Western Cape Government

BETTER TOGETHER.

Property Efficiency Report 2018/19

An annual publication that demonstrates the Western Cape Government's commitment to managing and improving the efficiency, effectiveness and sustainability of its property holdings.
Issue No. 8.

Contents

About the report

This 8th edition of the Property Efficiency Report (PER) shows the ongoing commitment of the Western Cape Government (WCG) through the Department of Transport and Public Works (DTPW) to transparency in its daily operations and the gathering of data that enables evidence-based stewardship of resources. The information presented here is based on data received from the DTPW, users, the private sector and other stakeholders.

Building on work done in prior years, we have included information gathered from remote meters installed at various facilities in the WCG property portfolio. The number of buildings with remote meters has increased from 27 in April 2018 to 38 by end March 2019. We are delighted to announce that we are also measuring and monitoring generation and consumption data obtained from our off-grid solar photovoltaic (PV) electricity generation facilities at Khayelitsha Shared Services Centre (SSC), the Green Building, York Park, Goulburne Centre, Athlone SSC, Elsenburg (Admin offices), and the 4 Dorp Street, 9 Dorp Street, and 27 Wale Street buildings. This is a remarkable achievement for the WCG.

We are continuing to report on savings from waterless urinals, supplementary water supplies from groundwater sources for purposes such as flushing toilets, and the new heating, ventilation and air conditioning (HVAC) plants at 9 Dorp, 4 Dorp and 27 Wale. The benefits of improving our stewardship of natural resources and reducing our use of municipal resources are steadily accruing, and the overall process is gaining momentum.

The performance matrix, consisting of several years' data, continue to provide a context-appropriate picture per individual building of resource utilisation efficiency, office suitability, and space utilisation efficiency.

Ongoing office modernisation projects continue to improve office space utilisation and reduce costs by increasing the number of desks and workstations per unit area. As indicated above, consumption of natural resources in the portfolio, mainly electricity and water, is an area of important interest. In addition, data from numerous remote meters has made it possible to generate automated performance reports, generate service alerts for urgent attention, pinpoint faults, and highlight areas where efficiency gains can be made.

39 buildings = 214 506m²

28 Owned buildings

15 Non-CBD	11 CBD	2 EXCLUDED*
58 973m²	82 484m²	3 469m²

11 Leased buildings

03 Non-CBD	08 CBD
7 415m²	62 165m²

*** 1 currently under modernisation**
*** 1 excluded due to complex and unverifiable data (under review)**

Reporting period and scope

There are 39 office buildings in the WCG's portfolio greater than 1 000m² in extent. As indicated above, this report examines the performance of 37 buildings for the financial year 2018/19. The reasons for the exclusion of two are listed below. The data is calculated for the 12 months from April 2018 to March 2019. For more detailed information on the composition of the portfolio please go to page 30.

*** The following changes have been made in the way we report on certain buildings:**

- 3 Dorp Street performance data has not been included in the sample as the entire building was undergoing modernisation during the reporting period.
- The performance data for the Western Cape Education Department (WCED) Central Office has been excluded from this report due to the complex nature of the property. It shares resources with an active hospital and the recently-installed meters are under calibration.

Data management and access

Accurate and relevant data from appropriate sources is essential for an informative and reliable report. Our principal sources of baseline data are the DTPW Immovable Asset Register, the Property Support Office, Operational Property Management, General Infrastructure, the provincial Department of Social Development, the Department of Community Safety, the various remote meters which have been installed in previous years, and those meters that came online during the reporting period.

Information must be collated with a sound methodology, and responsible analysis is required to ensure the data is correctly interpreted. To this end, great care has been taken to ensure that the remote meters are registered to the correct buildings, to compare consumption reflected on municipal accounts with data from remote meters, and to investigate and correct any anomalies.

The WCG's real estate portfolio was benchmarked using a tool driven off a comprehensive Green Building Council of South Africa (GBCSA) database of office building data in the same geographical areas. This benchmarking tool assists owners to understand how their buildings are performing in comparison to similar buildings in the area, as well as the performance of other buildings in the owner's portfolio. The private sector benchmark was established using data from private landlords and the GBCSA. In this edition we have also introduced the national energy performance certificate benchmark.

Foreword

BONGINKOSI MADIKIZELA

Minister of Transport and Public Works

As the new Executive Authority for the Department of Transport and Public Works in the 6th Administration of the Western Cape Government, I have taken the opportunity to look back through the history of this practical and informative publication to reflect on its development and growth over the last seven editions.

I am exceedingly proud of not only the bold first step taken by the officials of this department in 2013 to publish the first edition of the Property Efficiency Report but also the determination and perseverance that has been shown in improving the performance demonstrated through our use of systems and structures required to produce these improvements.

It was noted in 2013 that property is the Western Cape Government's second most expensive and valuable asset after its staff. Our portfolio of land and buildings therefore has to be managed in a way that maximises the use we make of it, including achieving the objectives of this Government. This has to be done in the most efficient, effective and sustainable way possible. Property management is an essential tool in addressing the significant spatial inequalities from our past. Our use of property also impacts on the services we provide, and the development of efficient and effective workplace environments also contributes positively to staff performance and productivity.

One of my top strategic focus areas during this term is to use our properties to stimulate the economy. Our property portfolio must be put to work so that we can achieve our social goals in service of the people of the province. We need to move with speed, to work in collaboration with the private sector and to use a renovated and rejuvenated institutional arrangement to ensure better use of and maximum value from our properties. Particularly because of the exceedingly tough economic and fiscal environment in which we find ourselves in South Africa today, we need to focus on efficiency and savings, and we need to prioritise what we have and focus on that which is most important. It is only through the use of sound asset management principles and evidence-based decision making that we can survive, adapt and grow, and thus become more resilient to the undoubted shocks, stresses and strains of the future.

I have noticed that substantial improvements in data collection and in the range and depth of performance measures have been made annually, and that this year is no exception. I recognise that this demonstrates our pursuit of excellence in carrying out our custodial responsibilities and duties as a public-sector immovable asset manager. This year, it is particularly impressive to note our outperformance of the EPC (energy performance certification) benchmark and the private sector benchmark for electricity consumption for the reporting portfolio as a whole. This also applies to the significant outperformance of the private sector benchmark for water consumption. These two environmental indicators relate to our use of scarce resources and are fundamentally important to us now given the situation with energy supply nationally and the recent drought and water crisis in the province.

It is only through the use of sound asset management principles and evidence-based decision making that we can survive, adapt and grow, and thus become more resilient to the undoubted shocks, stresses and strains of the future.

Asset management, as with a report of this nature, does not happen without the dedication, commitment, professionalisms, focus and enthusiasm of our people. While it is always easier to find fault and demand more, credit must be given to the capable staff in the engine rooms of Public Works who make this possible. The publication itself, on top of some of the excellent performance results presented here and elsewhere in Public Works, is testimony to their magnificent effort. I thank them sincerely for their efforts.

The publication of the first edition of the Property Efficiency Report set us on a journey – a journey of property performance management. Although we have come a very long and fruitful way, there is still a long road to travel and I look forward to seeing how this unfolds in a challenging future - BETTER TOGETHER.

Case Study
3 Dorp Street

The modernisation of the Department of Environmental Affairs and Development Planning (DEA&DP) building at 3 Dorp Street has been one of the most ambitious projects undertaken in the DTPW efficiency and sustainability programme. This jewel in the crown of the WCG office portfolio features exemplary creative and sustainable redesign. The project sets an impressive precedent for other buildings in the Cape Town CBD to follow.

The renovation process was undertaken in one tranche rather than the phased, floor-by-floor approach that has been used in other WCG modernisation projects. All DEA&DP staff were decanted to other CBD office accommodation for the duration of the project – between October 2017 and February 2019.

The result is a building complex with a plethora of world best practices and innovations presented through a beautiful architectural design. The external façade and the building's unique sunscreens have been featured in the opening credits of DSTV's popular cooking show "Kokkedoor". It is fast becoming an iconic corner of Long Street for tourists and locals.

Some ways in which this building is leading the way are shown below.

Energy efficiency

Heating, ventilation and air-conditioning is regulated through a building management system that is tuned for current seasonal temperatures. This helps to optimise electricity usage.

Double-glazed windows work with the bespoke designed sunscreens to significantly reduce the building's heat gain during the day.

The building is fitted with motion sensors that turn the lights off in spaces that are not being used.

Workplace design

Great care was taken in the design of staff workspaces. The result is a perfect balance between space optimisation and employee comfort in accordance with the Occupational Health and Safety Act and National Building Regulations and Building Standards Act.

The new standard design enabled an increase in the workspace capacity of almost 30%. Before modernisation, the desk space of a work station was 13m². After modernisation, space per desk stands at 10m².

Water recycling

This is currently the only building in the CBD that recycles blackwater (sewerage water). An estimated 1 million litres per annum is captured from this single building. Any water that is not re-used for the flushing of toilets is rerouted to the lush, rooftop garden.

This is currently the only building in the CBD that recycles blackwater.

Introduction

JACQUELINE GOOCH

Head of Department, Transport and Public Works

As the last political term started to draw to a close, the Department commenced a review of our strategic direction and started to revise our plan for the future. Strategic review should include a review of the vision, mission and purpose of the organisation. Thus began a process of invigoration, energisation and repurposing ourselves to make us truly fit-for-purpose and to shape our future as opposed to being shaped by it. We are acutely aware of the growing pressure being brought to bear on the immovable asset portfolio due to increased service delivery demands, the negative impact of climate change, and the need to balance the provision of new infrastructure against the maintenance of existing assets across their lifespan. The purpose of and rationale for this report fits squarely into our re-vitalised strategy and we will continue to focus efforts at it, as well as to expand on its reach and use its methodologies elsewhere across the Department.

The world is often described as a VUCA-world; VOLATILE, UNCERTAIN, COMPLEX and AMBIGUOUS. Notwithstanding this reality, the Department has now repurposed itself to embrace and focus on creating an antidotal DTPW VUCA-world view, which is VISIONARY, UNITARY, CREATIVE and AGILE. As a result, the Department has made a fundamental shift to become a citizen-centric organisation. We have taken a strategic decision to place the citizen at the centre of our mandate. In so doing to re-examine our role to actively serve the citizen in the broader restoration agenda by shifting the service paradigm from a functional-driven to a purpose-driven public service – to be a benefit to the human condition of the citizen.

We have to become 'future ready' and advance a long-term vision

We have to become 'future ready' and advance a long-term vision and a multi-generational thinking perspective. To clasp the future, we need to shape the future. We have asked ourselves to define our higher purpose; our purpose vis-à-vis the citizens. We are now determined to be not only citizen centric, but also future focussed and connected with our ecosystems. We wish to shape an inclusive and a dignified future for the citizens and restore hope where this has been lost. In this process, we have developed the following MANIFESTO to help us retain this focus:

As a department we honour our obligation to serve all the people of this province, no matter who they are.
Because to us, a bricklayer doesn't just lay bricks, they shape the foundations for schools and hospitals.

A healthcare facility doesn't only help people who are sick, it helps shape healthy and fit communities by restoring their dignity and prosperity.
And a road worker doesn't just build roads, they shape pathways that lead to endless opportunity.
Together, let's connect, recycle, renew, sustain and prosper
and when you see our state-of-the-art health facilities,
brand new schools, greener technology, efficient, safer roads and transport systems, remember that they are there because of you.
And no matter if you are an engineer, an architect, a cleaner, an accountant, a maintenance worker, or a traffic officer, you're helping to redress the past and take our Province into the future.
Through mutual respect and ethical behaviour we can and will shape our province into a dignified society, one which we can all be proud of.
The Department of Transport and Public Works.
Shaping the future. BETTER Together.

I am mentioning this all here because this publication demonstrates not only how we are moving away from the ordinary world view of VUCA to become less volatile, more certain, clearer and definitive but also innovative in our DTPW VUCA way. As officials, we are all also citizens and our citizen-centric approach necessarily includes our staff. Our properties therefore need to be the most efficient and sustainable possible for the public who use them and the employees who work in them. My ambition for Public Works is for it to be a world-class public-sector immovable asset manager and to make our buildings among the best in the world in line with our objective to become the most strategic, sustainable and effective Public Works component in the country. I envisage property asset management being delivered in the public sector as a centre of excellence, not only in South Africa but to be recognised internationally in the fullness of time.

