

Research: What kind of research can help us design the world we want? Anthropology, Permaculture and Earthship Ironbank

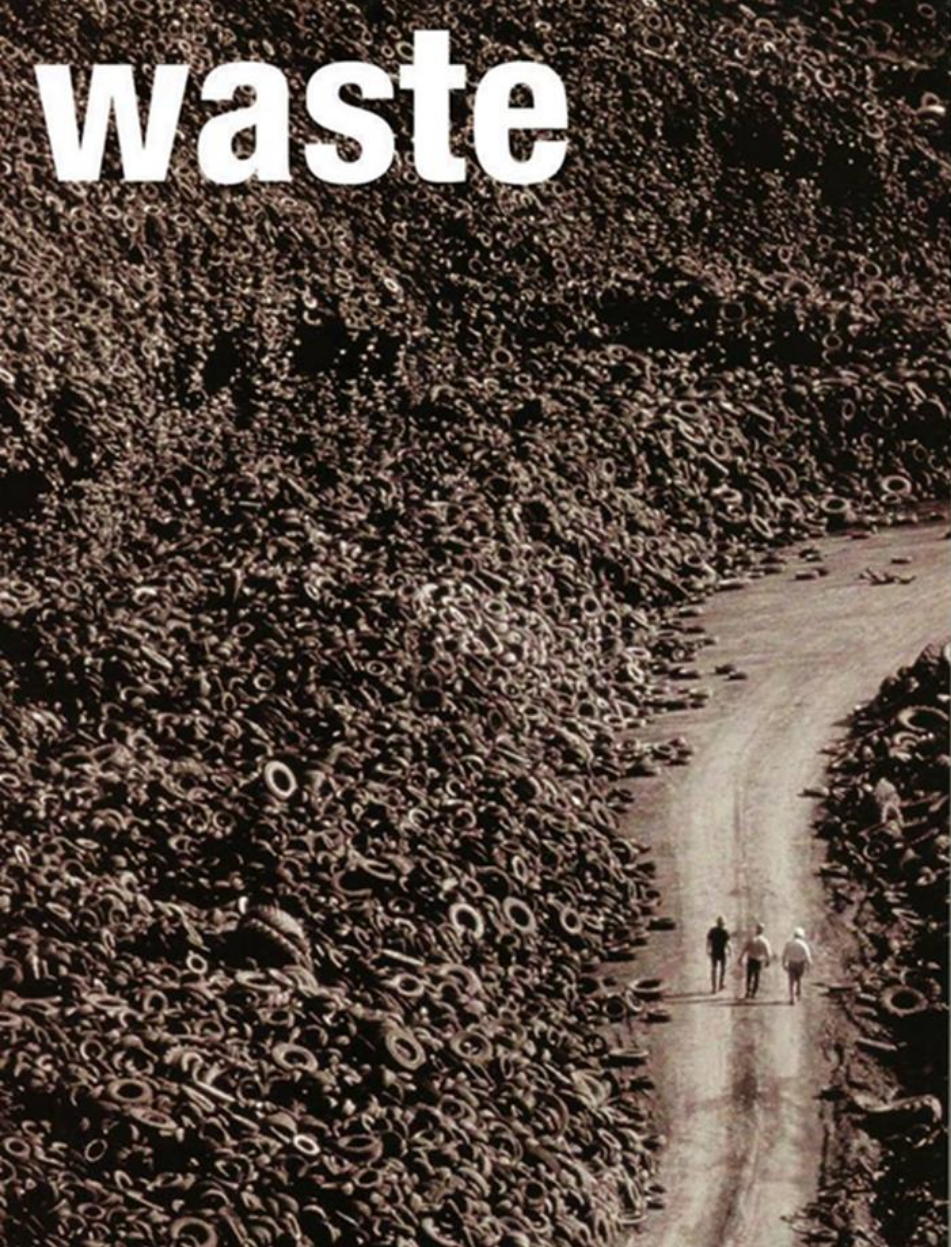
Dr Keri Chiveralls

International Permaculture Conference, London, UK 8th-10th September



BE WHAT **YOU** WANT TO BE
cqu.edu.au

waste



"Pertinent, timely
and brimming with passion!"

