

## **ANNEXURE H**

### **OPUWO POPULATION PROJECTIONS, LAND DEMAND AND AFFORDABILITY REPORT**

Submitted by:

**HARMONIC PLANNING**

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P.O. Box 3216 Windhoek  
Office 76 Pasteur Street,  
Windhoek West  
Tel: 061 238 460/Cell 081 127 5879  
Fax 088646401

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# 1 OPUWO POPULATION ANALYSIS AND GROWTH

This section will analyse the population dynamics and growth of Opuwo town. The regional analysis is followed by an analysis of the population growth rates for Opuwo and an estimate for the 2021 Opuwo Population. The section continues to make population estimates for 2041 and the future demand and supply of land to accommodate the growth of the town for the next twenty years.

## 1.1 Opuwo Town Population

According to the 2001 census, Opuwo had a population of only 2,640 people. By 2011, Opuwo town registered a total of 7,657 people with an average household size of 3.9 people for the urban area. The town had an estimated 1,963 private households. Development and growth of the town were amplified by the declaration of the town as the regional administrative capital and climatic events in particular the extreme national droughts experienced in the years 2013, 2016 and 2019.

Opuwo was one of the top 10 fastest growing urban centers in Namibia between 2001 and 2011. According to the table below, Opuwo was the 8<sup>th</sup> fastest growing urban locality.

(Ten fastest and slowest growing towns)								
Locality	Urban Population 2011	Urban Population 2001	Percentage Increase or Decrease 2001 to 2011	Growth Rate 2001 to 2011	Percentage of Urban Population 2011	Percentage of Urban Population 2001	Percentage gain/loss 2001 to 2011	Rank 2011
<b>Outapi</b>	6 600	2 640	<b>150.0</b>	<b>9.6%</b>	0.7	0.4	0.3	22
<b>Eenhana</b>	5 600	2 814	<b>99.0</b>	<b>7.1%</b>	0.6	0.5	0.2	24
<b>Ondangwa</b>	21 100	10 900	<b>93.6</b>	<b>6.8%</b>	2.4	1.8	0.6	10
<b>Swakopmund</b>	44 700	23 808	<b>87.8</b>	<b>6.5%</b>	5.1	3.9	1.1	4
<b>Ongwediva</b>	19 300	10 742	<b>79.7</b>	<b>6.0%</b>	2.2	1.8	0.4	11
<b>Rundu</b>	61 900	36 964	<b>67.5</b>	<b>5.3%</b>	7.0	6.1	0.9	2
<b>Okahandja</b>	22 500	14 039	<b>60.3</b>	<b>4.8%</b>	2.6	2.3	0.2	9
<b>Opuwo</b>	7 900	5 101	<b>54.9</b>	<b>4.5%</b>	0.9	0.8	0.1	20
<b>Hanties Bay</b>	4 800	3 285	<b>46.1</b>	<b>3.9%</b>	0.5	0.5	0.0	28
<b>Otjiwarongo</b>	28 000	19 614	<b>42.8</b>	<b>3.6%</b>	3.2	3.2	-0.1	8
Walvis Bay	61 300	43 611	<b>40.6</b>	<b>3.5%</b>	6.9	7.2	-0.3	3
Outjo	8 400	6 013	<b>39.7</b>	<b>3.4%</b>	1.0	1.0	0.0	19
Windhoek	322 500	233 529	<b>38.1</b>	<b>3.3%</b>	36.6	38.7	-2.1	1
Gobabis	19 000	13 856	<b>37.1</b>	<b>3.2%</b>	2.2	2.3	-0.1	14
Karibib	5 100	3 726	<b>36.9</b>	<b>3.2%</b>	0.6	0.6	0.0	27
Otavi	5 200	3 813	<b>36.4</b>	<b>3.2%</b>	0.6	0.6	0.0	25
Rehoboth	28 800	21 308	<b>35.2</b>	<b>3.1%</b>	3.3	3.5	-0.3	6
Tsumeb	19 200	14 929	<b>28.6</b>	<b>2.5%</b>	2.2	2.5	-0.3	13
Arandis	5 100	3 974	<b>28.3</b>	<b>2.5%</b>	0.6	0.7	-0.1	26
Katima Mulilo	28 200	22 134	<b>27.4</b>	<b>2.5%</b>	3.2	3.7	-0.5	7
Oshakati	35 600	28 255	<b>26.0</b>	<b>2.3%</b>	4.0	4.7	-0.6	5
<b>Omaruru</b>	6 000	4 761	<b>26.0</b>	<b>2.3%</b>	0.7	0.8	-0.1	23
<b>Mariental</b>	12 300	9 836	<b>25.1</b>	<b>2.3%</b>	1.4	1.6	-0.2	18
<b>Usakos</b>	3 600	2 926	<b>23.0</b>	<b>2.1%</b>	0.4	0.5	-0.1	33
<b>Keetmanshoop</b>	18 900	15 778	<b>19.8</b>	<b>1.8%</b>	2.1	2.6	-0.5	15
<b>Khorixas</b>	6 900	5 890	<b>17.1</b>	<b>1.6%</b>	0.8	1.0	-0.2	21
<b>Grootfontein</b>	16 400	14 249	<b>15.1</b>	<b>1.4%</b>	1.9	2.4	-0.5	16
<b>Okakarara</b>	3 700	3 296	<b>12.3</b>	<b>1.2%</b>	0.4	0.5	-0.1	32
<b>Karasburg</b>	4 300	4 075	<b>5.5</b>	<b>0.5%</b>	0.5	0.7	-0.2	29
<b>Luderitz</b>	12 500	13 295	<b>-6.0</b>	<b>-0.6%</b>	1.4	2.2	-0.8	17
<b>Oranjemund</b>	3 900	4 451	<b>-12.4</b>	<b>-1.3%</b>	0.4	0.7	-0.3	30
<i>Helao Nafidi</i>	<i>19 200</i>				2.2	0.0	2.2	12
<i>Omuthiya</i>	<i>3 800</i>				0.4	0.0	0.4	31
<i>Ruacana</i>	<i>2 900</i>				0.3	0.0	0.3	34
<i>Oshikuku</i>	<i>2 600</i>				0.3	0.0	0.3	35
<i>Otjinene</i>	<i>2 100</i>				0.2	0.0	0.2	36
<i>Okahao</i>	<i>1 600</i>				0.2	0.0	0.2	37
<i>Nkurenkuru</i>	<i>600</i>				0.1	0.0	0.1	38

Opuwo as a town and more importantly as the regional capital has undergone a period of significant government investments to provide the necessary road and building infrastructure to accommodate and connect the decentralized national government offices. As a result of the decision to move the regional capital to Opuwo, a number of government offices including the Regional Council's Office were constructed to accommodate the required staff and their operations. A number of officials were transferred and migrated from outside the region to Opuwo. The tarring of the road further supported the development of Opuwo as the road now connects the major urban centers of the Kunene region and further connects Opuwo to neighboring regions and to the national capital Windhoek and the port of Walvis Bay.

