Western Cape Government

BETTER TOGETHER.

Photograph: Courtesy of Bruce Sutherland and the city of Cape Town

Property Efficiency Report 2015/16

This report demonstrates the Western Cape Government's commitment to managing and improving the efficiency, effectiveness and sustainability of its property holdings.

Issue No. 5 – November 2016

Photograph: Courtesy of Bruce Sutherland and the city of Cape Town

Contents

Foreword

Donald Grant, Minister of Transport and Public Works

- I welcome the publication of the 2015/16 Property Efficiency Report – the 5th in a series of annual benchmarking and monitoring reports aimed at guiding and facilitating the Western Cape Government's drive to ensure the efficient and cost-effective utilisation of its property portfolio.
- With our current emphasis on government-wide evidence-based decision making, this report provides us with the data to promote positive engagement, both internally and with landlords. This in turn encourages transparency and access to even more robust data. As a result, we are increasingly able to set beneficial improvement targets and achieve them.
- Tools to enable comparisons and to challenge data have opened even more opportunities and driven change. The data consolidation and standards adopted to assess performance facilitates these internal comparisons of cost and practice across the office estate and within a context of external benchmark values.
- Progress continues within the Department to consolidate and to audit data sources and several processes and practices to improve data reliability and encourage its active use within the Department have been developed. Extension of reporting to cover the performance of much of the non-CBD office estate has in itself necessitated and encouraged a specific data improvement programme promoting improved transparency and will in time deliver efficiency gains. However, despite progress, there are still some locations where data gaps are evident. The Department will continue to develop and enhance processes to ensure future improvement.
- This report continues to be the only one of its kind to be produced by an administration in South Africa – my congratulations to Deputy Director General Gavin Kode and his team for this very important achievement.

Foreword

Jacqui Gooch, Head of Department, Transport and Public Works

- The Departmental Vision is "To lead in the delivery of government infrastructure and related services" and the associated Mission is "The DTPW delivers infrastructure and services to promote socio-economic outcomes and safe, empowered and connected communities".
- In giving effect to our mission, the DTPW makes significant contributions to the strategic goals of the Province: PSG 1 (Growth and Jobs) receives the largest contribution of any PSG at about R13 billion over the MTEF and the largest contribution from Programme 2 (Public Works Infrastructure) relates to PSG 4 (Resilient, Sustainable, Quality and Inclusive Living Environment).
- South Africa faces a challenging fiscal outlook which is premised on low economic growth, rising debt, no additional resources available for allocation, possible reductions in baseline budgets and limited resources. This emerging environment demands an integrated management decision-making process and this is largely premised on evidenced-based planning and decision making. Similarly, a critical focus is required to be made on programme and project effectiveness, ensuring value for money and driving efficiency in service delivery. In this, robust policy decisions and trade-offs are required – all of which are reliant on accurate, timely and relevant performance data.
- The objectives of Public Works are to ensure effective immovable asset management, to coordinate the use of immovable assets with service delivery objectives and to provide for the efficient utilisation of immovable assets. This Property Efficiency Report has at its root the pursuit of these objectives and all efforts in this regard are accordingly directed to optimising the performance of our immovable assets.
- One of Public Works' strategic outcomes from publishing the Property Efficiency Report is to improve the efficiency of office accommodation through the reduction of cost and improved space utilisation, coupled with a percentage reduction in full-time employee cost. This is done largely through the continuous assessment, analysis and optimisation of the performance of the property portfolio, which in turn, requires property performance data and intelligence.
- This 5th Property Efficiency Report is still the only one of its kind published by any administration in the country. This fact is testament to the initial and ongoing commitment to improve property asset management within the public sector to drive property performance and efficiency. The portfolio under report remains at 36 office buildings, being all leased-in and owned office accommodation throughout the Province greater than 1 000 m^2.
- The Provincial Strategic Plan also contains selected priority projects called "Game Changers" because they have the potential to be catalysts for substantial improvements in people's lives. One of these is directed at achieving energy security to support economic growth and is known as the Energy Game Changer. Public Works is intricately involved in one of the phases, namely, Energy Efficiency in Government Buildings and which has the ambitious target of reducing energy consumption in the PER buildings by 30% (net of photovoltaic solar generated) by 2020. Various initiatives are being implemented which further the objectives and outcomes of the Property Efficiency Report.
- As has been noted before, the improvement in the overall utilisation of the provincial property portfolio is an enormous challenge but also one that will not be achieved overnight. The Public Works team is nonetheless determined and committed in this resolve and this report again demonstrates this and the massive strides taken towards achieving this goal.

Executive Summary

Figure 1a: Summary statistics for the 2015/16 reporting period

	All WCG offices	CBD offices	Non-CBD offices	Private sector average
Western Cape portfolio: net area	206 975 m^2	145 285 m^2	61 690 m^2	–
Accommodated office staff	8 658	6 440	2 218	–
Cost per FTE	R58 169	R58 517	R57 157	R44 068
m^2/FTE	23.9 m^2	22.6 m^2	27.8 m^2	19.1 m^2
Energy consumed per FTE	3 817 kWh	4 419 kWh	2 066 kWh	4 375 kWh
Water consumed per FTE	26.1 m^3	20.9 m^3	39.7 m^3	29.7 m^3

Figure 1b: Prior reporting period summary statistics: 2014/15 reporting period

	All WCG offices	CBD offices	Non-CBD offices	Private sector average
Western Cape portfolio: net area	209 524 m^2	147 834 m^2	61 690 m^2	–
Accommodated office staff	8 642	6 336	2 306	–
Cost per FTE	R56 148	R58 310	R50 206	R31 418
m^2/FTE	24.3 m^2	23.3 m^2	26.8 m^2	14.7m^2
Energy consumed per FTE	4 319 kWh	4 682 kWh	3 321 kWh	4 556 kWh
Water consumed per FTE	20.3 m^3	16.3 m^3	31.1 m^3	32.0 m^3

1. Now in its 5th edition, this Property Efficiency Report and the data required to assess the performances reported therein demonstrates the commitments to improving both property performance and property information management practices within the Department of Transport and Public Works (DTPW).
2. The relative high cost per person across the Western Cape office estate is driven by the significance, still, of poorly occupied space. At R58 169, the overall cost per person across the office estate has increased by just 3.6% since 2014/15; this increase compares to an average inflationary change of around +6.5% to the South Africa consumer price index in 2016. The cost per person across the office estate does nonetheless remain significantly higher than a South African corporate occupier average cost of R44 068.
3. Measured by the overall space per FTE, overall space efficiency shows little change. However, despite evidence that the space per FTE at some offices has shown no improvement, there are many offices where significant improvements in space efficiency have been achieved and the gap between CBD and non-CBD office space efficiency exposes potential for a degree of rationalisation and savings in many non-CBD locations.
4. The Office Modernisation Programme remains a central pillar to DTPWs improvements in workplace efficiency. 23 projects undertaken under this programme since inception have optimised space utilisation by 34% and the space per desk in the completed projects to date stands at 13.5 m^2 per desk – this is ahead of the current South African private sector average of around 15 m^2 per desk.
5. 2015/16 has marked a year of stability in the overall performance reported across the CBD office estate and now provides a robust baseline. As the data to measure the CBD estate reaches maturity in many respects, the non-CBD estate demonstrates the impacts of improving data access and data transparency which have exposed more costs and uncovered previously unreported performance issues. The emerging data across non-CBD space has also reinforced pockets of performance strength.
6. At R2 433, the average total annual cost per m^2 of offices reported a 5% increase but is aligned with the benchmark cost. However, some component costs suffered larger changes since the previous reporting period reflecting improved cost transparency and annual fluctuation.
7. Tools to enable comparison and to challenge data have exposed opportunities and driven change across Public Works. The data consolidation and standards adopted to assess performance have facilitated fundamental internal comparisons of cost and practice across a diverse office estate as well as comparisons with external benchmark values to identify outlier performance.
8. Significant challenges to capture accurate and consistent data throughout the portfolio remain. However, progress continues within DTPW to consolidate and to audit data sources and several processes and practices to improve data reliability and encourage its active use within Public Works, continue to be developed.
9. Extension of reporting to cover the performance of much of the non-CBD office estate has in itself necessitated and encouraged a specific data improvement programme promoting improved transparency and will deliver efficiency gains. However, despite progress, there are still some locations where data gaps are evident. Public Works will continue to develop and enhance processes to ensure future improvement.
10. Data has promoted positive engagement. Engagement both internally and with landlords has improved transparency and data access to be more robust. At some non-CBD locations this improved data has identified some interesting gaps in performance.
11. Reductions in energy usage have been realised as a result of the various actions taken across the estate by Public Works to reduce its use and potential waste of energy. Total energy consumed across the Western Cape office estate was reduced by around 6% during 2015/16 compared to 2014/15 and overall consumption per m^2 at 167 kWh/m^2 remains much lower than a South African private sector office average of 249 kWh/m^2.
12. Reductions in energy consumption per m^2 were noted across a significant area of CBD office estate. Many of the reductions have come in owned CBD offices while various actions taken across the estate and by Public Works to reduce its use and waste of energy have been rewarded by real reductions in energy usage.
13. Assessments of the usage patterns of water across the estate have progressed and access to accurate consumption data has become more standard across offices. This reflects better metering, improving transparency in leased offices and more regular consolidation and review of data sources. Instances of poor data transparency and poor water consumption performance do however feature.

