



## Welcome ...

to **forthvalleygisnews**, a new quarterly newsletter for everyone with an interest in the work of Forth Valley GIS. **forthvalleygisnews** is targeted at all our existing customers as well as potential customers of the future.

In each issue you'll find news of current activities, recent developments, events and activities, the latest information and points of contact.

Please get in touch with your news and ideas – we look forward to hearing from you.

## What's inside?

- Headlines
- Data News
- Technology Update
- Training News
- GIS Tutor
- Going FORTH
- Treasure Trail
- Web Watch

## Meet the GIS Team



Back Row (L-R) David Stewart, Wendy MacDougall, Chris Stocks, Linda Workman, Alan Moore, Tom Moore, David France, Gordon Angus, Craig Walker. Front Row (L-R) Richard Teed, Colin Wright, Tracy Rich, Alastair Carson, Will Flanagan, Fiona Thomas, Mike Hill, Gary Semple, Sue Leadbeater, Richard Watters

Forth Valley GIS are a joint unit providing corporate GIS services to Clackmannanshire, Falkirk and Stirling Councils as well as a growing range of external customers in the public sector.

**Alan Moore** is the Head of Forth Valley GIS and is supported by **David Stewart**, Internal Services Manager; **Richard Teed**, External Services Manager; **Linda Workman**, Office Manager and **Wendy MacDougall**, Administrative Assistant. Our "Address Team" (more about them inside) is headed by **Tom Moore**, Gazetteer Custodian, and includes project management and technical consultancy from **Gary Semple**, who joined us from Informed Solutions, **Tracy Rich**, who recently returned to the UK after 4 years implementing GIS in the City of Burbank, and **Gordon Angus**, who joined from Lothian and Borders Police.

Senior Analysts **Christopher Stocks**, **Colin Wright** and **Richard Watters** provide project management, consultancy, systems analysis and design and GIS solutions development. GIS Analysts

include **Sue Leadbeater**, **Mike Hill** and **Alastair Carson**, a software engineer who recently joined us from defence systems company Thales. GIS Support comes from David France, who is principally involved in training, and **Will Flanagan**, who will soon be emigrating to Canada - the original home of GIS!

**Craig Walker** has recently assumed the role of GIS Technology Co-ordinator, focusing on delivering and supporting the GIS technical infrastructure and directly linking into the IT and ICT Services of the partner councils.

And last, but no means least, **Fiona Thomas** has recently joined us from Scottish Water as a dedicated GIS Data Co-ordinator and takes on all roles and responsibilities to do with GIS data management for the partner Councils, including all dealings with the Ordnance Survey and other 3rd party data suppliers. In future newsletters we'll meet the individual team members and get a behind-the-scenes look at the varied work of the service.

# Headlines

## Dear Readers

Welcome to the first edition of *forthvalleygisnews*!

This is time of major change within the public sector in Scotland. Local authorities and central government organisations are heavily involved in the modernisation of services, and need information systems which "join up" and deliver services electronically.

We have been reviewing and evaluating the direction of Forth Valley GIS in response to the changes around us. This has included consulting with customers and working hard to reshape the team and its development priorities to respond to the challenges and opportunities for the future.

We've also been busy working with external customers to help them respond to the same challenges and optimise the use of GIS and geographic data to help deliver improved services for the future.

As you may have noticed we've also recently rebranded. Hope you like the new logo and do visit the new website at [www.forthvalleygis.gov.uk](http://www.forthvalleygis.gov.uk). Here you will find the latest news, information on services, solutions, case studies and lots more.

We are sure you will find the newsletter interesting and informative – let us know your thoughts by emailing us at [fvadmin@forthvalleygis.gov.uk](mailto:fvadmin@forthvalleygis.gov.uk) or giving us a call on 01786 442976.



