



Basements

Uniclass F132



Uses:

- **garage, utility, den, store**
- **Easy services distribution below floor not through it**
- **Cool food storage:**
 - avoiding fridges and freezers?
- **Construction surplus materials storage:**
 - avoiding surplus materials and waste to landfill
- **Bins: below kitchen chutes?**
- **Green Waste Composting:**
 - ventilation & insect mesh needed



Groundwater

- Care with water table and future water table
- Care water entry from ramps into basement for car parking



Damp proofing:

- Clay powder and fabric based DPM?



Services

- **Inter-seasonal thermal store:**
 - store summer heat, use in winter
- **Plant room with controls to collect and distribute heat to optimum use**
- **Rainwater store:**
 - Use for washing, WC flushing, landscape, ponds, car washing
- **Compost toilet chamber:**
 - Compost for garden
- **Grey water store: better to use it immediately on garden**



Limecrete

- Limecrete is good below ground as foundations and as walls.
- Timing is everything: Avoid winter construction,
- Keep sections thin to allow to cure make sure you cure properly let things set and harden
- Leave temporary formwork in place around foundations in the ground
- Limecrete is soft so can be chiselled to allow modification later
- AITEC at CAT uses Limecrete for basements and foundations

On Carbon Negative buildings

- Consider Hemp-Lime above ground
- probably not below ground
- except partitions in basement



Hemp-lime

- **Funded Research completed**
- **GreenSpec was involved**
- **a design guide is published**
- **Wish to add specifications and guidance notes to GreenSpec**

- **W**

<http://www.limetechnology.co.uk/home/index.php>

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<http://www.limetechnology.co.uk/pages/hemcrete.php>



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