



**CLAYBRICK**  
for good

Environmentally Friendly

**51** YEARS OF GREENING THE FUTURE

**A TEAM THAT PLAYS TOGETHER WINS TOGETHER!**

# Technical Excellence

GREENING THE FUTURE OF CLAY BRICK WITH PROVEN RESEARCH

**51<sup>st</sup> Annual General Meeting**  
Champagne Sports Resort, Drakensberg  
01 May 2014

Presented by:  
**Nico Mienie, Chairperson**  
National Technical Committee  
**Howard Harris, Consultant**  
Structatherm Projects



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**Technical Committee**

- Nico Mienie
- Chris Dickinson
- Howard Harris
- At Coetzee

## TECHNICAL REVIEW 2013/4 (Nico)

### Review of Programme 2013/4

#### Long term projects out of reserves

- Environmental Life Cycle Assessment
- Socio-economic Life Cycle Assessment
- Developed the sustainability trade of tool - SBMI
- Relationship with Think Brick & T-value/CR value projects

#### Routine projects out of current income

- Monitored SABS for standards development
- Technical note series expanded
- Hot box thermal resistance testing fiasco - insulated cavity wall
- Marketing support



## TECHNICAL REVIEW 2014/5

### Technical themes for 2014/5

#### Long term projects out of reserves

- Complete Environmental Life Cycle Assessment
- Complete Socio-economic Life Cycle Assessment
- Promote the SBMI Sustainability trade-off tool
- Exploit T-value/CR value projects with Think Brick


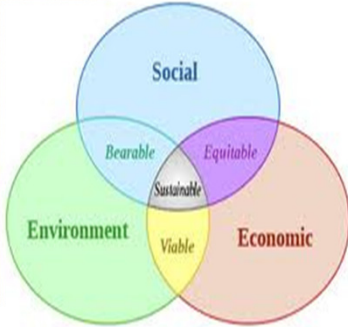
#### Routine projects out of current income



- Monitor of SABS for standards development
- Technical note series
- Salvage the Hot box thermal resistance testing
- Marketing support to counter CSIR propaganda




2014/2015 TECHNICAL REVIEW (Howard)

## Three pillars of sustainability

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## Life Cycle Assessment (LCA) of clay brick walling in South Africa

