



Carbon Pricing and Regional Industry Effectiveness

The challenges and opportunities
ahead

what can you
build with Selkirk?

BUILD WITH

Selkirk

The History of Selkirk Brick

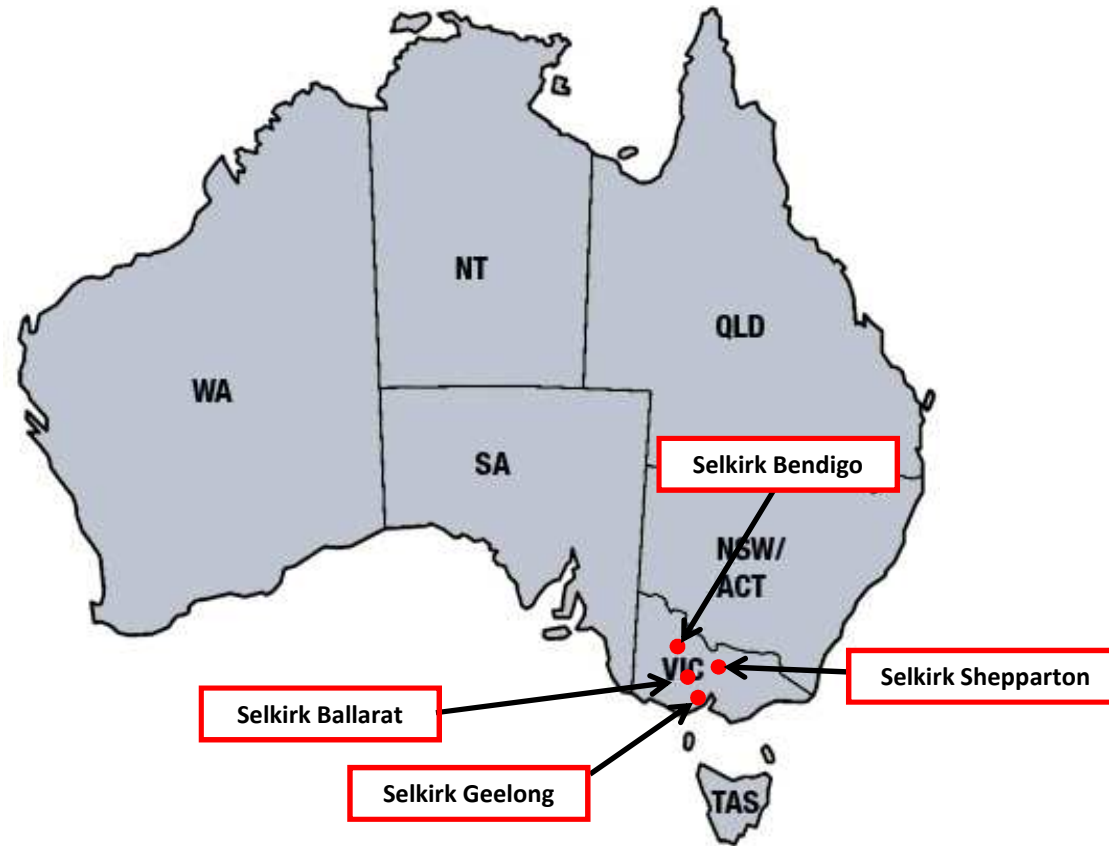
- **1962 Australia's first tunnel kiln and the worlds first fired by butane gas**
- **1965 Australia's first automated brick plant**
- **1983 first Selkirk pavers marketed**
- **1992 Selkirk enters the masonry market**
- **1994 fifth generation of Selkirk family joins the company**
- **Fourth largest manufacturer of clay bricks and pavers in Australia**
- **4th generation family owned business**
- **5th generation working within the business**