Chapter 1: About this Report

- Data and transparency underlie the approach developed to managing the property assets of the Western Cape Government (WCG) and this Property Efficiency Report provides a review of progress and an assessment of performances for the WCG office estate during 2015/16. The report is based on evidence consolidated by the Department of Transport and Public Works (DTPW).
- The first Property Efficiency Report which reported on the 2011/12 year was published in 2013. Reports for intervening years have also been produced and this report and the data required to support performance reporting, such as contained in this report, demonstrates the Department's commitments to improving both property performance and property information management practices.
- Case studies presented in this report showcase projects and initiatives across the Western Cape Government estate which help deliver a better, high performing estate.

REPORTING PERIOD AND SCOPE

- This report examines the performance of Western Cape Government offices for the financial year 2015/16 and is based on information as at the March 2016 financial year-end. All data has been assembled and consolidated by DTPW from various sources and has undergone validation, cleaning and verification both internally and with support from the JLL Global Benchmarking Service.
- The report is based on the combined performances of 36 offices of the Western Cape Government estate. Together, the estate being reported on comprises 206 975 m^2 net space and accommodates 8 658 full time equivalent staff. The estate includes 17 central Cape Town and George locations (CBD estate) and 19 other offices spread across the province (non-CBD offices).
- Global Benchmarking Services (GBS) have worked with DTPW to establish an approach to performance assessment and ensures that all data collected is standardised and is comparable to the external benchmarks.

Global Benchmarking Services (GBS) is a part of JLL, a financial and professional services firm specialising in real estate services and investment management, and is recognised as an industry leader in the global benchmarking services business. GBS has an extensive database of global properties and quality benchmarking products which gives clients the ability to perform diagnostics on client portfolios as well as combine the same with cutting edge portfolio advice to enhance productivity for its client portfolios. Its service scope includes detailed benchmarking and analysis of key portfolio performance indicators including space and cost efficiency, quality and environmental monitoring and impact of commercial assets. Global Benchmarking Services is based in London, Paris, New York and Mumbai.

- The profile of the estate exposes differences in location, ownership and significance and examines both CBD and non-CBD locations. This comprehensive and complete review of the Government's office accommodation provides a total view of performance and supports the development of standardised data across the estate. Data consolidation and standards facilitate powerful internal comparisons of cost and practice both within the estate and in the context of external benchmark values.

DATA MANAGEMENT AND ACCESS

- The production of this report and all departmental property reporting relies on access to accurate, reliable information about the WCG's assets. Equally, commitments made by the WCG to performance reporting and benchmarking require access to effective data to support strategic and operational decision-making.
- Progress has been made within Public Works to consolidate and to audit data sources. The Department has put in place several processes and practices to improve data reliability and encourage its active use within the Department. However, despite the progress made, there are still some locations where data gaps are evident – it is in these instances that performance reporting is hampered and thereby the capability to report progress or uncover opportunities to improve practice. Instances for reflecting solid progress are consequently few and far between.
- The space audit of assets continues on a rolling cycle ensuring an up to date and active record to support effective asset management. In conjunction with the Office Modernisation Programme, the requirements for office accommodation can be robustly planned and provided and the space and occupancy data is crucial to support professional and informed management of the estate.
- Annual Performance Plans (APP) continue to form a backbone for effective management and have been designed and set up to encourage active use of the performance data therein. Annual Performance Plans provide a useful mechanism to help the Department uncover and focus its asset management priorities as well as to promote engagement and collaborative solutions to work with other departments.
- Challenges to capture accurate and consistent data about the portfolio remain. However, increasing awareness and active use of the data and metrics available to the Department has helped to improve data capture and reliability. The extension of reporting to cover the performance of much of the non-CBD office estate has in itself necessitated and encouraged a specific data improvement programme promoting improved transparency and exposed previously unreported under-performance issues. Inadequate access to data has meant that in some instances, buildings will not benefit from centralised management practices and strategic planning which may have resulted in missed opportunities for efficiency gains.

Chapter 2: Performance Measurement

Figure 2a: Key performance data: 2015/16 reporting period

	Cost/m²	+/-	Space/FTE	+/-	Cost/FTE	+/-
Cape Town CBD office estate	R2 594	+4%	22.6 m²	-3%	R58 517	+0%
Non-CBD offices	R2 055	+10%	27.8 m²	+4%	R57 157	+14%
All WCG offices (Cape Town CBD + non-CBD)	R2 433	+5%	23.9 m²	-1%	R58 169	+4%
BENCHMARK	R2 310	-	19.1 m²	-	R44 068	-

Figure 2b: Prior reporting period performance data: 2014/15 reporting period

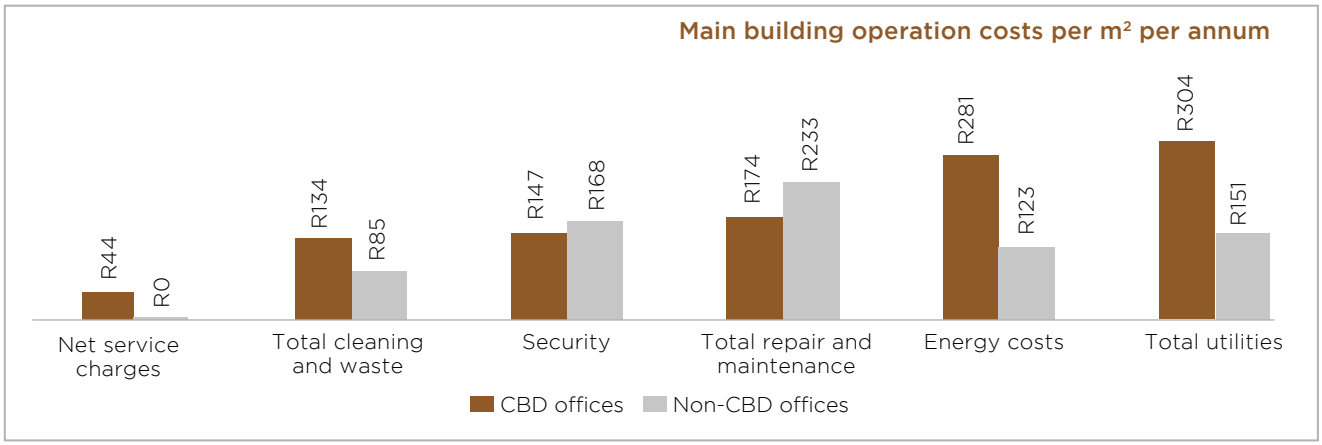
	Cost/m²	Space/FTE	Cost/FTE
Cape Town CBD office estate	R2 499	23.3 m²	R58 310
Non-CBD offices	R1 877	26.8 m²	R50 206
All WCG offices (Cape Town CBD + non-CBD)	R2 316	24.2 m²	R56 148
BENCHMARK	R2 141	14.7 m²	R31 418

- The average overall cost per person across the Western Cape office estate has shown little overall change during 2015/16 and remains significantly higher than a South African corporate occupier average cost of R44 068. Overall relative inefficiency of the estate remains impacted largely by the significance, still, of poorly occupied space – especially in some non-CBD locations.
- At R2 433, the average total annual cost per m² of offices reported a 5% increase but is aligned with the benchmark cost. However, some component costs suffered larger changes since the previous reporting period.
- There were very significant increases to costs per m² of rates and of repairs. The total rate liability per m² has more than doubled since 2014/15; some municipal revaluations and the emergence of a few previously unrated erven dealt a few large increases to the annual rates costs paid per m². An increase in rate of investment, especially to CBD offices, elevated the typical repair cost per m² to R191.

and access to more robust cost data has improved for several offices. Increases to cleaning and to security costs at some offices reflect data strengthening.

- It is interesting to note that for 2015/16 the non-CBD investment per m² in repair expenditure and annual cost per m² of security were above that reported across the CBD office locations. The cost per m² of internal and mechanical and electrical repair rose to record highs in 2015/16 across the non-CBD space.
- The operation costs per m² have increased by 10% in 2015/16 but at R753 m² remain 12% below the benchmark average. The overall increase to operational costs per m² reported this year is driven by a large increase in repair and maintenance expenditure which ended 2015/16 at R191 – a level aligned with the benchmark average for South African private sector offices. Reflecting upgrades to some Cape Town façades, the increases were most significant in the CBD offices.
- Non-CBD offices incurred an average security cost

Figure 3



- The annual core costs of building operation per m² demonstrate a profile (see Figure 3) which would typify any estate split between CBD and non-CBD locations – the cost per m² of most component costs are significantly less in the non-CBD locations. The extent however of difference has narrowed and some costs are now more fully reported as the transparency

per m² of more than double the rate per m² reported across CBD office space. Data verified and reported for 2015/16 at Goulburn Centre and Social Services at Eersterivier, Paarl and Worcester helped expose some very high security costs and other variations at office level expose scope for challenge and assessment of service value.

- Measured by the overall space per FTE, overall space efficiency shows little change. However, despite evidence that the space per FTE at some offices has shown no improvement, there are many offices where significant improvements in space efficiency have been achieved.
- Improvements reflect the impacts of modernisation in the main but also the improved accuracy and reliability of space data now accessible. Deteriorations in space efficiency at several of the leased non-CBD office locations are the consequence of the churn of staff and focus on consolidation, which are features of progressive rationalisation.

WESTERN CAPE OFFICE MODERNISATION

- In the 3rd Property Efficiency Report we highlighted the improvement possibilities in space utilisation precipitated through modernisation of office space. The improvements not only generate real savings in annual cost through progressive requirements for less space but, as important, provide good quality, productive working environments for staff.
- The Office Modernisation Programme continues to be a central pillar in Public Works transformation of the workplace and of efficiency. During the 2015/16 financial year, 23 Office Modernisation projects under the Programme were undertaken at an expenditure of R106 million. These projects optimised space utilisation by 34%. The space per desk in the completed projects to date stands at 13.5 m² per desk – this is ahead of a current South African private sector average of around 15 m² per desk.