The performance of our office portfolio in this report, properties greater than 1 000m², gives us a clear view of where we are performing exceptionally well against the private sector but also where we can and need to improve. This improvement relates not only to the performance itself but also to the accuracy, timing and availability of the performance data. Specifically, we will be working on the cost of occupation per m² as this is a clear area where there are many opportunities for improvement. Given our commitment to sustainability and the efficient use of scarce resources, our performance in the environmental indicators is very pleasing indeed. Outperforming applicable benchmarks is a significant achievement and I commend all the various officials who have collectively had a hand in this. Related to this is the fact that we now generate approximately 2% of our municipal electricity consumption from our own solar photo-voltaic (PV) plants. This is the result of a programme that commenced in 2013 and has been driven and expanded to the point that we now have 17 sites on various facilities. These plants are not only on office buildings. Although we have focussed on the most advantageous buildings first, we still have nine buildings that are potentially viable for the installation of solar PV.

We now generate approximately 2% of the energy we consume from our own solar photo-voltaic plants

As we journey to become a world-class public-sector immovable asset manager, we are embracing the 4th Industrial Revolution (4IR) and all that encompasses that, such as the internet-of-things (IoT), 3D and 4D modelling, big data, robotics, automation, electric vehicles and artificial intelligence. Significant work that we are conducting in this regard has been termed the e-Merge incubator and incorporates what we have referred to historically as the asset information management system. In a century characterised by transitions, the 4IR is defining a paradigm shift in the way humans function within society. Technological advances of the 4IR will have fundamental implications for the rate of change of human development in the 21st century, to the extent that they will be disproportionate with the first, second and third industrial revolutions. The 4IR future brings with it both exciting opportunities, as well as cautious risks for citizens and society at large. Embracing the digital economy, while reconfiguring existing service delivery models that represent the staggering step-change in innovation is critical in preparing a workforce for these implications. With the advent of the continuing and leap-frog advances made in smart technologies, and disruptive on-demand solutions; the DTPW is developing, leveraging and harnessing these new organizational possibilities toward one single purpose – enhancing the quality of life of the citizen.

As we journey to become a world-class public-sector immovable asset manager, we are embracing the 4th Industrial Revolution (4IR)

In conclusion, we have seen how the installation and use of Time-of-Use consumption metering and the digital applications associated to this data and intelligence has already revolutionised the publication of this report. As our digital asset information management system takes shape within the Department, we will expectantly see the positively disruptive influence and effect this will have on our measurement, monitoring and management of our asset management performance. This in turn will enhance the quality of life of the citizen, including us as servants of the public.

Executive Summary

With this 8th edition of the Property Efficiency Report, the DTPW demonstrates its commitment to improving property performance and property information management practices throughout the portfolio.

	2017/2018						2018/2019					
	All WCG offices	All leased buildings	All owned buildings	CBD offices	Non-CBD offices	Private Sector	All WCG offices	All leased buildings	All owned buildings	CBD offices	Non-CBD offices	Private Sector
WC portfolio net area	215 245	72 155	143 090	145 388	68 290	-	214 506	69 580	144 926	148 118	66 388	-
WC portfolio performance data	211 776	72 155	139 621	143 486	68 290	-	211 037	69,580	141 457	144 649	66 388	-
Accommodated office staff	9 949	3 693	6 256	6 900	3 049	-	11 168	3 633	7 535	7 902	3 266	-
Cost R/m²	3 807	2 953	4 291	4 336	2 636	2 691	3 097	2 842	3 222	3 205	2 861	2 907
Cost R/FTE *	81 640	57 697	93 285	92 351	57 401	-	59 716	55 187	61 921	58 669	62 437	-
m²/FTE	23	20	22	20	26	-	19	19	19	18	22	-
m²/Desk	19	17	20	18	21	15	17	17	17	16	20	15
Energy kWh/m²/pa	145	194	118	169	96	236	150	186	131	177	90	R231
Water kL/m²/pa	0,69	1,03	0,50	0,72	0,95	0,86	0,63	0,73	0,47	0,54	0,76	0,94

* Research has shown that there is a low correlation between assets under management and headcounts. As a result there is no reliable FTE benchmark for the private sector therefore such a benchmark has been excluded from the report. Cost per m² is a more reliable industry standard and will be used as the primary performance indicator going forward.

Water consumption 0,63 kL/m²/pa

Electricity consumption 150 kWh/m²/pa

Total electricity consumption per kWh/m²/pa increased by 3,4% from 145 to 150 kWh/m²/pa over the reporting period.

3 Dorp Street is the first building in the Cape Town CBD to make use of blackwater.

We are outperforming our five-year target of 154,4 kWh/m²

The portfolio currently out-performs the industry benchmark (EPC) of 185 kWh/m² per annum by 19%.

The portfolio also outperforms the private sector benchmark of 231 kWh/m² per annum by 35%.

30% decrease in water consumption over the last three years

9% reduction in the period under review from 0,69 to 0,63 kL/m²/pa

We updated and expanded the reporting on solar PV in this report.

This edition reports on the performance of CBD (Cape Town central business district) and non-CBD buildings separately as well as owned versus leased buildings.

Office Modernisation Programme remains on track

Space efficiency of 17m² per desk

Overall improvement in space efficiency

Approximately 1 200 additional staff

Desk/Space utilisation in completed Modernisation projects improved by 27%

Lease obligations and rental costs

Portfolio's total cost decreased

CHAPTER 1: Environmental performance

Monitoring and reporting on energy and water consumption across the portfolio is an essential element of assessing the WCG's environmental performance. The various teams continue to manage the allocated resources and demands carefully. This edition highlights the continued transition from relying only on municipal bills to gathering data from remote meters, comparing the figures, and taking steps to investigate and correct anomalies.

Despite notable progress during the 2018/19 financial year, the transition remains technically complex. Throughout this period, we continued to encounter building-specific challenges as we undertook individual audits. Substantial lessons have been learned which have helped the WCG determine the best way of taking remote metering forward. A major advantage of the process has been the identification of buildings where the local authority or landlord has submitted inaccurate accounts to the WCG. Through remote metering we have been able to quickly find water leaks and repair them, receive early alerts of high energy use in buildings, take remedial action where necessary, and address maintenance issues.

In the year under review, total electricity consumption (kWh/m²/pa) increased by 3,4% from 145 to 150 kWh/m²/pa. The consumption of 3 Dorp Street has been excluded from this report because it was undergoing a complete modernisation process. The consumption of the WCED Central Office was also excluded because of a lack of 12 months' applicable and verifiable data.

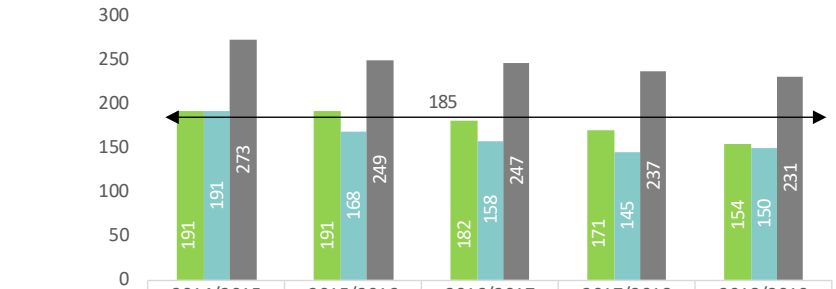
Due to the drought in 2018, the WCG had to take drastic and urgent actions to reduce the consumption of water. This, along with an approximate 10% increase in employees, caused an increase in electricity consumption in places. Despite this increase in energy consumption, WCG energy performance remains below the five-year target of 154,4 kWh/m²/pa.

Energy performance remains below the five-year target of 154,4 kWh/m²/pa.

Total electricity consumption (kWh/m²/pa) increased by 3,4% from 145 to 150 kWh/m²/pa.

Environmental Performance Summary

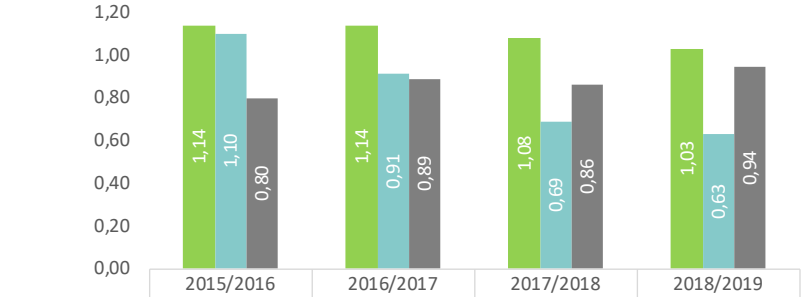
Electricity performance per kWh/m² per annum



	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019
Targeted	191	191	182	171	154
Actual	191	168	158	145	150
Private sector	273	249	247	237	231

The WCG remains committed to reducing its energy consumption in the 2019/20 financial year to meet its final portfolio target of 139,7 kWh/m²/pa. A significant achievement in the year under review has been a reduction in water consumption to 0,63 kL/m²/pa, approximately 9% less than the previous reporting period. Substantial water restrictions imposed by local authorities due to the drought, various water-saving installations throughout the portfolio, and improved consumer behaviour all contributed to this outstanding result.

Water performance per kL/m² per annum



	2015/2016	2016/2017	2017/2018	2018/2019
Targeted	1,14	1,14	1,08	1,03
Actual	1,10	0,91	0,69	0,63
Private sector	0,80	0,89	0,86	0,94

Types of buildings	Electricity benchmarks kWh/m²/pa		Water benchmarks kL/m²/pa	
	WCG portfolio	Private Sector	WCG portfolio	Private Sector
CBD Owned	159	237	0,45	0,91
CBD Leased	200	228	0,67	0,84
CBD All buildings	**177**	**233**	**0,54**	**0,88**
Non-CBD Owned	93	227	0,62	0,95
Non-CBD Leased	72	232	1,84	1,07
Non-CBD All Buildings	**90**	**228**	**0,76**	**0,97**
All Owned	131	232	0,47	0,93
All Leased	186	229	0,73	0,90
All Buildings	**150**	**231**	**0,63**	**0,94**

Portfolio electricity consumption

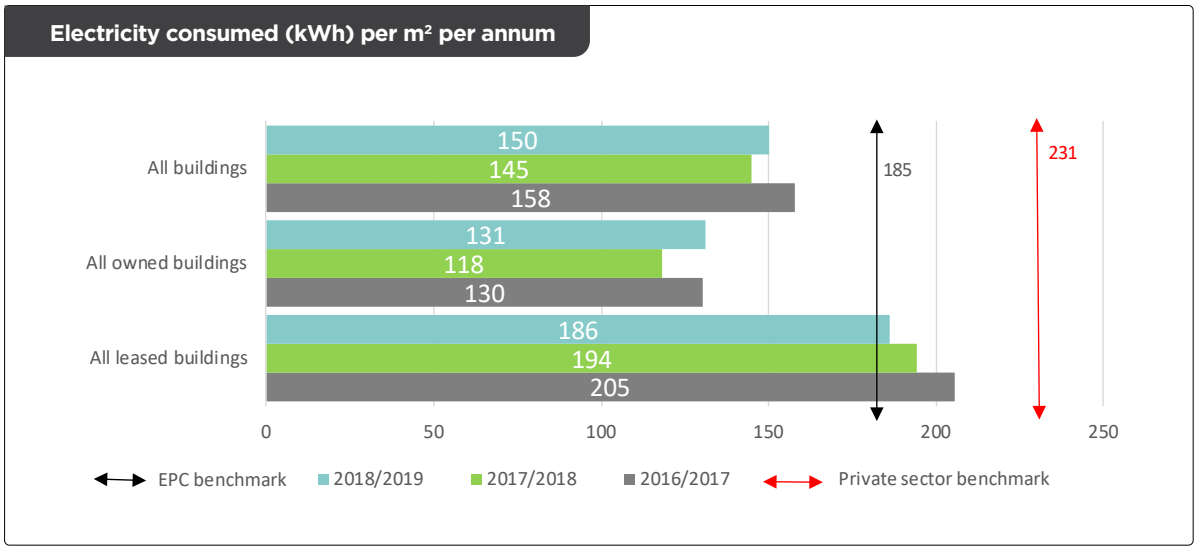
WCG
150 kWh/m²/pa

WCG's electricity consumption was 35% better than comparable private sector facilities

For the third successive year, the WCG portfolio outperformed the private sector electricity consumption benchmark of 231 kWh/m²/pa. At 150 kWh/m²/pa, the WCG's electricity consumption was 35% better than comparable private sector facilities. This achievement clearly shows the provincial government's commitment to ensuring that its office portfolio operates as efficiently and sustainably as possible. At 131 kWh/m²/pa, the WCG-owned buildings also outperformed the National Department of Public Works Energy Performance Certificate (EPC) benchmark of 185 kWh/m²/pa by approximately 29%.

