

PRESENTERS...the earth builders



Gernot Minke

Gernot Minke is the first world benchmark in terms of sustainable or natural construction. Gernot Minke has carried out more than 50 research and development projects in the field of ecological constructions, low-cost housing, earth constructions, bales of straw, bamboo and green roofs. He has been invited as a speaker to more than 60 international conferences and has given numerous lectures, courses and workshops in various countries of the world.

Email: minke@asl.uni-kassel.de Website: <http://www.gernotminke.de/>

Building with earth

The presentation starts showing some outstanding historical examples of earth architecture of the UNESCO World Heritage List and shows some results of research programs about the humidity absorption capacity of clayey soils and the shelter effect of earth walls against high frequency electromagnetic radiation. It also gives some data of shrinkage, abrasion and erosion behaviour of earth plasters. Besides these characteristics of the building material earth a new developed extrusion technique of earth elements and a method to build structurally and acoustically optimized adobe domes are illustrated and several worldwide built examples are shown. The lecture ends illustrating some design rules of earthquake resistant earth buildings shows some built low-cost-housing examples.



Tiny House, Brasil 2016/2017



Ray Trappel, architect and earthbuilder

Ray has been involved in earth building for over forty-five years and is an active member of the Earth Building Association of Australia. He has devoted his time to many community projects – his most recent, The New Secret Garden at Western Sydney University, Hawkesbury.

Emails: raytrappel@iinet.net.au raytrappel@gmail.com

Design tips and techniques to keep costs down

From the idea to the realisation there can be many opportunities to optimise the use of resources. From learning to “think simply” and learning how to use “a pattern language”, to appreciating the principles of “less is more” and “wabi sabi”. From the efficient use of raw materials, labour and energy to the use of the repurposed and the reduction of wastefulness. From a rammed earth house on a large block to a mudbrick town house on a small block and a garden centre with a number of earth building techniques on display.



Mudbrick Townhouse, NSW



Peter Hickson, Earthbuilding Solutions

Peter Hickson is a master builder and one of Australia’s leading proponents of earth building. He has been actively engaged in earth building for 36 years, in design and construction as well as in writing, education, research, promotion, leadership, community development and aid work. Peter has developed construction systems and commercial mud brick making equipment. He was a foundation member of the Earth Building Association of Australia (EBAA), serving on the committee since 2000 and as president for eight years. Peter’s business, Earth Building Solutions, offers services such as building, training and consultancy.

Emails: peterhickson7@gmail.com.au Website: <http://earthbuildingsolutions.com.au/>

Sweat, surrounding objects, simplicity of design and serendipity

I have been designing and building earth buildings from the very humble to luxurious for 36 years trying as best as possible to match the building with resources of the client. Sometimes the greatest challenge was finances and this meant we needed to apply the principles that make up the title of this talk. Sweat, surrounding objects, simplicity and serendipity became the ingredients for beautiful affordable homes. Often these buildings became my favourites due to a bond that grew between the client and myself and because so much value and beauty was created from so little. This talk will be the journey of creating some of these buildings.



Cob Granny Flat Woodhill, NSW



Michael Brady, Director, BSE Consulting

Michael Brady is a chartered professional environmental and civil engineer and an accredited building surveyor. Michael is inspired to fight mediocrity in residential engineering design. Michael spent 8 years in the Royal Australian Air Force as an Airfield Engineer before establishing an engineering consultancy focused on providing engineering design for natural building materials. With this focus, Michael has helped his clients achieve visionary sustainable construction outcomes including many single and multi-storey straw and earth dwellings. Michael lives on a small farm in Delegate NSW with his wife and 3 children where he enjoys close proximity to world class fly-fishing waters.

Email: michael@bseconsulting.com.au Website: www.bseconsulting.com.au

Cost of engineering design - why some earth buildings cost more to engineer than others

This presentation covers the key influences in engineering consultancy costs. It outlines how, through intelligent design and collaboration, a balance of architectural and structural requirements are able to be achieved resulting in best case outcomes for owners by reducing costs of construction and maintaining architectural intent. This presentation fits into the broad topics of “design features that assist in keeping the costs down” and “earth building approaches and systems to reduce construction costs”.



Clare Kennedy, Architect, Five Mile Radius

Clare Kennedy is a Brisbane based architect and earth construction enthusiast. In 2016, Clare founded Five Mile Radius, a design studio and research consultancy focussing on the use of locally sourced building materials in construction. Their philosophy is simple - Build With What You've Got. Over the past two years Five Mile has built a number of projects using local earth, timber and recycled materials. Every project is an opportunity to engage with students, industry and the public through publishing, film, social media, workshops and events. They are committed to sharing their work, aiming to have a positive impact not only in the local communities in which they build but also in construction culture and in what people demand of their built environment.