Figure 4: Western Cape Modernisation projects to 2015/16

			2011/12		2015/16		
Building	**Floor**	**Usable area (m²)**	**No. desks**	**m²/desk**	**No. desks**	**m²/desk**	**% saving**
4 Dorp Street	1	776	54	14.4	56	13.9	4%
	2	737	49	15.0	64	11.5	23%
	5	748	68	11.0	73	10.2	7%
	18	756	34	22.2	59	12.8	42%
	19	753	46	16.4	50	15.1	8%
	23	763	35	21.8	63	12.1	44%
	24	763	0	n/a	72	10.6	100%
7 & 15 Wale Street	Mezz	854	44	19.4	50	17.1	12%
	4	1 630	62	26.3	66	24.7	6%
	5	1 947	58	33.6	72	27.0	19%
9 Dorp Street	G	1 055	74	14.3	108	9.8	31%
	1	1 377	87	15.8	126	10.9	31%
	4	1 493	71	21.0	122	12.2	42%
Waldorf	7	1 608	45	35.7	122	13.2	63%
	12	977	55	17.8	56	17.4	2%
35 Wale Street	4	1 557	39	39.9	97	16.1	60%
	5	907	34	26.7	59	15.4	42%
4 Leeuwen Street	1-4	1 791	75	23.9	136	13.2	45%
Union House	2	417	34	12.3	44	9.5	23%
	4	429	37	10.7	49	8.8	24%
	5	433	22	17.3	42	10.3	48%
	8	431	27	16.0	41	10.5	34%
	10	417	24	17.4	49	8.5	51%
Overall		**22 619 m²**	**1 074**	**20.4 m²**	**1 676**	**13.5 m²**	**76%**

Owned buildings are shown in red font above.

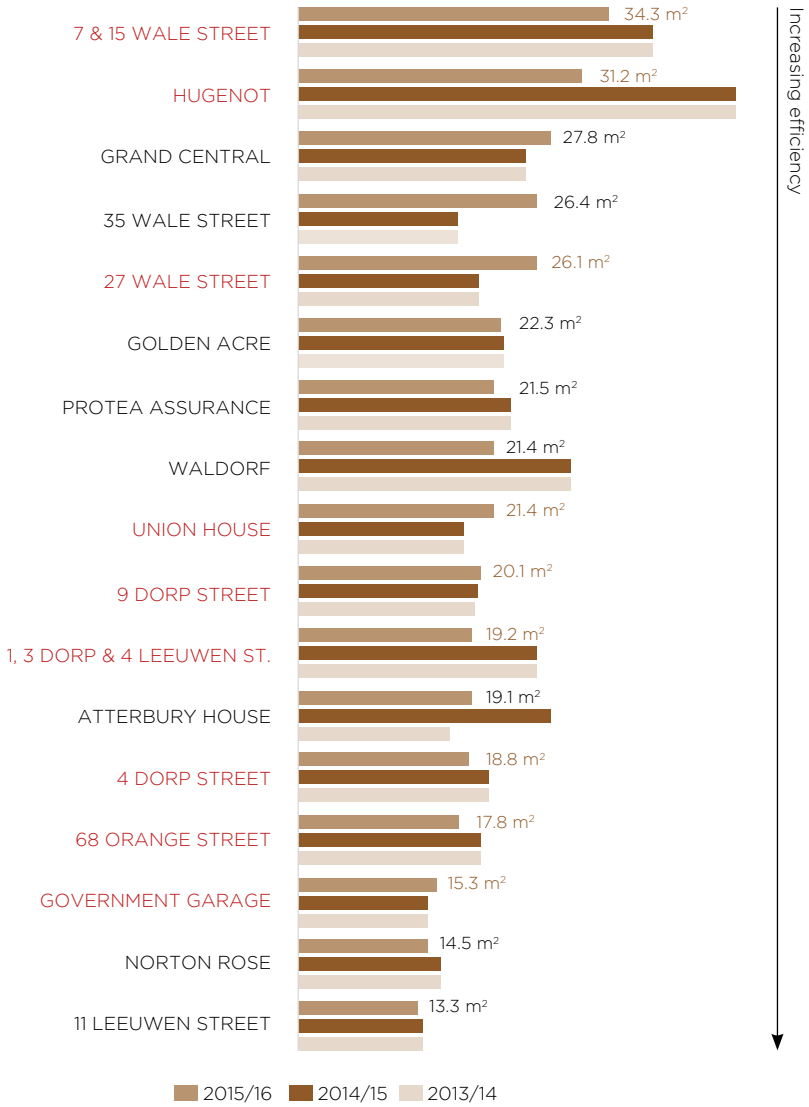
The objective of the Office Modernisation Programme, managed and delivered by Public Works, remains the transformation of efficiency of both owned and leased space through optimising the government office staff workplace. This Programme delivers long-term cost savings, reduces the environmental impact and improves productivity.

Chapter 2: Performance Measurement

- A clear distinction in space efficiency exists between CBD and non-CBD offices. Average space per person in the CBD for 2015/16 stood at 22.6 m² in contrast to the 27.8 m² reported across the non-CBD estate; subject to building design and lease restrictions, the gap highlights scope to manage rationalisation and space savings in some non-CBD locations.
- 55% of the space managed across the entire estate has reported an improvement in space efficiency over the past 3 years and some of the site specific reductions in space per FTE have been very significant. However, in 19 offices the current space per FTE exceeds 20 m² and the scope to improve further exposes a real opportunity for improvements to both the quality of accommodation and the annual cost to government.
- Many of the opportunities to make significant improvements in space efficiency lie in the non-CBD locations that have historically been less intensively scrutinised. These offices are typically leased space and thereby offer more flexibility as leases expire or break options become possible.
- Engagement in performance reporting and increasing reliance on data has improved the access and accuracy of space and cost data across the Western Cape office estate. Some changes to cost are expected as the integrity of data improves. However, active use and exchange of data within Public Works has continued to help managers to understand performance and develop relevant improvement plans for individual offices. The next challenge for Public Works is to continue to develop understanding through performance across offices but also to capture regular and consistent data about other assets under management.

CAPE TOWN CBD OFFICES

Figure 5[1]: Space per FTE, CBD offices



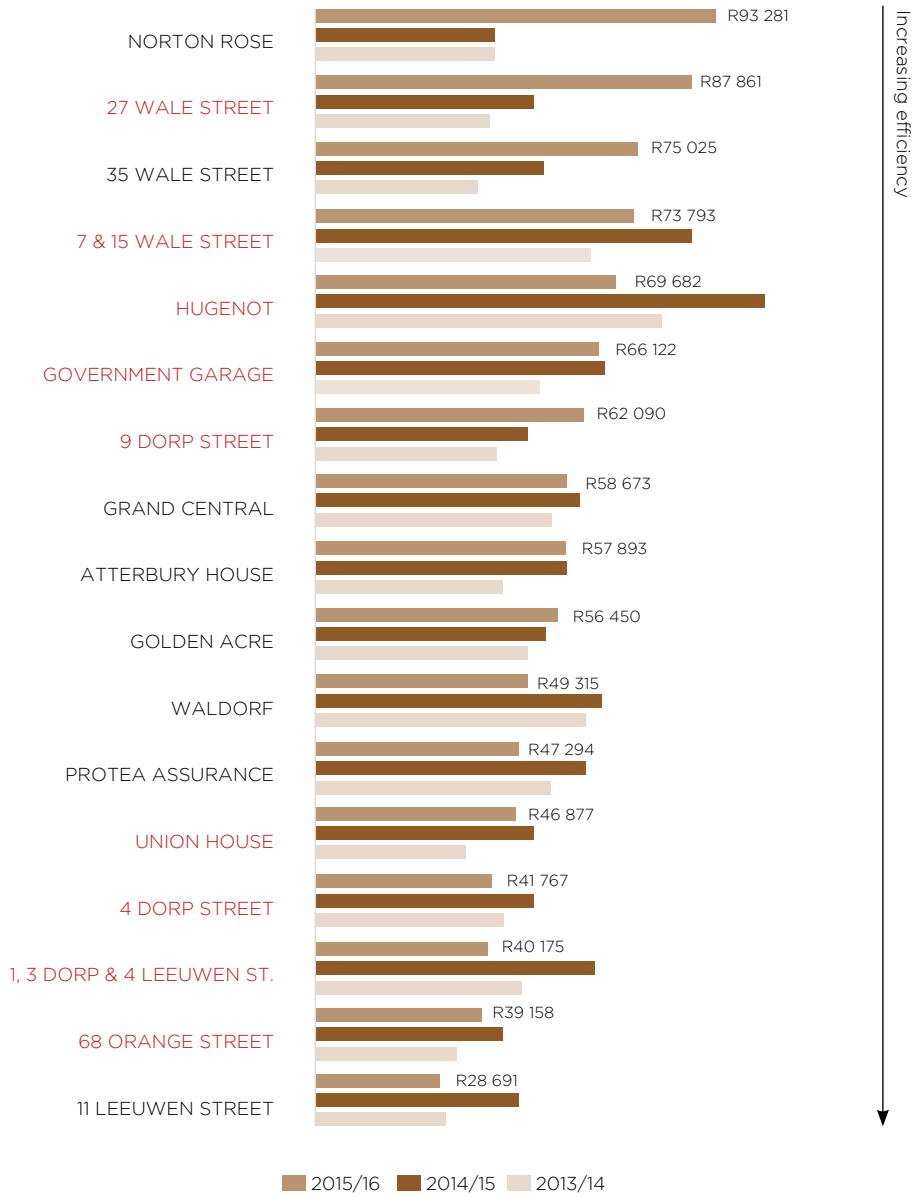
Owned buildings are shown in red font above.

[1] *Charts reporting space efficiency metrics show results for 2015/16 and previous two years. The ability to accurately report space efficiency data for three years reflects the robust quality of space data generated through the annual Space Audit across the estate.*

Chapter 2: Performance Measurement

- At 22.6 m², the overall space per person across the CBD office estate has improved very slightly but does remain above the benchmark average of 19.1 m² per person reported by South African private sector office users.
- Leased CBD space tends to be a little better utilised and sized to requirement while the owned space offers most room for the most improvement. It is the latter owned space which will be able to benefit most through modernisation and several of the projects completed to date provide evidence of what can be achieved.
- The costs per m² at many CBD offices has either fallen or remained quite stable. The average CBD office cost per m² has however risen by 4% during 2015/16 to R2 594 and is 12% higher than the benchmark. Leased space at Atterbury House and at Norton Rose both reported significant increases to both utilities and security costs per m² – landlord control over delivery of these services clearly can determine, to a large degree the associated, cost performance.
- Measured by cost per person, efficiency across the CBD estate has shown little change reflecting the balance between a small increase in average cost per m² but 3% improvement in space per person. There are of course exceptions at office level and the reported cost efficiency at 27 Wale Street suffered through poorer utilisation but also after very significant investment during 2015/16 which elevated annual cost.

Figure 6[2]: Property cost per FTE, CBD offices



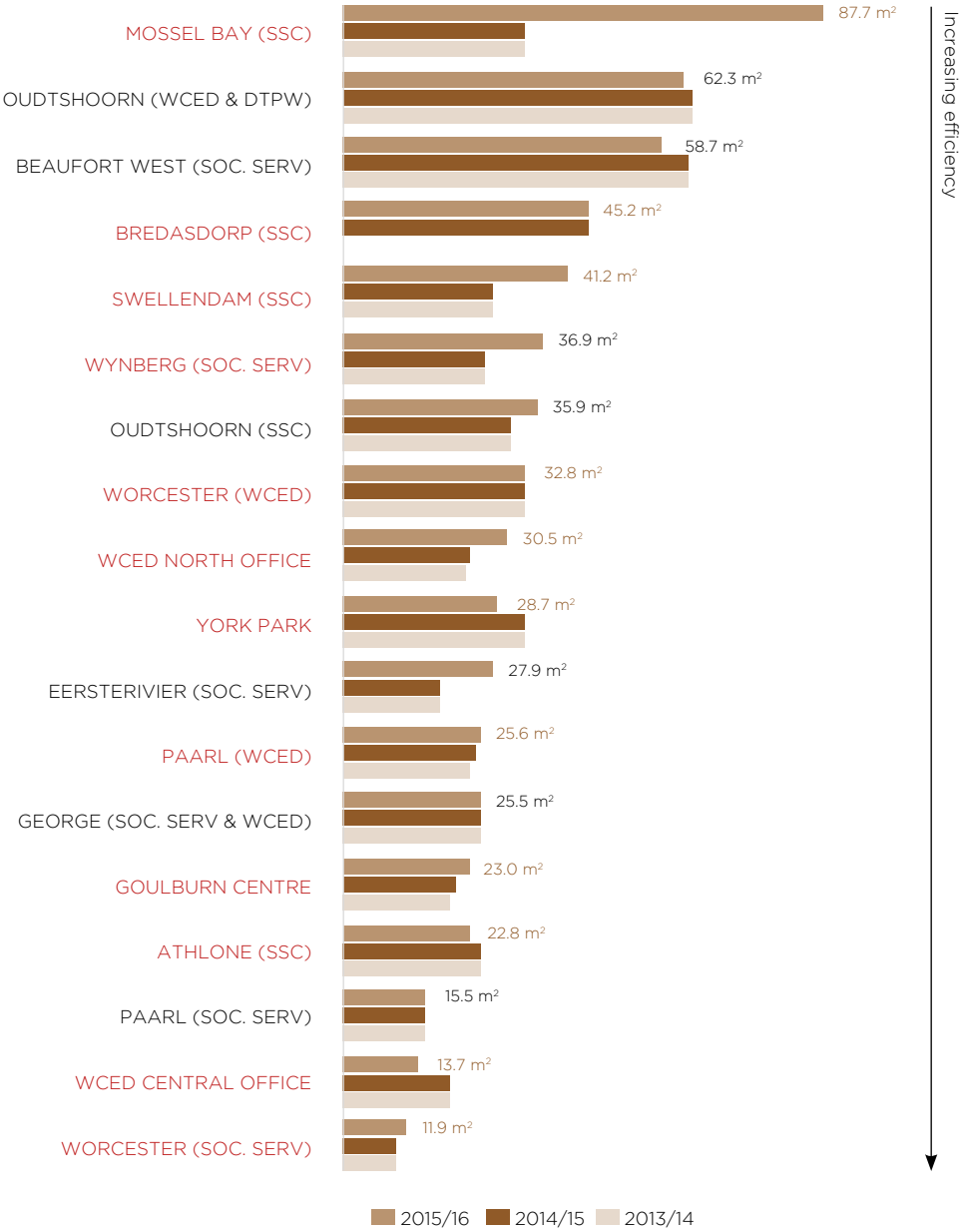
Owned buildings are shown in red font above.

[2] *In this report, historic cost metrics at a building level have not been presented since variations at some locations are a consequence of improved accuracy and access to more comprehensive cost data.*

- Leased non-CBD office accommodation is poorly utilised. Except for the Paarl Social Services facility (at 15.5 m²/FTE), all leased offices have ample capacity assuming space norms are practically achievable. To help target this improvement, Public Works has recently extended its comprehensive space audit to capture performance data to understand opportunities and expose utilisation efficiency opportunities across its portfolio of smaller (<1 000 m²) provincial offices. The latter estate comprises a further 81 offices with a total area of 21 779 m² and which currently provide a further 1 069 workstations for staff of the WCG.
- 3 non-CBD offices have reported great improvements in space utilisation as more staff are being accommodated but space utilisation at many other non-CBD locations has deteriorated during the 2015/16 period.
- The cost per person in non-CBD offices has increased to R57 157 – this is 30% above the benchmark cost per person and driven entirely by the poor use of space in these facilities. Figure 6 illustrates how space per FTE has changed across the non-CBD locations but also that the space per person at many offices is very high; well above both the benchmark average and the Western Cape internal space standard of 15 m².
- The annual cost per m² of non-CBD offices rose 10% to R2 055 – this is 11% below the private sector benchmark cost per m². However, many increases in cost per m² reported during 2015/16 are founded on improving accuracy and completeness of operational data in these locations and the baseline of data now established for these less prominent offices will enable future close monitoring and management of these sites.

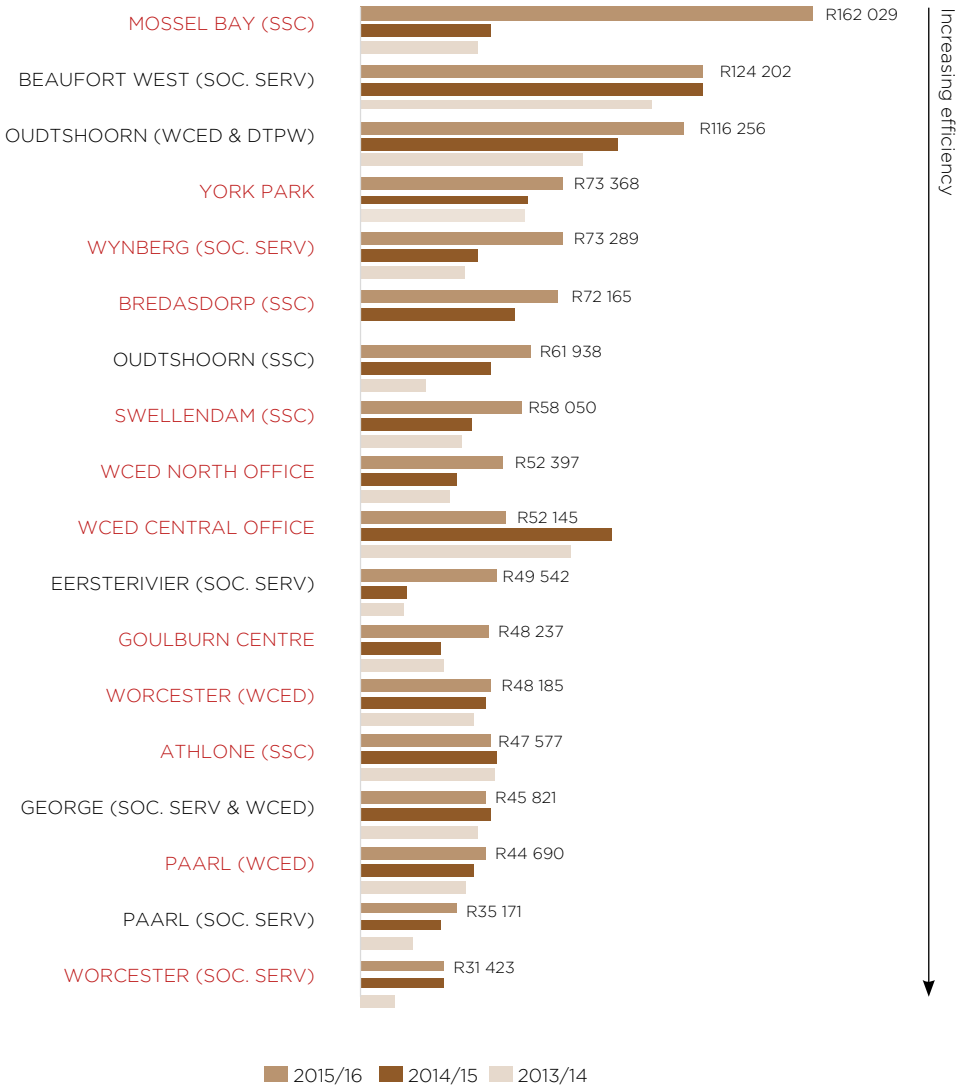
NON-CBD OFFICES

Figure 7: Office space per FTE, non-CBD



Owned buildings are shown in red font above.

Figure 8: Office property cost per FTE, non-CBD



Owned buildings are shown in red font above.

Chapter 3: Environmental Performance

Figure 9a: Key performance data: 2015/16 reporting period

	Energy consumed		Water consumed	
	per FTE	per m²	per FTE	per m²
Cape Town CBD office estate	4 419 kWh	196 kWh	20.9 m³	0.9 m³
Non-CBD offices	2 066 kWh	74 kWh	39.7 m³	1.4 m³
All WCG offices (Cape Town CBD & non-CBD)	3 817 kWh	160 kWh	26.1 m³	1.1 m³
BENCHMARK	**3 801 kWh**	**249 kWh**	**29.7 m³**	**0.8 m³**

Figure 9b: Prior reporting period performance data: 2014/15 reporting period

	Energy consumed		Water consumed	
	per FTE	per m²	per FTE	per m²
Cape Town CBD office estate	4 682 kWh	201 kWh	16.3 m³	0.7 m³
Non-CBD offices	3 321 kWh	124 kWh	31.1 m³	1.2 m³
All WCG offices (Cape Town CBD & non-CBD)	4 319 kWh	178 kWh	20.3 m³	0.8 m³
BENCHMARK	**3 959 kWh**	**273 kWh**	**27.8 m³**	**0.8 m³**

- Tracking and reporting of energy and water use across the estate is an important component to enable a full assessment of performance. At Public Works, the resource demands and impact of provincial property assets on the environment are carefully managed – measurement has facilitated this commitment to improved management.
- Total energy consumed across the Western Cape office estate was reduced by around 9% during 2015/16 compared to 2014/15 and 33 044 mWh of energy were consumed during 2015/16 across the 35 offices[3].
- As part of the Provincial Strategic Plan, Western Cape is engaged in the Energy Efficiency in Government Buildings initiative – this has the ambitious target of reducing energy consumption in the PER office buildings by 30% (net of photovoltaic solar generated) by 2020. There are several initiatives in place in various locations to help manage energy use and commitments in practice to meet these challenging targets for reduction.

KOGELBERG NATURE RESERVE AND EXCELLENCE IN DESIGN

- CapeNature is the public institution mandated to promote and ensure biodiversity conservation within the Western Cape.
- CapeNature is driven by the vision of "conserving nature for a sustainable future" with a mission "to manage, conserve and promote our human, natural and heritage assets through best practice, access, benefit sharing and sustainable use". These objectives are being achieved through various programmes and projects. CapeNature manages most of the mountain catchments and reserves that supply ecosystem services to the citizens of the Western Cape. Projects are carefully planned to avoid and mitigate any local environmental harm while also optimising the use of green building technology.
- Internationally recognised for its sustainable innovations in development, Kogelberg Nature Reserve is home to the most complex biodiversity on the planet and is part of a UNESCO World Heritage Site. Considered the heart of the Cape Floral Kingdom, the biological diversity and its conservation thereof is a priority. Only activities which do not adversely affect natural processes and wildlife are allowed.
- As a contextualised feature, the Oudebosch mountain camp is a commendable example for good practice of balancing tourist needs and conservation aspects. Oudebosch offers a thoughtful approach to building design and displays durable, recyclable, and renewable materials, and through energy-efficient design extrapolates the visitors' experience of the reserve to the structural level. It has received the International Holcim Regional Award for sustainable construction with architectural excellence.
- One of the more sustainable features in CapeNature's new tourism developments is the use of composting toilets. Used in both the Kogelberg and Rocherpan Nature Reserves, these toilets have been heralded internally as a modern alternative that can greatly reduce water use. Composting toilets are completely hygienic and odour free. By not requiring a connection to municipal sewerage lines, the composting elements not only save water, but also help to protect precious wetlands from degradation.
- In the Cape Karoo area, The Gamkaberg Nature Reserve is one of the more species rich environments on earth which is why the Sweet Thorn eco-lodges in this protected area were constructed with the specific aim of demonstrating environmentally friendly lifestyle methods.

[3] *Energy and water consumption data for Elsenburg offices is not yet accessible for only the offices component and so is excluded in any assessment of consumption across the office estate*

Chapter 3: Environmental Performance

- Acclaimed as one of top 50 most sustainable and responsible tourist destinations on the continent by Africa's Finest, Gamkaberg's eco-tourism offerings were designed to provide a first class nature experience, but at the same time create awareness about treading lightly on the environment. To this effect solar power is being used for water heating, lighting, toilet fans and pool pumps.
- Being in an arid environment, waterless toilets have also been installed and only environmentally friendly cleaning materials are used on site.
- With all these modern sustainability practices in place, CapeNature aims to be at the forefront of eco-tourism in the Western Cape and compliments the commitments made by Western Cape Government to facilitate and promote sustainable development.

RESERVE MANAGEMENT OFFICES: KOGELBERG

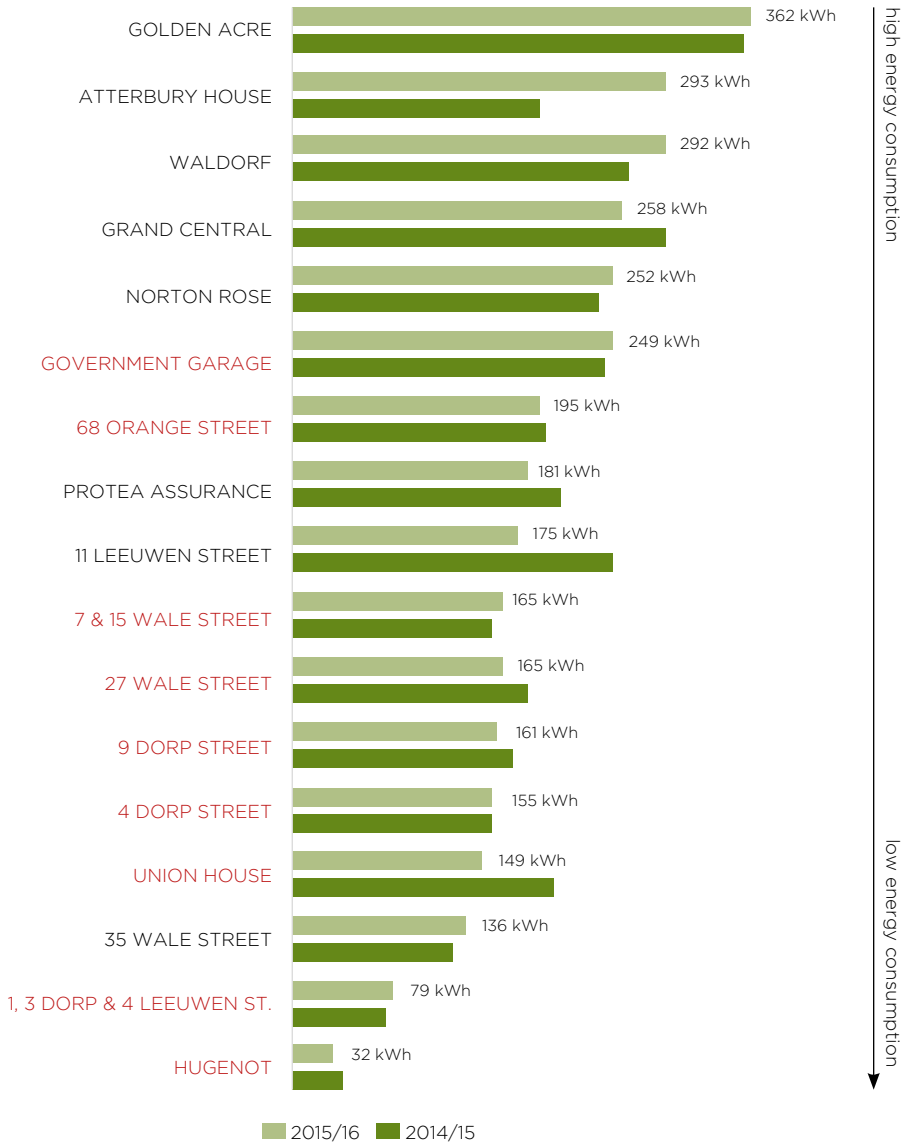
- Internationally recognised for its sustainable innovations in development, Kogelberg Nature Reserve is home to the most complex biodiversity on the planet and part of a UNESCO World Heritage Site. Considered the heart of the Cape Floral Kingdom, the biological diversity and its conservation thereof is a priority. Only activities which do not adversely affect natural processes and wildlife are allowed
- Eco cabins have been constructed in the reserve to minimise the impact on the surrounds but this philosophy of sympathetic development has now also been applied to the design of management offices at the reserve. Installation of an irrigation control system includes sensor to ensure no irrigation occurs during periods of rain while Grass blocks installed on driveways to permit tolerable degree of vegetation growth as well as permit free permeation of water into ground
- There is also extensive use of structural timber in the construction (from renewable sources) which limits the use of wet trades (concrete and mortar) in construction.