Private landlords remain under pressure to retain tenants. Current economic conditions are weak and rental growth per annum is limited. To comply with water restrictions, landlords had to incur capital expenses to reduce the consumption of municipal water and some also chose to reduce their reliance on municipal water through supplementary sources of supply. The focus of most landlords shifted from monitoring electricity usage and implementing electricity efficiency interventions to saving water. In general, energy efficiency projects form part of scheduled maintenance programmes, or are implemented when building tenants change.

WCG-owned buildings also outperformed the National Department of Public Works Energy Performance Certificate (EPC) benchmark by approximately 29%.



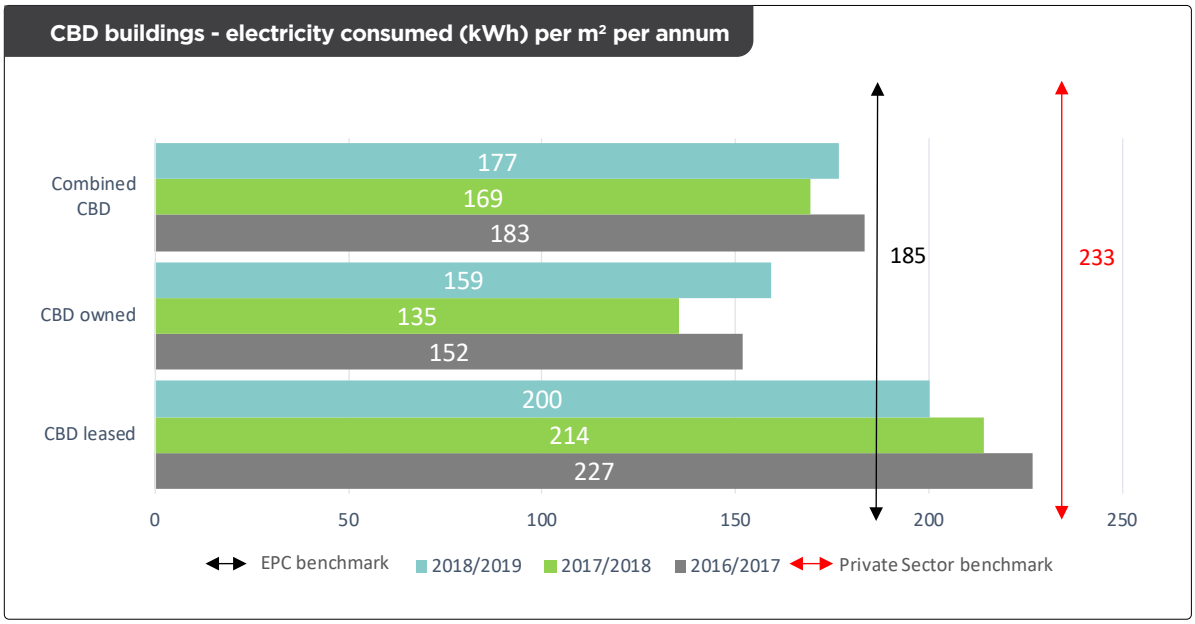
The graph above clearly indicates that WCG-owned buildings outperformed leased buildings.

131 kWh/m²/pa

The consumption in owned buildings in the year under review was **29% better** than the 186 kWh/m²/pa performance of leased buildings.

The following section analyses the performance of CBD vs non-CBD buildings in more detail.

CBD electricity consumption



The CBD portfolio (177 kWh/m²/pa) outperformed the private sector benchmark (233 kWh/m²/pa) by more than 24%. The combined CBD portfolio became 4% less efficient in the year under review. Electricity consumption in owned buildings has increased by more than 17%. A percentage of the increase can be attributed to capital projects implemented to make WCG buildings more water efficient. These projects included increasing the number of dry cooler fans, replacing diesel boilers with heat pumps, installing circulation pumps for grey and potable water systems, and installing more efficient chiller plants.

It must also be noted that the electricity consumption during the previous reporting period (2017/18) was lower than normal as a result of certain equipment being shut down for periods while additions were being installed or equipment was being replaced.

Leased buildings in the CBD increased their energy efficiency by more than 6% in the 2018/19 period. This is partly attributable to the WCG being billed for consumption that was incurred by private tenants in certain leased premises (e.g. 11 Leeuwen).

The CBD owned buildings outperformed the EPC benchmark by 14%. The WCG-owned CBD portfolio is one of the most energy-efficient office portfolio of its size in South Africa. The leased buildings are, on average, only 8% less energy efficient than the Energy Performance Certificate (EPC) benchmark. However, they continue to show a year-on-year improvement in efficiency.

Outperfomed private sector by more than 24%

The WCG-owned CBD portfolio is one of the most energy-efficient office portfolio of its size in South Africa.

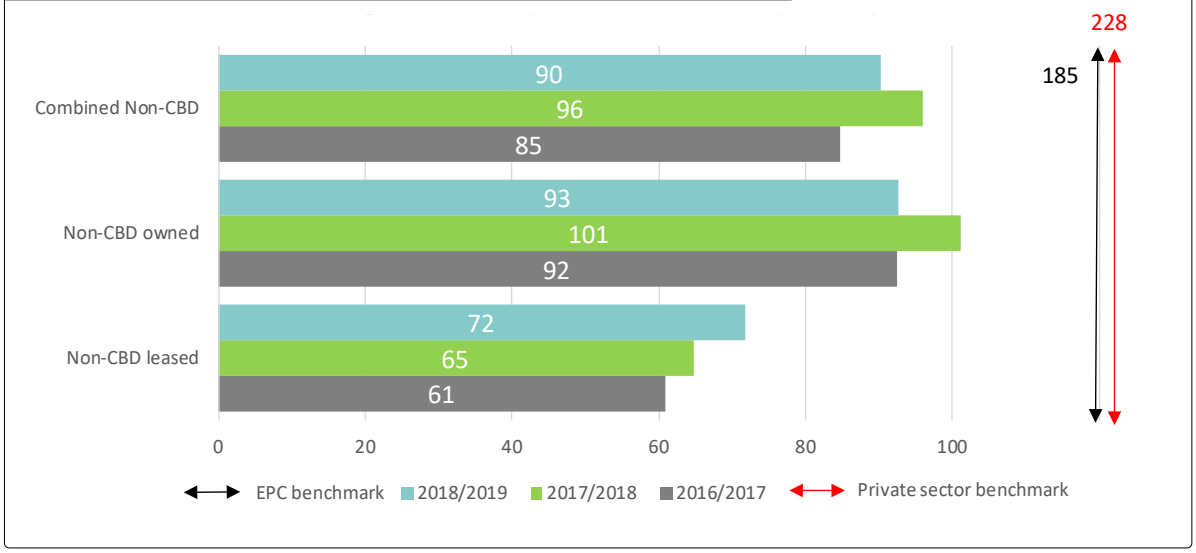
Non-CBD electricity consumption

On average, the non-CBD buildings are outperforming the private sector benchmark of 228 kWh/m²/pa as well as the EPC benchmark of 185 kWh/m²/pa. WCG-owned buildings continue to perform less efficiently (93 kWh/m²/pa) than leased buildings (72 kWh/m²/pa). In respect of year-on-year performance, electricity consumption of leased premises has increased by 10%, and in owned properties, consumption decreased by nearly 8%.

8%

Consumption decreased by nearly 8% in owned properties.

Non-CBD buildings - electricity consumed (kWh) per m² per annum



Renewable energy - generation and consumption

It is with great satisfaction that we expand the solar photovoltaic (PV) consumption report in this edition. PV consumption accounts for 2% of the total consumption of the selected portfolio. The implementation and benefits of PV in the WCG portfolio are discussed in more detail in the PV case study on pg. 16. To prove WCG's commitment and to lead the way, the DTPW has made a significant investment in the installation of rooftop solar PV systems at 17 government-owned properties since September 2016. Due to the success of these projects, the installation of PV at an additional four sites is being considered.

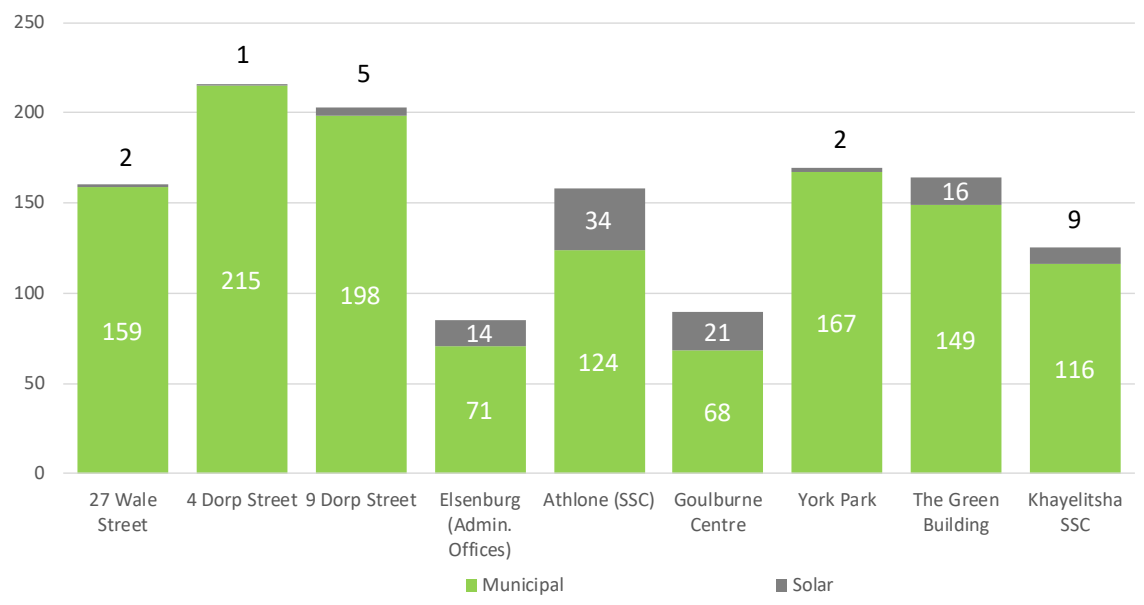
2%

PV consumption accounts for 2% of the total consumption of the portfolio.

17

Government-owned properties with rooftop solar PV systems.

Municipal vs Solar PV kWh/m² per annum



Please note that of the featured buildings in the graph above, only Khayelitsha SSC, 27 Wale and Athlone SSC have 12 months of PV data. PV in these buildings currently contributes approximately 2% of the combined energy consumption across this portfolio. This is expected to increase as PV installations steadily start to operate at full capacity.

Case Study
Rooftop solar photovoltaic systems

Through the Provincial Energy Security Game-Changer programme, the WCG aims to reduce dependence on Eskom-generated electricity. The objective is for an effective 10% of the Western Cape's electricity needs to be generated from alternative sources of supply by 2020. Households, businesses and the government can contribute to this initiative through installing low-carbon sources of supply such as solar water heaters and rooftop solar PV, as well as taking steps to increase energy efficiency.

In its capacity as custodian and manager of the WCG's immovable asset portfolio, the DTPW actively promotes the use of renewable energy in public buildings. The availability of abundant sunshine across South Africa means that installing solar energy plants is perfectly aligned with the objectives of the programme.