The Kunene Region and in particular the Opuwo constituency is presently highly dependent on animal husbandry namely cattle and goat farming with strong linkages to urban centres in the area. Traditionally farmers will relocate to urban centers in times of drought. The reoccurrence of droughts in 2013, 2016 and 2019 has devastated farmers in the region and many of the farmers and their families opted to relocate to Opuwo as the closest and biggest urban center in the region. The low urbanization rate of the Kunene and the Omusati regions in 2011 indicates that the bulk of the two regions population resides in the rural area and is a significant source for urbanization as people from the rural areas will easily be attracted to Opuwo as the regional capital for survival, government services, job opportunities and an improved living standard.

## **1.2 Population Size for 2021**

Opuwo as a town has grown in numbers and area much faster over the past 10 years than ever before. The number of people and households in Opuwo currently is perceived to be much bigger than the 2011 population of 7,000 people. Population numbers and in particular the number of households are a critical planning indicator to determine the demand for land and socio-economic services. To establish a more realistic estimate of the population of Opuwo three different methods were used to project the population of Opuwo in 2021 based on three growth scenarios namely, high, medium and low.

The high scenario population was estimated at 16,200 people based on the compounded growth rate of 7.81% between 2011-2021 which uses a combination of the estimated informal structures by GIZ in the informal settlements and planned (not necessarily registered) erven in 2021. The average household size of 3.9 people per household for formal planned erven was taken from the 2011 Census average household size for urban areas. The average household size for informal households were taken from the average number of people per room for rural areas from the 2011 Census which is 2 persons per room. The informal structures were not regarded as full households, but rather as rural rooms because of the shifting nature of the Kunene population moving between rural areas and urban centers as a result of climatic conditions.

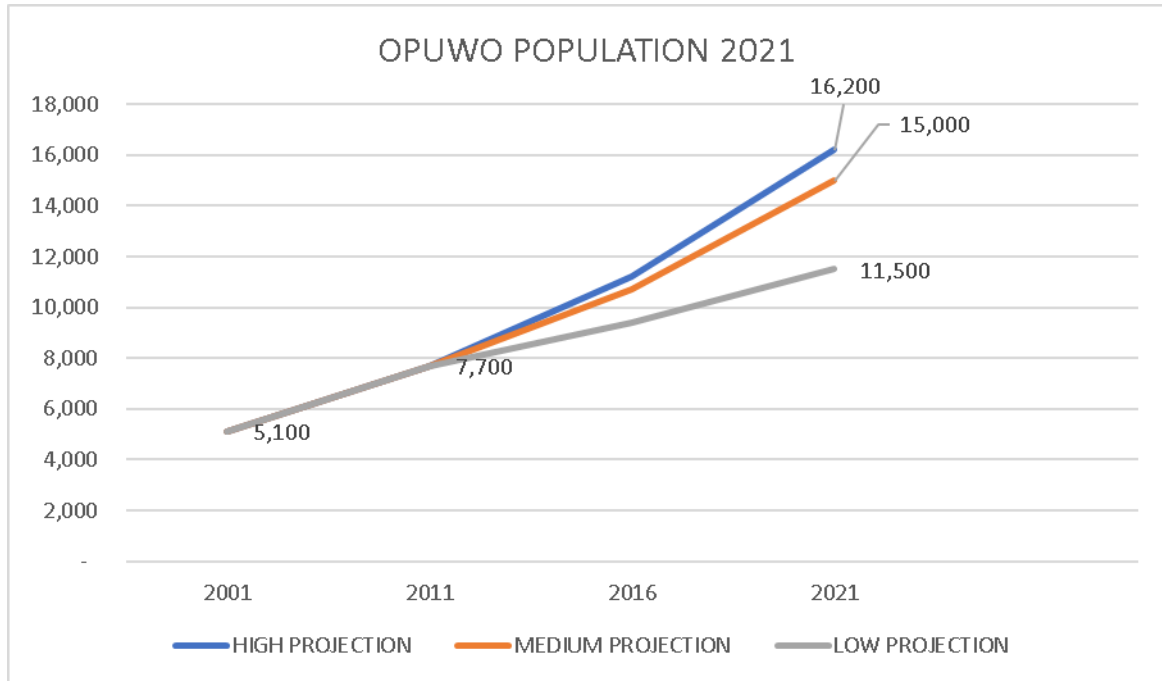
# OPUWO SOCIO-ECONOMIC EVALUATION

POPULATION ESTIMATE					
EXTENSION	LOCAL NAME	NUMBER OF REGISTERED ERVEN	AVERAGE HOUSEHOLD SIZE	TOTAL POPULATION	COMMENTS
<b>FORMAL</b>					
Opuwo Proper	Town	283	3.9	1,104	Estimated
Opuwo Extension 1	Ondundu	173	3.9	675	Average
Opuwo Extension 2	Okatuo	127	3.9	495	Urban
Opuwo Extension 3	Town	15	3.9	59	HH Size
Opuwo Extension 6	VIP	51	3.9	199	
Otuzemba Proper	Otuzemba	328	3.9	1,279	
Otuzemba Extension 1	Ondunye	332	3.9	1,295	
<b>LESS NON RESIDENTIAL ERVEN</b>		<b>-104</b>	<b>3.9</b>	<b>(406)</b>	
		<b>1,205</b>		<b>4,700</b>	
<b>SEMI-FORMAL</b>					
<b>OTUZEMBA</b>					
Opuwo Extension 8	Ouranda	339	3.9	1,322	
Opuwo Extension 7	Ouranda	282	3.9	1,100	
Katutura Ext. 2	New Katutura	272	3.9	1,061	
Otuzemba Extension 3		217	3.9	846	
Orutjanda Extension 1	DWN (Dev. Workshop Nam)	497	3.9		Vacant
<b>LESS NON RESIDENTIAL ERVEN</b>	8% Estimate	<b>-129</b>	<b>3.9</b>	<b>(501)</b>	
		<b>1,478</b>		<b>3,828</b>	
<b>INFORMAL</b>					
Orutjandja Informal Settlement	Orutjanda South/West	532	2	1,064	Rural Persons Sleeping per Room= 2
Orutjandja East	Farm No. 1147	561	2	1,122	
Okatuo Informal	Okatuo	56	2	112	Urban Persons per room 1.7
Otuzemba VIP	Otuzemba	254	2	508	
Ouranda	On Planned Area Opuwo Ext.	394	2	788	
Old Katutura		942	2	1,884	
Otuzemba Extension 2		217	2	434	Number of units were reconciled between available sources
Otuzemba Primary Residents		150	2	300	
Otuzemba Extension 4		400	2	800	
Otuzemba Extension 5		350	2	700	
		<b>3,856</b>		<b>7,712</b>	

The medium population estimate for 2021 of 15,000 people is based on the annual compounded growth rate of 6.92% between 2011 and 2021 which uses the primary school students enrolled for 2022 of 2,594 pupils provided in a February 2022 survey of Opuwo Schools.. The number of school-going persons in any settlement represents a significant percentage of the total population of that settlement. If a total population count is unavailable, one can use the correlation that exists between the smaller count of school-going persons and the larger total population to estimate the latter figure.

