

POPGROUP USERS GROUP (SCOTLAND)
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**Notes of the POPGROUP Users Group Meeting - 4 October 2010,
General Register Office for Scotland, Ladywell House, Edinburgh**

Present:

Paula Argo	Aberdeenshire Council
Andrew Ballingall	Fife Council
Chris Carr	Argyll & Bute Council
Esta Clark	General Register Office for Scotland (GROS) (Chair)
Allison Craig	North Ayrshire Council
Jan Freeke	Glasgow City Council
Alistair Harvey	City of Edinburgh Council
Allan Lambie	South Lanarkshire Council
Lesley Mann	North Lanarkshire Council
Jo McLure	Midlothian Council
Ludi Simpson	CCSR, University of Manchester
Harvey Snowling	GROS (Minutes)
Cameron Thomas	Highland Council
Adele Trainer	North Lanarkshire Council
Dorothy Watson	GROS

1. Introduction

- 1.1 Esta Clark welcomed everybody to the meeting and briefly summarised the purpose of the group. The aim is to provide a regular forum for POPGROUP users in Scotland to meet and share knowledge and experiences. She said that though GROS would be happy to facilitate the meetings, future agendas and formats should be decided by the group members.

2. POPGROUP developments

- 2.1 Ludi Simpson gave an update of the latest POPGROUP developments, which included:
- The transfer of ownership of POPGROUP software to the Local Government Association (LGA).
 - The transfer of software development to Edge Analytics.
 - The recent meeting of the UK-wide POPGROUP users group. (Notes of the meeting are available at <http://www.ccsr.ac.uk/popgroup/user/usergroup.html>.)
- 2.2. Ludi circulated the latest pricing structure for POPGROUP (available at <http://www.ccsr.ac.uk/popgroup/about/costs.html>) and summarised the various options. He highlighted the new Derived Forecast model, the data modules, the annual service package, and the early payment discounts. Ludi was keen to get feedback on what the group felt about the options available, especially the annual service package.
- 2.3 Ludi then gave a presentation about the Derived Forecast (DF) model, which is now available. DF is a general model that replaces function-specific software

such as LABGROUP and HOUSEGROUP. DF is similar to POPGROUP in structure (Excel spreadsheets), configuration and outputs (tables and charts). The model takes the population of interest and applies demographic rates to it. Data packages are available for the DF model (and also POPGROUP) that should make it easier to set up the data required by the software. Data packages can be obtained for projections of disabled, long-term limiting illness and ethnic group populations.

- 2.4 It was confirmed that POPGROUP licences covered anybody within an organisation (for example, council) but not external contractors that were employed by the organisation.
- 2.5 Feedback from the group on the pricing structure and the DF model was positive, but there is a lot of uncertainty at the moment about whether funding will be available to buy new software packages.

3. User presentation

- 3.1 Cameron Thomas gave a presentation of his experiences of using POPGROUP. He used POPGROUP for two purposes:
 - To replicate GROS projections for Highland Council area.
 - To obtain population projections for the eight districts within Highland.The projections from POPGROUP were then compared with those calculated using NORPOP.
- 3.2 Cameron showed some of the results from the work he did to replicate the 2008-based population projections for Highland. He found that when he compared the projections for Highland using NORPOP with those published by GROS the results were very similar. But the projections obtained from POPGROUP were not so good compared with the GROS figures. He reported that the discrepancies between the POPGROUP and GROS figures seemed to be due to migration. However, the results he got when migration rates were used rather than counts were closer to the GROS figures.
- 3.3 Some of the comments that Cameron made on his experiences of using POPGROUP were:
 - Lack of training.
 - Lack of resources to be able to make full use of POPGROUP. He is part of a small team and is limited to about 10 days a year to work on population projections.
 - The documentation for POPGROUP is good.
 - It is not clear where to get migration data for 'newborns'.
 - The standard schedule is based on the second year of national projections rather than the first. He thought that the reasons for this should be explained in the documentation. Members of the group also commented that they were sometimes a bit unclear as to whether they should be using data at 'year beginning' or 'year end'.Ludi noted these comments, many of which will be resolved when the next upgrade of POPGROUP is released in 2012.