Chapter 3: Environmental Performance

ENERGY

- Total energy consumption per m² was reduced a little during 2015/16 but at 167 kWh/m² remains already much lower than the South African private sector office average of 249 kWh/m². Various actions taken across the estate and by Public Works to reduce its use and waste of energy have been rewarded by reductions in energy usage.
- Notable reductions to reported electricity consumption at Protea Assurance and several other CBD locations in 2015/16 were offset by access to renewed and improved consumption data at Atterbury House and 7 & 15 Wale Street which re-based the consumption performances at these locations to a higher level than reported in 2014/15.
- Generally, the CBD offices consuming the highest volumes of energy per m² are leased offices. This pattern helps highlight the emphasis required to work actively with landlords. Improvements have started to emerge though and three of the leased CBD offices have yielded consumption data for 2015/16 which indicate lower consumption per m² than reported in 2014/15.
- Reductions in energy consumption per m² were made across 43% of the total space managed in the CBD office estate. Many of the reductions have come in owned CBD offices although a 12% reduction in energy per m² at Grand Central delivered strength to the performance in 2015/16.

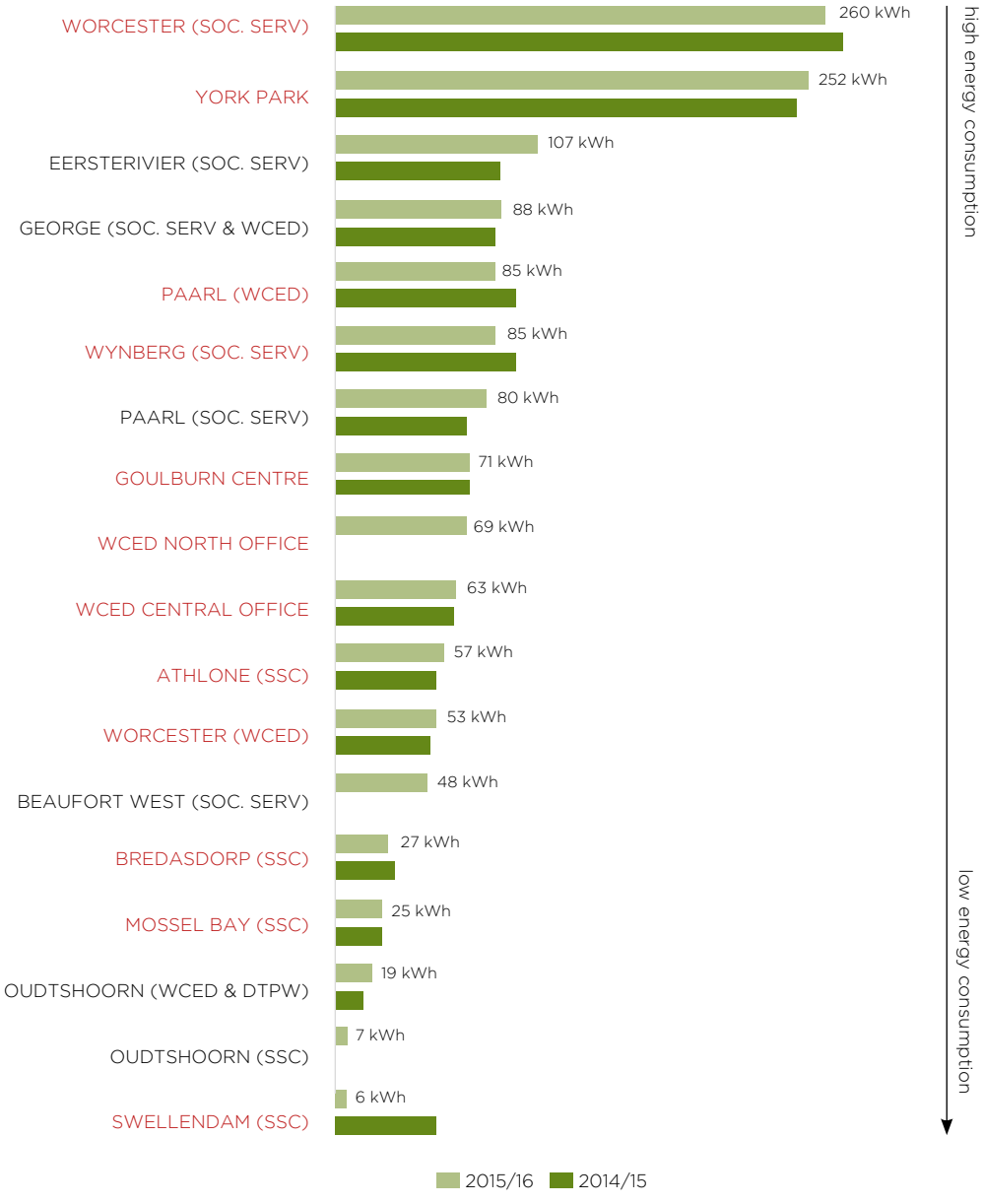
Figure 10: Energy consumed per m², CBD offices



Owned buildings are shown in red font above.

Chapter 3: Environmental Performance

Figure 11: Energy consumed per m², non-CBD offices



Owned buildings are shown in red font above.

Chapter 3: Environmental Performance

WATER

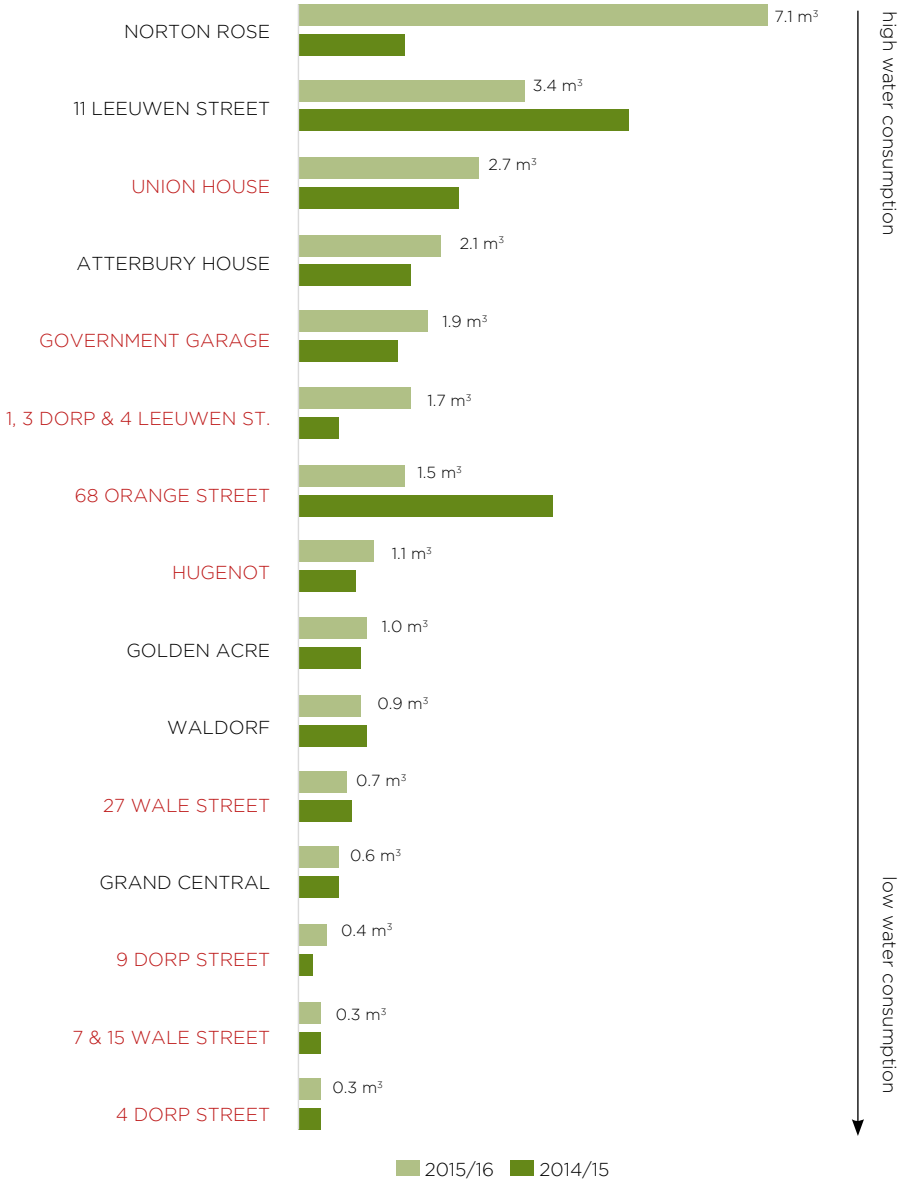
SAVING WATER – AQUATRIP

- This project illustrates clearly the benefits and value added through effective use of consumption data in tandem with equipment to secure operational improvements. This project clearly illustrates these gains for selected provincial facilities.
- School's ablution facilities are always prone to leaks, negligence and vandalism which results in very high water bills that can ill be afforded by these institutions. To improve water management and cut the unnecessary loss of water Aqua Trip was awarded a Tender by Western Cape Government Education Department and Western Cape Government Department of Public Works to participate in a major water savings project. Department of Public Works Surveyors, Talani Quantity Surveyors and GIBB Consulting managed this programme and worked hand in hand with AquaTrip throughout the project.
- The project featured 67 existing schools in the Western Cape although the project was seen as a pilot to demonstrate the savings that could be achieved by installing AquaTrip systems in facilities with high water consumption.
- The AquaTrip is a permanently installed stand-alone Leak Detection System. The system monitors the flow of water into a property and is programmable so that in the event of a burst geyser, burst pipes, taps left running, dripping toilet cisterns, dripping urinal's and vandalism the AquaTrip will automatically switch off the water. Systems are programmable to detect any water flow that occurs over weekends and after school hours.
- Leaks were detected after hours and the AquaTrip would shut off the water supply eliminating any possible water wastage and then automatically reinstate the water for the start of the next school day (ie: 6am). This system is set to "sleep" mode during the school's normal operating hours so that the school is never without water.
- DTPW monitored the water meters and took readings on a monthly basis to identify leaks and activity. Using six months of Municipal water statements, a monthly average cost and consumption for each location was established which was used to compare ongoing actual readings.
- AquaTrip saved on average between 34% and 86% in the first two months since installations took place. It is clear that having the AquaTrip installed in these schools will be able to drastically reduce water wastage and save these schools large amounts of money now being lost on water and sewerage costs. The significance of the saving in cost terms at most locations more than meets the cost of the installation within two months and thereby the potential to, affordably, improve water consumption in other schools is enormous.

- Assessments of the usage patterns of water across the estate have progressed and access to accurate consumption data has become more standard across offices. This reflects better metering, improving transparency in leased offices and more regular consolidation and review of data sources. The consequence of access to improved water consumption data in 2015/16 challenges the year on year tracking of performance although real improvements have clearly been made at several locations.
- There are a few leased offices where water consumption data is not accessible and, while this remains a landlord responsibility, Public Works will continue to pursue and expose performance at these locations. At those owned offices without water consumption data, investment in metering will deliver data to monitor and drive reduced consumption. Additionally, engagement with main CBD landlords to concluded green lease addendums in which the parties agree to collaborate to introduce various sustainability measures, that will have the necessary and desired effect of reducing consumption rates further.
- In 2015/16, a total of 1.1 m^3 of water was consumed per m^2 across the office estate. Expressed per person, this is equivalent to 26.1 m^3 per FTE. Either way this represents an increase in water consumed although these results are below the relevant benchmark averages across South African corporate offices of 0.79 m^3/m^2 or 29.7 m^3 per FTE.
- A clear performance gap exists between CBD and non-CBD offices in terms of water consumption – the consumption per m^2 in non-CBD estate is double that reported for the CBD locations and several offices continue to report very high consumption.
- CBD office water consumption data remains variable and the range in performances illustrates data variability. However, the average consumption across the CBD office space of 0.95m^3 per m^2 is significantly lower than the equivalent measure for non-CBD office accommodation of 1.4 m^3. On a per person basis, this difference is even greater and reflects the poorer utilisation of space across non-CBD offices.

Chapter 3: Environmental Performance

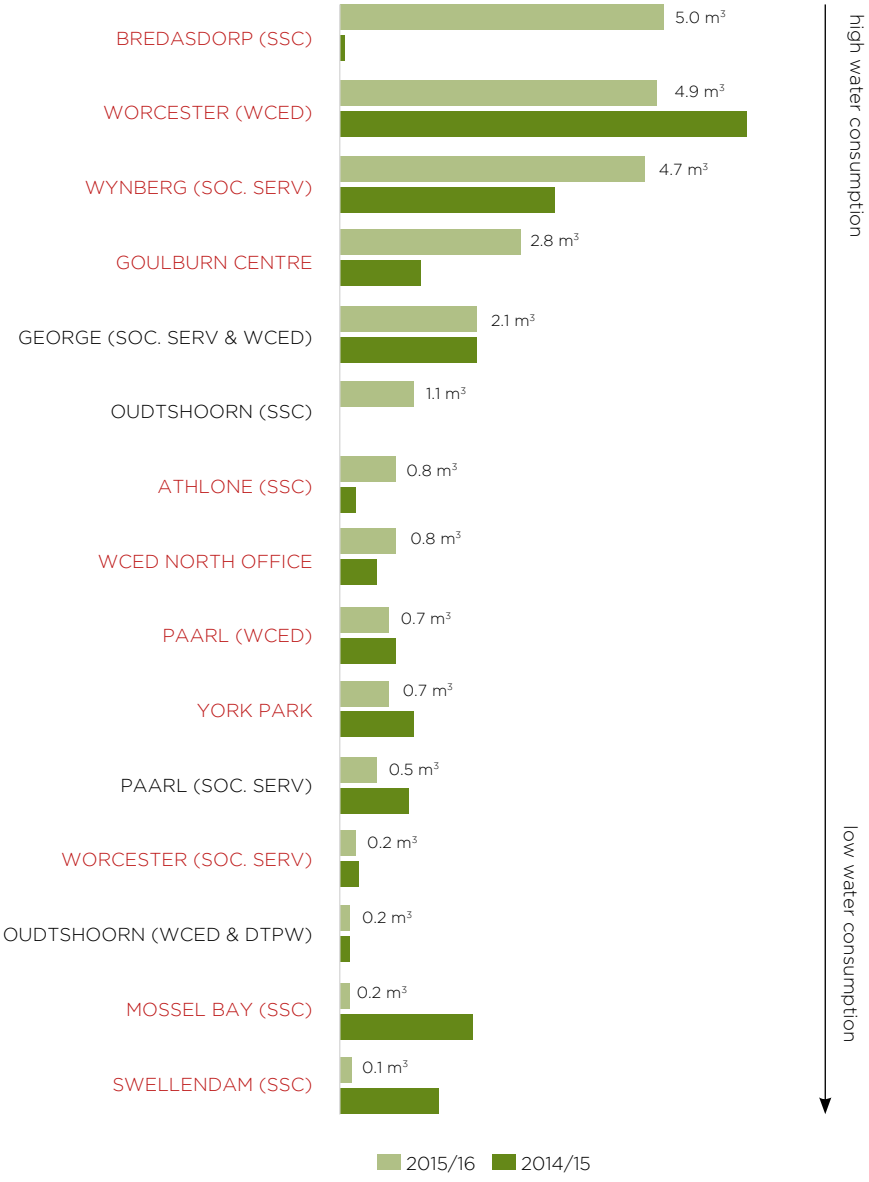
Figure 12: Water consumed per m², CBD offices[4]



Owned buildings are shown in red font above.

[4] *Metrics are shown only for those offices where water consumption data is accessible for 2015/16.*

Figure 13: Water consumed per m², non-CBD offices[4]



Owned buildings are shown in red font above.

[4] *Metrics are shown only for those offices where water consumption data is accessible for 2015/16.*

Chapter 4: Forward look

Gavin Kode, Deputy Director General, Provincial Public Works

- Since our first report was published in 2013, our main management focus has been premised on the principle of measurement, monitoring and management. That is, 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. From the outset, we have concentrated on the collation of timely property performance data so that our monitoring and management would be based on reliable and sound intelligence and the resultant value extracted from the asset management process was maximised. Over the years of producing the Property Efficiency Reports, we have made steady progress and, as a result of the previous four reports, have improved in all three areas with the most improved area being that of data measurement. Figure 14 below demonstrates our focus:

Figure 14: Areas of focus at DTPW

Data	• Data quality is critical • Data must be timeous and relevant • Data must be transparent • Data must be used or exploited • Data **must** be used to inform better strategic asset management
Performance	• Outliers must be verified and understood • Comparisons must be made between leased and owned office space • Compare portfolio performance to the private sector benchmarks
Opportunity	• Identify and action opportunities for improvement • Develop and implement identified efficiency and effectiveness opportunities

- Our data measurement and specifically our performance on environmental metrics will be significantly enhanced as our metering project (of both water and electricity utilisation) and installation of photovoltaic solar panels on buildings rolls out. The metering will not only provide us with granular and time-of-use consumption data but we will also have this data in real time which will enable us to drive behavioural change programmes to save utilities and reduce our environmental impact. Each and every kilowatt hour of solar energy generated is a worthwhile effort at reducing our carbon footprint.
- The procurement of the service providers for both the metering and solar PV projects in the last period was by means of an ingenious term service contract. I say ingenious because this procurement methodology will enable us to capitalise on savings realised through other efficiency gains on other capital and maintenance work. This enables us to package orders for installation as and when funds become available. The system onto which new packages are added is modular and will hopefully cover all feasible facilities in due course.
- Buildings contribute 33% to GHG emissions, use 40% of the world's energy, use 25% of the world's water, and produce 40% of the world's waste. As the asset manager of the WCG's immovable asset portfolio, it is incumbent on us to do whatever is possible to reduce these impacts. The greatest opportunity to make meaningful change in this regard lies with our existing buildings and two of the levers on which we are focusing are installing Solar PV on facilities and metering (of water and electricity) in buildings. A Solar PV feasibility study was undertaken during 2014/2015 in which PV was considered for various office facilities and some schools, which has enabled us to procure a contractor to implement roll out of feasible facilities, as and when funding becomes available. A limited amount has been made available during the current financial year but more is required to achieve the desired impact and reduction in reliance on fossil fuelled power. Metering is planned for all main incomers, floor areas per user and on all major utility consumption items such as HVAC and lifts.
- Some of the strides taken to empower ourselves to pull the levers of efficiency in the last period include the procurement and installation of the aforementioned metering and solar PV, functional Accommodation Committees reinstated and constituted, a User agreement in draft, Property Management Reporting system being embedded, ongoing Office Modernisation, green lease annexures to our existing leases being concluded and basement parking lighting and ground water recycling pilot projects planned. Still to come will be the integration of maintenance condition assessments, asset register information and property performance data on a single integrated property management system.
- We have rigorously engaged with our main CBD landlords through the conclusion of green lease addendums whereby we have agreed to collaborate to introduce various sustainability measures that will have the necessary and desired effect of reducing our consumption rates and improve the efficiency of our occupation in these leased-in facilities. Simultaneously, a massive improvement has been made with our lease agreements and the governance and the integrity of our current leased-in portfolio of general and health facilities is noteworthy. This effort was a necessary precursor to the previously mentioned focus on value extraction from our service contracts, most especially our lease agreements.
- The Accommodation Committee System, which regulates the day-to-day relationship between the custodian (Public Works) and the user/client departments, has also improved and work in this regard will continue to improve our respective implementation and adherence to the principles and prerequisites of the Government Immovable Asset Management Act (GIAMA). A goal is to provide "landlord/tenant" type occupation data to user-clients to empower them to bring about the behavioural changes of the occupants that will further improve occupation efficiencies. To assist in improving this relationship and to comply with the prescripts of GIAMA, a "user agreement" is being developed which will go a long way to improve our ability to deliver accommodation and infrastructure services to our clients.
- As property performance data becomes more available, we intend to provide monthly occupancy statistics to Accounting Officers to assist them in understanding and managing their use of state immovable assets.
- As we progress, we are continuously looking for opportunities to manage improvements and bring about efficiencies in operation and occupation of our immovable assets. We are essentially though only capitalising on the very "low hanging fruit" as the better part of our efforts are being focused on the data collection and monitoring. We are taking our role as the immovable asset manager of the Provincial Government real estate portfolio very seriously and although we have come a significant way down this road and have already overcome many obstacles along the way, we still have a long way to go. As the famed Chinese philosopher, Lao Tzu said, "The journey of a thousand miles begins with one step." Having taken a few steps now, we are firm in our resolve to continue with the journey which we call property efficiency.

