



THIS CITY WORKS FOR YOU

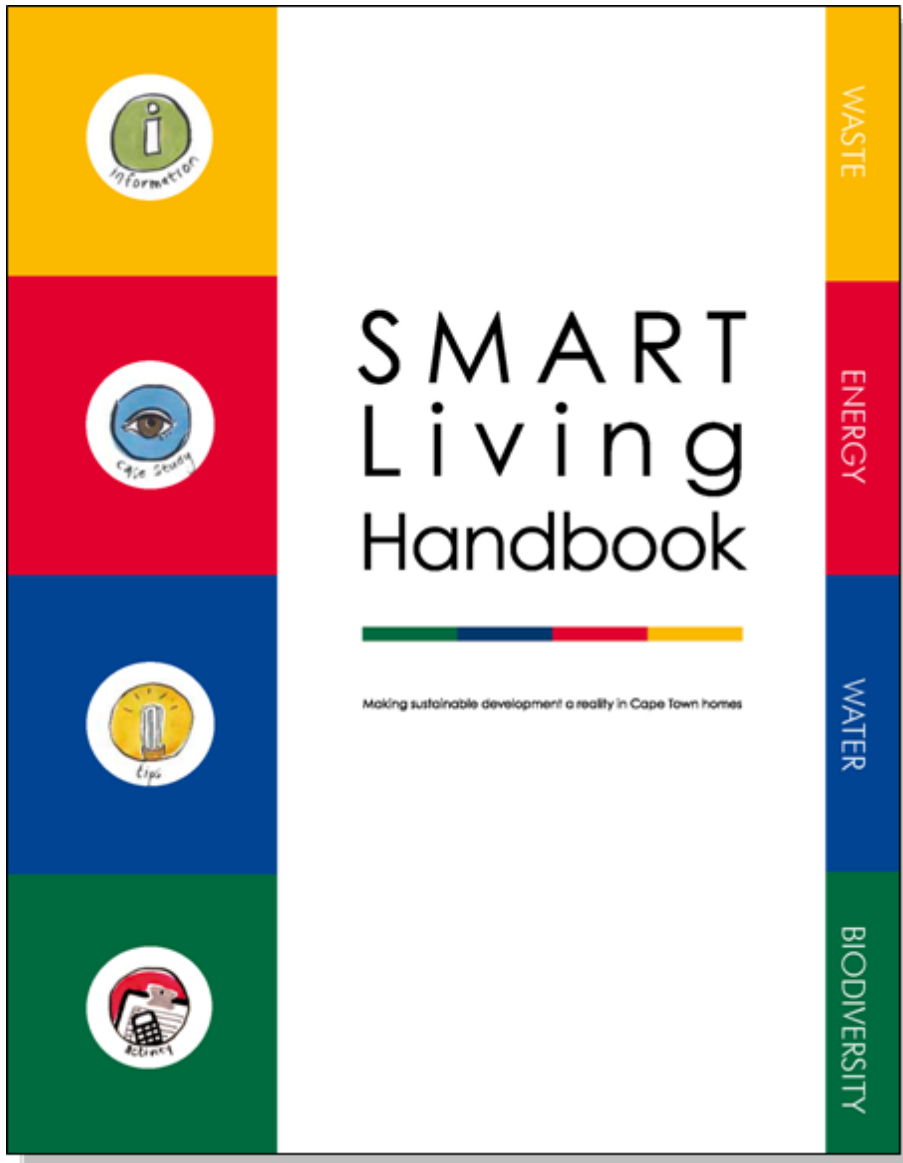


CITY OF CAPE TOWN | ISIXEKO SASEKAPA | STAD KAAPSTAD



SMART Living Handbook

An Introduction



Making sustainable development a reality in Cape Town homes

Beautiful, but threatened



**Electricity
blackouts**

Water supply low

**Landfill space
running out**

Runaway fires

The **SMART Living Handbook** provides us with the tools to do something about our threatened environment

The handbook is divided into four sections:

1. **Waste**
2. **Energy**
3. **Water**
4. **Biodiversity**

Pages are colour coded for easy reference

Icons provide a key to the different kinds of information:



Within each section you will find information on:

- a. Key environmental challenges
- b. City responses
- c. Interactive ways to explore your own environmental impact
- d. Practical steps towards using less water and energy, creating less waste and more biodiversity
- e. Useful contacts and resources

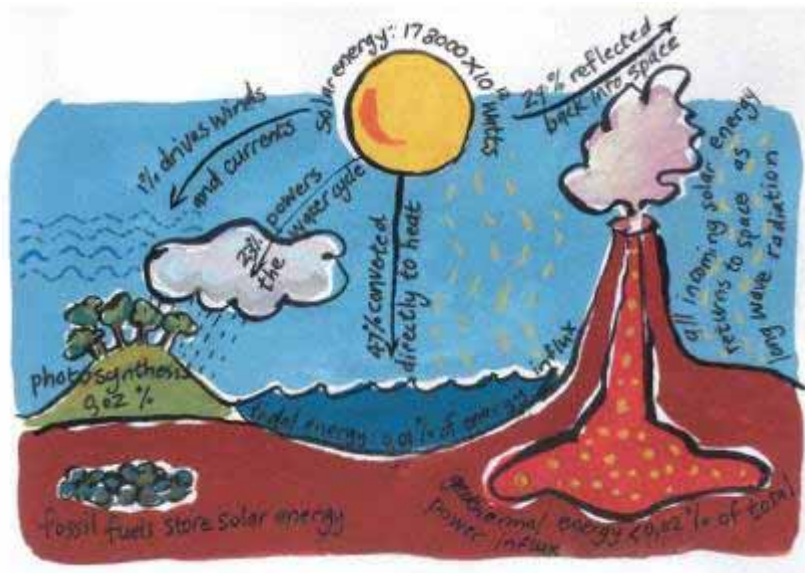
Choices offered will save money and make the home a safer place.

A sample of the format and style of information you can expect in each section:

Waste	Have you ever considered that the earth is a closed system for matter? In nature, waste generated by one organism becomes food for another. Could we ever design a world without 'waste'?
Waste in our city	Cape Town's waste is increasing faster than its population. Understand the City's waste management services and plans, find out about the new solid waste drop-off sites and learn about some award-winning, innovative recycling projects.
Waste in your home	The City aims to reduce waste by 30% by 2020. What is our role in this? An illustration of typical household waste bins helps us think a bit about the waste we generate in our homes.
Practical steps	<ul style="list-style-type: none">• How to Reduce, Reuse, Recycle• How to make a compost heap• Simple rules when using hazardous products• A safe cleaning products 'recipe book'
Contacts and resources	Contact details for key City waste functions and useful organisations are provided – including charities willing to accept materials for reuse and repair.

Colourful and fun graphics provide a simple representation of complex issues

The energy cycle



Carbon footprints



Most of South Africa's energy comes from coal. South African coal is low grade and large amounts of CO₂ are released into the atmosphere when it is burned. South Africa produces about 8 tons of CO₂ per person each year. This is twice as much as the global average of 4 tons per person. The rest of Africa only produces, on average 1,1 tons of CO₂ per person each year.

Activities ensure interaction with the issues

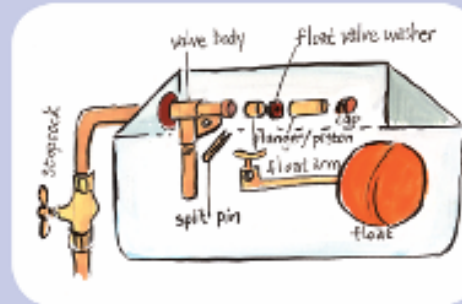
Quiz: How biodiversity-friendly are you?

	Yes	No
Do you always make sure that a burning cigarette is never thrown out of your car window?		
Do you always take your rubble or garden refuse to an established dump and not leave it in the veld?		
Do you always make sure that oil and other chemical products are disposed of in established dumps and not thrown on the veld or into your water drains?		
Do you have a variety of local indigenous plants in your garden and/or neighbourhood?		
Do you have local indigenous birds visiting your garden regularly?		
Do you have lizards, frogs or local indigenous insects such as praying mantis or moths in your garden and/or neighbourhood?		
Have you removed all invasive alien weeds, notably Rooikrans, Port Jackson, Kikuyu, Fountain Grass, Lantana and Chromolaena, from your garden?		
Does your cat have a collar or bell to alert and thus protect local indigenous small animals?		
Do you avoid using harsh pesticides or herbicides on your garden?		
Do you support local initiatives to conserve the natural areas in your area or 'green' your local spaces?		