In March 2015, WSP, a leading professional engineering services firm, presented a report to the WCG and Green Cape Sector Development Agency confirming the viability of solar PV as an alternative source of electricity supply in public buildings. The report proposed the implementation of as much solar PV capacity as was technically feasible on the rooftops of 16 WCG buildings, primarily in the Cape Town Central Business District.

In 2016, a tender was issued to procure the services of a contractor to install, operate and maintain solar PV electricity plants. An initial three-year contract was awarded up to the end of June 2019 and this has subsequently been extended by 12 months to 1 July 2020. Approximately R53,3 million was spent on the installation of rooftop solar PV systems at 17 WCG-owned properties. At the date of publication, consideration was being given to installing solar PV at a further four sites at a cost of approximately R7,5 million.

The **current cumulative energy saving for the initial phase of the project is estimated at more than R3,6 million**, details of which are shown in the table below.

Rooftop Solar PV - capacity, energy produced and cost saving			
Project / Building:	**Capacity (kWh)**	**Energy Produced year 1 (mWh)**	**Energy Saving year 1**
9 Dorp Street	52	77	R112 036
VSSC Athlone	109	172	R118 234
27 Wale Street	16	23	R33 669
Alfred Street Building - Library	76	110	R105 029
Alfred Street Building - CMD	209	333	R316 804
Karl Bremer Hospital	75	122	R154 814
Khayelitsha Shared Services Centre	21	34	R46 463
Revised GMT Building, Rusper Street, Maitland	72	119	R116 381
Goulburn Building, 63 Voortrekker Road, Goodwood	22	35	R49 835
Cape Teaching and Learning Institute (CTLI)	666	1 148	R751 017
Kromme Rhee, Stellenbosch	131	226	R217 080
Gene Louw Building, Off Brackenfell Boulevard	54	98	R106 768
Elsenburg Head Office Buildings, Stellenbosch	367	610	R585 005
Dassen Island, Cape Town Nature	15	12	R38 989
4 Dorp Street	29	44	R68 905
York Park Building, George	120	168	R222 974
Artscape	372	557	R604 081
Total	**2 405**	**3 888**	**R3 648 084**

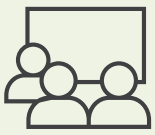
10-year simple average payback period

3 888 MWh/year savings

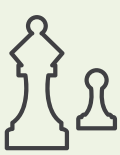
R3 648 084 minimum savings/year

The lowest pay back period is 8.1 years

Other benefits



The provision of skills training in renewable energy technologies.



Targeted procurement from small- and medium-sized enterprises.

Portfolio water consumption

A severe water shortage started affecting Cape Town and other parts of the Western Cape in 2015. There was a full-blown drought crisis from mid-2017 to mid-2018 with the total capacity of dams supplying Cape Town falling below critical levels. Preparations were being made for a "Day Zero" dry-taps scenario. The City of Cape Town implemented increasingly severe water restrictions to reduce water consumption and, by March 2018, had succeeded in reducing daily consumption to around 500 million litres per day.

The fall in consumption, combined with strong rains in June 2018, led dam levels to steadily increase. By September 2018, the combined average level of dams supplying Cape Town increased substantially and the City began easing water restrictions. Throughout the drought, property owners were obliged to prioritise the implementation of water efficiency projects and implement infrastructure upgrades to enable them to be less dependent on the municipal water supply.

For the WCG, the high tariffs implemented during the drought proved just how valuable the remote meters were. They enabled the WCG to quickly detect whenever consumption in specific buildings exceeded the applicable parameters so that problems could receive prompt attention. A dedicated Resource Champion and ongoing communication between all stakeholders enabled the WCG to achieve its consumption targets and, in some cases, do better than the target.

Water consumption in the portfolio has decreased over the last three years by approximately 30%, and 9% over the 2018/19 period. Water consumption across the portfolio decreased from 0.69 to 0.63 kL/m²/pa. This is far below the private sector benchmark of 0.94 kL/m²/pa for the same period, showing the WCG's dedication to promoting the efficient use of this very scarce natural resource.

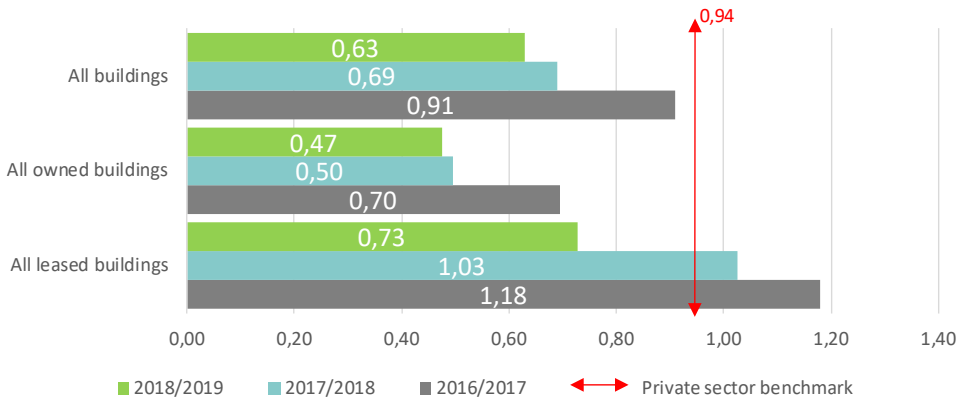
30% decrease in water consumption over the last three years

9% reduction in the period under review

33%

more efficient than the private sector

Water consumed (kL) per m² per annum



CBD water consumption

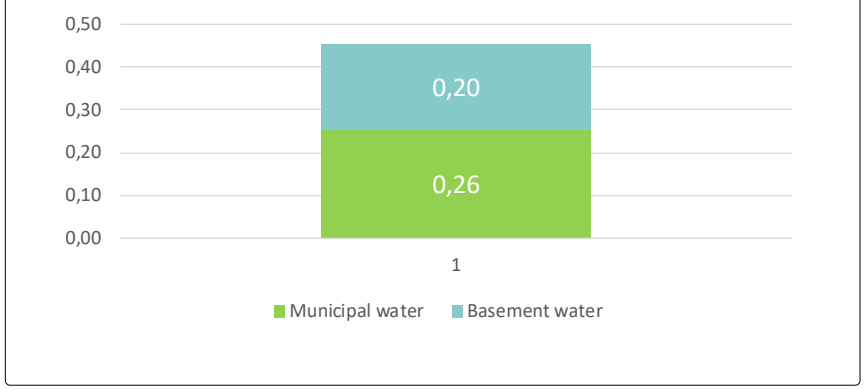
0,54 kL/m²/pa — CBD portfolio performance

0,88 kL/m²/pa — CBD private sector benchmark

Water consumption in CBD owned buildings declined over the reporting period by more than 15% to 0,45 kL/m²/pa. The leased buildings showed a reduction of 33% to 0,67 kL/m²/pa for the same period. The CBD buildings showed a combined reduction of 25% to 0,54 kL/m²/pa over the reporting period. This is more than 38% more efficient than the private sector benchmark of 0,88 kL/m²/pa.

The only building in the portfolio with basement water is 9 Dorp Street. Here there has been a reduction in municipal water consumption of more than 25% during the reporting period. A total of 43% of the water consumed in the building comes from its own basement water sources.

9 Dorp Street Municipal vs. Basement water (kL/m²/pa)



15%

CBD owned buildings declined over the reporting period **by more than 15%** to 0,45 kL/m²/pa.

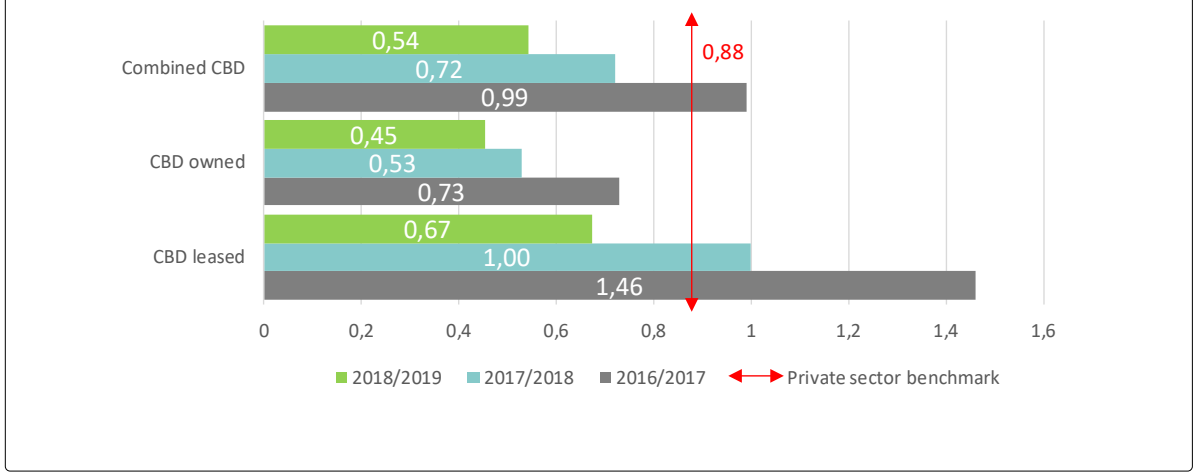
38%

more efficient than the private sector

43%

of the water consumed at 9 Dorp Street comes from its **own basement water sources.**

CBD buildings - water consumed (kL) per m² per annum



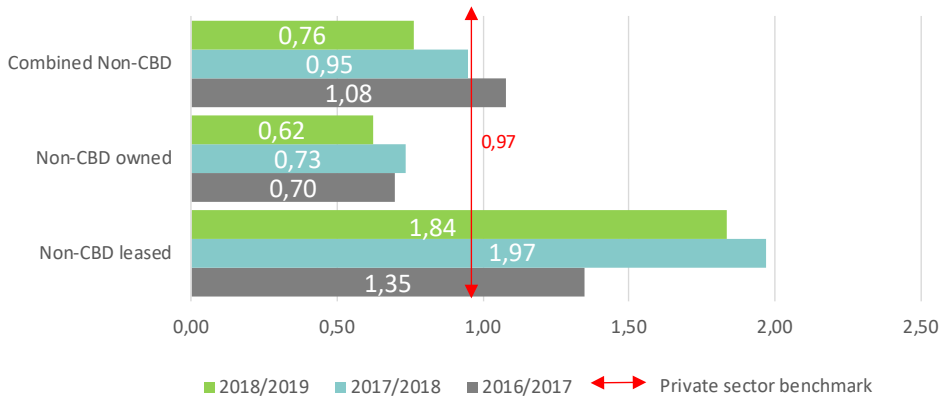
Non-CBD water consumption

0,62 kL/m²/pa Non-CBD portfolio performance

0,97 kL/m²/pa Non-CBD private sector benchmark

The non-CBD owned buildings are currently outperforming the industry benchmark of 0,97 kL/m²/pa with a consumption of 0,62 kL/m²/pa over the reporting period. At 1,84 kL/m²/pa, the non-CBD leased buildings are underperforming when compared to the industry benchmark. However, non-CBD leased buildings showed a reduction in consumption of more than 6% during the reporting period.

Non-CBD buildings - water consumed (kL) m² per annum



Case Study
Remote metering case study

The DTPW's remote metering project commenced in 2014 with a pilot of one building and 60 meters. The pilot immediately yielded measurable benefits, resulting in a roll-out to 49 buildings within the WCG portfolio including the 39 buildings of the Property Efficiency Report.

Effectively manage consumption

The ability to measure and monitor energy and water consumption 24/7 at 30-minute intervals allows the DTPW to effectively manage consumption in real time across the entire metered building portfolio. The system alerts the DTPW to notable increases in consumption such as major leaks or burst pipes. This facilitates quick response at any time of the day and over weekends. This mitigates the risk of substantial losses which are ultimately borne by taxpayers. More effective management of office costs makes more money available for other value-adding WCG service delivery activities.

49 WCG buildings
now have remote metering

Data produced by remote meters enables the DTPW to raise the awareness of building occupiers and WCG staff about their actual consumption of water and electricity and the importance of conserving our natural water and energy resources. During the 2015-2018 drought in the Western Cape, a campaign was launched to encourage WCG staff to save water at work and at home. Data from the remote metering system was used to provide weekly snapshots of water consumption in metered WCG buildings. This helped motivate staff to keep reducing their personal water consumption.

