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MARKET ASSESSMENT

The Student Housing Landscape in South Africa

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List of Acronyms

ANUK	Accreditation Network United Kingdom
BFI	Budget Facility for Infrastructure
CET	Community Education and Training
CPUT	Cape Peninsula University of Technology
CUT	Central University of Technology
DBSA	Development Bank of Southern Africa
DD	Due diligence
DFI	Development finance institution
DHET	Department of Higher Education and Training
DUT	Durban University of Technology
EPPF	Eskom Pension and Provident Fund
ESG	Environmental, Social and Governance
EU	European Union
FET	Further Education and Training
GDP	Gross Domestic Product
GEPF	Government Employee Pension Fund
GBCSA	Green Building Council of South Africa
HEI	Higher Education Institution
HMO	Houses of Multiple Occupation
IBT	Innovative Building Technologies
IFC	International Finance Corporation
IIPSA	Infrastructure Investment Programme for South Africa
JLL	Jones Lang LaSalle
MIF	University Macro-infrastructure Framework
MIT	Massachusetts Institute of Technology
MN&S	Minimum Norms and Standards
NDP	National Development Plan
NMU	Nelson Mandela University
NOLS	National Open Learning System
NPC	National Planning Commission
NWU	North West University
NSFAS	National Student Financial Aid Scheme
ODL	Open Distance Learning
PBSA	Purpose-Built Student Accommodation
PFMA	Public Finance Management Act
PSET	Post-School Education & Training
PSHA	Private Student Housing Association
SETA	Sector Education and Training Authorities
SHIP MO	Student Housing Infrastructure Programme Management Office
SHP	Student Housing Partner
sqm	Square Meter(s)
TUT	Tshwane University of Technology
TVET	Technical and Vocational Education and Training
TSA	Total Student Area
UCT	University of Cape Town
UFH	University of Fort Hare



UFS	University of the Free State
UJ	University of Johannesburg
UKZN	University of KwaZulu-Natal
UL	University of Limpopo
UNISA	University of South Africa
Univen	University of Venda
UP	University of Pretoria
UWC	University of the Western Cape
VAT	Value Added Tax
VUT	Vaal University of Technology
WITS	University of the Witwatersrand

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Foreword

Education is key to building human capital. Expanding access to quality tertiary education can also help reduce income inequality and promote social mobility through greater access to skills, training and jobs. One of the challenges South Africa's formal tertiary education system faces is a shortage of high-quality, affordable student housing units. Suitable and accessible student accommodation could support more South African students to access tertiary education and training schools.

The South African government has shown strong commitment to increasing student housing with support from the public and private sector by providing a clear regulatory framework for housing built specifically for students. In addition, funding support for lower income students through programs such as the National Student Financial Aid Scheme (NSFAS) is playing an important role in improving access. The government has also launched the Student Housing Infrastructure Program (SHIP) to fund and facilitate the development of student housing while creating an enabling environment for investments.

One of IFC's strategic priorities in South Africa is to work with the public and private sector to help address the skills shortages and high unemployment rate. Supporting the government's efforts to deliver student accommodation to all higher education institutions, and Tertiary and Vocational Education and Training institutions can play a key role in meeting that objective because it has the potential to contribute to students tertiary education retention rates.

In early 2020, IFC held a workshop which brought together private sector and public sector stakeholders, as well as universities, to discuss how to increase student housing. A primary finding of this workshop was that while there is investment appetite for the sector, there is a gap in terms of accessible and up-to-date data and information. This report aims to provide information on the current state of the student accommodation market in South Africa to help address this gap. The study assesses and quantifies the current and future supply of, and demand for, student accommodation at tertiary institutions and unpacks the key challenges to delivering adequate and affordable student accommodation.

The report's findings highlight the large gap between supply and demand, illustrating that there is a significant opportunity to increase investment in student accommodation as an asset class. Globally accommodation built specifically for students is an attractive asset class for investors because of its resilient performance in downturns due to the less cyclical nature of the education sector and high occupancy rates and yields. The report highlights learnings and experiences from other economies with mature student accommodation markets and offers valuable lessons for South Africa as it expands student accommodation.

A partnership between the public and the private sector will be critical to achieve the ambitious targets set by the government of South Africa to meet student housing demand. There is widespread interest and support from potential partners in the government, development finance institutions and the private sector to deliver on those targets. IFC hopes that this report will play a role in unpacking the opportunity in this sector and offer a roadmap to address some of the bottlenecks identified to unlock the sector's potential.



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Executive Summary

Access to affordable, quality student accommodation is an important part of tertiary education systems. In South Africa, demand for adequate student accommodation currently outstrips supply.

This market study offers a comprehensive assessment of South Africa's student housing sector, highlighting and unpacking, the following aspects:

- Current and future supply of, and demand for, student accommodation at South African tertiary institutions.
- The economic and social aspects of the delivery of student accommodation.
- The costs - construction, operational and maintenance - associated with providing student accommodation.

South Africa's post-school education and training sector comprises 26 public universities, 50 public Technical and Vocational Education and Training colleges, nine Community Education and Training Colleges and numerous private universities and private colleges. South Africa is the leader in the provision of higher education in Africa and its institutions are consistently ranked among the best on the continent. Despite these attributes, the lack of quality student accommodation has been a challenge for institutions and students.

Demand for Student Accommodation

It is estimated that there were 2.55 million students enrolled across all tertiary institutions (universities and Technical and Vocational Education and Training colleges) in South Africa in 2020. Public universities make up the largest portion (44.9 percent of all students), followed by TVET colleges (30.9 percent). Enrollments at public universities are estimated to grow to 1.2 million and TVET college enrollments are set to reach 1.03 million by 2023. Demand drivers for post-school education in South Africa, and by extension student accommodation, include population growth in the youth segment, government funding for post-school education, and household income growth. These, coupled with the government's stated goal to grow public university enrollments to 1.6 million and TVET college enrolment to 2.5 million by 2030, are set to drive continued demand for quality, affordable student accommodation.

Current Student Housing Supply

The South African student accommodation market, also referred to as purpose-built student accommodation or PBSA, in this market assessment, can be divided into three primary segments: The affordable, mid, and high-end markets. across private and public accommodation. The development of private accommodation has mainly driven the PBSA sector in the last decade. However, private developers have, to date, mainly been catering to the mid- (ZAR 3,000 – ZAR 4,500 per month) and high-end market (ZAR 5,000 – ZAR 8,000 per month). This has created a wide gap between affordable and mid-level student accommodation. There is consensus between the public and private sectors that the highest demand for PBSA lies within the affordable segment especially for NSFAS-funded students. The public and private sectors are starting to look at ways to reduce development costs to provide more affordable beds to the market. This allows developers to target the affordable end of the market while maintaining good returns on investment.

As of 2020, there were approximately 223,000 purpose-built student beds available in South Africa for public universities and TVET college students. Given a calculated combined enrolment of 1.19 million post-school education students at these institutions in 2020, and a bed-to-student provision ratio of 68 percent, there is an estimated supply-demand gap of approximately 511,600 beds. With enrollments set to grow to almost 1.6 million by 2025, this demand gap is set to grow to around 781,000 beds by 2025. Of this demand gap for student beds, approximately 59 percent will be for TVET colleges. Considering the expected increase in PBSA beds by 2025, about 84,000 beds are expected to be driven by students funded by the National Student Financial Aid Scheme, assuming current funding ratios remain the same.

The Cost to Build Student Accommodation

South Africa's Department of Higher Education and Training estimates that the average cost to build a student bed in South Africa is ZAR 225,000, resulting in a ZAR115 billion funding gap in 2020. The funding gap is expected to grow to an estimated ZAR 176 billion by 2025. Raising the funding required to address this massive shortage requires broad support from the private sector and makes cooperation and partnerships more important than ever.

Affordability is key to bridging the funding gap. The National Student Financial Aid Scheme has gone a long way toward helping to build this bridge and students benefiting from the scheme make up the largest portion of the affordable segment of the market estimated at 43.7 percent. Of these students, 48 percent (about 252,500 students) receive accommodation allowances.

Assuming a bed costs ZAR 225,000 on average to build, an annual rental rate in excess of ZAR 40,000 per annum would be needed to make a student accommodation development feasible from a private developer's perspective. Affordability remains a key hurdle to making new developments feasible given the average total student aid allowance per student for 2018 was ZAR35,987, covering tuition fees, books and living allowances along with accommodation. Adding to the challenge, there is a disparity between the average annual allocation per student at universities and TVET colleges – ZAR52,954 for university students compared to ZAR11,437 for TVET students. The figures indicate that the market segment that is in greatest need of affordable accommodation – TVET colleges – receives the least state support.

A key element to solving the constraint to affordability is lowering construction and operational costs. To make a predominantly student aid-funded development feasible, construction costs at universities would need reduce to well below ZAR 200,000 per bed and at TVET colleges to below ZAR 100,000 per bed (at current NSFAS accommodation allowance levels, as per 2020 rates).

Green Buildings

Construction costs can be reduced by adopting alternative design and building techniques that can reduce conventional construction time by up to 40 percent and building costs by up to 13 percent. In addition, operational savings can be achieved from the incorporation of green building and sustainability features. The report highlights global and South African experiences with the greening of developments and the positive outcomes of such innovations. Currently, there are two certified green residential developments in South Africa: one EDGE—Excellence in Design for Greater Efficiencies—certified, and one Green Star certified. These developments have shown an approximately 30 percent relative saving in utilities for water and electricity with a 1 percent to 3 percent higher initial construction cost. While the initial capital outlay may be higher, operational cost savings can be passed on to the end-user through lower rental rates, thus making student accommodation more affordable.

The greening of developments provides an opportunity to make student accommodation more accessible through operational savings and an improved built environment through increased ventilation, temperature and light control, resulting in improved health, comfort and wellbeing. IFC expects that the greening and green certification of student accommodation will become more common in South Africa, further driven by incentives such as green financing (green bonds), increased marketability and regulatory and banking incentives.

Public Sector Initiatives

To help expand student housing in South Africa, the government has put in place the Student Housing Infrastructure Programme Management Office, which is set to facilitate the construction of about 38,000 beds over the short to medium term. The Student Housing Infrastructure Programme Management Office was established in July 2019 in an agreement between the Department of Higher Education and Training, the Development Bank of Southern Africa and the National Treasury, to coordinate and facilitate Student Housing Infrastructure Programme activities. The Student Housing Infrastructure Programme was developed by the government to facilitate the provision of student housing infrastructure in line with the terms of the Higher Education

Act and the Continuing Education Act, including the provision of funding to institutions for the procurement of necessary and incidental infrastructure and services. As part of the agreement, the DHET, DBSA and National Treasury committed to coordinate support to the Student Housing Infrastructure Programme, in line with the need for an enabling environment for private and public investment in student housing.

The program aims to facilitate private sector investment to help the country deliver 300,000 student beds over the next 10 years. Currently, there are about 7,000 beds being developed by the private developers, which will be delivered to the market in the next 2-3 years. Most of the Student Housing Infrastructure Programme projects currently planned (around 35,000 beds) are earmarked for universities, with about 3,000 beds allocated to TVET colleges.

Challenges to Scaling Investment in Student Accommodation

From engagement with private sector developers, investors, funders and operators, when conducting this assessment, it is clear that the private sector is willing to participate in the program, however, some challenges inhibit the scaling of private sector investment in this sector.

Though support exists, there are several impediments, such as onerous legislation around Public-private Partnerships, some aspects of the well-intentioned norms and standards for PBSA being too inflexible, lack of certainty regarding investor-friendly provisions (e.g. J12 regulations which are due to expire), and absence of REIT-status for non-listed REITs. These are a few of the issues inhibiting private sector investment in the sector.

Public-private Partnerships in this sector have been difficult to implement due to complex and lengthy procurement processes that have often resulted in no outcome. Lessons learned from more mature markets where PPP arrangements are prolific can be examined and potentially implemented. Lessons include allowing for more flexibility and less complex PPP frameworks and allowing time for specialist PPP developers to successfully implement large projects. Another potential obstacle to the development of student accommodation is the perceived

onerous limitations imposed by the Minimum Norms and Standards, introduced by the DHET to regulate the quality of student accommodation. While the policy objective of the Minimum Norms of Standards is to ensure quality and safe provision of PBSA, the private sector stakeholders view the MN&S in its current form as overly prescriptive and constraining. DHET is in the process of reviewing the MN&S with a view to implementing the revised standards in 2022.

A lack of institutional investment in the sector is causing a bottleneck in development. South Africa has a young PBSA market, and many developers and investors are finding it relatively hard to obtain financing for South African student accommodation projects and investments. This can be ascribed to the perception by local banks that PBSA is still relatively new and untested, and therefore considered relatively risky. This should start to change as the market matures and becomes recognized as a reliable and defensive asset class. The strong demand drivers of student accommodation in South Africa have encouraged large commercial banks, to fund and partner with developers by providing a mix of senior, mezzanine debt as well as profit-sharing arrangements. To bring more liquidity to the new asset class, development finance institutions are increasingly set to play a catalytic role in funding student accommodation as social infrastructure. This in turn is expected to grow the market and in so doing attract private commercial banks and further investment in the sector.

The Potential Impact of COVID-19

Concerns have been raised that a COVID-19-induced preference and proliferation of online learning could have a negative effect on physical, campus-based enrollment rates, and consequently dampen demand for student accommodation. As of 2020, it is calculated that 36 percent (424,310) of public university students were enrolled in distance learning (i.e. not taking classes on campus), with more than 726,624 on-campus students at public universities. Although the Department of Higher Education and Training has announced plans to roll out a national online open learning system, starting with TVET colleges, the view from industry stakeholders is that it will take a long time before South Africa is able to embrace a largely online tuition system. Factors such as lack of IT infrastructure and high data costs inhibit the proliferation of online-only

enrollments. Based on feedback from stakeholders and international experiences, it is expected that a hybrid tuition model will emerge whereby students attend class on campus part of the time and do coursework online. This approach could allow universities to grow their student enrolments without increasing their physical academic infrastructure through a rotational attendance schedule. This increase in enrolments would lead to an increase in demand for student accommodation in academic nodes

Outlook for Student Accommodation in South Africa

Despite the fact that the PBSA asset class is still at its early stages in South Africa, consultations with the key industry and public sector stakeholders have highlighted the following strong attributes of the sector:

- Resilient performance in downturns, as evidenced in developed markets (and more recently in South Africa during COVID-19 lockdowns).
- High occupation rates as evidenced in established markets across the world and as noted among almost all large operators in South Africa.
- Relatively stable income and strong above-inflation rental growth prospects.
- Constant and growing imbalance between supply and demand.
- Favorable demographics.
- Regional excellence of South Africa's universities.
- The government's stated policy to address affordability issues through supportive policies such as NSFAS.

While there are still uncertainties and by extension higher levels of perceived risk, there is a real will to address some of the challenges by both the public and the private sector, to close the supply demand gap and to support human capital development in South Africa. Investors and funders are weighing the risks against the advantages and benefits of early entry, along with the other more general appealing attributes of student housing. It is hoped that the market intelligence made available through this report will create further opportunities for investments and enable the public and the private sector to make more informed investment decisions to address the student accommodation shortage in the country.

1. HIGHER EDUCATION LANDSCAPE AND STUDENT ENROLMENTS IN SOUTH AFRICA: SETTING THE SCENE

The South African government’s National Development Plan (NDP) commits to increasing university student enrolments from 1.1 million to 1.6 million by 2030 (NPC, 2012). The existing gap between demand and supply is set to expand further because the demand for student accommodation in the country is expected to increase substantially over the next decade. The current and future supply-demand gap is discussed in more detail in later sections of the report. This section provides introductory insights into the higher education landscape in South Africa and analyses enrolment trends in order to set the scene for the remainder of the report and contextualize the demand.

1.1 HIGHER EDUCATION IN SOUTH AFRICA

South Africa is home to 50 public Technical and Vocational Education and Training colleges, spread across 240 campuses and 26 public universities spread across 80 campuses. South Africa is a leader in the provision of higher education in Africa. Its universities are consistently ranked among the best in Africa (Scholaro, 2019). Currently, South Africa is home to eight of the top ten universities on the continent (Scholaro, 2019). This recognition has resulted in strong demand from domestic, regional and international students.

Successive governments have recognized the higher education sector’s importance and have introduced policies designed to grow South Africa’s higher education sector and improve affordability. The #FeesMustFall movement was a student-led protest movement that began in mid-October 2015 with the aim to stop increases in student fees as well as to increase the government’s funding of universities. The movement has pressured the government to radically increase funding for students—predominantly through the National Student Financial Aid Scheme (NSFAS).

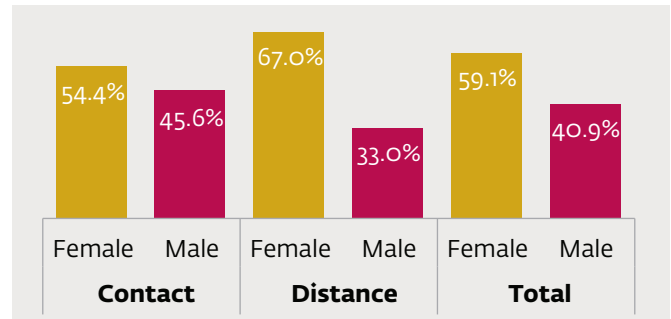
Most university students require accommodation for the duration of their studies, which is typically three years for undergraduate studies. The need for quality accommodation at higher education institutions has grown substantially as student numbers continue to grow.

1.2 STUDENT POPULATION AND DEMOGRAPHIC ANALYSIS

In order to have a better understanding of the dynamics within the larger higher education landscape in South Africa. An analysis of the student body in terms of population and demographics is useful. The following graphs present the gender and population grouping of students enrolled at public higher education institutions.

According to the enrolment statistics published by the Department of Higher Education and Training (DHET, 2020), more than half of the students enrolled in public universities in 2018 were women (59.1 percent), while 40.9 percent were men.

Figure 1: Gender Profile - University Students



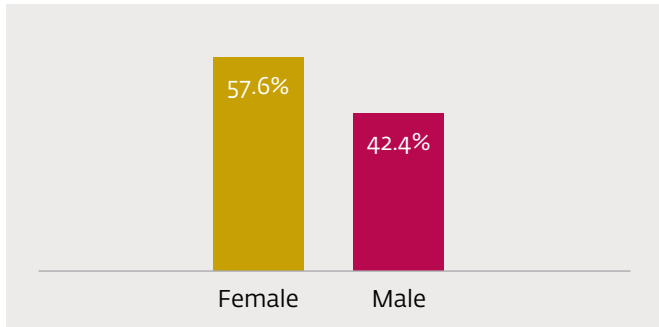
Source: (DHET, 2020)

However, more than two thirds of students (67.0 percent) enrolled for distance learning (not attending class on campus) at these institutions were women. For the contact mode of attendance (students going to class on campus), approximately 54 percent of students were female while 46 percent of students were male. In summary, the majority of university students in South Africa are female regardless of the mode of tuition.

Figure 2 illustrates that the majority of TVET college students are female—albeit a lower portion. The same holds true for students enrolled at private colleges (Figure 3), which has a very close gender profile to that of TVET colleges.

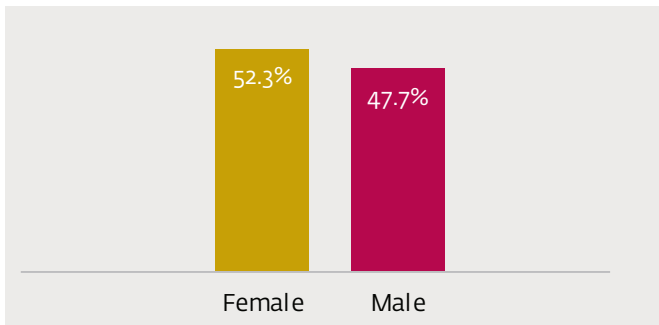
The conclusion that can be drawn from this analysis is that the largest portion (around 54.7 percent) of tertiary students are female, indicating that the potential demand for student accommodation could be skewed toward females. This could influence the decisions of providers offering single-sex student accommodation.

Figure 2: Gender Profile - TVET Students



Source: (DHET, 2020)

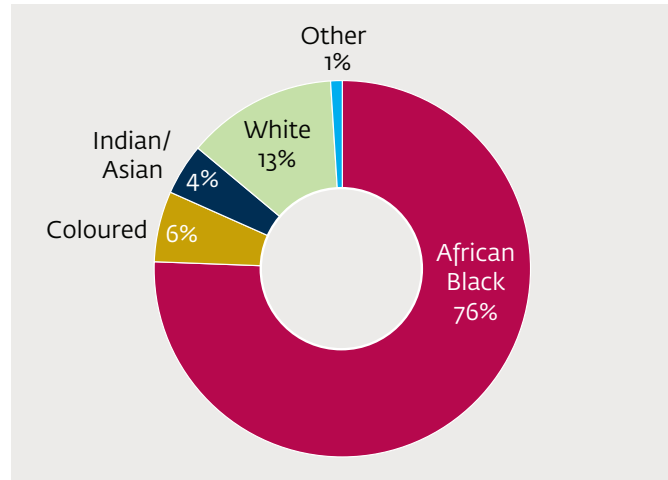
Figure 3: Gender Profile - Private College Students



Source: (DHET, 2020)

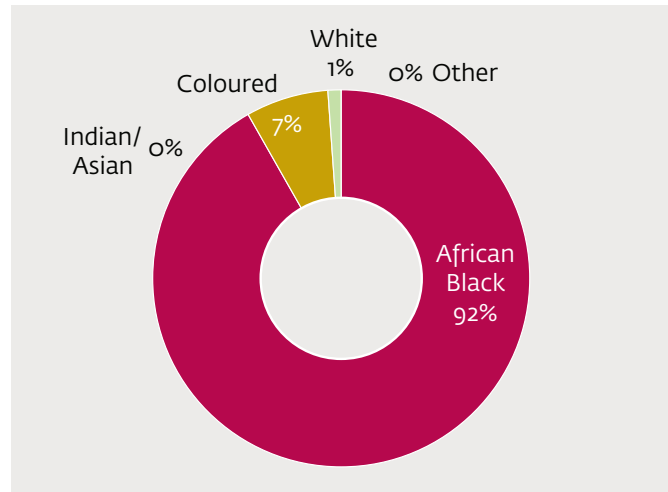
In terms of population grouping, using the DHET’s categorization methodology, the largest portion of students enrolled at public universities were African (74.5 percent) followed by White students (13.7 percent), Colored students (6.4 percent) and Indian/Asian students (4.1 percent) (Figure 4). TVET and private colleges have similar population profiles, with a majority of African students — 92 percent and 82 percent respectively (Figure 5 and Figure 6).

Figure 4: Population Grouping Profile - University Students



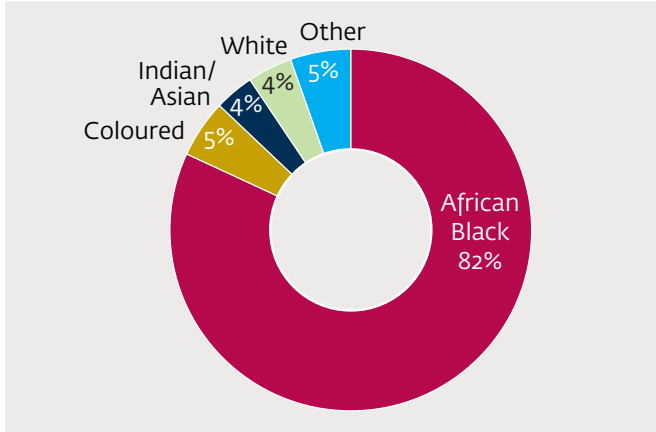
Source: (DHET, 2020)

Figure 5: Population Grouping Profile - TVET Students



Source: (DHET, 2020)

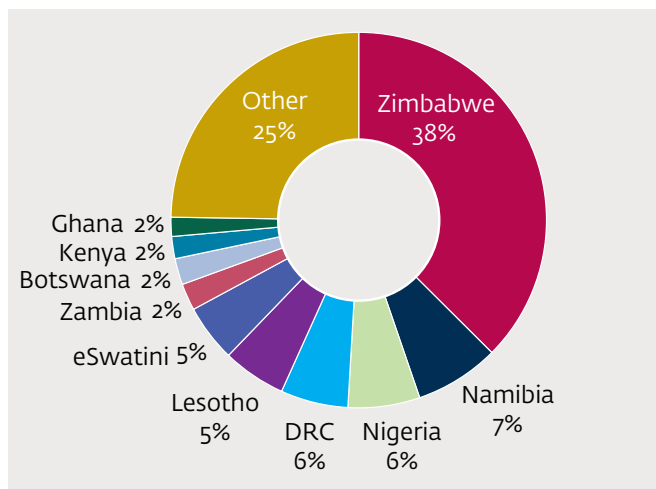
Figure 6: Population Grouping Profile - Private College Students



Source: (DHET, 2020)

Due to the prominence of South African universities on the continent, there is a strong presence of foreign students in the higher education institutions. In 2018 there were approximately 64,000 foreign students enrolled at public universities in South Africa (DHET, 2020). Of this, the majority (63 percent) were enrolled in contact tuition, with the largest cohort coming from Zimbabwe (55 percent). Figure 7 illustrates the breakdown in foreign student enrolments at public universities. From the figure it can be seen that the majority of foreign students come from other Sub-Saharan African countries (>75 percent).

Figure 7: Foreign Student Enrolment at Public Universities



Source: (DHET, 2020)

In addition to the 64,000 foreign students enrolled at South African universities, a further 4,200 foreign students were enrolled in private colleges in 2018 (DHET, 2020). Bringing the total foreign student population to around 68,000 in 2018.

1.3 CURRENT AND PROJECTED ENROLMENT RATES

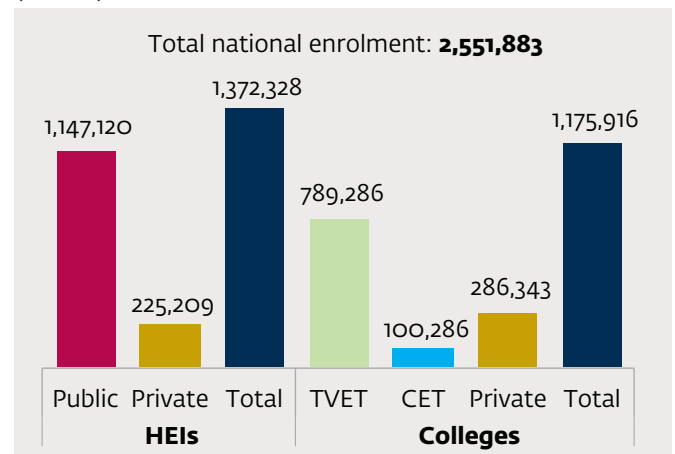
The demand for student accommodation is directly correlated to student enrolments. It is therefore vital to not only establish the number of students currently enrolled at tertiary institutions in South Africa but to also provide some insight into how these enrolments could evolve.

This sub-section provides a calculation of the current student enrolment headcount in South Africa and offers a short-term growth projection. Additionally, the demand drivers for post-school education in the country are discussed to contextualize future growth in student numbers.

1.3.1 Enrolment Rates in Post-School Education and Training

South Africa offers a wide range of post-school education and training programs undertaken by public and private universities, TVET colleges, CET and private colleges. More than an estimated 2.55 million students were enrolled in both public and private post-school education institutions in 2020 (Figure 8).

Figure 8: Student Enrolment per Institution Type (2020F)

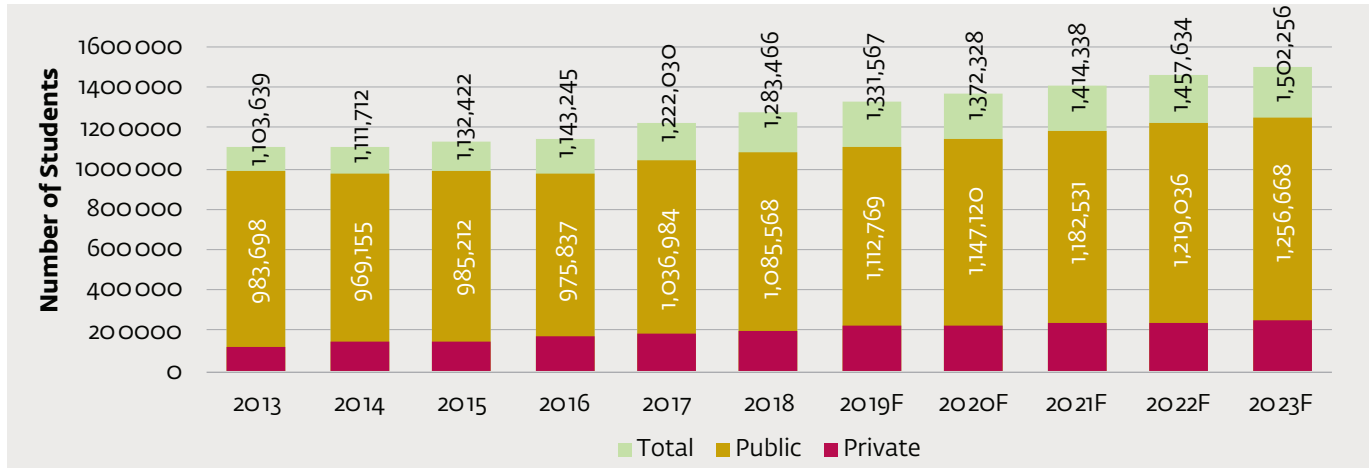


Source: Calculations based on data from (DHET, 2020)

Based on the latest statistical data released from the Department of Higher Education and Training (DHET) nearly half of all students (44.9 percent) enrolled in higher education institutions in South Africa are in public universities (approximately 1.15

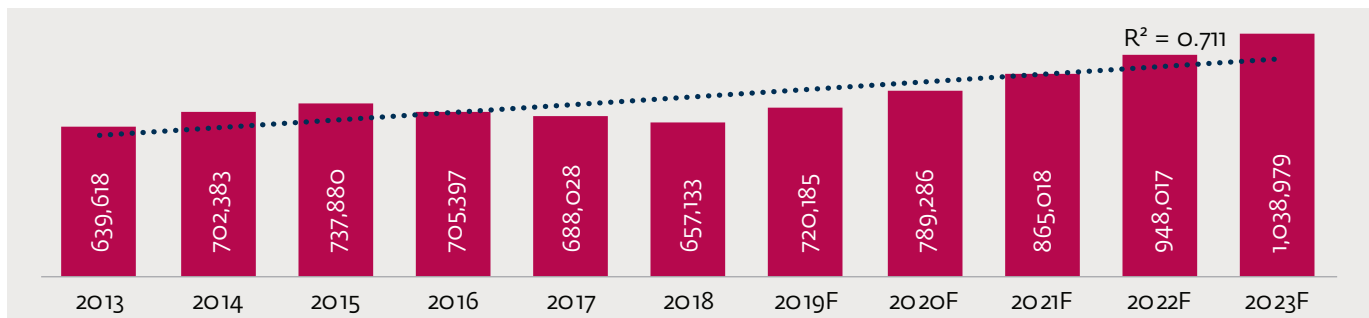
million in 2020) with a further 11 percent (286,000 in 2020) in private colleges and 8 percent in private universities (225,000 students in 2020).

Figure 9: Public vs Private University Enrolment



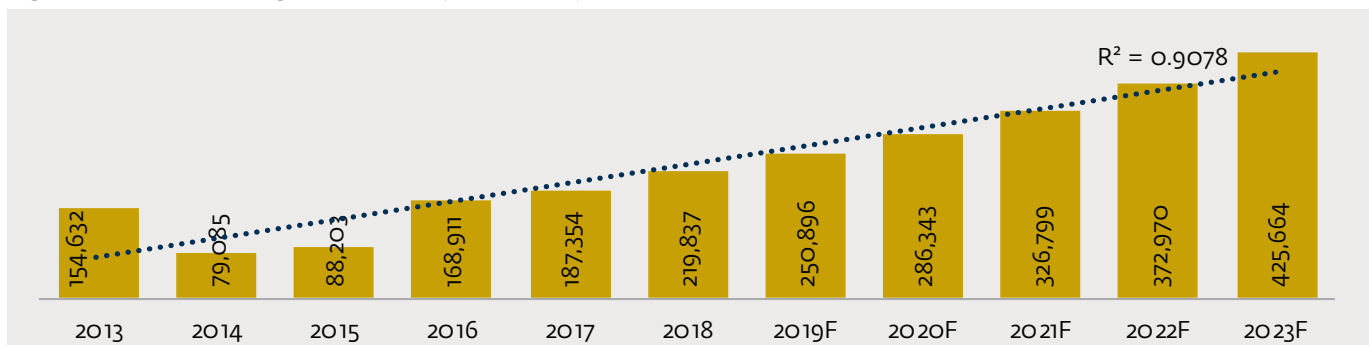
Source: Calculations based on data from (DHET, 2020)

Figure 10: TVET Enrolment (2013-2023F)



Source: Calculations based on data from (DHET, 2020)

Figure 11: Private College Enrolment (2013-2023F)



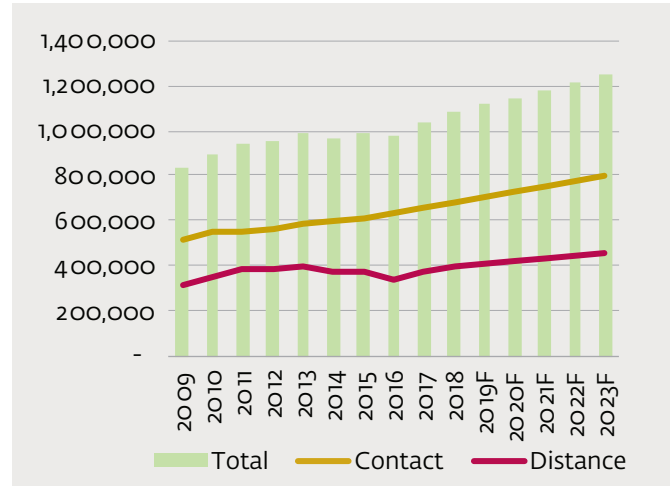
Source: Calculations based on data from (DHET, 2020)

Since 2010, enrolment at public and private universities has increased at a combined average rate of 3.4 percent per annum. Since 2013, the number of students enrolled at public and private universities has increased from 1.1 million to an estimated 1.36 million students in 2020 (DHET, 2020) – see Figure 9. Private university enrolments over this period increased from 119,000 to 225,000 students. TVET colleges saw enrolments increase from 639,618 in 2013 to an estimated 789,286 in 2020 – an average increase of 9.6 percent per annum between 2010 to 2018 (DHET, 2020).

Private college enrolment has grown at an average rate of 14.1 percent per annum between 2010 and 2018 (DHET, 2020). The result is that private college student headcounts have risen from 154,632 in 2013 to a projected 286,343 in 2020 – a near doubling in enrolments showing private colleges are growing at the fastest rate of all post-school education institutions in South Africa, albeit from a smaller base. It is expected that growth in this sector will continue as concerns persist around the quality of higher education at public institutions. However, the affordability of private universities limits the number of eligible students, thereby underpinning the continued demand for public higher education institutions.

While the number of students enrolled at public institutions has increased by an average of 2.5 percent per annum (2010 – 2018), the full-time contact student enrolment at these institutions has increased at a similar, although slightly elevated, average of 2.9 percent per annum over the same period (DHET, 2020). This indicates that the number of students studying on-campus is increasing faster than total enrolments – growth in physical, on-campus student headcounts are growing. Since 2009, most students (>60 percent) enrolled in public higher education institutions have been contact students, as opposed to distance students. Contact student numbers have grown from about 521,000 in 2009 to an estimated 726,000 in 2020 (DHET, 2020) – see Figure 12, indicating that contact learning remains most popular. This is of particular relevance to the demand for student accommodation as contact students require some form of housing close enough to campus to allow them to participate in contact classes and exams.

Figure 12: University Enrolment (2009-2023F)



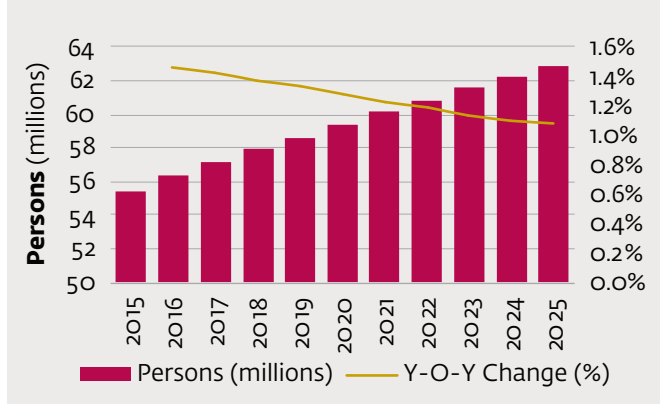
Source: Calculations based on DHET data (DHET, 2020)

It was reported (DHET, 2020) that in 2019 an estimated 787,000 high school students entered the National Senior Certificate (Matric) Examinations. Of this, 64 percent (504,000 students) wrote the exams and 409,000 (52 percent of initial enrolments) passed the examinations. In addition to low pass rates, there has also been a decline in enrolment in the subjects deemed necessary for admission to tertiary education. A further worrying outcome for higher education institutions is that many learners enrolling in these necessary subjects are passing at a 30 percent level (achieving grades between 30 percent and 39 percent). The number, and quality, of learners passing through the secondary schooling system brings into question the achievability of the government’s plans to increase public university enrolments to 1.6 million by 2030 (NPC, 2012) – an increase of about 400,000 enrolments from 2020 (Figure 9). Failure to achieve this goal could put pressure on the demand for student accommodation, however, this demand is still expected to be robust – see section 6.

1.3.2 Demand Drivers for Post-School Education and Training

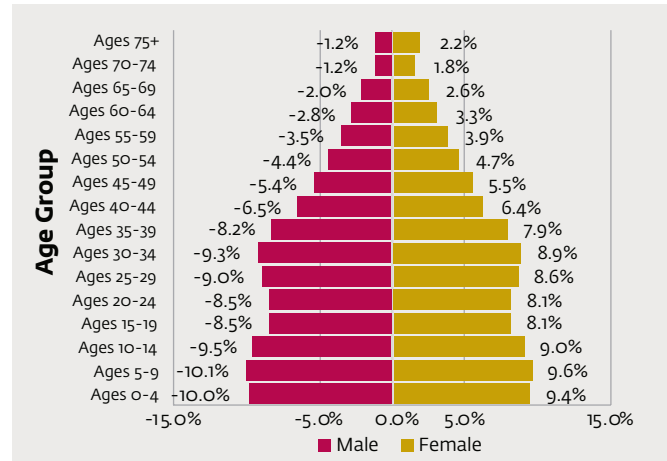
The primary demand drivers for post-school education and training, and by proxy student accommodation, are growth within the population base and the availability of funding (both through the government's NSFAS and private household income). Figure 13 illustrates the population growth trajectory for South Africa from 2015 to 2025 (Oxford Economics, 2020). South Africa's population is projected to grow at an average annual rate of 1.2 percent from 55.5 million persons (2015) to 62.9 million (2025). This constitutes an increase of about 7.4 million persons, or 739,000 per annum. It is projected that the largest increase in population will be accounted for in the portion of youth population (Figure 14). In 2020 the youth population (persons aged 15-24 years of age) comprised 16.6 percent of the total population, or 9.85 million people (Oxford Economics, 2020).

Figure 13: South Africa Population (2015-2025F)



Source: (Oxford Economics, 2020)

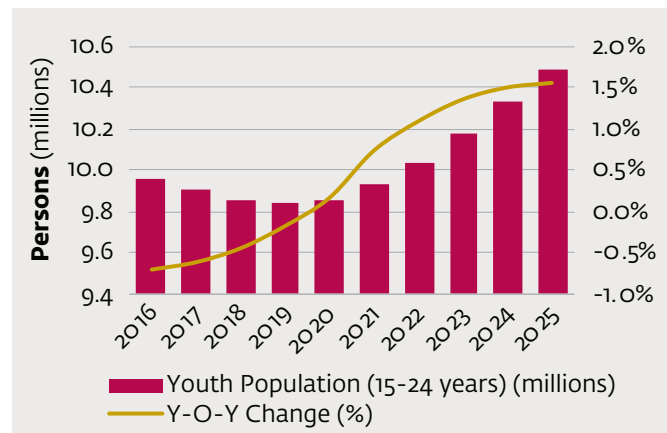
Figure 14: South Africa Age Pyramid (2020)



Source: (Oxford Economics, 2020)

Figure 15 provides a graphical illustration of the projected trends in the youth population segment. This age bracket is considered most applicable to demand for student accommodation as this constitutes the typical student-age population. This age bracket is projected to grow by about 640,000 persons in the short term (2020-2025) at an average annual rate of 1.26 percent. From the graph it can be observed that the population in this segment has been growing steadily since 2016 with a steeper growth curve from 2020 onward. The implication is that the population segment which is most directly linked to demand for post-school education is projected to grow at an accelerated rate over the short to medium term, driving demand for post-school education, and by extension, student accommodation.

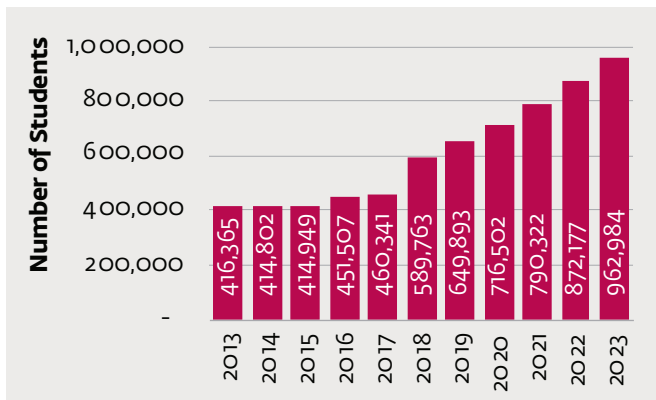
Figure 15: South Africa Youth Population Growth



Source: (Oxford Economics, 2020)

The South African government established the National Student Financial Aid Scheme (NSFAS) in 1991 to assist students with academic ability from disadvantaged families. NSFAS provides bursaries to students attending public universities and public TVET colleges. Figure 16 illustrates the trend in the number of students attaining NSFAS bursaries. The long-term growth rate in the number of NSFAS students (2011 – 2018) was 28.1 percent per annum (DHET, 2020). In 2020 there were an estimated 716,000 NSFAS-funded students, forecasted to grow to around 962,000 by 2023. In addition to tuition fees, NSFAS funding provides an accommodation allowance which is used to pay for student accommodation. Growth in the number of NSFAS funded students (in the region of 250,000 over the next three years) indicates a growing future demand for student accommodation – especially in the affordable segment.

Figure 16: Number of NSFAS Students (2013-2023F)

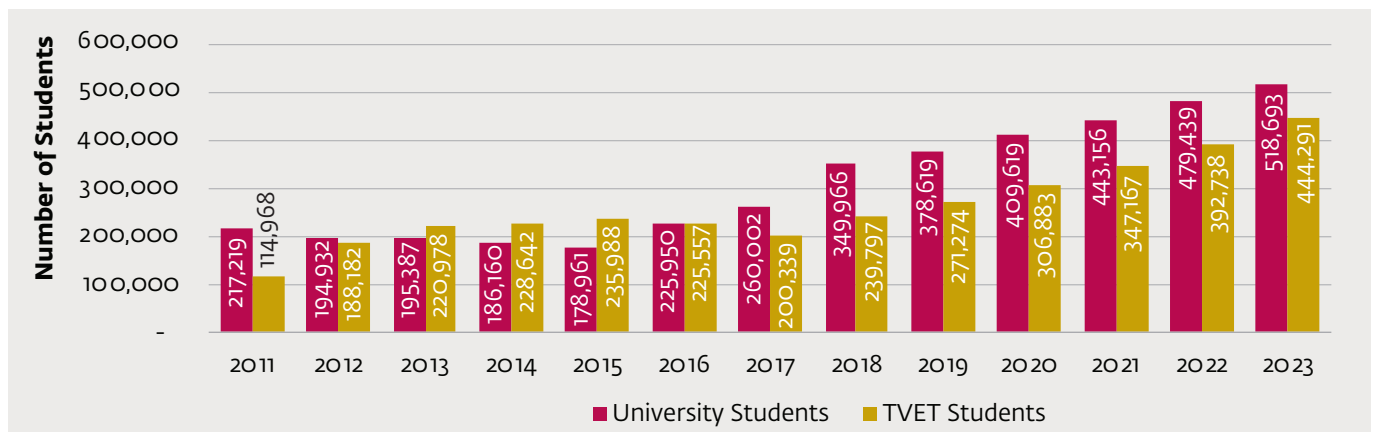


Source: Calculations based on data from (DHET, 2020)

Figure 17 illustrates that the most growth in NSFAS students can be expected in TVET colleges. NSFAS funded students at TVET colleges are projected to increase from about 306,000 in 2020 to around 444,000 by 2023 — an increase of 137,000 students (DHET, 2020). In contrast, NSFAS-funded students in universities are projected to increase by about 109,000 students to around 518,000 by 2023F.

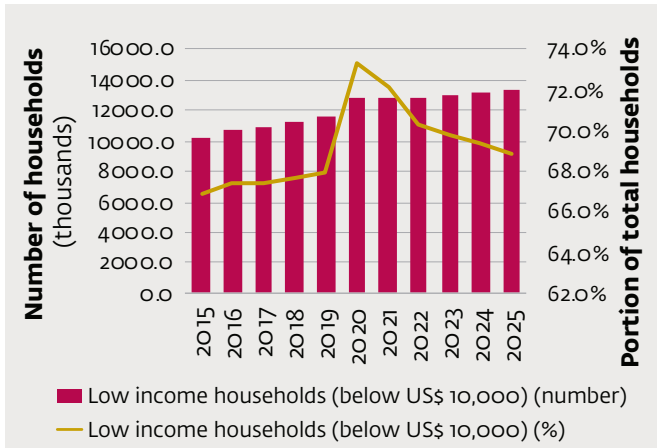
As NSFAS targets students from low-income households, it can be surmised that trends in the growth in this household income segment will affect the demand for NSFAS funding. This has already been attested to by abundant support for the #FeesMustFall movement calling for free higher education for students from households unable to afford it. Figure 18 illustrates the anticipated trends in the number of low-income households in South Africa based on projections by Oxford Economics (Oxford Economics, 2020). The number of low-income households as a percentage of the total population is expected to increase from 21.1 percent in 2020 to 31.1 percent by 2025F. This constitutes an increase of an additional 538,000 low income households over the short to medium term. An increase in the portion of low-income households can be linked to an increase in demand for affordable student accommodation, indicating continued and sustained demand for this market segment over the short to medium term.

Figure 17: NSFAS Students at University and TVETs (2013-2023F)



Source: Calculations based on data from (DHET, 2020)

Figure 18: Low-Income Households in South Africa (2015-2025F)



Source: (Oxford Economics, 2020)

1.4 ONLINE TUITION IN SOUTH AFRICA AND THE POTENTIAL IMPACT THEREOF ON ENROLMENT RATES

This sub-section specifically examines trends in online tuition and how this may affect enrolment rates in South Africa.

Currently, students in the schooling system are faced with various challenges to access post-school education, such as limited availability of enrolments, poor school performance, and unemployment (resulting in limited funding for students from lower income households). These limitations can be viewed as demand drivers for online tuition given that online tuition may offer lower tuition fees, potentially reduced cost of living (subsistence), distance learning options, and fewer academic admission requirements (in some instances). This section aims to highlight the status quo of the South African basic education system as a background to investigate the rate at which online qualifications and tuition are gathering support and the impact this could have on enrolment rates and, by proxy, the demand for student accommodation.

Based on statistical releases (DHET, 2020) there were 402,650 distance learning students enrolled at public universities in 2013. Growing at an average annual rate of 2.9 percent since then, distance learning enrolment in 2020 is estimated to stand

at 424,310 students (Table 1) (DHET, 2020). Distance learning in South Africa comprises Open Distance Learning institutions such as the University of South Africa (UNISA), the executive education specialists MANCOSA, as well as students that are taking distance learning courses while enrolled at traditional universities.

Table 1: Distance Enrolment at Public Universities (2013-2023F)

Year	Distance Student Enrolment at Public Institutions	Total Student Enrolment at Public Institutions	Distance Students as percent of Total
2013	402,650	983,698	40.9%
2014	372,331	969,115	38.4%
2015	379,732	985,212	38.5%
2016	337,836	975,837	34.6%
2017	377,014	1,036,984	36.4%
2018	400,499	1,085,568	36.9%
2019F	412,233	1,117,688	36.9%
2020F	424,310	1,150,758	36.9%
2021F	436,742	1,184,807	36.9%
2022F	449,538	1,219,863	36.9%
2023F	462,708	1,255,957	36.9%
Growth*	2.9%	3.0%	3.4%

Note: Growth rate is based on long term average annual growth between 2009 – 2018 and has only been applied to forecast years (2019 – 2023)
Source: Calculations based on data from (DHET, 2020)

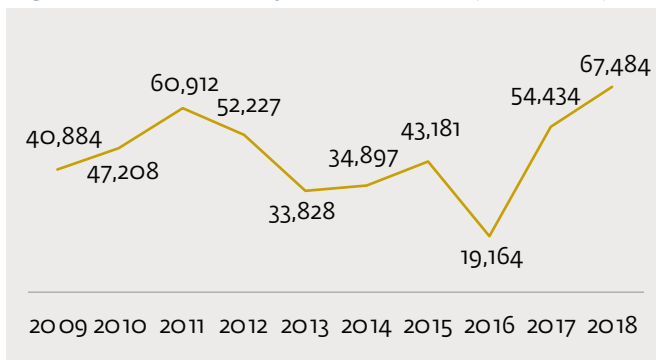
However, there are certain limitations that inhibit students in enrolling (or wanting to enroll) in traditional brick-and-mortar post-school education facilities. These limitations often also inhibit access to post-school education for many South Africans. Open-distance learning and mobile learning might allow more people access to higher education in the country. As ODL has no specific entry qualifications and is accessed digitally, developing countries are increasingly turning to ODL to increase access to higher education. The advantages include cost-efficiency, easier accessibility, flexibility and lifelong learning (ezTalks, 2017).

The trend for open higher education (without academic admission requirements) is growing internationally but is not yet prevalent in South Africa. Considering the country's history of poor school outcomes, open education may be the primary way for previously disadvantaged groups to gain access to further education.

ODL offers shorter courses that are unstructured and more skills based so can be done at the student's own pace and schedule. This approach provides more students with access to higher education in terms of affordability and no academic admission requirements. In addition, students can complete their courses successfully because courses are tailored to student and industry needs.

Currently, distance enrolments account for about 36.9 percent of total student headcounts (DHET, 2020). UNISA is South Africa's largest ODL institution; accounting for 12.8 percent of all degrees conferred by the country's 26 public universities and universities of technology (UNISA, 2020). UNISA accommodated an estimated 418,000 students in 2020—90 percent of all distance students (DHET, 2020). Figure 19 illustrates trends in first-year enrolments at UNISA from 2009 to 2018 (DHET, 2020). From the figure it can be seen that first-year enrolments have been on a sharp rise since 2016.

Figure 19: UNISA First-year Enrolments (2009-2018)



Source: (DHET, 2020)

The average annual growth rate in enrolments at UNISA had been 5.7 percent between 2009 and 2018 (DHET, 2020). This is indicative of an increase in demand for distance learning and the potential for the proliferation of online tuition to meet growing demand in SA.

GetSmarter is a private ODL platform founded in 2008 in South Africa (GetSmarter, 2020) that may become an increasingly prominent platform for higher education in the country. GetSmarter delivers online short courses in collaboration with universities from across the world, such as the Massachusetts Institute of Technology, Harvard, and the University of Cambridge, as well as local universities such as the University of Cape Town, and University of the Witwatersrand (WITS). In 2017 it became the largest acquisition of a South African educational technology company when it was bought by American EdTech giant 2U, Inc. for US\$ 103 million (Forbes, 2017). Affordability of the platform remains a major barrier to wider take-up in South Africa.

Although it is evident that not all South Africans have access to computers, many do have smartphones, which provide an alternative avenue to the traditional approach to ODL. Mobile devices are a cost-effective tool to deliver ICT-based learning to learners who cannot access contact learning. In Africa, South Africa has the highest smartphone adoption rate with nearly 90 percent of South Africans owning a mobile phone (Connecting Africa, 2020), which provides a positive outlook for the potential to roll out online tuition.

The most significant impediment to access mobile learning is the cost of data, which is prohibitively expensive in South Africa. Free data from various operators to access mobile learning apps have been the solution for many mobile learning companies. Vodacom has created the Digital Classroom domain, which provides Vodacom users with access to resources that can be browsed and downloaded for free (no data charges) (Vodacom, 2020).

The Department of Science and Innovation will work with the DHET to establish a national open learning system that will provide for online learning opportunities in the PSET system. The DHET has also set up a task team to draft a report on the implementation of open learning interventions that can be developed. This process may be fast-tracked given the effects of the COVID-19 pandemic accelerating the trend toward supplementing higher education with online tools. The DHET has also set up a task team to formulate a strategy for expanding online learning in PSET. This strategy is expected to be approved by the minister by 31 March 2021.

The trend that is emerging from some European countries (the United Kingdom, Netherlands, Ireland, Spain, Germany and France) is a hybrid model, mixed or blended approach, whereby universities provide a mix of online and in-person teaching (JLL, 2020). Without specific government advice, higher education institutions are starting to make decisions about plans for the new academic year that align with this hybrid approach. Jones Lang LaSalle's European Student Accommodation team's view (JLL, 2020) is that online learning will not replace contact or in-person education once the COVID-19 pandemic has passed. On the contrary, they see it as complementary to in-person education and helping to alleviate social distancing constraints by having the flexibility of rotating students among in-person sessions. The COVID-19 pandemic has accelerated the trend of a blended approach to education but there is no doubt that contact teaching will remain critical as a tool for higher education. This holds especially true for degrees which require in-person tuition for practical (medical students) or legal reasons (professional bodies that require students to attend in-person lectures and write exams on campus).

A trend that is expected to emerge is that applying a hybrid model could, in fact, allow universities to increase their student headcount due to a lesser demand for classroom space — students attending class on-campus on a rotational basis while doing some tuition online. The implication being that the number of students attending any one university campus could grow without an increase in the concomitant academic infrastructure — leading to an increase in the demand for student accommodation in the node.

1.5 CONCLUSION

PSET in South Africa is spread across public and private universities, TVET colleges, private colleges and CET colleges. Of these, public universities currently make up the largest portion of the student population in the country — 1.14 million in 2020 (45.0 percent of all students - Figure 12). Enrolment at these institutions grew at an average annual growth rate of 2.5 percent (2010-2018). In comparison, TVET college enrolments grew at 9.6 percent per annum over the same period — albeit from a smaller base (789,000 students in 2020). Private tuition comprises less than a tenth (8.8 percent) of all students

in South Africa, indicating that the demand for post-school education (and by proxy student accommodation) is vested in the public higher education sector.

Drivers of demand of post-school education, and by extension growth drivers of enrolment, include population growth and trends in household income. In South Africa the youth population segment (the segment most closely linked to demand for post-school education) is projected to grow by around 640,000 persons by 2025, signaling buoyant and continued demand for higher education over the medium term. In terms of affordability, the portion of lower income households as a percentage of total households is projected to grow from 21 percent to 31 percent between 2020 and 2025, indicating that demand for affordable (or free) post-school education will continue to rise. This demand has been further emphasized by prodigious support for the *#FeesMustFall* movement.

Growth in the youth population base, coupled with the government's commitment to providing free education to households who cannot afford it, is expected to drive an increase in the demand for enrolments at higher education institutions. Off the back of this, there is an argument to be made for the proliferation of online tuition.

The DHET has mandated the establishment of a national open learning system to make online tuition, and post-school education in general, more accessible to the broad spectrum of students in South Africa. Expert views, and examples from European markets, indicate that a hybrid tuition model whereby students attend some classes on-campus and some online will most likely materialize in a post-COVID-19 scenario. Such a hybrid approach could afford universities the opportunity to expand enrolment numbers without expanding physical academic infrastructure such as classrooms. It is expected that the resulting growth in student headcounts will further drive demand for student accommodation in university nodes. The next section of the report analyses the student accommodation market in South Africa to establish the current stock of accommodation, identify trends in the market and establish potential future supply.

2. THE STUDENT ACCOMMODATION MARKET IN SOUTH AFRICA

The demand for student accommodation is directly linked to trends in higher education student enrolments which, in turn, is driven by factors such as population growth, affordability and government funding. To date, the student accommodation market in South Africa has been considered fairly opaque with little consolidated information publicly available. The objective of this section is to provide an overview of the student accommodation market in South Africa on three distinct levels, macro (national), meso (provincial) and micro (nodal) in order to address the information gap.





2.1 THE SOUTH AFRICAN STUDENT ACCOMMODATION MARKET IN CONTEXT

The South African student housing market is considered the most mature when compared to other African markets. A comparison between South Africa, Nigeria and Kenya is presented in Table 2. In order to compare these markets to one which is considered mature on the global stage, the United Kingdom was added to the analysis.

Emerging markets in Africa tend to have large population sizes and good population growth rates, however, most markets are still considered to be at an infancy stage. South Africa is considered the most mature PBSA market in Africa followed by Kenya and Nigeria. When compared to mature markets such as the United Kingdom, it is clear that African markets are lagging behind in terms of tertiary enrolment rates. However, even though these enrolment rates are lower compared to the United Kingdom, it is to be noted that the African markets have a comparatively larger student population, which in turn drives demand in the PBSA market. As African markets start to mature, it is reasonable to expect that the student population will continue to grow as more students are able to afford to attend post-school education institutions. This will further drive the need for PBSA on the continent, especially in a market such as South Africa which has good affordability levels and a well-established post-school education sector.

One aspect that sets South Africa apart from other African markets is NSFAS —the National Student Financial Aid System, which subsidizes students and provides an

Table 2: Comparison between South Africa and Other Markets

	 South Africa	 Kenya	 Nigeria	 United Kingdom	
Country Population	58,558,270	52,573,973	200,963,599	66,270,000	
Tertiary Enrolment Rates	22.4%	11.5%	10.2%	61.4%	
Student Population (2018)	2,160,000	995,000	2,040,000	1,840,000	
PBSA Stock (No of Beds)	223,110	41,400*	-	651,000	
Average Rental Prices* (US\$ per bed per month)	Studio/Single Room	320	149	149	1,771 - 1,994
	Bed in double room	286	76 - 142	67	NA
	Bed in 3+ room	199	60 - 128	42	NA
	Old University Stock	-	10 - 50	-	639 - 879
Occupancy Rates	95 - 100%	95%	98 - 99%	98%	
Maturity of PBSA Market	Emerging	Nascent but Emerging	Nascent	Mature	

Source: (JLL, 2020)

*Rates calculated at 1 pound = \$ 1.33 / 1 ZAR = \$ 0.0659 1 Naira = \$ 0.0026263 and 1 KES = \$ 0.009151

accommodation allowance. This accommodation allowance makes PBSA more accessible to students with lower affordability levels and is considered a major driver of affordable PBSA demand in the country.

2.2 THE STATUS OF STUDENT ACCOMMODATION IN SOUTH AFRICA

The student housing market in South Africa is diverse and comprises many typologies – from high-rise, state-of-the-art purpose-built student accommodation (PBSA) complexes, and backyard dwellings to shacks. Additionally, there is an important distinction between public (provided by higher education institutions) and private (provided by private sector developers and operators) student accommodation.

For this report, purpose-built student accommodation (PBSA) (see Annexure D) is defined as:

- comprising a minimum of 20 beds,
- developments or buildings marketed and operated solely as student accommodation; and
- purpose-built developments or buildings falling within a 2km radius of a higher education institution campus. (See Annexure D for a more detailed definition)

Along with the various categories, student accommodation can also be classified into three income brackets. The first, and lowest-income bracket, is the affordable and NSFAS student accommodation market. This market targets lower income students by providing basic facilities and rooms with a minimum level of standard as set out by the DHET (DHET, 2015).

The second market segment is the mid-student accommodation market. This market targets middle income students with an affordability range of between ZAR 3,000 – ZAR 4,500 per month. Such student accommodation typically provides larger sized bedrooms compared to the affordable and NSFAS market with auxiliary amenities and services such as student support services, entertainment areas and other social amenities and is often occupied by students who ‘top-up’ their NSFAS accommodation allowances. Often, the costs of these services may be excluded from the base rental rate and additional payment may be required to utilize these facilities. These mid-level rooms/

units are often marketed as standard rooms in a large-scale PBSA development.

The final market segment is classified as the upper-end student accommodation market and is typically integrated into a PBSA development. Such rooms or units are marketed as a premium package which consists of larger rooms, private kitchen and bathroom amenities and higher quality finishes than standard rooms. These premium packages may also include the use of student services and other amenities which may be included in the room price. The price point of upper-end student housing can vary significantly from one development to the next, however, the average rental range for this market segment is between ZAR 5,000 – ZAR 8,000 per month but can be as high as over ZAR 14,000 in some exclusive nodes and developments.

2.2.1 Existing Supply of Student Accommodation in South Africa

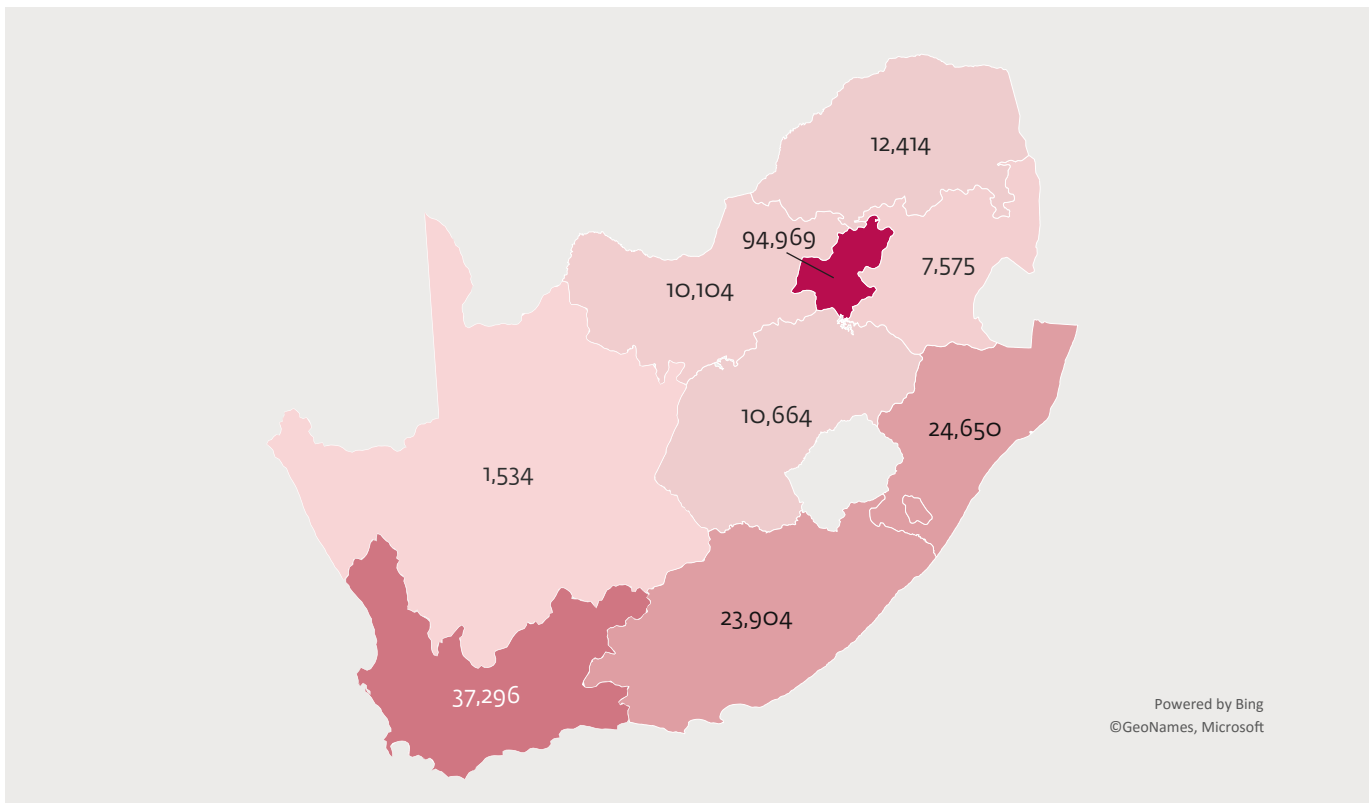
PBSA in South Africa consists of beds supplied by both the public and private sector. Map 1 illustrates the provincial geographic distribution of student accommodation beds.

The total PBSA supply in South Africa is estimated at approximately 223,110 beds, with Gauteng, Western Cape and KwaZulu-Natal accommodating around 70 percent of the total supply in the country. There are approximately 125,891 public beds (comprising public university and TVET college PBSA beds) and 97,219 private beds which are owned and operated by private investors and companies. This means that about 56 percent of all PBSA beds in the country are publicly owned while 44 percent are privately owned and operated. The provinces with the highest number of PBSA beds are those which also have the highest concentration of post-school education institutions. The aforementioned top three provinces are also considered as the key academic hubs in the country. Of the 125,891 public PBSA beds, universities own about 91 percent while TVET colleges own 9 percent. Put differently, TVET colleges account for 5 percent of the total national PBSA supply. A clear supply disparity emerges once one takes into consideration that TVET colleges accommodate 30 percent of all students enrolled in post-school institutions in South Africa but only supply 5 percent of the beds.