If you answered 'yes' to three or more of these questions you are on the way to having a healthy amount of 'backyard' biodiversity! If not, the many suggestions in Practical Steps will help you get started.

'How to' tips provide us with the tools to take action

Fixing toilet leaks



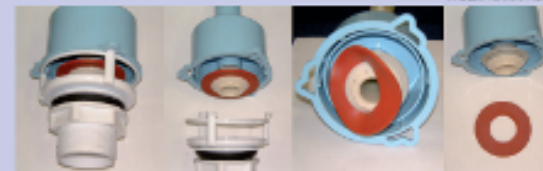
Replacing a float valve washer

1. Close the stopcock – this will shut off the water flowing into your house.
2. Remove the split pin and the float arm.
3. Unscrew the cap.
4. Remove the plunger using water pressure to push it out (open the stopcock slightly).
5. Unscrew the brass plunger to remove the washer held inside it.
6. Fit a new washer. Reassemble the parts (Step 4 to Step 3 to Step 2 to Step 1).
7. Open the stopcock and check that the float valve closes when the water reaches the full level in the cistern.



Replacing a flush valve washer

1. Close the stopcock.
2. Disconnect the lifting wire from the lever arm.
3. Remove the split pin and the side float.
4. Remove the spindle assembly.
5. Unscrew the bottom flange and remove the washer.
Note: Remember which side this washer faced to fit the new washer.
6. Install a new washer with the sloping side facing upwards.
7. Reassemble the parts (Step 5 to Step 4 to Step 3 to Step 2 to Step 1).
8. Open the stopcock and test that there are no more leaks.



Who should use this handbook?

- All city residents
- Households looking to cut costs
- Maintenance staff in buildings (schools, offices, orphanages)
- Educators
- Learners
- Builders
- Housing developers
- NGOs and CBOs in community development
- Environmental groups

At home

- Establish your own impact on the environment
- Learn how to measure and monitor water or energy you use
- Find water leaks in the home
- Implement recycling
- Choose and install water efficient taps and shower heads
- Switch to solar water heating
- Reduce electricity use
- Improve electrical, paraffin and gas safety
- Begin an indigenous garden and build a compost heap
- Make your own bio-friendly cleaning agents

In schools

Maintenance staff:

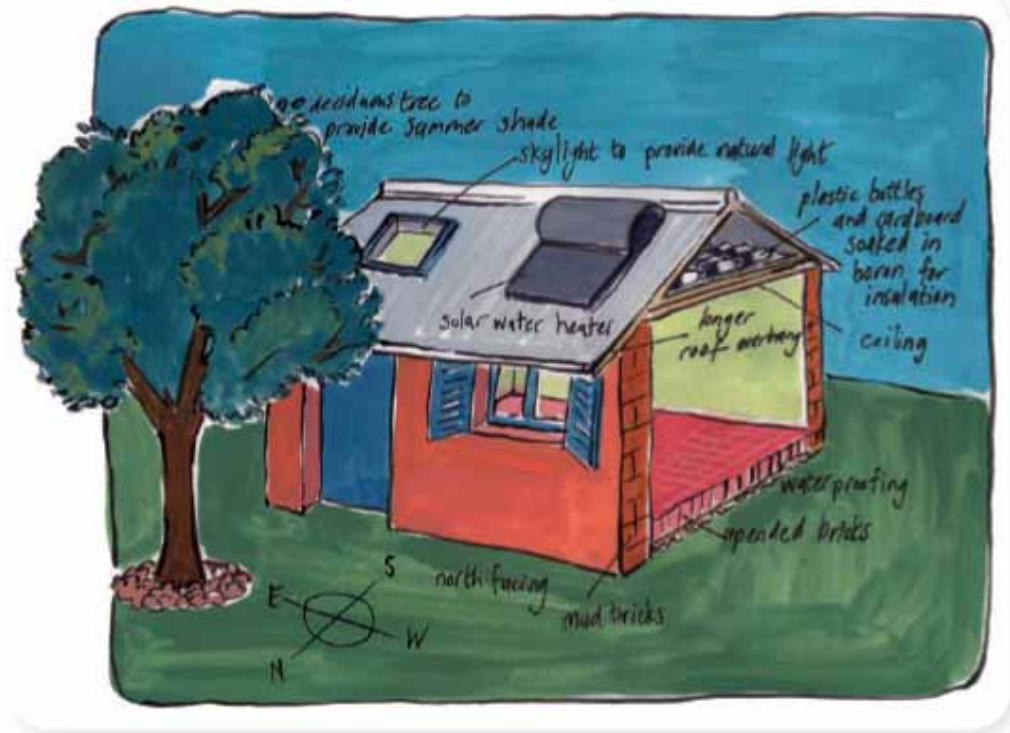
- Cut costs and improve building efficiency through fitting efficient water devices, light bulbs and water heating facilities
- Switch to safe, cheaper, non-toxic cleaning agents
- Build a compost heap and encourage an indigenous garden
- Implement recycling

