Scottish Neighbourhood Statistics

Intermediate Geography Background Information

Contents

Introduction to Intermediate Geography

Last year we introduced the new statistical geography called data zones, this geography has now been supplemented with a new intermediate geography. The data zones and intermediate zones build on the well established postcode and census geographies and are now the key geographies for disseminating government statistics and for supporting policy making.

Scottish Neighbourhood Statistics introduced in 2004, for the first time, a common, stable and consistent small area geography called data zones. The data zone is the key small area statistical geography in Scotland. The data zone geography covers the whole of Scotland and nests within local authority boundaries. Data zones are groups of 2001 Census output areas which have populations of between 500 and 1,000 household residents, where possible they have been made to respect physical boundaries and natural communities. They have a regular shape and contain households with similar social characteristics.

Not all statistics are suitable for release at the data zone level because of the sensitive nature of the statistics or for reasons of reliability and it was apparent that a statistical geography between data zone and local authority was required. The Intermediate zones are aggregations of data zones within local authorities and are designed to contain between 2,500 and 6,000 people.

We are grateful for the knowledge and experience that Community Planning Partnerships brought to the process of creating the new intermediate geography.

Office of the Chief Statistician
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Frequently Asked Questions about the Intermediate Geography

How will the Scottish Executive use the intermediate geography?

The data zone is the key small area statistical geography in Scotland. The intermediate geography will be used to disseminate statistics that are not suitable for release at the data zone level. It is intended that Government Statistics currently released at the electoral ward level will in future be released at the intermediate geography level instead.

After releasing the data zone geography in February 2004, it became apparent that there were some statistics that were not suitable for release at the data zone level because of the sensitive nature of the statistics or for reasons of reliability.

(Information about data zones can be accessed at **http://www.scotland.gov.uk/library5/society/sndata-00.asp**)

How will public sector organisations use the intermediate geography?

The introduction of the new data zones and intermediate geography will enable public sector organisations to have access to a wide range of aggregated central government administrative information which will help policy making at a local level.

It is also envisaged that the new geographies will help Community Planning partners to build a common understanding of local issues.

Will the intermediate geography be held consistent over time geography?

The intention is for the intermediate geography to be stable to allow changes over time to be easily monitored. We are currently developing the process for maintaining the intermediate geography and data zones. With each yearly update of Scottish Neighbourhood Statistics we will need to ensure that intermediate geography and data zones meet the minimum population thresholds.

What statistics will be available for intermediate zones?

It is expected that labour market, benefits and community care statistics currently disseminated at ward level through Scottish Neighbourhood Statistics will become available at the intermediate geography during 2005.

Because the intermediate geography are groups of data zones there are added benefits in that the perception of disclosure of information through overlapping geographies is removed and it is hoped that this will allow some key labour market and benefits statistics to become available at the data zone level also.

See **www.sns.gov.uk** for the current topics included.

How do I get a copy of the intermediate geography and data zone boundaries and look-up tables?

The CD containing the information can be obtained by emailing your contact and address details to **statistics.enquiries@scotland.gsi.gov.uk**

Do intermediate zones represent communities on the ground?

It was always recognised that intermediate zones are statistical small areas and do not necessarily delineate communities on the ground. However, community boundaries were taken in to consideration in the construction and quality assurance of the intermediate zones.

There are 1235 intermediate zones in Scotland, containing on average 4000 household residents. There is some variance in the intermediate zone populations across Scotland, with one quarter of intermediate zones containing less than 3200 household residents, one half of intermediate zones containing less than 3900 household residents, and three quarters of intermediate zones containing less than 4800 household residents.

How was the intermediate geography produced?

The intermediate geography was designed to meet constraints on population thresholds (2,500 – 6000 household residents), to nest in to local authorities and to be built up from data zones. The aim was also to build intermediate zones by grouping together data zones with similar social characteristics, to have a fairly compact shape, and to take account of physical boundaries. To do this (in most areas) we used Scottish Parliamentary Constituencies to get a first cut of intermediate zones and refined these using the Scottish Index of Multiple Deprivation, settlement boundaries, and background mapping.

The intermediate geography was then sent to Community Planning Partnerships who were asked to quality assure the intermediate geography based on their local knowledge and suggest changes were appropriate. All changes were accepted as long as they met the population threshold and data zone building block criteria and nested in to local authorities.

A report from St Andrews describing the process for producing intermediate zones is included at Annex A.

How were users consulted?

The original design for the intermediate geography and the role Community Planning Partnerships would play in the process was agreed at the Scottish Neighbourhood Statistics Development Group in spring 2004. The Scottish Neighbourhood Statistics Development Group includes representatives from local government, a range of public and voluntary organizations, and central Government.

As stated above Community Planning Partnerships played an important role in quality assuring and improving the intermediate geography based on local knowledge.

Were all suggested changes to intermediate geography accepted?

All changes were accepted as long as they met the population threshold and data zone building block criteria and nested in to local authorities.

How long did the consultation with Community Planning Partnerships take?

Community Planning Partnerships had three months to quality assure and improve the intermediate geography. Well before the consultation began, each Community Planning Partnership was asked to identify a co-ordinator to collate responses in each area.

Which boundaries does the intermediate geography respect?

Intermediate zones have been designed to respect local authority boundaries as at 2001 Census.

A small number of Community Planning Partnerships redesigned their intermediate geography by grouping together data zones to best fit local geographies of interest. These were accepted if they were consistent with the overarching population threshold criteria.

How will the intermediate geography take account of population change?

As part of Scottish Neighbourhood Statistics the General Register for Scotland (GROS) is developing a methodology to produce population estimates at the data zone level. 2001 Census population estimates were used in the creation of the intermediate geography and data zones.

Will the intermediate geography take account of current and future planning applications?

Information on population change as a result of development and regeneration will come from the General Register for Scotland small area population estimates.

Do the intermediate zone have names?

26 out of 32 Community Planning Partnerships took up the offer to name the intermediate zones.

Why did you use data zones as the geography to build the intermediate geography?

We now have a statistical geography hierarchy in Scotland:

Postcode unit* – 2001 Census output area – Data zone – Intermediate Geography – Local Authority

* postcode units are best-fitted to 2001 Census output areas

This allows ready aggregation geographically referenced information to any layer of the hierarchy which makes analysis more efficient and removes potential issue of confidentiality which are raised when statistical geographies overlap. Which in turn can result in more statistics being made available at the data zone level.

Will the links between postcodes, data zones and intermediate zones be maintained?