Table 3 provides a more granular disaggregation of existing and future stock of student accommodation beds at major post-school education institutions and in significant academic nodes. The minimum threshold used to define major tertiary institutions for reference in this report is a campus with more than 5,000 contact students (see Annexure E). Significant academic nodes are classified as containing a cluster of academic institutions and campuses which, combined, meet at least the abovementioned minimum threshold.

The top three nodes in terms of total number of PBSA beds include the Johannesburg CBD node (38,295 beds), Pretoria node (30,984 beds) and Cape Town CBD node (13,668 beds). All three nodes are major metropolitan areas and have some of the largest and most established public universities, as well as numerous TVET and private college campuses.

Map 1: Provincial Supply Overview



Source: (JLL, 2020)

Table 3: Existing Stock and Future Supply of PBSA at Major Education Nodes and Institutions

Node	Institution / Campus	Type of Institution	Existing Stock (beds)		Future Supply (beds)	
			Public	Private	Public	Private
Cape Town CBD Node	University of Cape Town (Groote Schuur, Main Campus, Breakwater Campus, Hiddingh Campus)	Public	6,490	5,890	2,600 (PA)	
	Cape Peninsula University of Technology (Mowbray Campus, Granger Bay Campus, District Six Campus, Media City Building, Roeland Street Building, Groote Schuur Hospital)	Public	1,036			
	College of Cape Town	Public	252			
Cape Town Belville Node	Cape Peninsula University of Technology	Public	576	1,271	2,150 (SHIP)	
	University of the Western Cape	Public	3,230		2,700 (SHIP)	
	University of Stellenbosch	Public	1,041			
	Northlink College (Tygerberg, Northville, Belhar)	Public	322			
Stellenbosch Node	University of Stellenbosch	Public	6,112	2,908		
	Boland TVET College	Public	343			
Port Elizabeth Node	NMU (2nd Avenue Campus, Ocean Sciences Campus, Bird Street Campus, South Campus, North Campus)	Public	842	1,515	2,000 (SHIP)	
East London Node	Buffalo City TVET College	Public	397	2,463		
	University of Fort Hare	Public	211			
	Walter Sisulu University	Public	0		3,200 (SHIP)	
Durban CBD Node	Durban University of Technology (Brickfield Campus, City Campus, Ritson Campus, Steve Biko Campus, ML Sultan Campus)	Public	1,561	5,614		
	University of KwaZulu-Natal (Westville Campus, School of Clinical Medicine, Howard College)	Public	5,868		3,000 (SHIP)	
	Thekwini TVET College	Public	220			
Pietermaritzburg Node	University of KwaZulu-Natal	Public	810	NA		
	Durban University of Technology - Riverside Campus	Public	0			
Polokwane CBD Node	Capricorn TVET College	Public	185	162		
	Tshwane University of Technology	Public	180			
Vanderbijlpark Node	Vaal University of Technology	Public	3,078	3,486		
	North-West University	Public	2,566			
Pretoria Node	University of Pretoria (Groenkloof Campus, Hatfield Campus, Hillcrest Campus (HPC), Prinshof Campus)	Public	5,580	22,234		2,078 (PA)
	Tshwane University of Technology (Arts Campus, Pretoria West Main Campus)	Public	3,170		3,500 (SHIP)	1,452 (PA)
	UNISA	Public	0			

Node	Institution / Campus	Type of Institution	Existing Stock (beds)		Future Supply (beds)	
			Public	Private	Public	Private
Ga-Rankuwa Node	Tshwane University of Technology	Public	1,631	NA		
	Sefako Makgatho Health Sciences University	Public	1,572		2,000 (SHIP)	
Johannesburg CBD Node	University of Johannesburg (Auckland Park Bunting Road, Doornfontein Campus, Auckland Park Kingsway)	Public	5,279	26,679	2,048 (SHIP)	2,481 (PA)
	WITS (Parktown Campus, Main Campus)	Public	6,337			
Midrand Node	Pearson Institute of Higher Education - Midrand Campus	Private	NA	2,649		
	Stadio - Waterfall Campus Gauteng	Private	NA			
	Varsity College - Waterfall - Midrand	Private	NA			
Bloemfontein Node	University of the Free State - Bloemfontein Campus	Public	3,212	2,663		
	Central University of Technology - Bloemfontein Campus	Public	1,118		2,000 (SHIP)	
University of Limpopo	Main Campus	Public	7,371	320	3,500 (SHIP)	
Tshwane University of Technology	Soshanguve Campus	Public	2,719	NA		
University of Venda	Main Campus	Public	2,641	NA		
Walter Sisulu University	Mthatha Campus	Public	5,346	NA		
Mangosuthu University of Technology	Umlazi	Public	1,886	NA		
North-West University	Mafikeng Campus	Public	1,221	2,212	1,728 (SHIP)	
University of the Free State	QwaQwa Campus	Public	NA	NA		
Rhodes University	Main Campus	Public	3,305	120		
University of Fort Hare	Alice Campus	Public	4,876	76	1,437 (SHIP)	
Walter Sisulu University	Butterworth Campus	Public	NA	NA		
University of Johannesburg	Soweto Campus	Public	1,206	NA		
Walter Sisulu University	Queenstown Campus	Public	NA	NA		
University of Pretoria	Mamelodi Campus	Public	724	NA		
Capricorn TVET College	Seshego Campus	Public	537	NA		
Majuba TVET College	Majuba Technology Centre Campus	Public	NA	NA	1,500 (SHIP)	
Vhembe TVET College	Makwarela Campus	Public	NA	NA		
Western TVET College	Randfontein Campus	Public	NA	NA		

Source: (JLL, 2020)

Notes:

SHIP – SHIP pipeline projects

HEI – Pipeline projects by Higher Education Institutions

BG – Developments that have broken ground

PA – Developments that have achieved planning approval

Note: The existing supply presented in this table does not constitute the total supply in the country as it only considers PBSA facilities within a 2km radius from the various institutions and nodes.

2.2.2 State of Student Accommodation in South Africa

While the previous subsection provided an overview of the existing number of student beds in South Africa, this subsection endeavors to shed some light on their quality, location, and segmentation.

Quality of Student Accommodation

During a February 11, 2020 briefing on the SHIP by the Minister of Higher Education, Science and Innovation, various concerns around the state and quality of student accommodation in South Africa were raised (Parliamentary Monitoring Group, 2020). These included:

- Asbestos roofs at the University of Venda campus that have been identified as health hazards to students.
- Upgrades at the University of Limpopo's Turfloop campus which were done with sub-par materials and did not last 'even three months'.
- Safety concerns at both private and public institutions, with reference to the rape and stabbing to death of student Precious Ramabulana in her private rented accommodation.

This brings into question the quality and safety of student accommodation at tertiary institutions and further underpins the need to provide quality affordable accommodation.

Overview of PBSA at Universities

Currently, the vast majority of existing PBSA (both on-campus and off-campus) is aimed at, or caters to, public universities. Based on stakeholder sentiment, the decision to invest at major public university campuses is mainly a capital allocation decision by investors and is perceived to offer the highest returns. The high demand associated with major education nodes such as Johannesburg, Pretoria and Cape Town, as well as the level of affordability associated with students in these nodes, are key considerations for capital allocation in these areas.

The majority of private universities as a rule do not provide PBSA for their students. On-campus bed provision is therefore almost non-existent, except for the Pearson Institute of Higher Education compound in Midrand. As a result, private students must find accommodation off-campus.

Private universities' campuses are relatively small compared to public universities, making PBSA developments at scale generally unfeasible. Often private university campuses are in CBDs, in close proximity to public universities and often private university students will stay in buildings predominantly servicing the public university in that area. Much like the TVET college market, this market is widely dispersed and fragmented, however private university students are typically more affluent and have more alternatives.

If and when private university providers start building large new campuses, there could be an opportunity for large-scale PBSA directed specifically at this market segment. Currently, one of the significant nodes starting to emerge in this sector is Midrand which houses a fair number of these institutions and could possibly support dedicated PBSA developments. However, until this happens it is expected that private developers will eschew this market in favor of the 'lower hanging fruit' that is public institutions.

Overview of PBSA at TVET colleges

In line with TVET colleges' specific aim to bring education to all towns and cities across South Africa, there are over 240 campuses spread across the country, often in rural areas and small towns. As a result of the geographic spread, TVET college campuses generally have fewer contact students than university campuses. In these nodes, there are few to no developments that meet the criteria for genuine PBSA (as defined in this report – see Annexure E) servicing TVET colleges. This could be attributed to campuses with small student headcounts, rural location and comparatively low levels of affordability.

NSFAS only started funding TVET college students in 2018 with a standardized fee. This fee allocation is driven by the national budget rather than market or needs driven and as such is not on par with what is necessarily required. (DBSA, IFC PBSA Market Study - Stakeholder engagement, 2020). Furthermore, NSFAS-funded TVET college students do not have to stay in accredited beds to receive their accommodation allowances and TVET colleges do not track or review accommodation providers. The sector tends to be informal and, in most instances, private accommodation has not met the criteria for quality of PBSA that is applied in this report. The

DHET is conducting an evaluation of TVET colleges' student accommodation under the five-year research project on TVET colleges. The report is due in 2021. According to preliminary findings, TVET college student accommodation not provided by institutions (private accommodation), is highly fragmented, informal, often unsafe, with hardly any private PBSA provision (Mzabalazo, 2020).

Initial student accommodation numbers indicated that around 18,000 beds supplied by TVET colleges were available on the market. However, about 4,000 of these beds have been deemed uninhabitable and decommissioned due to a lack of maintenance, leaving 14,000 beds in circulation (DBSA, IFC PBSA Market Study - Stakeholder engagement, 2020). The primary reason for this lack of maintenance is that TVET colleges had not received infrastructure grant funds in quite some time. In 2007 recapitalization funds were made available. TVET colleges had to submit funding request proposals stating for what the funds were to be used. Some TVET colleges had better proposals than others, and hence received more funds (DBSA, IFC PBSA Market Study - Stakeholder engagement, 2020).

A decade later, in 2017, at the elective conference of the governing African National Congress held at the Nasrec expo center, free education was announced, at which time about ZAR 1.3 billion per year was made available for infrastructure maintenance and repairs at TVET colleges for a three-year period. After the extent of the negative impact of COVID-19 on the national economy was realized, this budget was reduced, with an estimated ZAR 700 million allocated for 2021.

Given the current state of much of the existing accommodation owned by TVET colleges and the reduced budget, it is expected that the public sector supply of student beds in this market segment will continue to be curtailed.

2.3 OVERVIEW OF STUDENT ACCOMMODATION PROVIDERS ACTIVE IN THE MARKET

This sub-section endeavors to shed light on the various providers of accommodation active in the South African market.

There are 42 operators that provide private PBSA (as defined in the context of this report) across South Africa. The largest PBSA operators have facilities located close to major public universities and do not generally focus on minor universities or TVET colleges. Based on feedback from numerous private sector stakeholders, operators and developers are hesitant to enter less established markets (nodes) due to affordability and profitability concerns.

Table 4 shows that the 10 largest private PBSA operators in South Africa provide a total of c. 52,000 beds.

Table 4: Largest PBSA Owners / Operators in SA (by number of beds)

Rank	Operating Brand Name	Owners/ Shareholders/ Investors	Number of Beds
1	South Point	PIC and Old Mutual Alternative Investments	12,730
2	Building-specific brands (Future Portfolio)	Feenstra Group (Some buildings have other minority shareholders which include Lapalaka & Costa Zervas, MidCity)	9,719
3	Respublica Student Living (Respublica)	Redefine & Bridgehead Real Estate Fund	8,881
4	CitiQ	Futuregrowth & Lapalaka	5,350
5	Campus Key	Nedbank Property Partners & Haasbroek Family	3,747
6	Indluplace	Listed	2,655
7	Gateway Student Accommodation	Family Owned	2,500
8	Pulse Property Group	Various including Old Mutual Alternative Investments	2,267
9	Varsity Lodge	JJP Group	2,121
10	AFHCO	SA Corp Real Estate Limited	1,874
Total			51,844

Source: (JLL, 2020)

Table 5 indicates the top 5 operators per province. From the table it can be seen that the largest operators have a diversified geographic presence in the market. However, it should be noted that while they diversify in terms of geographic distribution they still tend to focus their attention on major academic nodes and large campuses.

Table 5: Ranking of Top 5 PBSA Providers per Province (by number of beds)

Province	Total No. of Private Providers	Top 5 Provider
Gauteng	47	South Point Respublica Feenstra Group CitiQ Gateway Student Accommodation
Western Cape	16	South Point Campus Key Northville Student at Home Respublica
Eastern Cape	9	Pulse Property Group South Point Kings SA Campus Key The Resident
Free State	6	Potch Studente Verblyf Unilofts South Africa Campus Key Respublica Lapeng Accommodation
KwaZulu-Natal	3	Student Central South Point Indluplace
North West	3	Campus Key Potch Studente Verblyf Mafadi
Mpumalanga	2	CitiQ Prospect SA Investments
Limpopo	2	Varsity Village Sunset Square
Northern Cape	-	NA

Source: (JLL, 2020)

As the industry matures, a trend is emerging toward consolidation among the private PBSA operators with the top four platforms now offering over 3,500 beds each across the country (and making up almost half of the private sector market).

Given that the supply and demand gap at major university campuses is around 209,000 (see section 6 for more details) there is room for growth in the portfolios of the top privately managed PBSA providers. However, this growth will not only manifest in the portfolios of large developers but also create potential for new market players to enter the sector. Growth potential is supplemented by the fact that the government aims to grow enrolments at universities to 1.6 million by 2030 (DHET, 2012).

Large operators that have operational economies of scale are well placed to take up market share from the less formal and smaller operators and owners, given the appeal of well-located PBSA as a differentiated product that offers student-centric amenities and caters to the specific needs of students.

2.4 MARKET SEGMENTATION

South Africa's PBSA market can be divided into three primary segments; the affordable, mid, and high-end markets, and is further segmented into private and public accommodation.

The development of private accommodation has mainly driven the PBSA sector in the last decade, specifically by larger role players such as South Point, Respublica, CitiQ, and CampusKey. However, private developers have, to date, mainly been catering to the mid- (ZAR 3,000 – ZAR 4,500) and high-end market (ZAR 5,000 – ZAR 8,000 per month). This has created a widening gap between affordable and mid-level student accommodation. However, some developers have realized the growing need for more affordable PBSA, especially for NSFAS-funded students, and are starting to look at ways to reduce development costs in order to provide more affordable beds to the market. Developers such as STAG African have identified the possibility of reducing development costs to about ZAR 180,000 per bed (Eprop, 2020). This allows developers to target the affordable end of the market while maintaining good returns on investment.

There is consensus between the public and private sectors that the highest demand for PBSA lies within the affordable segment. This is mainly driven by the annual increase in students funded by NSFAS which is expected to continue increasing in the future. These students are from low-income families who are not able to afford university and accommodation fees. NSFAS covers both these costs, but at a set limit based on the institution at which the student is studying. This has resulted in an increase in low-income students attending tertiary institutions. However, the supply of accredited accommodation has not been able to keep up with the increase in NSFAS-funded student enrolments.

Considering the growth in enrolments and slow rollout of new PBSA stock in the market, especially stock that targets the affordable end of the market, it is expected that this segmentation between affordable and mid-level PBSA beds will continue to widen in the short to medium term.

2.5 KEY MARKET INDICATORS

Having established the status quo of the PBSA market, it is important to also take cognizance of the various key market indicators for student accommodation in the country. Rental levels and occupancy rates provide broad indications of the relative resilience and health of the student accommodation market in general.

2.5.1 Lease Lengths

Lease lengths are important because they provide an indication of the period of time over which an operator or provider receives income from student accommodation (how many months' rent is collected). This also offers the time span for which certain levels of operational expenditure is carried.

The market practice in South Africa is for lease lengths to be denominated in months, as opposed to weeks which is the practice in developed markets such as the United Kingdom. The main reason for this is that in South Africa there is no real market for leasing student accommodation during academic breaks. In developed markets, especially in densely populated and tourist-centric cities like London, tourists often stay in student accommodation during academic breaks as it is an affordable alternative to hotels. In many PBSA developments in

the United Kingdom, when students vacate for holidays, their beds are let at a daily rate to tourists, business travelers, and people attending events at the university. If students do not vacate during holidays, they are required to pay holding tariffs.

In South Africa typical student accommodation lease lengths vary between 10 and 12 months (with breaks occurring during December and January). Lease lengths depend on the level of affordability of the student population, the relevant university, TVET colleges academic calendar and the requirements of specific operators.

The longer, 12-month leases are generally prevalent in higher-end, expensive developments where parents of students can afford to pay for an extra month or two to secure a bed or unit. Often the students will vacate at the start of December and return at the end of January, despite having to pay for the full 12 months. While the students are away the building will be restored and maintenance done to prepare for the next year's intake. A good example of this type of arrangement can be found at Hatfield Studios in Pretoria (FeenstraGroup, 2020).

The 11-month lease period mostly applies to buildings where operators require a building to be vacant for some time so that extensive repair and maintenance can be done in preparation for the next student intake. It is also prevalent in buildings where students are more cost-conscious. The break period for these buildings typically occurs in December or January, with the building re-opening for occupation in mid- to end January.

The shortest lease term in South Africa is 10 months. This arrangement is primarily found with buildings that cater to NSFAS-funded students, cost-conscious students or where the academic calendar allows for a 10-month occupancy period. Sometimes 10-month leases are a requirement of operators. A prominent example is Respublica's 10-month lease policy (Respublica, 2020) in which the leases ordinarily apply from 1 February to 30 November, reflecting the academic year and which have a 30-day notice period.

University lease periods may vary from 10 to 12 months, depending on various factors including the academic calendar and the market practice in a specific area.

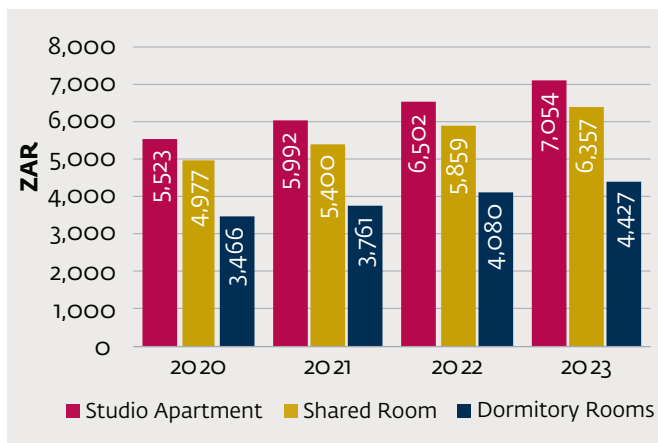
2.5.2 Rental Levels

Average market rental levels of PBSA in South Africa are largely dependent on NSFAS accommodation allowances at the university being serviced. Other factors include the age of the facilities, the quality of amenities and room finishes, proximity to campus and the precinct in general.

The national average rental rate for standard studio apartments (catering to both university and TVET college students) is around ZAR 5,500 per month per person. Studio apartment rental levels range widely between as low as ZAR 2,000 to as high as ZAR 14,000 per person per month. The average rental for shared rooms is ZAR 5,000 per month per person. This figure can vary significantly depending on the number of students sharing a room. Dormitory student accommodation fetches an average rental rate in the region of ZAR 3,500 per person per month but is limited compared to the other types of accommodation.

Figure 20 illustrates the projected growth in rental rates for the various primary types of student accommodation (studios, shared apartments and dormitory rooms) between 2020 and 2023 based on prevailing average escalation rates (8.5 percent per annum).

Figure 20: Average Rental Rate per Bed per Month (2020 - 2023F)



Source: (JLL, 2020)

It is common for high-end private facilities to charge a ‘reservation’ fee so that the student is guaranteed bed space upon resuming studies. This fee covers the running costs such as electricity and security services incurred over the December break.

2.5.3 Occupancy Rates

Due to the relative scarcity of PBSA in South Africa it is rare for a strategically located PBSA building to have an occupancy rate of lower than 95 percent (over the lease term which ranges between 10 and 12 months). Strategically located, newly constructed or newly refurbished, and accredited buildings (qualifying for NSFAS accommodation allowance payments) can see occupancy levels as high as 98 percent. It is not possible for private direct-let buildings to achieve a 100 percent occupancy as there is always a turnover of students throughout the academic year for various reasons. However, buildings subject to head leases with universities can have 100 percent occupancy levels throughout the lease term as the university guarantees the occupancy.

In general terms, occupancy levels typically range between 95 percent and 100 percent once a building has stabilized, typically after three years of operation. The highest occupancy rates are in new PBSA developments located close to campus or in nodes close to universities or campuses with strong or high contact enrolment levels.

Letting cycles for PBSA typically correspond with the academic year— February to November. In buildings that cater predominantly to NSFAS students the letting cycle picks up later than most non-NSFAS private PBSA buildings. NSFAS-funded students commonly adopt a ‘walk-in’ approach to private accommodation. These students are only able to do so once they have received notification that they will be allocated an accommodation allowance, which often only happens in late-January. NSFAS-reliant buildings are often only fully leased by the middle- to end-February.

In instances where affordability is less of an issue (privately funded students), the buildings can be fully let by as early as December of the prior year, with the letting cycle generally starting in August. Letting cycle variability is not as important a factor to consider in buildings with high retention ratios from

one year to the next. In South Africa, buildings that have a retention ratio of over 50 percent are considered to be strong performers. Typically, if a new PBSA building can achieve a retention rate of over 30 percent in its second year of operation it can be considered a successful development. Student retention beyond the second academic year is generally lower as students in South Africa have been perceived to prefer moving out of PBSA (into shared homes or traditional residential apartments) in later years of study (Meissenheimer, 2020).

2.5.4 Escalation Rates

Rental escalation rates have historically ranged on average between 7 and 10 percent per annum. This is set to change over the short to medium term as the negative impact of the COVID-19 related lockdowns start to take effect on the South African economy (see section 5 for more insights). Evidencing this are the remarks of representatives from WITS University who have indicated that they will incur escalations of 5.4 percent for the 2020/2021 term as prescribed to them by the DHET. A recent press release by the Minister for Higher Education, Science and Innovation (DHET, 2020) stated that university-owned accommodation could escalate rentals for the 2021 academic year at inflation-related rates. This is lower than pre-COVID-19 escalation rates.

2.5.5 Development Costs

Development costs per bed for PBSA depend, in large part, on the size of the development. Typically, the larger and more densified the development, the lower the cost per bed. Table 6 provides the actual cost of a completed project in 2016 (MidCity, 2020) while Table 7 illustrates the aggregated estimated average cost of three new facilities in Gauteng and KwaZulu-Natal (as per Q4 2019).

Table 6: Festival Edge Construction Cost (2016)

Description of Cost	Festival Edge Development (ZAR)
Improvement Costs	83,671,780
Escalation (CPAP)	2,768,000
VAT	12,102,000
Professional Fees	12,718,284
Direct Costs	4,597,800
Land	17,545,000
Finance Charges	8,860,000
Total Capital Cost	142,262,864
Number of Beds	433
Capital Cost / Bed	328,551

Source: (JLL, 2020)

Table 7: Average Cost Estimates for three Green Field PBSA Projects (Q4 2019)

Description of Cost	Average Cost (ZAR)
Building Cost – Basement	2,471,193
Building Cost – Retail	2,837,574
Building Cost – Units	141,348,133
Service Installations	39,810,233
Tenant Fit-Out Allowance	31,615,665
External Works	28,164,406
Preliminaries	27,256,724
Escalation Allowance	13,624,187
Professional Fees	40,616,400
Contingencies	9,539,818
Total Cost	334,691,015
Number of Beds	1,861
Cost / Bed	179,844

Source: (JLL, 2020)

As seen in these examples, construction costs range from around ZAR 180,000 to ZAR 330,000 per bed. It should be noted that the first example (Festival Edge) includes land cost. If this is stripped out the average cost per bed drops to about ZAR 288,000.

Based on DHET calculations, the average development cost per bed is estimated at around ZAR 225,000 (DHET, 2011). Although a large portion of current and existing developments

fall within a ZAR 250,000 to ZAR 350,000 per bed range, there are projects which have been developed at a cost as high as ZAR 630,000 per bed in Cape Town and ZAR 400,000 per bed in Durban, showing that the location of the asset is also an important cost factor. However, size is considered the most critical factor influencing cost of the development. As a rule, the larger a building or development, the lower the cost per bed.

In South Africa the supply-demand gap is driven by a crisis of affordability, which can be addressed by reducing the cost of providing a bed. The majority of university students can afford only around ZAR 30,000 and ZAR 35,000 per annum per bed through the NSFAS allowance for accommodation, while TVET college and NSFAS-funded students are allocated between ZAR 15,000 and ZAR 17,000 per annum. In order to accommodate university students at NSFAS rates, construction costs need to be kept well below ZAR 200,000 per bed. At TVET college accommodation rates, costs must come in below ZAR 100,000 per bed.

Currently it is possible to drive costs down to as low as ZAR 180,000 per bed in large-scale developments – see Table 7. Investors will need to consider innovative methods to drive down construction costs even further in the future. According to STAG African (STAG African, 2020) costs can be influenced by many factors such as location, DHET specifications (MN&S) and room configurations. Potential interventions to drive down development costs include:

- Design and planning - poor design planning is likely to result in a need for revisions pre-, and during the construction phase. Effective planning therefore drives down costs.
- Bulk service provision - must be accounted for accurately upfront. With many municipalities not able to run profitably, developers often have to cover prohibitively expensive costs to provide bulk infrastructure. State provision of bulk infrastructure can drive down costs dramatically.
- Development specifications - the more densely populated the development, the more affordable it tends to be, so optimal use of space can drive down costs.
- Construction methodology - developments continue to adopt traditional construction methodologies whereas innovative methodologies can substantially reduce construction costs and project duration – see section 2.6.

One must consider not only the development cost per bed but also the cost per bed over the lifecycle of the project. SHIP MO views long-term sustainability (both environmental and financial) as equally important (SHIP, 2020). Both development cost and operational cost can be reduced and managed through the implementation of alternative construction methods and the incorporation of green building principles – see section 2.6 for more details.

2.5.6 Operating Costs

Operating costs for PBSA typically include the day-to-day running of the building and includes cleaning, security, Wi-Fi, rates and taxes, insurance, repairs and maintenance, and electricity that is not recovered.

As a percentage of gross revenue, operating costs can vary significantly from building to building. A number of factors contribute to this, not the least of which is the size of the building. Larger buildings or complexes benefit from economies of scale and typically have lower fixed costs relative to the income they generate. Operating cost ratios in the low 20 percent range have been observed in large compounds under head leases and as high as 50 percent+ in older, smaller direct-let buildings that have been converted from offices.

Based on benchmarks derived from the United Kingdom market, operators typically aim to keep operating costs at less than 30 percent of gross revenue, provided the building in question has necessary scale (typically over 350 beds) (JLL, 2018).

An important component of the operating cost of a building is the applicable management fee which can vary quite drastically from building to building. Management fees can be as high as 8 percent plus VAT of gross income, to as low as 4.5 percent plus VAT of gross income (while including revenue collection, cleaning and maintenance fees). Management fees in PBSA are generally higher than other property sectors because it is often more management intensive. Property management fee arrangements must be reviewed and negotiated on a building-by-building basis, as there are various nuances and differences in terminology and the reporting of this expense line item.

2.5.7 View on Key Market Indicators

Analyzing the various key market indicators can provide an overview of the resilience and state of student accommodation. From this analysis it can be seen that pre-COVID-19, student accommodation operators were achieving above inflation escalations on rentals. However, this is expected to be somewhat hampered by economic challenges arising out of the COVID-19 pandemic and lockdowns.

Overall PBSA in South Africa commands high occupancy rates – in the region of 95 percent+ – indicating strong demand and resilience in the market.

One of the greatest challenges is driving construction and development costs down in order to promote affordability. Private sector developers think that this would be possible provided there is buy-in and support from the public sector along with innovative approaches. Some of these innovative approaches include the incorporation of green building and ecological aspects – which are discussed in more detail in the following sub-section.

2.6 EXTENT OF GREEN BUILDING CERTIFICATION IN STUDENT ACCOMMODATION

The Green Building Council of South Africa (GBCSA) certifies buildings using the Green Star, Net Zero, Energy Water Performance (EWP) and EDGE rating tools (GBCSA, 2020). According to the Green Building Council the certification of buildings creates a universal platform for the credible and objective measurement of green buildings.

Green certification in the context of financing may be desirable as it opens up opportunities for concessionary blend funding for buildings that meet green standards. This not only reduces the operational costs of a building by being more efficient in resource utilization but can also bring down its overall financing costs.

Currently there are two certified PBSA developments in South Africa (GBCSA L. R., 2020), namely the University of Cape Town's Avenue Road Student Residence and Dining Hall and

Tygerberg 3 Student Residence, also located in Cape Town. These developments were certified using the Green Star and EDGE tools respectively.

Based on stakeholder engagements (Balwin, 2020) (IHS, 2020) (GBCSA L. R., 2020) the EDGE tool is the most applicable to student accommodation accreditation, and residential accreditation in general. The primary reasoning being the following:

- EDGE is user-friendly
- EDGE certification is cost-effective
- EDGE tools are better suited to residential buildings/developments than Green Star tools, which mainly seem to focus on commercial assets.

EDGE is a user-friendly green rating system in the form of online software and a network of professionals (GBCSA, 2020). The tool determines the financial viability of a development's potential to save energy and water while in operation and reduce embodied energy in construction materials.

2.6.1 Certification Process

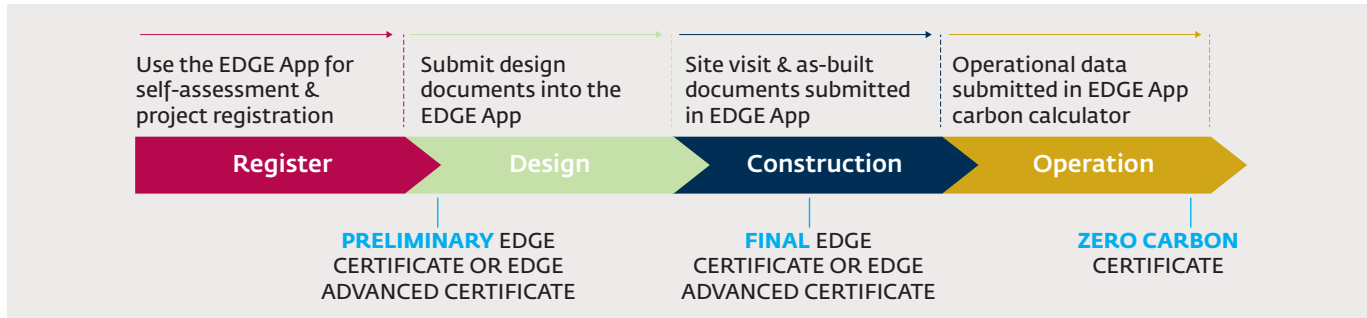
According to the Green Building Council (GBCSA, 2020) the certification process of each building/development is managed internally by a case manager and externally by the appointed assessors and/or moderators. Each certification is subject to assessment by independent third-party individuals who provide feedback to the case manager and project team or accredited professional. The certification period is dependent on the tool type used and varies from 2-4 months for certification at design stage, and another 2-4 months at post-construction stage.

For the purpose of this study the primary focus will be on the EDGE certification process since this has been identified as the most applicable tool to PBSA certification (Balwin, 2020) (GBCSA L. R., 2020) (IHS, 2020). While certification under the Green Star Tool has also been done, it is viewed as most applicable to commercial developments and is considered more laborious and costly than EDGE.

Each EDGE application for certification is prepared by the owner and/or developer, largely with the support of an EDGE Expert verified by an EDGE Auditor for compliance and certified by the Green Building Council (GBCSA, 2020).

Figure 21 illustrates the workflow certification process for developers to attain EDGE certification (EDGE, 2020).

Figure 21: EDGE Certification Workflow for Developers



Source: (IFC, 2020)

According to the Green Building Council (GBCSA, 2020) EDGE certification involves two key stages: preliminary and post-construction. Each stage consists of a two-round submission process to the Green Building Council.

Preliminary stage: At design stage the project details are entered into the EDGE software and green options are selected. The project design team is able to choose green measures that meet the EDGE standard, while a built-in financial calculator shows the incremental cost of that green measure and the payback period from the energy and water savings. For a preliminary certificate to be issued the project must reach the EDGE standard of a minimum of 20 percent improvement or saving in energy, water and embodied energy above the National Building Code baseline. Documentation is collected as per the EDGE requirements and submitted to the EDGE Auditor for review. Once reviewed and approved, the documentation is submitted to the Green Building Council and an external reviewer confirms if the standard has been met. The Green Building Council then issues the Preliminary Certificate which is valid for 2 years.

Post Construction: Following the construction of the building or project an EDGE Auditor visits the site to verify the green credentials. Findings are then collated, and documentation submitted to the Green Building Council. Once the documentation has been verified a final EDGE certificate is issued.

- Indicative costs and timelines for EDGE certification for a 500-unit development (EDGE, 2020) are as follows:
 - Registration cost – ZAR 196,150
 - Preliminary Certification – ZAR 196,100
- Final Certification – ZAR 49,050
- Certification Timeline – 3 months to 2 years
- EDGE professional fees – ZAR 40,000 to ZAR 70,000
- Additional Capex (for greening) – 1-3 percent

2.6.2 Green Star Certified Project Case Study

The University of Cape Town's Avenue Road Student Residence and Dining Hall in Mowbray is a 4-star Green Star certified development (GBCSA, 2020), South Africa's first university residence to receive such a rating (Eris, 2020). The development comprises 500 beds and was certified in July 2020. The PBSA was developed by Eris Property Group for the University of Cape Town and covers 9,705 sqm of total gross floor area. The development is co-funded by the DHET and the University of Cape Town (UCT, 2020). The residence was set to be completed in 2020 and ready to receive its first intake of students in 2021.

According to Eris (Eris, 2020) they managed to finalize a design that met the minimum requirements for a four-star

design rating within budget constraints through careful selection of its professional team to include companies with vested knowledge and expertise in the sector.

A significant challenge in the rating of the development was that, due to this being the first student residence to be Green-Star rated, a new rating tool needed to be developed (Eris, 2020). It was a challenge to develop the standard for assessing such developments while work on the PBSA project progressed at the same time. Two other green rating tools were used to create a hybrid – a tool for residential developments and for public and educational developments (Eris, 2020). An outcome of this development is that the tool is now available and can be used for future student accommodation developments.

Sustainable features in the development include, *inter alia*, (GBCSA, 2020) (Eris, 2020) (UCT, 2020):

Openable bathroom windows that allow for fresh air, natural light and views to the outside.

- Basins provided in each room with low flow taps and cold water supply only.
- Lighting in communal areas that are controlled via occupancy sensors.
- Centralized heat pump producing hot water which is circulated using a ring main system.
- Water efficient sanitary fittings (low flow showerheads and taps, and dual flush toilets).
- Limited parking to encourage the use of public transport.
- Concrete structures using low carbon materials and timber (>50 percent) sourced from sustainable sources.
- Soft landscaping combining indigenous, water-wise and low-maintenance plant and tree species.

The Avenue Road Residence forms part of the University of Cape Town's extended plan for the Mowbray precinct, which will accommodate 2,000 student beds upon completion (UCT, 2020) (Eris, 2020). This first-tier residence represents Phase 1 of a planned cluster of developments in this area. As there are houses of heritage significance on the site, the University of Cape Town had obtained official approval on its heritage to ensure the development does not detract from the existing buildings (UCT, 2020).

2.6.3 EDGE Certified Project Case Study

Tygerberg 3 Student Residence (Nkosi Johnson House) for the University of Stellenbosch by STAG African received EDGE certification in 2017 (EDGE, 2020). The development is located in Bellville, Cape Town, and comprises 200 bedrooms covering 3,120 sqm (EDGE, 2020) (Specifile, 2020).

According to the Green Building Council (Specifile, 2020) this project was particularly exciting due to it both being the first student housing project to be registered for EDGE certification in South Africa and for using light steel frame alternative building technology.

Sustainability features included *inter alia*, (Specifile, 2020) (EDGE, 2020):

- An 89 percent reduction in heating and cooling costs due to design, optimal orientation and the nature of materials used.
- Light steel frame walls which have a mass of only 10 percent of traditional brick and mortar walls – reducing truck trips and emissions. Furthermore, 87 percent of the steel used was recycled.
- Grey water irrigation system
- LED lighting
- Shower timers
- Student food gardens
- One third of electricity requirement provided by solar photovoltaics

According to STAG African (STAG African, 2020) the project was not just about providing a bed but also about creating a student community. As such, the student was put at the center of the design process to optimize student performance. For this development STAG used a modern approach to offer a cost- and time-effective solution.

In terms of cost savings and reduction of embodied energy of construction materials, the development offers the following (EDGE, 2020):

- 33 percent energy saving
- 27 percent water saving
- 45 percent reduction in embodied energy of construction materials.

2.6.4 Why Greening and Certification?

In the case of the University of Cape Town's Mowbray project, the university recognized that if a development embeds green measures into a building from the start, it will perform better and will also be a better space for students (Eris, 2020). Alison Groves, of WSP consulting engineers stated her hope that other developers in both the public and private sectors would recognize the value of a Green Star rating for their PBSA developments, not just from the perspective of status, but from an operations and principle point of view (Eris, 2020). STAG African, a signatory of the African Green Campus Initiative and member of the Green Building Council (STAG African, 2020), states that the use of innovative building technology methods has proven to unlock significant benefits for universities and their residence students.

Manfred Braune (UCT, 2020), the University of Cape Town's director of environmental sustainability, says having the design of PBSA assessed by the Green Building Council, creates transparency and accountability to ensure that the building is greener and more energy efficient than what is required by the National Building Code. In addition, the Green Building Council independently verified the project's green credentials. An additional advantage say stakeholders is the benefits accrued to the company as a whole (MMLL, 2020) (Balwin, 2020). Many developers and investors have Environmental, Social and Governance (ESG) requirements that they must meet for their own internal and sustainability reporting goals. Having green buildings (especially certified developments) on their portfolios aid in achieving a favorable rating or score. Additionally, ABSA (ABSA, 2020) stated that in their observation of the market, the need for 'sustainable living' is being supported by various solutions including green buildings which is growing at a faster pace than non-green buildings.

The World Green Building Council (World Green Building Council, 2020) states that the benefits of green buildings extend beyond the economic and the environment. These buildings typically offer improved internal environment quality in the form of increased ventilation, temperature and light control resulting in improved health, comfort and wellbeing. In a post-COVID-19 world, these factors and advantages cannot be overlooked. According to Sean Kenealy of STAG African

(Bizcommunity, 2020), South Africa has an unprecedented opportunity to drive a green recovery led by sustainability and green solutions. Developers need to innovate toward better, greener solutions that uplift the construction industry and protect the planet, rather than trying to do things as they have always been done. Investors, such as Momentum Metropolitan Life Limited (MMLL, 2020), have begun to expect green elements and sustainability in any development or portfolio they finance as a prerequisite, and not just as a 'nice-to-have'. Similarly, the Eskom Pension and Provident Fund have also indicated that they consider and take green building elements into account when making investment decisions.

Eskom also mentioned that EDGE certification is used as a measure to determine the extent to which a building has been made green. Specifically, Eskom considers the savings achieved by buildings in terms of water and energy usage. When asked how they see the green building sector evolving, they noted that affordability in developing buildings will be crucial and developers will need to become more creative to achieve green certification while maintaining a certain level of affordability (Eskom PPF, 2020).

The Green Building Council (GBCSA, 2020) states that EDGE proves that the next generation of buildings can be more affordable to build – this is especially valuable in the PBSA sector where affordability has always posed a challenge. Over the last five years, experience with South African projects point to an additional construction cost of between 1 percent and 3 percent to meet the EDGE standard (project dependent) (EDGE, 2020). However, operational savings surpass this initial additional capital outlay (>30 percent). Some developers have reported saving the equivalent of one month's rent per unit per annum in reduced water and electricity costs and an additional green capital expenditure of less than 1 percent (IHS, 2020).

In an article published in the Journal of Construction (Kok & Amoah, 2020), the authors state that developers have been actively looking at ways to provide sustainable and environmentally friendly buildings. The authors report that STAG African, in their development at the University of Stellenbosch, made use of light weight steel construction methods and noted

that the construction time was reduced by up to 40 percent, total building costs were reduced by 13 percent, and the cost of heating and cooling reduced by up to 89 percent. In addition, these construction methods reduce waste generated during construction from 25 percent to 0.1 percent. Furthermore, the authors elaborated that the construction of the lightweight steel building produces minimal waste as the off-cut steel is recycled and used to manufacture new steel components. LED lights and solar energy or heat pumps are incorporated into the development to reduce energy consumption, and timers were installed in the showers to ensure students do not waste water. The methods and materials used for construction, as well as the installation of energy-conserving appliances, fittings, and fixtures, increases the efficiency of the building (Kok & Amoah, 2020).

Saving in operational costs is especially relevant to PBSA where the savings directly affect the owner and operator and is not to the sole advantage of the tenant (as is the case with traditional residential developments). According to the South African Property Owners Association (SAPOA, 2019) the cost of electricity had increased by 125 percent over the last decade (2009 to 2019) – further emphasizing the need to reduce operational costs. Investors (MMLL, 2020) indicate that although greening could mean an additional upfront capital expenditure cost, it is cheaper in the long run as it reduces the operational costs associated with utilities. These savings can, in the long run, reduce the operational costs of PBSA and the savings can be passed on to students (result in lower rentals), especially at the affordable end of the market. Such savings will be especially important for an affordable PBSA model to work.

Developers of green residential developments (Balwin, 2020) state that incorporating green elements into their developments improve on their marketability. They (Balwin, 2020) have partnered with a bank (ABSA, 2020) to offer green mortgages to potential buyers. This mortgage offers a reduction of 0.5 percent on the relevant interest rate (Balwin, 2020).

Some of the advantages of green buildings for developers and investors can be summarized as follows (EDGE, 2020) (Balwin, 2020) (IHS, 2020) (Zutari, 2020):

- Increased revenue due to cost savings during operational phase of a development's lifecycle
- Lower incremental cost
- Potential increased sales revenue and marketability as green buildings can command higher sales values compared to standard buildings. The operational efficiencies can also deliver higher net revenue which has a positive effect on sales values.
- Access to green finance through green bonds and loans
- Regulatory and banking incentives
- Greater potential market share as green buildings can be marketed more effectively and are considered desirable by the local market
- International recognition
- Reduction in reputational and policy risk

2.6.5 Barriers to Greening and Certification

Some stakeholders (IHS, 2020) (Balwin, 2020) have identified the cost associated with certification, as a perceived barrier to certification. According to the Green Building Council (GBCSA, 2020) the cost for EDGE certification for non-GBCSA members is as follows – see Table 8. While EDGE certification is considered a more affordable alternative to Green Star certification, the cost of certification is still a deterrent to developers who want to add green elements but do not necessarily require certification.

Table 8: Cost of EDGE certification for non-GBCSA members

EDGE Certification	Base Fee (ZAR)	Post Construction (ZAR)
50-100 units	49,050	49,050
101-200	91,450	49,050
201-300	123,500	49,050
301-500	196,100	49,050
501-1,000	259,700	49,050
1001+	386,900	49,050
Green Star SA new buildings/ major refurbishments	Fee (ZAR)	
<1,500sqm	73,150	
1,500 - 2,499sqm	109,200	
2,500 - 4,999sqm	142,050	
5,000 - 9,999sqm	163,250	
10,000 - 19,999sqm	199,300	
20,000 - 39,999sqm	233,200	
40,000 - 69,999sqm	265,000	
>70,000sqm	307,400	

Source: (GBCSA, 2020).

However, without green certification, developers are not able to access capital available through financial instruments such as green bonds, that connect them with investors seeking the green assets.

Developer John Schooling (Bizcommunity, 2013) suggests that a combination of inertia and reluctance to embrace new ways of thinking contribute to the slow adoption of alternative building technologies. A change of mindset of developers would be required to fast track their adoption of green building standards. Other stakeholders (Balwin, 2020) perceive that a lack of knowledge and understanding of greening and sustainability act as barriers. Developers and operators do not necessarily understand the benefits of greening or how to implement it.

Stakeholders (Eris, 2020) (MMLL, 2020) have indicated that in some instances it is more difficult to achieve the same level of ‘green’ or sustainability in building refurbishments as opposed to new builds. The primary reason being that existing buildings restrict what can be done. That is why developers who are looking to go green prefer new builds since they can drive the specifications (MMLL, 2020).

2.6.6 Future Extent of Greening and Certification

Stakeholders actively involved in the ‘green’ segment of the market (Balwin, 2020) (IHS, 2020) (MMLL, 2020) feel that in due course increasing numbers of developers will adopt the green initiative. The participation rate could be greatly improved if green finance were to become more commonplace and accessible (Zutari, 2020). The 2020 JLL Living Sector Investor Survey (JLL, 2020) found that 94 percent of investors (primarily based in Europe) believe future living sector investments will be more focused on sustainable assets. This has been backed up with 77 percent of respondents having mandated this within their investment structure. The corresponding figures for the previous year (2019) were 80 percent and 69 percent respectively, showing a shift in attitude and predicting how the market will continue to move in the coming years.

Additionally, provision of guiding and enforcing legislation could further bolster the incorporation of sustainability elements into all developments (Balwin, 2020), not just PBSA. According to a JLL survey (JLL, 2020) investors see the durability and longevity of sustainable assets as their defining feature, particularly within the context of changing regulatory regimes (in Europe), where policies on areas such as building and emission standards are likely to be tightened up.

IHS (IHS, 2020) expressed the hope that pioneers in the sustainable development of PBSA will usher in a new generation of PBSA developers and persuade them of the possibilities for, and advantages of, incorporating green elements into their developments.

2.7 FUTURE PIPELINE DEVELOPMENT OF STUDENT ACCOMMODATION IN SOUTH AFRICA

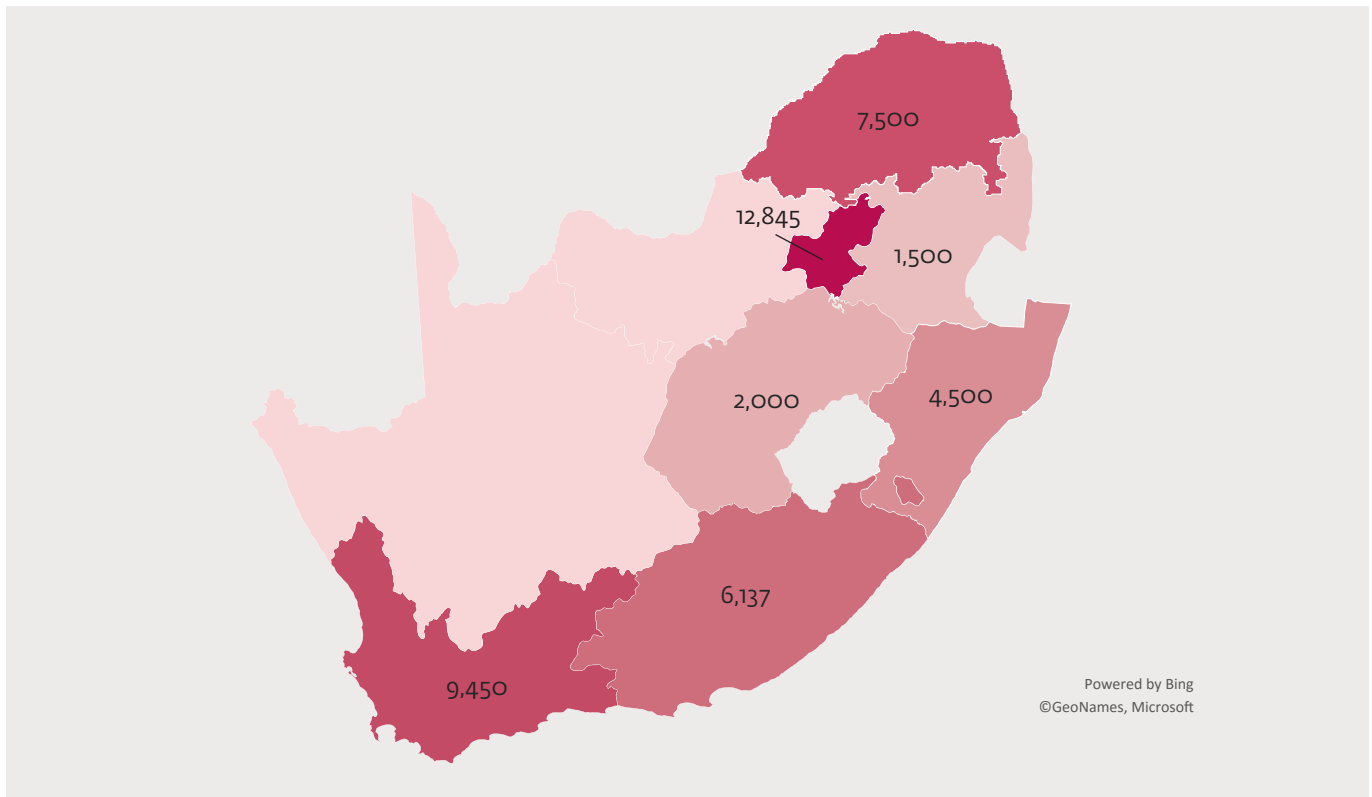
There are several PBSA projects at various stages of planning and development across South Africa. Private sector projects are mostly located in major education nodes while the public sector is driving projects at less prominent universities and TVET colleges.

To establish future supply, we define Pipeline Projects in the following three groups:

- Broken ground (BG) – Refers to projects that have commenced construction and are at various stages of completion.
- Planning approval (PA) – Projects that are being planned or are at various stages of the planning approval process.
- Student Housing Infrastructure Programme (SHIP) projects – Projects planned or under construction as part of the SHIP program.

Map 2 presents an overview of the total number of beds of pipeline projects at a provincial level followed by Table 9 and Table 10 which provide more details at a project level.

Map 2: Provincial Overview of Pipeline Projects



Source: (JLL, 2020)

Private PBSA developments are expected to provide just over 5,200 beds at major education nodes over the short- to -medium term (see Table 10) (JLL, 2020). This is, however, dwarfed by the public sector’s pipeline, which is set to deliver over 40,300 beds, mostly through the first two phases of the SHIP, which is in turn a small portion of the 300,000 beds that the SHIP intends to facilitate over the next 10 years.

The SHIP’s 300,000 bed target is split between 200,000 beds at universities and 100,000 beds at TVET colleges (Parliamentary Monitoring Group, 2020). To meet the 10-year target of 300 000 student beds, SHIP MO will have to facilitate the delivery of at least an average of c30 000 student beds per annum. SHIP MO has split its targets into 2 phases between 2020 and 2023.

To meet the target of 38 000 by 2023, SHIP MO intends to work with all relevant stakeholders including the private sector, private developers, construction industry and debt capital markets. It is important to complement the existing SHIP initiatives thereby developing a structured, innovative model which will enable both PSET institutions and private developers to collaborate to assist in the accelerated development of the student beds.

The involvement of all these stakeholders will be governed by public procurement and regulatory standards, including the following non-negotiable principles:

- competitiveness
- equitability
- transparency
- affordability
- value for money

The SHIP intends to help universities and TVET colleges use some of their own funds and source funding from government grants and development finance institutions for the construction of the targeted number of beds. The extent to which the private sector will be involved in the program is yet to be determined. The DHET has allocated ZAR 4.1 billion to universities for student housing over six years from 2015/16 to 2020/21 in support of the program (Parliamentary Monitoring Group, 2020). A more detailed discussion on the SHIP follows in section 3.

2.7.1 On-Campus / Public Future Pipeline Development of Student Accommodation

Table 9 presents an overview of the major on-campus future pipeline student accommodation projects currently being planned by the public sector. From the table it can be observed that the majority (38,297 beds or 93.5 percent) of future PBSA student beds provided by public sector initiatives are set to materialize from SHIP-led projects. The majority of public PBSA pipeline projects are funded by SHIP with only the University of Cape Town partnering with external parties to develop the Obz Square and Avenue residences.

Table 9: Major Public Pipeline Projects

No	Pipeline Developments	City/Area	Program	No of Beds
Ship Phase 1 Projects				
1	University of Limpopo	Polokwane	SHIP Phase 1	3,500
2	University of the Western Cape	Bellville	SHIP Phase 1	2,700
3	University of Fort Hare	Alice	SHIP Phase 1	1,437
4	Sefako Makgatho Health Sciences University	Ga-Rankuwa	SHIP Phase 1	2,000
5	North West University	Mafikeng	SHIP Phase 1	1,728
6	Nelson Mandela University (South Campus)	Port Elizabeth	SHIP Phase 1	1,500
7	Nelson Mandela University (George Campus)	George	SHIP Phase 1	500
Total for Phase 1 of SHIP				13,365

No	Pipeline Developments	City/Area	Program	No of Beds
SHIP Phase 2 Projects				
1	Tshwane University of Technology	Pretoria	SHIP Phase 2	3,500
2	Walter Sisulu University	East London	SHIP Phase 2	3,200
3	University of KwaZulu-Natal	Durban	SHIP Phase 2	3,000
4	Cape Peninsula University of Technology	Bellville	SHIP Phase 2	2,150
5	University of Johannesburg	Soweto & Auckland Park	SHIP Phase 2	2,048
6	Central University of Technology	Bloemfontein and Welkom	SHIP Phase 2	2,000
7	Gert Sibande TVET College	Mpumalanga	SHIP Phase 2	1,500
8	Majuba TVET College	Newcastle	SHIP Phase 2	1,500
9	Lephalale TVET College	Lephalale	SHIP Phase 2	1,200
10	Northlink TVET College	Cape Town	SHIP Phase 2	1,500
11	Sekhukhune TVET College	Sekhukhune	SHIP Phase 2	1,500
12	Vhembe TVET College	Vhembe	SHIP Phase 2	1,300
Total for Phase 2 of SHIP				24,398
1	UCT - OBZ Square 2 & 3	Cape Town	University-led	1,800
2	UCT - Avenue Residence P1	Cape Town	University-led	500
3	UCT - Avenue Residence P2	Cape Town	University-led	300
Total for University-Led				2,600
Grand Total				40,363

Source: (JLL, 2020)

The first phase of SHIP caters only for the provision of beds at public universities and aims to develop a total of 13,365 beds at various higher education institutions across the country. The second phase of the program will include the development of PBSA at public universities as well as at two major TVET colleges in Mpumalanga and KwaZulu-Natal. In total, the second phase of SHIP is set to develop 24,398 beds at both public university campuses and TVET college campuses.

Considering that SHIP MO is targeting some of its investment toward smaller towns and campuses, it can be deduced that the DHET recognizes the need for PBSA in these previously underserved areas. Most of the universities and TVET colleges located in smaller towns do not have the financial means to develop their own PBSA stock, nor do the students generally have the required means to afford rents charged by the private sector (rents based on expected returns under current development costs). This requires public sector intervention, via the SHIP project, to invest in and develop affordable PBSA at smaller campuses.

There are two SHIP projects currently at advanced stages of development: namely, the University of Limpopo project in Polokwane and the University of Fort Hare Alice Campus.

The DBSA has signed a development loan facility of ZAR 480 million with the University of Limpopo (UL) for the construction of the 3,500 bed facility (DBSA, DBSA Signs R480 Million Development Loan with the University of Limpopo, 2020).

The University of Fort Hare's Alice campus development is a flagship SHIP project. The developer STAG African has designed and completed 610 student beds as part of Phase 1 with another 1,437 beds due for completion by the end of 2020 (University of Fort Hare, 2019).

As to non-SHIP or university-led projects, the University of Cape Town (UCT) is nearing completion of Phase 1 of its new Obz Square residence. This residence, which is estimated to cost ZAR 222 million, is located on Avenue Road in the Mowbray precinct and will provide 500 student beds (UCT, 2020). The University of Cape Town is targeting a four-star green rating from the Green Building Council South Africa

(GBCSA). The three-storey residence will have 144 single rooms and 173 double rooms. The residence is due for completion by the end of 2020 in time for the 2021 intake (UCT, 2020).

Phase two will be developed on land currently occupied by University of Cape Town family ‘barracks’ opposite Mostert’s Mill, below the M3. This has been earmarked for the student dining hall. Phase three, a 300-bed residence, will be built on the Edwin Hart site. Once all three phases have been completed, the facility is expected to have approximately 800 beds in total (UCT, 2020). The Director of Capital Planning and Projects Department at the University of Cape Town (UCT, 2020) indicated that the next major student accommodation which will be undertaken by the university is the Obz Square 2 and 3, toward the south and adjacent to the existing Obz Square residence. Once all three phases are completed, an additional 1,800 beds will be made available to the local student accommodation market.

2.7.2 Off-Campus or Private Pipeline

Table 10 presents an overview of the major private projects currently underway and/or planned in South Africa (JLL, 2020).

Table 10: Major Private Pipeline Projects

No	Pipeline Developments	No of Beds	City/Area	Developer
1	Tshwane University of Technology - Frederick Student Village	352	Pretoria West	Various
2	Tshwane University of Technology - Madeira Isles Student Village	2,100	Pretoria West	Posterity
3	University of Pretoria - Libro Studios	364	Hatfield	Eris
4	University of Pretoria - 1129 Park Street	1,000	Hatfield	Feenstra
5	University of Johannesburg - Richmond Street Development Phase 2	392	Auckland Park	Lapalaka
6	University of Johannesburg - Richmond Street Development Phase 3	392	Auckland Park	Lapalaka
7	University of Johannesburg - Upper Richmond Development	650	Auckland Park	HCI
8	University of Johannesburg - Ellis Park Student Village (Doornfontein)	1,047	Doornfontein	Adowa
Total		6,297		

Source: (JLL, 2020)

Pipeline Projects in Pretoria

Adowa is currently constructing two new student housing developments in Gauteng. The developer has commenced with the first phase of Frederick Student Residence, a 352-bed student housing development in Pretoria West, set for completion by the end of 2020.

Eris is also in the process of acquiring funding for the Libro Studios development in Hatfield which is set to provide 364 beds. The development will comprise of one- and two-bedroom sharing units with single beds in each bedroom (Eris, 2020).

The Feenstra Group is developing a new 1,000 bed student accommodation facility situated on 1129 Park Street, which is approximately 700m from the University of Pretoria. It is situated behind the Hatfield Plaza Shopping Centre and is in close proximity to the Hatfield Gautrain Station (FeenstraGroup, 2020).

Pipeline Projects in Johannesburg

Adowa is also currently constructing the first phase of the Ellis Park Student Village in Doornfontein, Gauteng. The development, which was scheduled to be completed by December 2020, will offer a total of 1,047 beds. The Village will be located at the University of Johannesburg's Doornfontein campus and is expected to help in alleviating the demand for affordable and secure accommodation in the node (Adowa, 2020).

Eris Property Group is in the process of developing new student accommodation near Wits University. The development has not yet broken ground, but once completed the facility is expected to offer students with a mix of two-, four-, five- and seven-bedroom units. The units will be equipped with a kitchen, bathroom, an eating and lounge area (Eris, 2020).

Hosken Consolidated Investments has also acquired land near the University of Johannesburg in Auckland Park where it has started to develop a 600-bed student facility (Hosken Consolidated Investments Limited, 2020).

Based on the estimated completion dates of the private projects, most of the private pipeline projects (see Table 10) are

expected to be completed within the next two to three years, with most projects in advanced stages of planning or currently under construction.

2.8 CONCLUSION

In the African context, South Africa's PBSA market is starting to mature but is still emerging when compared to markets such as the United Kingdom and United States. Currently there are around 223,000 purpose-built student beds available across the country with 44 percent being owned and operated by private sector stakeholders and the remainder vested in the public sector. The private market is primarily characterized by mid- to high-end PBSA stock concentrated mainly around public universities and education nodes. Affordable private PBSA stock can also be found in education nodes; however, this market segment is comparatively smaller compared to the mid- and high-end markets (in terms of existing private sector stock).

Of the existing public sector held student beds, the majority are for the use of public university students (91 percent) with only 9 percent being attributed to TVET colleges. From this a disparity emerges as TVET colleges accommodate around 30 percent of all students in the country but only provide about 5 percent of all student beds. This indicates a clear supply-demand disparity.

The quality of PBSA stock also varies significantly between markets and geographies. Affordable PBSA stock tends to offer very basic products with only the essentials such as a bed and desk with shared bedrooms and ablution facilities. In some cases, the quality of affordable PBSA can be very poor with landlords not maintaining the property and in extreme cases allowing overcrowding. However, this is a challenge not only in privately managed PBSA – some university owned properties are also subject to poor management and maintenance (Parliamentary Monitoring Group, 2020).

Most PBSA at public universities had been built during the 1960s-1990s and may have only been incrementally refurbished and renovated to maintain a certain level of quality. Some universities, such as the University of Pretoria, developed new residences to accommodate the increase in

student enrolments during 2008 (University of Pretoria, 2020). However, not all universities have the financial capabilities to build new residences to keep up with the demand. This is especially true for smaller and rural university campuses. In addition to this, some of these universities also lack the desired funding to effectively maintain and manage on-campus accommodation, which has led to the dilapidation of on-campus facilities (Parliamentary Monitoring Group, 2020).

During 2018, the TimesLive website reported on the poor living conditions at the Walter Sisulu University of Technology where a single room accommodates three or more students due to limited student accommodation and the non-existence of access controls in the student residences. The poor quality of residences was due to a maintenance backlog faced by the university (TimesLive, 2018). The regrettable quality of student accommodation and lack of adequate beds has created demand for student accommodation across South Africa.

There is a significant pipeline of student accommodation projects planned for the short to medium term with around 46,900 beds set to come online within that period. Of these beds around 13 percent are being developed by private sector developers for their own operation and ownership while 87 percent will be developed by public and institutional investors.

The majority (38,297 beds or 81 percent) of future PBSA student beds provided to the market are set to materialize from SHIP-led projects. The SHIP Phase 2 pipeline is currently in the early stages of planning with some of the design and market studies expected to be completed over the next 6-8 months (by Q2 of 2021) (DBSA, 2020). Considering that SHIP is targeting some of its investment toward smaller towns and campuses, it can be inferred that the DHET recognizes the need for PBSA in these previously underserved areas.

Private pipeline projects tend to be further along in the planning phase before being announced and typically have shorter development timeframes due to the need to enter the market as soon as possible and a less intensive regulatory and approval process than public developments require. It is therefore expected that the majority of private pipeline projects will be completed by 2022/23.

The affordability issues associated with TVETs and the remote location of many of these campuses have been a deterrent to private developers who are targeting the higher returns associated with urban education nodes. The DHET have recognized the need for quality and affordable PBSA and, as part of the second phase of the SHIP program, will fund the development of PBSA at two major TVETs in Mpumalanga and KwaZulu-Natal (DBSA, 2020) (Parliamentary Monitoring Group, 2020).

3. ASSESSMENT OF FUNDING AND BUSINESS MODELS

Given that there is a funding gap of an estimated ZAR 115 billion and that is set to grow to ZAR 176 billion by 2025, major investment is needed in the sector. This section looks at how student accommodation is currently being funded both from a private and public perspective. When looking to the future, barriers to funding and possible solutions are explored, based on lessons learned in mature student accommodation markets. The section concludes with an overview of investment and transaction activity in the sector.

3.1 GOVERNMENT FUNDING FOR POST-SCHOOL EDUCATION AND TRAINING

The analysis of how student accommodation is funded both directly and indirectly by the government is broken down firstly by funding going to the post-school education sector directly and thereafter NSFAS and SHIP funding initiatives which indirectly fund the sector.

3.1.1 Post-School Education and Training Sector Funding

As a percentage of Gross Domestic Product (GDP), public expenditure allocation to the DHET increased from 0.64 percent in 2010 to 0.99 percent in 2018 (DHET, 2020). This is in line with the 1 percent commitment made by the President in response to the Heher Commission of Inquiry into Higher Education and Training in 2017 (NPC, 2020).

Total funding by the government allocated to public post-school education for the 2018/19 financial year was ZAR 49.1 billion (DHET, 2020). Public higher education institutions (universities) received the largest portion of funding (ZAR 36.9 billion or 75.2 percent), while TVET and CET colleges were allocated ZAR 10.0 billion (20.4 percent) and ZAR 2.2 billion (4.4 percent) respectively (DHET, 2020).

Funds allocated to tertiary institutions have increased by around ZAR 24 billion from 2011/12 to 2018/19. Public universities saw the largest increase in funding (ZAR 17.5 billion), followed by TVET colleges (ZAR 5.6 billion), while CET colleges saw a minimal increase (ZAR 766.9 million).

The amount allocated to public post-school education institutions in the 2018/19 financial year was ZAR 8.6 billion, more than in the 2017/18 financial year, with the largest increase going to public universities (ZAR 5.3 billion), followed by TVET colleges (ZAR 3.2 billion) and CET colleges (ZAR 45.2 million) (DHET, 2020).

UNISA received the largest amount of funding among the public universities during the 2018/19 financial year, receiving ZAR 3.8 billion, or 10.2 percent, of the total allocation, followed by the University of Pretoria (ZAR 2.7 billion or 7.4 percent) and the University of KwaZulu-Natal (ZAR 2.4 billion or 6.4 percent). Sol Plaatje University was allocated the least (ZAR 610 million or 1.7 percent) (see Annexure B) (DHET, 2020).

Between 2015/2016 and 2018/2019 funding at TVET and CET colleges was allocated through subsidies and operational costs. The largest portion of funding allocated to TVET colleges during the 2018/19 financial year was for operational cost (57.1 percent or ZAR 5.7 billion), while 42.9 percent (ZAR 4.3 billion) went to subsidies. The largest subsidy grant to any single TVET college in the 2018/19 financial year went to False Bay TVET College (ZAR 451.2 million or 10.5 percent), while Lephalale TVET college received the least (ZAR 34.2 million or 0.8 percent) (see Annexure B).

