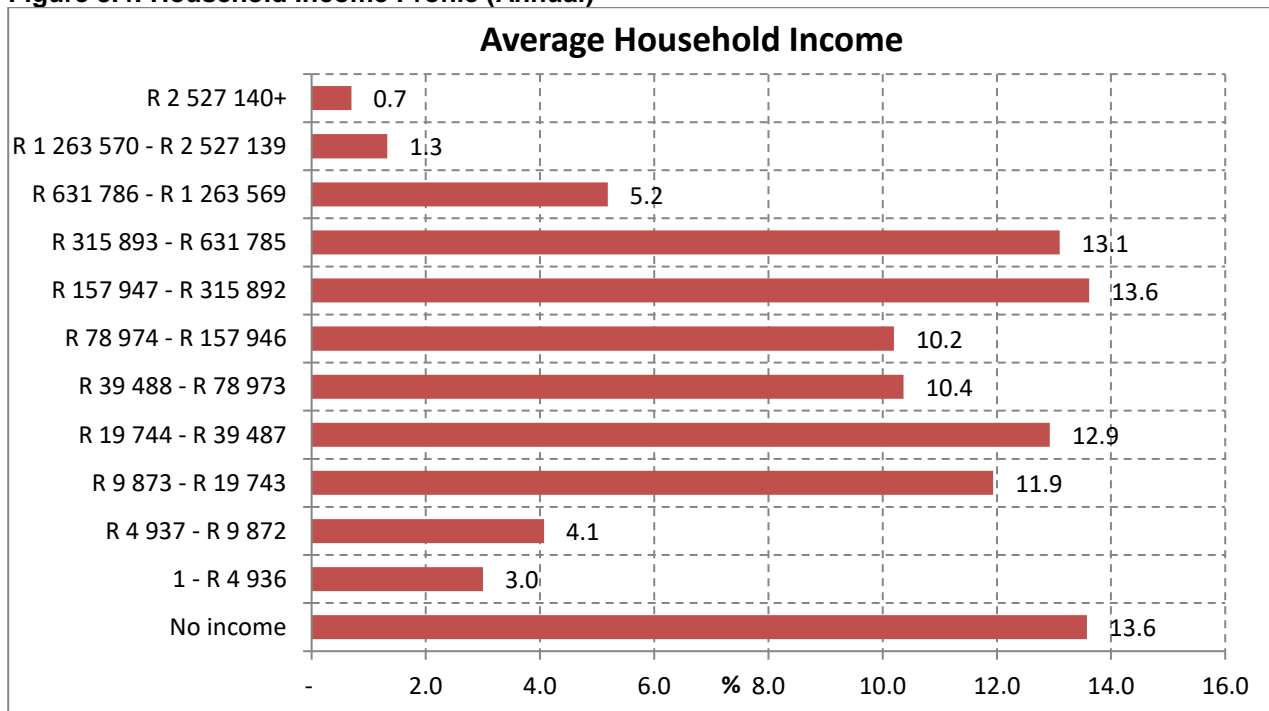
Figure 3.3: Employment profile



Source: Demacon ex Stats SA, 2015

3.6 HOUSEHOLD INCOME PROFILE

Figure 3.4: Household Income Profile (Annual)



Source: Demacon ex Stats SA, 2015

Findings (Figure 3.4)

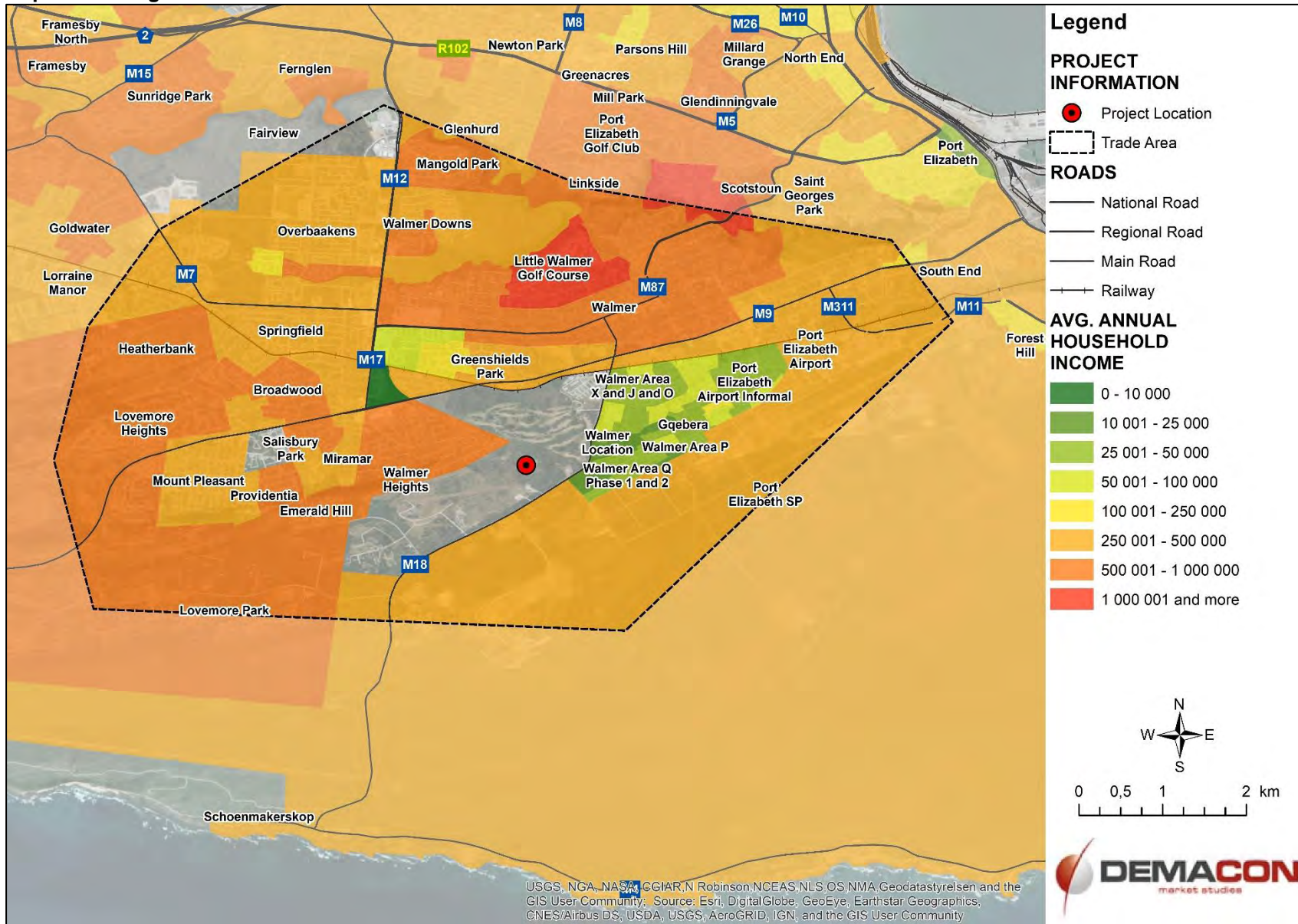
- ✓ A total of 13.6% earn no income at all.
- ✓ A total of 42.3% of households earn between R1 and R78 973 *per annum* or below R6 581 *per month*.
- ✓ 23.8% earn between R 78 974 and R315 892 *per annum*.
- ✓ A total of 20.3% earn more than R315 892 *per annum*.
- ✓ Average annual household income for **LSM 1-10+** (only the income earning households) is at **R253 554 per annum** or **R21 129 per month** (calculated for 2015).

- ✓ Average annual household income for **LSM 4-10+** is at **R382 829 per annum** or **R31 902 per month** (calculated for 2015).

This indicates that the study area is a predominately *middle to high income earning* community. Map 3.3 shows the average annual household income per sub-place for the surrounding areas.

The study area is characterised by high income households, while Gqebera is the only suburb that has low household income and does not seem in-line with income trends of the area.

Map 3.3: Average Annual Household Income



3.7 LIVING STANDARD MEASUREMENT

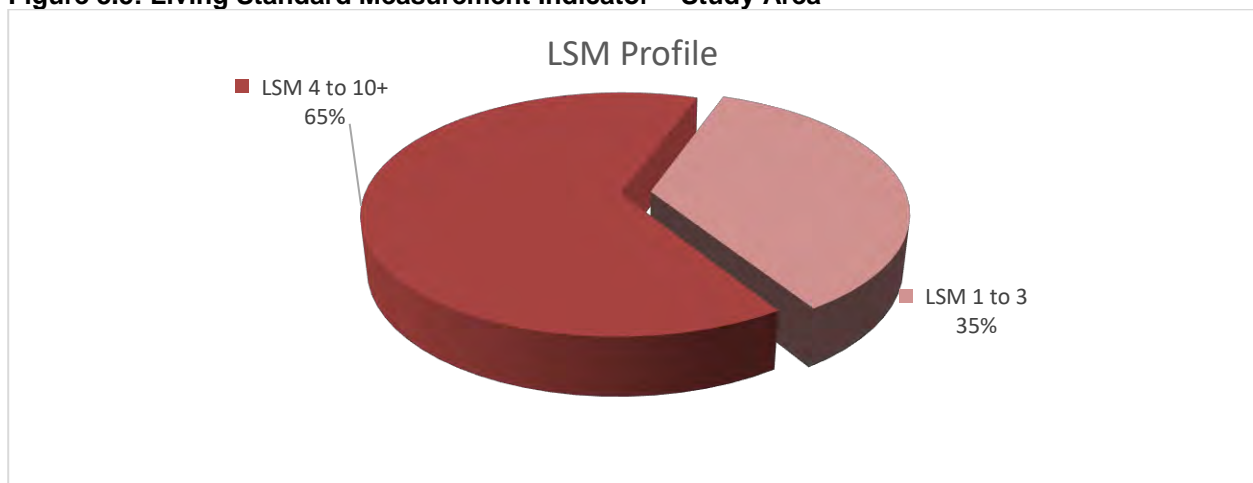
The LSM index is an internationally recognised instrument designed to profile a market in terms of a continuum of progressively more developed and sophisticated market segments. The LSM system is based on a set of marketing differentiators, which group consumers according to their standard of living, using criteria such as degree of urbanisation and ownership of assets (predominantly luxury goods). Essentially, the LSM system is a wealth measure based on standard of living, rather than income alone. The market segmentation continuum is divided into ten LSM segments, where LSM 1 signifies the lowest living standard and LSM 10+ signifies the highest living standard. The LSM categories are defined and weighted in terms of the following 29 variables (refer to Table 3.2). It is important to note that the LSM system is widely applied internationally for marketing and branding purposes, and that it is therefore not an instrument developed locally to label or stereotype certain market segments.

Table 3.2: Living Standard Measurement (LSM) Variables

1	Hot running water	16	Less than 2 radio sets/household
2	Fridge/freezer	17	Hi-Fi/music centre
3	Microwave oven	18	Rural outside
4	Flush toilet in/outside house	19	Built-in kitchen sink
5	No domestic in household	20	Home security service
6	VCR	21	Deep freezer
7	Vacuum cleaner/floor polisher	22	Water in home/plot
8	No cell phone in household	23	M-net/DSTV subscription
9	Traditional hut	24	Dishwasher
10	Washing machine	25	Electricity
11	PC in home	26	Sewing machine
12	Electric stove	27	DVD player
13	TV set	28	1 cell phone per household
14	Tumble dryer	29	Motor vehicle in household
15	Home telephone		

Figure 3.5 summarises the current status of the consumer market in terms of the LSM index. Essentially, the LSM index summarises the net result of market indicators discussed in preceding paragraphs. Map 3.4 shows the LSM type for the study area per sub-place.

Figure 3.5: Living Standard Measurement Indicator – Study Area

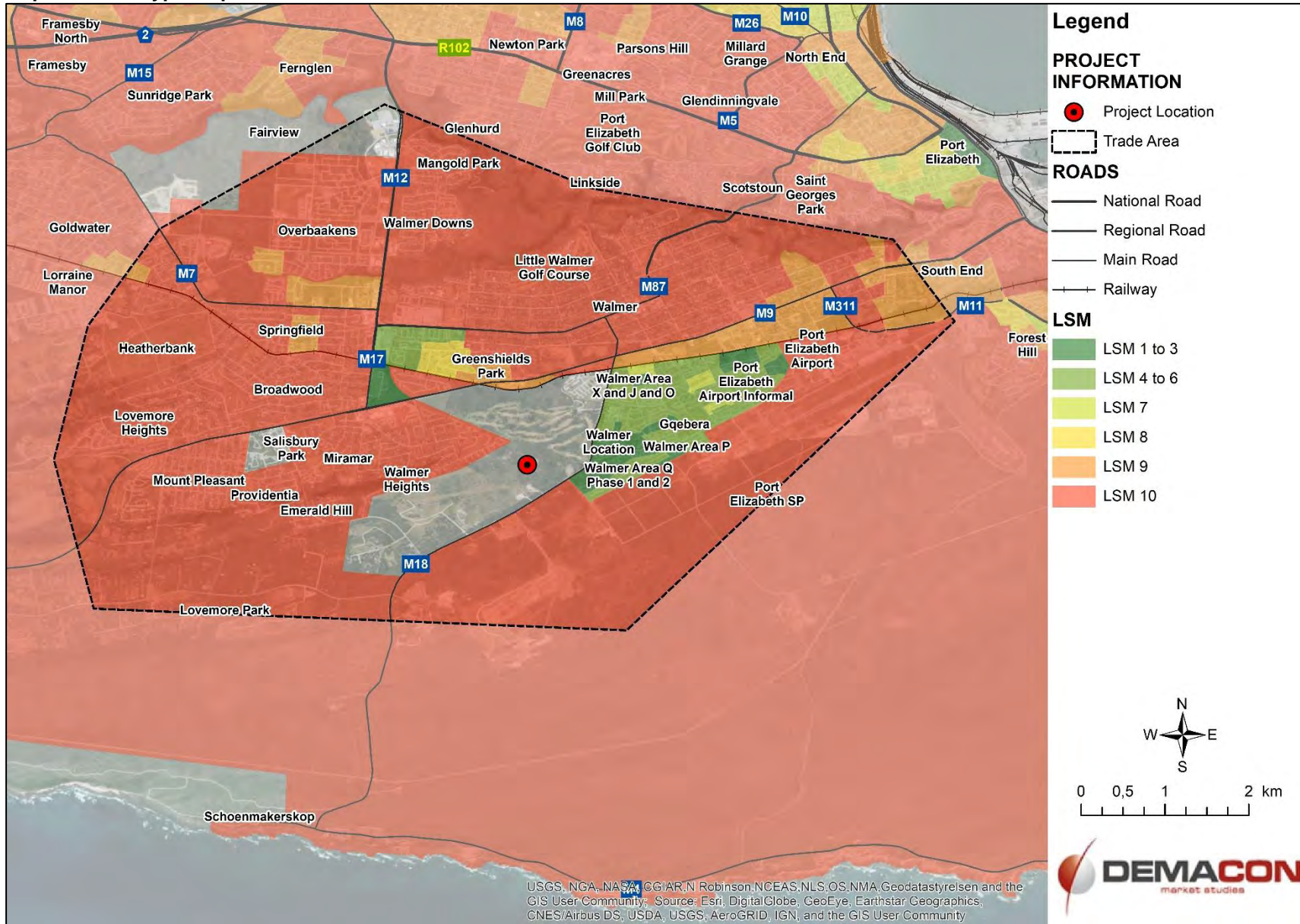


Source: Demacon calculations

Findings: (Figure 3.5)

- ✓ The majority (**64.5%**) of the market falls within **LSM 4 – 10+ grouping**.
- ✓ **LSM 1 – 3** amounts to **35.5%**.

Map 3.4: LSM Type Map

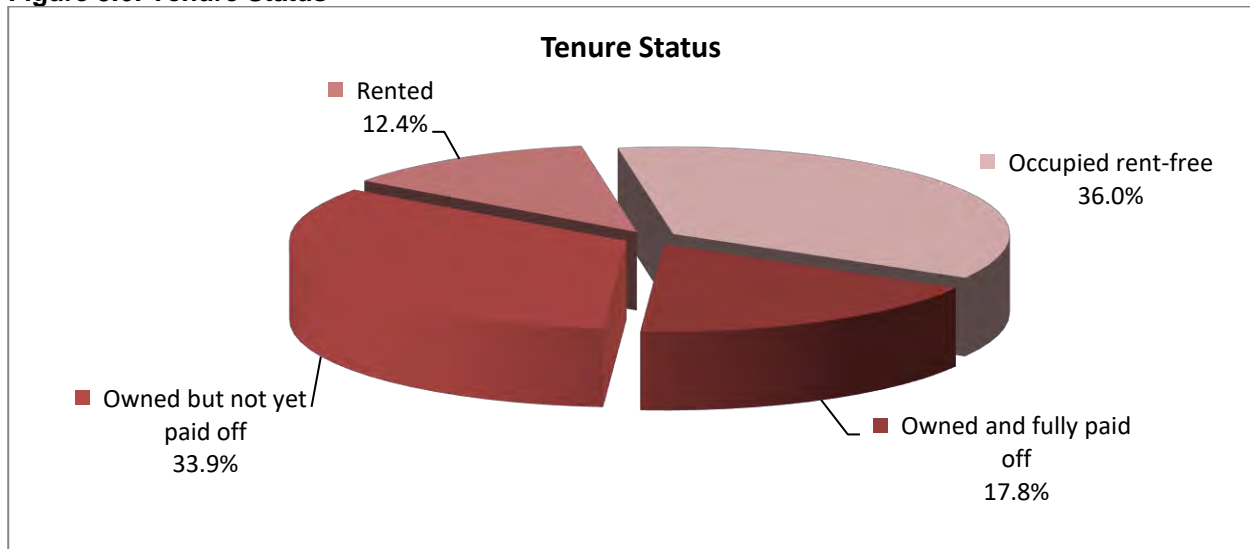


Development implications

The LSM levels are indicative of a predominantly high LSM levels. LSM 4 – 10 groups are characterized by ownership of durables, luxuries and some saving. LSM 1 – 3 predominantly only acquire basic goods and services as their living level is limited by their income.