Alan Moore  
Head of Forth Valley GIS

## internal

The main **internal** focus of the GIS unit this year is to align Geographic Information systems with the **e-Government** and **modernising** priorities of the partner Councils. The aim is to put in place the building blocks that will enable the delivery of strategic GI services to the Councils over the next three years. We are concentrating on the following major projects:

- A centralised Spatial Data Warehouse based on Oracle 9I to centrally manage geographic data.
- New web GIS Development to provide widespread access to GIS within and outwith the councils.
- Data Management.
- OS MasterMap Implementation.
- Migration of GIS applications away from ArcView 3.
- Corporate Address Gazetteer creation and implementation.

Consultation has also begun in relation to our communication, training and customer support strategies. In addition to this project work, we are continuing to support GIS across many Services and delivering smaller scale developments such as the 2001 Census tools.

Future e-Bulletins and our new website will keep you informed as these projects unfold. Watch this space!

## external

**External** services continue to grow. In addition to longer term service agreements with Angus, East Dunbartonshire, Perth & Kinross, and East Renfrewshire Councils, Central Assessors and Scottish Enterprise Forth Valley, we are continuing to increase our portfolio of consultancy and project management with a wide range of customers including Dundee City, Scottish Borders, Renfrewshire, and North Ayrshire Councils, Scottish Enterprise, Scottish Executive, National Library of Scotland and NHS Forth Valley. Interesting projects include:

- Preparation of a project plan for delivery of a Corporate Address Gazetteer for East Renfrewshire Council.
- Scoping study for Perth and Kinross Council reporting the options for using GIS to share data between Community Planning partners
- Development of a Contaminated Land prioritisation tool for Dundee City Council.

With customers at other Councils, our work is focused in the areas of Modernising Government (particularly address and street gazetteer development), web GIS development, migration to OS Mastermap and ArcGIS migration and training. Elsewhere the focus remains on analysis, bureau services and both web and desktop application development. We continue to be regarded as one of the foremost public sector GIS consultancies and continue to lead and innovate in the field. Future issues of *forthvalleygisnews* will keep you informed of new business and focus on projects of particular interest.

## Who are the Joint Management Group?

Forth Valley GIS operates under a unique and innovative public sector partnership controlled jointly by Clackmannanshire, Falkirk and Stirling Councils. The unit reports to a Joint Management Group (JMG) comprising a senior management representative from each Council and the Head of Forth Valley GIS, Alan Moore. The JMG members for each Council are: **Alexis Easton**, Head of IT, Clackmannanshire Council; **Fiona Campbell**, Head of Policy and Performance, Falkirk Council and **Ivan Condon**, MGF2 Project Manager, Stirling Council. The JMG meets on a bi-monthly basis and set overall direction, policy and strategy as well as monitor and review the performance of service delivery.

# Data News ...



In each edition GIS Data Co-ordinator Fiona Thomas will be reporting on all data related issues and updates.

## Ordnance Survey Mastermap

### What is it?



Many of you will be used to working with 'Land-Line' the Ordnance Survey large scale digital data product shown below. The OS have recently released their "next generation" product - 'OS MasterMap'. As the product evolves its layers will include **address, transport, imagery, prebuild, height, land use and administrative boundary** data. The topographic layer (set to replace Landline) is available now.

### How will it affect you?



Instead of 'spaghetti' like lines, real world feature such as houses and gardens are now represented by individual areas (or polygons) on the map with a unique identity. Not only is it now easier to make the data look more like the real world, it is also possible to link your own data to OS MasterMap to help with analysis.

### What are FVGIS doing?

Following heavy involvement in the test programme for OS MasterMap and initial implementation work, we will fully migrate the partner Councils to the OS Mastermap topographic layer soon. FVGIS are currently re-evaluating software for this process which will fully incorporate 'change only' update data management procedures.

## Positional Accuracy Improvement

### What is it?

When the Ordnance Survey converted its 1:2500 scale data to the National Grid back in the 1950's there were limitations in the original mapping and the procedures which were used. These difficulties have affected the 'absolute' accuracy of the data (the position of features in relation to the National Grid). The Positional Accuracy Improvement programme is an OS initiative to improve the positional quality of its large scale data (Land-Line and OS Mastermap) and will mainly affect rural towns and areas.