The auto-alert system automatically sends email notifications to the DTPW maintenance call centre and, in some cases, selected officials who can resolve the issue at hand. Alerts include:

- Water flowing at night
- Abnormally high water consumption
- Abnormally high electricity consumption
- Warnings that a solar PV system is offline

Installed meters

792

meters in place at the time of publication

- **627** live remote electricity meters
- **123** water meters
- **8** pressure meters
- **34** solar PV meters

The benefits to the Property Asset Management team are as follows:

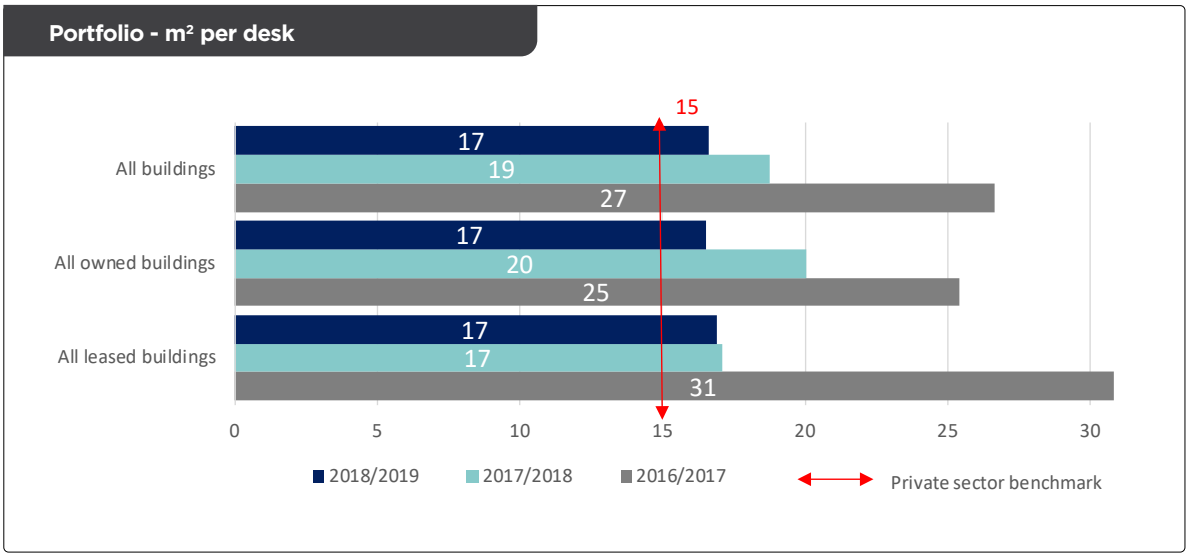
- Auto-alert notifications when abnormal water flow is detected.
- Bill comparison reports of consumption recorded in municipal bills and remote-metered consumption.
- Tariff analysis reports to determine whether buildings are being billed according to the correct tariff.
- Automated EPCs (energy performance certificates) for each monitored building.
- Automated monthly portfolio and Individual facility consumption reports for the attention of accounting officers and facility managers. These reports compare:
  - o Individual and group building performance with industry benchmarks.
  - o The performance of the WCG-owned property portfolio with the leased portfolio.
  - o The WCG city centre portfolio with properties outside the city centre.

Chapter 2: Space utilisation

m² per desk

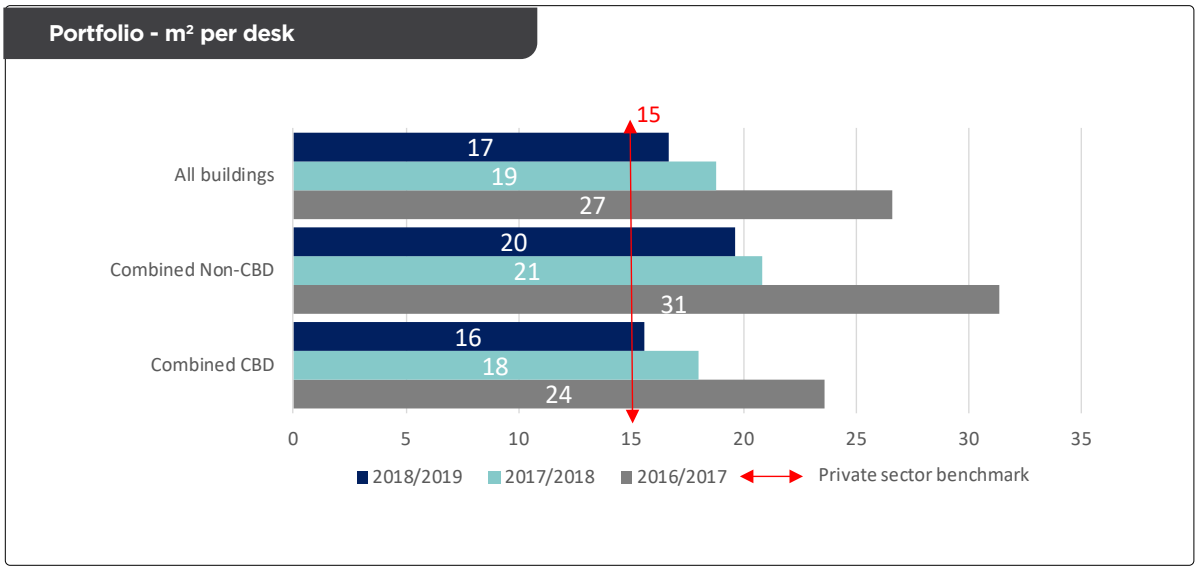
The WCG remains committed to improving space utilisation throughout its property portfolio. Increased space efficiency results in real savings in annual costs, reduces space requirements and, above all, provides excellent quality office space. This helps create a productive working environment throughout the provincial government. Overall space efficiency showed an improvement during the reporting period.

Increased space efficiency results in real savings in annual costs.



10% improvement in desk space efficiency

The portfolio achieved an average desk space of **17m²,** down from 19m² in the same period last year.



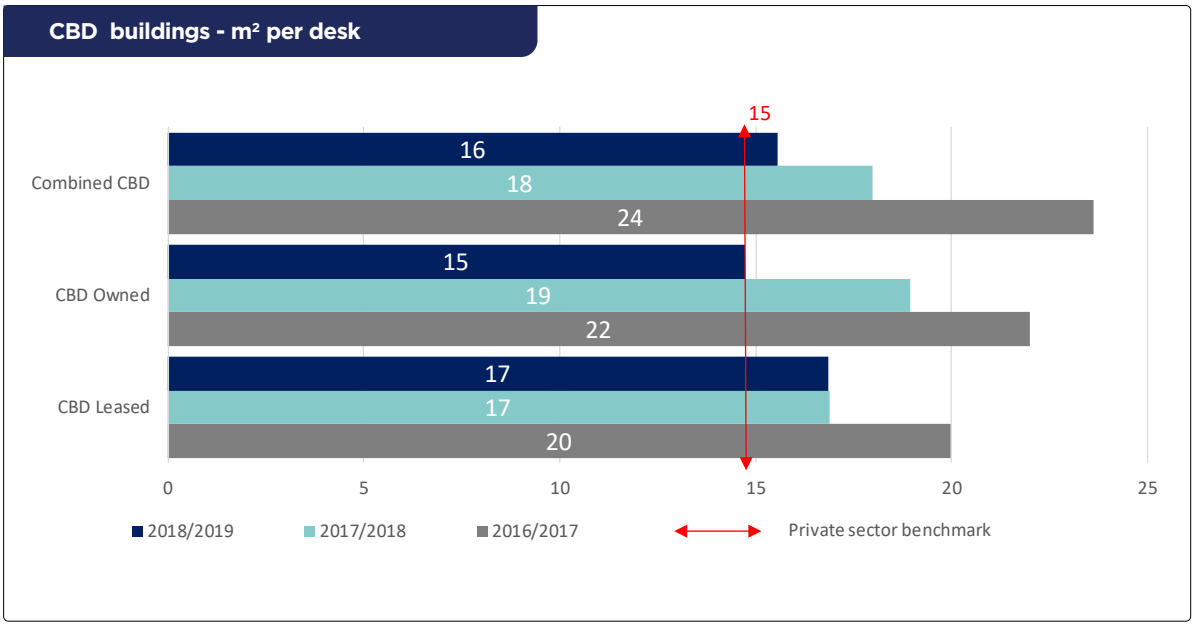
Cape Town CBD buildings

16m²/ desk CBD buildings

20m²/ desk Non-CBD buildings

15m²/ desk CBD-owned buildings - achieved the DTPW target

The CBD buildings remain the most space-efficient in the WCG portfolio, outperforming non-CBD buildings by 20%. The CBD properties realised an 11% improvement in efficiency (from 18m² to 16m² per desk) during the reporting period. The non-CBD building portfolio achieved a space per desk of 20m², an improvement of 4% compared with the previous year.



WCG-owned buildings in the CBD showed a 21% space efficiency improvement from 19m² to 15m² per desk which, for the first time, matches the private sector benchmark and departmental target. CBD owned buildings also outperformed CBD leased buildings. At 17m² per desk, leased buildings in the CBD were not as efficient as the private sector benchmark of 15m² per desk.

11% Improvement in efficiency

The CBD properties realised an 11% improvement in efficiency (from 18m² to 16m² per desk).

The CBD buildings remain the most space-efficient in the WCG portfolio

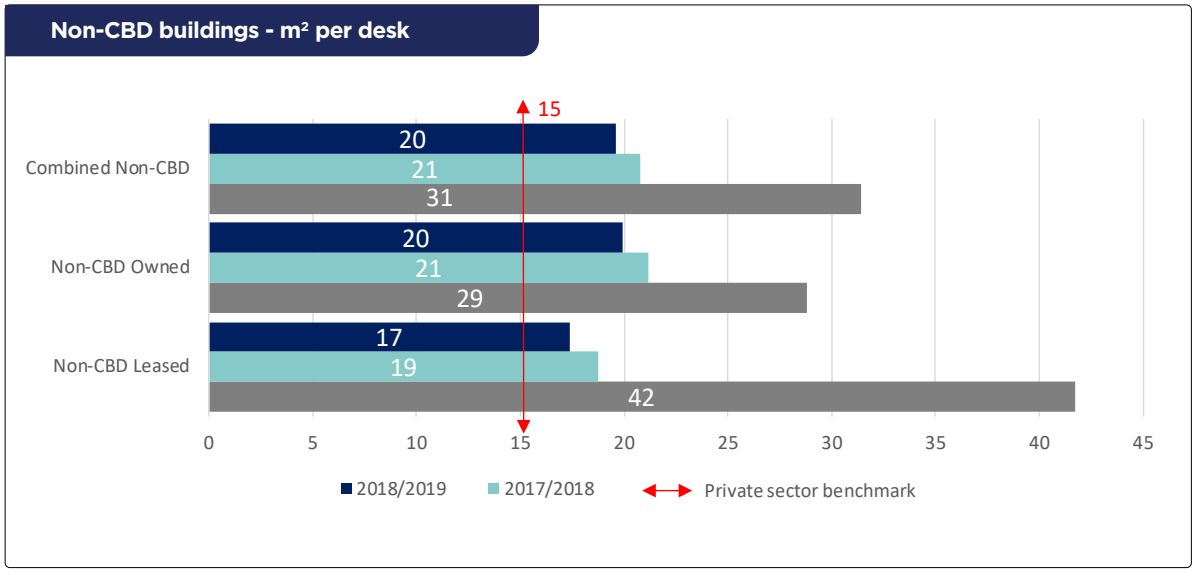
Non-CBD buildings

During the reporting period, the non-CDB buildings saw a continued improvement in desk efficiency. This equates to an improvement of 10%. Owned non-CBD buildings also did well with a 5% improvement in efficiency over the reporting period. However, non-CBD buildings are still above the private sector benchmark of 15m² per desk.