The total amount allocated to CET colleges amounted to ZAR 2.2 billion during the 2018/19 financial year. A larger proportion of CET colleges funding was allocated for operational costs (95.0 percent or ZAR 2.1 billion) while 5.0 percent (ZAR 110 million) was allocated for subsidies.

TVET college and university funding has been cut in the last round of funding (DHET, 2020) and whether this form of funding will continue to be made available through the National Treasury to enable DHET to meet the needs of a growing population at tertiary age remains a major hurdle to the growth of the sector (JLL, 2020).

NSFAS funding, which is considered separately to the above government funding initiatives, is an important supplemental

source of funding for students and student accommodation. The subsequent sub-section provides a short history of the scheme and its current contribution to the sector. In the 2021 budget speech, the minister of finance reiterated that the government remains committed to supporting deserving students and that the National Treasury is working with DHET on policy and funding options. However, these will only be detailed in the medium-term budget policy statement. The 2021/2022 budget allocated ZAR 45.6 billion to university transfers, ZAR 13 billion to technical and vocational education and training and ZAR 37.3 billion to NSFAS.

NSFAS Funding

In the 2020 academic year, NSFAS provided around ZAR 28 billion to university students and approximately ZAR 6.5 billion to students at TVET colleges (DHET, IFC PBSA Market Study - Stakeholder Engagement, Policy Issues & Student Budget Allocation, 2020). Given the size of this grant, it is important to understand the scheme's history and its future sustainability.

NSFAS started in 1991 under a different name, the Tertiary Education Fund for South Africa (TEFSA). In its first year of operation, it supported only 7,220 students with an average loan size of ZAR 2,977 and a total budget of ZAR 21 million. By 2003, it had been renamed NSFAS (under the National Student Financial Aid Scheme Act 1999) and was supporting 96,552 students with a total allocation of ZAR 893 million (DHET, 2010).

In 2007, new bursary funding was introduced, including funding for TVET colleges and Funza Lushaka bursaries. At this point, the scheme allocation totaled ZAR 1.76 billion and supported 125,897 students (DHET, 2010). By 2014, 414,802

students were being funded (at both universities and TVET colleges) with the total allocation reaching ZAR 8.96 billion, and loans averaging ZAR 21,906.

As a result of the *#FeesMustFall* student protests in 2015, NSFAS allocations increased considerably, with 2016 seeing the grant budget increased to ZAR 14.6 billion (DHET, 2017). Following an announcement by former President Jacob Zuma in December 2017 and confirmed through budget allocations from the National Treasury in February 2018, fully subsidized funding for means-tested students were introduced. Up until 2018, NSFAS mostly provided loans to students that had to be paid back once a student finished their studies and was gainfully employed. Accordingly, from 2018 onwards students who pass the means test receive fully subsidized bursaries for the duration of their studies.

Before the *#FeesMustFall* protests, NSFAS projected that by 2020 205,000 university students would receive financial assistance. Following *#FeesMustFall*, this projection was increased to 469,978 in 2020 (NSFAS, 2018). This represents 44 percent of the total target enrolments at public universities (1,070,000) (DHET, 2020).

According to a recent survey by the DHET, NSFAS funded 414,399 university students in the 2019 academic year, while it supported just under 295,000 TVET college students. As a percentage, in 2019 NSFAS funded 42 percent of all university students (Parliamentary Monitoring Group, 2020).

Table 11 shows the amount of funding disbursed and the number of students who have received NSFAS grants from 2011 to 2018 (DHET, 2020).

Table 11: Number of students who received NSFAS funding (2011-2018)

Year	Public HEIs		TVET Colleges		Total		Percentage change on the amount provided
	Number of students	Amount Provided (ZAR)	Number of students	Amount Provided (ZAR)	Number of students	Amount Provided (ZAR)	
2011	217,219	4,848,960,105	114,968	1,116,590,548	332,187	5,965,550,653	62.2%
2012	194,932	5,888,373,557	188,182	1,822,497,265	383,114	7,710,870,823	29.3%
2013	195,387	6,748,152,217	220,978	1,953,253,361	416,365	8,701,405,578	12.8%
2014	186,160	6,970,982,424	228,642	1,991,487,809	414,802	8,962,470,233	3.0%
2015	178,961	7,194,618,509	235,988	2,095,129,942	414,949	9,289,748,451	3.7%
2016	225,950	10,304,756,649	225,557	2,106,267,265	451,507	12,411,023,914	33.6%
2017	260,002	12,106,307,436	200,339	2,012,107,916	460,341	14,118,415,352	13.8%
2018	346,966	18,373,238,547	239,797	2,742,606,899	586,763	21,115,845,446	49.6%

Source: (DHET, 2020)

Approximately 587,000 students in total received NSFAS bursaries in 2018, which was 126,422, or 27.5 percent, higher than in 2017. The total funding provided through NSFAS was ZAR 21.1 billion in 2018, which is almost 50 percent (or ZAR 7.0 billion) more than in 2017. Of the ZAR 7.0 billion, public universities received the vast majority (ZAR 6.3 billion) while TVET colleges received, in comparison, very little of the increase (ZAR 730.5 million). This substantial year-on-year increase was predominantly as a result of the announcement of ‘fully subsidized free higher education and training for poor and working-class South Africans’ by the former President Jacob Zuma in December 2017 (DHET, 2020).

Out of the total ZAR 21.1 billion funding provided for NSFAS bursaries in 2018, a larger proportion was allocated to public universities (87.0 percent or ZAR 18.4 billion), while TVET colleges received 13.0 percent (ZAR 2.7 billion). For the large-scale provision of PBSA at TVET colleges to be feasible, this funding discrepancy must be addressed. Until then affordability will remain the largest obstacle to new developments at TVET colleges. A mindset shift is required by the government and by extension the National Treasury. This sentiment is echoed by the Heher Commission that recommended that NSFAS, and by extension the DHET, should concentrate on the financing of TVET colleges (finding ultimately that TVET education should be free). However, since the Heher Commission, there has been a decline in funding for TVET colleges, which in most cases are consistently and severely underfunded and carry high levels of financial risk. At the same time, TVET colleges are almost

completely reliant on funding from the fiscus which, in turn, is also restricting growth (The Presidency, 2017).

Table 12 and Table 13 break down accommodation funding at university and TVET colleges (by number of students) (DHET, 2019) (Parliamentary Monitoring Group, 2020).

Table 12: Public University NSFAS Accommodation Allowance Breakdown

Type of Student Accommodation Allowance	No of Students
University-owned accommodation	52,813
University-leased accommodation	46,391
University-accredited accommodation	52,434
Privately-leased accommodation	33,335
Total Students (with NSFAS Accommodation Allowance)	184,973

Source: (DHET, 2020)

Table 13: TVET College NSFAS Accommodation Allowance Breakdown

Type of Student Accommodation Allowance	No of Students
Headcount (Contact Students)	459,209
On-Campus Accommodation	46,391
Students Receiving Accommodation Allowances	52,434
Total Student Receiving Allowances	98,825

Source: (DHET, 2020)

It remains to be seen whether the expansion of the higher education system (and by extension the growth of the NSFAS grant) toward the NDP targets is feasible. After extensive review and consideration, the Heher Commission (DHET, 2017) concluded that free higher education and training was not viable. As a result, it is likely that the government and the National Treasury will come under increasing pressure to make difficult decisions regarding the continued growth of the NSFAS grant as the economy languishes in an environment of low growth.

However, the DHET have given student accommodation providers some comfort regarding fee levels for 2020 by agreeing to pay in full the agreed NSFAS allowance rates for the full year and by agreeing to an inflation-related increase to NSFAS allowances for 2021 for university leased and accredited buildings (DHET, Directions for a National Framework for tuition and accommodation fees for academic years 2020 in the Public Higher Education Institutions, 2020).

In February 2021 the Minister of Higher Education, Science and Innovation announced changes to the 2021 NSFAS funding. These changes pertain particularly to previously funded legacy qualifications that are being phased out. As of 2021 NSFAS will no longer fund first time entrants for certain qualifications (such as Bachelor of Education and Bachelor of Nursing), although students who are already enrolled in these programs will continue to receive funding. The phasing-out of this legacy qualification has been a complex and protracted process started in 2015 when the objective was established to develop a single qualifications policy for all public and private Higher Education Institutions. The change in funding allocation will only affect students entering the university system for the first time and students who have already obtained a prior university qualification and wished to pursue a second qualification in one of the discontinued qualifications. At the same time, NSFAS is under pressure to verify about 800,000 applications for 2021 funding and were (as of end-February 2021) finalizing the due diligence and quality checks of the application information received.

SHIP Facilitated Funding

Another source of funding to the sector is through the Student Housing Infrastructure Programme (SHIP). Following the recognition of the need for a focused and coordinated approach to the provision of student housing, the DHET announced that the SHIP was to accelerate the provision of student housing at public universities and TVET colleges. The program was established in line with the ministerial determinations issued in terms of the Higher Education Act 101 of 1991, and the Continuing Education Act 16 of 2006 (SHIP, 2020).

The support provided to SHIP MO by the includes:

- Enabling SHIP MO to provide support and assistance to public post-school education and training institutions.
- Mobilizing funding for the establishment and operations of SHIP MO and related activities earmarked to deliver the student housing program.
- Ensuring that the SHIP MO has the requisite capacity to oversee the implementation of the SHIP.

According to interactions with the DBSA and staff of the SHIP MO office, the DBSA will host the program's management office and employees in its offices in Midrand for the first five years. The program's dedicated staff contingent will work with universities and TVET colleges to advise on and facilitate their respective applications for funding. The SHIP MO target is to help raise funding for the construction of a target of 200,000 beds at universities and 100,000 beds at TVET colleges. This goal means that the number of beds provided each year must increase from a present average of 4,000 beds to 30,000 beds a year (Parliamentary Monitoring Group, 2020).

The SHIP project management office is set up under a memorandum of agreement between the DHET, DBSA and National Treasury and reports to a steering committee chaired by the DHET with members from the other parties. The SHIP MO will become part of the DHET's Integrated Infrastructure Development Support Programme in the future. The role of the SHIP office is to aid universities in their development of the capacity to improve and oversee the planning, procurement and implementation of the development of student accommodation beds. This is done by assisting universities in running feasibility studies for new projects and standardizing

application processes for funding in terms of both equity and debt (as further discussed below). The office will effectively create a pragmatic and programmatic approach for all projects. The SHIP office has been tasked with helping universities and TVET colleges bring ‘shovel ready’ projects to funding applications (SHIP, 2020).

The SHIP intends to help universities and TVET colleges raise equity funding for their projects predominantly from the National Treasury’s Budget Facility for Infrastructure. The SHIP MO office will carry out feasibility studies for SHIP projects and thereafter monitor the implementation of these projects. The projects are implemented directly by institutions as implementing agents. Regarding all other student housing projects/initiatives, the SHIP MO office will provide institutions with technical assistance during the funding application and implementation stages. Universities and TVET colleges will be expected to contribute a portion of the equity from their own balance sheets (where possible) (SHIP, 2020). In terms of grant funding, the DHET contributes about ZAR 1 billion a year to student accommodation at universities, but not at TVET colleges, while the National Treasury Director-General Mr Dondo Mogajane said the National Treasury had already provided hundreds of millions of rands in funding for the student housing program through the BFI and is set to continue to do so. (DHET, 2019).

Debt funding for SHIP MO facilitated projects will be sourced primarily from the DBSA and other development finance institutions. Debt interest relief grant funding will also be applied for from the European Union grant-funded Infrastructure Investment Programme for South Africa (IIIPSA). This will be done by offering capital grants and interest rate subsidy facilities for funded projects. Furthermore, the BFI provided initial seed capital to cover the operational expenses of the SHIP MO and a costing model for student accommodation that can be applied by all post-school education and training institutions in South Africa (DHET, 2019).

According to the DBSA, the target is to lend on average 40 percent of the cost of the development, with the remainder of the funding being provided by the institutions mentioned earlier. The DBSA’s Chief Executive Officer Mr Patrick Dlamini stated

that the DBSA has pledged to make available ZAR 6 billion for the first phase of projects in the IIIPSA (DHET, 2019).

In terms of loan repayments, a structure is being proposed whereby NSFAS rental income streams will be paid directly to the DBSA, as opposed to being first paid to the university or TVET college in question. This ‘cash sweep’ of NSFAS payments removes some of the risk from the university balance sheet as NSFAS will effectively be servicing the debt directly.

At least ZAR 7 billion a year is required to achieve the 30,000-bed target. Over the long term more than ZAR 80 billion will be required to deliver the 30,000 beds targeted by the program (Parliamentary Monitoring Group, 2020). The SHIP office recognizes government cannot achieve this target alone and has started the process of asking other stakeholders, including development finance institutions, for support (Parliamentary Monitoring Group, 2020).

In terms of implementation, the program will run over 10 years. The pilot phase has recently been completed (2020) and the SHIP MO is busy hiring its full contingent of staff members, with Phase 1 of the program starting in Q4 of 2020, starting with feasibility studies for 12 projects (SHIP, 2020) (DBSA, 2020).

In the pilot phase, the SHIP has reached various stages of facilitating the development of 7,000 beds at universities in the Eastern Cape, Western Cape and Gauteng. Phase 1 of the program envisages the construction of 19,363 more beds at universities and TVET colleges in North West, Gauteng, Eastern Cape, Western Cape, KwaZulu-Natal, Free State and Limpopo (DBSA, 2020).

In what must be considered as support of the SHIP MO, the President declared in the February 2020 State of the Nation address that “We are going to spend ZAR 64 billion over the next years in student accommodation and will leverage at least another ZAR 64 billion in private investment. These building projects are ready to start.” (South African Government, 2020)

The establishment of the SHIP MO is set to facilitate much-needed development in the PPSA sector, especially in rural

areas, where the need is the greatest. However, it is not yet clear how the private sector will be involved. The Minister of Higher Education, Science and Innovation, in his briefing to the Parliamentary Committee about SHIP (Parliamentary Monitoring Group, 2020) highlighted some of the challenges experienced in the pilot phase. They include:

- Delays due to no title deeds, rezoning and land claims on rural campuses.
- Private entities competing for land deals with the government.
- Limited planning, procurement and implementation capacity in institutions.
- Limited capacity in the government to support program preparation.
- Uncoordinated sequencing of funding causes project delays and loss of funds.
- Investors deterred by onerous procurement process, including a poorly structured request for proposals (RFP), unclear timelines, extended bidding stages due to insufficient bids, and corrupt procurement process.
- Private sector players using corrupt and illegal practices or projects to further their own interests.

In light of these challenges, various stakeholders have stated that it would be advisable for the private sector to be involved in the rollout of the SHIP, both from a funding and development perspective. Universities alone, even with the assistance of the SHIP MO office, will struggle to deliver on their stated objective of 300,000 beds without significant involvement by the private sector. One of the main reasons cited for this is that the core competency of universities and TVET colleges is the provision of education and not property development and property management or operations, nor is it their stated legislative function.

From engagement with private sector developers, investors, funders and operators, it is clear that the private sector is willing to participate in the program, however major challenges remain. Before unpacking the challenges associated with public and private partnerships, the following sub-section reviews the current ways in which the private sector is invested in PBSA.

3.2 PRIVATE SECTOR INVESTMENT IN STUDENT ACCOMMODATION

Investors can invest in student accommodation in several ways through several structures or vehicles in South Africa. The stage of maturity of these structures and the opportunities and challenges associated with each are discussed. With regards to the least developed investment structure, that is Public-private Partnerships, we analyze the growth of this vehicle in markets where PPPs have been implemented successfully and at scale to help guide the discussion in SA.

3.2.1 Investment Landscape / Market Access

Investors have a wide variety of vehicles or structures at their disposal to enter the South African student accommodation market (see Figure 22). These vehicles have evolved in developed markets, especially the United Kingdom, which have been catering to the increased investment appetite for this asset class since the early 1990s (JLL, 2020).

Figure 22: PBSA Investment Vehicles

Indirect Entry	Direct Entry
<p>Pension & S12J Qualifying Funds Least used/ evolved vehicles <i>Example:</i> The PIC's South Point & Old Mutual Impact Housing Fund</p>	<p>Direct Ownership Developments let directly to students or on head leases to universities and built on off-campus land <i>Example:</i> Academia Student Village</p>
<p>REITs Limited use of this vehicle in SA <i>Examples include:</i> Redefine's 50% share in Respublica, Indluplace and SA Corporate</p>	<p>Joint Ventures Where institutional investors, banks and/or developers act as limited partners <i>Examples:</i> Investec & the Feenstra Group at Hatfield Studios</p>
	<p>Public-Private Partnerships Where developers partner with universities to provide accommodation and share risk. Usually done by way of DBFO arrangements</p>

Source: (JLL, 2020)

3.2.2 Indirect Entry: Funds & REITs

Indirect entry options into the student accommodation market are limited in South Africa, mostly because the market is still relatively immature and fragmented.

There is substantial institutional capital invested in the sector in developed markets, such as the United Kingdom. Examples of large platforms backed by pension funds in developed markets, including the United Kingdom Student Accommodation Fund and the Campus Living Global Fund. From Singapore's sovereign wealth fund (GIC) to Canada's largest pension fund (CPPIB), to the world's largest insurer (Allianz), a range of global players are active in the buying and selling of student accommodation (Savills, 2019) – see Table 14.

Private equity firms are also still very active in this sector in the Organisation for Economic Co-operation and Development markets. A notable transaction not recorded in Table 14 above took place in 2020 in the United Kingdom. United States-based private equity firm Blackstone acquired the United Kingdom

student accommodation firm iQ for \$ 6 billion which was not only the largest PBSA transaction in history but also the largest-ever private property deal in the United Kingdom. The portfolio consisted of 67 properties comprising more than 28,000 beds across the United Kingdom, with 4,000 beds in its development pipeline (The Guardian, 2020).

In South Africa, there has been increased activity by institutional funds in the market in recent years. The main barrier to the growth of indirect exposure to the sector through investments in large institutional funds (such as pension and insurance funds) is that most student accommodation providers do not have substantial enough portfolios or platforms to attract large institutional investments. Another prohibiting factor is that there are few, if any, greenfield PBSA buildings that have extensive track records (having gone through at least one financial cycle). Given these two important factors institutional investors, which are notoriously risk averse, are still wary of PBSA as an asset class (JLL, 2020)

Table 14: Top Investors in the Global Student Accommodation Sector since 2016

Rank by total investment US\$	Investor	Type	Origin	Market active in	Total Volumes 2018/ 2019
1	Greystar	Developer / Owner	United States	United States, United Kingdom, Spain, Netherlands, Austria	US\$ 4.5bn
2	GIC	Sovereign Wealth Fund	Singapore	United Kingdom, United States, Germany, Australia	US\$ 310mn
3	CPPIB	Pension Fund	Canada	United Kingdom, United States, Spain, Germany	US\$ 310mn
4	Scoinc Group	Developer / Owner	United States	United States	US\$ 540mn
5	Harrison Street RE Cap	Equity Fund	United States	United Kingdom, United States, Germany, Ireland	US\$ 220mn
6	Mapletree Investments	Investment Manager	Singapore	United States, United Kingdom, Canada	US\$ 200mn
7	Brookfield AM	Operating Company	Canada	United Kingdom, France	US\$ 830mn
8	Goldman Sachs	Equity Fund	United States	United Kingdom, United States, Australia	US\$ 250mn
9	Blackstone REIT	Private REIT	United States	United States	US\$ 1.2bn
10	GSA Group	Developer / Owner	United Kingdom	United Kingdom, Germany, Ireland, Spain, Australia	N/A for 2018

Source: (JLL, 2020)

The largest investment in the sector by an institutional investor in the PBSA asset class in South Africa occurred in 2015 when the Public Investment Corporation, on behalf of the Unemployment Insurance Fund (40 percent) and the Government Employees Pension Fund (60 percent), purchased the largest PBSA platform in South Africa, South Point (Southern African Legal Information Institute, 2015).

Since then another major institutional investor, Old Mutual Alternative Investments (OMAI) (OMAI, 2020) through one of their housing investment funds, increased their investment in South Point as well as in Pulse Living (under the Pulse Student Living brand). OMAI has been an investor in South Point through a joint venture since 2008. Other pension funds or institutional involvement in the sector include Momentum Metropolitan Life Limited's (MMLL, 2020) alternative investment and the Eskom Pension and Provident Fund in Eris Property Group. Futuregrowth is also invested in the sector through its ownership stake in Citiq Student Accommodation (OMAI, 2020).

S12J Qualifying Funds

Another form of indirect investment through a fund structure is 'S12J' funds. S12J of the South African Income Tax Act presents investors with fully tax-deductible investment options if they invest their income into S12J qualifying funds. In order for investors to receive this tax saving S12J qualifying funds are permitted to invest in certain property asset classes, such as hotels, lodges, student residences and bed & breakfast establishments, while complying with certain restrictions that bind qualifying investments (an investment holding period of 5 years and a maximum equity investment size of no more than ZAR 50 million) (JLL, 2020).

S12J funds that have invested in the sector include Westbrooke Stac and Jaltech (Westbrooke, 2020). Westbrooke Stac has made the most significant investment in the sector with investments in several buildings across South Africa. Jaltech, which has exposure to hospitality assets, has made one investment in a building located in Stellenbosch (Westbrooke, 2020).

While the tax deductibility incentives are attractive, the legislation governing S12 funds is viewed as restrictive for the following reasons:

- Investors in S12J qualifying funds are limited in the amount they are able to invest annually (ZAR 2 million per person)
- S12J qualifying funds are limited to investing a maximum of ZAR 50 million per property
- A 'sunset clause' provides that no new Section 12J deduction will be granted after June 2021 (12J Association, 2020)

This segment of the investment landscape in South Africa may, therefore, continue to face headwinds unless policies are changed.

Listed REITs

In terms of indirect investments through the listed Real Estate Investment Trust (REIT) segment of the market, there are limited options. South Africa has no listed REIT focused on student accommodation. Although there was an attempted listing by Inkunzi Student Accommodation REIT in 2018. One of the reasons cited by Inkunzi for the limited interest was that listing activity all but came to a standstill in 2018 due to corporate scandals and headwinds faced by the property sector in general. In addition, there was a reluctance by institutional investment asset managers to enter what they perceived as a new asset class without a proven track record (Nkomo, 2020).

Some listed REITs do however have exposure to the sector. These include:

- Redefine Properties purchased 51 percent of Respublica in 2016 and in addition to its increased investment in Respublica (acquisition of Princeton Village, development of Lincoln House and acquisition of land holdings) has since used its own balance sheet to fund the construction of three major developments: Hatfield Square (Pretoria) Yale Village (near Wits) and Roscommon House in Cape Town;
- Indluplace's portfolio of two assets in Vanderbijlpark and Durban respectively;
- SA Corporate's three-asset Afhco portfolio in Doornfontein;
- Octodec's buildings are marketed as traditional residential rental units but are occupied predominantly by students

REITs focused on student accommodation are prevalent in OECD markets. Examples include American Campus Community Inc, Education Realty Trust Inc, and Campus Crest Communities in the United States and the Unite Group in the United Kingdom.

3.2.3 Direct Ownership

Individual Outright Ownership of Title

Individual investors have the option of buying units in new PBSA developments. Developments in which individual sectional title units are offered for sale often do not qualify within the strict definition of PBSA as they are frequently operated as apartment buildings without typical student amenities and services. It is for this reason that this type of investment option is not expounded upon for the purposes of this report.

A large-scale investor can develop or purchase whole student accommodation buildings directly. This could take the form of 100 percent ownership of a title deed or ownership of undivided shares in a property (joint venture). In South Africa, there are a number of developers that own PBSA buildings in this manner. Early developers, especially those that focused on office conversion in the early 2000s, started out by converting individual buildings and building portfolios on their own balance sheets. Private developers that directly own their developments carry the largest risk, but also stand to pocket the greatest rewards, provided the market matures and there is an exit option available to investors (typically funds and institutional investors). However, now in South Africa, there are several developers that would like to sell their stock but are struggling to sell at yields that would provide them with their expected returns (Lapalaka, 2020) (Nkomo, 2020).

In recent times, there has been a shift away from office conversions to large greenfield purpose-built developments that require relatively large capital outlays. In such instances, developers and investors have increasingly been adopting joint venture arrangements.

Undivided Shares or Joint Ventures

Major new greenfield PBSA developments started in South Africa in 2015 with the Feenstra Group's Hatfield Studios development (980 beds across four high-rise buildings) (FeenstraGroup, 2020).

Several greenfield developments are owned in undivided shares. In these structures, development partners typically take an undivided share in the property in return for developing the property, providing the land and/or providing funding for the development. Commercial banks often also enter in these arrangements in the form of a profit share or providing mezzanine finance for the development. This is effectively a partnership form of ownership and can be governed by a shareholder's agreement if it is an incorporated joint venture or a partnership agreement. This form of ownership is often preferred by developers as it spreads the risk among more than one party and eases the funding requirements of a single developer's balance sheet.

Another primary reason for adopting this form of ownership is that greenfield PBSA developments are often done on a large scale (to reduce build cost per bed and operating costs through economies of scale) and they are therefore expensive to fund. It is also expensive to build greenfield PBSA because it typically includes 24/7 on-site security (including video surveillance, security rooms, biometric access systems, study halls, common areas, and recreation facilities. High-speed broadband and sustainable green features are becoming more common. Given the major capital outlay, partnerships are often required to cover the capital costs. Additionally, given the scale of the projects, land consolidation is often required and to secure land parcels partnerships are often necessary.

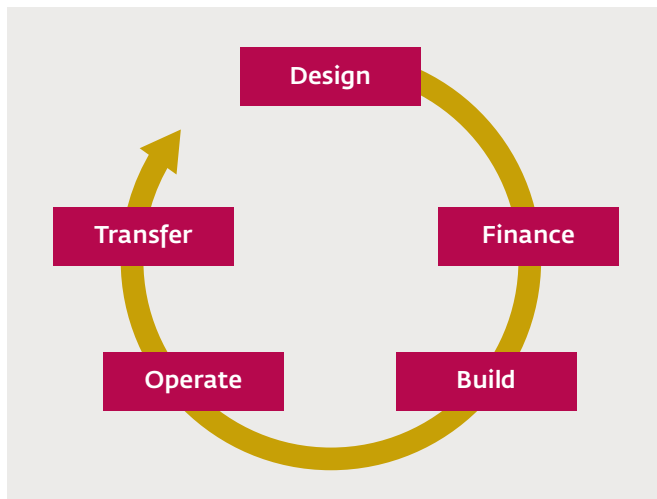
3.3 INVESTMENT BY BOTH THE PRIVATE AND PUBLIC SECTOR

This sub-section focuses on the overlap between private and public sector investment in PBSA.

3.3.1 PPPs in South African PBSA

It is notoriously difficult to define a Public Private Partnership (PPP). The Canadian Council for Public Private Partnerships (1998) makes a good attempt when it states that a PPP is a co-operative venture between the public and private sectors, built on the expertise of a partner that best meets clearly defined public needs through the appropriate allocation of resources, risks and rewards (Akintoye & Beck, 2003). This arrangement from the perspective of the private sector in the context of PBSA is set out in Figure 23.

Figure 23: Design Build Finance Operate Transfer Cycle



Source: (JLL, 2020)

South Africa has a comprehensive PPP legislative framework. Unfortunately, private and public sector stakeholders alike have commented that the legislation is extremely complex, and the approval process involved in finalizing a PPP is perceived as onerous. When one combines this with the fact that universities are often under-resourced and generally inexperienced in rolling out PPP projects, it means that many projects are started but do not come to fruition.

Due to the challenges of concluding PPP agreements and the perceived prohibitively high costs if the project is aborted, the private sector is often deterred from participating in PPPs. From the perspective of private developers (and often public sector stakeholders) it is understood that PPPs do not work because of a high failure rate, onerous regulations and bid requirements. Under these circumstances, major operators such as South Point and Respublica, are reverting to partnering directly with universities through head leases, while growing their direct-let portfolios. A case can be made that in the provision of PBSA, PPPs could help universities access private funding in a transparent and low-risk manner. Respublica (Respublica, 2020) have suggested that PPPs are a viable solution to addressing the shortfall of quality accommodation. The most obvious opportunity is for universities to consider a sale and leaseback; in this instance, universities generate capital that can be deployed into post-school education facilities. This allows the university to focus on its core skills of educating students and the acquirer (assuming a specialist student accommodation operator) can lease the beds back to the university and assume all operating risks associated with managing such facilities.

It is therefore a missed opportunity that in South Africa to date there have only been two completed and publicized formal PPP student housing projects. The first was the 1,200 bed Ovals development at the university of KwaZulu-Natal's Westville campus, completed by Crowie Construction in 2006 (Ruben Reddy Architects, 2006), and the second the provision of the 1,100 bed Kovacs complex development at the University of the Western Cape (Muguma, 2015).

In light of the gap that has been created by onerous PPP legislation, alternative funding structures where universities take a profit share or an equity stake in a development are being considered and adopted (Posterity, 2020). In other instances universities, given a relatively high degree of autonomy are finding ways to partner with private developers without having to comply with the seemingly restrictive PPP legislation while still sharing the risk and returns of the project (STAG African, 2020, p. STAG African). (STAG African, 2020, p. STAG African)

The SHIP initiative should create a number of opportunities for entry into the market via PPPs given that this program seeks to standardize and facilitate complex PBSA developments. However, as discussed elsewhere, affordability, profitability and reluctance by universities to give up another stream of income and profitability remain major obstacles to making PPPs work for the private sector in the context of the SHIP.

3.3.2 University Head Leases and Alternative Partnership Structures

Head leases could be considered a quasi-form of a PPP. There are several head leases being provided by universities in South Africa, but these are typically for short durations (one to three years) compared to the typical concession periods in PPPs (ranging from 30 to 50 years).

As previously mentioned, some developers are starting to partner with universities in ways that do not fall within the definition of a formal PPP. STAG African is an example of one such developer. They have done so in the projects they have completed for the University of Stellenbosch by using the university's relatively strong autonomy and ensuring that projects are profitable while sharing risk (STAG African 2020).

3.3.3 Evolution of Student Accommodation PPPs in the United Kingdom

To address the large supply–demand gap in South Africa, lessons and experience from more developed markets, like the United Kingdom, where PPPs and PPP-type arrangements have emerged successfully could be considered and drawn upon, especially as it pertains to the roll-out of the SHIP.

Student accommodation partnerships between universities and private sector operators in the United Kingdom have enabled more than 30,000 new beds to be built in the last 15 years, and a further 20,000 beds to be transferred from university portfolios (JLL, 2018). This is a growing market in the United Kingdom and has attracted over £2.5 billion in capital investment over the last decade, with the number of partners tripling in the same period. One in five universities with its own student housing has closed a partnership deal. Concession lengths have increased to about 50 years as universities have leaned toward larger capital receipts generated by longer debt tenors. Each year, on average, about 2,500 beds are built under this type of deal, and a further 800 transferred (JLL, 2018).

Growth of DBFO Schemes in the UK

Figure 24 shows the typical models of ownership and operation of student accommodation in the United Kingdom. This sub-section will focus on the Design, Build, Finance and Operate ('DBFO') which is the most common PPP.

Figure 24: The Different Ownership Schemes in the UK

Model	Borrow & Build	Income Strip	Design Build Finance Operate (DBFO)	Forward commitment of nomination or lease or new development	Nomination agreement for existing stock	Direct Let
Structure						
Who owns or buys the land?	University	Developer, investor or university	University, then offers long lease to operator	University or operator	Operator	Operator
Who secures funding?	University, via bank loan or bond	University or developer via institutional investor	Operator	Operator	Operator	Operator
Who retains income?	University, and uses to service debt	University, and pays proportion to investor	Operator, and pays university initial capital receipt	University, and makes RPI-indexed lease payment to operator	Operator	Operator
Length of concession/ lease		30-45 years	40-50 years	25+ years	Variable	
Do the residences revert to University?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Potentially		
Type of nomination agreement			Soft	Hard	Hard	
What risk does the university retain?						
Construction	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
Operational & Lifecycle	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
Demand	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Limited	Limited	Limited	
Termination liability		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
← More control by university						
More control by operator →						

Source: (JLL, 2018)

There are many variations but the basic structure of a DBFO arrangement, is as follows:

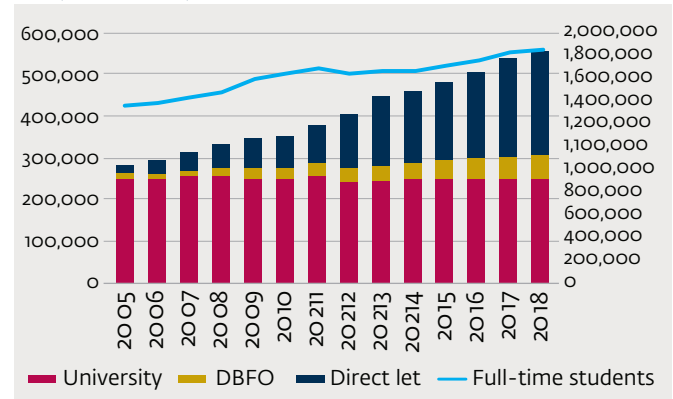
- A student housing partner (SHP) takes a long lease of university-owned land.
- The SHP designs a student housing scheme in conjunction with the university, obtains planning permission, raises finance, builds it, operates it, maintains it, and retains the income.
- In return, the university receives a capital receipt, with the size depending on many factors, including initial rent levels, rent increase mechanisms, construction costs, operational costs, and the risk appetite of funders.
- Non-residential space might be included (academic or administrative space, or student union facilities). This is often at a rate deemed ‘peppercorn’ or very low or nominal rent and thus affects the level of capital receipt.
- The student housing partner might run the soft (non-mandatory) facilities management or subcontract this back to the university.
- As well as (or instead of) development land, the deal might include a ‘stock transfer’ of existing university-owned student housing to be refurbished or remodeled.
- Importantly, the asset is returned to the freehold of the university at the end of the concession period. The student housing partner will maintain a sinking fund for repairs and hand over the asset with no backlog maintenance. The attraction to the university is the ability to acquire or refurbish facilities without ‘selling the family silver’ (JLL, 2018).

These are also known as ‘off-balance sheet’ or ‘demand risk transfer’ deals because of the mechanism that seeks to limit the university’s long-term liability. The university usually has the ability, but not the obligation, to nominate as many rooms as it wants each year (a ‘soft’ nomination agreement). The university is only liable for filling those rooms it has nominated. The rest is the responsibility of the student housing partner to market and let, and so it must be sure that the location and quality of the scheme will be attractive in the market (JLL, 2018).

At the end of 2018, there were more than 550,000 PBSA beds in the United Kingdom. Of those operational beds, there are over 45,000 in DBFO schemes, with about 6,000 more that are part of income strip deals. The direct-let model made up the

largest portion of the 80 percent growth experienced in PBSA in the United Kingdom over the last 10-years.

Figure 25: Growth of PBSA and Student Numbers in the UK (2005-2018)

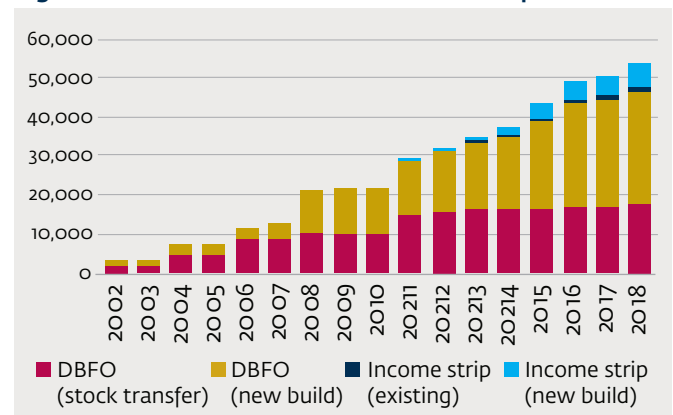


Source: (JLL, 2018)

Unlike SHIP MO’s plan to predominantly grow university-owned beds in South Africa, the United Kingdom has seen the total number of university-owned beds remain relatively static since the early 2000s but this conceals a great deal of activity by universities which have been demolishing old stock, building new beds, and buying and leasing halls from private operators. Also, about 17,500 university beds have been transferred to student housing partners as part of DBFO schemes.

Figure 26 drills down into the specifics of DBFO and income strip arrangements in the United Kingdom.

Figure 26: Growth in DBFO and Income Strip Schemes



Source: (JLL, 2018)

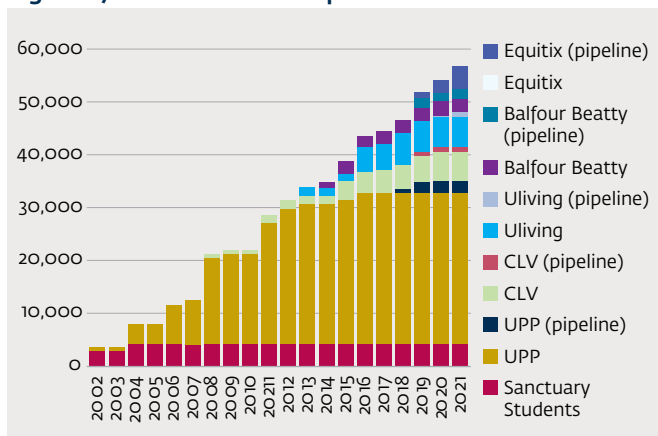
Under DBFO schemes, around 25,000 new beds have been built. Seven times as many (200,000) have been built for the direct-let market.

Under an income strip, an investor (a landlord) pays a capital sum upfront for a tenant (a university) to commit to paying an indexed rent on a long lease of an asset (typically 35-45 years). At the end of the lease, the university has the option to acquire the freehold for £1. Control, operation and liability for repair remains with the university – hence the institutional landlord merely ‘strips’ a proportion of the income out of the asset in return for forward-funding the development. There is a very strong market demand from institutional investors for this type of annuity-style and indexed-income investment. Over 6,000 new beds have been built as part of income strip deals. The first of its kind was created in 2011 to finance a 566-bed scheme in Clapham for Imperial College London. Since then, income strips have become a commonplace method of financing student accommodation, with more than £0.5 billion raised to date (JLL, 2018).

DBFO Partners in the UK

DBFO transactions are complex. They require the experience of the legal and commercial implications of the partnership, as well as expertise in each component of designing, building, financing and operating PBSA. For this reason, the DBFO market has high barriers to entry, and the number of players is small: there are about 10 times as many organizations who are active in direct let PBSA on the same scale (JLL, 2018).

Figure 27: Total DBFO beds per SHP



Source: (JLL, 2020)

The University Partnerships Programme pioneered this type of transaction and has continued to grow its market share, with UPP operating around 65 percent of all DBFO beds in the United Kingdom from close to 100 percent market share in the early 2010s (JLL, 2018). In recent times three other student housing partners have gained market share totaling more than 11,000 beds.

Length of Concessions

The average length of DBFO concessions has changed markedly, from just under 40 years to just under 50 years. Earlier deals tended to be driven by preference for shorter concession periods by both universities and banks. Universities are still attracted to schemes that revert to them sooner, but this has been outweighed on many recent deals by the higher capital receipts generated by longer debt tenors. In some cases this has been necessary to make the financial model stack up, and also reflects institutional funds’ preference for longer-term investments (JLL, 2018).

Size of Deals

The complexity of DBFO schemes means that many transaction costs (for both university and partners) are high, irrespective of the size of the deal. There have been no stand-alone deals smaller than 400 beds. The average deal size, involving around 1,500 beds, has changed little over time. Only a quarter of the deals have been for more than 2,000 beds. The UPP has closed the two largest individual deals, with Lancaster University in 2008 (4,347 beds) and the University of Reading in 2011 (4,970 beds). (JLL, 2018)

While formal PPPs have seen limited success in South Africa (when compared to the United Kingdom), universities are starting to adopt innovative approaches to developing new PBSA on campus.

3.4 BUSINESS MODEL ANALYSIS AND RECOMMENDATIONS

This sub-section discusses public and private business PBSA models and investors and funders perception of them. It also provides recommendations about how investment and funding in the sector can be encouraged by, among other things, making reference to cost and income benchmarks established in mature markets.

3.4.1 Private Sector Funding and Investment

The private sector has various methods of investing in the student accommodation asset class, whether through a fund or a REIT structure (indirect) or through direct ownership of assets or joint ownership of assets. Underpinning all of these types of investment vehicles is debt funding. It is therefore important to recognize how banks perceive the student accommodation asset class and what they perceive to be barriers to funding developments and transactions.

When PBSA first started being developed in more mature markets such as the United Kingdom in the early-1990s debt funding was hard to come by. Banks were hesitant and uncertain about this novel asset class. As it was new, they did not have a reliable way of valuing these assets and ascribing risk to the income streams was difficult. As the market has matured and the asset class has become recognized, developers and investors are able to raise debt in much the same way as other property asset classes. Today capital markets are supporting this asset class due to its strong long-term fundamentals and defensive nature of income streams (JLL, 2020).

Given that South Africa has a 'newer' PBSA market, many developers and investors are finding it relatively hard to obtain financing for South African student accommodation projects and investments (Nkomo, 2020).

This can be ascribed to the perception of local banks that PBSA is still relatively new and untested, and therefore considered relatively risky. Nevertheless, the strong demand drivers of student accommodation have encouraged large commercial banks, such as Investec, RMB and Nedbank, to fund and partner with developers by providing a mix of

senior, mezzanine debt as well as profit-sharing arrangements. To bring more liquidity to the new asset class, development finance institutions such as the DBSA and the IFC are set to play a catalytic role in funding PBSA as social infrastructure. This in turn is expected to grow the market and in so doing attract private commercial banks and further investment in the sector. Investors have also been somewhat hesitant to take large positions in PBSA for many of the same reasons as banks.

Almost all large greenfield PBSA developments in South Africa were constructed from 2015 onward. As a result, institutional investors and funders do not yet have evidence of how the asset class will perform through a full property or financial cycle and, as a result, seem to be adopting a wait-and-see approach. In addition, much like the case in the United Kingdom in the early 1990s, it is hard to value these assets as there is a lack of comparative data or benchmarks around operating costs and management fees. Repair and maintenance, sinking fund allowances and other transaction costs are difficult to compare. It is therefore hard for developers and sellers to answer questions posed by credit and investment committees, which often include:

- Are relatively recent historic average rent escalations achievable in future?
- Is the university node in question over-supplied?
- Are operating costs market related and does the operator have sufficient experience?
- Are property management fees too high?
- Is provision being made to replace furniture and fixtures and fittings?

All these questions relate to benchmarks. Benchmarks are, in turn, linked to track records which are yet to be established in the South African market given that greenfield developments only started five years ago. Nonetheless, the market is growing, and buildings have been operating successfully and answers to these questions are starting to emerge.

With regards to benchmarking or estimating market rent in this sector, it is advisable to look at the conventional residential rentals. Data from property analysts the Rode Report, show that over the past 20 years, mid-range apartment rentals have escalated at a higher average rate than the Consumer Price

Index, suggesting that PBSA rental escalations could be higher than inflation, for as long as the market remains undersupplied (Rode , 2020).

Whether a specific node is oversupplied is hard to determine without historic data to see if vacancies are increasing or rental rates are dropping. At this stage of the development of the sector, this question needs to be answered in a nuanced manner that is specific to nodes. This report seeks to set a nationwide benchmark so that supply in various nodes around the country can be compared.

With operating cost benchmarks yet to be established it is advisable to once again look to the already established residential sector for guidance. The South African Property Owners Association Research Report on Operating Costs (SAPOA, 2020), shows that the Gross Cost to Income ratio in residential assets was 43 percent in 2018 and rising to 44 percent in 2019. However, PBSA is in many ways different from conventional residential rental apartments. In this regard, it is better to seek guidance from more established markets such as the United Kingdom. Given the nature of PBSA, such low operating cost margins are achievable especially in large-scale developments (as a rule of thumb over 350 beds). Evidence from developed markets shows that many top operators can operate buildings at less than 30 percent. This surprises investors who are typically used to seeing operating cost margins as high as 45 percent in the residential rental sector. Every asset must be closely assessed and evaluated individually, but there is ample evidence that this is possible.

Unlike developed markets where there are many independent third party PBSA operating brands (much like hotel chain brands) South Africa has very few, if any, active third-party operating brands. As a result, there is very little transparency and competition regarding management fees. Until the sector matures this question will have to be assessed on a case-by-case basis.

What is the correct provision for replacement of fixtures and fittings and furniture and appliances? Here market norms for South Africa need to be established. Furniture and appliance replacement provisions can be calculated relatively easily

by taking the life cycle of the furniture and appliances and allocating an annual provision to replace the furniture and appliances at the end of their respective life cycles. However, replacement costs for fixtures and fittings can be contentious as it is difficult to estimate. A benchmark is emerging that repairs and maintenance costs (including replacement provisions) should on average be 5 percent of gross revenue.

While there are still uncertainties and by extension higher levels of perceived risk, it is recommended that investors and funders weigh that up against the advantages and benefits of early entry, along with the other more general appealing attributes of student housing, which include:

- Resilient performance in downturns, as evidenced in developed markets (and more recently in South Africa during COVID-19 lockdowns).
- High occupation rates as evidenced in established markets across the world and as noted among almost all large operators in South Africa.
- Relatively stable income and strong above-inflation rental growth prospects.
- Constant and growing imbalance between supply and demand.
- Favorable demographics
- Regional excellence of South Africa's universities
- The government's stated policy to address affordability issues through supportive policies such as NSFAS.

This last point touches on affordability – which is key to any assessment of the feasibility and financial model related to a project.

3.4.2 Affordability and Expected Returns

As stated in this report, most demand now and in the future will likely be in the affordable segment of the market. And in this segment the NSFAS accommodation allowance is set to be the main source of funding. This means that any variances in the annual NSFAS accommodation allowance will have a significant effect on the market.

NSFAS accommodation allowances vary from university to university, while TVETs receive a standard rate that is considerably lower than that allocated at universities. Table 15 shows

the sensitivity of the feasibility of a project relative to different NSFAS accommodation allowances.

Table 15: Theoretical Cost per Bed Calculation*

Description of Cost	Scenario 1	Scenario 2	Scenario 3	Scenario 4
NSFAS Allowance (Annual) (ZAR)	40,000	33,000	25,200	15,750
Number of Beds	350	350	350	350
Development Yield (Expected)	12%	12%	12%	12%
Vacancy Factor	5%	5%	5%	5%
Operating Cost Ratio	30%	30%	30%	30%
Cost Per Bed (needed to make development feasible) (ZAR)	222,000	183,000	140,000	87,000

*Assuming NSFAS funded tenants
Source: (JLL, 2020)

Assuming a NSFAS allowance of ZAR 40,000 at a public university, a developer would have to construct 350 beds for less than ZAR 220,000 to achieve a market-related target development yield of 12 percent or more. In the case of lower NSFAS allowances, a developer would have to develop for ZAR 183,000, R140,000 and R87,000 or less to achieve a development yield of 12 percent. There are many inputs that go into this calculation and the rudimentary assumptions used in this illustrative example should only be used in the context of better understanding the effect that differing NSFAS allowances have on the feasibility of a specific project.

Whether the above construction costs per bed are achievable is discussed in section 2.4. More certainty about NSFAS allowances could unlock significant development in the sector as debt funders and investors will have to deal with less uncertainty when doing feasibility calculations.

3.4.3 PPPs as a Business Model

There is an increasing trend among universities to recognize the value of their own covenant (and NSFAS funding) in securing additional student accommodation. However, most universities still prefer to invest in traditional on-balance sheet schemes (take full ownership of the scheme) in order to derive extra commercial income (DHET 2020).

Private stakeholder engagement suggests that universities should start to allow more private sector ownership arrangements of new schemes as the development and operation of student accommodation as something that sits outside their core competency or business model. Some universities are starting to consider alternative funding structures to that of full ownership, such as minority stakes in SPVs (special purpose vehicles), and some income strip funders have started to discuss risk transfer arrangements that are closer to DBFO-style deals (Posterity, 2020). The distinctions among different funding structures are starting to blur. New models that offer universities largely different levels of control are starting to emerge. In this way, the onerous prescriptions of the PPP legislation can be overcome to some degree (STAG African 2020).

Private sector stakeholders suggest that the SHIP should consider flexible funding arrangements as opposed to focusing only on 100 percent university-owned schemes and in so doing attract more private sector involvement and expertise.

Allowing for a flexible approach to funding through the various business models or investment vehicles discussed above will open up investment in the asset class to various types of funders and investors. It is however key that for the asset class to grow at scale more institutional investment is needed. New development is being stunted because developers are not able to exit their positions in favor of long term investors. Not only will institutional investment remove the bottleneck to new developments, (resulting in favorable social impact) but it will also help them achieve strong and sustainable yields for their shareholders.

3.5 PBSA TRANSACTIONS AND PROCESSES

There have been limited large investment transactions since the Public Investment Corporation, on behalf of the Government Employees Pension Fund acquired a portfolio of assets from South Point in 2015, which transacted at a blended yield of 10.00 percent (EPPF, 2020).

Since then there have been some attempted disposals of assets, including the failed listing of the Inkunzi Student Accommodation Fund in 2018. According to Owen Nkomo, who was part of the lead sponsor team, this listing failed due to the poor property market conditions and corporate scandals in 2018, which all but brought new property sector listings to a halt (Nkomo, 2020).

Shortly thereafter, most of the assets that formed part of the attempted Inkunzi listing were taken to market by JLL for the Feenstra Group and partners under the name the ‘Future Portfolio’. The Future Portfolio consisted of about 3,900 prime and strategically located PBSA beds in Pretoria and Johannesburg. JLL’s Capital Markets team received several bids for the assets at varying price levels as part of the first stage of the sales process. Negotiations with the top bidder broke down at the end of an extensive due diligence exercise in 2019. The sellers have, however, re-engaged with the under-bidders and confidential negotiations are ongoing (FeenstraGroup, 2020).

In terms of recent deals, Table 16 (JLL, 2020) sets out two transactions that took place in 2019. For pricing and the net initial yields reported in the table, one must pay attention to the specifics of the deal, which is discussed below. (RCA, 2020).

Table 16: Recent Student Accommodation Transactions

Transaction	No of Beds	Purchase Date	Purchase Price (ZAR)	Capital Value/Bed (ZAR)	Net Initial Yield
1	611	2019	141 million	215,000	10.00%
2	1,060	2019	169 million	159,000	11.78%

Source: (JLL, 2020)

In the Adowa transaction (Transaction 1), 9,834 sqm of bulk was included in the purchase price. The bulk rate that was paid (which can be defined as the sum of the areas of all floors of a building) is unclear. This may affect the first year’s forward yield (Share Data Online, 2019).

In Transaction 2, a portfolio sale, the sellers included a maintenance provision of ZAR 18 million to cover furniture replacement. If this provision is excluded from the purchase price, the net initial yield is 10.65 percent. However, if this provision is added to the purchase price, the more accurate forward yield is 11.78 percent (JLL, 2020).

S12J Student Accommodation Funds have purchased outright or purchased stakes in six buildings in recent years (Westbrooke, 2020). One must note that for S12J funds transactions are limited to ZAR 50 million per asset. Also, due to the tax benefits of the structure, acquisition yields can be somewhat slanted. S12J funds have raised a significant amount of capital and are ready to deploy that financing to suitable schemes. It can therefore be expected that several deals should close over the short to medium term in this segment of the investment market.

Despite increased political uncertainty, a weakening property sector, uncertainty about the sustainability of NSFAS funding and administration, and the effect of COVID-19, which is yet to be fully determined, investor sentiment has remained somewhat buoyant as seen by the relatively strong performance of the sector during the pandemic. This is evidenced by the fact that sales are still ongoing along with some delays brought on in part by the uncertainty due to the COVID-19 lockdowns and the DHET’s response (JLL, 2020).

In an uncertain environment, the unique characteristics of the asset, including build quality, location, affordability, operational efficiencies, operator experience and track record, sinking fund provisions as well as the strength of the balance sheet of the university involved have become more important when assessing an investment in this asset class.

3.6 CONCLUSION

Higher education and by extension student accommodation is well-funded by the government in South Africa, through National Treasury allocations to the DHET, NSFAS, and possibly to projects facilitated by the SHIP. Nevertheless, this is not enough to meet the major gap between supply and demand.

The private sector has stepped in to help fill the gap and investments can be made in several ways which shows that structuring is not an issue as investment vehicles and opportunities are available. However, this is not enough to fill the ever-increasing funding gap. Muted transaction activity shows that a lack of institutional investment is causing a bottleneck in development. Developers looking to exit their investments to focus on new developments are being forced to hold on to their assets due to a lack of investment appetite from long-term capital. This should start to change as the market matures and becomes recognized as a reliable and defensive asset class.

The SHIP is an innovation that will no doubt help the sector to mature. It is not yet clear how the private sector will participate in the roll-out of the program. PPPs in the student accommodation space have been notoriously difficult to implement due to complex and lengthy procurement processes often with no outcomes for the effort expended by all parties involved. Lessons learned in more mature markets where PPP arrangements are prolific can be examined and potentially implemented. Lessons include allowing for more flexibility and less complex PPP frameworks and allowing time for specialist PPP developers to successfully implement large projects.

4. CONSTRAINTS IN THE STUDENT ACCOMMODATION SECTOR

Further to any funding and investment constraints listed in the previous section, there are additional development constraints affecting the PBSA sector in South Africa. The objective of this section is to highlight and assess the major external factors and constraints influencing the sector in order to provide insights into a possible business strategy to mitigate these risks.

4.1 REGULATORY OVERVIEW

This sub-section of the report provides a review of applicable legislation, regulations and policies that affect student accommodation. In order to completely grasp the intricacies of the post-school education sector in general one must first take note of the large number of policies, legislation and regulations governing higher education and training in South Africa (WITS, 2020), these include, inter alia, the following:

- 5 Green Papers
- 30 White Papers
- 15 Draft Bills
- 175 Bills
- 120+ Acts

However, of these 345+ documents not all are directly relevant to student accommodation. Of these, the following are considered most applicable to the provision and development of PBSA:

4.1.1 University Macro-Infrastructure Framework

Annexure 6 of the University Macro-Infrastructure Framework published by the DHET (DHET, 2019) guides universities on the formation of PPPs, specifically for student accommodation. The report indicates that PPPs in South Africa are regulated by the Public Finance Management Act (PFMA) and Treasury regulation 16. While at a municipal level they are governed by the Municipal Finance Management Act and regulations, as well as the Municipal Systems Act. Treasury regulations are issued in terms of the PFMA. DHET uses Treasury Guidelines to evaluate PPP proposals for Ministerial approval.

The Public Finance Management Act does not regulate university PPPs - they are regulated by Treasury regulation 16 and a ministerial approval is obtained in terms of the Higher Education Act (Act 101 of 1997). Treasury Regulation 16

permits PPPs with a wide range of characteristics. However, they all involve transferring risks to the private sector. Three tests are always run to determine the approval of a PPP, namely:

1. Is there substantial technical, operational and financial risk transferred to a private party?
2. Can the public institution afford the fee?
3. Does the solution offer value for money?

PPP legislation is exceedingly complex. It is in some part based on Dutch legislation for wind turbines. There are hundreds of pages of legislation and regulations and PPP projects can take three to five years to complete. For most PBSA developers PPPs are considered to be a non-starter because of their onerous requirements.

There has consequently been very few DFBOT projects South Africa's PBSA sector. Instead stakeholders have found a number of innovative ways of legally circumventing the legislation – generally build and lease from the institution. There are four examples of this at the University of Stellenbosch (STAG African, 2020). Such deals are typically 100 percent contractual with effective ownership going to the developer for the duration of the lease. The developer establishes a notarial bond over the leases and then leases the building over a period that is longer than 20 years.

The key takeaway is that the development of PBSA is somewhat stifled due to the private sector considering PPP arrangements as too laborious, instead opting for alternative schemes. It is recommended that the legislation be relooked at to streamline the process and make it more user-friendly and thus attractive to private sector stakeholders.

4.1.2 Policy on the Minimum Norms and Standards for Student Housing at Public Universities

The DHET (DHET, 2015) published a draft policy stipulating the minimum norms and standards for student accommodation at public universities in 2011, to gazette it in September 2015. The MN&S guidelines ensure that students have adequate, good quality accommodation deemed fit for purpose. These policies apply to new and existing student accommodation.

The policies are used in conjunction with other national, regional and municipal legislation such as the South African Constitution, National Building Regulations Act, Housing Act, Rental Housing Act, Spatial Planning & Land Use Management Act and Occupational Health and Safety Act. Additionally, the private student accommodation provider should obtain accreditation from a university and together draft a standard lease agreement.

Below are some of the policies covered regarding physical structure, development site, design, health and safety, construction repair and maintenance, governance and compliance of student accommodation as laid out in the MN&S (DHET, 2015):

- **Physical infrastructure** – The policy indicates that the existing accommodation should be brought up to standards within a reasonable period. Additionally, student accommodation should incorporate universal access for students with disabilities.
- **Development site** – The future development should be located within a 20km radius of the university. For accommodation further than a 5km radius, the operator should provide affordable and secure transport.
- **Design of residences** – The rooms should have a maximum of two students per room with single rooms having a minimum size of 8 sqm and double rooms 14 sqm. The policies for ablution facilities are a minimum of one basin per four students, one shower cubicle per seven students and one lavatory per five students. Also, communal spaces must have a minimum of 1.5 sqm per student for the first 100 students and 1 sqm per student thereafter.
- **Health and safety** – The student accommodation must comply with all national, regional and municipal legislation regulating health and safety. The following certificates of compliance must be obtained on an annual basis: fire safety, electrical and gas installations, security staff, mechanisms and procedures, hygiene inspections and occupational health and safety.
- **Construction, repairs and maintenance** – All construction, repair and maintenance must comply with national legislation and the following: reasonable emergency response times, minimum disruption to the academic program and ministerial approval before construction.
- **Governance of student housing** – A council created by the

university should conduct quarterly meetings while staffing levels should be at a ratio of one warden for 100 students and one sub-warden for 100 students.

- **Compliance with Minimum Norms and Standards** – The DHET is the custodian of the policy, and all NSFAS-funded students may only be accommodated in housing that meets the MN&S .

The following sections provide a more detailed review of the MN&S in terms of possible constraints imposed on the provision of PBSA.

4.1.2.1 Analysis of the MN&S for Student Accommodation

This section provides a more detailed analysis of the potential and perceived constraints of this policy on the development and provision of student accommodation in South Africa.

The MN&S (see section 4.1.2) are applicable to the design of all new buildings from the date of publication of the Gazette (Sept 2015) but are not applicable to existing stock (built pre-2015). It should be noted that this policy only applies to accommodation provided for at public universities and excludes TVET colleges, CET colleges and private university accommodation.

Prior to 2011, there were no discernible requirements or standards. South Africa, when compared to most developed countries (which at that time had established policy and regulatory frameworks for the construction of student housing), was at a relative disadvantage to other more mature student accommodation markets. The student accommodation market in South Africa was largely unregulated until 2015, the implication being that, in addition to the challenges of implementing the MN&S from then on, years of bad practice would have to be addressed by providers to standardize and normalize PBSA in the market.

The rationale for the MN&S was based on the findings of the Report on the Ministerial Committee for the Review of the Provision of Student Housing at South African Universities (DHET, 2011), which found that rooms vary considerably in size across university campuses and range from ‘a double room measuring between 8 sqm and 20 sqm, averaging at around

13 sqm. An average single room for undergraduate students was 9 sqm, ranging from 6 sqm to 14.3 sqm. On average single rooms for postgraduate students was 11 sqm, with the range being from 6 sqm to 28 sqm'. The majority of students were officially allocated to 'single' or 'double' rooms, but the committee came across instances of up to six students in a single, 40 sqm room at the University of Zululand. University of Zululand also had 4-bed rooms, as did Tshwane University of Technology (DHET, 2011).

The basic requirements, according to the MN&S (DHET, 2015), regarding single and shared rooms as well as dormitory-type residence buildings are as follows:

- Single rooms must be no smaller than 8 sqm, and double rooms must be no smaller than 14 sqm.
- Dormitory or hall-type residence buildings must comply with the following MN&S for ablution facilities:
 - Wash basins – 1 basin per 4 student residents
 - Shower cubicles – 1 shower cubicle per 7 student residents
 - Lavatories – 1 lavatory per 5 student residents
 - Shower and lavatory cubicles must be designed in such a way that individual privacy is provided (no communal showers or toilets)

NSFAS-funded students at public universities may only be housed in accommodation which meets the MN&S requirements set out in the policy on the Minimum Norms and Standards for Student Housing at Public Universities (DHET, 2011). As previously stated, this does not apply to NSFAS-funded TVET college students.

The DHET, as custodian of this policy, provides a consultative, facilitative and supportive service to universities in assisting them to attain their student accommodation targets and goals. Responsibility for accrediting relevant private student accommodation is that of the 'feeder' university through which the NSFAS funding allocation is made. The level of compliance with student accommodation MN&S must be included in the university's annual report.

4.1.2.2 Constraints of the Minimum Norms and Standards

Critics of the MN&S have expressed the opinion that while the primary objective of the policy is to ensure living standards necessary to foster positive academic progress, in future the MN&S could benefit from engaging with private PBSA developers, who have had experience with some of the constraints of the current standards. This section provides an insight into some of the perceived constraints resulting from the MN&S to the provision and development of PBSA as gathered from published reports and various stakeholder engagements.

Housing

According to property administrator DigsConnect (DigsConnect, 2020) and the property owners that they have interacted with, the MN&S policy is based on specific concepts of a high quality student residence. As a result, private sector stakeholders often view the specifications for accreditation as being overly prescriptive for instance in terms of communal areas and ablutions.

These overly prescriptive features affecting PBSA provision include:

- Television and DVD players
- AV equipment cupboards
- CCTV and biometric access control
- Lights on time-delay motion sensor switches
- Wall-mounted heaters
- Curtains and curtain rails (ignoring alternatives like blinds).

The policy (DHET, 2015) further stipulates that a student residence should contain 'a flat-lawned area, the minimum size for a volleyball court'. This requirement potentially limits the pool of eligible accredited properties and provides design challenges to developers of, inter alia, high-rise PBSA buildings. However, this stipulation has not been insurmountable with developers finding innovative solutions such as roof-top turfed areas (MMLL, 2020).

Location

The 2011 task team set up by the Minister of Higher Education concluded that due to the severe shortage of on-campus student housing, a majority of students seeking on-campus

accommodation were often placed in unsafe and inaccessible areas (DHET, 2011). Using the 2011 task team's report as a point of departure, the specifications for on-campus student accommodation require that housing sites must be within a radius of no more than 20 kilometers of the university campus. If there are new university-owned or rented student residences being developed outside of this radius, they must be submitted to the DHET for approval. Private sector stakeholders indicated that this restriction could limit new development and could stand to be revisited. This holds especially true given the location of many campuses within densely built-up urban areas with limited available land for development.

However, this is perceived to be the exception rather than the norm and could only apply in specific instances. Furthermore, it should be borne in mind that for the most part developing PBSA further from campus has certain associated costs (such as for transport). These should be weighed against possible land price savings.

Compliance and Accreditation

The MN&S policy (DHET, 2015) places the responsibility of ensuring compliance and accreditation of student accommodation in universities. While the intention behind this provision is understandable due to limited capacities, if one were to scrutinize the capacity of public universities in South Africa to successfully undertake this responsibility, it becomes clear that they neither have the administrative capacity, nor the resources to do so. Interviews with stakeholders from public universities indicate that they often have to accredit and liaise with 500+ service providers. The prescriptions and provisions made in the MN&S policy is sometimes perceived as creating a level of bureaucracy not easily manageable or financially feasible for university oversight.

To mitigate this burden, universities, such as WITS have put in place a minimum ceiling of 100 beds in order for a service provider to qualify for consideration for accreditation. As a result, WITS accredited 23 service providers in 2020 who provided a combined 11,000+ beds (WITS, 2020). This reduces the onerous task of liaising with and managing landlords from possibly hundreds to a more manageable number.

Based on their expert and first-hand knowledge of dealing with the student accommodation accreditation process DigsConnect (DigsConnect, 2020) proposes employing an independent accreditation review system and either outsourcing or collaboration between universities and external services providers. Such an approach is viewed as a potential solution to the capacity constraint experienced at universities and could fast-track and standardize the process.

A potential further shortcoming of the accreditation process as identified by public university stakeholders is the double counting of student beds by various institutions. Interviews with relevant stakeholders from both the public and private sector revealed that some institutions accredit the same beds, especially in denser academic nodes. One example being Johannesburg where WITS and the University of Johannesburg have accredited the same beds – about 8,500 offered by private service providers – resulting in a double counting by both institutions.

According to private sector stakeholders, this stipulation of the MN&S could result in an even greater shortage of student accommodation. At the same time, it could create a window for exploitation and manipulation by 'landlords' or private accommodation providers as well as university administrators. As a student accommodation marketer DigsConnect (DigsConnect, 2020) have observed properties that were unfurnished, did not have 'a flat-lawned area the minimum size for a volleyball court', and did not have biometric access control, but have received accreditation. Conversely, they have also encountered landlords with properties that meet the MN&S requirements that cannot get accreditation due to many obstructions in the existing vetting process. Further, they have also come into contact with cases of 'third parties' that own no property being granted accreditation licenses, and then selling those licenses on to the actual property holders. This indicates a gap in the monitoring and compliance enforcement of the MN&S and accreditation process which negatively affects the sector as a whole.

Some private sector stakeholders are of the opinion that there seems to be little structure or standardized approach to the implementation of the government standard among

universities. Some universities are perceived to apply only part of the requirements, some create their own standards or checklists from the standards document, and some completely ignore the standards and continued to verify properties surrounding their campuses where none of the MN&S are met. Others fail to verify any properties, and grant NSFAS funding for student accommodation to students upon the presentation of any lease agreement, even those in contravention of the MN&S. Additionally, some universities do not have a list of their accredited landlords, which means it is often difficult for students to find accredited accommodation due to a lack of information. This can be seen as more of a failure by the universities themselves rather than challenges raised by the MN&S policy itself.