The links between postcodes and data zones and intermediate zones are needed to allow statistics to be produced for SNS. The intention is to continue to make the links available to SNS users. GROS will also maintain the relationships on the GROS Postcode Index.

Are there any confidentiality issues with using the intermediate geography?

The Scottish Executive statisticians work to a Code of Practice which prevents us from releasing analyses which could identify specific individuals. We use several methods to prevent this, including rounding the results.

What other geographies will be supported in Scottish Neighbourhood Statistics?

The key geography for disseminating results through Scottish Neighbourhood Statistics will continue to be the data zone. Results will also be available at the intermediate geography and Local Authority, and best fit information will be available at Health Board and Scottish Parliamentary Constituency level.

We are exploring whether to include the Scottish Executive Urban Rural Classification and the future Regeneration Outcome Agreement geography within Scottish Neighbourhood Statistics.

Report to the Scottish Executive on

SCOTTISH NEIGHBOURHOOD STATISTICS INTERMEDIATE GEOGRAPHY

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Scottish Neighbourhood Statistics Intermediate Geography

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The project

The Scottish Neighbourhood Statistics project is intended to provide small-area data on a range of topics, including population, social conditions, housing, health, crime and education. Geographical units must be defined for which the data can be provided, ideally at a micro-level so users can aggregate the units to approximate places that they have an interest in. Suitable units must therefore be defined; these are referred to as data zones, rather than neighbourhoods, because the latter term suggests some degree of community identification with the zones, which will be difficult or impossible to achieve in a consistent manner across Scotland. Data zones should be composed of contiguous whole census output areas, and should fit within local authority boundaries. A system of data zones for Scotland was devised in the last months of 2003, altered after consultation with local authorities, and published in February 2004.

A key issue in the release of Scottish Neighbourhood Statistics is confidentiality. In particular, any situation must be avoided where information about specific individuals can be extracted or inferred from publicly released data. Certain data may be released for quite small areas, such as data zones, without risking disclosure, but other data, particularly data relating to relatively rare events, may not be published for small areas. Such data may however be published for larger geographical areas. The purpose of this project is to design a system of these areas, known at present as the Intermediate Geography, which is appropriate for release of data that cannot safely be released at the data zone level.

The following criteria should be taken into account in the definition of the Intermediate Geography.

1) Intermediate zones must be built up from data zones and should nest within local authorities.
2) They must contain between 2,500 and 6,000 household residents.
3) Significant physical boundaries such as motorways, railways and valleys should be taken into account.
4) The shapes of intermediate zones should be reasonably compact to allow the make-up of the area to be easily understood.
5) Intermediate zones should be related to Scottish parliamentary constituency boundaries (this will not always be possible, as data zones do not nest within these constituencies).
6) Where possible, intermediate zones should be coextensive with small settlements of 3,000 plus residents.

7) Where possible, intermediate zones will group together data zones with similar characteristics, as measured by the Scottish Index of Multiple Deprivation.

In practice, it is impossible to satisfy all these criteria at once, and compromise was necessary. The first two criteria above were always met in our original proposals, though in a few cases intermediate zones outside the household population range were accepted if the Community Planning Partnership made a strong case.

Local knowledge is important in evaluating the zones created, and it is important that people with extensive local knowledge should examine the zones and make suggestions for their improvement. This was done primarily through the Community Planning Partnerships (CPPs) over a three-month period. Amendments based on local knowledge were accepted if they were accordant with the main criteria above (1&2). CPPs were also invited to suggest names for the intermediate zones.

Because of difficulties in defining a consistent set of zones based on community loyalty and identification, this factor was not considered explicitly in designing the intermediate zone system. Nevertheless, it is likely to be related to several of the more easily defined factors used, such as boundaries, shape, relationship to settlements, and it was clearly considered by many CPPs in their responses and suggestions.

To improve the consultation aspects of the project, the St Andrews team were joined by GeoWise Ltd who have expertise in designing on-line consultation exercises.

Background

For the last few decades, the availability of accurate and systematic small-area social, economic and demographic data has been effectively confined to the Small Area Statistics produced for the decennial population census. The census is restricted in the topics that it covers, and takes a long time from data collection to publication, as a result being effectively anywhere from two to twelve years out of date. An increasing amount of data is now stored on an ongoing basis by central and local government, in many cases with postcodes or other geographical referencing systems attached. Such data can be made available at the local level, subject to suitable constraints to preserve privacy, and the Scottish Neighbourhood Statistics programme is intended to create a system to allow easy access to these data.

For the reasons of privacy mentioned above, it is not practical to make the data available for very small geographical units. On the other hand, to allow users to approximate geographical areas they are interested in, it is useful to have small units for which data can be aggregated flexibly. Defining these areas is, however, a substantial problem Several suggestions were made and evaluated, before settling on the system eventually adopted. The original set of data zones was published on the basis of 1991 census data. In some cases, the data zones had been superseded by events since 1991, so the system was redesigned taking into account 2001 census boundaries and populations. The methods used are explained in the following web site:

http://www.scotland.gov.uk/library5/society/sndata-01.asp

The project team

Professor Robin Flowerdew was project manager. The production of the Intermediate Geography was co-ordinated by Dr Zhiqiang Feng, who was also responsible for checking and implementing suggestions made by the CPPs. Mr John Maslen was responsible for the consultation exercise. Graham Brooks and Jon Clare worked on designing the software for consultation.

Methods used

Design of data zones

The key element in the proposed methodology for creating the data zones is the use of a geographical information system as a decision support tool. Most of the criteria used in defining the zones can be shown in map form, enabling the operator to display overlays of the relevant information on a screen simultaneously. This allows informed decisions to be made immediately. It is also possible to make provisional decisions about the construction of intermediate zones, investigate their wider implications for neighbouring areas, and to reverse these decisions if necessary.

The objective of the methodology is to combine the current set of data zones (DZs), which are between 500 and 1000 in population (excluding people not living in households), into larger intermediate zones (IZs), between 2,500 and 6,000 resident household population. These intermediate zones must themselves nest within local authority areas. They must also, as far as can be managed, meet the criteria of compactness, homogeneity, accordance with other boundaries and environmental features and with local communities identified in the area.

The nature of the task is fairly similar to that of constructing data zones from output areas. We will analyse each local authority separately. There are many ways of constructing zones of the required population size (2,500 – 6,000 people living in households). Our general approach is to use a few criteria to produce an initial set of IZs, and then to fine-tune them by examination within the GIS, reallocating DZs between IZs in order to improve shape, homogeneity, accordance with boundaries, local communities identified and other criteria without infringing the population constraints.