-NC MAGAZINE

GARBAGE WARRIOR

A FILM BY OLIVER HODGE

WINNER
AUDIENCE AWARD
VANCOUVER INTERNATIONAL
FILM FESTIVAL 2007

HOTDOCS
OFFICIAL SELECTION

KYOTO PLANET
FOR CHANGE
AWARD NOMINEE

©2007 Garbageman Inc. All Rights Reserved. A Garbageman Production. "GARBAGE WARRIOR"
Was filmed and produced by OLIVER HODGE and JIMMY WILSON. Produced by JIMMY WILSON. Screenplay by JIMMY WILSON. Directed by OLIVER HODGE.

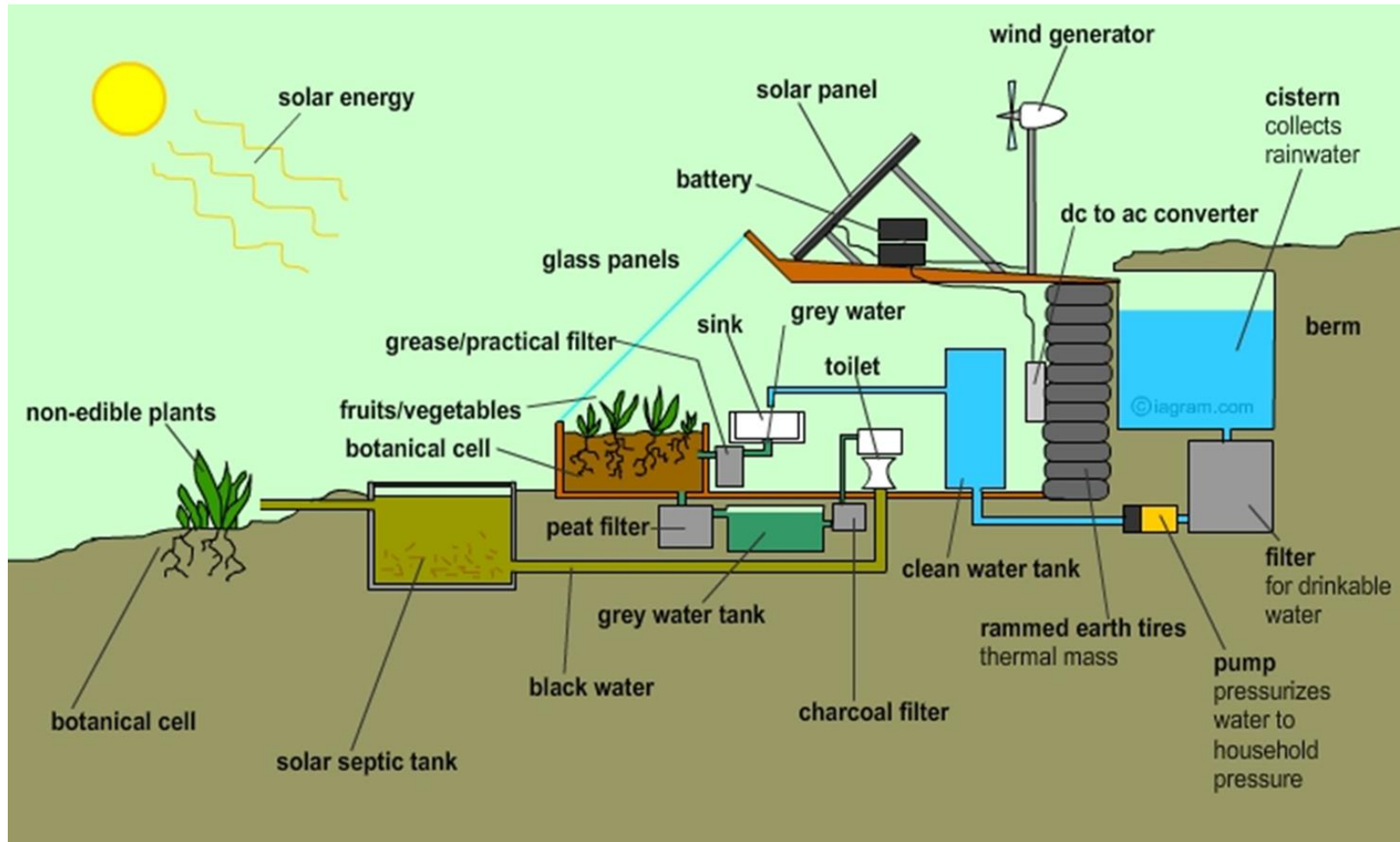
The film "GARBAGE WARRIOR" was supported by the Garbageman Foundation, the Garbageman Foundation and the Garbageman Foundation. The film was produced by Garbageman Inc. and the Garbageman Foundation. The film was produced by Garbageman Inc. and the Garbageman Foundation. The film was produced by Garbageman Inc. and the Garbageman Foundation.

