

CONSTRUCTION ECOLOGY FORUM – RECORD OF DEBATE

Topic	This forum believes that all new housing should have mechanical ventilation with heat recovery												
Date	18 July 2002												
The vote	Before the debate, the majority (15 to 9) disagreed with the debate proposal. The debate increased the numbers believing in natural ventilation (18) and those believing in mechanical ventilation (10). The audience increased in number during the debate so it was tricky to work out if the debate changed any opinions!												
Attendees	The following external guests (and others) attended the debate: <table border="0"> <tr> <td>David Turrent- ECD</td> <td>Reinhold Schmaddrer – Glenn</td> </tr> <tr> <td>Julian Williams – ECD</td> <td>Howells Architects</td> </tr> <tr> <td>Rachel Livings -PTE</td> <td>Benson Lau – WSP Environmental</td> </tr> <tr> <td>Andy Joblin – Levitt Bernstein</td> <td>Narinder Assi – Agenda 21Architects</td> </tr> <tr> <td>Peter Saunders – Levitt Bernstein</td> <td>James Groux – Agenda 21Architects</td> </tr> <tr> <td>Adam Ritchie – Max Fordham LP</td> <td></td> </tr> </table>	David Turrent- ECD	Reinhold Schmaddrer – Glenn	Julian Williams – ECD	Howells Architects	Rachel Livings -PTE	Benson Lau – WSP Environmental	Andy Joblin – Levitt Bernstein	Narinder Assi – Agenda 21Architects	Peter Saunders – Levitt Bernstein	James Groux – Agenda 21Architects	Adam Ritchie – Max Fordham LP	
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The case for Mechanical Ventilation (Richard Shennan, Ashley Bateson and Fred Hull)

- It's the only way to get tempered fresh air. Just like being outside but warm and so is the healthiest solution.
- The buildings with mechanical ventilation can be designed to be airtight with good insulation and with efficient heat recovery so are the most efficient in terms of energy usage.
- There are many conditions when natural ventilation just doesn't work (e.g. summers, no wind). There are not enough air changes.
- Naturally ventilated buildings always have lots of stand alone little extract fans in kitchens & bathrooms -Its better to have the one centralised heating/ ventilation system, ducting out to the roof.
- The capital cost of mechanical ventilation systems may be higher but this becomes insignificant in terms of energy saving over the life of the building (a building can typically use 10 times more energy in its operation than the energy embodied in construction).

## The case against Mechanical Ventilation

**(Brian Mark, Saud Muhsinovic and Leo Griffiths)**

- Fresh air blowing through windows is the healthiest solution. It's good for spiritual health and keeps people closer to nature.
- There are no complex systems to control and no maintenance issues. Everyone understands the use of windows.
- Ducts are obtrusive and ugly. Costs of building works to hide the ducts and form the risers are very high.
- Naturally ventilated buildings may lose heat but there is plenty of waste heat around and if we used that properly then its not necessary to control heat loss.
- Naturally ventilated buildings are generally better designed in terms of insulation and solar alignment. A mechanically ventilated building can be built anywhere with no relationship to the site.

### Interesting points of discussion from the audience:

- The appropriate use of natural or mechanical ventilation depends on the style of the building. The choice is dependent on situation and shape of the building.
- It is a problem that natural energy (wind) cannot be controlled. More effort in doing this may be worthwhile.
- Most new buildings will be in high density, urban situations, thus polluted air will come in when windows are opened.

### More points that were discussed later (down the pub):

- There are security issues attached to opening windows in high density, urban situations.

Any more views /ideas?

**The debating forum remains open ...**