

# Geography – Background Information

## 2011 Census NRS Frozen Geography Policy

### **Background**

In 2007 the Census Programme Board approved Geography's recommendation to continue with our 'frozen geography' policy.

More information of postcodes can be found in the Postcode Background Information note on the [National Records of Scotland \(NRS\) Postcode Extract](#) section of the NRS website.

### **Definition**

'Frozen geography' means that the underlying postcode database is 'frozen' at a particular date and this 'frozen postcode database' is the basis for the census enumeration and also the basis for processing, editing and producing all the census geography outputs.

Any postcode collected during the enumeration phase that was not included in this frozen set is replaced during processing by the most appropriate postcode from the frozen postcode database.

This ensures that the parts of the census that involve 'location' - enumeration, usual residence, travel destination and migration origin - will be on the same postcode base.

This follows the same strategy which was successfully adopted in the 1991 and 2001 Censuses.

### **How does it work?**

It is ideal to freeze the postcode database as late as possible, but it is necessary to strike a balance between the need for up-to-date information and the lead-time required for the production of geography products for the enumeration phase.

For the 2011 census the postcode database was frozen in January 2011 in order to minimise the period of time in which new postcodes could be introduced before the enumeration date in March

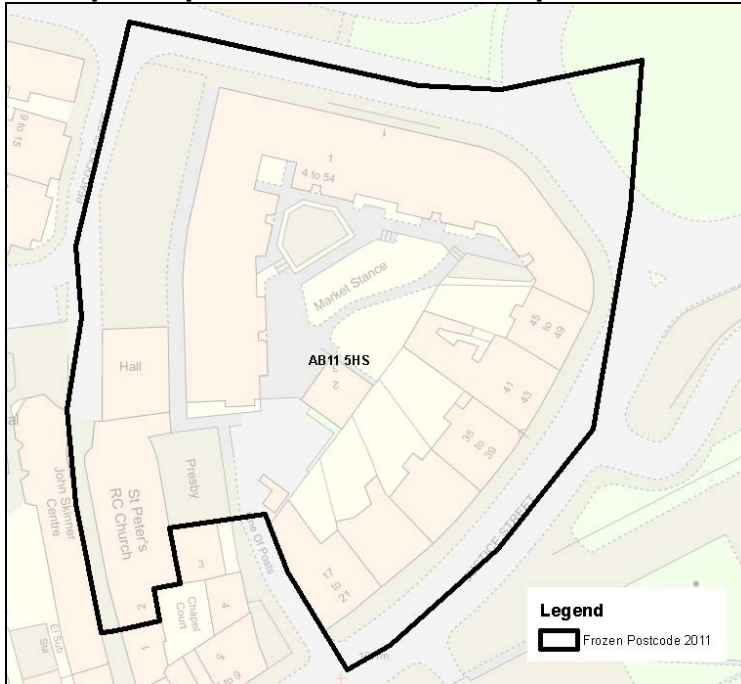
Any new valid postcodes encountered after the date of freezing had to be incorporated into the frozen postcode database.

This was accomplished by using specially created postcode indexes which substituted the brand new postcode with a postcode from within the frozen postcode database.

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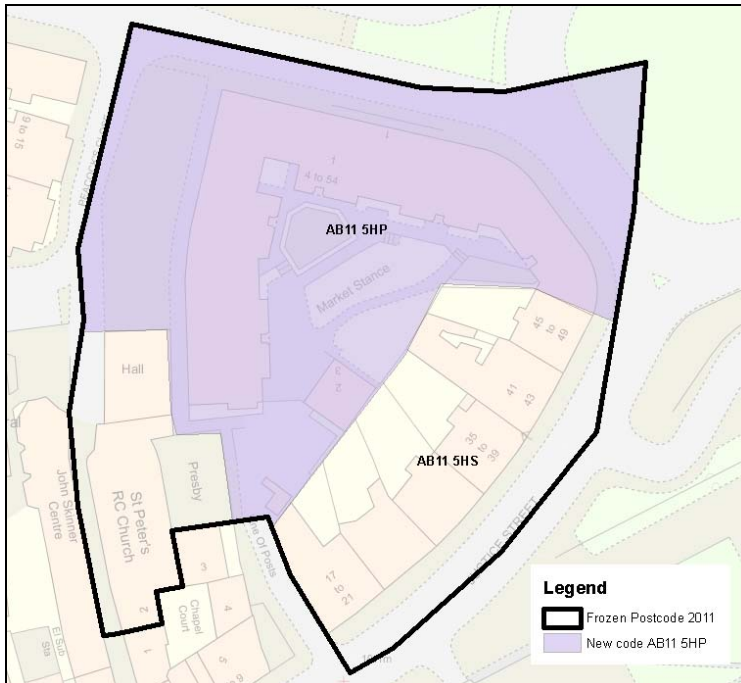
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### Example of postcode in the frozen postcode database



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### Example of new postcode, linked to postcode in the frozen postcode database



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In the above example, the new postcode 'AB11 5HP' has its extent within the position of the frozen postcode database postcode AB11 5HS. Therefore

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census entries for 'AB11 5HP' have been replaced by the 'frozen' postcode AB11 5HS.

Each large user postcode was linked to a small user postcode.

Postcodes which were deleted from the postcode database in the year before freezing were linked to a postcode in the frozen postcode database. This was necessary to help complete the processing of the responses to the census questions on 'address one year ago' and 'place of work or study'.

The frozen postcode database together with the special postcode indexes were held, maintained and updated by National Records of Scotland Geography and sent to our contractor to update the Scottish Geography database. This was established as part of the enumeration area planning process and was used extensively during the processing of census questionnaires to check the validity of postcodes.

Postcode queries raised during this process were passed to the geography team for resolution and various automated and manual systems were used to ensure the final census database contained accurate and valid postcodes in the frozen postcode database.

### **Any issues**

Potentially there were some. We were aware that postcodes which existed at the beginning of census operations could change. We would also be made aware of new postcodes once the census operation was underway and we might also learn that some of the original postcodes had been deleted.

However it was concluded that the level of change would be small (less than 0.2%) and did not warrant the disruption and risk of delays entailed by updating the postcode database up to the last possible moment.

There is no evidence from customers to suggest that the 'frozen geography' policy used in 1991 and 2001 was flawed or caused inaccuracies.

### **Advantages**

There are advantages to freezing the Geography base at a given point in time:

Operationally, the task of substituting new postcodes for frozen ones is a much simpler one than continually adding new postcodes to the geography base.

The set of frozen postcodes and the special indexes become ancillary geographic products and can, if required, be updated to allow new postcodes to be referenced back to the frozen set. New postcodes are already referenced back to 2001 (and 1991) Output Area's (OA's).

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#### **When did we freeze?**

Without doubt we wanted to freeze the postcode base as late as possible but it had to strike a balance between the need for current information and the lead-time required for the production of geography products for the field. The postcode base was frozen in January 2011.