## Scotland's People in Time and Space

#### Geography and the work of the General Register Office for Scotland

#### **Duncan Macniven**

**Registrar General for Scotland** 



General Register Office for S C O T L A N D information about Scotland's people

1

## The work of GROS

- Registering births, deaths, marriages etc
- Taking the decennial census
- Using these and other sources to publish demographic statistics
- Using these and other sources for family history



### An Act to provide for the better Registration of Births, Deaths and Marriages in Scotland, 1854



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#### VICTORIÆ REGINÆ.

#### C A P. LXXX.

An Act to provide for the better Registration of Births, Deaths, and Marriages in Scotland. [7th August 1854.]

WEREAS it is expedient that a complete and uniform System of Registration of Births, Deaths, and Marriages should be established and maintained in *Scotland*: Be it enacted by the Queen's most Excellent Majesty, by and with the Advice and Consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the Authority of the same, as follows:

#### First Annual Report

Sir,

In conformity with your Instructions, I beg to submit the following Report :---

Scotland is of an extremely irregular figure, and its Mainland is so broken up by promontories, and indented by bays or friths, that, even at its most solid part, there are very few points which are above 40 miles distant from some part of the sea, and a much greater portion of the solid land lies within 80 miles of salt water. The surface also of Scotland, unlike that of England, is, generally speaking, rugged and mountainous, and most of it so unfitted for the purposes of agriculture, that it may be questioned whether more than a third of its surface could be rendered arable. Scotland, however, is surrounded by Islands on its northern and western sides, a considerable number of which are inhabited ; while the remainder are so precipitous and inhospitable, that they only afford pasture to a few sheep during summer, or are altogether abandoned to the wild sea-fowl, which build their nests in great numbers among the inaccessible cliffs.



#### First Annual Report

#### Report.

For the purposes of Registration, Scotland was, in 1855, divided into 1027 Districts; and all the subjoined Tables are prepared from the facts entered in the Register Books of these Districts. No old records exist sufficiently perfect to afford any means of comparing the varying proportion of Births, Deaths, or Marriages in Scotland for previous years; but, as the peculiar manner in which Scotland is broken up into insular and mainland portions seemed to afford peculiar facilities for studying the influence of soil, climate, season, etc., on the forms and proportions of the fatal diseases which prevail among the inhabitants of each of these localities, after considering Scotland as a whole, the various influence which an *Insular*, a *Mainland*, and, as contrasted with both, a strictly *Town* situation, bears on the proportion of Births, of Deaths, and Marriages, will be pointed out, but more especially the influence of these three localities on the prevalence and fatality of different diseases.

In 1855, the population of Scotland, estimated to the middle of the year, amounted to 3,005,958 persons, of whom 1,433,863 were males, and 1,572,095 females. For convenience of comparison, this population is divided into three great Divisions—Insular, Mainland, and Town popula-



General Register Office for S C O T L A N D information about Scotland's people

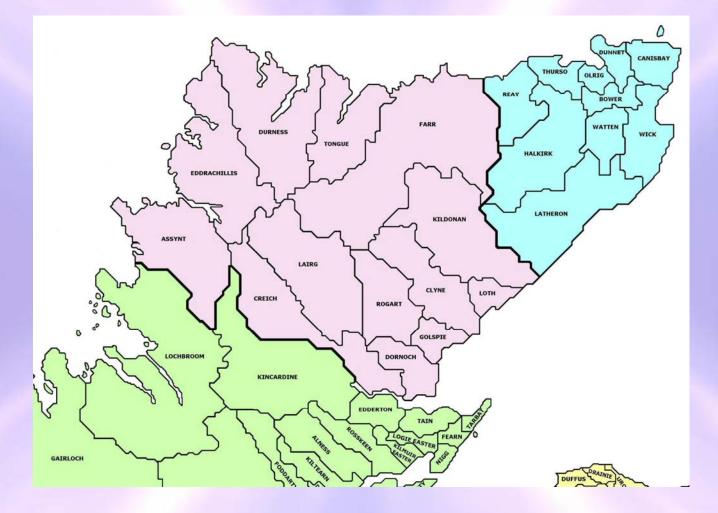
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### First Annual Report

	POPULATION.		BIRTHS.		lilegitimate Births.		DEATHS.		MARRIAGES.	
	Census 1851.	Esti- mated 1855.	No.	Per cent. to Pop.	No.	Per cent. to Births	No.	Per cent. to Pop.	No.	Per cent. to Pop.
Insular	166,487	166,487	8,788	2.24	162	4-8	2,698	1.617	724	0.434
Mainland .	1,714,522	1,764,878	53,347	3-02	4,589	86	30,893	1.750	10,060	0.572
Towns	1,007,788	1,075,098	\$6,269	8-87	2,606	71	28,481	2-644	8,896	0-827
SCOTLAND	2,888,742	8,005,958	98,849	3-10	7,857	7.8	62,004	2-062	19,680	0.654



### **Registration Districts in 1855**





7

### 1861 Census

SINCE the Census of 1851 was taken, an Act has been in operation for a period of about  $6\frac{1}{2}$  years whereby all the Births, Deaths, and Marriages in Scotland are entered on Public Registers. To the Registrar-General under that Act the whole arrangements for taking the Census of Scotland in 1861 were entrusted, and the machinery employed for this purpose was of course mainly that employed in the Registration of the Births, Deaths, and Marriages, assisted by Enumerators appointed under them, and superintended by the Sheriffs in Counties and by the Chief Magistrates in Burghs.



### 1861 Census

Greater delay has occurred in bringing out these preliminary Tables than was contemplated; *first*, from causes not foreseen in time relative to a sufficient staff of clerks at the Head Office; and *secondly*, from the returns having been taken up for the Registration Counties, which differ somewhat from the Civil Counties, and required the necessary corrections to be made in order that the Tables might give a distinct idea of the progress of the population in each County from the year 1801, when the first Census of Scotland was taken.

