State of the Environment
Report for Angus 2004

Angus Environment Forum May 2005

THE FIRST

STATE OF THE

ENVIRONMENT REPORT

FOR ANGUS 2004

Produced by the Angus Environment Forum

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EXECUTIVE SUMMARY

The main aim behind the production of this document was to provide a "snapshot" of the Angus environment as it is now and to provide a baseline against which future progress can be measured. Overall, the results of this survey of available data about Angus present a good picture of the state of the local environment.

In Angus most of the rivers and coastal waters rated a very good/good quality and air quality generally is very good. Drinking water quality is good also. However, the data shows some susceptibility to flood risk from climate change.

Waste recycling is good and is improving and statistics show a good reuse of brownfield sites for development. In Angus, there is generally good access to bus services. However, on the down side there are concerns over vandalism/anti-social behaviour and traffic volume is increasing.

Although presenting a nice picture of the environment locally these indicators need to be balanced against the area's global impact on the environment. An ecological footprint[1] was calculated for Angus in 2003 and this showed that Angus residents have an ecological footprint of 4.78 global hectares per capita. Given that to be within the carrying capacity of the planet, each citizen has only 1.89 gha available then this shows that Angus is overshooting its "allowance" by 2.89 gha – in other words, if everybody in the world lived like people in Angus then we would need 2.5 planets to sustainably support consumption.

The eco footprint analysis showed that the largest impact was from Materials and Waste (31%), followed by Food (30%), Personal Transport (16%), Domestic Energy (13%), Services Energy (6%) and Built Land (4%). This assessment indicates that the 'average' Angus resident is using 250% of the average earthshare, which compares favourably to the UK figure of 333% (UK average eco footprint of 5.45 gha).

For further information about the ecological footprint of Angus, please see the Council's website on www.angus.gov.uk/localagenda21 or alternatively contact Planning and Transport, St. James House, Forfar. Tel. (01307) 461460.

Representatives of the following organisations who make up the Angus Environment Forum compiled this report:

Angus Council
Scottish Environment Protection Agency
Scottish Water
Scottish Natural Heritage
Communities Scotland

[1] Ecological footprint is the land and water area that is required to support indefinitely the material standard of living of a given human population, using prevailing technology.

THE FIRST STATE OF THE ENVIRONMENT REPORT FOR ANGUS 2004

INTRODUCTION

Welcome to the first State of the Environment Report for Angus. The data contained in this document has been drawn together by the Angus Environment Forum. The Angus Environment Forum were established in 2003 after the Sustainable Development Seminar hosted by Angus Council in Arbroath and includes representatives from:

- Angus Council
- The Scottish Environment Protection Agency
- Scottish Water
- Scottish Natural Heritage
- Communities Scotland

As a first attempt at producing a State of the Environment Report for Angus, it was decided by the Forum to draw together data and statistics which are already collected and are therefore, readily available. Wherever possible, data for a few years has been used to illustrate trends over time. However, more recently collected data may not have a history and trends for those datasets will develop over time. Supplementary text has been kept to a minimum and just provides brief background information wherever this is available.

The report is divided into seven sections looking at statistics regarding the natural and built environment, waste, energy, travel and transport, air, water, pollution and public perception.

The aim of the document is to provide a starting point for measuring our impacts on the environment by gathering together the available environmental data to create an overall picture of the state of the environment in Angus. It is envisaged that over time the type of data collected will grow and incorporate more information on social and economic issues and will become a *Sustainability Indicators Report*.

BACKGROUND

"Angus will be a place where a first class quality of life for all can be enjoyed in vibrant towns and pleasant villages set in attractive and productive countryside. The area will be dynamic and outward looking contributing to the culture, environment and economy of Scotland".

The above is a vision of Angus quoted from the Angus Community Plan and the Local Agenda 21 Strategy. Sustainable Development is one of the main principles guiding the Community Plan with the environment and quality of life forming one of the five main topics within the plan. Working groups from the Community Planning Partnership were set up to tackle the various topics within the plan and the Angus Environment Forum was formed to facilitate joint working in relation to the environment.

The Forum comprises representatives of Angus Council, Communities Scotland, Scottish Environment Protection Agency, Scottish Natural Heritage and Scottish Water. One of its key activities is the preparation of this State of the Environment Report. The Environment Forum intends to hold an annual conference focussing on 'The State of the Angus Environment'. The aim is to raise awareness of the importance of safeguarding the environment and indicate the progress made in improving the natural environment in Angus. It will also provide an opportunity for members of the public to discuss environmental issues with representatives of the Forum.

THE ANGUS ENVIRONMENT

Angus lies midway along the eastern coastline of Scotland and covers an area of 200,000 hectares with a resident population of 108,370 (Angus Local Plan 2003: Consultative Draft). It comprises a network of towns and villages set in a diverse and productive countryside area, which extends from the coast into the Glens that penetrate the Grampian Mountains. The three broad areas (Coast, Strathmore and The Glens) vary markedly in their geographic make-up, land use and population base.

Maintaining the high quality of the environment in Angus, as well as the productive nature and diversity of the natural heritage of the rural and coastal areas, is of prime importance. In addition, the historic, cultural and archaeological heritage needs to be protected and enhanced and the vitality and viability of the town centres maintained.

The Angus Environment Forum has an important role to play in maintaining and enhancing the environment of Angus and it is hoped that this document will provide a starting point towards improving the quality of life for present and future generations of people living and working Angus.

The Coastal Area

The Coastal Area provides a major transport corridor with the A92 road (currently being upgraded to a dual carriageway) and the east coast rail line. The commercial harbour facilities at Montrose provide access to national and international markets. The area comprises an attractive and varied coastline, providing an important agricultural hinterland. It contains almost two-thirds of the Angus population, the bulk of who are located in the towns of Arbroath (with almost 24,00 population, the largest in Angus), Montrose, Carnoustie and Monifieth (on the very edge of Dundee).

The Strathmore Valley

The valley of Strathmore is a broad and fertile agricultural strath or vale accommodating more than one-third of the Angus population, principally in the market towns of Forfar, Brechin and Kirriemuir. Whilst agriculture and related industry remain important, manufacturing and the service sector, provide a variety of employment opportunities. The A90 trunk road linking Edinburgh and Dundee with Aberdeen runs through Strathmore.

The Glens

The Glens and the highland area cover the land north and west of the Highland Boundary fault line covering almost one-third of the total area of Angus, it takes the form of a plateau cut deeply with five main glens – Isla, Prosen, Clova, Lethnot and Esk. With less than 3% of the total Angus population, no major centres of population, and an economy predominately estate and farm based, this major upland area, including extensive areas of heather moorland, is regarded as fragile. Recognised for its high scenic, landscape and environmental quality, the Angus Glens do, however, provide for wide range of recreational and tourist activities.

SECTION ONE: THE NATURAL AND BUILT ENVIRONMENT

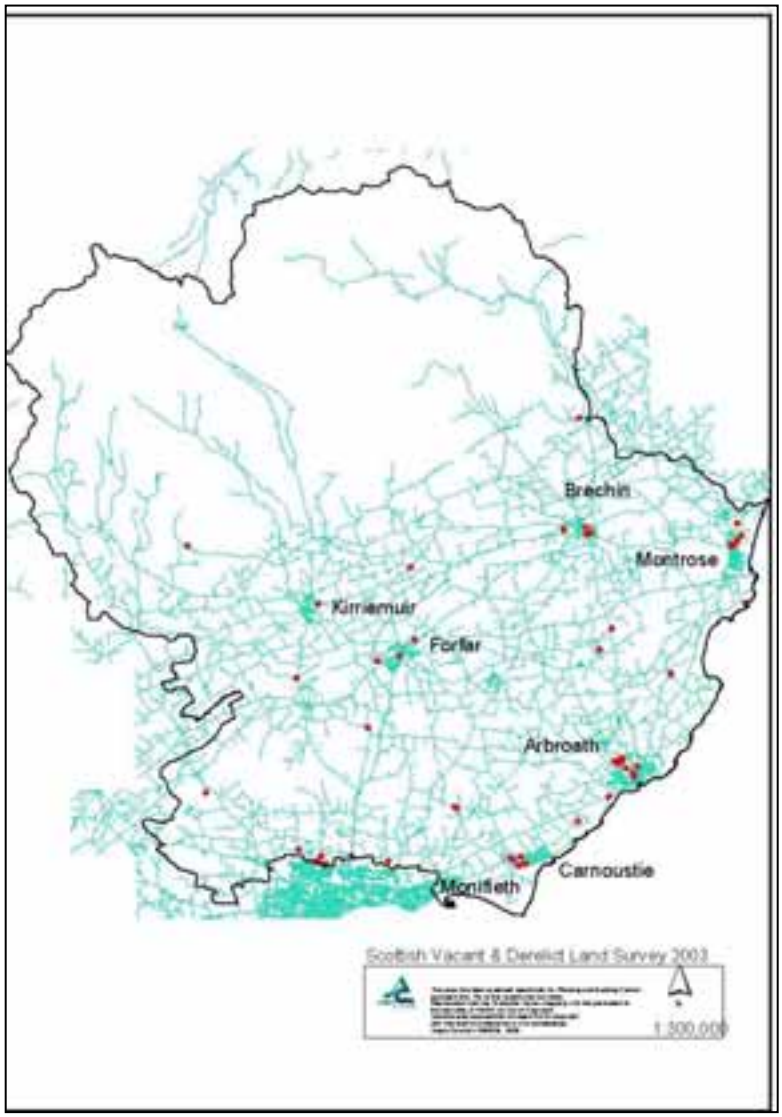
1. TOTAL AMOUNT OF VACANT AND DERELICT LAND (HECTARES).

Why this Indicator is Important

Dereliction and vacant properties may be symptoms of wider problems, but can themselves promote a spiral of degradation. Reclamation of derelict land can help to revitalise local environments. On the other hand, some vacant and seemingly derelict areas can provide a haven for wildlife and therefore in environmental terms, represent a positive contribution to biodiversity - however unsightly they may seem to the casual onlooker.

Whilst in Scotland as a whole the area of vacant and derelict land has increased in the last year (2003), in Angus it has decreased with a total of 13 sites (68.67 hectares) being removed from the list in the 2003 survey, leaving a total of 157.33 ha of vacant and derelict land in Angus.

The following map shows the location and spread of derelict land in Angus:



Legislative/National Relevance – The Scottish Executive collects data from local authorities and publishes the results annually in the Scottish Vacant and Derelict Land Survey (SVDLS). The survey is a co-operative effort between local authorities and the Scottish Executive Development Department.

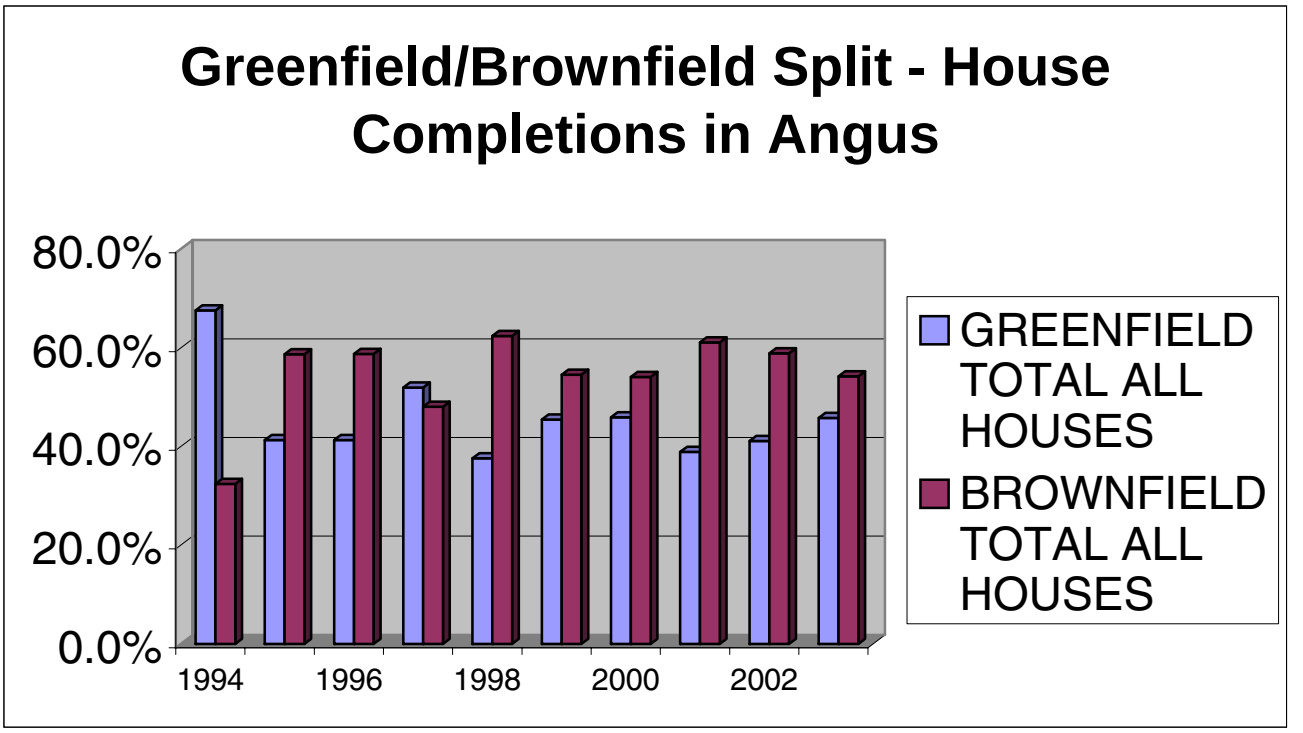
2. NEW DEVELOPMENT SPLIT BETWEEN GREENFIELD AND BROWNFIELD SITES (HOUSING AND INDUSTRY).