It is the view of private sector stakeholders that public universities cannot be expected to perform their duties under the current conditions. Under the current system for verifications there is little accountability for the correct implementation of the standards. Therefore, the conclusion can be made that in addition to some content and standards of the policy that could be revised there might be room for improvement in correctly implementing the policy itself in order to promote the provision of quality PBSA to the South African market.

Size

Private sector stakeholders have expressed the sentiment that the minimum size requirement set out in the MN&S reduces their ability to densify new developments which, in turn, limits revenue – making student accommodation less affordable and new developments less feasible. The MN&S in this way are viewed by some private sector developers as an inhibitor to the provision of affordable PBSA.

Private sector developers have suggested that reducing the minimum size by as little as 1 sqm per student could greatly improve affordability. Using innovative designs tested in, and adapted from, developed markets allows for quality, functionality and student wellbeing. In this regard, as previously mentioned, it could be advised that engagement with private sector stakeholders be pursued when reviewing the MN&S in order to collectively find an approach to providing affordable, good quality PBSA in South Africa. The DHET has indicated

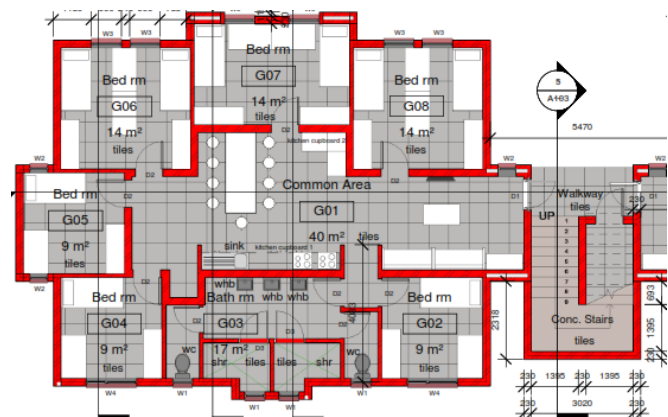
that the review process will include the invitation for public comments during 2021, meaning that private sector stakeholders will have an opportunity to provide inputs.

4.1.2.3 Changes in the Minimum Norms and Standards

As illustrated in the previous sub-section while having admirable intentions, there could be room for refining and reviewing some portions of the MN&S. During engagement with the DHET (DHET, 2020) it was confirmed that the department is in the process of reviewing the MN&S. The Norms and Standards for Student Housing for the Post-School Education and Training system will also be developed and implemented. The student accommodation strategy was set to be submitted to the Ministry for approval by the end of March 2021. In addition, a new framework on the accreditation of private student accommodation will be developed and submitted for approval by 31 March 2022 with the University Education division of the DHET responsible for managing the program.

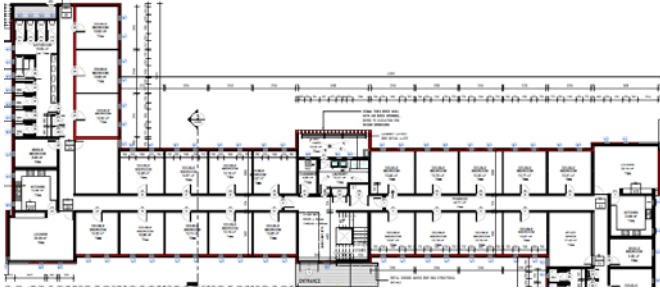
The existing MN&S support two basic student accommodation types. However, any configuration that meets the requirements are allowed. First, the ‘pod’ design (Figure 28) which focusses on providing a scaled down, intimate and controlled environment and second, the ‘dormitory wing’ arrangement (Figure 29) which strives for greater economies at the expense of spatial efficiencies.

Figure 28: The ‘pod’ design



Source: (DHET, 2020)

Figure 29: The 'dormitory wing' design



Source: (DHET, 2020)

According to the DHET (DHET, 2020) the existing MN&S (DHET, 2015) permit single and double rooms with a minimum size of 8 sqm and 14 sqm, respectively. The current policy specifies minimum requirements on the assumption that the objective for student accommodation is to provide access to secure, diverse, supportive, comfortable, efficiently managed and affordable living and learning environments which contribute to the personal and academic growth of each student. It does not cap the amount of assignable space for student living. Current policy proposals which are still under discussion and are based on the same student accommodation objective associated with the 2015 policy suggest the following:

- The total student area per bed be limited to a maximum of 14 sqm, where total student area is the sum of all assignable areas (the floor area available for assignment to an occupant or for specific use) bedrooms, ablutions, food preparation areas, services to support student housing such as laundries

and housekeeping rooms, security, common rooms for recreation and meetings, student study spaces, warden and sub-warden accommodation and a warden’s office; and

- The ratio of the total student area to gross building areas (sum of assignable areas, non-assignable area, the floor area not available for assignment to an occupant or for specific use, but necessary for the general operation of a building, such as corridors and staircases and the structural area) is not less than 65 percent.

These potential amendments to the policy allow for some flexibility and trade-offs in the size of spaces and encourages effective space utilization. The policy is also proposing a reduction in the minimum areas of single and double rooms to 7,5 sqm and 13,5 sqm, respectively.

The DHET (DHET, 2020) further poses that shifting from a maximum of two beds per room to more than two beds per room may affect the quality of student accommodation and compromise student life and, as such, necessitates a rethinking of the policy. Table 17 provides an evaluation (pros and cons) of the different room types by the DHET (DHET, 2020) with an indicative desirability of each on a scale of one to five, with five being the ideal. From the table it can be seen that single rooms are considered most optimal, however this remains the costliest option in terms of construction cost and could affect the affordability of student accommodation.

Table 17: Room Type Evaluation

Room type	Sleeping	Storage	Study	Comments
Single Room	5	5	5	Space provision currently defined as 8sqm with a possible 0.5 sqm incremental saving. Ideal social situation. Most costly
Double Room	4	4	3	Pre COVID-19 considered the most economical model. There is a saving in area, a party wall and a door.
3+ Beds in a Room	3	3	2	While seeming to offer area savings, the increased risk of communicable contagious diseases and the requirement to be able to enforce effective social distancing must bring this model into question. Pre COVID-19, the real concern was the difficulty in providing equitable space for each room occupant with equal access to natural light and ventilation. Private study becomes more challenging with each additional member in a room. This model is better suited to institutions where sufficient alternative private study space is provided either in the residency itself or on campus.

Source: (DHET, 2020)

A policy decision needs to be made regarding MN&S for on-campus versus off-campus accommodation where common rooms for recreation, meetings, and study spaces, are provided on campus. For example, some universities are converting spaces such as entrance foyers to buildings into group learning areas. As a result, students are on campus for most of the day and only return to their residence to sleep. This approach could enable another student housing typology to be developed to serve a different set of objectives.

Additionally, expansion of the MN&S to include accommodation at TVET colleges is required as this portion of the market can be considered the least regulated and most in need of standardization.

4.1.3 Public Infrastructure Delivery and Construction Sector Dynamism in the South African Economy

The objective of the policy paper Public Infrastructure Delivery and Construction Sector Dynamism in the South African Economy (NPC, 2020) is to inform the National Planning Commission's review on the progress toward vision 2030 regarding public infrastructure and delivery and the construction sector. The report suggests that PBSA developers should adopt innovative building technologies to reduce time and the cost of construction as well as enhance the performance, health and safety, and environmental performance of PBSA buildings. Examples of such technologies include, but are not limited to:

- Water and energy saving technologies
- Light weight steel structures
- Heat pumps
- Interior design and fit-out to maximize indoor quality

4.1.4 Student Housing Infrastructure Program

SHIP MO also provides advisory support on policy interventions while supporting government's economic transformation efforts within the property and construction industries (SHIP, 2020).

Currently, there is no comprehensive document to facilitate the delivery of student accommodation in the country. However, the Minister for Higher Education, Science and Innovation is developing a comprehensive Student Accommodation Strategy that will incorporate monitoring, evaluation, and accountability of student accommodation providers. (Parliamentary Monitoring Group, 2020).

Most of the funding for SHIP student accommodation (300,000 beds over 10-years) is provided by the DHET, the Budget Facility for Infrastructure grant funding, DBSA loans, Infrastructure Investment Programme for South Africa (IIPSA) grants, private developers and financial institutions.

Additionally, student accommodation allocation is managed via university policies. NSFAS students living in private accommodation receive a ZAR 2,250 monthly living and transport allowance (Parliamentary Monitoring Group, 2020). NSFAS students can receive a single-use private accommodation allowance if they submit a lease agreement to the university.

The SHIP MO (Parliamentary Monitoring Group, 2020) identified some of the challenges facing the provision of student accommodation to be as follows:

- Delays due to title deed delays, re-zoning delays and land claims on rural campuses
- Private entities competing for land deals with the government
- Limited planning, procurement and implementation capacity in institutions
- Limited capacity in government to support program preparation
- Uncoordinated sequencing of funding causes project delays and loss of funds
- Investors deterred by the onerous procurement processes

4.2 FRAMEWORK FOR PAYMENT OF STUDENT ACCOMMODATION

Post-school education in South Africa is considered to be expensive relative to average household incomes, especially at private universities with the tuition fees being unaffordable for a large portion of the population. There are various sources of funding available to students studying at post-school institutions in South Africa. These include:

- Financial aid from universities
- Bursaries and scholarships
- Student loans
- Grants from Sector Education and Training Authorities (SETAs)
- Part time work
- NSFAS

Most of the larger universities in South Africa offer financial aid to students who have achieved excellent academic results but are unable to fund their studies. Each university has their own criteria and rules when it comes to financial aid and determining who qualifies. As an example, the University of Pretoria (University of Pretoria, 2020) can provide financial aid to qualifying students in the following forms:

- **Financial support:** The university provides financial aid to high achieving students in need with the amount depending on the severity of the applicant's financial situation. The loan amounts can range between ZAR 500 – ZAR 20,000 at an interest rate of prime -1 percent.
- **Achievement awards:** Students who achieve high marks (grades) in high school with the amount of money the student qualifies for dependent on the student's results and the faculty they are enrolling into. This money does not need to be repaid to the university.

As previously mentioned, NSFAS was established specifically to assist students with academic ability from poor, disadvantaged families by providing loans and bursaries to students attending public universities and TVET colleges. The NSFAS Act (NSFAS, 1999) enables any student to apply for a bursary from NSFAS, but allows the board to impose conditions, generally, or in respect of a particular bursary.

The bursary amount is provided to the designated higher education institution instead of the applicant. This also allows NSFAS to enter into what is essentially an agency agreement with public universities or TVET colleges. These institutions are then authorized to do the following (NSFAS, 1999):

- Administer bursaries granted to students of the institution.
- Receive bursary applications from students.
- Consider and assess the applications in light of the criteria for the granting of bursaries determined by NSFAS.
- Grant bursaries if the criteria are met after ascertaining that funds are available.
- Enter into a written agreement with a borrower or bursar in accordance with the provisions of the Act and on the terms and conditions determined by NSFAS.

The Act (NSFAS, 1999) allows NSFAS to determine the parameters under which bursaries are granted to students, ensuring that students are provided with sufficient funds to cover their costs of tuition and/or residence, and any further reasonable provisions.

NSFAS differentiates their allowance allocation between universities and TVET colleges. An overview of these (excluding tuition) allowances is presented below (Western Cape Government, 2019) (DHET, 2019).

Public university student allowances:

- Accommodation: As per the actual costs charged by the university (costs for private accommodation must not exceed costs for university residence)
- Transport (up to 40 km from institution): ZAR 7,500 per annum
- Living allowance: ZAR 15,000 per annum
- Book allowances: ZAR 5,200 per annum
- Incidental/personal care allowance: ZAR 2,900 per annum for students in catered residences

TVET college student allowances

- On-campus accommodation: ZAR 33,000 per annum
- Accommodation in an urban area: ZAR 24,000 per annum
- Accommodation in a peri-urban area: ZAR 18,900 per annum
- Accommodation in a rural area: ZAR 15,750 per annum

- Transport (up to 40 km from institution): ZAR 7,350 per annum
- Incidental/personal care allowance: ZAR 2,900 per annum

4.2.1 Eligibility Criteria for NSFAS Funding

NSFAS utilizes a national means test to determine the eligibility of an applicant for government financial aid. Through its central application system, students are awarded bursaries against set income criteria. Using the means test, NSFAS then determines an applicant's award amount. To be eligible an applicant must (DHET, 2019):

- Have South African citizenship
- Have passed Grade 9 and 10 to receive NSFAS funding to study at a TVET college
- Have passed Grade 12 to receive NSFAS funding at a public university
- Be enrolled at or admitted to one of South Africa's 26 public universities or 50 public TVET colleges
- Come from a family with a combined gross income of up to ZAR 350,000 or ZAR 600,000 if the applicant is disabled
- Formally register to study for an approved funded program at a public university and meet the financial qualification criteria
- Be a first-time applicant

Funding renewals are automatic for students who pass 50 percent or more of their registered courses in an academic year.

4.2.2 Procedures to Procure and Divest of NSFAS Grant Funding

The DHET establishes the rules applicable to NSFAS funds allocated by parliament. In terms of the rules applied to universities, NSFAS funds eligible students. NSFAS funds the full cost of study (DHET, 2019) (covering tuition fees, accommodation fees, meals and learning support materials costs; including allowances for students with disabilities).

Public universities manage the allocation and payment of NSFAS allowances for accommodation. Universities are encouraged to ensure that first-year students and students qualifying for NSFAS are accommodated in university-managed residences (if space is available) before considering placing them in private accredited off-campus accommodation.

Students placed in accredited off-campus accommodation must provide the university with a signed lease agreement which is verified with the service provider (landlord). Accredited student accommodation providers for NSFAS-funded university students are then paid by the institution itself on a pre-arranged basis – generally bi-monthly or quarterly. It is due to this perceived lower level of risk that some private student accommodation providers have indicated a preference for housing NSFAS students.

4.2.3 Assessment of NSFAS Student Accommodation Allowances

According to the Private Student Housing Association, an advocacy group founded in 2019 by private suppliers to engage with the government and institutions and drive targeted interventions (and aim to address perceived risks associated with the sector), NSFAS could review how universities determine market rentals and accordingly the optimal NSFAS accommodation allowance for universities.

Currently there is uncertainty about how NSFAS rentals are determined due to the discretion universities are given under the following provision: 'As per the actual costs charged by the university (costs for private accommodation must not exceed costs for university residence)' (Western Cape Government, 2019). It is perceived that there is no uniformity or objective criteria guiding universities and that the NSFAS rental amount is set by non-property specialists and the allocation to accommodation is often influenced by allocations to other needs of the university. Private sector stakeholders have expressed concern that in some instances universities are setting such low rental rates that private developers simply cannot enter certain markets as these low rentals make developments unfeasible (to meet their desired and required returns).

A primary concern of the Private Student Housing Association is that it is unreasonable of NSFAS to stipulate that costs of private rental accommodation may not exceed costs for university residences, when university residences in many instances were built decades ago and are held on the books of universities at minimal carrying costs. The private sector must then try to compete and comply with these low rental levels. Private sector stakeholders have argued that new developments

require a higher cost of capital and, accordingly, warrant higher rentals.

The concern is that if NSFAS is not guided by true market rental rates, (which is objectively determinable) then many new developments will remain unfeasible and the demand gap will persist. Private sector stakeholders reason that a uniform accommodation tariff, based on private market rentals, dictated by NSFAS or an independent third party, will help in alleviating the PBSA supply-demand gap at universities across South Africa. Private sector stakeholders further argue that at TVET colleges, the low NSFAS accommodation and travel allowances, ranging from ZAR 7,350 to ZAR 33,000 per annum, restrict new development as it is near impossible for these stakeholders, under current regulations (setting certain minimum requirements), to use the allowance to develop beds at feasible development yields.

4.3 ACCREDITATION OF STUDENT ACCOMMODATION

As previously stated, student accommodation needs to meet the MN&S and be accredited in order to be eligible for NSFAS-funded students at public universities. The onus for carrying out this accreditation process rests with the relevant university, which has raised concern from private sector stakeholders and university representatives alike based, primarily, on capacity constraints and standardization discrepancies. This sub-section of the report provides a comparison between the accreditation regulations and processes applicable to South African public universities and those applied by universities in the United Kingdom. The objective of this comparison is to ascertain if there are any lessons to be learned and best-practice guidelines to be gathered from a market that is considered more mature in terms of student accommodation.

4.3.1 A Comparison with the United Kingdom PBSA Accreditation Requirements and Process

The regulation of student accommodation in the United Kingdom varies significantly between different accommodation providers. Universities that provide halls of residence must be licensed by the local authority and in this case, the accommodation is exempt from the licensing requirements

for houses of multiple occupation (required by the Housing Act 2004. HMO licensing is mandatory where there are five or more students sharing a kitchen. In the United Kingdom on-campus (university provided) accommodation must belong to a government-approved code or be licensed by the local authority (Citizens Advice, 2020). These codes aim to ensure safe, good quality accommodation.

There are three general codes for standards and accreditation of PBSA (Citizens Advice, 2020), namely:

- Universities United Kingdom / Guild Higher Education Code of Practice for the Management of Student Housing, known as the Student Accommodation Code
- Accreditation Network United Kingdom (ANUK)/Unipol Code of Standards for Larger Residential Developments for student accommodation managed and controlled by educational establishments
- Accreditation Network United Kingdom ANUK/Unipol Code of Standards for Larger Developments for student accommodation not managed and controlled by educational establishments

The codes are designed as statements of good practice which are subject to change and refinement in the light of experience (Universities UK, 2020). The codes should serve to reinforce and, where necessary, encourage better management of accommodation provided by higher education institutions and major private suppliers. Together with licensing requirements for HMO for privately rented property, they help effect a sustained improvement in the management of all forms of student housing. The third code listed above is specifically for halls of residence (PBSA) owned and operated by private companies.

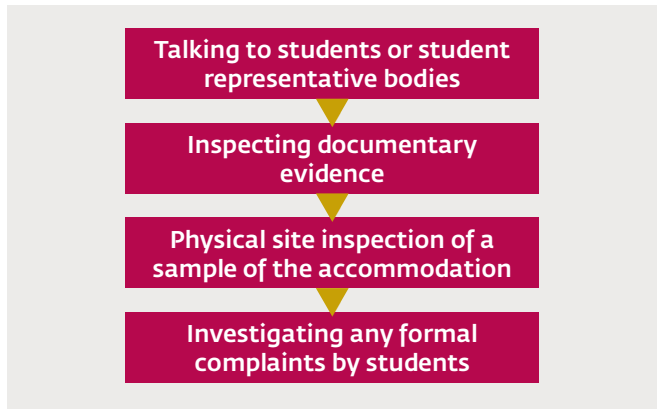
For a public establishment (university residence) to join the code there are two requirements (Universities UK, 2020):

- The establishment must undertake an independent audit against The Student Accommodation Code
- The audit result together with the appropriate management responses are then submitted to the National Administrator with a covering letter from the vice-chancellor / principal.

All universities and colleges signed up to The Code are independently audited every three years to confirm that their

accommodation management practices are up to the standards expected (Universities UK, 2020). To ensure full accountability and transparency, auditors follow a rigorous four-step process for each investigation – see Figure 30.

Figure 30: Four-Step Audit Process



Source: (Universities UK, 2020)

Privately owned PBSA is guided by a voluntary National Code of Standards for Larger Developments developed by the Accreditation Network United Kingdom (ANUK) and Unipol approved in 2006 under the 2004 Housing Act. By joining The Codes, PBSA providers are agreeing to meet a set of benchmark standards relating to (Unipol, 2020):

- The physical condition of the accommodation
- Management of the property
- The relationship between the landlord and tenants

According to Unipol (Unipol, 2020) students stand to benefit considerably from renting accommodation that falls under The Code, for various reasons, namely:

- Assurance that repairs and maintenance is carried out at acceptable timescales
- Confidence and security around the handling of deposits
- Certainty that the rented property is properly managed and regulated
- Access to a robust complaints process should there be any issues

Once PBSA is accredited by the Unipol Code properties are typically branded with The Code logo. When students search for accommodation on the Unipol website the logo appears with

accredited accommodation. Being accredited supports the good reputation of landlords with potential tenants (Unipol, 2020).

The Code (ANUK/Unipol, 2020) established a set of specific standards with particular relevance to larger developments tenanted by students (15+ students living in one building). The criteria on The Code has been chosen to reflect a balance of common sense obligations and responsibilities between the managers of PBSA and tenants, and sets benchmark standards which are achievable without significant expenditure of time and/or money and without prejudice to their respective legal rights (ANUK/Unipol, 2020).

4.3.2 Lessons from the UK

While the Code (ANUK/Unipol, 2020) might set basic standards and benchmarks it is not perceived to be overly prescriptive in terms of design, finishes or facilities. Rather, it focusses primarily on the operation of the PBSA and the service offered to the tenant (the students).

Some standards are construed to be best practice advisory rather than prescriptive minimum norms and standards. For instance, (ANUK/Unipol, 2020) include, the following:

- All study bedrooms must contain a bed, adequate clothes storage space, a desk, chair and curtains or window blinds that are hung properly
- All furnishing and furniture are clean and in reasonable condition
- All kitchen facilities are designed and installed having regard to safety
- Food storage and preparation facilities are provided
- Kitchens contain an adequate number of appropriately positioned plug sockets
- Suitable and adequate Water Closet (toilet), bath and/or shower facilities are provided, having regard to any guidance applicable to developments of this type laid down by the local authority
- Facilities are provided for the washing and drying of clothes at a ratio no greater than 1:75

Based on private sector stakeholder feedback the minimum norms and standards could stand to be revised in order to come across as less prescriptive. A key take-away from the

United Kingdom standards could be to provide best practice guidelines with a more pronounced focus on operational guidelines (which will in turn ensure adequate standards of student accommodation) rather than strict directives. However, it should be borne in mind that the UK is a more mature PBSA market than South Africa and the possibility exists that market forces have led to most student accommodation being of a good quality and standard and that with ample supply bad quality accommodation is automatically weeded out.

Accreditation of PBSA according to The Code is administered by an independent body to check that the required standards are met (ANUK/Unipol, 2020). Centralizing the function of accreditation not only ensures transparency and consistency throughout, but also mitigates capacity constraints of higher education institutions in terms of accreditation.

4.4 CONCLUSION

This section of the report analyzed the primary constraints facing the development of affordable PBSA in South Africa. These challenges are best summarized in the SWOT (Strengths, Weaknesses, Opportunities and Threats) and PEST (Political, Economic, Social and Technological) analyses in Annexure D of this report.

In terms of regulation and policies the legislation most applicable to student accommodation is the MN&S for student accommodation at public universities. While this legislation is only applicable to public universities (excluding TVET colleges and private universities) it is viewed by private sector stakeholders as potentially inhibiting the development of affordable student accommodation due to strict prescriptive measures.

For accommodation to be eligible for occupation by, and payment for, a NSFAS-funded student it must be accredited by the relevant public university as meeting the MN&S. It is in this accreditation process that universities themselves have cited capacity constraints and private sector stakeholders have observed inconsistencies.

In the United Kingdom the minimum norms and standards focus on operation standardization as opposed to strict directives and accreditation based on these standards is carried out by an independent third party. These are two main best practice guidelines which could be considered for the South African student accommodation landscape and have both already been suggested by private sector stakeholders as possible interventions in the major challenges facing the sector.

5. THE IMPACT OF COVID-19 ON STUDENT ACCOMMODATION IN SOUTH AFRICA

Due to the COVID-19 pandemic, South Africa, like most other nations worldwide, imposed a lockdown system. In March 2020 all tertiary institutions closed for an early first term recess, sending students home. Most institutions continued some form of online tuition assisted by the DHET e-learning guides to TVET colleges. In May 2020, a third of all students and staff were allowed to return to campus under Level 3 of the lockdown. In early June 2020 universities began to open for the return of students on campus under strict direction from the DHET and the national government.

This section of the report examines the impact of the COVID-19 pandemic on the student accommodation market in South Africa as well as the concomitant responses taken by the public and private sector in this regard. Since it is highly probable that this pandemic, and potentially others like it, could be part of everyday life in the future, the student accommodation market should begin to prepare for the ‘new normal’.

5.1 THE COVID -19 EFFECT ON ONLINE TUITION AND PHYSICAL ENROLMENT RATES

During the lockdown (Levels 5 to 3) students had to continue their learning remotely. A lack of internet access and reliable electricity supply, among other essential amenities, made this a challenge. These challenges are among some of the reasons why stakeholders (both public and private) believe full-time online tuition is not a viable option in South Africa.

In European markets a hybrid model (also referred to as a mixed or blended model) is seen to be emerging. Following this trend, universities will be providing a mix of online and in-person teaching. Without specific government advice, higher education institutions were starting in September 2020 to make decisions about plans for the new academic year that aligned with this hybrid approach. According to stakeholder engagements, a similar approach is likely to be employed in South Africa from 2021 onward. In anticipation of a possible surge in demand for online tuition some universities have started marketing courses that can be completed fully online.

Evidence that this hybrid approach may work is that rent collection in the United Kingdom is performed well (Q2/Q3 2020) and leasing for the next academic year (2021) was anticipated to pick up in August – despite this hybrid approach being in place. Surveys among European students shows that students prefer to have an on-campus experience to that of online learning and they see it as being a critical component of their development.

Similarly, there are certain courses that cannot be migrated to an online platform due to the requirement of in-person technical and practical work. In addition, the regulatory requirements from some professional associations require that students studying toward specific degrees such as engineering undertake tests and assessments on-campus and in-person, and as such cannot be completed via an online platform.

The Department of Science and Innovation is working with the DHET to establish a National Open Learning System that will provide for online learning opportunities in the post-school education system. The concept of open learning focuses on increasing access to learning opportunities by providing self-directed learning materials and online self-evaluation tools for certain courses and programs. The DHET has also set up a task team to formulate a strategy for expanding online learning in post-school education, which is due in 2022. The National Open Learning System will primarily focus on the TVET college sector, with universities employing their own initiatives for online tuition (see Section 1.4).

5.1.1 Effect on PBSA Demand

Many students in South Africa do not come from homes that are conducive to furthering their post-school education and often do not have access to cost-effective and speedy data services or space that is conducive to studying. Safety and security in their home environment can be a further challenge. As seen in Europe, social interaction in a safe space among young contemporaries is an essential part of personal growth which students seem unwilling to forgo for outright online learning. This sentiment was echoed by feedback from university, public sector (DHET) and private sector stakeholders who indicated that students were eager to return to campus once they were allowed to do so.

According to stakeholders it will take considerable time before the socio-economic conditions of most students improve to such an extent that they can safely and effectively study online from home. This is an extra barrier to the replacement of in-person education by online education in South Africa. It is more likely that a major disruptive force will first be observed in more advanced markets than South Africa, where there are reasonable guarantees of student amenities such as access to electricity, Wi-Fi, and security.

Many stakeholders see online learning as complementary to contact or in-person education at universities. They speculate that a hybrid model will likely emerge in South Africa and that it could actually increase the current capacity of tertiary institutions to accommodate students within its academic buildings (through rotational in-person teaching) and therefore increase the demand for PBSA. It might still be too early to say definitively what will happen, but these are clear trends that are emerging.

In conclusion, it is anticipated that the demand for PBSA will remain resilient and strong and little to no disruption in this demand resulting from online tuition is expected over the short to medium term. South Africa is said to be many years away from adopting a fully online tuition approach. Various issues such as high data costs, inconducive home environments and incompatible student behaviors hinder the shift toward online tuition and drives the demand for in-person, traditional learning. This further underpins the continued demand, and need, for PBSA.

Similarly, any hybrid model that might be employed will in all likelihood still require students to live on, or close to, campus, and as such will in all likelihood not negatively affect the demand for PBSA.

5.2 STUDENT ACCOMMODATION RESPONSE MEASURES TO COVID-19 REQUIREMENTS

COVID-19 has resulted in a review of the design of norms and standards applicable to student accommodation (Meissenheimer, 2020). For instance, accommodation now has to allow for a reduced student density and communal amenities that involve less contact, such as changing the biometric access control from fingerprints to facial recognition.

A further example is the innovative pod design that STAG African engineered and patented more than a decade ago (Meissenheimer, 2020). Such a pod accommodates eight students in double or single bedrooms sharing a living and cooking area with ablution facilities of two showers and two toilets (STAG African, 2020). Should an outbreak occur in such a pod eight students are affected rather than the entire residence. In response to possible outbreaks, STAG residences now also include a separate flat where a nurse could live, as well as an isolation pod of four to eight rooms for use in an emergency or crisis (Meissenheimer, 2020).

These are but a small sample of responses taken by policy makers and operators alike to make student accommodation safer and more adaptable to the new requirements imposed on it by the pandemic. This section provides an overview of what these response measures have been, the impact they have had on operational costs and possible new MN&S that might be required in future.

5.2.1 Best Practice and Policy Response

The Minister of Higher Education, Science and Innovation published a notice in the Government Gazette on June 8, 2020 (DHET, 2020) setting out the DHET Risk adjusted strategy for the COVID-19 pandemic for public and private higher education: criteria for return to campuses. This document sets out the national guidelines for institutions to develop specific phase-in plans for the return of students and staff to campuses and residences. The pertinent points of the policy include:

- No student or staff member should return to campus or residence until they have received communication from their institution that they are able to do so.

- Once the institution has confirmed that it is ready for their return, and they have agreed to the necessary code of conduct, then the individuals recalled may do so.
- Health guidelines for higher education assist institutions to put relevant protocols in place and these should be adhered to at an institutional level.
- All tertiary institutions must identify isolation and quarantine facilities and develop (and publicize) protocols for any staff and students who presents with symptoms or tests positive.
- Each tertiary institution must complete a risk assessment for the return of employees and students in line with the regulations.
- Provision must be made for sanitation and screening of persons entering the tertiary institution.
- All institutions must have a COVID-19 Response Task Team in place, in line with regulations, to ensure responsiveness to ongoing issues.

The policy (DHET, 2020) further has a provision for return to residence that applies to all on-campus, institution managed/ leased off-campus, and private residences. The policy makes the following provisions:

- Students returning to residences should be identified at institutional level, concomitant with numbers that can be accommodated to enable physical distancing, the handling of communal spaces, hygiene requirements and dining hall arrangements.
- Students identified to return for contact teaching in terms of the phase-in plans may return to institution managed / leased residences before classes begin, provided the maximum percentage per residence identified for the level (Level 3 - 33 percent; Level 2 - 66 percent) is adhered to and all health and safety protocols are in place. Any deviation from these levels would require approval from the DHET and would need to show capacity to manage the strict protocols necessary.
- Students who live in private rented accommodation close to campuses may return, but their access to campus must be restricted to keep the campus population to one-third of the capacity, consistent with Level 3 risk for spread of the infection. Their access to residence must be managed as with all other students, subject to regular screening when entering residences.

- Students and staff in residences will have to sign a code of conduct to ensure that they adhere to the strict regulations in place (as demonstrated by some operators).
- Social solidarity must be encouraged to ensure the health and safety of all in the residences.
- Tertiary institutions must identify the students who may return to residences and provide permits to enable their return.

Under Level 1 of lockdown (in effect from September 21, 2020) 100 percent of the student population may return to campus (DHET, 2020). However, physical distancing and health protocols are still required. Similarly, social solidarity is also required. During this lockdown level, international students who were living abroad may return, provided that international travel is permitted.

Under Level 1 a move will be made to a 50 percent occupancy of rooms (classrooms) to a maximum of 250 persons indoors at a time, with ventilation of rooms remaining critical. It should be noted that universities have been implementing their own return strategies in line with their teaching and learning and campus readiness plans. Each institution has taken a different approach to the risk-adjusted, phased-in return, dependent on their context and readiness. Examples include WITS (WITS, 2020) who stated that teaching and learning programs will continue online as far as possible with selected students allowed to return to campus, and the University of the Western Cape (UWC, 2020) which remained online for the remainder of 2020.

All TVET college students had returned to campuses by 27 July 2020 to resume teaching and learning, practical training, internal assessments and national examinations.

In terms of return to residences, there were about 54,500 students living in university-owned residences by September 22, 2020 (South African Government, 2020), approximately 48 percent of the residence capacity. Additionally, institutions reported that there were a further 49,000 students living in university leased and managed accommodation, about 21,000 students living in university accredited private accommodation and about 34,500 living in other forms of private

accommodation. Some institutions indicated that not all students were taking up their invitations to return to campuses, preferring to continue to study remotely.

The Academic Year

In an October 2020 briefing the Minister announced that the 2020 academic year will be extended and is likely to only be completed in the first part of the 2021 calendar year. The Minister stated that in terms of the completion of the 2020 academic year, 10 universities aimed to complete the academic year before end-2020, four universities planned to end in January 2020, seven universities planned to complete it in February 2021 and five universities planned to complete in March 2021.

Further, the results from the National Senior Certificate (matric) examination was expected to be announced at the end of February, 2021. As a result, the start of the new academic year for first year university students will be staggered between March 8, 2021 and April 12, 2021. TVET colleges do not face the same altered academic year as universities, with the Minister for Higher Education, Science and Innovation (South African Government, 2020) announcing that the 2021 academic calendar makes adequate provision for both returning and new students to undertake their studies in 2021, with a normal academic cycle.

This extension of the academic year for universities has an impact on accommodation and tuition costs. The directive from the minister (DHET, 2020) states that in terms of tuition fees, the 2020 academic year is conceptualized as a 'package'—meaning that the cost should remain the same regardless of the timeframe needed for completion. The implication being that the cost for university-owned accommodation remains at the same level for the academic year, regardless of its length, capped to the end of March 2021. This assumes that while there may be periods of non-occupation, most students will return to complete the academic year.

NSFAS payments for university-owned accommodation will remain at the 2020 rate as with tuition fees (DHET, 2020). The cost for university-leased PBSA remains at the same level for the 2020 academic year, regardless of its length, subject

to an agreement that the original fee would be paid for both the 2020 academic year and the 2021 academic year, with an inflation-linked increase for 2021. This means that wherever possible, the cost of both academic years would be conceptualized as a package, and payments spread out over the full period (DHET, 2020).

Private, individually-leased PBSA (in particular accredited and registered PBSA) is requested to apply the principle that where there are periods of non-occupation of accommodation, monthly payments be reduced, based on a payment regime that spreads out the agreed costs over the extended 2020 academic year (DHET, 2020).

The minister (DHET, 2020) stated that NSFAS would continue to disburse accommodation allowances to beneficiaries, up to the agreed costs for the 10 months of the academic year. Institutions who pay private PBSA providers are instructed to do so in line with the agreed framework but to reduce monthly payments and spread the cost over the extended 2020 academic year.

Student Accommodation of the Future

Tech-ready student accommodation is set to be the future of PBSA in South Africa. Student accommodation must be able to accommodate students studying online since it is highly likely that although universities will resume, they will follow a hybrid teaching approach with both traditional (in class) and online tuition. As a result, accommodation should offer easy access to fiber and Wi-Fi, as well as have charging stations for cell phones and laptops. Given the high cost of data and relative unaffordability thereof to the largest portion of the student body, free and uncapped internet access should form part of the offering (Meissenheimer, 2020).

Schooling (Schooling, 2020) states an important fact in his recent article on the student accommodation response to COVID-19. Developers and operators need to future proof PBSA developments. "The challenge for universities and student accommodation providers is to look past the immediate circumstances, and project ourselves forward into a new reality" (Schooling, 2020). Future responses to the pandemic need to prioritize the construction of affordable,

pandemic-ready student accommodation to ensure the accessibility of post-school education across income brackets.

A short-term checklist for student accommodation (Meissenheimer, 2020) could include the following features:

- High-speed, uncapped Wi-Fi
- Uninterrupted electricity supply with possible off-grid (green) solutions
- Entrance security using facial recognition technology
- Smaller units to minimize social interaction and possible infections

5.2.2 Response by Property Managers and Operators

In response to COVID-19, PBSA operators employed various measures to comply with government regulations while keeping in mind the best interests of their students. Most operators closed their accommodation during the initial (Level 5) phase of lockdown. Under Level 3 students were able to systematically start returning to their accommodation. In general, the providers continuously communicated with their tenants regarding the rules and guidelines applicable during each phase of their return-to-residence. A sample of some of the rules and measures imposed as part of the COVID-19 response include the following (SouthPoint, 2020):

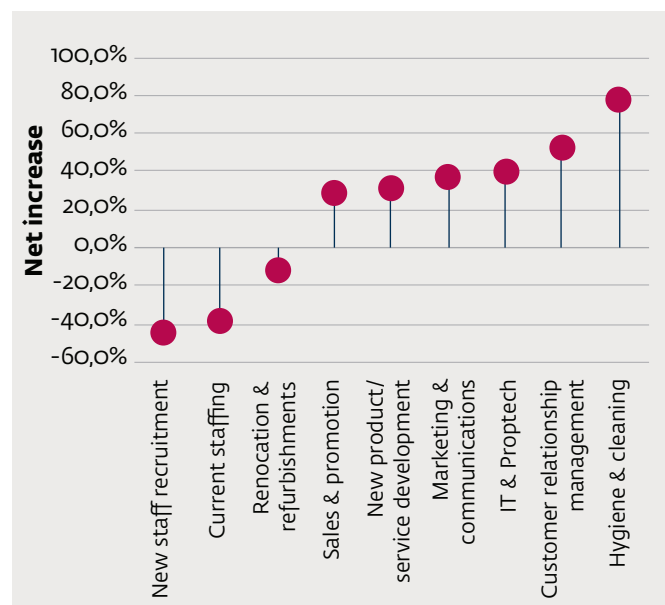
- No more than 2 students allowed in the kitchen, laundry area or elevator at the same time.
- No more than 4 students allowed in the shower areas at the same time.
- Closure of some communal areas (TV rooms, entertainment rooms and study areas)
- COVID-19 screening for all students every time they enter the building
- Cleaning of all reachable surfaces at least three times a day.
- No visitors allowed

Additional Cost

As can be expected, making changes in the way student accommodation is developed and operated has cost implications. Private sector stakeholders have indicated that one of the largest potential additional capex costs that could be incurred from COVID-19 is the cost of building accommodation that houses one student per room. Sean Kenealy of STAG African (Sawahel, 2020) proposes that on-site building activities, and therefore the cost of student bed space, could be significantly reduced by installing a cellular concrete walling system and adopting a Design for Manufacturing and Assembly (DfMA) approach to building.

Operators of student accommodation indicated that, to date, the largest increase in cost has been those associated with operating expenses, specifically cleaning and sanitizing costs. Figure 31 illustrates operational areas that will likely require adjusted budget allocations due to COVID-19, based on a JLL Survey of PBSA operators in the United Kingdom in May 2020 (JLL, 2020). From the graph it can be seen that the largest budgetary adjustment will be in the hygiene and cleaning line item – similar to feedback by South African operators.

Figure 31: Adjusted Budget Allocations due to COVID-19



Source: (JLL, 2020)

5.2.3 Possible New Minimum Norms and Standards Requirements

As stated in section 4.2 of this report, the DHET is in the process of reviewing and revising the MN&S for student accommodation. It is expected that this process will also take into consideration requirements and changes to accommodate COVID-19 specifications. This sub-section examines possible new requirements that could be included in the revised MN&S.

According to inputs from DHET (DHET, 2020) the risk of COVID-19 spread can be mitigated by, *inter alia*, the following in terms of student accommodation:

- Only constructing single rooms
- The abandonment of the spatial arrangement which calls for ablution blocks with individual shower cubicles accessed off a common space in favor of standalone bathrooms, where each bathroom is provided with a toilet, handwash basin and shower.
- The provision of additional handwash basins which are accessible from corridors or common spaces.
- The construction of kitchenettes without hot plates, where catering is provided at a university, requiring that all students make use of the catering provided by the university.

The above measures are aimed at limiting exposure to other students in bedrooms and common spaces.

Single rooms will require an additional floor area of 1 sqm per bed (maximum) (or 0,75sqm per bed minimum) if the new proposals are accepted. It will also require a doubling up of room doors and the addition of a room divider per double room. This additional floor area can be accommodated within the total student area of 14 sqm by reducing the size of other spaces through trade-offs. The one advantage is that it provides flexibility for postgraduate students (DHET, 2020).

In existing residences, double rooms can be subdivided into two single rooms. This will require a partition to be constructed and the installation of an additional door. The minimum room size of 7 sqm will need to be condoned. It should be noted in this regard that the Report on the Ministerial Committee for the Review of the Provision of

Student Housing at South African Universities (DHET, 2011) reports that rooms vary considerably in size across university campuses. An average single room for undergraduate students was 9 sqm, the range being from 6 to 14.3 sqm. A recently completed university of Venda residence provided a minimum of 7.3 sqm for a single room (DHET, 2020).

Standalone bathrooms will require more floor area. Again, this may be achieved through trade-offs in reducing other building spaces. It will also require 40 percent more showers and the installation of additional basins external to these standalone bathrooms. There will be a decrease in functional duality as the toilet and showers cannot be used simultaneously by different students. This could be offset to some extent by the additional handwash basins. However, coupled with the provision of single rooms only this arrangement will provide flexibility as residences can be gender neutral (DHET, 2020).

Health and safety risks, including those relating to COVID-19, are more likely to be controlled in the non-self-catering option where a single, central kitchen prepares food. This approach ensures that students will not be in close proximity to others in a confined cooking area. A staggering of meal times can further mitigate risks (DHET, 2020).

5.3 POTENTIAL CHANGES AND ANTICIPATED TRENDS

In addition to changes in how universities function and how student accommodation is developed and operated there could be potential changes in the investor and developer sentiment in the student accommodation market. In order to identify potential changes and anticipated trends in South Africa an assessment is made of changes within the greater European student accommodation landscape. It has been found that general trends applicable in these markets eventually filter down into less mature markets and as such could provide valuable insight for the South African market.

5.3.1 Lessons from Europe

Just before the outbreak of COVID-19, JLL (JLL, 2020) surveyed 70 global investors from a variety of different investor profiles, and pre-COVID-19 demand for the living sector

was extremely strong. However, the question stands: would important drivers of the market hold true after the crisis? The pre-COVID-19 survey found that the majority of investors were looking to expand their exposure to the student accommodation sector, up from the previous year (2019).

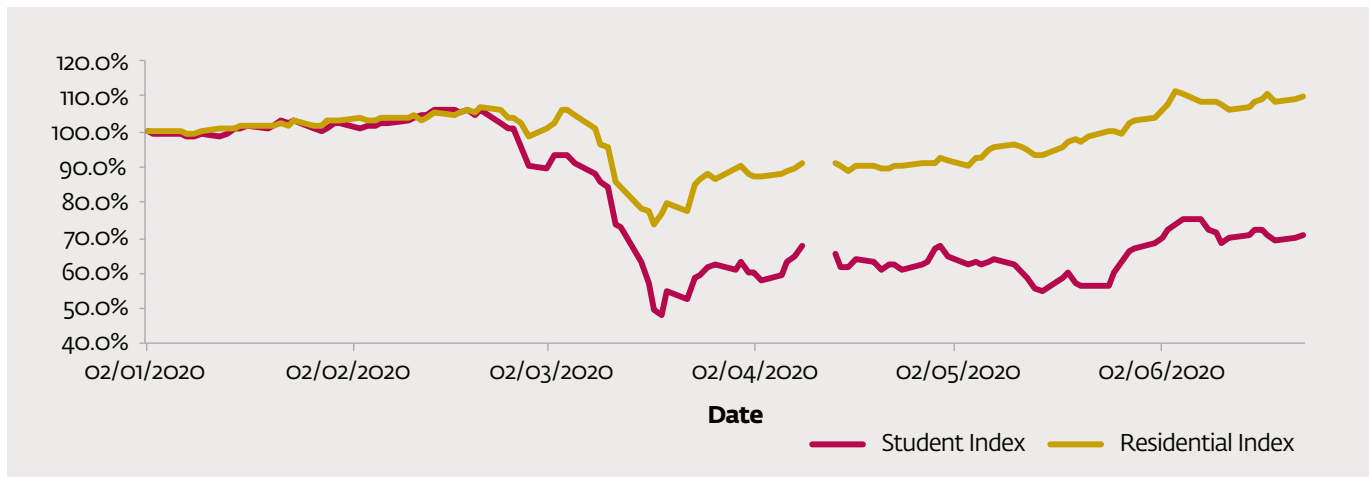
European real estate stocks fell sharply following the outbreak of the COVID-19 pandemic (see Figure 32). As a whole, the European and United Kingdom indices have recovered relatively well to over 75 percent of their January 1, 2020 value (JLL, 2020). Each of the living sectors has behaved differently over the course of the year. Unsurprisingly, given the uncertainty around term start dates and the ability of those students overseas (foreign students) to enter the United Kingdom, the student sector has fared worse than the wider residential market (JLL, 2020). In the interim the residential sector has performed surprisingly well and has now surpassed January 1 levels by around 10 percent. This is mainly driven by the strong performance of the four main players in the sector.

From a lender standpoint, the student accommodation sector was the most heavily affected by COVID-19 in the European Union living sector market (JLL, 2020) (see Figure 33). The primary reasons for subdued lender sentiment were:

- Near-term rent collection concerns
- Risk of Autumn 2020 classes being cancelled and/or postponed – protracting the period of materially-reduced income
- A potential structural shift in how and where students learn, especially with respect to international students

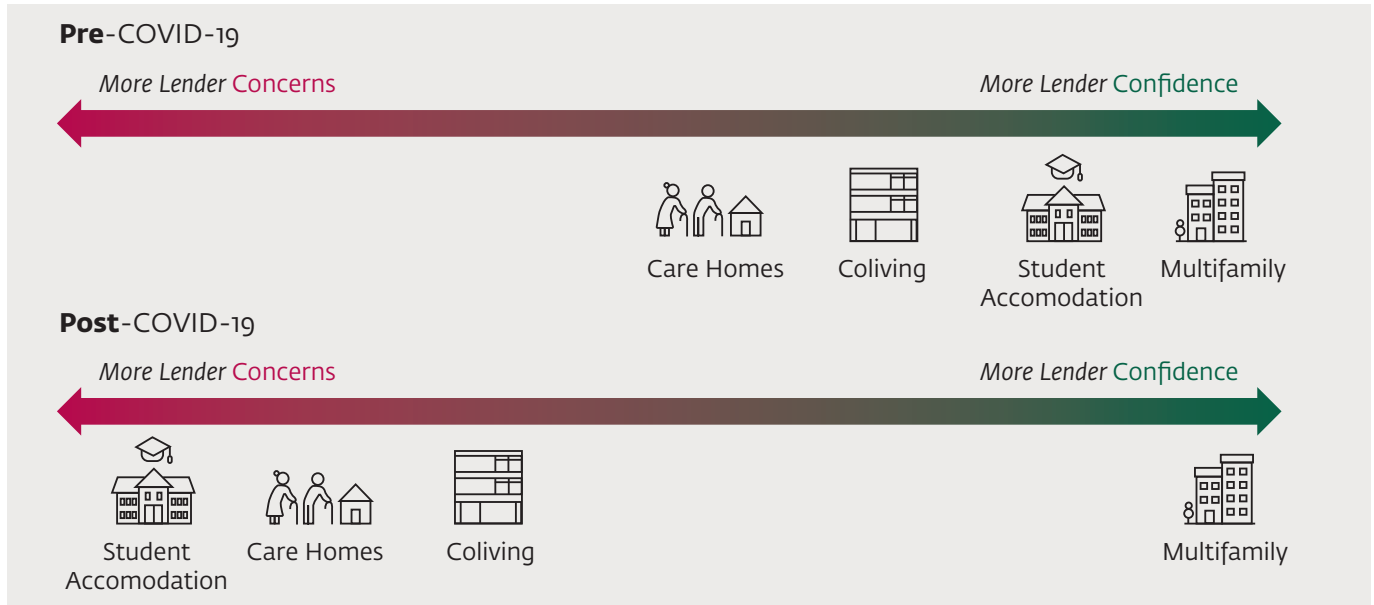
COVID-19 appears to have not dampened the demand for PBSA in the United Kingdom with bookings for the 2020/2021 academic year (as of June 2020) 1.4 percent ahead of the 2019/20 academic year (JLL, 2020) (see Figure 34). However, the pace of lettings growth has eased somewhat since April 2020. Overall, demand for PBSA is up by 0.5 percent year-on-year (JLL, 2020).

Figure 32: EU Real Estate Stock Value (Q1/Q2 2020)



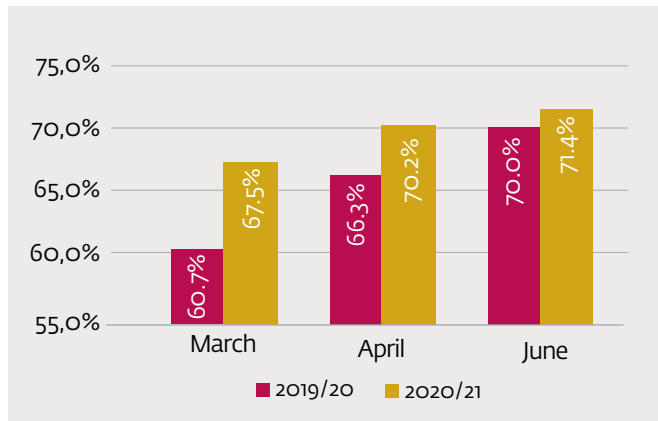
Source: (JLL, 2020)

Figure 33: Lender Sentiment Standpoint



Source: (JLL, 2020)

Figure 34: Bookings for Academic Year 2020/21



Source: (JLL, 2020)

The major take-aways, lessons learned and trends observed in European Union markets are, inter alia, the following (JLL, 2020):

- Rent collection is performing well
- Leasing for the next academic year is doing well and anticipated to pick up toward Q3
- Demand from international students is expected to drop in the short- to medium-term but is projected to recover
- PBSA remains undersupplied across most major European markets and completions are likely to be delayed due to COVID-19
- Demand for higher education is resilient in economic downturns
- Student accommodation has performed relatively well compared to other real estate sectors (for instance hospitality and industrial)
- Strong demand persists for contact or residential (not online) learning

5.3.2 Lessons and Anticipated Trends for South Africa

The full economic damage caused by COVID-19 and the lockdowns is uncertain. It will take several months, if not years, to have a better understanding of where the damage has occurred and how severe it is. While the magnitudes are uncertain, it is already clear that there will be a sharp decline in incomes, rising unemployment, and widespread business closures. For current and prospective students, lockdown-related job losses and salary cuts could affect their families' ability to afford tuition fees and accommodation. With affordability becoming an increasing need and consideration, the provision of affordable, well-designed student accommodation holds the key to addressing the high demand for student accommodation and, by extension, the future of higher learning in South Africa. Post-COVID-19 student accommodation should be able to provide two main things (Schooling, 2020):

- A residence that allows students to remain on campus during a pandemic.
- Accommodation that is affordable so that students, and their families, can continue to pay both tuition and accommodation fees, even during difficult economic times.

The PBSA sector has shown resilience through downturns in other markets (JLL, 2020), with families often choosing to forgo other expenditures to provide their children with higher education, and this may be the case for South Africa despite pressure on household income.

It appears from engagements with stakeholders across the country that NSFAS and other bursars and university head leases have continued to pay rent in full over the lockdown period. Operators have negotiated reductions in rentals directly and on an ad-hoc basis with parents (for non-NSFAS funded students) and agreed to reasonable terms given the changing circumstances of parents.

Investors are adopting a wait-and-see approach before making decisions on acquiring new PBSA. However, developers and investors have indicated that they will be going ahead with their pipeline projects that have passed approval stage, although they will be more cautious on projects only in inception stage.

Operators are of the view that given that the 2021 academic year is expected to start somewhat on time (at least for senior students, not necessarily first years), their revenues are anticipated to rebound back to pre-COVID-19 levels within the next academic year. However, should the academic year be pushed out severely, there is a risk of high vacancy rates and no rental income for the duration of the delay.

5.4 CONCLUSION

COVID-19 has permeated all facets of South African society, including post-school education and student accommodation. The pandemic has affected how students are taught, when academic years start and end and how providers develop and operate student accommodation. Table 18 summarizes the various impacts and trend predictions as a result of COVID-19 on the PBSA sector in South Africa over the short- medium- and long-term.

While adapting to the new reality posed by COVID-19 has posed numerous challenges, it should not necessarily be viewed as a calamity but rather an opportunity to improve and adapt for a changed world.

Table 18: COVID-19 Impacts and Trend Predictions

Short-Term	Medium-Term	Long-Term
<ul style="list-style-type: none"> • Occupancy risk and lower rent collection • Operator responses and health / wellbeing programs • Increased operational cost (additional cleaning) mitigated by operational cost savings (utilities) • Emergency online tuition interventions • Halt in construction 	<ul style="list-style-type: none"> • Return to campus and return to residence (>80 percent) • Construction completion delays • Potential to enhance online teaching programs • Possible moratorium on shared rooms • Increased operational costs • Staggered approach to 2021 academic year (first- year students starting later than senior students) impacting on occupancies and available space for first -year students 	<ul style="list-style-type: none"> • Impact on household income and affordability levels of student accommodation • Hybrid online tuition intervention – some classes provided in-person some online. This could generate additional PBSA demand due to increased enrolments and headcounts. • Internal fit-out, design and room size to address social distancing and other COVID-19 requirements • Increased operational (and potentially capital expenditure) costs for both public and private sector accommodation • Impact on financial resilience of universities

Source: (JLL, 2020)

6. THE DEMAND-SUPPLY GAP FOR STUDENT ACCOMMODATION IN SOUTH AFRICA: QUANTIFYING THE NEED

As stated in the introduction to this study, one of the greatest challenges to promoting post-school education in South Africa is the availability of quality, affordable student accommodation. This section endeavors to establish the demand-supply gap for student accommodation in South Africa in order to quantify the need in the market. Subsequently an estimation is provided of the current and forecast demand for student accommodation in the country. In order to further contextualize the demand an approximation is provided of the capital requirement needed to address this shortfall.

6.1 METHODOLOGY

For the purposes of calculating the effective demand and the net effective demand for student accommodation in South Africa the demand calculations were conducted at an institutional level for all public universities and TVET colleges. The calculations are informed by projections made from the most recent enrolment and institutional PBSA accommodation data available from the DHET to reflect 2020 enrolment rates.

In order to calculate the total private PBSA supply in the market, an extensive database of existing stock was compiled, which was subsequently mapped to aid in the demand calculation (see Annexure B).

In order to calculate the number of private PBSA beds associated with a specific institution, a 2km radius was used to identify the private supply located in close proximity to an institution's campus (and in the case where an institution has more than one campus, the total of each campus was aggregated to an institutional level). This enabled the comparison between the total contact student enrolment figures of an institution to the total on- and off-campus accommodation associated with the institution.

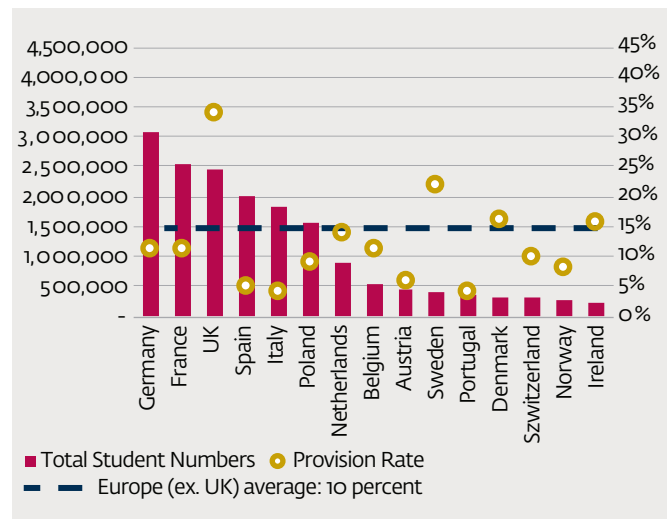
The most important assumption used in calculating the net effective demand in South Africa, is the PBSA-to-Student Ratio benchmark that is to be used. Many European countries use the United Kingdom's benchmark to calculate their Net

Demand Gaps as it is the most established and mature market in Europe.

Figure 35 shows that the European national provision rate (what is referred to as the PBSA-to-Student Ratio in this report) averages 10 percent (excluding the United Kingdom as it is seen as an outlier), ranging from as low as 2.5 percent in Portugal to just under 35 percent in the United Kingdom. The United Kingdom is considered to be the most developed student accommodation market in Europe and analysts predict that the other European Union markets will grow their national provision rates toward the United Kingdom's benchmark, but not beyond.

If all non-United Kingdom markets achieved 30 percent provision rates, on current student numbers, it would represent 3 million+ additional PBSA beds across the selected markets.

Figure 35: PBSA to Student Ratio Benchmarks from Europe



Source: (JLL, 2018)

However, the 35 percent United Kingdom benchmark cannot be used as a blanket approach, as there are several important differences that need to be accounted for, such as the size of the relevant institutions and various socio-economic and political factors. Given the aforementioned factors it can be concluded that the PBSA-to-Student ratio, or provision ratio, in South Africa should be higher than the 35 percent derived from the United Kingdom. It is therefore advised to adopt, and adapt. The DHET proposed a coverage of 50 percent of enrolments for urban campuses and 80 percent for rural campuses to calculate the Net Demand Gap.

For the purpose of this study, a weighted average ratio of 68 percent was calculated, which was applied to determine the net effective demand. The rationale behind using a weighted average is due to the calculation being done at an institutional level as opposed to a campus level (with some institutions having campuses in both dense urban areas and rural towns).

6.2 ESTABLISHING THE NET EFFECTIVE DEMAND FOR STUDENT ACCOMMODATION

The Net Effective Demand is a function of the total contact student enrolment rates at both public universities and TVET colleges, the total on- and off-campus PBSA supply associated with an institution and the PBSA-to-Student ratio described in the previous section.

Essentially, the demand calculation methodology for PBSA employed by this study applies a bottom-up approach which calculates the demand at an institutional level for each of the various public universities and TVET colleges, which is then aggregated to a provincial and national level.

Essentially, the demand for PBSA is calculated by applying the PBSA-to-Student Ratio to the institutional enrolment rates (which calculates the effective demand) and subtracting the associated supply to derive the total net effective demand.

This can be described as follows:

$$f = (E \times PR) - TS$$

where: f = Net Effective Demand
 E = Institutional Enrolment Rates
 PR = PBSA-to-Student Ratio
 TS = Total on- and off-campus PBSA supply associated with an institution

Based on this formula and approach it was possible to calculate the approximate net effective demand on a macro (national), meso (provincial) and micro (institutional) levels. Table 19 and Table 20 present the estimated net effective demand for relevant institutions (public universities and TVET colleges).

Table 19: Public University PBSA Demand

	2020 Enrolments (Contact Students)	Public PBSA	Private PBSA (2km radius)	Total PBSA	PBSA Ratio	Effective Demand	Net Effective Demand
Cape Peninsula University of Technology	32,876	5,843	10,253	16,096	49%	16,780	6,260
Central University of Technology	19,762	1,118	405	1,523	8%	18,239	11,915
Durban University of Technology	32,122	2,611	19,369	21,980	68%	10,142	-137
Mangosuthu University of Technology	13,733	1,886	0	1,886	14%	11,847	7,452
Nelson Mandela University	29,253	3,295	2,249	5,544	19%	23,709	14,348
North West University	50,664	9,215	5,713	14,928	29%	35,736	19,523
Rhodes University	7,791	3,657	120	3,777	48%	4,014	1,521
Sefako Makgatho Health Sciences University	7,599	1,573	0	1,573	21%	6,026	3,594
Sol Plaatje University	3,527	978	0	978	28%	2,549	1,421
Tshwane University of Technology	65,738	10,164	8,762	18,926	29%	46,812	25,776
University of Cape Town	27,878	6,579	6,317	12,896	46%	14,982	6,061
University of Fort Hare	18,431	5,089	2,539	7,628	41%	10,803	4,905
University of Free State	42,037	5,978	2,258	8,236	20%	33,801	20,349
University of Johannesburg	46,937	6,481	30,091	36,572	78%	10,365	-4,655
University of KwaZulu - Natal	49,542	7,384	1,715	9,099	18%	40,443	24,589
University of Limpopo	22,728	7,316	320	7,636	34%	15,092	7,819
University of Mpumalanga	6,624	1,353	0	1,353	20%	5,271	3,151
University of Pretoria	49,875	8,044	27,078	35,122	70%	14,753	-1,207
University of South Africa	0	0		0	0%	0	0
University of Stellenbosch	32,706	7,931	3,776	11,707	36%	20,999	10,533
University of The Western Cape	24,366	3,656	0	3,656	15%	20,710	12,913
University of Venda	19,000	2,036	0	2,036	11%	16,964	10,884
University of Witwatersrand	39,436	6,336	28,620	34,956	89%	4,480	-8,139
University of Zululand	16,916	4,354	0	4,354	26%	12,562	7,149
Vaal University of Technology	20,390	3,081	1,838	4,919	24%	15,471	8,946
Walter Sisulu University of Technology	33,219	5,354	2,463	7,817	24%	25,402	14,772
Total	713,150					437,952	209,744

Source: (JLL, 2020)

Table 20: TVET PBSA Demand

Institution	2020 Enrolments (Contact Students)	Public PBSA	Private PBSA (2km radius)	Total PBSA	PBSA Ratio	Effective Demand	Net Effective Demand
Boland TVET College	6,075	782	2,908	3,690	61%	2,385	441
Buffalo City TVET College	5,263	397	1,146	1,543	29%	3,720	2,036
Capricorn TVET College	22,759	782	162	944	4%	21,815	14,532
Central Johannesburg TVET College	10,817		0	0	0%	10,817	7,356
Coastal TVET College	11,929	754	0	754	6%	11,175	7,358
College of Cape Town for TVET	9,092	252	2,513	2,765	30%	6,327	3,418
Eastcape Midlands TVET College	7,271		0	0	0%	7,271	4,945
Ehlanzeni TVET College	11,456	50	2,301	2,351	21%	9,105	5,439
Ekurhuleni East TVET College	13,560	210	0	210	2%	13,350	9,011
Ekurhuleni West TVET College	14,966		0	0	0%	14,966	10,177
Elangeni TVET College	8,547	72	1,144	1,216	14%	7,331	4,596
Esayidi TVET College	8,775	873	0	873	10%	7,902	5,094
False Bay TVET College	7,769	179	0	179	2%	7,590	5,104
Flavius Mareka TVET College	7,937	103	0	103	1%	7,834	5,294
Gert Sibande TVET College	11,158	80	0	80	1%	11,078	7,508
Goldfields TVET College	5,777		0	0	0%	5,777	3,929
Ikhala TVET College	6,440		0	0	0%	6,440	4,379
Ingwe TVET College	10,231		0	0	0%	10,231	6,957
King Hintsa TVET College	4,783	500	0	500	10%	4,283	2,752
King Sabata Dalindyebo TVET College	7,786		0	0	0%	7,786	5,294
Lephalale TVET College	5,126		0	0	0%	5,126	3,486
Letaba TVET College	4,747		0	0	0%	4,747	3,228
Lovedale TVET College	4,653	384	0	384	8%	4,269	2,780
Majuba TVET College	18,665		0	0	0%	18,665	12,692
Maluti TVET College	10,707	172	0	172	2%	10,535	7,109
Mnambithi TVET College	5,905	574	0	574	10%	5,331	3,441
Mopani South East TVET College	6,906		0	0	0%	6,906	4,696
Motheo TVET College	14,483	234	0	234	2%	14,249	9,614
Mthashana TVET College	4,103	800	0	800	19%	3,303	1,990
Nkangala TVET College	15,156	300	0	300	2%	14,856	10,006

Institution	2020 Enrolments (Contact Students)	Public PBSA	Private PBSA (2km radius)	Total PBSA	PBSA Ratio	Effective Demand	Net Effective Demand
Northern Cape Rural TVET College	3,522	100	0	100	3%	3,422	2,295
Northern Cape Urban TVET College	3,524	712	0	712	20%	2,812	1,684
Northlink TVET College	13,277	322	403	725	5%	12,552	8,303
Orbit TVET College	11,814	560	0	560	5%	11,254	7,474
Port Elizabeth TVET College	7,231	250	0	250	3%	6,981	4,667
Sedibeng TVET College	15,338		0	0	0%	15,338	10,430
Sekhukhune TVET College	7,087	746	0	746	11%	6,341	4,073
South Cape TVET College	4,951	250	0	250	5%	4,701	3,117
South West Gauteng TVET College	22,305	280	0	280	1%	22,025	14,887
Taletso TVET College	5,741	460	0	460	8%	5,281	3,444
Thekwini TVET College	6,587	220	0	220	3%	6,367	4,259
Tshwane North TVET College	16,179	24	0	24	0%	16,155	10,978
Tshwane South TVET College	10,969		0	0	0%	10,969	7,459
uMfolozi TVET College	8,658	964	0	964	11%	7,694	4,923
Umgungundlovu TVET College	5,962		0	0	0%	5,962	4,054
Vhembe TVET College	16,241	300	0	300	2%	15,941	10,744
Vuselela TVET College	6,909	317	0	317	5%	6,592	4,381
Waterberg TVET College	5,213	540	0	540	10%	4,673	3,005
West Coast TVET College	7,850	1088	0	1,088	14%	6,762	4,250
Western TVET College	18,862		0	0	0%	18,862	12,826
Total	481,062					455,854	301,914

Source: (JLL, 2020)

It is evident from the tables that there is significant demand for PBSA in South Africa. The net effective demand at public universities is estimated at 209,744 beds (41 percent of total demand) while the demand at TVET colleges are calculated at 301,914 beds (59 percent of total demand). This equates to a total PBSA net effective demand for student accommodation of approximately 511,685 beds across South Africa.