As a starting point, we used the boundaries of the Scottish Parliamentary Constituencies, constraining IZs to include only DZs within the same constituency. We also used settlement boundaries, constraining IZs to respect the boundaries of settlements of population 3,000 or more. Within these constraints, we then constructed IZs on the basis of proximity, working from one side of the local authority to the other.

The next stage of the procedure was to examine the resulting zones critically. This can be aided by on-screen display of the DZ and IZ boundaries against an Ordnance Survey backdrop marking significant physical boundaries. The display will also contain information about DZ populations and scores on the Scottish Index of Multiple Deprivation, together with settlement and constituency boundaries. The availability of all the relevant data on-screen will allow the operator to adjust IZ boundaries better to reflect considerations of shape, homogeneity and physical boundaries while continuing to observe the population criterion.

At this stage, it is possible that zones will be adjusted so that they no longer conform to settlement or constituency boundaries, if it is felt that these are outweighed by other considerations.

A final step in the procedure is to allocate unique identifiers to the intermediate zones produced. This was done in association with the Scottish Executive. CPPs were invited to suggest names for the zones. Look-up tables are provided, one listing the DZs associated with each intermediate zone and other attributes of the IZ, and the other listing the DZs and saying which IZ they are in.

It should be clear from the account of the methodology above that personal judgement is an important aspect of the procedure. Although progress has been made on systems of zone design that are entirely computer-generated, such as the ZoDE system under development at the University of Newcastle upon Tyne and the AZM system developed at the University of Southampton, it is considered that these are not yet suitable for the current purpose. This is either because the objective function maximised by the software is not sufficiently flexible, or because there are restrictive limits on the number of input zones that can be handled. It may be that one of these systems will be sufficiently reliable and sufficiently thoroughly tested to be used in a few years' time, but at present it is felt that there are advantages to be gained from the 'hands-on' approach we propose.

Because there were many criteria in use, the resulting zones are far from being good reflections of any one criterion. Thus, although shape was an important criterion, it was impossible to avoid defining some IZs that are far from the approximately round shapes that would be most satisfactory. Similarly, the use of the Scottish Index of Multiple Deprivation as a measure of homogeneity did not guarantee that all IZs are socially homogeneous. The geographical distribution of deprivation means that many IZs must include both the poorest and the richest part of a small town. It is only in rural areas and in big cities like Glasgow that we can expect deprivation levels to be similar over large areas.

As part of the quality assurance process, suggested Intermediate Zones were reviewed to see if improvements could be made, and in several cases revisions were made, mainly on the basis of improving shape and respecting local environmental features, such as major roads and railways. The Intermediate Geography for each council area was considered by at least two people before being sent out for consultation. It is felt that most of the changes recommended in the consultation process resulted from local factors felt to be important rather than to any problems with the quality of the initial suggestions.

Consultation with Community Planning Partnerships

The role of the Community Planning Partnerships in the consultation process was very important. The St Andrews team undertook the initial definition of IZs for the whole of Scotland in order to ensure comparability, but necessarily this group only had local knowledge of a few areas, whereas the consultation process allowed the input of local people and officials throughout the country. A potential problem in the consultation process was the danger of receiving different and perhaps contradictory suggestions from different people or organisations, so it was important to have one nominated contact in each council area who could act as a co-ordinator. Accordingly, Community Planning Partnerships were asked to nominate somebody to co-ordinate views and to forward suggestions to us (see Appendix 1). Co-ordinators were appointed in most

council areas and, as far as we are aware, the system worked well - in no case did we receive duplicate sets of suggestions or complaints that the co-ordinator had misrepresented local opinion. We thank them for their help in co-ordinating responses. As expected, local knowledge in the CPPs played a very important role in improving the Intermediate Geography, especially in identifying areas where there were important community boundaries of which we were unaware, or where new development was ongoing or likely. We thank them both for their input into improving the Intermediate Geography for their areas and for the constructive manner in which they approached the task.

GeoWise has been directly involved in the on-line delivery of Scottish Neighbourhood Statistics for the last two years. As such the team had an excellent understanding of relevant issues. They worked closely with the team at St Andrews to ensure that consultation on IZs was carried out effectively, in particular by designing software to make it easy for CPP representatives to view and to modify the Intermediate Geography.

In August 2004, a CD was prepared and three copies sent out to each CPP. It was accompanied by a letter from the Scottish Executive (Appendix 2) asking for assistance from the CPP and including details of how the consultation process would operate. The CD contained:

- a set of instructions as a PDF file
- the boundary data files as ESRI shape files
- template Excel worksheets for recording suggested changes and names
- an interactive atlas for viewing the results
- the Adobe SVG Viewer V.2 for viewing the interactive atlas.

For those organisations with specialist GIS skills and in line with the previous consultation exercise for Data Zones, ESRI shape files of the proposed IZs were made available for specific local authorities together with a version for the whole of Scotland. DZ boundaries were also available for organisations looking to compare both geographies. This allowed expert users to take these boundaries, import them into desktop GIS software and undertake their own analyses.

We also used an interactive atlas. This offers advantages (more enjoyable user experience, better interactivity etc.) but there were also a number of disadvantages relating to dependence on users being able to load the Adobe plug-in and the potential volumes of boundary (generalised boundaries are not appropriate in this case) and OS raster data causing longer data load times. The latter were overcome by distributing the application on a CD. Users could select their local authority, navigate to areas of interest and select specific data zones to build up their own intermediate zones. Full instructions on installing and using the interactive atlas were provided.

Output

The output from the project consists mainly of the Intermediate Geography itself. Boundaries were supplied to the Scottish Executive as shape files in ESRI software. A look-up table was also supplied giving the identifier and composition of each intermediate zone in terms of the data zones that make it up. Those intermediate zones containing communal establishments were identified in the table.

Timetable

The contract was due to start on 1 June 2004, but for logistical reasons was delayed. The month of June was devoted to constructing the Intermediate Geography, working on each local authority in turn. This work was completed in July, and the consultation process began in August and lasted until 18 November. Contacts in each Community Planning Partnership were sent copies of a CD containing instructions for the exercise and maps for use in examining and revising the suggested Intermediate Zones, together with an interactive application for viewing the data.

Few responses were received before mid-November, the majority being received in the week before the deadline date. Reminder letters were sent to the six Council Areas who had not responded by the deadline, producing replies from four of the six, with continuing work on examining the responses until 9 December 2004.

