

passive veggie stand

A SOCIAL OUTREACH PROJECT

IN PARTNERSHIP WITH



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**The UCT Knowledge Co-op facilitated this collaborative project
Between Abalimi / Harvest of Hope and UCT.**

See <http://www.knowledgeco-op.uct.ac.za> or
Contact us at barbara.schmid@uct.ac.za / 021 – 650 4415



UCT KNOWLEDGE CO-OP

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PHASE 01

MEETING WITH HARVEST OF HOPE



Mama Kaba's vegetable gardens

PHASE 01

MEETING WITH HARVEST OF HOPE



Mama Kaba's vegetable gardens

PHASE 01

MEETING WITH HARVEST OF HOPE



When the farmers harvest the vegetables they sort them into these plastic crates

PHASE 02

MEMORANDUM OF UNDERSTANDING

Points agreed upon with community partners:

- Aims of the project:
 - To enable selling of surplus produce to create a quick turnover that will help to grow the garden as an enterprise.
 - To break the isolation of the garden and help to integrate with the community
- Selling of fruit and vegetables at the stand would be between 3-6pm on weekdays and daytime on weekends. During sale hours the gardeners would like to place the stand just inside the garden gateway.
- Optimal crate material = plastic (issues of hygiene and food safety)
- Shade from the sun for fruit and vegetables and for seating behind the stand.
- Passive cooling measures to keep produce as fresh as possible
- Security – ability to lock the stand up at night
- Able to remove crates and add partitions for easy sorting while harvesting
- Possible wheels on stand to be able to move around easily
- Research into costing and budget implementation and possible donor funding

PHASE 03

WORK PLAN AND SCHEDULE

DATE	ACTION
10 March	Site visit to Harvest of Hope and Mama Kaba's garden
17 March	Group meeting: review of site visit, allocation of responsibilities
MID-TERM VAC	
21 April	Group meeting: review research, idea session
26 May	Group meeting: review individual first design drafts, discuss and suggest adjustments
WINTER VAC	
18 July	Group meeting: discuss second draft of design and make adjustments
4 August	Group meeting: finalise design
MID-TERM VAC	
5 September	Start to compile project (research, design drafts, final design, costing implementation, etc.)
11 October	Complete and submit project

TEAM MEMBER	ALLOCATION OF RESPONSIBILITIES
Camilla	Taking photographs, design drawings; research: ergonomics
Leigh	Recording interviews and compiling aims of the project; admin – emails, reports, work plan and schedule; research: feasibility and cost
Zeni	building design model; research: passive technologies and existing precedents

*all team members contribute in the actual designing process (i.e. with sketches, brainstorming sessions, etc.)

PHASE 04

RESEARCH: EXISTING PRECEDENTS



heel-historisk-haandarbejde.blogspot.dk



<https://za.pinterest.com/hadenal/market-stalls/>



<https://za.pinterest.com/pin/325948091755077583/>



<https://za.pinterest.com/pin/325948091755077516/>



<https://za.pinterest.com/pin/325948091755077477>



<https://s-media-cache-ak0.pinimg.com/236x/2c/cb/05/2ccb052444ec6b583fe9f63f3873e342.jpg>