17m²/desk
Non-CBD buildings

10%
improvement from previous financial year

15m²/desk
Private sector benchmark



Office modernisation projects 2018/19

The table below lists and compares space efficiency in the modernisation projects that were concluded during the reporting period. The number of desks increased from 200 to 254. There was an average 27% gain in space efficiency resulting from the modernisation projects listed below:

27%
average gain in space efficiency

9 Dorp Street

24%
increase in number of desks

11m²/desk
after modernisation

3 Dorp Street

29%
increase in number of desks

10m²/desk
after modernisation

CHAPTER 3: Performance measurement cost

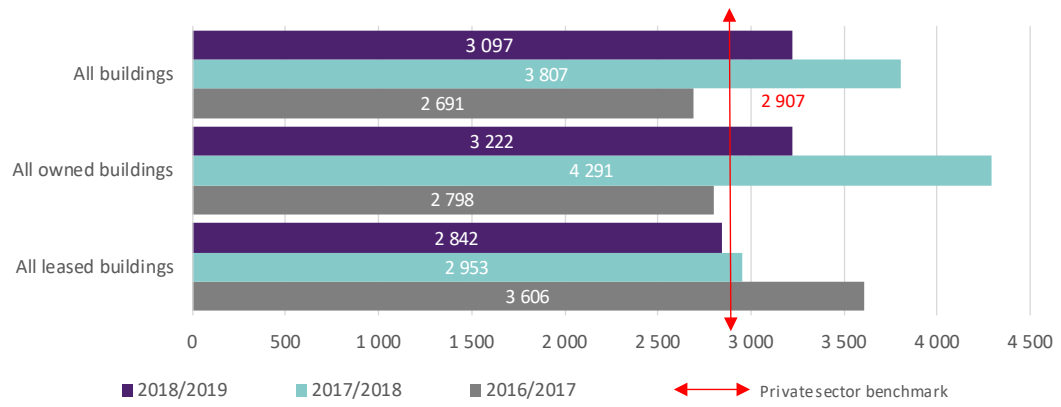
The portfolio's total cost decreased over the reporting period by nearly 19% from R3 807 to R3 097/m². The WCG continues to make investments in its assets to ensure future sustainability. With the current weak economic conditions, the budget for infrastructure investment is limited, this requires certain projects to be prioritised. The data for the 2018/19 period illustrates that the DTPW prioritised finalising capital projects in the CBD portfolio. Once completed, new investments will be made in the non-CBD owned portfolio.

DTPW prioritised finalising capital projects in the CBD portfolio

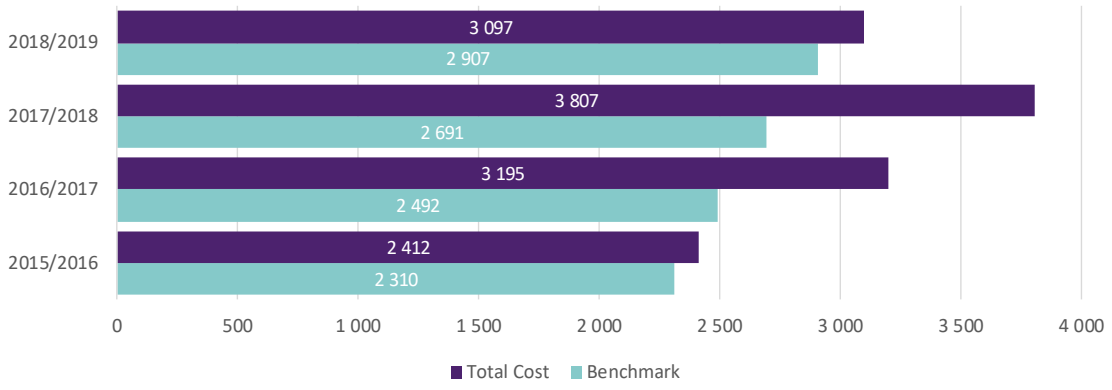
19%

Total cost decreased over the reporting period by nearly 19% from R3 807 to R3 097/m²

All buildings - cost per m²



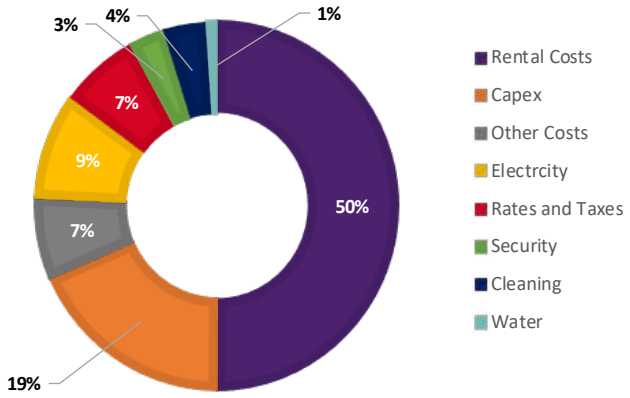
Total cost per m² vs Private Sector benchmark



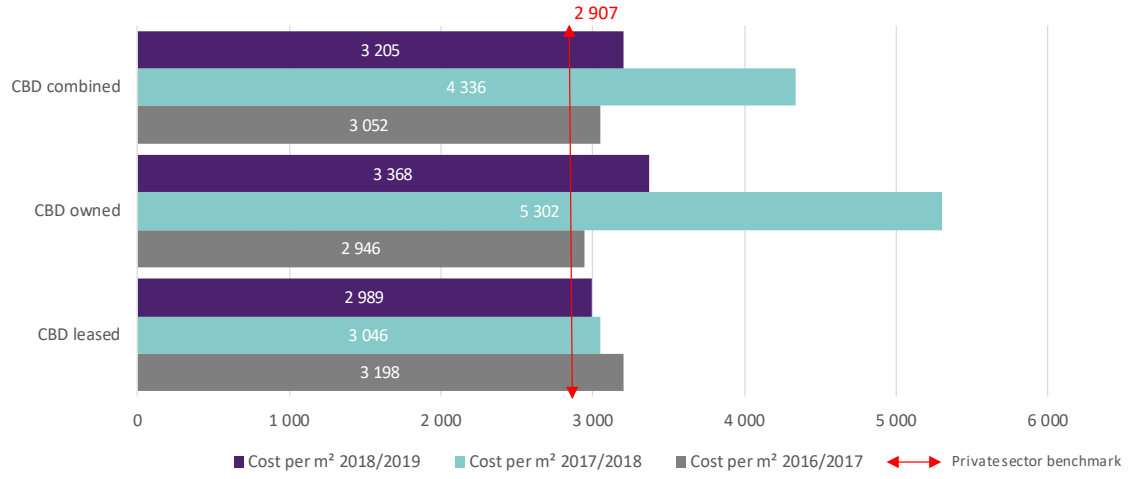
Capital projects implemented in the various CBD buildings include the addition of extra dry cooler fans, replacing diesel boilers with heat pumps, installing circulation pumps for the grey / potable water systems, and installing more efficient chiller plants.

Lease obligations and rental costs accounted for approximately 50% of the total cost in 2018/19, followed by Capex at 19%, electricity at 9%, other costs at 7% (these include operating expenses, sewerage and waste, and waste removal. Rates and taxes account for 7%, while cleaning accounts for 4% and security 3%.

Percentage breakdown of main cost items



CBD buildings cost per m²



The Department spent nearly 26% less on the various CBD properties from R4 336 to R3 205/m². The most severe expenditure cut was on owned property projects, mainly due to substantial capital cost expenditure reduction on two significant projects coming to completion. Leased properties decreased by nearly 2% over the reporting period.

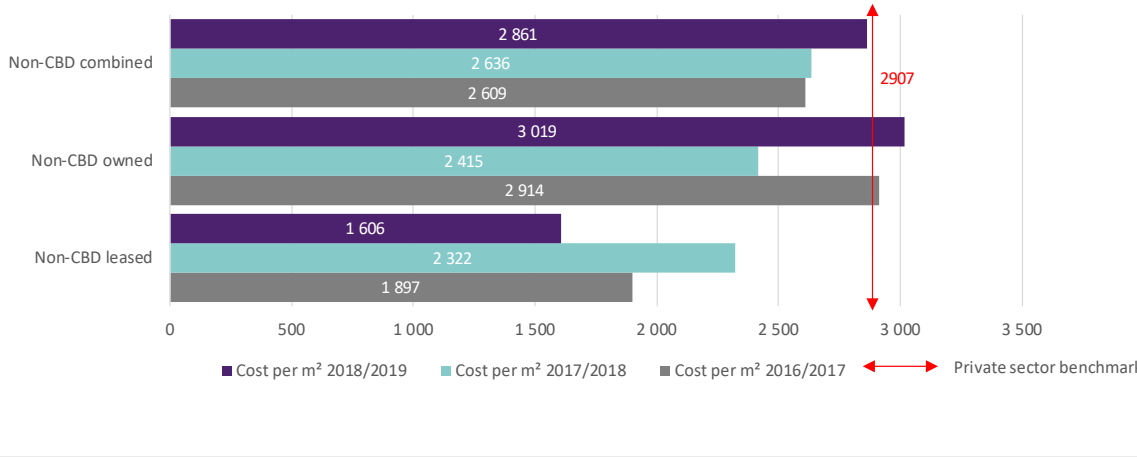
Approximately 8% more was spent on non-CBD owned properties year-on-year, while non-CBD leased premises had a decrease of 30% in costs. Non-CBD owned properties had a rise of 25% due to the increase in expenditure at Mossel Bay SSC, where the bulk of the money was spent on modernising the building.

Decreased expenditure

26% less on the various CBD properties from R4 336 to R3 205/m².

This is a difficult indicator to report on due to the fact that capital and maintenance expenditure varies substantially year-on-year vis-a-vis the reported portfolio compared to all properties.

Non-CBD buildings cost per m²




Western Cape Government
KHAYELITSHA
SERVICE CENTRE
DIENSSENTRUM

CHAPTER 4: Portfolio overview

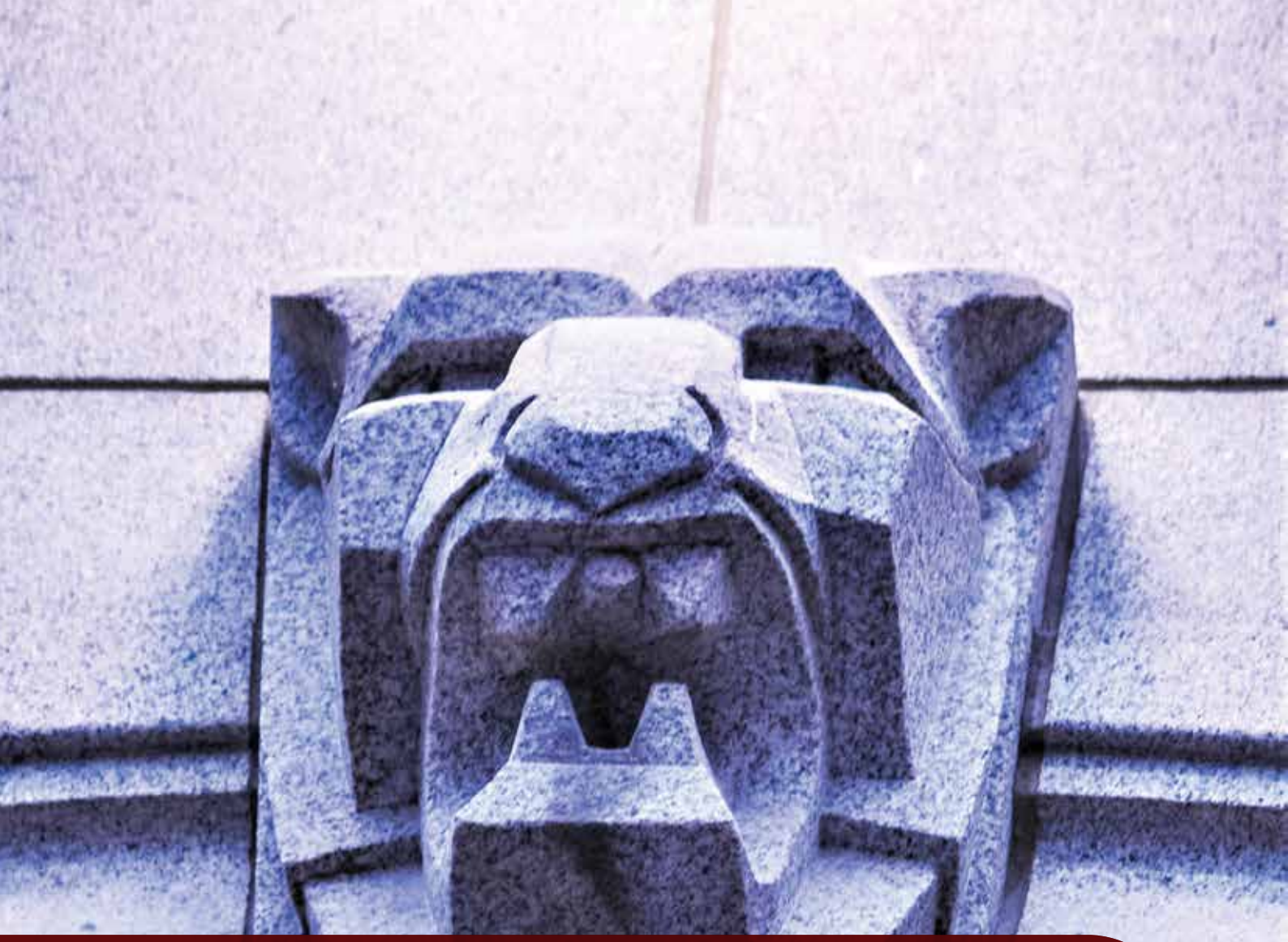
Portfolio by location

Location of building	Ownership	Size m²	Number of buildings	m²/FTE
CBD	Leased	62 165	8	19,30
CBD	Owned	82 484	11	22,66
Non CBD	Leased	7 415	3	21,36
Non CBD	Owned	58 973	15	23,14
Total		**211 037**	**37**	**19,46**
Exclusions 2018/2019*		3 469	2	
Total All buildings		**214 506**	**39**	