The low scenario population for 2021 of 11,500 people is based on the annual compound growth rate as determined by the National Census between 2001 and 2011 at 4.15%. The population in 2021 under the low growth scenario is significantly lower than the high and

medium estimates which has far reaching implications for land delivery and providing for social and economic infrastructure.



DESCRIPTION	Growth Rate	2001	2011	2016	2021
Opuwo Projected Population (GIZ &HKS Estimate)	7.81%	5,100	7,700	11,200	16,200
Projected population (Based on Primary School Numbers)	6.92%	5,100	7,700	10,700	15,000
Opuwo Town Census Projected Population	4.15%	5,100	7,700	9,400	11,500
Kunene Region Projected Population	2.37%	68,700	86,900	97,600	109,800
Opuwo Population as a Proportion of the Region (Medium)	Medium Projection	7.4%	8.9%	11.0%	13.7%

### 1.3 Population Projections

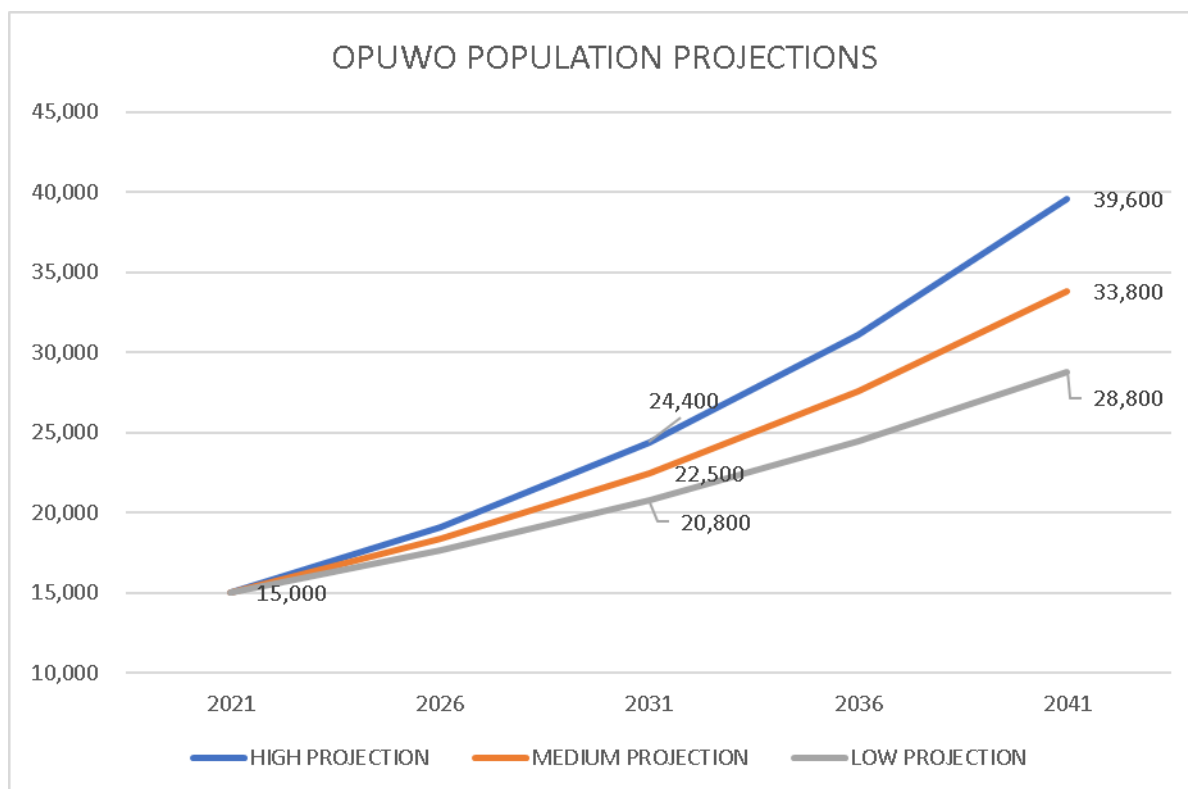
The medium population growth estimate is accepted as the most likely scenario and the population of Opuwo is estimated at 15,000 people in 2021 which means that the population doubled in 10 years. This estimate will be used in the report as the base for the 2021 population. The exceptional growth between 2011 and 2021 is regarded as special for that period and it is assumed that population growth of Opuwo will be much lower and will revert to the 2001-2011 growth rate of 4.15%. The 2001-2022 growth rate is already much higher than the national and the regional growth rates of 1.4% and 2.3% respectively. Considering the relatively low density and population for the Kunene region it is expected that the future growth for Opuwo town will primarily come from immigrants specifically from the Omusati and Oshana regions due to their proximity and good road infrastructure linkage in search of government employment and economic opportunities.

Population and economic development scenarios might change when the Baynes Hydropower Plant planned to generate about 600MW of electricity commence. The project will create developmental opportunities for Opuwo as the main transport corridor will pass through the town. Development will also be augmented should the newly discovered copper, cobalt, iron and zinc mines in the area become productive.

Population estimates will be made using a 20% variation for the higher and lower projections. It is estimated that the population of Opuwo town as a proportion of the region will grow from 13.7% in 2021 to 19.3% in 2041. The population of Opuwo in 2021 is estimated at 15,000 compared to the Region's population of 109,800 people while these populations are projected to grow to 33,800 and 175,300 respectively by 2041.

The graph and table below provide a more detailed overview on the calculated population projections.



