



Independent Assurance Practitioner's Limited Assurance Report

To the Directors of City of Cape Town

Introduction

We have undertaken a limited assurance engagement at the post-issuance stage on the City of Cape Town Green Bond. Our engagement was performed given our appointment as independent advisor to City of Cape Town in terms of the Climate Bond Initiative Requirements for certification of the City of Cape Town Green Bond.

Subject matter

We have undertaken a limited assurance engagement at post-issuance stage on the City of Cape Town Green Bond to provide an independent limited assurance conclusion regarding whether:

- 1 The funding raised from the Green Bond has been received and has been allocated correctly (Use of Proceeds);
- 2 There is an appropriate process in place to manage allocated and unallocated funds related to the Green Bond (Management of Proceeds);
- 3 There is appropriate process in place and evidence of tracking nominated project performance, monitoring continued conformance of Green Bond to Climate Bonds Standard V2.1, reporting to bond holders and reporting to the Climate Bonds Initiative (Reporting); and
- 4 There are suitable internal processes to track and report on the use of proceeds from the Green Bond.

This engagement was performed to enable the City of Cape Town to obtain limited assurance on City of Cape Town's compliance with the Climate Bonds Initiative Standard V2.1.

Responsibilities of the Directors of the City of Cape Town

The Directors of the City of Cape Town are responsible for the:

- preparation of the Climate Bond Information Form and the City of Cape Town Green Bond Framework V2.4 in relation to the City of Cape Town Green Bond in conformance with the Post-Issuance Requirements of the Climate Bonds Standard V2.1, including the identification and assessment of eligibility of the projects to be financed by the bond proceeds;
- the assertion that the Issuer and the bond have conformed to the Post-Issuance requirements of the Climate Bonds Standard, including the how the proceeds have been utilised and managed;
- the establishment of internal processes and controls related to project evaluation and selection, management and reporting on the use of the proceeds of the bond, as required by the Climate Bond Standards V2.1;
- preparation of the assertions about the Green Bond in accordance with the above noted reporting criteria;
- preparation and fair presentation of the prospective applications to the Climate Bond Standard Secretariat;
- design, implementation and maintenance of such internal controls as you determine are necessary to enable the assertion about conformance to the pre-issuance requirements of the Climate Bond Standard and post-issuance requirements of the Climate Bond Standard respectively of the City of Cape Town Green Bond to be free from material misstatements, whether due to fraud or error;
- prevention and detection of fraud and for identifying and ensuring that the City of Cape Town complies with laws and regulations applicable to its activities; and
- implementing procedures designed to ensure that personnel involved with the preparation and presentation of the assertion about conformance to the pre-issuance requirements of the Climate Bond Standard and post-issuance requirements of the Climate Bond Standard respectively of the City of Cape Town Green Bond are properly trained, systems are properly updated and that any changes in reporting relevant to the assertion about conformance to the pre-issuance requirements of the Climate Bond Standard and post-issuance requirements of the Climate Bond Standard respectively of the City of Cape Town Green Bond encompass all significant business units.



Our independence and quality control

We have complied with the independence and other ethical requirements of the Code of Professional Conduct for Registered Auditors issued by the Independent Regulatory Board for Auditors (IRBA), that is consistent with the International Ethics Standards Board for Accountants' *Code of Ethics for Professional Accountants* (Parts A and B) which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

KPMG Services Proprietary Limited applies the International Standard on Quality Control 1, *Quality Control for Firms that Perform Audits and Reviews of Historical Financial Information, and Other Assurance and Related Services Engagements*, and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Our responsibility

Our responsibility is to perform our limited assurance engagement so that we are able to express our limited assurance conclusion on whether anything has come to our attention that causes us to believe that, in any material respects, the City of Cape Town Green Bond has not conformed to the requirements of the Post-Issuance Requirements of the 'Climate Bonds Standard V2.1'. We conducted our assurance engagement in accordance with the International Standard on Assurance Engagements (ISAE) 3000 (Revised), *Assurance Engagements other than Audits or Reviews of Historical Financial Information*, issued by the International Auditing and Assurance Standards Board.

A limited assurance engagement undertaken in accordance with *ISAE 3000 (Revised)* involves assessing the suitability in the circumstances of City of Cape Town's use of 'Climate Bonds Standard V2.1' as the basis of preparation of the City of Cape Town Green Bond, assessing the risks of material misstatement of information whether due to fraud or error, responding to the assessed risks as necessary in the circumstances, and evaluating the overall presentation of the selected information. A limited assurance engagement is substantially less in scope than a reasonable assurance engagement in relation to both risk assessment procedures, including an understanding of internal control, and the procedures performed in response to the assessed risks.

The procedures we performed were based on our professional judgement and included inquiries, observation of processes followed, inspection of documents, analytical procedures, evaluating the appropriateness of quantification methods and reporting policies, and agreeing or reconciling with underlying records.

Given the circumstances of the engagement in performing the procedures listed above, we:

- Conducted interviews with management and key staff responsible for the City of Cape Town Green Bond to obtain an understanding of the processes, systems and controls in place in respect of the project evaluation and selection, use of proceeds, management of proceeds and reporting on the City of Cape Town Green Bond;
- Examined the processes, systems and controls in place to evaluate and select projects and the processes, systems and controls which are used to track and report on the use-of proceeds for the City of Cape Town Green Bond;
- Inspected documentation which supports processes, systems and controls in place for the project evaluation and selection, use of proceeds, management of proceeds and reporting on the City of Cape Town Green Bond;
- Examined the contents of the 'City of Cape Town Green Bond Framework V2.4' documentation and compared this with the requirements of the 'Selection of Nominated Projects & Assets' and 'Internal Processes and Controls' sections of the Post-Issuance Requirements of the 'Climate Bonds Standard V2.1';
- For a selection of projects, inspected documentation which supports the projects being eligible for the City of Cape Town Green Bond against 'Climate Bonds Standard V2.1' and specific eligibility criteria; and
- Inspected the presentation of information regarding the City of Cape Town Green Bond in the Post-issuance applications to the Climate Bonds Standard Secretariat for consistency with our findings.

Our engagement has been performed to provide a limited level of assurance. Procedures performed in a limited assurance engagement vary in nature and timing, and are less in extent than for, a reasonable assurance engagement. As a result, the level of assurance we will obtain in our limited assurance engagement is substantially lower than the assurance that would have been obtained had we performed a reasonable assurance engagement.



Accordingly, we do not express a reasonable assurance opinion about whether the information in relation to the City of Cape Town Green Bond is prepared, in all material respects, in accordance with the Climate Bond Standard V2.1.

Limited assurance conclusion

Based on the procedures we have performed and the evidence that we have obtained, we conclude that:

1. Nothing has come to our attention to indicate that the Climate Bond Information Form and the City of Cape Town Green Bond Framework V2.4 in relation to the City of Cape Town Green Bond have not been prepared in conformance with the Post-Issuance Requirements of the Climate Bonds Standard V2.1.
2. Nothing has come to our attention to indicate that the funding raised from the Green Bond has not been received and has not been allocated correctly.
3. Nothing has come to our attention to indicate that the process used to manage allocated and unallocated funds related to the Green Bond do not conform to the Post-Issuance Requirements of the Climate Bonds Standard V2.1.
4. Nothing has come to our attention to indicate that the tracking of nominated project performance, monitoring of continued conformance of Green Bond to Climate Bonds Standard V2.1, reporting to bond holders and reporting to the Climate Bonds Initiative (Reporting) by the City of Cape Town is not in not in conformance with the Post-Issuance Requirements of the Climate Bonds Standard V2.1.
5. Nothing has come to our attention to indicate that the internal processes that are in place to track and report on the use of proceeds from the bond are not suitable.

Other matters

The maintenance and integrity of the City of Cape Town's website is the responsibility of City of Cape Town's management. Similarly, the maintenance and integrity of the Climate Bonds Initiative's website is the responsibility of the Climate Bonds Initiative management. Our procedures did not involve consideration of these matters and, accordingly, we accept no responsibility for any changes to the information in the Post-issuance applications to the Climate Bonds Standard Secretariat or our independent limited assurance report that may have occurred since the initial date of presentation on the City of Cape Town website or on the Climate Bonds Initiative website.

Restriction of liability

Our work has been undertaken to enable us to express a limited assurance conclusion as set out above in accordance with the terms of our engagement and for no other purpose. We do not accept or assume liability to any party other than the Directors of the City of Cape Town, for our work, for this report, or for the conclusions we have reached.