3.8 TENURE STATUS

Figure 3.6: Tenure Status



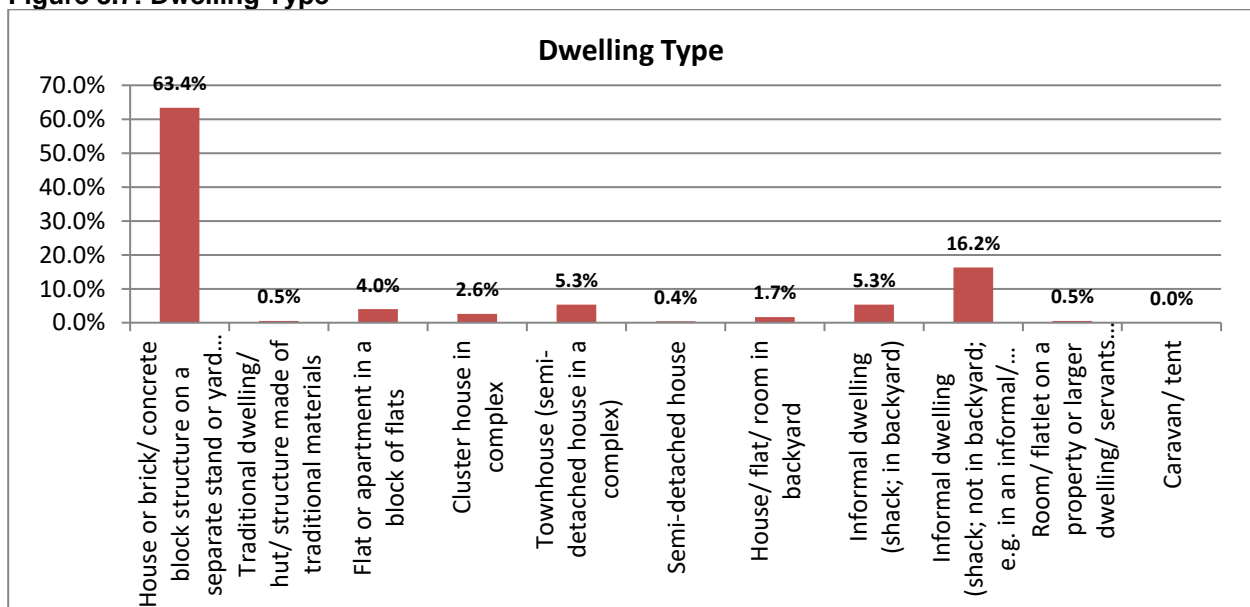
Source: Demacon ex Stats SA, 2015

Findings (Figure 3.6)

- ✓ The majority of the population occupy their homes rent free (36%).
- ✓ 33.9% own the home but is still paying the bond while 17.8% own and have fully paid off the home while 12.4% is renting.
- ✓ It is evident that the study area is characterised by home ownership with only a small number of households renting.

3.9 DWELLING TYPE

Figure 3.7: Dwelling Type



Source: Demacon ex Stats SA, 2015

Findings (Figure 3.7)

- ✓ 63.4% of households stay in a house or brick structure on a separate stand with 16.2% in an informal dwelling type.
- ✓ A total of 12.3% is in townhouses / flats.
- ✓ The informal dwellings is located in Gqebera, while the rest of the study area is characterised by formal houses and townhouses/flats.

3.10 SYNTHESIS

Table 3.3 illustrate the total number of people that resides in the study area.

Table 3.3: Socio-economic indicators for study area

Variable	Study Area		
Study Area Population (2015)	✓ 59 874 people		
	✓ 20 248 households		
Average household size (2015)	✓ 3 persons per household		
Age & Gender profile (2011)	Age	Female	Male
	0-19	29.5%	30.8%
	20-34	25.7%	26.6%
	35-64	36.2%	35.3%
	64+	8.6%	7.3%
Level of education (2011)	✓ 2.6% - No schooling		
	✓ 32.5% - Grade 12		
	✓ 25.1% - Higher education		
Level of employment (2011)	✓ 67.1% - Economically active of which 81.1% is employed and 18.9% is unemployed		
Weighted Average Annual Household income (2015) - All LSM (only income earning households)	✓ R253 554 <i>per annum</i>		
	✓ R21 129 <i>per month</i>		
Weighted Average Annual Household income (2015) - LSM 4-10+	✓ R382 829 <i>per annum</i>		
	✓ R31 902 <i>per month</i>		
LSM 1-3	✓ 35.5%		
LSM 4-10+	✓ 64.5%		
Dwelling Type	✓ 63.4% - House or brick structure		
	✓ 16.2% - Informal		
Tenure Status	✓ 36% - Occupy rent free		
	✓ 33.9% - Owned and not paid off		
	✓ 17.8% - Owned and paid		
	✓ 12.4% - Rent		

Source: Demacon ex Stats SA, 2015

The study areas is mostly a high income, highly educated, high employment area with low density dwellings, the exception is the Gqebera area that have low income, informal dwellings and high density.

4 CHAPTER 4: RESIDENTIAL MARKET ANALYSIS

4.1 INTRODUCTION

The aim of this chapter is to analyse the prevailing property trends in the market by means of sales price trends, sales activity and residential market demand.

The following aspects will be discussed in this chapter:

- Port Elizabeth Property Trends
- Walmer Heights Property Trends

4.2 PORT ELIZABETH PROPERTY TRENDS

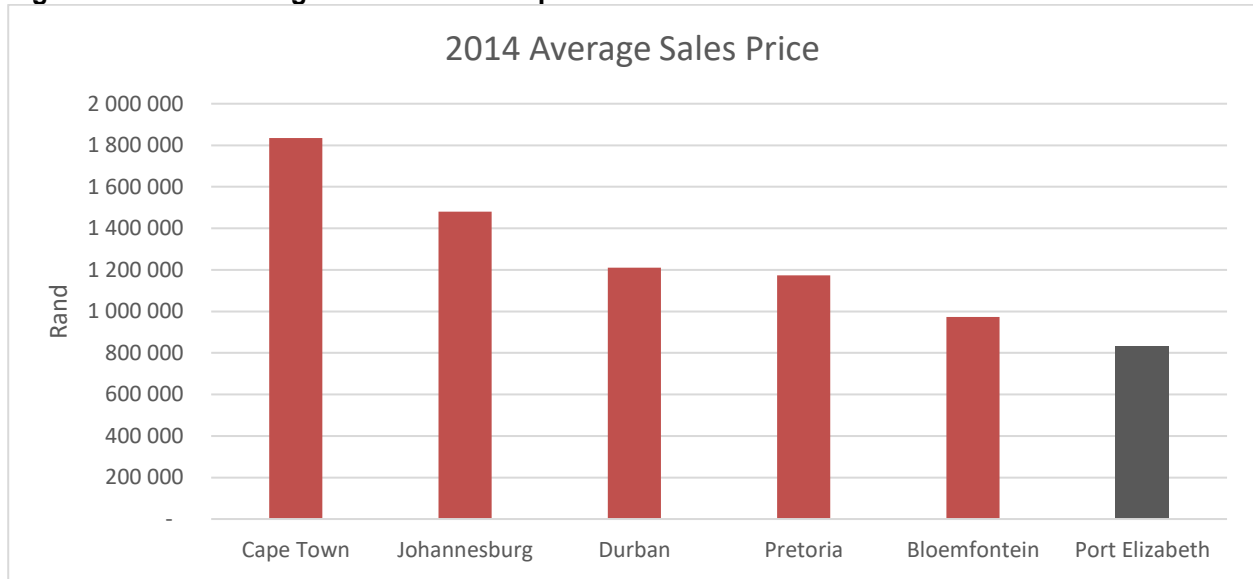
Map 4.1 shows the regions included in the Port Elizabeth (PE) property price trend analysis. These are the areas for which formal property data is available.

Map 4.1: Port Elizabeth Region



The metro has a lower average sales price when compared to other metros in South Africa as evident in Figure 4.1.

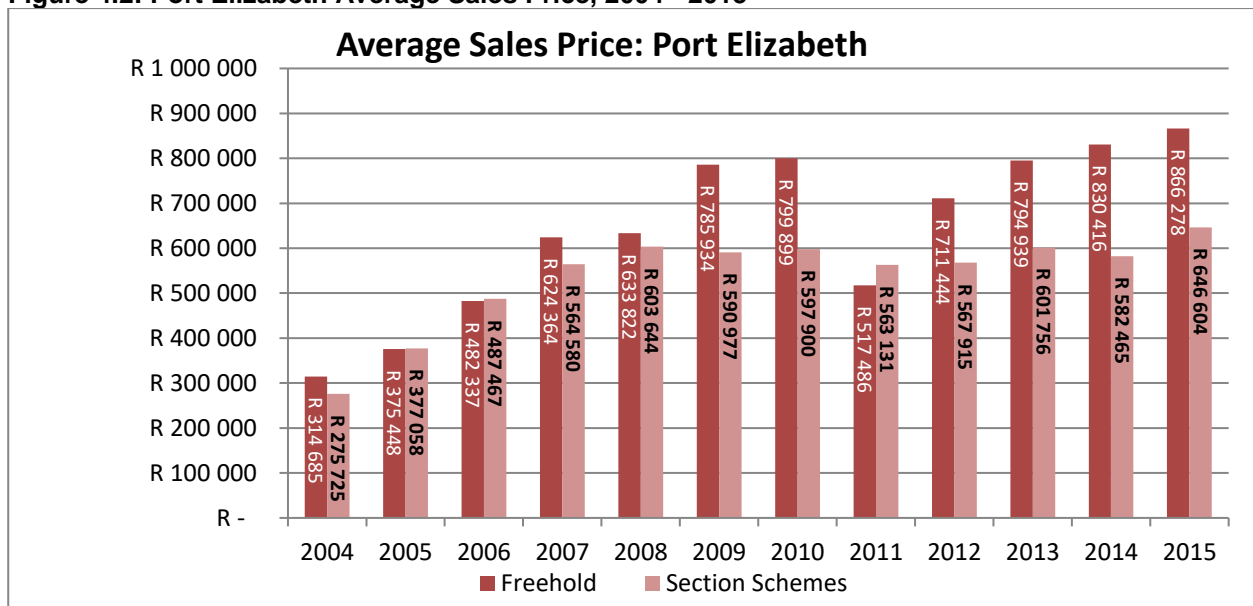
Figure 4.1: 2014 Average Sales Price Comparison



Source: Demacon ex. Deeds data, 2015

Figure 4.2 shows the average sales price for freehold and sectional schemes for the Port Elizabeth area between 2004 and 2015.

Figure 4.2: Port Elizabeth Average Sales Price, 2004 - 2015



Source: Demacon ex. Deeds data, 2015

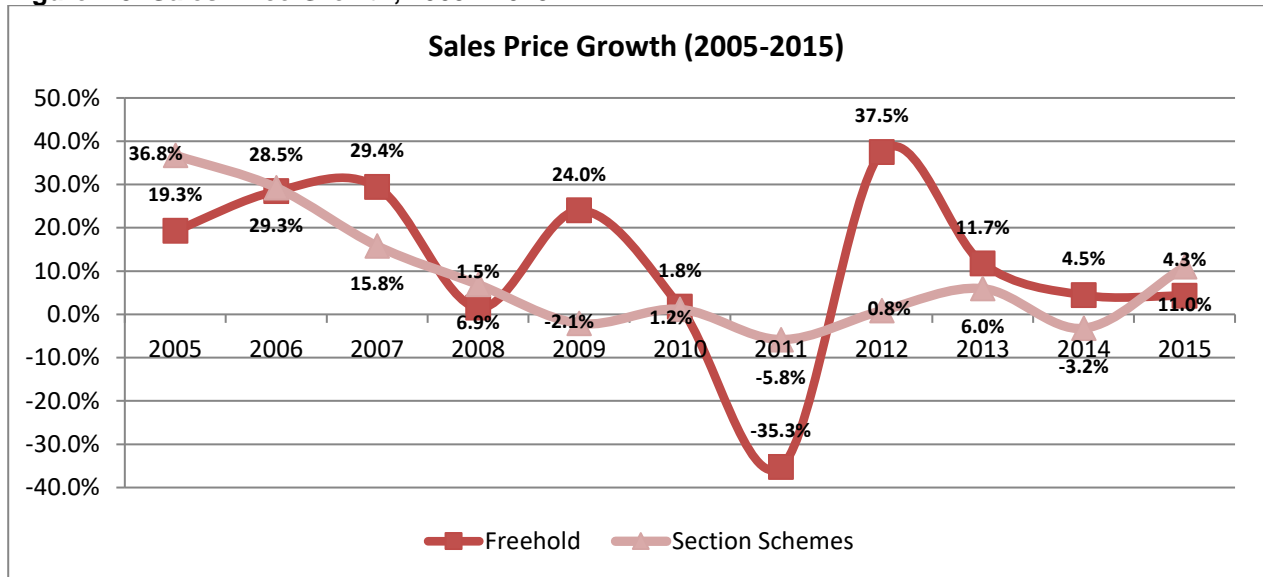
Figure 4.2 Findings

- The average sales price for freehold and sectional schemes in PE have increased significantly over the past decade.
- Between 2004 and 2008 the sales price of freehold and sectional schemes have been more or less the same.
- Since 2009 the sales price of freehold have been higher than the sectional schemes with the only exception being in 2011 where the opposite was evident.
- The graph shows two distinct period of growth in sales price for PE. The first period was between 2004 and 2010 where property prices for both freehold and sectional schemes more than doubled this was followed by a sharp decrease in 2011. The second period of growth was evident from 2012 to 2015 (current).

- The increase in sales prices since 2011 shows that property prices is only now above the price levels of 2009/2010.

The growth in the sales price is illustrated in Figure 4.3.

Figure 4.3: Sales Price Growth, 2005 - 2015



Source: Demacon ex. Deeds data, 2015

Figure 4.3 Findings

- Freehold had positive growth between 2005 and 2010 and then again from 2012 to 2015. It is evident that the only negative growth was during 2011 where a -35% growth changed the housing price landscape.
- Sectional schemes sales price growth has been more stable with relative low growth between 2008 and 2015.

The growth trends is illustrated in Table 4.1.

Table 4.1: Sales price growth

	Long Term (2005-2015)	(2005 - 2010)	(2010 - 2015)
Freehold	10.7%	20.5%	1.6%
Sectional Scheme	8.9%	16.7%	1.6%

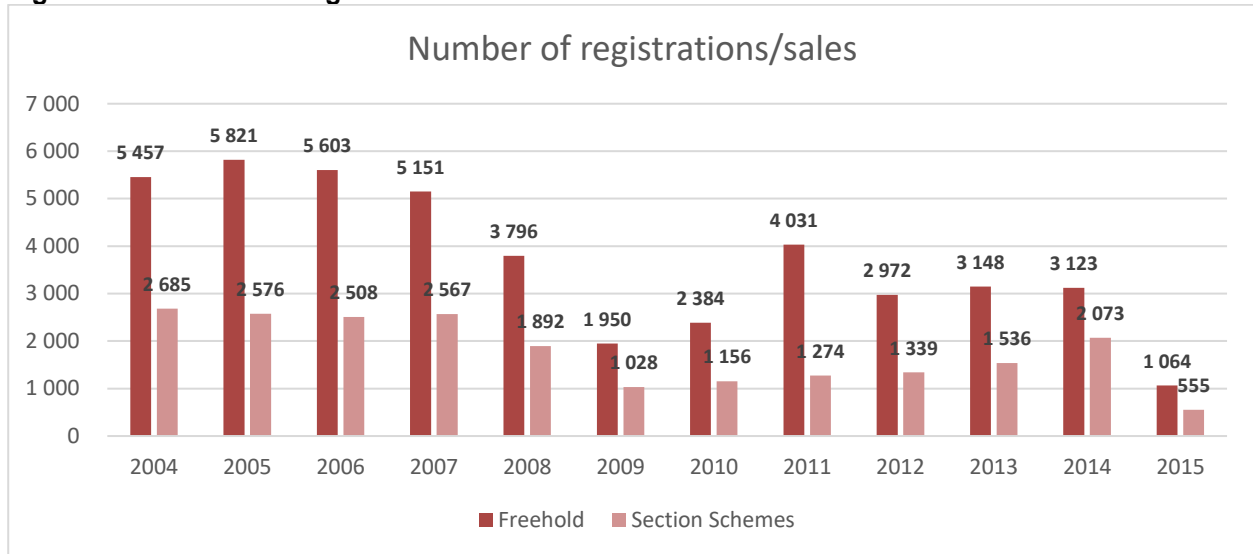
Source: Demacon ex. Deeds data, 2015

Table 4.1 Findings

- The long term growth for freehold properties between 2005 and 2015 was 10.7% while the sectional schemes was lower at 8.9%.
- The period between 2005 and 2010 shows an average growth of 20.5% for freehold while sectional schemes grew at 16.7%.
- The 2010/2011 decrease in prices was followed by a growth of 1.6% in both freehold and sectional schemes between 2010 and 2015.

The number of registrations/sales is shown in Figure 4.4.

Figure 4.4: Number of Registrations/sales until June 2015



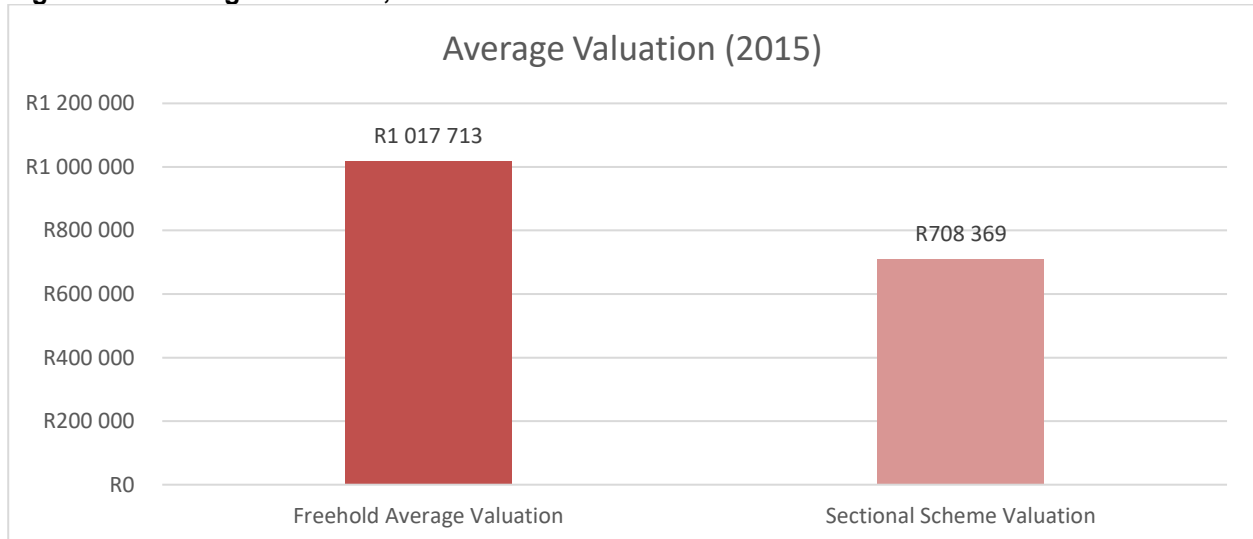
Source: Demacon ex. Deeds data, 2015

Figure 4.4 Findings

- Sales was highest between 2004 and 2007 with averages around 5 000+ for freehold and 2 500+ for sectional schemes *per annum*
- The number of sales has since 2008 decreased for both property types
- Freehold is still the largest segment in sales and comprises between 60% - 70% of sales.