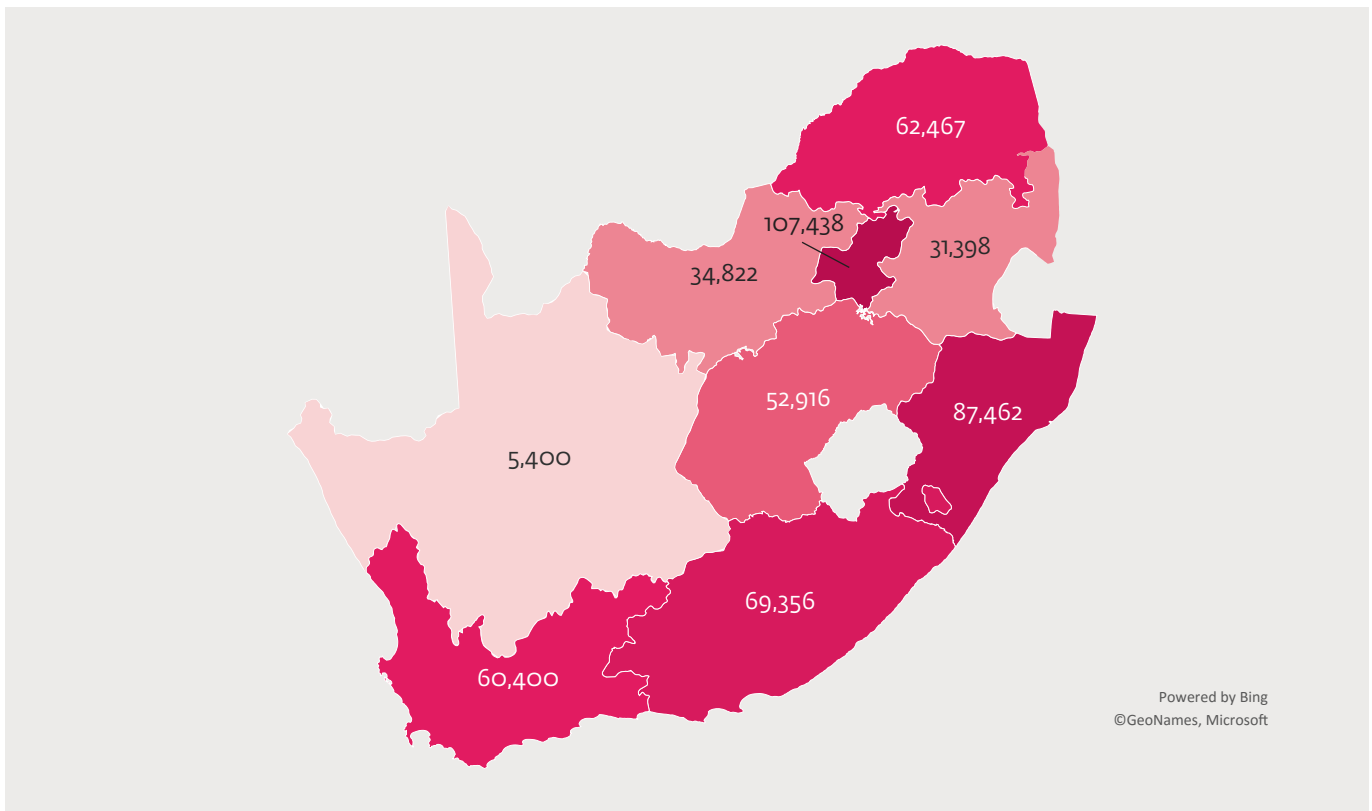
Map 3 presents an overview of the net effective demand for PBSA at a provincial level for 2020. Future demand is projected in section 6.3.

Currently, urban centers are the best served with PBSA. As such it can be surmised that strong demand exists within rural areas. It should be noted that rural areas aren't classified as only very small towns or far flung settlements. Rural areas also

include somewhat isolated, medium-sized urban centers that draw in students from a large catchment area, for example Potchefstroom or Kimberley. It is anticipated that these areas could have a real demand for student accommodation and should not be overlooked for investment.

If an average female enrolment distribution of 58.3 percent (59.1 percent for public universities and 57.6 percent for TVET colleges) is applied, then it can further be deduced that around 298,000 of the student beds in demand should be targeted at the female market. Female orientated student accommodation is typically associated with specific safety concerns that do not always apply to male-only accommodation. The magnitude of this demand could be used to guide future public and private investment into the sector.

Map 3: Net Effective Demand at Provincial Level (2020)



Source: (JLL, 2020)

6.2.1 Institutions with the Highest Demand

As previously explained, it was possible to calculate net effective demand on an institutional level. This was done for all public universities and TVET colleges across South Africa. Figure 36 presents an overview of the top 10 institutions with the highest demand for PBSA.

An interesting comparison to make is evaluating the phase 1 and 2 SHIP projects and comparing them to the campuses that have the highest demand. Out of the 17 SHIP projects earmarked for phase 1 and 2, nine of them are located at institutions with the highest demand (as per Figure 36). This means that more than half of the earmarked SHIP projects will be developed at these institutions and that the figures align with DHET’s prioritization of projects.

Figure 36: Institutions with Highest Demand (No of Beds)

Tshwane University Of Technology, 25,776	University Of Free State, 20,349		North West University, 19,523	
	South West Gauteng TVET College, 14,887	Capricorn TVET College, 14,532	Nelson Mandela University, 14,348	
University Of KwaZulu-Natal, 24,589	Walter Sisulu University For Technology, 14,772	University Of The Western Cape, 12,913	Western TVET College, 12,826	

Source: (JLL, 2020)

It should be noted that net effective demand does not necessarily translate into unmet demand (students with nowhere to sleep). It is merely a calculation of the number of students not housed in PBSA (as per the definition of this study). Hence, students living in communes, traditional residential units,

sectional title apartments or back rooms, are accounted for in the net demand figure.

6.2.2 Demand Gap at Public Universities

As previously mentioned, the net effective demand for student accommodation at public universities in South Africa amounts to approximately 209,000 beds in 2020. The Tshwane University of Technology has the highest demand (in excess of 25,000 beds across all campuses) followed by the University of Kwazulu-Natal (about 24,500 beds) and the University of the Free State (20,000), which all have a net effective demand north of 20,000 beds.

Table 21 presents an overview of major public university campuses with the lowest PBSA to student ratio (JLL, 2020). The PBSA to student ratio is a measure of the number of PBSA beds (as per the definition of PBSA set out in this document) in relation to an institution’s enrolment rates. A low ratio indicates a perceived under provision of PBSA at the institution and acts as a guide to identify institutions which may have a need for more PBSA beds. It is evident from Table 21 that the Central University of Technology, University of Venda, and Mangosuthu University of Technology are the three institutions with the lowest PBSA to student ratio, indicating a large supply gap at these intuitions.

Table 21: PBSA-to-Student Ratio (Major University Campuses-only)

No	Institution	PBSA-to-Student Ratio
1	Central University of Technology	8%
2	University of Venda	11%
3	Mangosuthu University of Technology	14%
4	University of the Western Cape	15%
5	University of Kwazulu-Natal	18%
6	Nelson Mandela University	19%
7	University of Free State	20%
8	University of Mpumalanga	20%
9	Sefako Makgatho Health Sciences University	21%
10	Walter Sisulu University of Technology	24%

Source: (JLL, 2020)

6.2.3 Demand Gap at TVET Colleges

Demand for student accommodation at TVET colleges outstrips that of public universities by nearly 92,000 beds to total around 301,000 beds in 2020. Since many TVET college campuses are situated in more rural areas, it is worth noting the change in demand after assuming an 80 percent PBSA-to-student ratio (as opposed to the weighted average of 68 percent used in this study). Under this assumption, the net effective demand at TVET colleges is estimated at 359,642 beds – around 57,700 beds more than under the previous calculation. The implication being that net effective demand for PBSA at TVET colleges could be even higher than the stated figure. The 68 percent benchmark is possibly a conservative assumption if one takes as correct the 2010 Ministerial Committee recommendation of coverage of 50 percent of enrolments for urban campuses and 80 percent for rural campuses. With most TVET colleges located in rural areas the average coverage could be closer to 80 percent, but a coverage of 68 percent has been used to represent and account for both urban and rural campuses as a benchmark.

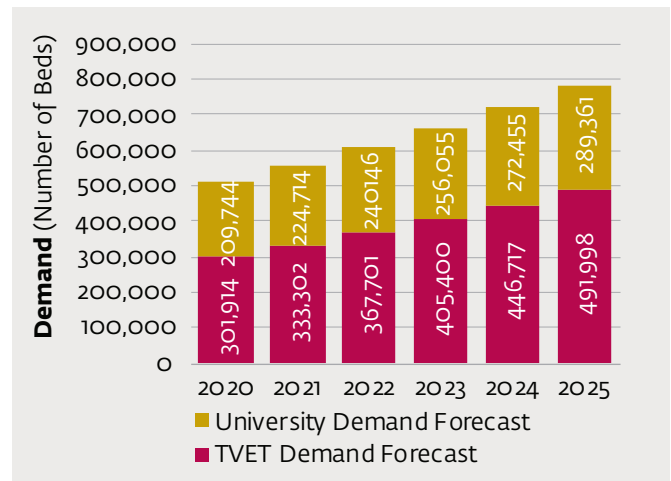
The top three TVET colleges with the highest demand include South West Gauteng TVET college (about 15,000 beds), Capricorn TVET college (about 14,500 beds), and Western TVET college (around 12,800 beds), which all have an institutional demand of more than 12,000 beds.

The DHET has recently started conducting extensive research into the accommodation situation at TVETs, with the final findings of the research team due at the end of March 2021. Their preliminary findings, based on a February 2020 survey, shows that only 14,631 on-campus beds are being supplied to around 481,062 full-time contact TVET college students. Based on primary research done for this study, there is almost no formal private PBSA being provided off-campus that is solely dedicated to TVET colleges – indicating a low level of supply.

6.3 FORECAST DEMAND FOR STUDENT ACCOMMODATION

Crucial to determine is the future demand for student accommodation in South Africa as this is set to inform applicable policy as well as public and private sector initiatives. In order to determine how demand for PBSA will change over the next five years (2020 – 2025), demand forecasts have been made based on enrolment growth rates and current public and private PBSA offerings in the market. Figure 37 illustrates the results of the demand forecasts.

Figure 37: 5-Year Demand Forecast (No of Beds)



Source: (JLL, 2020)

From the demand forecast results it can be seen that demand for PBSA at public universities is expected to increase by about 79,600 beds between 2020 and 2025 to reach around 289,000 beds by 2025. TVET college demand is expected to increase by around 190,000 beds over the same period to total 492,000 beds in the next five years.

From the demand extrapolation it can also be seen that the bulk of current and future demand for PBSA lies within the TVET college space, yet this sector continuously receives the smaller portion of funding (see section 3 of this report). A further deduction can be made that, given the comparable lower levels of affordability of TVET college students, the onus of future demand for student accommodation will be in the affordable segment of the market.

Factors that could affect the future demand for student accommodation includes government funding, the drive to provide free education and goals to grow student enrolment figures. It is not expected that virtual learning courses will have significant effect on demand as the hybrid model expected to materialize will, in all likelihood, require students to take both contact and online courses which will still require the provision of PBSA near campuses. All of these could potentially result in a higher growth rate in student headcounts which, in turn, would relay into a higher demand for student accommodation.

As such, given the above scenario as well as the conservative student-to-bed ratios used for TVET college demand calculation, the demand figures provided in Figure 37 can be considered as conservative baseline estimations.

6.4 NSFAS DRIVING STUDENT ACCOMMODATION DEMAND

As previously established, NSFAS plays a significant role in financing post-school education for many students in South Africa. NSFAS also allocates accommodation allowances for both university and TVET college students, which inherently drives the need for affordable student accommodation. When considering that around 33.7 percent of contact students enrolled at the various public universities and TVET colleges receive NSFAS funding and of this 33.7 percent, 48.4 percent receive an accommodation allowance, it is clear that NSFAS funding is a major driver for student accommodation.

To this end, it is useful to calculate the demand for student accommodation generated by NSFAS-funded students specifically. Based on calculations informed by the most recent statistics available on NSFAS funding and enrolment rates at the

various higher education institutions, is estimated that NSFAS funding generates a demand of about 252,500 beds in 2020 by providing accommodation allowances to bursary students. Should a similar ratio of NSFAS funding be maintained over the next five years, it is expected that the bursary scheme will generate an additional demand for around 84,000 by 2025. Assuming a similar average funding value of ZAR 35,987 per student as reported for 2018, it is expected that an increase of about 84,000 students would necessitate an increase of around ZAR 3.02 billion in NSFAS funding by 2025. This would translate to an annual budget increase of about ZAR 605 million (for the period 2020 to 2025). This is deemed realistic considering that the average annual increase in NSFAS funding from 2012 to 2018 had been around ZAR 2.1 billion.

Considering that NSFAS allowances have a cap for accommodation, the bursary is a major driver for affordable PBSA beds, and this market segment is set to continue. Table 22 illustrates the breakdown and methodology for calculating the estimated student accommodation demand generated by NSFAS-funded students in the period 2020 to 2025.

6.5 FUNDING GAP: CAPITAL REQUIREMENTS TO MEET DEMAND

Now that the current demand for PBSA has been established it is necessary to determine the capital requirements needed to meet this demand in order to ascertain the funding gap for the same. The Net Demand Gap calculations discussed in section 6.2 were used as the basis of calculating the funding gap. It is to be noted that this funding gap analysis is based on 2020 enrolment figures and does not take into account projected growth. The estimated funding gap can therefore be considered to be relatively conservative since, if the government were to

Table 22: NSFAS Generated Student Accommodation Demand

	No of Contact Students	Percent NSFAS Funded Students*	Estimated No. of NSFAS Funded Students	percent of NFAS Students with Accommodation Allowances*	Total NSFAS Student Accommodation Demand
2020	1,194,212	43.7%	522,067	48.4%	252,507
2025	1,592,856	43.7%	696,340	48.4%	336,369

Source: (JLL, 2020)

*Based on (DHET, 2020) ratios

reach its stated growth targets of 1.6 million public university students by 2030, the funding gap would most likely increase (especially if there are delays in the roll-out of the SHIP).

If the Net Demand Gap figure is used for public university campuses of 209,000 beds and an average build cost per bed factor of ZAR 225,000 (which is the estimated cost of one PBSA bed according to (DHET, 2011)) is applied, a funding gap at university campuses of an estimated ZAR 47 billion is established.

If the same average bed cost of ZAR 225,000 is applied to the Net Demand Gap figure for TVET colleges of 301,000, the funding gap figure amounts to ZAR 68 billion.

Table 23 presents an overview of the estimated funding gap in South Africa for both public universities and TVET colleges based on the calculated 2020 supply-demand gap. Based on this calculation, it can be surmised that there is a significant funding gap of about ZAR 115 billion which needs to be met in order to provide sufficient PBSA to the market to meet the 2020 demand. This calculation does not take into account the increase in the funding gap that would emerge as more students enroll at the various institutions in the future. This natural growth is expected to further widen the funding gap in the market.

Table 23: Hypothetical Funding Gap at Public Universities and TVET Colleges

Institution	Net Demand Gap (number of beds)	Assumed Construction Cost Per Bed (ZAR)	Total Cost (ZAR)
Public Universities	209,744	225,000	47.19 bn
TVET Colleges	301,914	225,000	67.93 bn
Total	511,658		115.12 bn

Source: (JLL, 2020)

6.6 CONCLUSION

Demand for PBSA in South Africa is driven by rapidly increasing enrolments and growth in the government funding for the same. Conservative net effective demand estimation for 2020 put the demand for student accommodation at public universities at around 209,744 beds while the demand at TVET colleges is estimated at 301,914 beds. This brings the total current (as of 2020) demand for additional student beds to 511,658 in total. This demand is projected to grow to a total of around 781,000 beds within the next five years (by 2025).

The NSFAS allowance is also a major driver for affordable PBSA stock in the market and is set to continue to increase in the near future. Not only will NSFAS continue to put pressure on the provision of PBSA in the country, developers will need to start developing innovative solutions to reduce the cost of PBSA beds in order to provide a cost effective solution for NSFAS funded students while meeting internal financial targets. Of the students currently enrolled at public universities and TVET colleges approximately 43.7 percent receive NSFAS funding. Of these NSFAS-funded students, about 48.4 percent receive accommodation allowances. If this apportionment is applied to the demand gap for student accommodation it can be deduced that about 252,500 beds are currently (2020) required to meet NSFAS demand. This is projected to grow to around 336,300 by 2028. From this calculation it can be surmised that more than 43 percent of demand for student accommodation currently, and in the future, is expected to materialize in the affordable segment of the market.

The supply-demand gap has resulted in a notable funding gap that needs to be addressed in order to accommodate the growing need for PBSA beds in the country. At an average bed rate of ZAR 225,000 it is projected that in excess of ZAR 115 billion will be required to meet the 2020 supply-demand gap of around 511,658 beds. This figure puts into context the great demand for PBSA in South Africa as well as the equally great response required to meet this demand. Such a task cannot be accomplished by either the private or public sector alone and will necessitate partnership and cooperation in order to ensure that the goal of quality, affordable accommodation is met.

ANNEXURE A – PROJECT METHODOLOGY

Project Background

The International Finance Corporation (IFC) commissioned JLL, a property consultancy company specialising in property services and investment management, to produce a comprehensive market study assessing student accommodation in South Africa.

As part of its global mandate, the IFC aims to create opportunities where they are needed the most. Through this directive, the IFC has identified the training of quality graduates from the post-school education and training system as a developmental challenge for South Africa. A main component of this challenge is the delivery of adequate student accommodation, which relates to both the deficit in producing accommodation but also the availability of accurate and up-to-date information concerning this market segment.

The objective of this market study is to provide information on the student accommodation market in South Africa highlighting and unpacking, inter alia, the following aspects:

- Current and future supply of, and demand for, student accommodation at South African tertiary institutions
- The economic and social requirements pertaining to the delivery of student accommodation
- The costs (construction, operational and maintenance) associated with providing student accommodation

The purpose of curating this information is to assist the public and private sector in South Africa in collectively finding economically viable and sustainable solutions to providing quality student accommodation across the country.

JLL provided a bespoke market study on the student accommodation market in South Africa by gathering information by reviewing reports, conducting research and collecting data through interviews and surveys.

Methodology

In the study of the student accommodation market in South Africa research was aggregated on a provincial, institutional and nodal level. Market research was conducted to obtain primary and secondary information required for analysis under various sections of our scope of work. Information was collected on a best-efforts basis.

The market study was based on:

Field Research

- Interviews with the majority of the major and key professionals in the student housing industry in South Africa, including developers, investors, funders, leasing agents, operators, property managers and stakeholders in tertiary institutions as well as the DHET, NSFAS and DBSA.

Desk-based Research of

- Websites of real estate agents, major developers and student accommodation facilities
- Websites of tertiary institutions
- Press releases and news articles
- Published statistics

While the best public data sources available were used, it should be noted that there are limitations on the reliability of data sources as student housing markets in South Africa are particularly opaque and information is not as readily available as in more mature markets.

Data collection and analysis

Data was collected from public sources as well as JLL's own primary research. DHET, DBSA and National Treasury provided certain quantitative and qualitative inputs to the report.

Interviews with government departments

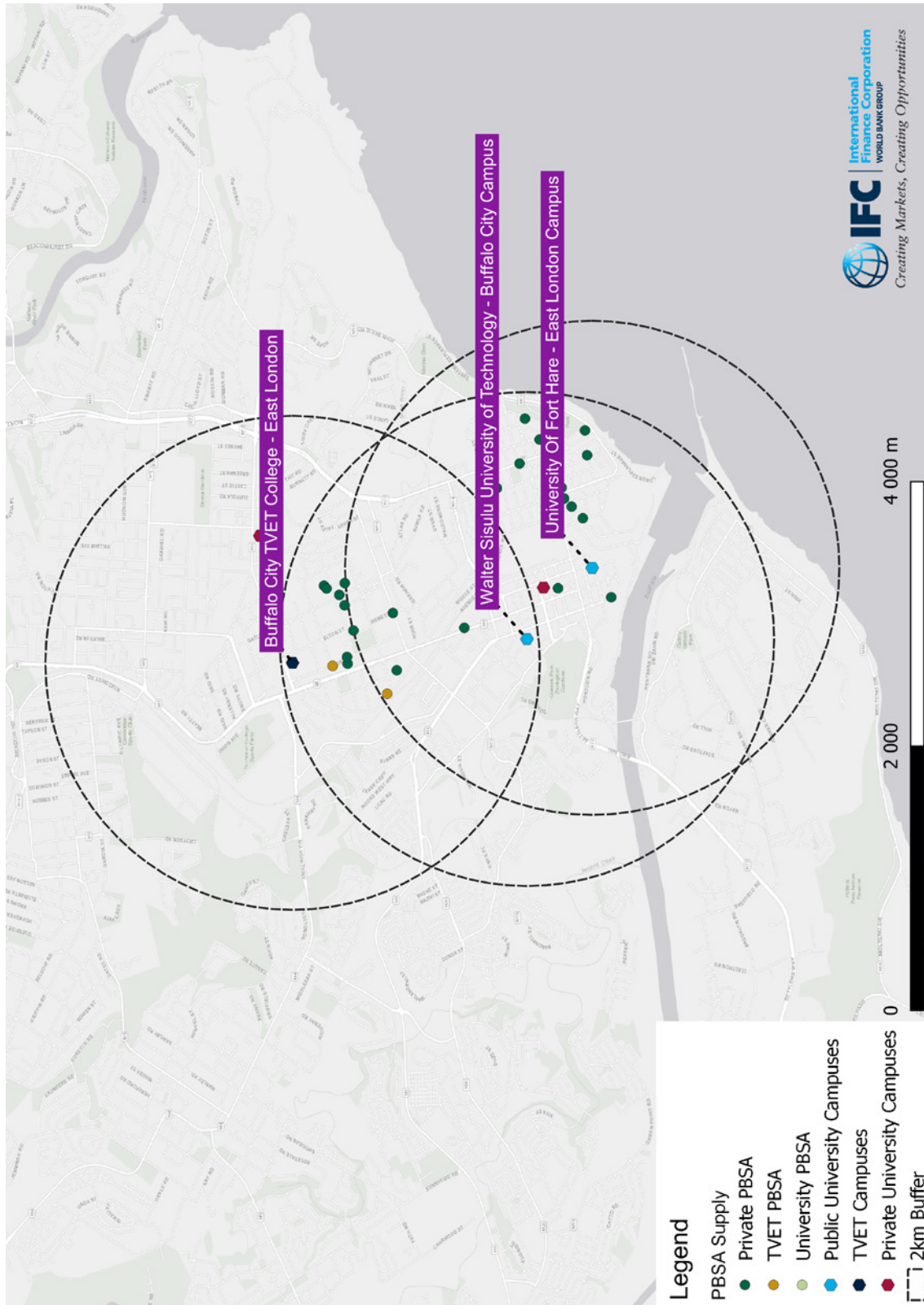
Stakeholder engagement discussions with representatives of the government departments that oversee and fund higher education, including the DHET and NSFAS were held. Discussions were also held with senior representatives of the DBSA and SHIP MO.

Research

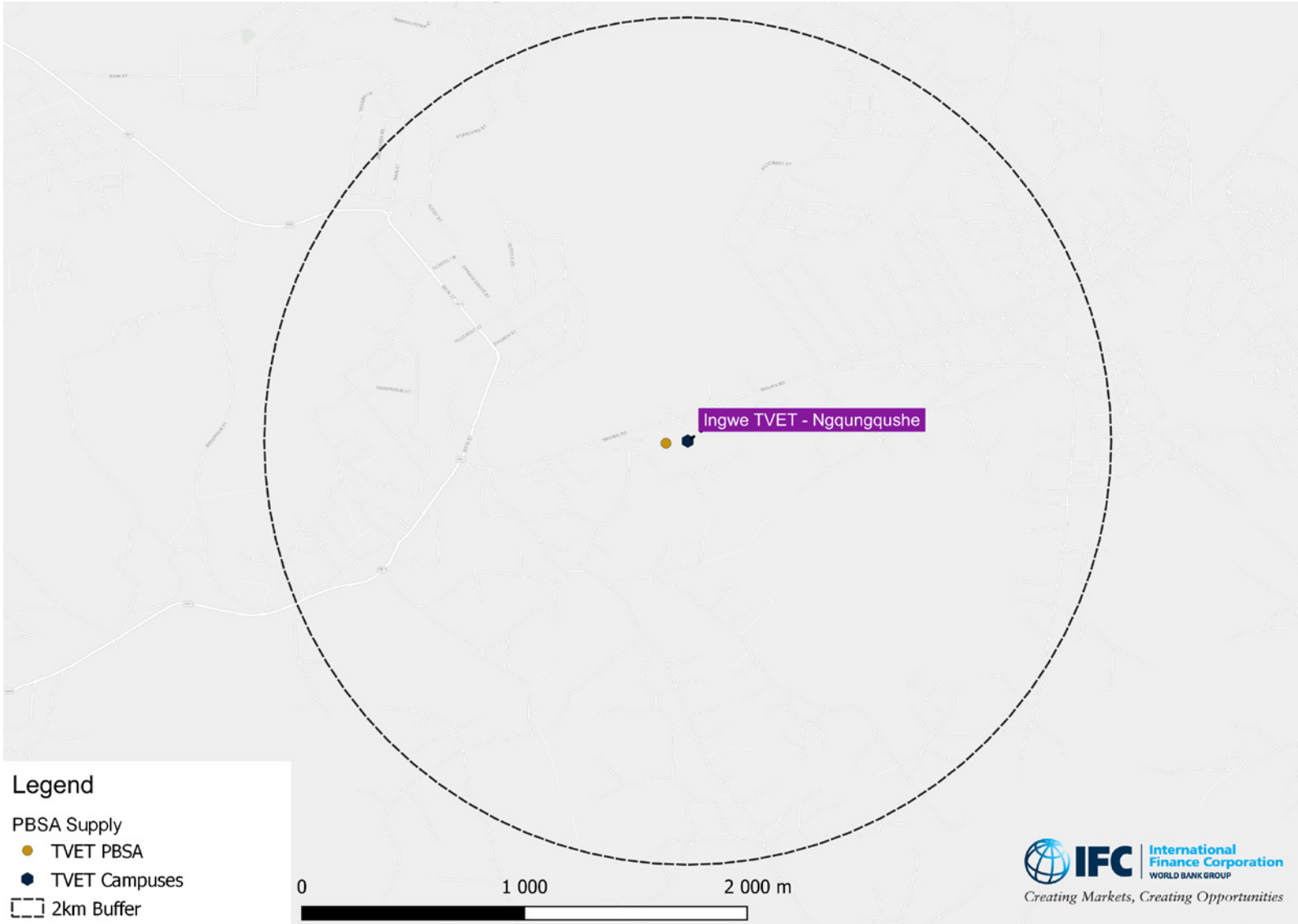
Research was conducted on higher education and further education and training enrolments, existing and future student accommodation provision and cost projections for these sectors.

ANNEXURE B – GEOMAPPING OF PBSA

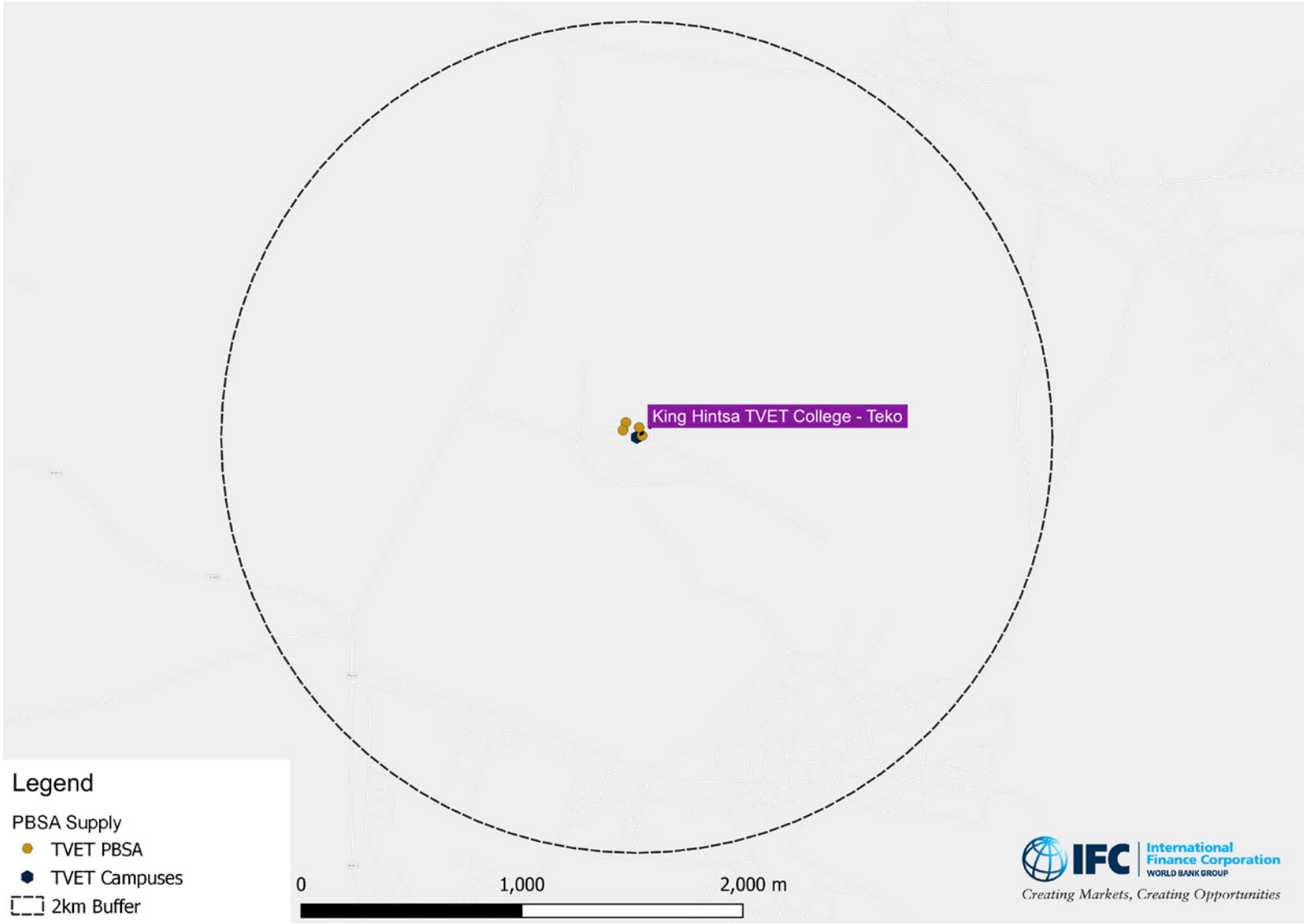
Map 4: East London Node



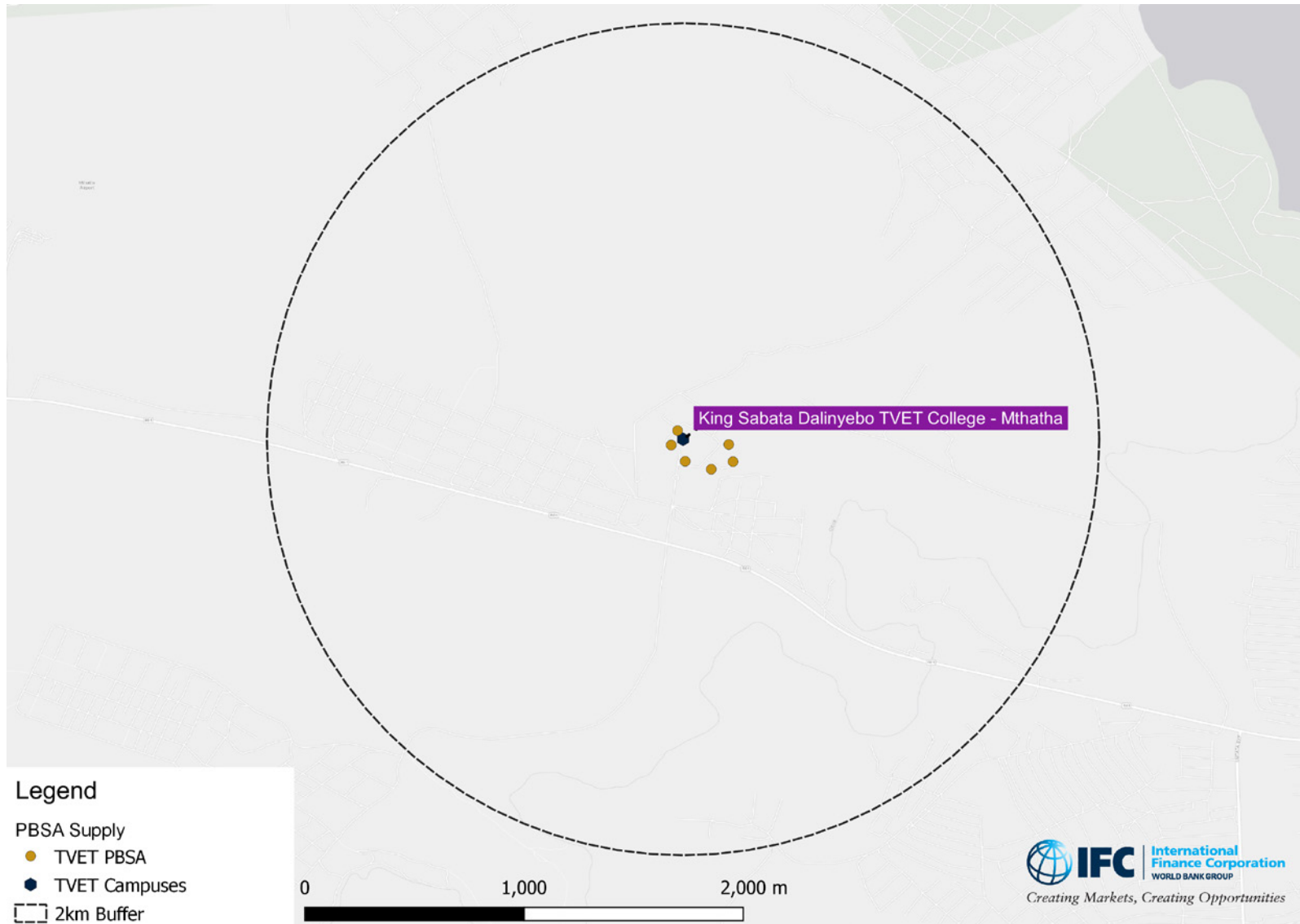
Map 5: Ingwe TVET - Ngqungqushe



Map 6: King Hintsa TVET College - Teko



Map 7: King Sabata Dalinyebo TVET College - Mthatha



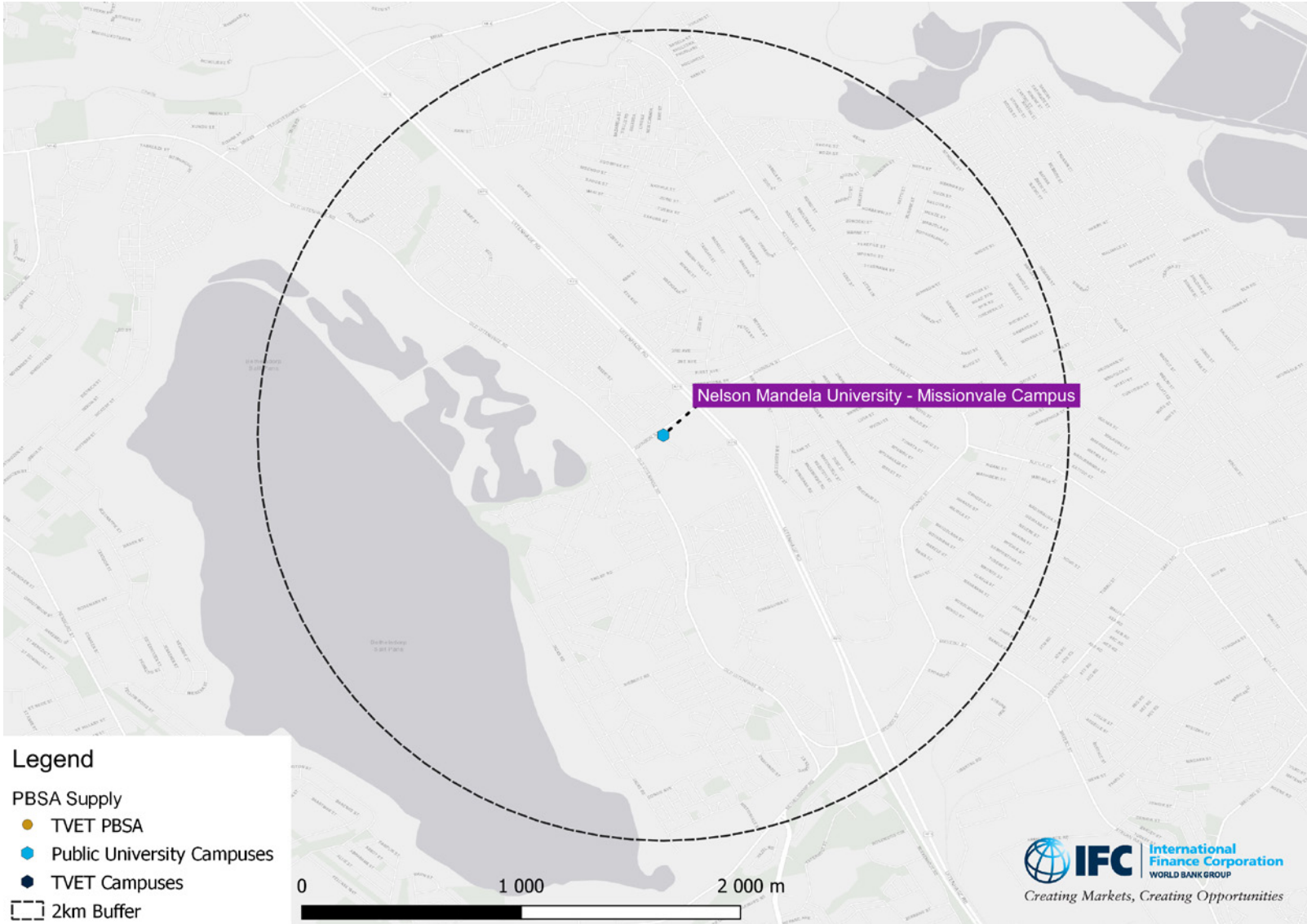
Map 8: Lovedale TVET College - King Campus



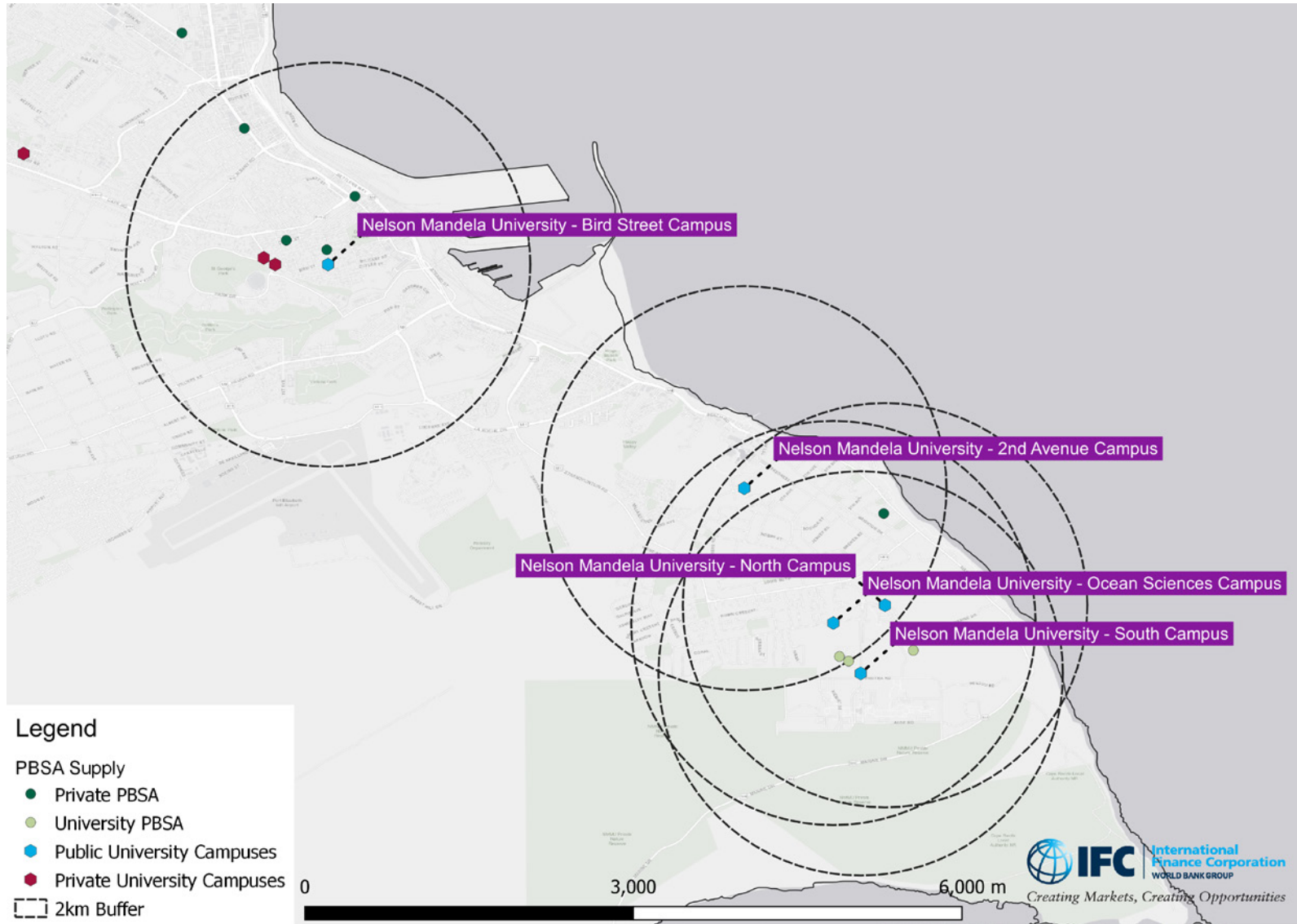
Map 9: Lovedale TVET College - Zwelitsha Campus



Map 10: NMU Mission Vale Campus



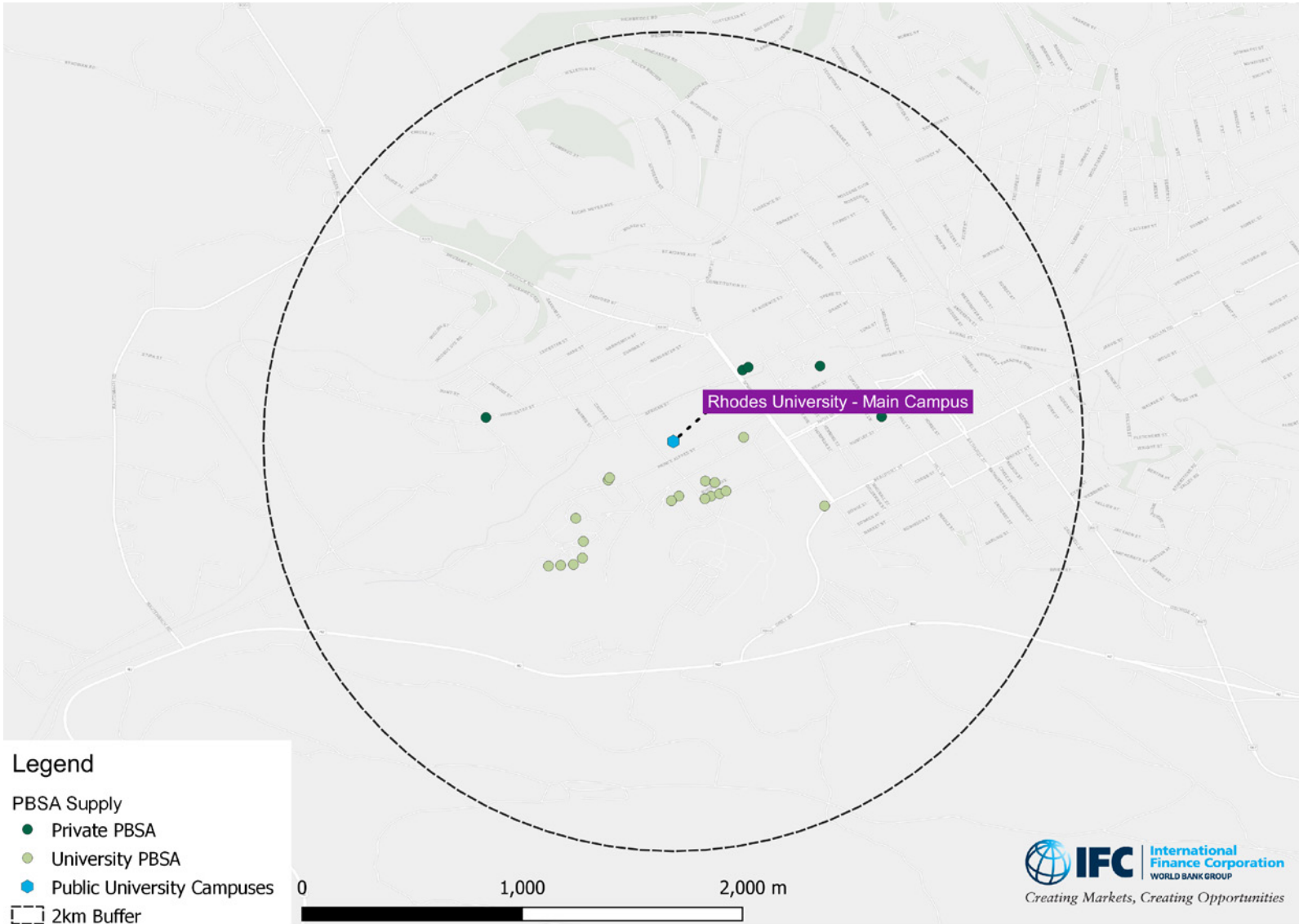
Map 11: Port Elizabeth Node



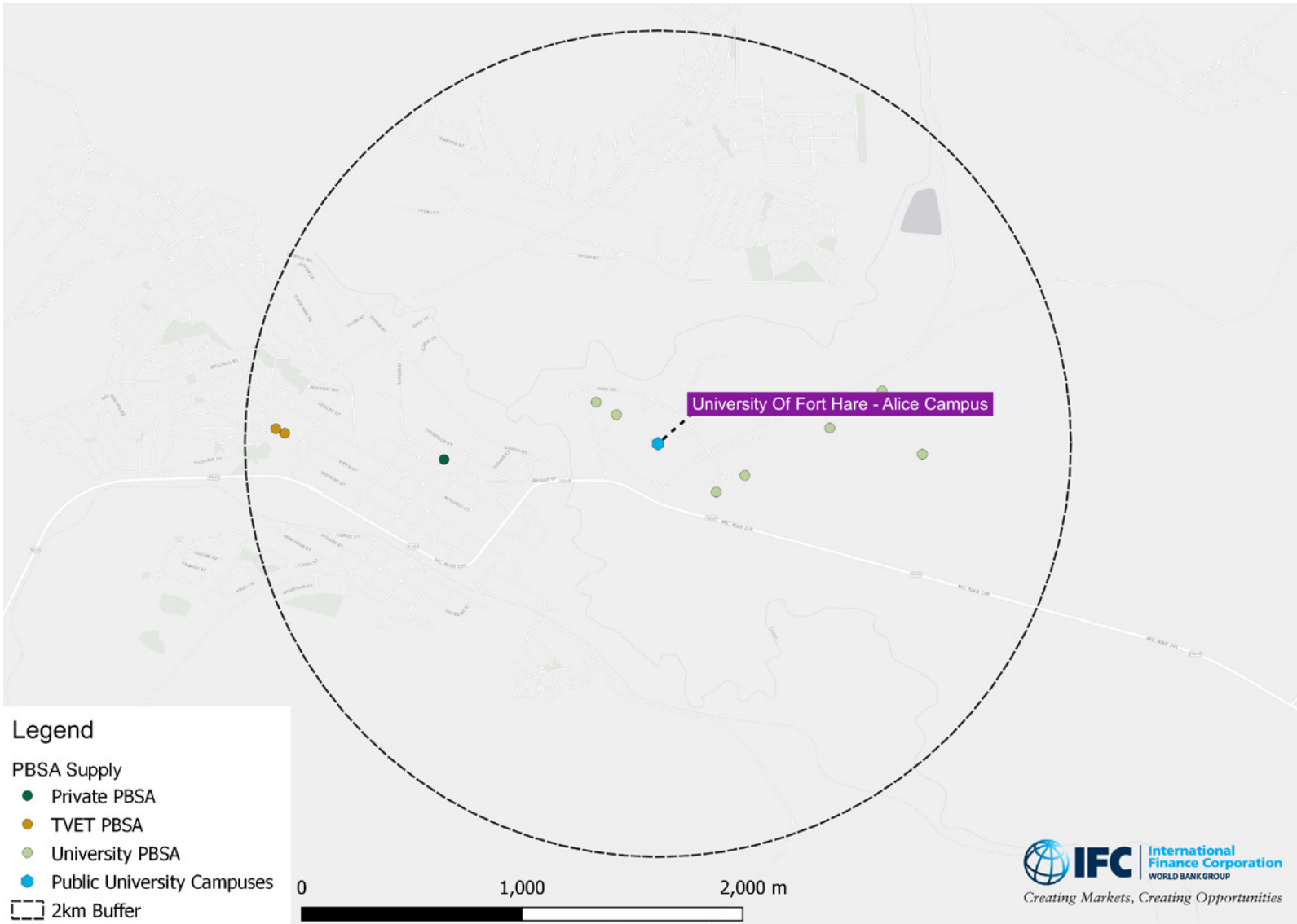
Map 12: Port Elizabeth College - Dower Campus



Map 13: Rhodes University - Main Campus



Map 14: University of Fort Hare - Alice Campus



Map 15: WSU Butterworth Campus

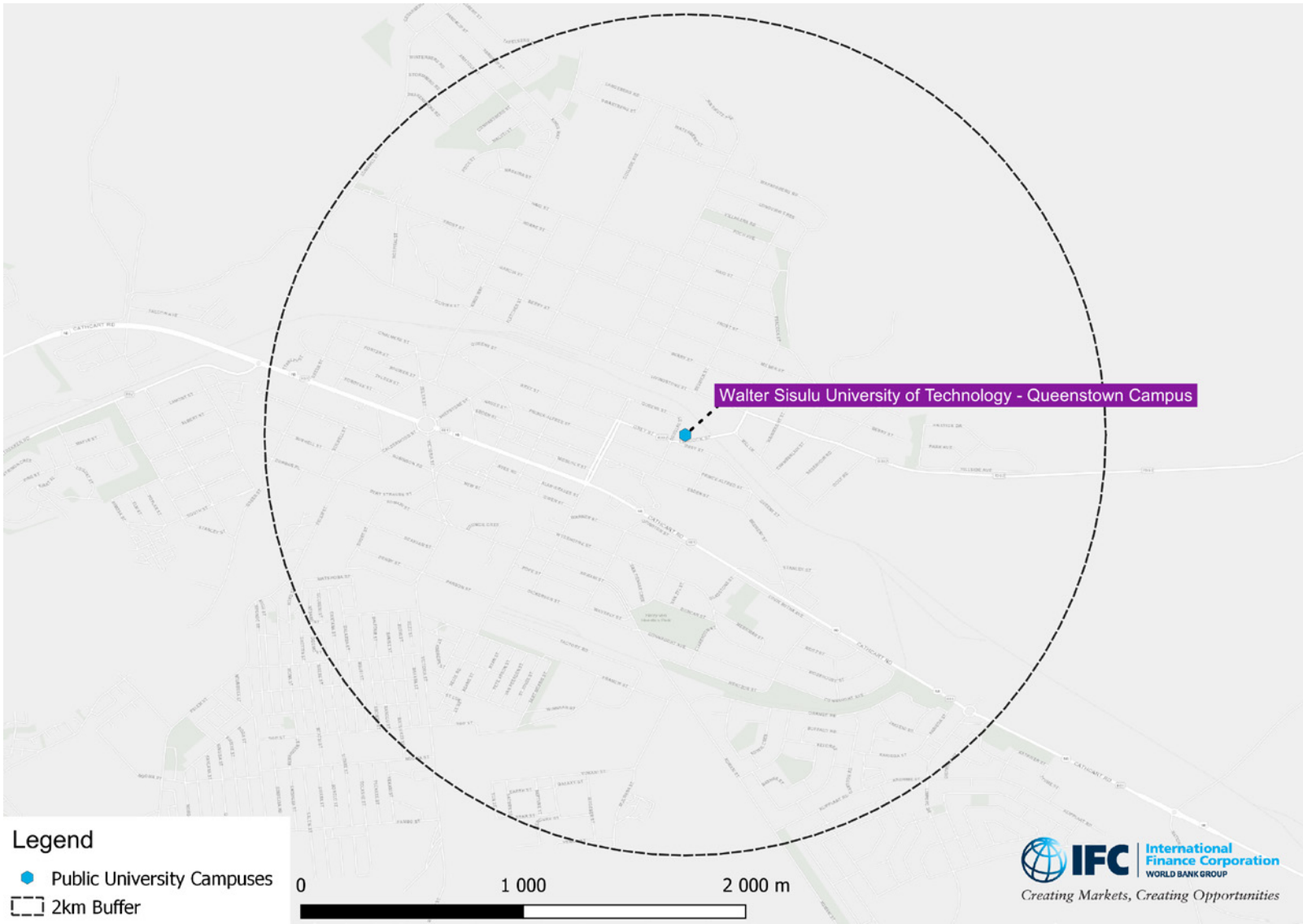


Map 16: WSU Mthatha Campus



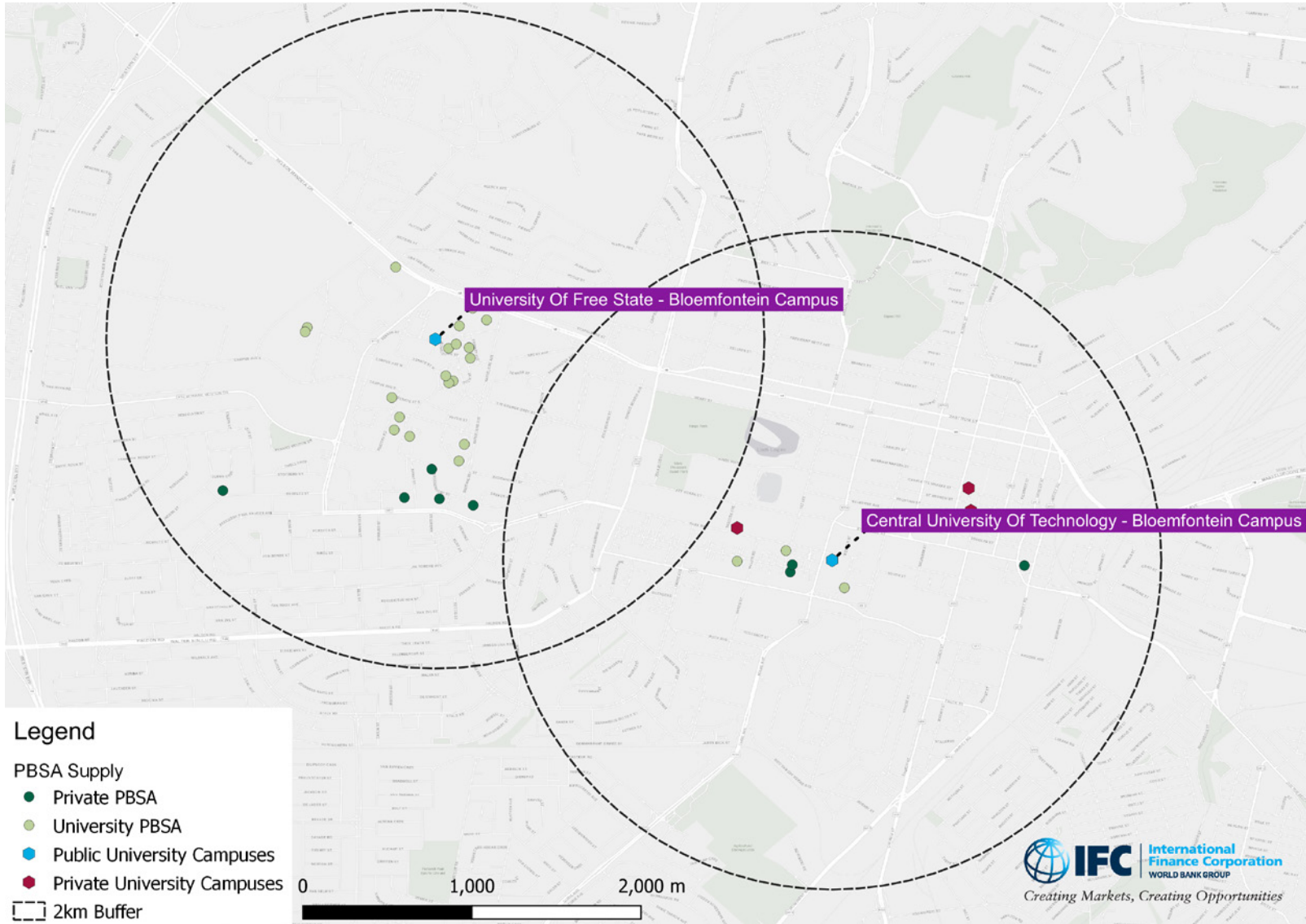
Map 17: Walter Sisulu University Queenstown Campus

100



Map 18: Bloemfontein Node

101

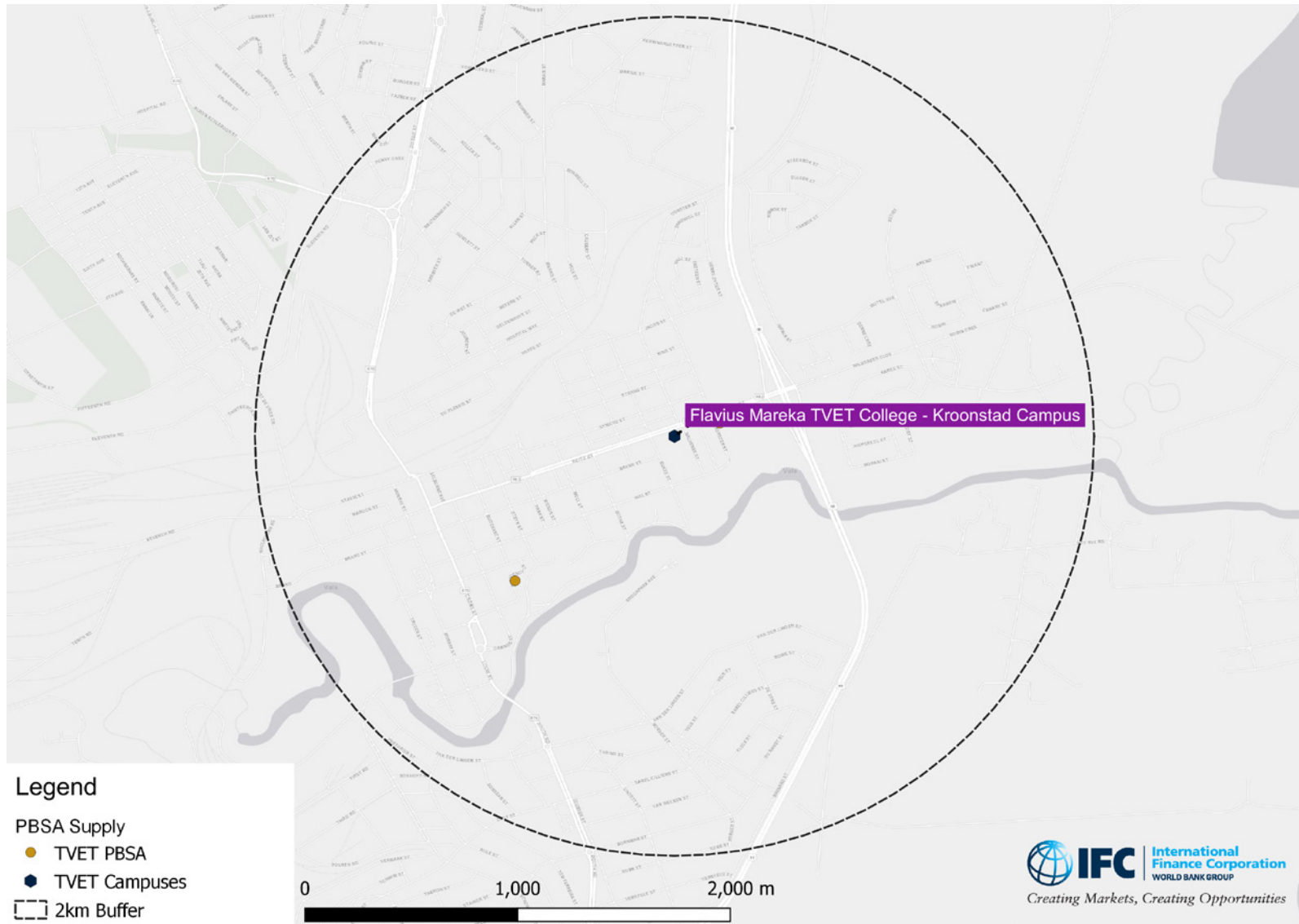


Map 19: Central University of Technology - Welkom Campus



Map 20: Flavius Mareka TVET College - Kroonstad Campus

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Map 21: Maluti TVET College - Bonamelo Campus



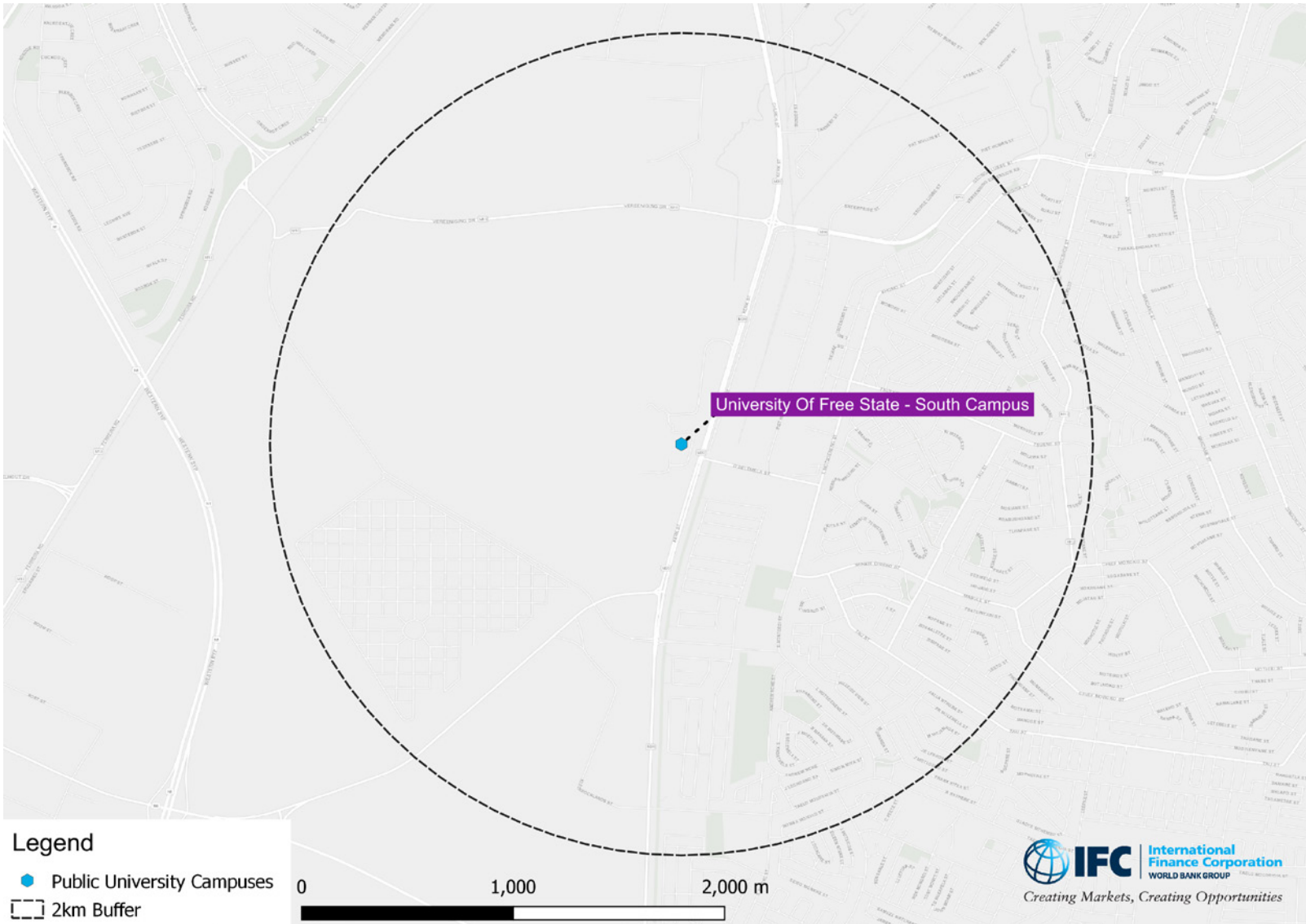
Map 22: Maluti TVET College - Lere La Tshepe Campus