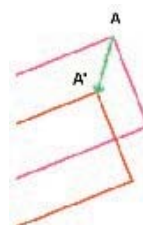
### How will it affect you?

The PAI programme will only affect you if the data in your 'area of interest' was derived using 1:2500 scale mapping. The programme will result in an improved and more consistently accurate standard of OS map data for these areas. However, users

will have to consider how they will transform any of their own datasets which have been derived from this mapping (the OS are providing 'link files' to help with this process). These improvements will also make it possible to correlate data captured via GPS with this OS mapping.

### What are FVGIS doing?

Ordnance Survey's Positional Accuracy Improvement Programme will not affect Clackmannanshire, Falkirk or Stirling Councils until October 2004 - when it will affect the towns of Dunblane and Bo'ness. In the meantime, FVGIS will be evaluating the impact of PAI within the partner Council areas, investigating suitable software for dealing with the issue and developing an action plan for managing the transition.



## Data Updates

Over the last few months Fiona has been busy compiling a "metadata" register (see our "unravelling the jargon" feature) of all 3rd party datasets and carrying out a review of how this data is managed.

The following 3rd party digital data products were updated within the GIS across the three Councils in July 2003.

- **Ordnance Survey**
  - 1:10K Raster
  - 1:50K Raster
  - Address Point
  - Land-Line
  - (OSCAR) Asset Manager
- **Scottish Natural Heritage**
  - National Scenic Areas (NSA)
  - National Nature Reserves (NNR)
  - Ramsar Sites (Ramsar)
  - Special Areas of Conservation (SAC)
  - Special Protection Areas (SPA)
  - Sites of Special Scientific Interest (SSSI)

And over the next 3 months, updates to the following datasets are anticipated:

- **Ordnance Survey**
  - Address Point (tri-council)
  - Land-Line (tri-council)
- **GROS**
  - Postcode Geography (tri-council)

# Other News ...

## Technology Update



Forth Valley GIS are going through rapid technology changes in order to improve services to customers.

A range of technology initiatives are now being worked on to provide a more robust and widely accessible environment for GIS service delivery.

- Purchase of new server hardware to give a reliable and high availability environment for geographic data
- A move to a more powerful and scalable database product, Oracle 9i (taking advantage of the recent Office of Government Commerce enterprise license agreement)
- construction of a centrally held geographic data repository using the new technology base of Oracle 9i and ESRI ArcSDE 8.3 to deliver data to all clients
- Upgrade of ArcIMS 3.1 to ArcIMS 4 allowing the development of new Intranet and web GIS solutions with improved functionality
- Migration of users from Arcview 3.x to ArcView 8.x

**Craig Walker has recently assumed the dedicated role of GIS Technology Co-ordinator. He will provide more news on the progress of these exciting changes in future editions.**

## The Corporate Address Gazetteer

**Flat 3/1? Flat 3A? TFL?**

**St. John's St? Saint John St.? Saint John's Street? Which is it?!**



This is a particular headache for Councils across Scotland who have to maintain numerous address based datasets.

To help with this problem, all councils in Scotland have recently received Modernising Government funding from the Scottish Executive to create a standardised Corporate Address Gazetteer (CAG), a definitive list of all addresses that exist within the Local Authority boundary. Each address is located on a street. The street information is also vital to roads management and the Street Gazetteer is managed in the Forth Valley GIS application RoadNet (look out for more information on RoadNet in future editions of **forthvalleygisnews**).

Over the last few years, Forth Valley GIS has amassed a wealth of expertise in address and property data (with the award winning Corporate Property Initiative) and is ideally placed in its role to project manage the address gazetteer work at Clackmannanshire, Falkirk and Stirling Councils. Forth Valley GIS have formed a dedicated "Address Team" ("A.T." = "@") of a Gazetteer Custodian (Tom Moore) and three project managers (Gary Semple, Tracy Rich and Gordon Angus) now tackling this organisational and data management challenge.