The average valuation of properties in Port Elizabeth is estimated at R1 017 713 for freehold and R708 369 for sectional schemes in 2015 and illustrated in Figure 4.5.

Figure 4.5: Average Valuation, 2015



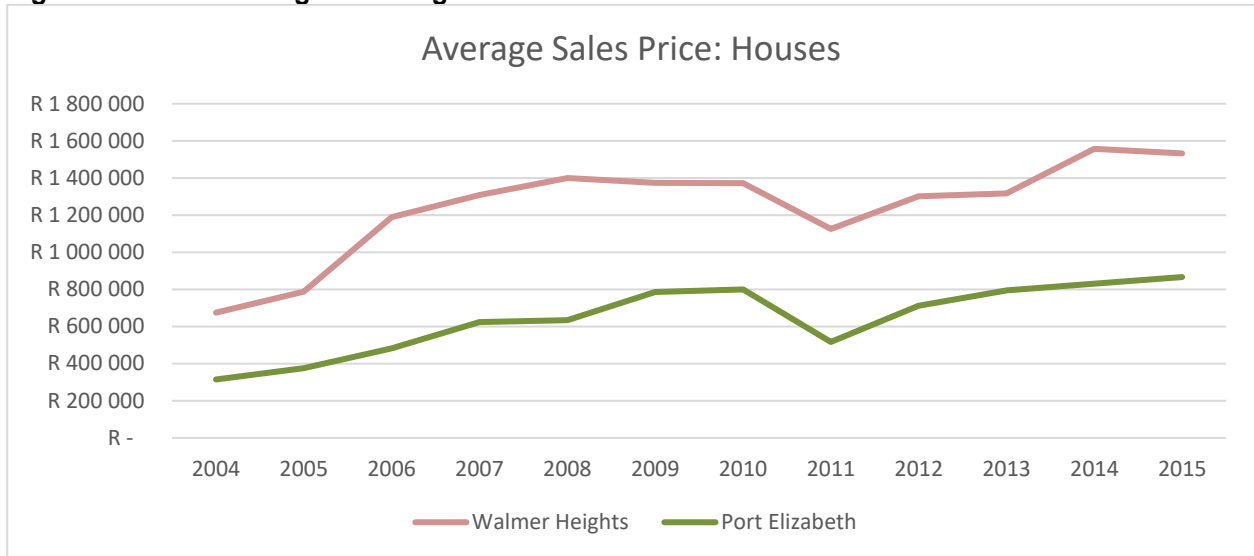
Source: Demacon ex. Deeds data, 2015

A detailed property analysis for Walmer Heights is provided below.

4.3 WALMER HEIGHTS PROPERTY TRENDS

Figure 4.6 illustrates the average sales price growth for houses in Walmer Heights and compares it to the average sales price of houses in Port Elizabeth.

Figure 4.6: Walmer Heights Average Sales Price: Houses



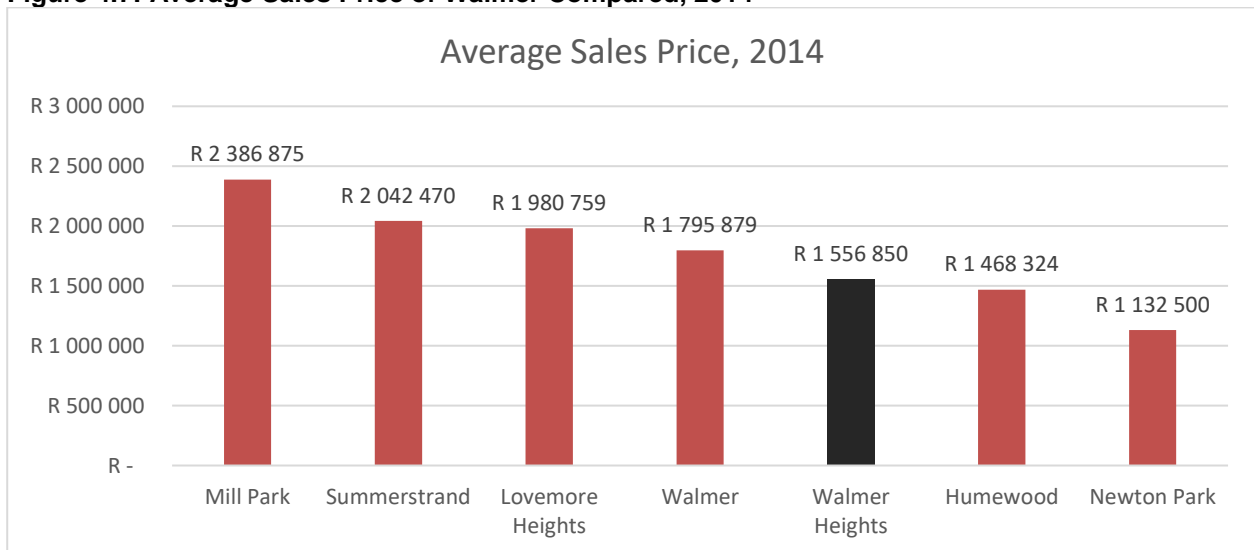
Source: Demacon ex. Deeds data, 2015

Figure 4.6 Findings

- ✓ The average sales price for houses is considerably higher in Walmer Heights when compared to Port Elizabeth.
 - 2004 average sales price:
 - Walmer Heights – R674 729
 - PE – R314 658
 - 2015 average sales price:
 - Walmer Heights – R1 532 273
 - PE – R866 278
- ✓ Sales prices of Walmer Heights correlates with that of Port Elizabeth. It is evident that sales prices have increased and doubled compared to 2004

The average sales price of Walmer Heights is compared to other suburbs within Port Elizabeth as illustrated in Figure 4.7. The proposed development is in the vicinity of the identified suburbs and in calculating pricing effect, which will be more pronounced in the immediate environment, it is required to consider pricing activity in the immediate surrounding area as this is where the brunt of property price impacts will be felt. Walmer Heights is one of the highest selling suburbs within Port Elizabeth.

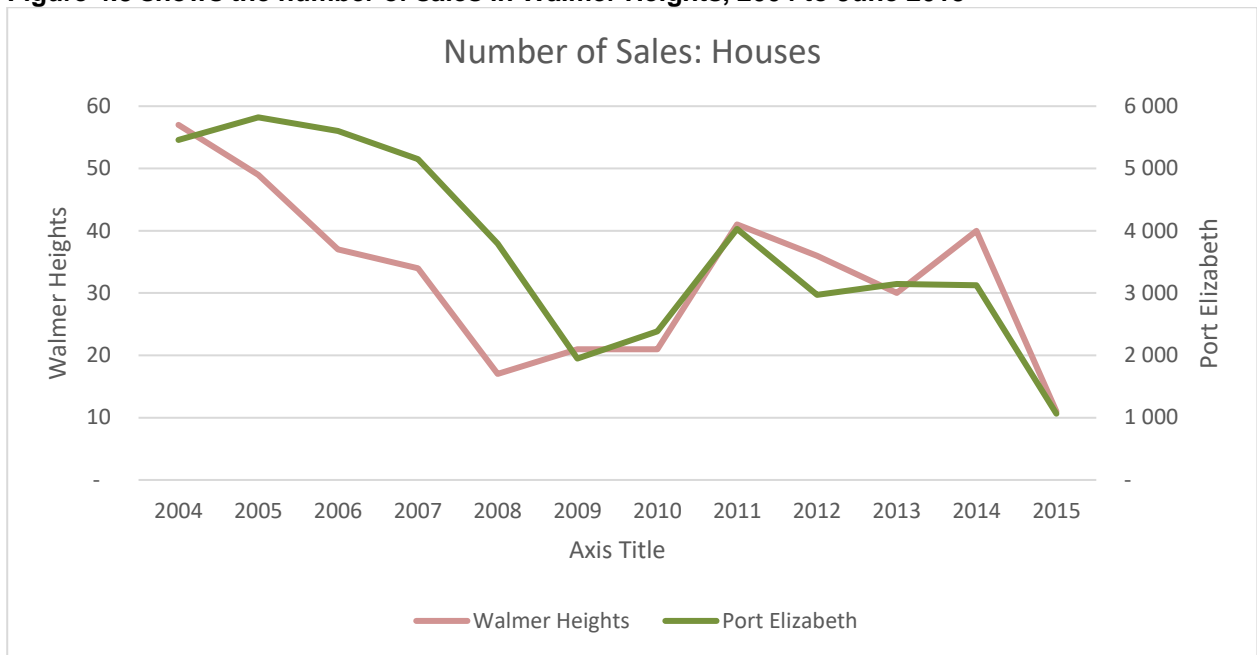
Figure 4.7: Average Sales Price of Walmer Compared, 2014



Source: Demacon ex. Deeds data, 2015

Figure 4.8 shows the number of sales for Walmer Heights between 2004 and 2015.

Figure 4.8 shows the number of sales in Walmer Heights, 2004 to June 2015



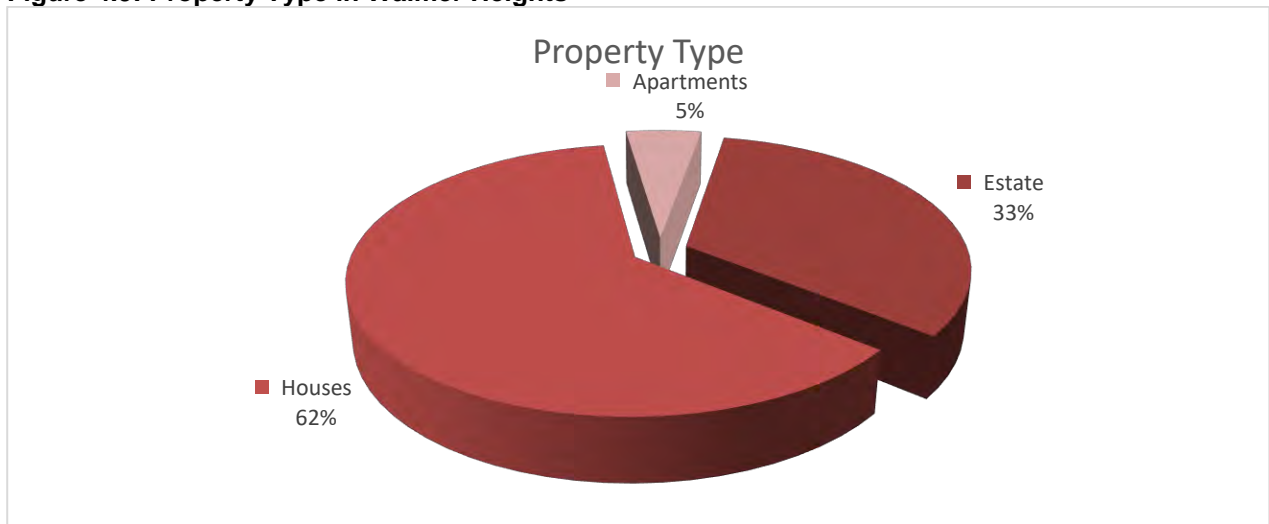
Source: Demacon ex. Deeds data, 2015

Figure 4.8 Findings

- ✓ The number of sales was highest in 2004 just below 60 properties.
- ✓ Between 2009 and 2015 the sales volume of Walmer Heights correlates with Port Elizabeth

The property types in Walmer Heights is illustrated in Figure 4.9.

Figure 4.9: Property Type in Walmer Heights



Source: Demacon ex. Deeds data, 2015

Figure 4.9 Findings

- The suburb is characterised by low density houses and estates with only a small number of apartments

The growth trend is illustrated in Table 4.2.

Table 4.2: Walmer Heights Sales price growth

	Long Term (2005-2015)	(2005 - 2010)	(2011 - 2015)
Freehold	8.5%	15.3%	6.4%
Sectional Scheme	5.3%	3.7%	6.8%

Source: Demacon ex. Deeds data, 2015

Table 4.2 Findings

- The long term growth for freehold properties between 2005 and 2015 was 8.5% while the sectional schemes was lower at 5.3%.
- The period between 2005 and 2010 shows an average growth of 15.3% for freehold while sectional schemes grew at 3.7%.
- The 2010 decrease in prices was followed by a growth of 6.4% in freehold and 7.3% in sectional schemes between 2011 and 2015.

4.4 SYNTHESIS

The sales price in Port Elizabeth has experienced two periods of growth in the freehold market. The first period was from 2005 to 2010 where growth averaged 20.5% *per annum* and the second period was from 2011 to 2015 with a growth rate of 13.7%. A significant decrease in average sales price was evident in 2011.

It is evident that Walmer Heights is one of the high-income suburbs in Port Elizabeth with an average sales price of R1.5 million (2014/2015) for freehold properties. The suburb is characterised as a mainly low-density, high-income suburb with freehold and estate properties.

5

CHAPTER 5: CASE STUDY ANALYSIS

5.1 INTRODUCTION

A case study analysis is provided to determine if the development of a lower value property product will have an impact on existing property price trends for a middle to high income suburb. This analysis makes use of a number of case studies throughout South Africa on developments over the past decade, in particular where lower income properties were developed adjacent or near middle to higher income properties. The assessment considers historical price trends and the result (pre- and post- implementation) of the low income project.

The case study analysis was conducted for three areas namely;

1. Birch Acres (Kempton Park),
2. Birchleigh North (Kempton Park)
3. Fleurhof (Roodepoort).

In the case of Birch Acres and Fleurhof an integrated housing project including subsidy, social and FLISP (affordable units) properties was introduced within the existing suburb while in Birchleigh North, a subsidy product was developed adjacent to the suburb.

Main findings:

- It is clear for the case study analysis that the initiation (pre-construction) of the low-cost development led to increased sales volumes.
- Once the construction is completed and the houses is visible the number of sales in the adjacent area decreases.
- The construction of the low income housing has had an immediate impact on price and sales growth for the adjacent suburb.
- Sales price growth after the project integration was only 2% for the existing suburb.
- Long-term growth for the adjacent suburb is below that of the greater region, which implies that property values does not increase with the same value as the aggregate economy.
- The existing price trends of the adjacent suburbs plays a role in the ease of integrating the FLISP/social housing development with the local market. Lower priced suburbs shows better integration with FLISP housing developments than a high-income suburb would and a price differential ratio is evident.
- The layout and product offering of the FLISP/social project have an impact on the property market price and sales of the adjacent (existing) market.

BIRCH ACRES (EKURHULENI)

2002



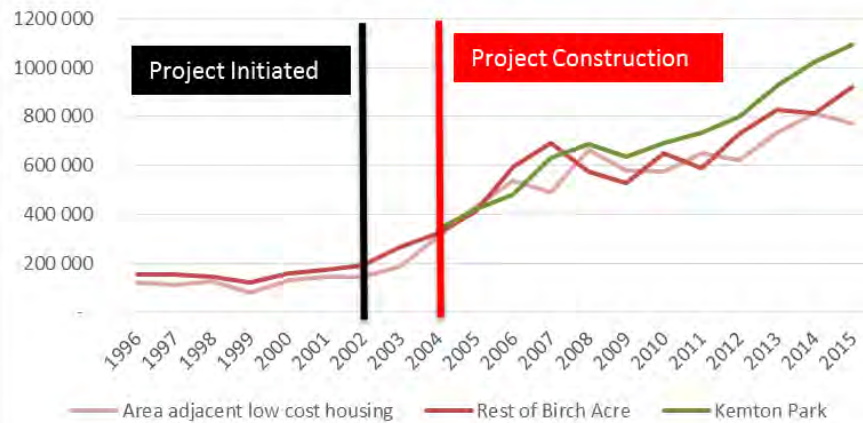
2004/2005



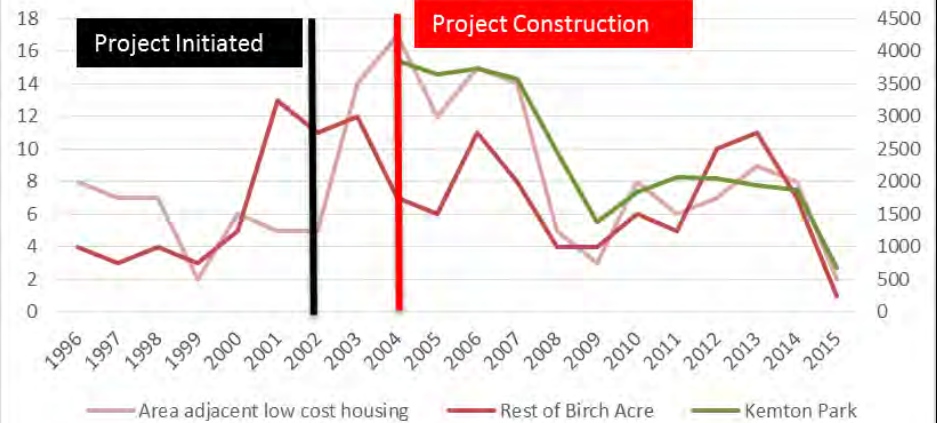
2015



Sales Price Compared



Number of Sales Compared



Average Sales Price

	Buffer Area	Rest of Birch Acres	Kemton Park
2004	R306 588	R323 857	R336 165
2014	R811 938	R812 857	R1 024 881

- The sales price for the buffer area (the area between Birch Acres and Kempton Park) was lower than the rest of the suburb up to 2004.
- Between 2003 and 2006 both areas showed high growth which compares to the national property value growth rate.

