

## Message from the Editor

Welcome to the first edition of the e-Tran:SIT for 2008! This year we will continue to provide you with interesting facts and figures on sustainable transport in South Africa and internationally as well as share information and resources with you through the Tran:SIT website.

This year has started off with a "transport bang" for me. I attend a very interesting course at UCT focussing on transport supply and demand and Eduardo Vasconcellos, a visiting transport expert from Brazil, ran a two-day workshop for the City of Cape Town transport staff. Unfortunately, we were not able to bring Eduardo to other cities in the country, but hope that those in Cape Town who attended the workshop and the open lecture at UCT found it insightful and inspiring. I certainly did.

This edition of the e-Tran:SIT focusses on electric bikes and I'd like to thank Andrew Janisch, the new Tran:SIT Project Manager for his article on the day-to-day use of the e-bike that SEA has been using for the last few months.

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## e-Biking – A lesson in new mobility

Guest Author : Andrew Janisch

I have always tried to cycle to the office whenever possible. It's great to combine exercise and sustainable practice with getting to work. However, I have always arrived hot and sweaty, and it takes me a while (even after a shower) to cool down and get going on my working day. It's also a bit of a schlep organising change of clothes, towels for the office etc.

When I was given an e-bike to try out last year, this problem fell away. The battery driven bike travels just under 30km/h on the flat with no effort required from me. I do have the option to pedal as much or little as I want, so a selective workout is possible, but not compulsory. My 15km trip from home to the office took 35 minutes – 15 minutes more to complete compared to a car, and 5 minutes less than by normal bike. I also arrived at the office feeling energised but not hot and sweaty!

The e-bike is a great alternative for people who work within 20km of their office, and don't require a car to get around during the day. You charge it like a cell phone. Each charge takes a few hours, and will cost you about 15 – 20 cents (that's around 1c/km – not a bad economy rate!), and one charge before you leave for work and one more at the office while you work will get you there and back with consummate ease.

### A couple of points of caution:

- ✚ Cape Town is not a biker friendly city. Several of the major roadways are very narrow and there is little space for a car and a bike to occupy the road in one lane. Probably 20% of my ride to work I would describe as "hairy"!
- ✚ The bike is heavy! Make sure the battery is fully charged before you leave – you do **not** want to ride this baby home without power! You also don't want to carry it up too many flights of stairs...

Overall I found the e-bike, at R5000, a great alternative to getting around (work, small shopping trips). It is very cheap to run (saves me around 60c/km (energy costs) on my car), keeps my personal carbon footprint down and is fun to ride. Go and try it for yourself!

## What is an e-bike?

The e-bike is the mini version of the electric car. It is powered by a rechargeable battery which drives an electric motor positioned on the front wheel. The motor is engaged with the use of a twist grip throttle on the right hand handle – similar to a motor bike throttle. Gears can be changed from a selector on the right hand handle.

The bike that SEA tested travels at approximately 27km/h on the flat without any additional pedalling assistance. With comfortable pedalling the speed can increase to 30km/h and with aggressive pedalling it can reach 35km/h. This speed will vary on the gradient of the road.

E-bikes can be charged in one of two ways, firstly through a charger which plugs into the electricity mains and secondly, the battery is charged as the cyclist pedals without using the motor. The bike that SEA tested can only be plugged into the mains. This is one of the limiting factors of the bike, which means that the trip length is limited.

## Comparison with other forms of Transport

The e-bike has several benefits over scooters, motorbikes and cars. It is 20 times cheaper to run than most fuel economical scooters, the e-bike at R5000 is cheaper than a scooter as well as other more powerful modes of transport. The maintenance costs are lower, although you need to get an indication from the supplier who will be able to service the vehicle should something go wrong. The e-bike is also more environmentally friendly as it produces 7 times less CO<sub>2</sub> than the most economical scooter.

It is less strenuous than bike riding and there is no need for a change of clothes or a shower when the destination is reached. You should however have a clear indication of how far you are travelling and whether the bike can cover that distance in one charge, otherwise you may get stuck. It is a healthier alternative to other modes of private road based transport.

The advantages of the e-bike are clear, but as with all modes of transport there are some disadvantages. These include the limited trip length, the cumbersome nature of the bike, particularly around storage and transport in a vehicle as well as the recharge time that is required.

For more information on our experience with the e-bike, visit the Tran:SIT website at <http://www.sustainable.org.za/transit/topic/non-motorised-transport/index.php>

If you would like to contribute to this newsletter or if you have any comments or questions, please contact us at [lize@sustainable.org.za](mailto:lize@sustainable.org.za) or call 021 702 3622 and ask for Lize Jennings.

## The SEA E-bike



## Editor's Choice

This month I haven't chosen a book or paper, but rather a website of interest.

The website <http://googlemapsbikethere.org> is requesting that Google Maps includes actual bike lanes on their maps and plan routes for cyclists based on the most direct cycle option or the most bicycle-friendly cycle option. It also shows some examples of what can be done with web-based maps.

Although Google Maps is not widely used in South Africa yet, this use of web based cycle route planners could be something very useful in the future, particularly with the increased development of non-motorised transport networks in South Africa.

## Upcoming Events

The 27<sup>th</sup> Annual Southern African Transport Conference (SATC) 2008 will take place from 7 – 10 July 2008 at the CSIR International Convention Centre in Pretoria. The theme for the conference is "Partnership for Research and Progress in Transportation. For more information visit [www.up.ac.za/academic/civil/satc.html](http://www.up.ac.za/academic/civil/satc.html)

## Sustainable Energy Africa (SEA)

Sustainable Energy Africa promotes sustainable energy approaches and practices through research, capacity building, information dissemination, project implementation, lobbying and networking. SEA manages the Urban TRAN:SIT Programme, which aims to build capacity in local government to develop more sustainable transport policy, strategy and implementation in South African cities.