Portfolio by ownership

Ownership	Size m²	Count	CBD	Non-CBD
All Leased	69 580	11	8	3
All Owned	141 457	26	11	15
Total	**211 037**	**37**	**19**	**18**
Exclusions 2018/2019*	3 469	2	1	1
Total All buildings	**214 506**	**39**	**20**	**19**

Building Name	Useable Area m² 2018/2019	Total Cost	Total cost per FTE	Total cost per m²	Energy 2018/2019 kWh/m²/ annum	Water 2018/2019 kl/m²/ annum	m²/desk	FTE 2018/2019
All buildings	**211 037**	**R653 536 552**	R59 716	R3 097	**150**	**0,63**	**17**	**10 944**
All leased buildings	**69 580**	R197 733 895	R55 187	R2 842	**186**	**0,73**	**17**	**3 583**
All owned buildings	**141 457**	R455 802 657	R61 921	R3 222	**131**	**0,47**	**17**	**7 361**
All CBD buildings	**144 649**	**R463 603 827**	**R58 669**	**R3 205**	**177**	**0,54**	**16**	**7 902**
CBD leased	**62 165**	**R185 826 189**	**R58 034**	**R2 989**	**200**	**0,67**	**17**	**3 202**
11 Leeuwen Street	1 726	R5 050 223	R37 134	R2 926	103	0,43	10	136
35 Wale Street	5 309	R14 491 874	R49 125	R2 730	111	0,00	17	295
Atterbury House	6 160	R16 116 081	R50 521	R2 616	210	0,77	16	319
Golden Acre	9 041	R28 161 305	R58 547	R3 115	206	0,64	17	481
Grand Central	18 722	R61 733 442	R75 193	R3 297	240	0,40	20	821
Norton Rose	4 978	R21 480 705	R83 583	R4 315	124	0,46	16	257
Protea Assurance	6 608	R7 896 489	R25 228	R1 195	106	1,32	21	313
Waldorf	9 621	R30 896 071	R53 269	R3 211	282	0,88	13	580
CBD owned	**82 484**	**R277 777 638**	**R59 102**	**R3 368**	**159**	**0,45**	**15**	**4 700**
1 Dorp Street	3 644	R16 999 992	R112 583	R4 665	133	0,40	20	151
27 Wale Street	11 166	R31 172 340	R54 978	R2 792	159	0,33	17	567
4 Dorp Street	18 365	R66 006 285	R52 890	R3 594	215	0,56	13	1 248
4 Leeuwen Street	1 791	R4 931 105	R41 093	R2 753	78	0,32	13	120
68 Orange Street	1 368	R3 238 074	R43 758	R2 367	115	0,24	18	74
7 & 15 Wale Street	23 055	R60 333 105	R74 762	R2 617	113	0,28	25	807
9 Dorp Street	13 039	R59 797 180	R57 222	R4 586	198	0,26	10	1 045
Government Garage (Hope Street)	1 140	R3 269 736	R38 467	R2 868	211	0,44	7	85
Government Garage (Roeland Street)	1 192	R3 856 707	R37 811	R3 235	202	1,04	9	102
Hugenot	2 123	R5 680 756	R78 899	R2 676	40	0,26	22	72
Union House	5 601	R22 492 357	R303 951	R4 016	160	1,59	11	74
All Non-CBD buildings	**66 388**	**R189 932 726**	**R62 437**	**R2 861**	**90**	**0,76**	**20**	**3 042**
Non-CBD leased	**7 415**	**R11 907 706**	**R31 254**	**R1 606**	**72**	**1,84**	**17**	**381**
Eersterivier (SOC. SERV)	1 157	R1 480 371	R13 458	R1 279	140	0,75	10	110
George (SOC. Serv & WCED)	4 500	R8 650 227	R43 688	R1 922	77	2,12	21	198
Oudtshoorn (SSC)	1 758	R1 777 108	R24 344	R1 011	13	1,11	20	73
Non-CBD owned	**58 973**	**R178 025 020**	**R66 902**	**3 019**	**93**	**0,62**	**20**	**2 661**
Athlone (SSC)	6 557	R18 382 259	R58 729	R2 803	124	0,80	19	313
Bredasdorp (SSC)	2 894	R4 915 332	R111 712	R1 698	67	0,34	60	44
Elsenburg (Admin. Offices)	10 804	R17 182 956	R39 684	R1 590	71	0,00	24	433
Goulburne Centre	2 213	R3 821 614	R21 470	R1 727	68	0,42	12	178
Khayelitsha SSC	2 687	R5 836 993	R24 838	R2 172	116	2,95	10	235
Mossel Bay (SSC)	1 141	R14 568 857	R373 560	R12 768	30	0,45	27	39
Oudtshoorn (WCED & DTPW)	1 836	R4 110 819	R82 216	R2 239	33	0,13	33	50
Paarl (WCED)	2 632	R5 503 448	R47 856	R2 091	72	0,61	21	115
Swellendam (SSC)	1 621	R2 594 322	R89 459	R1 600	31	0,32	45	29
The Green Building	6 615	R22 579 435	R59 264	R3 413	149	0,00	14	381
WCED North Office	3 726	R7 385 407	R35 169	R1 982	75	0,26	17	210
Worcester (SOC. SERV)	1 150	R2 487 845	R29 617	R2 163	94	0,52	13	84
Worcester (WCED)	4 324	R10 694 219	R76 937	R2 473	46	0,45	28	139
Wynberg (SOC. Serv)	4 024	R8 683 224	R58 277	R2 158	49	0,87	23	149
York Park	6 749	R49 278 288	R188 085	R7 302	167	0,74	23	262



CHAPTER 5: The way forward

GAVIN KODE
Deputy Director-General, Provincial Public Works

Thomas Edison said that “If we did the things we are capable of, we would astound ourselves.” In looking back to when we embarked on this Property Efficiency Report journey, it was simply to do what we knew we were well capable of doing – it was because our success was not guaranteed that we disbelieved. We doubted whether we could achieve it simply because it had not been done before. Although, in a sense, we are astounded at what we have achieved with this our 8th edition, we are also striving for so much more and stretching ourselves because of the successes we have accomplished along the way.

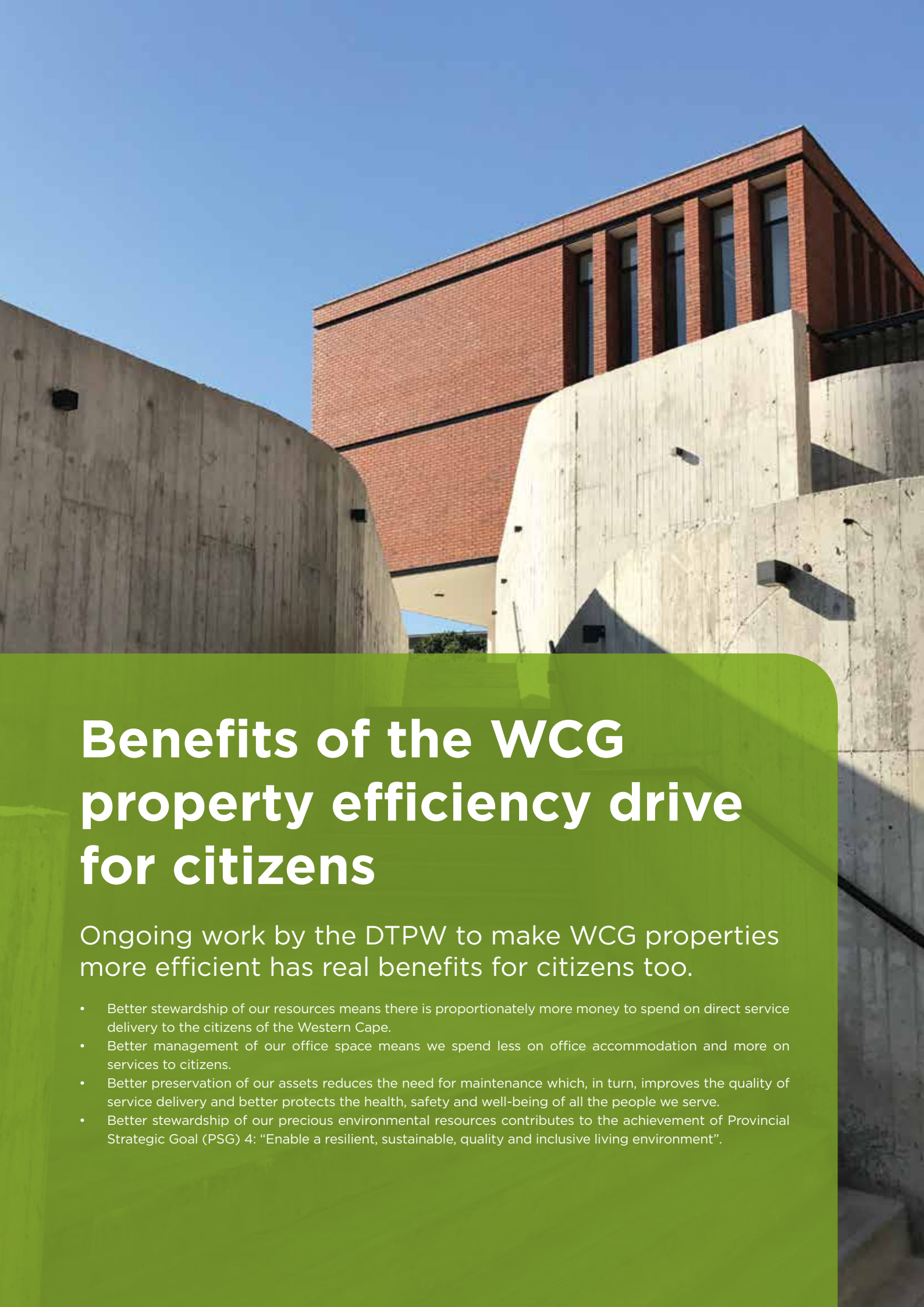
We have repeated many times that our original management rationale for publishing a report of this nature was the measurement of property performance data, the regular and rigorous monitoring of that performance data and the management of the opportunities that present from that. This is and remains the primary principle on which immovable asset management is undertaken and how we plan to expand not only the reach and extent of the properties reported on in this report but also the way in which we manage all the public immovable assets under our management.