Why this Indicator is Important

Attractive streets and buildings, low levels of traffic, noise and pollution, green spaces, and community safety are fundamental to a good quality of life whether in a town, village or countryside. New developments must be planned in ways, which revitalise our urban areas, ensure thriving rural communities, conserve the historic environment and maintain the character of our townscapes and countryside.

In order to protect the countryside by minimising new Greenfield development and encourage the momentum of urban regeneration, there is a need to re-use previously developed land, and to bring empty buildings back into use. New development within existing urban areas contributes to the revitalisation of communities and enables people to live near to shops and employment thus reducing the need to travel.

The Angus Local Plan (Consultative Draft 2003) seeks to support this policy and therefore, as one of its guiding principles, has a policy to give priority to the reuse of previously developed sites where appropriate. The implementation of this policy is reflected in the graph below:



Legislative/National Relevance:

- Best Value Performance Indicator
- National Headline Indicator for the UK.

3. AREA OF PROTECTED/KEY HABITATS, E.G. SITES OF SPECIAL SCIENTIFIC INTEREST, ETC (HECTARES).

Why this Indicator is Important

The special natural, cultural, and archaeological characteristics of the Angus countryside and landscape are highly valued and must be retained. There is a need to reverse the decline in wildlife and habitats – our biodiversity. Any change to our landscape must be well managed and not cause unacceptable impacts on our natural heritage.

The Angus Local Plan (Consultative Draft 2003) recognises the importance of the natural environment in Angus and seeks to protect sites containing habitats, species, and/or geological or geomorphologic features of local or regional importance, whether designated or otherwise.

The Tayside Biodiversity Action Plan outlines how biodiversity contributes to our overall economy by supplying the raw materials for our clothing, food, drink, fuel, buildings and roads. Tourism based on wildlife is one of Scotland's major income-earners and many jobs in Angus are environment-based, such as farming, fishing and services providing water, energy and building materials.

Sites of Special Scientific Interest (including National Nature Reserves, Special Areas of Conservation, Special Protection Areas, Geological Sites, Local Nature Reserves and National Scenic Areas)

Site	Hectares
Auchterhouse Hill	251.30
Balloch Moss	16.00
Balshando Bog	3.80
Barry Links	1041.10
Blacklaw Hill Mire	27.10
Caenlochan	5043.70
Carrot Hill Meadow	8.60
Craigs of Lundie & Ardgarth Loch	30.10
Crossbog Pinewood	62.40
Den of Airlie	88.40
Den of Fowlis	8.50
Den of Ogil	5.50
Dilty Moss	38.00
Dryleys Brickpit	1.4
Duns Dish	31.5
Easthaven	1.20
Elliot Links	28.7
Forestmuir Meadow	68.2
Gagie Marsh	6.1
Gannochy Gorge	46.00
Kinnaber Links	311.8
Little Ballo	11.5
Loch Brandy	99.7

Lochindores	16.6
Loch of Kinnordy	86.00
Loch of Lintrathen	189.1
Long Loch of Lundie	34.2
Monifieth Bay	212.7
Montrose Basin	955.4
North Esk & West Water	288.7
Red Craig	105.5
Rescobie & Balgavies Lochs	178.00
Restenneth Moss	35.4
Rickle Craig to Scurdie Ness	73.1
* River South Esk	N/A
* River Tay	N/A
Rossie Moor	132.30
Round Loch of Lundie	8.1
Turin Hill	19.7
Whitehouse Den	0.2
Whiting Ness, Ethie Haven	153.00
TOTAL HECTARES	**9732.50**

This represents 4.47% of the Angus area is protected under the above designations.

** Are linear and based on river systems so no area measurements are available.*

Legislative/National Relevance

- EU and National Legislation – new Countryside and Wildlife Act.
- Sites designated by Scottish Ministers.
- National and Local Biodiversity Action Plans.

Natural Heritage Designations

REF		NNR	SAC	SPA	RAMSAR	SSSI	GCR	OTHER
1	AUCHTERHOUSE HILL					●		
2	BALLOCH MOSS					●		
3	BALSHANDO BOG					●		
4	BARRY LINKS		●	●		●	●	
5	BLACKLAW HILL MIRE					●		
6	CARROT HILL MEADOW					●		
7	CRAIGS OF LUNDIE AND ARDGARTH LOCH					●		
8	CROSSBOG PINEWOOD					●		
9	DEN OF AIRLIE*	●				●		
10	DEN OF FOWLIS					●		
11	DEN OF OGIL					●		
12	DILTY MOSS					●		
13	DRYLEY'S BRICKPIT					●	●	
14	DUN'S DISH			●	●	●		
15	EASTHAVEN					●		
16	ELLIOT LINKS					●		
17	FORESTMUIR					●		
18	GAGIE MARSH					●		
19	GANNOCHY GORGE					●	●	
20	KINNAIBER LINKS (part of ST. CYRUS S.S.S.I.)	●				●		
21	LITTLE BALLO					●		
22	LOCHINDORES					●		
23	LOCH OF KINNORDY			●	●	●		
24	LOCH OF LINTRATHEN			●	●	●		
25	LONG LOCH OF LUNDIE					●		
26	MONIFIETH BAY		●		●	●		
27	MONTROSE BASIN			●	●	●	●	● LNR
28	NORTH ESK & WEST WATER PALEOCHANNELS					●	●	
29	RESCOBIE AND BALGAVIES LOCHS					●		
30	RESTENNETH MOSS					●		
31	RIVER SOUTH ESK (linear)		x					
32	RICKLE CRAIG - SCURDIE NESS					●	●	
33	ROSSIE MOOR					●		
34	ROUND LOCH OF LUNDIE					●		
35	THE RIVER TAY & ITS TRIBUTARIES(linear)		x					
36	TURIN HILL (composite site)					●	●	
37	WHITEHOUSE DEN					●	●	
38	WHITING NESS - ETHIE HAVEN COAST					●	●	

NNR - National Nature Reserve
SAC - Special Area of Conservation
SPA - Special Protection Area
SSSI - Site of Special Scientific Interest
GCR - Geological Conservation Review Site (i.e. site is partly or wholly a SSSI for its geological interest.)
LNR - Local Nature Reserve
NSA - National Scenic Area

● Designated
x Candidate
○ Proposed
★ Site in process of being de-declared as an NNR

4. AREA DESIGNATED AS COUNTRY PARKS (HECTARES).

Why this Indicator is Important

The ability to access and explore open countryside plays an important role in people's quality of life. The Angus countryside with its variety of landscapes, including mountains, lochs, woodlands and seashore, provides opportunities for visitors of all ages to enjoy the outdoors. Country parks provide an opportunity for relaxation and exercise in an informal setting and can also provide a haven for wildlife. As well as offering a range of activities to visitors, country parks are also a valuable learning resource offering illustrated talks and guided walks to schools, clubs and other organisations.

The county of Angus is fortunate to have several Country Parks within its boundaries. These are located at Monikie, Crombie and Forfar Loch, and are manned by the Angus Ranger Service who have established bases at these locations.

- Monikie Country Park, with its reservoirs, woodland and parkland, is an ideal location for a visit to the countryside. The scenic surroundings offer many opportunities to enjoy the outdoors at any time of the year.

- Crombie Country Park was officially opened in September 1983. Its 102 hectares includes Crombie Loch as well as broadleafed and coniferous woodlands.

- Forfar Loch Country Park is situated only a few minutes walk from the centre of the historic town of Forfar. With its woodlands, loch and grassland habitats, it is a haven for visitors and wildlife throughout the year. The loch itself is 1½ km long and 9 metres deep. It is bounded by a footpath of 5 km in length.

Country parks	3	359.27 ha	Includes 112.44 ha of water in Forfar Loch and Reservoirs

- During the year 2001-2002, the country parks at Forfar Loch, Crombie and Monikie attracted 482,166 visitors.

Legislative/National Relevance:

- Part 1 Land Reform (Scotland) Act 2003
- Outlined in Scottish Outdoor Access Code – www.outdooraccess-scotland.com
- National Planning Policy Guidance 11 (NPPG11)
- Planning Advice Note (Pan65): Planning and Open Space
- Countryside (Scotland) Act 1967

5. AREA (IN HECTARES) OF MANAGED GREEN SPACE FOR LEISURE:

Why this Indicator is Important

The opportunity to pursue recreational activity is essential to the quality of life; health and well-being of people and can also contribute to the local economy. Within Angus there is a wide range of opportunities for sport, informal and formal recreation with areas of open green space contributing towards the area's attractiveness to both residents and visitors.

The towns in Angus are characterised by their range of open spaces, including coastal links, public parks, school playing fields, allotments, footpaths and general amenity areas including areas of tree planting. Areas of recreational and/or amenity value are protected from development in the Angus Local Plan and an Open Space Strategy is currently being developed by Angus Council.

Passive recreation	1,061.4435	hectares
Active recreation	60.5576	hectares
Play areas	14.2664	hectares
Total area	1,136.2675	hectares

Legislative/National Relevance:

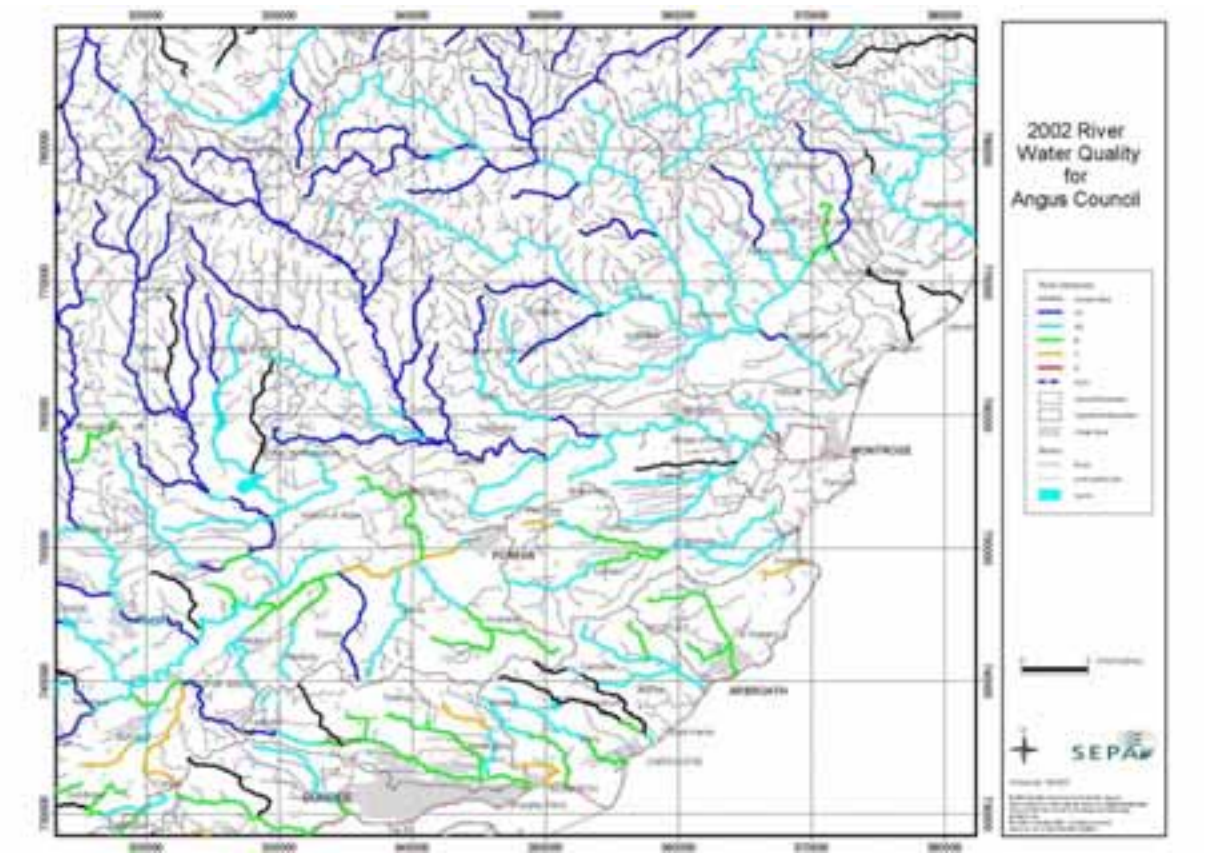
- Part 1 Land Reform (Scotland) Act 2003
- Outlined in Scottish Outdoor Access Code – www.outdooraccess-scotland.com
- National Planning Policy Guidance 11 (NPPG11)
- Planning Advice Note (Pan65): Planning and Open Space
- Countyside (Scotland) Act 1967

6. RIVERS OF GOOD OR FAIR QUALITY

Why this Indicator is Important

River water quality is important because rivers are a major source of water used for drinking and by industry. Rivers also support a wide variety of wildlife and are used extensively for recreation. Abstraction from and discharges to rivers and from the ground waters that support them, affects their flow and their quality.