Review of the consultation exercise

General comments

The consultation exercise with CPPs lasted three months and progressed fairly smoothly. A few respondents found it difficult to use the software, and a few sent their responses back in ways other than those suggested. In most cases, it was still possible for us to use their responses, and in other cases we were able to ask the contact person for more information to make the responses usable. Several responses included intermediate zones that infringed our basic rules, usually by including zones below 2,500 or over 6,000 in population. Where this occurred, we usually suggested modifications that fitted in with our general principles. If cases were made for the oversize or undersize zones, especially on the basis of community cohesion, we accepted them, referring to the Scottish Executive if new matters of principle were involved. In the end, we accepted 8 zones that are below 2,500 in household population, one of which is below 2,000 (Harris in Eilean Siar, where it was felt inappropriate to join Harris with part of Lewis). We have 5 zones that are over 6,000 in population.

The intention was that people in the Community Planning Partnerships would consult widely to agree on a preferred set of intermediate zones. In some Council Areas, this clearly happened, and responses mentioned meetings that had been held to approve the suggestions. However, we did not ask for information on how each CPP carried out their review, and so no overall conclusions can be drawn.

Almost all CPPs suggested some change to our proposed zones, though this varied from a very small number of specific modifications to a total redesign of the system. In some cases, redesign was undertaken to make the zones as compatible as possible with another set of zones of local importance, such as wards or neighbourhoods. In most cases, respecting the boundaries of areas locally perceived as communities seemed to be the most important criterion, together with avoiding joining together two places perceived to have little in common.

Another frequent reason for altering our proposed intermediate zones was to respect recent (post 2001 census) and ongoing patterns of development. Comments about projected developments were noted for subsequent zone revisions but it was decided that IZs had to meet the population constraints based on the 2001 census, even if it was known that the zones

would meet the criteria if 2004 populations were used. If responses took new or planned developments into account without infringing our basic constraints, they were accepted; otherwise, we tried, sometimes unsuccessfully, to create zones that met our 2001 population criteria but could accommodate current population increases.

Difficulties could also arise where there was substantial population in communal establishments. Some responses had been based on meeting the size criteria for total population rather than household population. An important example in Argyll and Bute is discussed below.

Comments arguing for specific changes in the intermediate zone system for other reasons (such as public identification with certain areas, or accordance with other systems developed for parts of the local authority) were considered. These were used in making appropriate adjustments unless suggested changes led to violation of the principles established for the exercise as a whole. Such adjustments were discussed with the Scottish Executive as appropriate. Comments arguing for a different approach to the definition of intermediate zones were noted and forwarded to the Scottish Executive, but were not used to adjust the system. Although every effort was made to include comments submitted after the suggested due date, a few could not be fully considered for timetable reasons.

In a few cases, responses included comments or questions on aspects of the intermediate zone definition process. In most cases, these referred to matters outside our responsibility, and these have been passed on to the Scottish Executive. Examples include queries about when the intermediate geography would come into effect, and when they would be updated.

Table 1 lists all the Council Areas and gives some statistics about the number and size distribution of intermediate zones, following the consultation and revision process. The number of intermediate zones varies from 6 in the Orkney Islands to 133 in Glasgow City, mainly reflecting population sizes. The smallest IZ has 1946 people (in Eilean Siar); the largest, in West Dunbartonshire, has 6112. The table picks out in bold type those cases where intermediate zones outside the recommended range of 2500 to 6000 have been permitted.

The mean household population of intermediate zones varies from 2907 in Eilean Siar to 5146 in West Dunbartonshire; the overall mean being 4029. Other Council Areas with relatively small intermediate zones include Shetland, Orkney, Fife and Falkirk; others with relatively large intermediate zones include Inverclyde, West Lothian, South Ayrshire and Dundee. The St Andrews team did not intentionally create larger intermediate zones in some areas than others, so at least part of the variation in size distribution stems from the changes recommended by the various CPPs.

Naming intermediate zones

A further task given the respondents was to come up with names for the intermediate zones, following a series of suggestions (see Appendix 2). Most respondents did so, although one or two felt it was more appropriate to give them numerical labels rather than names, usually on the grounds of avoiding confusion with other geographical areas such as wards that might have similar names but different extent. In such cases, zones were given names of the form IZ One, IZ Two, IZ Three, etc., the numerical ordering being from South to North, as was

done for the data zone codes. This numerical ordering has also been given to intermediate zones in those council areas which did not respond or which did not provide names.

Generally the names given are suitable as far as we can tell. Sometimes names are very long, usually where they incorporate the names of several (as many as six) small settlements, presumably because of a wish to avoid favouring some over others. In a few cases, we asked respondents to shorten names in excess of 50 characters, though we have not always insisted on this. We have also changed the style of some names, adopting the use of commas and the word 'and' to link together lists of names instead of the variety of styles adopted by respondents which included &, /, and - in this context.

Responses from specific CPPs

The following outlines responses from community planning partnerships.

Aberdeen's response indicates that the system of neighbourhoods they have established is suitable for the purposes for which intermediate zones are proposed. However, they have responded to the task by designing intermediate zones to fit the boundaries of neighbourhoods as well as possible. The Intermediate Geography co-ordinator for The Aberdeen City Alliance explicitly stated that he had carried out consultation with all Community Planning partners and the City Council's own directorate, with reports presented to both the Full Council and The Aberdeen City Alliance. Names for the IZs reflect those given to Aberdeen's neighbourhoods.

Aberdeenshire's response had been fully discussed with the Council's six Area Managers who have considerable local knowledge and through a working group of the Community Planning Partnership. They raised the issue of zone boundaries around some settlements, which were drawn tightly so that future growth in the settlement would necessarily be outside the zone.

A difficult case occurred in Argyll and Bute, where one data zone contains a small household population and a large non-household population (in a naval base). It was suggested that the communal population should not be put in with neighbouring data zones because they had little in common. However, if the data zone concerned were to be an intermediate zone in its own right, it would be far too small for data based on household population, so it was disallowed. It also proved impossible to match the IZ system to the Argyll and the Isles Enterprise boundaries, because doing so would have necessitated splitting data zones.

Clackmannanshire suggested minor changes to the suggested IZ boundaries, in two cases leading to IZs below the 2,500 minimum. They were concerned that the 'frozen' data zone boundaries would be inappropriate in areas that had undergone major changes.

Dundee suggested a few minor changes, in all cases to take account of new building and its effect on IZ populations.

