9. BOTRIVIER

9.1 TOWN ANALYSIS

9.1.1 OVERVIEW

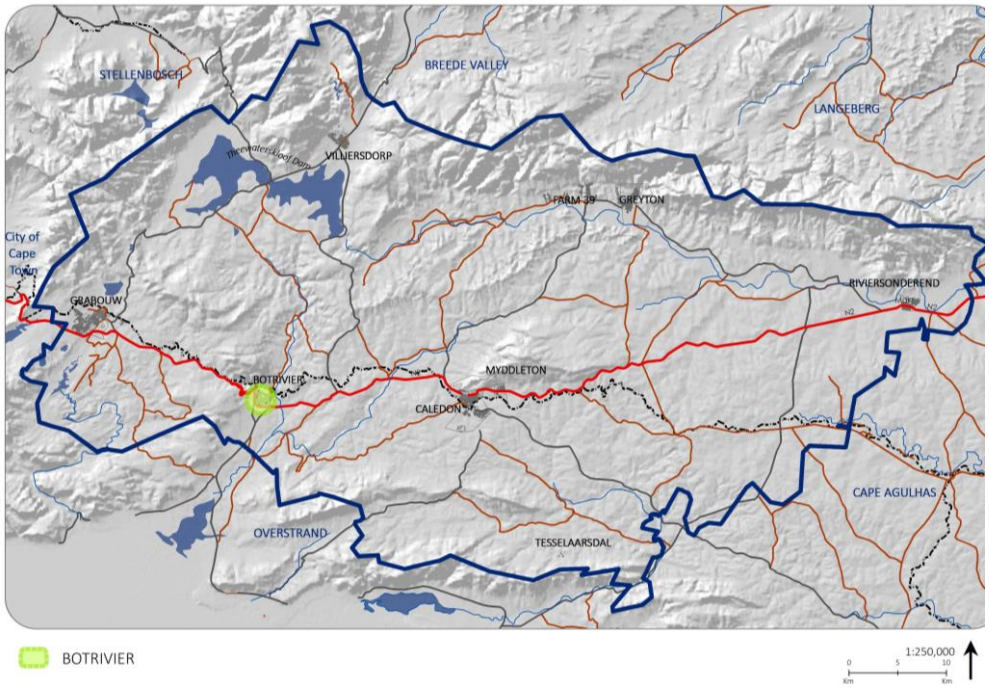


Figure 9.1: Location of Botrivier within TWKM

- The current role of Botrivier within the overall municipal context is that of a rural node and agricultural service centre.
- The location of Botrivier along the N2 National Road is of strategic significance. The town is located at the convergence of a number of routes, including the routes to coastal towns (R43), routes serving the surrounding agricultural production areas and the N2, the route providing access to the sub-region and the wider areas of the Southern Cape.
- The high level of accessibility is strengthened by the railway line, aligned along the N2, which almost enclose the town.
- There is a high level of immigration, mostly from farm workers.
- A high percentage of middle and low density erven are vacant, providing the opportunity for infill development, densification and for optimising existing service infrastructure.

Table 9.1: Botrivier at a Glance

Botrivier at a Glance	
Total population	5 505 (2011 Census) 6 477 (2018 MYPE)
Growth rate (2011 – 2018)	2.4% per annum
Role and function	Agricultural service centre
Settlement classification	Secondary regional service centre
Comparative locational advantage	Gateway to the Rûens and coastal resorts Railway access Undeveloped central business area and vacant residential properties
Economic base	Agriculture
Growth potential (GPS, 2014)	Medium growth potential Low socio-economic need
Housing backlog	735 persons

9.1.2 HISTORIC BACKGROUND

Botrivier is located near the foot of the Houw Hoek Mountains. It abuts the N2 National Road and the Cape Town-Caledon railway line. Botrivier is located 23 km from Grabouw and 24 km from Caledon. Botrivier originated as a town that provides basic services for the nearby farming communities.

9.1.3 SETTLEMENT ANALYSIS

Analyses of (i) the biophysical and agricultural environments in and around Botrivier, (ii) the socio-economic profile and (iii) the built environment within Botrivier were undertaken to inform the spatial proposals that are presented in the following sections. Refer to **Annexure 1**, **subsection 4**. The analyses focused on the following aspects:

- **biophysical and agricultural environment:**
  - the environmental status quo;
  - environmental risks;
  - agricultural status quo.
- **socio-economic:**
  - economic systems;
  - residential patterns;
  - income distribution;
  - demographics.
- **built environment:**
  - movement network;
  - social facilities distribution and access;
  - engineering infrastructure.