- In the lead up to the FLISP development (1999 – 2002) there were more property sales in the rest of the suburb compared to the buffer area. A decrease in sales volumes is evident from 2004.

- In 2004 and 2005 the sales price of the areas was in line with that of Kempton Park
- By the time (2006/2007) the link between the existing suburb and the FLISP development was made, the sales price of the buffer area was below that of the rest of the suburb and of Kempton Park.
- From 2008, the sales price of the buffer area and of Birch Acres were below the average sales price of Kempton Park.

- The buffer area showed increased sales by 2002 up to 2004, the period just as development was starting to edge closer to the existing suburb. By 2004 property sales was at a high for the buffer area
- In 2005 sales volumes decreased in the buffer area and in the rest of the Birch Acres suburb and a similar trend is evident in Kempton Park with a slight decrease in sales volumes
- The trend line for the area follows that of Kempton Park



- The average sales price of South Africa was constant and positive for most of the period illustrated above

General Comments

- The surrounding area price trends plays a role in the ease of integration of the FLISP/social housing development with the local market
- The layout and product offering of the FLISP/social project have an impact on the property market price and sales of the adjacent (existing) market
- In 2005 the price ration between the FLISP houses and the buffer area houses was at 22%. This means that the FLISP property price was 22% the value of the Birch Acres buffer area house prices

- By 2011 the average sales price of the FLISP houses was at 75% of the buffer area sales price.
- The buffer area, Birch Acres and the FLISP houses have increased in value/sales price since the integration in 2004/2005 although the increase in property prices is lower than the Kempton Park average since 2007
- Sales price in the Birch Acre area was in line with the average of Kempton Park, but since 2007 has had a lower sales price increase

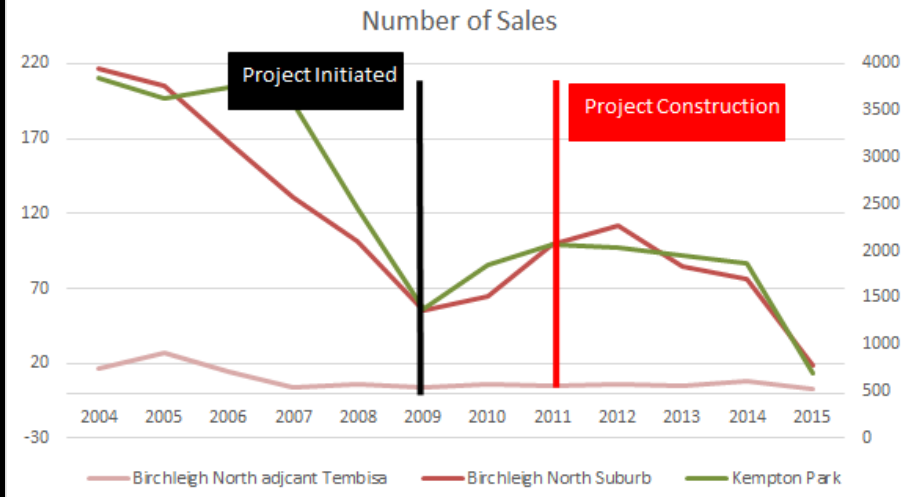
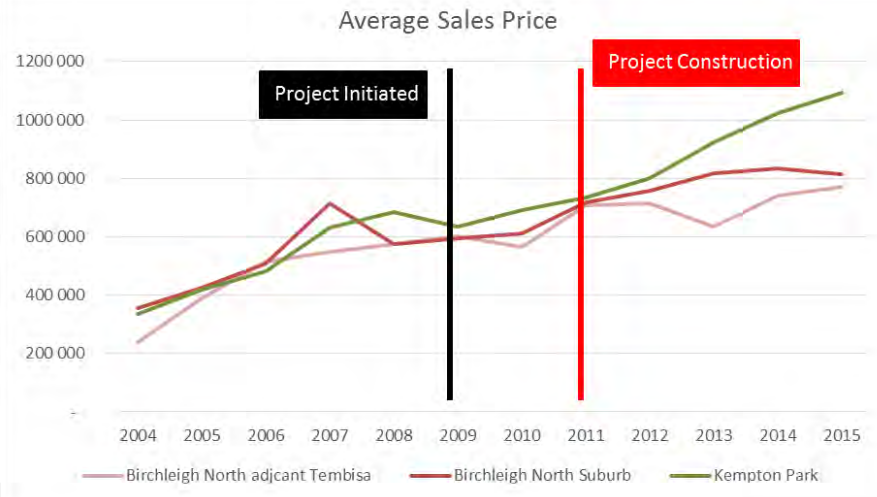
- The number of sales increased significantly prior to the integration of the areas
- It is evident from the analysis that the product offering or value of the FLISP houses to the north of Birch Acres was in line with the suburb house offering and as such limited the impact on market prices in the buffer area.
- House price growth is however slower compared to the rest of Kempton Park

Implications:

1. Increase in sales when the project is initiated

2. Once the construction is completed and the FLISP houses is visible the number of sales in the adjacent area decreases
3. Sales price of properties do increase, but at a slower rate than the adjacent, non-affected suburbs. The sales price increased by 10.2% between 2004 and 2014 in the buffer area while the Kempton Park area experienced growth at 11.8%

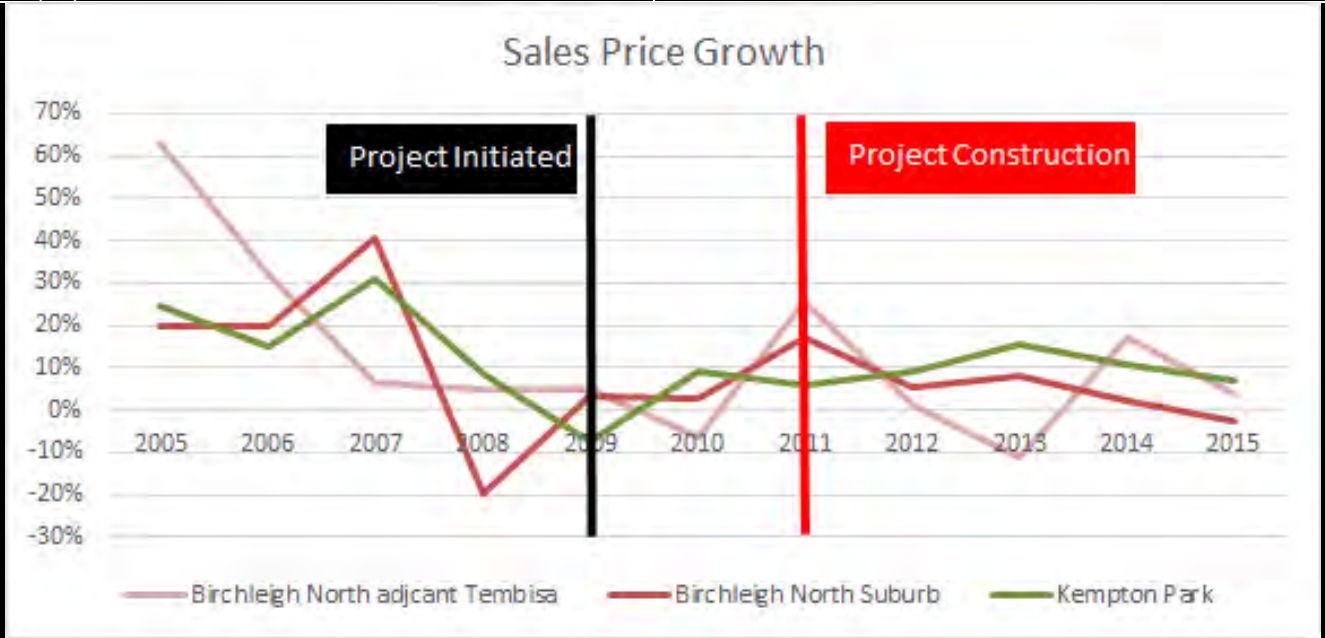
BIRCHLEIGH NORTH (EKURHULENI)



Average Sales Price

	Birchleigh North adjacent Tembisa	Rest of Birchleigh North	Kempton Park
2004	R238 782	R356 750	R418 886

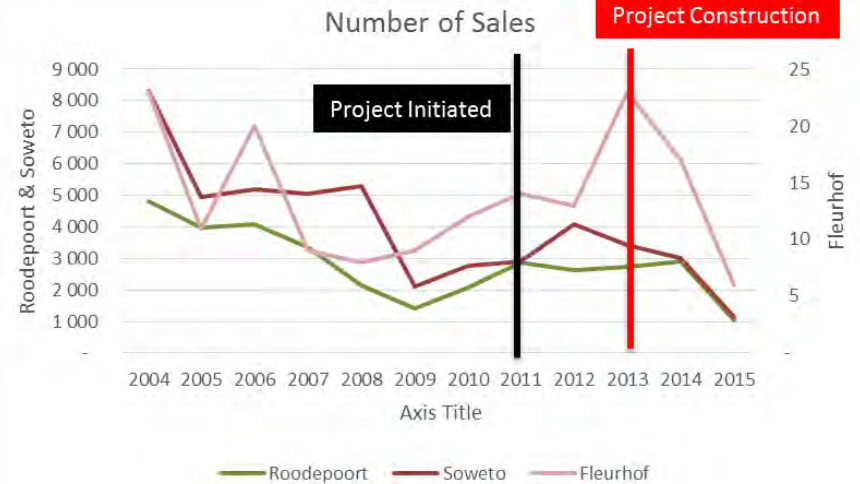
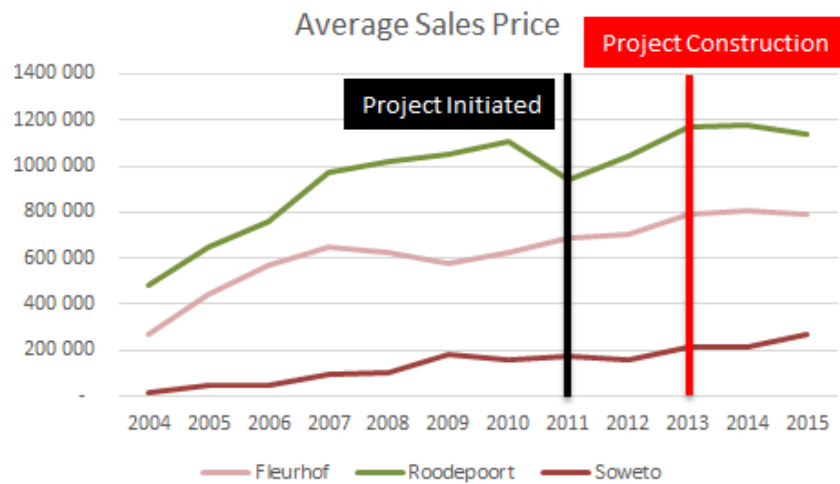
2014	R742 500	R835 099	R1 024 881
<ul style="list-style-type: none"> Up to 2007 Birchleigh North sales price was in-line with the Kempton Park sales price while the northern part of the suburb (the portion closest to Tembisa) was somewhat lower. Since 2008 (just before the development of the low income houses north of the suburb) the sales price of properties had decreased which is not correlating with the trends in Kempton Park. This illustrates an impact on prices due to possibly the development of the low income houses adjacent to the suburb. The area of the suburb adjacent the low income houses have on 2 occasions showed no to very little sales price growth (which is not in line with the price trends of Kempton Park). These include the 2008-2010 period in which the project was initiated and again in 2011/2012 when the low income housing project was constructed Since 2011 the area adjacent the low income housing development has had no to very low sales price growth while Kempton Park has significant increase in the sales price of properties 		<ul style="list-style-type: none"> The sales trends show that the area adjacent the low income housing has had low sales volumes since 2007 The Birchleigh North suburb follows the same trend as Kempton Park 	



- The area of Birchleigh North adjacent Tembisa has since 2009 shown mixed growth in property sales price. It is evident that once the low income housing project was initiated in 2009 the suburb, for the first time, had negative sales growth

<p>General Comments</p> <ul style="list-style-type: none"> • The new houses developed to the north of Birchleigh North is subsidy/RDP houses • The value of the low income houses is far below that of the properties situated in Birchleigh North • Average property values In Birchleigh North in 2009 was R600 000, in line with the rest of the suburb and Kempton Park. The value of the low income houses far below the 20% price ratio of the R600 000 property price for Birchleigh North 	<ul style="list-style-type: none"> • The area adjacent the low income housing development have experienced limited growth in sales price. • Since the low income project was initiated (2009) the sale price growth for the adjacent area was a low 4.3% and 7.1% for the rest of Birchleigh North while, Kempton Park was at 10.1%. • Once construction took place the price growth decreased to 2.1% per annum for the adjacent properties. 	<ul style="list-style-type: none"> • The average sales price of Birchleigh North was above that of Kempton Park up to 2007. Since then the sales price of the Birchleigh North area as well as the area adjacent the low income development have been below the Kempton Park average • The number of sales have been very low in the area adjacent the low income housing development
<p>Implications:</p> <ol style="list-style-type: none"> 1. The area adjacent Tembisa has had lower sales price growth compared to the rest of the Birchleigh North suburb – this illustrates that location aspects are significant contributors to the appeal and the price of properties 2. The construction of the low income housing has had an immediate impact on price and sales growth for the adjacent suburb 3. Long-term growth for the adjacent suburb is below that of the region, which implies that property values does not increase with the same value as the aggregate economy 		





Average Sales Price

	Fleurhof	Roodepoort	Soweto
2004	R271 522	R483 886	R17 717
2014	R809 118	R1 176 001	R217 192

- The average sales price in 2004 for Fleurdal was R 271 522 which is below Roodepoort but significantly higher than the sales price of Soweto
- The average sales price for Fleurhof correlates with Roodepoort
- The Fleurhof integrated housing development was initiated in 2011 with construction to the west of the Fleurhof suburb. By 2013 construction took place on the open space adjacent the suburb.
- In 2011 when the integrated project was initiated sales prices stayed constant over the short term
- In 2013 when construction took place adjacent Fleurhof the sales prices have been flat up to 2015

- Sales for Fleurhof reached a high of 22 in 2013, this is also the year in which the construction of the integrated housing development was evident adjacent the suburb
- There is a clear increase in sales in the years prior to the integrated housing development. This significant increase in sales is not a trend that is evident in Roodepoort or Soweto for the corresponding period.
- In 2014 and the first half of 2015 have experienced a significant decrease in the number of sales



- The sales price growth for Fleurhof over a 10 year period between 2004 and 2014 averages 11.5% and is above that of Roodepoort (9.3%)
- The short term growth between 2011 and 2014 is at 1.6% while Roodepoort is at 2.2%

General Comments

- In 2011, when the integrated housing project was initiated near Fleurhof the average house price was at R687 571 and well above the highest valued property that forms part of the integrated development (R250 000)
- By 2013, when construction started adjacent Fleurhof the average sales price in Fleurhof was R787 977 and the average free hold property in the integrated development was R260 000

- This represent a price ration between the existing market and the new market of 33%
- Sales trends is in line with other case study area and a significant increase in sales is evident prior the construction of the integrated development
- The number of sales decreases once construction takes place
- Sales prices have stayed constant once the integrated development was constructed sales price increase of only 1.6% over a 3 year period.

- There is a clear increase in sales in the years prior to the integrated housing development and this is not a trend that is evident in Roodepoort or Soweto for the corresponding period. This implies that the development of the Fleufhof integrated housing development did have an impact on sales volumes prior to and during the construction period

Implications:

1. Significant sales prior to the construction of the development can be expected
2. Once construction starts the number and volume of sales will decrease
3. Average sales price growth will be low and moderate at best

6

CHAPTER 6: IMPACT ASSESSMENT

6.1 INTRODUCTION

The aim of this chapter is to provide an economic impact assessment by applying the findings of the preceding chapters. This chapter is divided into the following topics:

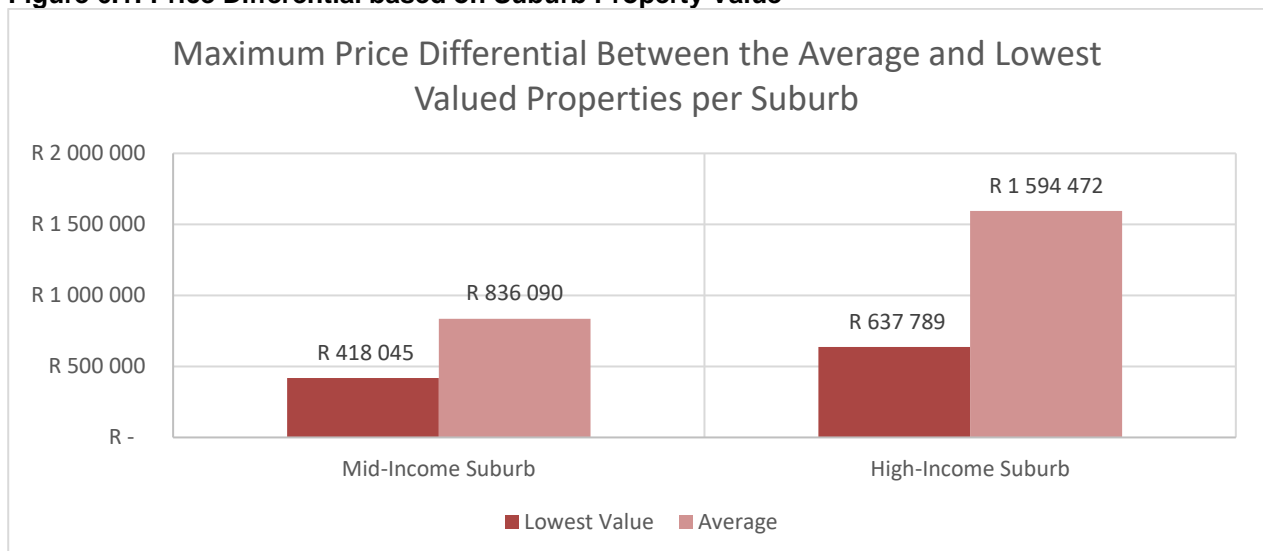
- Price differential
- Rates & taxes
- Residential market demand
- Mitigation

6.2 PRICE DIFFERENTIAL

The price differential analysis is used to firstly determine the optimum, open market price distribution price of properties within a suburb. Secondly, it is used as a guideline to identify the impact of the affordable housing development on property prices in Walmer Heights.