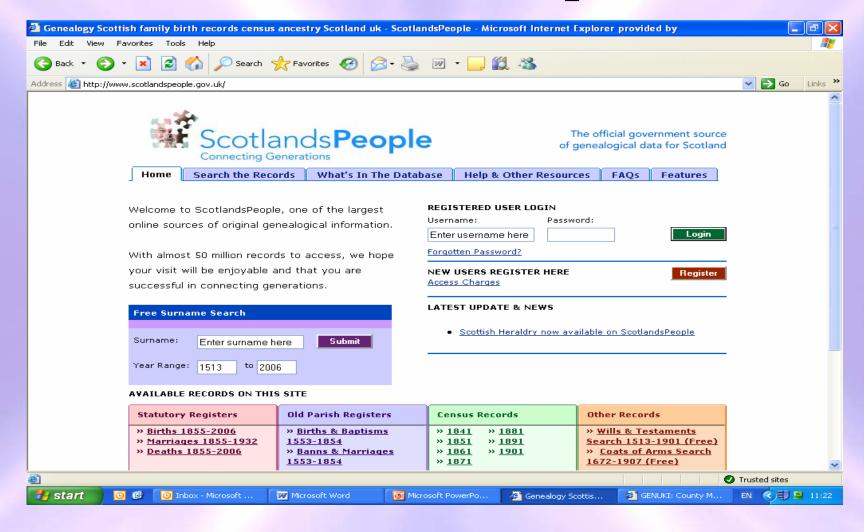


## Geography's role today

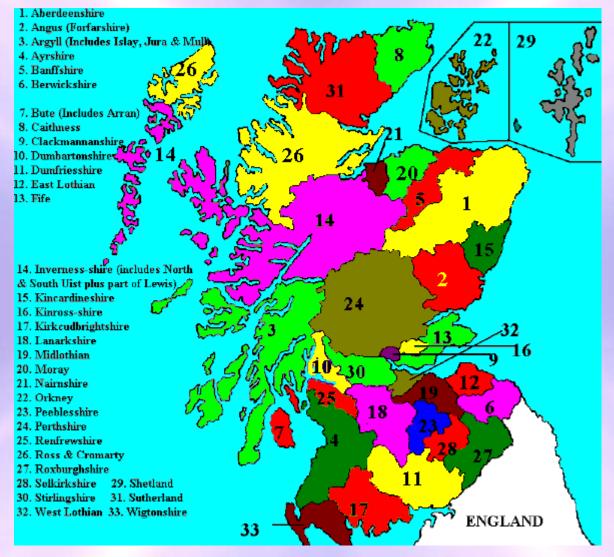
- Family history
- Demography



### ScotlandsPeople









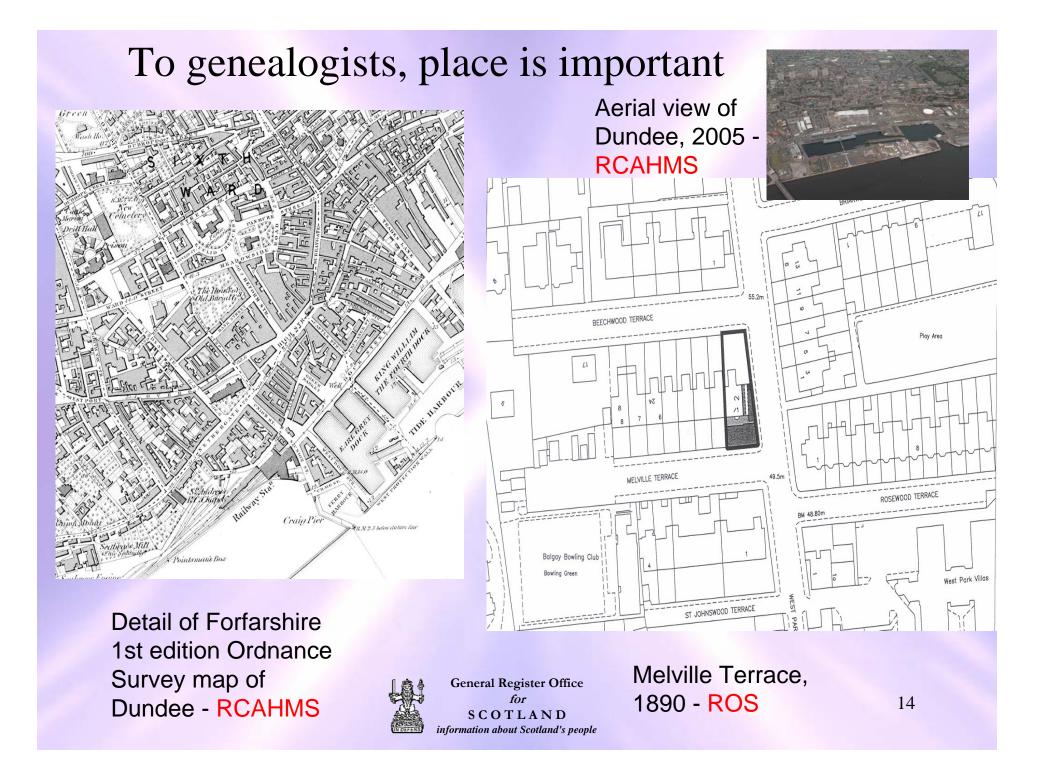


Historic view of Dundee High Street, 1878 - RCAHMS

Water Wynd and Meadow Place, from Meadowside, 1873, from 'Dundee Old and New,' The Dundee Improvement Committee Album - Scottish National Photography Collection - SNPG







#### Sept. 2. 1890.

Disch. by Trustees of the deceased ROBERT HENRY WYBRANTS, Mill Spinner and Merchant, Dundee,-disburdening of Bond (dated 31st Aug., and recorded in this Register 2nd Sept. 1881) for £500, by Alexander Henderson, Silk Mercer, Dundee, -16 Poles 23 yards of ground on the north side of the Turnpike Road from Dundee to Perth and bounded on the north by a Road or Street 20 Feet wide formed or to be formed, with Dwelling House, &c. thereon now forming No. 2 CLARENDON TERRACE, DUNDEE, said ground being the Stance next the westmost of the Stances into which the ground after mentioned was divided, being part of 202 Poles of ground part of the lands and Estate of BLACK-NESS. Dated Aug. 27 and 28, 1890; with Warrant of Registration thereon, on behalf of said Alexander Henderson.