KPMG Services Proprietary Limited

Per Neil Morris,
Director

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11 March 2019

Appendix 1: City of Cape Town Climate bond information form

Climate Bond Information Form		Information is Confidential or Public	Information to be provided by potential Issuer <i>Note: If not all information is available at time of submission of this Form, please indicate this with "TBC" in the relevant cells</i>	
Issuer Details	Company information	Registered Business Name	Public	City of Cape Town Metropolitan Municipality
		Trading name (if different)	Public	n/a
		Address of Head Office (including country)	Public	Private Bag X6, Bellville, Cape Town, 7535, South Africa
		Business Registration Number	n/a	n/a
	Contact person	Name	Public	Kevin Jacoby
		Position and company	Public	Chief Financial Officer: City of Cape Town
		Contact number (include country code)	Public	+27(0)214003265
		Email address	Public	kevin.jacoby@capetown.gov.za
Bond Details	Details on bond size, currency, timing, identification (provide preliminary estimates until details can be confirmed on financial close of the bond)	Unique name of the "bond"	Public	City of Cape Town's Green Bond
		ISIN	Public	ZAG000145376
		CUSIP	Public	TBC
		Country of issuance	Public	South Africa
		Local currency	Public	South African Rand (ZAR)
		Amount issued in local currency	Public	1 billion
		Issue date	Public	17 July 2017
		Maturity date	Public	17 July 2027
		Coupon/Yield	Public	TBC
		Underwriter	Public	TBC
	Bond Type	Use of Proceeds Bond	Public	Use of Proceeds Bond
		Use of Proceeds Revenue Bond	n/a	n/a
		Project Bond	n/a	n/a
Securitized Bond		n/a	n/a	

	Assurance		n/a	KPMG Services Pty Ltd has been appointed as verifier, and will perform pre- and post- issuance assurance. Post-issuance verification will assure the Use of Proceeds allocation, ongoing eligibility of the projects and assets, adequacy and output of issuer's internal control and systems, and use of funds not yet allocated are as per the framework established. KPMG will issue pre- and post- issuance assurance reports. Following the assurance, The City of Cape Town will apply for pre- and post- issuance certification from the Climate Bonds Initiative (CBI).
Green definitions	Description of Nominated Projects & Assets	Transport	n/a	n/a
		Energy	n/a	n/a
		Low carbon buildings	n/a	n/a
		Industry and energy-intensive commercial	n/a	n/a
		Waste and Pollution Control	n/a	n/a
Green definitions	Description of Nominated Projects & Assets	Water	Public	<p><u>Project 1:</u> <i>Taxonomy and investment area:</i> Water - Water capture and storage infrastructure <i>Project alignment:</i> Adaptation <i>Criteria:</i> The Water Criteria of the Climate Bonds Standard (V2.1), Phase 1 <i>Basic description:</i> Water reservoir integrity maintenance by replacement of reservoir containment infrastructure for: Project 1.1 Neptune reservoir (replacement of ineffective floating roof) and Project 1.2 Brakkloof reservoir (concrete roof replacement and structural repairs) <i>Project Lifespan:</i> >20yrs <i>Location:</i> City of Cape Town, South Africa <i>Budget and period:</i> R 4 630 527, allocated for spend FY2014 - 2017; USD 357 866 equivalent # <i>Phase:</i> Project.1.1 - Construction commencement stage with all service providers procured Project 1.2 - Procurement of good and services</p>
			Public	<p><u>Project 2:</u> <i>Taxonomy and investment area:</i> Water - Water distribution infrastructure <i>Project alignment:</i> Adaptation <i>Criteria:</i> The Water Criteria of the Climate Bonds Standard (V1), Phase 1 <i>Basic description:</i> Water Demand Management and Water Conservation program focusing on pressure management, zone metering and valves in order to improve water management and reduce water losses through enhanced leak detection and intervention <i>Project Lifespan:</i><20yrs (evidenced) <i>Location:</i> City of Cape Town, South Africa <i>Budget and period:</i> R 14 694 307, allocated for spend FY2015 -2018; USD 1 135 634 equivalent # <i>Phase:</i> In execution</p>
			Public	<p><u>Project 3:</u> <i>Taxonomy and investment area:</i> Water - Water capture and storage infrastructure, and water treatment plants <i>Project alignment:</i> Adaptation <i>Criteria:</i> The Water Criteria of the Climate Bonds Standard (V2.1), Phase 1(Evidence Provided) <i>Basic description:</i> Alternative water treatment and supply infrastructure, specifically the establishment of piping infrastructure to deliver non-potable quality water from existing waste water treatment works to users accommodating non-potable water. <i>Project Lifespan:</i> >20yrs <i>Location:</i> City of Cape Town, South Africa <i>Budget and period:</i> R 44 350 768, allocated for spend FY2015 - 2018; USD 3 427 602 equivalent # <i>Phase:</i> In execution</p>

			Public	<p>Project 4: <i>Taxonomy and investment area:</i> Water - Water distribution infrastructure <i>Project alignment:</i> Adaptation <i>Criteria:</i> The Water Criteria of the Climate Bonds Standard (V2.1), Phase 1 (evidence provided) <i>Basic description:</i> Water meter replacement with water management devices programme and leak repair program for indigent households , in order to enhance water management, influence behaviour to reduce water wastage and reduce water losses through leakage <i>Project Lifespan:</i> <20yrs (evidenced) <i>Location:</i> City of Cape Town, South Africa <i>Budget and period:</i> R 819 762 092, allocated for spend FY2015 - FY2019; USD 63 354 439 equivalent # <i>Phase:</i> In execution</p>
			Public	<p>Project 5: <i>Taxonomy and investment area:</i> Water - Water treatment plants <i>Project alignment:</i> Adaptation and Mitigation (emissions impact expected - quantified using CDM methodology) <i>Criteria:</i> The Water Criteria of the Climate Bonds Standard (V2.1), Phase 1 (Evidence Provided) <i>Basic description:</i> Sewer pump station upgrade with more efficient equipment, civil construction; diminishing likelihood of malfunction and surrounding water body contamination. <i>Project Lifespan:</i><20yrs (evidenced) <i>Location:</i> City of Cape Town, South Africa <i>Budget and period:</i> R 4 431 377, allocated for spend FY2016/2017; USD 342 474 equivalent # <i>Phase:</i> In construction</p>
Green definitions	Description of Nominated Projects & Assets	Water	Public	<p>Project 6: <i>Taxonomy and investment area:</i> Water - Flood defences <i>Project alignment:</i> Adaptation <i>Criteria:</i> The Water Criteria of the Climate Bonds Standard (V2.1), Phase 2 (Draft) <i>Basic description:</i> Sir Lowry's Pass River pass upgrades to protect surrounding areas against future flooding and infrastructure damage projected due to more intense rainfall events, and restoring River pass to natural state in sections to enable the resumption of ecosystem services <i>Project Lifespan:</i> >20yrs <i>Location:</i> City of Cape Town, South Africa <i>Budget and period:</i> R 22 114 284, allocated for spend FY2015 - FY2019; USD 1 709 079 equivalent # <i>Phase:</i> Environmental study phase ahead of construction <i>Disclaimer:</i> Funding to be allocated to project 6 under the assumption that it will align with yet to be finalised Phase 2 water criteria – to be assessed in post issuance assurance process. If it is found to be in-eligible when the criteria are issued the City will re-allocate funds to another project aligned to the CBI [sic: Climate Bonds] Standards.</p>

			Public	<p>Project 7: <i>Taxonomy and investment area:</i> Water - Flood defences <i>Project alignment:</i> Adaptation <i>Criteria:</i> The Water Criteria of the Climate Bonds Standard (V2.1), Phase 2 (Draft) (Evidence Provided) <i>Basic description:</i> Upgrading of sea wall adjacent to Beach Road in Strand and upgrading of Sea Point promenade and sea wall, aimed at prevention of flooding of adjacent businesses and residential properties and road infrastructure as a result of storm surges. <i>Project Lifespan:</i> >20yrs <i>Location:</i> City of Cape Town, South Africa <i>Budget and period:</i> R 19 001 782, allocated spend for FY2015/2017; USD 1 468 532 equivalent # <i>Phase:</i> In construction</p>
			Public	<p>Project 8: <i>Taxonomy and investment area:</i> Water - Water distribution infrastructure, and water treatment plants <i>Project alignment:</i> Adaptation <i>Criteria:</i> The Water Criteria of the Climate Bonds Standard (V2.1), Phase 2 (Draft) (Evidence Provided) <i>Basic description:</i> Replacement and upgrading of aging sewerage and water supply network system, in order to reduce water losses due to leakage, enhance resilience of water reticulation system to system shocks and avoidance of associated environmental and infrastructure impacts <i>Project Lifespan:</i> >20yrs <i>Location:</i> City of Cape Town, South Africa <i>Budget and period:</i> R 82 663 240, allocated spend for FY2013-2017; USD 6 388 540 equivalent # <i>Phase:</i> In construction</p>
		Waste and pollution control	n/a	n/a
		Nature-based assets	n/a	n/a
		Information technology and communications	n/a	n/a
	Ambition level	1) Meet standard 2) Exceed standard, or 3) Progressive performance (more green over time)	Public	Meet standard
Use of proceeds/Set up of assets to be funded	Framework approach or existing assets		Public	<p>Framework approach: a logical approach has been formulated to address:</p> <ul style="list-style-type: none"> - Nominated project selection and evaluation from a portfolio of approved projects, subject to defined selection and evaluation criteria; - Eligible projects performance assessment methodology and criteria; - Funds management, tracking and reporting.
	Refinancing or new assets	(in % terms & note if estimated or definite split)	Public	<p>Refinancing: 100 % New assets: 0%</p> <p>The eligible projects have already been subject to formal budgeting processes and funding allocation from existing pool of resources. This City of Cape Town's Green Bond issuance seeks to refinance the committed budgets, such that formally approved eligible projects are financed/refinanced preferentially through the green bond issue mechanism and subsequently performance tracked.</p>