Earthship Design Principles

- 1. Passive design or 'thermal/solar heating and cooling 'maintain comfortable temperatures in any climate'
- 2. Renewable energy 'through photovoltaic/wind power systems'
- 3. Onsite sewage treatment which 'prevents pollution of aquifers' and uses grey water to flush toilets
- 4. Building with 'natural and recycled materials' including materials often considered as 'waste'
- 5. 'Water harvesting' through the use of rain water which is recycled/reused 'four times'
- 6. 'Food production' using waste water for irrigation and a planter system which can be used to grow food on-site, year round, with zero food miles (Earthship Biotecture 2015).



Earthship Design Principles



Earthship Ironbank



Earthship Ironbank



Earthship Ironbank

Easter Earthship Workshop

Sat 7, Sun 8 April 2012 with Martin Freney

theory | tyre pounding | mud | bottle brick making

Come for one or two days

\$25 each day (+ \$0.30 booking fee)

(covers cost of insurance, vego lunch & drinks)

10:30am – 5:30pm, places limited

(to keep group size safe and manageable)

Ironbank, Adelaide Hills, South Australia

Email: martin.freney@internode.on.net



Marty's Earthship Credentials...

- Earthship Biotech Internship, Taos 2008
- Earthship Biotech Seminar "Sustainable Autonomy for Everyone", Melbourne, February 2012 (attendee and presenter)
- PhD Thesis: *Lifec*

Things to bring/wear;

- Water bottle
- Work gloves
- Work boots (not thongs as pictured!)
- Sun glasses and or safety glasses
- Be prepared for;
- rain (jacket)
- sun (hat, sun-screen)
- mud (change of clothes?)
- If you have a sledge hammer or shovel bring them too (no problems if you don't)

Click below to book for

<http://www.ironbank.org.au>

Click below to book for

<http://www.ironbank.org.au>

Further info will be email

Sheet #	Description
1	Drawing Schedule
2	Site Plan
3	Floor Plan
4	Section ABC
5	Section DEF
6	Section G
7	Tyre Wall Detail 01
8	N S Elevations
9	E W Elevations
10	Wastewater Site
11	Wastewater Building
12	Greywater proposal
13	Electrical
14	Earth tube details
15	Wet area details

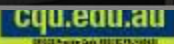
City of Onkaparinga
Development Approval
Endorsed pursuant to the
Development Act and Regulations

