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IHBC GUIDANCE NOTES

Thatching, chimney stacks and fire

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This is one of a series of occasional Guidance Notes published by The Institute of Historic Building Conservation (IHBC). IHBC Guidance Notes offer current and recent guidance into topics that we consider crucial to the promotion of good built and historic environment conservation policy and practice. The Notes necessarily reflect knowledge and practice at the time they were developed, while the IHBC always welcomes new case examples, feedback and comment to research@ihbc.org.uk for future revisions and updates.

Executive Summary

1. This is a short interim guidance note regarding a disparity of interpretation that has come to light between the interpretation of the Planning Inspectorate and best practice regarding the height of chimneys above thatch. It is understood that technical advice on the latter from Historic England is forthcoming.

2. Information about similar cases and outcomes would be welcome for a further iteration of this Note.

3. In December 2016 an appeal was dismissed for the extension of an existing chimney flue to 1.8 metres above a thatched-roof ridge, in order to comply with Building Regulations/HEATAS requirements for the installation of a replacement wood burning stove. [1]

Setting

5. The conservation area in question encapsulates a cluster of dwellings fronting a road and is set within a wider rural valley landscape. Despite some diversity in the age of buildings in the vicinity these are broadly consistent in scale and in their use of vernacular material for the walls, and roof coverings in thatch or tile. Some particular local distinctiveness is added by chequer-work detailing in the walls that contributes to the charm and richness of the area particularly where this is combined with softly moulded roofs in thatch.

6. The appeal property conforms to the local vernacular characteristics and is

prominent within its context of open fields and as such was considered to make a positive contribution to the character and appearance of the conservation area as a whole.

7. The Planning Inspector notes that the variety of chimneystacks was an additional defining townscape feature generally reflecting the age, scale or internal layout of individual properties and that the existing chimneystack corresponded to the junction between the pair of cottages and was slightly off centre of the ridge.

8. The stack was particularly short - eight courses of brickwork overall from where it emerged from the roof and including four courses above the height of the ridge about 0.3 metres with a tall red cylindrical clay pot of approximately 0.7 metres in height. The proposal was to extend the brick chimneystack and pots to a cumulative height of 1.8 metres above the ridge.

9. The Inspector noted that while there were taller stacks (than the existing) in the locality, these tend to be where the properties were of a larger overall scale, where the stacks were at the gable end, or where the roof covering was slate or tile and in dismissing the appeal, stated that the diminutive scale of the existing stack was entirely fitting with the overall proportions of the property and helped to emphasise the softly moulded thatched roof.

10. The Inspector considered that the rebuilt stack would dominate the roof and appear as disproportionately large in relation to the squat proportions of the dwelling and that the balance between the thatch and the chimney would also be compromised, causing the stack to stand out noticeably against its low profile and soft moldings of the roof covering.

11. Given the appeal site's relationship to the road and its prominence within the street scene, the Inspector considered that there would also be a harmful visual impact in the wider context and an erosion to the character and appearance of the conservation area but that this would be less than substantial within the context of paragraphs 133 and 134 of the NPF.

12. The building was not a designated or undesignated heritage asset, i.e. it was neither listed nor on a local list of buildings of townscape interest. The dwelling opposite was listed Grade 2 but no reference was made to any impact on its' setting in the outcome. The only heritage asset under consideration at the appeal was therefore the designated conservation area.

13. Having found harm to the conservation area, the Inspector concluded that this must be given considerable importance and weight.

Thermal Efficiency and Fire Safety

14. An upgraded wood burner and use of an inglenook fireplace would be a benefit to the appellant but should only be afforded minimal weight though the greater thermal efficiency and the consequent potential for better fire suppression were properly addressed in the decision letter.

15. The local planning authority had contested the validity of the appellant's assertion that the development was necessary to meet fire standards for a wood-burner and to get fire insurance.

16. It should be noted that the appellant did not provide any substantive evidence, by way of fire officer's report or heating engineer's survey to justify the modification to the existing chimney that under other circumstances might have carried more weight in the appeal than the Inspector afforded it.

17. The obvious original intention of chimneys in historic thatched dwellings was that they be used with open fires. Their proper functioning relied on generous volume of cooler air from within the room and/or from draughts to limit the overall temperature in the flue.

18. Modern wood and multi-fuel burning stoves and the associated building alterations (as was proposed in this planning appeal) are far more efficient than open fires. Once installed there will be higher temperature within the chimney without the beneficial effect of the cooler air from within the room. Consequently chimneys that had once worked reliably with an open fire have become at greater risk from elevated temperatures.