In addition to their intrinsic value, rivers and burns also act as important wildlife corridors, enabling dispersion and migration of species. Within Angus, the river South Esk was designated as a Special Area of Conservation (SAC) for its internationally important populations of Salmon and Freshwater Pearl Mussel. The river Tay and its tributaries (linear) is also a candidate SAC (for further information see Tayside Local Biodiversity Action Plan).



Legislative/National Relevance

- EU and National Legislation – new Countryside and Wildlife Act.
- Sites designated by Scottish Natural Heritage.
- National and Local Biodiversity Action Plans.
- National Headline Indicator

7. VISITOR NUMBERS TO KEY/SELECTED SITES.

Why this Indicator is Important

Awaiting 2003 figures from Angus & Dundee Tourist Board – due out at end of March. Also sending some info on Green Tourism.

Tourism is a major industry in the UK and it is important that it is economically, socially and environmentally sustainable. In Angus, the high quality of the environment is a draw to visitors from both home and abroad. However, there is a need to manage visitor numbers in a way that lessens the impact on the environment and does not spoil the very thing the visitors have come to see.

The Tourism Strategy for Angus and Dundee (2001 – 2005) describes Angus as being:

> *An "authentic" and varied corner of Scotland with a rich heritage and an excellent environment. With its blend of coast and countryside it is an area that excels in outdoor pursuits and is a county to escape to from the stresses and strains of modern living.*

The Strategy recognises that the quality of a destination's environment is clearly of importance as customers increasingly choose "green" destinations. The Tourism Strategy highlights the importance of the Angus Glens being incorporated into the National Park area as a further enhancement to the County's reputation. With a range of archaeological and heritage attractions (Pictish stones, hill forts, Restenneth Priory, Pictavia, Arbroath Abbey, NTS properties etc) the area is something of a "cradle" of the Scottish nation and this complements the concept of authenticity – it is the antithesis of over-commercialised tourism kitsch. The environment has also created a playground for outdoor pursuits (golf, walking, fishing & field sports etc) and there is potential to further link this environmental theme to the area's food product.

Angus - attraction and visitor numbers

source - Angus and Dundee Tourist Board

Name	Location	Owner	1998	1999	2000	% change 99-00
Monikie Country Park	Monikie	Local Authority	180000	204040	150668	-26
Glamis Castle	Glamis	Private	118706	131852	137558	4
Crombie Country Park	Monikie	Local Authority	84085	90000	88053	-2
Kerr's Miniature Railway	Arbroath	Private	40000	50000	45000	-10
Arbroath Museum	Arbroath	Local Authority	26863	26986	23199	-14
The Meffan (Forfar Museum)	Forfar	Local Authority	22798	23150	21586	-7
Montrose Basin Wildlife Centre	Montrose	Other	12558	11604	10908	-6
Montrose Museum	Montrose	Local Authority	11902	9038	10473	16
House of Dun	Montrose	National Trust for Scotland	12871	12775	10185	-20
Angus Folk Museum	Glamis	National Trust for Scotland	11034	9493	9939	5
Edzell Castle	Brechin	Historic Scotland	11040	9792	9095	-7
Barrie's Birthplace	Kirriemuir	National Trust for Scotland	6920	6999	6672	-5
Arbroath Abbey	Arbroath	Historic Scotland	8142	8294	6634	-20
Barry Mill	Carnoustie	National Trust for Scotland	3209	3007	3162	5
Oathlaw Pottery & Gallery	Forfar	Private	1200	1600	1600	0
Glenesk Folk Museum	Glenesk	Private	2307	2073	1498	-28
Montrose Air Station	Montrose	Other	800	750	700	-7
William Lamb Memorial Studio	Montrose	Local Authority	482	283	361	28

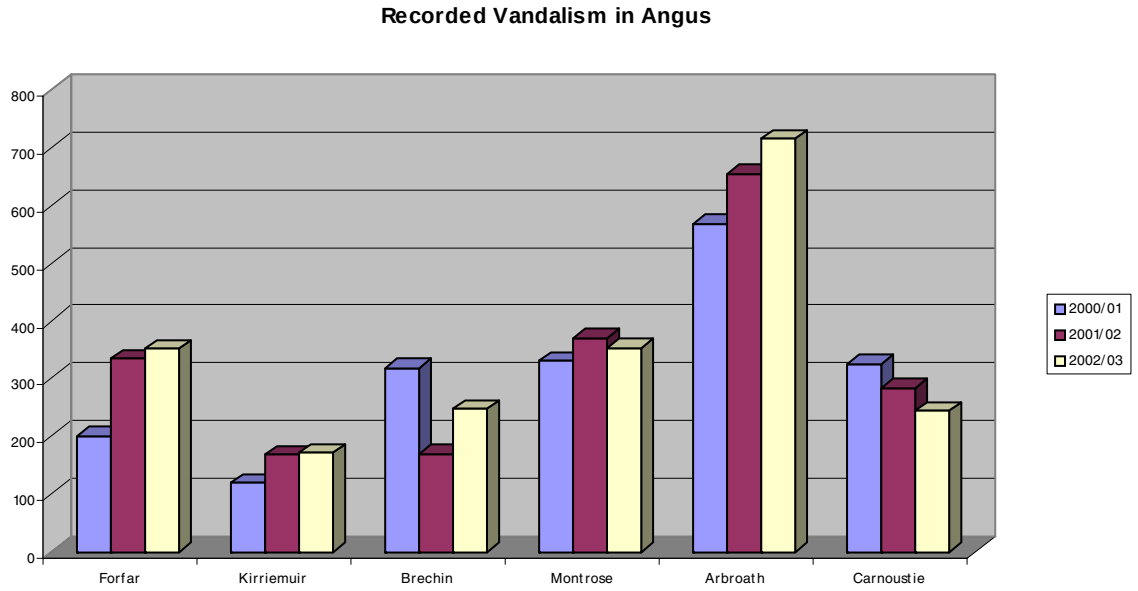
Legislative/National Relevance:

- Sustainable Tourism is being developed as a National Indicator

8. NUMBER OF REPORTED VANDALISM INCIDENTS.

Why this Indicator is Important

Vandalism can have an adverse impact on peoples' quality of life. Everyone has a right to live in a community that is safe. Vandalism imposes economic costs, reinforces social exclusion and can hasten the environmental decline of neighbourhoods. Areas that suffer from repeated acts of vandalism increase peoples' fear of crime and are very frustrating for those having to repeatedly repair property that has been vandalised.



Source: Angus Community Safety Audit 2003

The above graph indicates the highest amount of recorded vandalism was in Arbroath, Forfar and Montrose respectively. The figures for Carnoustie and Brechin are disproportionately high in comparison to their population size. However, the figures for Carnoustie demonstrate a steady decrease of approximately 25% between 2000/01 and 2002/03.

Legislative/National Relevance:

- Crime and Fear of Crime is a National Headline Indicator

9. AREA MANAGED UNDER AGRICULTURAL/ENVIRONMENTAL SCHEMES AND ORGANIC FARMING.

Why This Indicator Is Important

Agriculture is a major influence on the appearance of the countryside and has created a legacy of countryside features and wildlife habitats. Agricultural land occupies more than three-quarters of the UK's surface area and in Angus, agriculture is an important part of the economy. Therefore, farmers have a key role in the responsible management of the countryside.

The importance of achieving a balance between the sensitive management of our natural heritage in order to maintain and enhance biodiversity, sustaining a viable agricultural industry and ensuring the long-term viability of rural communities is now well recognised.

In Scotland, schemes to encourage the adoption of environmentally friendly farming practices have operated for a number of years now. Examples include the Environmentally Sensitive Areas Scheme (there are no designated ESA's in Angus), which were first introduced in 1994 and the Countryside Premium Scheme, which was introduced in 1997.

The Rural Stewardship Scheme helps ensure that farming is a lead player in the protection and enhancement of the environment. The scheme also plays a major role in sustainable rural development and helps to maintain the prosperity of our rural communities.

The Organic Aid Scheme (OAS) has been in operation in Scotland since 1994 supporting the conversion of land to organic status. The contribution of the OAS to the growth of organic farming in Scotland has accelerated sharply in recent years – mostly in upland rough grazing.

In Angus, the take-up rate of those agri-environmental schemes is as follows (As at December 2003):

Scheme	**Hectares**
Countryside Premium Scheme	20731.329
Habitats Scheme	896.635
Organic Aid Scheme	10551.273
Rural Stewardship Scheme	3979.404
TOTAL	**36158.641**

(Source: SEERAD)

Organic Farming in Angus **Main & Minor Holdings June 2002 Census**		
	Units	Hectares
Totally organic	8	5,687.660
Partly organic	30	6,375.170
Not organic	851	146,597.411
No response	391	31,152.036
Total	**1,280**	**189,812.277**

Source SEERAD: ES1

10. AREA COVERED BY FOREST AND BY FOREST TYPE.

Why this Indicator is Important

Woodlands and forests are important because they are fundamental to achieving the goal of Sustainable Development. They enhance our landscape and provide habitats for many species of wildlife. In addition, woodlands and forests provide places for leisure and recreation as well as being an economic resource for timber production, tourism, and local development and regeneration. Trees also contribute towards reducing the UK's carbon dioxide emissions targets under the Kyoto protocol by removing carbon from the air and acting as a "carbon sink".

The 1995-1999 National Inventory of Woodland and Trees showed that 16.4% of the total and area of Scotland was woodland, nearly three times as much as in 1924.

Area of new forest planting (total and percentage of broadleaved and natural species).