Map 23: University of the Free State - QwaQwa Campus



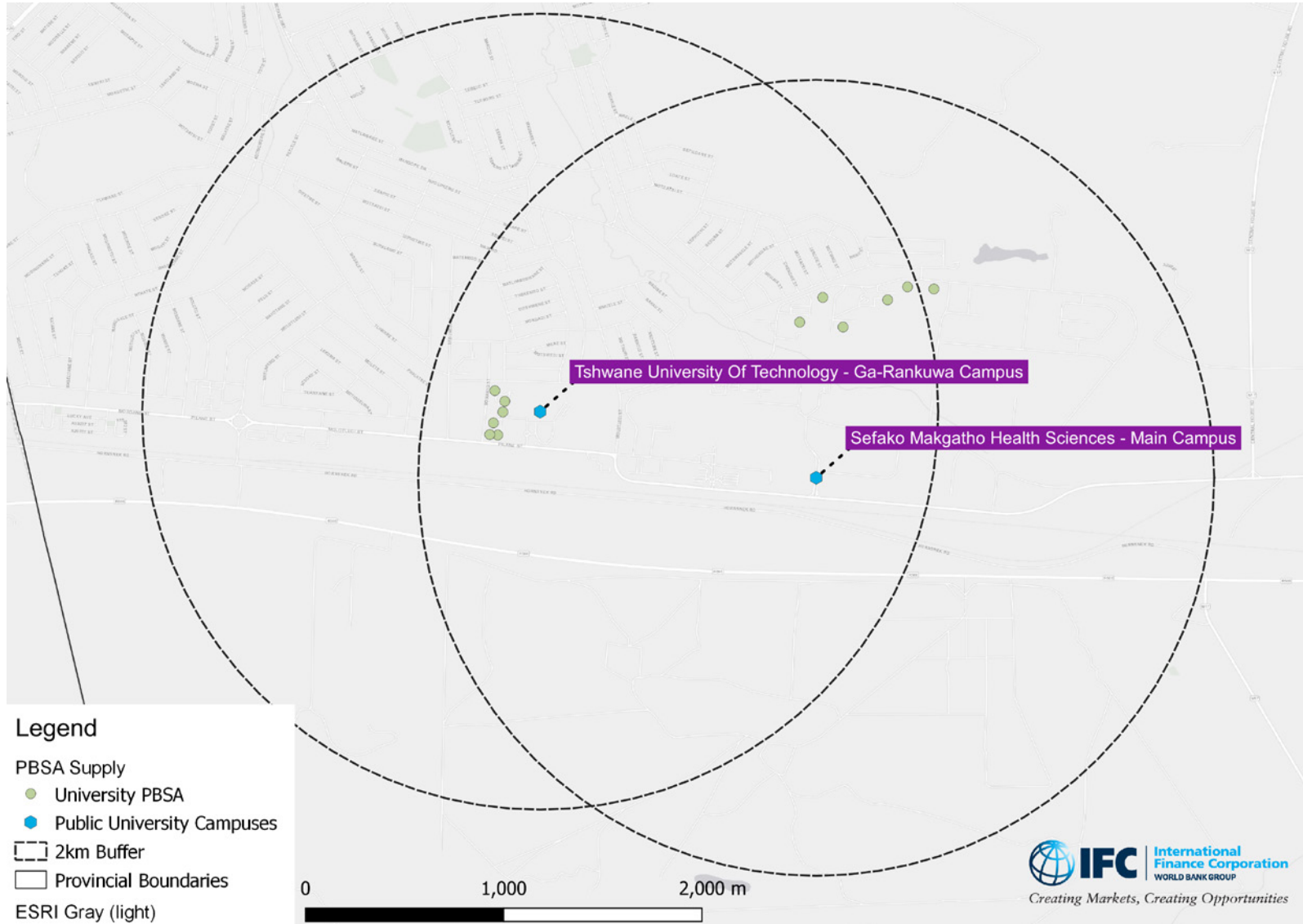
Map 24: University of the Free State - South Campus



Map 25: Ekurhuleni East TVET College - Springs and Kwa Thema Campuses

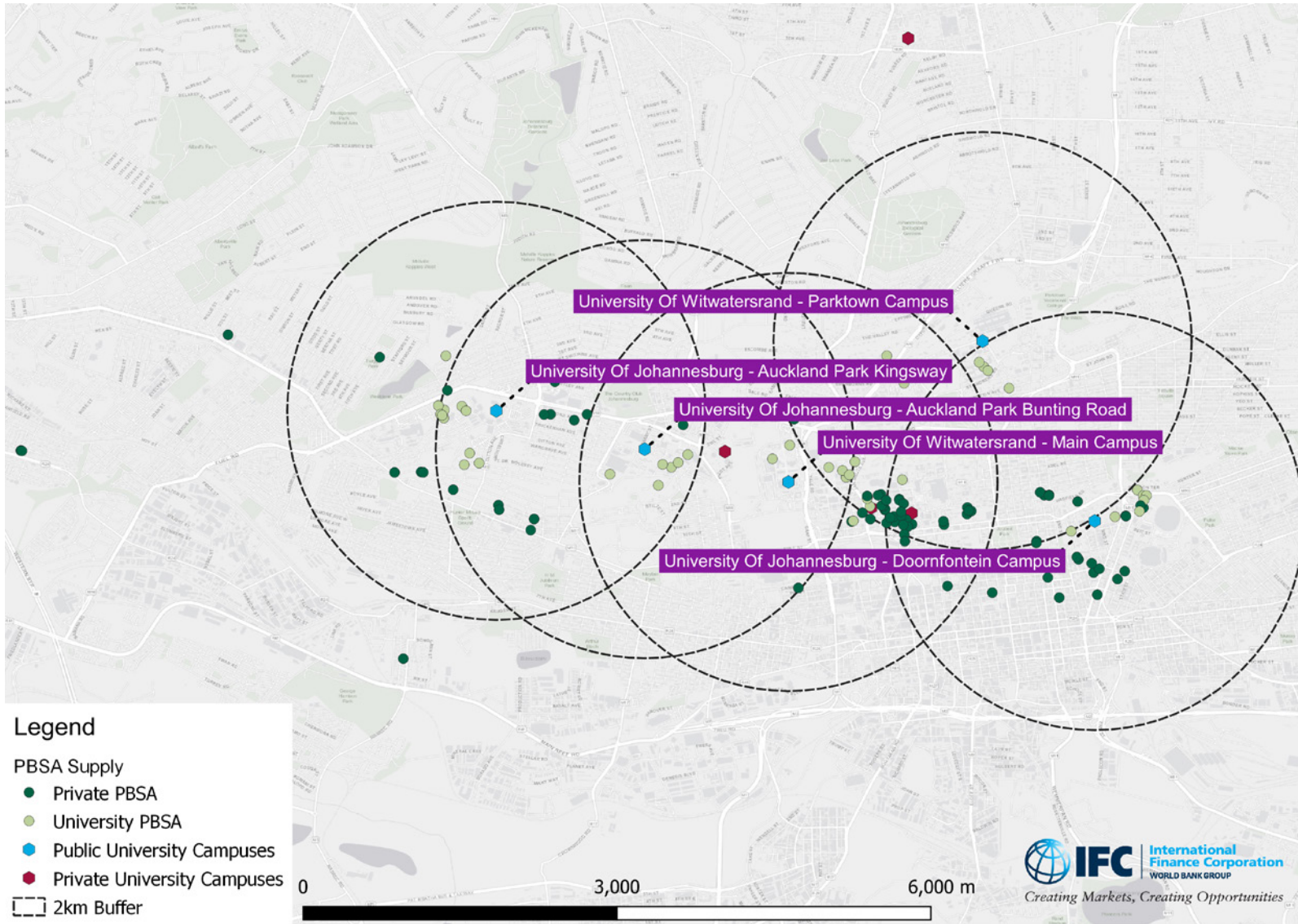


Map 26: Ga-Rankuwa Node



Map 27: Johannesburg Node

110



Legend

PBSA Supply

- Private PBSA
- University PBSA
- Public University Campuses
- Private University Campuses

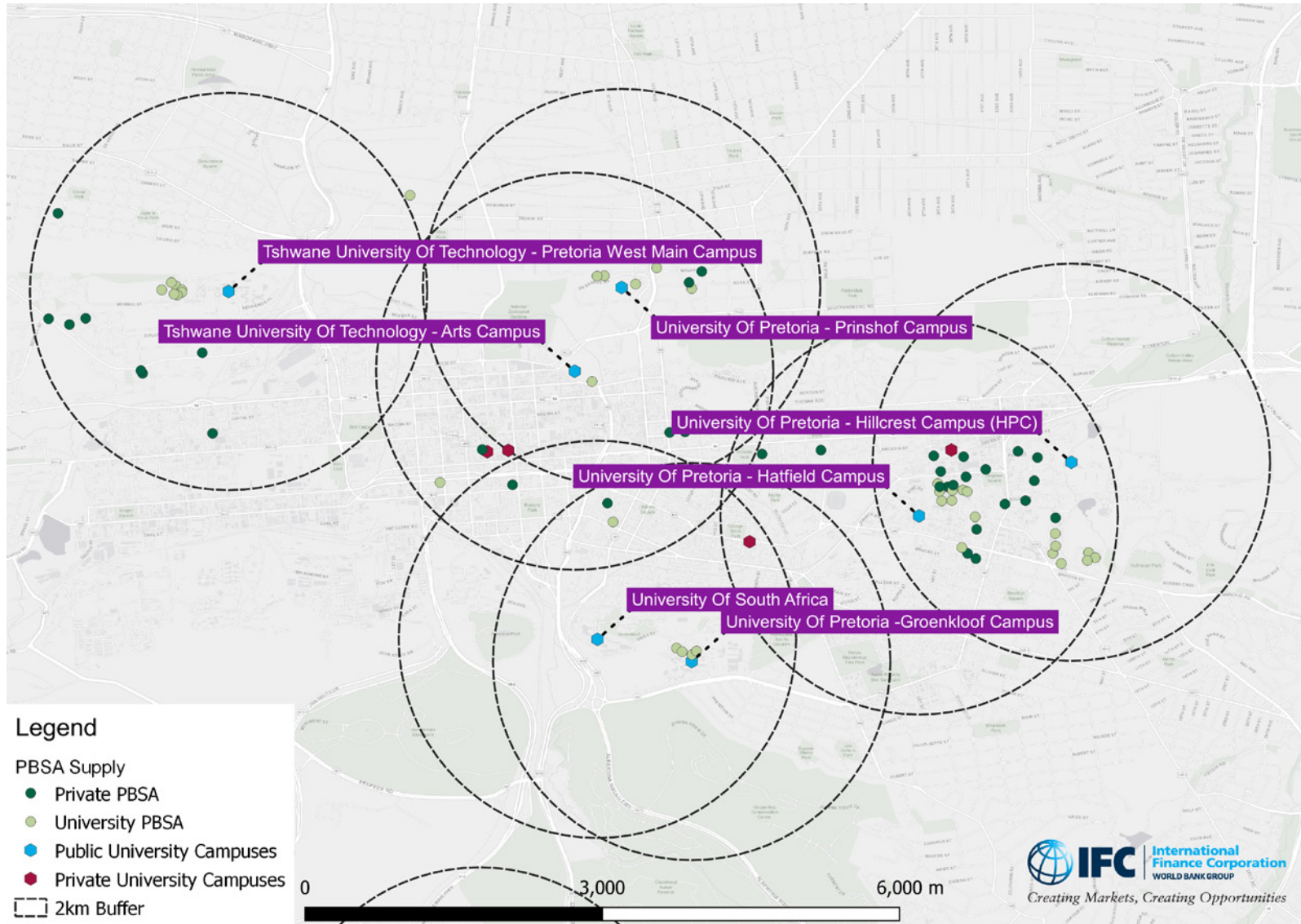
□ 2km Buffer

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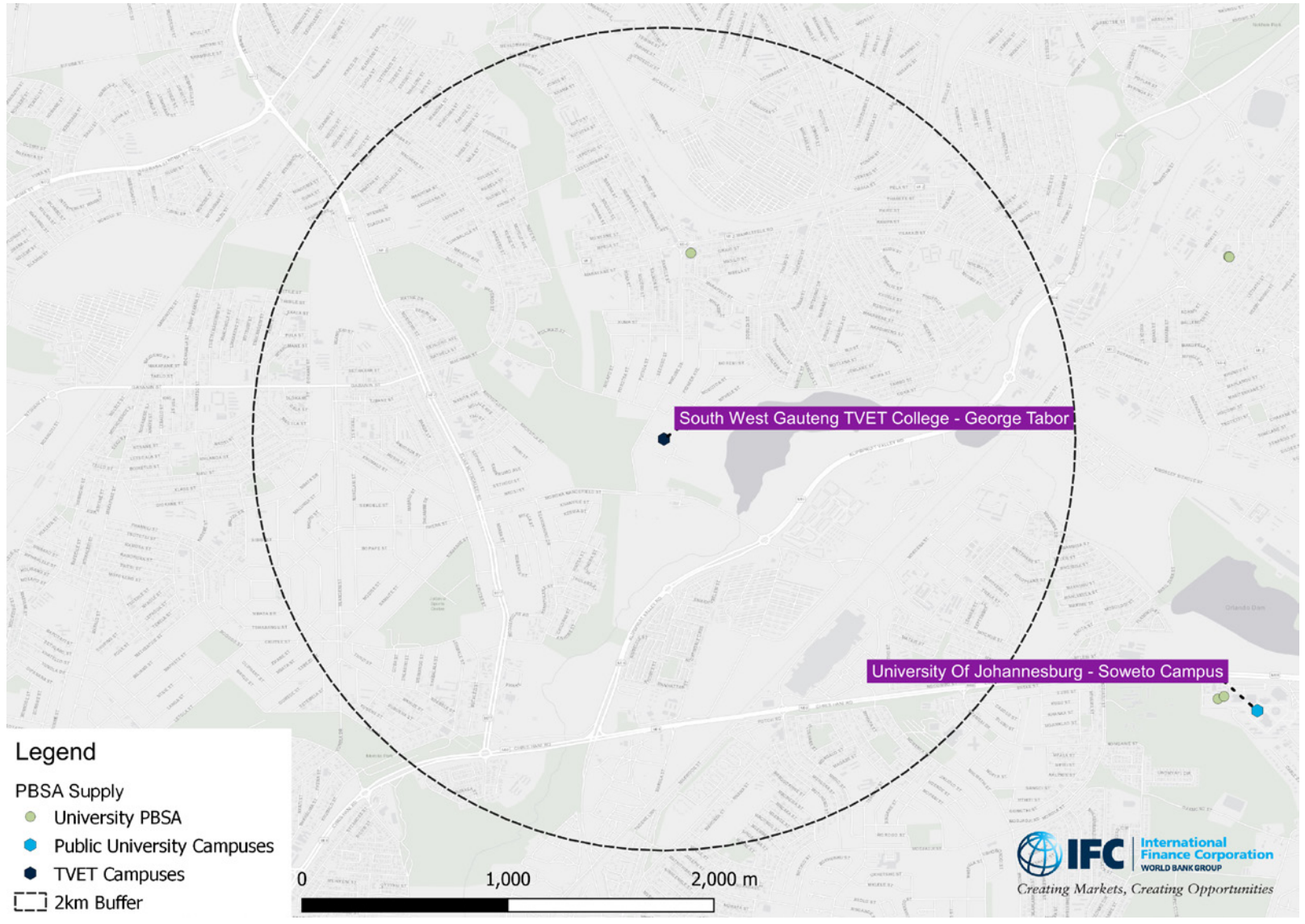
3,000

6,000 m

Map 28: Pretoria Node



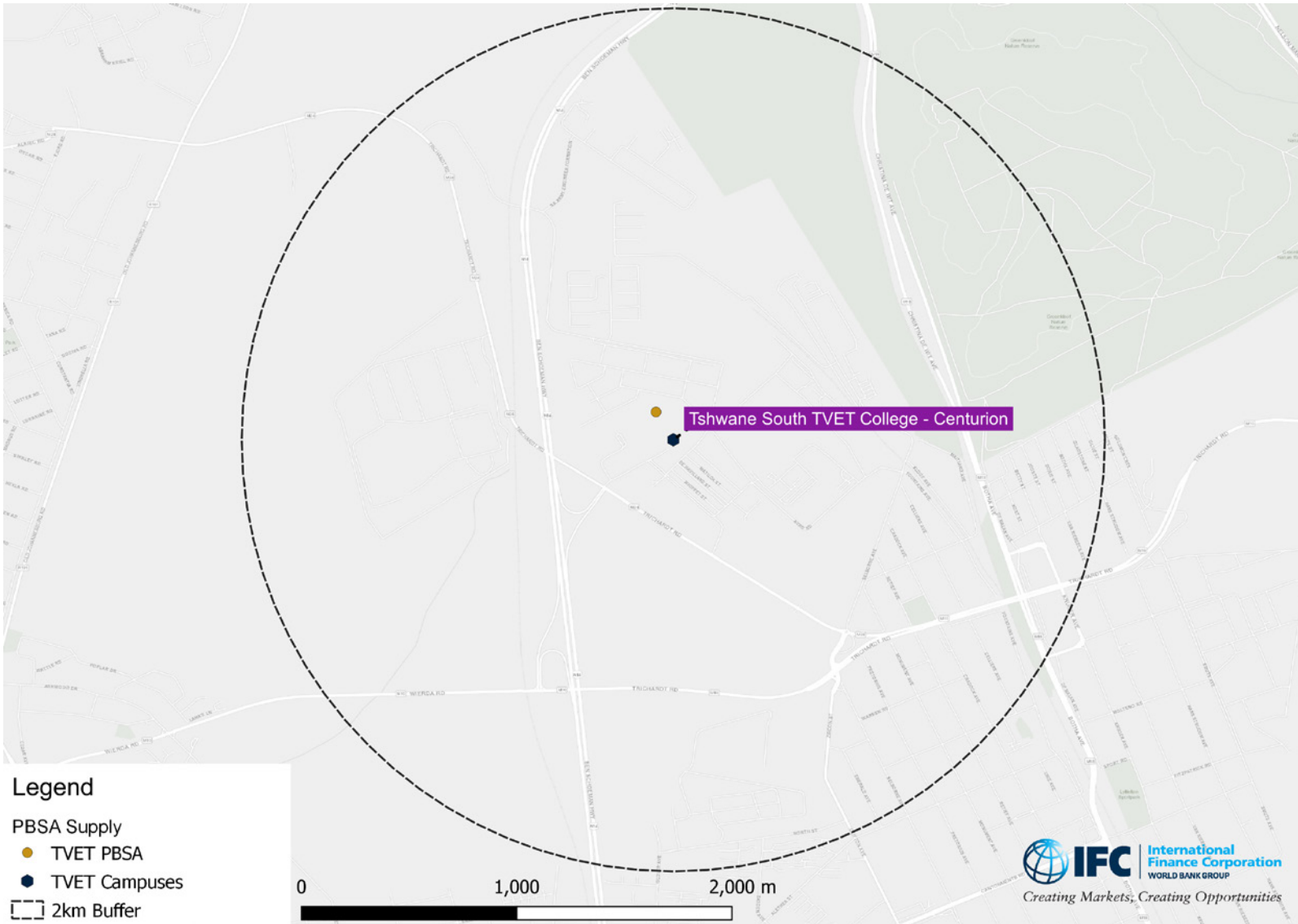
Map 29: South West Gauteng TVET College - George Tabor Campus



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Map 30: Tshwane South TVET College - Centurion Campus

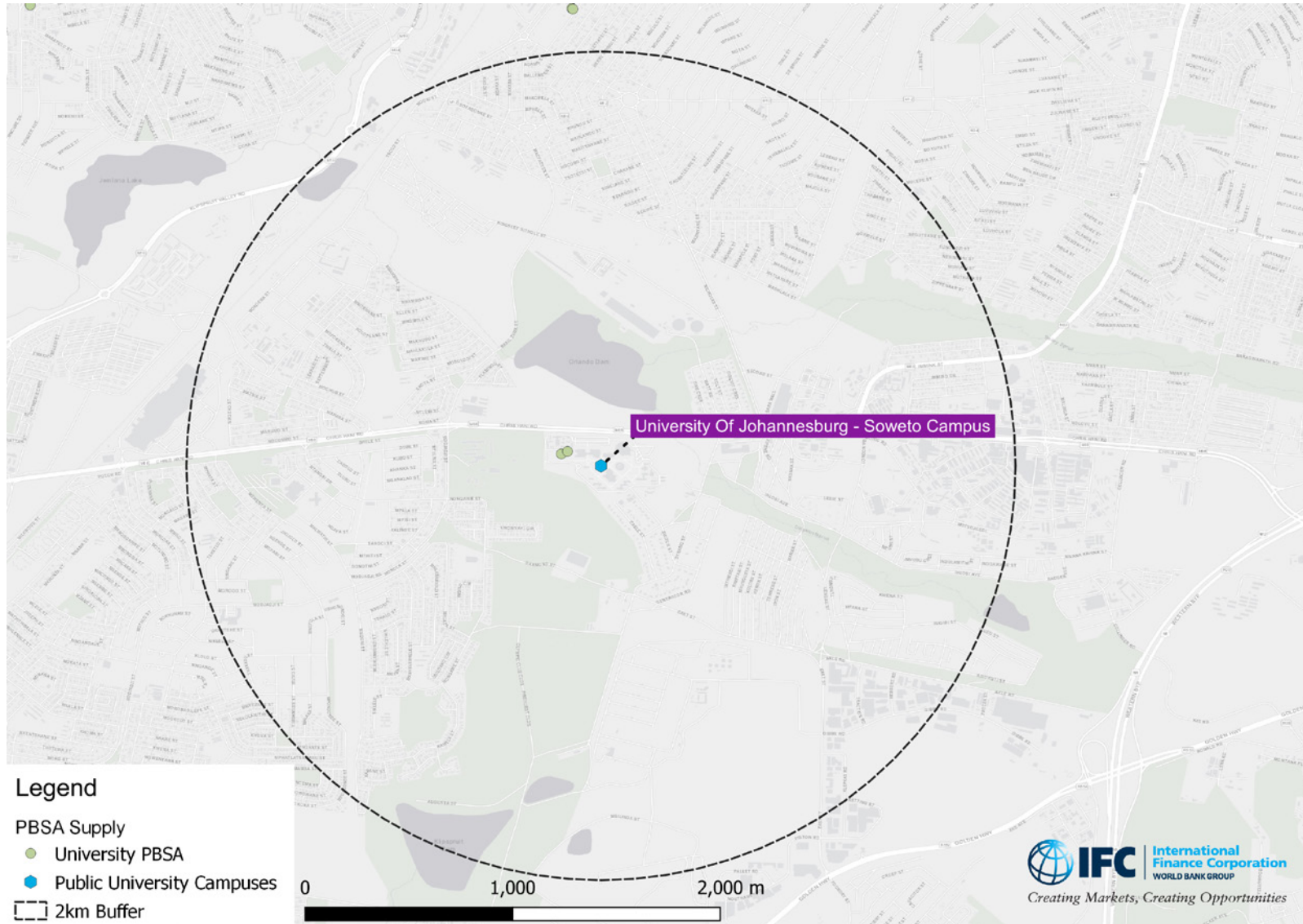


Map 31: Tshwane University of Technology - Soshanguve Campus



Map 32: University of Johannesburg - Soweto Campus

T15



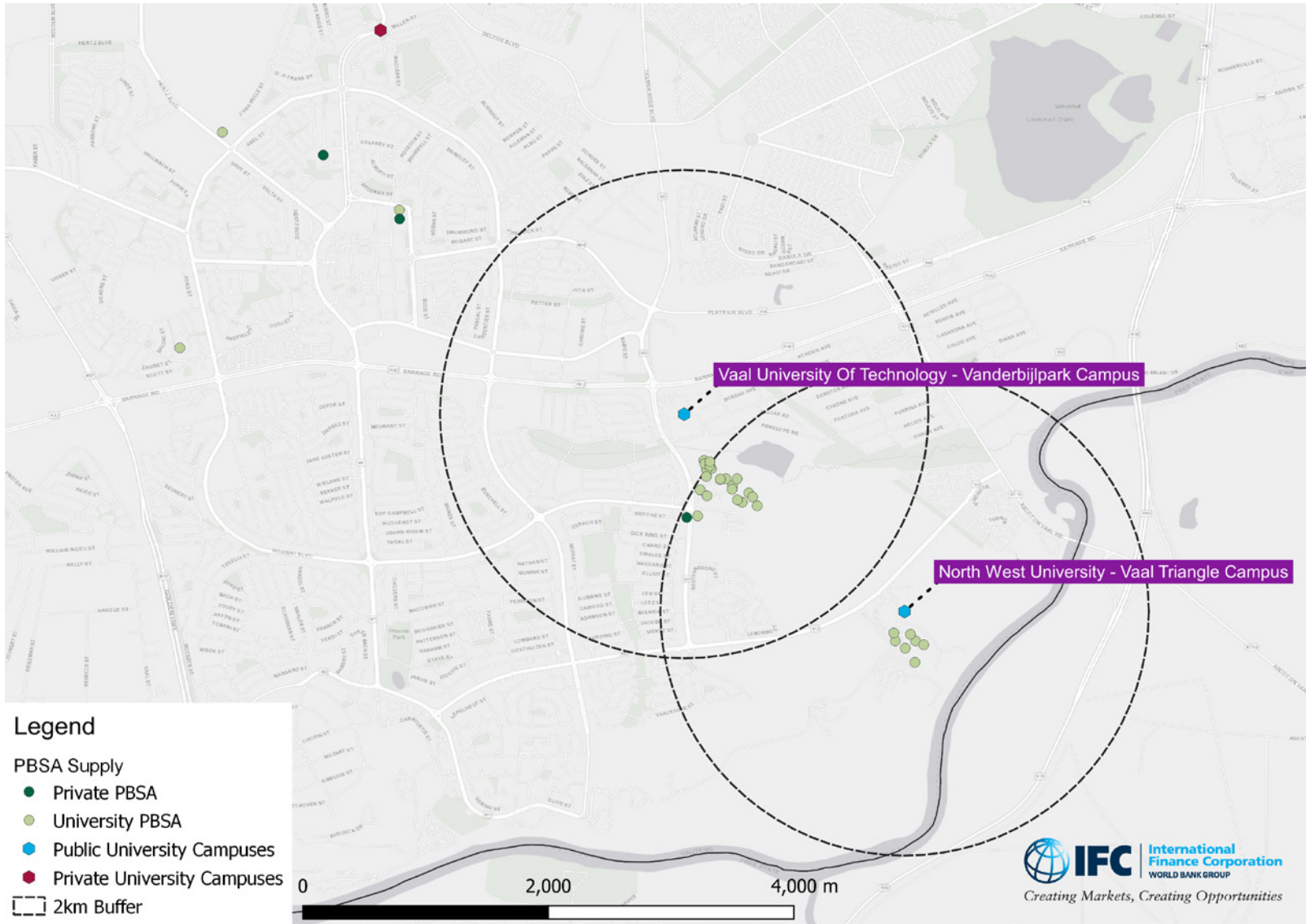
Map 33: University of Pretoria - Onderstepoort Campus



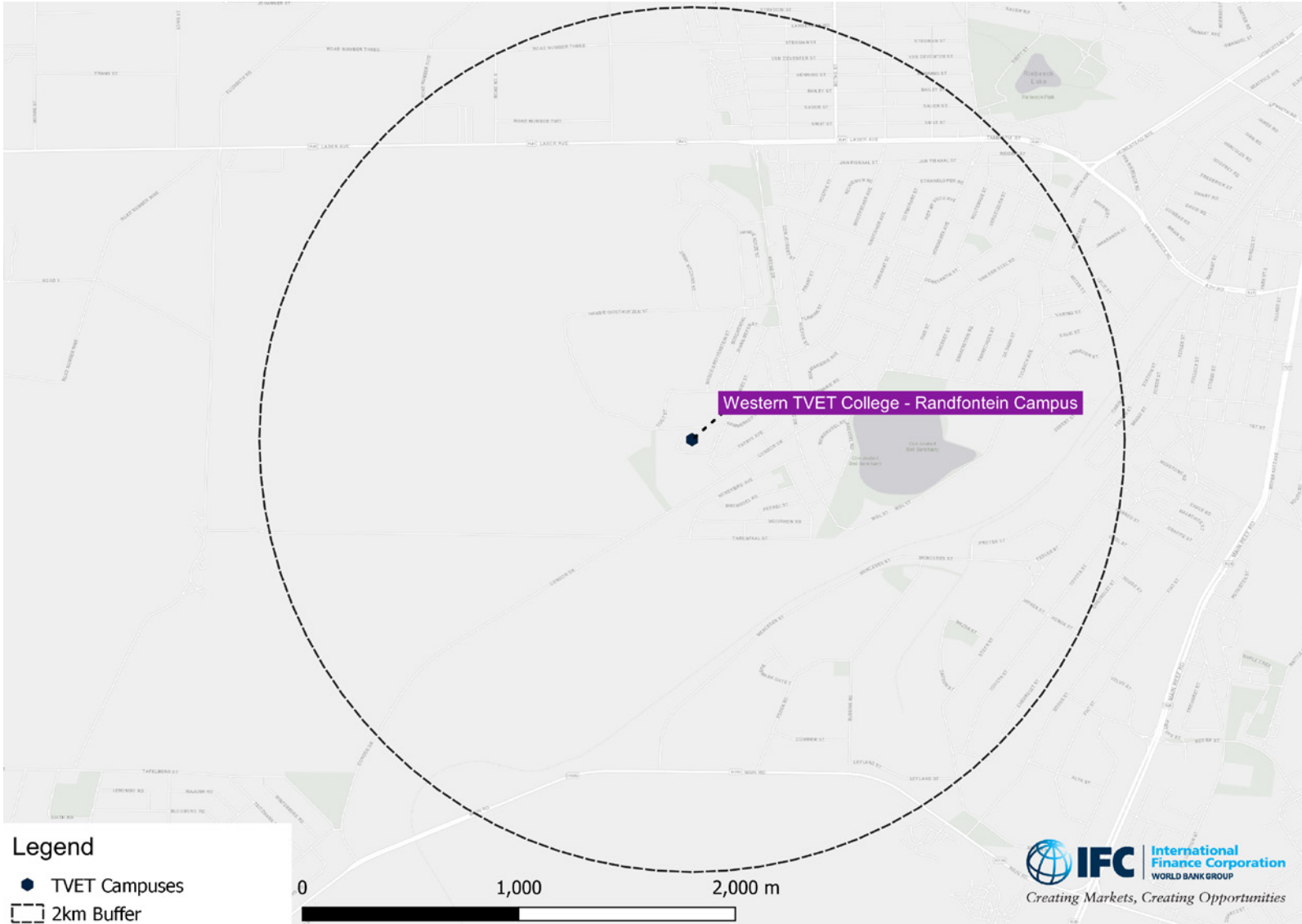
Map 34: Vaal University of Technology - Ekurhuleni Campus



Map 35: Vanderbijlpark

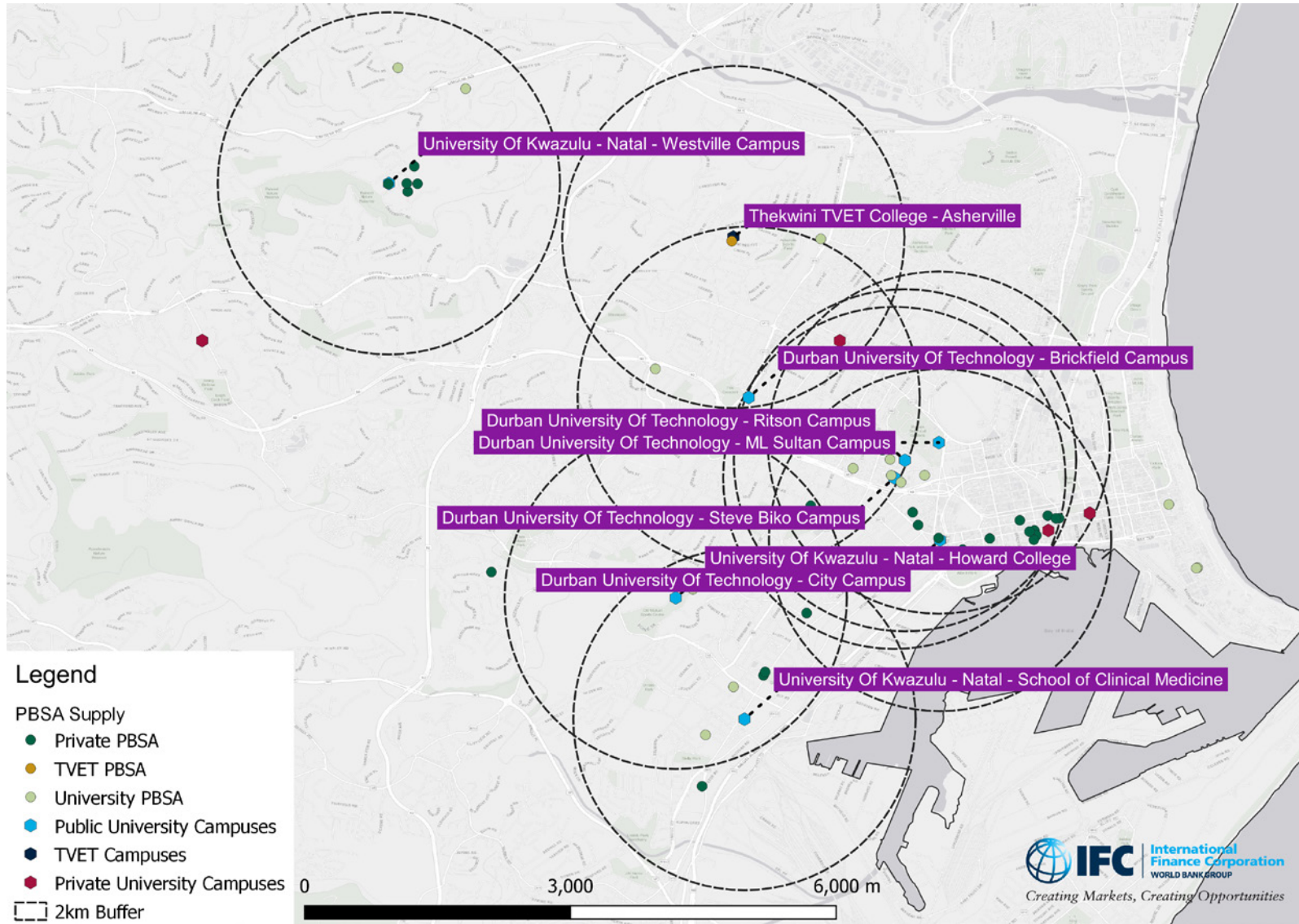


Map 36: Western TVET College - Randfontein Campus

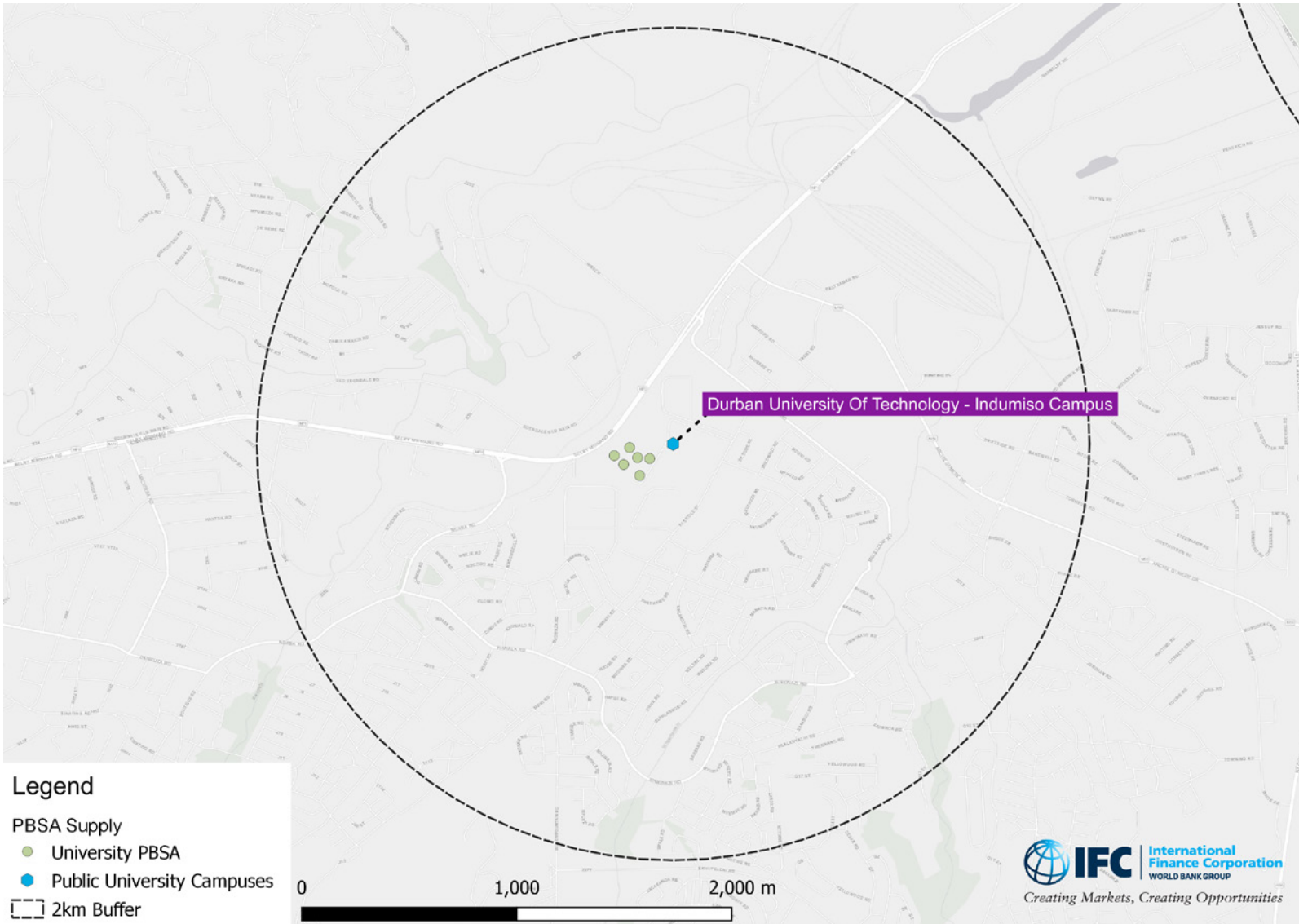


Map 37: Durban Node

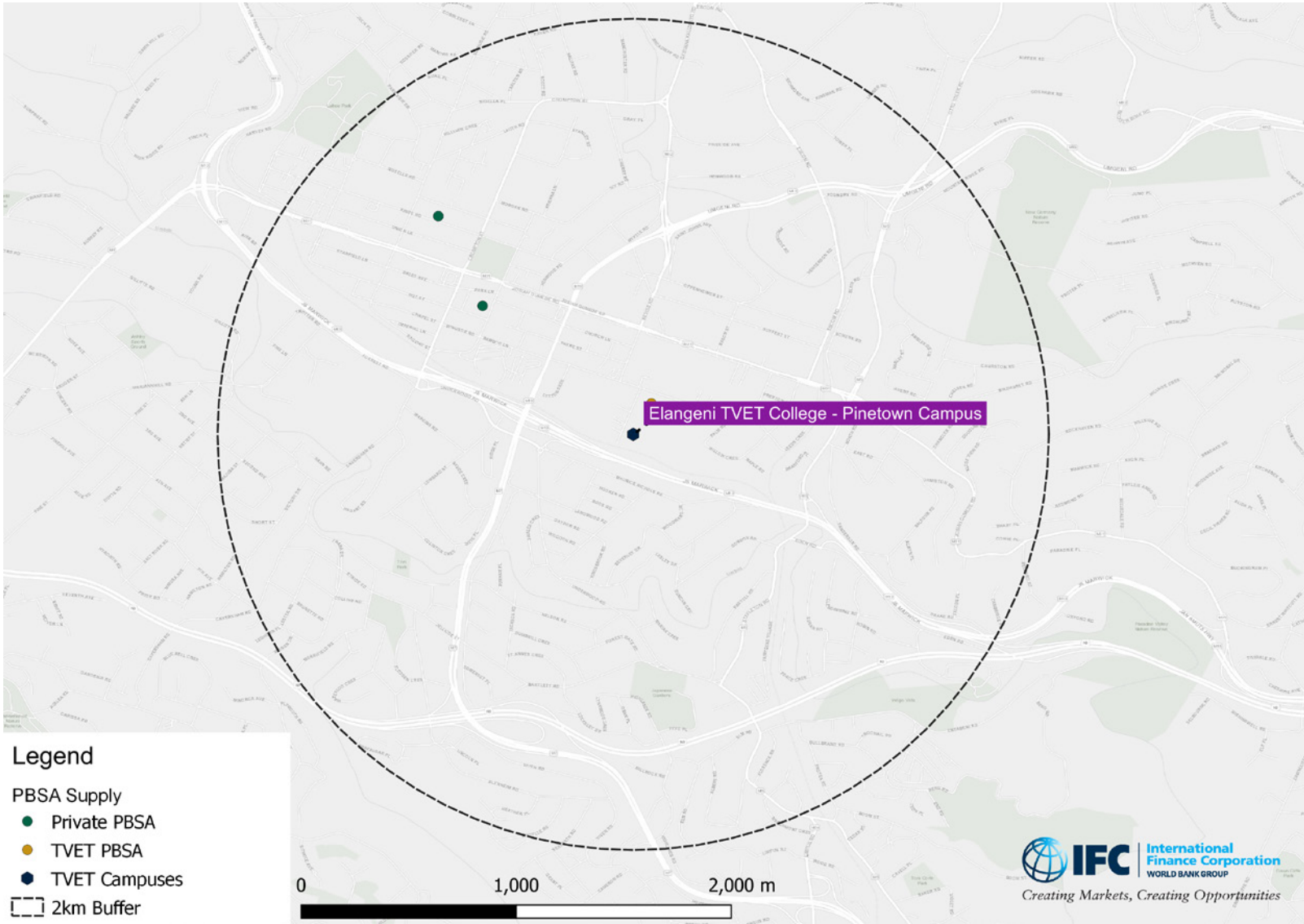
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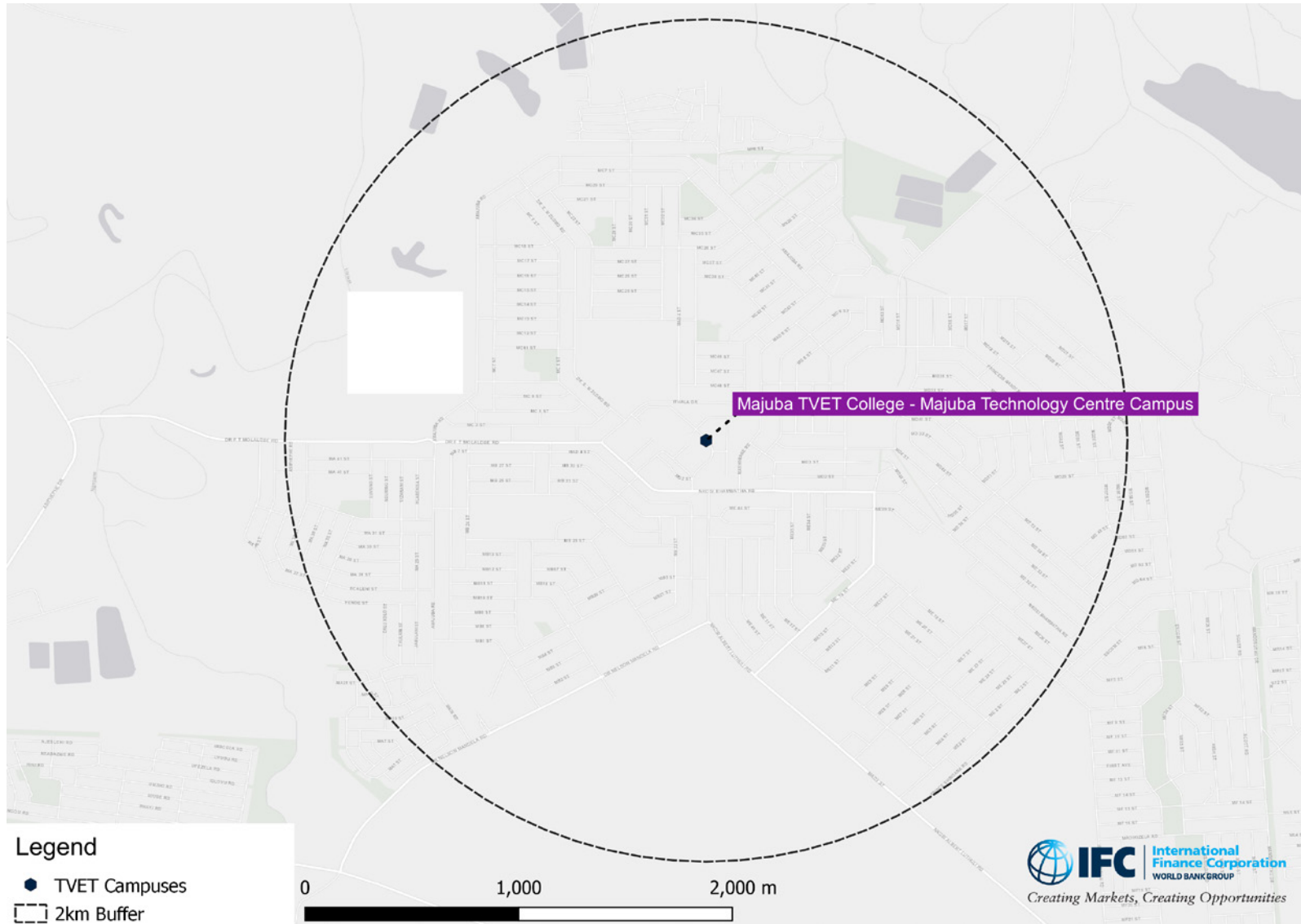
Map 38: Durban University of Technology - Indumiso Campus



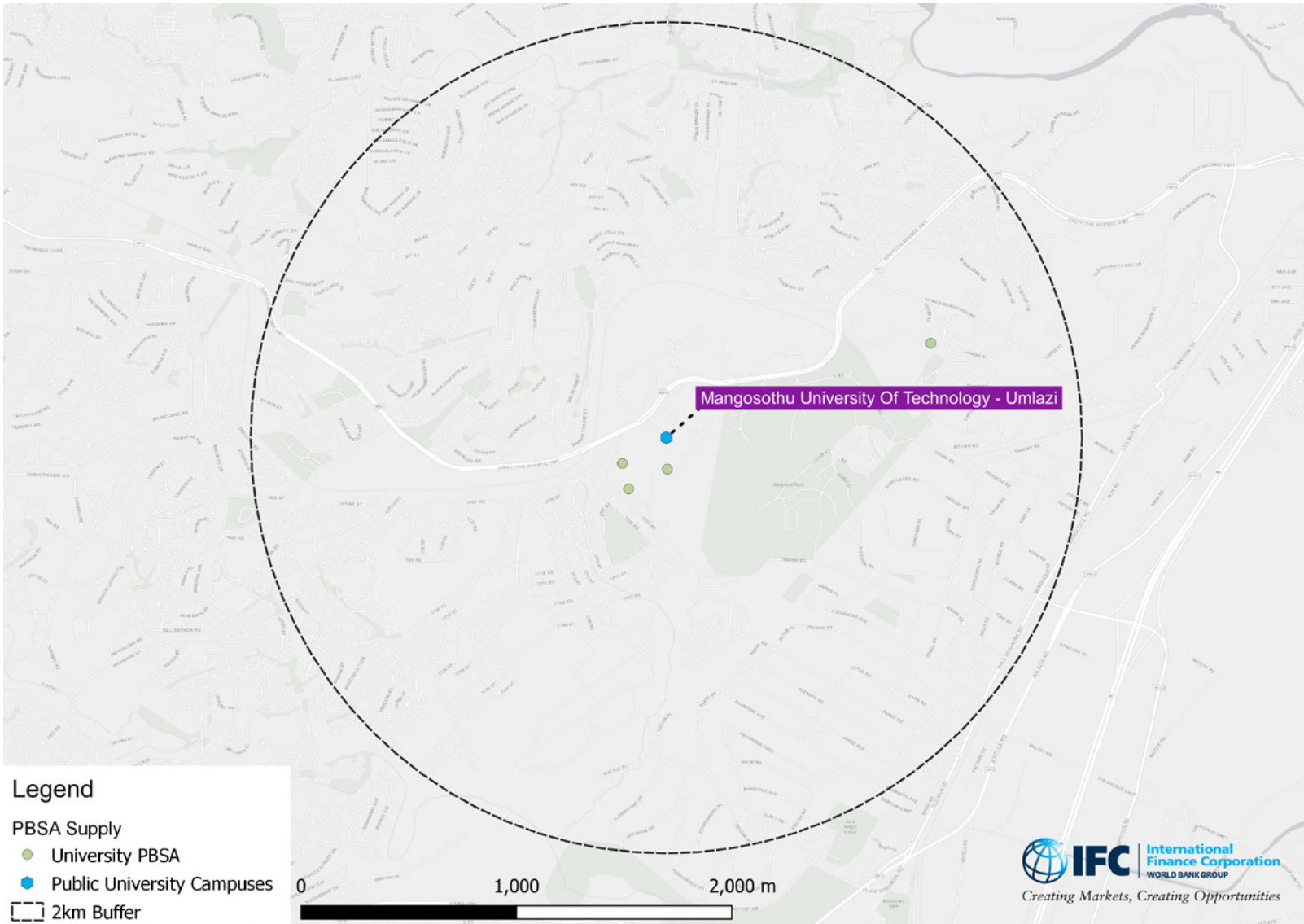
Map 39: Elangeni TVET College - Pinetown Campus



Map 40: Majuba TVET College - Majuba Technological Centre Campus



Map 41: Mangosothu University of Technology - Umlazi

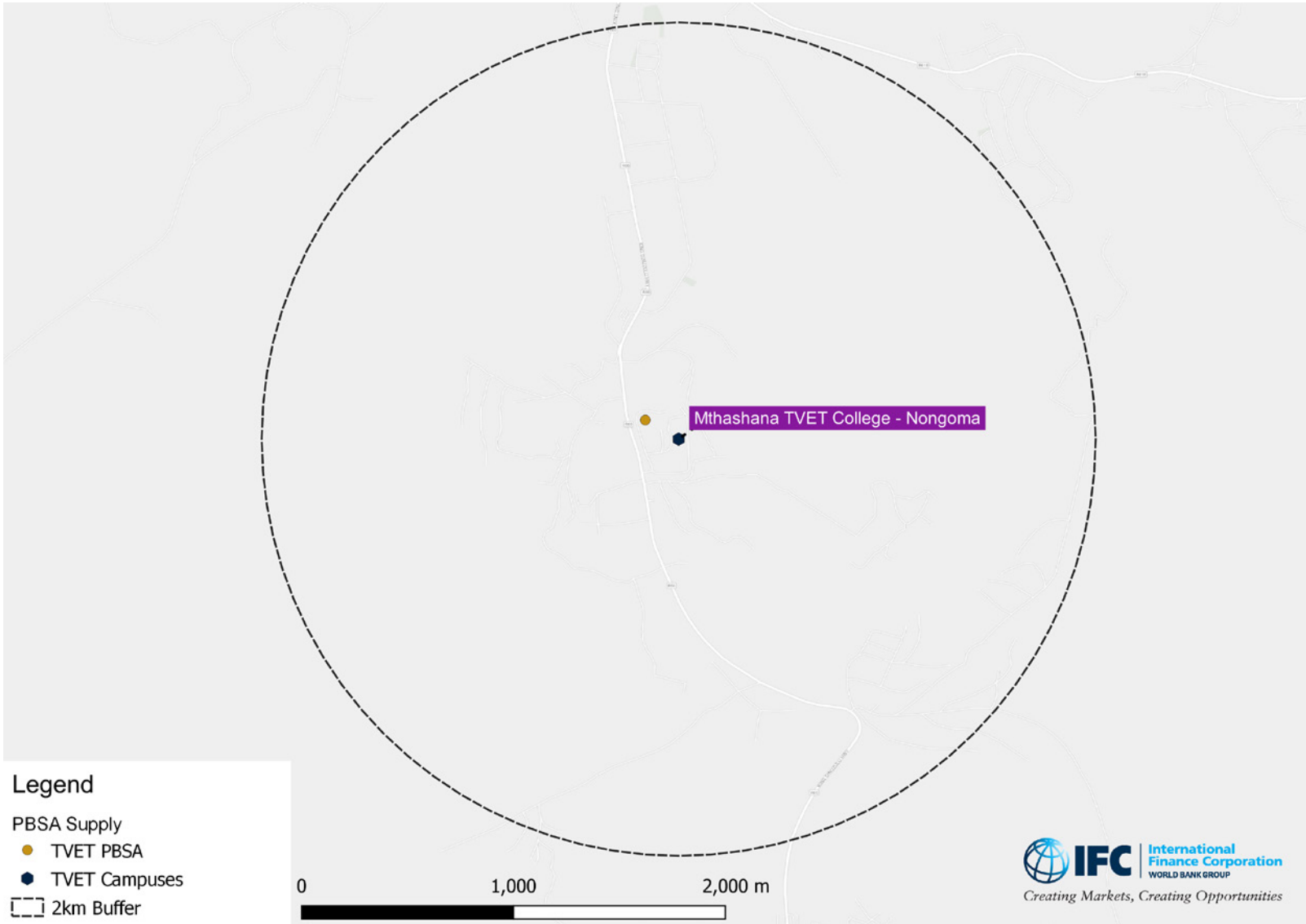


Map 42: Mthashana TVET College - Emandleni

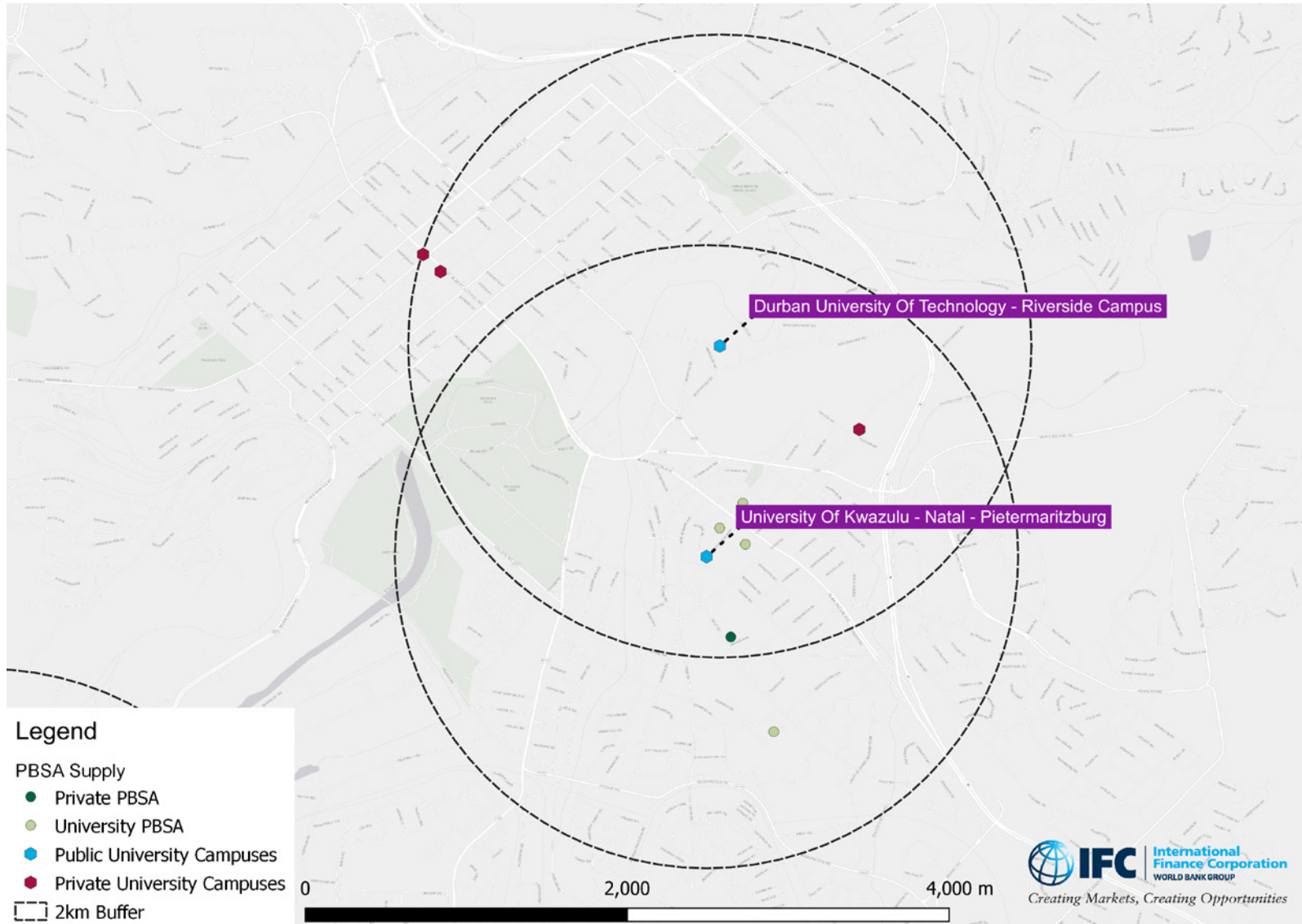
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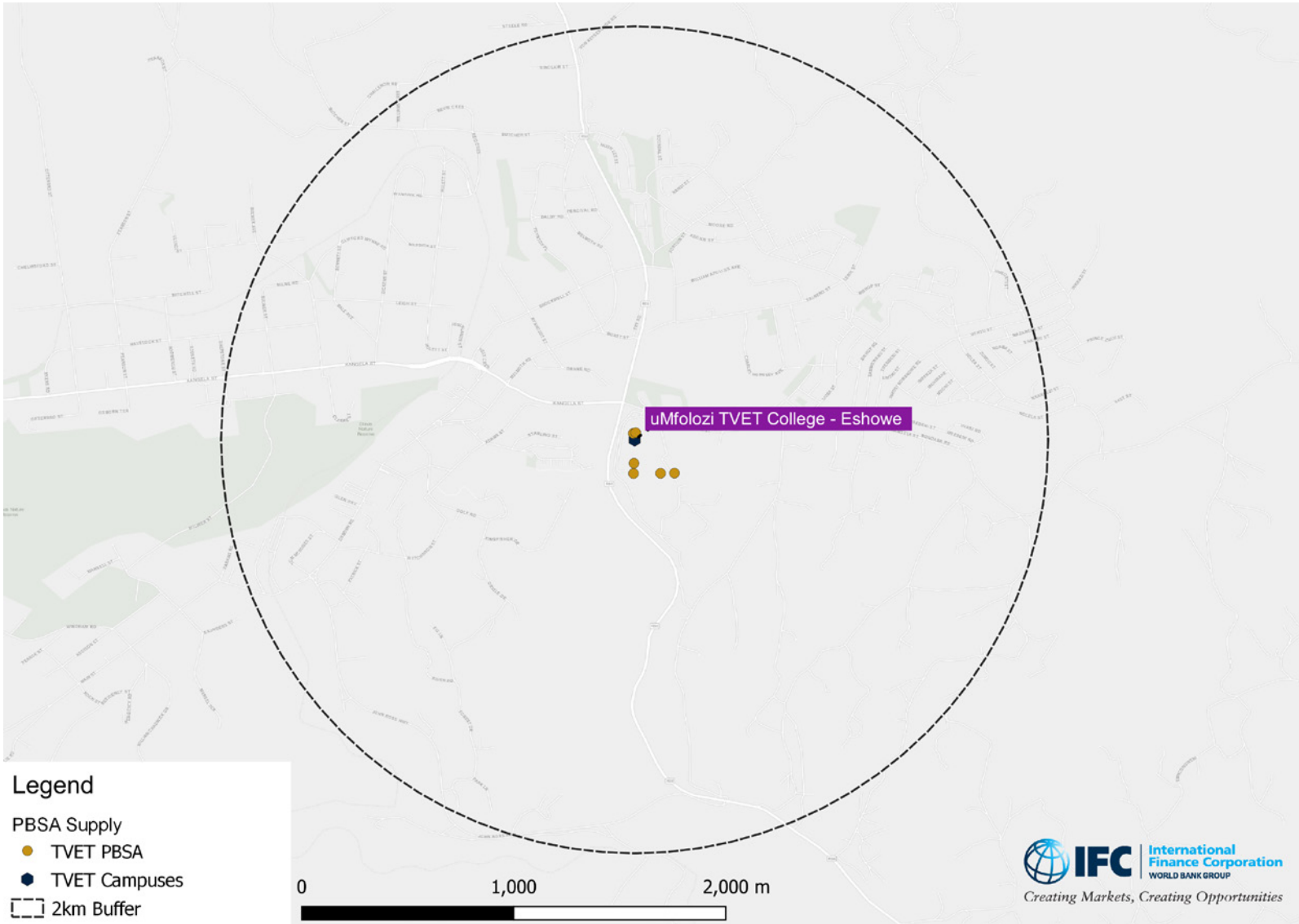
Map 43: Mthashana TVET College - Nongoma