	Allocation split across different project categories (if undetermined then "n/a")	(in % terms & note if estimated or definite split)	Public	Water: 100%
Project Selection and Evaluation	Is there to be a portfolio (framework) approach?		Public	Yes - framework approach implemented.
	Describe the decision procedure/policy for assessment of assets		Public	City of Cape Town Green Bond Framework V2.4 (dated 09/02/2018) defines the projects identification, assessment and selection process, including conformance with the Climate Bonds Standard V2.1 and detailed City of Cape Town described bond purpose. This framework is complimented by the City of Cape Town Green Bond Reporting Framework V4.2 (draft) which provides detailed guidance for bond performance reporting and funded projects performance assessment and reporting.
	Describe the governance framework for decision making		Public	<p>The City of Cape town Green Bond Framework V2.4 (dated 09/02/2018) complimented by the City of Cape Town Green Bond Reporting Framework V4.2 (Draft) sets out the governance framework in terms of roles, responsibilities and procedures for the project selection and evaluation, as well as subsequent proceeds management, tracking and reporting and projects' performance assessment and reporting. The key governance aspects regarding project selection and evaluation include:</p> <p>Established processes and systems:</p> <ul style="list-style-type: none"> (i) City of Cape Town capital project identification, definition and approval process (ii) City of Cape Town Green Economy and Climate Change Working Group (iii) City of Cape Town Treasury function (iii) SAP ERP system (iv) Capital project responsibility allocation and management processes <p>Roles and responsibilities:</p> <ul style="list-style-type: none"> (i) City of Cape Town officers' allocated to nominated project selection and characterisation. (ii) City of Cape Town Green Economy and Climate Change Working Group, who will liaise with the respective programme and project managers to confirm and verify the information for correctness regarding projects as part of evaluation (pre-issuance) and performance evaluation and reporting (post-issuance). <p>Decision making criteria:</p> <p>As detailed in the City of Cape Town Green Bond Framework V2.4, the assessment of assets is conducted as follows:</p> <ul style="list-style-type: none"> i) Identification of significant (>ZAR 10,000,000 CAPEX) City of Cape Town approved capital projects delivered, or in the process of being delivered between FY2010/11 and FY2018/19 with budget allocated to them. ii) Assessment of current source of finance (budgeted and/or allocated) to determine ease and cost implications of possible re-financing. iii) Alignment of remaining programmes/ projects /assets to existing Climate Bond Certification Criteria, including taxonomic alignment and technical criteria requirements. iv) Alignment with the City's CCT Environmental Strategy (2016), Implementation Framework (2016) and Draft Climate Change Policy (2016) implementation v) Ease of access to evidence for assessment of project/asset against Climate Bond Certification Criteria. <p><i>All of the following projects were deemed to meet the above requirements, but the City of Cape Town also desires to fund a natural systems restoration project for water (namely Project 6) for which the CBI Criteria (Water Phase 2) are still in draft format, therefore, funding will be allocated to project 6 under the assumption that it will align with yet to be finalised Phase 2 water criteria – to be assessed in post issuance assurance process. If the project is found to be in-eligible when the criteria are issued the City will re-allocate funds to another project aligned to the Climate Bonds Standards.</i></p>
Management of proceeds	Proceeds are to be:	1) earmarked	Public	Earmarked
		2) ring-fenced	n/a	n/a

	Provide detail on either earmarking or ring-fence process		Public	Raised proceeds for the City of Cape Town's Green Bond, whilst unallocated to eligible projects, are to held in temporary "Green" investment instruments that are cash or cash equivalents, within the City of Cape Town Treasury Function. The earmarking of funds within the Treasury function will occur by two principal mechanisms: - Eligible projects' funding source will be identified and stipulated within the City of Cape Town project management framework, with an assertion of funding source being green bond for each unique WBS element in the SAP ERP system. - An account of remaining unallocated green bond funds will be tracked and the equivalent value maintained in approved Green Investments as described.
	Timing	When will the proceeds be deployed? (in yrs)	Public	5 years; July 2014 - June 2019 (across FY14/15 - FY18/19)
		How long is expected tenor of the bond? (in yrs)	Public	TBC
	Use of proceeds before allocation to green	Describe the types of financial instruments/what the proceeds can be used for before allocation	Public	The proceeds will be held in temporary investment instruments that are cash, or cash equivalent instruments, within the City of Cape Town Treasury function, aligned to Climate Bond Standard V2.1 Post-Issuance Requirement 6.2.1. The temporary investment instruments will be subject to: - the Climate Bond Standard V2.1 Post-Issuance Requirements S6 Non-Contamination of Proceeds; - the City of Cape Town Cash Handling and Investment Policy (amended by Council 28/10/2015 C13/10/15) (as at http://resource.capetown.gov.za/documentcentre/Documents/Bylaws%20and%20policies/Cash%20Management%20and%20Investment%20-%20%28Policy%20number%204551%29%20approved%20on%2028%20October%202015.pdf); - the City of Cape Town Green Bond Framework V2.4 S6 Management and Tracking of the Proceeds, in respect of maintenance of equivalent value to unallocated funds in Green Investment vehicles.
Reporting	Reporting on allocation of proceeds	How often will there be a report?	Public	- Quarterly reporting for internal City of Cape Town management purposes as part of City of Cape Town's financial reporting processes.- Annual reporting of the Green Bond Progress Report, aligned to City of Cape Town financial year reporting.
		Will the report be public or bondholder only?	Public	Public; to be published on the <i>City of Cape Town's Investing in the City of Cape Town</i> webpage, found through www.cityofcapetown.gov.za .
		Will the report have assurance by a third party?	Public	TBC
		Will the report include a breakdown of proceed allocations by category?	Public	Project tracking mechanism will allow for category specific spend identification and determination by user.
		If possible, will there also be a breakdown at project level?	Public	Yes - the tracking mechanism enables this. The City of Cape Town objective is to report fully on each eligible project in terms of: - description of projects financed and the aggregate amounts of funds allocated to each project; - specification of remaining unallocated green bond proceeds at the reporting period end; - confirmation that the Use of Proceeds of the Green Bond issued conforms to the City's Green Bond Framework; and - a description of the expected environmental sustainability impact.
	Reporting on green credentials/outcomes	How often will there be a report?	Public	Annually
In what format (newsletter, part of CSR report, website disclosure)		Public	Website disclosure; to be published on the City of Cape Town's Investing in the City of Cape Town webpage, found through www.cityofcapetown.gov.za .	

		Will the report be public or bondholder only?	Public	Public; to be published on the <i>City of Cape Town's Investing in the City of Cape Town</i> webpage, found through www.cityofcapetown.gov.za .
		Will the report include details of the green categories (i.e. wind farm 60 MW)	Public	Yes - the project performance assessment is to be conducted per project and annual report will include report on project specific performance.
		Will the report include where are the projects/assets located (i.e. wind farm 60 MW UK off-shore)	Public	Yes - the annual report will include details of projects financed, including geographical location per project - where applicable.
		What will be the performance KPI 's disclosed for each category? (include calculation method)	Public	<p>The City of Cape Town's Green Bond will allow the City of Cape Town to invest in projects in a manner that is consistent with the City's sustainable values and to support projects which deliver a 'green' outcome through helping the city to adapt to, or mitigate climate change going into the future. The alignment criteria focuses on adaptation/mitigation <u>objectives</u> as at planning stage, based on available information and subject to analysis and decision-making processes.</p> <p>The green credentials/outcomes-orientated reporting will be phased in as the City of Cape Town matures in its evaluation and reporting processes, as follows:</p> <ul style="list-style-type: none"> - initial reporting will focus on successful implementation of inputs; i.e. the measure of success of implementation of projects according to technical scope (1 - 3 year focus) - reporting will be progressed to be able to identify and report on outputs, in terms of the initial results of project implementation and direct impact (1 - 3 year focus) - reporting will be progressed to be able to identify and report on outcomes and impacts, in terms of short-, medium- and long-term results, effects and changes (3 - 5 year and 5 - 10 year focus respectively) <p>As such, the specific project-relevant outcome/impact-orientated KPIs will be developed progressively. However, it is notable that outcome/impacts' types are recognised at the point of project selection and evaluation, based on requirement for project alignment with the City of Cape Town Environmental Strategy (2016), Implementation Framework (2016) and Climate Change Policy (2017).</p> <p><i>Adaptation focused projects:</i> Adaptation focused projects are orientated towards enhancement of resilience and reduction of significance of impact of physical climate change and associated extreme events. As such, adaptation focused projects are reported on an Input-Output-basis, i.e. the realisation of the flood defence infrastructure. Thereafter, as and when climate change associated events/trends are noted, resilience can be identified, measured and reported on.</p> <p><i>Mitigation and adaptation projects:</i> Adaptation as above. The specific mitigation focused projects in the portfolio of projects for the City of Cape Town's Green Bond are orientated towards avoidance of emissions and environmental impacts, which may be realised as and when the project is implemented (consideration given to detail and effectiveness of technical specification of project). At the time of pre-issuance submission, the significance of mitigation was not quantified for:</p> <ul style="list-style-type: none"> - Project 9: IRT Vehicle Acquisition, regarding the replacement of existing BRT buses with EV buses and peripheral infrastructure <p>It is recognised by the City of Cape Town that outcome orientated KPIs should be developed in order to report on determined emissions avoided.</p> <p>As these outcome/impact-orientated KPIs are developed, this form and associated reporting on the City of Cape Town's Green Bond will be updated and provided.</p>

Reporting	Reporting on green credentials/outcomes	Will the KPI's be verified by a third party?	Public	TBC
		What is a target level performance (is this relative to baseline/how does it fit with meeting the standard)?	Public	<p>As discussed above, projects are selected on the basis of their eligibility to the Climate Bond Standard V2.1 and alignment with the City of Cape Town Environmental Strategy (2016), Implementation Framework (2016) and Draft Climate Change Policy (2016), subsequent to evaluation processes. Through these processes, it is established the output results of implementation of the projects are regarded by City of Cape Town as in conformance with the Climate Bonds Standard V2.1.</p> <p>As the City of Cape Town matures in its evaluation and reporting processes, green credentials/outcomes-orientated reporting will be phased in, including target setting where appropriate.</p> <p>As these outcome/impact-orientated KPIs and targets are developed, this form and associated reporting on the City of Cape Town's Green Bond will be updated and provided.</p>

Notes

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Applied a currency conversion rate of 12.9393 ZAR/USD as the average of the daily average exchange rate at approximately 10:30 am as transacted by the South African Reserve Bank for the period 2017/04/21 - 2017/05/29 (obtained 2017/05/29 from <https://www.resbank.co.za/webindicators/ExchangeRateDetail.aspx?DataItem=EXCX135D>)

Appendix 2: City of Cape Town Green Bond Framework V2.4



CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

CITY OF CAPE TOWN GREEN BOND FRAMEWORK

2018/02/09

Version 2.4

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1. Introduction

The vision of the City of Cape Town (CCT) is threefold:

- To be an opportunity city that creates an enabling environment for economic growth and job creation, and to provide help to those who need it most.
- To deliver quality services to all residents.
- To serve the citizens of Cape Town as a well-governed and corruption-free administration.

In pursuit of this vision, the City's mission is as follows:

- To contribute actively to the development of its environmental, human and social capital.
- To offer high-quality services to all who live in, do business in or visit Cape Town as tourists.
- To be known for its efficient, effective and caring government.

To achieve its vision, the City of Cape Town is building on the strategic focus areas it has identified as the pillars of a successful and thriving city. The City of Cape Town's Integrated Development Plan (IDP) provides a strategic framework within which the City aims to deliver on the City's five pillars – To make Cape Town an opportunity city, a safe city, caring city, an inclusive city, and a well-run city. These are the five key strategic focus areas that inform all of the City's plans and policies.

Through the five-year IDP, the City is able to:

- develop and articulate a clear vision;
- identify its key development priorities;
- formulate appropriate strategies;
- develop the appropriate organisational structure and systems; and
- align resources with development priorities.

With a growing population and an increasing divide between advantaged and disadvantaged groups, the City faces the challenge of promoting development whilst managing the redistribution of resources to redress current inequities. To address the growing needs of a largely impoverished population and to ensure the health of communities, the City needs to become economically competitive, both locally and globally. While working towards these goals, it is imperative that the City recognises and effectively manages its unique economic asset, the environment. The central component to achieving this strategy is adopting and applying the fundamental principles and approaches of sustainable development.

In 2001, Cape Town became the first city in Africa to approve and adopt a comprehensive city-wide environmental policy: the Integrated Metropolitan Environmental Policy (IMEP). A revised version, the Environmental Strategy for the City of Cape Town, along with an Implementation Framework was developed in 2016. In addition, the City of Cape Town Climate Change Policy was adopted by Council on 20 July 2017. The Green Bond programmes or projects will contribute to the City's overall initiatives as outlined in these documents.

2. Framework Overview

This Green Bond Framework sets out how the City proposes to raise Green Bond Finance and select programmes/projects/assets to which proceeds will be allocated. It compliments and should be read in conjunction with The Green Bond Reporting Framework.

In order to ensure credibility of the City's Green Bond, the administration, issuance, allocation and reporting of the bond and its proceeds will adhere to the internationally recognised Climate Bonds Standard version 2.1 (for more details please visit: www.climatebonds.net/standards/standard_download)

3. Raising and listing the Green Bond

The Green Bond is to be raised as part of the City's R7 billion Domestic Medium Term Note Programme (DMTN), and will be listed on the Johannesburg Stock Exchange (JSE).

The City employed the services of a suitably qualified intermediary in order to market the bond and register it with the JSE.

4. Purpose of Green Bond

It is the City of Cape Town's intention that the proceeds of this bond are to be used to support projects which deliver a 'green' outcome through helping the City to adapt to, or mitigate climate change going into the future.

5. Use of Proceeds

To ensure continued compliance and to maintain the certification of the bond, the proceeds will be allocated in accordance with the Climate Bonds Standard version 2.1.

Thus, the proceeds from the issuance of the City of Cape Town's Green Bond will be applied to eligible programmes, projects and/or assets in the eligible sectors, as deemed by the taxonomy developed by the Climate Bonds Initiative (CBI).

Given that the CBI is still in the process of developing some of their criteria within this taxonomy, the City of Cape Town's Green Bond will likely include some projects and/or assets for which criteria have not been published. Thus, where the assessment criteria have been published by the CBI, the eligibility of projects and/or assets will be assessed against these prior to the proceeds being allocated. Should assessment criteria only be in draft, the projects will be assessed against these draft criteria for the purpose of pre-issuance certification. At the point of post issuance certification, the projects and/or assets will be assessed against published criteria only. No projects will be identified and aligned to the bond pre- or post-issuance, for which no criteria (draft or published exist).

In the first instance of issuance, the City will seek pre-issuance assurance from a Certified Climate Bonds Initiative Assurance Provider that the framework and initially identified programmes/projects/assets qualify to be certified by the Climate Bonds Initiative.

Post issuance assurance will immediately after the registration of the bond in order to ensure compliance with certification requirements.

Any re-allocation of proceeds will be done after ensuring that the programme, project/asset to which the proceeds are being allocated is compliant with the requirements of the relevant Climate Bonds Certification Criteria.

6. Management and Tracking of the Proceeds of Issuance

All Financial Management will be compliant with the South African Municipal Financial Management Act (MFMA) 2003 (Act No. 56 of 2003) and amendments, and Project Management procedures will be in-line with Municipal Systems Act 2000 (Act 32 of 2000), and amendments.

The City of Cape Town will track the Use of Proceeds of its Green Bond(s) via its Systems, Applications and Products (SAP) Enterprise Resource Planning (ERP) System. Reports can be extracted from the SAP system which will contain the following information for each project:

- Budgeted Amount
- Actual Amount Disbursed
- Work Breakdown Structure (WBS) Element
- WBS Description
- Assertion of Funding Source (Green Bond Proceeds)

Whilst it is the City's intention that all proceeds are allocated to eligible programmes/ projects /assets as soon as possible after the bond is raised so as to ensure that the proceeds are effectively deployed, the City will maintain an amount in approved Cash or Cash Equivalents which will be equal to at least the remaining unallocated proceeds in terms of the City of Cape Town's Investment Policy until all proceeds are allocated.

7. Reporting on Use of Proceeds

The associated "Green Bond Reporting Framework" indicates how the proceeds will be tracked and reported on to ensure ongoing disclosure and compliance with the Climate Bond Certification requirements.

8. Assurance

The City of Cape Town Green Bond Framework and initial list of programmes, projects or assets will be reviewed and certified by Climate Bonds Initiative for the Inaugural Green Bond Issue.

This will be published on the City of Cape Town website at <http://www.capetown.gov.za/en/treasury/Pages/default.aspx>

9. Programme/Project/Asset Identification Procedures

As indicated, all proceeds of the bond issuance will either be allocated to programmes, projects or assets that will be compliant with the Climate Bonds Initiative's Certification Criteria.

In order to identify appropriate programmes/projects/assets, the City has applied its own filtering criteria as follows:

- i) Identification of significant (>ZAR 1,000,000 Capital Expenditure (CAPEX) capital projects delivered, or in the process of being delivered between Financial Year (FY)2010/11 and FY2018/19 with budget allocated to them.
- ii) Assessment of current source of finance (budgeted and/or allocated) to determine ease and cost implications of possible re-financing (for instance, refinancing any grant-funded projects will not be considered).
- iii) Alignment of remaining programmes/ projects /assets to existing Climate Bond Certification Criteria.
- iv) Alignment with the City's CCT Environmental Strategy (2016), Implementation Framework (2016) and Draft Climate Change Policy (2016) implementation
- v) Ease of access to evidence for assessment of project/asset against Climate Bond Certification Criteria.

The resultant list of programmes/ projects /assets and their current budgets will be listed in the associated tracking report (per section 6 above). In order to manage the risk of holding unallocated proceeds from the bond issuance, the value of the bond issuance will be less than the total budget of these projects, the balance of funding for these projects will be met through existing funding sources. This list will be maintained on an annual basis and programmes, projects/assets will be reported on as per the details in the City of Cape Town Green Bond Reporting Framework.

Annexure 1: City of Cape Town Water Criteria of the Climate Bonds Standard: Social and human rights and broader environmental considerations

Chapter 2 of the [Constitution of South Africa](#) enshrines the right to access of sufficient water, an environment not harmful to health and wellbeing and the protection of the environment from degradation under section 24 and 27 of the Bill of Rights.

Many of the rights in the Bill of Rights overlap and support the right to water and sanitation as defined in the [UN Special Rapporteur handbook](#) on the human right to safe drinking water and sanitation, its guiding principles and guidelines for setting standards and targets. The explicit recognition of the right to access sufficient water is also in line with guidelines expressed in "[The 2013 ICCR Water Roundtable: Stakeholder Responsibilities in Managing Access to Water](#)", and is further reflected in the [City of Cape Town's Water Sector Development Plan](#).

The Constitution further outlines the developmental duties of municipalities under section 153 of Chapter 7, stating that operational and planning processes must prioritise the basic needs of communities and promote socio-economic development. In terms of achieving this constitutional obligation the City continually works towards improving business processes including the development of a Water Demand Management Strategy as well as the adoption of specific targets and standards which addresses many of the guiding principles to protect human rights through business processes as expressed in [UN's Guiding Principles on Business and Human Rights](#).

The [City of Cape Town's Integrated Development Plan](#) (IDP) was developed to provide a strategic framework which informs the City's plans and policies working towards a more inclusive society. It comprises of five strategic focus areas which are as follows:

- Opportunity city: This focus area recognises the need to develop an economically enabling city for job creation and attracting investment. It also identifies the importance of a clean and safe natural environment to provide opportunity for now and in the future, expressing the need for the efficient management of natural resources and investment into green technology to address issues around water, energy and waste.
- Safe city: A safe city is fundamental in allowing citizens to access the opportunities of the city. Safety is therefore considered as a broad issue beyond policing, incorporating disasters and risks. This includes urban design in order to build a safe and resilient city. City policies and strategies will therefore be aligned with international best practices.
- Caring city: The focus is on protecting social health and wellbeing of which basic human needs forms a fundamental part.

- Inclusive city: An inclusive city promotes non-discrimination and equality to ensure citizens have access to the resources they need and to service the rights of current and future generations.
- Well-run city: Promotes the need to implement democratic and transparent processes, addressing access to information and the right to participation.

In the context of water development, the City has developed a Water Service Development Plan (WSDP) which is a product of the IDP and a public engagement process and further constitutes the Water Sector Plan. It is based on a framework developed by the American Water Works Association and adopted the following elements:

- Product Quality: Addressing the ability of the department to meet the potable water quality standards [licence conditions](#)¹, the Department of Water Affairs general wastewater effluent standards, environmental management requirements and ecological needs.
- Customer Satisfaction: The ability to provide basic services to all residents, meeting [Service Charter standards](#).
- Employee and Leadership Development: Challenging the department to develop and retain its employees and promote a working environment with a high level of motivation among employees.
- Operational Optimisation: Challenging the department to review business processes to continuously improve in the provision of service delivery in all its operations in terms of time and costs. This promotes the efficient use of resources, sustainability and taking advantage of technological advancements.
- Financial Viability: The finances gained through tariffs, charges or any levies should be total cost recovering in nature. Emphasising the need to reduce debt and provide affordable water as well as the effective utilisation and maintenance of its assets to facilitate consumer base growth. Investment should be well-timed, synchronised with mutual projects and provide good returns on investment.

¹ Water use must be licensed unless it is listed in Schedule 1 of the National Water Act, 1998, whereby water is used lawfully if under general authorisation or if a responsible authority waives the need for a licence. The considerations of general authorisations for licences are based on a number of factors that include: existing lawful water uses, the need to redress the results of racial past and gender discrimination, efficient and beneficial use of water in the public interest, for socio-economic impact, the strategic importance for it to be authorised. If a licence is granted it is not implied any guarantee regarding the availability of quality of water which it covers. Licences granted may not exceed forty years, after which it may be reviewed and extended (Republic of South Africa, 1998: Part 2: 27 (l)).

- Infrastructure Stability: this business attribute requires the department to understand when to create and dispose of an asset, the condition of its assets, lifecycle costs, the associated costs to be incurred in unlocking asset value, to sustain the business.
- Operational Resilience: The department is required to ensure adequate risk management of its water and wastewater business.
- Community sustainability: This challenges the department to facilitate local employment through infrastructure development while ensuring that operations and service delivery does not compromise the health and well-being of communities and the environment. Efforts should be made to ensure investments are green and climate change impacts are managed.
- Water Resource Adequacy: Purely focusing on water security, it challenges this department to provide a new source of water supply by 2017. It encourages long term resource planning, long term demand analysis and conservation of existing resources and
- Stakeholder Engagement: This requires the department to identify the representatives of various stakeholders and ensure adequate engagement in issues that affect them. It encourages effective engagement across all spheres of government and directorates in the City for the purpose of optimising investments into improvement programs and risk management.

Annexure 2: City of Cape Town Green Bond vulnerability assessment and adaptation plan

Water Projects Vulnerability Assessment: Water Demand Management Projects

Eligibility criterion 1: The project must score at least 60% of the maximum potential score in all three parts of the Vulnerability Assessment.

Eligibility criterion 2: If any question in any part of the VA scores a zero score, it must be addressed through a Corresponding Adaptation Plan.

SECTION 1: ALLOCATION

		Max Score	Actual Score	Requirement: E = provide evidence; D = disclose	Comments
1.1	Are there accountability mechanisms in place for the management of water allocation that are effective at a sub-basin and/or basin scale?	1	1	Disclosure	Yes. This forms part of the National Department of Water and Sanitation's responsibility.
1.2	<p>Are the following factors taken into account in the definition of the available resource pool?</p> <p>a) Non-consumptive uses (e.g., navigation, hydroelectricity)</p> <p>b) Environmental flow requirements</p> <p>c) Dry season minimum flow requirements</p> <p>d) Return flows (how much water should be returned to the resource pool, after use)</p> <p>e) Inter-annual and inter-seasonal variability</p> <p>f) Connectivity with other water bodies</p> <p>g) Climate change impacts</p>	7	7	<p>Evidence</p> <p>Please see document titled "WRS-WCWSS Status Report April 2016"</p>	<p>The following specific answers apply:</p> <p>a) N/A. These factors are not applicable to the Water Reconciliation Strategy for the Western Cape Water Supply System (WRS WCWSS)</p> <p>b) Yes. Ecological reserves are accounted for the in the WRS WCWSS</p> <p>c) Minimum flow requirements would becomes applicable when dry seasons prevail. See section 1.1.1 of the WRS WCWSS report which demonstrates the water restrictions imposed by DWAF when a severe drought occurred in 2003 and 2004.</p> <p>d) Yes. Return flows are accounted for in the WRS WCWSS</p> <p>e) Yes. Seasonal variability is of great concern due to the hot dry summers experienced in the Western Cape. This is accounted for in the WRS WCWSS</p> <p>f) Yes. This is accounted for in terms of the Ecological Reserve requirement in the WRS WCWSS</p> <p>g) Yes. Climate change impacts inform the scenario planning the in the WRS WCWSS</p>
1.3	Are arrangements in place to accommodate the potentially adverse impacts of climate change on the resource pool? (E.g. using best available science to plan for future changes in availability, undertaking periodic monitoring and updating of available pool.)	1	1	<p>Evidence</p> <p>Please see the following documents: "WRS-WCWSS Status Report April 2016"; "Water Conservation and Demand Strategy 2016-17 Review"</p>	Yes. The WRS WCWSS takes account of climate change in its scenario planning. The City's Water Conservation and Water Demand Management Strategy and Draft Water Outlook also takes climate change into account.

1.4	Is there a distinction between the allocation regimes used in "normal" times and in times of "extreme/severe" water shortage?	1	1	Evidence Please see the following documents: "WRS-WCWSS Status Report April 2016"; "City of Cape Town Water By-Law"	Yes. In times of drought, allocations are restricted by the National Department of Water and Sanitation. See section 1.1.1 of the WRS WCWSS report which demonstrates the water restrictions imposed by DWAF when a severe drought occurred in 2003 and 2004. The City of Cape Town Water By-Law also allows the City to impose water restrictions on consumers.
1.5	Are there plans to define "exceptional" circumstances, such as an extended drought, that influence the allocation regime? (E.g., triggers water use restrictions, reduction in allocations according to pre-defined priority uses, suspension of the regime plan, etc.)	1	1	Evidence Please see the following document: "WCWSS Reconciliation Strategy June 2007".	Yes. Water storage in the system is evaluated towards the end of each winter rainfall season (October to November), when the reservoirs are at their fullest. The Water Resources Yield Model (WRYM) and Water Resources Planning Models (WRPM) are used to assess whether or not supplies must be restricted for the following year, to ensure that sufficient water remains for the more essential uses such as basic human needs and industry, if a drought is to occur. There is also a Western Cape Water System Consultative Forum in place and this group meets to discuss the water situation of the system (by the end of winter) and to advise the DWAF's Regional Director on the need and level of curtailments for the following year. Any shortfalls between requirement and available supply as a result of a drought in the winter will necessitate the imposition of water restrictions. Supplies are progressively curtailed during droughts. The Director General of the DWAF imposes these restrictions after consultation with all Water User Associations (WUAs) and water service
1.6	For international / transboundary basins, is there a legal mechanism in place to define and enforce water basin allocation agreements?	1	1	Disclosure	Yes. The National Department of Water and Sanitation enforces agreements through the National Water Resource Strategy and the various regional Water Reconciliation Strategies. The City does receive water from outside its jurisdiction (transboundary), but allocations are done nationally.
1.7	Are water delivery agreements defined on the basis of actual in situ seasonal/annual availability instead of volumetric or otherwise inflexible mechanisms?	1	1	Evidence Please see document titled "WRS-WCWSS Status Report April 2016"	Yes. This is accounted for in the WRS WCWSS. Please see Section (2) 'Water Availability' and in particular, section 2.1 'System Yield', as well as section 3.2 'Water Balance' with corresponding Figure 19.
1.8	Has a formal environmental flows (e-flows)/sustainable diversion limits or other environmental allocation been defined for the relevant sub-basin or basin? (If there is a pre-existing plan, then has the environmental flows program been updated to account for the new project?)	1	1	Evidence Please see document titled "WRS-WCWSS Status Report April 2016"	Yes. The WRS WCWSS includes the implementation of an ecological reserve.

1.9	Have designated environmental flows / allocation programs been assured / implemented?	N/A	N/A	Evidence or Disclosure	N/A for projects being submitted
1.10	Has a mechanism been defined to update the environmental flows plan periodically (e.g., every 5 to 10 years) in order to account for changes in allocation, water timing, and water availability?	1	1	Evidence Please see document titled "WRS-WCWSS Status Report April 2016"	Yes. The WRS WCWSS includes the implementation of an ecological reserve. The WRS WCWSS is updated on an annual basis to account for changes in allocation, timing, and water availability.
1.11	Is the amount of water available for consumptive use in the resource pool linked to a public planning document? (E.g., a river basin management plan or another planning document – please indicate)	1	1	Evidence Please see the following documents: "WRS-WCWSS Status Report April 2016" ; "Water Services Departmental Sector Plan".	Yes. The City of Cape Town Water Services Departmental Sector Plan and the WRS WCWSS are public planning documents that provide this detail.
1.12	If present, is the river basin plan a statutory instrument that must be followed rather than a guiding document?	1	1	Disclosure	Yes. The WRS WCWSS, as a statutory plan, is legally binding, as is the Water Services Development Plan. While it does provide a decision-support framework for system operation, water allocations and forward planning; it was commissioned by the Department of Water Affairs and Forestry in line with the establishment of a National Water Resource Strategy, as outlined in Chapter 2, 5.4(a) and 6.1(a) which covers additional strategies and plans such as the WRS WCWSS.
Total Allocation Score		17	17		
Eligibility Criterion 1 passed			100%		

SECTION 2: Governance

		Max Score	Actual Score	Requirement: E = provide evidence; D = disclose	Comments
2.1	Have water entitlements been defined according to one of the following? <ul style="list-style-type: none"> • Purpose that water may be used for • Maximum area that may be irrigated • Maximum volume that may be taken in a nominated period • Proportion of any water allocated to a defined resource pool 	1	1	Disclosure	Yes; water entitlements are defined according to the purpose for which water will be used, as indicated in the National Water Act (36 of 1998).
2.2	Is the surface water system currently considered to be neither overallocated nor over-used? N.B. Over-allocated would be if e.g. current use is within sustainable limits but there would be a problem if all legally approved entitlements to abstract water were used. Over-used would be if existing abstractions exceed the estimated proportion of the resource that can be taken on a sustainable basis.	1	1	Evidence Please see the following documents: "WRS-WCWSS Status Report April 2016"; "City of Cape Town Water By-Law"	The current system in the Western Cape is allocated according to the model of yield (See sections 2, 2.1 and 3.2 of the WRS - WCWSS) . In the case of the current 2017 drought, water restrictions have been imposed with a view to curbing over-use. The imposition of water use restrictions is provided for in Chapter 3, Section 36 (1-5) of the By-Law. The allocation model is robust and sets legal parameters for water utilisation, but tolerance of unallocated draw down has resulted in current system stress.

2.3	If monitored and the investment uses groundwater, is the groundwater water system currently considered to be neither over-allocated nor over-used? N.B. Over-allocated would be if e.g. current use is within sustainable limits but there would be a problem if all legally approved entitlements to abstract water were used. Over-used would be if existing abstractions exceed the estimated proportion of the resource that can be taken on a sustainable basis.	N/A	N/A	Evidence	N/A. At the time of implementation, none of the projects submitted make use of groundwater
2.4	Is there a limit to the proportion (e.g. percentage) of water that can be abstracted?	1	0.5	Evidence Link to the National Water Resource Strategy: http://www.dwa.gov.za/nwrs/NWRS2013.aspx and please see WRS-WCWSS Status Report April 2016.	In line with Chapter 6 of the National Water Resource Strategy, it is the National Department of Water and Sanitation which sets limits on abstraction. Specifically, there is a limit on the volume of water that can be abstracted. See Section 2.2 'Allocations' in the WRS - WCWSS Status Report where the limits for the Western Cape were as follows in the urban sector (kl/a): 414 471 600 and in the agricultural sector(m3/a): 162.3 million. For detailed breakdowns per municipality, see Table 7 and Table 8.
2.5	Are governance arrangements in place for dealing with exceptional circumstances (such as drought, floods, or severe pollution events), especially around coordinated infrastructure operations?	1	1	Disclosure	Yes. There are governance arrangements in place when such conditions prevail. These are covered in the National Disaster Management Act (57 of 2002) wherein Chapter 5, Part 3, section 55 clarifies a Municipality's special powers and role in respect to the preparation of plans, responsibilities and the process for declaring disaster conditions. In the case of the current 2017 drought, a declaration for local disaster conditions was made by the City of Cape Town's Executive Mayor on 6th March 2017, following official declaration and promulgation in the Provincial Gazette 3rd March 2017). The declaration, valid for an initial period of 3 months, with month-to-month extension options, allows the City to invoke emergency procurement procedures and accelerated water resource schemes.
2.6	Is there a process for re-evaluating recent decadal trends in seasonal precipitation and flow OR recharge regime, in order to evaluate "normal" baseline conditions?	1	1	Evidence Please see the following document: "Disaster Management Forum - Water Resource Presentation"	Yes. City uses monitoring for assessing trends

