

POLICY

WELTEVREDEN VALLEY SMALLHOLDING LOCAL AREA

(POLICY NUMBER 11170)

APPROVED BY COUNCIL : 31 JANUARY 2013
C08/01/13

WELTEVREDEN VALLEY SMALLHOLDING LOCAL AREA POLICY



PREPARED BY



PREPARED FOR



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CHAPTER 1: INTRODUCTION

1.1 Background

The Weltevreden Valley Smallholding Area (subject area) consists of 54 smallholdings being portions of Cape Farm 787, Philippi of approximately 21.68ha in extent. The subject area is bordered by Vanguard Drive Expressway and the Philippi Horticultural Area (PHA) to the west and by the London Village, Wildwood and Colorado Park residential developments to the north and south (See figure 4).

ARG Design, architects, planners and urban designers in conjunction with Pendulum Consulting Transport Planners and MBB Consulting Engineers were appointed by the City of Cape Town (CoCT) Department: Planning & Building Development Management (DPBM) Khayelitsha/Mitchells Plain/Blue Downs (District F) to undertake the Weltevreden Valley Smallholding Local Area Policy (WVSLAP) study.

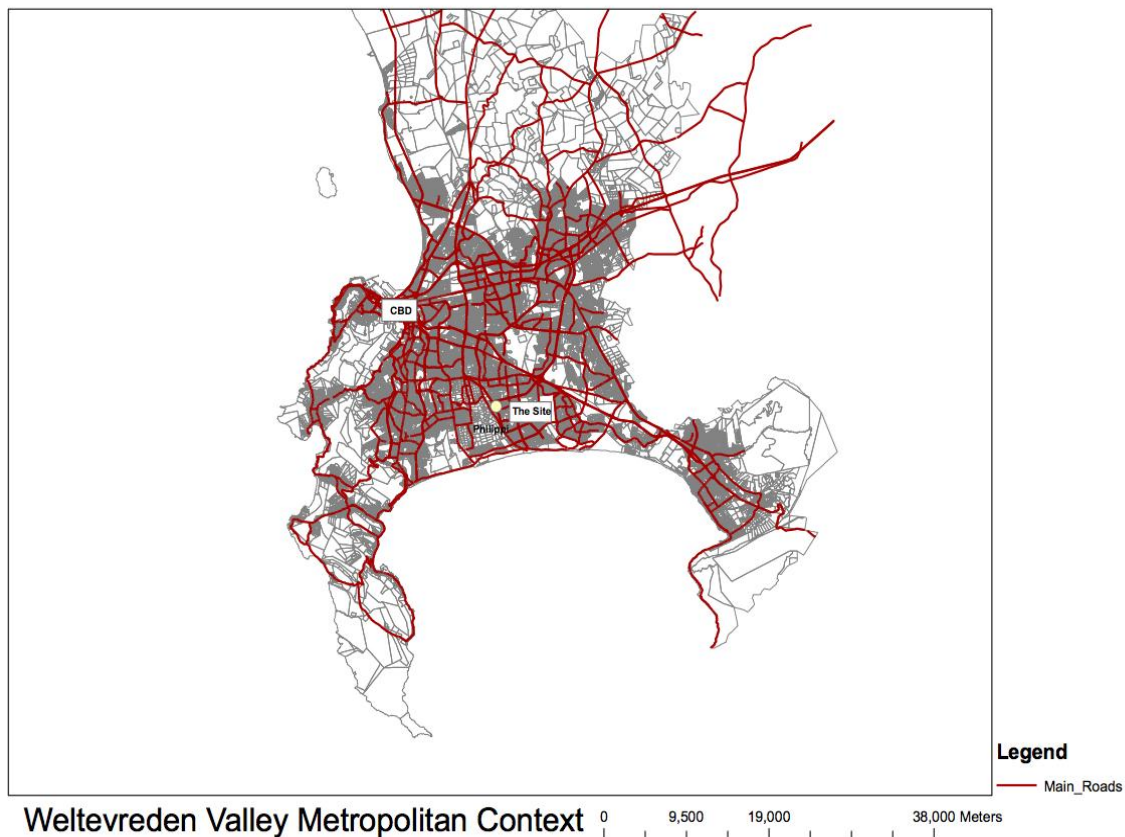


Figure 1: Metropolitan Context

1.2 Brief

- The brief involved the setting of spatial guidelines and urban development patterns for development of the entire study area and a strong statement regarding the ad- hoc nature of development within the study area.
- The study is intended to promote sound decision-making regarding the potential use of vacant land and the impact of development on the surrounding residential fabric and service networks.
- It will create a guideline for developers wishing to develop the sites as well as for the administrators who administer the land.
- It will reduce the number of ad-hoc applications for rezoning and subdivision.
- The document aims to encourage more desirable spatial forms in the development of the area.

1.3 Limitations to study

No in depth soil analysis was done for the agricultural study and no full Traffic Impact Assessment (TIA) was done for the various layouts examined.

CHAPTER 2: LEGAL/REGULATORY/PLANNING FRAMEWORK

This section describes the legislation and policies providing the mandate for, and guiding this policy. The CoCT's mandate to introduce and enforce this policy stems from the following:

2.1 Provincial Spatial Development Framework, 2009.

The **Provincial Spatial Development Framework (PSDF, 2009)** states that densification should occur along mobility routes in order to support public transport, on the periphery of open spaces to increase surveillance, within areas of public sector investment and in selected areas of high private sector investment. None of the above applies to the study area.

The PSDF advocates an average gross density of at least 25 du/ha inside the urban edge, which does not include the space allowed for open space, transport etc. This relates to residential plots of 400m² or less.

In terms of the **Western Cape Spatial Development Framework (WCSDF)-(UR 6a)**, all development undertaken by the private sector above a certain threshold shall provide 20% or more inclusionary housing. This includes 10% for the so-called gap housing market. The gap housing market according to the WCSDF: Inclusionary Housing Discussion Document (2009) is that segment earning above R3500 (subsidy) and below R12000- R16000/ month.

This is important for the WVSLAP as most of the erven will be in the range of R400- R600 000, which falls within the gap market and just above

2.2 Cape Town Spatial Development Framework (CTSDF, 2012)

In terms of the **Cape Town Spatial Development Framework (CTSDF, 2012)**, approved as a 4(6) structure plan in 2012, the subject area is designated for urban development. The subject area is intended to be used for low- density housing with the opportunity for buildings and infrastructure with a residential purpose, offices, shops, community facilities and other associated uses, excluding noxious industrial.

2.2.1 Recommendations in the CTSDf:

- Recommend / Aims to aims to promote that new urban development is supported by appropriate public transport infrastructure and services.
- Recommend / Aims to promote appropriate land use intensification through achieving a minimum, average gross base density of 25du/ha in the next 20-30 years, and will aim for a higher gross base density thereafter.
- Recommend / Aims to promote the redressing of existing imbalances in the distribution of different types of residential development, and avoid creating new imbalances. Further the design guidelines of this policy promotes for a range of size, type and cost of housing opportunities in an appropriate location in close proximity an adjacent to activity/development routes and activity streets, with good access to economic opportunities, public transport and social facilities.
- Promote good contextual urban design fit, and ordering relationship between people, urban space and the built and natural environment.
- Promote appropriate land use intensification where feasible.

2.3 District SDF for Khayelitsha / Mitchells Plain (2012)

In terms of the **Khayelitsha/Mitchell's Plain District Spatial Development Framework**, approved as a 4(10) structure plan in 2012, the subject area is intended to be used for low- density residential development. It is designated as new urban infill with the opportunity for a range of urban uses, excluding noxious industry.

2.3.1 Recommendations in the Spatial Development Framework:

- Recommend incremental densification over time of urban areas where appropriate. This should be guided by available infrastructure capacity, neighbourhood density and character, proximity to job opportunities and social facilities, and access to public transport
- Acknowledge and respect the surrounding urban environment and develop accordingly. This includes considerations relating to neighbourhood density and character, and access to public transport, job opportunities and social facilities.
- In general, support the development of new development areas at higher densities that exists in these locations, but with due regard for appropriate transition to surrounding areas.
- Develop utilizing the principle of socio-economic gradient.
- Give particular attention in applications for development that will interface areas between existing development and new development areas, especially where urban character may be impacted or where socio-economic gradient is steep.
- Recommend appropriate development of identified new development areas subject to infrastructure availability and in line with requirements for provision of associated social facilities and recreational spaces.
- Recommend proposal of small-holding area; be used as an area for new urban development consisting of a mix of medium and lower density housing.

- Front development onto the proposed extension of Rosewood Drive.
- Propose medium density forms of housing which are likely to be appropriate on the Vanguard Drive interface as well as along Rosewood Drive extension.

Figure 2, which is an extract from the document, shows the smallholding area in yellow (potential low density development.)

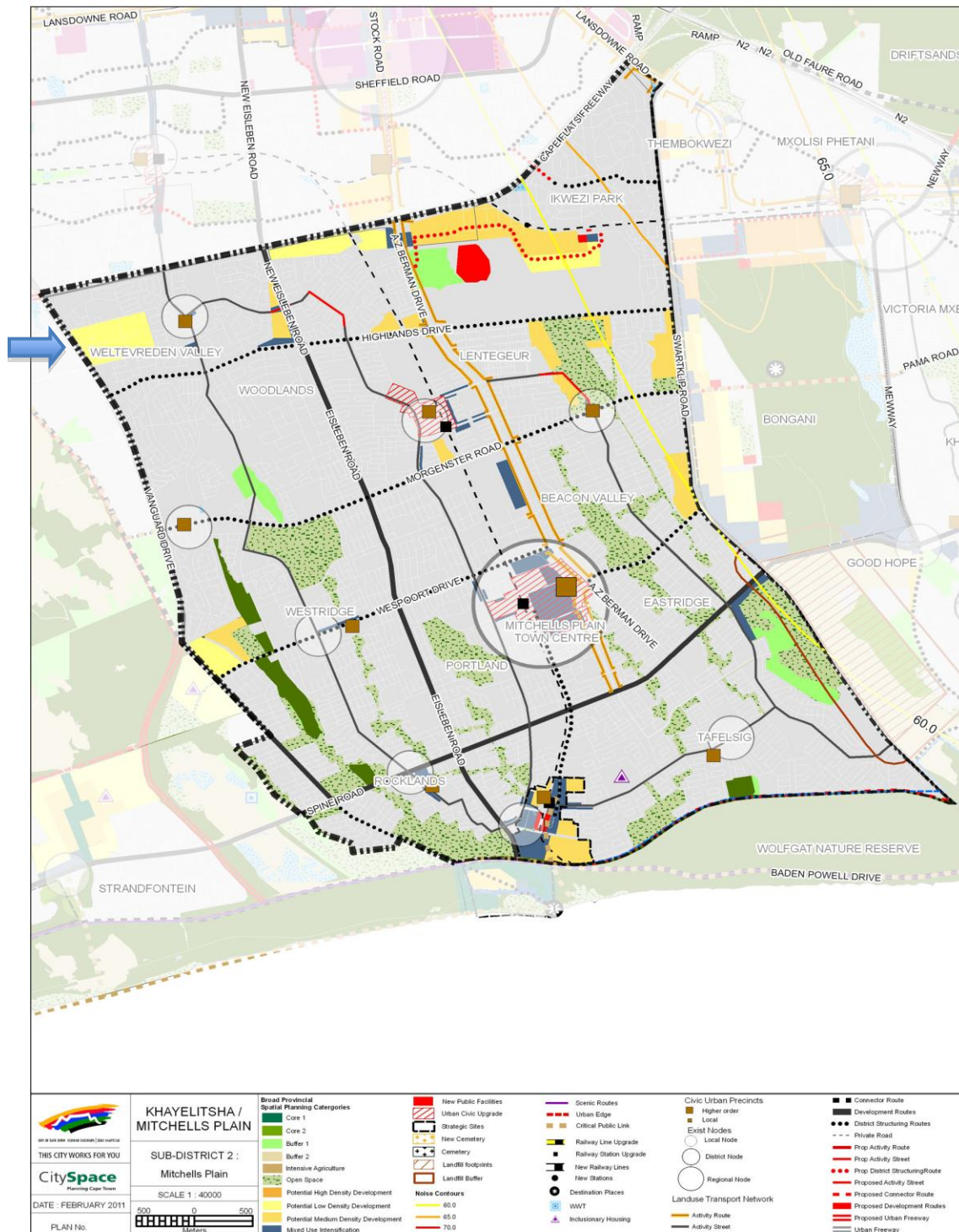


Figure 2: Extract from Khavelitsha /Mitchells Plain

2.4 City of Cape Town IDP (2012 review)

The IDP is a strategic framework for building a city based on five pillars:

- the opportunity city,
- the safe city,
- the caring city,
- the inclusive city, and
- the well-run city.