9.1.4 KEY SPATIAL CHALLENGES/ISSUES

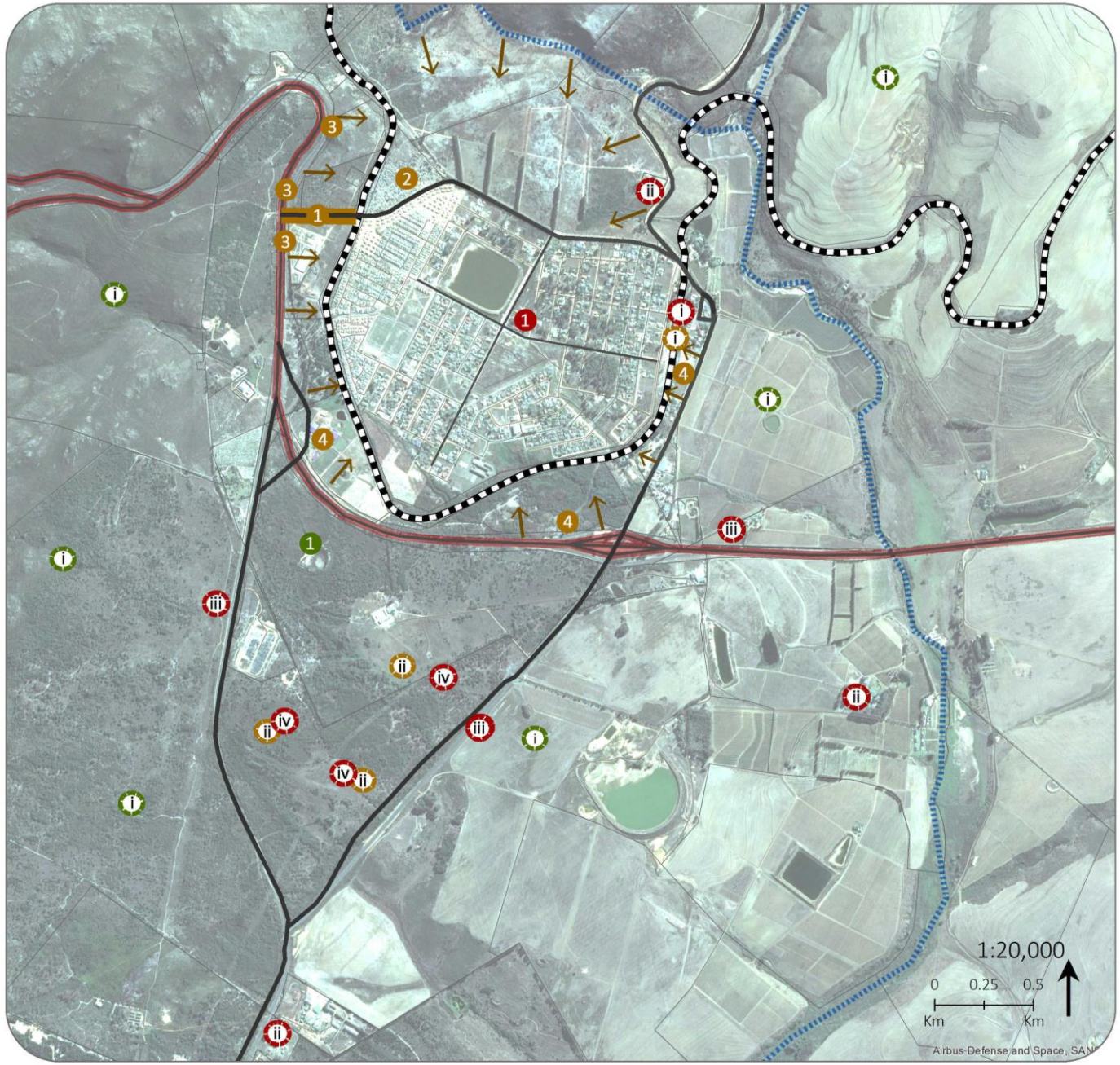
- Urban efficiency/Spatial dislocation:
  - The western parts of Botrivier have poor access to the N2 National Road.
  - The northern and southern parts of the town are divided by the N2 National Road and there is no direct physical link between these two areas.
  - The New France settlement is located on an old landfill site and this site is unsuited for residential development.
- Socio-economic:
  - High level of poverty with 63% of the population earning less than R3 200 per month.
  - Lack of commercial development and investment in the town.
  - There is no secondary school within or near Botrivier.
- Housing Backlog:
  - The subsidised housing backlog[1] is 735 persons (DoHS database, 2018).