GIORDANO CERTIFICATION



- 6 JUN 2013

BUILDING RULES CONSENT GRANTED
SUBJECT TO CONDITIONS



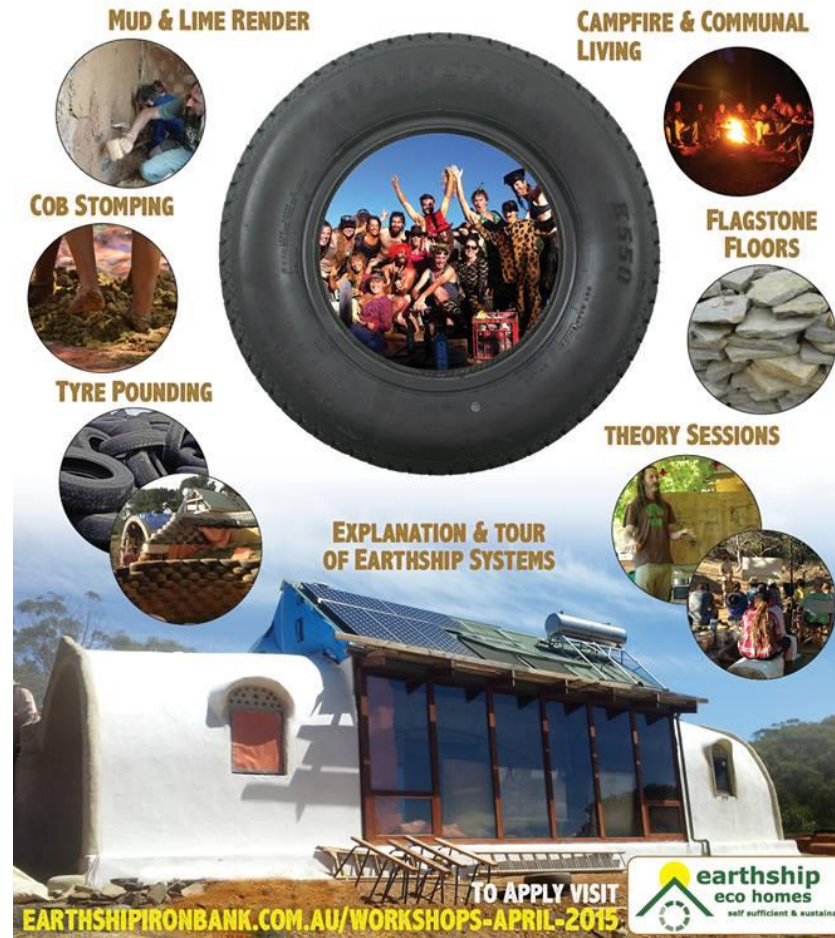
Earthship Ironbank

- Taught Earthship design principles and systems (energy, water, wastewater and food production)
- Earthship construction methods, such as bottle brick making, bottle wall construction, tyre pounding, tyre walls
- Natural building techniques, such as cob stumping, mud and lime rendering, flagstone floors, mud floors
- Afternoons and evenings punctuated with discussion, music, festivities
- Communal living and onsite camping
- Emotional, social and cultural aspects of workshops significant

Earthship Ironbank

WORKSHOPS 11 APRIL - 21 APRIL 2015

**THERE WILL BE 2 DAY, 4 DAY OR 10 DAY WORKSHOPS ACROSS THE 2 WEEKS,
HEAD TO EARTHSHIPIRONBANK.COM.AU FOR ALL THE DETAILS.**



The poster features a central image of a large black tire with a group of people posing inside it. Surrounding this central image are several circular inset photos showing various activities: people working on a wall, a campfire at night, flagstone floors, people stumping cob, tyre pounding, and people in a classroom setting. At the bottom of the poster is a photograph of the Earthship Ironbank building, a white, curved structure with solar panels on the roof. The text 'EARTHSHIP eco homes self sufficient & sustainable' is visible in the bottom right corner of the poster.