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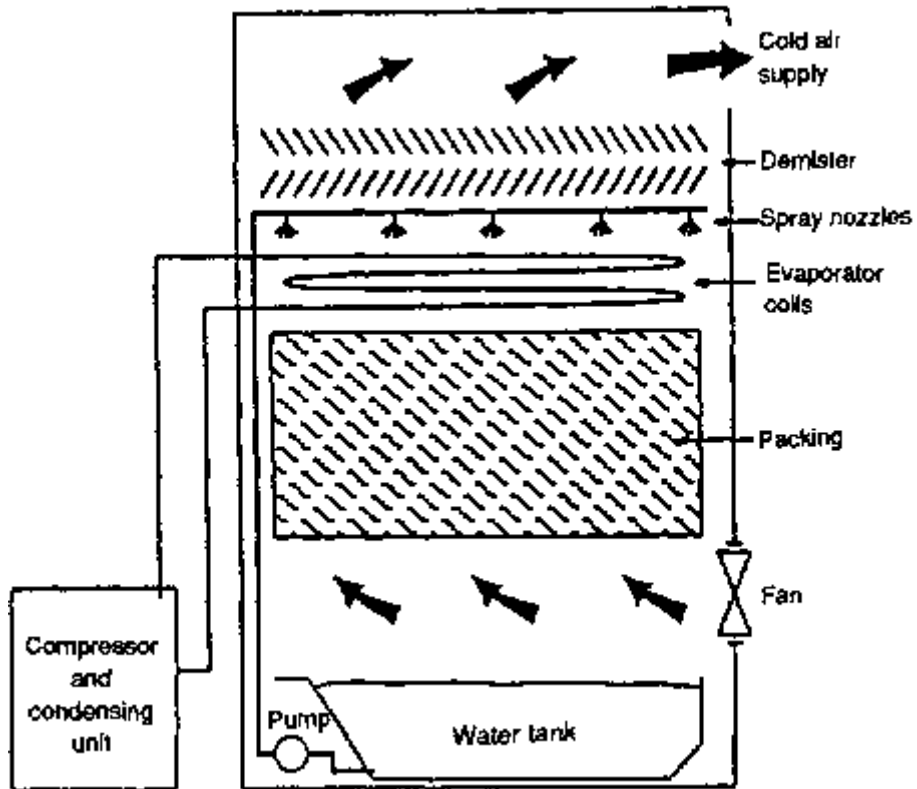
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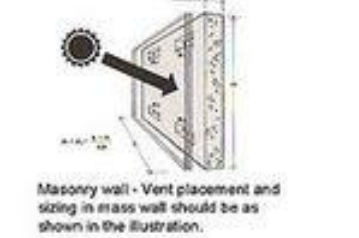
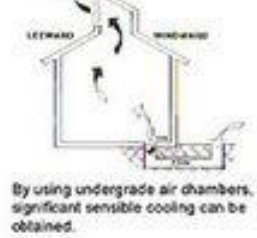
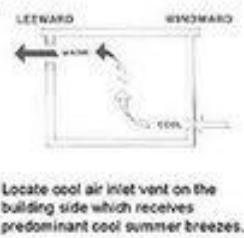
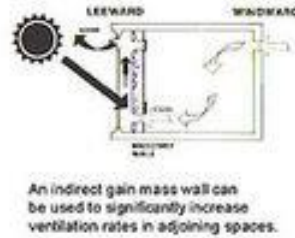
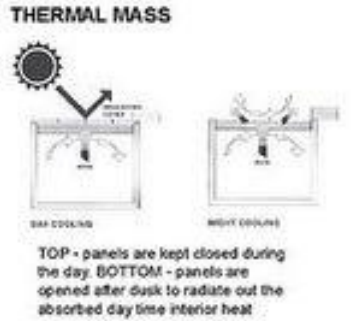
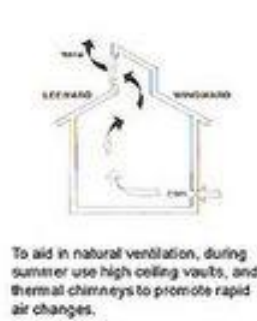
PHASE 04