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Selkirk a Regional Business



what can you
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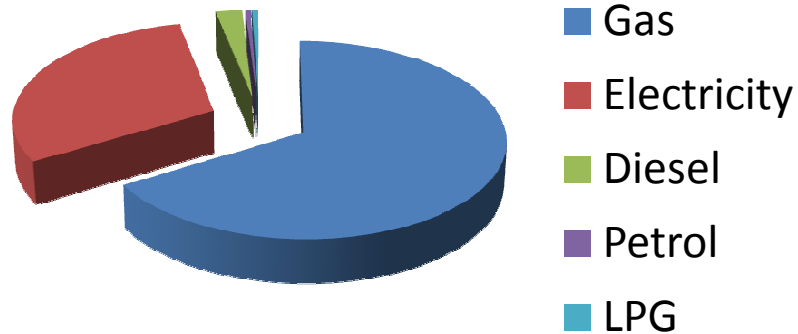
BUILD WITH

Selkirk

Selkirk's Carbon Footprint

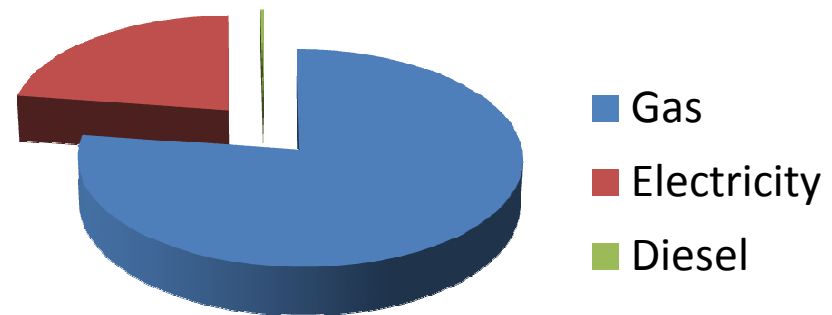
Total CO₂ 25000 T per annum

**Selkirk Brick Carbon Profile
Ballarat**



Total CO₂ 7000 T per annum

**Phillip's Brick Carbon Profile
Bendigo**



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Carbon Emission of Electricity

State	kgCO ₂ per kWh
Victoria	1.21
New South Wales	0.89
Queensland	0.88
South Australia	0.68
Western Australia	0.8
Tasmania	0.3
Northern Territory	0.67

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Carbon Efficiency



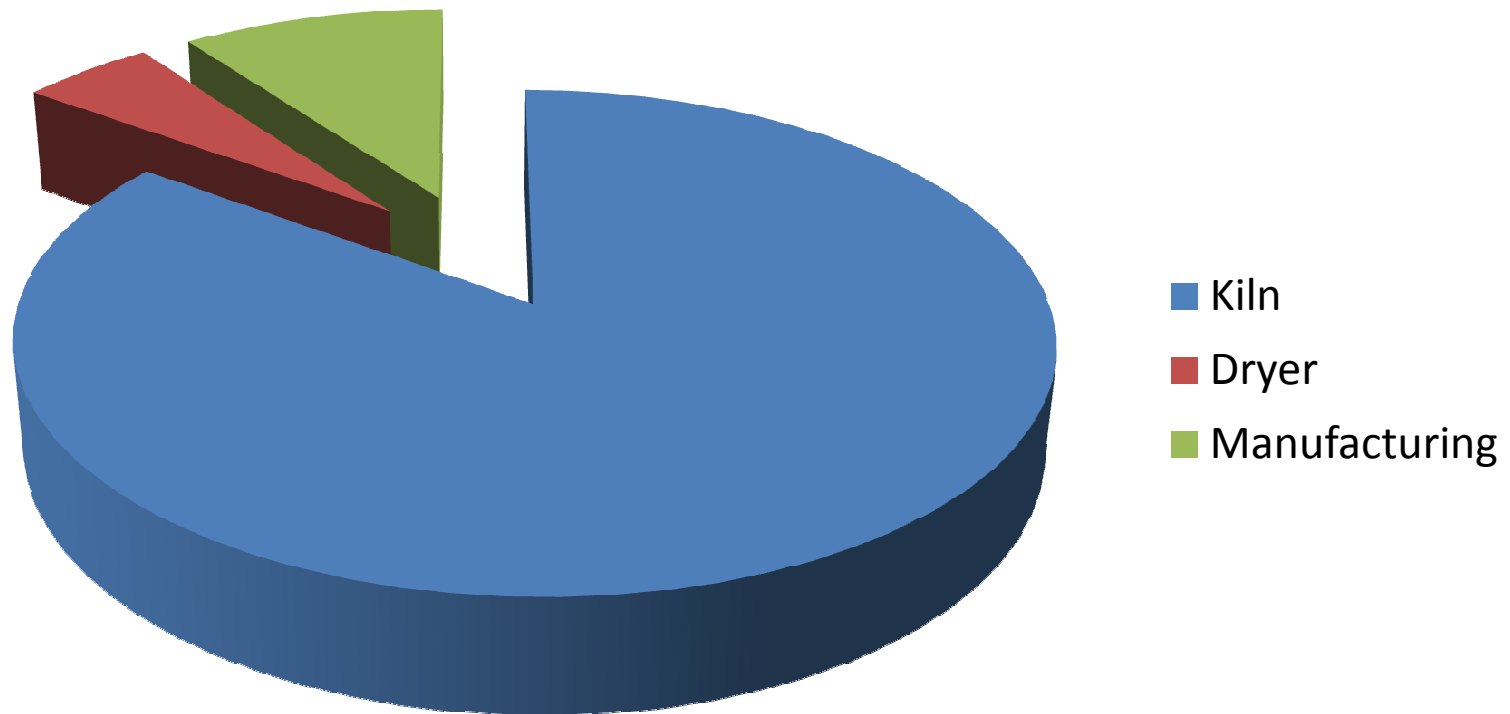
what can you
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Where is the Energy used?