9.1.5 DEVELOPMENT INFORMANTS AND CONSTRAINTS

Botrivier is enclosed by physical and ecological constraints which limit the outward growth potential of the town:

[1] Housing backlog = number of informal structures, backyarders and farm workers on the waiting list.

- There are patches of Western Rûens Shale Renosterveld (having a 'critically endangered' ecosystem status) and Rûens Silcrete Renosterveld (having a 'critically endangered' ecosystem status) within the urban edge. These areas are listed as Critical Biodiversity Areas.
- A tributary of the Bot River, which skirts the southern portions of the current urban extent. This ecological corridor includes two areas that are subject to flooding and are possibly classifiable as wetlands.
- Watercourses along the southern and northern edge of the urban area also act as ecological corridors, linking the upper reaches of the mountain catchment within the lower lying valley floor.
- Physical barriers include the N2 National Road and railway line on the western and southern edges and an electrical servitude to the north of town.
- The eastern edge of town is bordered by intensive agricultural land and should be safeguarded from development.
- The area towards the north and the west of the town is characterised by undevelopable slopes of 1:4 and steeper.



OPPORTUNITIES & CONSTRAINTS

BIOPHYSICAL

- 1 Environmentally sensitive areas
- i Scenic natural and rural setting

SOCIO-ECONOMIC

- 1 Undeveloped economic sector
- 2 Stagnant rates base
- Increased immigration
- i Potential tourism investment at station
- ii Existing tourism attractions and potential for more projects
- iii Strategic location along the N2
- iv Botrivier identified as a potential industrial hub

BUILT ENVIRONMENT

- 1 Illegal access off the N2
- 2 Existing informal settlement located on old landfill site
- 3 Location next to N2 used as leverage to protest/draw attention to needs
- 4 Landlocked town
- 5 Limited uptake of existing vacant residential opportunities
- Limited land to address housing backlog
- Challenging physical structuring elements
- Lack of identity/sense of place
- i Existing, under-utilised station infrastructure
- ii Sufficient space available for future industrial development

Figure 9.2: Botrivier: Summary of Opportunities and Constraints

9.2 PROPOSALS

9.2.1 THE SPATIAL DEVELOPMENT CONCEPT

(i) The Spatial Vision

To promote Botrivier as one of the N2 transport corridor's 'anchor' nodes and to stimulate growth through road and rail based transport-linked industrial and associated development.

(ii) The Spatial Concept Plan (Figure 9.3)

The following main structuring elements informed the spatial vision and future growth potential of Botrivier:

- **Nodes:**
  - The new Primary Economic Area;
  - Botrivier Station precinct.
- **Paths/Routes**
  - The N2 National Road which forms the current southern edge of town.
  - The R43 road which provides the main access to the town and forms the northern boundary of the existing urban footprint.
- **Edges**
  - Visual buffers along the N2 National Road and R43 Road.