For more details, see the case study on our website, or look for a more detailed account of this work in future editions of **forthvalleygisnews**!

## Training News

We see training as an integral part of our commitment to our customers. We offer a variety of courses for existing users and also for new users who just want to find out more about what GIS is all about.

GIS courses currently available from FVGIS:

- Intranet GIS – Introduction to the GIS mapping and data available on the intranet.
- DMS (Desktop Mapping System) – Introduction, advanced and workshop courses on this popular GIS mapping and analysis tool developed for the 3 councils.
- DCM (Data Capture & Management) – Short course on data creation using the DCM tool.
- STEMS (School Transport) – Specialist training on this customised transport and education management application.
- Map Explorer – Short course to help you get to grips with this simple, free browser for viewing and analysing GIS data at a basic level.
- Roadnet – need help creating and managing the National Street Gazetteer. Roadnet may be just up your street!
- Arcview 8 – Introductory 1 day course to get you started with Arcview 8.

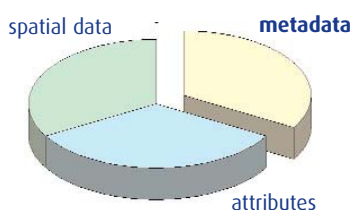
## Unravelling the Jargon!

The world of GIS is full of acronyms and strange terminology! Each edition we hope bring you some easy to understand definitions of some of the more commonly used phrases!

### What is Metadata? The missing piece of the pie?

Metadata, sometimes called "data about data", describes the content, quality, and other characteristics of data. It can help a potential data user to decide whether or not the data is appropriate for their use by answering the who, what, how, why, when questions like:

- **Who** collected the data? Who is responsible for its update?
- **What** is the subject of the data? What scale was it captured at?
- **How** was the data collected?
- **Why** was the data collected?
- **When** was the data collected? When is it due for update?



Metadata is critical to preserving the usefulness of data over time. It is increasingly recognised as being an integral part of the data itself (and not just a documentary afterthought)! As GIS technology progresses, maybe GIS software will also automatically read metadata information, and integrate it into standard GIS functions such as overlay and transformations, informing data users about the data characteristics even as they are using it!

## GIS Tutor ...

If you are new to the world of GIS, then our GIS tutor may be just what you are looking for! This week we start right at the beginning and try to explain.

### What is a GIS?

A GIS is a "Geographic Information System". Does that make you any the wiser?! Thought not!

Lots of definitions of GIS exist. However, these aren't really very useful without an understanding of what a GIS does ...

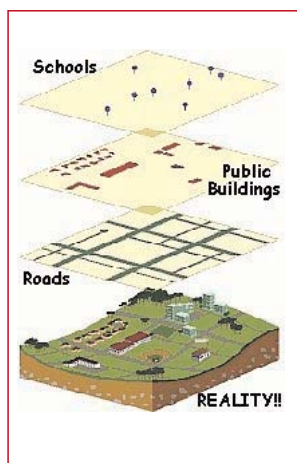


Are you having trouble finding your way around your GIS?

The key component of a GIS is Geography. All GIS data is in some way referenced to a place on earth...this can be through an address (eg 2 Pitt Terrace) or perhaps an 'xy' grid reference. Similar 'types' of information are usually stored together in a GIS. So you might find a schools dataset...or roads...or maybe flood-zones. Each school will be given a unique ID and other information about that school (its name, the level of education taught, number of pupils etc) will usually be stored alongside this. At its simplest level a GIS can be used to overlay these different layers to produce a map. This is known as digital mapping and has revolutionised the field of cartography - changes can now be made to maps without having to painstakingly re-draw them by hand! And how often you have looked at a map and found the area that you are interested in lies on the corner of four adjacent sheets?! This is no longer a problem as GIS allows you to centre your map on the exact area you are interested in.