Email: gday@fivemileradius.org Website: www.fivemileradius.org

Improving the value of earth.

Five Mile Radius is working to facilitate a shift in consumer demand that would see earth become a highly valued construction material. Clare's talk will focus on three of their earthen projects, painting a picture of how we might be able to improve public perceptions of building with what we have around us.



Mud houses, India



Rob Hadden, Owner Builder

35 years of owner building with earth and timber - where I've been, where I'm going, and what I've learned

Rob Hadden is a serially obsessed builder and probably should feature in 'Psychiatric Weekly' as a case study. I began building in 1981 and haven't stopped since then. Going where angels fear to tread and always pushing my limits produces some odd buildings. Some would say that is very apt! I hope to still be going strong at ninety with hammer in hand – on yet another project. Over the years as my knowledge and skills base increased, I tackled increasingly complicated buildings but always the underlying principle behind my efforts was to be able to owner build and to utilise common everyday materials in the pursuit of my dreams. There are so many ways to achieve those aims, but my overarching aim was to build with as little money as possible. My first two buildings on the current site came in at around \$20,000 each and the most recent at around \$30-35,000 roughly. These have been built over a twenty-five year period during which time I became expert at getting materials at little or no cost. In this day and age of ever increasing bureaucracy it is getting harder to comply...but it has ever been so. The more things change, the more they remain the same. Anything is possible. For me, building is an art form and not just a place to eat, sleep and be shot off to work to pay for a mortgage of which I have not had since 1984!



Earl Boyd

Light Earth

Earl is an enthusiastic natural builder and has been involved in various alternative building projects here in Australia and back home in NZ – including the first permitted Earthship's in both countries, construction & earthquake testing of the newly developed insulative mudbricks for the NZ Earth Building Standards, and is actively involved with indigenous housing initiatives building traditional styles villages using earth on tribal land in NZ.

During her training as a conventional carpenter Earl became exposed to the magic and wonders of traditional & earthen building, and the possibilities it could offer the housing crisis alongside the many environmental and health benefits. Chasing the movement and revival of these ancient ways of building she has spent the past 6 years exploring and creating with various techniques such as mudbrick, cob, light earth and natural renders amongst others with a strong interest in vernacular building.

Working alongside experts, as a member of EBAA & EBANZ and building in broad areas in both countries, Earl has experience and knowledge of building in a wide range of climatic and environmental conditions including working within seismic zones, bushfire areas and extreme weather. Passionate about responsible, healthy, affordable homes and having spent years working with owner builders and facilitating grass roots community building workshops Earl brings exposure and promotes earth building to an eclectic range of people and sees accessibility and availability of earthen homes as a real option for everyone.

TALKS...hear from the earth builders

FRIDAY 28 SEPTEMBER 2018

8.00 REGISTRATION/BREAKFAST

- 8.30 **WELCOME**
We acknowledge the Traditional Owners of the lands on which we gather, the Wodi-Wodi peoples, and all First Nations communities in the Yuin nation. We pay our respects to Elders past, present and future, everywhere. Sovereignty was never ceded.
- 8.45 **Ray Trappel** Design tips and techniques to keep costs down.
- 9.15 **Peter Hickson** Sweat, surrounding objects, simplicity of design and serendipity.
- 9.45 **QUESTIONS**

10.00 MORNING TEA

- 10.20 **Gernot Minke** KEYNOTE: Building with earth
- 12.00 **QUESTIONS**

12.15 LUNCH

- 1.15 **Michael Brady** Cost of engineering design - why some earth buildings cost more to engineer than others.
- 1.45 **QUESTIONS**
- 1.55 **Clare Kennedy** Improving the value of earth.
- 2.25 **QUESTIONS**

2.35 AFTERNOON TEA

- 3.05 **Rob Hadden** 35 years of owner building with earth and timber - where I've been, where I'm going, and what I've learned.
- 3.50 **QUESTIONS**
- 4.00 **Open forum** Affordable housing through the use of unfired earth.