4. Summary from all users of work they have been doing

- 4.1 The group members were asked to give a short summary of their experiences of using POPGROUP.
- 4.2 Allison Craig has not had much opportunity to use POPGROUP because of limited time and resources. She would be interested in future training events that are being arranged and in advice from other group members.
- 4.3 Paula Argo has recently taken over the projections work from a former colleague who had used POPGROUP and is familiarising herself with this work. She has found the User Guide for small area projections useful. Ludi emphasised the importance of including a full description of the work in the 'Notes' worksheet of each Excel file.
- 4.4 Jan Freeke uses POPGROUP for a number of purposes: the structure plan for the eight council areas in the Glasgow and Clyde Valley region; the ten community planning partnership areas; social housing demands, based on tenure change data. He finds the output dump files from POPGROUP very detailed and useful. He also explained how he obtains results that add exactly to the totals, without rounding – by rerunning the preferred projection with a constraint of the results rounded to whole numbers by age and sex.
- 4.5 Alistair Harvey has not used POPGROUP/HOUSEGROUP as much as expected since Edinburgh Council purchased them. He has used them to produce alternative household projections for the Strategic Development Plan (SDP), but the council decided to use the GROS projections. He has found the process of working through the SDP projections beneficial to his understanding of how projections work. Alistair intends to run small area projections at multi-member ward (and, possibly, school catchment area) level, using the guidance provided by GROS.
- 4.6 Allan Lambie has not used POPGROUP much in the last 2 or 3 years. The last piece of work was for the 14 community areas in South Lanarkshire, constrained to GROS projections for the council area. For migration, he reported that the method used was similar to that used recently by Fife for their multi-member wards.
- 4.7 Dorothy Watson reported that she has produced 2006-based household projections using HOUSEGROUP to familiarise herself with this package.
- 4.8 Lesley Mann and Adele Trainer produced a set of population projections for different geographies (wards, local neighbourhood areas, etc.) within North Lanarkshire which have been well received by council colleagues. They carried out a number of different scenarios. The comments and issues they reported were:
- Lack of time and resources meant that it took a long time to produce the projections.
 - Defining the local areas using post codes and data zones was time-consuming.
 - NHS Lanarkshire was a useful source of migration data.
 - They were unsure whether to constrain to council area projections, or not.

- They found that it was not possible to use population and dwelling constraints at the same time (perhaps to help reconsider local headship rates).

- 4.9 Jo McLure has attended a POPGROUP training course in Manchester but not had much opportunity to use it. Again, lack of time and resources is an issue and any support and time-saving advice would be helpful. She is planning to carry out dwelling-led projections.
- 4.10 Andrew Ballingall has attended a POPGROUP training course in Manchester and is currently working through the HOUSEGROUP User Guide for small areas. He is interested in how to set a limit on the amount of housing development that can take place in a local area – there are areas in Fife where there has been a lot of house building in recent years and if this level of development is projected forward the long-term population projections will be unrealistic. He is also interested in whether it is possible to build a time-lag into the model to capture housing development that have been approved but not yet completed.
- 4.11 Chris Carr reported that Argyll & Bute Council had used NORPOP in the past, but there is little documentation for this package, so it was replaced by POPGROUP. She has attended the POPGROUP training course in Manchester. One of the projections she has run was for the five district areas within Argyll & Bute. These projections were uncontrolled and so, as expected, the totals for the five areas did not add up to the GROS council area projections.
- 4.12 Paul Davison was unable to attend the meeting but has sent a report of the POPGROUP work done by Stirling Council ([Annex 1](#)).

5. Discussion of any technical/methodology/data issues that users have – PUG (10) 02

- 5.1 There is an issue with running POPGROUP on Excel 2007. It was reported that it is not possible to create some of the charts when POPGROUP is run on this version of Excel. This is a known problem and Ludi said that Edge Analytics will be producing an advice note and may be able to fix the problem (although there may be costs involved in this).