MUD & LIME RENDER

CAMPFIRE & COMMUNAL LIVING

COB STOMPING

FLAGSTONE FLOORS

TYRE POUNDING

THEORY SESSIONS

EXPLANATION & TOUR OF EARTHSHIP SYSTEMS

TO APPLY VISIT
EARTHSHIPIRONBANK.COM.AU/WORKSHOPS-APRIL-2015

earthship
eco homes
self sufficient & sustainable

Earthship Ironbank



Earthship Ironbank



Earthship Ironbank



Earthship Ironbank



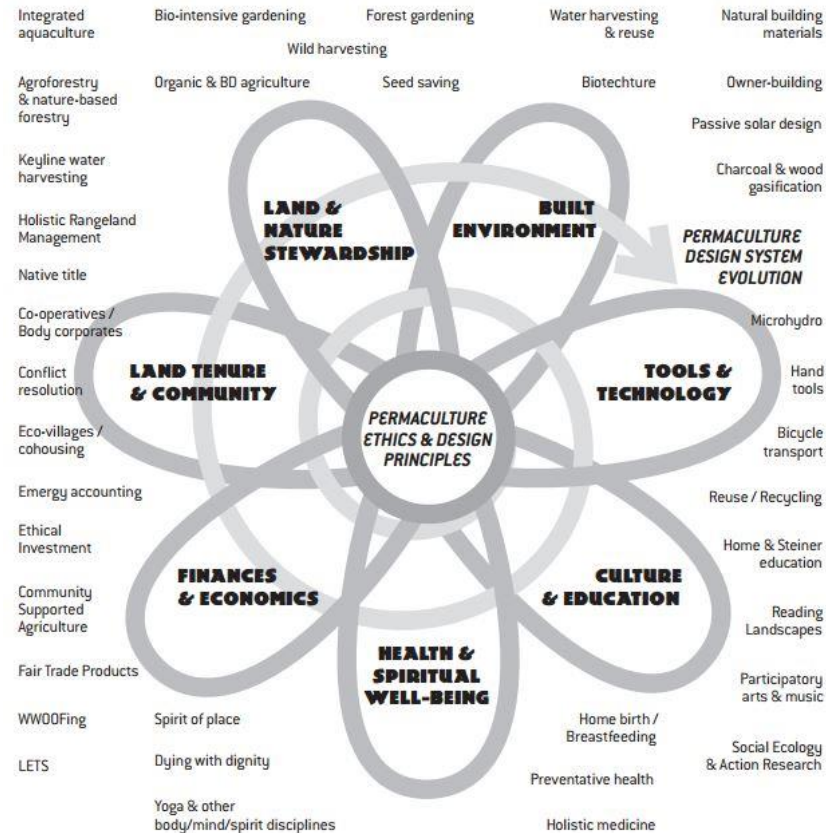
Anthropology and Permaculture

- Interview with key informants
- Participant observation
- Fieldwork and ethnographic data
- Permaculture Workshops Edmonton (Haluza-DeLay and Berezan 2013)
- ‘Community of interest’ and learning community
- Information exchange and social networking (both physical and virtual)
- Fosters development of ‘ecological habitus’ – ‘feel for the game’ ‘live sustainably without trying’ (Haluza-DeLay 2008; Bourdieu 1990)



Permaculture Principles

1. Observe and Interact
2. Catch and Store Energy
3. Obtain a Yield
4. Apply Self-Regulation and Accept Feedback
5. Use and Value Renewable Resources and Services
6. Produce No Waste
7. Design from Patterns to Details
8. Integrate Rather than Segregate
9. Use Small and Slow Solutions
10. Use and Value Diversity
11. Use Edges and Value the Marginal
12. Creatively Use and Respond to Change