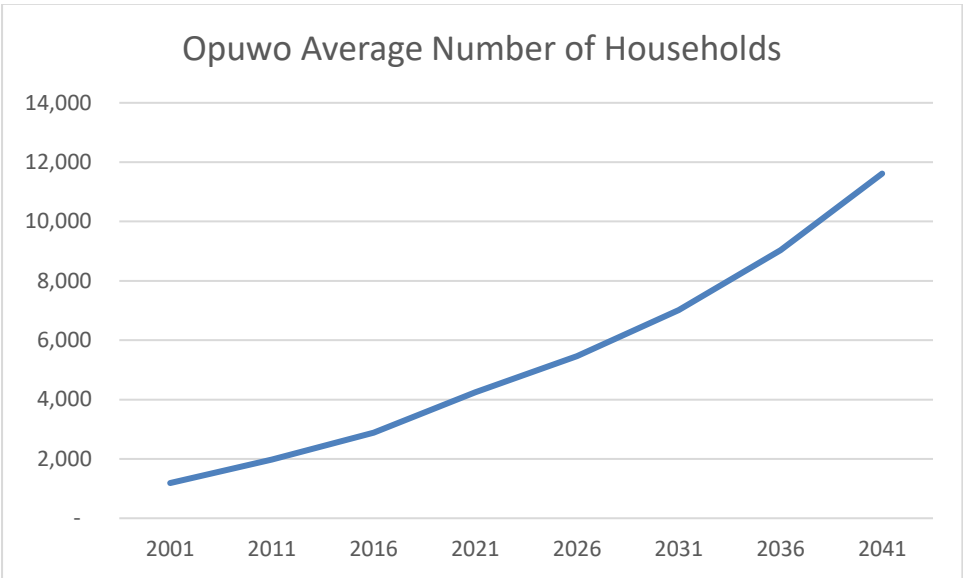
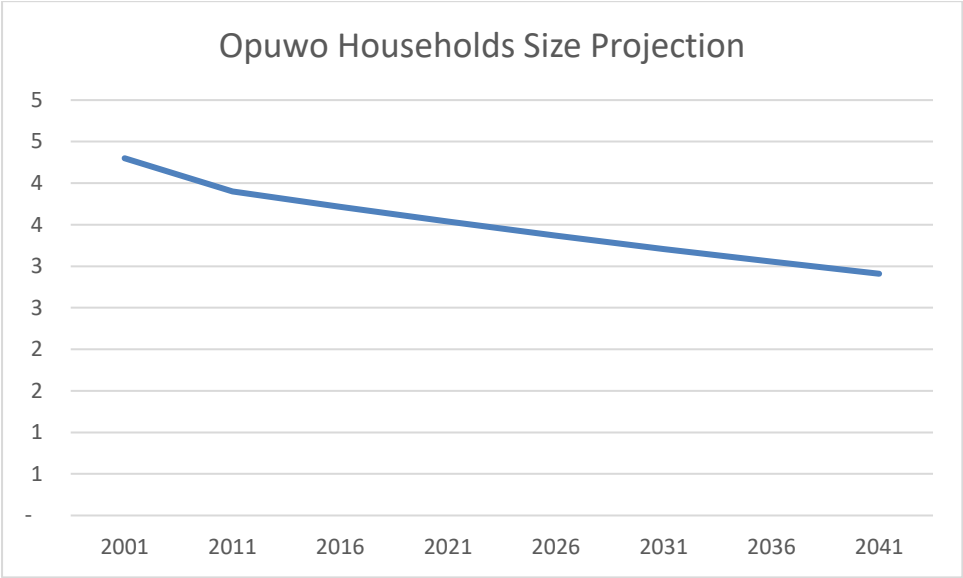


DESCRIPTION	Growth Rate	2021	2026	2031	2036	2041
Opuwo Projected Population (20% Higher)	4.97%	15,000	19,100	24,400	31,100	39,600
Projected population (Base Population)	4.15%	15,000	18,400	22,500	27,600	33,800
Opuwo Projected Population (20% Lower)	3.32%	15,000	17,700	20,800	24,500	28,800
Kunene Region Projected Population	2.37%	109,800	123,400	138,700	155,900	175,300
Opuwo Population as a Proportion of the Region (Medium)	Medium Projection	13.7%	14.9%	16.2%	17.7%	19.3%

## 1.4 Household Formation

According to the 2011 Census, the average household size for the Kunene Region was 4.6 while the average household size for the urban areas in the region was 3.9 persons per household. In 2001 the average household size for urban areas in the Kunene Region was 4.3 persons per households. This indicates that the average household size for urban areas in the region has contracted by more than 0.4 persons or by about -9.3% over ten years or

0.93% annually. Although the number might seem insignificant, it has far reaching implications for the region as it means that for the same population increase, the number of households is growing faster as households become smaller. The smaller household size has implications for the demand for land and housing.



The projected populations are divided by the average household sizes in the following table to yield a projection of the numbers of households.

DESCRIPTION	Growth Rate	2001	2011	2016	2021	2026	2031	2036	2041	CHANGE (2041-2021)
Opuwo Projected Population (Medium Projection)	4.15%	5,100	7,700	10,700	15,000	18,400	22,500	27,600	33,800	18,800
Opuwo Households Size Projection	-0.97%	4	3.9	3.7	3.5	3.4	3.2	3.1	2.9	(0.6)
Opuwo Average Number of Households		1,186	1,974	2,881	4,241	5,462	7,013	9,033	11,616	7,376

The estimated base number of households in 2021 is 4,200. Based on the medium projection and the decreasing household size, Opuwo will grow by another estimated 2,800 households between 2021- 2031. The additional households that would have to be accommodated by 2041 is estimated at 7,500.

In March 2022 Opuwo had a total of 2,034 surveyed erven according to records in the Office of the Surveyor General. Compared to the estimated 4,241 households of 2021, it means that Opuwo needs an additional 2,200 surveyed erven to satisfy the 2021 requirement and a further 2,800 to cater for the town until 2031. Households presently without surveyed erven or formally demarcated sites are those situated in the informal settlements and those living in houses outside the town's boundaries. A total of about 5,000 erven or sites therefore have to be surveyed or otherwise delivered by 2031 to accommodate the backlog and new households.

## 1.5 Opuwo Annual Land Requirement

The 2021 placement of households has the estimated 4,200 households spread amongst detached houses, backyard flats, flats, with approved building plans and structures including informal settlements with no approved building plans. In March 2022 Opuwo had a total of 2,034 surveyed erven according to the records of the Surveyor General. According to the 2020-2025 Opuwo Valuation Roll in 2022, 1,146 are built-up erven whilst vacant erven bring the total to 1,528 erven. The remaining erven not on the Valuation Roll are in new townships such as Opuwo Extensions 8 and 9 and are vacant. Besides not being serviced as yet in 2022, it is expected that the development standards of these new townships will elevate the purchase prices to a level beyond what most needy households will be able to afford.

Informal settlement areas accommodate the shortfall in sites and will continue to do so if suitably priced options are not provided. They are poorly serviced. It is estimated that Opuwo had a backlog of about 1,000 sites in the informal areas that can benefit from upgrading with better services in 2021. A second usually low cost option lies in the availability of flats and leasable rooms. Construction of these units is a private sector initiative. In Opuwo title conditions limit such initiatives.

Based on the projected 7,000 households in 2031, and assuming the 2021 status quo is kept for the 4,200 households, the Town needs to provide for an additional 2,800 residential erven, sites or flats by 2031. Divided equally over the 10-year period, this calculates at about 280 dwelling units per annum to accommodate the annual population growth and household formation in the town.

A total of about 2,800 erven, flats or sites therefore have to be delivered by 2031 to accommodate new households. Assuming an extravagant possibility that all new households are to obtain 550 m<sup>2</sup> erven in a standard type township where 60% of the area is taken up by residential sites, one calculates land take-up at about 26 hectares per annum between 2021 and 2031 to keep pace with the current household formation in the town.