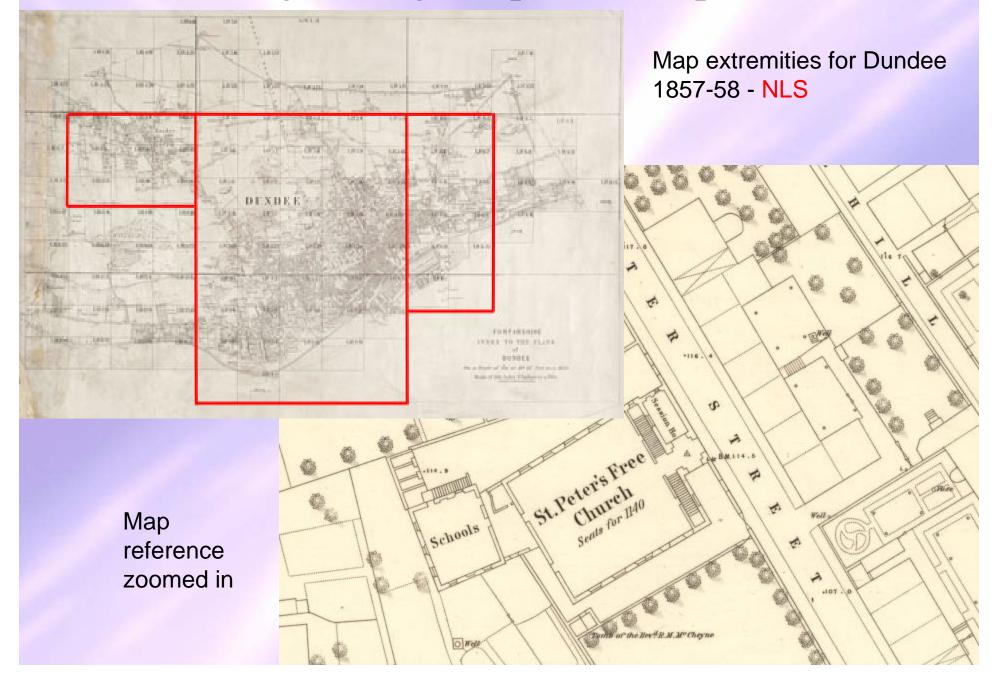
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#### Sept. 2. 1890.

(7180)Disp. by ALEXANDER HENDERSON, Silk Mercer, Dundee. to David Scott, Spinner and Manufacturer, Dundee,-of the subjects in the immediately preceding Minute. Dated Aug. 28, 1890; with Warrant of Registration thereon, on behalf of said Grantee. 649. 24.



(7179)



# Scotland offers a world-leading service to family historians



## Statistical geography

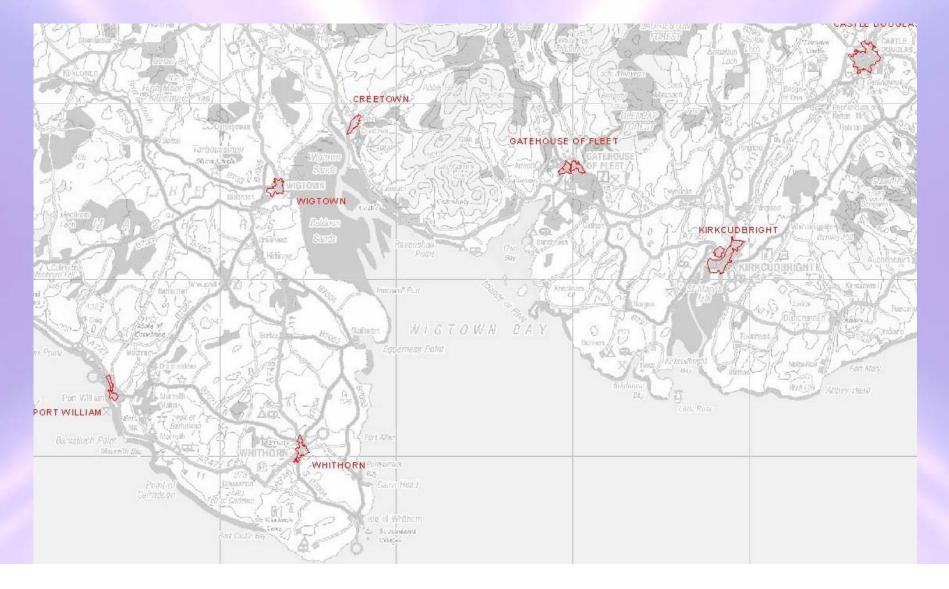
- GROS holds much geographically referenced information about Scotland's population
- GROS pioneered use of postcode mapping for statistical purposes
- GROS maintains maps and indexes relating postcodes to higher geographies



## Statistical geography index

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	SCOTLAND
	information about Scotland's people

### Statistical geography - settlements



## Statistical geography - settlements

Settlement	Council area	Estimated population		
Aberchirder	Aberdeenshire	1,200		
Aberdeen	Aberdeen City	199,790		
Aberdour	Fife	1,750		
Aberfeldy	Perth & Kinross	1,900		
Aberfoyle	Stirling	660		
Aberlady	East Lothian	900		
Aberlour	Moray	790		
Abernethy	Perth & Kinross	920		
Aboyne	Aberdeenshire	2,270		
Airth	Falkirk	1,210		
Alford	Aberdeenshire	2,120		



## **Census Outputs**

- Output Area the building brick
- Group of neighbouring postcodes nesting in higher geographies (especially council areas)
- Average 20 households/50 people
- 42,604 output areas in 2001