## Thermal Performance Study (TPS) of clay brick and other walling systems

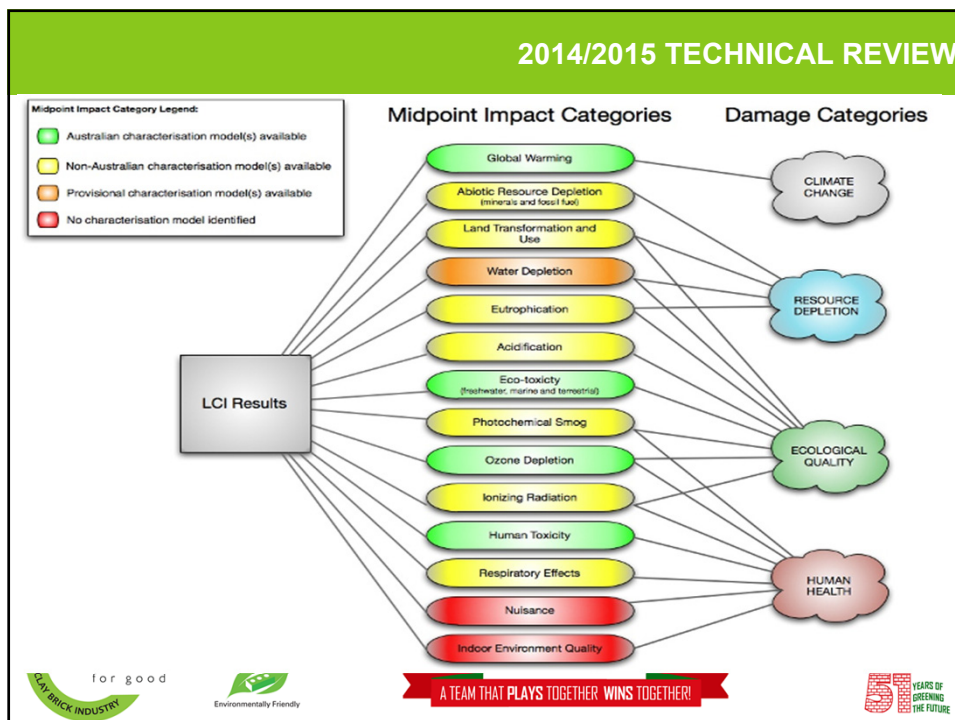
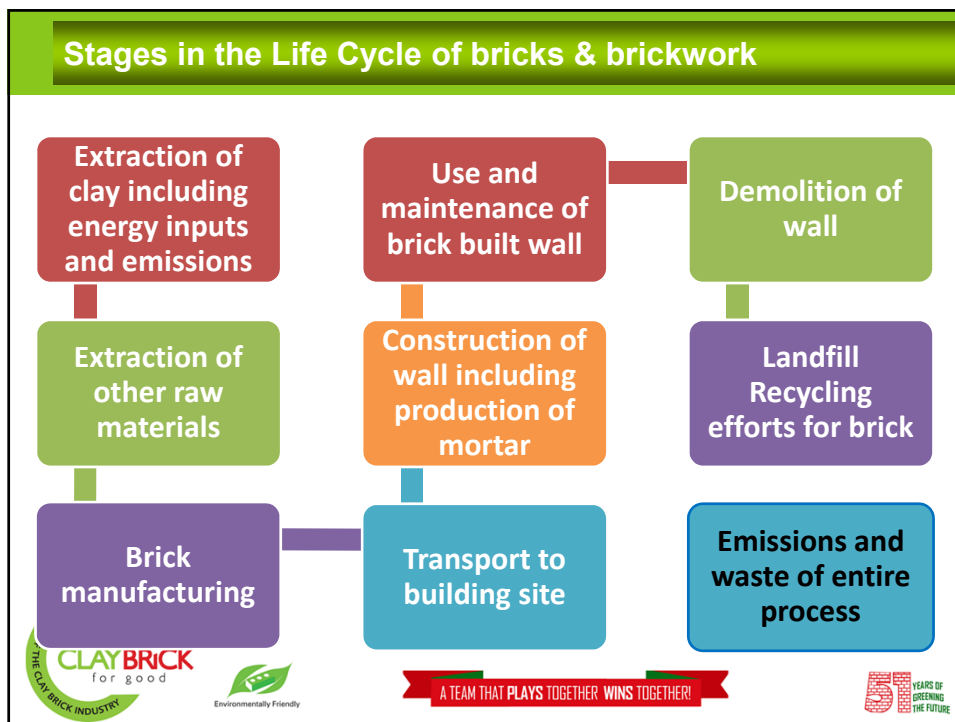
FOR  
The Clay Brick Association

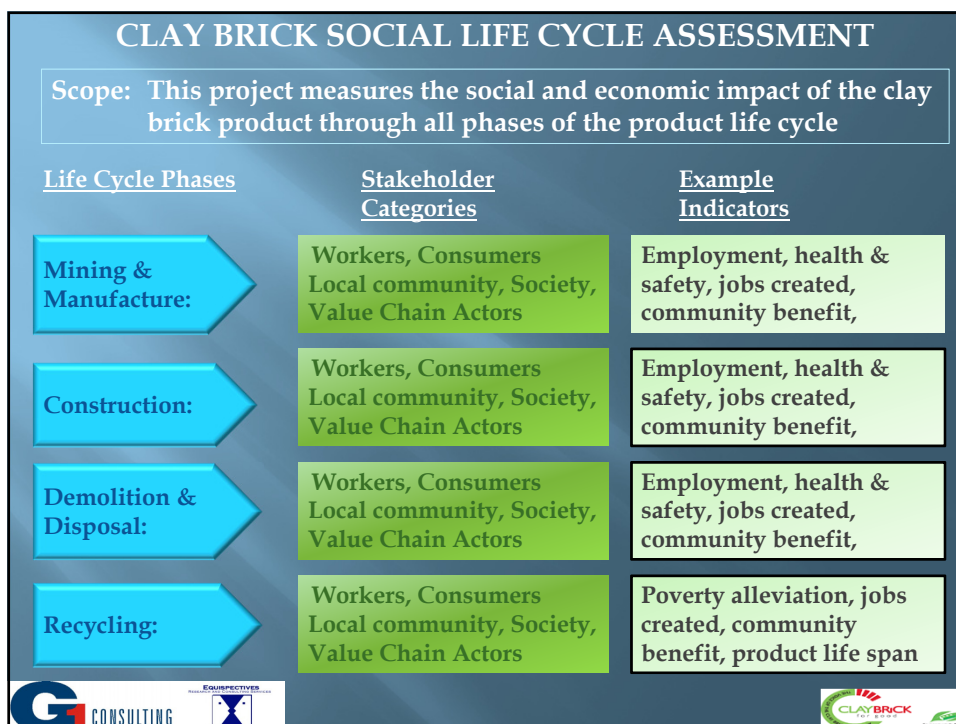
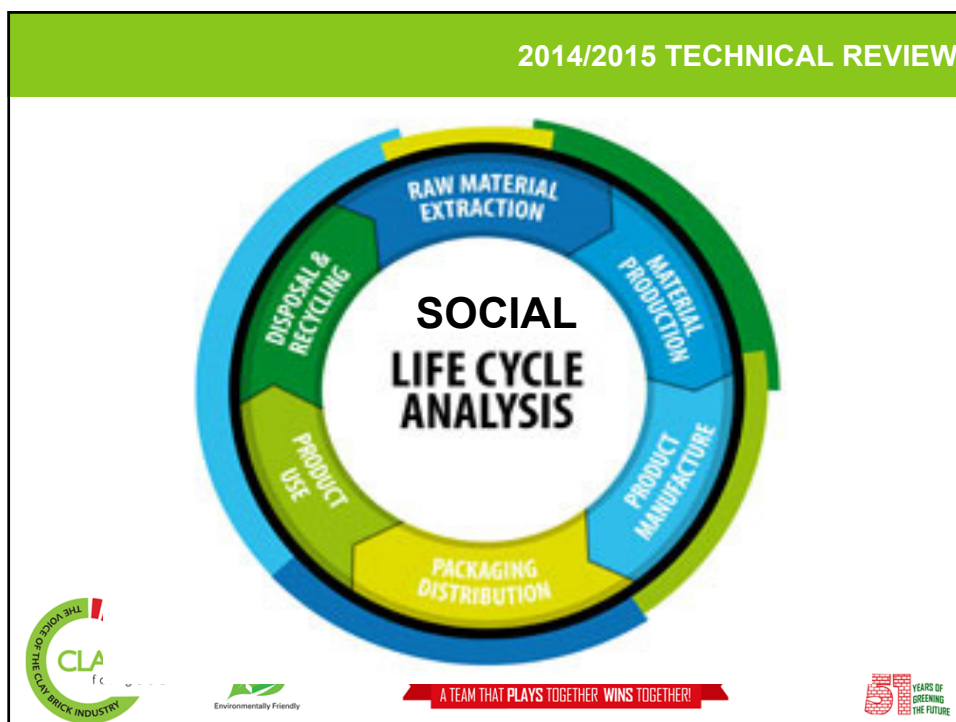
BY  
The Department of Architecture  
University of Pretoria  
Coordinator: Prof Piet Vosloo





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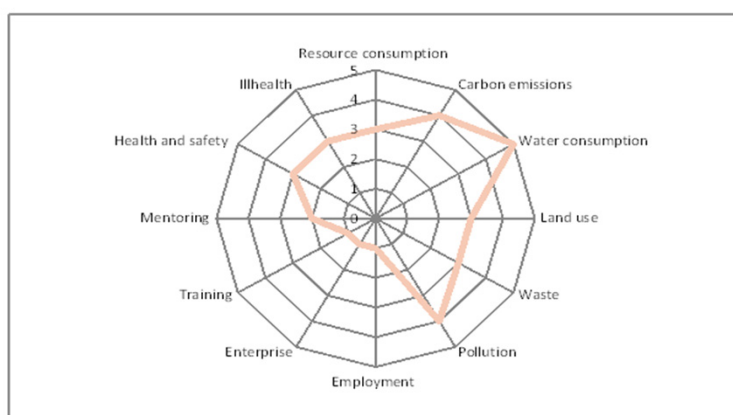
## MINING AND MANUFACTURING RESULTS

Stakeholder Category	Research Impact
Worker	Positive impact measured as the number of man hours per brick
Consumer	Positive impact on health and safety
Local Community	Positive impact on local community, local employment and local economic development
Society	Positive impact by providing access to economic opportunity
Value Chain Actors	Positive impact on supplier relationships