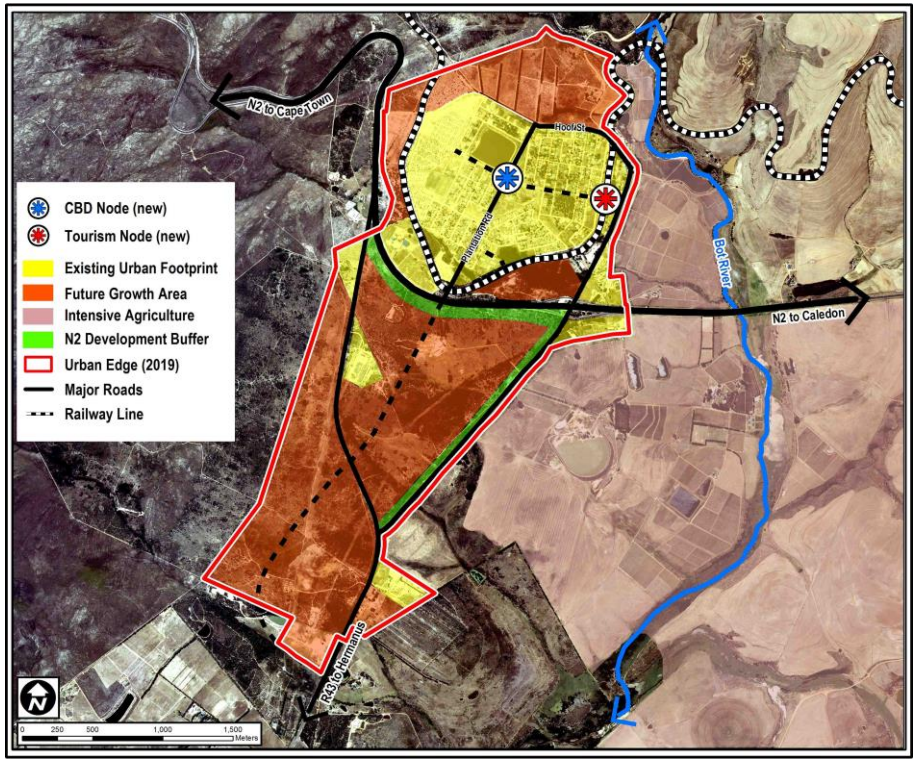


Figure 9.3: Botrivier: Spatial Concept

- **Districts/Precincts**
  - New urban growth expansion area to the south of the N2;
  - New residential growth areas in the northern and southern parts.
- **Landmarks**
  - Houwhoek Mountain.
  - Botrivier Station.

(iii) Principles for Implementing the Spatial Concept

- **Encourage:**
  - a linkage between the CBD and the new industrial and residential developments located south of the N2;
  - the establishment of a new tourism node incorporating the station and nearby hotel.
- **Promote:**
  - agri-industrial development;
  - Botrivier as a centre for wind energy and green industries;
  - spatial and social integration;
  - the creation of visual buffers along the N2 and R43.
- **Restrict:**
  - development beyond the electrical servitude and the Houwhoek River to the north of town;
  - leapfrog development across the Bot River to the east of the town.
- **Maintain / Protect**
  - the rural character within the existing urban footprint of Botrivier.
- **Contain:**
  - development within the barriers created by the N2 and the R43.

(iv) Spatial Restructuring

- **Spatial and Social Integration**
  - To improve accessibility from the western parts of Botrivier to community facilities and the CBD and to develop a north-south link. Spatial integration is proposed by means of:
    - Developing Plantation Street as an activity street/route;
    - A new connectivity/collector route across the N2 to the south;
    - Development of vacant and publicly owned erven;
    - Centralising the Primary Economic Area and community facilities.
- **Densification:**
  - Support non-residential land uses along the proposed activity streets.
  - Promote general densification (infill development, sub-divisions of erven, second dwellings etc.) within the urban footprint (brown field areas).
- **New Growth Areas:**
  - Future urban growth is proposed as follows:
    - southern direction across the N2;
    - northern direction up to the electrical servitude and the Bot River.

9.2.2 POPULATION GROWTH AND LAND USE REQUIREMENTS

Based on population projections and historic trends for Botrivier, the population growth rate was 2.4% per annum between 2011 and 2018. Assuming an average population growth rate with a slight decrease of 2.2% per annum, it is estimated that ±24.1 ha of land is required to address the projected housing needs for the next 10 years (a total estimated population of 8 035 by 2028). However, considering densification measures for brownfield areas, ±26.4 ha of greenfield areas is required to accommodate the projected growth (including land for community facilities). **Table 9.2** sets out the projected need for urban growth up to 2028.

Table 9.2: Botrivier: Projected Land Requirements

Proposed densification strategy		
Densification	**Assumption**	**Units**
Vacant erven	10% vacant erven developed	30
2nd Dwellings	5% of single residential erven developed	66
Sub-divisions	5% of single residential erven developed	66
Sub-total (Density of 25 du/ha):		**162 (±6.5 ha) (A)**

Residential projections and allocation assumptions:			
Density Category	**% of Population**	**Average Household Size**	**Density**
Low Density	15%	3	15du/ha
Medium Density	25%	4	25du/ha
High Density	60%	5	50du/ha
Subsidy housing	-	5	65du/ha