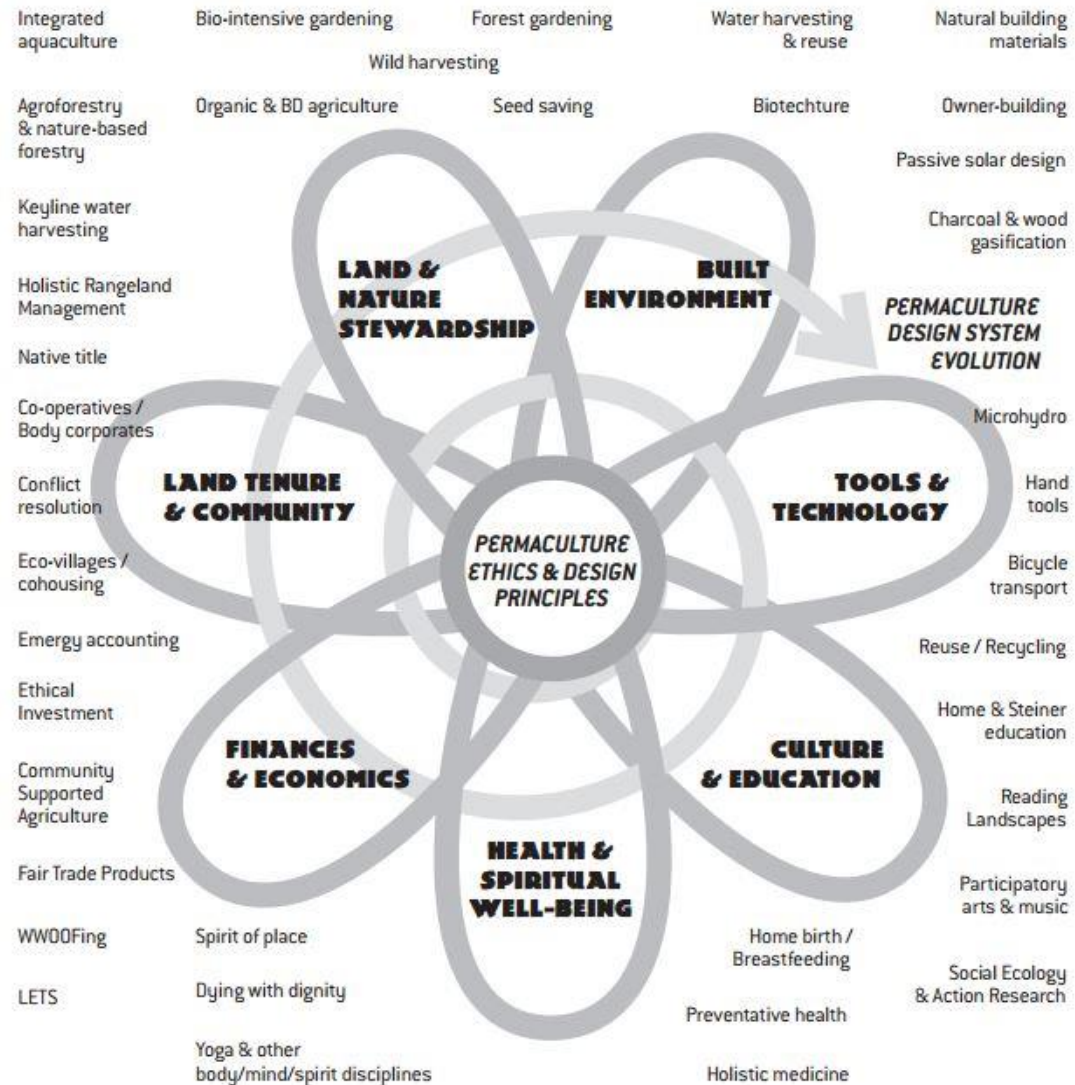


(Holmgren 2002)

Earthship Ironbank and Permaculture

- 'Permanent Agriculture' -
'Permanent Culture'
- Established in Australia in late 70s
- The three core ethics of permaculture (Holmgren 2002):
 1. Care for the earth
 2. Care for the people
 3. Set limits to production and consumption and redistribute surplus

Image Source: (Holmgren 2013)



Earthship Ironbank and Permaculture

- Life-cycle impacts of building with waste questionable
- Building with 'waste' metaphor for the construction of new cultural and social systems from the 'ruins' of a decaying industrial society
- Enables social structures and relationships formed throughout the building process to become literally embedded in the building
- Sense of permanence from impermanence - embedding transient movement in larger physical and social structures
- Emblematic of shift from consumption to production



"The greatest **change** we need to make is from **consumption** to **production**, even if on a small scale, in our own gardens. If only **10%** of us do this, there is enough for **everyone**."

-bill mollison

Data Collection and Analysis

- Preliminary results of fieldwork suggest most participants already interested and involved with permaculture or related interests
- Speeding up and deepening of engagement across the permaculture domains
- Freney and Chiveralls designing a survey 'spill-over' effects (Hondo and Baba 2010) associated with the workshops
- Significance of the workshops as a form of cultural 'catalyst' (Walter 2012)
- Transformations in the everyday practices of participants beyond the workshops.
- Results will be compared with ethnographic data obtained through participant observation.