However, the real power of a GIS goes way beyond these mapping functions. The partnership of location and 'attribute' data, and its storage in a digital format makes it possible to perform all sorts of interesting analysis that was previously not possible. The partner councils are using GIS to do lots of interesting and innovative work. Examples include analysis of the Census 2001 data, windfarm visualiations and schools transport planning.

... So back to the definition! A GIS is really "a system of software, hardware and data which can be used to visualise (imagine the alternative of looking at a database!), analyse, model and display geographic data."



## Out with the old ...

Forth Valley GIS have recently rebranded.  
Look out for our new logo ...  
we hope you like it!



# Going FORTH ...

## Contaminated land studies in Clackmannanshire



The identification and risk assessment of potentially contaminated land is a current issue of concern for local authorities across the country. Clackmannanshire Council has been working with Babtie and Forth Valley GIS to identify the possible sources, pathways and receptors of any contamination risk.

Successful application of the selected Babtie model requires reliable and accurate land use information. The data must differentiate between areas of industrial, recreational, educational, and residential land. Forth Valley GIS have worked with Ian Doctor at Clackmannanshire to prepare such data.

Firstly, OS MasterMap was used as the base information to identify and accurately locate landscape elements. Whilst OS MasterMap provides a degree of land use information, other possibilities were explored for improved classification. The Corporate Address Gazetteer proved invaluable since its Assessors information helped classify over half of the nearly 30,000 buildings in the area.

The remaining building features were classified by a number of innovative methods. For example, spatial statistics were applied to identify similarly shaped structures which all occur in residential areas. Even map text was employed to tell the 'Public Houses' apart from the 'Post Offices'!

With this stage now complete, Ian commented

"I have been impressed by the range of GIS techniques that have been used to complete this task. We now have a sound and reliable base for identifying potential contaminated sites within the Council boundaries."

GIS comes to the aid of the

## 2001 Census

**The 2001 Census data is now available and ready for use, but of course ... it isn't quite that simple!**

The census data is only supplied for a limited number of standard geographic areas, such as Census Output Areas (COAs), Wards and Sectors. But if what you are really interested in the number of pre-school children in a primary school catchment area then significant work is required to get the information you are looking for from the census data.

To help solve this problem, Forth Valley GIS have produced a "Census Aggregation Tool" which can apportion data from the standard census output areas into any other required geographic zone.

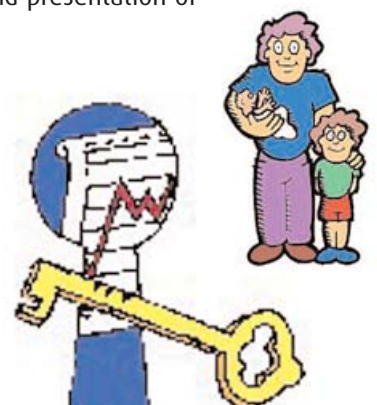
Caroline Moore, Research Officer for Stirling Council has already been using the tool to help profile the characteristics of the resident population of the 8 'Stirling Partnership for Urban Regeneration' (SPUR) areas. This analysis used data from about 26 different census tables. Caroline said

"previously we would not have attempted to undertake this analysis in such depth as the time involved would have been too great. As it was, we were able to extract the necessary information in about an hour". As well as greatly reducing the time required, the results are also consistent and objective. "Using the application saved us a substantial amount of time and meant we could have more confidence in the results."

All this means that time saved on data extraction can be freed up to concentrate on the analysis and presentation of the results.

The tool is based on ESRI's ArcGIS 8 software, and works with Census data stored in an Access or SQL Server database.

For more details, see the case study on our website, or contact FVGIS.





## Grounds for Success ... in Grangemouth!

Since January 2003 a team of surveyors armed with Global Positioning Systems/GIS equipment have been out scouring the area from Bonnybridge to Bo'ness in attempts to locate, identify and measure the soft landscaping areas, litter bins & street furniture maintained by the Estates Services of Falkirk Council.

With 95% of this work now successfully complete, Moira Fitzsimmons and her Project team have transferred these findings to the desktop GIS system in Grangemouth ready for the next stage of the project.