Action: Ludi to report back to Edge Analytics about this problem.

- 5.2 There was a question about how reliable the 'Training' scenario described in the report of the Fife wards projections was at the small area level (in particular, the migration figures). Alistair reported that he had run the 'Training' scenario for Edinburgh council area and found the results to be good at this level of geography. Ludi pointed out that the 'Training' scenario was not a standard set of projections and might not stand up to scrutiny.
- 5.3 There followed a discussion about whether small area population projections would be justifiable at local inquiries and whether the 3,000 population threshold mentioned in the user guidance would give robust results. Ludi said that POPGROUP could tackle areas of any size provided that the GROS population estimates that are used as the basis of the projections are reliable and that the age/sex structure of the population is accurate. If this is the case, there should

be no problems with presenting projections at local inquiries. But he did warn that users should be cautious in some areas.

- 5.4 It was not clear to some group members how best to adjust the net migration within POPGROUP. As there is no option to input net migration directly is it best to adjust the in-migration or the out-migration, or both? Ludi said that each of these options was valid, as long as the user is aware that the results may be different if the age/sex structure of the in-migrants is different from that of the out-migrants.
- 5.5 Some group members were interested in how to restrict the size of the population increase or decrease in a particular area and, possibly, allocate any excess to a neighbouring area. Ludi said that this was not possible in POPGROUP and would require a change to the software to achieve this.
- 5.6 Ludi asked whether household headship rates and communal establishment population counts were available from the Census at data zone level.

Action: GROS to investigate whether Census household headship rates and communal establishment population counts can be made available to POPGROUP users.

- 5.7 It was reported that the user guidance for small area projections was mostly very clear and easy to follow. But there were some areas that could be clarified to make it easier for users. It was agreed to send any comments on the user guidance (and also the small area data provided recently by GROS) to <mailto:gros@customer.gsi.gov.uk>

Action: All group members to report any sections of the user guidance that could be improved.

- 5.8 Ludi reported that the two-day POPGROUP training courses would continue to take place each May at Manchester University. If there was a sufficiently high uptake of the Derived Forecast model then a training course for this software could be arranged in Scotland. For formal training contacts, POPGROUP users should contact Edge Analytics. For informal training and support, Ludi encouraged users to ensure they were on the POPGROUP email list.

Action: Group members to let GROS (via [General Register Office for Scotland - Contact Form](#)) know if they are interested in getting some training (general POPGROUP training, refresher, or Derived Forecast).

6. Format of future meetings

- 6.1 There was a discussion on how to carry forward the work of this group. It was agreed that the meeting had been beneficial and that another meeting next year would be useful. General small area projection issues could also be raised at PAMS meetings. Any other ideas (for example, a virtual group) about how group members could share their knowledge and experiences were invited.

Action: Group members to suggest alternative ways of sharing POPGROUP knowledge.

- 6.2 It was agreed that the idea of having a presentation by a POPGROUP user should be retained for future meetings and that it would be useful to have a 'walk-through' of the work done, in addition to showing the results of the work.

7. Any other business

- 7.1 Esta thanked everybody for attending and for their input to the meeting.
- 7.2 Post-meeting note: Ludi Simpson has also written up his notes of the meeting ([Annex 2](#)). He has also offered to help to create guidance on the use of the single-year of age data for small areas. If anybody is planning to work with the single year of age data for small area projections and can share their files with him, he would be happy to offer advice. From this work it could be reported what worked, and the user guidance could be updated.

Annex 1 - POPGROUP Use – Stirling Council

Introduction and Background

Stirling Council purchased POPGROUP and HOUSEGROUP in 2007 with the intention of undertaking small area population projections. Training at University of Manchester was undertaken by a member of staff, who then proceeded directly to Scottish Government GIS unit (without passing GO or collecting £200).