Projected residential units and required area up to 2028 (1 558 additional people)				
Density Category	**Existing Housing Backlog**	**Population Increase**	**Units Required**	**Land Required (Ha)**
Low Density Housing	-	233	78	5.2
Medium Density Housing	-	390	97	3.9
High Density Housing	-	935	187	3.7
Current Subsidy Housing Demand	735	-	735	11.3
Units and area required for residential growth:			**1 097**	**24.1 (B)**
New residential growth area required (including densification): B-A=C				**17.6 (C)**

Community facilities requirements for current need and future population growth up to 2028: 6 477 (2018) plus 1 558 additional people = 8 035 (2028) *

Community Facilities	**Population Threshold**	**Space Requirement per Facility (ha)**	**Number of Facilities Required**	**Required Space (ha)**
ECDC/Crèche	2 400	0.02	-	-
Primary School	4 000	2.8	1	2.8 **
Secondary School	5 000	4.8	1	4.8 **
Skills Training Facility	as per need	0.2	1	0.2
Primary Health Clinic	5 000	0.2	-	-
Library	400	0.05	-	-
Museum	as per need	variable	1	TBD

Community Centre	10 000	0.2	-	-
Grass Field	2.3		-	-
Parks (neighbourhood)	0.5 ha/1 000		2	1.0
Fire Station	60 000	0.3	-	-
Police Station	60 000	0.1	-	-
Area required for facilities:				**8.8 (D) *****
Total greenfield area required (C + D):				**26.4 ha**

* The CSIR Guidelines (2015) were used to determine the social facilities requirements. The estimated total population for 2028 was used to determine the total number of required social facilities. The existing social facilities were subtracted from the total number required to calculate the number of new facilities. The Social Infrastructure Accessibility Study for the Theewaterskloof Municipality (2018) was also studied.

** Note that the Social Infrastructure Accessibility Study for the Theewaterskloof Municipality (2018) states that 3 primary schools and 3 secondary schools would be required for the population growth at 2028, as based on the methodology used in the study. However, the TWKM IDP states that Botrivier is too small to sustain schools and the Western Cape Education Department (WCED) has highlighted that, at this stage, there is not enough demand in Botrivier for a high school. The required number of schools was therefore been reduced.

*** Note that the area could be reduced if community facilities are clustered and shared, e.g. school shared sportsfield. Alternatively, existing facilities can be upgraded to provide for improved and additional services.

9.2.3 URBAN EDGE

Against the background of the overarching growth development strategy for TWKM and given the wider economic role of Botrivier within the Municipality and the sub-region, spatial provision for expansion of industrial and residential areas is required. Therefore, in determining the urban edge for Botrivier, consideration was given to the following:

- The municipal growth and development strategy;
- Existing physical constraints i.e. the railway line and N2 National Road;
- Natural and biodiversity resources, e.g. steep slopes, the Bot River, watercourses and flood prone areas, critical biodiversity areas and high potential and unique agricultural land;
- Projected future urban growth and densification measures, indicating that 26.4 ha additional greenfield area is required to address urban growth for the ten year planning period.

The proposed urban edge for Botrivier is illustrated on **Plan 9.1**.

9.3 SECTOR STRATEGY: BIOPHYSICAL ENVIRONMENT AND AGRICULTURE

The biophysical sensitive environment within the urban edge should be managed and protected from inappropriate urban development. Sensitive vegetation within the urban edge should be conserved where possible and should be incorporated into open space areas. In this regard, the following areas are of particular importance:

- The patches of Western Rûens Shale Renosterveld and Rûens Silcrete Renosterveld within the urban edge. Key objectives of managing these areas would include the maintenance of the connectivity between the patches and their incorporation into open space areas.
- The riverine environment of a tributary to the Bot River, as well as the wetlands and floodplain associated with this tributary, which functions as an ecological corridor and linear open space system.

The high potential and productive agricultural land surrounding Botrivier must be protected from inappropriate urban development.

9.4 SECTOR STRATEGY: SOCIO-ECONOMIC

9.4.1 Industrial Development

Botrivier was identified as an important economic node located within the N2 growth corridor, mainly because of the existing vacant land within the urban edge which can accommodate a significant proportion of the industrial land requirements of TWKM and the greater region, as well as its strategic location within the greater Overberg region. A number of land use applications for industrial development were approved in recent years. It is therefore proposed to entrench the character of Botrivier as a light industrial hub. A total of ±95.4 ha is provided for industrial development.