2.7	Is there a formal process for dealing with new entrants?	1	1	Disclosure	Yes. The National Department of Water and Sanitation has a licensing authority which deals with this through a formal process.
2.8	For existing entitlements, is there a formal process for increasing, varying, or adjusted use(s)?	1	1	Disclosure	Yes. The National Department of Water and Sanitation has a licensing authority which deals with this through a formal process.
2.9	Is there policy coherence across sectors (agriculture, energy, environment, urban) that affect water resources allocation, such as a regional, national, or basin-wide Integrated Water Resources Management (IWRM) plan?	1	1	Evidence Link to the National Water Resource Strategy: http://www.dwa.gov.za/nwrs/NWRS2013.aspx	Yes. The NWR Strategy gives an indication of the policy direction regarding water requirements, usage and strategies across different sectors and government. Please see Chapter 4 of the Strategy 'Water Resources: Planning, Infrastructure Development and Management'; and specifically, section 4.3 which lists common objectives.
2.10	Are obligations for return flows and discharges specified and enforced?	1	1	Disclosure	Yes. These are specified in licenses granted by the National Department of Water and Sanitation.
2.11	Is there a mechanism to address impacts from users who are not required to hold a water entitlement but can still take water from the resource pool?	1	1	Disclosure	Yes. The National Department of Water and Sanitation has various levels of authorisation in place that cover users who do not require a formal license. See the following link for more detail: http://www.dwa.gov.za/WAR/authorised.aspx
2.12	Is there a pre-defined set of priority uses within the resource pool? (E.g., according to or in addition to an allocation regime)	1	0	Disclosure	No. The National Water Resource Strategy aims to ensure equitable water allocation through the implementation of a Water Allocation Reform programme. This programme is currently being implemented. However, it does not identify specific priority uses or user groups.
2.13	If there are new entrants and/if entitlement holders want to increase the volume of water they use in the resource pool and the catchment is open, are these entitlements conditional on either assessment of third party impacts, an Environmental Impact Assessment (EIA) or an existing user(s) forgoing use?	1	1	Evidence Link to National Water Act: http://www.acts.co.za/national-water-act-1998/index.html	Yes. The National Department of Water and Sanitation has various formal levels of authorisation for new entrants and for increasing entitlements. See the following link for more detail: http://www.dwa.gov.za/WAR/authorised.aspx For instance, one requirement for an entitlement such as a Government Waterworks, is an Environmental Impact Assessment. See Chapter 11, Section 110.
2.14	Are withdrawals monitored, with clear and legally robust sanctions?	1	1	Evidence Link to National Water Act: http://www.acts.co.za/national-water-act-1998/index.html . Please see City of Cape Town Water By-Law".	Yes. This is monitored by the National Department of Water and Sanitation and legally defined within the National Water Act and its regulations. Chapter 4. Part 10 of the NWA specifies the steps which can be taken where there is non-compliance. The local municipality, as the monitoring authority, has recourse to apply penalties or sanctions for non-compliance in line with the City of Cape Town Water By-law, (Chapter 11, section 64).

2.15	Are there conflict resolution mechanisms in place?	1	1	Disclosure	Yes, in terms of the National Water Act, Chapter 15: Appeals and Dispute Resolution, section 150 in particular, cover Mediation processes.
Total Governance Score		14	12.5		
Eligibility Criterion 1 passed			89%		

SECTION 3: TECHNICAL DIAGNOSTICS

		Max Score	Actual Score	Requirement: E = provide evidence; D = disclose	Comments
3.1	Does a water resources model of the proposed investment and ecosystem (or proposed modifications to existing investment and ecosystem) exist? Specify model types, such as WEAP, SWAT, RIBASIM, USACE applications). Scale should be at least sub-basin.	1	1	Evidence Please see document titled "WESTERN CAPE WATER SUPPLY SYSTEM - RECONCILIATION STRATEGY STUDY: Determination of Future Water Requirements	Yes. The base model for determining water resources is a bivariate model. An MS-Excel model was developed to model future water requirements in the Greater Cape Town Area over the next 25 years. The model was used to establish alternative scenarios for the future water requirements of the Western Cape Water Supply System (WCWSS). The alternative scenarios are considered to be dependent on the following main variables: <ul style="list-style-type: none"> • Population growth rate • Economic growth rate The alternative scenarios can also be based on high and low population and economic growth rates, as well as various levels of water services and other variables.
3.2	Can the system model the response of the managed water system to varied hydrologic inputs and varied climate conditions?	1	1	Evidence Please see document titled "WESTERN CAPE WATER SUPPLY SYSTEM - RECONCILIATION STRATEGY STUDY: Scenario Planning for Reconciliation of Water Supply and Requirement	Yes. The model mentioned above is the WCWSS RECONCILIATION PLANNING SUPPORT TOOL (RPST) . Various criteria are included in the model in order to enable the interventions to be compared against each other. These criteria include, inter alia, the following: <ul style="list-style-type: none"> • URV, • Environmental Impact, • Socio-economic impact, • Health risk, • Creates additional storage, • Facilitates diversification, and • Reduces System Risk Profile. 11 Scenarios were modeled. see Water Reconciliation Study (DWAf, 2007) for an example of this

3.3	Are environmental performance limits (ecosystem, species, ecological community) and/or ecosystem services specified?	1	1	<p>Evidence. Please see NEMA: https://www.environment.gov.za/sites/default/files/legislations/nema_amendment_act107.pdf; NEMA EIA Regulations (2014): https://www.environment.gov.za/sites/default/files/legislations/nema_eia2014regulations_g38282.pdf; NEMA EIA Regulations Listing Notices (2014): https://www.environment.gov.za/sites/default/files/gazetted_notices/nema107of1998_amendments_environmentalimpactsassessmentsregulations_gnr327listingnotice1.pdf; https://www.environment.gov.za/sites/default/files/gazetted_notices/nema107of1998_amendments_environmentalimpactsassessments_gnr325listingnotice2.pdf; https://www.environment.gov.za/sites/default/files/gazetted_notices/nema107of1998_amendments_environmentalimpactsassessmentsregulations_gnr324listingnotice3.pdf</p>	Any modifications to the City's current water infrastructure or the building of new infrastructure (to address supply-side) will need to be done in compliance with applicable legislation. Therefore such performance limits would be assessed when various criteria which, amongst other impacts, will be looked at during an Environmental Impact Assessment. Specifically, Section 23, (2) (h) of the National Environmental Management Act (2008) (NEMA) would become applicable. Listing notices 1 - 3 give details of the various triggers for EIA processes, many of which would apply to water supply projects.
3.4	Can these performance limits be defined and quantified using the water resources model?	1	1	<p>Evidence.</p>	Yes. The results of the EIA process would define these limits.
3.5	Have these limits been defined based on expert knowledge and/or scientific analysis?	1	1	<p>Evidence</p>	Yes. These limits take into account expert knowledge and scientific analysis and will have been informed by input from a wide range of public, private and industry specialists when amendments to this piece of National Legislation were made. Such input on the investigations, assessments and communications of the potential impact of identified activities would have been done in direct consultation with the Environmental Association Practitioners Association of South Africa that certifies Environmental Assessment Practitioners.
3.6	Are these performance limits linked to infrastructure operating parameters?	1	1	<p>Evidence. NEMA EIA regulations (2014): https://www.environment.gov.za/sites/default/files/legislations/nema_eia2014regulations_g38282.pdf; NEMA EIA Regulations Listing Notices (2014): https://www.environment.gov.za/sites/default/files/gazetted_notices/nema107of1998_amendments_environmentalimpactsassessmentsregulations_gnr327listingnotice1.pdf; https://www.environment.gov.za/sites/default/files/gazetted_notices/nema107of1998_amendments_environmentalimpactsassessments_gnr325listingnotice2.pdf; https://www.environment.gov.za/sites/default/files/gazetted_notices/nema107of1998_amendments_environmentalimpactsassessmentsregulations_gnr324listingnotice3.pdf</p>	Yes, however the linkage is conditional wherein Environmental Authorisation will be granted where the infrastructure operating parameters are done in a manner that falls within the environmental performance limits. The NEMA Environmental Authorisation Regulations and associated listing notices provide detail of activities that require EIA processes. Performance limits would be included as part of the EIA process.