LAND REQUIREMENT 2031								
			Average Erf Size (m2)	Estimated Space Consumed (m2)	Additional 40% for (Roads/POS)	Total Space Occupied (m2)	Hectares Consumed	
Opuwo current erven (2022)	2022	2,034	500	1,017,000	200	1,017,700	102	
Planned Townships (2022)								
New Households 2031	2031	7,500	400	1,858,440	743,376	2,601,816	260	
Developable Land (New Townlands)	2051							
<b>Additional Erven Required</b>		<b>5,466</b>	<b>900</b>	<b>2,875,440</b>	<b>743,576</b>	<b>3,619,516</b>	<b>362</b>	
<b>Total Additional erven required</b>		<b>5,466</b>			<b>Area for Residential</b>	<b>Additional 40% for Non Res (Roads/POS)</b>	<b>TOTAL SPACE REQUIREMENT</b>	<b>Hectares by 2031</b>
High Density Erven:	80%	4,373	Erf size SQM	300	1,311,840	524,736	1,836,576	184
Low Density Erven:	20%	1,093	Erf size SQM	500	546,600	218,640	765,240	77
					<b>1,858,440</b>	<b>743,376</b>	<b>2,601,816</b>	<b>260</b>
<b>Annual Erf Requirement: (Over 10 years)</b>		<b>547</b>	Average Annual Erven Required		Average Annual Hectares Required			<b>26</b>

The following table illustrates the current nature of township development and land consumption with an erf size of 350 m<sup>2</sup>.

# OPUWO SOCIO-ECONOMIC EVALUATION

OPUWO LAND SUPPLY							
			Average Erf Size (m2)	Estimated Space Consumed (m2)	Additional 40% for (Roads/POS)	Total Space Occupied (m2)	Hectares Consumed
Opuwo current erven (2022)	2022	2,034	1,550	3,152,700	1,261,080	4,415,330	442
Planned Townships (Erven Ext.7&8&DW)	2022	1,118	370	413,660	165,464	579,494	58
Developable Land Available	2031	4,687	350	1,640,494	1,093,662	2,734,156	273
		7,839	2,270	5,206,854	2,520,206	7,728,980	773

## 1.6 Opuwo Land Supply

The total townlands area for Opuwo is 10,8 square kilometers or 1,783 hectares in total. Much of the unoccupied land is flood plain or steep and mountainous which is not suitable for large scale urban development.

DESCRIPTION	PORTION	SLOPE	SIZE M2	SIZE HECTARES
Townlands	876	All Land	9,824,251	982.4251
Townlands	115	All Land	8,015,320	801.5320
			17,839,571	1,783.9571
Surveyed Portions within TL's	Portion 1174	Flat	400,665	40.0665
Surveyed Portions within TL's	Portion 1175	Flat	363,094	36.3094
Surveyed Portions within TL's	Portion 1176	Flat	351,745	35.1745
<b>Total Surveyed Block:</b>			<b>1,115,504</b>	<b>111.5504</b>

## 1.7 Developable Land

The following section serves to determine the vacant land available for development in Opuwo.

The proclaimed Local Authority Area was evaluated and categorised in accordance with its suitability for development. The following categories were applied.

- Land naturally unsuitable for intensive urban settlement comprising:
  - Steep mountainous land; gradient  $> 1/3$
  - Fairly steep land:  $1/3 \geq \text{gradient} > 1/5$
  - Mountainous isolated Land:  $1/5 \geq \text{gradient} > 1/8$  or otherwise inaccessible
  - Flood Plain: 1 in 50 year return period
  - Flood Plain: Enclosed island
- Occupied Land with urban settlement comprising:
  - Main formally built-up & occupied townships
  - Informal settlement
- Developable Land outside northern drainage system and situated west of the town where provision of infrastructure would prove excessively expensive to supply, comprising the following portions in Figure 11:
  - Portion A
  - Portion B of Marginally steep
  - Portion C of Marginally steep
  - Portion D
- Developable Land on which settlement is in process within southern drainage system and which are partially settled at low densities comprising the following portions in Figure 11:
  - Portion E
  - Portion L
- Accessible marginally steep Land suitable for high income residential housing comprising the following portions in Figure 11:
  - Portion F
  - Portion G
  - Portion H
- Planned Areas (Infill possible in areas not yet fully occupied) comprising the following portions in Figure 11:
  - Portions of Extensions 7 & 8, north to Otuzemba Ext.2 including unplanned intervening vacant land.

- New Katutura
- Development Workshop Township
- Developable Land suitable for urban settlement inside northern drainage system comprising the following portions in Figure 11:
  - Portion I
  - Portion J
  - Portion K

As calculated and shown in the two tables below, the existing built-up area occupies 535 hectares comprising 30% of the total townlands. Another 25% or 440 hectares is available for new developments (subject to reductions due to topography, water courses, service lines such as the new national road, etc.).

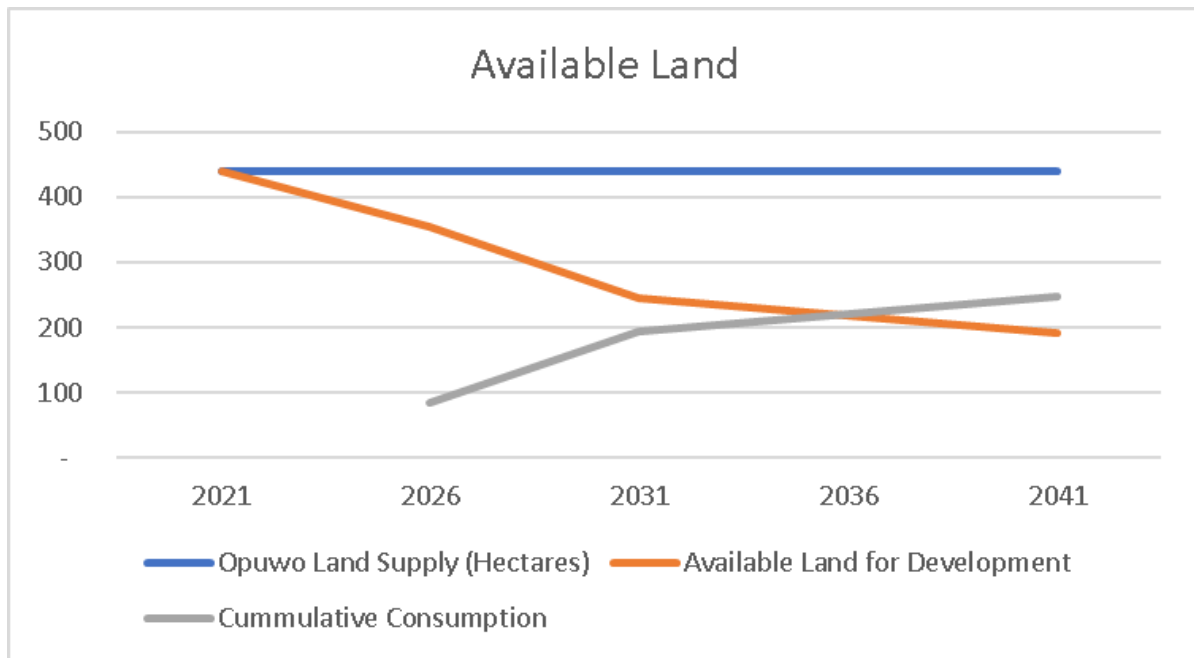
AVAILABLE LAND				AREAS	%
				in Hectares	Townlands
Developable Land on which settlement is in process within southern drainage system				10.89	0.61
Developable Land suitable for urban settlement inside northern drainage system				232.23	13.02
Planned Areas (Infill possible in areas not yet fully occupied)				158.00	8.86
Accessible marginally steep Land	Suitable for low density high income			38.76	2.17
<b>TOTAL AVAILABLE LAND</b>				<b>439.88</b>	<b>24.6576</b>

