

EcoSUN Green Villages



RDP Settlement Ekuphumleni - Ndlambe Municipality

Ekuphumleni is a settlement Ndlambe Local Municipality

More than 100 RDP houses are already built. The central green area is a designated Public Place and is therefore favoured for the Community Centre.

Up to 7 houses foreseen for EcoSUN piloting, will be built around the Community Centre.

Around the Community Centre a vibrant place for the locals is established, including a Market place. Existing communal facilities such as a children's playing ground become part of the Centre.

The CC could be supplemented by another public building for example a library or fitness centre etc.

A centre for Ekuphumleni could be created.

The EcoSUN Green Village demonstration site is easily approached by visitors due to its position close to the main road.

The new EcoSUN technology in the CC could be demonstrated not only to the residents but also to visitors passing in cars or trucks.



An Internet Cafe or a gym established in the Community Centre will attract guests and offer chances for income generation and re-financing of maintenance costs.

Jobs could be created

urban planning concept - Ekuphumleni - Kenton on Sea



Proposed EcoSUN
Green Village area

-  RDP standard house build
-  RDP EcoSUN house

Cadasral Plan:



Ekuphumleni RDP Houses build in 2015 to 2017
in front the area for the VCommunity Centre



The DST decided to create individual houses for rent. The houses have 60m² to 80m² and build on the modules of the new RDP houses.

In the ground plan, the house is shifted, as well the roof. This creates a higher roof and a lower roof. So daylight falls into the higher part of the building into the living room. The sky window is also for vetilation in summer and it also used for the air heating system in winter.

The solar panels are east-west or north-oriented.

Rainwater is collected in tons on each side of the roof.

urban planning concept - Ekuphumleni - Kenton on Sea



EcoSUN houses: modular design system of individually social houses for rent

individual house 1

3 bedrooms, 2 bathrooms,
kitchen with dining and
living room
gross area: 70 m²

individual house 2

3 bedrooms, 1 bathrooms,
kitchen with dining and
living room
gross area: 60 m²

individual house 3

3 bedrooms, 2 bathrooms,
kitchen with dining and
living room
gross area: 70 m²

individual house 4

3 bedrooms, 2 bathrooms,
kitchen with dining and
living room
gross area: 80 m²



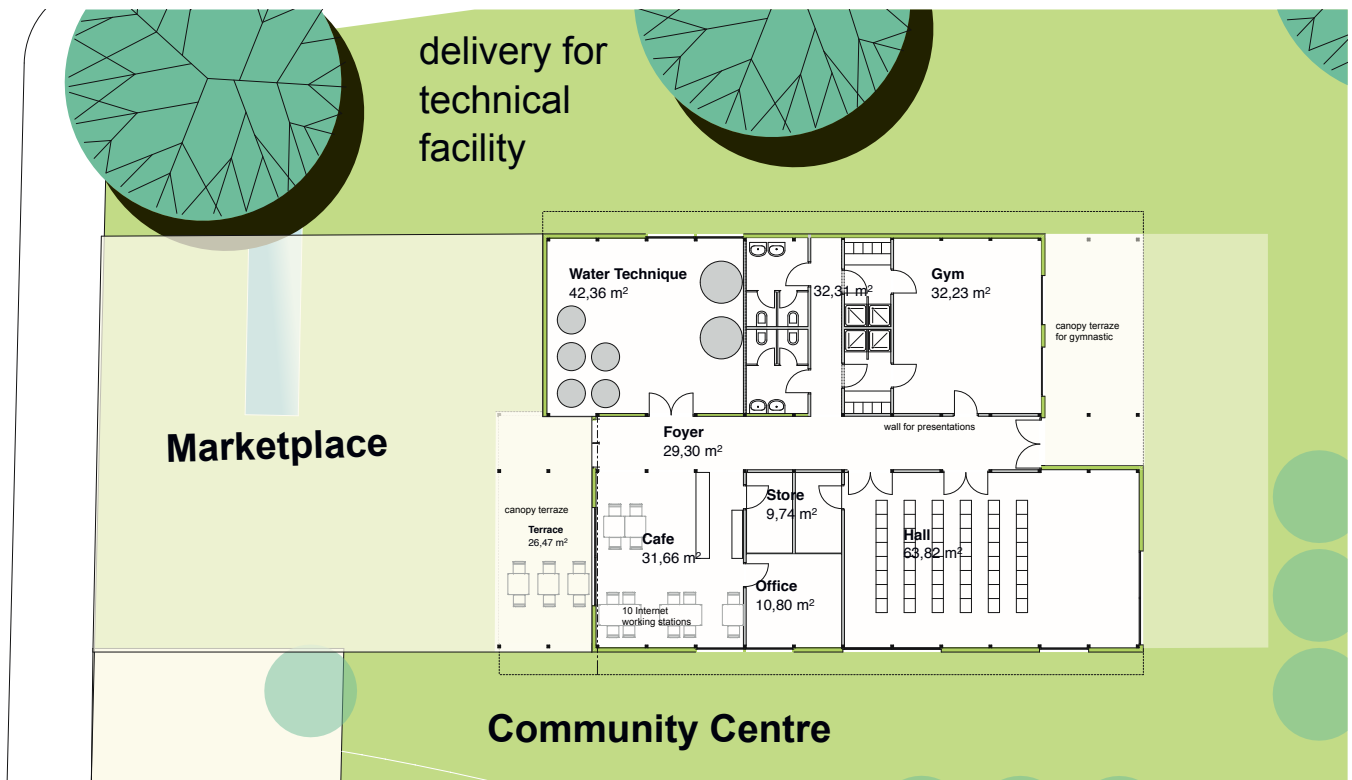


street view of new RDP houses



street view of new RDP houses with extensions

Community Centre



- The community centre has 252m² of usable space. It can be extended later. It depends on the needs of the community and the money they will have.
- The EcoSUN technology components are considered an attraction and are therefore placed visible from the entrance.
- Skylights will provide daylight in the foyer and the Internet Cafe.
- Foyer walls can be used as for exhibitions or educational poster presentations.
- Roof structure design is as simple as possible and considers the needs of solar modules, e.g. slope and direction
- Desire by the community: Internetcafe, Office, Meeting room and a Gym with changing room, toilets and showers for 15 people

design

- Light and transparent building
- Simple construction: wooden or steel trusses rest on columns
- Cladding by coloured transparent plates

roof section detail