3.7	Are these limits linked to an environmental flows regime?	1	1	Evidence. See section 7 of: http://www.dwa.gov.za/Projects/RS_WC_WSS/Docs/Reconciliation%20Strategy.pdf	Yes. All new supply side projects constructed after the construction of the Berg River Dam would require an ecological reserve to be implemented. Plans are underway to implement the ecological reserve requirement for older dams as well. Note section 7 of the Water Reconciliation Strategy for the WCWSS (2007): http://www.dwa.gov.za/Projects/RS_WC_WSS/Docs/Reconciliation%20Strategy.pdf
3.8	For new projects, is there an ecological baseline evaluation describing the pre-impact state?	1	1	Evidence. Please see NEMA EIA Regulations: https://www.environment.gov.za/sites/default/files/legislations/nema_eia2014regulations_g38282.pdf	Yes. The NEMA will need to be consulted to determine this baseline which can take the format of a scoping exercise as outlined in sections 21 of the 2014 NEMA Regulations. Please see: https://www.environment.gov.za/sites/default/files/legislations/nema_eia2014regulations_g38282.pdf
3.9	For rehabilitation / reoperation projects, is there an ecological baseline evaluation available before the projects was developed?	1	1	Evidence. Please see NEMA EIA Regulations: https://www.environment.gov.za/sites/default/files/legislations/nema_eia2014regulations_g38282.pdf	Yes. The NEMA will need to be consulted to determine this baseline which can take the format of a scoping exercise as outlined in sections 21 of the 2014 NEMA Regulations. Please see: https://www.environment.gov.za/sites/default/files/legislations/nema_eia2014regulations_g38282.pdf
3.10	Has there been an analysis that details impacts related to infrastructure construction and operation that has been provided?	N/A	N/A	Evidence	N/A . The projects that have been submitted are all regarding upgrades to existing infrastructure in order to improve performance; no new infrastructure is going to be constructed.
3.11	Are lost species and/or lost or modified ecosystem functions specified for restoration in the environmental evaluation?	1	1	Evidence. Please see NEMA: https://www.environment.gov.za/sites/default/files/legislations/nema_amendment_act107.pdf	Yes. This will form part of any Environmental Authorisation applied for and in line with section 24 of NEMA.
3.12	Have regional protected areas / nature reserves been included in the analysis for impacts from the investment asset and future climate impacts?	1	1	Evidence. Please see NEMA: https://www.environment.gov.za/sites/default/files/legislations/nema_amendment_act107.pdf	Yes. This will form part of any Environmental Authorisation applied for and in line with section 24 of NEMA.
3.13	Does the model include analysis of regression relationships between climate parameters and flow conditions using time series of historical climate and streamflow data?	1	1	Evidence	Yes - modelling has been re-run with climate change assumptions and streamflow data supplied by Climate Systems Analysis Group at UCT
3.14	Does the model include climate information from a multi-modal ensemble of climate projections (e.g., from the Climate Wizard or the World Bank's Climate Portal) to assess the likelihood of climate risks for the specified investment horizon(s)?	1	1	Evidence	Yes - modelling has been re-run with climate change assumptions and rainfall projections supplied by Climate Systems Analysis Group at UCT
3.15	Are changes in the frequency and severity of rare weather events such as droughts and floods included?	1	1	Evidence. Please see WRS-WCWSS (2007): http://www.dwa.gov.za/Projects/RS_WC_WSS/Docs/Reconciliation%20Strategy.pdf	Yes. The WRS-WCWSS includes consideration of droughts at many points throughout the document.

3.16	Are sub-annual changes in precipitation seasonality included?	1	1	Evidence. Please see WRS-WCWSS (2007): http://www.dwa.gov.za/Projects/RS_WC_WSS/Docs/Reconciliation%20Strategy.pdf	Yes. Seasonality of rainfall is a key consideration of the WRS-WCWSS
3.17	Is GCM climate data complemented with an analysis of glacial melt water and sea level rise risks, where appropriate (e.g., high or coastal elevation sites)?	1	0	Evidence	No. Climate Change has not yet been modelled at a detailed scale in the WRS-WCWSS
3.18	Is paleo-climatic data (e.g., between 10,000 and >1000 years before present) included?	1	0	Evidence	No. Climate Change has not yet been modelled at a detailed scale in the WRS-WCWSS
3.19	Is the number of model runs and duration of model runs disclosed?	1	1	Evidence	Monte-carlo simulations run with multiple scenarios to develop model
3.20	Has a sensitivity analysis been performed to understand how the asset performance and environmental impacts may evolve under shifting future flow conditions?	N/A	N/A	Evidence	N/A . The projects submitted will not be affected by future flow conditions, as these projects form an integral part of the City's water reticulation system and will continue to be required regardless of the source of water (e.g. surface water, ground water, recycled water etc. will all use the same reticulation system).
3.21	Is directly measured climate data available for more than 30 years and incorporated into the water resources model?	1	0	Evidence	No. Climate Change has not yet been modelled at a detailed scale in the WRS-WCWSS
3.22	Has evidence demonstrated that climate change has already had an impact on operations and environmental targets? Are these impacts specified and, to the extent possible, quantified? These impacts should be responded to directly in the Adaptation Plan.	1	1	Evidence. https://www.capetown.gov.za/Family%20and%20home/Residential-utility-services/Residential-water-and-sanitation-services/2016-residential-water-restrictions-explained	Yes. Cape Town is currently experiencing a drought, directly related to climate change. This is having an impact on all aspects of City operations. Level 6 water restrictions have been implemented as a result.
3.23	Does the evidence suggest that climate change will have an impact on operations and environmental targets over the operational lifespan? Are these impacts specified and, to the extent possible, quantified? These impacts should be responded to directly in the Adaptation Plan.	N/A	N/A	Evidence	N/A . Although the city is experiencing impacts related to climate change, the projects submitted will not be affected by future climate change, as these projects form an integral part of the City's water reticulation system and will continue to be required regardless of the source of water (e.g. surface water, ground water, recycled water etc. will all use the same reticulation system).

3.24	Is there a discussion of the uncertainties associated with projected climate impacts on both operations and environmental impacts?	N/A	N/A	Evidence	N/A . Although the city is experiencing impacts related to climate change, the projects submitted will not be affected by future climate change, as these projects form an integral part of the City's water reticulation system and will continue to be required regardless of the source of water (e.g. surface water, ground water, recycled water etc. will all use the same reticulation system). Regardless, there are ongoing assessments of impact of climate change on planning for resilience within the water supply network.
Total Governance Score		20	17		
Eligibility Criterion 1 passed			85%		
TOTAL VULNERABILITY ASSESSMENT SCORE:		51	46.5		

SECTION 4: ADAPTATION PLAN					
		Max Score	Actual Score	Requirement: E = provide evidence; D = disclose	Comments
AP.1	Is there a plan to restore or secure lost/modified ecosystem functions / species?	1	0	Evidence	N/A. The water demand management projects are aimed at improving the City's ability to conserve water and reduce water demand. However, as these are engineering projects they do not include an ecosystem function component.
AP.2	Is the adaptation plan for environmental targets / infrastructure robust across specified <u>observed</u> / recent climate conditions? Confer VA	1	1	Evidence. Please see the following documents: "City of Cape Town Water Sector Climate Adaptation Plan of Action"; "CSAG Report - Climate Change Projections for the City of Cape Town"	Yes. The City of Cape Town Climate Adaptation Plan of Action (CAPA) for the Water Sector is based specifically on scientific evidence of climate change. This includes observations and projections. The City is in the process of reviewing and updating its climate change adaptation plan based on the most recent scientific evidence.
AP.3	Is the adaptation plan for environmental targets / infrastructure robust across specified <u>projected</u> climate conditions? Confer VA	1	1	Evidence. Please see the following documents: "City of Cape Town Water Sector Climate Adaptation Plan of Action"; "CSAG Report - Climate Change Projections for the City of Cape Town"	Yes. The City of Cape Town Climate Adaptation Plan of Action (CAPA) for the Water Sector is based specifically on scientific evidence of climate change. This includes observations and projections. The City is in the process of reviewing and updating its climate change adaptation plan based on the most recent scientific evidence.

AP.4	Is there a monitoring plan designed to track ongoing progress and impacts to inform future decisions?	1	1	Evidence. Please see the following document: "City of Cape Town Water Sector Climate Adaptation Plan of Action"	Yes. Monitoring requirements for each adaptation action are outlined in the Water Sector CAPA.
AP.5	Is there a plan to reconsider on a periodic basis the VA for operational parameters, governance and allocation shifts, and environmental performance targets?	1	1	Evidence. It is not possible to provide evidence as the review process is ongoing.	Yes. The City of Cape Town is currently in the process of reviewing and updating its overall Climate Change Adaptation Action Plan, including the Water Sector CAPA. As described in the Water Sector CAPA, it is significantly informed by the WRS-WCWSS. The WRS-WCWSS is reviewed regularly, with updated status reports generally produced annually. An incomplete list (website has not been updated recently) can be found here: http://www.dwa.gov.za/Projects/RS_WC_WSS/RepDoc.aspx
TOTAL ADAPTATION PLAN SCORE:		5	4		