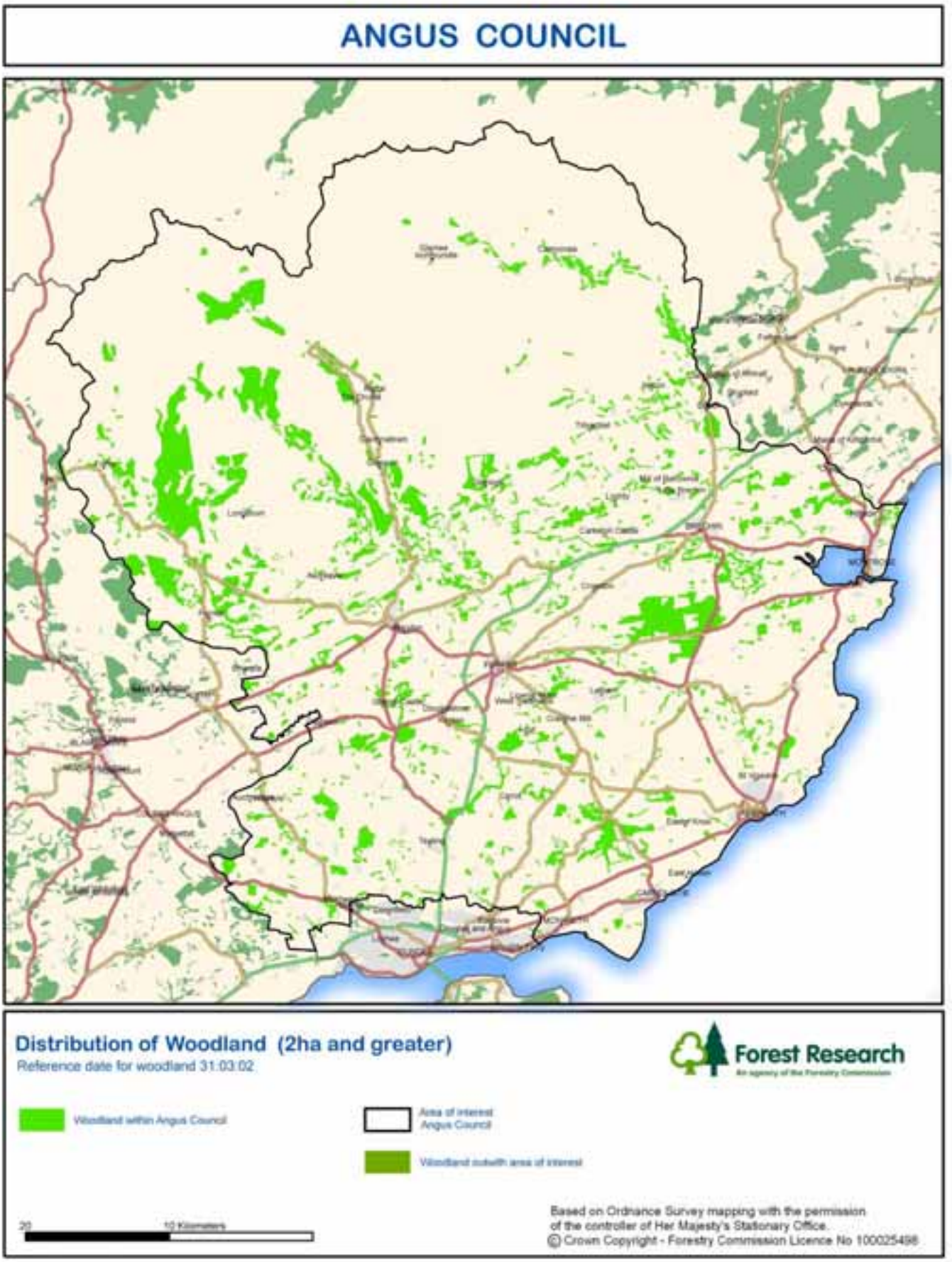
Forests and woodlands enhance our landscape and are habitats for wildlife. They are places for leisure and recreation and are an economic resource for timber production, tourism, and local development and regeneration. Plans for creating new woodlands need to be sensitive to possible impacts on soil, water, wildlife, heritage features and other aspects of the woodland setting.

The Forestry Commission seeks to increase the area of forest in Scotland by encouraging a steady expansion of diverse, productive and well-managed multi-benefit forests, which use a range of appropriate tree species and silvicultural systems, and by encouraging the expansion of our native woodlands.

The Woodland Grant Scheme and the Farm Woodland Premium Scheme were recently reviewed and revised into the Scottish Forestry Grants Scheme and aim to encourage the creation and management of woods and forests to provide economic, environmental and social benefits for now and the future. The scheme also includes grants for restocking.

Legislative/National Relevance

- National Indicator for Sustainable Development
- The UK Forestry Standard
- Forests for Scotland – Scottish Forestry Strategy – Scottish Executive 2000


ANGUS COUNCIL
Distribution of Woodland (2ha and greater)
Reference date for woodland 31.03.02
Forest Research
Woodland within Angus Council
Area of interest
Angus Council
Woodland outwith area of interest
20
10 Kilometers
Based on Ordnance Survey mapping with the permission
of the controller of Her Majesty's Stationary Office.
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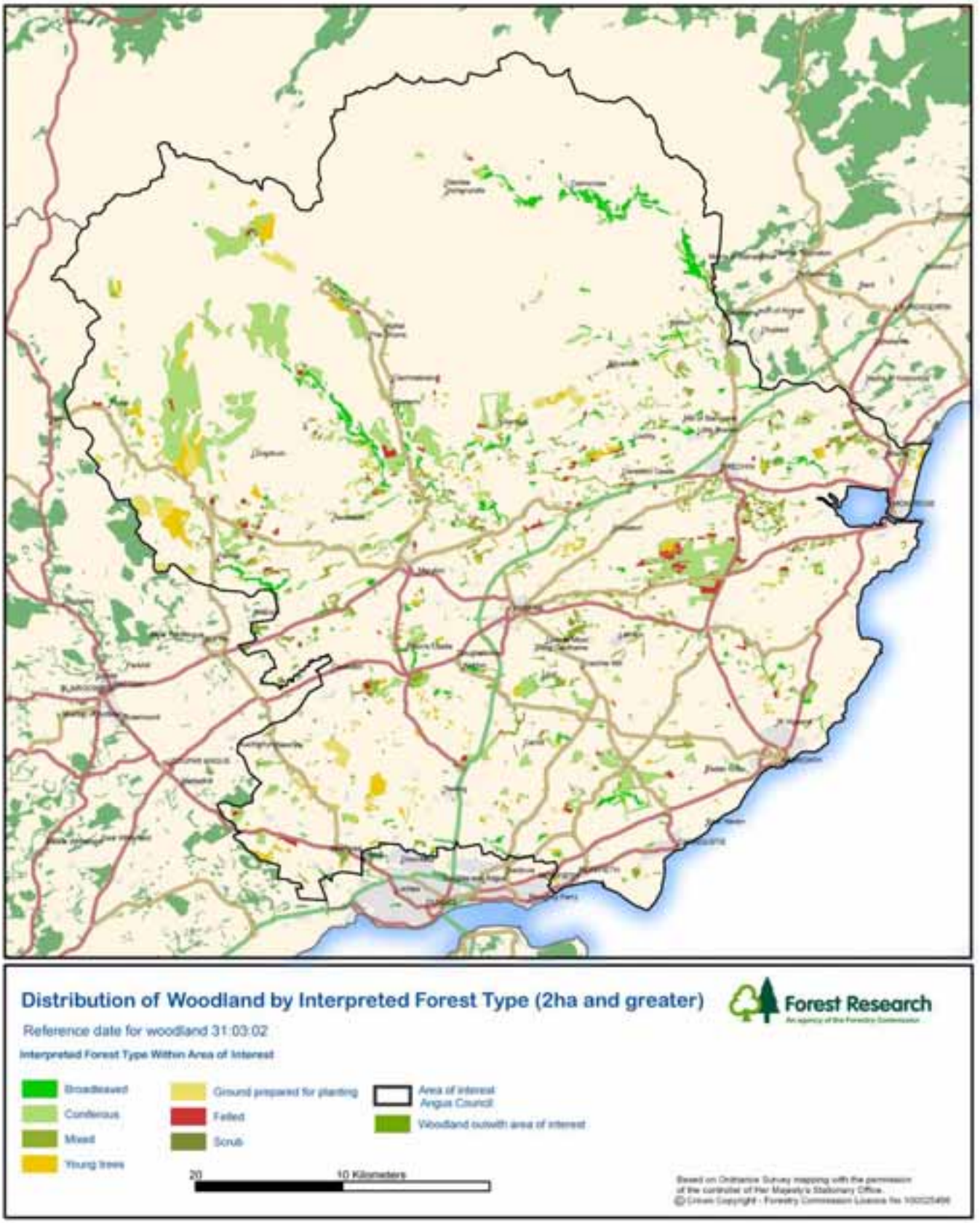
ANGUS COUNCIL



11. SHEDULED ANCIENT MONUMENTS IN ANGUS

Why this indicator is important

Ancient monuments and archaeological remains are important because they are evidence of the past development of society and help us to understand and interpret the landscape of today. As a finite and non-renewable resource, once lost, they are gone for good and are therefore deserving of protection from development.

Sites of national importance are scheduled as Ancient monuments by Historic Scotland and owners of such properties must apply to them for consent to carry out repairs, alterations, demolition, or any work affecting the monument.

Scheduled Ancient Monuments in Angus *(see Appendix II - Glossary for explanation of categories)*

Category	**No. of Sites**
Prehistoric Ritual and Funerary	102
Prehistoric Domestic and Defensive	228
Roman	9
Crosses and Carved Stones	14
Ecclesiastical	10
Secular	31
Industrial	4
TOTAL	**398**

Legislative/National Relevance

- Historic Buildings and Ancient Monuments Act 1953
- Ancient Monuments and Archaeological Areas Act 1979

12. LISTED BUILDINGS IN ANGUS

Why this indicator is important

The Scottish Ministers are required to compile lists of buildings of special architectural or historic interest. The administration of both local and national conservation policies is based on these lists. All buildings erected before 1840, the character of which remains substantially unimpaired, are included. Later buildings are selected on the basis of their individual character and quality. Special regard is paid to:

- planned streets, villages of burghs;
- works of well known architects;
- buildings clearly associated with famous people or events;
- good examples of buildings connected with social and industrial history and the development of communications;
- distinctive regional variations in design and use of materials;
- good examples within individual building types; and
- technological innovation.

ANGUS – SUMMARY OF LISTED BUILDINGS (as of 17 December 1998)
(Source: Historic Scotland)

	A	**B**	**C(S)**	**TOTALS**
BURGHS	31	460	360	851
PARISHES	65	743	472	1281
TOTAL	**96**	**1203**	**832**	**2132**

For a definition of the categories – see Appendix II for Glossary

The extent to which historic buildings and structures are in poor to very bad condition is an indicator of the state of health of the built environment, urban regeneration and the creation of sustainable communities. New development needs to look for opportunities to conserve the local heritage.

Historic Scotland maintain a "Buildings at Risk" (BAR) register which is a list of buildings (generally a listed building, or a building within a conservation area) which is vacant, lacking a foreseeable new use, and suffering from neglect and/or poor maintenance, fire damage, damage from the elements, or structural problems. The 2003 Buildings at Risk Bulletin from Historic Scotland shows the position in Angus as being:

- 46 Buildings at Risk (3.5% of BAR in Council to BAR in Scotland)

The total of 46 buildings are made up from the following categories:

Council Area	Cat A	Cat B	Cat C(s)	Total Listed Bldgs	Total BAR	Listed Bldgs as % of BAR
Angus	8	26	4	38	46	83%

Legislative/National Relevance

- Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997
- Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997
- Historic Buildings and Ancient Monuments Act 1953
- Ancient Monuments and Archaeological Areas Act 1979
- Civic Amenities Act 1967

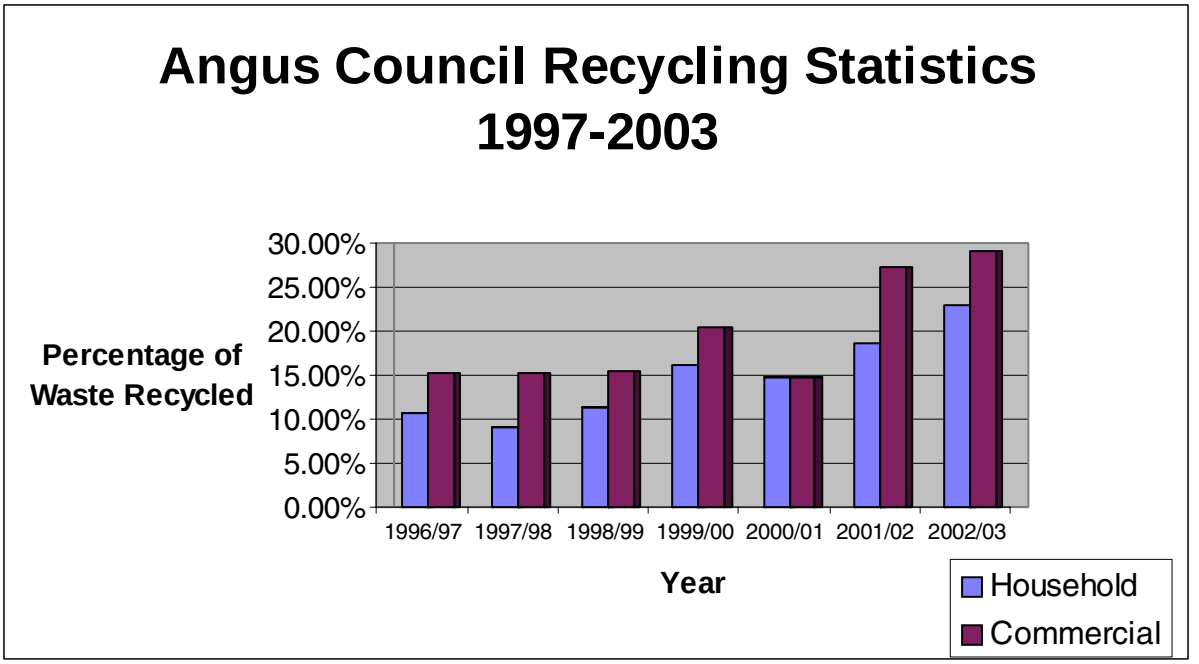
SECTION TWO: WASTE

13. PERCENTAGE OF TOTAL HOUSEHOLD WASTE RECYCLED.

Why this Indicator is Important

The types of waste we produce, all forms of waste management, and the transport of waste, have impacts on the environment. Waste is a potential resource and increased levels of reuse, recycling and energy recovery will contribute to sustainable development. The reduction of waste at source is at the top of the "waste hierarchy", followed by reuse or recovery through recycling, composting or energy recovery and finally, disposal of what is left.

