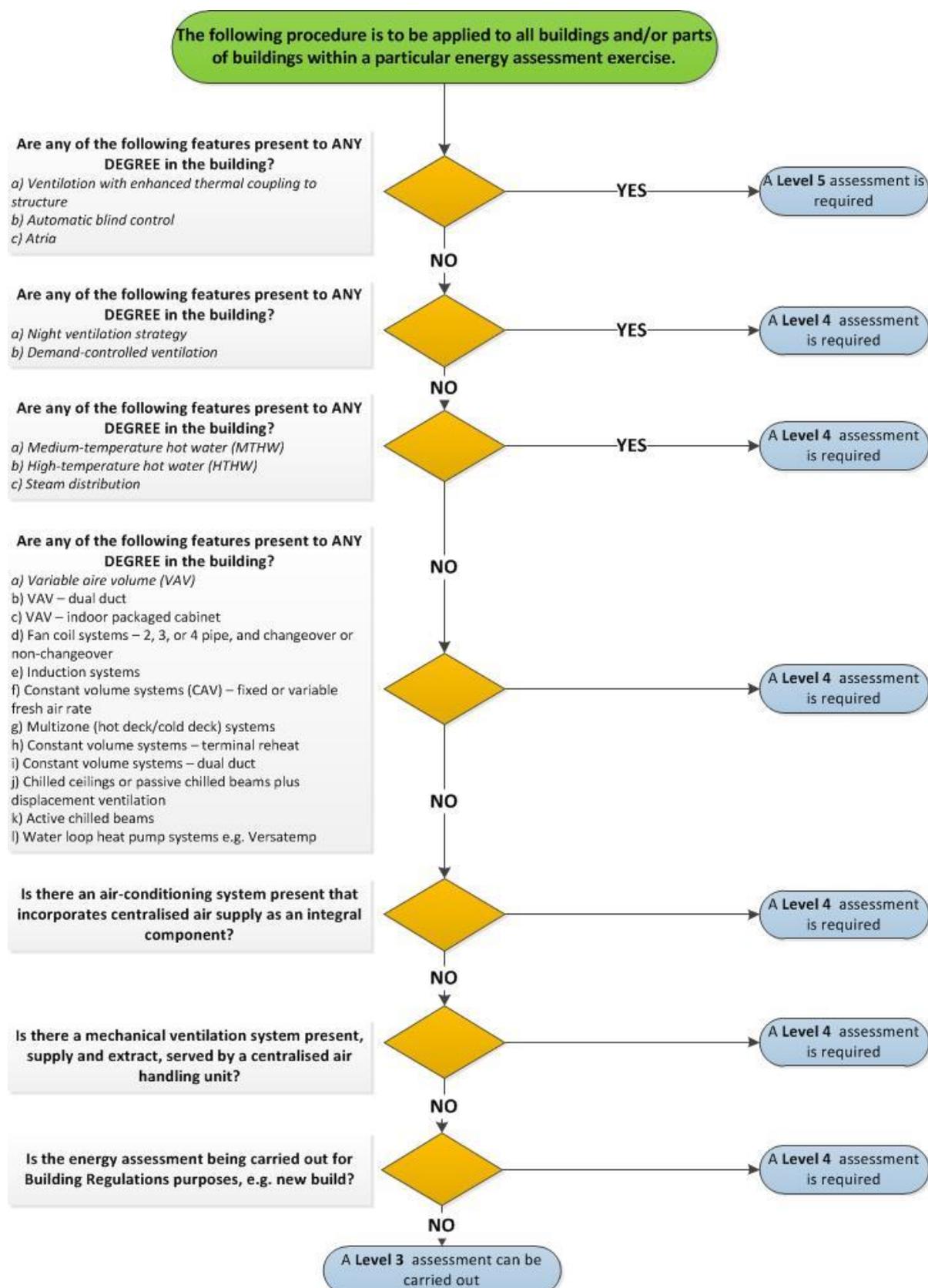


NDTS001: What Level Should My Non-Domestic Assessment be?



Night Ventilation Strategy

Can be defined as the presence of suitable systems, controls and operating strategy such that overnight ventilation (passive and/or mechanical) is used to cool down the exposed building mass and thereby offset daytime cooling demands.

If no such operation, and subsequent offset, is possible through the *automatic* operation of systems and controls, a night ventilation is deemed to be not present as part of the building energy asset rating.

Ventilation with Enhanced Thermal Coupling to Structure

This is a further development of the *Night Ventilation Strategy*, such that significant components of the building structure, in addition to its ordinary surfaces, are exposed to night ventilation in order to enhance the building's capability of offsetting daytime cooling demands.

An example of this procedure is the *TermoDeck* system, where night ventilation is padded through ducts in the solid floors of the building, thereby increasing the 'coolth' contained in the thermal capacity of the building structure available to offset subsequent summertime daytime cooling loads.

Demand-Controlled Ventilation

Defined as supply and/or extract ventilation that is modulated to match the needs of the actual occupation level of each zone, rather than operating at a constant level defined by the activity database. Thus, the energy required to adjust the condition of the supply air, and that required to move the air, can be reduced. The rate of ventilation would typically be controlled by presence detectors, CO₂ sensors or another device that senses the varying requirement.

Automatic Blind Control

These would be defined as internal or inter-pane (but not exterior) blinds that are motorised so that the position can be modified to control solar heat gain and/or glare, controlled by automatic sensors. The control regime must also open the blinds as the heat gain and/or daylight levels decrease, so that the use of these natural resources can be optimised for each zone.

Note: exterior shading devices can be modelled using iSBEM in the definition of each window; however iSBEM does not currently model the re-radiation effects of blinds where solar gain has entered the space before it is modulated by the shading device.

Atrium

This is a non-continuously occupied interior space within a building, often several stories high, bound on at least one side by occupied spaces set to the conditions determined from the activity database. There may, or may not, be building elements (such as glazing) surrounding the atrium (although there may need to be something for smoke control, in case of fire). The atrium itself is not maintained to the conditions set by the activity database for adjoining spaces. The technical purpose of the atrium can be one, or more, of the following:

- Providing a buffer between the thermal conditions in the adjoining spaces and the exterior, to reduce the direct impact of the exterior on these zones. In this case, it should not be maintained to conditions as though it is occupied. (If it is conditioned and the features below do not apply, it is not considered to be an atrium);
- Providing a means for daylight to reach the middle of deep plan spaces that would otherwise not receive it;
- Encouraging stack effect, or other passive ventilation, to draw extract air from the adjoining spaces.