Educators and learners:

- Design lessons and activities exploring environmental issues, including:
 - Designing a bio-diverse indigenous garden
 - Doing an energy/water 'audit' of the school
 - Starting a recycling programme in all classrooms
 - Researching environmental themes
- Organise school visits using up-to-date contact information for local nature reserves and recycling
- Engage directly with environmental issues through interactive exercises

Housing development

- Design energy efficient houses
- Fit tried and tested water saving devices
- Learn to install an insulated ceiling
- Fix household water leaks



Adult education and community development

- Understand service delivery costs and service accounts
- Learn to read a water meter
- Save electricity
- Improve electrical, paraffin and gas safety in the home
- Develop skills to fix leaks in the home and wire electric plugs
- Know how to respond to household fires
- Build a compost heap

CAPE TOWN ELECTRICITY

RECEIPT :64664
VAT INVOICE:232/06656124481/64746
VAT Reg No.:4180101877
Name :
Meter: 02652124481
Date:Sat Aug 13 2005, Time:16:18:38

free basic electricity

units bought

50.0 units @ 0.00 c/unit
43.5 units @ 45.99 c/unit

electricity account

ELEC R 17.54 93.5 units
WAT R 2.46

TOTAL R 20.00

Tender R 20.00 CASH
Change R 0.00

total of units purchased

4935 0631 5360
4230 6275

activation

electricity purchased from supermarkets, shops, spazas and post offices

Shoprite Checkers Details
Operator: CHARMAINE
Receipt : 00193287

*** NAME WRONG OR QUERIES ***
CALL: 0800 220 440

POS_232:S-06399 SHOPRITE KENILWORTH-2
POWERED BY SYNTELL

A City of Cape Town prepaid meter slip

To receive your household's free 50 kWh with a prepaid meter you must go to the vending sales point and ask for it. You do not have to buy electricity in order to request the free allocation. However, the allocation works on a 'use it or lose it' basis and will not accumulate from month to month.

An average middle-income home in Cape Town uses approximately 774 kWh/month. An average low-income home uses 369 kWh/month.

Of course the amount your home uses will depend greatly on how many people are living in the house, whether you have an electric geyser or not, and the amount of appliances you own and use.

This handbook is the product of a **close partnership**, managed by the City's Environmental Resource Management Department (ERMD). Together with the City of Cape Town, the Western Cape Provincial Department of Environmental Affairs and Development Planning and national Department of Water Affairs and Forestry, have been co-sponsors.

The compilation and production of this handbook was done by Sustainable Energy Africa (SEA) and Amathemba Environmental Management Consulting, working together with a wide range of City staff from various line functions, notably from ERMD, Water Services, Solid Waste and the Electricity departments. Additional insight was provided by interaction with experts from local universities and NGOs.



Sustainable Energy Africa
Association incorporated under Section 21

AMATHEMBA

Environmental Management Consulting CC



water & forestry

Department:
Water Affairs and Forestry
REPUBLIC OF SOUTH AFRICA



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Conclusion

**Let us work together
for a better city**