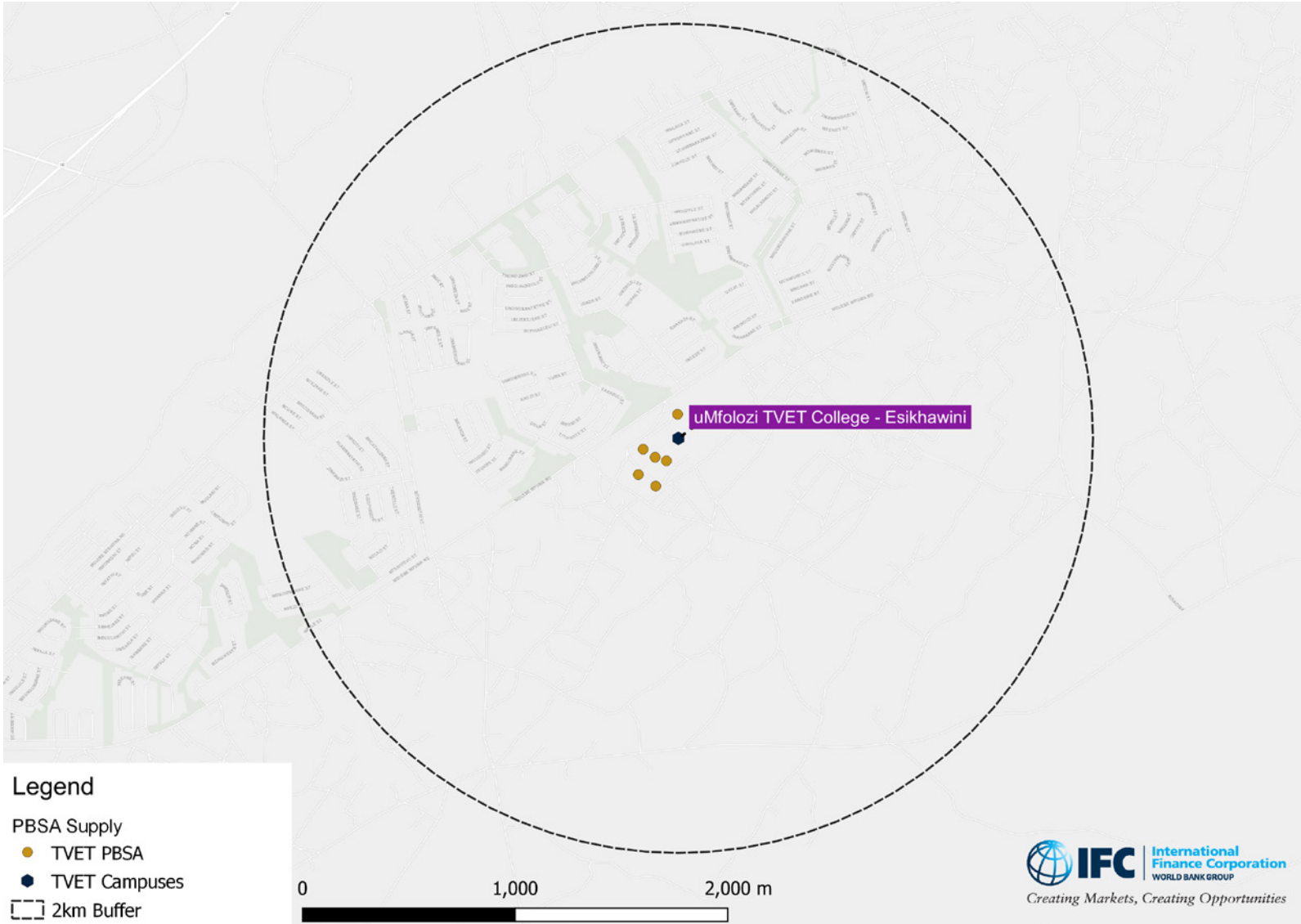
Map 44: Pietermaritzburg Node



Map 45: uMfolozi TVET College - Eshowe

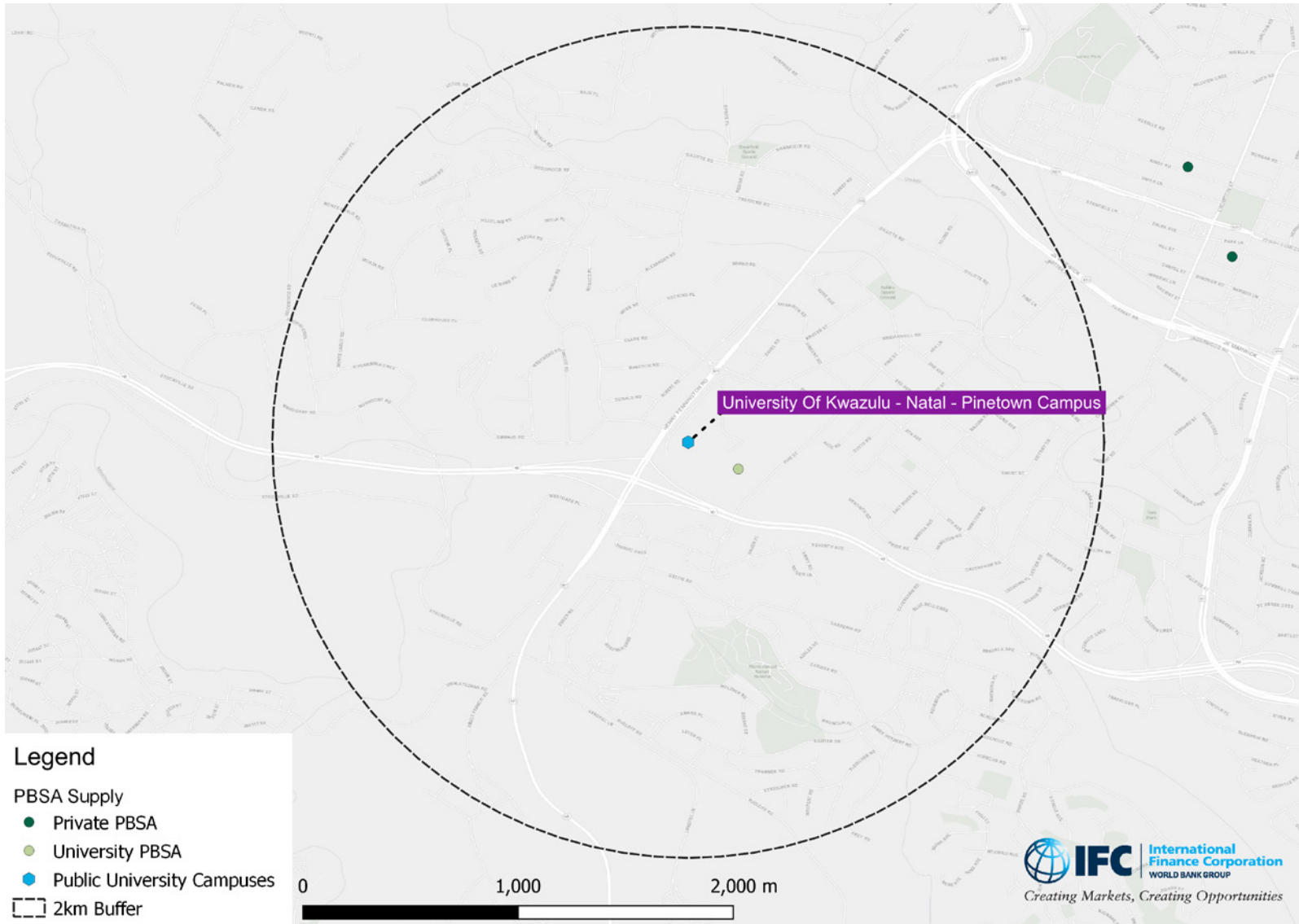


Map 46: uMfolozi TVET College - Esikhawini

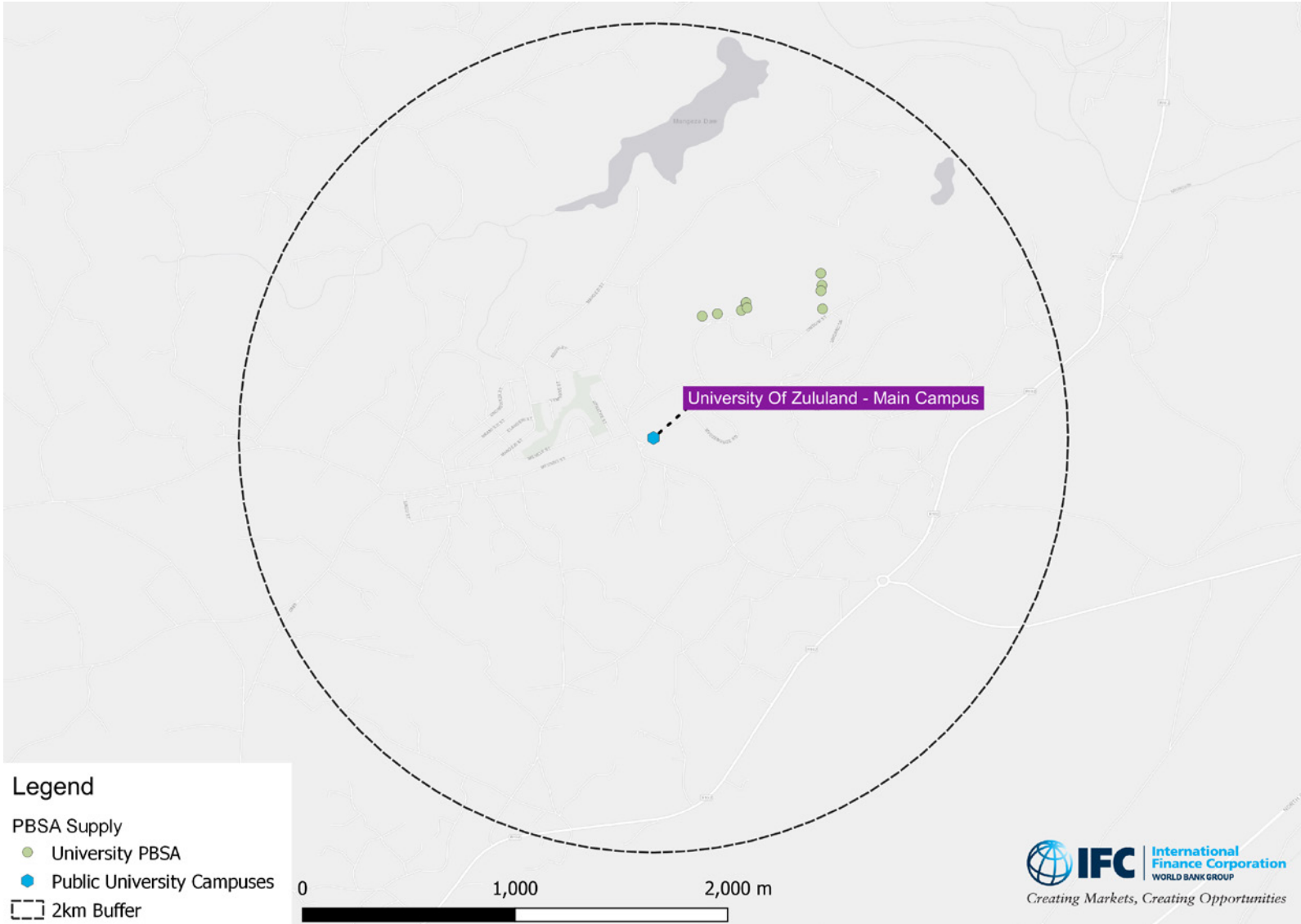


Map 47: University of KZN - Pinetown Campus

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Map 48: University of Zululand - Main Campus



Map 49: University of Zululand - Richards Bay Campus



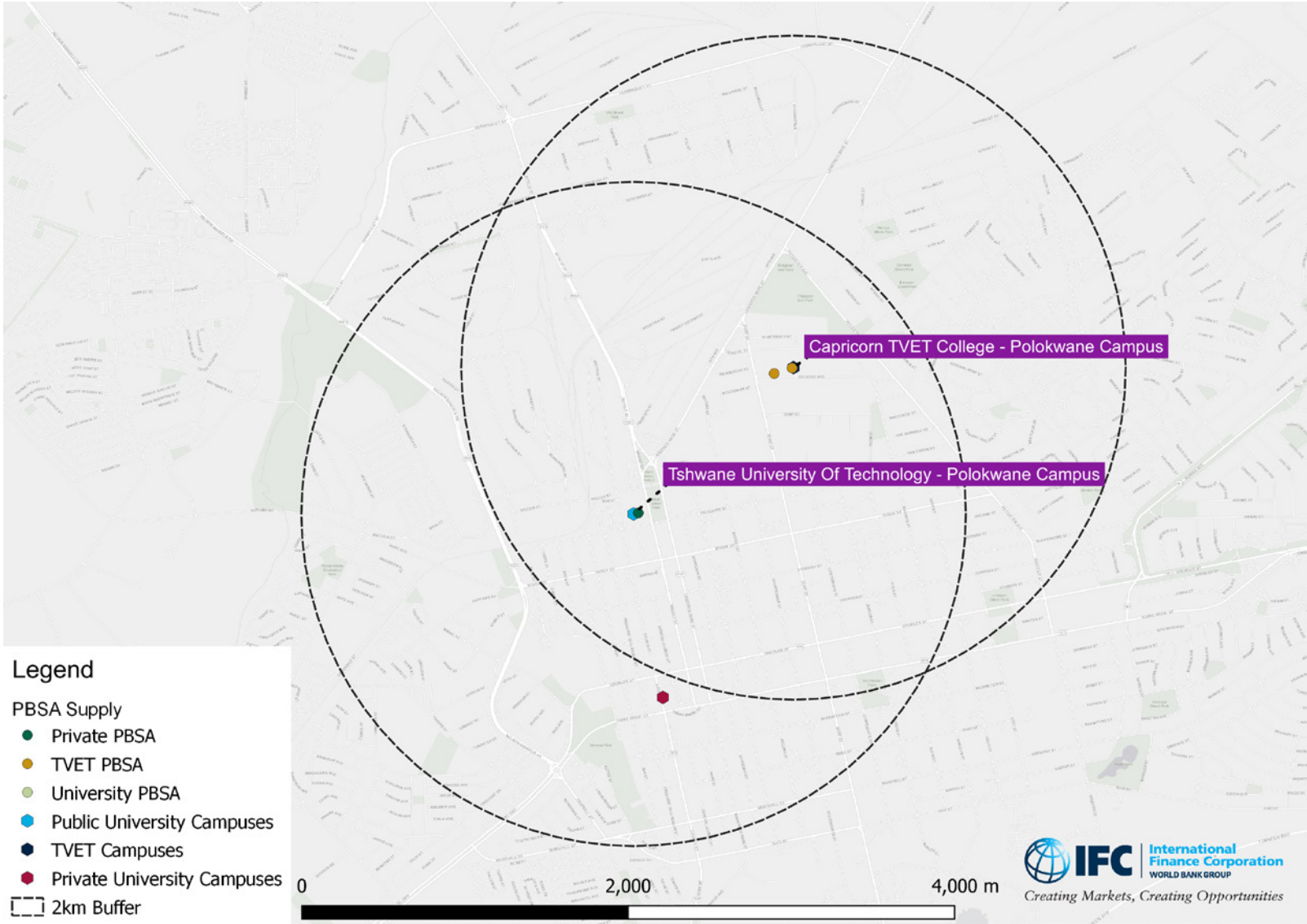
Map 50: Capricorn TVET College - Senwabarwana Campus



Map 51: Capricorn TVET College - Seshego Campus



Map 52: Polokwane CBD Node



Map 53: Sekhukhune TVET College - Apel

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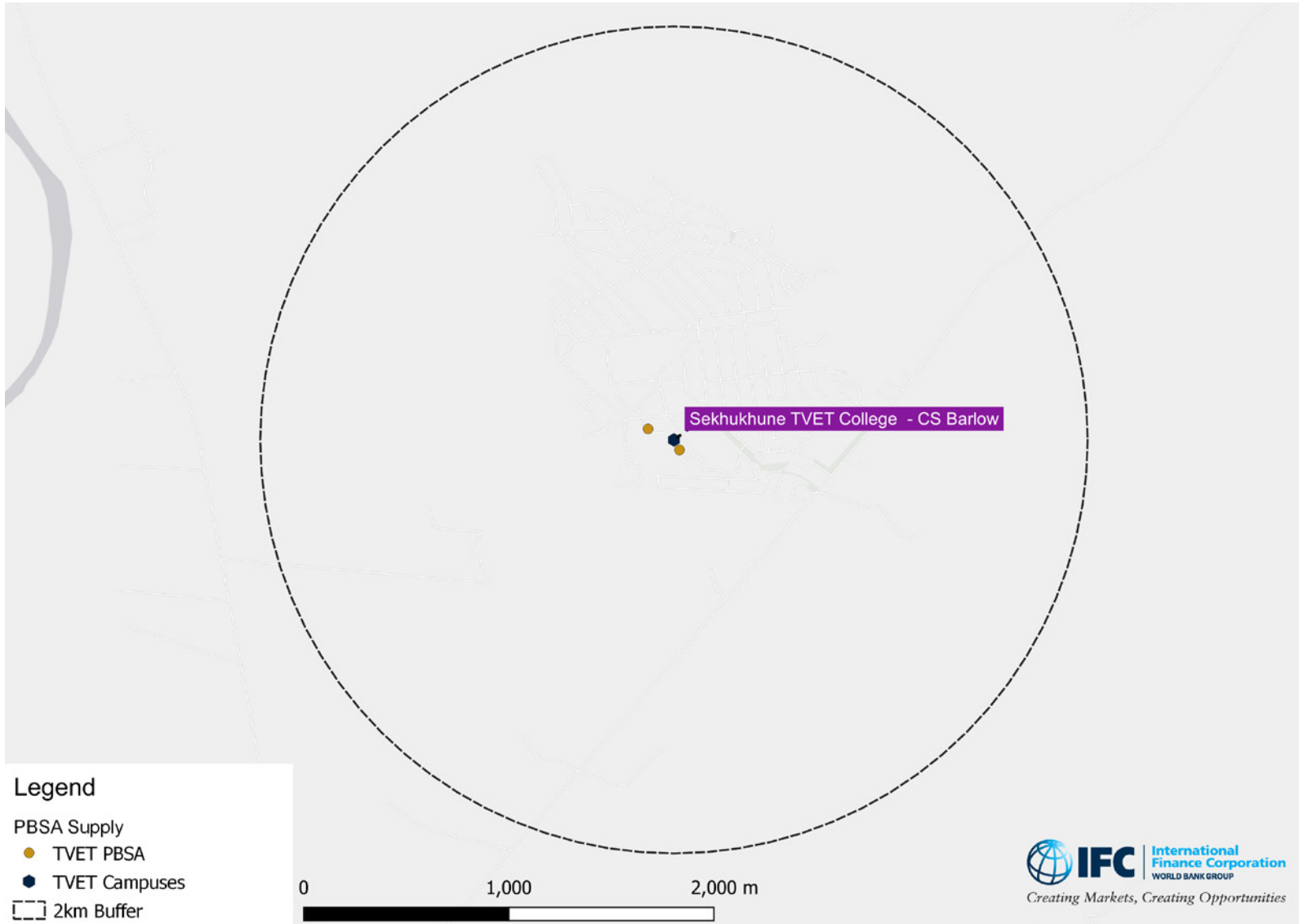


Map 54: Sekhukhune TVET College - CN Phatudi Campus

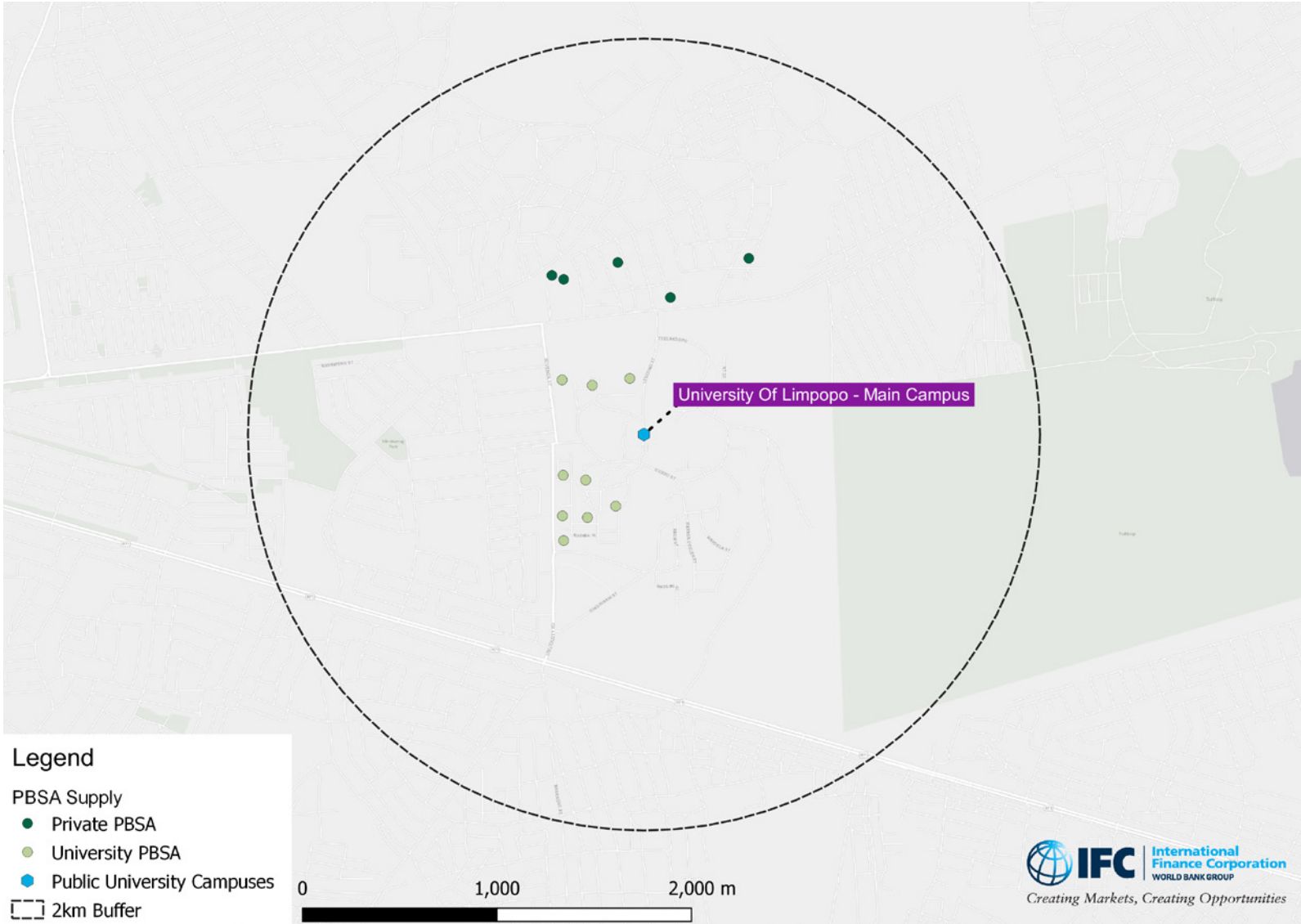


Map 55: Sekhukhune TVET College - CS Barlow

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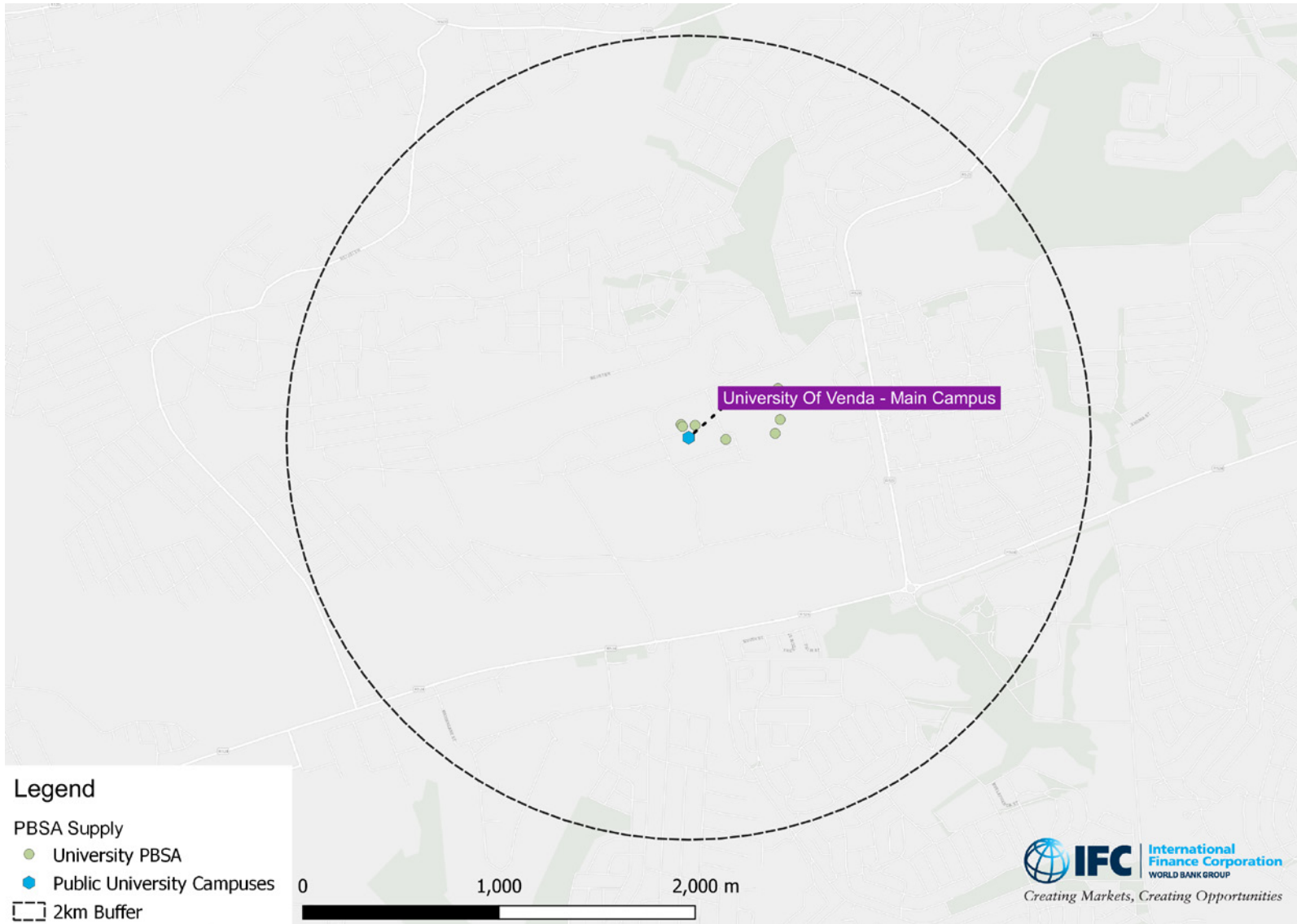


Map 56: University of Limpopo - Main Campus



Map 57: University of Venda - Main Campus

140



Map 58: Vhembe TVET College - Makwarela Campus



Map 59: Waterberg TVET College - Engineering and Skills Training Centre

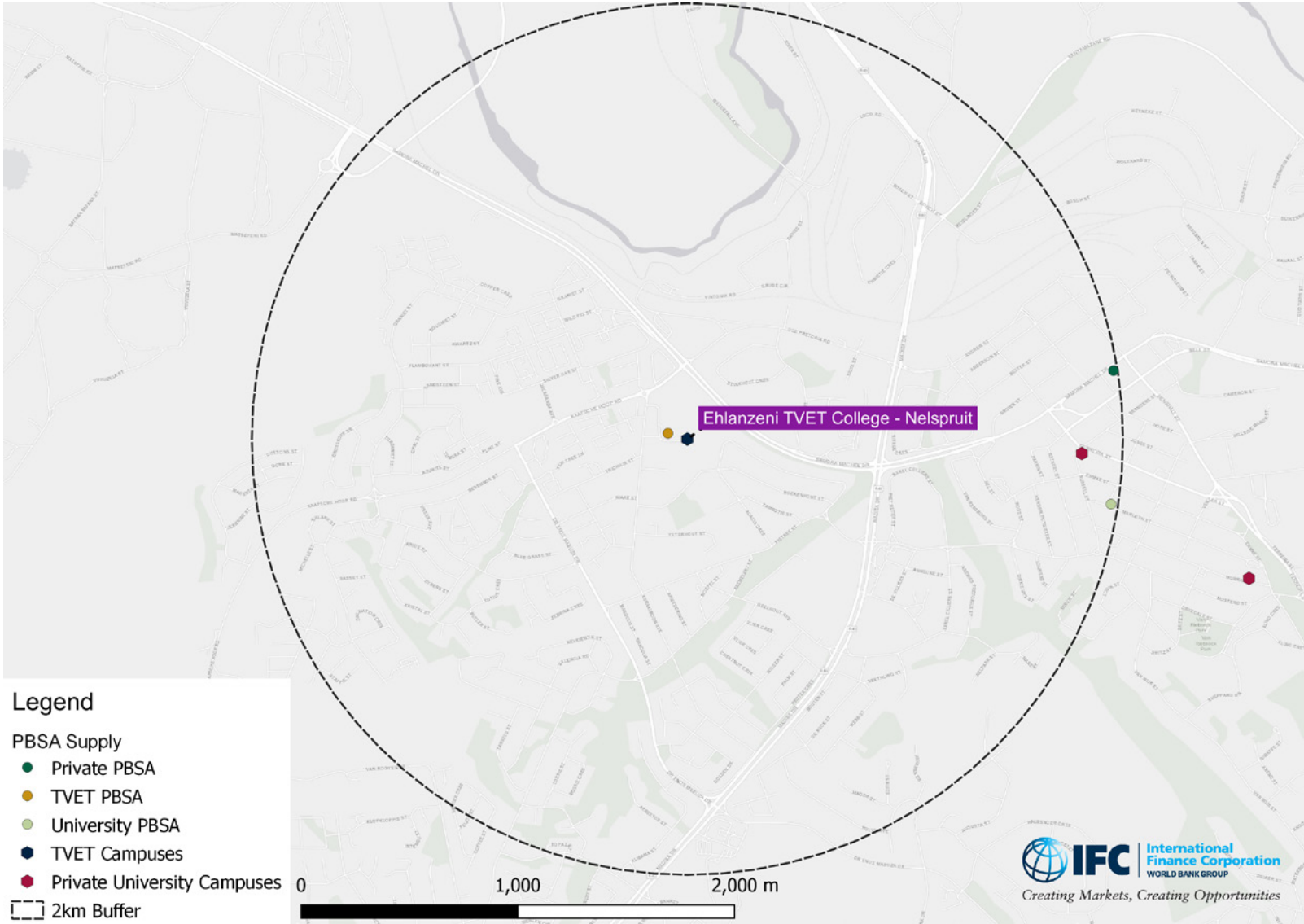
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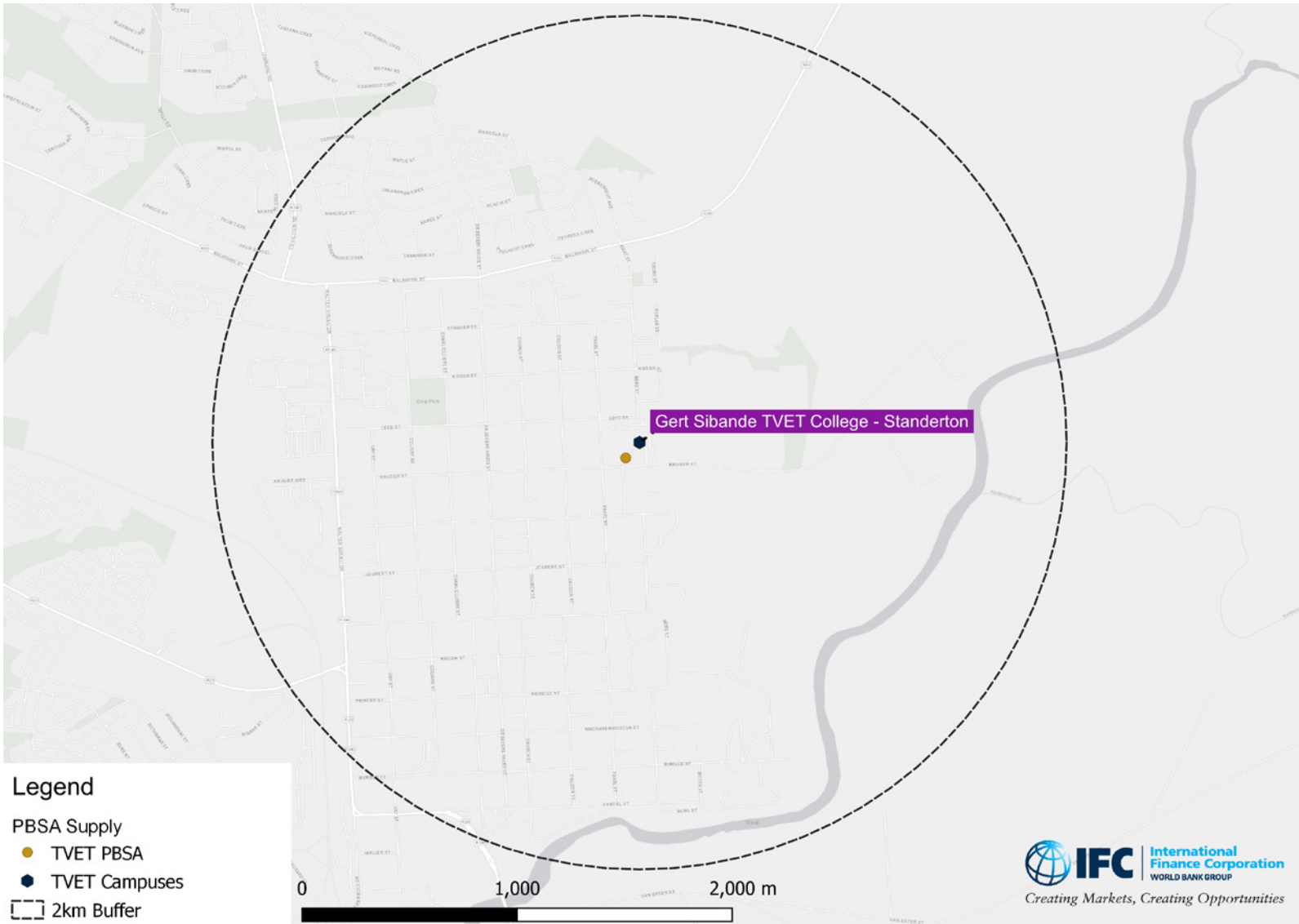
Map 6o: Waterberg TVET College - IT and Computer Sciences Centre



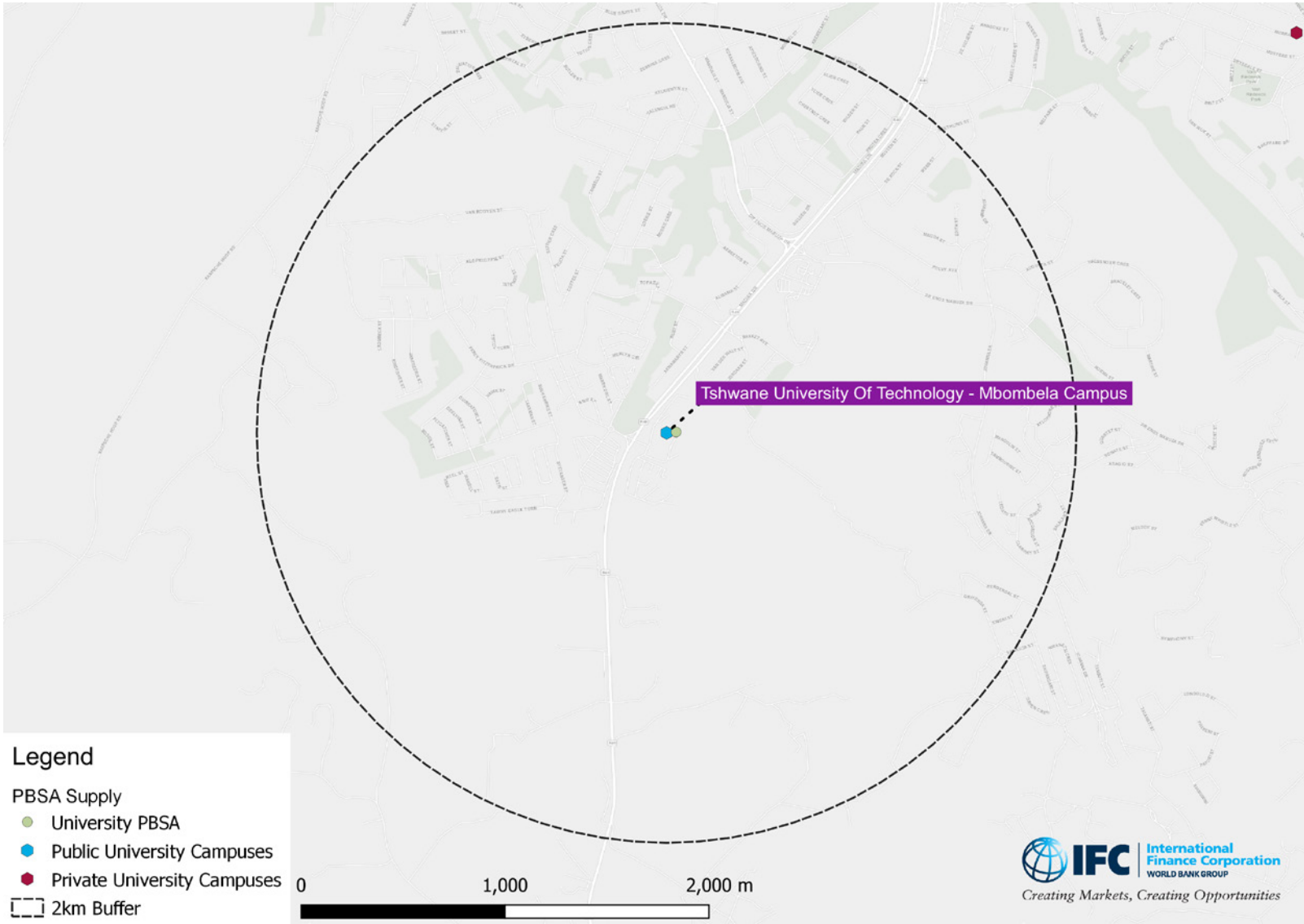
Map 61: Ehlazeni TVET College - Nelspruit



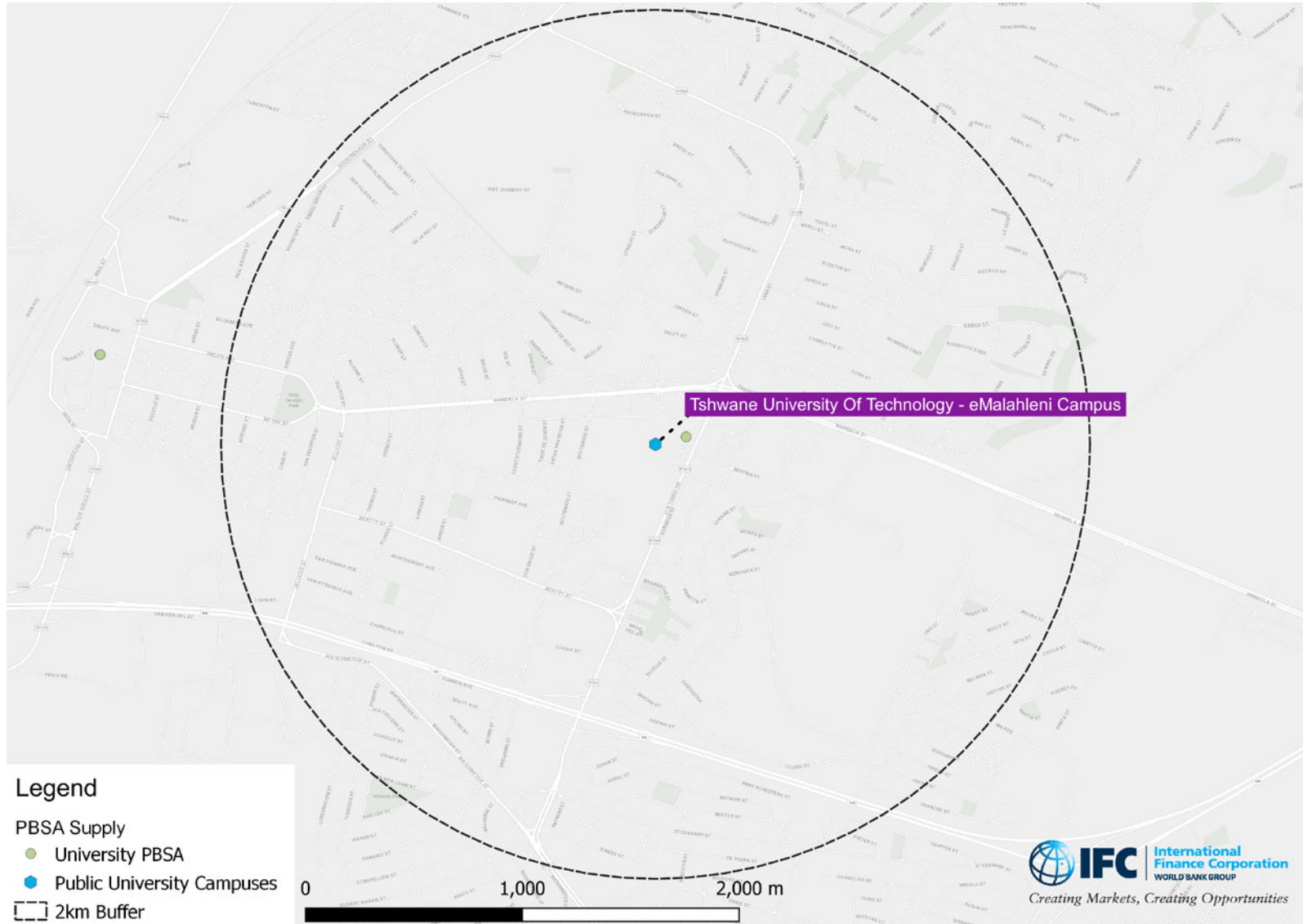
Map 62: Gert Sibande TVET College - Standerton



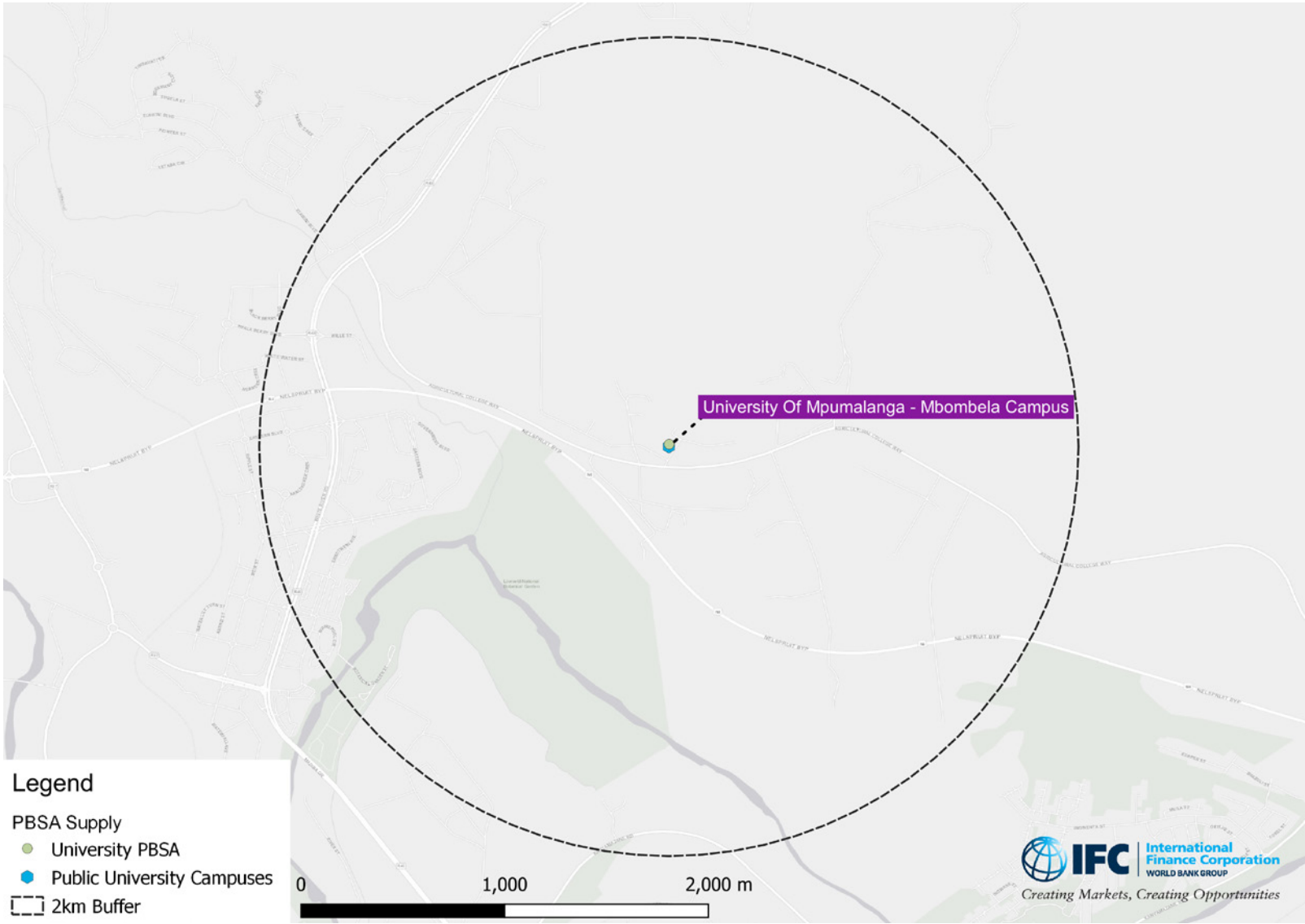
Map 63: Tshwane University of Technology - Mbombela Campus



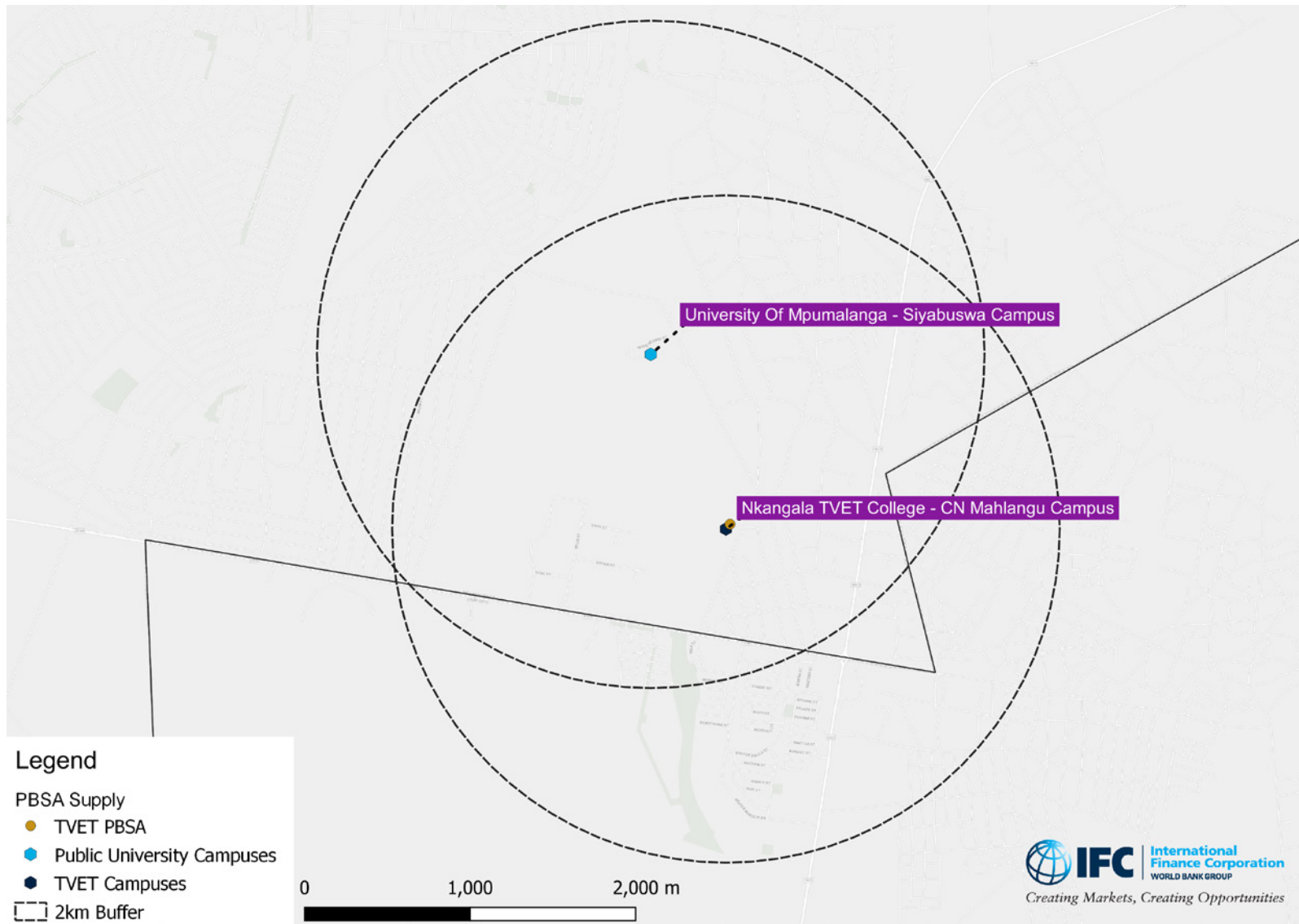
Map 64: Tshwane University of Technology - eMalahleni Campus



Map 65: University of Mpumalanga - Mbombela Campus



Map 66: University of Mpumalanga - Siyabuswa Campus and Nkangala TVET College - CN Mahlangu Campus Node



Map 67: Vaal University of Technology - Secunda Campus

150



Map 68: Northern Cape Rural TVET College - Namaqualand Campus

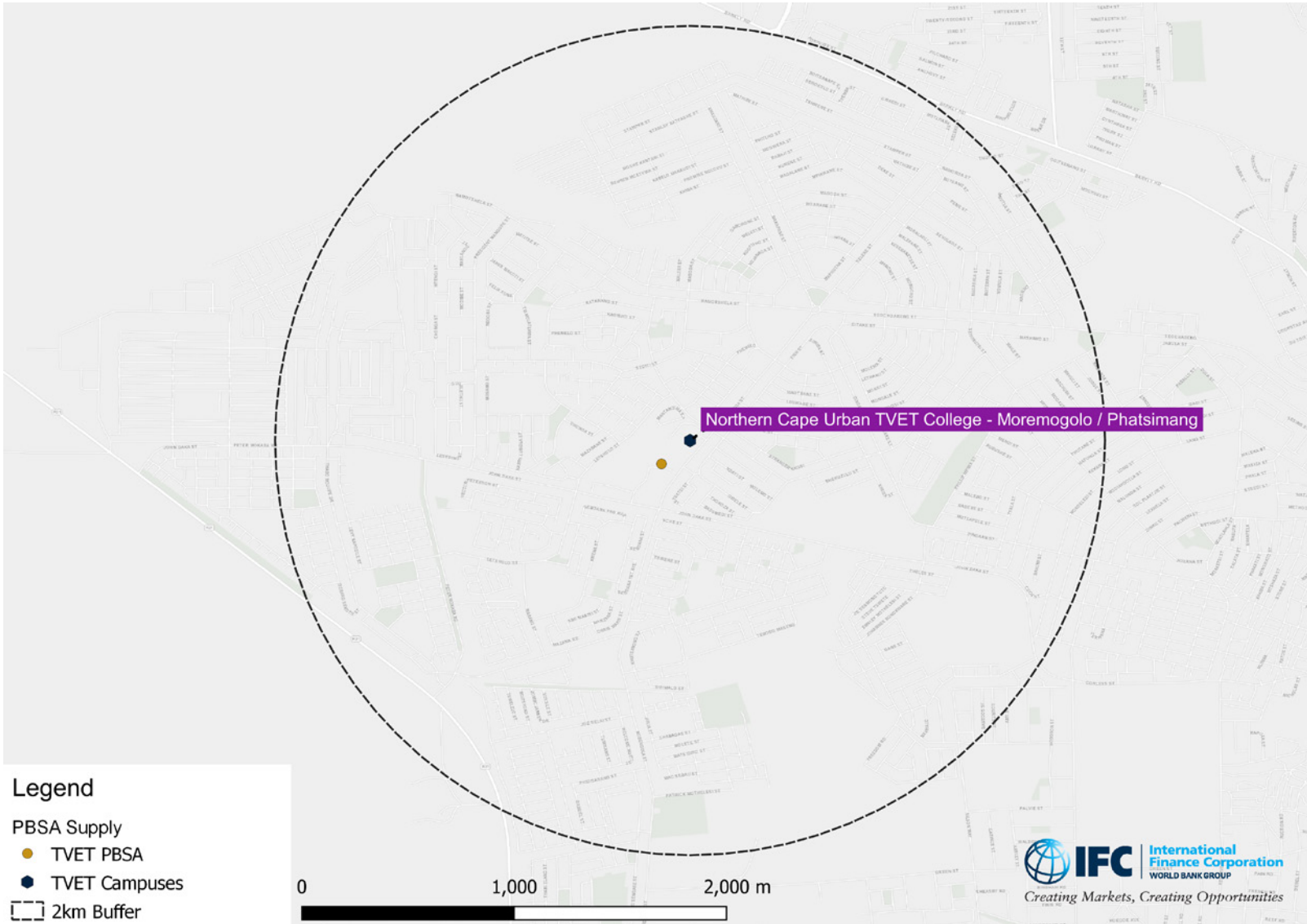
151



Map 69: Northern Cape Rural TVET College - Upington Campus



Map 70: Northern Cape Urban TVET College - Moremogolo - Phatsimang Campus

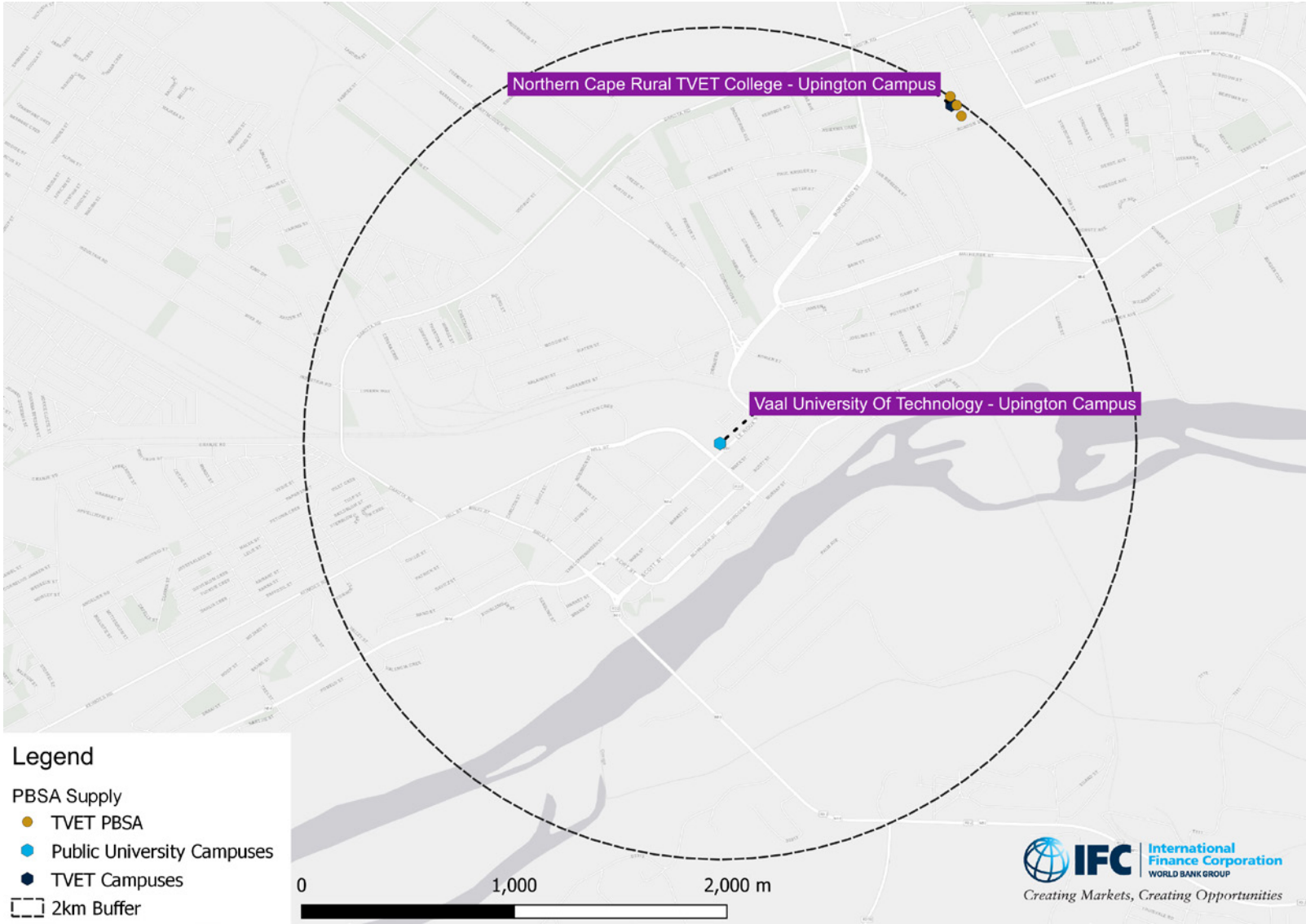


Map 71: Sol Plaatje University - Main Campus and Northern Cape Urban TVET College - City Campus

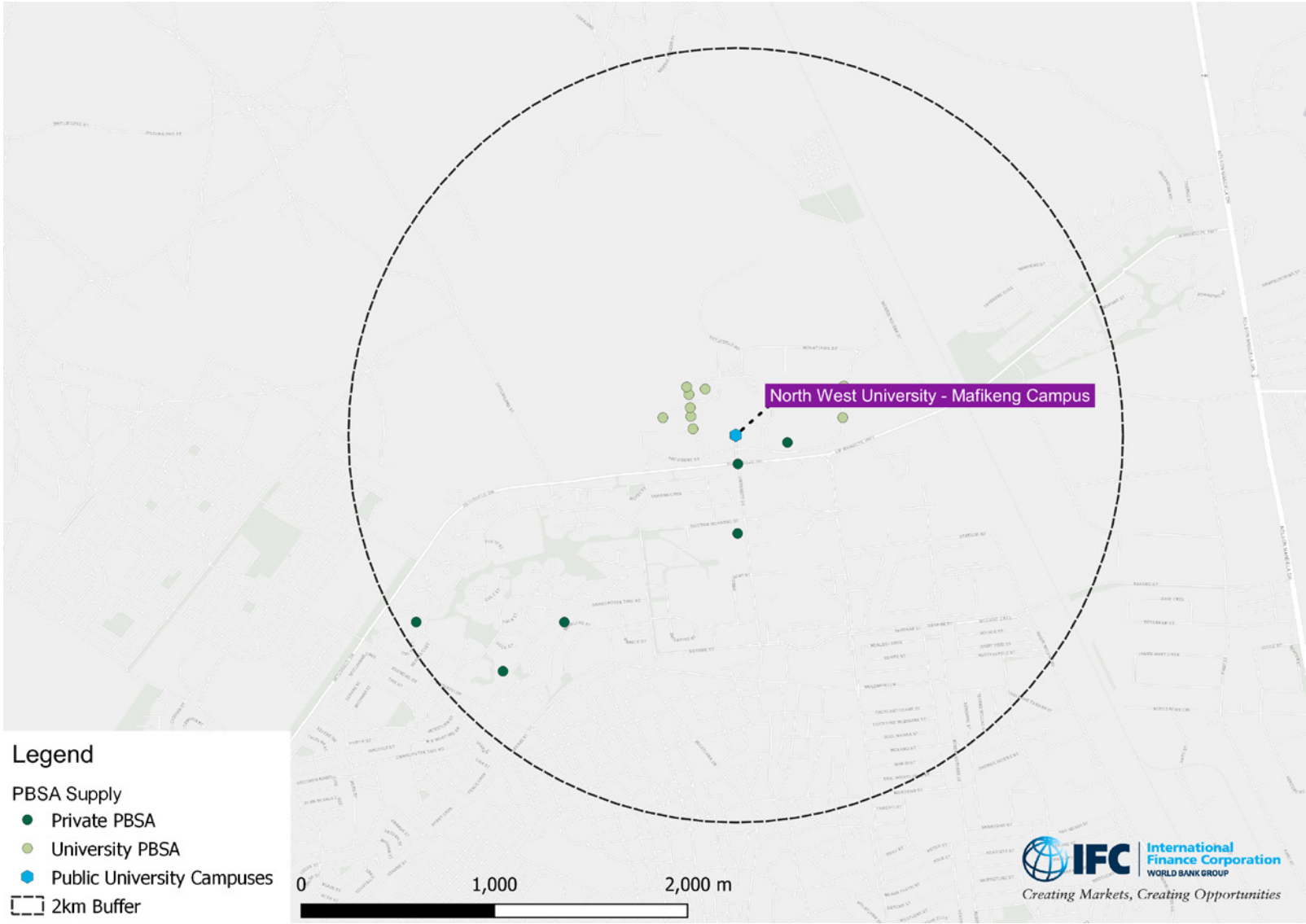
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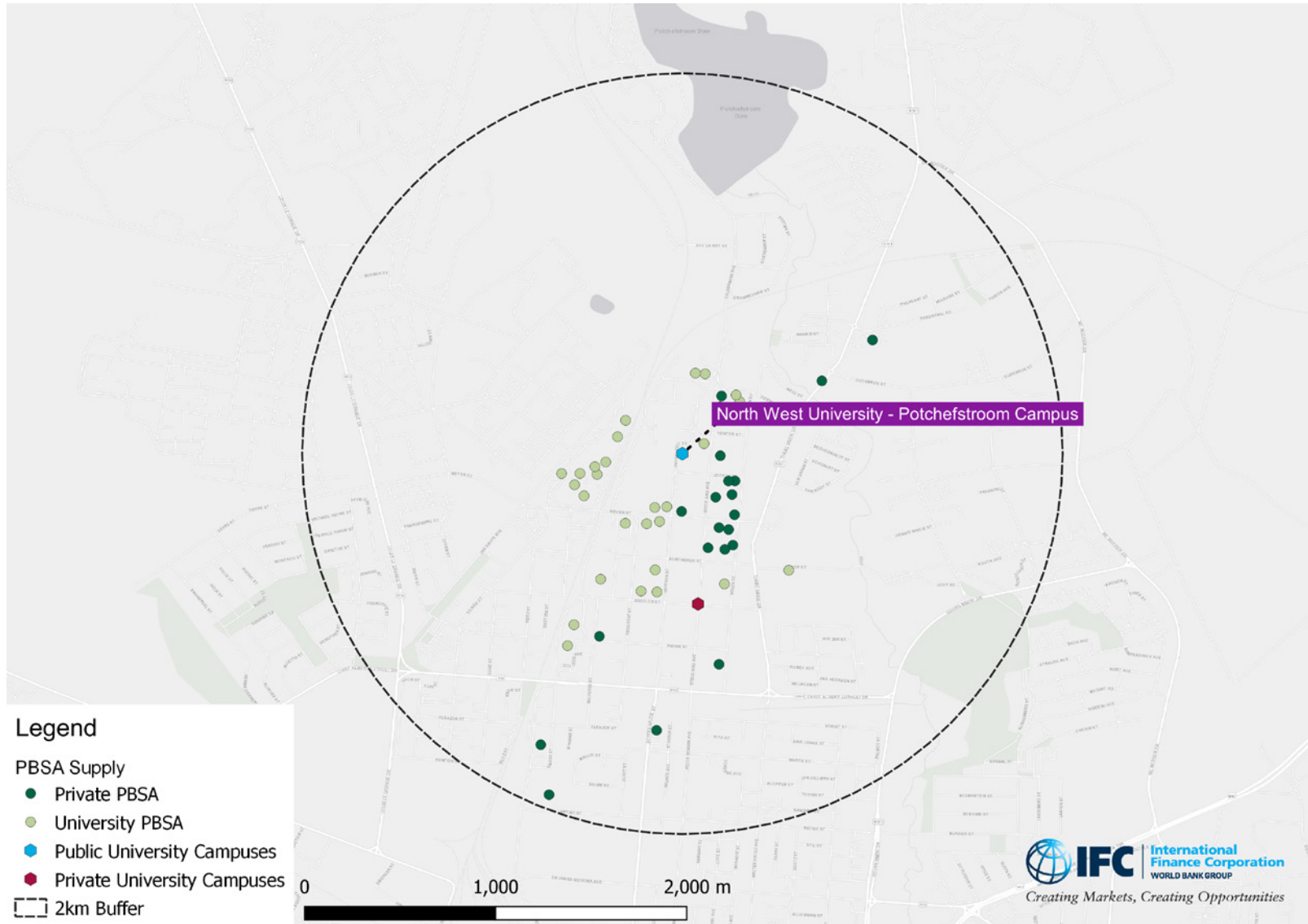
Map 72: Vaal University of Technology - Upington Campus



Map 73: NW University - Mafikeng Campus

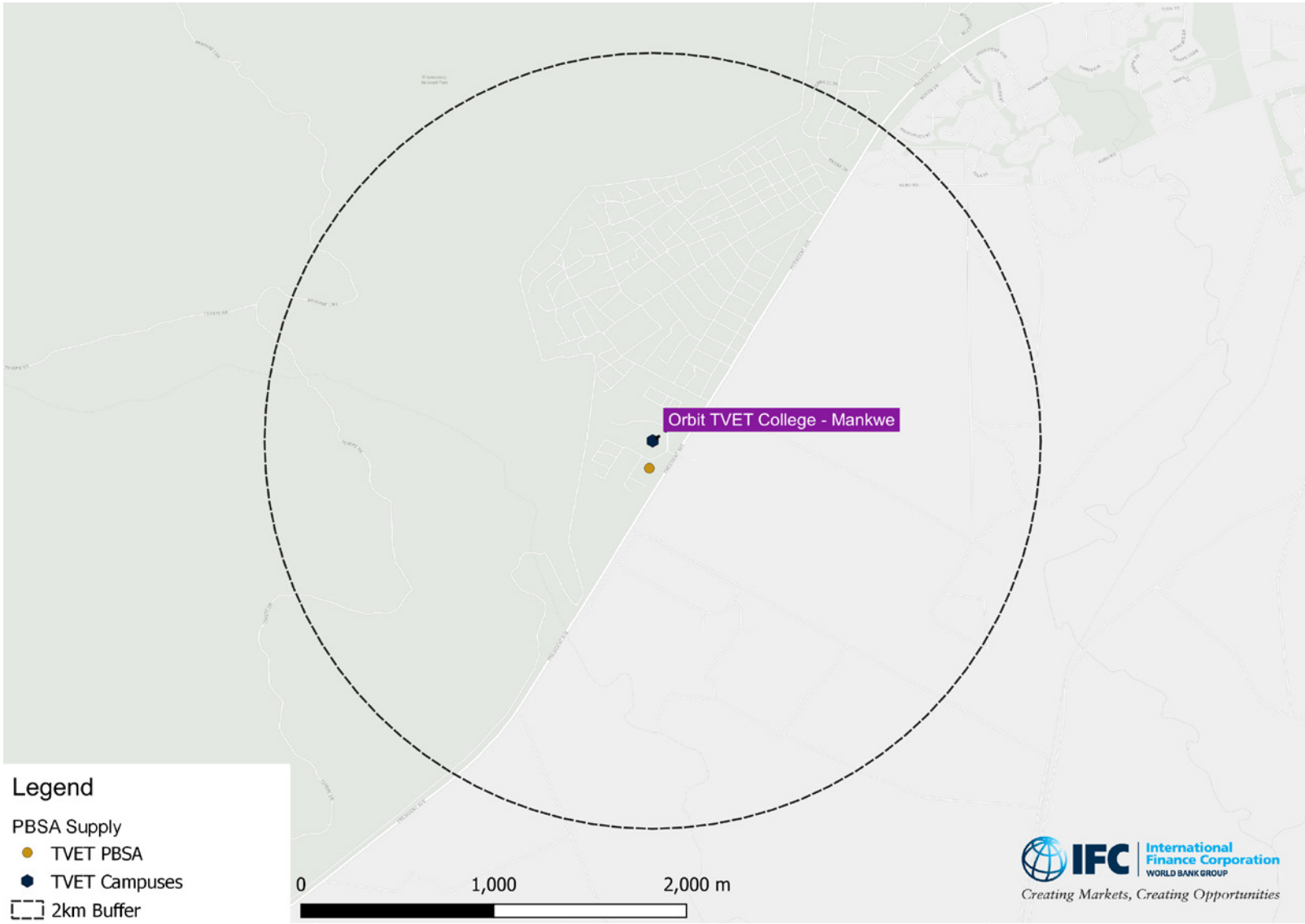


Map 74: NW University - Potchefstroom Campus



Map 75: Orbit TVET College - Mankwe

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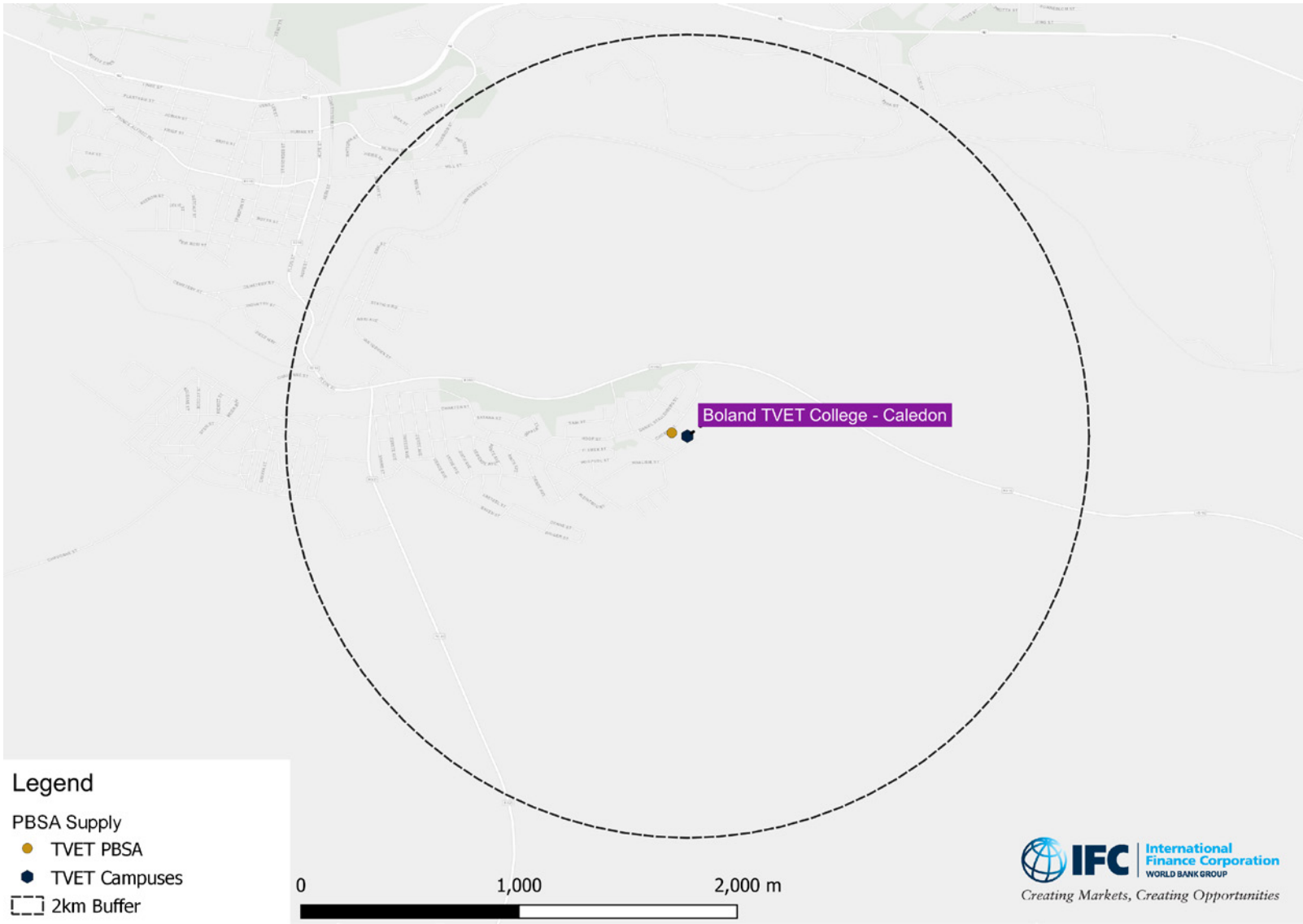
Map 76: Taletso TVET College - Taletso Lehurutshe Campus