Population Projections

In May-June 2009 projections were undertaken for the Stirling Local Development Plan (LDP) area, essentially the Council area outwith the Loch Lomond and Trossachs National Park. The work was required to inform the development of the plan (currently in preparation) and also the related Housing Need and Demand Analysis (HNDA) and eventually the Local Housing Strategy (LHS).

An aggregation of data zones was used to approximate fairly to the LDP area. This had to follow GROS' own POPGROUP projections for the national park and ensure no data zones were omitted or double-counted.

GROS supplied age-specific fertility, age-gender-specific mortality and migration data for the selected data zones and these were used largely as described in the recent POPGROUP guidance. The model was run without any significant problems or issues. A number of scenarios were investigated to consider the effects of lower net migration as a result of the economic downturn. At the time, standard GROS assumptions of migration were fairly optimistic, being based on the previous 5 years observations. The projections process allowed for a more pessimistic view to be considered, and this became the main projection used in LDP and housing strategies. An aspirational scenario was also used to investigate the migration implications of a political aspiration of reaching a population of 100k for the Council area (and therefore around 90k for the LDP area).

As well as projections for the LDP area, similar assumptions were applied to projections for the entire Council area (which is relevant to the Local Housing Strategy). These deviate slightly from GROS projections due to methodological differences and scenario assumptions.

Household Projections

A simple linear approach of translating population projections into household projections was taken. These were not completed in HOUSEGROUP but the principles applied to a spreadsheet model. Again, GROS supplied data on age-specific headship rates and numbers not in households, and these were projected forward as consistently as possible.

A couple of scenarios investigated changes to GROS' assumptions of change in headship rates (this being based on census data).

Future plans

Subject to resources, future work is likely to focus around projections for smaller areas relevant to the development of the LDP and LHS. These are likely to be suitable aggregations of data zones, rather than political wards, which are seen as less relevant. A full report is available here: http://www.stirling.gov.uk/population_projections_report.pdf
Paul Davison, Research Officer davisonp@stirling.gov.uk

Annex 2 - Notes from Scotland User Group meeting 4th October 2010

(Ludi Simpson, 5th October 2010)

The Scotland User Group was successfully held last Monday 4th October. The attendees of 11 from local authorities and 3 from GRO(S) discussed their current work and the likelihood of wanting the DF and data modules but the uncertainty of available funds: promotion via utility of ethnic group and disability projections to non-planning departments will be worthwhile.

Formal minutes will be available later. These notes summarise the work and issues of the local authorities present, together with discussion of solutions to identified issues. GROS have recently released data for Data Zones for births and deaths and population, aimed at supporting small area projection work, and published a POPGROUP guidance document.

Cameron Thomas, Highland. Projections for 8 previous council area boundaries, using migration, fertility and mortality rates and factors from GROS/NHS. Previous use of the undocumented Excel-based NORPOP (Norfolk cc). The attraction of PG is its ability to use rates or events for migration, which when used has reduced the discrepancy with GROS projections for Highland. Time available for district and small area work projections is limited to at most 10 days per year: user support required appropriately.

Suggests consider that standard schedules might be based on the first year of national projections to increase acceptability, rather than the second year (the advantage of the second year's greater reliability as a long-term pattern, due to the first year's incorporation of that year's events, needs to be confirmed and explained).

Advice on data should clarify the source of new-born and 90+ data for deaths and any other inconsistencies between PG and GROS time-plans. Such inconsistencies are earmarked for elimination in the next upgrade of PG.

Chris Carr, Argyll and Bute. Also used NORPOP previously and abandoned because undocumented. PG projections have been presented to and accepted in a planning Inquiry (PLI). Was unsure of the reliability of migration estimates derived from a training projection, especially for small areas. LS suggested that the indirect estimate of net migration by age was trustworthy for any sized area with the provisos that the area is approximated well by Data Zones, that the GROS population estimates for those Data Zones are reliable (principally that migration estimated from health re-registrations are reliable), and that the trust was put in *net* migration by age, not gross flows. Excel 2007: guidance needed to work around glitches, which Edge have helpfully advised on.