East Ayrshire suggested a few minor changes in part of the council area, and expressed concern about the need to modify data zone boundaries.

East Renfrewshire suggested a few minor amendments to the suggested Intermediate Geography, and made the point that development patterns in some areas were at variance

with boundaries of IZs and their building blocks, with the result that it was very difficult to construct zones that reflected communities.

Edinburgh suggested a number of changes, and drew attention to an anomaly whereby part of Edinburgh that had been transferred to West Lothian still appeared in our maps. This is because we have been using the Output Areas for the 2001 census as the fundamental building block for designing data zones and hence intermediate zones too.

Eilean Siar's response emphasised the importance of community identity. On these grounds, Harris was accepted as an IZ despite being well short of the population minimum specified. Another IZ, in Lewis, is also below this minimum, but again it was considered to reflect community and service provision boundaries better than an alternative configuration that would respect the population minimum.

Following consultation with the CPP, Falkirk suggested revisions to the proposed Intermediate Geography.

Fife suggested some revisions to the proposed Intermediate Geography. These were unproblematic except in the Dunfermline area where some of the zones suggested were too small according to 2001 census figures, although new building since 2001 meant that they will now have exceeded the minimum.

Glasgow's response makes some points about the desire for the intermediate geography to be constrained to electoral wards. The IZ coverage for Glasgow was therefore revised to match the ward boundaries as well as possible. To avoid confusion with ward names, IZs in Glasgow were given numerical identifiers.

Highland made some fairly substantial changes to the proposed Intermediate Geography, and argued that one area should be recognised as an IZ despite having too small a population, on the grounds that its population had grown sufficiently to meet the criterion since the census.

Inverclyde's reply followed consultation with all members of the Inverclyde Alliance. Several changes were made so that the zones reflected the most deprived communities.

Midlothian made a number of suggestions, generally with the intention of making the boundaries accord better with perceived communities. Some of their suggestions were not put into effect because they resulted in multi-extent zones, which were avoided in the methodology as far as possible.

The response from Moray also suggested some changes, resulting in two IZs that were below 2,500 in population. A particular concern here was the difficulty of dealing with large rural areas.

North Lanarkshire's response was based on replies from two members of the CPP. A number of changes were made to the original proposals.

Perth and Kinross suggested some fourteen changes, mainly to 'better reflect Perth and Kinross Council community areas and the geographies of the Area Based Initiatives'. Other reasons were to keep communities together which were split by the original proposals, and to separate adjacent places that were regarded as separate communities.

Renfrewshire suggested changes to 24 of the proposed Intermediate Zones and the creation of 3 new Intermediate Zones, making 38 in all. Again, there were problems in dealing with a large sparsely populated rural area surrounded by settlements.

South Ayrshire's response was based on extensive consultation, and quite a number of changes were made, keeping to the criteria drawn up for the exercise.

West Dunbartonshire was concerned that IZs should reflect natural communities, and as a result argued for two IZs over 6,000 in population. They also felt that the IZs should be given numbers rather than names, to reduce confusion with other geographical entities.

Useful responses were also received from East Dunbartonshire, North Ayrshire, Orkney, Scottish Borders, Shetland, South Lanarkshire, Stirling and West Lothian. No response was received from Angus, Dumfries & Galloway or East Lothian.

Policy for revision of data zones and intermediate zones

Although discussion of a schedule for revising data zone and intermediate zone systems in Scotland was not part of our brief, it may be useful to offer a brief discussion of the issue in the light of our experience. The problem cannot have a simple answer, in that there are strong arguments both in favour of and against revisions. First, Scotland's geography is ever-changing, and new housing developments are continually reducing the appropriateness of zonal systems drawn up in the past. On the other hand, one of the main uses of neighbourhood statistics will be to monitor change at the local level, and this is far easier with a stable geography. Boundaries therefore should not be changed without good reason, but it would be foolish not to adjust them in the face of major geographical change.

Zones undergoing development will become too large to meet the population criteria, while other places are losing population to the extent that some zones will slip below the minimum population threshold. Other areas will be changing in character, sometimes dramatically so, making the homogeneity criterion look different. It is therefore important that revisions to the zonal system be undertaken every few years. It is also recognised that some councils may wish to revisit initial comments on data zones in light of the extensive use being made of the statistical geography.

There have been a handful of amendments to local authority boundaries since 2001 and these will need to be considered in maintaining data zones.

The census remains important to people interested in small geographical areas. Its definition and use of Output Areas has been a starting point in the definition of data zones and hence of intermediate zones. It is hoped that the Output Area geography will remain the same in 2011 as in 2001, except for areas of rapid development and social change. Where it changes, it may be important for data zone geography to change too. Some changes may also be called for as social conditions change in different areas.

Table 1 Summary statistics for household population of intermediate zones by council area

LA name	number of intermed-iate zones	total household population	25% percentile	50% percentile	75% percentile	Mean	Min.	Max.
Aberdeen City	47	206516	3783	4377	5167	4394	**2095**	5871
Aberdeenshire	57	223978	3143	3816	4660	3929	2569	5969
Angus	25	106445	3178	4593	5045	4258	2714	5909
Argyll & Bute	22	87403	3110	4064	4596	3973	2744	5636
Clackmannanshire	12	47124	3229	3677	5147	3927	**2020**	5556
Dumfries & Galloway	35	145782	3366	4167	4871	4165	2592	5962
Dundee City	31	142501	4074	4710	5182	4597	2610	5922
East Ayrshire	30	118600	3210	3914	4678	3953	2648	5564
East Dunbartonshire	28	106965	3114	3587	4417	3820	2688	5780
East Lothian	22	88956	3221	3845	4818	4043	2693	5941
East Renfrewshire	20	88647	3482	4306	5485	4432	2997	**6028**
Edinburgh, City of	101	437793	3390	4285	5205	4335	2634	5927
Eilean Siar	9	26165	2607	2937	3090	2907	**1946**	4006
Falkirk	41	143457	2994	3376	3802	3499	2759	5043
Fife	103	342987	2922	3180	3704	3330	2517	5389
Glasgow City	133	565974	3509	4096	5010	4255	2668	**6078**
Highland	54	205351	3103	3605	4350	3803	**2405**	5852
Inverclyde	17	83055	4520	4936	5551	4886	2569	5951
Midlothian	20	80040	3634	3836	4486	4002	2533	5826
Moray	24	84871	3021	3467	4196	3536	**2189**	4900
North Ayrshire	38	134427	2938	3343	4094	3538	2587	5164
North Lanarkshire	73	318123	3476	4209	5309	4358	2586	5903
Orkney Islands	6	19034	2809	3138	3510	3172	2600	3901
Perth & Kinross	34	130857	3200	3615	4615	3849	2775	5952
Renfrewshire	38	170707	3387	4630	5510	4492	2615	**6016**
Scottish Borders	29	105382	3088	3450	4075	3634	2547	5899
Shetland Islands	7	21678	2562	2950	3633	3097	2514	4125
South Ayrshire	24	110438	3905	4643	5426	4602	3143	5961
South Lanarkshire	82	298812	3024	3489	4185	3644	2519	5504
Stirling	21	83730	2976	3786	5132	3987	2656	5934
West Dunbartonshire	18	92625	4647	5345	5714	5146	3635	**6112**
West Lothian	34	157582	3988	4774	5506	4635	2659	5875
Total	1235	4976005	3198	3898	4787	4029	1946	6112