The graph below illustrates Angus Council's recycling rates for household and commercial waste for the last six years:



14. HOUSEHOLD WASTE GENERATED PER YEAR (METRIC TONNES):

- Based on 2002/2003 total household wastes:

  16,261T (waste to energy);
  3,147T (composted);
  7,651T (recycled);
  29,342T (landfilled).

15. AMOUNT OF CONSTRUCTION AND DEMOLITION WASTE GOING TO LANDFILL:

- Not exclusively Angus material – total inactive 17,385.69 Tonnes
- approximately 2,166 Tonnes is recycled

Legislative/National Relevance

- National Headline Indicator
- National Waste Strategy

SECTION THREE: ENERGY

16. ENERGY USE PER HOUSEHOLD.

Why this Indicator is Important

The generation and use of energy has widespread environmental impacts including the release of carbon dioxide, the main greenhouse gas. One element of a sustainable energy policy should be the reduction of energy use through efficiency and conservation measures. Households are responsible for nearly 30 per cent of final energy use, and a quarter of carbon dioxide emissions.

The Council is the energy conservation authority for Angus. The Housing Department's role is to co-ordinate a reduction in home energy consumption by promoting energy efficiency to householders throughout Angus. The Council provides information on general energy issues, grants, government energy policies, and where to get specific energy advice. The Council's Housing Department employs a Home Energy Management Officer who can provide general information on energy efficiency or help and advice regarding grants and bills etc to all residents within Angus.

Improvements to the Council's own housing stock are almost complete and include comprehensive programmes to double glaze all windows insulate all lofts to 200mm, insulate all cavities, use condensing boilers in all gas heating upgrades, and distribute low energy light bulbs to all tenants. Improvements to Housing Association stock are believed to similary advanced. However, it is increasingly the private sector where improvements must be facilitated.

Household energy consumption for Angus for the year 2000/01 was 103.1 GJ. However, it is felt that this figure does not convey very much and it would be better to use the average NHER (National Home Energy Rating) as this will be much more easily understood and will be monitored.

The NHER is a score from 1 to 10 calculated by surveying a house or flat and assessing its energy consumption and insulation performance from a standard checklist. It covers construction type, window glazing, insulation, walls and roof, type of heating system, orientation and exposure etc. It may be an additional optional feature of house purchase surveys in a few years to give an indication of the energy performance of a property to purchasers. 1 is a tent, 10 is well insulated!

It is hoped to start the process of surveying Council stock and some in the private sector this year, with a view to compiling more accurate data over the next 5 years as part of the HECA Strategy. The new Scottish Housing Quality Standard requires all social rented sector housing to achieve an NHER of 5 by 2015.

Target: To achieve a NHER rating of 5 for Council housing stock by 2015.

17. AMOUNT OF RENEWABLE ENERGY GENERATED.

- Nil (2002/03)

Legislative/National Relevance:

- Home Energy Conservation Act 1995

SECTION FOUR: TRAVEL AND TRANSPORT

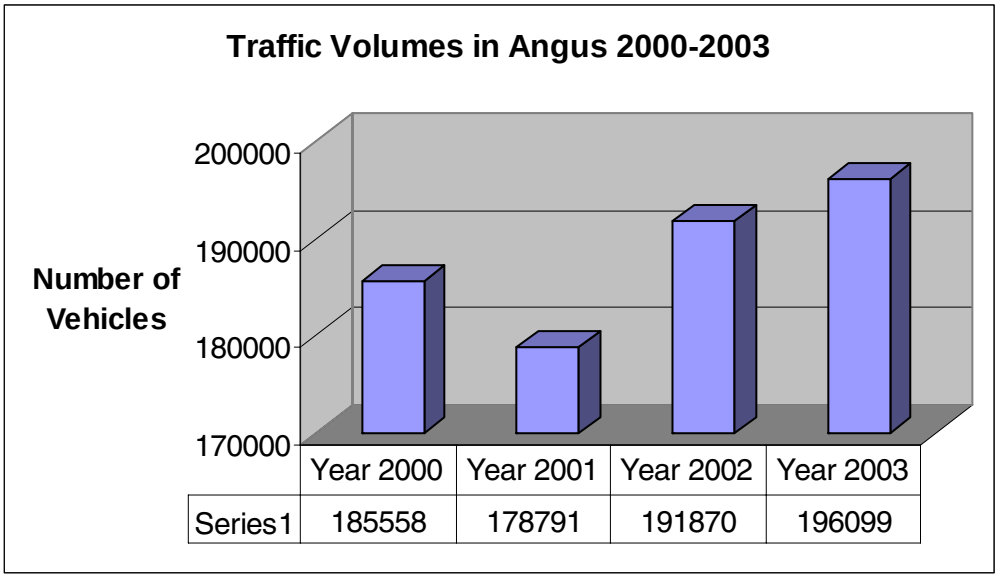
18. OVERALL TRAFFIC VOLUMES

Why this Indicator is Important

Although the car has brought many economic and social benefits, it has also brought problems. Nationally, the cost of congestion runs into billions of pounds each year. Road traffic is one of the fastest growing contributors to greenhouse gas emissions, which cause climate change, and add substantially to local air pollution and noise levels, damaging health and quality of life.

One of the Government's key objectives is to encourage people to walk, cycle or use public transport more and their cars a little less, and to reduce the need for travel through better land use planning.

Overall Traffic Volumes on Angus roads



The above equates to an increase in traffic volume of 5.7% over three years or an average increase of 1.89% per year.

Legislative/National Relevance:

- National Headline Indicator
- Road Traffic Reduction Act 1997
- Angus Local Transport Strategy 2000

19. MODE OF TRAVEL TO WORK IN ANGUS

Why this Indicator is Important

One of the Government's key objectives in transport is to strike the right balance between transport's role in helping the economy progress and allowing people to travel wherever they need to go, while at the same time protecting the environment and improving quality of life. Previously, traffic growth has been associated with economic growth, but the resulting volume of traffic leads to congestion, noise and air pollution and contributes to greenhouse gas emissions, which cause climate change.

A key objective in the Angus Local Transport Strategy is to maintain and improve accessibility to jobs, services and facilities for all members of the Angus Community in the most sustainable way and this involves encouraging an increase in the proportion of journeys to work, school, shops etc by foot, cycle and public transport.

Travel to Work and Place of Study (Source: 2001 Census)

All People aged 16 – 74 in employment or studying

Area	All people aged 16-74 in employment or studying	Percentage of people aged 16 – 74 in employment or studying who											Average distance (km) travelled to place of work or study[1]	Percentage of public transport users in households[2]	
		Work or study mainly at or from home	Travel to place of work or study by												
			Underground, metro, light rail, train	Train	Bus, minibus, or coach	Motorcycle, scooter or moped	Driving a car or van	Passenger in a car or van	Taxi or minicab	Bicycle	On Foot	Other		With car or van	Without car or van
a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p
Scotland	2510494	6.07	0.43	3.45	13.95	0.46	50.03	8.29	0.77	1.44	14.07	1.04	12.58	63.18	36.82
Angus	54173	6.71	0.05	1.81	7.18	1.04	54.88	8.25	0.74	2.32	15.95	1.65	15.36	77.13	22.87

Footnotes:

1. Excludes working or studying at home, no fixed place, working at offshore installation, working or studying outside the UK.
2. Public transport includes underground, metro, light rail, tram, train, bus, minibus or coach.
3. 'Works or studies' means all people aged 16 to 74 who work or study mainly at or from home, at no fixed place or travel to a place of work or study.

Legislative/National Relevance:

- Angus Local Transport Strategy 2000
- Road Traffic Reduction Act 1997

20. PERCENTAGE OF ANGUS HOUSEHOLDS WITHIN 6 MINUTES WALK OF A BUS SERVICE.

Why this Indicator is Important

Accessibility to transport is a key issue for sustainable development and social justice "Sustainable Angus: Local Agenda 21 Strategy" recognised that the key issues to be addressed in Angus are:

- Accessibility for non car owners,
- Accessibility of public transport,
- Access for disabled people,
- Increase service availability through the use of Information Technology,
- Guiding new development to accessible locations.

Nationally, it is recognised that local buses are the most frequently used and the most accessible mode of public transport across Scotland. However, in rural areas such as Angus, a higher proportion of the population live further away from bus stops than in urban areas, and in some of Scotland's most remote areas no services are available.

The table overleaf outlines on a national level walking time to the nearest bus stop, or the nearest place one can get a bus, and the frequency of bus service there: and compares Angus to national data and our immediate neighbours, i.e. Aberdeen City, Aberdeenshire, Dundee and Perth and Kinross *(from the Scottish Executive Statistical Bulletin Transport Series Trn/2003/2 Bus and Coach Statistics: 2001-02)*

WALKING TIME TO NEAREST BUS STOP

Please note that the Scottish Household Survey is not designed to provide figures for individual local authority areas for each year.

	Walking time to nearest bus stop												
	Up to 6 minutes					7 to 13 minutes							
	One bus every …					One bus every …							
	Up to 13 mins	**14 to 26 mins**	**27 to 63 mins**	**64 or more mins**	**Don't know freq.**	**Up to 13 mins**	**14 to 26 mins**	**27 or more mins**	**Don't know freq.**	**14 or more mins**	**Not Known**	**No bus serv.**	**All People**
All Scotland	**17**	**24**	**25**	**4**	**15**	**1**	**2**	**3**	**3**	**4**	**1**	**1**	**100**
Large urban areas	32	32	12	0	12	2	3	1	3	2	1	0	100
Other urban areas	16	28	27	0	18	1	2	2	3	1	1	0	100
"Accessible" small towns	3	25	41	2	16	0	2	6	2	2	1	0	100
"Remote" small towns	1	4	51	9	23	0	0	4	4	4	1	0	100
"Accessible" rural areas	2	7	39	12	12	0	1	7	4	11	1	4	100
"Remote" rural areas	0	0	19	26	10	0	0	10	3	19	1	13	100
Aberdeen City	21	52	9	0	11	1	3	1	1	1	0	0	100
Aberdeenshire	4	11	37	7	13	0	1	6	5	11	1	6	100
Angus	**1**	**13**	**41**	**5**	**20**	**0**	**0**	**6**	**3**	**7**	**1**	**4**	**100**
Dundee City	44	25	17	0	6	3	1	1	1	1	1	0	100
Perth & Kinross	10	14	32	7	16	0	1	6	3	8	0	4	100

Key: Large Urban, population > 125,000,
Other Urban, population > 10,000 –124,999,
"Accessible" small towns > 3,000 – 9,999 which are within 30 minutes drive of a settlement of 10,000 or more people
"Remote" small towns > 3,000 – 9,999 which are *not* within 30 minutes drive of a settlement of 10,000 or more people
"Accessible" rural - settlements of less than 3,000 people, which are within 30 minutes drive of a settlement of 10,000 or more people
"Remote" rural - settlements of less than 3,000 people, which are *not* within 30 minutes drive of a settlement of 10,000 or more people

Legislative/National Relevance:

- National Indicator of Sustainable Development for Scotland

21. HOW CHILDREN TRAVEL TO SCHOOL/WALKING BUSES.

Why this Indicator is Important

A switch of school journeys from the car to walking, cycling or bus would help to improve children's health and independence and reduce road traffic, congestion and air pollution. There is a need to encourage necessary access to facilities, services, goods and other people in ways, which make less use of the car and minimise impacts on the environment.