RESEARCH: PASSIVE TECHNOLOGIES



PASSIVE COOLING TECHNIQUES A CRASH COURSE

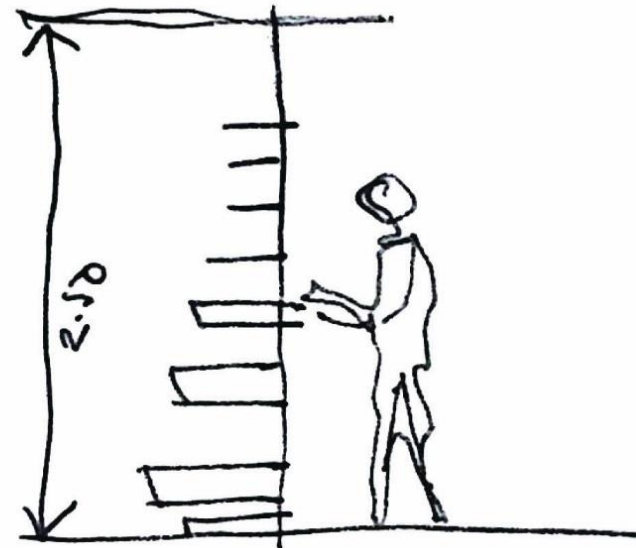
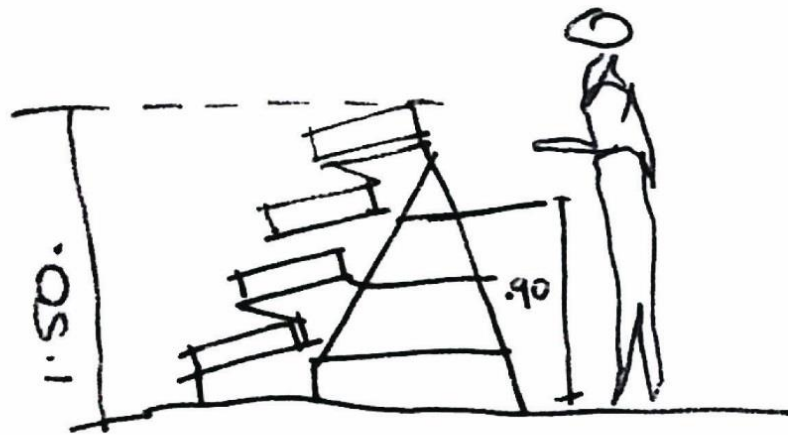
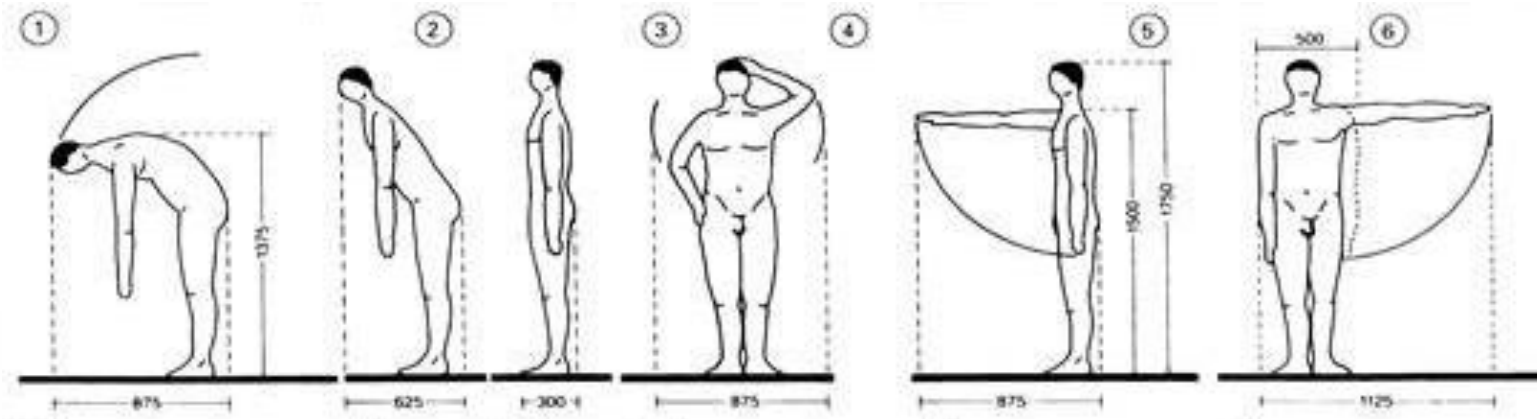
Passive solar building design involves the modeling, selection and use of appropriate passive solar technologies to maintain the building environment at a desired temperature range. This minimizes the use of active solar, renewable energy and especially fossil fuel technologies.