19. The initiation of thatch fires is particularly the transmission of hot flue gases through aged brick stacks that have open or porous mortar joints (often in unobserved or unmaintained roof spaces) and the presence of deep beds of thatch against chimneys. When combined with high flue gas temperatures, over time this may allow the thatch to be reheated to a point where it will char or burn. The thatch is therefore effectively insulating the chimneystack brickwork and preventing the release of heat from the brick thereby creating localised hot spots in the centre of the abutting thatch.

Building Regulations

20. One issue that appears not to have been referred in any way in this appeal case is the position regarding the impact of the proposals under the Building Regulations and compliance with Approved Document J.

21. Had the appeal been allowed (or a stack shorter than 1.8 metres been proposed) any work carried out on an appliance or chimney would have been notifiable as a material change of any part of the combustion system (appliance or chimney) under the Building Regulations.

22. Paragraph 2.18 (Separation of Combustible Materials from fireplaces and flues), states that combustible material should not be located where it could be ignited by the heat dissipated through the walls of a fireplace or flue [2].

23. Thatch is generally (but not always) found on small dwellings of traditional vernacular construction and many of these have a single small chimney (and or a small number of flues) in brick.

24. Traditionally constructed stacks are unlikely to have flues of sufficiently adequate dimensions for a flue liner to be added while maintaining the minimum required 200mm clearance from the inside of a liner to the thatch of a tightly thatched chimney. With traditional lining arrangement the only option is likely to

require the thatch be cut away from the chimney before any work is commenced to the stack. [3] The extent of these works may need to be discussed with the local planning authority and incorporated into any application for the relevant consents.

25. The extent to which the thatch may need to be cut away will be a matter for individual circumstances and is not a matter for this note, but there may be issues of historical and archaeological evidence to consider as referred to in the IHBC's Research Note: Change to Thatched Roofing Materials Planning Policy and Planning Appeals in England [4].

26. Chimneys with a larger plan (and larger flues) usually enable a different approach and where the distance between the inner surface of the flue liner and outer surface of the chimneystack is 200mm or more, the Building Regulations allow combustible materials to touch the outside of the brickwork but relining of the chimney requires very careful centring to avoid hot spots particularly with, for example flexible linings that use twin-wall stainless steel.

27. Treatment of the flue void may vary from one manufacturer to another. Some insist on the void being filled with an insulating material while others require the void around their liner to remain clear of materials but closed off top and bottom - but these do not offer a high thermal resistance and do not add much to the insulation levels of the chimney.

Conclusion

28. Some general lessons to be drawn from this appeal for applicants, agents and those within a local planning authority are:

- where possible, evaluate the condition of the brickwork and pointing of the stack to realistically assess the physical condition and the need for any remedial work in advance of any other alterations;
- where parts of the stack can't be clearly observed, try to make an objective assessment of the likely condition based on the age of both the building and the stack itself and make a realistic assessment of risk accordingly;
- understand the potential for the build-up of hot spots and the increased risks to the thatch if wood or multi-fuel burning stove is to replace an open fire;
- bear in mind that cutting the thatch back around the stack before any other work is done may interfere with the historical evidence;
- assess the likely aesthetic impact of increasing the height of a stack in relation to the scale and proportions of the dwelling (and any similar dwellings in the vicinity) bearing in mind best endeavours to achieve a minimum clearance height (including pots) above the thatch of 1.8M; [5]
- the increased height may well require planning permission, building regulations approval and or listed building consent depending on the extent to which the stack may need to be upwardly extended;
- ensure that applications for consent are backed up with properly documented authoritative professional advice from a fire officer or a survey from an experienced heating engineer to conform with fire safety standards and/or to obtain fire insurance;

- consider contemporaneous submissions and consideration of applications for planning and/or listed building consent with an application under Approved Document J of the Building Regulations.

Bob Kindred MBE BA IHBC MRTPI

Endnotes

1. Appeal Ref: APP/Y3940/D/16/3156979 Chequers, Wylye Road, Hanging Langford, Salisbury, Wiltshire SP3 4NW

2. Approved Document J, Diagram 21 shows that the requirement could be met by ensuring the combustible material is at least 200mm from the inside surface of a flue or fireplace recess; or 40mm from the outer surface of a masonry chimney or fireplace recess unless it is a floorboard, skirting board, dado or picture rail, mantel-shelf or architrave. Metal fixings in contact with combustible materials should be at least 50mm from the inside of the flue.

3. Comprising proprietary clay, refractory concrete and pumice flue liners, cast in-situ concrete linings and twin-wall flexible stainless steel liners.

4. RN2016/2, Apr 2016 Accessible at: http://ihbconline.co.uk/toolbox/research_notes/thatch.html

5. Historic England are conducting research on the issue of the height of chimneys in relation to thatch and the Institute understands that this is likely to recommend that chimneys should normally be 1.8 m above thatch height, so as to minimise the risk of thatch fires.