Local authorities are being asked to implement School Travel Strategies and plans that in many cases involve local schools carrying out surveys of their students. The advantage of this option is that it is also a way of engaging pupils, teachers and parents with sustainable development issues. It is hoped that for the next issue of the State of the Environment Report, surveys will have been carried out in Angus schools. However, in the meantime, the following represents the available information regarding how children travel to school:

- 2,300 pupils use school transport.
- 3 walking buses – Edzell, Friockheim and Hillside (further 12 primary schools interested in setting them up).

Spending on cycling, walking and safer streets (CWSS) projects which includes engineering and other works to promote "safe routes to school":

- £65,000 in 2001/02 (Year 1)
- £84,000 in 2002/03 (Year 2)
- £175,000 proposed spending for 2003/04 (Year 3).

Legislative/National Relevance:

- National Core Indicator of Sustainable Development
- Road Traffic Reduction Act 1997
- Angus Local Transport Strategy 2000

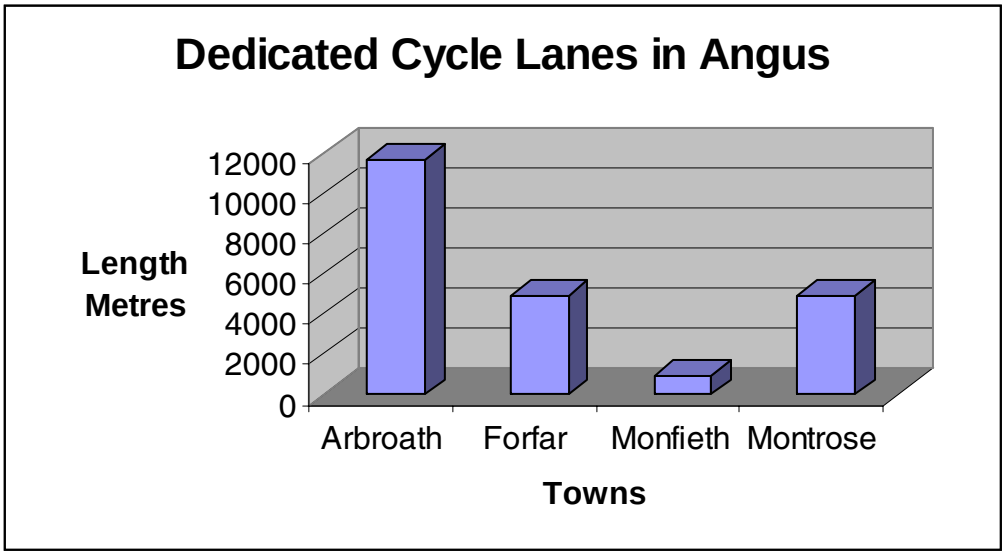
22. DEDICATED CYCLE LANES IN ANGUS.

Why this Indicator is Important

The Local Transport Strategy recognises the steady rise in road traffic in recent years and highlights the need to change our travel habits in a way that would benefit the environment. A key objective within the Strategy is to encourage people to cycle more and reduce their use of cars for both commuter and recreational journeys. Increasing cycling also has added health benefits for the individual by increasing fitness levels and helping to keep people's weight down. One way of encouraging more cycling is providing dedicated routes for cyclists or by marking out lanes on existing roads.

Other routes such as the Sustrans/North Sea Route promotes "green tourism" and encourages people to visit an area for cycling holidays. Sustrans stands for sustainable transport and is a charity that works on practical projects to encourage people to walk and cycle more through creating a National Cycle Network - 45,235 metres of the National Network and the North Sea Cycle route runs through Angus.

The chart below shows the length of existing dedicated cycle routes in Angus as at March 2004 and includes on street and off street cycles lanes as well as shared use. The chart also includes 1,690 metres of Arbroath and Montrose sections of the Sustrans/North Sea Route.



Future Proposals:

ROUTE	LENGTH IN METRES	COMMENTS
A92 Dundee/Arbroath (Dual Carriageway)	19,000	Due to be completed in 2006
A933 Condor - Arbroath	2200	Off Road
Monifieth - Carnoustie	4000	Off Road
Carnoustie to East Haven	4000	Off Road
St Vigeans to Bothwell	100	Off Road

Legislative/National Relevance:

- Road Traffic Reduction Act 1997
- Angus Local Transport Strategy 2000

23. LENGTHS OF PATHS.

Why this Indicator is Important

Paths are about more than just enjoying the outdoors. They can make a contribution to sustainable transport; there are health benefits for users and economic benefits for the local area. They can provide health benefits through encouraging the physical activities of walking, horse riding and cycling.

Paths are a key element in environmental improvement schemes. They make the countryside accessible without the need for a car providing more recreational opportunities close to where people live and work. Their use helps raise environmental awareness, an essential pre-requisite for the promotion of Local Agenda 21. Paths can help biodiversity and can provide 'wildlife corridors' enabling wildlife to move freely from area to area. In addition, paths are the cheapest form of recreation to create and maintain and the whole community regardless of income, age or ability can use them.

New "Paths For All" Network in Angus:

- Forfar – 8 miles of paths have been built or improved and a 16-mile network of paths, tracks and minor roads have been signposted.
- Arbroath – 7 miles of paths have been improved – the final network, once signposted will be 18 miles.
- Brechin – work about to start on improvements to 4 miles of paths around Brechin.

Legislative/National Relevance:

- The Countryside (Scotland) Act 1967
- Town and Country Planning (Scotland) Act 1997
- Local Government (Scotland) Act 1973
- Roads (Scotland) Act 1984
- Angus Local Plan 2003 (Consultative Draft)

SECTION FIVE: AIR

24. AIR QUALITY MONITORING.

Why this Indicator is Important

A key sustainable development objective is to control air pollutions in order to reduce the risks of harm to human health, the natural environment and quality of life. The DETR's "Local Quality of Life Counts" handbook of local indicators for sustainable development outlines the following pollutants as having been associated with potential health impacts:

- Nitrogen dioxide (NO_2): is thought to have both acute and chronic effects on airways and lung function, particularly in people with asthma:
- Sulphur dioxide (SO_2): affects the lining of the nose, throat and airways of the lung, in particular among those who suffer from asthma and chronic lung disease;
- Ozone (O_3): affects breathing and lung function;
- Carbon monoxide (CO): reduces the capacity of the blood to carry oxygen and deliver it to the tissues and can block important biochemical reactions in cells:
- PM_{10}: particulate air pollution episodes are responsible for causing excess deaths among those with pre-existing lung and heart disease.

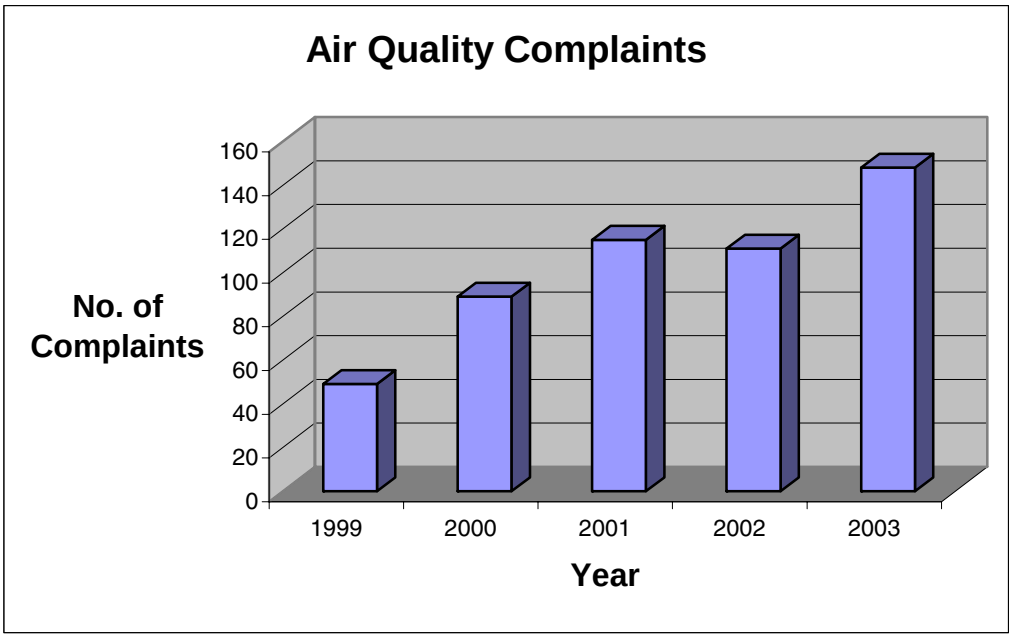
AIR MONITORING DATA FOR ANGUS 2003

Date	Parameter	Site	Unit	Groundhog	Diff Tube	NAQ Obj
	NO2	CARNOUSTIE	1 Hour Mean	30		200
	NO2	FORFAR	Max 1hr Mean	30		200
	NO2	ARBROATH	Max Ann Mean		19.67	40
	NO2	BRECHIN	Max Ann Mean		15.68	40
	NO2	CARNOUSTIE	Annual Mean		22.85	40
	NO2	FORFAR	Annual Mean		23.57	40
	NO2	KIRRIEMUIR	Annual Mean		13.96	40
	NO2	MONIFIETH	Annual Mean		22.77	40
	NO2	MONTROSE	Annual Mean		20.15	40
	PM10	CARNOUSTIE	24 hr Mean	39		50
	PM10	FORFAR	Max 24hr Mean	29		50
	SO2	CARNOUSTIE	15 min Mean	5		266
	SO2	CARNOUSTIE	1 Hour Mean	5		350
	SO2	CARNOUSTIE	24 hr Mean	5		125
	SO2	FORFAR	Max15min Mean	4		266
	SO2	FORFAR	Max 1hr Mean	4		350
	SO2	FORFAR	Max 24hr Mean	4		125
	CO	CARNOUSTIE	8 hour Average	0.5		10
	CO	FORFAR	Max 8hr Ave	0.3		10

Key to Headings:

- "Groundhog" is the trade name for the Ambient Air Quality Monitoring Station leased from Dundee City Council.
- NO_2 is Nitrogen Dioxide (measured in microgrammes per cubic metre)
- PM_{10} relates to Particulate Matter (measured in microgrammes per cubic metre)
- SO_2 is Sulphur Dioxide (measured in microgrammes per cubic metre)
- CO is Carbon Monoxide (measured in milligrammes per cubic metre)

The Column marked NAQ Obj stands for National Air Quality Objectives and these are the Government standards, which should not be exceeded. Angus Council is well below these figures for all save Particulate Matter. The Objective for this is to be lowered to 18 in 2010 so the Council has been asked to find out what is causing these high levels. Samples are being taken during 2004 to try and identify the type of particles involved. If they are man-made (e.g. associated with traffic or industrial processes) then the Council will have to take action to improve the situation. If, on the other hand, they are from natural sources (e.g. soil from fields, sand from beaches or salt from sea spray) then there will be nothing the Council can do about it and will have to take further advice.



Air Pollution Complaints/Enquiries by Type – 2003

Pollution Type	Source	No. of Complaints
Dust	Industry/Trade/Business Premises	7
Dust	Other Sources	3
Enquiry		6
Fumes/Gases	Domestic Premises	6
Smell	Affecting Neighbourhood (misc. sources)	14
Smell	Agricultural Spraying/Spreading	32
Smell	Industry/Trade Premises	23
Smell	Sewage Treatment Works	5
Smoke (Dark)	Chimney(s)	1
Smoke (Dark)	Industry/Trade Premises	17
Smoke	Builders Burning Waste	7
Smoke	Domestic Premises	1
Smoke	Domestic Bonfires	18
Smoke	General Nuisance	5
Smoke	Straw/Stubble Burning	3
		148

Legislative/National Relevance:

- Environmental Protection Act 1990 (EPA 90).
- Pollution Prevention and Control Act 1999
- Pollution Prevention and Control (Scotland) Regulations 2000
- Part IV Environment Act 1995
- National Air Quality Strategy 2000 and Addendum 2003
- National Headline Indicator

SECTION SIX: WATER

Scottish Water is committed to the principles of environmental stewardship and has an important role in promoting sustainable development in Scotland. Scottish Water accepts that it has an environmental impact through its core business activities of providing safe drinking water and collecting, treating and returning treated wastewater to the environment.

