



**THE HIGHLAND COUNCIL  
BUILDING STANDARDS**

**POLICY NOTE BST - 020**

**Unexpected Low Air Infiltration  
Rates  
Domestic**

**Key Contact**

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## 1. INTRODUCTION

Issues have arisen recently where houses have been **designed** with air infiltration rates greater or equal to 5 m<sup>3</sup> /h/m<sup>2</sup> @50 Pa, but lower results have been achieved on site.

## 2. TECHNICAL HANDBOOK GUIDANCE

The guidance in the handbook is slightly confused. What is clear in the guidance is that for dwellings with an **actual** air infiltration rate **lower** than 5 m<sup>3</sup> /h/m<sup>2</sup> @50 Pa, the areas of trickle ventilation, which are controllable, may not suffice to ensure air quality. The recommendation is that an **alternative** ventilation solution be provided.

Where the guidance **appears** to recommend types of alternatives is where the confusion lies. The guidance does not actually recommend any, but states that examples of ventilation systems are provided. The further clue is that option c. recommends using the mechanical ventilation already recommended by a previous clause. This is a previous clause which already states that the trickle ventilation provision is **inadequate** in these situations.

## 3. REQUIREMENTS

Where an infiltration rate of less than 3 m<sup>3</sup> /h/m<sup>2</sup> @50 Pa has not been designed, but has been achieved on site :

- a. An amendment to warrant should be applied for since the building has not been constructed in accordance with the approval, which has resulted in a material change to the performance of the building and compliance with Section 3.

Where an infiltration rate between 3 and 5 m<sup>3</sup> /h/m<sup>2</sup> @50 Pa has not been designed, but has been achieved on site :

- a. The advice of a specialist as to the ability of the natural and mechanical ventilation of the property to ensure adequate air quality must be taken and implemented. A suitable specialist is not defined but should be measured by training and experience in the fields of ventilation and air quality on a case by case basis. Depending on any remedial works an amendment to warrant may be required.