Jan Freeke, Glasgow. Projections for structure plan and housing needs assessment. * Council Areas in conurbation, and ten community planning partnership areas in Glasgow. Also a PG projection for Glasgow with tenure as groups. Prefers integers that add exactly to a total in the results, without rounding; achieves this by rerunning the preferred projection with a constraint of the results rounded to integers by age and sex. Uses the dump output file for its detail.

Allison Craig, North Ayrshire. Priority to use PG, but not risen to highest priority. Welcomes any advice on usage to make the work more efficient because there is little time to work on projections.

Paula Argo, Aberdeenshire. Struggling to understand projections left by predecessor, now working on projections for structure plan. User documentation of files on each Notes sheet emphasised. Found the guidance document for small areas readable and useful.

Alistair Harvey, Edinburgh. Not used as much as expected as Council decided to accept GROS projections. Has duplicated GROS figures and the self-training involved in seeking the correct figures for each input file has given greater understanding of methods. Intend now to follow guidance for small area projections, using multi-member wards. Constraints to allow a maximum capacity to be set for some areas, which when met pushes population to neighbouring areas; LS: this probably would need software enhancement to achieve this. Net migration cannot be entered directly in PG. If want to change assumptions to reflect a different net migration, add to age-sex in-migration or take from age-sex out-migration with same result. However, if entered as a change in the total in- or out-migration, be aware that if the age-structure of in- and out-migration are significantly different as is often the case, then this will make a difference to the projection.

Allan Lambie, South Lanarkshire. Self-trained, last used 3 years ago for 14 community areas constrained to GROS projection for Council Area.

Adele Trainer and Lesley Mann, North Lanarkshire. Have spent 18 months self-training, snatching time where possible. Time-consuming to define each local neighbourhood, and each social services area, by postcodes, prior to allocating DZ data from GROS and NHS migration data. Forecasts have been very well received by senior managers as basis for considering local needs. Would like to use dwelling and population constraints for same recent years, perhaps to help reconsider local headship rates: guidance needed.

Jo McLure, Midlothian. Trained usefully in Manchester, but not implemented. Not sure how to make time needed: any support and labour-saving devices welcome.

Paul Davison, Stirling (written report, not at meeting). Projections for Local Development Plan, also used for Housing Need and Demand Analysis, and Local Housing Strategy. For the area excluding national park, aggregating GROS data for DZs, following guidance document. Also projected Council Area as a whole. Scenarios have included GROS migration based on recent years, more pessimistic migration (adopted for LDP), and an aspirational scenario. Household projections calculated outside PG software. Future work, as resources allow, is likely to focus on smaller areas relevant to the LDP and LHS (probably not political wards).

GROS data. Household headship rates and institutional population for each DZ will be produced by GROS from 2001 Census, to help small area projections.

Training. A variety of needs expressed: new users of PG. Refresher for self-taught; DF and data module use; small areas. LAs were asked to make requests to Edge, to seek others to share costs, and to provide venue (pc for each trainee) to reduce cost. Edge asked to clarify training on offer and cost.

Recommended action for Edge and/or LS as part of user support and (last two items) promotion:

Prepare FAQs / guidance notes for:

- Advice on using dwelling and population constraints for same recent years (LS)
- Advice on newborn/90+ if data sources allow it. (LS)
- Guidance on Excel 2007, things to watch for, workarounds (Edge)

Add to list of enhancements to be considered later for next PG: (LS)

- Consider using first year of national projection for standard schedule. (ask ONS whether first year is affected by births and deaths).

- allow a maximum capacity to be set for some areas, which when met pushes population to neighbouring areas.

Add to web site (LS)

- LA activities
- Links to Scotland DZ data and small area guidance.

Prepare quote for making PG fixes for Excel 2007. (Edge)

Work with GROS to define Census household data for DZs. (LS)

Offer training for both new users and those refreshing and taking DF. (Edge)

Possibly use example of Argyll and Bute in promotion: PG projections accepted in a public planning inquiry. (Edge)