Scottish Water specifically aims to achieve the following commitments:

- to comply with all relevant environmental legislation and the other obligations to which we subscribe;
- to avoid, reduce or control pollution through all our activities;
- to continually improve our environmental performance in relation to our activities, products and services;
- to set environmental objectives and report on performance towards achieving set targets;
- to design and operate our assets in a manner consistent with the efficient use of energy and materials;
- to protect and enhance our natural and man-made heritage and recreational opportunities for our customers;
- to encourage our staff and customers' understanding and awareness of environmental issues;
- to consult widely to further develop our sustainable development policy.

25. WATER SUPPLY

The Angus Area is served with water from three Sources:

Loch Lee - (Treatment Works at Whitehillocks)
Supplies low lying part of Brechin and rural areas such as Glen Esk, Edzell, Fern, Noranside, Tannadice, Letham, Craichie, Kingsmuir, Rescobie, Aberlemno, Redford, Guthrie.

- Approximately 4Mld.

Backwater - (Treatment Works at Lintrathen)
Supplies Kirriemuir, Forfar, Arbroath, Montrose, and high part of Brechin and rural areas of Hillside, Ferryden, Inverkeilor, Friockheim, Auchmithie, Colliston, Bridgend of Lintrathen, Newtyle, Charleston, Glamis, Inverarity, Glamis, Douglastown and Gateside.

- Approximately 25 5Mld.

Clatto Water Treatment Works, Dundee (Backwater Reservoir and Loch of Lintrathen waters).
Supplies Carnoustie, Monikie, Newbigging, Barry, Muirdrum, and Monifieth.

- Approximately 7.5Mld.

- A total of approximately **37Mld**, with approximately **28Mld** to domestic customers and 9Mld to commercial customers.

Considerable leakage detection and pressure control measures have been taken throughout Angus in the last 10 years. This has reduced demands considerably i.e.

Location	Before - m3per day	After - m3 per day	Saving - m3 per day
Arbroath	11,000	7,250	3,750
Brechin	3,500	1,350	2,150
Forfar	8,000	4,100	3,900
Montrose	6,800	4,800	2,000

Future work:

- Fine tuning of Arbroath, Brechin and Forfar
- Continuing work in Montrose
- Carry out similar work in Kirriemuir, Carnoustie and Monifieth.

Legislative/National Relevance:

- **Water (Scotland) Act 1980**

Duties:

Supply of water for domestic purposes
Water supplied to be wholesome
Supply of Water for non-domestic purposes
Water for Fire-Fighting etc.
Conservation and Protection of Water Resources
Byelaws for preventing pollution, misuse, waste and contamination
Power to restrict use of hosepipes

- **Water Supply (Water Quality) (Scotland) Regulations 2001**

Tests to be taken
Where samples are taken
Parameters
Production of Annual Drinking Water Quality Report

- **EC Drinking Water Directive**

- **Water Byelaws**

26. SUMMARY OF DRINKING WATER COMPLIANCE - 2003

(Note these figures are for the full North East Area and not just Angus)

Quality & Environment	Apr-03	May-03	Jun-03	Jul-03	Aug-03	Sep-03	Oct-03	Nov-03	Dec-03
% Bacteriological compliance for all regulatory samples	99.98%	99.91%	99.70%	99.49%	99.73%	99.89%	99.94%	99.95%	99.60%
% Total coliform compliance regulatory samples	99.96%	99.82%	99.40%	98.99%	99.50%	99.785	99.87%	99.91%	99.83%
% Faecal coliform compliance regulatory samples	100%	100%	99.95%	100%	100%	100%	100%	100%	99.83%
WQ 1000 Indicator	998.00	992.59	997.39	995.00	991.00	987.00	992.00	977.00	979.00

Customer Service	Apr-03	May-03	Jun-03	Jul-03	Aug-03	Sep-03	Oct-03	Nov-03	Dec-03
Number of discolouration complaints	221	221	76	107	147	495	280	275	185
Number of taste & odour complaints	82	82	94	76	76	104	61	32	19

Targets

% Bacteriological compliance for all regulatory samples	99.6%
% Total coliform compliance regulatory samples	99.6%
% Faecal coliform compliance regulatory samples	99.6%
WQ 1000 Indicator	965.3

27. BATHING WATER QUALITY.

Why this Indicator is Important

A key sustainable issue for the coastal environment is to prevent contamination of coastal waters with pollution from human activities. Bathing water quality may be affected by discharges from sewage treatment works and storm overflows, rivers, agriculture and diffuse sources. The main concern is to avoid contamination of bathing waters by human or animal sewage.

In Scotland, 60 beaches are identified under the European Bathing Waters Directive (76/160/EEC) and in Angus, Carnoustie, Montrose and Arbroath (West Links) beaches are designated bathing waters.

Angus Council has applied to Keep Scotland Beautiful for a Blue Flag Beach award for Montrose, and a preliminary Seaside Award was granted for 2004. In addition, Seaside Awards are being sought for Arbroath, Lunan Bay, Easthaven, Westhaven, Carnoustie and Monifieth.

Identified Bathing Water Sites	**Quality 2000**	**Quality 2001**	**Quality 2002**	**Quality 2003**
Arbroath (West Links)				
Carnoustie				
Montrose				

Other Beaches in Angus	**2003**
Arbroath (Victoria Park)	
Lunan Bay	
Monifieth	
St. Cyrus	

Key for Above	
	**Excellent Water Quality:** Indicates sample meets the EC Guideline Standards: (Total Coliforms less than or equal to 500 coliforms per 100ml; less than 100 faecal coliforms per 100ml; less than 100 faecal streptococci per 100ml)
	**Good Water Quality:** Indicates sample meets the EC Mandatory Standards: (Total Coliforms less than or equal to 10,000 coliforms per 100ml; less than 2,000 faecal coliforms per 100ml).
	**Poor Water Quality**: Indicates sample failed to meet the standard required for good water.

Legislative/National Relevance:

- European Bathing Waters Directive (76/160/EEC)
- UK Sustainable Development Indicator

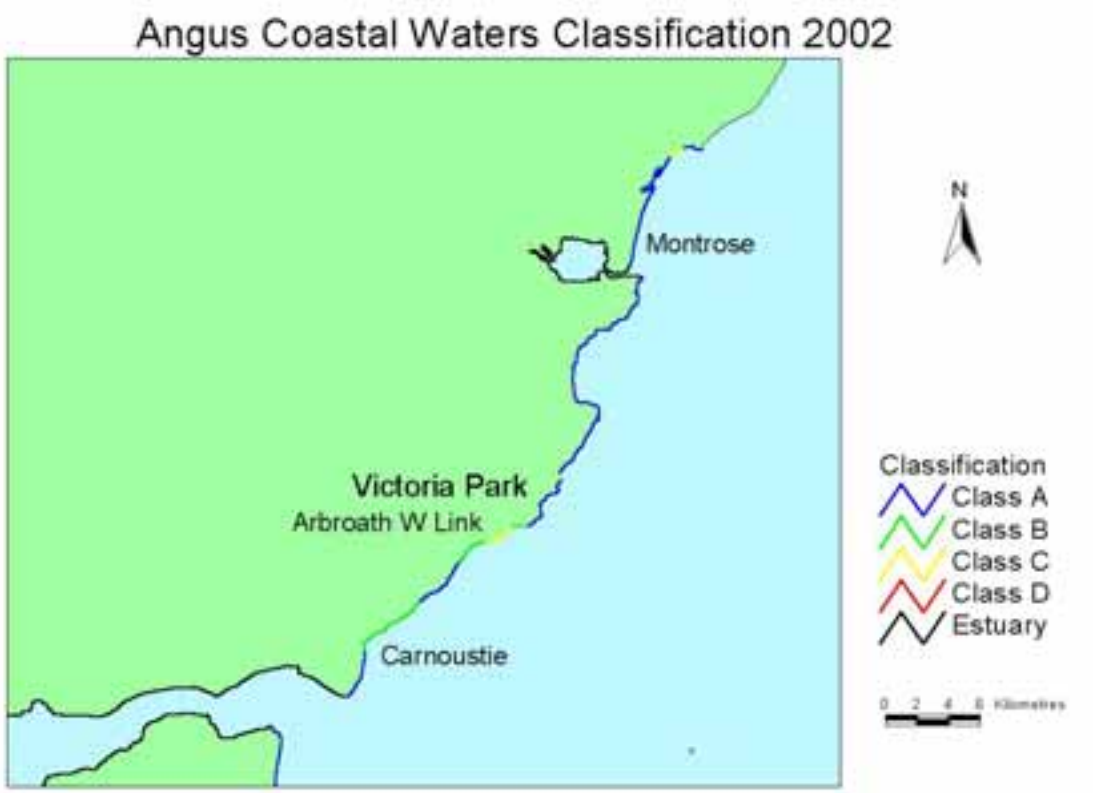
28. COASTAL WATER QUALITY

Why this Indicator is Important

There are many pressures upon the aquatic environment resulting from population, industry, agriculture, forestry, mining and other human activity. These cause environmental impacts, which in turn determine the quality of any particular part of the aquatic environment.

In 1996, aesthetic impacts from sewage and non-sewage related litter were the primary reason why coastal waters were classified by SEPA as polluted affecting 21 km of coastline in Scotland. Failure of bacteriological standards, primarily due to discharges of sewage, was the second most significant reason for stretches of coast being classified as *fair/poor* or *seriously polluted.* Biological impacts of sewage and fish farm discharges, chemical impacts of urban drainage, contaminated land and industrial effluents, all resulted in short stretches of coastline being classified as polluted.

The Urban Waste Water Treatment Directive sets out timetables for the implementation of appropriate treatment for sewage discharges, which, for example, would require secondary treatment for all sizeable communities unless the discharge is to highly dispersant receiving waters. The directive also specifies quite demanding regulation in terms of sampling and analysis. In Angus, the directive has resulted in the provision of a new Wastewater Treatment Plant at Hatton, by Arbroath, which deals with sewage from Dundee, Carnoustie, and Arbroath, and also the provision of a plant at Montrose.



Classification: A = Excellent – Approximately 35 km
B = Good – Approximately 7 km
C = Unsatisfactory – Approximately 2 km
D = Seriously Polluted – 0 km

Legislative/National Relevance:

- The Urban Waste Water Treatment Directive (91/271/EEC) amended by Commission Directive 98/15/EC of 27 February 1998.
- Water Framework Directive (2000/60/EEC)
- The Water Environment and Water Services (Scotland) Act 2003

29. NUMBER OF PROPERTIES AFFECTED BY FLOOD INCIDENTS.

Why this Indicator is Important

Since the mid 1980s Scotland has seen an increase in the number of floods and high flows on many large rivers. Similar "flood rich" periods have occurred in the past, but these floods and high flows could occur increasingly in the warmer and wetter Scotland predicted by climate scientists. Current predictions of climate change suggest that over the present century Scotland will become warmer and wetter, sea level will rise and the number of storms around the coast will increase. As a result, the threat of flooding both inland and around the coast will increase damaging Scotland's economy and society. Transport links, housing, the public water supply and commercial properties are especially vulnerable to such an increase in flooding. Although landowners are primarily responsible for flood protection, local and central government also have a role in reducing the adverse impact of floods.

The Scottish Executive predicts (in Climate Change: Flooding Occurrences Review 2001) that in Angus:

Angus Area (km^2)	**Total No. of Properties**	**No. of Properties at Risk**		**Total No. of Properties at Risk**
		Inland Floodplain	**Coastal (<5m OD)**	
2,184	49,828	1,750	6,639	8,389

Legislative/National Relevance:

- Flood Prevention (Scotland) Act 1961
- Flood Prevention and Land Drainage (Scotland) Act 1997
- Environment Act 1995
- National Planning Policy Guidance (NPPG 7)

SECTION SEVEN: POLLUTION

30. CONFORMITY WITH WASTEWATER TREATMENT PLANT STANDARDS

Wastewater

The Angus Area has many Wastewater Treatment Works operated by Scottish Water, mostly situated at the towns and hamlets located throughout the Area and range from major works at Montrose, Forfar, Brechin, Edzell and Letham to small "Public Septic Tanks" at very rural hamlets of no more than 6 properties.

