

Response to BCA Inquiry from Paul Sterling, Director -Westaflex (Aust) P/L and Chairman- Australian Flexible Duct Manufacturers Alliance (ADMA) re Conditioned Space and Ductwork, March 2011

Question 1: Are the following areas within a building considered a conditioned space or not:

Space	Conditioned?	Reason
<b>Class 2-9 buildings:</b>		
1. in a suspended ceiling not being used as a ceiling plenum	No	As long as the suspended ceiling is not a perforated or grille ceiling, ie as long as the space is effectively separated from the conditioned space below. <i>Also see note 1 below.</i>
2. in a suspended ceiling being used as a ceiling plenum	Yes	Part of the conditioned space.
3. in riser shafts between floors	Yes	If riser shafts reticulate conditioned air or are likely to in the future.
4. in bulk heads	No	As long as the bulkhead is effectively separated from the adjoining conditioned space. <i>Also see note 1 below.</i>
5. Behind plaster walls	No	As long as the wall is effectively separated from the adjoining conditioned space. <i>Also see note 1 below.</i>
6. Lift / Elevator shafts	Yes if the lift doors open into the conditioned space.	Part of the conditioned space. <i>Also see note 1 below.</i>
<b>Class 1+10 buildings:</b>		
<i>See note 2 below.</i>		
1. In between floors in 2 and 3 storey dwellings including posi struts.	No	As long as the space between floors is effectively separated from the adjoining conditioned space. <i>Also see notes 1 and 2 below.</i>
2. in riser shafts between floors	Yes	If riser shafts reticulate conditioned air or are likely to in the future. <i>See note 2 below.</i>
3. in bulk heads	No	As long as the bulkhead is effectively separated from the adjoining conditioned space. <i>Also see notes 1 and 2 below.</i>
4. Behind plaster walls	No	As long as the wall is effectively separated from the adjoining conditioned space. <i>See note 2 below.</i>

*Note 1:* if the ceiling/lift/bulkhead/wall is not a conditioned space then it may need to be insulated and sealed as being part of the envelope. It may be more practical to build if you accept that there is some leakage to the ceiling etc, and therefore treat it as part of the conditioned space.

*Note 2:* The responses assume some rooms are conditioned while others are not. However, for Class 1 buildings it is often the case that the conditioned space is the total space within the insulated building envelope bounded by the external walls and roof or ceiling. In this case, the floor between stories etc would be within the conditioned space.

**Question 2:** What does "The requirements of (a) do not apply to ductwork and fittings located within the only or last room served by the system" in Spec J5.2 Clause 2(b) mean?

The Guide re Specification J5.2 Clause 2 states " Ductwork has joins, and unless sealed these joins will allow heated or cooled air to escape. The requirements do not apply to ventilation ductwork where the air is not heated or cooled. **Nor does it apply to ductwork in the space being conditioned as the air is intended for that space anyway.**" Similar provisions apply in BCA Volume Two 3.12.5.3.

In the only or last room served by the system the conditioned air in the ductwork is intended for the space so it is irrelevant if any air escapes from the ductwork into the same space before the outlet.

Similar reasoning applies regarding ductwork insulation in Specification J5.2 Clause 3(d)(i).

Diagram to assist in explaining BCA Volume One Spec J5.2 Clause 2(b)