Public Works has been committed to developing an enterprise wide property asset information management system

As custodian of the WCG's property portfolio, Public Works has been committed to developing an enterprise wide property asset information management system that would be designed to strengthen existing structures to ensure the creation of a robust information base with property management and management reporting systems to support management decisions and therefore to provide a more holistic approach to asset management through multi-disciplinary management teams. This system has now touched ground with the launch of the Departmental eMerge platform, which will further enable the Department to drive our infrastructure growth led strategy. We are developing new ways of working i.e. changing our business models – and perhaps more importantly, we are developing new ways of thinking i.e. changing our mental models. As the Head of the Department has noted regarding our Future readiness distinction, our Citizen centric approach and our embracing of the 4IR, we will now also need to attract the right talent to the Department to achieve this. Our Vision for this 4IR disruptor intervention solution will address the People, Processes and Technology required to deliver "Whole Asset Lifecycle Management". We have recognised that this is a key outcome which will determine our success in realising our goal of becoming the most strategic, sustainable and effective Public Works component and delivering property asset management in the public sector as a centre of excellence.

Looking forward, we will therefore be using data and connectivity decisively to transform the way we serve citizens and deliver our services. We will automate where possible, in a way that will enable our public officers to contribute fully to their work as public-sector asset managers. This will also enrich the experience of the engagement between the Department and the users of the assets. We will be fostering a creative space for the brilliant minds of our people to thrive and to lead successfully in the 21st century. The use of smart monitoring and recording technology such as utilisation sensors and drones will then link into our system and revolutionise our ability to measure, monitor and manage the immovable assets in our care by providing better accountability, sustainability, risk management and service maximisation. We will continue with the work of our resource champion in measuring and providing users with key consumption and utilisation data to improve efficiencies and effectiveness. Our highly successful solar PV programme will continue, as every kilowatt hour of renewable energy generated is a kilowatt hour of unsustainable energy saved. The outcomes of this report have highlighted our need to delve deeper into the makeup of the building costs per square meter and see where efficiencies can be achieved to improve our performance in this area. We will also be looking at structural and organisational reform so that we can become fit-for-purpose and cultural change can be aligned with this organisational structure and our greater purpose and vision.

Together with the Minister and the Head of Department, I too want to acknowledge the people behind the Property Efficiency Report – the many construction, maintenance, monitoring, planning, finance and accounting, immovable asset management, IT, HR and service provider and contracted people who have, sometimes even unknowingly, had a hand in the development and publication of this report and the performance reflected herein. Nothing in life really happens without people but I would like to take this opportunity to express my thanks and appreciation for the enthusiasm and commitment of these officials to not only undertake the ordinary but now also for what we see as extraordinary. You all continue to try to achieve excellence, even in the sure knowledge that we may never reach this utopia. You have in some way done what Francis of Assisi described as "Start by doing what's necessary, then what's possible, and suddenly you are doing the impossible."



Benefits of the WCG property efficiency drive for citizens

Ongoing work by the DTPW to make WCG properties more efficient has real benefits for citizens too.

- Better stewardship of our resources means there is proportionately more money to spend on direct service delivery to the citizens of the Western Cape.
- Better management of our office space means we spend less on office accommodation and more on services to citizens.
- Better preservation of our assets reduces the need for maintenance which, in turn, improves the quality of service delivery and better protects the health, safety and well-being of all the people we serve.
- Better stewardship of our precious environmental resources contributes to the achievement of Provincial Strategic Goal (PSG) 4: “Enable a resilient, sustainable, quality and inclusive living environment”.

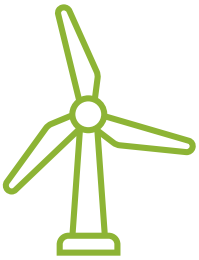
Responding to climate change

Better management of our scarce environmental resources helps to make our operations more sustainable and emit less greenhouse gas (GHG) into the atmosphere. The WCG's work to mitigate the severity of climate change is contributing to the well-being of everyone, especially children and the generations that have not yet been born.

Saving water

We live in a water-stressed country. Climate change is likely to lead to even less rainfall in the south-western parts of South Africa. The more careful we are about how we use this precious resource, the better life will be for everyone. The WCG is taking the lead by ensuring that its facilities use as little water as possible, by minimising waste, by recycling water where possible, and by utilising groundwater resources in critical facilities to help ensure that service delivery continues, even when municipal water supplies are constrained. This simultaneously conserves water and reduces the risk of water-related service interruptions.

The most recent Department of Water and Sanitation figures (2015/16) show the average per capita consumption of water in South Africa is 233 litres per person per day. At the peak of the Western Cape drought of 2015 to 2018, the per capita daily consumption of water was drastically reduced to only 80 litres. This was partly the result of severe water restrictions, partly the result of people having to drastically reduce their water consumption to avoid a "Day Zero" dry-taps scenario in Cape Town, and partly the result of public education about climate change and the need to conserve our precious water resources. Collective action can make the difference. The WCG is playing its part by reducing water consumption to a minimum, and we encourage the people of the Western Cape to keep doing everything they can to conserve water.



Improving energy efficiency and adding renewable sources of energy

Our energy efficiency initiatives are helping to mitigate the impact of climate change. We are reducing our electricity consumption by improving energy efficiency in the WCG property portfolio. This includes making heating, ventilation and air conditioning systems work more effectively, reducing the need for heating and cooling, and using technology to switch off systems when they are not being used. In these ways we are reducing the severity of emissions from existing GHG-emitting systems.

Our addition of solar PV systems to our energy supply is mitigating the impact of climate change by sourcing a portion of our needs from a renewable energy (non-GHG-emitting) source. An added benefit of renewable energy systems is that they do not cause the severe air and water pollution that is associated with fossil-fuel burning sources of energy, particularly coal-fired power stations. The addition of solar PV systems is also helping to reduce our dependence on Eskom and the related risk of WCG service delivery to citizens being disrupted by load-shedding.

Continual improvement

Our efforts to improve the efficiency of the WCG property portfolio are helping to improve the lives of the people, both directly and indirectly. We are committed to ongoing improvement. We appeal to readers to join us in our journey towards ever-improving sustainability and a better quality of life for everyone in the Western Cape.

Acknowledgements

The 8th edition of the Property Efficiency Report reflects the dedication and hard work of all stakeholders involved, most especially those in the Immovable Asset Management and General Infrastructure space of Public Works.

The efficiency results truly speak for themselves and highlight the positive impact of the innovations introduced by the Department during the reporting period. Data collection and analysis once again proved to be the most challenging aspect of compiling the report. However, as the Department continues to roll out their metering programme and the data set improves, so will the confidence in compiling the report.

Personally, we would like to thank all who contributed to the good story which the report highlights. The WCG truly does work "Better Together", as this was made clear once again through the continuation of the good story told through the entire Property Efficiency Report series.

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Data Sources

Department of Transport and Public Works:

- Internal Communications
- Chief Directorate: Immovable Asset Management (Property Support Office; Operational Property Management; Property Planning and Information)
- Chief Directorate: General Infrastructure (Technical Support; Programme/Projects Infrastructure Delivery)

Department of Community Safety

Green Building Council of South Africa

Rabie Property Group

Disclaimer

The Western Cape Government has taken every care in the preparation of this report. The sources of information used to prepare the report are believed to be accurate and reliable, but no guarantee of accuracy or completeness can be given. Should any errors be identified post publication, the Department undertakes to issue an erratum to effect any necessary amendments.

Acknowledgements

Glossary

APP	Annual Performance Plan
BBBEE	Broad-based Black Economic Empowerment
Benchmark	In this report, the portfolio is benchmarked against a comprehensive database of office buildings in the same geographical area compiled by the Green Building Council of South Africa (GBCSA).
Capital expenses	Includes capital and maintenance expenditure.
CBD offices	The 2018/19 report includes the 19 WCG offices located in the Cape Town Central Business District. The estate comprises around 144 649m^2 of occupied office space. A list of buildings is featured in the Appendix.
Cost	References in this report to cost and total costs represent the following: For rented buildings the Total Occupancy Costs are made up of: Annual operating expenses, such as rent and local real estate taxes, repair and maintenance, service charges and support services, as well as management to reflect operating costs. Annualised capital expenses, such as adaptation and equipment, as well as IT infrastructure and hardware to reflect capital costs. For owned buildings the Total Occupancy Costs are made up of Proxy costs for rent to reflect market rental value. Annual operating expenses, such as local real estate taxes and support services, repair and maintenance, as well as management to reflect operating costs. Annualised capital expenses, such as adaptation and equipment, as well as IT infrastructure and hardware to reflect capital costs. The data has been assembled from within Departments and across Public Works. Total property cost includes net rent (for owned offices an average cost per m^2 has been applied to approximate to an equivalent market rental cost and to facilitate direct comparison against leased space), rates, parking charges, net service charges, internal repair and maintenance, mechanical and electrical repair and maintenance, external and structural repair and maintenance, minor improvements, security, cleaning and waste disposal, water and sewerage and energy.
DEA&DP	Department of Environmental Affairs and Development Planning
DTPW	Department of Transport and Public Works
Energy Performance Certificates (EPC)	Energy Performance Certificates are a list of statistics about the energy efficiency of a property to benchmark the energy performance of a building against industry benchmarks or national norms. EPCs carry ratings on energy use and carbon dioxide emissions and applied through the application of a standard method – SANS 1544. A standard: • Standards are distilled wisdom of people with expertise in their subject matter. • Something considered by an authority or by general consent as a basis. Properties are classified into - Type of occupation, Climatic zone and energy consumption in kWh/m^2. The properties in the PER 2018/19 is classified in group G1, climatic zone 4 (Coastal) – 185 kWh/m^2.
FTE	Full time equivalent (staff).
GBCSA	Green Building Council of South Africa
Grey- vs Blackwater	Greywater is collected from sinks, dishwashers, bathtubs, and washing machines, while blackwater is collected from toilets.
Immovable assets	Immovable property is an immovable object, an item of property that cannot be moved without destroying or altering it – property that is fixed to the earth, such as land or a building.
kL	A unit of volume, equal to 1000 litres; a cubic meter.
kWh	The kilowatt hour is a unit of energy equal to 1 000-watt hours. The kilowatt hour is the most commonly known unit to measure energy delivered. Average annual power consumption can be expressed in kilowatt hours per year, per square metre or per FTE user.

Glossary

MWh	A megawatt hour is equal to 1 000 kilowatt hours or equal to 1 000 kilowatts of electricity used continuously for one hour.
Non-CBD offices	The 2018/19 report includes the 18 WCG offices located outside of the Cape Town city area. The estate comprises around 66 388 m^2 of occupied office space. A list of buildings is featured in the Appendix.
Occupancy costs	Those costs related to occupying a space including; rent, real estate taxes, personal property taxes, insurance on building and contents, depreciation, and amortization expenses.
Occupied space (Usable Area)	The net internal area, measured in square metre, of office space occupied by organisations. The space has been defined in accordance with SAPOA guidance and is equivalent to the SAPOA usable area.
Performance	Performance of the Western Cape office estate has been assessed using three standard metrics of property efficiency (cost per square metre, space per FTE and cost per FTE) to report internal efficiencies and also through comparison to a benchmark average of South African corporate occupiers. Additionally, sustainability performances have been assessed using data to develop energy and water consumption metrics.
Property Efficiency Report Portfolio	The portfolio under report remains at 39 office buildings, being all leased-in and owned office accommodation throughout the province greater than 1 000m^2. The following changes have been made in the way we report on certain buildings: ○ 3 Dorp Street has not been included in the sample as the entire building was undergoing modernisation during the reporting period. ○ The Western Cape Education Department (WCED) Central Office has been excluded from this report due to a lack of 12 months' of applicable and verifiable data. The Department's Resource Champion is currently investigating this matter.
Public Works	The Western Cape Department of Transport and Public Works (DTPW). Public Works develops and maintains appropriate infrastructure and related services for sustainable economic development which generates growth in jobs and facilitates empowerment and opportunity.
Reporting period	The reporting period for the Property Efficiency Report 2018/2019 is from 1 April 2018 to 31 March 2019.
SAPOA	South African Property Owners Association
SSC	A shared service centre (SSC) is an office building occupied by various WCG departments and often with shared facilities and a public interface.
WCG	Western Cape Government

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