# OPUWO SOCIO-ECONOMIC EVALUATION

DESCRIPTION OF CATEGORY	Breakdown by Portions	Areas of Portions		AREA BY CATEGORY	
		Hectares	%	Hectares	%
<b>Proclaimed Local Authority Area</b>				<b>1783.9571</b>	<b>100.00</b>
	Opuwo Townlands No. 876	982.4251	55.07		
	Opuwo Townlands No. 1115	801.5320	44.93		
	Total Area of Townlands	1783.9571	100.00		
<b>Land naturally unsuitable for intensive urban settlement</b>				<b>712.73</b>	<b>39.95</b>
	Steep mountainous land; gradient > 1/3	129.00	7.23		
	Fairly steep land: 1/3 ≥ gradient > 1/5	61.00	3.42		
	Mountainous isolated Land: 1/5 ≥ gradient > 1/8 or otherwise inaccessible	234.73	13.16		
	Flood Plain: 1 in 50 year return period	208.00	11.66		
	Flood Plain: Enclosed island	80.00	4.48		
	Total Area naturally unsuitable for intensive urban settlement	712.73	39.95		
<b>Occupied Land with urban settlement</b>				<b>535.00</b>	<b>29.99</b>
	Main formally built-up & occupied townships	340.00	19.06		
	Informal settlement	195.00	10.93		
	Total Area occupied	535.00	29.99		
<b>Developable Land outside northern drainage system</b>	<b>Refer to Figure 11</b>			<b>96.65</b>	<b>5.42</b>
	A	41.67	2.34		
	B Marginally steep	5.19	0.29		
	C Marginally steep	38.93	2.18		
	D	10.86	0.61		
		96.65	5.42		
<b>Developable Land on which settlement is in process within southern drainage system</b>	<b>Refer to figure 11</b>			<b>10.89</b>	<b>0.61</b>
	E	6.51	0.36		
	L	4.38	0.25		
	Total Area	10.89	0.61		
<b>Accessible marginally steep Land</b>	<b>Refer to Figure 11</b>			<b>38.76</b>	<b>2.17</b>
	F	13.37	0.75		
	G	6.31	0.35		
	H	19.08	1.07		
	Total Accessible marginally steep Land	38.76	2.17		
<b>Planned Areas (Infill possible in areas not yet fully occupied)</b>				<b>158.00</b>	<b>8.86</b>
	Portions of Extensions 7 & 8, north to Otuzemba Ext.2 including unplanned intervening vacant land.	100.00	5.61		
	New Katutura	8.00	0.45		
	Development Workshop Township Opuwo Ext. 4	50.00	2.80		
	Available Land Infill in planned areas	158.00	8.86		
<b>Developable Land suitable for urban settlement inside northern drainage system</b>	<b>Refer to Figure 11</b>			<b>232.23</b>	<b>13.02</b>
	I	158.62	8.89		
	J	35.91	2.01		
	K	37.69	2.11		
	Total Developable Land Portions I, J & K	232.23	13.02		
<b>Sum of Constituent portions</b>		<b>1,784.26</b>	<b>100.02</b>		<b>100.02</b>
<b>Total Land suitable for Urban Settlement</b>	Portions E to L (excluding A to D)	<b>439.88</b>			







CATEGORY	DESCRIPTION	YEAR	2021	2026	2031	2036	2041
HOUSEHOLD FORMATION	Opuwo Projected Population (Medium)	6.92%	15,000	18,400	22,500	27,600	33,800
	Opuwo Households Size Projection	-0.97%	3.5	3.4	3.2	3.2	3.2
	Opuwo Average Number of Households		4,241	5,462	7,013	8,625	10,563
	Additional Households			1,221	1,551	1,612	1,938
LAND DEMAND	Land Required for new household (HA)	Average Erf Size: 500m2		61	78	81	97
	Additional Land Required (HA)	@40%	Roads/ POS Schools	24	31	32	39
	Total Additional Land Required (HA)			85.5	108.6	112.8	135.6
LAND SUPPLY	Opuwo Land Supply (Hectares)		440	440	440	440	440
	Cummulative Consumption			86	194	221	248
	Available Land for Development		440	354	246	219	192

As indicated in a previous table, the average household size for Opuwo is projected to reduce to 2.9 persons per household in 2041. Because of the uncertainty of Opuwo household dynamics over the next 20 years and the rural nature of the population, in the above table, the land consumption projections for 2041 are based on the average household size of 3.2 calculated for 2031 which is already significantly lower than the 2011 census average household size of 3.9 persons per household.

Taking the projected land consumption and the supply of 440 hectare for the town as a whole, the available developable land is adequate to accommodate Opuwo's growing population.

Additional land needs to be procured within the existing planning period to ensure the continued availability of developable land for Opuwo after the 20 years planning horizon.

## 2 AFFORDABILITY

The affordability section will take a brief look at the household affordability in Opuwo using the national framework to understand the demand for land in the different affordability groups vis-a-vis the suitability of the supply of land.

### 2.1 Opuwo Household Affordability

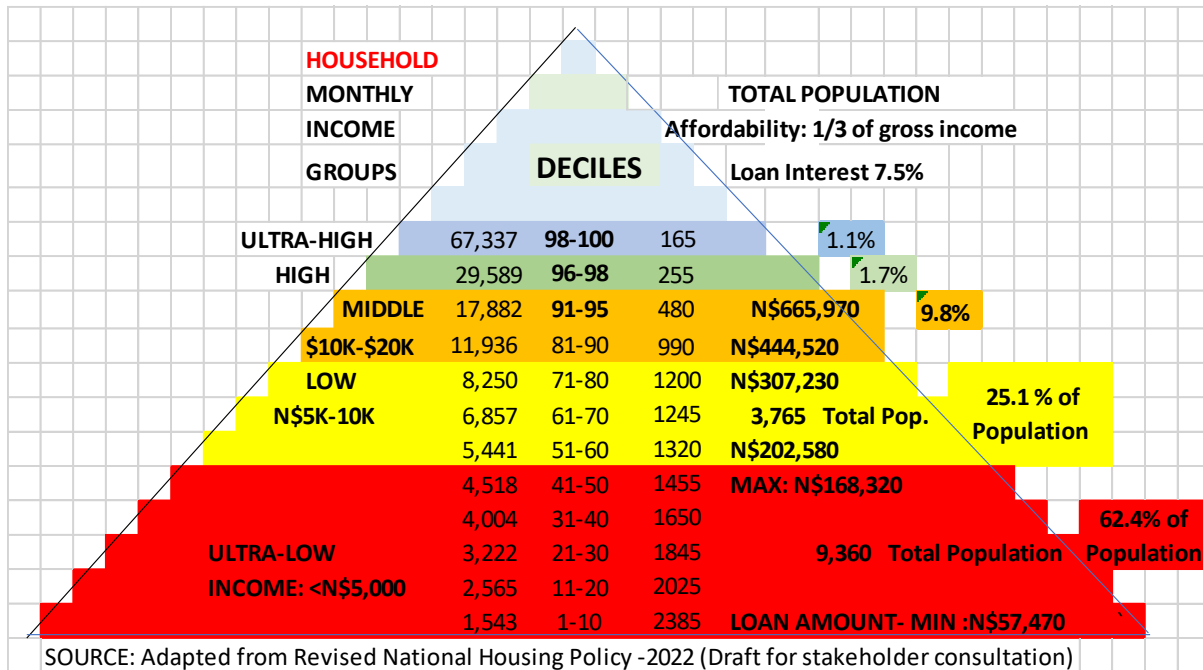
Considering the 2022 national estimate that 66% of Namibia's urban population live in the informal settlements, the estimated population of Opuwo's 15,000 people with 4,242 households, the total informal settlement is population for Opuwo is about 10,000 people or about 2,900 units with an average household size of 3.5 persons (Draft National Housing Policy 2022). According to the same document 88% of households have a monthly household income of less than N\$10,000 and only about 2% have monthly incomes in excess of N\$20,000.