In Phase 2, staff have gathered additional information from existing paper records and then used DCM, the data capture tool developed by FVGIS to 'cleanse' the data and produce single, comprehensive records of all the grounds maintenance areas and assets in the council area. Such information has not been available until now.

The final phase of a 'condition survey' has just been piloted in Hallglen. This information will be reviewed in conjunction with Housing Services and will be used to program a regeneration project for soft landscaping areas.

Moira has been very pleased with the GIS and her team and enthused

"there is no end to the usefulness of GIS."

The information gathered will streamline much of the ground maintenance planning strategy in the future as well as communicating this information to other Council Services via the intranet.

## Treasure Trail ...



Forth Valley GIS have been working with East Dunbartonshire Council to successfully launch a web based GIS on their Intranet.

The launch marked the end of the second phase of an on-going project with Forth Valley GIS to develop and enhance their corporate GIS. Promotion of the website was tackled by making it fun and interesting – thanks to an ingenious "virtual treasure hunt".

The game was simple ... just like the TV programme except for the GIS serving as the helicopter and no sign of Aneka Rice! After solving a clue, the user had to find that place on the map by 'working' the GIS. Only then did they discover the next clue and a secret number. The sum of these numbers was the final answer!

With roughly 1,200 potential users, training and support was a concern. The concept of a "GIS superuser" was employed whereby each department nominated someone to receive training, pass it on to the rest of their department and then act as a first line of support. This proved very effective and is supported by early usage figures.

Nigel Kerr, Principal Environmental Health Officer at EDC said

"We have received lots of positive feedback from staff on the treasure hunt as an awareness raising and training tool. Hopefully it has made staff comfortable enough to start using the Intranet GIS to support their day to day work."

There has already been interest in a special Christmas Treasure hunt to keep the ball rolling!

## Tips and Tricks

### From the Support Desk ...

Ever wondered how to transform that simple plan into a piece of cartographic design worthy of wallspace? Not sure how to get around that sticky analysis problem?

#### Then ask the support team!

[support@forthvalleygis.gov.uk](mailto:support@forthvalleygis.gov.uk)

Over the next few issues we will be sharing pearls of wisdom to help make GIS easier for you.

Until then, don't forget that our GIS applications, including DMS, STEMS & ROADNET come with online help facilities to guide you around the software. Just look for the help icon.



## Diary Dates

### 4-5 November

6th Annual Government  
Computing Scotland  
Conference 2003  
Assembly Rooms, 54 George  
St, Edinburgh

### 7 November

CAPS GMS Group  
The Meffan Institute, Forfar,  
Angus

### 20 November

ESRI Technology Update  
Seminar  
Edinburgh

### 26 November

AGI Scotland Annual Event  
"Beyond Geographic  
Information - realising the  
business benefits"  
The Glasgow Science Centre

## Web Watch ...

[www.forthvalleygis.gov.uk](http://www.forthvalleygis.gov.uk)



For the first in our series of featured GIS web sites, we look at our own newly launched site. Developed entirely in-house, it's as part of a larger re-branding exercise.

The site contains the latest news from Forth Valley GIS as well as details of our expertise, services, customised GIS solutions, and much more. As the site develops, look out for more customer case studies, detailed training syllabuses and even an active mapping content. The aim is to provide a valuable online resource for customers, GIS professionals and anyone else interested in GI information.



funny?

**Q What kind of maps do spiders make?**

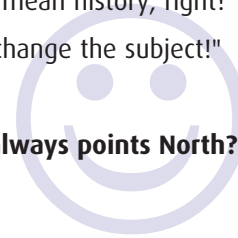
**A** Web-based maps.

A burglar went into the bank and pointed a gun at the teller and said, "Give me all your money, or you'll be geography!"

The teller laughed nervously, "You mean history, right?"  
The burglar snapped back, "Don't change the subject!"

**Q What's big, white, furry and always points North?**

**A** Polar Bearing



**For further information please contact:**



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