## Sustainable Building Materials Index

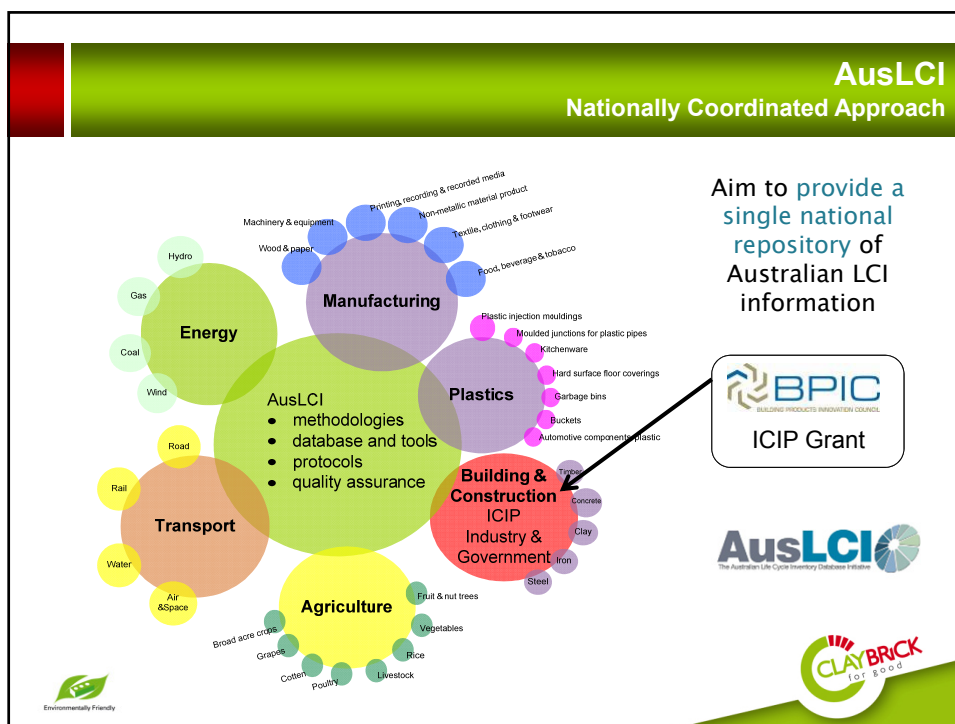
2014/2015 TECHNICAL REVIEW



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Ecological	3.67
Human development	1.83
Overall	2.75



TECHNICAL PROGRAMME	
ENVIRONMENTAL LIFE CYCLE ASSESSMENT	
• <b>Prior year expenditure 2012/13</b>	<b>R300167</b>
• <b>Prior year expenditure 2013/14</b>	<b>R248982</b>
• <b>Current year</b>	<b>R925964</b>
• Expenditure paid this year - March	R270236
• Completion expenditure	R655728
• <b>Think Brick co-operation</b>	<b>R160000</b>

## TECHNICAL PROGRAMME

### SOCIO-ECONOMIC BUDGET

- **Current projects approved** **R318132**
- **Current projects expenditure** **R311917**
  - Expenditure in the 2013/14 year R265717
  - Less - Swisscontact contribution 2013/14 R181000
  - Delayed completion expenditure 2014/15 R227200
- **Extension project** **R191880**
  - Planned extension & promotion R333000
  - Less - Swisscontact contribution 2014/15 R141120
  - Less - Canadian support anticipated ?



## ROUTINE TECHNICAL PROGRAMME TECHNICAL REVIEW 2014/5

### 2011 - 2014 Budget versus Expenditure Schedule

Budget item	Financial year	Budget	Spend	Variance	% underspend
<b>Routine programme items</b>	2011/2012	645000	376412	268588	41.6
	2012/2013	479000	349623	129377	27.0
	2013/2014	552000	681448	-129448	-23.5
<b>Accumulated spend</b>		<b>1676000</b>	<b>1407483</b>	<b>268517</b>	<b>16.0</b>





## ROUTINE TECHNICAL PROGRAMME ITEMS

### ROUTINE PROJECT BUDGET 2014/2015

- |  |                |
|--|----------------|
| • <b>Clamp Kiln Emission Project</b>               | <b>R165000</b> |
| • <b>SABS Monitoring &amp; Retainer</b>            | <b>R272000</b> |
| • Retainer Chris Dickinson, Eurocode               |                |
| • SANS204 & SANS10400XA development                |                |
| • CR method bolstering via T-value & wall tests    |                |
| • <b>Marketing assistance</b>                      | <b>R249000</b> |
| • Countering CSIR bias, Technical Notes, Animation |                |
| • Road show for promotion of LCA                   |                |

**TOTAL**

**R686000**



## ROAD SHOW TECHNICAL PROGRAMME ITEMS

### ROAD SHOW 2014/2015

- |   |                |
|---|----------------|
| • <b>Environmental LCA</b>                      |                |
| • <b>Social Life Cycle Assessment</b>           |                |
| • <b>Sustainable Building materials Index</b>   |                |
| • <b>EECB - Energy Efficiency Clay Brick</b>    |                |
| • <b>Flights, venue</b>                         |                |
| <b>Net total cost</b>                           | <b>R291180</b> |
| • <b>CBA share</b>                              | <b>R447000</b> |
| • <b>Less: Swisscontact support of Roadshow</b> | <b>R155820</b> |