## 2011 Enumeration District planning

- Key to collection of data
- Groups of contiguous whole postcodes taking into account natural and man made boundaries
- 6,500 in Scotland, responsibility of enumerator
- New EDP system in ARC GIS
- Enumerator provided with map and address list



## Plans for 2011 Census outputs

- Output Areas with minimum change from 2001
- Revisions normally splitting or merging existing output areas
- Will include Data Zones



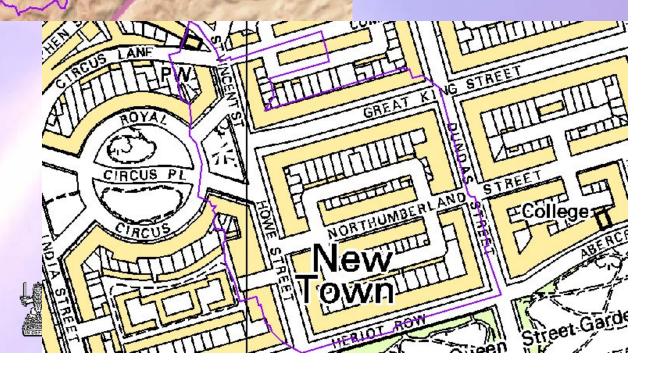
## Data Zones

- Output Areas too small for many uses
- Data Zones: stable aggregations of OAs
- Compact, homogenous
- Median population 760
- 6505 in Scotland
- Aggregated to 'Intermediate Geographies' with mean population 4000 (1235 in Scotland)



# Biggar Innerleithen Upper Tweeddale A708

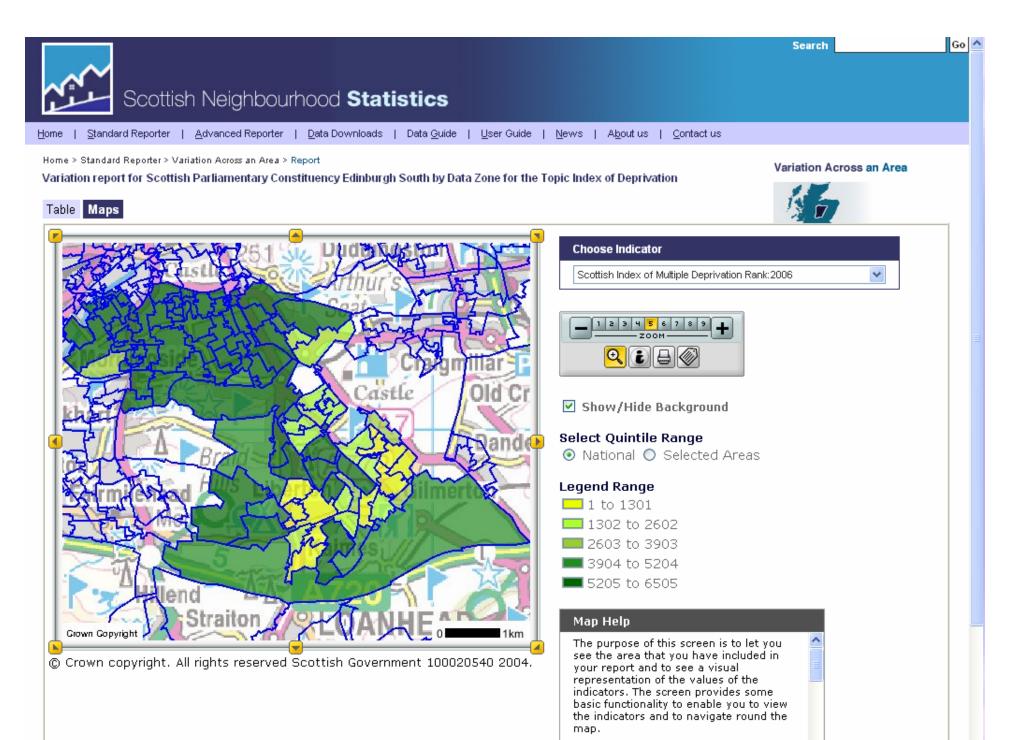
#### Data zones: rural and urban



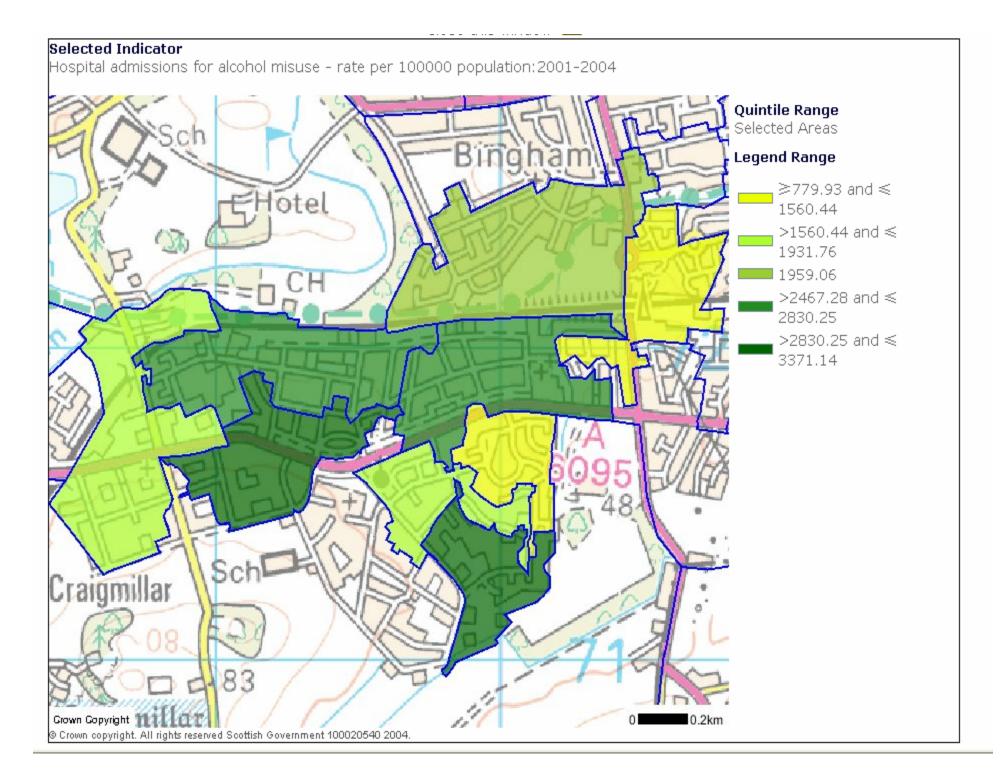
## Uses of Data Zones

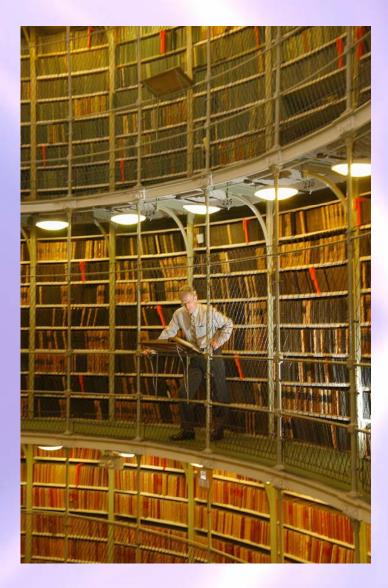
- Scottish Neighbourhood Statistics
- Index of deprivation
- Council and NHS board
  - service provision
  - target setting
  - performance monitoring
- Police beats
- Community Planning Partnerships
- Charities bidding for funding
- etc





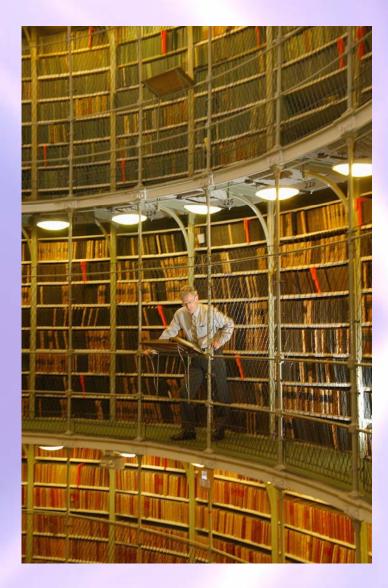
If you wish to go to the Results table.





### Registrar General for Scotland





Registrar General for Scotland

Chairman Scottish Government's Geography Steering Group



- Scottish Government Agriculture support •
  - **Drinking Water Quality Regulation**
- SEPA •
- **SNH**

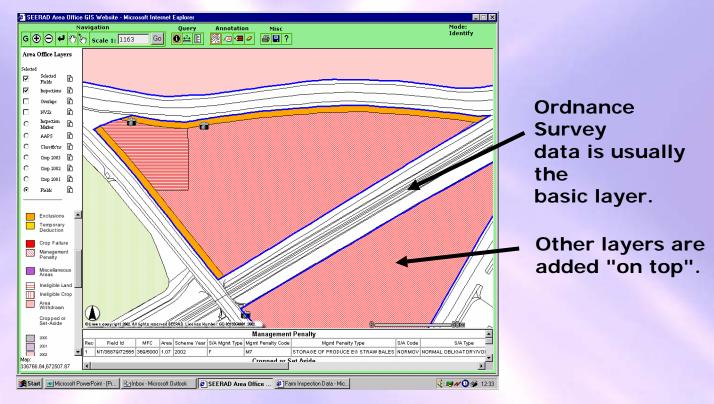
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- **Transport Scotland** •
- **RCAHMS** •
- Historic Scotland •
- **Emergency** Services
- Local Authorities
- NHS
- etc •

**Registers of Scotland** Land and Property Registration **Flood warning system Site Designation and Management Species Protection Trunk Road network Management CanMore/CanMap public information Ancient Monument Scheduling/Protection Command and Control Systems** Planning, Education, Social Work, **Environmental Health systems** Statistics and demographic analysis; **Property Management** 



#### The Government's map base





#### Your spatial reference is a key part of your identity



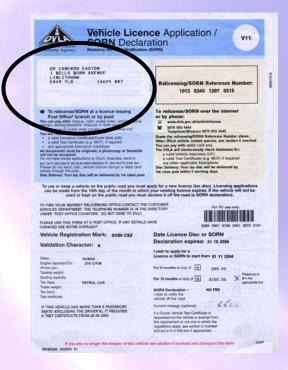
Place of birth = Nationality



Address contributes to establishment of identity

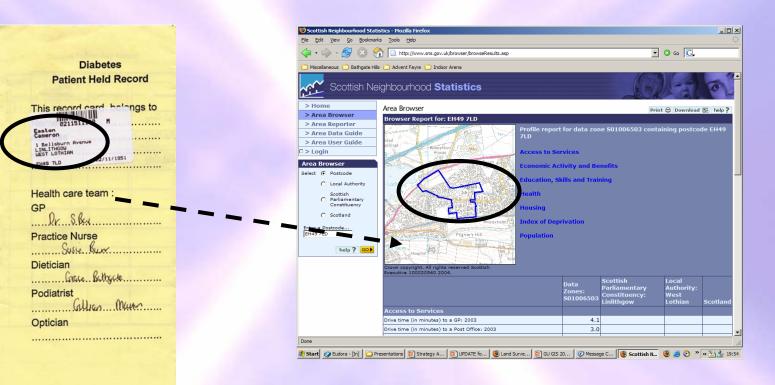


General Register Office for S C O T L A N D information about Scotland's people



#### Address allows access to services

#### Address is the key to information - about you and about Scotland

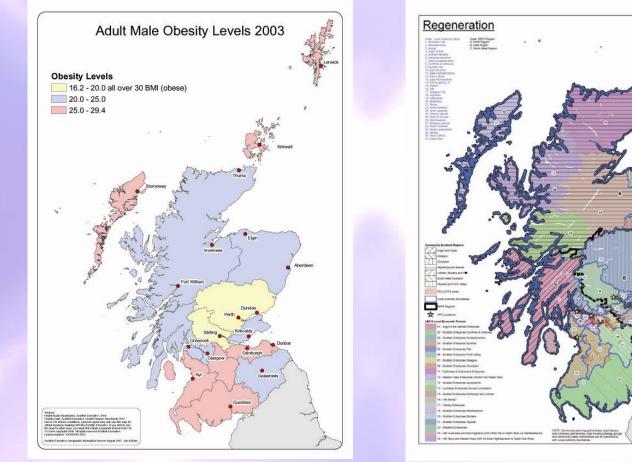


Address is key to aggregating information to provide

Scotland's Spatial Statistics

Your address is key part of the information held about you

Grand Grand



### Geographic information used widely

#### Place names unlock the Archives and Libraries



Place names are not usually considered part of a GIS



But they open up different types of spatial information



### ..... and a lot of money spent on it

- Rural GIS infrastructure project £1 million
- Other public sector infrastructure costs £?
- Ordnance Survey data £5 million annually
- Height data for flood warning £1.5 million
- Other public sector data costs £?
- National Address Gazetteer £9 million
- e-Planning £10 million
- etc







AND SCOTTER



ONE SCOTLAND – ONE GEOGRAPHY A GEOGRAPHIC INFORMATION STRATEGY FOR SCOTLAND



- First GI strategy for Scotland
- Consultation
- Published November 2005
- Ministerial backing
- Aims to overcome the barriers to maximising the use and value of geographic information, for the benefit of Scotland



openscot

building better service

ONE SCOTLAND – ONE GEOGRAPHY A GEOGRAPHIC INFORMATION STRATEGY FOR SCOTLAND



- Vision and leadership
- Availability of information
- Sharing of information
- Promotion of use of information
- Technical standards





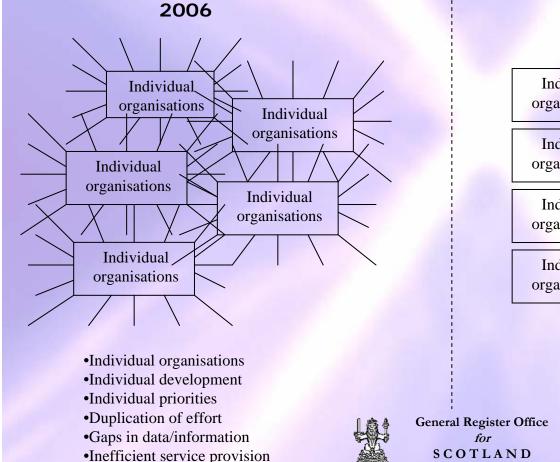


ONE SCOTLAND – ONE GEOGRAPHY A GEOGRAPHIC INFORMATION STRATEGY FOR SCOTLAND

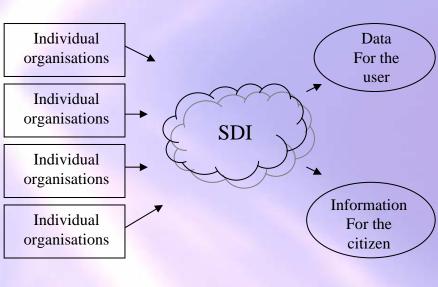
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- Not a giant IT project with data warehouse at its core
- Sharing of up to date geographic information
- Agreement to share key geographies
- Infrastructure which allows sharing





SCOTLAND information about Scotland's people

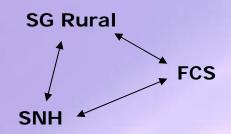


2011

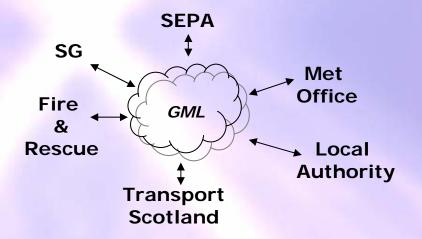
- •Co-ordinated organisations
- •Co-ordinated development
- •Scottish priorities
- •Integrated approach
- •Shared infrastructure
- •Cost/efficiency savings

Proof of Concept – 1 Single Rural Development Payment

Proof of Concept – 2 Emergency Response System



• Develop mechanism to share boundary data



- Define key datasets for emergency response
- Develop mechanism to share key data
- Link emergency response system to police Alert system





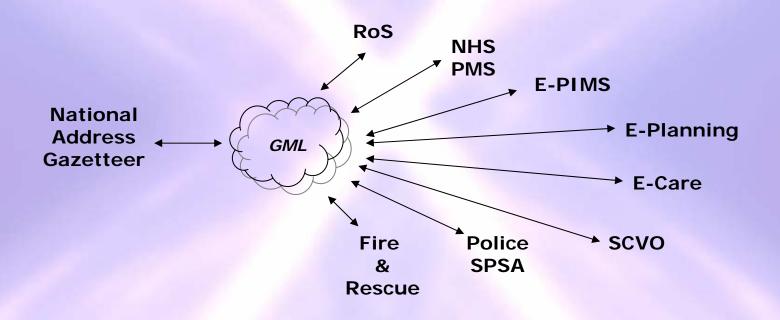


Data served to Scottish public sector bodies

Data collated by National Address Gazetteer

- Development cost = £10 million
- Sustainable data creation and management
- Policy that public sector will use the National Gazetteer
- Phased adoption 2008 2011





NAG data as core address in other national address datasets



Procurement of key spatial data

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- Forth Valley GIS
- Building on established shared service
- Professional and imaginative
- Good customer links: councils and public
- Scope for wider access
- Not only transforming Forth Valley's geography
- But also Scotland's



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Safety	star studded event in Wellington Square in Ayr	About My Property			
Leisure	November 2008.		Information about where		
Environment	21 October 2008		you live and services nearby.		
Business	Park Smart And Keep Children Safe At Belmont A		Postcode Find		
Roads and Transportation	South Ayrshire Council and Strathclyde Police and taking Belmont Academy pupils to and from scho		Postcode		
	dropping off or collecting their children from sch	Recycling and Refuse			
Council Newsletters	21 October 2008		Your bin collection day.		
Community Planning	Trading Standards Announce The Result of Fair	_	Postcode Find		
Partnership	46% of measures tested contain less than state	Your Council			
Contacting Us	A to Z of Council Services		• Committee Services		
Help us to get it right	ABCDEFGHIJKLMN	Community Councils			
Emergency numbers	More: <u>Planning Licensing Schools</u>	Housing Building Standards	<ul> <li>Consultations</li> </ul>		
	In Focus Lo	ocal Events 🔊	<ul> <li>Councillors</li> </ul>		
Customer Services Tel: 0845 601 2020					



Services For

Family
Property and Housing
Learning
Health
Safety
Leisure
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Customer Services Tel: 0845 601 2020 South Ayrshire Council County Buildings, Wellington Square, Ayr KA7 1DR

#### Home \ GIS and Maps

### South Ayrshire Council

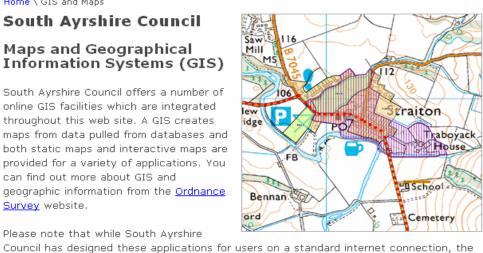
#### Maps and Geographical Information Systems (GIS)

South Ayrshire Council offers a number of online GIS facilities which are integrated throughout this web site. A GIS creates maps from data pulled from databases and both static maps and interactive maps are provided for a variety of applications. You can find out more about GIS and geographic information from the Ordnance Survey website.

Please note that while South Ayrshire

General Interactive Maps

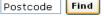
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#### vou live and services nearby.

About My Property

Information about where



Recycling and Refuse

Your bin collection day. Postcode Find

Website Help

- About South Ayrshire
- Accessibility
- Access keys

Browsealoud

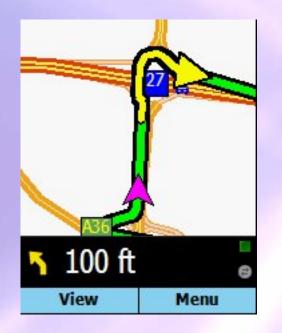
- Glossarv
- RSS Feeds
- Search
- Website linking
- Website Statistics

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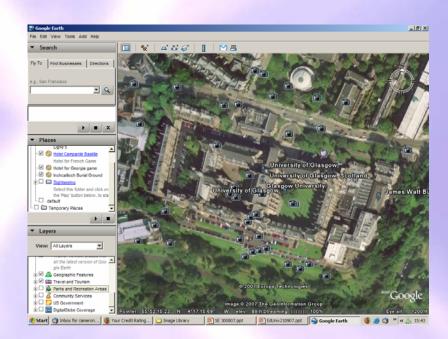
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South Ayrshire Council County Buildings Wellington Square,	Council & Counc Democracy Tax	il Accessing Services	Schools & Learning	Planning & Building Standards	Waste Collection	Find my Nearest		
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#### Technology will continue to improve



People will use spatial information without thinking about it



People will expect the public sector to provide information in the way they can get it at home



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Expectations will continue to increase





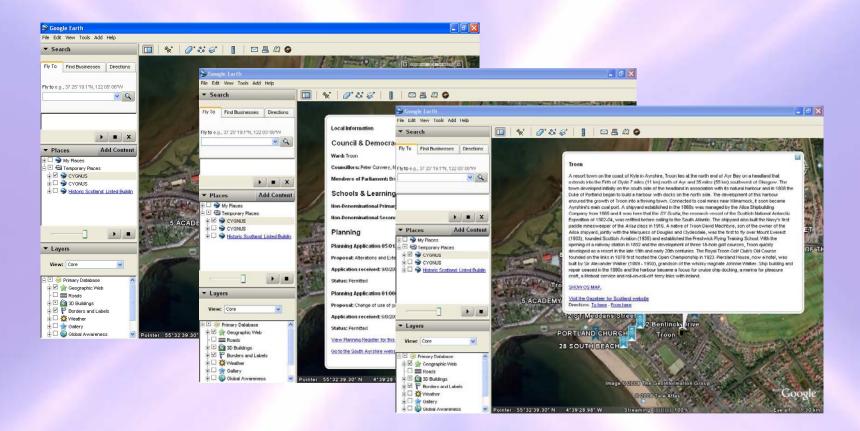
High quality spatial information is increasingly available in the media