Source www.azsolarcenter.com

PHASE 04

RESEARCH: ERGONOMICS

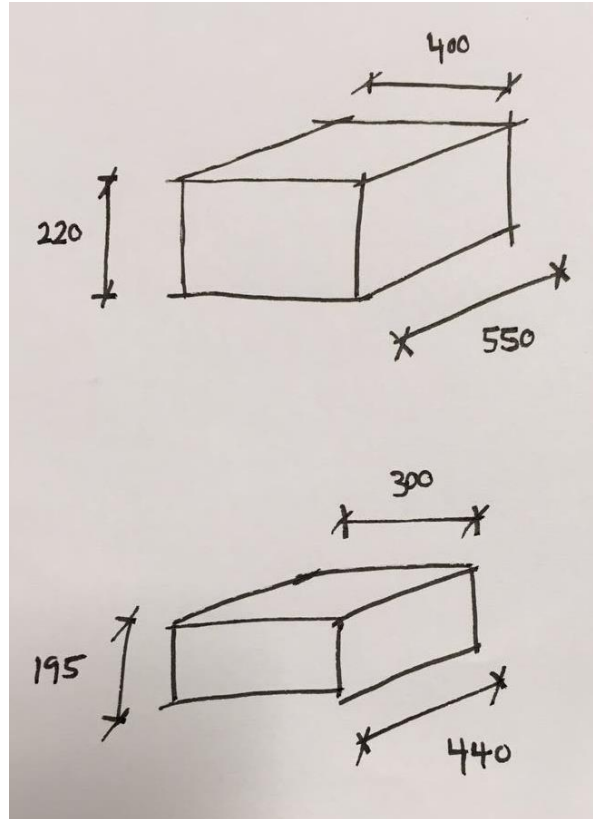


PHASE 05

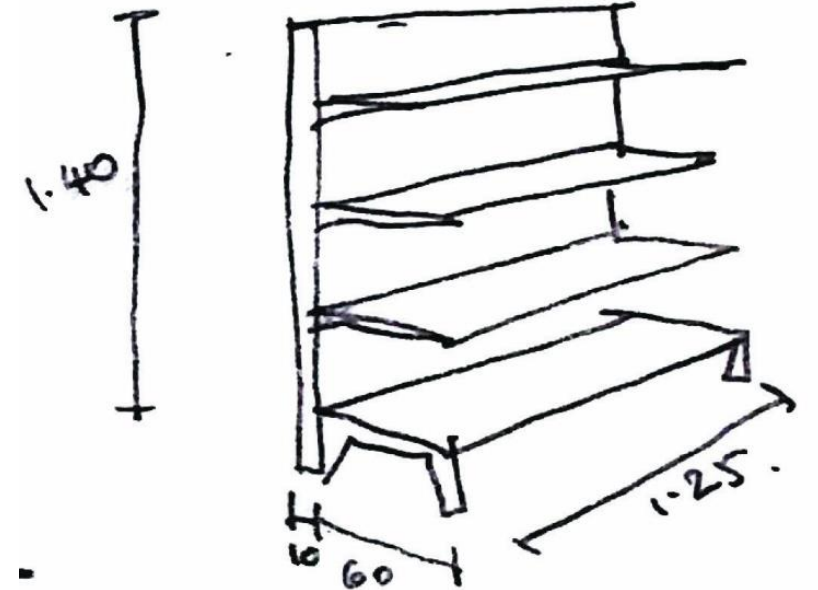
CONCEPT & DESIGN



The concept for the design came out of an idea to make use of the existing vegetable harvest crates to hold the vegetables. The farmers harvest the produce into the crates and then any leftover crates of vegetables are slotted into the stand.