Those five key focus areas inform all the City's plans and policies including the WVSLAP. Furthermore this policy indirectly supports Council's strategic objectives as articulated in the current Integrated Development Plan (IDP) and above.

2.5 The South African Constitution, Act 108/1996

The following sections of the Chapter 2: The Bill of Rights, of the Constitution, 1996 have particular relevance for the policy.

Section 156 Powers and functions of municipalities

(1) A municipality has executive authority in respect of, and has the right to administer-

(2) A municipality may make and administer by-laws for the effective administration of the matters which it has the right to administer.

(5) A municipality has the right to exercise any power concerning a matter reasonably necessary for, or incidental to, the effective performance of its functions.

Section 24 Environment

Everyone has the right-

(a) to an environment that is not harmful to their health or well-being; and

(b) to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that-
(i) prevent pollution and ecological degradation;
(ii) promote conservation; and
(iii) secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.

Section 25 Property

(1) No one may be deprived of property except in terms of law of general application, and no law may permit arbitrary deprivation of property.
(5) The state must take reasonable legislative and other measures, within its available resources, to foster conditions which enable citizens to gain access to land on an equitable basis.

2.6 National Environmental Management Act (NEMA) 107/1998

The aim of NEMA is to provide for co-operative environmental governance by establishing principles for decision-making on matters affecting the environment, institutions that will promote co-operative governance and procedures for co-ordinating environmental functions exercised by organs of state; to provide for certain aspects of the administration and enforcement of other environmental management laws; and to provide for matters connected therewith. A set of regulations have been published in terms of this act which supply a list of activities that may trigger a basic assessment or scoping and Environmental Impact assessment.

2.7 The National Environmental Management Biodiversity Act 10/2004 (NEMBA) and the CoCT Biodiversity Strategy, 2003.

In terms of the NEMBA, the Minister can declare certain ecosystems as threatened or endangered ecosystems. The removal of vegetation in these systems therefore triggers an environmental assessment. Cape Flats Dune Strandveld, which may be found on the site therefore, may trigger this regulation. The CoCT Biodiversity Strategy is also of relevance. This document provides an overarching framework for a citywide consolidated and coordinated approach to protecting and enhancing the rich biodiversity of Cape Town.

2.8 CoCT: Storm water Management Planning and Design Guidelines for New Developments

This document provides guidelines for the planning and design of storm water management systems with particular emphasis on new developments. In general, the aim should be to provide a storm water management system which mirrors nature, utilizes natural features in the storm water cycle, will be an asset to the community, and will function efficiently with relatively less maintenance.

Environmental policies such as promoting the use of locally indigenous vegetation will also reduce the long-term maintenance requirements of the development.

Topography informs the feasibility of different locations for storm water routes, outlets and treatment areas. The main storm water routes should be located along natural drainage routes.

CHAPTER 3: PROBLEM STATEMENT

The smallholdings within the study area referred to (see figure 4), are currently zoned Rural and a few have been subdivided into smaller single residential developments. The subject area measures approximately 21.68ha in extent with internal unmade public roads and represents a substantial portion of undeveloped land within Weltevreden Valley.

A few smallholdings have been subdivided into blocks of typically 10 – 20 single residential erven, some with a small POS. These pockets have however been developed in isolation and on an ad-hoc basis, which has due to the average size of the smallholdings, not been able to establish a sustainable and integrated township extension. The continued development of the entire smallholding area in this manner is not feasible due to the lack of appropriate social infrastructure being provided (such as crèches, public open space, commercial and Places of Worship) and un-coordinated civil infrastructure provision.

The smallholdings are generally approximately 4000m² in size. Due to the multitude of landowners of varying financial status present in the area, it is likely that without a strong policy position from the City development proposals for these individual erven will continue to be submitted and approved in an arbitrary fashion and development applications will be phased in a manner which will not result in a sequential development from the outside in. This would severely restrict the development of the central properties whose owners may in fact be in a better position to develop but cannot gain access to their properties. Also the appropriate provision of social infrastructure for the entire area cannot be established due to its piecemeal development.

The absence of a coherent policy for the study area is manifesting in the following critical issues:

- Negative impacts on land use development trends and patterns, city's economy, social well-being, natural heritage etc;
- Increasing pressure on infrastructure;
- Major indirect 'knock-on' socio-economic impacts through the loss of aesthetic appeal and sense of place resulting from alien invaded land, sand dunes, dumping etc, and;
- Increasing vulnerability to surrounding communities resulting from undeveloped land, lack of social & community facilities, inappropriate infrastructure etc;

A policy response to the smallholding area within the district is required to increase the efficiency of management, to improve the allocation of resources and infrastructure; and guide development in regard to these issues.

4 CONTEXT

4.1 Regional context

4.1.1 Major routes and access

The site is accessible via Vanguard Drive and Highlands Drive through the suburbs of Colorado Park (**See figure 3**). It is deeply embedded in the suburbs. Although the site borders on Vanguard Drive, no access is possible from this road, nor will it be allowed in the near future.

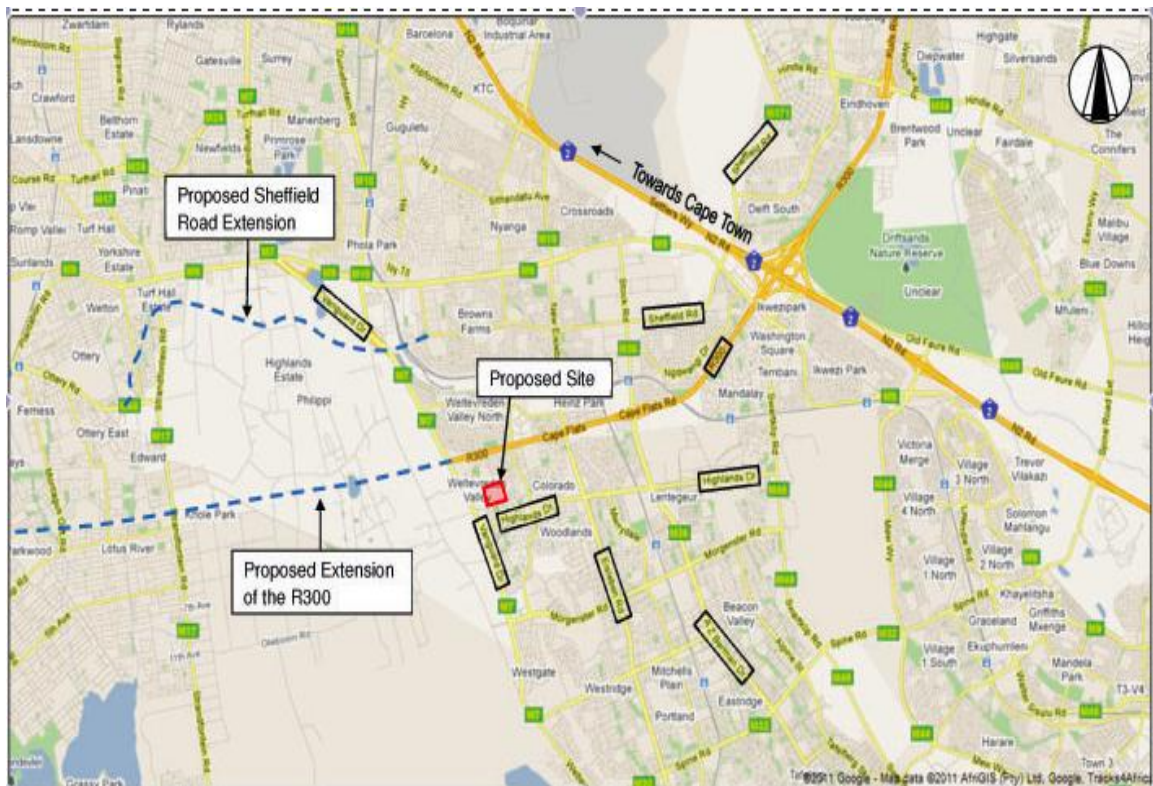


Figure 3: Transport Routes



Weltevreden Valley Small holding: Aerial Photograph

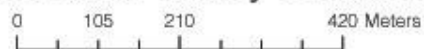


Figure 4: Aerial Photograph of site

4.2 Local Site context

4.2.1 Demographic Profile

Weltevreden Valley falls within the Mitchell's Plain area. Mitchell's Plain was an area planned as a new settlement in the 1970s. It was built to alleviate housing shortages in the so called "coloured" community of Cape Town at a time when communities were being forcefully removed in terms of apartheid legislation. The town was planned as a segregated, self-sufficient dormitory town far from the "white" areas of the city, and also isolated from its "black" and "Indian" neighbourhoods. All manufacturing and industrial activity was excluded from the planning for the area in order to promote Atlantis, 45km to north of the city, as a "coloured" decentralization point. Mitchell's Plain was built to accommodate 250,000 people; the current population of the area far exceeds this.

Weltevreden Valley falls within Ward 78 of the City of Cape Town. According to the 2003 ward profiles based on the 2001 census data, the population profile of the area was as follows:

The main population group living in the area fall in the "Coloured" ethnic group, 31% fall within the 18-34 age group, indicating a young population profile (**See Table 1 and 2**). English and Afrikaans are almost equally spoken. The majority of those of employable age were employed in 2001. Most people are employed in the semi skilled sectors Clerks (20.97%) Craft and related trade workers (16.04%) elementary occupations (14.33%) (**Table 6**). More than half of the population resides in detached brick structures and 34.96% reside in semi-detached /townhouses of which most are owned but not yet paid off (see Tables 7 and 8).

Table 1: Ethnic Group
Ethnic Group, Age, Education, Language, Migration, Disabilities

WARD 078						
ETHNIC GROUP	Male	%	Female	%	Total	%
Black African	504	1.37	593	1.61	1,096	2.97
Coloured	17,289	46.83	18,341	49.68	35,629	96.50
Indian/Asian	46	0.12	59	0.16	105	0.28
White	49	0.13	41	0.11	90	0.24
Total	17,888	48.45	19,034	51.55	36,921	100.00

Table 2: Age

WARD 078						
AGE	Male	%	Female	%	Total	%
0 - 5	1,983	5.37	1,894	5.13	3,877	10.50
6 – 12	2,471	6.69	2,378	6.44	4,848	13.13
13 - 17	1,941	5.26	1,923	5.21	3,863	10.46
18 - 34	5,620	15.22	5,899	15.98	11,519	31.20
35 - 54	4,262	11.54	4,992	13.52	9,254	25.06
55 - 64	1,155	3.13	1,253	3.39	2,407	6.52
65+	456	1.24	695	1.88	1,151	3.12
Total	17,888	48.45	19,034	51.55	36,921	100.00

Table 3: Language

WARD 078						
LANGUAGE	Male	%	Female	%	Total	%
English	10,105	27.37	10,864	29.42	20,969	56.79
Afrikaans	7,652	20.73	8,031	21.75	15,683	42.48
Xhosa	84	0.23	109	0.30	194	0.53
Other African	22	0.06	20	0.05	41	0.11
Other	25	0.07	9	0.02	34	0.09
Total	17,888	48.45	19,034	51.55	36,921	100.00

Table 4: In-migration in the period 1996- 2001

WARD 078		
IN-MIGRATION IN THE PERIOD 1996 TO 2001 INCLUDING INTRA-CITY MIGRATION	Number	%
Eastern Cape	162	4.38
Free State	19	0.51
Gauteng	66	1.78
Kwa-Zulu Natal	80	2.16
Limpopo	12	0.32
Mpumalanga	21	0.57
Northern Cape	82	2.22
North West	13	0.35
Western Cape	3,113	84.18
Undetermined	130	3.52
Total	3,698	100.00