5.00 CLOSE

5.00 SUNDOWNER DRINKS- BBQ Area - complimentary drink and drinks by donation

6.30 DINNER- BBQ area - healthy, yummy fresh cooked meals (vegetarian options).

8.00 EVENING SESSION - optional talk, video TBA

WORKSHOPS...making and creating

SATURDAY 29 SEPTEMBER 2018

8.00 REGISTRATION/BREAKFAST

- 9.00 **Peter Hickson** Introduction: Determining the characteristics of earthen materials
9.40 QUESTIONS
9.50 **Presenters** Short talks by each presenter describing workshop and location
10.15 QUESTIONS

10.30 MORNING TEA

- Earl Boyd** Make a Light Earth Wall
Ray Trappel Make a Rammed Earth Wall with a Window
Peter Hickson Make a Mudbrick and Build a Mudbrick Wall

12.30 LUNCH

1.30 ALL WORKSHOPS CONTINUE

3.15 AFTERNOON TEA

3.45 ALL WORKSHOPS CONTINUE

5.00 DRINKS

7.00 DINNER

The live dulcet tones of Andre Ramada will drift in and out of drinks and dinner.
EBAA has talent - DIY live music so bring your instrument

8.30 **5x5:** Presenters share their ideas, works and thoughts with 5 slides in 5mins



Mudbrick workshop



Rammed earth workshop

TOUR...low cost earth buildings in the flesh SUNDAY

SUNDAY 30 SEPTEMBER 2018

8.00 REGISTRATION/BREAKFAST

8.30 EBAA AGM - 1 hr 8:30 - 9:30

9.30 **Bamarang** Tour of - three MB houses and MB Round house - walk around

10.30 MORNING TEA

10.55 **DRIVE to Bamarang mud brick yard (5 min)**

11.00 **Bamarang** Mud brick yard

11.55 **DRIVE to Mundamia (5 min)**

12.00 **Mundamia** Jim da Silva Farm - Ten bed mudbrick hostel and cob shrine

1.00 **DRIVE to Berry (20 min)**

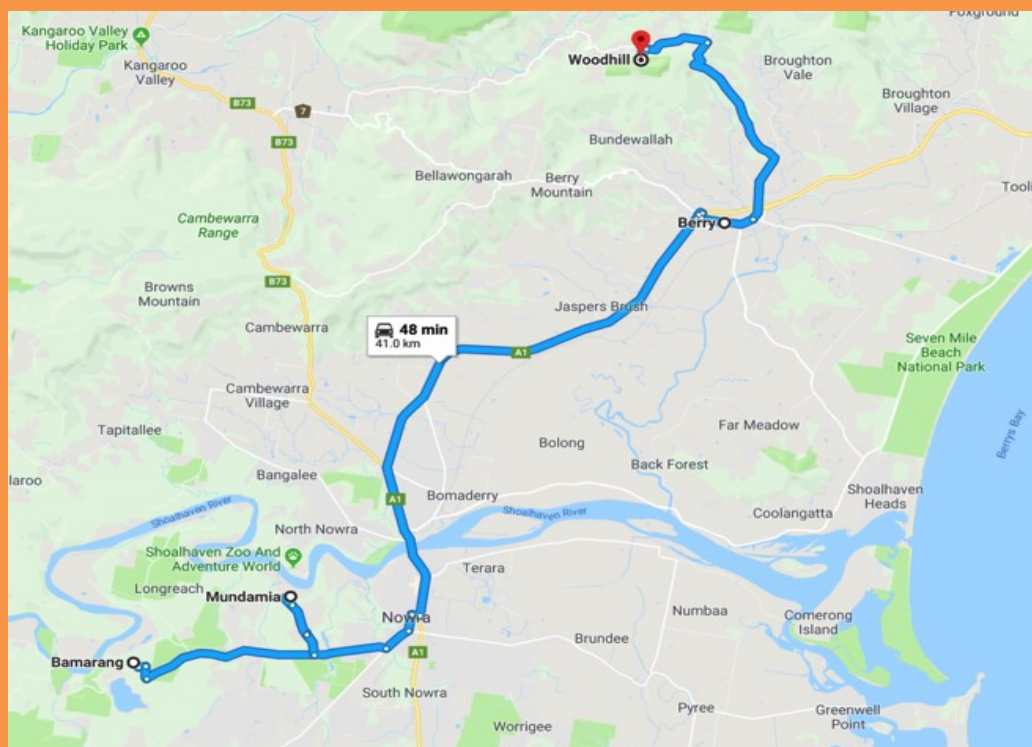
1.20 LUNCH at Berry in the park

2.00 **DRIVE to Foreman's Road, Woodhill Mountain (15 min)**

2.15 **Woodhill Mtn** Rita's cob granny flat

Woodhill Mtn Lynne and Lynne's MB home

4.30 FINISH



...a rough idea of where we are going

This event is sponsored by:

