



An Introduction to Sustainable Design

Barry Ford MCIAT MCIOB CEnv IMaPS



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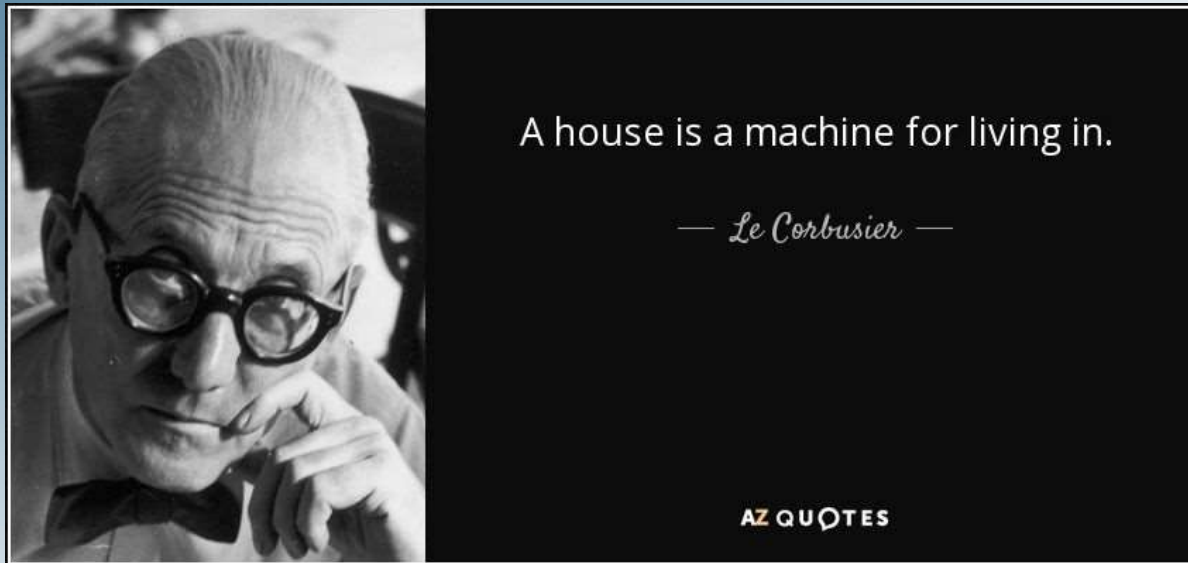
Sustainable Design and the Loss Adjuster



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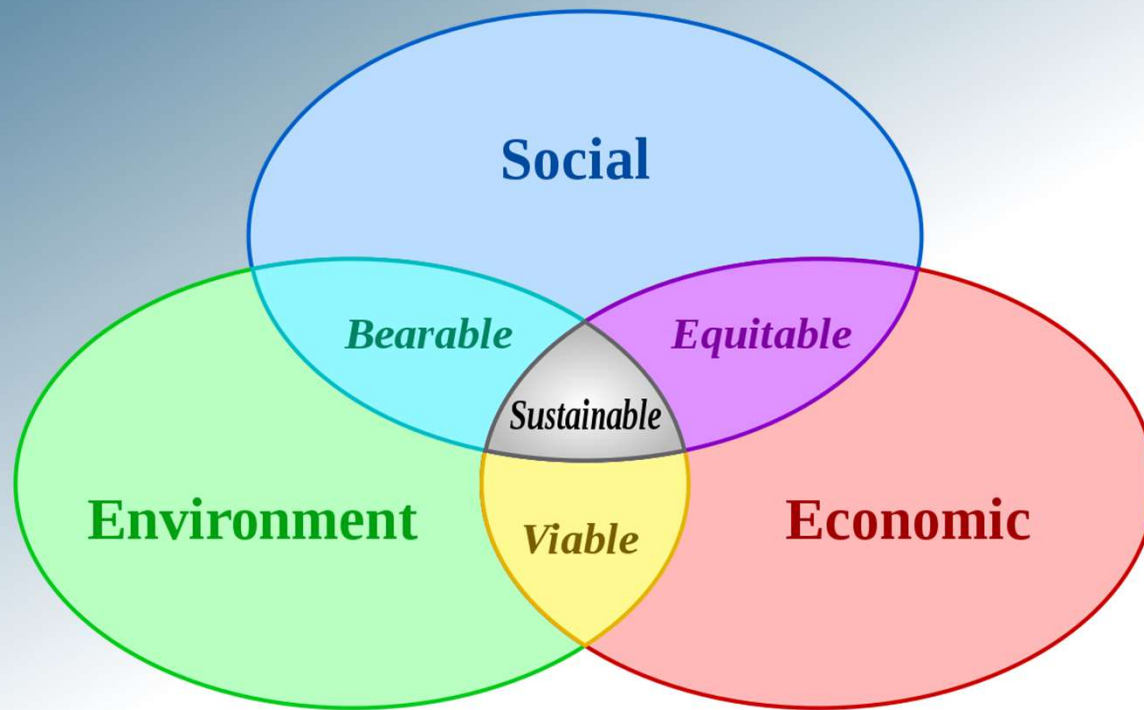
Sustainable Design and the Loss Adjuster



Sustainable Design and the Loss Adjuster



Sustainable Development



Climate Change



Climate Change



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Climate Change



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The Future

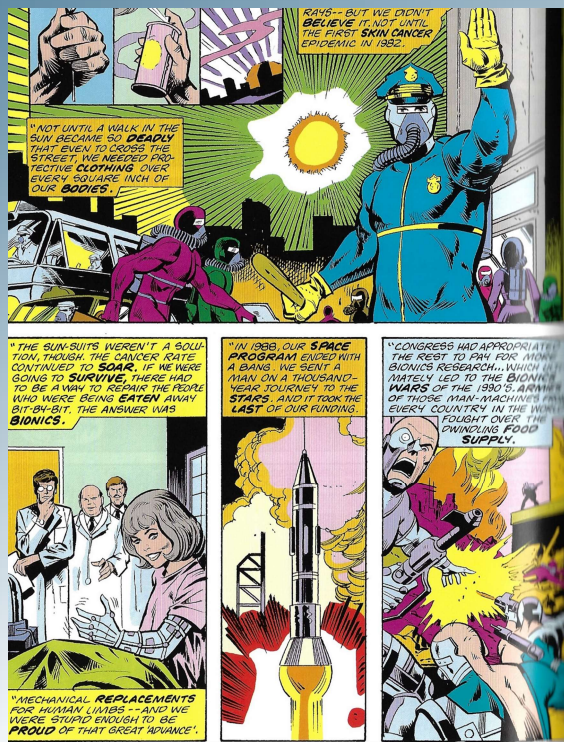


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The Future



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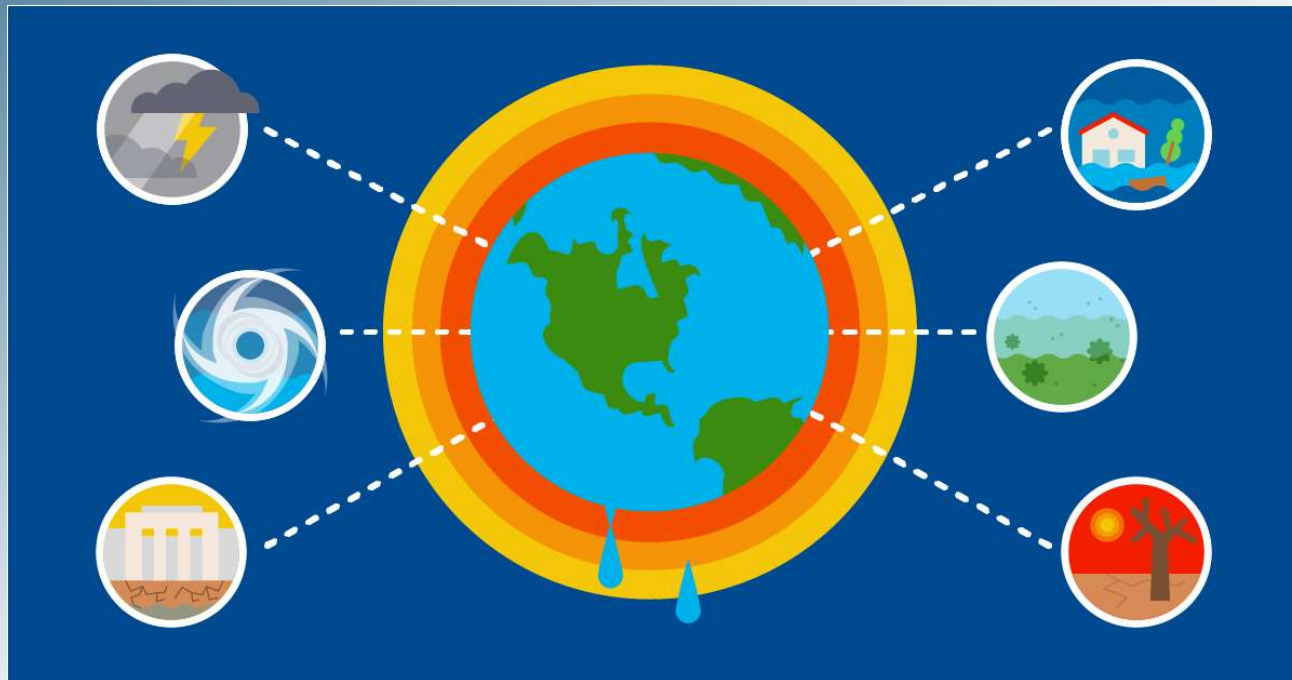
The Future



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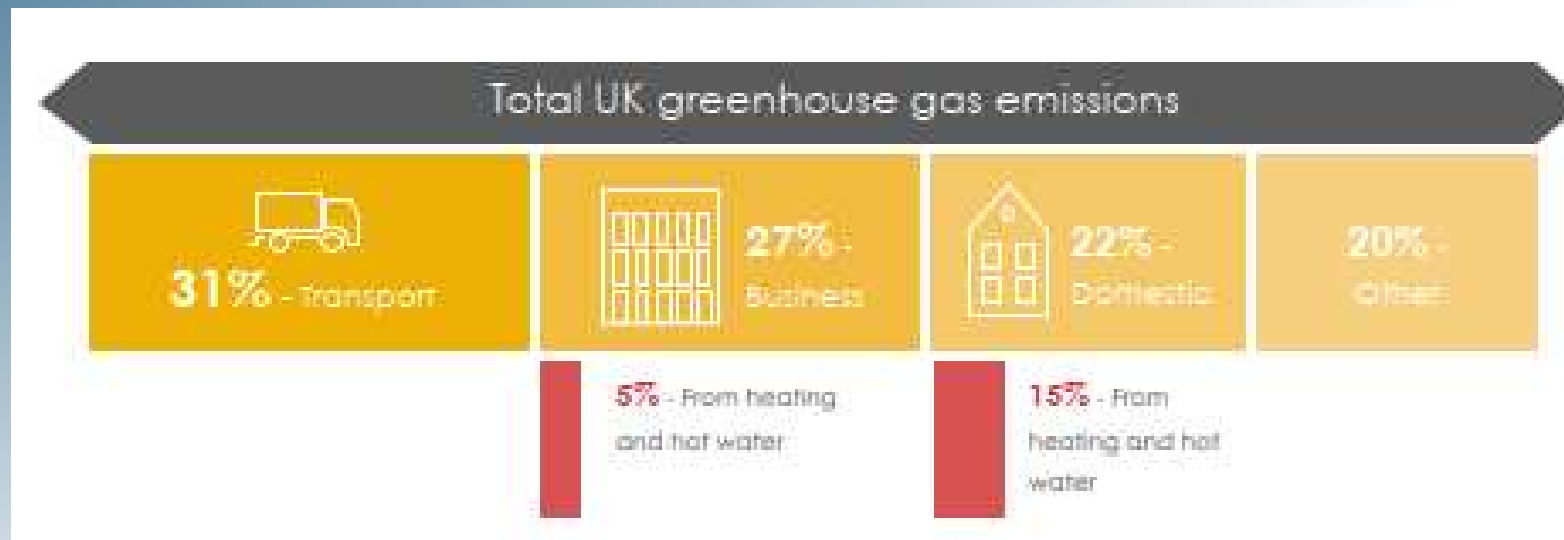
Consequences



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Cause and Effect



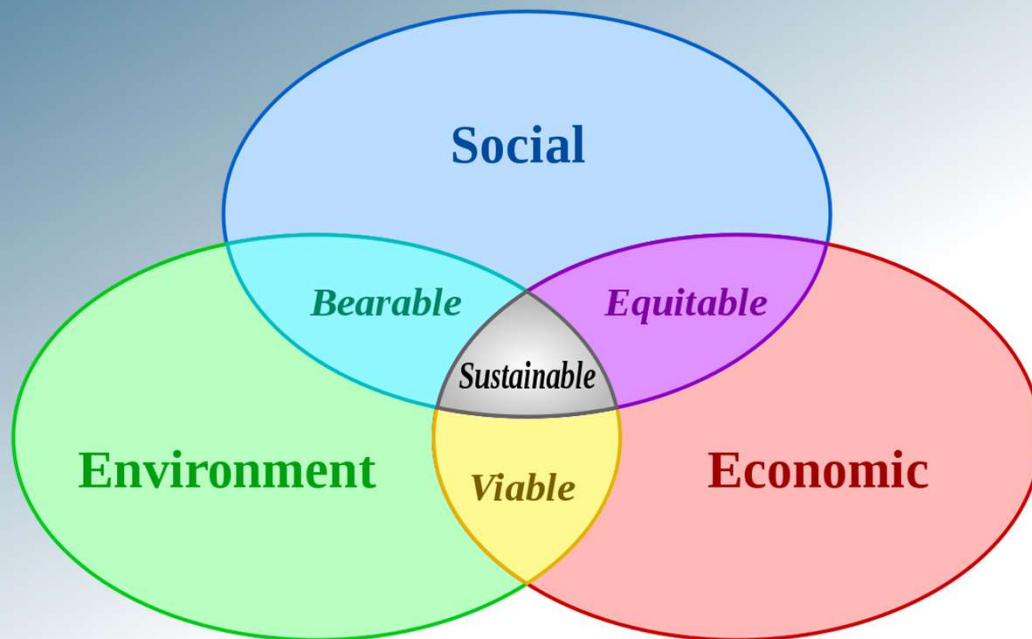
Cause and Effect



Cause and Effect



Cause and Effect

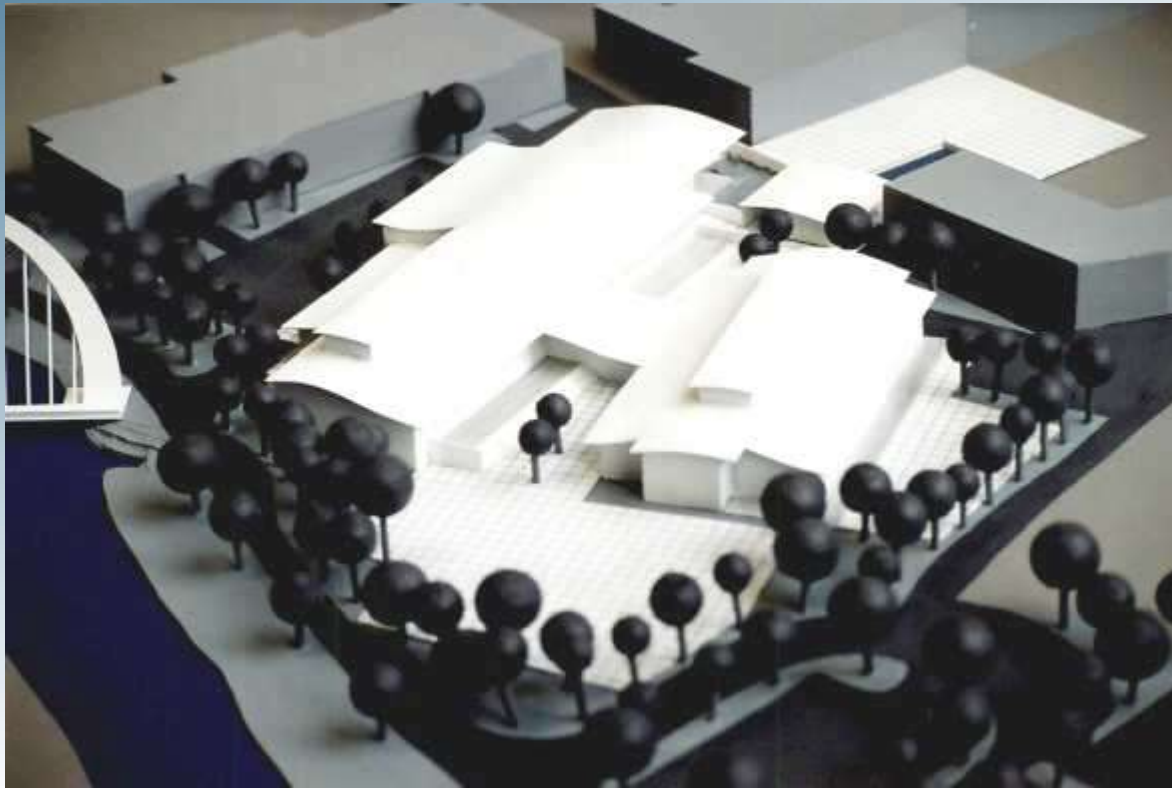


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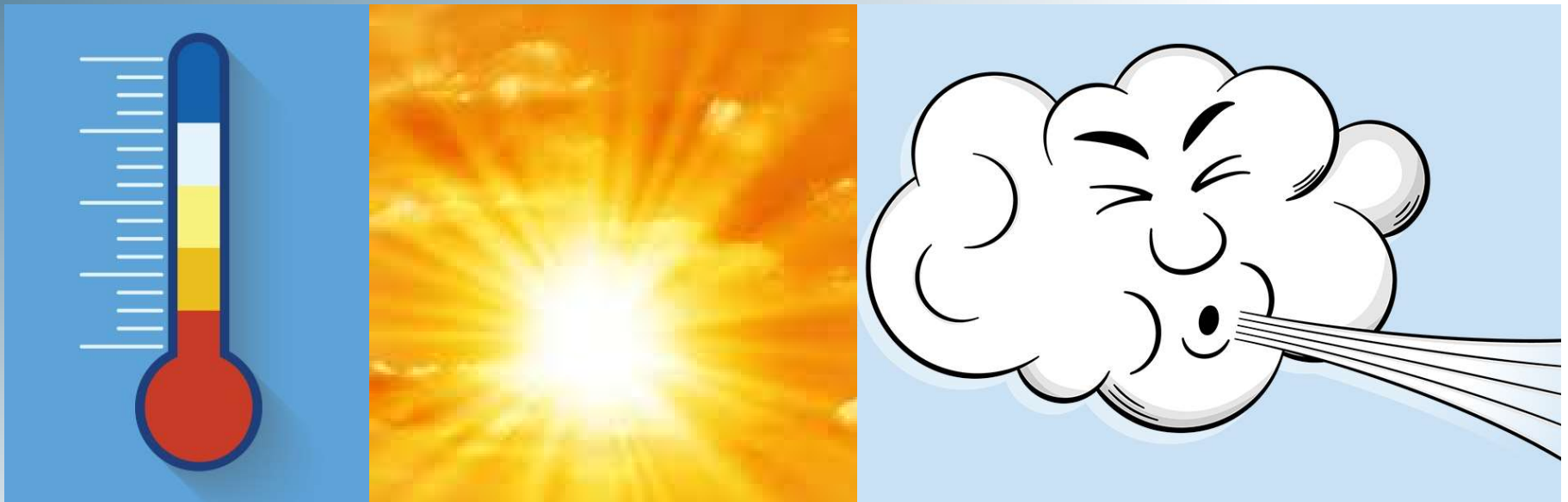
General Principles of Sustainable Design



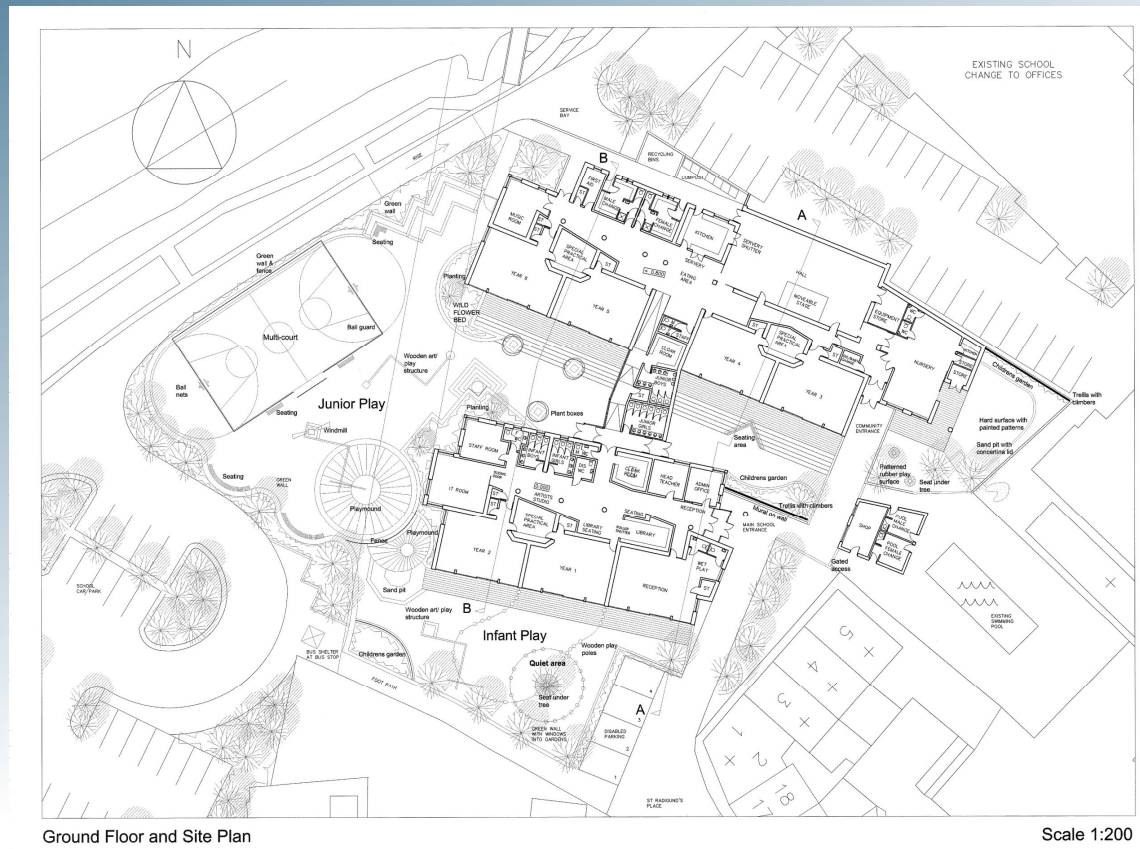
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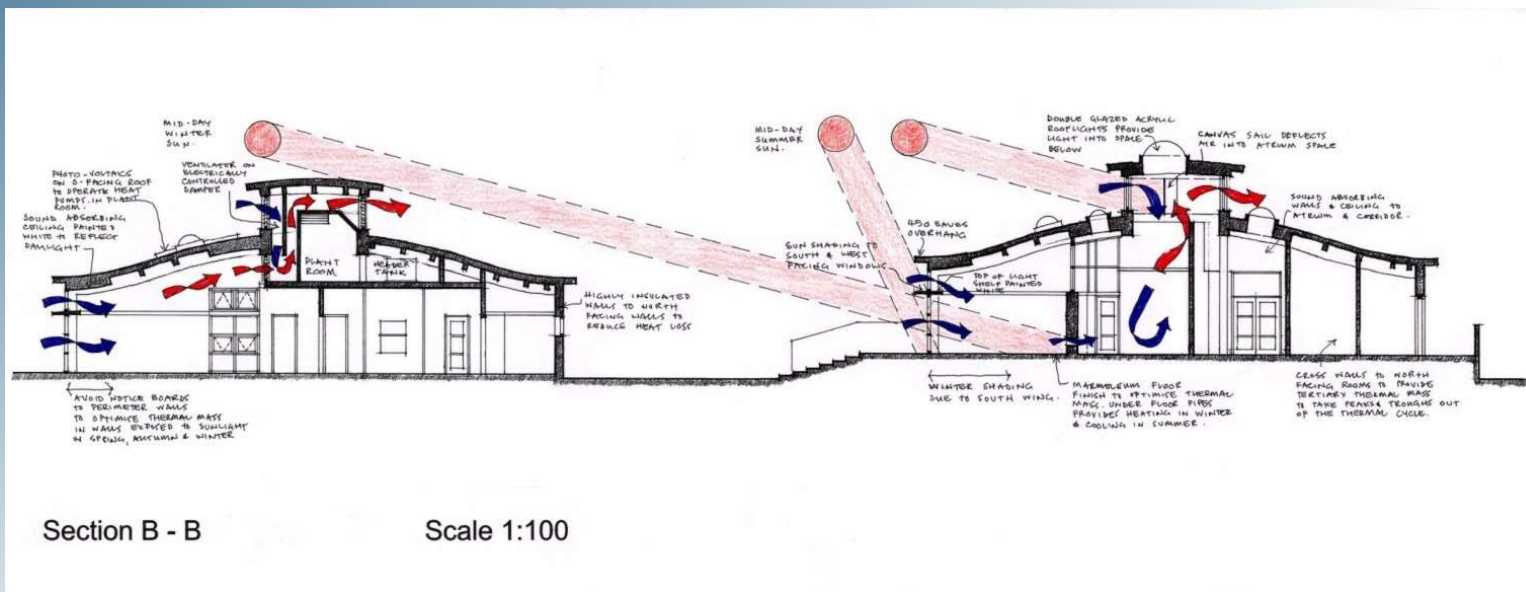
General Principles of Sustainable Design



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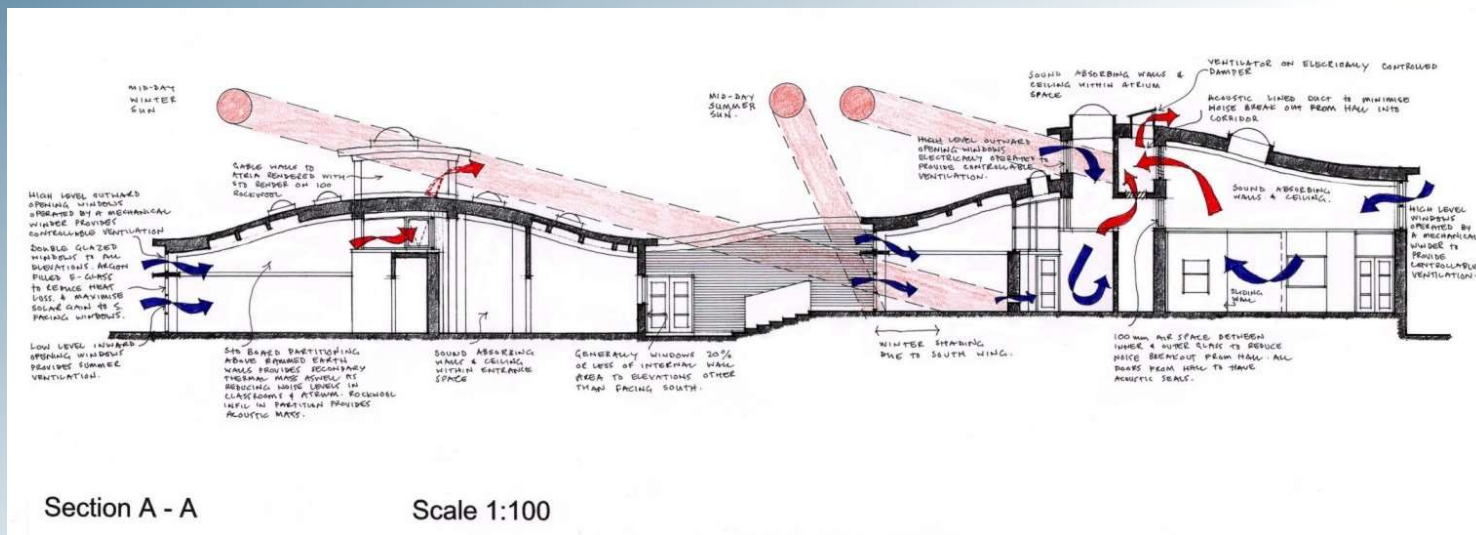
General Principles of Sustainable Design



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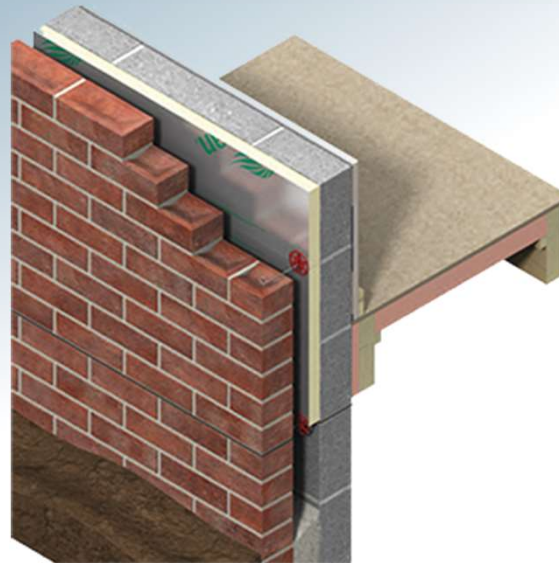
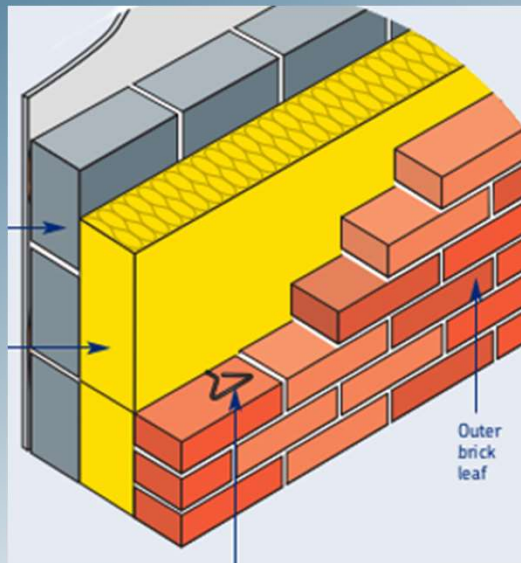
General Principles of Sustainable Design



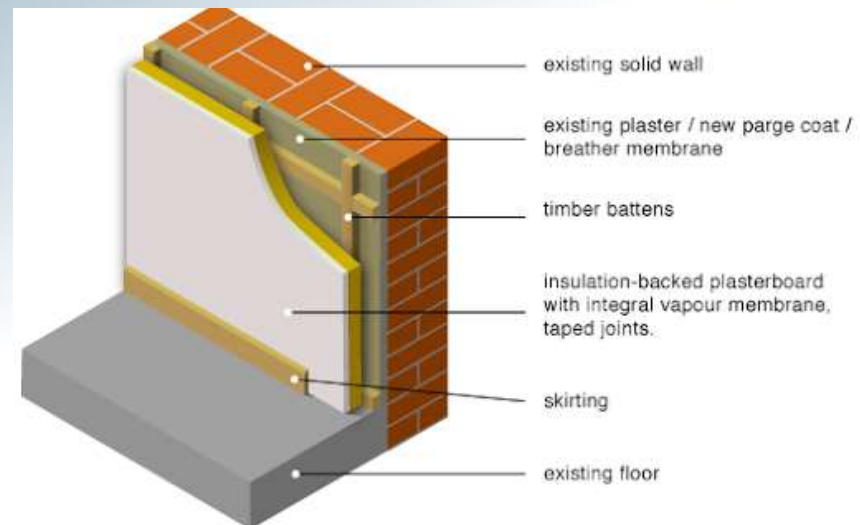
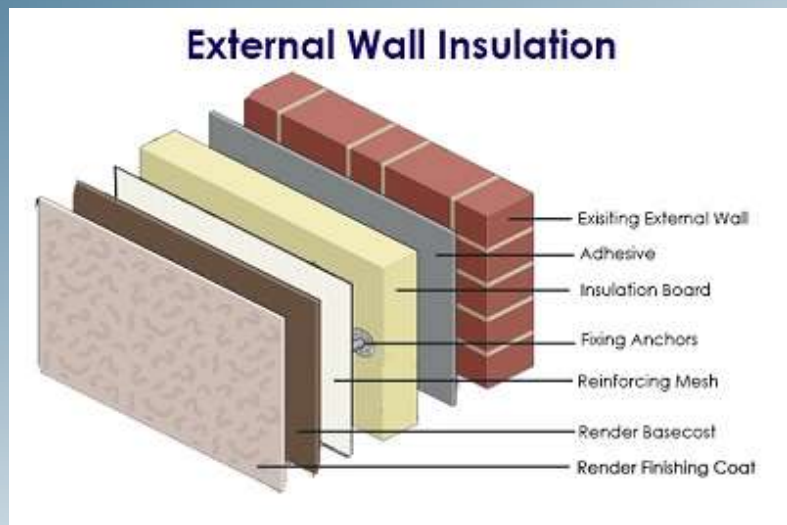
Detail Design



Insulation



Insulation

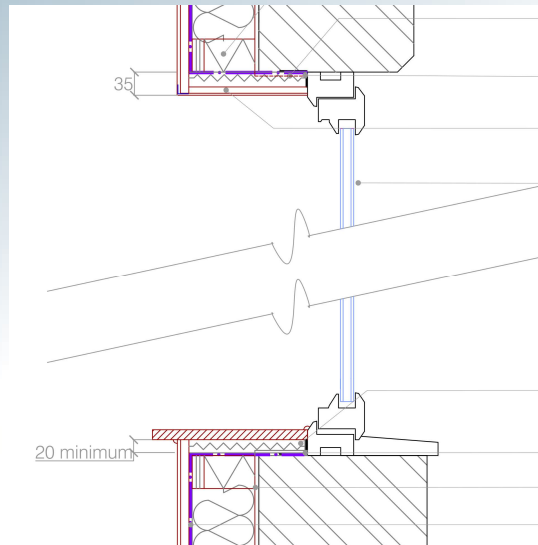
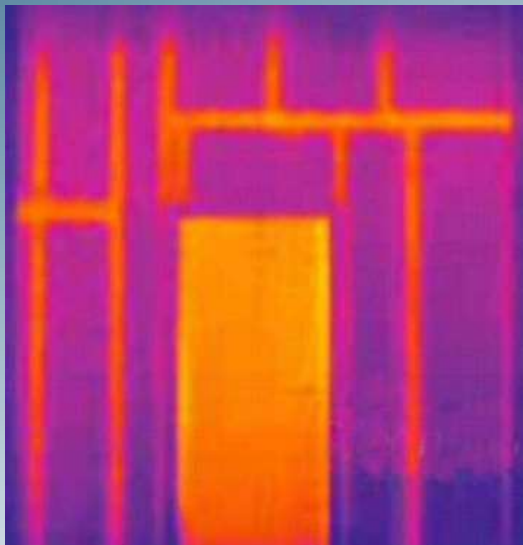


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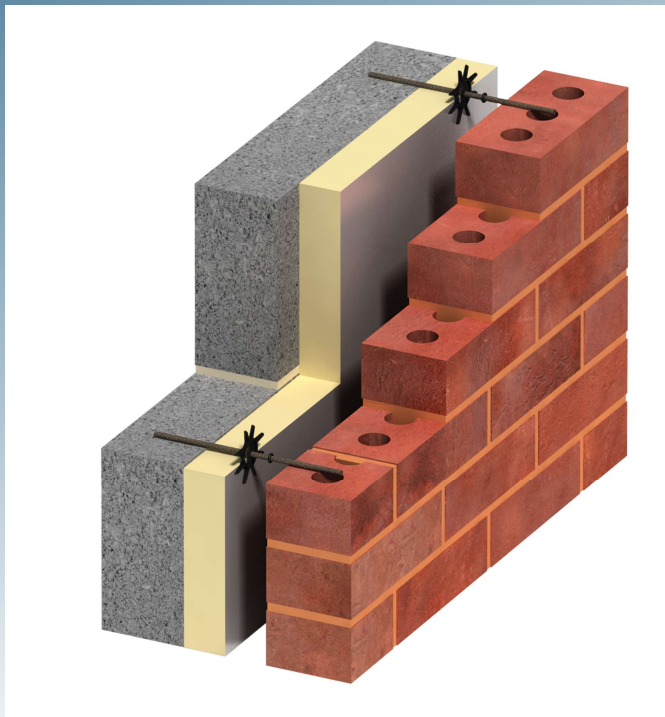
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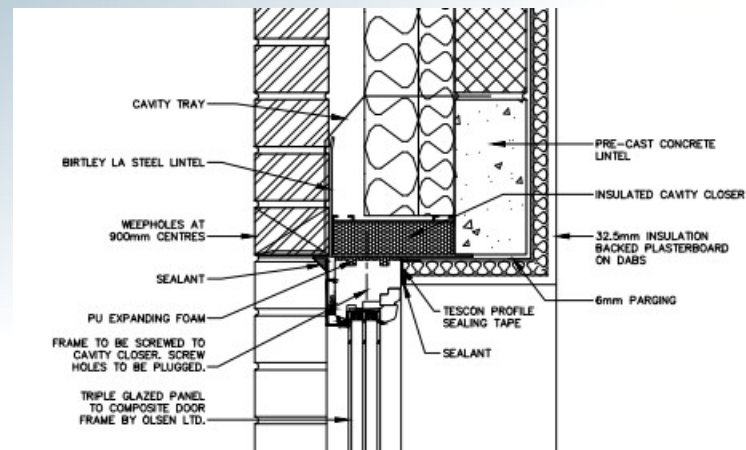
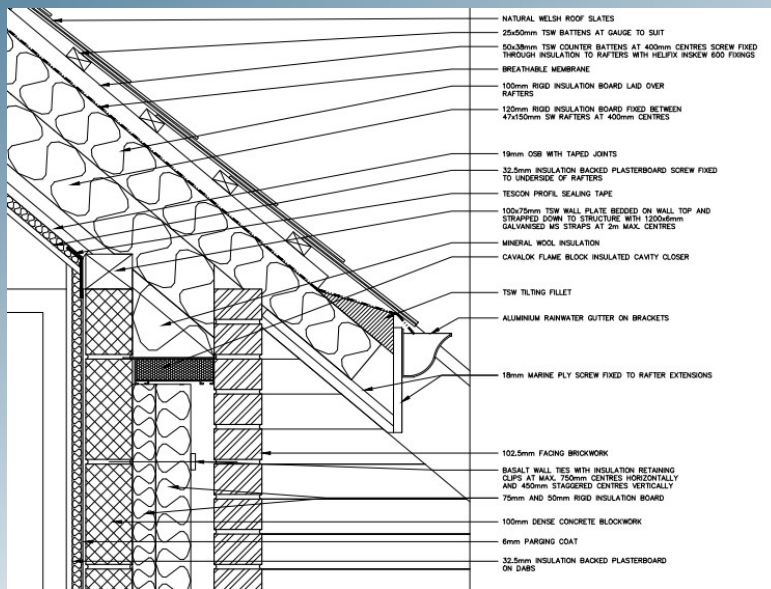
Insulation



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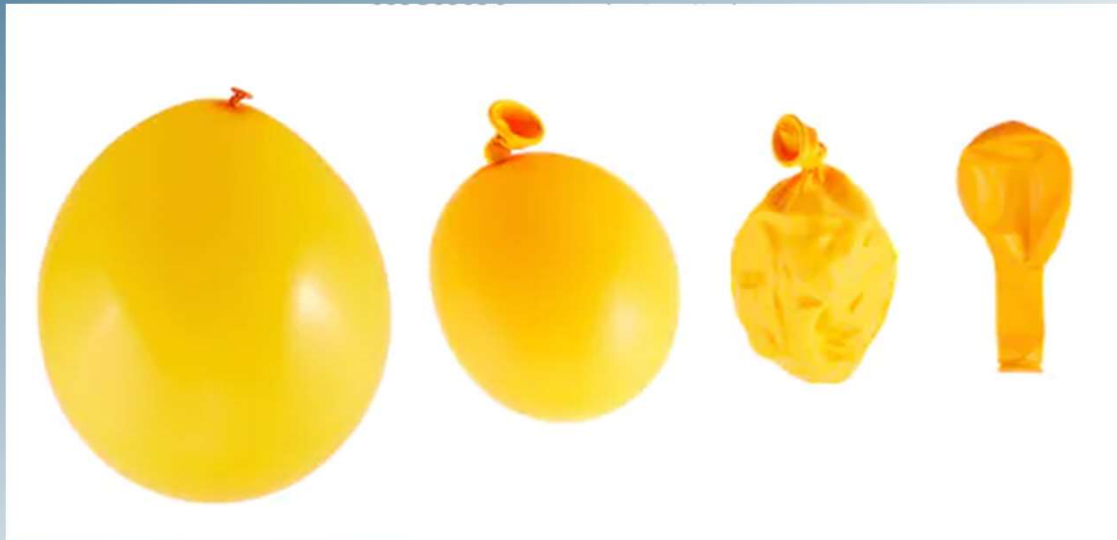
Airtightness and Ventilation



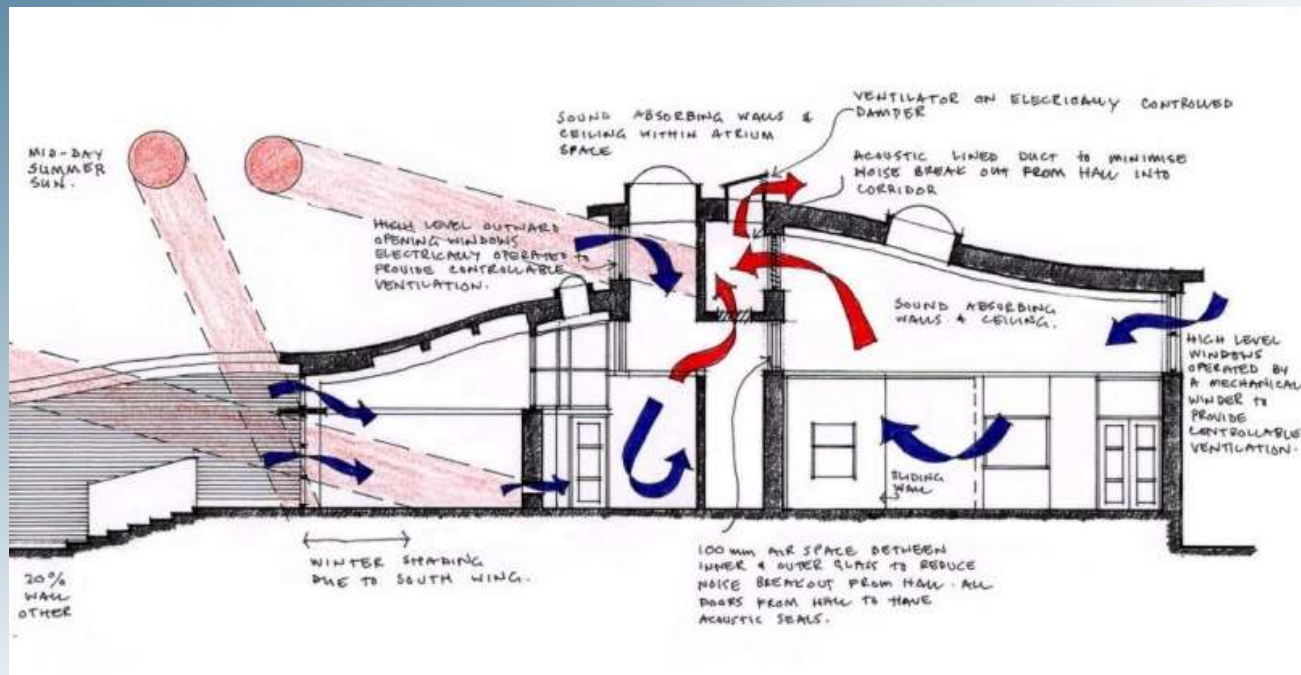
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Airtightness and Ventilation