- Price differential analysis in **middle to high-income suburbs**, such as Walmer Heights, Summerstand, etc. indicate that the lowest house price value should not be **more than 60%** below the average house price value of the suburb. The average house price for these high income suburbs is starting at R1.3 million and above.
- The price differential for **mid-income suburbs**, where the average house price is at around R800 000, is at most 50% lower than the average. Figure 6.2 illustrates the maximum lowest house price value based on analysis of current property prices for mid-income and high-income suburbs.

Figure 6.1: Price Differential based on Suburb Property Value



Source: Demacon ex. Deeds data, 2015

The lowest values are characterised by higher density (townhouses/flats) residential units in these suburbs.

The price differential for Walmer Heights is illustrated in in Table 6.1

Table 6.1: Walmer Heights Price Differential, 2013 - 2015

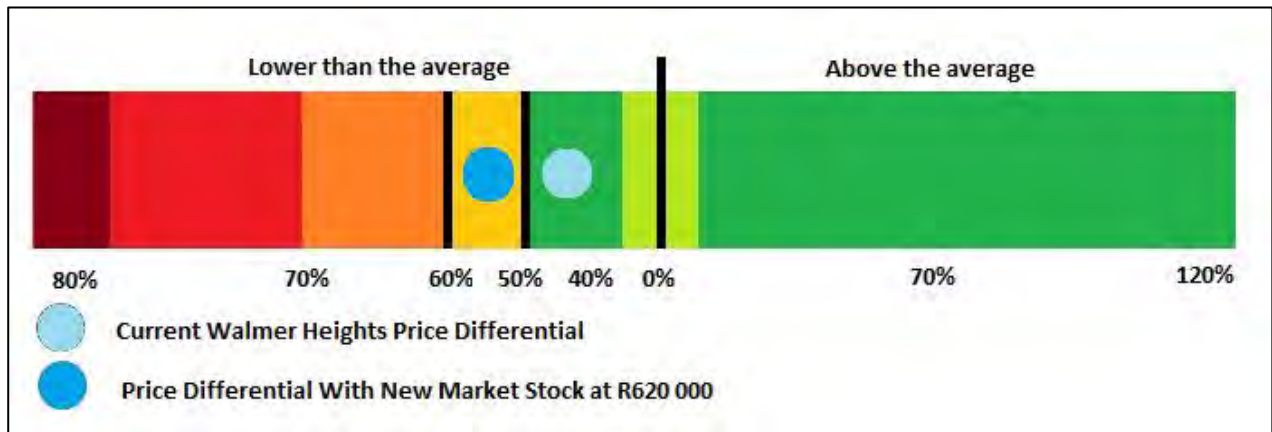
	Lowest	Average	Highest	Price Differential (below the average)	Price Ratio (higher than average)
2013	769 000	1 317 300	2 100 000	42%	59.4%
2014	800 000	1 556 850	2 775 000	49%	78.2%
2015	950 000	1 532 273	2 400 000	38%	56.6%

Source: Demacon ex. Deeds data, 2015

Table 6.1 shows that the Walmer Heights area has a current price differential between 40%-50% below the average sales price.

The following graph illustrates the price differential for suburbs with an average house sales price of approximately R1.5 million. The graph shows that current price differential for values lowest than the average is between 50% and 60% without influencing price trends. A price differential that goes beyond the 60% ratio for high income suburbs will impact sales price trends.

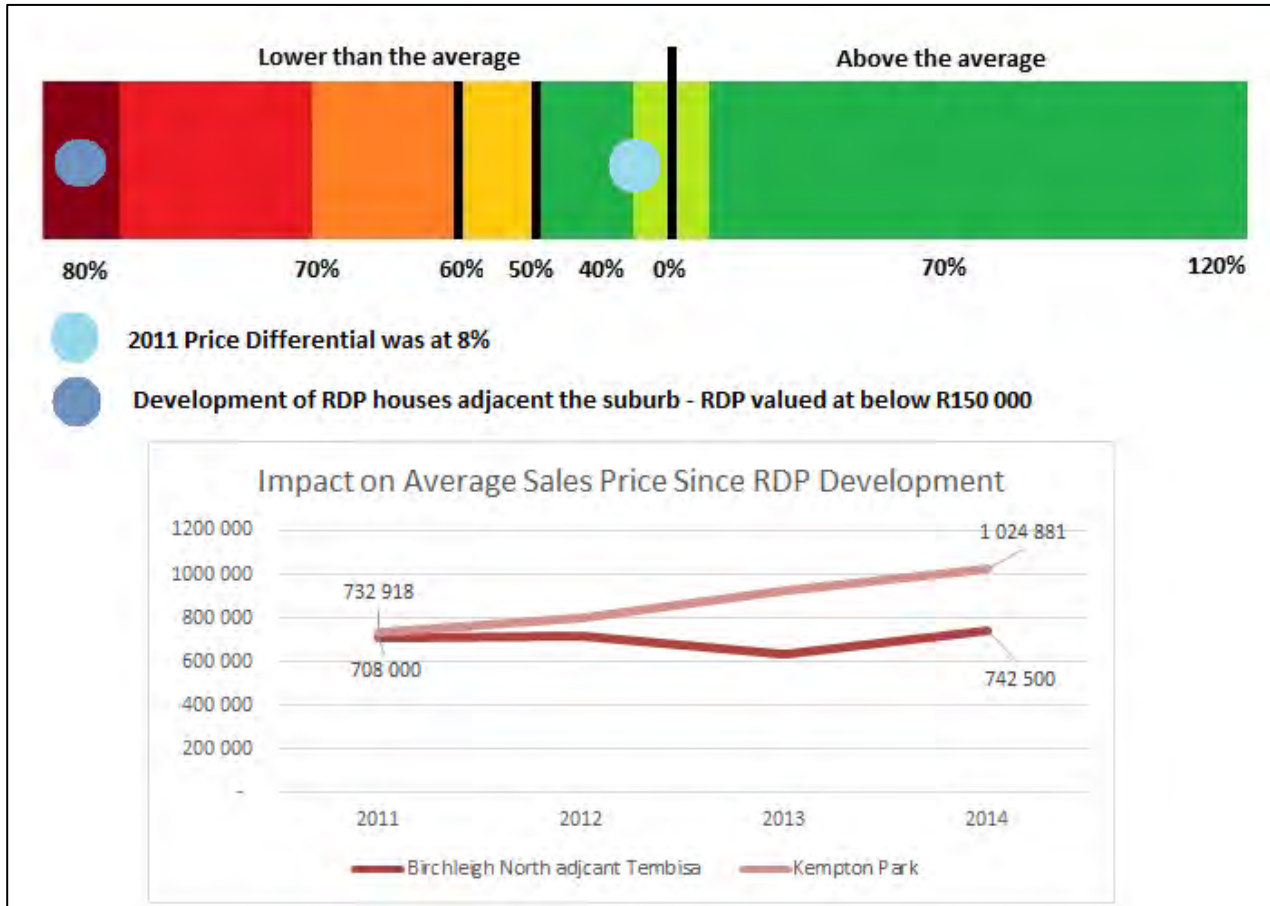
Graph 6.1: Price Differential, (Based on 2014/2015 property sales prices)



In order to illustrate the impact on property prices of an area where the price differential was above 60%, Graph 6.2 is used as illustration.

The price differential analysis indicates that the value of new residential development do have an impact on price growth of a suburb. The Walmer Heights suburb have an average sales price of approximately R1.5 million (2015) and given price differential analysis of other similar suburbs it is evident that a 60% price differential will not negatively impact current sales prices and growth. This means that a new residential development with a minimum value of R620 000 can be developed adjacent the suburb. A residential development with a higher differential will influence sales and price growth.

Graph 6.2: Impact of Significant Price Differential on Sales Price



6.3 PROPERTY RATES & TAXES

This analysis aims to illustrating the impact on rates and taxes as the mix of a residential development change. The aim is to identify a residential mix that will maximise rate and tax income for the local municipal area (Nelson Mandela Bay).

6.3.1 Implication on Property Taxes due to Subsidy Residential Development

In order to illustrate the impact on rates and taxes with a variety of residential typology developments the following scenarios are provided. Table 6.2 illustrates the property tax income for NMBM in Scenario 1 while Table 6.3 shows Scenario 2.

Scenario 1 illustrates the property rates and taxes applicable to Port Elizabeth for a suburb where all the houses is bonded and has an average value of R1.3 million in 2015. The average sales price growth for property in this price group is 8% *per annum*. No new residential development is planned for this area for the short to medium term to illustrate the value of property rates and taxes for the local authority.

The suburb has a total of 1 000 bonded properties in 2015 and now new additional development is planned up to 2025. The average sales price growth is market related (nominal growth) and will increase from R1.3 million in 2015 to R2.8 million in 2025. The property rates and taxes for residential property is provided by the Port Elizabeth Municipality⁴.

⁴ <http://www.nelsonmandelabay.gov.za/Notices.aspx?objID=28&cmd=view&id=448>

Scenario 2 illustrates the impact on property rates and taxes for the local authority when a subsidy development enters the market adjacent to or within the suburb. The subsidy development adds an additional 500 units to the suburb in 2016 with now additional development planned thereafter.

The 2015 average sales price for the bonded properties is again R1.3 million and the subsidy properties is valued at R150 000 when developed in 2016. The case study analysis earlier in the report indicate that the average growth of bonded properties decelerate from 8% *per annum* to 2% *per annum* while the subsidy properties have an average growth of 5.1% *per annum*. The higher growth rate of the subsidy component is however from a lower base than that of the bonded properties.

Findings (Scenario 1 & 2)

- In Scenario 1
 - The property price growth is on average 8% *per annum* which increases the average property price and the subsequent taxes that the local authority receive.
 - The property tax increased from R12.7 million in 2015 to R27.6 million in 2025
- In Scenario 2
 - the suburb average price decrease from R1.3 million in 2015 to R948 000 in 2015 due to the introduction of subsidy houses
 - The yearly price growth of the bonded segment decelerate from 8% to 2% *per annum*
 - The bonded property prices shows slower growth, which results in a decrease in property tax collected from the suburb
 - The property tax increased from R12.7 million in 2015 to R15.5 million in 2025
- Summary
 - The introduction of subsidy housing will result in a decrease in the amount of tax received from the suburbs to the local authority
 - Cumulatively, the local authority will lose R56 million in property tax over a 10 year period with the development of subsidy houses adjacent a high-income bonded suburb.

This is a significant loss in income for local authorities due to sub-optimal positioning of the low-income subsidy component.

Table 6.2 Scenario 1: Bonded Housing with Property Rates & Taxes

Scenario 1: Bonded Housing (no subsidy)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Number of Properties	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000
Bonded	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000
Average Bonded Price	1 322 000	1 427 760	1 541 981	1 665 339	1 798 566	1 942 452	2 097 848	2 265 676	2 446 930	2 642 684	2 854 099
Price Growth (bonded segment)	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%
Suburb Average Price	1 322 000	1 427 760	1 541 981	1 665 339	1 798 566	1 942 452	2 097 848	2 265 676	2 446 930	2 642 684	2 854 099
Property Tax (R'000)	12 726	13 756	14 868	16 069	17 366	18 767	20 280	21 914	23 679	25 585	27 644

Table 6.3 Scenario 2: Subsidy Development Adjacent or within a Bonded Suburb

Scenario 2: Bonded Housing & Subsidy Development	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Number of Properties	1 000	1 500	1 500	1 500	1 500	1 500	1 500	1 500	1 500	1 500	1 500
Bonded	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000
Subsidy		500	500	500	500	500	500	500	500	500	500
Average Bonded Price	1 322 000	1 348 440	1 375 409	1 402 917	1 430 975	1 459 595	1 488 787	1 518 562	1 548 934	1 579 912	1 611 511
Average Subsidy Price		150 000	157 665	165 722	174 190	183 091	192 447	202 281	212 618	223 483	234 902
Price Growth (bonded segment) - case study	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Price Growth (subsidy segment) - case study	5.1%	5.1%	5.1%	5.1%	5.1%	5.1%	5.1%	5.1%	5.1%	5.1%	5.1%
Suburb Average Price	1 322 000	948 960	969 494	990 519	1 012 047	1 034 094	1 056 674	1 079 802	1 103 495	1 127 769	1 152 641
Property Tax (R'000)	12 726	12 983	13 246	13 514	13 787	14 066	14 350	14 640	14 935	15 237	15 545

Table 6.4: Summary - Net difference between Scenario 1 & 2 property tax modelling (R'000)

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Scenario 1: Bonded Housing (no subsidy)	13 756	14 868	16 069	17 367	18 768	20 281	21 915	23 680	25 586	27 644
Scenario 2: Bonded Housing & Subsidy Development	12 984	13 246	13 514	13 787	14 066	14 350	14 640	14 936	15 238	15 545
Yearly Difference (loss in tax)	- 772	- 1 622	- 2 555	- 3 579	- 4 702	- 5 930	- 7 275	- 8 744	- 10 348	- 12 099
Cumulative Difference (loss in tax)	- 772	- 1 622	- 4 177	- 7 756	- 12 458	- 18 388	- 25 663	- 34 407	- 44 755	- 56 854

6.3.2 Walmer Heights Implication

This sub-section illustrates the site specific impact on property tax for the Nelson Mandela Bay Municipality if the proposed social residential development takes place. The draft scoping report indicates that the development site is earmarked for affordable residential development which includes subsidy houses, social houses (rentals) and gap or affordable houses (FLISP). A total of 1 100 units with a combination of the abovementioned units is proposed for the site.

Two scenarios is provided to illustrate the impact of the development next to Walmer Heights. Table 6.5 illustrates Scenario 1 while Table 6.6 shows Scenario 2 and a summary with the cumulative impact in Table 6.7.

Scenario 1 illustrates the current market trends in Walmer Heights. The suburb has a total of 905 properties with an average sales price of R 1.5 million in 2015. The average sales price growth is **8.5% per annum** while property tax is calculated based on NMBM rates.

Walmer Heights has to date been buffered from price deceleration on account of the green belt (Arlington Horse Race Course and the Walmer Country club) between Walmer Heights and Gqebera.

Scenario 2 includes the affordable housing development in the property tax calculation. The scenario assumes the development will take place in 2018/19 with 600 subsidy, 241 affordable and 259 social (rental) units to increase the number of properties to 1 746 including the 905 bonded properties. The sales price growth of the bonded properties will **decelerate to 2% per annum** while the subsidy and affordable units will have annual growth of 5.1%, albeit from a lower base than the bonded properties. The average bonded property sales price will increase from R1.5 million in 2015 to R1.8 million in 2025 which is significantly lower than the property value in Scenario 1.

Table 6.5: Scenario 1 – Property tax implication based on continued stable house price growth

Scenario 1: Status Quo (no social housing)	2015	2017	2019	2021	2023	2025
Number of Properties (Bonded)	905	905	905	905	905	905
Property taxes (R'000)	13 370	15 763	18 580	21 896	25 800	30 396

Table 6.6: Scenario 2 – Property tax calculation based on decelerating property price growth

Scenario 2	2015	2017	2019	2021	2023	2025
Bonded	905	905	905	905	905	905
Affordable	-	-	170	170	170	170
Social Housing (rentals)	-	-	490	490	490	490
Subsidy	-	-	536	536	536	536
Total Number of Properties	905	905	2 101	2 101	2 101	2 101
Average Bonded Price	1 532 273	1 594 177	1 658 582	1 725 588	1 795 302	1 867 832
Average Affordable Price	390 000	430 794	475 856	525 631	580 612	641 345
Subsidy house price	-	157 665	174 190	192 447	212 618	234 902
Suburb Average Price	1 532 273	1 594 177	1 010 806	1 054 961	1 101 248	1 149 787
Property Rates & Taxes (social rental)	-	-	433 413	433 413	433 413	433 413
Property rates & Taxes (affordable/FLISP)	-	-	1 648 348	1 721 438	1 798 055	1 878 402

Scenario 2	2015	2017	2019	2021	2023	2025
Property rates & Taxes (bonded)	13 370 187	13 915 683	8 775 030	9 164 125	9 571 997	9 999 727
Total Property Tax (R'000)	13 370 187	13 915 683	10 856 791	11 318 975	11 803 465	12 311 541

Table 6.7: Net difference between Scenario 1 & 2 property tax modelling on account of the Walmer Housing Project as in Map 1 (R'000)

	2017	2018	2021	2023	2025
Scenario 1: Bonded Housing (no subsidy)	15 763	17 114	21 896	25 800	30 396
Scenario 2: Bonded Housing & Subsidy Development	15 071	15 401	16 441	17 179	17 954
Yearly Difference (loss in tax)	- 691	- 1 712	- 5 454	- 8 621	- 12 442
Cumulative Difference (loss in tax)	- 460	- 2 172	- 14 552	- 30 136	- 53 021

Findings (Scenario 1 & 2)

- In Scenario 1
 - Property price growth of between 5% and 8% for properties further than 1000m from the low income housing area (Walmer & Walmer Heights)
 - The property tax increased from R13.3 million in 2015 to R30.3 million in 2025
- In Scenario 2
 - The suburb average price decrease from R1.5 million in 2015 to R1.01 million in 2019 due to the introduction of subsidy, affordable and social houses
 - The yearly price growth of the bonded segment decelerate from 8% to 2% per annum due to the introduction of low-income housing stock. This will result in negative real growth in house prices
 - The bonded property prices shows slower growth, which result in a decrease in property tax collected from the suburb
 - The property tax decreased from R13.3 million in 2015 to R12.3 million in 2025
- Summary
 - The introduction of subsidy, affordable and rental housing will result in a decrease in the amount of tax received from the suburbs to the local authority
 - Cumulative the **NMBM will lose R53 million in property tax over a 10 year period** with the development of subsidy, affordable and social houses adjacent a high-income bonded suburb.
 - Decelerated growth and dampening effect on middle-higher property prices will be evident in Walmer Heights.