The table and triangle below attempt to provide a picture of the affordability and market size for Opuwo based on national average statistics. The 2021 projected population of Opuwo was assigned into the national average income deciles and relative population spread taken from the Revised National Housing Policy (Draft for stakeholder contribution 2022).

According to the table, 50% of the households comprising about 63% or 9,360 of the population from the projected 2021 Opuwo population of 15,000 earn less than N\$4,500 per month. The highest these households can afford is about N\$170,000 for a housing solution with a loan of 20 years at a subsidized interest of 7.5% per annum. The ultra-low income is classified by the Revised National Housing Policy as people who earn less than N\$5,000 per month. Low-income households earn between N\$5,000 and N\$10,000 and make-up further 25% of the population or more than 3,900 persons. Combined these two groups comprise almost 87% of the population.

The table and triangle are a clear indication that the bulk of the housing and land delivery efforts nationally and for Opuwo as a town must be concentrated on the households earning

less than N\$5,000 per month covering more than 50% of the households and about 63% of the population.

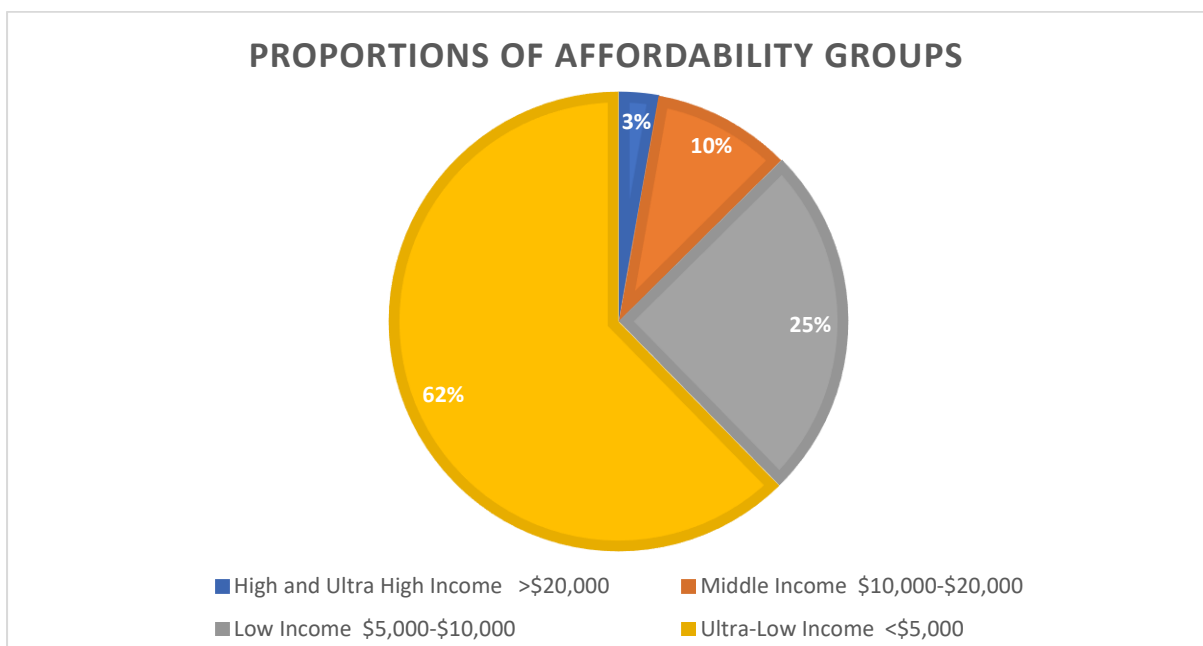


2015/16 Namibian Household Income and Expenditure Survey (NHIES)											
INCOME GROUP DESIGNATION	Income Deciles	% of Overall Population		Average Household Size	Average Monthly Household Income (N\$)	Housing Affordability (max. 30% of income) (N\$)	Affordable Loan (7.5% interest over 20 years) (N\$)	Outapi Population Spread 2021	Outapi Estimated House Holds	Outapi Total Monthly House Hold Spend	
ULTRA-LOW (Monthly household income range N\$0-5,000)	1-10	15.9	62.40%	7.5	1,543	463	57,470	2,385	9,360	318	490,674
	11-20	13.5		6.4	2,565	770	95,580	2,025		316	811,582
	21-30	12.3		5.8	3,222	967	120,040	1,845		318	1,024,929
	31-40	11		5.2	4,004	1,201	149,080	1,650		317	1,270,500
	41-50	9.7		4.6	4,518	1,355	168,320	1,455		316	1,429,063
LOW (Monthly household income range N\$5,000-10,000)	51-60	8.8	25.1	4.2	5,441	1,632	202,580	1,320	3,765	314	1,710,029
	61-70	8.3		3.9	6,857	2,057	255,340	1,245		319	2,188,965
	71-80	8		3.8	8,250	2,475	307,230	1,200		316	2,605,263
MIDDLE (Monthly household income range N\$10,000-20,000)	81-90	6.6	9.8	3.1	11,936	3,581	444,520	990	1,470	319	3,811,819
	91-95	3.2		3	17,882	5,365	665,970	480		160	2,861,120
HIGH (Monthly household income range N\$20,000-40,000)	96-98	1.7		2.7	29,589	8,877	1,101,920	255		94	2,794,517
ULTRA HIGH (Monthly household income range N\$40,000-80,000)	98-100	1.1		2.5	67,337	20,201	2,507,590	165		66	4,444,242
(Source: Revised Housing Policy-2022 (Draft for stakeholder consultation))								15,000	3,175	25,442,704	

## 2.2 Land Demand According to Affordability Groups

Given the distribution and quantity of demand for each affordability group, the land demand for each category was projected for the planning 20 years horizon.