Data Collection and Analysis

- Survey attempting to capture changes in ecological engagement and behaviour before and after workshop
- Self-reporting issues
- Triangulation of Data

1. Field-notes and Interviews from workshops

2. Ongoing social network analysis through social media

3. Survey

a) Knowledge and Engagement

b) Behaviour

1. How interested were you in the topic of permaculture before and after attending the workshop?

	very interested	somewhat interested	neutral	not very interested	not at all interested
before	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
after	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Describe/comments	<input type="text"/>				

2. Please indicate to what extent your behaviour has changed in relation to ENERGY

	Less often	No change	More often
Turn off the lights when going out even for a short time.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Unplug or switch off the main power of an electrical appliance when not using.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Forthcoming Publications



1. Chiveralls , K. and M. Freney 2015 'Spill-over Effects for a Ship Shape Society: Earthship Ironbank as Cultural Catalyst'
Unmaking Waste Conference, University of South Australia,
Adelaide, 21st – 24th May.
2. Chiveralls, K. 2016 'Reclaiming the Past to Mould the Future: Waste as metaphor at Earthship Ironbank', in Crocker, R. and K. Chiveralls, *Subverting Consumerism: Reuse in an Accelerated World*, London, Routledge.

References

- Freney, Martin. 2009. "Earthships: Sustainable Housing Alternative", *International Journal of Sustainable Design*, 1(2):223-240.
- Freney, Martin. 2008. "Evolving Towards an Ecological Society", *Proceedings of the 3rd International Solar Cities Congress 2008*, Adelaide, South Australia, February 17-21.
- Fukuoka, Masanobu. 1978. *The One-Straw Revolution*. Emmaus, PA: Rodale Press.
- Haluza-DeLay, Randolph. 2008. "A Theory of Practice for Social Movements: Environmentalism and Ecological Habitus". *Mobilization*, 13(2):205-218.
- Haluza-DeLay, Randolph and Ron Berezan. 2013. "Permaculture in the City: Ecological Habitus and the Distributed Ecovillage". In *Environmental Anthropology Engaging Ecotopia: Bioregionalism, Permaculture, and Ecovillages* edited by Joshua Lockyer and James R. Veteto, 130-145. New York: Berghahn Books.
- Hewitt, Mischa and Kevin Telfer. 2012. *Earthships in Europe (Second Edition)*. IHS BRE Press: Bracknell.
- Holmgren, David. 2002 (2011). *Permaculture: Principles and Pathways Beyond Sustainability*. Holmgren Design Services: Hepburn, Victoria.
- Holmgren, David. 2013. *Essence of Permaculture*. Holmgren Design Services: Hepburn, Victoria. Accessed February 19. http://holmgren.com.au/downloads/Essence_of_Pc_EN.pdf

References

- Lockyer, Joshua. and James R. Veteto, eds. 2013. Environmental Anthropology Engaging Ecotopia: Bioregionalism, Permaculture, and Ecovillages. New York: Berghahn Books.
- Meyer, David and Nancy Whittier. 1994. "Social Movement Spill-overs". Social Problems, 41(2):277-298.
- Mollison, Bill and David Holmgren. 1978. Perma-culture One: A Perennial Agriculture for Human Settlements. Tasmania: Tagari Publications.
- Mollison, Bill. 1979. Perma-culture Two: Practical Design for Town and Country in Permanent Agriculture. Tasmania: Tagari Publications.
- Open Eye Media. 2015. Garbage Warrior. Australia: Hopscotch. Website. Accessed February 19. <http://www.garbagewarrior.com/about>
- Reynolds, Michael. 1990. Earthship Volume 1: How to Build Your Own. Solar Survival Press: Taos, New Mexico.
- Reynolds, Michael. 1991. Earthship Volume 2: Systems and Components. Solar Survival Press: Taos, New Mexico.
- Hondo, Hiroki and Kenshi Baba. 2010. "Socio-psychological impacts of the introduction of energy technologies: Change in environmental behavior of households with photovoltaic systems". Applied Energy, 87:229-235.
- Walter, Pierre. 2012. "Cultural Codes as Catalysts for Collective Conscientisation in Environmental Adult Education: Mr. Floatie, Tree Squatting and Save-our-Surfers", Australian Journal of Adult Learning, 52(1): 114-133.

Comments, Collaboration? Contact:

Dr Keri Chiveralls

Discipline Leader/Senior
Lecturer/Permaculture
Design and Sustainability
Appleton Institute | School
of Human Health and
Social Sciences
Higher Education Division
CQUniversity Adelaide, 44
Greenhill Road, Wayville
South Australia 5034
PO Box 42, Goodwood SA
5034
P +61 8 8378 4546
(x54546)
E k.chiveralls@cqu.edu.au