Panel Session 2 - Practical experience of managing ventilation and air quality for resident well being

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The TCHG Experience
Issues to consider

• Operation & Controls – ease of use
• Installation quality
• Information techniques
• Maintenance & regimes
• Perceptions, lifestyles and cultures
• Social housing high occupancy (freq. & nos.)
• Noise levels
• Size of units
• Aesthetics
• Climate
9 flats Sect 106 in Tonbridge

Moisture content in block structure high but also internal wet rooms (no windows) higher air tightness than designed / decentralised extract fans – time consuming to resolve problems post completion & more ‘lifestyle’ issues!
Welland Road, Tonbridge

– 4 x 2 bed rented flats – EcoHomes / Code trial
SIPs panels / high air tightness / continuous decentralised low extract with boost ‘chosen’ – too late in design for MVHR.

Damp problems after 12 months in most flats.
Fresh air vents ‘retrofitted’
- Problem solved
‘Avante’, Coxheath - £60K House project – TCHG Section 106
Completed 2007 / 08
First project with MVHR for TCHG

Results showed residents needed more & better information on MVHR
Avante – Lessons learned

Complex controls! (but can bypass)

Demos & info letters

Most residents managing well
Clare Avenue, Tonbridge – 7 flats – MVHR for acoustic reasons

Lifestyle or technology?
Result = Installation flawed

Mould around vents!
Clare Avenue, Tonbridge – 7 flats – MVHR for acoustic reasons

![Diagram showing comparison of indoor, outdoor, and recovered temperature in MVHR houses.](image)

This series of data shows exactly what happens when an MVHR system operates 24/7. As soon as the space heating system shuts down over night, the heat exchanging ability diminishes and creeps nearer to the temperature of the outdoor air. In this case had the outdoor temperature dropped below say 10 degrees some auxiliary heating system would have to kick in to stop the temperature of the supply air to drop below say 10 degrees.

It is worth noting the steady performance of the MVHR system during the daytime.

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Resident perception of cold drafts from vents in 1 bed flat
MVHR – maintenance regime?

OR

Resident access or not?

(Easily accessible external filters Vs internal less accessible filters)

Also normal programme heating contractor or specialist?
Commissioning??! - Can it be trusted?

New Building Regs 2010 guidance needs adequate enforcement

Good snagging & checks needed

Use of rigid ducting max’d and flexi ducting used just for bends

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Installation Guide and Checklist

Mechanical Ventilation with Heat Recovery

(Version – 20 July 2006)

The Electric Heating and Ventilation Association has developed this guidance and checklist document in partnership with the Residential Ventilation Association (a HEVAC association), BRE and EST.
Conclusions

• Complex issue / needs open mind / better industry knowledge

• Methods to ensure ‘drying out’ of structure max’d before handover

• Ongoing checks & reinforcement of messages by staff & resident champions

• Lifestyles change? Breaking the news delicate – tough to change

• No technology immune from sabotage & misuse

• Currently more evidence of dampness issues with decentralised methods

• MVHR installation more critical, needs informed procurement & commissioning needs to be reliable (3rd party checks?)

• Ongoing maintenance & life cycle costs?