Sixty two percent of the land must be provided for the ultra-low and 25% of the available land to the low-income groups, together these two groups comprise about 87% of the total population of Opuwo. Based on the projected new households, it is suggested that Council concentrate its land delivery efforts on these two lowest income groups that will require a total of about 5,500 erven or sites by 2041. For the higher income groups, middle– high– and ultra-high-groups, the total number of additional households for 2041 is estimated to be about 822 households. The middle-income group comprise the bulk of the households with just more than 730 households and the high and ultra-high income groups comprise less than 70 households.

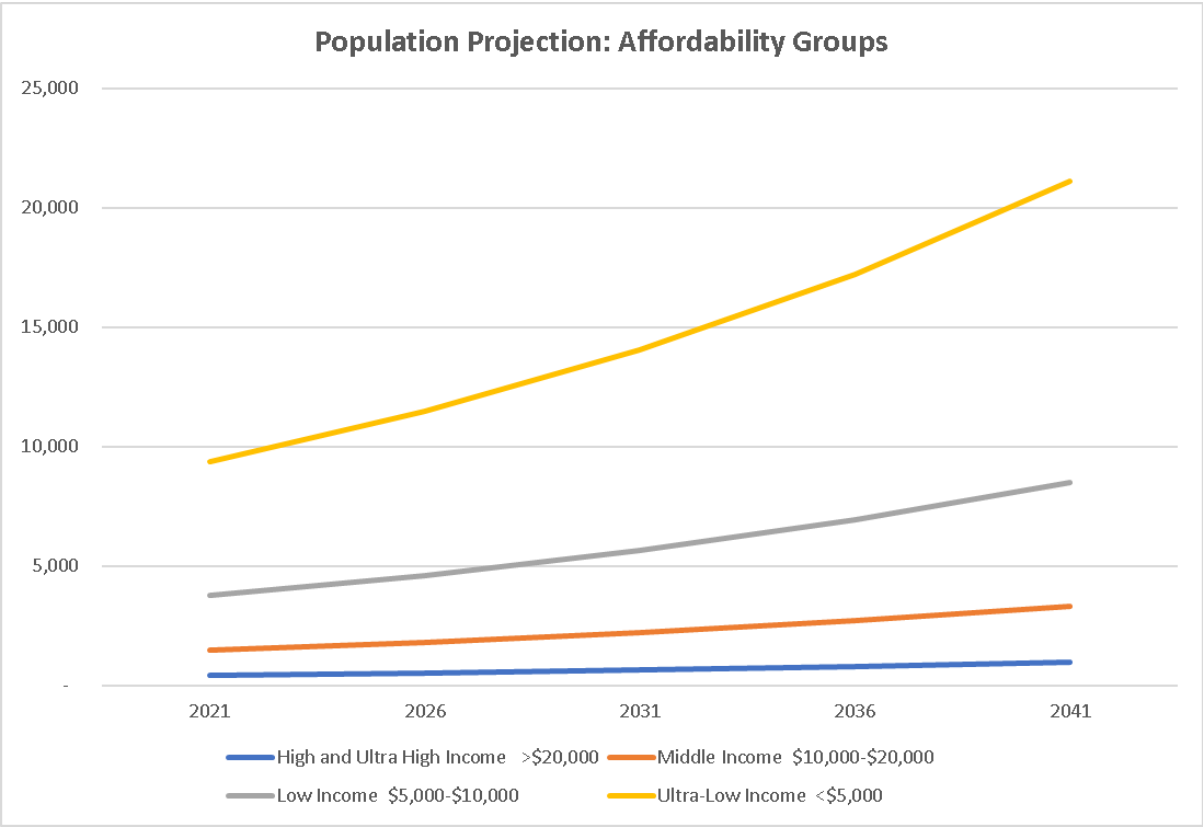


### 2.3 Land Requirement per Affordability Group

The population for each affordability group is used to estimate the number of households per population group in order to determine the number of erven/sites and the total land demand for each group.

The biggest proportion of land must be availed to the low and ultra-low income groups. As the relatively new regional capital, Opuwo will have to make provision for young newly employed professionals as first-time homeowners and tenants. Sites will have to be made available for

middle income earners in particular sites for flats to accommodate professionals who move to Opuwo for work leaving their families in their respective hometowns.



OPUWO SOCIO-ECONOMIC EVALUATION

TABLE: LAND REQUIREMENT PER AFFORDABILITY GROUP							
	DESCRIPTION	Growth Rate	2021	2026	2031	2036	2041
G R O U P  1	High and Ultra High Income Population	4.15%	420	515	631	773	947
	Households -High and Ultra High Income	3.5	120	147	180	221	271
	Land Required (HA) (Erf size 500 + 40% Roads and Open Space)		8.40	10.29	12.61	15.46	18.94
G R O U P  2	Middle Income Population	4.15%	1,470	1,801	2,208	2,705	3,315
	Households - Middle Income	3.5	420	515	631	773	947
	Land Required (HA) (Erf size 500 + 40% Roads and Open Space)		29.40	36.03	44.15	54.10	66.30
G R O U P  3	Low Income Population	4.15%	3,765	4,614	5,654	6,929	8,491
	Households - Low Income	3.5	1,076	1,318	1,615	1,980	2,426
	Land Required (HA) (Erf size 300 + 40% Roads and Open Space)		45.18	55.37	67.85	83.14	101.89
G R O U P  4	Ultra-Low Income Population	4.15%	9,360	11,470	14,056	17,225	21,109
	Households - Ultra-Low Income	3.5	2,674	3,277	4,016	4,921	6,031
	Land Required (HA) (Erf size 300 + 40% Roads and Open Space)		112.32	137.64	168.67	206.70	253.30
	Total Population		15,015	18,400	22,549	27,632	33,862
	Total Households		4,290	5,257	6,442	7,895	9,675

## 2.4 Summary of the Key Challenges and the Drivers of Change

The key spatial challenges for Opuwo town are summarized in the table below with the respective drivers of change that the structure plan for the town must respond to.

SPATIAL CHALLENGE	DRIVERS OF CHANGE
Uncontrolled erratic urban settlement expansion.	Population growth. Informal settlement growth. Regional Droughts that destroy the livelihoods of rural communities. Employment opportunities as a result of mining opportunities relatively close proximity to the town.
Vacant and sometimes overcrowded residential structures.	Nomadic lifestyle of surrounding communities. Strong urban-rural linkages.
Provision of basic services to new settlement growth.	Uncontrolled expansion of settlements. Unplanned settlements.
Availability of housing finance.	Growth of informal settlement outstrips formal rate paying households. Limited national budget allocations for housing and infrastructure development.
Low density sprawling informal settlement.	Unplanned settlements
Low-income households are located far away from services	Uncontrolled settlement growth. Land grabbing.
Fragmented spatial planning and under provision of land for essential urban services such as POS and Institutional Land.	Haphazard planning with no overall guidance.
Overflowing sewage oxidation ponds presenting an unhealthy environment.	The capacity of sewage ponds is exceeded. Shortage of technical skills to operate the ponds. Poor maintenance of ponds. Poor access control to ponds.
Domestic garbage dumping heaps especially in informal settlements.	Improve garbage collection system. Poor to non-existent illegal dumping control.