Glossary of terms

APP	Annual Performance Plan
Benchmark	In this report the benchmark represents the average performance reported (defined below) by South African corporate occupiers. It provides context for results and does not necessarily reflect best practice. The average reflects a typical performance based on evidence from corporate occupiers. The sample of offices (approximating to 750 000 m^2 occupied office space) will include performances above and below the benchmark reported. The benchmark data represents real evidence collected from occupiers and reported to the same standards.
CBD offices	For the 2015/16 report, the 17 WCG offices located in the Cape Town or George CBD's. The estate comprises around 145 000 m^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 JLL Global Benchmarking Service Total Property Cost. Total Property Cost is defined specifically to include only a set of costs which represent the core costs of building occupation and operation and for which data in most organisations is accessible and cost definitions are based on the latest edition of the GEM Code (defined below). The data in this report has been assembled from various departments and from within Public Works. Total property cost includes Net Rent (for owned offices an average cost per m^2 has been applied to approximate 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. Total property cost excludes any capital expenditure.
Department	The Western Cape Department of Transport and Public Works (referred also as DTPW)
DTPW	The Western Cape Department of Transport and Public Works
FTE	Full time equivalent (staff)
GHG	Green House Gases
JLL Global Benchmarking Service	The JLL Global Benchmarking Service has been helping occupiers appraise the performance of their buildings and workplaces since 1995. Today, we are global leaders in performance analytics of business buildings and hold the largest independent database of occupier performance in more than 50 countries. Our occupier clients are from a range of sectors including: finance, insurance, pharmaceutical, media, utilities, legal, public sector, professional services and retail. GBS uses the Global Estate Measurement Code (GEM Code) as a framework to measure occupier performance in terms of cost and space efficiency, effectiveness, fitness, environmental consumption and impact.
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 m^2 or per FTE user.
MTEF	Medium Term Expenditure Framework
Non-CBD offices	For the 2015/16 report, the 19 WCG offices located outside of the Cape Town city and George areas. The estate comprises around 61 690 m^2 of occupied office space. A list of buildings is featured in the Appendix.
Occupied space	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.
Office estate	The report examines the performance of 36 offices, which represent around 206 975 m^2 of occupied office space. The estate represents the majority, in terms of space and cost, of the provinces office accommodation.
PER	Property Efficiency Report
Performance	Performance of the Western Cape office estate has been assessed using three standard metrics of property efficiency (cost per m^2, 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.
Public Works	The Public Works branch of the Western Cape Department of Transport and Public Works (DTPW) which develops and maintains appropriate infrastructure and related services for sustainable economic development which generates growth in jobs and facilitates empowerment and opportunity.
SAPOA	South African Property Owners Association
SSC	Shared Services Centre
WCED	Western Cape Department for Education

Appendix

The table below illustrates key data and key measures for each office. The table is split into CBD and non-CBD estates. Owned offices are shown in red font and the offices are ranked by size (net usable area measured in m²).

CBD OFFICES	Usable net area	Total cost	Total cost per FTE	Total cost per m²	Energy consumption per m²	Water consumption per FTE	m² per person
7 & 15 WALE STREET	21 417 m²	R46 046 946	R73 793	R2 150	165 kWh	0.32 m³	34.3 m²
GRAND CENTRAL	19 627 m²	R41 481 498	R58 673	R2 114	258 kWh	0.60 m³	27.8 m²
4 DORP STREET	18 612 m²	R41 265 736	R41 767	R2 217	155 kWh	0.30 m³	18.8 m²
9 DORP STREET	15 118 m²	R46 816 017	R62 090	R3 097	161 kWh	0.37 m³	20.1 m²
27 WALE STREET	11 166 m²	R37 604 456	R87 861	R3 368	165 kWh	0.71 m³	26.1 m²
WALDORF	9 964 m²	R22 931 685	R49 315	R2 301	292 kWh	0.90 m³	21.4 m²
GOLDEN ACRE	7 566 m²	R19 192 977	R56 450	R2 537	362 kWh	1.05 m³	22.3 m²
1,3 DORP & 4 LEEUWEN ST.	7 002 m²	R14 623 705	R40 175	R2 089	79 kWh	1.68 m³	19.2 m²
PROTEA ASSURANCE	6 888 m²	R15 134 025	R47 294	R2 197	181 kWh	–	21.5 m²
UNION HOUSE	6 121 m²	R13 406 833	R46 877	R2 190	149 kWh	2.70 m³	21.4 m²
35 WALE STREET	5 564 m²	R15 830 189	R75 025	R2 845	136 kWh	0.00 m³	26.4 m²
ATTERBURY HOUSE	4 399 m²	R13 315 444	R57 893	R3 027	293 kWh	2.13 m³	19.1 m²
NORTON ROSE	4 335 m²	R27 797 595	R93 281	R6 413	252 kWh	7.09 m³	14.5 m²
GOVERNMENT GARAGE	2 290 m²	R9 918 312	R66 122	R4 330	249 kWh	1.93 m³	15.3 m²
HUGENOT	2 122 m²	R4 738 359	R69 682	R2 233	32 kWh	1.12 m³	31.2 m²
11 LEEUWEN STREET	1 727 m²	R3 729 882	R28 691	R2 160	175 kWh	3.41 m³	13.3 m²
68 ORANGE STREET	1 369 m²	R3 015 144	R39 158	R2 203	195 kWh	1.51 m³	17.8 m²
Non-CBD OFFICES							
ELSENBURG (ADMIN. OFFICES)	10 804 m²	R23 701 576	R63 886	R2 194	see note 1	see note 1	29.1 m²
YORK PARK	6 749 m²	R17 241 385	R73 368	R2 554	252 kWh	0.73 m³	28.7 m²
ATHLONE (SSC)	6 556 m²	R13 702 168	R47 577	R2 090	57 kWh	0.85 m³	22.8 m²
WORCESTER (WCED)	4 324 m²	R6 360 391	R48 185	R1 471	53 kWh	4.89 m³	32.8 m²
WYNBERG (SOC. SERV)	4 024 m²	R7 988 542	R73 289	R1 985	85 kWh	4.71 m³	36.9 m²
GEORGE (SOC. SERV & WCED)	3 902 m²	R7 010 542	R45 821	R1 797	88 kWh	2.06 m³	25.5 m²
WCED NORTH OFFICE	3 726 m²	R6 392 392	R52 397	R1 716	69 kWh	0.79 m³	30.5 m²
BREDASDORP (SSC)	2 894 m²	R4 618 547	R72 165	R1 596	27 kWh	5.00 m³	45.2 m²
PAARL (WCED)	2 632 m²	R4 603 080	R44 690	R1 749	85 kWh	0.74 m³	25.6 m²
GOULBURN CENTRE	2 212 m²	R4 630 765	R48 237	R2 093	71 kWh	2.80 m³	23.0 m²
OUDTSHOORN (WCED & DTPW)	1 995 m²	R3 720 182	R116 256	R1 865	19 kWh	0.17 m³	62.3 m²
WCED CENTRAL OFFICE	1 901 m²	R7 248 173	R52 145	R3 812	63 kWh	–	13.7 m²
OUDTSHOORN (SSC)	1 758 m²	R3 034 950	R61 938	R1 727	7 kWh	1.14 m³	35.9 m²
PAARL (SOC. SERV)	1 594 m²	R3 622 572	R35 171	R2 272	80 kWh	0.51 m³	15.5 m²
EERSTERIVIER (SOC. SERV)	1 563 m²	R2 774 371	R49 542	R1 775	107 kWh	–	27.9 m²
BEAUFORT WEST (SOC. SERV)	1 527 m²	R3 229 262	R124 202	R2 114	48 kWh	–	58.7 m²
SWELLENDAM (SSC)	1 237 m²	R1 741 491	R58 050	R1 407	6 kWh	0.14 m³	41.2 m²
WORCESTER (SOC. SERV)	1 150 m²	R3 048 062	R31 423	R2 651	260 kWh	0.22 m³	11.9 m²
MOSSEL BAY (SSC)	1 141 m²	R2 106 383	R162 029	R1 847	25 kWh	0.16 m³	87.7 m²

Note 1: consumption data for Elsenburg is available only at a total site level. Consumption data has not been included for the administrative office area at this site.
Note 2: Owned buildings are shown in red font above.

Department of Transport and Public Works
Head Office, 9 Dorp Street, Cape Town, 8001.
Tel: 021 483 5605
www.westerncape.gov.za

Western Cape Government