% Energy Use



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Firing Methods for Bricks

- Clamp Kiln – wood fired 36 MJ per unit
- Down Draft – coal/wood fired/gas 24 MJ unit
- Paton Kiln – coal/gas fired – 15 MJ per unit
- Tunnel kiln – coal/sawdust/gas 9 MJ per unit

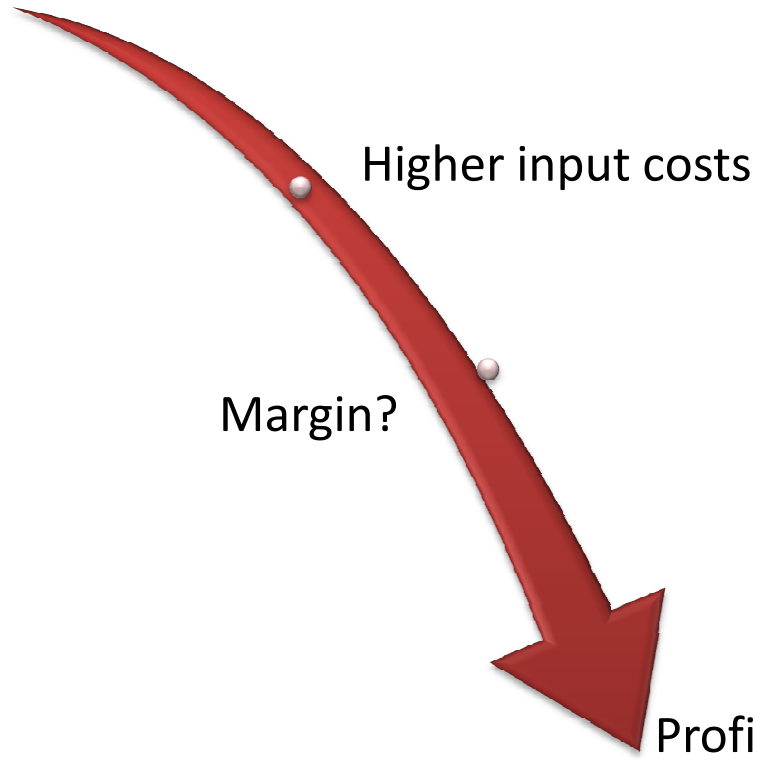
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What is the Impact of the Carbon Tax?

Increase in Energy Cost



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What to do?

- Close the business – its all too hard
- Cease manufacturing and become a shopfront
- Move offshore
- Or innovate, improve and use the challenge to build a stronger business

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What ways can we reduce our Carbon Footprint



Produce less

- Reduction of business



Increase Efficiency

- Limited potential



Innovate

- Change what we make
- Change how it's made

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What are we Doing?

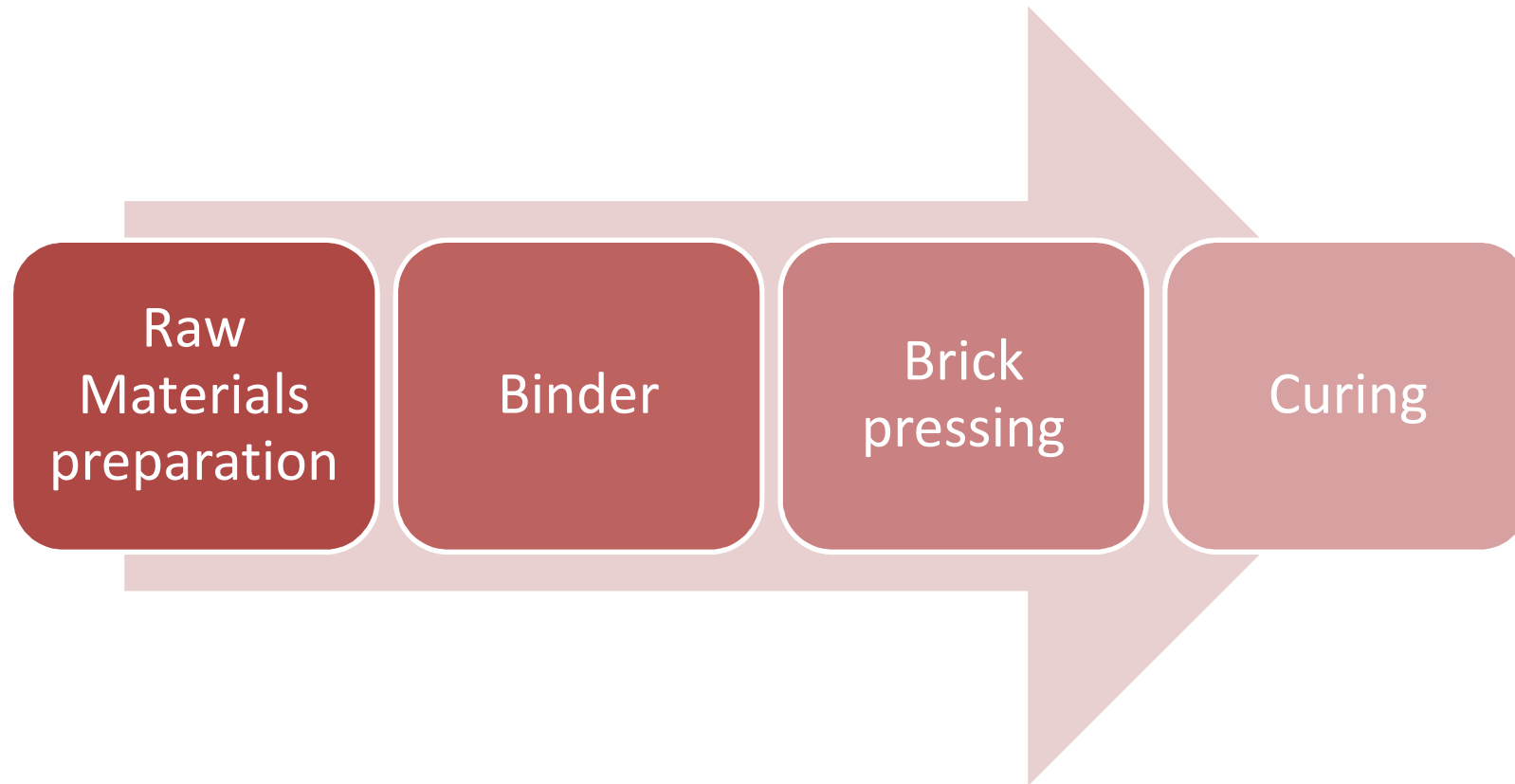
- Utilising waste streams to reduce the firing temperature but still produce traditional styled products.
- Breakthrough process to change the firing temperature from 1100°C to only 200°C
- Investigating cogeneration, syngas and biofuel