Appendix 1 Initial letter to Community Planning Partnerships

Office of the Permanent Secretary

Office of the Chief Statistician
St Andrew's House
Regent Road
Edinburgh EH1 3DG

Telephone: 0131-244 0443
Fax: 0131-244 0335
Robert.williams@scotland.gsi.gov.uk
Http://www.scotland.gov.uk/stats

19 April 2004

Community Planning Partnership Contacts

Copy:
Community Planning Partnership Chairs
Local Authority Chief Executives
Communities Scotland

SCOTTISH NEIGHBOURHOOD STATISTICS: INTERMEDIATE GEOGRAPHY

I am asking for your assistance in carrying out a **consultation on a new intermediate geography** for disseminating small area statistics in Scotland.

As you may know the Scottish Executive has been working with colleagues across the public and voluntary sector to develop a range of socio-economic data at small area local geographies. Traditionally data has been held for a range of different geographies depending on the source of the data and the needs of the organisation collecting the information. The Scottish Neighbourhood Statistics project is working to enable users to access data across subject domains on a common and consistent geography. It is with regard to the development of this geographic structure that I am asking for your assistance.

1. Over the last year the Scottish Executive and Local Authorities have been working to develop Data Zones (which were released in February). These Data Zones will increasingly be the core geography for disseminating small area statistics across most policy areas including information about benefits, education, health and the labour market. Statistics relating to Data Zones will become available through Scottish Neighbourhood Statistics and the Scottish Index of Multiple Deprivation during late early summer 2004.

2. However for some users and for some datasets – owing to confidentiality and reliability issues - it is considered that a pre-defined geography that fits between the Data Zones and Local Authority is required. It is this new Intermediate Geography that the Scottish Executive will be consulting on over the summer. The methodology for creating the Intermediate Geography is very similar to that used to create the Data Zones and is set out at Annex A.

At this stage we are **asking that you start the consultation process by identifying who should be the Intermediate Geography co-ordinator for your Community Planning**

Partnership. Once we have created the Intermediate Geography we will provide them with electronic and or paper maps to draw together the views of your partners and quality assure the geography for your area. We will accept suggested amendments to the geography based on local knowledge that are consistent with our hierarchical and population threshold constraints.

I am happy to answer queries about the Scottish Neighbourhood Statistics Intermediate Geography. The Scottish Neighbourhood Statistics Internet site can be accessed at **www.sns.gov.uk**.

Yours sincerely

ROBERT WILLIAMS
Office of the Chief Statistician
19 April 2004

Annex A: Intermediate Geography Methodology

The Scottish Executive will create the Intermediate Geography using the following methodology:

(a) To be built by combining groups of Data Zones and nesting within local authorities to maintain the Scottish Neighbourhood Statistics hierarchy. This will allow indicators for the Intermediate Geography to be readily aggregated from Data Zones.

(b) Intermediate Geography will contain between 2,500 and 6,000 household residents. These will be tight constraints unless breaking the constraint marginally would provide a much more sensible solution. Intermediate Geography is not designed to exactly delineate communities on the group, rather they are statistical units.

(c) Intermediate Geography will aim to be have a regular shape to allow the make-up of the area to be easily understood.

(d) We will aim to nest the Intermediate Geography within Scottish Parliamentary Constituencies. This is not a tight constraint (data zones do not nest within constituencies and so intermediate geography cannot either).

(e) Some effort will be given to ensure that the Intermediate Geography represents small settlements of 3,000 residents or more.

(f) Intermediate Geography will aim to group together Data Zones with similar characteristics and the Scottish Index of Multiple Deprivation will be used to this effect.

(g) We will encourage Community Planning Partnerships to quality assure the Intermediate Geography over a three month period. A single contact will be identified in each CPP and that contact will be asked to collate a joint response from the partners for that area. Amendments based on local knowledge will be accepted if they are consistent with the tight constraints at (a) and (b).

(h) We will provide unique codes for each area. CPPs will be invited to suggest names for each of the Intermediate Geography areas, but we recognise that there are pros and cons with naming and it may not be possible for CPPs to arrive at an agreed set.

Appendix 2 Second letter requesting input from Community Planning Partnerships

Office of the Permanent Secretary

Office of the Chief Statistician
St Andrew's House
Regent Road
Edinburgh EH1 3DG

Telephone: 0131-244 0443
Fax: 0131-244 0335
Robert.williams@scotland.gsi.gov.uk
http://www.scotland.gov.uk/stats

August 2004

Community Planning Partnership Contacts

SCOTTISH NEIGHBOURHOOD STATISTICS: INTERMEDIATE GEOGRAPHY CONSULTATION

In April 2004, we wrote to each Community Planning Partnership concerning plans to develop an **Intermediate Geography** for use in the release of Scottish Neighbourhood Statistics, for data which would not be appropriate to release for the system of data zones already developed. We asked that each CPP identify an **Intermediate Geography Co-ordinator**. Suggestions for this Intermediate Geography have now been developed, and we would like your Community Planning Partnership to take part in a **three-month consultation exercise**.

Scottish Neighbourhood Statistics will be made available using the set of data zones defined last year, but some data cannot be released for such small zones for reasons of confidentiality. It is therefore useful to define larger areas (Intermediate Zones) for which such data can be released. It is intended that these zones will be in use from spring 2005. A team at the University of St Andrews, headed by Professor Robin Flowerdew, has produced proposals for these Intermediate Zones. We now invite your **comments on the Intermediate Zones**. Suggested changes to these zones based on local knowledge will normally be accepted provided they meet the first three criteria listed below.