This is a significant loss in income for the Nelson Mandela Bay Municipality due to sub-optimal positioning of an affordable, low-income subsidy component. A layout aligned with sound economic principles, including systematic pricing contours can be expected to yield positive impacts leaning more towards scenario 1 (Table 6.2). On the contrary, a low cost / low income and affordable development that does not reflect the necessary sensitivities to surrounding real estate price realities could yield negative impact scenarios. Of the recently (September 2017) revised layouts, Option B can be expected to be the most environmentally sensitive – subject to minor revision.

6.4 SECURITY ISSUES

According to the CSIR, the notion that the physical environment can either increase or reduce opportunities for crime is not new. Internationally, it has been studied extensively over a number of decades. There is general consensus that if the environment is planned, designed and managed appropriately, certain types of crimes can be reduced. Environmental design has formed an integral part of many crime prevention initiatives in countries such as the UK, USA, Canada, The Netherlands and Australia.

The study of the relationship between crime and the physical environment has resulted in various theoretical approaches and a number of schools of thought have emerged since the early 1960s. Some of the more familiar approaches include Crime Prevention Through Environmental Design (CPTED, pronounced 'septed'), situational crime prevention and place-specific crime prevention. The CSIR bases its work on a South African interpretation of international approaches, as well as research conducted locally, and refers to the concept as crime prevention through planning and design.

The environment can play a significant role in influencing perceptions of safety. Certain environments can impart a feeling of safety, while others can induce fear, even in areas where levels of crime are not high. In this regard, planning and design measures can be utilised very successfully to enhance feelings of safety in areas where people feel vulnerable.

For a criminal event to occur, the following are required:

- a ready, willing and able offender;
- a vulnerable, attractive or provocative target/ victim;
- a favourable environment; and
- the absence of willing, able and credible modulators.

Tracts of open land such as buffer strips, undeveloped land, transport reserves, etc, separate different parts of the city or town from each other. This contributes to a fragmented urban landscape. These vacant pieces of land usually have no specified use and no one takes responsibility for them, with the result that they are often neglected.

The lack of ownership (territoriality) and reduced opportunities for surveillance in many cases lead to these areas becoming unsafe. Pedestrians having to cross such pieces of vacant land are vulnerable to attack and properties in the vicinity often experience high levels of crime, such as housebreaking. Vacant land provides convenient access and escape routes for criminals, as well as hiding place for stolen goods.

Based on international studies and guided by the local context, five principles have been identified which are crucial to establishing how the physical environment either reduces or increases the opportunities for crime. These are:

- **Surveillance and Visibility**
 - Surveillance is improved if there is good visibility. Dark or twisting streets, alleys, entrances and doorways can act as havens for potential offenders and increase feelings of unsafely. The way in which lighting is designed and positioned, and the way roads and paths are laid out, can obviate many of these problems and render both the physical environment and the users visible to others using the environment.
- **Territoriality**
 - Territoriality is a sense of ownership of one's living or working environment. Territoriality and a sense of ownership are encouraged when residents identify with the spaces and where the space and its configuration are legible to them.
 - A sense of ownership and responsibility for a particular environment improves the chance of passive observers intervening (as modulators of a crime). Places should be designed and managed in ways that encourage owners/users to take responsibility for their use, upkeep and maintenance. Territoriality can be increased through clearly defining public and private spaces, utilising the human scale, limiting unused open space, etc.
- **Access and Escape Routes**

- Certain types of criminal events and sites are often deliberately chosen for their ease of access to escape routes. Similarly, the availability of access and escape routes also adds to the safety of potential victims.
- Areas of refuge, such as vacant land, where people can hide and which have clear routes of escape from a crime, are obvious havens for offenders. For example, houses or neighbourhoods near or adjacent to tracts of open land are often the targets of repeated burglaries.
- **Image and Aesthetics**
 - The image projected by a poorly maintained building or a public area has been clearly linked to levels of crime and particularly to the fear of crime. This link is often referred to as 'crime and grime'.
 - Urban decay and the degradation of neighbourhoods make people using these areas feel unsafe: this effectively reduces the number of users, which could exacerbate the crime problem.
 - Good design and the effective management of spaces in the city are necessary factors that prevent precincts from becoming actual or perceived 'hot spots' for crime. Vacant land that is not maintained, or unoccupied buildings, can contribute to decay, as do litter and the breakdown of services.
 - The image of spaces can be improved by ensuring a human scale in design, using attractive colours or materials, providing adequate lighting, and designing for high levels of activity.
- **Target Hardening**
 - Target hardening reduces the attractiveness or vulnerability of potential targets by, for instance, the physical strengthening of building facades or boundary walls.
 - Walls around houses and burglar bars on windows are the most common examples of this principle. Target hardening is often the first solution that occurs to residents and designers because it can physically reduce opportunities for crime. However, a common mistake is that, in the process, other principles are compromised. If target hardening of buildings obstructs lines of sight or provides havens that cannot be surveyed, the hardening is unlikely to be an effective crime prevention tool.

Employing these principles in combination can increase the possibility of reducing crime. Each principle should not be viewed in isolation and the context within which it is to be applied should be taken into account. When applying any one of the principles the implications it has for any of the others must always be considered. For instance, when building a high wall around a property (target hardening), the consequences of violating the principle of surveillance and visibility must be considered.

6.5 RESIDENTIAL MARKET DEMAND

This sub-section of the report focuses on the residential market, with the objective of estimating the development potential and preferred product offering for a residential development for the site.

The market demand is based on the price differential analysis that indicate the minimum value of properties that should be developed without negatively impacting the current market trends is R620 000. The R620 000 should border on the existing Walmer Heights suburb. The site is large enough to accommodate lower value units further to the south to Victoria Drive and more in-line with residential trends in Gqebera. The residential market demand model will provide insight in current market demand and prices.

Table 6.8: Household Income Categories

Income Category	Type of Housing
R0 – R1 500	Subsidy
R1 500 – R3 500	Subsidy & CRU Housing
R3 500 – R7 500*	FLISP / GAP & Social Housing

R7 500 – R15 000	FLISP / GAP & Affordable Bonded
R15 000+	Bonded

*the upper price bracket was recently adjusted to R15 000

Demand for residential units can be stated as follows:

Definition

The residential market refers to land uses associated with human habitation such as housing or dwelling units. Residential use can vary in typology, density, tenure, structure, layout and affordability. ‘Residential’ does not include hotels or guesthouses, which are defined as being ‘short-stay’ accommodation.

FLISP – Finance Linked Individual Subsidy Program (FLISP) is specifically intended for the market segment whose income is inadequate to qualify for a home loan, but exceeds the maximum limit applicable to access Government’s ‘free basic house’ subsidy scheme. This market segment, generally known as the ‘affordable/gap’ market, earns between R3 501 and R15 000 per month. Households in this segment, if buying a home for the first time, may apply for a FLISP subsidy

Subsidy Housing – A housing subsidy is a grant by government to qualifying beneficiaries for housing purposes. One of the DHS areas of responsibility in the delivery of human settlements relates to the bottom-most end of the market, where it provides housing subsidies to the poor. This is where the bulk of the housing backlog exists, affecting mainly those who earn below R3 500 a month

Defining demand

Residential demand depends on a variety of factors. In this context, residential demand can be conceptualised as follows:

$$Dres. = f \{Po; P\%; Q; Pr; Pr\%, ROI, I, Tx; Y; Hs; R; Ci; Hs; Hp\}$$

Where:

Po	=	Population Size
P%	=	Population growth rate
Q	=	Existing quality of residential environment
Pr	=	House prices
Pr%	=	Growth in house prices
ROI	=	Return on investment
I	=	Interest rates
Tx	=	Rates and Taxes
Y	=	Household income
Hs	=	Household size
R	=	Rent
Ci	=	Cap Rates
Hs	=	Housing shortage
Hp	=	Housing preferences

The subsequent section illustrates the relationship between household income and house prices, household income versus rental stock profile and an overview of the construction profile.

❖ **Household Income: House Price Ratio**

It is evident that as household income increases the estimated affordable house price reflect similar trends.

❖ **Project Size and Anticipated Take-Up**

Table 6.8 indicates the current market performance and the market share that the finance-linked and bonded housing component of the proposed project could attract.

Table 6.9: Summary of Market Recommendations

TOTAL MARKET			
A	Additional HH: base yr + 5yrs		1 857
B	Annualised Market growth (full housing spectrum)		371
C	Bonded & Credit linked		54.5%
D	Bonded & Credit Linked take-up per annum		202
E	Annual secondary market contribution (units / annum)	Min	165
F		Max	221
G	Total annual Bonded & Credit Linked demand	Min	368
H		Max	423
PROJECT SPECIFIC – BONDED UNITS			
I	Project Bonded & Credit Linked Units		500
J	Forecast market share of total market sales	Min	10%
K		Max	15%
L	Project forecast total annual take-up rate (units / annum)	Min	37
M		Max	63
N	Years to 80% take-up (bonded & credit linked units)	Min	7.9
O		Max	13.6
P		Avg	10.7
	Optimum point of market entry		2018+

Source: Demacon, Modelling 2017

Explanatory Notes:

A = increase in demand for new rental units, 2017 – 2021

B = Annualised market growth, i.e. of A/5

D = B x C

E & F = Annual secondary market contribution (i.e. the contribution made by re-sales in the target affordability income brackets)

G & H = Annual new entry-level to executive flat/ apartment demand; D + E and D + F

I = Project Specific Bonded & Credit Linked Units

J & K = assumed market share of market area

L = G x J

M = H x K

N = I / L

O = I / M

Explanatory Notes:

² – Reflects the percentage of the local population with incomes and affordability levels aligned to bonded units

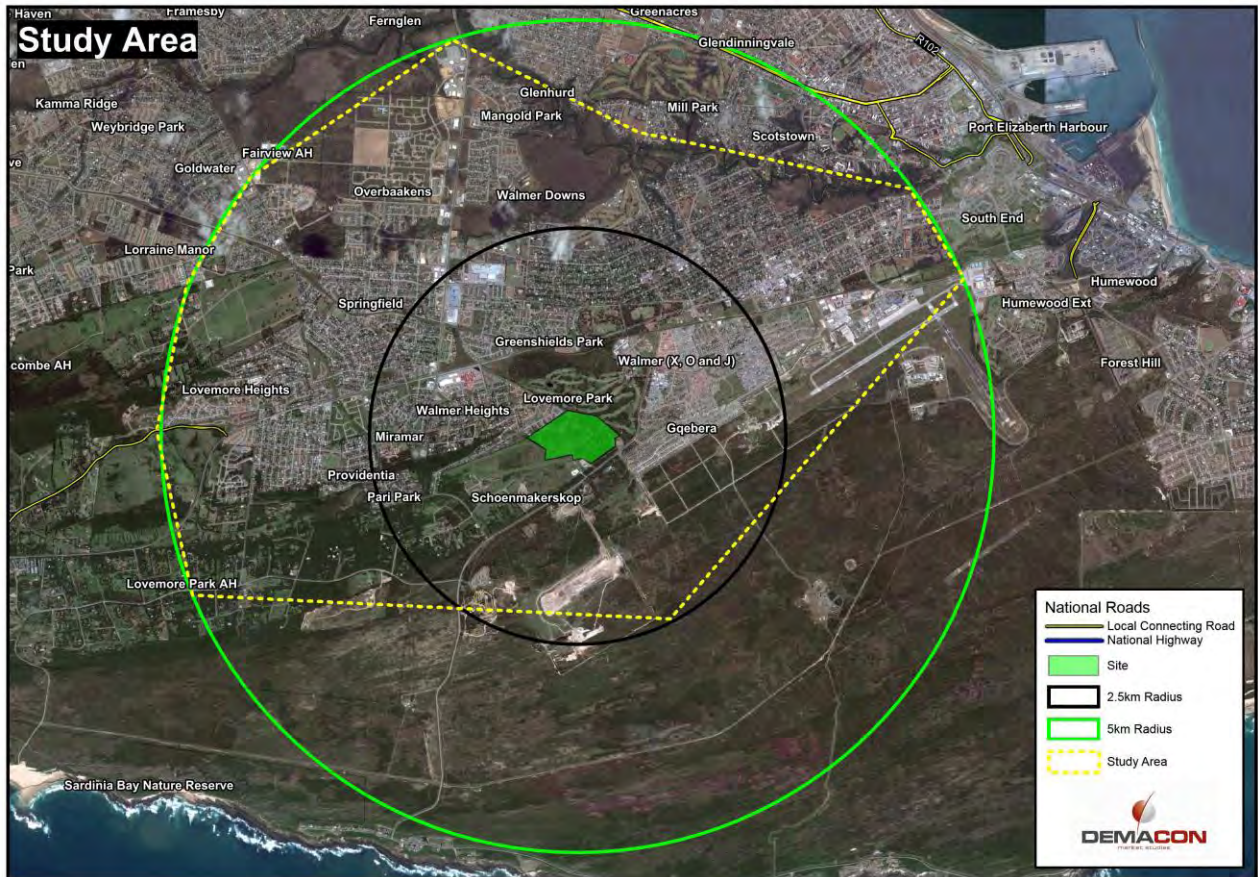
³ – Number of potential buyers through local secondary market transactions, e.g. qualifying local potential buyers selling existing homes to move to new area.

Findings:

- ✓ It is important to understand that the modelling portrays demand and take-up based on current market trends.
- ✓ Table 6.9 shows two sections, 1) total market and 2) project specific. Between 2015 and 2020 an estimated **1 857 households** will seek accommodation in the target geographic market area, resulting in an annual growth in demand of approximately **371 units** (across the full housing spectrum, including informal and subsidy).
- ✓ Under present market conditions, the finance-linked and bonded segment (54.5%) will yield a take-up rate of 202 units per annum.
- ✓ A total of **500 FLISP & bonded units** could be developed and taken up within approximately **10 years** (80% take-up), resulting in **between 37 and 63 units per annum**.
- ✓ The ideal bonded : subsidy ratio equals 70 : 30 (optimised marketability), this can be adapted to the maximum marketable ratio of 60 : 40, but it will affect marketability, economic and financial impacts as well as investment risk.
- ✓ Given a 60 : 40 ratio, approximately **330 subsidy units** could be developed.

The market area used to determine the demand and affordability of a residential development is delineated in Map 6.1.

Map 6.1: Market Delineation

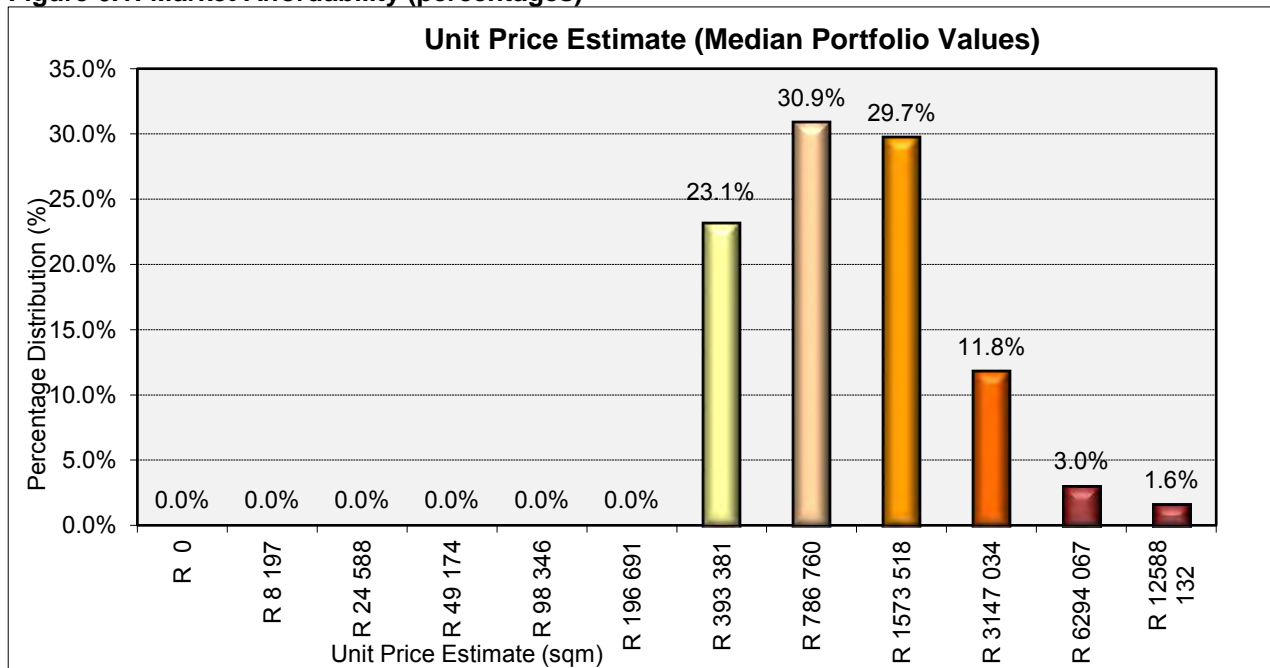


The market potential is illustrated below.

✓ **Affordability Profile – Target Market**

Figure 6.1 indicates the affordability profile of the market.