9.4.2 Tourism

Tourism development should be encouraged as one the main economic growth sectors to facilitate economic growth in Botriver. The focus should be on the development of the vintage rail initiative and upgrading the rail link between Cape Town and the Overberg District as a primary freight and passenger route. This will strengthen the existing tourism activities at the Botrivier station and hotel precinct (Area 18 on **Plan 9.1**). Currently, the vintage passenger service terminates at the Elgin Station.

Tourism initiatives, such as wineries, restaurants, farm stalls, overnight facilities, etc. that are compatible with and that will strengthen the established agricultural sector should be encouraged.

9.4.3 Economic Development

In the previous SDF, the eastern part of Waterkant Street was identified as a possible activity street. It is proposed to also develop Main Road as an activity street, by allowing for more intensive use along its alignment. It is foreseen that this proposal can create a stronger link between the existing economic node of Botrivier, the station precinct and the new Primary Economic Area (Area 18 on **Plan 9.1**) identified around the intersection of Plantation and Waterkant Street. The development of the new proposed Primary Economic Area should be reinforced by directing commercial, business and community facility development towards this area.

However, mixed land use should be encouraged throughout the settlement, where appropriate, and where it will not impact negatively on the dominant character of the surrounding area.

Two larger areas (Areas 9 and 10 on **Plan 9.1**) for mixed use development are also proposed along the R43 road. Mixed use development represent residential development with a higher mix of land uses, including commercial and community facilities, than a conventional residential suburb. This road is an important route between Cape Town and Hermanus and activities serving the passing traffic would be suited at this location. These areas could also accommodate a range of housing typologies.

To accommodate the possible future demand for rail-based freight, space and opportunity should be provided along the railway line for freight and logistics-related facilities and infrastructure, e.g. cold storage, transfer stations, turntable/turnaround area, etc. This could be accommodated in Areas 13, 14, 15 and 18 (**Plan 9.1**). Rail-based freight could benefit the local agricultural and agri-industrial activities by providing a more cost-effective transport mode.

9.5 SECTOR STRATEGY: BUILT ENVIRONMENT

9.5.1 Population Growth and Land Use Requirements

Based on the population projections for Botrivier, the estimated population will be 8 035 by 2028. According to the Community Survey of 2016, the average household size for Botrivier is 3.1 persons. It is therefore estimated that approximately 2 592 households will reside in the town by 2028.

In addition to the current urban footprint of Botrivier, in order to accommodate the above growth in population, taking densification measures on brownfield land into consideration, 26.4 ha of additional greenfield area is required. The

current SDF provides a total of ±192.2 ha for residential purposes, which excludes the proposed mixed uses areas. This far exceeds the projected need up to 2028. Note that the largest proportion of the proposed development represent low density residential uses, which will include large sections of open space.

9.5.2 Residential

(i) Low density residential development

Sufficient space is provided for market-related, low density residential uses. This land use will increase the rates base for the Municipality and partly subsidise service delivery for government funded housing projects in the town. Three parcels of land have been earmarked; two smaller parcels (Areas 6 and 7 on **Plan 9.1**) within the town and the larger tract of land to the south along the R43 Road. (Area 5 on **Plan 9.1**)

(ii) Medium density residential development

Medium density residential is proposed within the northwestern part of Botrivier, to the west of the railway line (Area 2 on **Plan 9.1**), south of Waterkant Street (Erf 1351, Area 4 on **Plan 9.1**) and east of Plantation Road (Erf 1212, Area 3 on **Plan 9.1**). The latter two areas have been identified as priority housing projects in the TWKM housing pipelines and are aimed at the FLISP market (Priority Development Areas 2 and 3).

(iii) High density residential development

Land for higher density, subsidised housing has been earmarked in the northern part (Area 1 on **Plan 9.1**). This area has been identified as a Priority Development Area. Various housing typologies can be accommodated within this part of Botrivier to encourage socio-economic integration. An area is also provided for transitionary housing (Area 8 on **Plan 9.1**) to accommodate the demand for informality. Transitionary housing represents an area where TWKM will provide basic communal services for low income individuals to accommodate them on a temporary basis, until they can be relocated to a subsidised housing development or find alternative accommodation. The management of the area will be done by TWKM's housing department. It is important to provide for recreational areas, e.g. small pocket playparks, to enhance the amenity of the proposed subsidised housing areas.