We are also interested in your ideas for **names for the Intermediate Zones**. Comments must be received within three months to be taken into account, but it would be helpful if they could be received earlier if possible.

To support this exercise we enclose:

1 instructions on how to take part in the consultation process
2 a CD containing both the data and an interactive application for viewing the data

Responses to this consultation should be sent to Robin Flowerdew of St Andrews University at the address below.

Thank you in advance for your assistance with this project. We hope you find the consultation material useful.

Yours sincerely

ROBERT WILLIAMS

Intermediate Geography: Consultation Instructions

1. Introduction

This document describes the process for undertaking the consultation and providing feedback.

The Scottish Executive is seeking feedback on this work in two specific areas:

- Comments on Intermediate Zones (IZs).
- Suitable names for IZs

3.

4. Sections 7 and 8 give suggestions about how changes should be reported.

5. 2. Timescales

Consultees have three months to respond. The deadline for submission of responses is 18 November 2004, though an earlier response would be welcome.

The intention of the St Andrews team is to review the feedback from consultees in November 2004. ***Suggested changes to the Intermediate Zones will normally be accepted provided they meet the first three criteria listed below.***

3. Contacts during Consultation

Please send all consultation responses to Robin Flowerdew. Robin is also the contact for further information on how the data zones were created.

Robin Flowerdew
School of Geography and Geosciences
St Andrews University
St Andrews, Fife KY16 9AL
01334 463853
rf15@st-andrews.ac.uk

If you have technical IT questions about using the CD please contact:

John Maslen
Consultation Co-ordinator, GeoWise Ltd
28 Quality Court
Maritime Lane
Edinburgh EH6 6SB
0131 624 8935
John.maslen@geowise.co.uk

If you would like more information regarding policy aspects of the exercise, please contact Robert Williams.

Robert Williams
Scottish Executive Office of the Permanent Secretary
Office of the Chief Statistician
Room 3.WR, St Andrew's House
Edinburgh
0131 244 0443
Robert.Williams@scotland.gsi.gov.uk

4. Project Background: how the Intermediate Zones were created

The following criteria were taken into account in the definition of the Intermediate Geography.

1) Intermediate zones must be built up from data zones and should nest within local authorities.
2) They must not be made up of non-contiguous areas (except where this is unavoidable, as in the case of islands).
3) They must contain between 2,500 and 6,000 household residents.
4) Significant physical boundaries such as motorways, railways and valleys should be taken into account.
5) The shapes of intermediate zones should be reasonably compact to allow the make-up of the area to be easily understood.
6) Relationship to Scottish parliamentary constituency boundaries (this is not always possible, as data zones do not nest within these constituencies).
7) Where possible, intermediate zones should be coextensive with small settlements of 3,000 to 6,000 residents.
8) Where possible, intermediate zones should group together data zones with similar characteristics, as measured by the Scottish Index of Multiple Deprivation.

In practice, it is impossible to satisfy all these criteria at once, and compromise will be necessary. The first three criteria above, however, must always be observed.

Local knowledge is important in evaluating the zones created, and it is highly appropriate that people with extensive local knowledge should examine the zones and improve them where possible. This will be done primarily through the Community Planning Partnerships (CPPs) over a three-month period. Amendments based on local knowledge will be accepted if they are accordant with the first three criteria above. CPPs will also be invited to suggest names for the intermediate zones.

6. 5. Consultation Process

Each Community Planning Partnership (CPP) will receive 3 copies of the project CD to support this consultation.

The CD contains:

- A copy of these instructions as a PDF file
- The boundary data files (one per local authority) as ESRI shape files in the Shape folder.
- A lookup table listing which data zones are in each intermediate zone. This is provided in Excel format in the datazone2interzone.xls file in the Lookup folder.
- A set of template Excel worksheets (one per local authority) to use for providing names for the intermediate geographies.
- An interactive atlas for viewing the results (see below for instructions).
- The Adobe SVG Viewer V.3, which needs to be installed (if not present already) for viewing the interactive atlas.

Due to OS licence conditions, you/your agent may only use this mapping for official business dealings with the Scottish Executive. If you wish to use the mapping for other uses, you must first obtain a separate licence from OS.

This data is issued on the condition it is used solely for the time limited project named above and must be returned to Scottish Executive on completion of the project. In addition all copies of the data, including those held in paper based or any electronic format must be erased on completion of the project.

The above conditions relate to the use of the Ordnance Survey mapping data in this consultation, once the intermediate zones have been finalised the Scottish Executive will make them widely available.

If you have received all 3 copies of the CD on behalf of your CPP then you need to plan how best to carry out the consultation process.

The Scottish Executive expects a single set of consistent comments from each CPP and it is up to you to decide how this is best achieved. It could be by one organisation analysing the boundaries on behalf of many others or by many organisations undertaking their own analysis and then bringing them all together. It may make sense to assign a single co-ordinating organisation with desktop GIS resources. Feedback from others using either their own GIS resources or the interactive atlas on the CD can then be passed to the co-ordinator and assimilated into a consistent set of consultation results.

There are two main options for undertaking the analysis:

1. Organisations that have the software, the background map data and the expertise can copy the data off the CD and load it into a desktop GIS package like ESRI ArcView or MapInfo. These instructions do not provide further detail on how this is done on the assumption that users choosing this route will be well aware of how to set up a project file to support such analyses. We would suggest background map scales ranging from 1:250,000 to 1:10,000. This option is the most flexible and allows the user to examine all the boundaries in detail and submit large scale changes if they see fit. Larger scale re-design of boundaries based on local knowledge will be accepted if they are accordant with the first three criteria above.

2. Alternatively organisations that do not have the necessary resources can also view the boundaries using the interactive atlas. This enables users to select a local authority, navigate to areas of interest and select specific Data Zones that make up the

Intermediate Zones. Users can select multiple Data Zones and build up their own Intermediate Zones. Note that boundaries of Data Zones cannot be changed. The tool is ideal for users who want to rapidly explore the IZs and suggest minor revisions. More detail is provided below on using the interactive atlas.

7. 6. Using the Interactive Atlas

The atlas requires you to have installed the free Adobe SVG Viewer. This is a similar piece of software to the free Adobe PDF viewer for reading PDF files. The windows version is available on the CD in the Adobe folder. This and versions for other operating systems can be downloaded from **http://www.adobe.com/svg/viewer/install/main.html**.