Figure 6.1: Market Affordability (percentages)

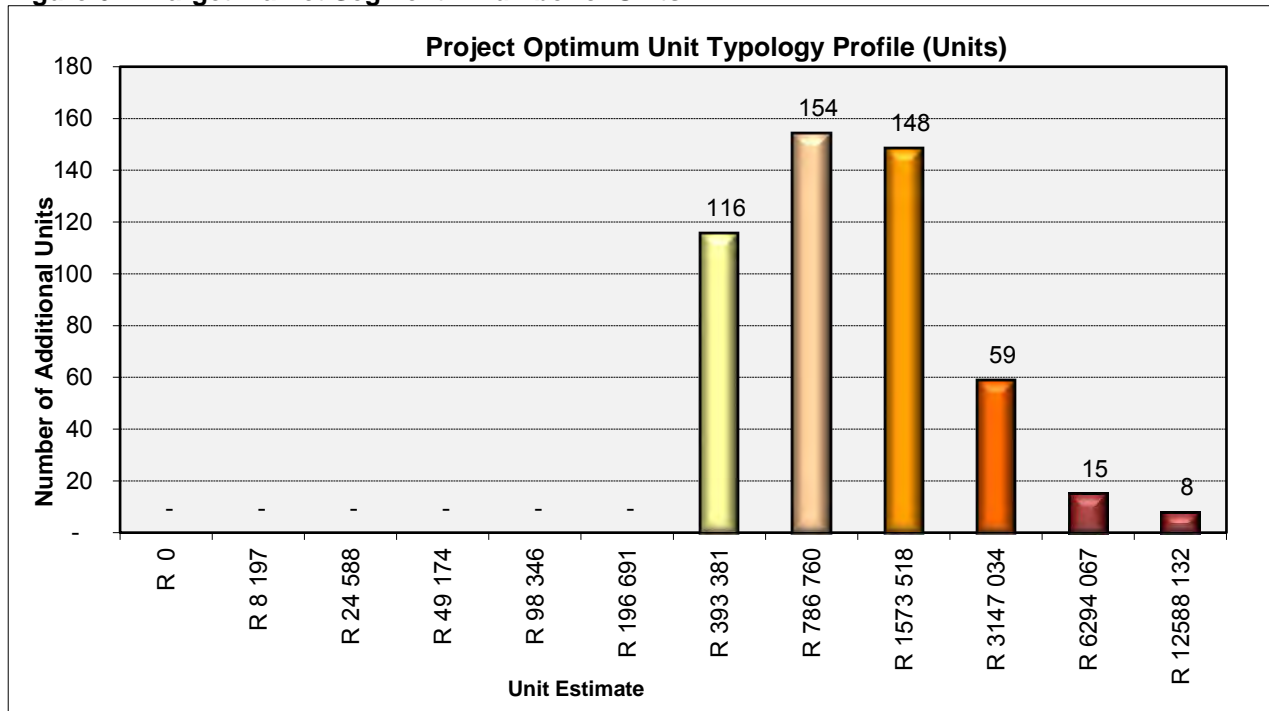


Source: Demacon, 2015

✓ **Unit Price Estimate (Median Values) – Target Market**

Figure 6.2 indicates the unit typology profile for a residential development on the site.

Figure 6.2: Target Market Segment – Number of Units



Source: Demacon, 2015

Findings:

- ✓ The market demand model illustrate market demand for houses starting at around R400 000 up to R590 000 and referred to as affordable bonded or FLISP units for the lower priced units.
- ✓ The largest demand is for bonded units above R600 000. These units could be developed adjacent the existing Walmer Heights suburb to tie-in with current market values in the suburb.
- ✓ In the context of the above, it is evident that there is definitely a market for more affordable residential products in the market area, however the location of these units is critical to ensure that the property market is not negatively affected.
- ✓ There are, locational realities that need to be borne in mind. Sensible layout and design principles will have to be incorporated to ensure optimal functioning of the residential scheme.
- ✓ There is demand for lower priced products. The placement of these will be critical in order not to have a negative impact on price growth. Through a planned arrangement the lower value offering located adjacent Victoria drive and Gqebera should could be accommodated to minimise negative price growth impacts.

7

CHAPTER 7: FINDINGS & MITIGATION

7.1 OVERVIEW

A social and affordable housing development should aim at addressing the housing needs of the market through market driven product offerings, whilst protecting and nurturing existing upmarket residential investment to which the municipality has an equal responsibility.

Social and affordable housing developments have an integral role to play in providing the correct housing stock to a market that's primary objective is to have a safe, secure and high value residential product within close proximity to economic nodes.

Key Guidelines for a Social and Affordable Housing Development:

- The inclusionary housing project should not adversely affect the character, historical or architectural integrity of a neighbourhood
- The inclusionary housing project should as far possible be located in close proximity to commercial nodes
- Affordable housing aims to provide housing for income-eligible earner.

7.2 FINDINGS

7.2.1 General Findings

- The **setting created by surrounding land uses** has an effect on any individual parcel of land and a change in the surrounding land uses results in a break in the existing neighbourhood associations and stability.
- Consumers therefore tend to move to an area or neighbourhood that satisfies his preference pattern. Any change to these preference would result in the possibility of movement away or out of the neighbourhood to a similar neighbourhood where his preferences are addressed which is a real possibility for Walmer Heights if an affordable housing project to e be developed adjacent the suburb.
- The area on which Gqebera is situated is ideal for airport related commercial and industrial use, however the state of the community means that they cannot afford to escape (relocate) and therefore makes this land un-usable.
- It is evident that the proximity of the high income Walmer to Gqebera did not have a positive value impact on property value or living standards of the community in Gqebera. The low income suburb has been located adjacent Walmer, a high income area, for more than a decade and very little positive value impact is evident on Gqebera.
- The proximity of the site to the Port Elizabeth airport, with associated noise impact do impact the site.
- It is evident that Walmer Heights is one of the high-income suburbs in Port Elizabeth with an average sales price of R1.5 million (2014/2015) for freehold properties. The suburb is characterised as a mainly low-density, high-income suburb with freehold and estate properties.

7.2.2 Positive Impacts

- In the case of Gqebera and the anticipated impact that will realise as a result of the social housing project the following should be considered. The consumption by one person (in this case a newly built residential unit) does not diminish the opportunities for consumption by another (in this case the people staying in Gqebera). In other words while the resident of a new government housing project are better off, benefits also accrue to other residents of the community in the form of slum clearance⁵.
- It provides households the opportunity to enter the property market through private home ownership.
- Densification and formal housing development within the urban edge
- Provides much needed housing stock in the affordable housing segment (FLISP) and rental market

7.2.3 Negative Impacts

- If the housing project continues, Walmer Heights can expect an increase in sales volumes as households will want to relate based on an expectation of negative impact on property values and quality of life.
- The construction of the housing development will have an immediate impact on price and sales growth for the adjacent suburb with sales prices expected to have low growth of around 2% over the short to medium term.
- Long-term sales price growth for the Walmer Heights suburb will lack behind the regional growth. Property values will not increase with the same value as the aggregate economy.
- Price differential in **high-income suburbs**, such as Walmer Heights, for the lowest house price value should not be more than **60%** below that of the average house price value of the suburb. The current average sales price in Walmer Heights is R1.5 million. This means that a development where house/apartment prices of around **R620 000 would be viable adjacent to Walmer Heights without compromising the price trends and character of the suburb**. A residential development with a higher differential will influence sales and price growth.
- The Walmer Heights average price could potentially decrease from R1.5 million in 2015 to R1.01 million in 2019 due to the introduction of subsidy, affordable and social houses.
- The yearly price growth of the bonded segment in Walmer Heights will decelerate from 8% to 2% *per annum* due to the introduction of low-income housing stock. This will result in negative real growth in house prices. Therefore the bonded property prices shows slower growth, which result in a decrease in property tax collected from the suburb.
- The property tax will show a significant loss in property tax income from the suburb
 - Without the construction of the integrated housing development the Nelson Mandela Bay Municipality will receive up to R30.3 million in property tax in 2025 while the introduction of the integrate housing development will reduce sales price growth and only R17.9 million will be received in 2025
 - Cumulatively (the tax collected every year from 2015 up to 2025) the NMBM is expected to lose **R53 million in property tax over a 10 year period**

⁵ C.M. Tiebout, 1956

- Decelerated growth and dampening effect on middle-higher property prices will be evident in Walmer Heights.
- There will be a significant loss in income for the Nelson Mandela Bay Municipality due to **sub-optimal positioning** of an affordable, low-income subsidy component.

7.3 QUALITATIVE IMPACT ASSESSMENT

Based on the assessment of the Walmer Housing Project, a set of key impacts were identified, some positive and some negative, of which most cannot easily be evaluated in terms of quantitative measures. This section focuses on providing a qualitative assessment of these variables.

7.3.1 Impact Assessment Tables

The evaluation of impacts is conducted in terms of the criteria detailed in Table 7.1 to Table 7.7. The various environmental impacts and benefits of this project will be discussed in terms of the status, extent, duration, probability, and magnitude of the impact. Finally, an accumulative impact and significance rating is applied to rate each identified impact in terms of its overall magnitude and significance (Table 7.8).

After the recommendations of the previous report (August 2015), amended layouts (Option A and Option B) were provided. The impact was assessed for the revised layouts Option A and Option B.

The main issues have been addressed to a large extent. Option B closely aligns with the comments provided in the socio-economic impact report. The development still encompasses a large subsidy component, but an attempt has been made to create price contours that will be sensitive to possible price impacts due to the low income housing. From an economic perspective, the option most likely to have the least negative impact is Option B.

In order to adequately assess and evaluate the impacts and benefits associated with the project it was necessary to develop a methodology that would scientifically achieve this and to reduce the subjectivity involved in making such evaluations. For informed decision making it is necessary to assess all legal requirements and clearly defined criteria in order to accurately determine the significance of the predicted impact or benefit on the surrounding natural and social environment.

The nature or status of the impact is determined by the conditions of the environment prior to construction and operation. A discussion on the status of the impact will include a description of what causes the effect, what will be affected and how it will be affected. The status of the impact can be described as negative, positive or neutral.

Table 7.1: Status of Impact

RATING	DESCRIPTION	QUANTITATIVE RATING
Positive	A benefit to the environment ⁶	+
Neutral	No cost or benefit to the environment.	N
Negative	A cost to the environment.	-

Table 7.2: Extent of Impact

RATING	DESCRIPTION	QUANTITATIVE RATING
Low	Site Specific; Occurs within the site boundary.	1

⁶ The sum total of all surroundings of a living organism, including natural forces and other living things, which provide conditions for development and growth as well as of danger and damage.

Medium - Low	Local; Extends beyond the site boundary; extending only as far as local community or urban area	2
Medium	Provincial / Regional; Extends far beyond the site boundary; Widespread effect	3
Medium - High	National i.e. South Africa	4
Very High	Across International Borders	5

The duration of the impact refers to the time scale of the impact or benefit.

Table 7.3: Duration of Impact

RATING	DESCRIPTION	QUANTITATIVE RATING
Low	Immediate (less than a year)	1
Medium - Low	Short term (1-5 years)	2
Medium	Medium term (6-15 years)	3
Medium - High	Long term (the impact will cease after the operational life of the project)	4
High	Permanent (no mitigation measures of natural process will reduce the impact after construction)	5

The magnitude or severity of the impact is indicated.

Table 7.4: Magnitude of Impact

RATING	DESCRIPTION	QUANTITATIVE RATING
None	Where the aspect will have no impact on the environment	0
Minor	Where the impact affects the environment in such a way that neutral, cultural and social functions and processes are not affected	1
Low	Where the impact affects the environment in such a way that neutral, cultural and social functions and processes are slightly affected	2
Moderate	Where the impact affects the environment in such a way that neutral, cultural and social functions and processes continue albeit in a modified way	3
High	Where the impact affects the environment in such a way that neutral, cultural and social functions and processes are altered to the extent that it will temporarily cease	4
Very high / don't know	Where the impact affects the environment in such a way that neutral, cultural and social functions and processes are altered to the extent that it will permanently cease	5

The probability of the impact describes the likelihood of the impact actually occurring.

Table 7.5: Probability of Impact

RATING	DESCRIPTION	QUANTITATIVE RATING
None	Impact will not occur	0
Improbable	the possibility of the impact materialising is very low as a result of design, historic experience or implementation of adequate mitigation measures	1
Low Probability	There is a possibility that the impact will occur	2
Medium Probable	The impact may occur	3

Highly Probable	It is expected that the impact will occur; Chance of occurrence.	4
Definite	Impact will occur regardless of any prevention measures	5

The impact of the development is considered together with additional developments of the same or similar nature and magnitude.

Table 7.6: Cumulative Impact

RATING	DESCRIPTION	QUANTITATIVE RATING
Negligible	The net effect is the same as the single development	1
Marginal	The impact of two developments of a similar nature is less than twice the impact of a single development. This implies it is better to place the two developments in the same environment rather than in separate environments.	2
Compounding	The impact of two developments is more than twice the impact of two single developments. This implies that it is better to split the two developments into separate environments	3

The impact magnitude and significance rating is utilised to rate each identified impact in terms of its overall magnitude and significance.

Table 7.7: Impact Significance Rating

IMPACT	RATING	DESCRIPTION	QUANTITATIVE RATING
Negligible	No Impact	The impact has no impact or the impact is unknown	0
Negative / Positive	Low	The impact does not have a direct influence on the decision to develop the area	Up to 15
	Low-Medium	The impact has an influence but the impact can be mitigated	16 - 30
	Medium	The impact could influence the decision to develop in the area unless it is effectively mitigated	31 - 45
	Medium-High	The impact will have a direct influence on the decision to develop but there are means of mitigating the impact although these may be difficult as well as expensive	46 – 60
	High	Where the impact must have an influence on the decision to proceed to develop in the area	Above 60

Table 7.8 summarises the findings of the qualitative impact assessment for the Walmer Housing Project – Revised Layout Option A and Option B.

Table 7.8: Impact Table – Walmer Housing Project Revised Layout Option A

THEME	SPECIFIC IMPACT	STATUS OF IMPACT	IMPACT SIGNIFICANCE PRIOR TO MITIGATION					DESCRIPTION & MITIGATION MEASURES	IMPACT SIGNIFICANCE POST MITIGATION	
			EXTENT	DURATION	MAGNITUDE	PROBABILITY	SIGNIFICANCE		MAGNITUDE	SIGNIFICANCE
CONSTRUCTION PHASE										
Housing Development	Job creation	+	3	2	3	5	Medium	The construction of the proposed development may create new employment opportunities for the local economy. Ensure that local employees are used during the construction phase.	3	Medium
	Local Economic Growth	+	3	2	3	5	Medium	New construction activity will create capital investment that will in turn benefit the local economy. The project will furthermore make a positive contribution in respect of the creation of productive, rateable real estate assets.	3	Medium
	Infrastructure Investment & Development	+	2	2	2	5	Medium	The proposed development will facilitate investment in infrastructure development and expansion. Albeit that the initial infrastructure investment constitutes a short-term impact, prolonged benefits are created in the local economy.	2	Medium
OPERATIONAL PHASE										
Housing Development	Job creation	+	2	5	2	5	Medium	Increased production as a result of the Walmer Housing Project will create and sustain new job opportunities in various sectors of the economy.	3	Medium
	Local Economic Growth	+	2	5	2	5	Medium	The proposed development will facilitate investment in key local sectors, which will translate into additional business sales and additional GGP.	2	Medium
	Rates & Tax Base Expansion	-	2	5	4	5	High	The development will facilitate limited real estate investment, job creation and economic growth, which, in turn will contribute to the limited creation of productive, rateable assets.	3	Medium

THEME	SPECIFIC IMPACT	STATUS OF IMPACT	IMPACT SIGNIFICANCE PRIOR TO MITIGATION					DESCRIPTION & MITIGATION MEASURES	IMPACT SIGNIFICANCE POST MITIGATION	
			EXTENT	DURATION	MAGNITUDE	PROBABILITY	SIGNIFICANCE		MAGNITUDE	SIGNIFICANCE
								The status of the impact could be reversed from a negative to a positive		
	Property Prices	-	2	5	4	4	Medium to High	The development of low income housing next to the upper class area of Walmer Heights will negatively impact property prices in the area. The inclusion of definite pricing contours will ensure a less negative impact. The area directly adjacent Walmer Heights should be reserved for higher income households.	2	Medium
	Addressing Housing Need	+	2	3	3	4	Medium	The development will provide housing opportunities for households currently occupying informal dwellings, thereby alleviating the housing backlog of NMBM.	3	Medium
	Security	-	2	3	3	4	Medium to High	The incidences of crime may decrease over time, as the community becomes increasing socially upward mobile. The inclusion of target hardening aspects will minimize crime. Development of vacant land in itself could be utilised as a mitigation measure in itself and will result in a positive impact.	2	Medium
	Reduced risk of illegal land invasion	+	2	5	3	5	Medium to High	Vacant land in metropolitan regions will continue to be subjected to risks associated with land invasion. Although it is not a deciding consideration for the development, the benefit of having productive development that contribute towards rates and taxes could potentially outweigh the benefit associated with illegal land occupation. If developed as a secure access controlled estate which is increasingly becoming common practice, even in lower income communities, the risk will be minimum	2	Medium

Source: Demacon, 2017

Table 7.9: Impact Table – Walmer Housing Project Revised Layout Option B

THEME	SPECIFIC IMPACT	STATUS OF IMPACT	IMPACT SIGNIFICANCE PRIOR TO MITIGATION					DESCRIPTION & MITIGATION MEASURES	IMPACT SIGNIFICANCE POST MITIGATION	
			EXTENT	DURATION	MAGNITUDE	PROBABILITY	SIGNIFICANCE		MAGNITUDE	SIGNIFICANCE
CONSTRUCTION PHASE										
Housing Development	Job creation	+	3	2	3	5	Medium	The construction of the proposed development may create new employment opportunities for the local economy. Ensure that local employees are used during the construction phase.	3	Medium
	Local Economic Growth	+	3	2	3	5	Medium	New construction activity will create capital investment that will in turn benefit the local economy. The project will furthermore make a positive contribution in respect of the creation of productive, rateable real estate assets.	3	Medium
	Infrastructure Investment & Development	+	2	2	2	5	Medium	The proposed development will facilitate investment in infrastructure development and expansion. Albeit that the initial infrastructure investment constitutes a short-term impact, prolonged benefits are created in the local economy.	2	Medium
OPERATIONAL PHASE										
Housing Development	Job creation	+	2	5	2	5	Medium	Increased production as a result of the Walmer Housing Project will create and sustain new job opportunities in various sectors of the economy.	3	Medium
	Local Economic Growth	+	2	5	2	5	Medium	The proposed development will facilitate investment in key local sectors, which will translate into additional business sales and additional GGP.	2	Medium
	Rates & Tax Base Expansion	-	2	5	3	5	Medium to High	The development could facilitate real estate investment, job creation and economic growth, which, in turn will contribute to the creation of productive, rateable assets.	2	Low to Medium

THEME	SPECIFIC IMPACT	STATUS OF IMPACT	IMPACT SIGNIFICANCE PRIOR TO MITIGATION					DESCRIPTION & MITIGATION MEASURES	IMPACT SIGNIFICANCE POST MITIGATION	
			EXTENT	DURATION	MAGNITUDE	PROBABILITY	SIGNIFICANCE		MAGNITUDE	SIGNIFICANCE
								The status of the impact could be reversed from a negative to a positive if the house pricing contours are included and the northern section should be priced R620 000 and upwards and the layout should not be permeable		
	Property Prices	-	2	5	2	4	Medium	The development of low income housing next to the upper class area of Walmer Heights will negatively impact property prices in the area. The inclusion of definite pricing contours will ensure a less negative impact. The area directly adjacent Walmer Heights should be reserved for higher income households. Positive but neutral	0	Low to Medium
	Addressing Housing Need	+	2	3	3	4	Medium	The development will provide housing opportunities for households currently occupying informal dwellings, thereby alleviating the housing backlog of NMBM.	3	Medium
	Security	-	2	3	2	4	Medium to High	The incidences of crime may decrease over time, as the community becomes increasing socially upward mobile. The inclusion of target hardening aspects will minimize crime. Development of vacant land in itself could be utilised as a mitigation measure in itself and will result in a positive impact.	1	Low
	Reduced risk of illegal land invasion	+	2	5	3	5	Medium to High	Vacant land in metropolitan regions will continue to be subjected to risks associated with land invasion. Although it is not a deciding consideration for the development, the benefit of having productive development that contribute towards rates and taxes could potentially outweigh the benefit associated with illegal land occupation.	1	Medium

THEME	SPECIFIC IMPACT	STATUS OF IMPACT	IMPACT SIGNIFICANCE PRIOR TO MITIGATION					DESCRIPTION & MITIGATION MEASURES	IMPACT SIGNIFICANCE POST MITIGATION	
			EXTENT	DURATION	MAGNITUDE	PROBABILITY	SIGNIFICANCE		MAGNITUDE	SIGNIFICANCE
								If developed as a secure access controlled estate which is increasingly becoming common practice, even in lower income communities, the risk will be minimum		

Source: Demacon, 2017

7.4 RECOMMENDATIONS

Mitigation can be achieved through project composition, pricing, layout and access.