**General Register Office** information about Scotland's people

for

SCOTLAND

People will expect the public sector to meet the same standards

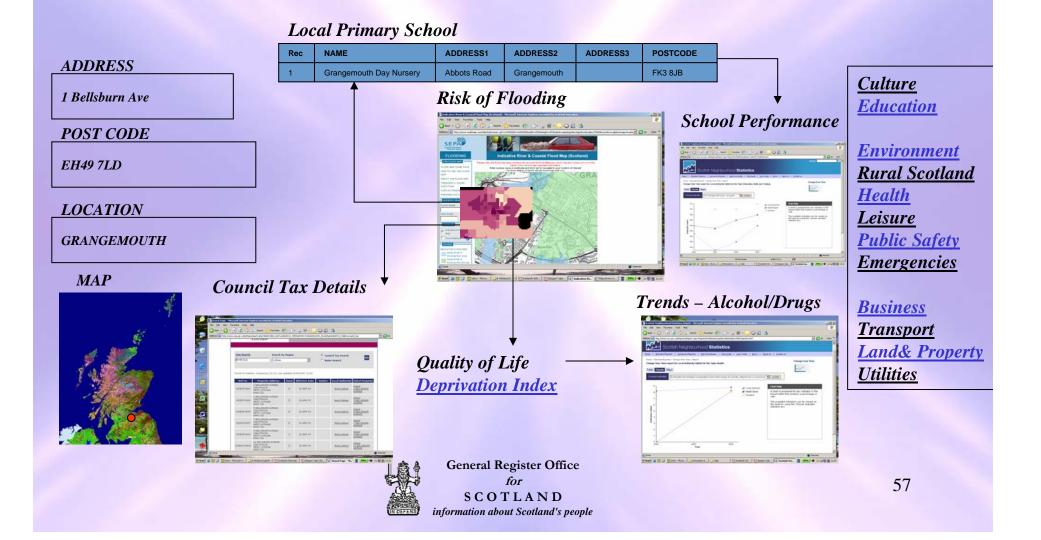




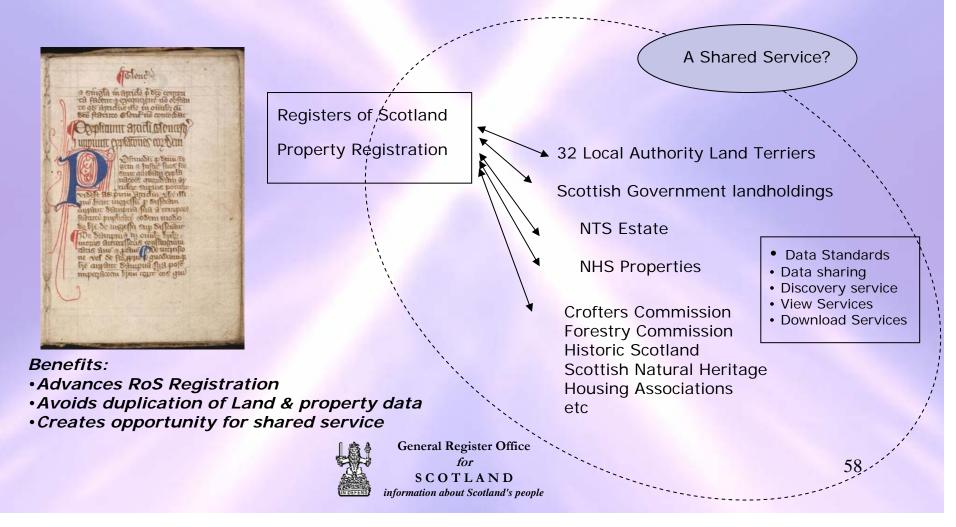
#### LOOK AT INFORMATION ABOUT SCOTLAND

#### DOWNLOAD DATA ABOUT SCOTLAND

### <u>USE A SCOTTISH</u> <u>PUBLIC SERVICE</u>



### National Land & Property Register

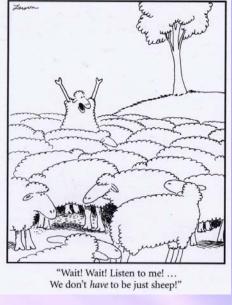


#### This means data sharing/standards/web services



Data sharing between Rural Agencies/NDPBs





#### But do <u>our</u> people know how to do it?

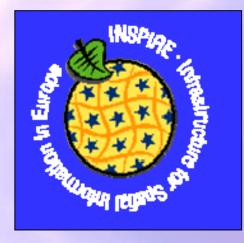
# And still significant challenges

- Organisations act independently
- Duplication of effort
  - Multiple acquisition of data/software
  - Replicated storage of the same data.
- Gaps in data coverage
- Ineffective use of resources
  - Multiple "data warehouses" to manage same datasets
  - Replicated system development and management costs
- Barriers to data sharing
- Gaps in information delivery
- Inefficient service provision



### The European dimension





- INSPIRE
- European Framework Directive
- General rules to establish *Infrastructure for Spatial Information in Europe*



## **INSPIRE** components

- Metadata
- Interoperability of spatial datasets and services
- Network services Discovery, View, Download, Invoke
- Data and service sharing
- Co-ordination, monitoring & reporting



## **INSPIRE** priority data sets

### ANNEX I

### ANNEX II

- Co-ordinate Reference Systems
- Geographical Grid Systems
- Geographical names
- Administrative Units
- Addresses
- Cadastral Parcels
- Transport Networks
- Hydrography
- Protected Sites



- Land Cover
- Ortho-Imagery
- Geology



### **INSPIRE** other key data sets

### **ANNEX III**

- Statistical Units
- Buildings
- Soil
- Land Use
- Human Health & Safety
- Utility & Government Services
- Environmental Monitoring Facilities
- Production & Industrial Facilities
- Agriculture & Industrial Facilities
- Population Distribution Demography

- Area Management, Restriction, Regulation Zones & Reporting Units
- Natural Risk Zones
- Atmospheric Conditions
- **Meteorological Geographical Units**
- Oceanographic Geographical Features
- Sea Regions
- Bio-Geographical Units
- Habitats & Biotopes
- Species Distribution
- Energy Resources
- Mineral Resources



## **INSPIRE** next steps

- Transpose Directive into UK legislation
  - next Spring
- Fulfil INSPIRE dataset requirements
  - 2009-2013
  - We don't yet know what this will actually mean
  - But it will include
    - Defining metadata
    - Ensuring interoperability of spatial datasets and services
    - Developing network services Discovery, View, Download, Invoke

for

SCOTLAND information about Scotland's people

• Ensuring data and service sharing





AND SCOTTER



ONE SCOTLAND – ONE GEOGRAPHY A GEOGRAPHIC INFORMATION STRATEGY FOR SCOTLAND

# Scotland's People in Time and Space

### Geography and the work of the General Register Office for Scotland

### **Duncan Macniven**

### **Registrar General for Scotland**