Table 5: Work Status Economically Active Aged 15- 65

WORK STATUS - ECONOMICALLY ACTIVE Aged 15 to 65	Male	%	Female	%	Total	%
Employed	7,238	43.71	5,779	34.90	13,017	78.61
Unemployed	1,967	11.88	1,576	9.52	3,542	21.39
Economically Active Total	9,204	55.58	7,355	44.42	16,559	100.00

Table 6: Occupation of Labour Force

WARD 078						
OCCUPATION OF LABOUR FORCE	Male	%	Female	%	Total	%
Legislators, senior officials and managers	363	2.79	217	1.67	580	4.46
Professionals	273	2.10	237	1.82	510	3.92
Technicians and associate professionals	651	5.00	849	6.52	1,500	11.52
Clerks	1,053	8.09	1,677	12.88	2,730	20.97
Service workers, shop and market sales workers	759	5.83	665	5.11	1,424	10.94
Skilled agricultural and fishery workers	54	0.41	11	0.08	66	0.51
Craft and related trades workers	1,643	12.62	445	3.42	2,088	16.04
Plant and machine operators and assemblers	1,045	8.03	591	4.54	1,636	12.57
Elementary occupations	1,057	8.12	808	6.21	1,865	14.33
Undetermined	339	2.60	280	2.15	618	4.75
Total	7,238	55.60	5,779	44.40	13,017	100.00

HOUSING PROFILE

Type of Dwelling, Ownership, Household Income, Household Size

Table 7: Type of dwelling

WARD 078		
TYPE OF DWELLING	Number	%
House or brick structure on a separate stand or yard	4,759	58.88
Traditional dwelling/hut/structure made of traditional materials	65	0.80
Flat in block of flats	24	0.30
Town/cluster/semi-detached house (simplex; duplex; triplex)	2,826	34.96
House/flat/room in back yard	179	2.21
Informal dwelling/shack in back yard	85	1.05
Informal dwelling/shack NOT in back yard	11	0.14
Room/flatlet not in back yard but on shared property	79	0.98
Caravan or tent	11	0.14
Private ship/boat	0	0.00
Not applicable (living quarters is not housing unit)	44	0.54
Total	8,083	100.00

Table 8: Dwelling Ownership

WARD 078		
DWELLING OWNERSHIP	Number	%
Owned and fully paid off	2,559	31.65
Owned but not yet paid off	4,415	54.60
Rented	963	11.91
Occupied rent-free	104	1.29
Not applicable	46	0.57
Total	8,086	100.00

4.2.2 Urban Form

4.2.2.1 Surrounding neighbourhoods

Colorado Park

Colorado Park located to the north and north east of the site is a middle income neighbourhood and one of the more affluent areas in Mitchells Plain. The erf sizes are on average between 500-700m².

The houses are predominantly single storey, constructed of brick, which is plastered and painted with pitched roofs and garages for parking vehicles.

A three bedroomed house in this neighbourhood is currently being sold at between R450 000 and R600 000.



Figure 5: House types in Rosewood Drive

To establish an understanding of the house prices currently being paid in Cape Town and where this suburb fits in, a recent FNB estate agent property survey was consulted. The survey divided the residential property markets into four agent-defined¹ income segments, namely “Lower Income Areas” (average price = R582, 000), “Middle Income Areas” (average price = R1.17m), “Upper Income

¹ These segments are not necessarily legislated, but are used for ease of reference.

Areas (average price = R2.01m) and “High Net Worth Areas” (average price = R2.8m). (*FNB property market analytics, March 2011*)

It is clear that although the houses in this area are defined as lower income areas, in comparison with the rest of Mitchells Plain, they represent the upper end of the spectrum.

Wildwood

Wildwood, which borders on Colorado Park (to the east of the study area), also consists of predominantly single residential dwellings on plot sizes of between 500-700m² and of a similar style to Colorado Park (**See figure 5**).

Philippi Horticultural Area (PHA)

PHA is located across Vanguard Drive to the north of the study area. The PHA is a 3,300 hectare section of farmland most of which has been classified as an “agricultural area of significant value given its existing use” in the City’s Agricultural Land Review. The south-eastern portion of the PHA has been rated an area of significant value given its potential and emerging agricultural use, while smallholdings are located on a narrow strip along the central part of the western border of the PHA (CoCT, 2008b). The study area falls outside of the PHA.

4.2.2.2 Existing subdivisions on the site

There are a few subdivisions that have been allowed on the site. The most significant of these is the Vanguard Villas development on the eastern portion of the site.

Vanguard Villas

Vanguard Villas is a security village development developed by New Age Property developments. It has 119 semi-detached units of between 92-98m² units (2-3 bedrooms). Rentals are approximately ±R3 500 /month.

The development is domestic in nature with brick walls, pitched roofs and parapet walls (**See Figures 6 and 7**).



Figures 6 and 7: Vanguard Villas Development



4.2.2.3 Recent developments in the surrounding area

One of the recent developments in the surrounding area is the Watergate Estate Development. It is situated close to the R300 next to the Mitchells Plain District Hospital, approximately 2km from the study area.

Watergate A (See figure 8)

This development has been approved, and will consist of approximately 163 single residential, 14 general residential and 3 commercial sites. Erf sizes will be between 72m² to 262 m². The general residential units will consist of 3 and 4 storey walk-up units. Unit sizes will vary between 34m² and 74 m², which will include a combination of 1-3 bedroom units.

Watergate B: Portion 11 of Cape Farm 693

This is an approved development with a site extent of 5.537ha. The subject property (Portion 11 of Farm 693 and a Portion of Erf 36915) is located on the corners of A Z Berman Drive and the Cape Flats Freeway/R300.

A township application and deviation from the Weltevreden Valley Structure Plan was approved in February 2009. The township layout makes provision for 227 Single Residential Units, three Public Open Spaces & Remainder Public Road.

Watergate C: Portion 12 of Cape Farm 693

Watergate C is another approved development with a site extent of 2.8199ha. The subject property (Portion 12 of Farm 693 and a Portion of Erf 37930) is wedged in between the R300 freeway and the Cape Flats Railway line with no direct access to the nearest public street, which is Katrine Harries Street. A township application and deviation from the Weltevreden Valley Structure Plan was approved in February 2009. It makes provision for 130 Single Residential Units, Public Open Spaces & Remainder Public Road.



Figure 8: Watergate A Estate

4.2.2.4 Conclusions

The surrounding urban form is that of a low density, domestic scale environment. There is the possibility to create a higher density development on these sites that fits in with the sustainability principles of the City. This would need to be designed sensitively to fit in with the surrounding urban fabric with regard to street pattern and integration. **(See density discussion in section 5.)**

Lack of integration and linkages

The surrounding land use pattern is predominantly residential. The suburbs such as Colorado Park and Wildwood are isolated and little accessibility exists between neighbourhoods. As long as the smallholdings remain undeveloped, the access between these areas will be problematic.

Crime and safety

The vacant land in its current form has become a hiding place for criminals and poses safety issues for the surrounding residents. It also provides a venue for antisocial behaviour.

4.2.3 Existing facilities

The study area is not located within walking distance of most social facilities. Although Westgate Mall is the closest shopping centre, it is not accessible by foot and requires the use of a vehicle. The study area is well served by public transport at present **(See discussion on public transport in section 4.2.9).**

It has been confirmed by the WCED that there is no need for an additional school site in the study area, as there are other vacant properties located within a 1-5km radius that are suitable for a school site. In addition there is a surplus of vacant school sites in the larger Mitchells Plain.

The following schools are located within a six kilometre radius of the site (**Refer figure 9**).

Schools located near the site

1. Northwood Primary- 1.7km (Woodlands)
2. Portland High- 2.7km (Mitchells Plain)
3. Highlands Primary- 2.7km (Woodlands)
4. Woodville Primary (Woodlands)
5. Nal' uxulo Primary- 3.7km (Weltevreden Valley North)
6. Mondale High School- 5.7km (Portland's)
7. Aloe High School- 2.6 km (Lentegeur)

The following are the closest public health amenities to the subject property (**Refer to figure 9**).

Public Health Amenities located near the Weltevreden Valley site.

1. Valley Clinic- 2.5km
2. Lentegeur Public Clinic- 3.4km
3. Mzamomhle Public Clinic- 4.8km
4. Phumlani Clinic- 5.6km
5. Mitchells Plain Medical Centre- 6.7km
- 6. Crossroads Clinic- 7.2km**

The Mitchells Plain Hospital is currently under construction (R394-million). The hospital is a four-level building that will offer 230 beds, with state-of-the-art medical equipment. It is located adjacent to the Lentegeur Hospital.

The figure overleaf indicates the location of the study in relation to surrounding amenities (**See Figure 9**).

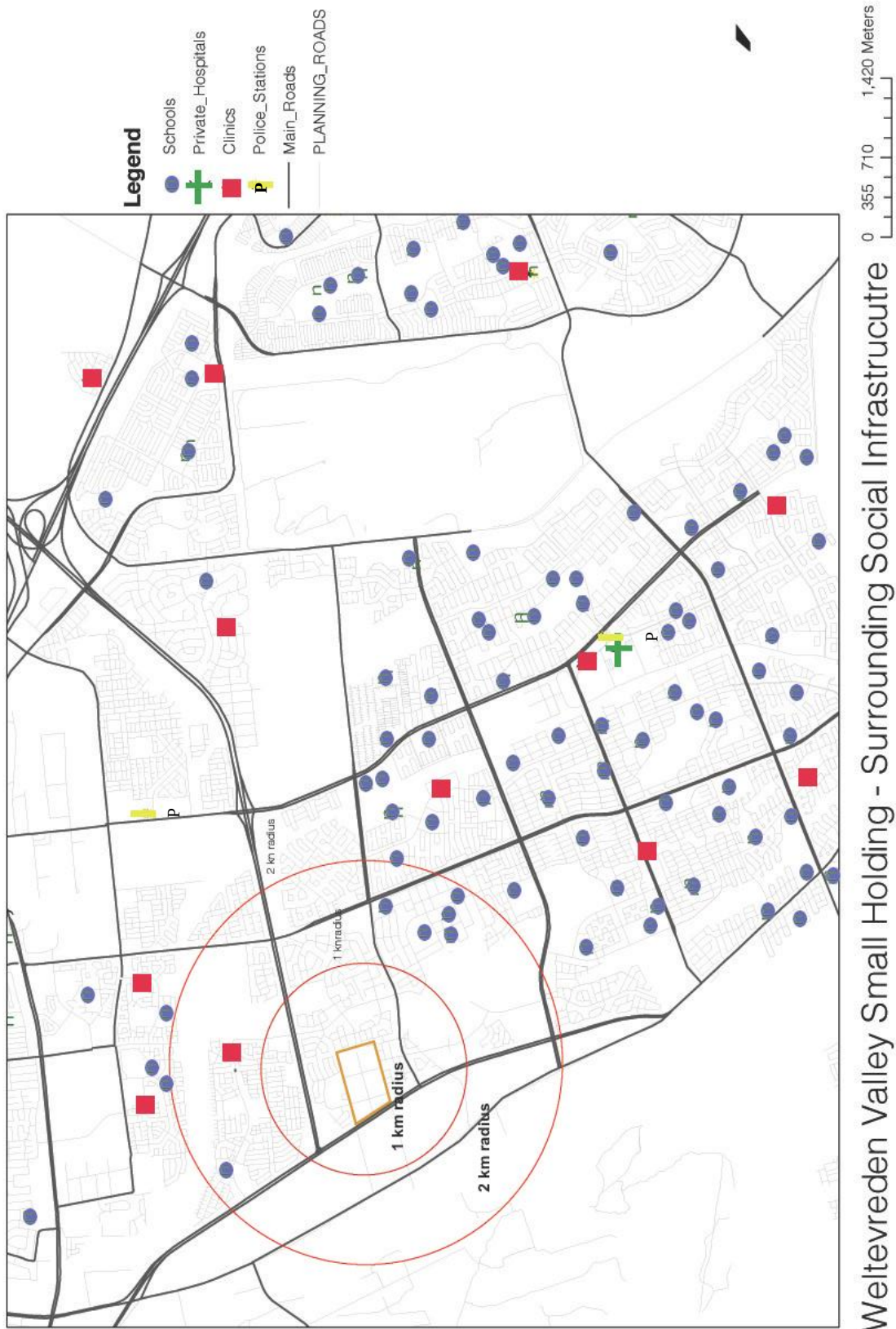


Figure 9: Social Facilities

4.2.4 Environmental

4.2.4.1 Topography

The study area is characterised by low parabolic dunes that have been highly influenced by urban development in the surrounding area.