7.4.1 Composition

Higher priced properties tend to locate in close proximity to one another – this is consistent with Tiebout theory of the invisible foot (like attracts like). Within this mechanism lies the powerful multiplier mechanism of agglomeration and critical mass (positive growth triggers further growth). The Walmer Heights suburb is regarded as one of the highest income areas in the Nelson Mandela Bay area with sought after low density, high income properties. New residential development adjacent to Walmer Heights should ideally be in keeping with prevalent market prices in order to continue to foster price growth of around 8.5% *per annum*.

7.4.2 Pricing

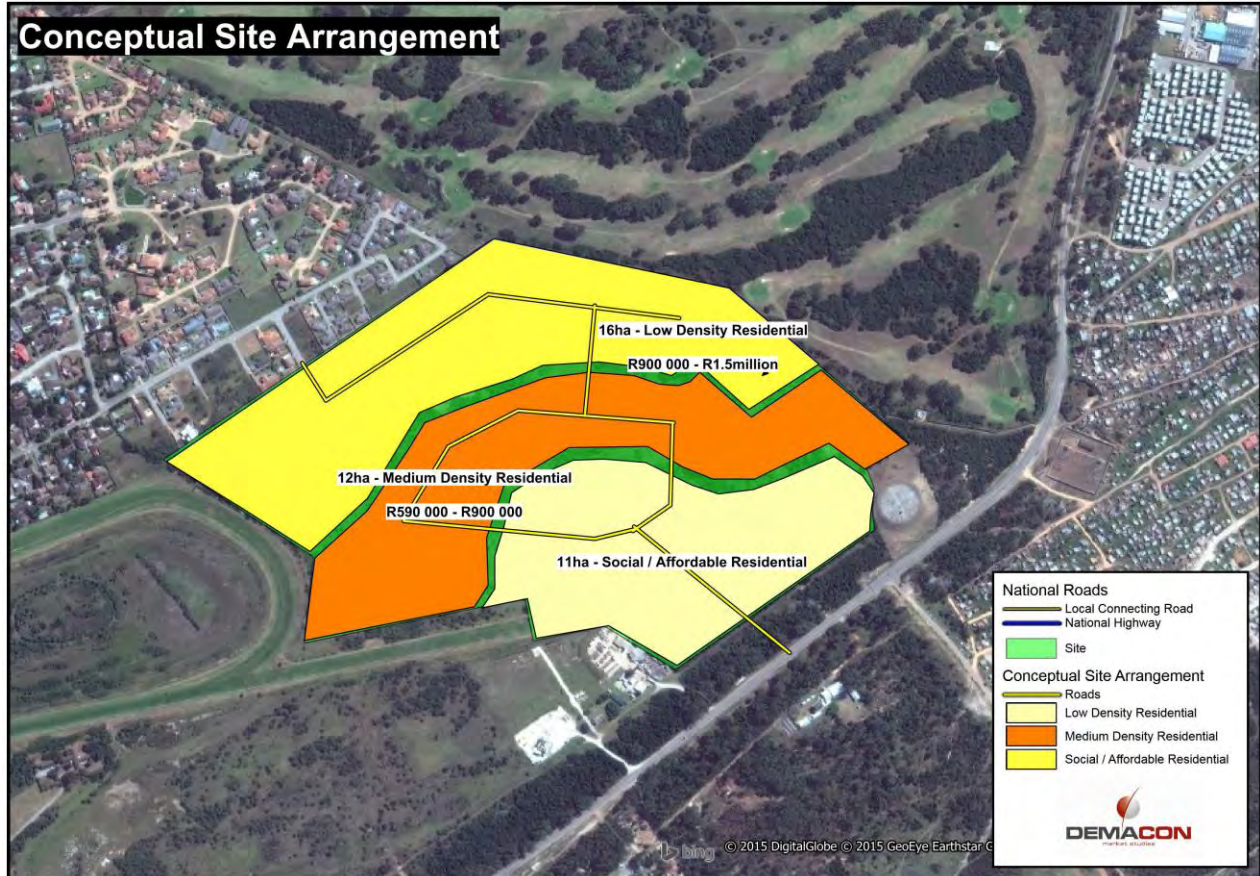
The current price differential in Walmer Heights is 40%-50% and could be increased to be a maximum of 50%-60%. This implies that new properties should be priced from a minimum not below **R620 000** which, consistent with the above, will not decelerate price growth and municipal income in Walmer Heights. However, properties below this minimum entry level value will, in all probability, decelerate prevalent price growth and concomitant municipal property tax income.

The market demand modelling did, however, indicate that there is a potential demand for residential units from as low as ±R400 000 for the area. The appropriate placement of such units will be crucial in order not to exert negative forces on price growth. Through a deliberate, planned arrangement the lower value offering should be situated adjacent Victoria drive opposite Gqebera to mitigate negative price growth and associated impacts.

7.4.3 Layout

The preferred residential typology mix should maximise investment for the buyer, maximise income for the local authority and address the housing needs of the area whilst protecting and nurturing existing upmarket residential investment to which the municipality has an equal responsibility. Based on the above analyses and findings and with the housing needs of the area considered, the following conceptual site arrangement would reflect the necessary sensitivity to property price dynamics and, as a result, yield a “best fit” scenario with minimum negative impacts - real and perceived.

Map 7.1: Conceptual Site Arrangement to Mitigate Price Growth & Property Tax Impacts



The site arrangement makes provision for low-density, mid- to higher priced properties adjacent the existing Walmer Height suburb and the Walmer Country Club to mitigate price impacts on the residential assets. The lower priced social and affordable component should ideally be located along Victoria Drive to improve proximity and accessibility to public transport.

The site arrangement ensures that higher density units are in close proximity to major transportation routes and to facilitate access to public transport. The intermediate zone will offer a balanced transition between lower and higher density units. This site configuration reflects the necessary sensitivity towards existing asset owners on the one hand and the optimum blend of more affordable units in the market. As such the revised layout, in particular Option B, reflects a more sustainable solution.

7.4.4 Access

In the context of the aforementioned a dual access configuration is recommended. Lower density, higher priced units could attain access via a Walmer Heights link to and from Beethoven Avenue. On the other hand access to and from the higher density, lower priced units to Victoria Road (M18) is a vital consideration (possibly aligning with Arlington road).

7.4.5 Security

According to research⁷ subsidized housing doesn't bring crime or disinvestment if it's well designed and managed and if the neighbourhood is safe and stable to begin with. Many communities fight to exclude affordable housing developments because they fear rising crime and declining property values. Some research has found that an influx of subsidized households may affect crime rates, but only in communities that are already struggling with disinvestment and worsening crime. A

⁷ <https://www.urban.org/urban-wire/affordable-housing-safe-neighborhoods-four-lessons-success>

much larger body of evidence confirms Massey’s new findings that crime and property values are unaffected by the construction of subsidized housing.

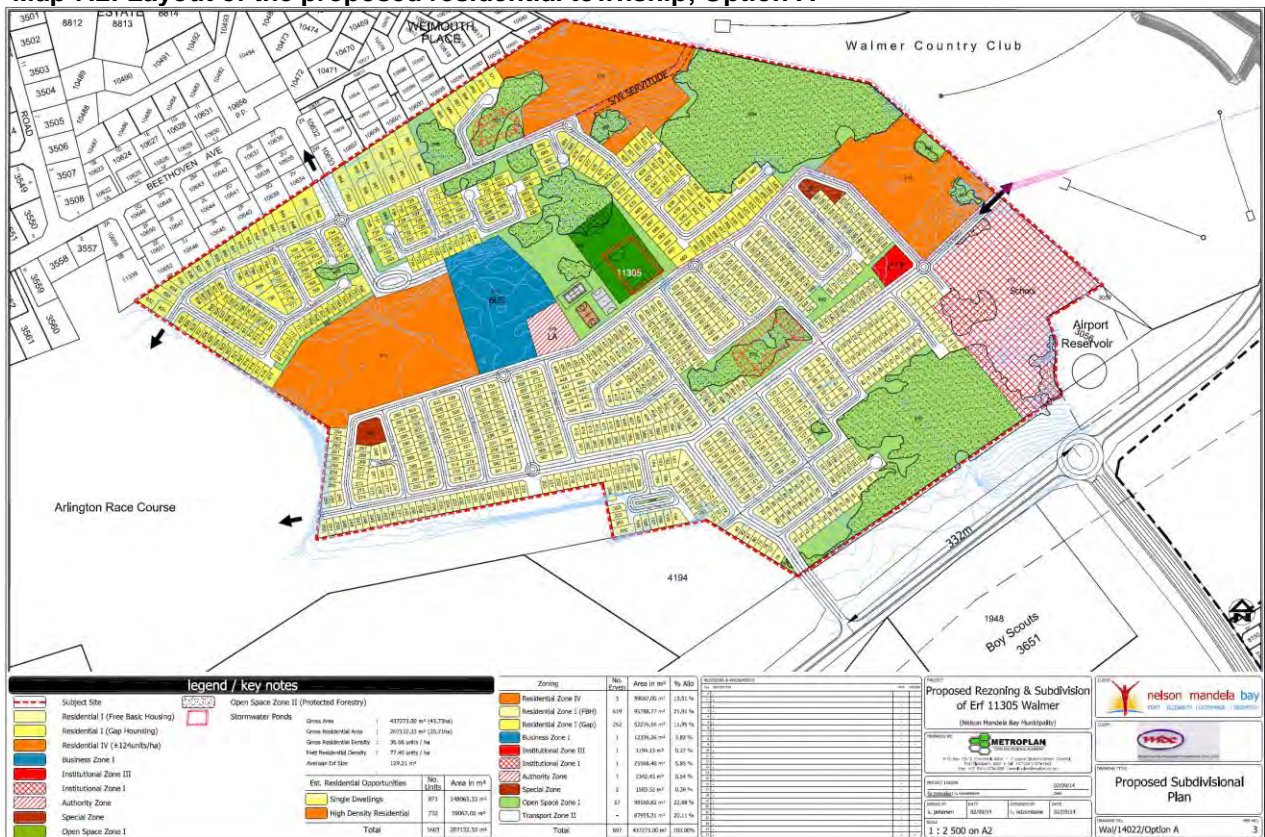
Mitigations to limit the possible increase in crime rates in the area, include the site arrangement proposed above – locating higher priced units next to Walmer Heights would limit increased crime rates in the area. Another mitigation measure would include the use of defensible space. Defensible space is achieved both through “target hardening,” design features that repel criminal activity such as fences, gates, and locks, and through design elements that encourage residents to assert control over their public spaces and neighbourhood environments (Newman 1972, p.4).

The quantitative research affirms the invisible, though distinctly eroding impacts of the inappropriate positioning and sub-optimal price variance thresholds of low income residential development when introduced to established, middle and high income suburban markets. The price growth and unseen medium to longer term property tax implications contrast the political objectives aspired to through these mixed income housing schemes. The findings clearly illustrate that there is a critical point beyond which a too large price differential erodes future property price growth and, by default, municipal property tax income. In the interest of sustained national fiscus growth, in a country with a narrow tax support base, this is fast becoming a rapidly increasing vital consideration.

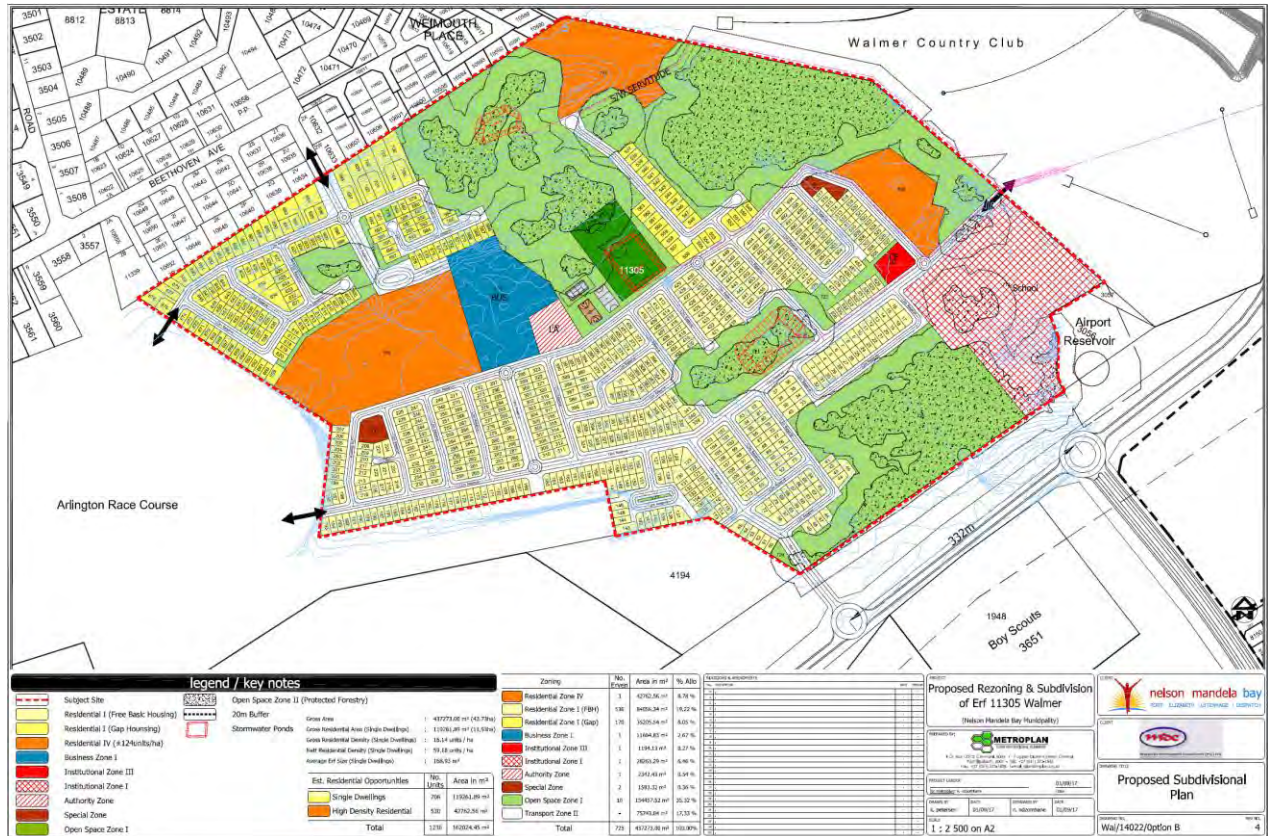
7.4.5 Comparison of the initial 2015 layout with the revised 2017 layout

The revised layout options of the township can be seen in Map 7.2 and Map 7.3.

Map 7.2: Layout of the proposed residential township, Option A



Map 7.3: Layout of the proposed residential township, Option B



The main issues have been addressed to a large extent. Option B closely aligns with the comments provided in the socio-economic impact report. The development still encompasses a large subsidy component, but an attempt has been made to create price contours that will be sensitive to possible price impacts due to the low income housing. From an economic perspective, the option most likely to have the least negative impact is Option B.

The business site is still positioned to allow through-traffic. The business site should ideally not be internalised, as internalised business site does, generally, not function optimally and the development does not have sufficient critical mass to independently sustain a business site. The business site should ideally be located directly adjacent the M18.

Although subsidy housing is not rateable for at least 8 years, the rating of social housing is entirely up to the discretion of the local authority. Most local authorities opt not to rate social housing purely based on the principle of subsidisation. The financial sustainability of the development will ultimately hinge on the effectiveness with which the local authority collects taxes from the area.

7.5 CONCLUSION

Beaumont Estate and Walmer Heights is currently buffered from direct property price impacts of the nearby Quebera by a green zone of approximately 800m wide. The vacant land in itself, however, poses a significant threat in terms of land invasion. Development of a mixed typology housing development may, to an extent, mitigate this risk. The aspiration should, however, be to create sensible pricing contours in order to mitigate the decelerating price growth effect of low income housing on high income housing. Erroneously, the location of low income households in close proximity to high income households does not in itself effect socio-economic upliftment or improve access to job opportunities. The ideal minimum price for properties adjoining the high income Walmer Heights is recommend from R620 000. In order to mitigate security and associated socio-economic concerns, the revised layout should respond to pricing contours and permeability of the development should be limited. It is also recommended that the business site should not be

internalised: retail sales performance can be significantly enhance simply by positioning the business site adjacent or close to the M18.

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