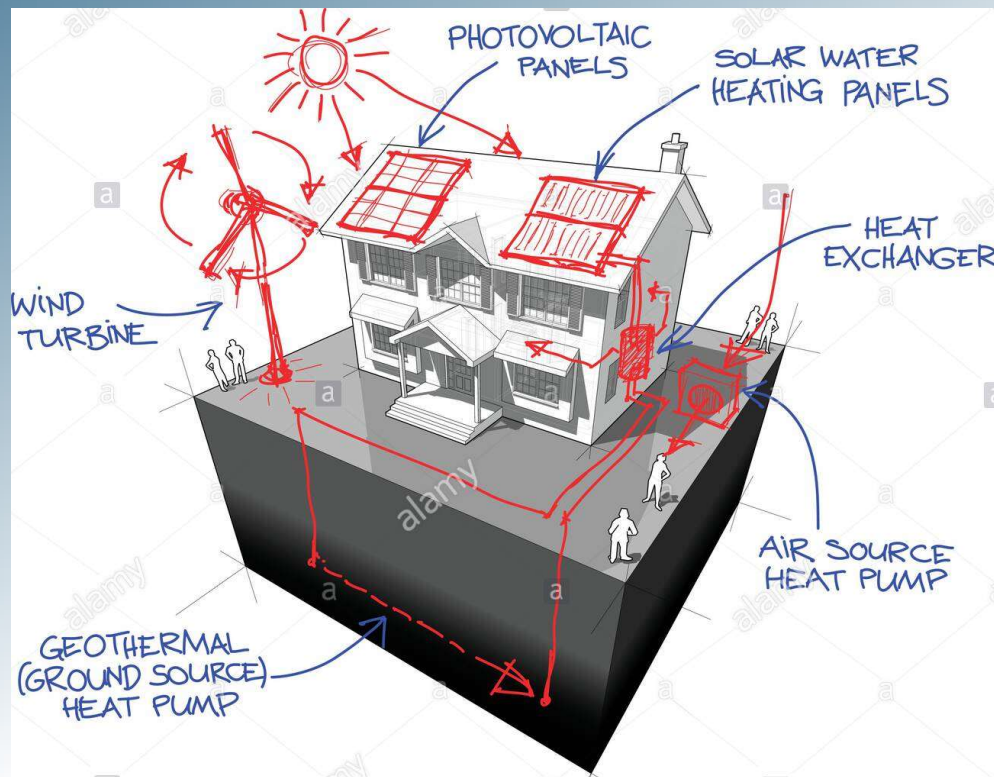
Airtightness and Ventilation



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Technologies



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Photovoltaic Panels



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Air Source Heat Pumps



Ground Source Heat Pumps



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Light Pipes



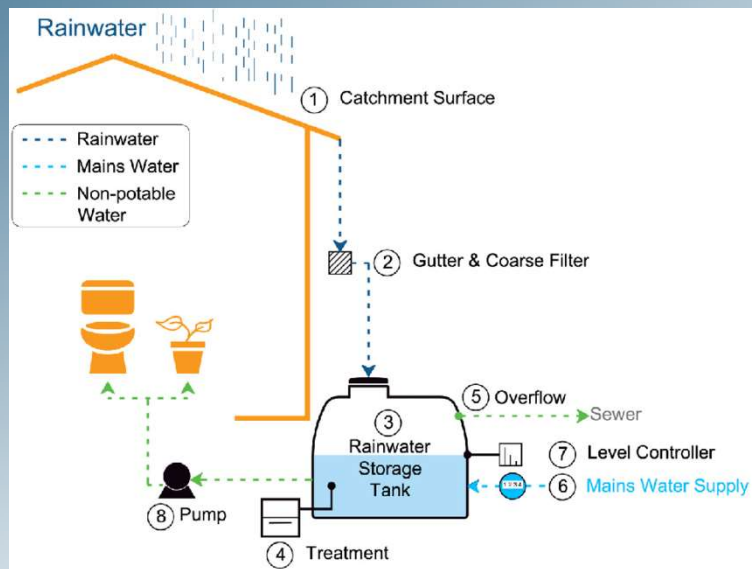
Water - Attenuation



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Water – Grey Water



Passivhaus

- Simple building form – reduce the exposed surface area of the building to reduce heat loss.
- South-facing predominant facades – to maximise daylight and solar gains.
- High levels of insulation.
- An extremely air-tight building fabric.
- Reduced thermal bridging.
- High performance triple glazed windows with window proportions that are based on orientation.
- Natural purge ventilation from opening windows.
- Efficient background mechanical ventilation with heat recovery.

The Fold



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The Fold



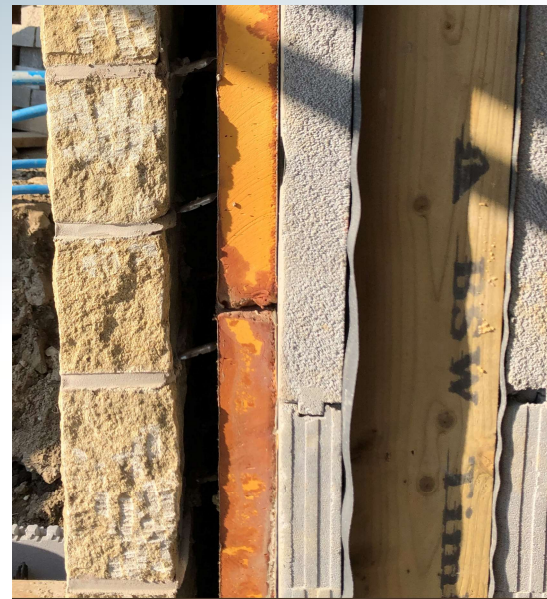
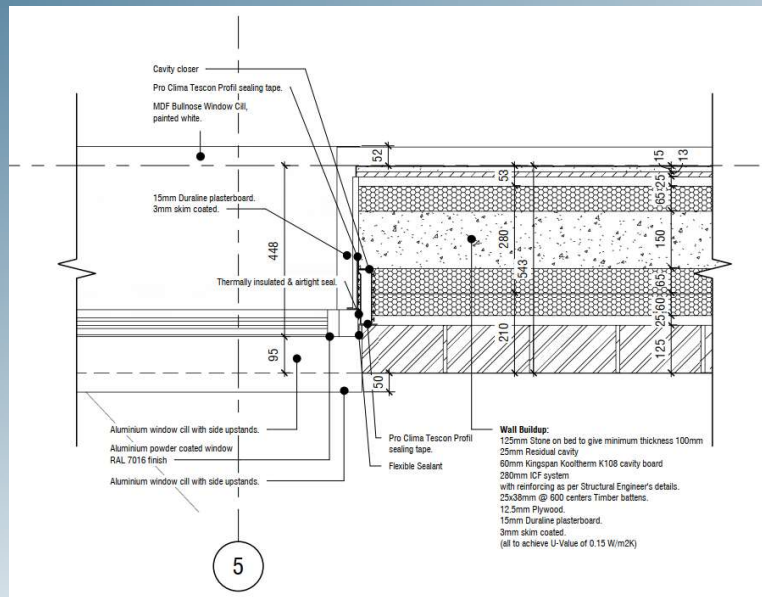
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