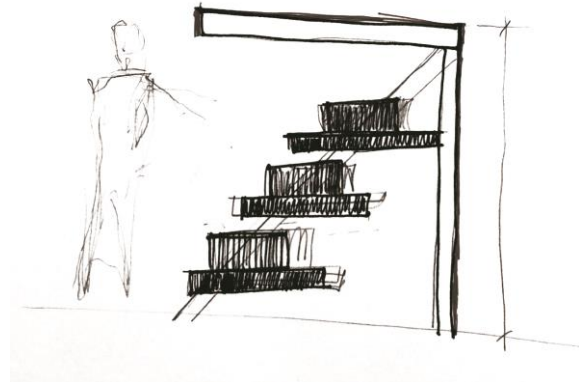
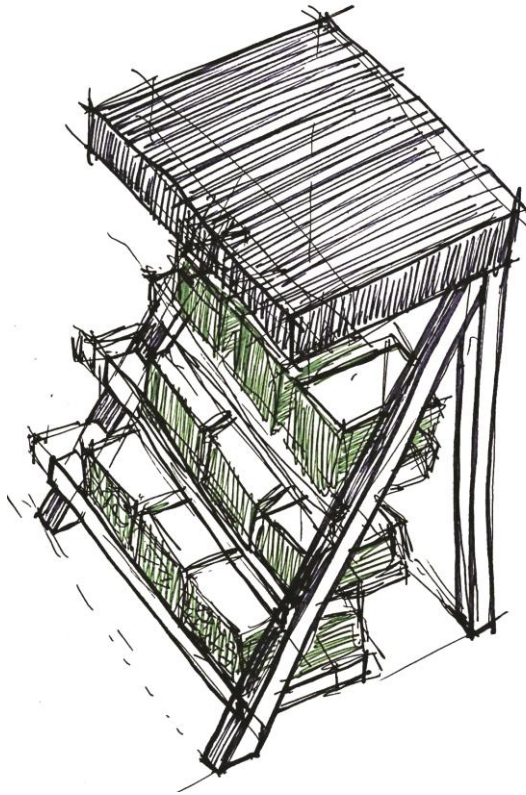
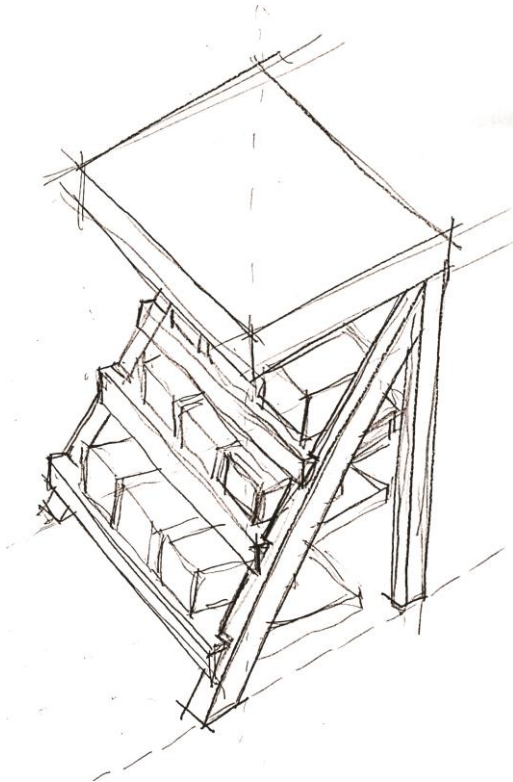
Crate measurements (in mm)



Concept sketch with dimensions (in mm)

PHASE 05

CONCEPT & DESIGN



The design consists of a timber framework holding up a 'roof' of shade cloth and three stepped shelves, on which the crates will sit. The shade cloth can be rolled down over the sides of the structure, to keep the vegetables cool.

3D model views of proposed design.

ENVIRONMENT AND SERVICES 02 | PROJECT 01

PHASE 06

RESEARCH: FEASIBILITY AND COST

To carry out once design is in place.

(source reference)