According to the Weltevreden Valley Structure Plan, *“the dunes in the study area are a significant feature in the landscape. Rather than be removed or flattened as in Mitchells Plains, it is recommended that they be retained where possible, or ‘rolled’ to accommodate housing at elevations and to provide topographical interest, aid in the drainage of the site and provide view sites for housing.”*

4.2.4.2 Geology

The Weltevreden Valley development lies on the southern extremity of the Cape Flats sedimentary deposits. These sediments are comprised predominately of wind blown, light grey coloured sand which varies from medium grained to coarse grained and occurs in the form of elongated dune structures separated by parallel valleys. The sand is typically high in silica content and also has minor broken shell particles. It is quarried at a number of locations to the west of the study area.

4.2.4.3 Wind

The major feature of the climate in this area is the strong summer southerly winds. During January, winds blow from the southerly quadrant for 75% of the time – the most predominant wind being southerly, however the strongest being south-south-easterly.

Design of residential areas and building should take wind characteristics into account – to lessen its impact and create wind protected areas.

4.2.4.4 Rainfall

Rainfall is around 700mm p.a mainly in winter, usually mild and extended over a few days. Storm water runoff from the area will increase with urban development. The storm water is a significant issue for the development of the study area and special care will need to be taken in its design and implementation. (**See section 4.2.8.1**)

4.2.4.5 Vegetation

The study area is highly disturbed with large stretches of alien vegetation, Port Jackson and Rooikrans covers large portions of the study area. Evident dumping occurs on the study area. According to the Environmental Resource Management Section of the City of Cape Town, in terms of the biodiversity network, there are some natural remnants of Cape Flats Dune Strandveld, which is an endangered vegetation type.



Figure 10: The vegetation on study area is mainly alien vegetation with little indigenous vegetation remaining particularly in the southern portion of the study area.



Figure 11: Port Jackson growing on the study area.

4.2.4.6 Cape Flats Aquifer

According to the District SDF for Khayelitsha and Mitchells Plain, 2012 the Strandveld Group deposits constitute what is known as the Cape Flats aquifer. The aquifer is regionally unconfined and internally is essentially free of lateral hydraulic or geological boundaries which may influence regional behaviour. The aquifer is not hydro-geologically linked to any other aquifer, except the talus/scree material along the foot of the mountains in the west.

The aquifer pinches out against “impermeable” boundaries in the east, west and north, while the coastline extending along False Bay between Muizenberg and Macassar defines the southern boundary. The aquifer is recharged principally from precipitation within the catchment. Groundwater flow in the Cape Flats is either to the west to Table Bay or south to False Bay. The water in the main part of the aquifer has a fairly low salinity but is relatively hard. There is a build up of salts in some pockets of the aquifer due to very high evaporation rates. The aquifer has been significantly affected by urban development but is still regarded as a viable supplementary water source for Cape Town. This resource upon

which Mitchells Plain was built, contains eight million cubic metres of water and has not been used, maintained or managed productively. The aquifer is significantly polluted and abstraction from the aquifer would be a long term project. This is significant for the study area as any additional development and hardening of surfaces could impact on the aquifer. The fact that there is a very high water table in the Cape Flats, also impacts on the way the study area can be developed from a storm water management perspective. The CoCT Storm water Management Policy, 2009 should be used as a guide for development.

There are no areas with high agricultural potential soil in Khayelitsha / Mitchell's Plain. However, the PHA, west of District F (largely falling outside the boundaries of District F), is successfully farmed.

4.2.4.7 Heritage

There are no heritage factors that need to be taken into account with regard to the study area development. However, sites larger than 5000m², which are developed, will require a Notice of Intention to Develop (NID) be submitted to Heritage Western Cape (HWC).

As the study area has never been built or farmed upon, there may be archaeological findings.

Anything recovered during construction should be reported to HWC immediately.

4.2.5 Surrounding Zoning

Most of the surrounding properties are zoned as Single Residential or Informal Residential on the eastern side of Vanguard Drive.

Across Lansdowne Road is PHA, which is predominantly zoned as Rural (**See figure 12**).

It would make sense for the development on this study area to be residential with associated uses (commercial, public open space etc).

It would not make sense from a land use perspective to retain the study area for agricultural purposes as it is effectively isolated from PHA by the development of Vanguard Villas (a residential development) and Vanguard Drive.

The use of the study areas for agricultural purposes could create various forms of nuisance such as agricultural vehicular movement through the residential areas, the use of fertilisers and other agricultural additives.



Weltevreden Valley Small Holding: Zoning Map

0 280 560 1,120 Meters

Figure 12: Zoning Map

4.2.6 Ownership

There are multiple owners in the study area. Two land owners predominate, the National Housing Board (NHB) and Moosa M Ismail. See **table 9** below and **figure 13**.

Table 9: Ownership Information

Erf Number, Owners Name and Extent (meters squared rounded)

ERF NUMBER	Owners Name	EXTENT (m2)
22	Green Pyramid Prop Inv C C	2550
23	Robert Ross Inv Pty Ltd	4055
24	Pillay Stephen Faisal & Amina	4050
10	City Of Cape Town	1712
49	Rapidough Prop 560 C C	4054
25	Francke Edward Joseph	4049
54	Moosa Mohamed Ismail	4050
31	Blackbird Trading 2 C C	8092
32	Lalloo Vanmarie	4049
33	Moosa Mohamed Ismail	4054
34	Moosa Mohamed Ismail	4059
77	National Housing Board	4048
78	Adam Shameim Ahmed	4051
79	Adam Shameim Ahmed	4054
3137	S H Developers Pty Ltd	4071
38	Moosa Mohamed Ismail	4049
37	Moosa Mohamed Ismail	4044
36	Moosa Mohamed Ismail	12152
35	Loofer Hilmer Edward & Khairunissa	4053
82	National Housing Board	4048
81	National Housing Board	4051
80	Expanttrade Fourteen C C	4053
16	Pienaar Daniel Pfeilhaupt	4699
39	Moosa Mohamed Ismail	4051
58	Amod Ridwaan & Nazemoenesa	4052
11	Beagles Run Inv 15 C C	8107
40	Moosa Mohamed Ismail	4048
41	Moosa Mohamed Ismail	4051
83	National Housing Board	4049
84	National Housing Board	4050
85	National Housing Board	4050
47	National Housing Board	4196
43	Ford Malcolm Alfred & Valerie Geraldine	4057
60	Ford Malcolm Alfred & Valerie Geraldine	4056
61	Pienaar Leonard Edward Louis	4054
62	Adams Ismail & Makmudda	4052

ERF NUMBER	Owners Name	EXTENT (m2)
44	Benting Shahied	4043
42	Trojeski Dennis	4049
88	National Housing Board	4047
87	National Housing Board	4048
86	Clark Eugene Winston	4049

The map overleaf shows the ownership highlighting the largest land owners.



Figure 13: Ownership Map

4.2.7 Agricultural Potential of Study area.

4.2.7.1 Soils and soil potential

The study does not provide for an agricultural soil survey or soil analyses but based on the experience of the Philippi land, the following can be expected:

- Soil potential is predominantly medium to medium high. This rating is mainly due to the deep sandy nature of the soils that emanates from the wind blown sands of the False Bay Coast.
- Free lime can be present and in some instances recent Aeolian sands were deposited on old wetland soils. The low potential areas are due to low topsoil clay content and subsoil wetness. Effective soil depth and light texture also contribute to low water holding capacity.
- Stagnant free water is present and is associated with anaerobic conditions.
- With certain indigenous plants, wetness may affect growth rate. The higher the free water table, and the longer the duration of saturation, the more severe the effect of wetness will be on growth and production.
- Groundwater may be seriously saline. The reason for the successful use of low quality irrigation water by the farmers in Philippi is the sandiness of the soils and leaching of the salts in winter during the rainy season.

4.2.7.2 Irrigation infrastructure

There are no irrigation systems or bulk supply pipelines for irrigation in the study area.

4.2.7.3 Water Use Rights for Irrigation

Since no irrigation took place during the introduction of the 1988 National Water Act, the properties do not qualify for Agricultural Water Use Rights. It may be possible to obtain agricultural water from boreholes, but this will be subject to approval of a water licence application, which can be a lengthy process.

4.2.7.4 Conclusions from an agricultural perspective:

Viability of agriculture on 4000m²: Normal agriculture will not be a viable option on a 4000m² plot, although there are some land reform projects where the allocation per farmer is similar or even smaller (however the success of these is

questionable). Protected agriculture (tunnels, green houses) can be viable on this size of plot.

Water Use rights: The main hindrance to successful farming will be acquiring water use rights for agriculture. The water source would be from boreholes. Another inhibiting factor would be to apply practices which will not harm or negatively affect the neighbours.

Possible forms of farming: The type of agriculture that could be practiced economically would be irrigated farming with cash crops, preferably under protection. However if several plots were combined to be made available for farming (preferably not less than 10) then open field production of cash crops could be viable. Good fencing would also be essential.

As the land is currently divided and in its current context, deep within a residential area that commercial agriculture would not be a viable option. The land should be allowed to be developed for residential and associated settlement purposes.

4.2.8 Engineering Services

4.2.8.1 Storm water

Existing storm water services comprise a 750mm diameter storm water pipeline crossing the study area in a north-south direction as well as a storm water detention pond located on the southern side of the study area (**See figure 14**). The pipeline is located in the servitudes of existing roads of adjacent developments, viz. Rosewood Drive and Carnaby Street.

The outcome of a recent assessment of the storm water infrastructure of Mitchell's Plain, which included the study area, is that the existing storm water infrastructure will cater for the densification of the study area.

Storm water in the area is potentially problematic. As there is a large amount of wind blown sand, the use of catch pits would cause problems, and such catch pits could become blocked. For this reason the use of overland drainage is recommended using overland channels to drain to the nearest municipal drainage areas. It is recommended that the use of swales be examined as one of the water sensitive urban design measures.

4.2.8.2 Potable Water

An existing potable supply pipeline enters the study area on the south via Rosewood Drive road servitude and changes direction in the centre of the study area to continue in an easterly direction in order to follow the Washington Drive road servitude.

The capacity of the existing potable water supply is deemed sufficient to serve the densification of the study area.

4.2.8.3 Sewer

An existing 375mm diameter sewer crosses the study area in a north–south direction, following the same route as the storm water pipeline (**Refer figure 14**). This sewer was constructed when the area was under the control of the old Divisional Council. The area was taken over by the City of Cape Town in 1979.

There is unfortunately no record of what allowances were made when designing the sewer. It is not clear whether allowance was made for discharge from the study area, and if so, whether a discharge from smallholdings was allowed, or whether allowance was made for future densification.

Other than the study area, most of the other areas that need this pipeline are already developed and it is doubtful if there will be a large increase in flow from other areas.

In order to be sure about the available spare capacity in the sewer, it would be necessary to arrange for the flow to be gauged over a reasonable period, which must include wet weather flow. It will only then be possible to have an idea as to the impact of the discharge from the study area on the sewer.

4.2.8.4 Electricity

Conditional support needs to be confirmed about the availability of adequate electricity supply for the development. Indications are that it will be available.

4.2.8.5 Bulk Services Contribution

Any new development in the study area will be allowed to connect to existing services upon payment of the bulk services contribution levy applicable at the time for each of the services. Based on current rates (2012), the bulk services contribution for a typical layout for the development of the Weltevreden Valley smallholdings, would be of the order of six million rands for the development as a whole.

4.2.9 Transport and Service Infrastructure

4.2.9.1 Existing Street Network

The study area is primarily accessed by Rosewood Drive, off Highlands Drive in the south, as well as Rosewood Drive, Bond Street, Casino Street, off Weltevreden Parkway from the east (**Refer figure 15**).

The impacted roads are further discussed hereafter.

- Vanguard Drive is a Class 1 Expressway running north-south which intersects with the N2. It also intersects with Klipfontein Road and Lansdowne Road which are major public transport corridors and roads of metropolitan significance. Vanguard Drive provides good connectivity from Mitchells Plain to areas on the Cape Flats like Heideveld, Nyanga and Goodwood and further north to Platteklouf, Montagu Gardens and beyond.
- Cape Flats Freeway (R300) is a Freeway that runs east-west and intersects with the N2, as well as the N1. It provides good regional connectivity and connects Mitchells Plain to areas such as Delft, Bellville and Durbanville further north.
- Highlands Drive is a Class 3 Secondary Arterial that intersects with Vanguard Drive, Eisleben Road and A.Z. Berman Road. These roads are also significant public transport routes. Rosewood Drive also intersects with Highlands Drive, which is the main access to the study area from the south.
- Rosewood Drive forms part of the Washington- Rosewood- Fulham link. Currently this link is interrupted along the Rosewood section and the roads probably function as Class 5 Residential Access Collector Streets. Should Rosewood be connected, the route could possibly function as a Class 4 Local Distributor.
- Weltevreden Parkway is a Class 4 Local Distributor Street that connects Weltevreden Valley to Oliver Tambo residential area.
- Bond Street is a Class 5 Residential Access Collector Street that provides access to the residential area north of the proposed study area. It also serves as an alternate route to Casino Street for those who want to access the study area from the east.

4.2.9.2 Future Road Network

The roads that have been earmarked for upgrading and extensions, are the Cape Flats Freeway (R300) and Sheffield Road. These roads run in an east-west direction, north of the proposed development. At present the R300 terminates at the intersection of Vanguard Drive, with a future proposal to extend it through the PHA further west. The extension of the R300 will provide improved east- west connectivity.

Currently, Sheffield Road does not intersect with Lansdowne Road. It is proposed that Sheffield Road extend through the PHA further west. This extension will link Sheffield with Ottery Road providing an improved east- west connection between areas like Gugulethu and Nyanga to Wynberg **(Figure 15)**.

4.2.9.3 Access to the Study area

Access to the study area would be primarily off Rosewood Drive. Other residential streets that connect to the study area are Bond Street and Casino Road from the east. At present Rosewood Drive terminates on both sides of the study area, limiting the connection between the two adjacent communities.

No roads had been planned by the CoCT for the study area and any roads to be constructed within the study area will be the responsibility of the Developer/owner.

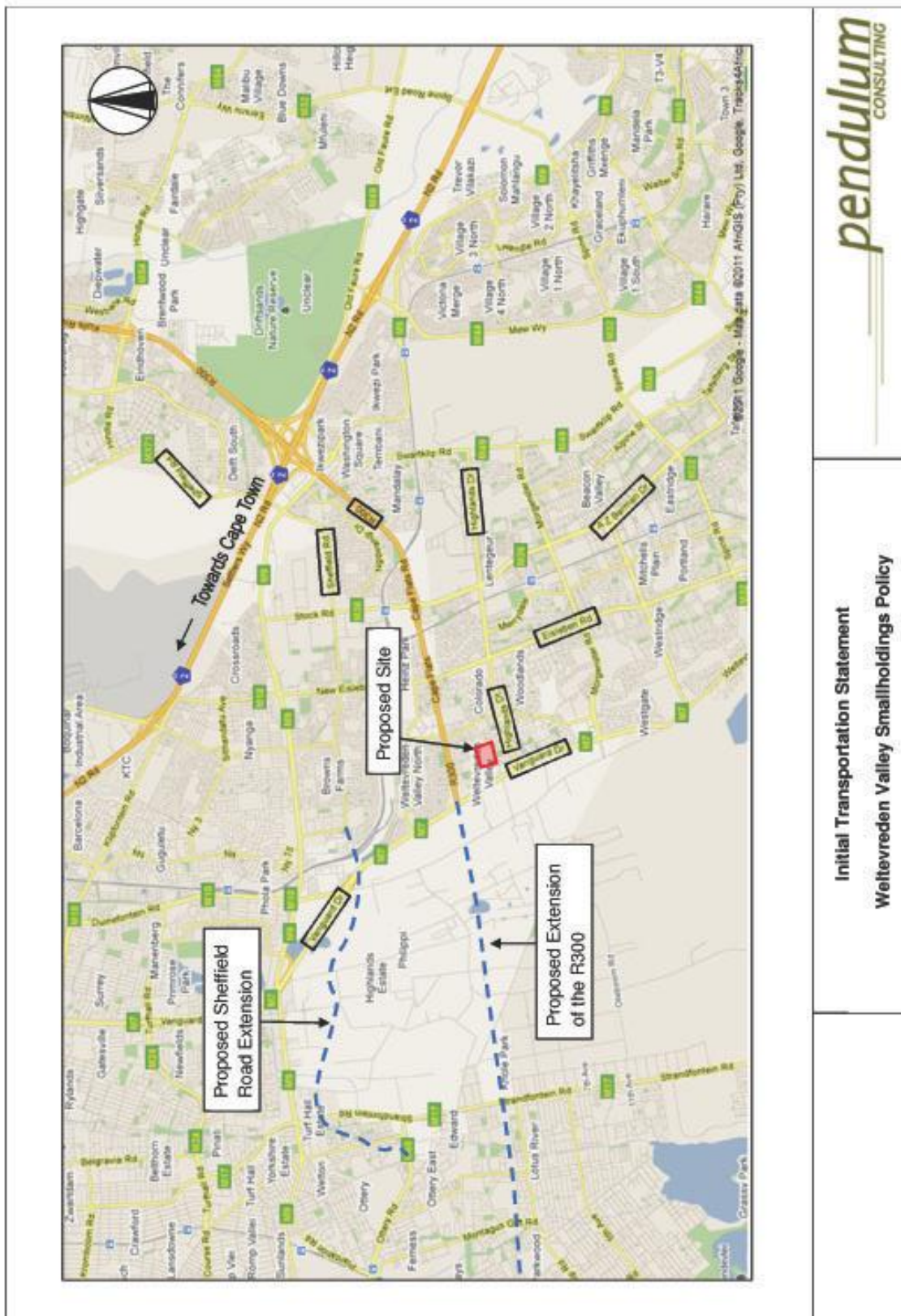


Figure 15: Locality Plan

4.2.9.4. Shoulder Sight Distance

Initial investigations confirmed that shoulder sight distances on potential access points to the proposed development are acceptable in terms of the shoulder sight distance requirement of 45m on Class 5 residential streets.²

4.2.9.5. Existing Traffic Volumes

Traffic counts were not obtained as part of this initial investigation. A site visit confirmed that traffic volumes along the streets that provide access to the study area are fairly low during the AM and PM peak hours. It is assumed that on completion of the development, additional traffic will be generated on the streets that lead to the study area. Traffic impact studies could be triggered by development on the study area.

4.2.9.6. Public Transport

The study area is well located in respect of public transport services. Public transport vehicles in the form of minibus taxis (MBT's) and Golden Arrow Bus Services (GABS) operate along Highlands Drive and Vanguard Drive. COCT Integrated Rapid Transit (IRT) initial service plans propose to operate a trunk service along Vanguard Drive. With future IRT services along Vanguard Drive, it can be concluded that the Weltevreden Valley will be well served by public transport.

Table 10 indicates MBT utilization information obtained from the COCT's Current Public Transport Record (CPTR) for MBT along Vanguard Drive, Highlands Drive and Weltevreden Parkway. Nine (9) routes are currently in operation along the above-mentioned roads as listed below.

- Seven routes are being serviced along Vanguard Drive and Highlands Drive;
- Two routes are being serviced along Weltevreden Parkway

Table 10: Minibus Taxi Utilization

Route numbers	Route Description	Roads in use	Unique	Capacity		Total capacity	% utilisation	
				Arrivals	Departures		Arrivals	Departures
259, 260, 452, M33,	Mitchells Plain Town Centre-Cape Town	Highlands and	78	5865	5955	11820	38,23%	49,57%

² 1. Guidelines for human settlement planning and design: Geometric design and layout planning, Volume 2

Route numbers	Route Description	Roads in use	Unique	Capacity		Total capacity	% utilisation	
				Arrivals	Departures		Arrivals	Departures
M32		Vanguard Drive						
485	Mitchells Plain Town Centre-Hanover Park	Highlands and Vanguard Drive	38	5814	5814	11634	41,17%	28,60%
166, 396	Mitchells Plain Town Centre-London Village	Weltevreden Parkway	20	1095	1095	2190	33,15%	57,44%
	Mitchells Plain Town Centre-Samora Machel	Highland and Vanguard Drive	26	330	330	680	31,43%	83,03%

From **Table 10** it is concluded that Highlands Drive, Vanguard Drive and Weltevreden Parkway are operating at less than or close to 50% utilization, with the exception of the Town Centre- Samora Machel route which has a departure utilization of 83%.

Accordingly, there should be sufficient public transport capacity for the additional development. Based on our initial site visit there is only one formal public transport embayment with shelter along Highlands Drive, close to the intersection with Vanguard Drive, and two on Weltevreden Parkway that borders the study area (**See Figure 16.**)

4.2.9.7 Non-Motorized Transport

Non-motorized transport (NMT) activities in the form of pedestrian desire lines take place across the study area and are prevalent in the surrounding community. Due to low vehicle ownership and income levels, walking is the more dominant mode for people living in the Mitchells Plain area, as well. Sidewalks have been provided extensively on the roads that serve public transport.

The COCT has also developed a City Wide NMT Plan. The following proposals have been made that impact the WVSA:

- It is envisaged to have a Class 3 cycle lane, as well as a pedestrian route, along Weltevreden Parkway for residents that wish to access Westgate Shopping Mall.
- Rosewood Drive east of the study area that connects with Regent Street has also been seen as a possible pedestrian route because of high pedestrian volumes between Weltevreden Valley and Colorado.
- Class 3 cycle lanes are proposed along Highlands Drive, linking Strandfontein Road in the west across the PHA to the greater Mitchell's Plain area.

- Class 2 cycle paths are proposed along Boundary Road in the PHA that intersects with Weltevreden Road.
- Class 2 cycle paths along Weltevreden from Baden Powell Drive in the south to Manenberg in the north

4.2.9.10 Zoning Scheme Regulations and Restrictions

The relevant zoning scheme for this area is the Cape Divisional Council zoning scheme (Divco Scheme).

All of the vacant erven in the study area are zoned as Rural. According to the zoning scheme, the rural zone is all land within the Council's jurisdiction which is not zoned or designated for any other purposes. This land may be used for any type of farming and in particular, farming of an extensive nature, without special consent having to be obtained before commencement of operations; this does not include buildings or structures, which would have to comply with the building regulations and provisions. It is in the said zone wherein any use or activity may be permitted, by consent of the respective authority. The subdivision sizes would not be less than 21.5 hectares per section.

In addition, according to the zoning scheme, the single residential zone allows for the establishment of detached single -family dwellings only. The attendant places of assembly, such as places of worship/assembly or creches, may be consented to by Council conditionally. The minimum subdivision sizes may vary, but will not be less than 650m² per plot, except with the special consent of Council.

This density is extremely low and plot sizes of this size would probably be unaffordable to most people in the gap housing market range.

CHAPTER 5: SYNTHESIS: OPPORTUNITIES AND CONSTRAINTS

(See figure 17)

5.1 Constraints

Services

- The study area is un-serviced, there are no existing roads and there are three service servitudes running through the site, a foul sewer, a storm water pipeline and a water pipeline
- The study area has predominantly sandy soils which may prove to be problematic for storm water management.

Transport

- At present Rosewood Drive ends on both sides of the study area, limiting the connection between the two adjacent communities.
- The possibility exists for rat running if Rosewood Avenue is joined.

Environmental

- The predominant wind directions are south east in summer and North West in the winter time. The layout should take this into account.
- The study area is covered in alien vegetation, which acts as a shelter for criminals in the area.
- The study area is underlain by the Cape Flats Aquifer and special storm water measures need to be put in place to ensure that water is returned to the study area once surfaces have become hardened by development.

Location

- Currently, the study area acts as a physical barrier between the suburbs surrounding it.

Ownership of plots

- There are a number of different owners, so in order to develop the entire study area, the owners will need to consolidate their land and create a joint development consortium.

5.2 Opportunities

Services

- There is sufficient bulk capacity to accommodate a development with a density of at least 30du/ha.

Traffic

- Traffic volumes adjacent to the study area are low and although no traffic counts were done, it is likely that the existing street network will be able to accommodate an additional development of 30 du/ha.
- There is sufficient public transport capacity to accommodate the additional development.
- There are high pedestrian traffic volumes across the study area between Weltevreden Valley and Colorado. This should be catered for in the design of the layout.

Environmental

- The study area contains some remnant vegetation of Cape Flats Dune Strandveld see map attached. However, the importance of this vegetation in the biodiversity network needs to be established by means of a study. To be aligned with the ERM (Biodiversity and Wetlands Areas).
- An environmental impact assessment may be triggered by pipe sizes, removal of indigenous vegetation and size of the study area (if developed as a whole).
- A study will need to be undertaken to determine if there are sensitive wetlands on the study area on erven 787 portions, 36, 11, 40, 37.



Figure 16: Wetlands and Biodiversity Areas

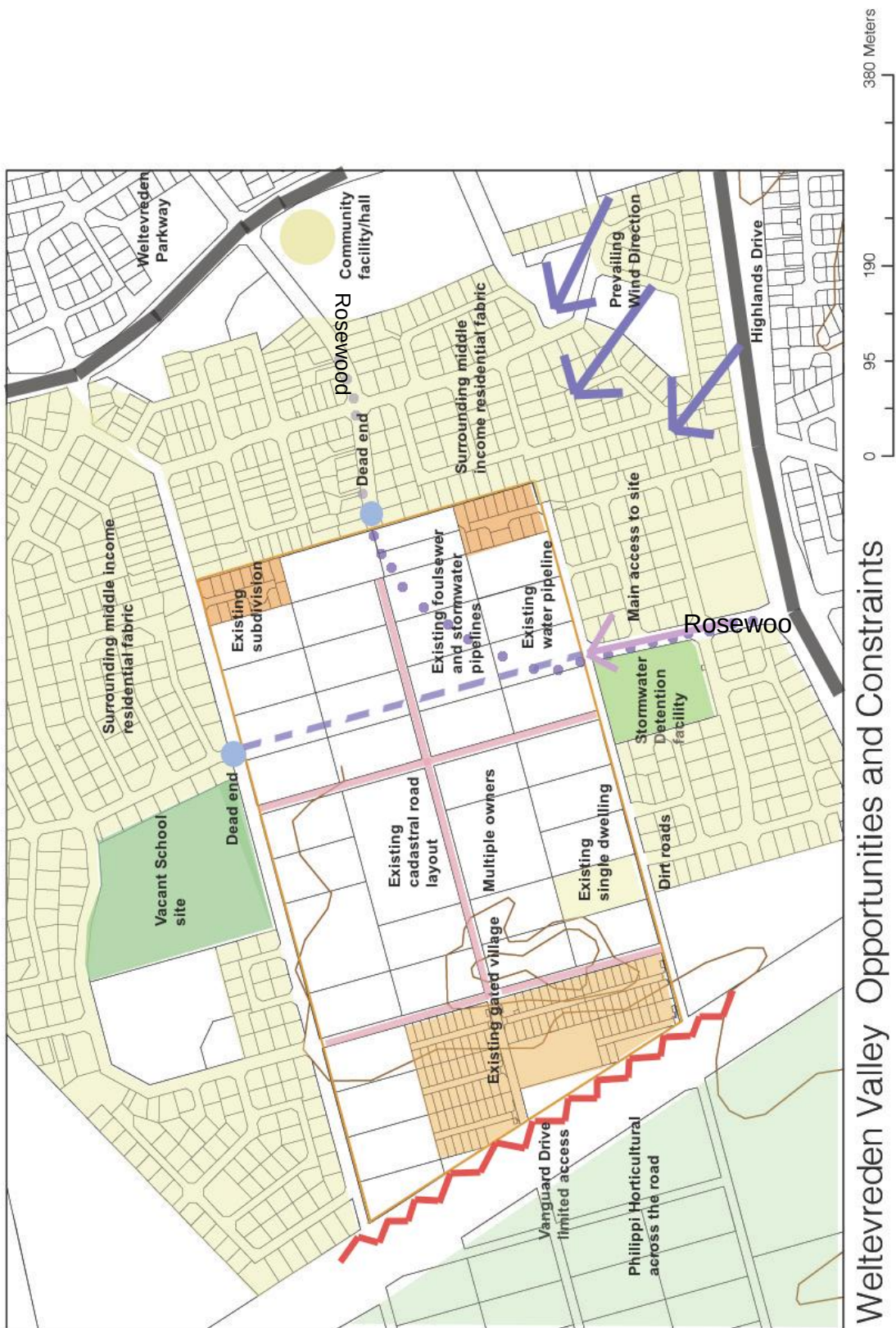


Figure 17: Opportunities and Constraints

CHAPTER 6: DISCUSSION OF DENSITY PROPOSALS AND SPACE STANDARDS.

6.1 Density

The PSDF proposes an average density of 25 dwelling units per hectare for the City. The previous structure plan for the Weltevreden Valley suburb proposed an average density of 13 du/ha, which is extremely low. The District SDF for Khayelitsha/Mitchell's Plain proposes that the development be a low- density development. However, low density has different meanings and this is not elaborated on in the document.

According to the City of Cape Town's Densification Policy, 2012 the generic considerations for density are highlighted in the boxes below:

Access to a safe, secure and efficient public transport system (existing or planned):

Medium to high densities need to be aligned with and support the development of a viable public transport system. This may not be an overriding consideration for the residential areas, or parts thereof, that are indicated for town houses/group housing and are not located in immediate proximity to a public transportation route, but where there is predominant middle to high-income groupings who are able to afford the costs of private transportation."

The study area is well located with respect to public transport services. Public transport vehicles in the form of MBTs and GABS operate along Highlands Drive and Vanguard Drive and the IRT will most probably operate a service along Vanguard Drive. Once connected, Rosewood Drive will become a more significant route for public transport.

Land use integration:

Proximity to places of employment, services and facilities is required if the higher- density areas are to generate the benefits of concentration

From an employment, services and provision of facilities perspective, Weltevreden Valley is not that well located. The closest shopping centre is Westgate Mall, which is not within comfortable walking distance. Weltevreden Valley is also far from major places of employment.

Access and proximity to public open spaces:

High-density development should be located near urban open spaces (such as squares and promenades), recreational green spaces (parks and sports fields) and natural resource areas (nature areas and reserves, river corridors and wetlands, mountain and natural views) and coastlines (beaches and sea views) to provide physical and psychological relief from the higher-density environments and to off-set the lack of private open space.

The study area although located adjacent to PHA is not well located with regard to green open and/or recreational spaces.

Infrastructural capacity:

Densification should not be supported where water, waste water and storm water capacity is reaching points of absolute constraint and the cost implications of rectifying the situation are too high for the private sector/not planned for within a five year time frame.

Bulk Water

It appears that there is sufficient capacity to accommodate a development of 30du/ha, subject to confirmation upon submission of development plans/proposals/applications.

Bulk Sewer

Although this will have to be determined when development plans/proposals/applications are finalised, it appears that there is sufficient capacity to accommodate a development of 30 du/ha.

Storm water

Storm water in the study area as with anywhere in the Cape Flats is a problem due to the high water table and sandy soils which make development of subsurface drainage problematic.

There is an existing detention pond adjacent to the study area, which could be extended into the study area to accommodate the development. Theoretically, it is easier to maintain and manage one large space than a number of small detention facilities.

However, a large detention pond has a number of detracting features. It becomes waterlogged in winter and can be hazardous for children playing on the edges of the pond. Windblown sand can block drainage points. A number of smaller open

spaces can be provided, which will act as detention facilities in winter. This will need to be catered for in a storm water plan for any development in the study area.

General Land Use Character

The general land use character of an area is important when considering the suitability of higher-density development. If an area is solely single- dwelling residential it is less suitable for higher density development (because of a different form) than where there are flats and mixed land use development. This is dependent on the form of the higher density development proposed. Town houses, or low-rise flats, can be highly compatible within a single dwelling residential area.

Higher-density development needs to be evaluated to enhance or uplift the built character of an area or the surrounding environment. Alternatively, the development needs to be compatible with an area, especially if the area is of a positive or valuable built character.

Currently the study area is surrounded by low-density, middle-income, residential development and is known to be the most valuable real estate in Mitchell's Plain, therefore any development in this area should enhance the area.

If the entire study area were to be developed with small (4000m²) gated villages, the entire character of the area would change for the negative. Therefore a variety of densities should be proposed for the study area with an average of 30 du/ha.

Socio-economic

The affordability of the product and compatibility of the intended market and/or product with the surrounding local communities requires consideration.

Based on the prices being obtained for houses in the surrounding neighbourhoods, it appears that the average prices are in the R400000-R600 000 range. This indicates that a density proposal of 30 du/ha would target those in the gap, to slightly above range, which would fit in with the remainder of the area. This should not be the overriding factor in determining densities for the study area.

The acceptable approach to achieving higher density design solutions is design – led, concentrating on sustainable urban quality. Market considerations will

influence housing designs and this together with a design led approach makes density a measure of the product, not a determinant thereof.

6.2 Schools

New residential communities can generate a demand for a significant number of new school places, particularly where families are attracted to the area. In such cases, it is vital to the process of supporting sustainable communities that the planning system facilitates the timely provision of new school buildings. The development of Vanguard Villas on the eastern portion of the study area has highlighted the fact that new developments of this kind attract young couples with families. A density of 28-33 du/ha will result in approximately 1772 -1800 people (average household size of 4), or the need to accommodate approximately 300 additional pupils. This is not a significant number to warrant a new school in the area. However, provision needs to be made for an early childhood development centre of approximately 400m².

6.3 Parks and Open Space Standards

The recent survey of park usage and perceptions towards them by Cape Town residents (CSIR 2010) indicated that if parks cannot be well-maintained and proper provision made for them that people would prefer to have access to fewer but larger parks that are better maintained and secure rather than being provided with many small parks that are unkempt and lack facilities.

According to the report completed by the CSIR for the City of Cape Town (2008), the following space standards should be applied to the provision of open space and parks.

Table 11: General space provisions for parks

General provision	0.5 ha per 1000 people		
Hierarchy of park types	Three levels of provision	Approximate division of allocation of total provision/1000 people	Access distance

	Neighbourhood parks Community parks	0.3 ha	20 minute walk
	District/Regional parks	0.2 ha	20 minutes travel time by public transport

Table 12: Park hierarchies and sizes

Park hierarchy	Park type	Typical threshold	Minimum site size(ha)	Optimum site size(ha)	Catchment area
Neighbourhood parks	Play/pocket park, playground Local/neighbourhood	800 4000 6000	0.04 ha 0.4 ha 0.8 ha	0.1 ha 1.0 ha 2.0 ha	0.5km 0.5km 0.75km
Community parks		20 000	1.5 ha	8-20 ha	1.5-3.0km
District/Regional parks		50 000	2 ha	40 ha	>10km

Some precedent from other countries with regard to space standards is as follows:

Table 13: Space Standard precedent from elsewhere

New South Wales, Australia	2.83 Ha per 1000 people	
National Playing Fields Association, UK	2.4 ha per 1000 people which amounts to 0.8 ha of children's playing space and 1.6ha of outdoor playing space.	

These are clearly very high standards and do not take into account the density of the area being examined. As a rule, the higher the density of development, the more crucial the need for quality open spaces.

In this development it is recommended that the open space include at least 4 pocket parks of at least 400m².

CHAPTER 7: IMPLEMENTATION STRATEGY AND POLICY DIRECTIVES

7.1 Design brief for the Weltevreden Valley area

Good urban design is essential in order to produce attractive, high-quality places in which people will want to live, work and relax. It can be achieved by the way streets and spaces are arranged and how the mass, scale and position of buildings are planned within the landscape. The result is that the successful neighbourhood is a place that is pedestrian friendly and also feels safe, contains high quality buildings and attractive spaces between buildings. Good design can give a clear and distinct sense of place creating community pride.

7.2 Best Practice Design criteria

The following is a set of best practice design criteria to be used in evaluating development proposals for the study area.

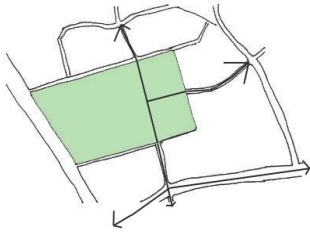
Context

How does the development respond to its surroundings? Is it of a similar quality and height?

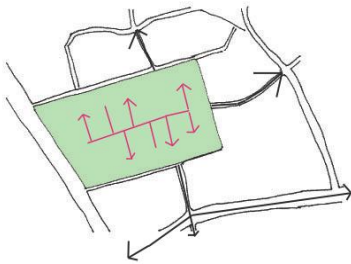
Connections: How well is the new neighbourhood / study area connected?

Connectivity and permeability: Convenient access needs to be provided between and within areas, particularly to larger community and commercial facilities and to places of work.

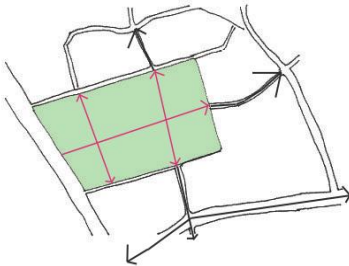
Routes within the area should be accessible for everyone and as direct as possible, and for this reason “gated estates” should be discouraged. The design process should consider what levels of permeability are appropriate for different street users, with permeability for pedestrians and cyclists taking precedence over permeability for vehicles. A pedestrian NMT route through the study area is highly recommended.



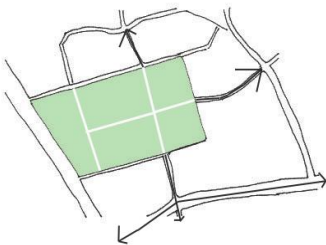
Connect the site to nearby facilities, main routes, public transport links etc.



Cul de sac designs create introverted layouts, which fail to integrate with the surrounding area successfully.

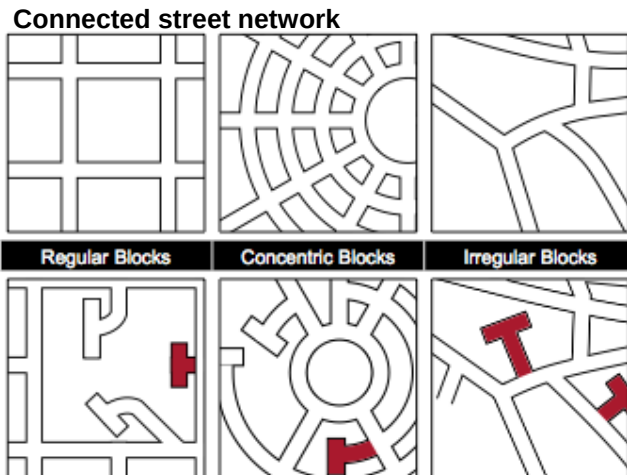


Direct design approaches that integrate with the surrounding environment provide a much better environment for pedestrian access and improves natural surveillance.



Where street patterns are designed to form the basis for the perimeter blocks they ensure building designs contribute positively to the public realm.

Grid pattern street layout designs offer the most choices and connect places more successfully. Concerns about ‘rat-running’ can be overcome by designing road layouts that restrict vehicle speeds and prioritize pedestrian and cycle movement. An over-reliance of cul-de-sac designs should be avoided as they limit choice and disconnect places for the users of public space.



Disconnected street network

Inclusivity: How easily can people use and access the development?

Inclusivity can be achieved by the way the street layout is set out, by avoiding cul-de-sacs and gated villages which prevent permeability of movement through a site.

The feeling of belonging imparted by an area’s identity is a marketable product. Identity promotes inclusivity.

Variety: How does the development promote a good mix of activities?

It is recommended that commercial activity be promoted on at least 1-2 hectares of land. The commercial land uses should take place along the main road through the development and should be clustered together.

Mixed-use /commercial centres are best located at crossroads and along main movement routes, within walking distance of homes. This strengthens their identity, provides passing trade and enables bus stops to be fully integrated.

Where affordable housing is included within housing layouts (ie development by the Provincial Department of Housing) it should not be isolated or obvious because of its design. Integrated and “pepper-potted” designs would work best

(i.e. affordable housing should be distributed along major routes and throughout the development to avoid large clusters.)

Efficiency: How does the development make appropriate use of resources, including land?

Within the higher density levels, which sustain urban life, variations in the net density of built form profiles will occur naturally. These variations can be enhanced by building up the mass around centres, main streets, public transport access points and parks, for example. Shape the mass of built form to frame positive public spaces. The layout and design of the plots will determine efficiency of layout.

Distinctiveness: How do the proposals create a sense of place?

Essentially, good urban design or sustainability in urban design seeks to establish a sense of place by enhancing the public domain. This may be evidenced by an effective public transport network, safe streets, and equity of access to retail and services as well as traditional commons such as parks.

Layout: How does the proposal create people-friendly streets and spaces?

It should be easy for both residents and visitors to find their way around the area. The design of streets from the outset should limit traffic speeds within the range of 30-60 km/h, without the need to resort to the use of remedial measures such as traffic calming measures for example, speed bumps.

Avoid circuitous, 'suburban', cul-de-sac street networks with few access points and lengthy routes to nearby locations, particularly as found in gated villages.

Provide safe and high-quality walking and cycling environments throughout the layout. Ensure integration between new development and adjacent built-up areas in terms of street network, public transport services, footpaths/cycle routes and design standards

Public realm: How safe, secure and enjoyable are the public areas?

Open space or play space designs must be included in new development proposals. They must be integrated into the development. Open spaces and play areas must relate to the context of the area and have safe and easy access. Open spaces and play spaces must not be pushed to the edge of development

proposals where natural surveillance is restricted and ownership becomes confused.

Should not design dwellings where rear private space backs onto the public realm. This is visually disruptive on the street scene, creates inactive edges, left-over spaces that are not managed and reduces levels of security and privacy.

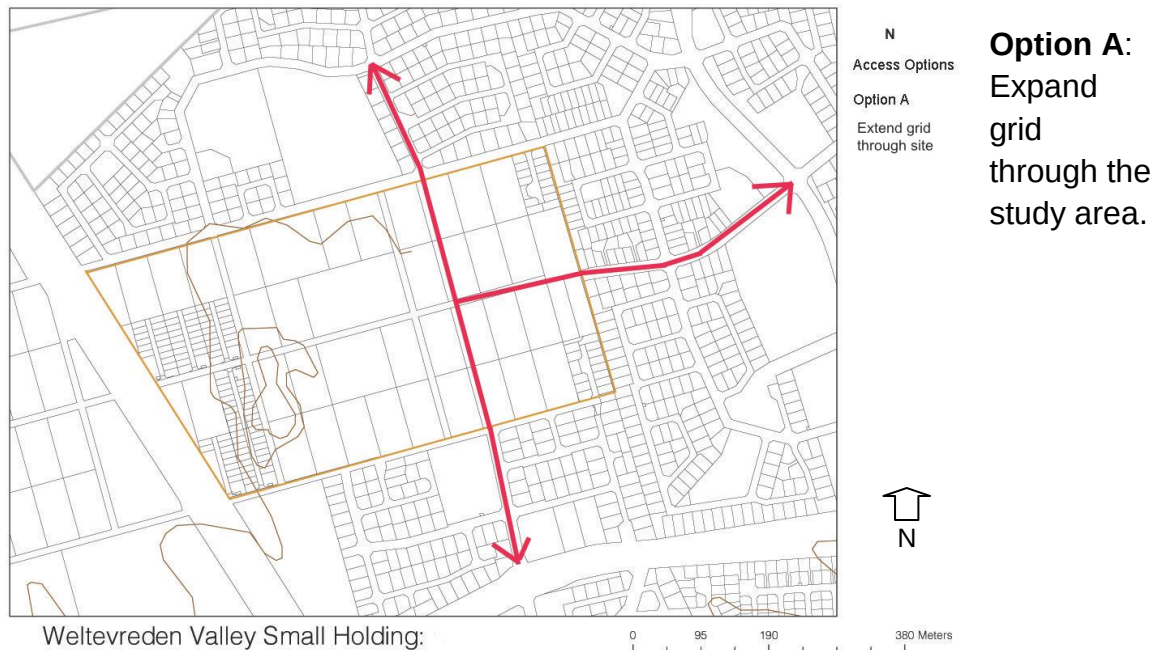
Parking: How will the parking be secure and attractive?

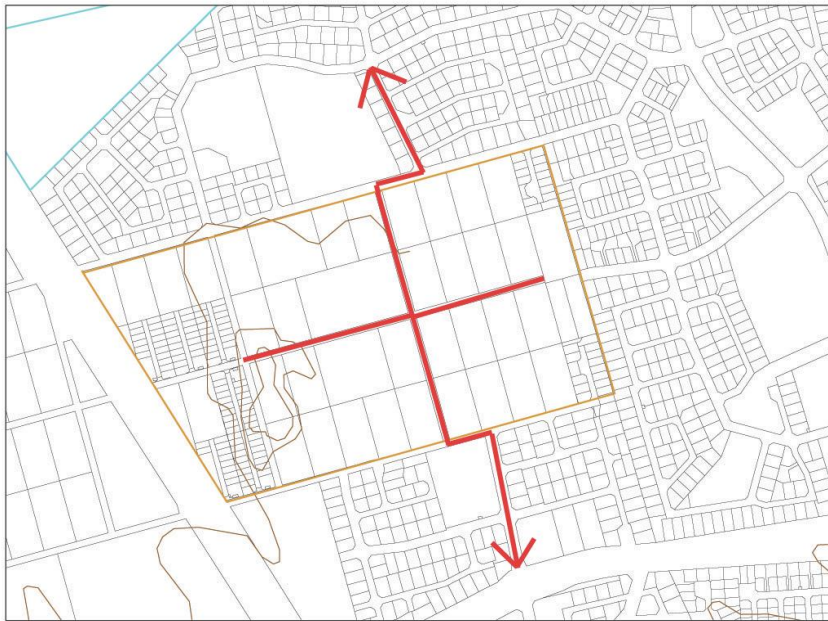
The use of courtyard designs, which can accommodate both parking and a park/recreation area, clearly demarcated from each other surrounded by houses facing onto the space, are ideally suited to be secure and attractive.

7.3 Layout Options

7.3.1 Accessibility across the study area

There are a number of access options that have been examined as part of the analysis of the study area. These are elaborated on in the table overleaf.



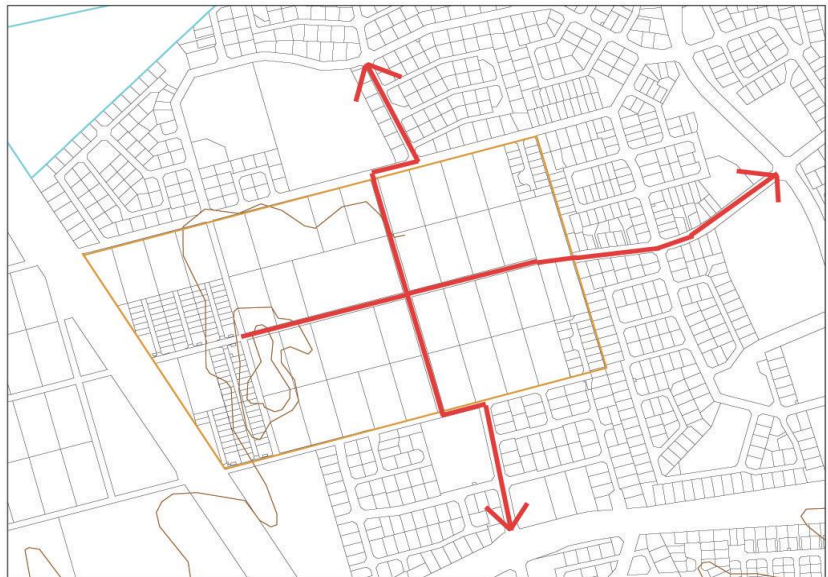


Option B
Dog leg partial
access

Option B:
Dog leg
partial
access

Weltevreden Valley Small Holding:

0 95 190 380 Meters

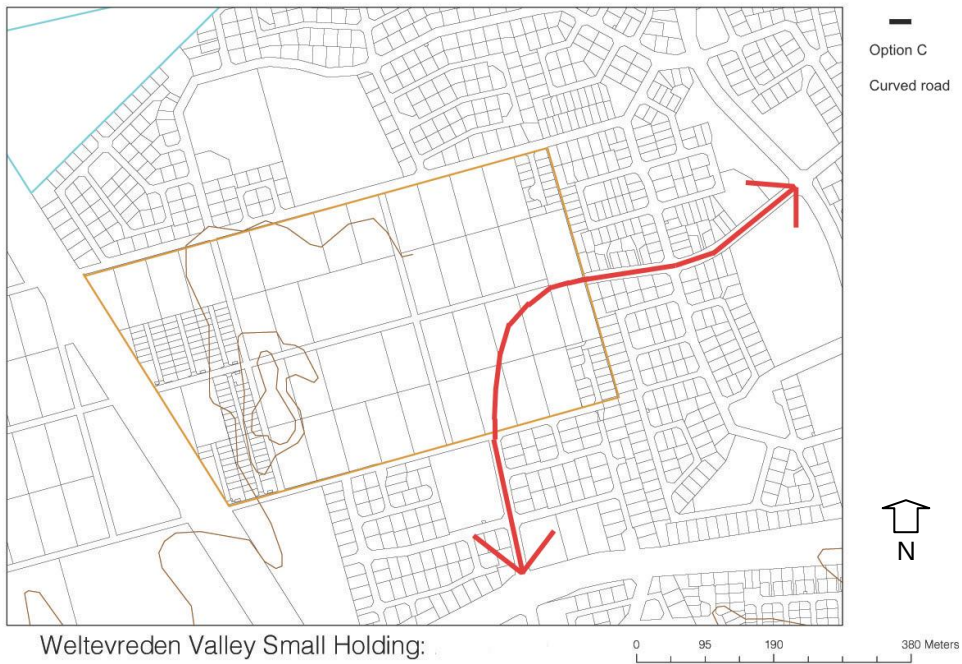


Option B 1
Dog leg full
access

Option B1
Dog leg full
access

Weltevreden Valley Small Holding:

0 95 190 380 Meters



—
Option C
Curved road

Option C
Curved
road

Access Options	Pros	Cons
Option A	• Allows for direct access between different neighbourhoods. • Utilizes the area where the existing services are located, so makes for efficient layout.	• May lead to rat running between neighbourhoods. • Will make through road into a class 4 road with higher speeds • This can be mitigated with design of the road. • Does not use existing road layout so will involve some consolidation and new, subdivision.
Option B	• Reduces rat running	• Does not make best use of servitudes over storm water and sewer pipelines. • Does not link to suburbs north of the study area directly
Option B1	• Reduces rat running	• Does not make best use of servitudes over storm water and sewer pipelines.
Option C	• Allows for direct access between different neighbourhoods	• May lead to rat running between neighbourhoods and will make through road into a class 4 road with higher speeds. • Creates awkward sites for development.

7.3.2. Neighbourhood Form Option Types

As an example, a few layouts have been prepared of possible layout options for the study area. These layouts have been examined with the aim of determining a generic set of policy directives.



Figure 18: Layout option one

Option 1: Pinwheel Neighbourhood Layout (See figure 18, previous page).

- With a proposed trip generation rate of 0, 8 trips/du, 354 trips can be expected during the commuter peak hours.
- A proposed parking requirement rate of 1 -1.25 bays/du totals 443 to 553 parking bays being required.
- Staggered intersections should be 30m apart on class 5 streets.
- Minimum intersection spacing of 60m for adjacent intersections on class 5 streets.
- Long straight distances more than 100m- 150m to be avoided as this encourage speeding.
- Commercial area focused in 1 location will attract vehicles and pedestrians, which will conflict with turning movements at this main intersection. However, this will assist in slowing down traffic across the study area, which is a positive benefit.
- Direct connections to neighboring communities could encourage rat-running unless traffic calming measures are implemented.

Option 2: H shaped Blocks (See figure 19 overleaf)

- With a proposed trip generation rate of 0.8 trips/du, 390 trips can be expected during the commuter peak hours.
- A proposed parking requirement rate of 1 -1.25 bays/du totals 487 to 608 parking bays being required.
- Staggered intersections should be 30m apart on class 5 streets.
- Minimum intersection spacing of 60m for adjacent intersections should be considered on class 5 streets.
- Long straight distances greater than 100m - 150m to be avoided as it encourages speeding.
- Commercial area is spread along a block, which could result in traffic congestion along this section. This would slow down traffic and thereby avoid rat running. Direct connections to neighboring communities can increase the opportunity for rat- running.
- POS facing main roads to be avoided because of road safety considerations for children.



Figure 19: Option 2 H Shaped Blocks

Option 3 -Grid Layout (See figure 20)

- With a proposed trip generation rate of 0.8 trips/du, 385 trips can be expected during the commuter peak hours.
- A proposed parking requirement rate of 1 -1.25 bays/du totals 481 to 601 parking bays being required.
- Staggered intersections should be 30m apart on class 5 streets.
- Intersection spacing along Rosewood Drive should be at a minimum of 120m.
- Shoulder sight distance for the inside bend could be problematic.
- Commercial area along Rosewood poses a road safety concern.
- POS adjacent to block 10 is not ideal as shoulder sight distance along the bend could be insufficient.
- The eastern side of the development north of Rosewood Drive requires a turnaround area.

Option 4L H Block –Parallel Main Roads (See figure 21).

- With a proposed trip generation rate of 0.8 trips/du, 423 trips can be expected during the commuter peak hours.
- A proposed parking requirement rate of 1 -1.25 bays/du totals 529 to 661 parking bays being required.
- Staggered intersections should be 30m apart on class 5 streets.
- Minimum intersection spacing of 60m for adjacent intersections on class 5 streets.
- Commercial area focused in 1 location will attract vehicles and pedestrians, which will conflict with turning movements at this main intersection.
- Connections to neighboring communities through indirect routes are encouraged as it reduced speed and reduces the chance of rat-running.
- The increased number of POS and associated activities can increase driver awareness



Figure 20: Option 3 Large Grid



Figure 21: Option 4 L and H Blocks- Parallel Main Road

Option 5: Neighbourhood Courtyards (See figure 23)

- With a proposed trip generation rate of 0.8 trips/du, 444 trips can be expected during the commuter peak hours.
- A proposed parking requirement rate of 1 -1.25 bays/du totals 555 to 694 parking bays being required.
- Long straight distances greater than 100m - 150m to be avoided as it encourages speeding.
- Commercial area is spread along a block, which could result in traffic congestion along this section.
- Direct connections to neighboring communities could increase the opportunity for rat- running.

Conclusions

Option A of the street layouts and Option 1 of the precinct layouts are the preferred options, although they all have their pros and cons.



Figure 22: Option 5

8 Summary and Conclusions

8.1 Development Policy

Access and Movement

- The most efficient use of the study area would involve a direct access route across the existing servitudes as illustrated in street layout option A. This would help to connect the study area to its surrounding neighbourhoods and would allow for an efficient grid type layout.
- The extension of Rosewood Drive in a circular movement is the most problematic from a safety and efficiency perspective and it would be better to move the water pipeline to fit in with a grid structure.

Land Use: Agriculture

- The study area is no longer viable for use for commercial agriculture.

Land Use: Commercial

- The extension of Rosewood Drive across to the north of the study area, would allow for a small neighbourhood centre at the intersection of the roads. Commercial development of at least 4000m² would be appropriate. The neighbourhood centre should cater for daily needs of the residents of the neighbourhood within walking distance. It should also include an early development centre and a place of worship/institutional site. This would provide the focus to the neighbourhood.

Land Use: Mixed use

- Mixed -use development with a small amount of retail will be encouraged in local centres provided it accommodates local needs, it contributes to the vitality and viability of the centre and that the development is appropriate to the role and function of the centre in the hierarchy.

Land Use: Public Open Space

- In this development it is recommended that the open space include at least 4 neighbourhood parks of at least 400m². Pocket parks and other forms of structured open space also retain a dual role as a storage area for run-off. Indigenous plants to be used for landscaping.

Roads

- Long straight distances greater than 100m - 150m to be avoided as much

- as possible as it encourages speeding.
- Staggered intersections should be 30m apart on class 5 streets.
- Minimum intersection spacing of 60m for adjacent intersections on class 5 streets.

Density

- Market considerations will influence housing designs and this together with a design led approach makes density a measure of the product, not a determinant thereof. However, the current densities of 13 du/ha are very low and a density of at least 30 du/ha or more would be far more appropriate for the study area.

8.2 Implementation guidelines

Submission of a precinct plan

The design for development precincts should only be approved if it incorporates an area of at least 24000m² of contiguous development or more. Some suggestions for how the land could be developed have been included in this report. Although these are notional, they include some principles for design.

What this implies is that the current owners of the land will need to either buy at least ±5 or 6 of the approximately 4000m² plots in a square configuration and rezone/subdivide these for development themselves, or they will need to approach a developer together to develop over the different sites.

It would also benefit all the land-owners, if one NID was submitted to HWC for the entire study area instead of for each precinct.

Checklist for land use approval

- Does the proposed development consist of at least 24000m² of contiguous development or more?
- Does the road network allow for integration with the surrounding street network? (The grid layout is the most efficient form).
- Does the development take into account the need for commercial development along the main crossroads as well as institutional sites for places of institution (crèche) and place of worship?
- Does the development include at least one 400m² pocket park per precinct of 24000m² or four pocket parks for the entire study area?
- Is the proposed density for the residential development at least 25-30du/ha or something similar justified by good design principles?

- Has a storm water management plan been completed for the site that is in line with the City's Storm Water Management Policy?
- Does the pipe size and removal of indigenous vegetation trigger a basic assessment or scoping report, in terms of the National Environmental Management Act?
- Has Heritage Western Cape given their consent for the development?
- Has the criteria set out in the Best Practice Design section (**section 7.2**) been used both in pre-application consultations and in assessing applications i.e.?
 - **Context:** Does the development respond to its surroundings?
 - **Connections:** How well is the neighbourhood / study area connected?
 - **Inclusivity:** How easily can people access the development?
 - **Variety:** How does the development promote a good mix of activities?
 - **Efficiency:** How does the development make effective use of resources including land?
 - **Distinctiveness:** How does the proposal create a sense of place?
 - **Layout:** How does the proposal create people friendly streets and spaces?
 - **Public realm:** How safe, secure and enjoyable are the public spaces?
 - **Parking:** How will the parking be secure and attractive?
- In general: How well does the development fit / respond and reinforce the surrounding distinctive patterns of development or its local context?
- Does the development plan / proposal/application have any impact on the immediate environment at street level and how well does it promote the continuity of street frontage?
- Does the development plan/application/proposal promote owned spaces, natural surveillance, visual connections, safe pedestrian walkways, integration, mixed use, lighting etc?
- Has the proponent carried out a site appraisal prior to preparing a layout?
- Is the standard of design of a sufficiently high standard?
- Does the design of the residential environment contribute to a "sense of place"?

CHAPTER 9: GENERAL

9.1 Scope and Application

This Policy is applicable to any land use, development or activity proposals within the subject study area as defined. It is further binding for both developers, owners, administrators who administer land and all organs of state.

9.2 Commencement Date

Unless otherwise specified, the commencement date for this Policy will be at the date of adoption by Council.

9.3 Indemnity

The Policy shall not create liability on the part of the CoCT or any official thereof, for any damage that may result from reliance thereon.

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