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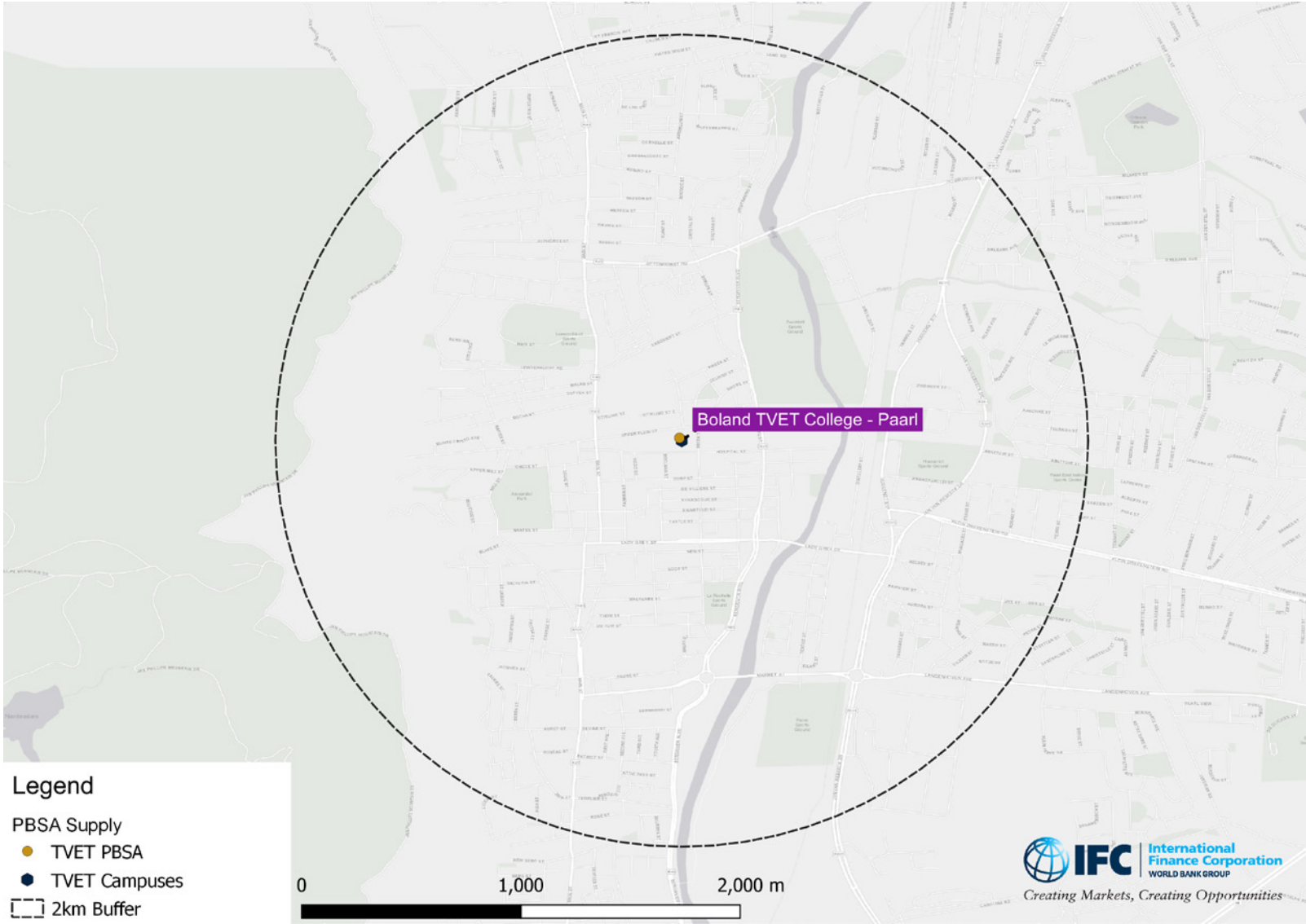


Map 77: Boland TVET College - Caledon

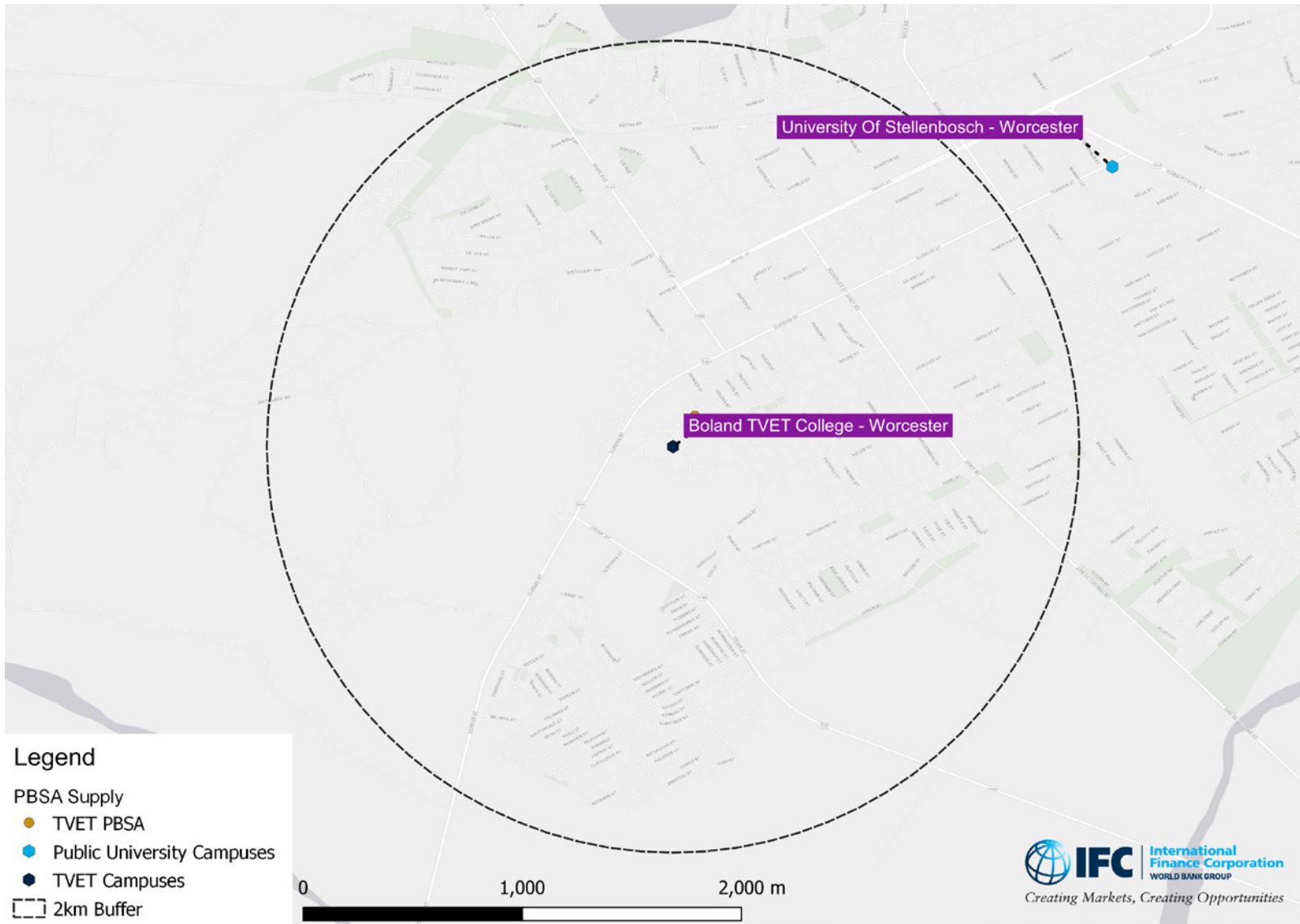
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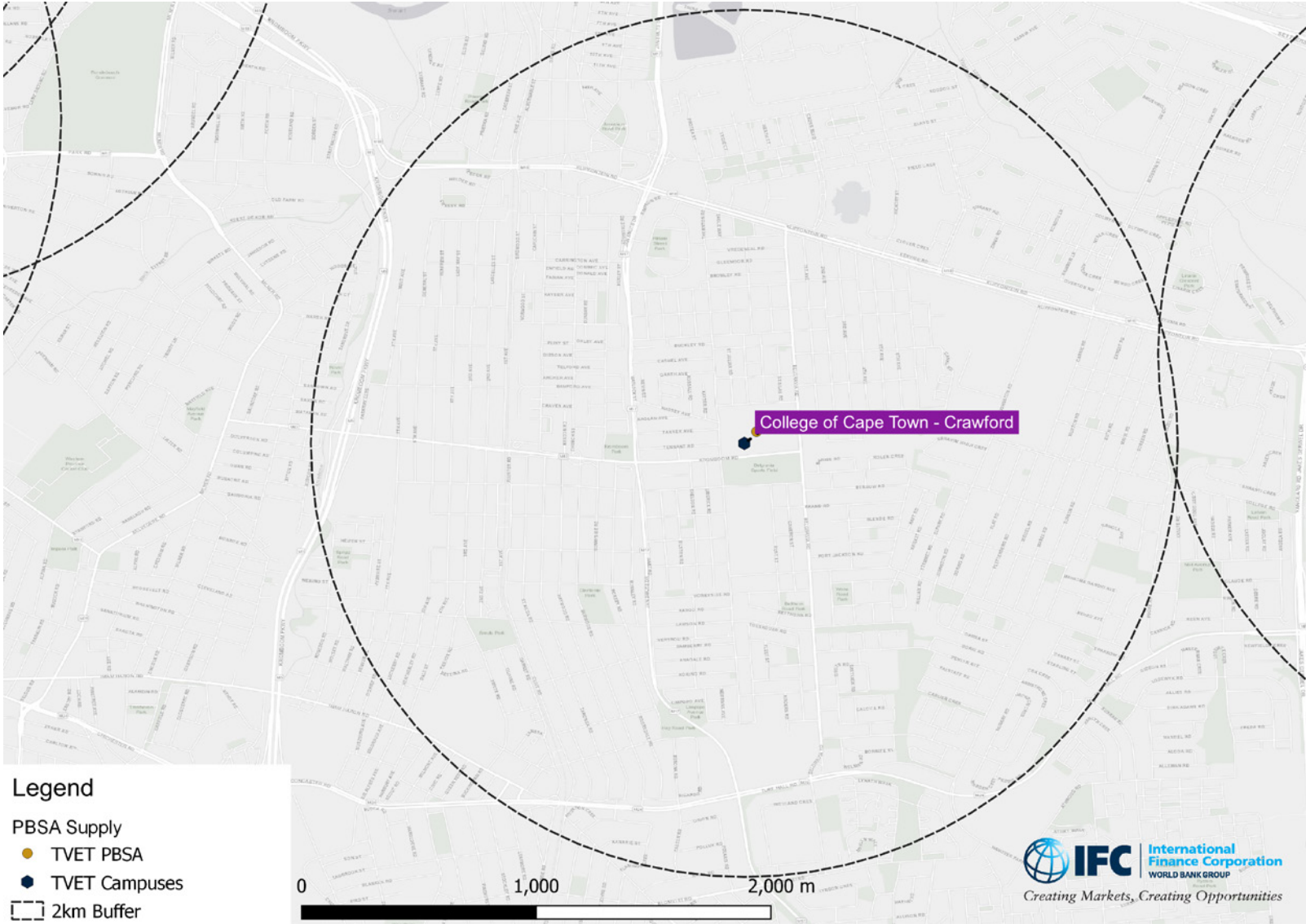
Map 78: Boland TVET College - Paarl



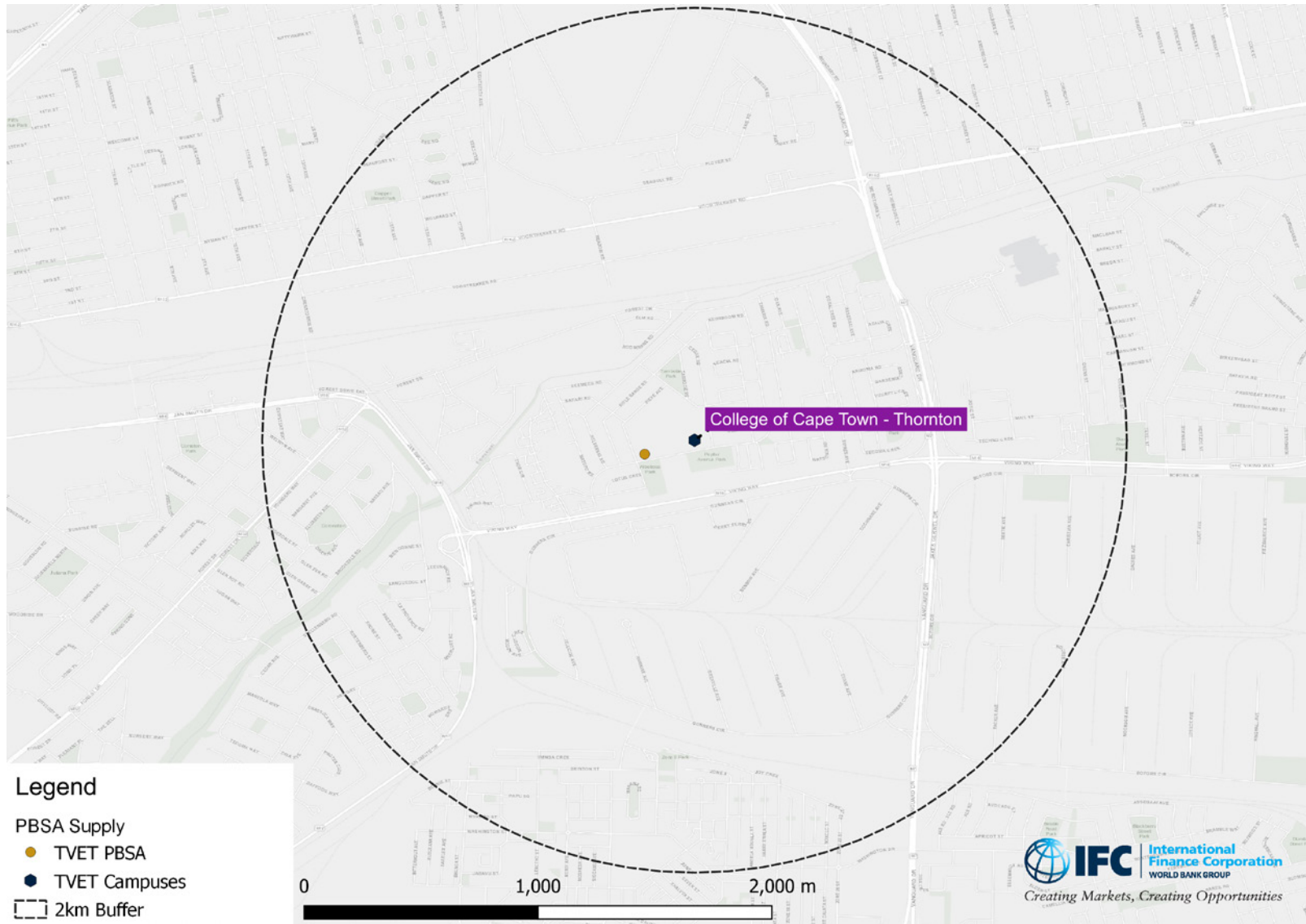
Map 79: Boland TVET College - Worcester



Map 80: College of Cape Town - Crawford



Map 81: College of Cape Town - Thornton



Legend

PBSA Supply

● TVET PBSA

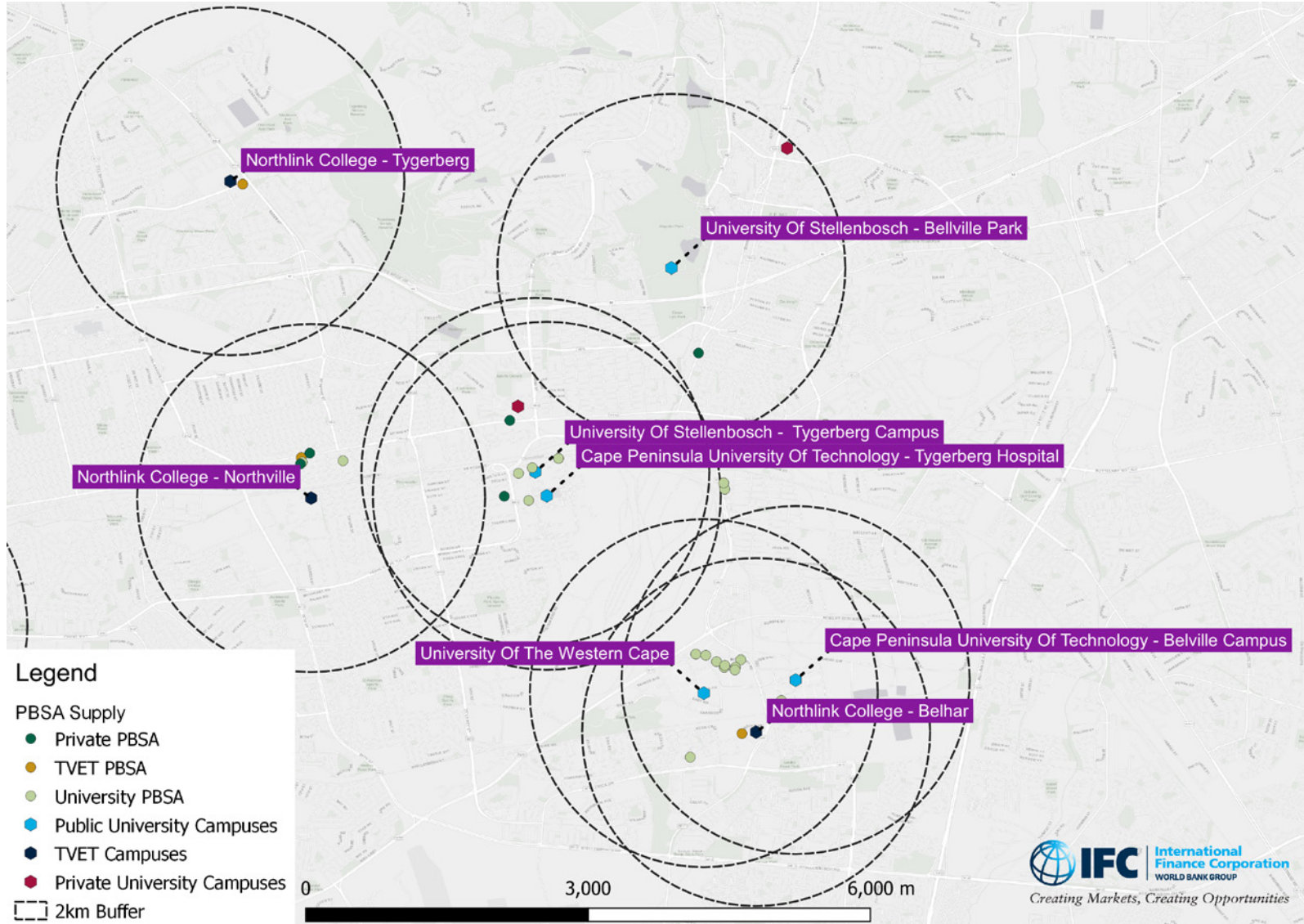
● TVET Campuses

□ 2km Buffer

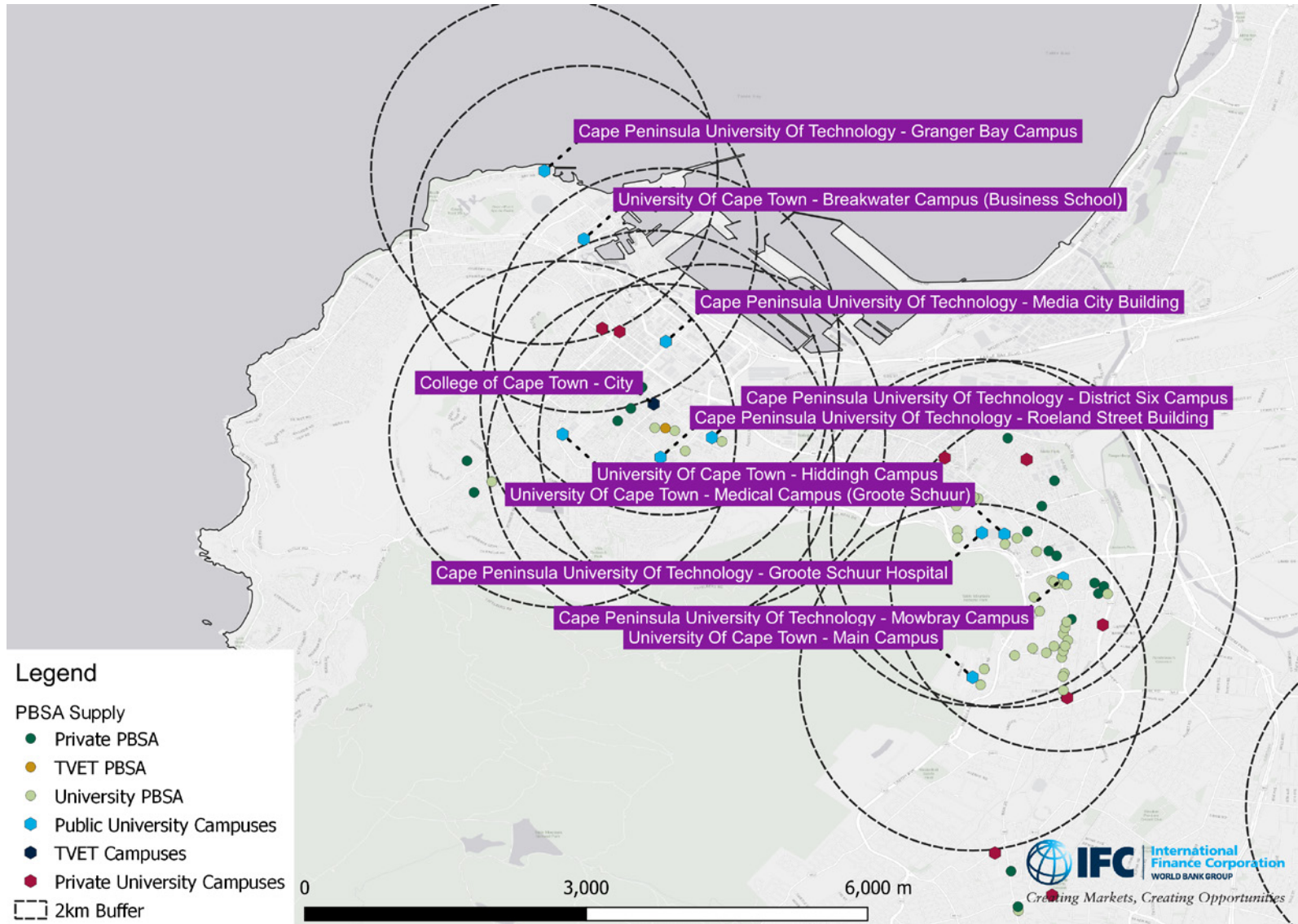
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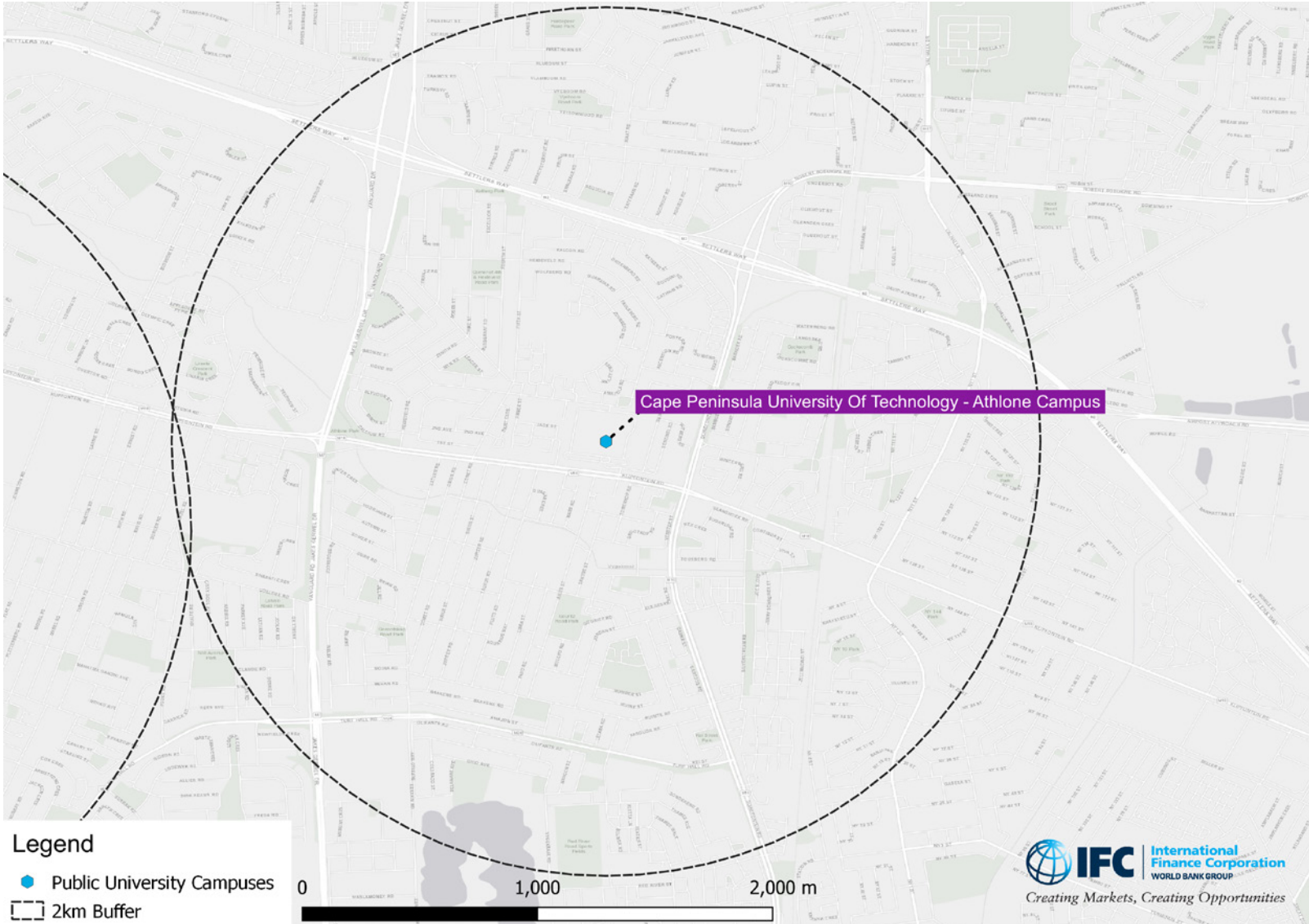
Map 82: Cape Town Belville Node



Map 83: Cape Town CBD Node



Map 84: CPUT - Athlone Campus

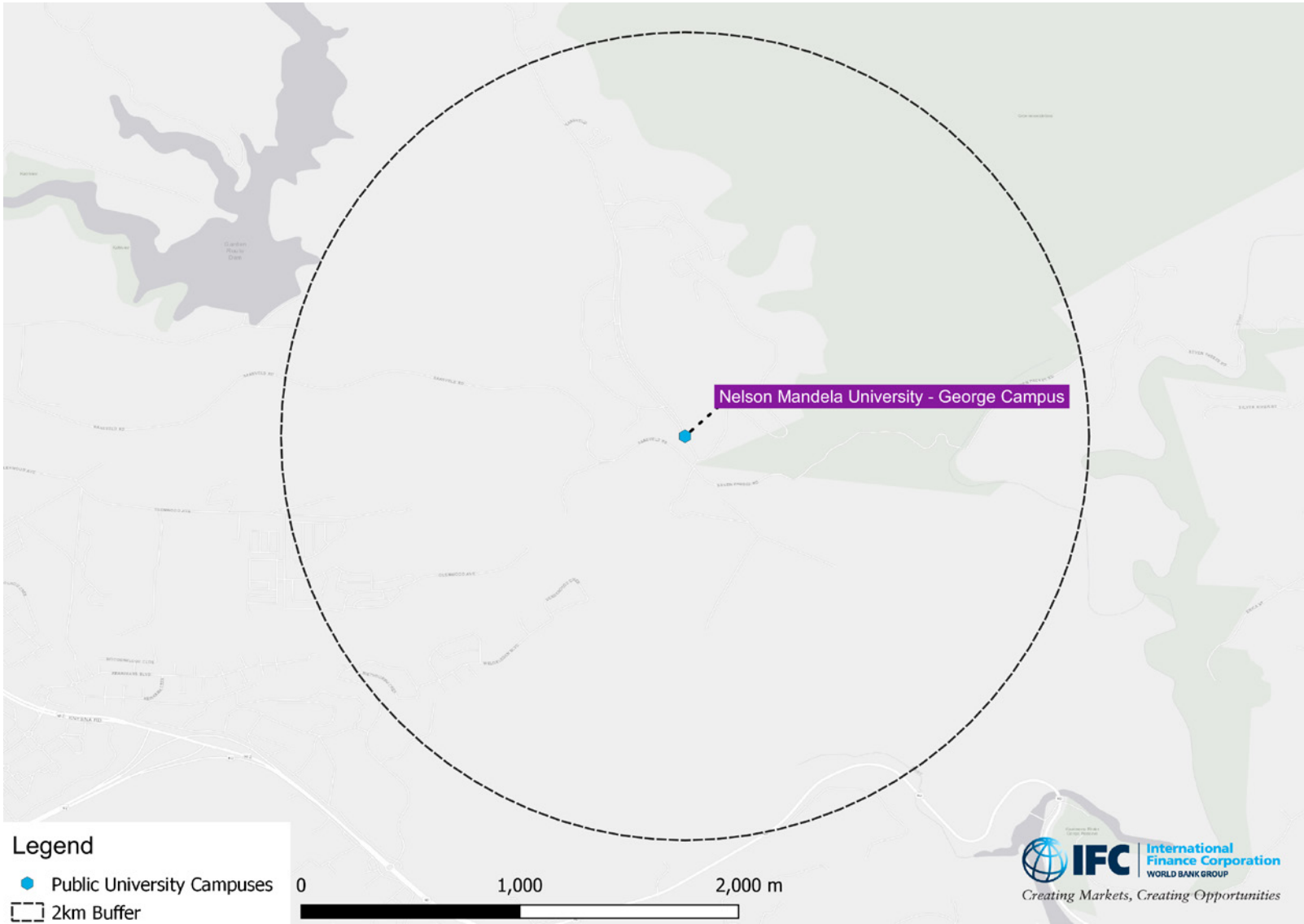




Legend

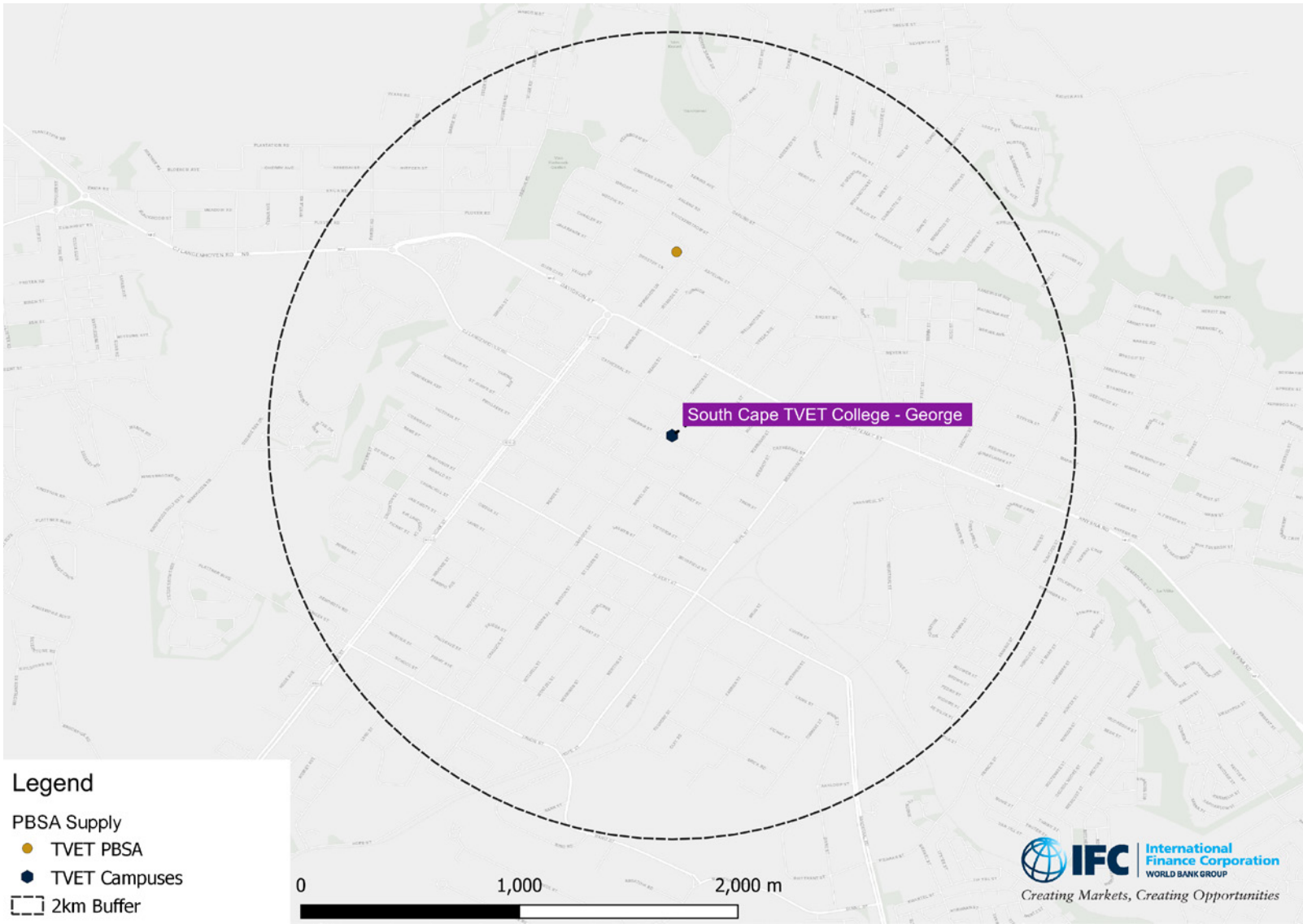
- PBSA Supply
- Private PBSA
- Public University Campuses
- 2km Buffer

Map 86: NMU - George



Map 87: South Cape College TVET - George

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Legend

PBSA Supply

● TVET PBSA

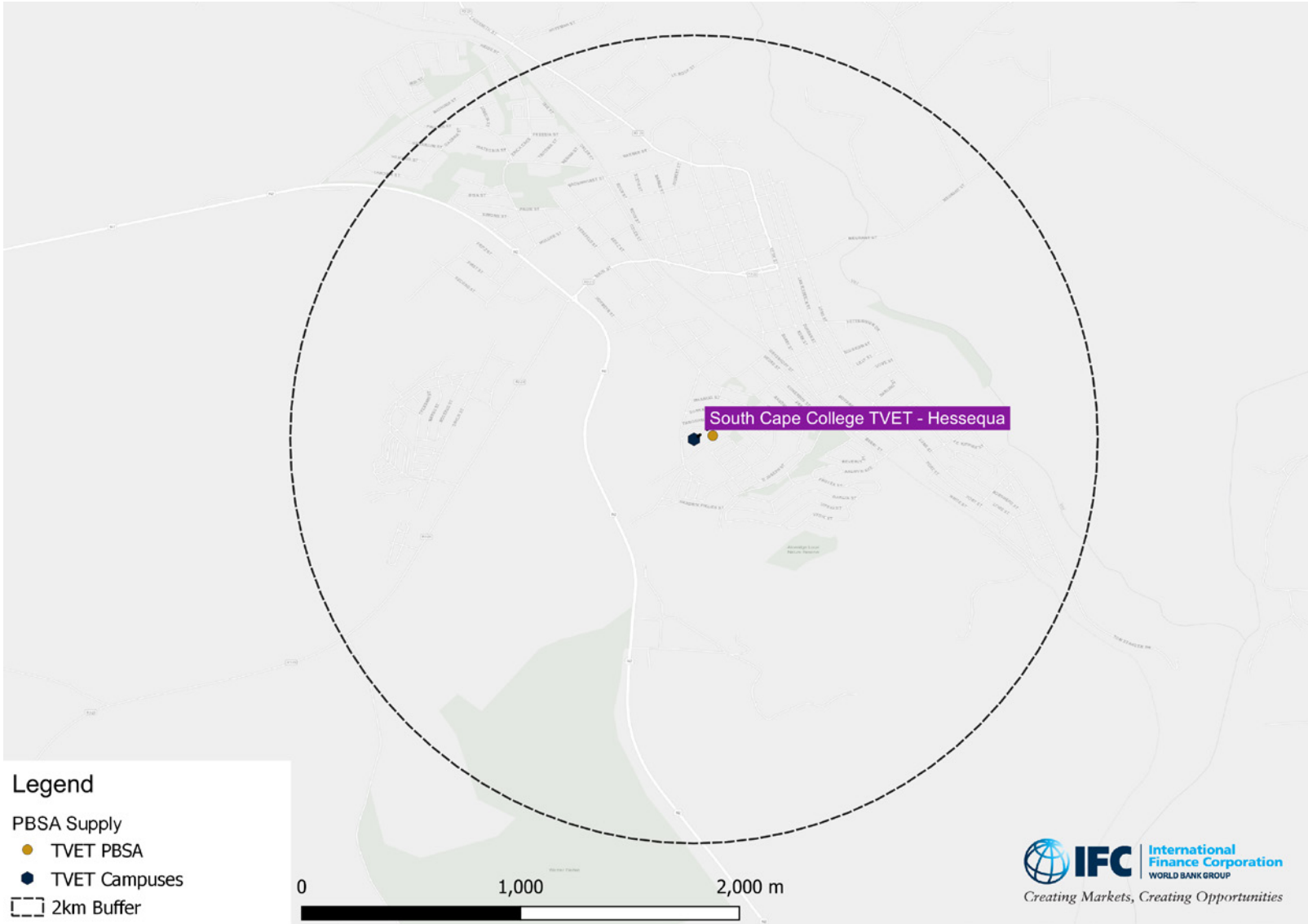
● TVET Campuses

⊞ 2km Buffer

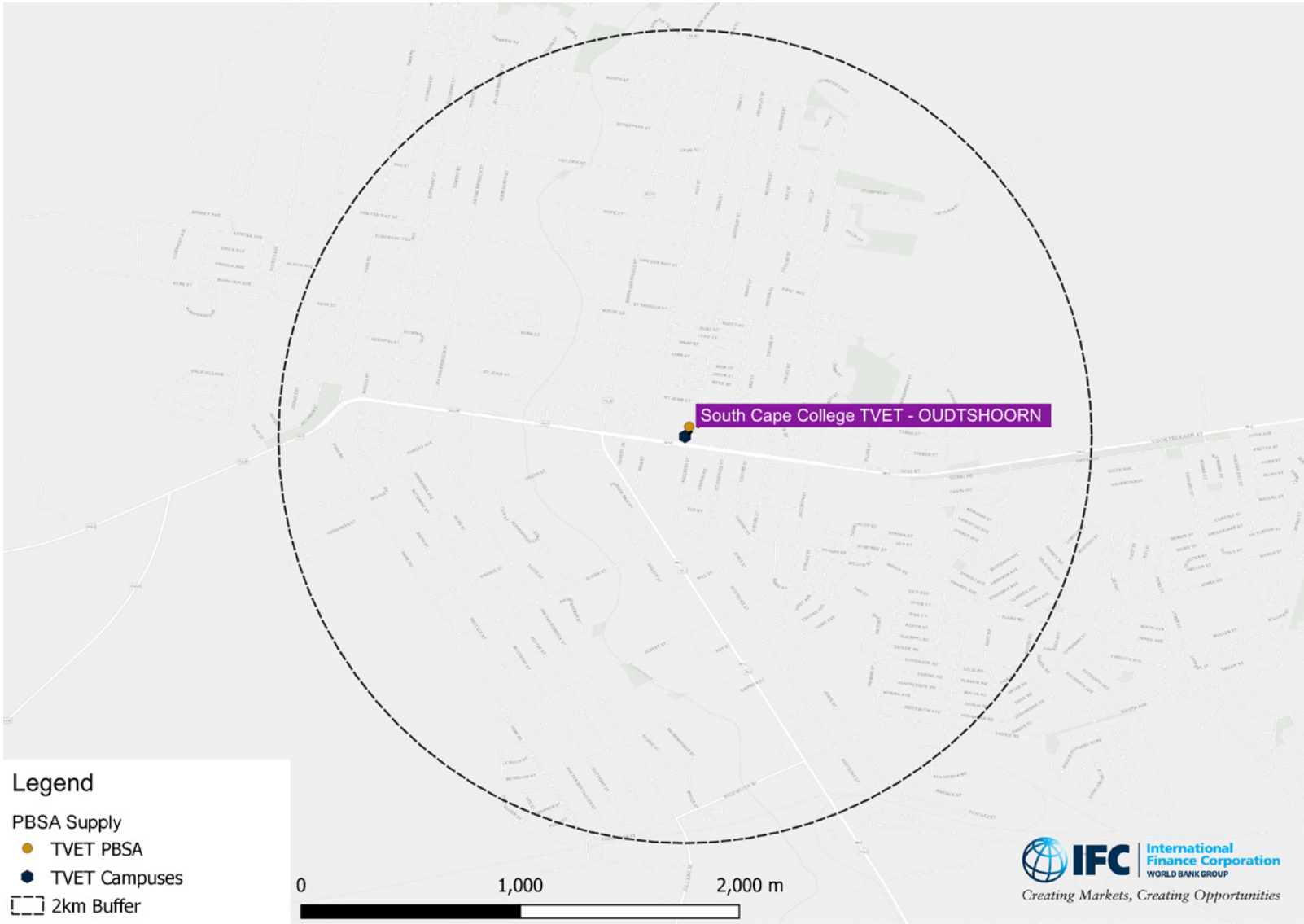
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Map 88: South Cape College TVET - Hessequa

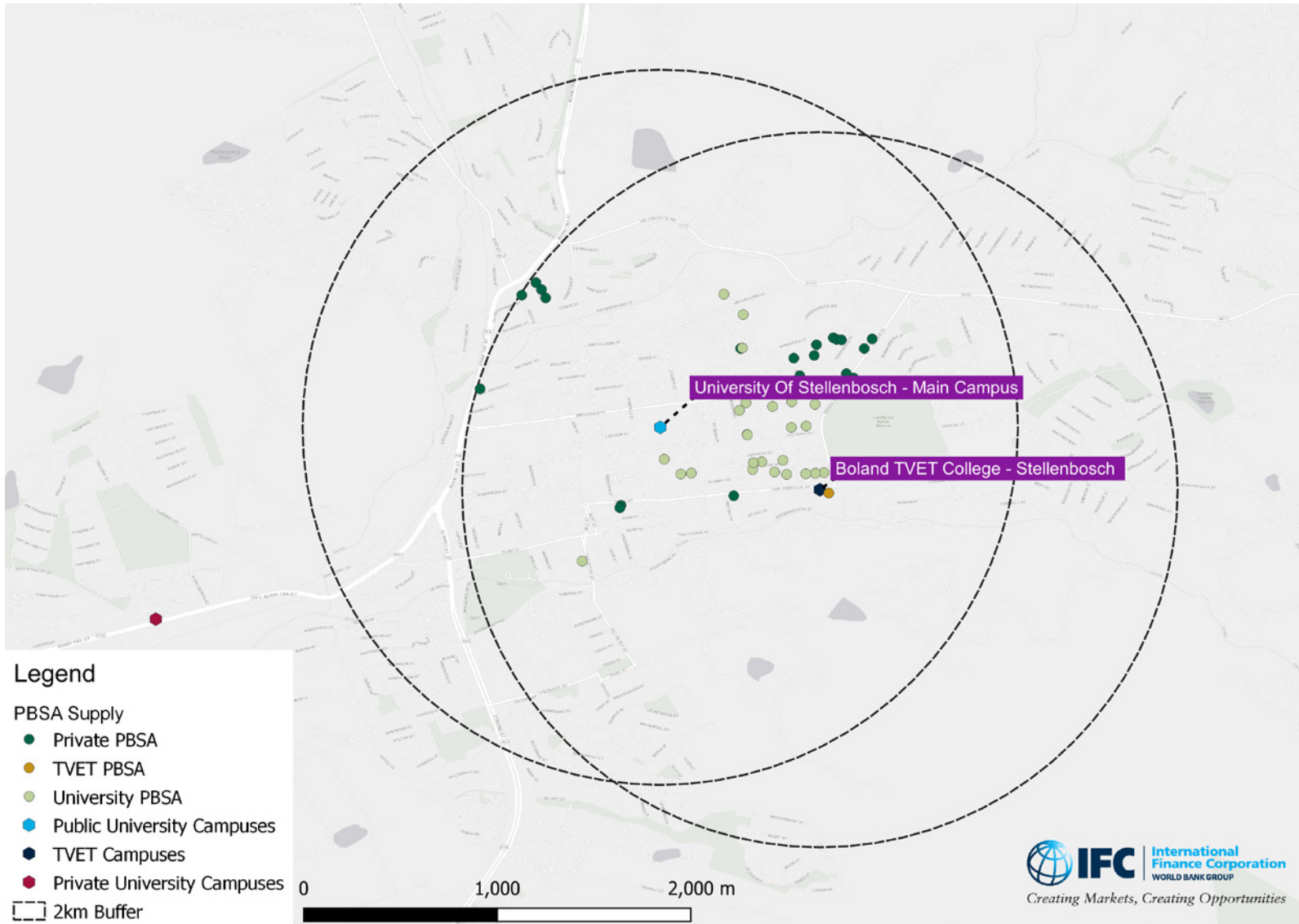


Map 89: South Cape College TVET - Oudtshoorn



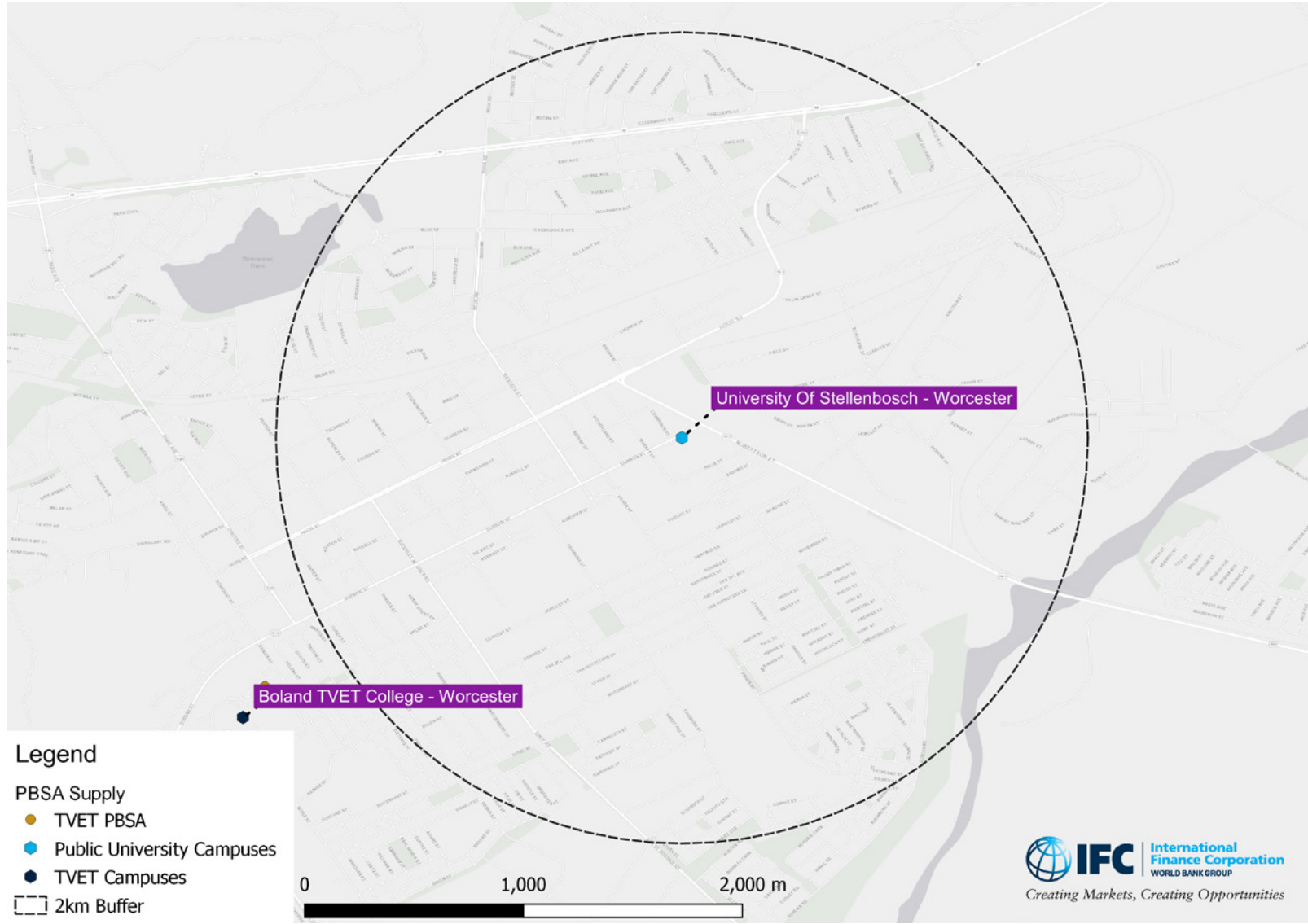
Map 90: Stellenbosch Node

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Map 91: University of Stellenbosch - Worcester

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ANNEXURE C – FUNDING ALLOCATION

Table 24: Government funding allocated for public HEIs (2018/2019)

Institution	Total Amount Allocated ZAR
Cape Peninsula University of Technology	R 1,410,494,000
Central University of Technology, Free State	R 674,133,000
Durban University of Technology	R 1,234,530,000
Mangosuthu University of Technology	R 624,824,000
Nelson Mandela University	R 1,352,395,000
North West University	R 2,148,988,000
Rhodes University	R 638,618,000
Sefako Makgatho Health Science University	R 743,085,000
Sol Plaatjie University, Northern Cape	R 610,164,000
Tshwane University of Technology	R 2,097,579,000
University of Cape Town	R 1,786,486,000
University of Fort Hare	R 701,865,000
University of Johannesburg	R 2,185,612,000
University of KwaZulu-Natal	R 2,374,318,000
University of Limpopo	R 1,015,681,000
University of Mpumalanga	R 980,345,000
University of Pretoria	R 2,744,115,000
University of South Africa	R 3,758,744,000
University of Stellenbosch	R 1,957,801,000
University of the Free State	R 1,528,562,000
University of Venda	R 694,550,000
University of Western Cape	R 1,291,327,000
University of Witwatersrand	R 1,920,667,000
University of Zululand	R 620,278,000
Vaal University of Technology	R 869,491,000
Walter Sisulu University	R 932,226,000
Total	R 36,896,878,000

Source: (DHET, 2020)

Table 25: Funding allocated for TVET colleges (2018/2019)

Institution	Total Amount Allocated ZAR
Boland TVET College	R 69,499,000
Buffalo City TVET College	R 66,077,000
Capricorn TVET College	R 80,306,000
Central JHB TVET College	R 69,604,000
Coastal TVET College	R 109,162,000
College of Cape Town TVET College	R 75,477,000
Eastcape Midlands TVET College	R 78,922,000
Ehlanzeni TVET College	R 105,329,000
Ekurhuleni East TVET College	R 85,131,000
Ekurhuleni West TVET College	R 103,918,000
Elangeni TVET College	R 87,873,000
Esayidi TVET College	R 76,330,000
False Bay TVET College	R 451,248,000
Flavius Mareka TVET College	R 45,854,000
Gert Sibande TVET College	R 163,934,000
Goldfields TVET College	R 427,700,000
Ikhala TVET College	R 50,750,000
Ingwe TVET College	R 63,493,000
King Hintsa TVET College	R 52,729,000
King Sabata Dalindyebo TVET College	R 63,087,000
Lephalale TVET College	R 34,199,000
Letaba TVET College	R 46,939,000
Lovedale TVET College	R 53,154,000
Majuba TVET College	R 151,873,000
Maluti TVET College	R 52,922,000
Mnambithi TVET College	R 59,173,000

Institution	Total Amount Allocated ZAR
Mopani South East TVET College	R 71,314,000
Motheo TVET College	R 73,064,000
Mthashana TVET College	R 54,014,000
Nkangala TVET College	R 116,251,000
Northern Cape Rural TVET College	R 72,430,000
Northern Cape Urban TVET College	R 76,189,000
Northlink TVET College	R 98,281,000
Orbit TVET College	R 145,942,000
Port Elizabeth TVET College	R 91,095,000
Sedibeng TVET College	R 81,874,000
Sekhukhune TVET College	R 49,181,000
South Cape TVET College	R 56,161,000
South West Gauteng TVET College	R 103,535,000
Taletso TVET College	R 75,993,000
Thekwini TVET College	R 60,824,000
Tshwane North TVET College	R 83,949,000
Umfolozu TVET College	R 113,039,000
Umgungunlovu TVET College	R 55,078,000
Vhembe TVET College	R 90,812,000
Vuselela TVET College	R 80,854,000
Waterberg TVET College	R 46,973,000
West Coast TVET College	R 66,287,000
Western College TVET College	R 86,565,000
Total	R 4,602,971,018

Source: (DHET, 2020)

ANNEXURE D – SWOT AND PEST ANALYSIS

Table 26: SWOT Analysis

Strength	Weakness
<ul style="list-style-type: none"> • South Africa’s universities have consistently been recognized as the best in Africa, leading to sustained demand from regional and international students. • South Africa’s universities are currently oversubscribed and the only real constraint to growth has been the number of places available to undergraduate students. • Recently the PBSA offering in South Africa has developed significantly as the market opportunities became apparent, although a supply-demand imbalance persists. • Most higher education institutions rely on private PBSA providers to fill the demand gap. • South Africa has a growing youth population base with increasing secondary enrolments, which is a leading indicator of substantial demand growth in the tertiary sector, and consequently PBSA growth. • Students are taking (on average) longer to attain their qualifications at public universities, and are therefore requiring accommodation for longer periods than in the past. 	<ul style="list-style-type: none"> • Shortage of suitable development sites as supply of land in close proximity to higher education institutions and in attractive city center locations are limited. • The MN&S are perceived as restrictive, ambiguous, inappropriate, rigid and are not uniformly and objectively applied by universities when it comes to accreditation. • A combination of rising inflation and a weak ZAR means developers are facing rising build costs, raising the bar for future development schemes to be viable. • NSFAS accommodation allowances vary widely from university to university and TVET college students enjoy comparatively low allowances, making new PBSA developments difficult to fund. • South Africa spends comparatively less than many developed countries on higher education due to a constrained budget that is set to come under increasing pressure.
Opportunity	Threat
<ul style="list-style-type: none"> • Private PBSA providers stand to benefit indirectly from government ambitions to grow the number of students funded by NSFAS as NSFAS funding makes PBSA more affordable to a larger portion of the population. • Strong demographically-driven demand is evidenced in the market. To cater to this demographic shift, the government has indicated it intends to grow university and TVET college capacity significantly over the next 10 years. • SHIP is an opportunity for the private and public sector to work together to address growing demand for PBSA with the assistance of SHIP MO experts. • Higher education institutions recognize the importance of private PBSA in light of increasing pressure on their budgets, creating incentives for universities and TVET colleges to work with the private sector to provide PBSA to their students. 	<ul style="list-style-type: none"> • MN&S accommodation accreditation is done at university level, is ad-hoc and discretionary, and differs from university to university (as does the NSFAS accommodation allowance), making new development unnecessarily risky. • Closure of higher education institutions due to COVID-19 has led to non-payment of rentals by private students. If the next academic year is delayed or abandoned NSFAS and Head Lease payments won’t be made, potentially leading to a period of materially reduced income. • A potential (though unlikely) scenario where COVID-19 catalyzes a structural shift in how and where students learn, especially in terms of online learning, slowing the growth of PBSA demand. • If SHIP MO does not come up with ways to include the private sector in the rollout of 300,000 beds, private sector PBSA may start to perform poorly.

Table 27: PEST Analysis

Political	Economic
<ul style="list-style-type: none"> • NSFAS administration is sub-par with a recent Auditor General opinion showing ZAR 7.5 billion in irregular expenditure. • NSFAS is running a rigorous audit of NSFAS students to weed out fraud. • Government is targeting substantial increases in numbers of NSFAS-funded students and by extension increases in funding toward the scheme. • Corruption has halted the rollout of SHIP at Fort Hare and stands to cripple the stability of the program. • DHET is working on developing a Comprehensive Student Accommodation Strategy to cover all aspects of student accommodation. • Some PPP arrangements, such as that by TUT Enterprises Holdings, is labelled by DHET oversight committee as an instrument that exists to facilitate corruption and nepotism and has a lack of proper procurement procedures. 	<ul style="list-style-type: none"> • In a slowing economy and shrinking tax base, the NSFAS grant may be curtailed by the government, putting income streams to many developments under pressure. • Extension of the 2020 academic year (AY) beyond 2020 could affect the income statements of PBSA providers as DHET urges (and instructs) that the 2020 AY be viewed as a package irrespective of when it ends. There is not yet any definite model or plan for any additional academic year costs for NSFAS-funded students. • Disproportionate allocations to TVET college and CET college programs raise concern about possible unfair treatment and neglect. • DHET contributed about ZAR 1 billion a year to student accommodation at universities, but not at colleges. A least ZAR 7 billion per annum is required to meet the SHIP target.
Social	Technological
<ul style="list-style-type: none"> • Home life for many students is inconducive to academic performance, hence the preference for on-campus or private PBSA driving continued demand for PBSA development despite potential COVID-related disruptions. • Some existing public PBSA owned by universities are considered to be unsafe (asbestos hazard at Univen) • Universities are encouraged to prioritize housing first-year and NSFAS funded students in their residences. • There is a big difference between urban and rural institutions in terms of both accommodation provided and demand. 	<ul style="list-style-type: none"> • Upgrades of university owned residences (UL's Turfloop campus) are often done with sub-par materials. • The use of innovative building technologies and materials, such as light steel frames, offers potential time and cost savings in the development of PBSA. • Technological challenges, such as high data costs and lack of Wi-Fi, hinder the rollout of online tuition – driving the continued use of on-campus tuition and demand for PBSA.

ANNEXURE E – SUPPLY AND DEMAND METHODOLOGY

Calculating Supply and Demand:

Definition of PBSA

For the purpose of this study Purpose-built Student Accommodation (PBSA) is defined as the following:

- Purpose-built developments or buildings providing a minimum of 20 beds.
- Purpose-built developments or buildings marketed and operated solely as student accommodation.
- Purpose-built developments or buildings falling within a 2km radius of a higher education institution campus.

This includes:

- Developments or buildings provided by the public sector (tertiary institutions either on or off-campus).
- Developments or buildings provided for by the private sector
- To remove any ambiguity, PBSA excludes beds occupied by students living in:
 - Communes or houses that have a bed capacity of less than 20 beds
 - Sectional title apartment buildings that are owned by various owners
 - Back-yard rooms and informal housing
 - Rooms rented in private residential dwellings
 - Family-owned accommodation
 - Buildings falling outside of a 2km radius of the university campus where they are enrolled (regardless of whether or not it would fall within the above definition of purpose-built accommodation within the 2km radius).

In general terms PBSA, as defined above, refers to buildings which have been purpose-built or converted to cater to the accommodation needs of students and are marketed as student accommodation and which offer student accommodation amenities. A PBSA building may accommodate students on a Head Lease or a Direct Let basis from any type of higher education institution. PBSA in South Africa therefore covers a wide range of types of buildings offering a variety of unit configurations ranging from studio apartments, cluster apartments, and dormitories.

PBSA Development Cost per Bed Assumption

The cost of developing a PBSA bed in South Africa used in this report is based on the Report on The Ministerial Committee for The Review of the Provision of Student Housing at South African Universities 2011 report (DHET, 2011). Based on development costs reported by the various universities in their student housing master plans, this figure is estimated at ZAR 225,000 per bed.

Delineation and Selection of PBSA Nodes

A node is seen as the area of influence of a relevant higher education institution campus. For the purposes of this report this area of influence is delineated by a 2km radius around the campus (as illustrated on relevant maps in Annexure B). This radius was selected based on market best practice and expert opinions that beyond a radius of 2km, PBSA becomes significantly less desirable due to travel costs, time and security concerns.

In the instances where nodes overlap, that is where campuses are located within 2km of each other (such as Tshwane, Johannesburg, Cape Town) these nodes have been clustered together for the purposes of mapping supply calculation to illustrate the overlap in influence of spheres of the relevant campuses.

Establishing Supply Within a Node

All accommodation (whether accommodating students or not) that falls outside of the PBSA definition that was used is excluded from the dataset and analysis of the data. The reader is cautioned to take this into consideration when reviewing the report.

In short, our analysis of supply within a node only takes into account PBSA as defined in this report. In limited instances where geographic realities represent barriers of separation within the 2km radius (for instance highways, mountains, nature conservation areas) supply outside of the 2km radius which can be directly attributed to serving said node or institution can be included in calculating the supply within that node.

Demand Methodology

For the purposes of calculating the PBSA demand in SA, the demand calculations were conducted at an institutional level for all public universities and TVET colleges. The calculations are informed by the most recent enrolment and institutional PBSA accommodation data available from DHET.

In order to calculate the total private PBSA in the market, JLL compiled an extensive database of existing stock, which was subsequently mapped to aid in the demand calculation (see Annexure A). In order to calculate the number of private PBSA beds associated with a specific institution, a 2km radius was used to identify the private supply located in close proximity to an institution's campus (and in the case where an institution has more than one campus, the total of each campus was aggregated to an institutional level). This enabled the comparison between the total contact student enrolment figures of an institution to the total on- and off-campus accommodation associated with the institution.

Effective Demand

The effective demand refers to the total demand for PBSA (without accounting for the PBSA-to-Student ratio) which measures the total demand for PBSA in the market. However, it is known that not all students enrolled at universities occupy PBSA with many utilizing other private accommodation facilities. The effective demand can be viewed as an estimate on the gap for student housing in the country.

Net Effective Demand

The Net Effective Demand considers the PBSA-to-Student ratio in its calculation of the potential PBSA demand at an institutional level as well as country level. The Net Effective Demand is a function of the total contact enrolment rates at both public universities and TVET colleges, the total on- and off-campus PBSA supply associated with an institution and the PBSA-to-Student ratio described in the section. This can be described as follows:

$$f = (E \times PR) - TS$$

where: E = Institutional Enrolment Rates

PR = PBSA-to-Student Ratio

TS = Total on- and off-campus PBSA supply associated with an institution

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