The exception being Arbroath and Carnoustie, where the wastewater is pumped to the PPP plant at Hatton. This is run by Catchment (Tay) Ltd via a 30 year Concession, and also takes wastewater from Dundee. Scottish Water pay based on volumes and sludge treated.

Summary of Performance of Wastewater Treatment Works
(Note these figures are for the full North East Area)

Quality & Environment	**Apr-03**	**May-03**	**Jun-03**	**Jul-03**	**Aug-03**	**Sep-03**	**Oct-03**	**Nov-03**	**Dec-03**
Number of bathing water overall failures primarily as a result of our discharges	0	0	0	0	0	0	0	0	0
Number of non-compliant waste water assets (SW)	7	9	8	9	15	13	15	14	14
Number of non-compliant waste water assets (PFI)	1	0	0	0	0	1	0	0	1
Number of enforcement orders at waste water assets	0	1	0	0	0	1	1	1	1
Number of formal samples at waste water assets	0	1	0	0	0	4	0	0	0
Number of successful prosecutions under COPA etc (Scottish Water)	0	1	0	0	0	0	0	0	2
Number of Properties on Sewer Flooding register				125	129	130	130	131	131

Targets

Number of bathing water overall failures primarily as a result of our discharges	0
Number of non-compliant waste water assets (SW)	6
Number of non-compliant waste water assets (PFI)	0
Number of enforcement orders at waste water assets	0
Number of formal samples at waste water assets	0
Number of successful prosecutions under COPA etc (Scottish Water)	0
Number of Properties on Sewer Flooding register	90

31. TOTAL AMOUNT OF 'POTENTIALLY' CONTAMINATED LAND (HECTARES)

Why this Indicator is Important

Contaminated land is defined as being any land which appears to the local authority in whose area it is situated to be in such a condition, by reason of substances in, on or under the land, that:

(a) significant harm is being caused or there is significant possibility of such harm being caused; or

(b) pollution of controlled waters is being, or is likely to be caused.

In July 2000 a new statutory regime for the identification and remediation of contaminated land came into force. Part IIA of the Environmental Protection Act 1990 was inserted by section 57 of the Environment Act 1995. Local authorities are required to draft a strategy to show how they will deal with contaminated land within their area. This document outlines the actions proposed by Angus Council.

Contaminated land is being dealt with through the inspection (desktop) of the area in a 5 year programme due to be completed some time in 2005. This will result in a list of sites that will be prioritised for further investigation (onsite).

SECTION EIGHT: PUBLIC PERCEPTION

32. PUBLIC CONCERN ABOUT NOISE.

Why this indicator is important

Noise can have an adverse impact on peoples' quality of life. Excessive noise can cause annoyance and stress and may disturb sleep. Public concern about noise is a national indicator for quality of life and it is suggested that this could be compiled for complaints. However, this has its limitations, as complaints are mostly limited to things that people feel something can be done about it. Surveys done in England suggest that people annoyed by transport noise outnumber those annoyed by neighbours by a factor of twenty, yet complaints are almost entirely about neighbour noise. Factors other than noise levels are also likely to affect the numbers of complaints, For example, the promotion of 'complaint' hotlines or persistent callers making several complaints about single incidents. It is recommended therefore, that levels of complaints should be backed up with local surveys asking respondents their level of concern with different categories of noise in their area.

The Civic Government (Scotland) Act 1982 empowers uniformed police officers to request the noise level from, for example, sound equipment to be reduced. If the request is ignored then the police may confiscate the offending equipment as evidence for a prosecution.

The Act covers annoyance caused by singing, playing musical instruments, television, and radio noise and also empowers uniformed police officers to deal with dangerous and annoying creatures where this affects people in a public place. Annoyance includes noise and the provisions can be used in relation to barking dogs. If the annoyance is associated with a residence, however, the complainant has to apply to the District Court for a Court Order (under a different subsection of the same section of the Act).

Total complaints regarding noise in Angus in 2003 were 211. This is broken down by area as follows:

Area	No. of Noise Complaints
Arbroath Office (dealing with complaints from Arbroath/Carnoustie/Monifieth and associated landward area)	68
Forfar (dealing with complaints from Forfar/Kirriemuir/Glens and associated landward area)	64
Montrose (dealing with complaints from Montrose/Brechin and associated landward area)	79
TOTAL	**211**

Total noise complaints for the previous three years are as follows:

- 2002 - 251
- 2001 – 310
- 2000 – 251

(No breakdown of these figures is available)

Noise complaints by type in 2003 is as follows:

TYPE OF COMPLAINT	NUMBER OF COMPLAINTS RECEIVED
Agriculture (Not bird scarers)	1
Alarms (Intruder)	2
Alarms (Car)	1
Amplified Music	35
Audible Bird Scarers	1
Commercial Premises (Not Licensed)	5
Construction Noise	8
DIY	2
Dogs (LA)	39
Dogs (Not LA)	7
Domestic (Not LA)	1
Enquiry	25
Industrial	58
Miscellaneous	8
Outdoor Event	5
Traffic	6
TOTAL	**211**

Legislative/National Relevance:

- The Civic Government (Scotland) Act 1982
- Environment Protection Act 1990

33. SATISFACTION WITH THE QUALITY OF SURROUNDINGS.

Why this Indicator is Important

Good quality surroundings are fundamental to a good quality of life. Noise, litter, graffiti, vandalism and dog fouling may be symptoms of wider problems, but can themselves promote a spiral of degradation with a high rate of crime reinforcing social exclusion and decline.

The following table has been extracted from Angus Citizen Panel 4th Survey Results (2003).

How common would you say the following things are in this neighbourhood?	Very Common	Fairly Common	Not Very Common	Not at all Common	Don't Know	Not Answered
Dog Fouling	24%	33%	26%	12%	0.9%	3%
Fire Raising	0.8%	2%	18%	69%	4%	6%
Groups of young people hanging around on the street	19%	27%	25%	25%	1%	3%
People who have been drinking or using drugs	10%	17%	27%	35%	6%	5%
Vandalism, graffiti or other deliberate damage to property	7%	17%	31%	38%	2%	5%
Rubbish or litter lying around	22%	31%	25%	19%	0.47%	3%
Noisy neighbours or loud parties	6%	6%	35%	48%	1%	4%

Please note: Figures do not add up to 100% due to rounding.

The survey also asked the Citizen's Panel "Overall, how involved do you feel in the local community?" 635 respondents replied:

- A great deal 7%
- A fair amount 33%
- Not very much 49%
- Not at all 9%
- Don't know 1%
- Not answered 2%

Legislative/National Relevance:

- Local Government (Scotland) Act 2003

Appendix I

LIST OF INFORMATION SOURCES

No.	Indicator	Source
1.	Total amount of vacant and derelict land (hectares).	Angus Council, Planning and Transport (SVDLS)
2.	New development split between Greenfield and Brownfield sites (Housing and Industry)	Angus Council, Planning and Transport
3.	Area of protected/key habitats, e.g. Sites of Special Scientific Interest, etc (hectares).	Angus Council, Planning and Transport
4.	Area designated as Country Parks (hectares).	Angus Council, Leisure Services
5.	Area (in hectares) of managed greenspace for leisure.	Angus Council, Leisure Services
6.	Rivers of good or fair quality.	Scottish Environment Protection Agency
7.	Visitor numbers to key/selected sites.	Angus and Dundee Tourist Board
8.	Number of reported vandalism incidents.	Police/Angus Council, Chief Executive's Department
9.	Area managed under environmental schemes and organic farming.	Scottish Executive Environment and Rural Affairs Department
10.	Area covered by forest and by forest type.	Forestry Commission
11.	Scheduled Ancient Monuments in Angus.	Historic Scotland/Angus Council, Planning and Transport
12.	Listed Buildings in Angus.	Historic Scotland/Angus Council, Planning and Transport
13.	Percentage of total household waste recycled.	Angus Council, Environment and Consumer Protection
14.	Household waste generated per year (metric tonnes).	Angus Council, Environment and Consumer Protection
15.	Amount of construction and demolition waste going to landfill.	Angus Council, Environment and Consumer Protection
16.	Energy use per household.	Angus Council, Housing – HECA Report 2001
17.	Amount of renewable energy generated.	Angus Council, Housing – HECA Report 2001
18.	Overall traffic volumes.	Angus Council, Roads
19.	Mode of Travel to Work in Angus	Census 2001
20.	Percentage of Angus households within 6 minutes walk of a bus service.	Angus Council, Planning and Transport
21.	How children travel to school.	Angus Council, Education
22.	Dedicated Cycle Lanes in Angus.	Angus Council, Roads
23.	Lengths of paths.	Angus Council, Planning and Transport
24.	Air quality monitoring.	Angus Council, Environment and Consumer Protection
25.	Water Supply	Scottish Water
26.	Drinking Water.	Scottish Water
27.	Bathing Water Quality.	Scottish Environment Protection Agency
28.	Coastal Water Quality.	Scottish Environment Protection Agency

No.	Indicator	Source
29.	Number of properties affected by flood incidents.	Scottish Executive
30.	Percentage conformity with wastewater treatment plant standards.	Scottish Water
31.	Total amount of 'potentially' contaminated land (hectares).	Angus Council, Environment and Consumer Protection
32.	Public concern about noise.	Angus Council, Environment and Consumer Protection
33.	Satisfaction with the quality of surroundings.	Angus Council, Chief Executive's Department

Appendix II

GLOSSARY

Ancient Monuments
Categories of Monument
The categories under which monuments are grouped are as in the list above. Note that a single monument will appear more than once in this list if it has features which relate to different categories, e.g. a chambered cairn with recent shielings will appear under 'prehistoric ritual and funerary' and also under 'secular'. The name of the monument will often, but not invariably, reflect such multiple attributions.

Prehistoric Ritual and Funerary includes cairns, chambered cairns, long cairns, ring cairns, barrows, chambered barrows, long barrows, mounds, ring enclosures, henges, stone circles and rows, standing stones and cup-marked stones.

Prehistoric Domestic and Defensive includes forts, duns, brochs, galleried dwellings, souterrains, houses, hut circles, homesteads, settlements, enclosures, palisaded enclosures, crannogs, field systems, cairnfields and cultivation terraces.

Roman includes military works, civil settlements and roads.

Crosses and Carved Stones includes crosses, cross slabs, market crosses and cross-incised stones, as well as Pictish symbol, stones, inscribed stones, tombstones and some miscellaneous sculptured stones. The category does not include cup-marked stones (Prehistoric Ritual and Funerary) or milestones (Industrial).

Ecclesiastical includes churches and chapels (sometimes prefixed 'old' or 'former' if there is likely to be confusion with more recent sites nearby), monasteries, nunneries, priories, burial grounds and burial enclosures. Note that churches in ecclesiastical use are excluded from the scope of the Schedule.

Secular includes non-prehistoric works which are basically military or defensive such as castles, forts and mottes; works which are basically domestic such as houses and settlements; earthworks, homestead moats, towers and bastles which fall between the military and the domestic; and a range of other works such as barracks, artillery mounds, roads, bridges, tollbooths, dovecotes, Martello towers, prisons, hospitals and sundials.

Industrial includes canals and associated structures such as graving docks, tunnels, bridges and signal lamps; mills of various kinds, pottery kilns, engine houses, engines and railway stations. It also includes some iron bridges. This category includes monuments particularly characteristic of the Industrial Revolution, but also earlier sites representing the processing and manufacturing side of Medieval life, such as salt pans and early mines, as well as some important industrial monuments of more recent date, for example a whaling station and gasworks.
(Source: Historic Scotland 1999)

LISTED BUILDINGS
Definition of Categories:

Category A – Buildings of national or international importance, either architectural or historic, or fine little-altered examples of some particular period, style or building type.

Category B – Buildings of regional or more than local importance, or major examples of some particular period, style or building type which may have been altered.

Category C(S) – Buildings of local importance, lesser examples of any period, style, or building type, as originally constructed or altered; and simple, traditional buildings which group well with others in categories A and B or are part of a planned group such as an estate or an industrial complex. The C(S) category

includes the best of the buildings previously not statutorily listed but given a C category (this latter category is being phased out in the course of the resurvey). In addition some buildings are designated "B" for group": this category is also being phased out and those buildings (if still considered to merit inclusion in the lists) are being assigned to one of the three categories.

DETR: Department of the Environment, Transport and Regions.

NHER: National Home Energy Rating

'You cannot change the amount of matter in the universe, you can only change its state'

Sir Isaac Newton - Entropy Law

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