To install the viewer from the CD navigate to the Adobe folder, double click on SVGView.exe and follow the instructions. This is a standard piece of software and should cause no problems to install. If you do encounter any problems we recommend that initially you contact your own IT support team. Further questions about the Interactive Atlas should be directed to John Maslen of GeoWise Ltd at the contact details set out above.

The application has been designed for Microsoft Internet Explorer Ver 5+ browsers although most of the functions will work effectively with other browser platforms.

You can either copy all the files under the SVG folder onto your hard disk or run the atlas directly from the CD. You will need about 150 Mb of free space if you want to copy all the files.

Simply navigate to the 'SVG' folder on the CD and double-click on the file "default.svg". This will launch the application in your browser. Although the application takes a bit of time to load, you will save a great deal of time interacting with it once loaded. Refresh times are almost instantaneous.

The application allows you to interact fully with the map and build up collections of DZs using the mouse to select them. To remove DZs from your selection simply click on one a second time. The IZ code and the household resident count are displayed to the right of the screen so you can assess the size of your selection zone in relation to the strict population thresholds (see Section 4 above). Once you are happy with your selection of DZs for a specific IZ, then you can note down the codes of any DZs that have shifted from one IZ to another and transfer this information into your spreadsheet structured as specified in Section 7.2. A save facility has been included to aid this process which will copy the list of selected data zones.

If you have an active connection to the internet clicking on a data zone in the list of selected data zones will load a more detailed map of the data zone in a new window.

The atlas is primarily intended to enable users without GIS expertise and resources to gain a view of the intermediate zones whilst also providing a means to undertake relatively minor amendments to the overall design of IZs.

We would suggest that even those organisations with desktop GIS resources take the time to review the interactive atlas.

8. 7. Submitting feedback

7.1 Boundaries (major revisions)

If you are undertaking relatively large scale re-design of IZ boundaries using desktop GIS software then the best option is through the submission of an alternative set of boundaries as a polygon-based GIS data layer. These boundaries should conform to the rules and constraints detailed in Section 4. They should be provided as ESRI shape files including the following attributes:

- new unique IZ code – created by you
- IZ name (see Section 8)
- household resident count
- comment field (optional).

Once there is consensus on the revisions at the CPP level, you should send your revised boundaries on CD by post to Robin Flowerdew of St Andrews University at the address shown above.

7.2 Boundaries (minor revisions)

If you are making more minor revisions using either the desktop GIS or the interactive atlas then it is easier to submit changes using the unique codes of the Data Zones.

We recommend you create an Excel file structured as follows:

DZ code	Old IZ code	New IZ code
..		..
..		..

To submit your response through Excel files, these can be emailed directly to Robin Flowerdew at **rf15@st-andrews.ac.uk** provided attachments are not too large. If they are large than then please copy them onto CD and submit by post to Robin Flowerdew.

If you do not wish to make any changes to IZ boundaries, please let Robin Flowerdew know.

9.
10.
11. 8. Creating Intermediate Zone names

We would like CPPs to propose names for all IZs. Naming offers significant advantages in being able to refer to a specific area in a logical and more memorable manner. While it is not obligatory that every CPP provide names for their IZs, it is recommended.

We would suggest that there is little point in only providing names for some IZs – an all or nothing approach is best.

In the NameTemplate folder on the CD there is a set of template Excel files that can be used to provide the names for the intermediate geographies. Once you have CPP consensus you can submit names directly to Robin Flowerdew at **rf15@st-andrews.ac.uk**, if you are submitting major revisions on CD then you can include the names file on that also.

Guidelines on naming Intermediate Zones

Names should be concise but should allow local residents to identify which zone covers their area. The names should follow these guidelines.

1 Names should not exceed 50 characters in length, including spaces separating words.

2 Names should not normally include abbreviations - words like West, Central, Street and Road should be spelled out in full. An exception is the word 'Saint', which should be written 'St' without a full stop.

3 Apostrophes and hyphens should be used where appropriate.

4 Commas should be used as appropriate, if a name includes a list of three or more place names.

5 No other punctuation marks should be used.

6 If a zone name contains a place name and a compass direction, the place name should come first - e.g. 'Dumbarton South' not 'South Dumbarton'. However, a place name beginning with a compass direction should keep the direction at the beginning - e.g. 'West Lothian North Central' would refer to the North Central part of West Lothian, and
'East Kilbride West' to the Western part of East Kilbride.

7 Names may be in English or Gaelic as preferred.

8 Names likely to be unacceptable to some residents should be avoided.

9 No two zones within the same local authority should have the same name.

ANNEX B: Intermediate Geography Metadata

Title	Scottish Neighbourhood Statistics Intermediate Geography
Abstract	The intermediate geography will be used to disseminate statistics that are not suitable for release at the data zone level because of the sensitive nature of the statistics or for reasons of reliability.
Subject	Administrative
Keywords	Society
Data Rights	Unrestricted
Supplier Name	Scottish Executive
Supplier Contact Name	Geographical Information Service Data Manager
Supplier Address Line 1	1 - J88
Supplier Address Line 2	Victoria Quay
Supplier Address Line 3	Edinburgh
Supplier Country	Scotland
Supplier Postcode	EH6 6QQ
Supplier Telephone	0131 244 1441
Supplier Fax	0131 244 1443
Supplier Email	segis@scotland.gsi.gov.uk
Supplier Web Address	www.scotland.gov.uk
Date Created	FEB 2005
Update Frequency	Irregular
Format	Shape File
Size (Mb)	9
Language	English (UK)
Location	SEGIS
Source	Scottish Executive Data zones
Project	Scottish Neighbourhood Statistics
Type	GIS vector polygons
Geographical Extent	Scotland
Special Reference System	British National Grid
Lineage	Data zones created from Primary School catchments approximated to output area boundaries which are then amalgamated to data zones based on population, compactness and social homogeneity. Intermediate geography are built up from groups of Data zones
Positional Accuracy	In line with GROS Census 2001 Output Areas
Attribute Accuracy	Good

Completeness	Complete
Creator Name	Scottish Executive
Creator Contact Name	Geographical Information Service Data Manager
Creator Address Line 1	Area 1-J88
Creator Address Line 2	Victoria Quay
Creator Address Line 3	Edinburgh
Country	Scotland
Creator Postcode	EH6 6QQ
Creator Telephone	0131 244 1441
Creator Fax	0131 244 1443
Creator Email	segis@scotland.gsi.gov.uk
Creator Web Address	www.scotland.gov.uk