

LOCAL REVIEW BODY
HEARING STATEMENT OF APPOINTED OFFICER
17/00257/FUL
Replacement windows and installation of chimney flue 5 High Street Innerleithen EH44 6HA

ISSUES TO BE CONSIDERED:

- 1) The potential impacts on local amenity
- 2) An examination of the technical aspects of the flue gas treatment proposals

RESPONSE:

1) *The potential impacts on local amenity*

Planning Application 17/00257/FUL was recommended for refusal on the grounds that the discharge height is insufficient to guarantee adequate dispersal of flue gases arising from the use of a wood burning stove.

The combustion of wood generates pungent odour components, the presence of which can be experienced some time after that appliance has been extinguished. The Applicant's statement that the stove will only be used during working hours does not guarantee that there will be no impact on the amenity of other occupiers. No information has been given as to the hours of occupancy of the potentially affected properties.

Experience gained on similar sites elsewhere in the Borders has shown that complaints are likely when stove gases are allowed to discharge below the heights at which openable windows are situated.

The effects of local low-level air turbulence can lead to smoke and odour problems occurring regardless of the principal wind direction.

As a minimum, it is recommended that flues terminate at least one meter above eaves height unless there are skylights/roof windows above.

Discharge of gases above ridge height is the preferred option.

Whilst there is little pollution control Guidance specific to small stoves, an indication of safe separation distances may be drawn from the Screening Tool approved by the Scottish Government for the assessment of biomass boilers. This requires consideration of all buildings and structures situated within a radius of 5 times the discharge height of the flue.

In the case of this Application there are occupied buildings within only two times the proposed flue height.

The Applicants have sought to justify their flue height by producing a photograph showing the historical presence on site of a chimney stack.

This has no relevance to the modern situation.

Many once common practises have been stopped e.g. the widespread use of low grade and inexpensive high sulphur coal in the two main Borders towns – now prohibited under Smoke Control legislation.

If Planning Consent were to be sought for this chimney stack today, my Department would recommend refusal on the same grounds as for the flue.

The Applicants have submitted documents confirming that the stove and flue will be installed in accordance with the HETAS approval scheme. This is not disputed.

The HETAS scheme however is only concerned with fire safety issues and ensuring that the stove will have a proper air & flue gas flows.

On the HETAS website reference is made to Guidance produced by the British Flue & Chimney Manufacturers Association –

<https://www.hetas.co.uk/wp-content/mediauploads/BFCMA-General-Guidance-10-12-12.pdf>

Page 9 of the Guidance “Chimney Heights & Termination” (copy attached) gives a minimum chimney height of 4.5m from the top of the appliance stating –

“The reason for this is to clear pressure zones created by wind hitting the roof and nearby structures, like trees, which may interfere with the up draught required by the appliance or fire.”

The Guidance makes no mention of preventing pollution or amenity impacts on other nearby occupiers.

2) An examination of the requirements of the flue gas treatment proposals

The Applicants have submitted technical documentation in support of their Appeal –

ABCAT Product Information
ABCAT Background and application
ABCAT SP test results summary

The documentation acknowledges that wood burning produces particulate matter (PM) and oxides of nitrogen (NOx).

When assessing the impact of all wood burning appliances, the Scottish Air Quality Regulations lay a duty on the Council to assess particulate matter below 10 micron particle size (PM10).

The Council is also required to assess Oxides of Nitrogen (NOx).

ABCAT Product Information – Performance and Properties

This documents states -

“Various tests have shown that the ABCAT mainly cracks the smallest particulate fraction, namely PM2.5.”

The unit therefore fails to address 75% of the range of fine particles which have been shown to impact on human health and which the Council have a duty to assess

No information is provided in respect of any reduction in emissions of NOx.

ABCAT SP test results summary

This document acknowledges that the unit may have difficulty in processing hydrocarbon emissions & methane gas and indicates that further research is required on the matter which will -

“hopefully provide answers.”

I would argue that this statement offers no assurance that the unit will prevent odour or other impacts on the amenity of other occupiers.

Conclusions

Stoves can be beneficial to the householder, in providing a backup in the event of failures of other means of heating. They can also add to the ambience of a room.

There is however a trade-off involved due to the potential to emit harmful and annoying flue gasses. This will not be an issue in most areas unless there is a concentration of such units. It will also not be an issue where the flue can discharge at a high level to prevent fumes gaining access to other premises.

When considering an Application to install a stove, the Council must be therefore be satisfied that the discharge point for the flue will allow adequate dispersal and dilution of the emissions.

I would submit that in this case the Applicants have failed to do so.

The technical information provided does not demonstrate that the proposed abatement technology will properly address all the pollutants of concern.

This installation is intended for use in a principal Borders settlement which is served by adequate and reliable supplies of mains gas and electricity. It is not required for standby heating but is a fashion/lifestyle choice on the part of the Applicant.

I therefore ask the Review Body to uphold the initial Decision.

SUPPORTING DOCUMENTS:

Location Plan, 13011-101-B
ABCAT Product Information

ABCAT Background and application

ABCAT Residuals of wood burning

ABCAT SP test results summary

ABCAT test with Wohler SN 500 analyser

British Flue & Chimney Manufacturers Association –

<https://www.hetas.co.uk/wp-content/mediauploads/BFCMA-General-Guidance-10-12-12.pdf>

David A, Brown

Environmental Health Officer

2nd October 2017

Chimney Pots and Terminals

There are many types of chimney pots and terminals, in different styles and shapes to suit almost any taste and application. However, it is important to ensure the chosen pot or terminal does not restrict the exit of the products of combustion. The area of the outlet must be at least the same as the flue area. If the terminal has a hood the area of the outlet should be twice the flue area. Beware of terminals which are primarily designed for ventilating a chimney where the fireplace has been closed off.

An open termination is normally recommended for wood burning and multi-fuel appliances. However rain caps or anti-downdraught terminals may be used. Rain caps and anti-downdraught terminals are available in two versions, with anti-bird mesh and without mesh. Where a terminal with mesh is used, there is a risk of soot build up, and therefore regular cleaning is required to avoid blockage.

If there is a "down draught" from the chimney (i.e. smoke blown back into the room) it is best to check that there is nothing wrong with the chimney arrangement, before fitting a special terminal. The problem is often caused by factors such as lack of ventilation in the room, poor throating above the open fire or insufficient chimney height.

Chimney Heights and Termination

The minimum chimney height recommended for minimum performance of wood burning and multi fuel appliances is 4.5 m from the top of the appliance to the top of the chimney. It is best to position the chimney, so that it goes straight up as near to the roof ridge as possible. The diagram below, taken from Document J, shows the minimum flue discharge heights and positions for all wood burning and multi fuel applications. In some cases, particularly when chimneys are towards the bottom of a sloping roof or at the eaves, it may be necessary to increase the chimney height above these minimum mandatory requirements. The reason for this is to clear pressure zones created by wind hitting the roof and nearby structures, like trees, which may interfere with the up draught required by the appliance or fire. The maximum freestanding stack height above the roof for a traditional masonry chimney is 5.4 times the narrowest horizontal part of the chimney. In the case of stainless steel system chimneys, the manufacturer's installation instructions should be consulted; however in most cases it will be around 1.5 metres. This measurement is taken from the last point where the chimney stack passes through or past the edge of the roof up to the chimney capping or termination. Tall chimneys may need bracing, always consult the manufacturer for advice.

Point where flue passes through weather surface (Notes 1,2)		Clearances to flue outlet
A	At or within 600mm of the ridge	At least 600mm above the ridge
B	Elsewhere on the roof (whether pitched or flat)	At least 2300mm horizontally from the nearest point on the weather surface and: a) at least 1000mm above the highest point of intersection of the chimney and the weather surface; or b) at least as high as the ridge
C	Below (on a pitched roof) or within 2300mm horizontally to an openable rooflight, dormer window or other opening (Note 3)	At least 1000mm above the top of the opening
D	Within 2300mm of an adjoining or adjacent building, whether or not beyond the boundary (Note 3)	At least 600mm above any part of the adjacent building within 2300mm