The three areas proposed for mixed use development (Areas 9, 10 and 11 on **Plan 9.1**) could accommodate a range of residential options, as well as commercial and community land uses. Mixed use development represent residential development with a higher mix of land uses, including commercial and community facilities, than a conventional residential suburb.

9.5.3 Cemeteries

Adequate land has been provided for expansion of the existing cemetery to provide capacity for the immediate future (Area 19 on **Plan 9.1**).

9.5.4 Social Facilities

The projected population growth in **Table 9.2** and the CSIR Guidelines for the Provision of Social Facilities (2015) were used to determine the required social facilities by 2028. Cognisance was also taken of the current and future need identified in the Social Infrastructure Accessibility Study for the Theewaterskloof Municipality (2018). Note that the Social Infrastructure Accessibility Study's estimated required schools seem excessive compared to the CSIR Guidelines. Based on the above, one primary school and one secondary school would be required by 2028, as well as one training facility. Schools are space extensive and suitable sites would need to be allocated. Due to the limited space available within the central and western parts of Botrivier, where the greatest need is, shared sportsfields and facilities would need to be considered. Additional social facilities should be clustered, where desirable, in Areas 16 and 17 on **Plan 9.1**.

9.5.5 Densification and development of vacant land

Limited levels of densification have been observed in Botrivier between the 2012 SDF and this current SDF. The approach and findings of the 2012 SDF with regard

to densification therefore remain applicable. The majority of residential erven in Botrivier is approximately 600 m² in extent and the town has a gross density of ±12 du/ha. The high proportion of vacant erven and sizeable developed erven located within the existing footprint of the town, provide opportunities for densification.

The following densification guidelines for Botrivier are recommended. Refer to **Figure 9.4** for the location of these planning areas.

Table 9.3: Botrivier: Densification Guidelines

PLAN AREA	EXISTING DENSITY	TARGET DENSITY	PRIVATE VACANT ERVEN	PUBLIC VACANT ERVEN	PROPOSED DENSIFICAITON MEASURE
A	9du/ha	20du/ha	30	1	Redevelopment of brownfield area with higher densities, group housing developments, second dwelling units, subdivisions.
B	10du/ha	15du/ha	165	2	Higher density infill development, where possible consolidation and redevelopment, second dwelling units, subdivisions.
C	13du/ha	20du/ha	60	-	Where possible consolidation and redevelopment; second dwelling units, subdivisions.
D	35du/ha	35du/ha	0	-	No further densification. Encourage subdivisions only to secure land tenure.
E	8du/ha	15du/ha	7	1	Where desirable, consolidation and redevelopment of vacant land; second dwelling units, smaller subdivisions.
F	12du/ha	15du/ha	9	-	Where desirable, consolidation and redevelopment of vacant land; second dwelling units, smaller subdivisions.
G	3du/ha	5du/ha	0	-	Any form of densification should be sensitive to the character of the station precinct.