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Unfired brick process



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Binders

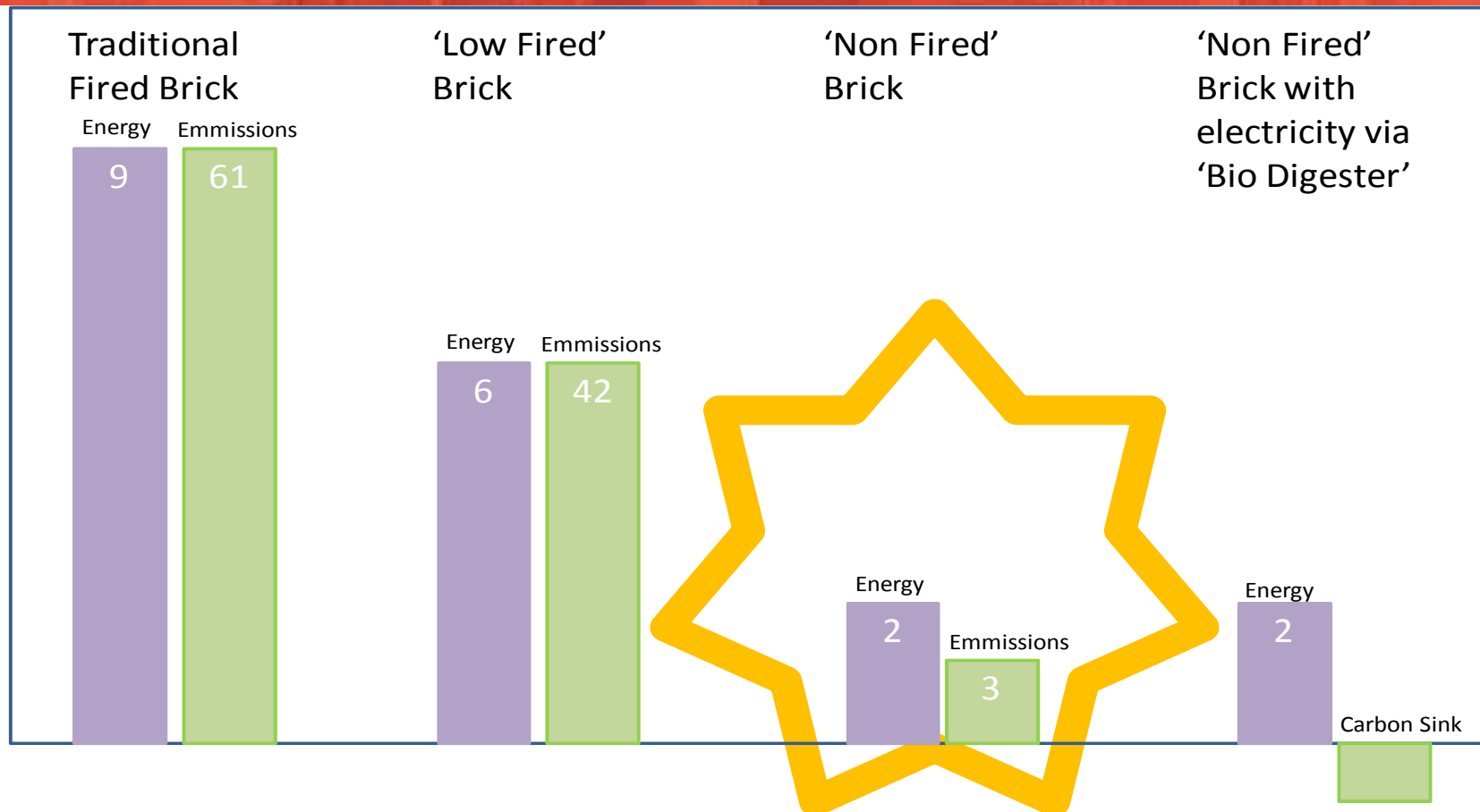
- OPC
 - High Carbon Foot Print
- Lime
 - High Carbon Foot Print
- Green Binders
 - Low or No Carbon Foot Print
 - Reuse of waste materials
 - Renewable

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How will this effect our Carbon Footprint



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Greenwash or Green Tag?



stralia



ecospecifier global
GREEN TAG
CERTIFIED



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Opportunities and challenges

- Industry bias due to free carbon certificates
 - Steel and cement
- Funding
 - Not until 3rd quarter 2011
- Not available for all businesses due to structure
- Renewable Energy – Syngas and Bio digestion
- Truly carbon efficient products

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