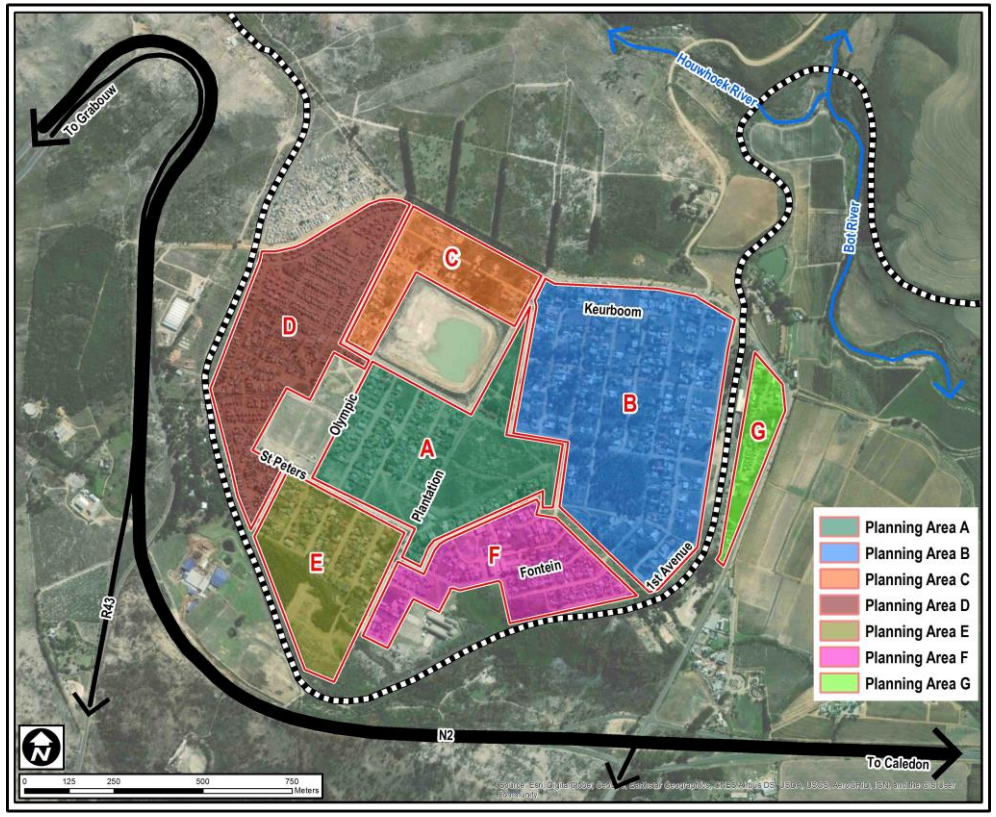


Figure 9.4: Botrivier: Densification Planning Areas

9.5.6 Heritage

Historically, Botrivier developed mostly after the station was built, although a number of buildings in the vicinity existed before the railway line was completed. Compagne's Drift was an important stop-over in the Vereenigde Oost-Indische Compagnie (VOC) era.

Two precincts with heritage significance are identified for Botriver:

- Precinct A: There is a row of railway homes (mostly corrugated iron cottages), which would have been occupied by railway employees. The original home of the Station Master still exists, although it had been altered and added over time. The Botrivier Hotel has historic value, with much layering as it was extended over time. The Church Hall and the Supermarket are both dated 1923. The station buildings themselves also have heritage value. Botrivier was a popular stop for tourists during the period when passenger trains used this line.
- Precinct B: Early 20th century homes were observed in this precinct, some of them well preserved and some substantially altered. Nevertheless, the cluster of homes that still exist make this a valuable heritage resource. Aerial photographs from 1939 confirm that a cluster of homes existed in this section of town at that date.

Figure 9.5: Botrivier: Heritage Precincts

9.6 SECTOR STRATEGY: INTEGRATION

9.6.1 Spatial Context

The following key spatial integration challenges have been identified in Botrivier:

- The town is characterised by limited developable areas located to the north of the N2. Therefore, future urban growth is proposed in a southern direction south of the N2. Care should be taken to prevent functional fragmentation of the town which could be created by the N2 dividing the town in a northern and southern halves.
- Priority should be given to linking higher density residential areas with areas of non-residential activities in order to facilitate access to economic opportunities.
- Consideration should be given to upgrading of the various open spaces and recreational facilities which are of poor quality and result in these spaces being under-utilised.

9.6.2 Spatial and Social Integration Proposals

- Integration Areas

  Activity streets along Waterkant and Plantation Streets are proposed to improve accessibility to businesses and community facilities located in the central part of town. Extending Plantation Street will link the proposed industrial and residential areas to the south of the N2 with the residential areas to the north of the N2. Pedestrian walkways and cycle routes (NMT) should be developed along Waterkant and Plantation Streets.

  Infill development on publicly owned land south of Waterkant Street should:

  - aim to provide a range of erf sizes and tenure options to encourage social integration between different income groups;
  - achieve high levels of residential density.

- Integration Spaces

  Open space, recreation areas and community facilities should be upgraded and the usage thereof should be rationalised between the school and the public. Proposed integration spaces include:

  - The open space area in 8th Avenue;
  - Proposed cluster of community facilities in St. Peters Way.

9.7 PRIORITY DEVELOPMENT AREAS AND SPECIAL STRATEGIC INTERVENTIONS AND SPATIAL PROJECTS

The following Priority Development Areas have been identified for planning and implementation purposes. Priority Development Areas are identified which will either address a specific urgent need, e.g. subsidised housing, or to facilitate economic activity and job creation, e.g. high income housing, tourism development, economic development, etc.:

- 1: Beaumont subsidised human settlement project;
- 2: Erf 1351 GAP project;
- 3: Erf 1212 GAP project.

The Botrivier Station Precinct has been identified which require more detailed studies and precinct planning.