

SB09

LOCAL DEVELOPMENT PLAN

STRATEGIC ENVIRONMENTAL ASSESSMENT SUSTAINABILITY APPRAISAL PART 1

Document 1 - The Scoping Report

CYNLLUN DATBLYGU LLEOL

ASESIAD AMGYLCHEDDOL STRATEGOL/ GWERTHUSIAD CYNALADWYEDD RHAN 1

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THE SEA/SA PART 1 DOCUMENTATION

I

Part 1 of the Strategic Environmental Assessment/Sustainability Appraisal of the emerging Caerphilly Local Development Plan is comprised of 3 documents, namely:

Document 1 :

The Scoping Report (This Document)

The Scoping Report provides the background to the SEA/SA. It contains a review of the current state of the environment of the County Borough and sets out the sustainability objectives that form the basis of the assessment tests used to assess the LDP throughout its production.

Document 2 :

The Review of Relevant Plans, Policies and Programmes

In order to meet the procedural requirements of the SEA Directive, Part 1 of the SEA/SA must include a

review of the relevant plans policies and programmes that might have implications for the production and implementation of the LDP. All relevant plans, policies and programmes need to be reviewed, from European level document down to local level documents and their implications for the LDP identified.

Document 3:

The Assessment of the Preferred and Alternative Strategies

The first part of the assessment process is the formal assessment of the preferred and alternative strategies at the pre deposit consultation stage of the LDP. This document outlines how the strategies will be tested and then provides details of the assessments and analyses that will modify the LDP. Details of mitigation and changes to the Preferred Strategy will also be included.

II

Together these documents constitute the first part of the SEA/SA report, and will be the subject of consultation in conjunction with the pre-deposit consultation on the LDP Preferred and Alternative Strategies. These documents have influenced the content and nature of the Preferred Strategy for the LDP. Chapter 9 of the Caerphilly Local Development Plan: Draft Preferred Strategy details how the SEA/SA has influenced and changed the Preferred Strategy.

1 INTRODUCTION

1.1

This document is the Scoping Report for the Strategic Environmental Assessment of the emerging Caerphilly Local Development Plan. The Strategic Environmental Assessment (SEA) will be integrated into the Sustainability Appraisal (SA) for the same development plan, and will be used to assess the effects of the policies and land allocations of the Local Development Plan. This document describes how this is to be undertaken. In addition, it is also necessary to undertake an Appropriate Assessment of the Plan as it affects Natura 2000 sites both within, and in reasonable proximity to, the county borough.

1.2

This scoping report sets out the baseline data and characterisation of the area, with the purpose of identifying the key environmental and subsequent

sustainability issues within the county borough. This scoping report is the first stage in the development of the integrated SEA and SA process and has the purpose of ensuring that both statutory and other consultation bodies and interested parties have an early input into the process. Getting it right at this stage should allow for a consistent appraisal and relevant ongoing monitoring. It should also help in the smooth flowing of the process as scrutinised material may not need to be changed as the LDP proceeds through to adoption as the Council's Land Use Development Plan.

1.3

The initial sections of this draft report provides the legislative background to SEA, the contents of such an assessment, the stages in the process and how it is intended to undertake this for the Caerphilly County Borough

Local Development Plan (LDP) with specific reference as to how it will tie in with the Sustainability Appraisal (SA) of the same LDP.

1.4

As an SA differs from an SEA the proposals to link them are given in the section covering methodology and this should be considered in terms of the County boroughs principles of sustainability. Consultation proposals in terms of who and when are given in the Consultation section and aim to provide an open process.

1.5

The backbone of the report is the series of indicators set out, broadly, under the topic requirements of the SEA Regulations under the headings of Population & Human Health, Air Pollution, Cultural Heritage & Landscape, Geology & Soils, Biodiversity, Material Assets and Climatic Factors.

These topics help retain clarity as to how the SEA fits into the SA. Within each of these topic headings some background to the issues, as far as they affect Caerphilly, is given and the main issues that could, in full or part, be addressed as part of the plan are identified. Potential indicators are proposed that can be monitored to indicate the broad direction of change required and whether this is occurring. This was undertaken following a review of existing plans, strategies and programmes, baseline information analysis and a series of meetings with officers of the Council, external organisations and the Sustainability Group.

1.6

The report also outlines stages regarding monitoring and future stages. As this is a scoping document views are sought on process and content.

2 BACKGROUND

2.1

The European Union passed a Directive in 2001 (2001/42/EC) on the assessment of the effects of certain plans and programmes on the environment. This Directive commonly known as the Strategic Environmental Assessment Directive (SEA Directive) has been interpreted by the UK and Welsh Governments to meet national needs. In Wales the Assembly Government's publication 'The Environmental Assessment of Plans and Programmes (Wales) Regulations 2004' (The Regulations) sets out the Welsh perspective. As a further aid to interpreting these Regulations the Welsh Assembly Government has also published 'Local Development Manual (June 2006)' as an aid to clarification and for the production of land use plans by Local Authorities.

2.2

Environmentalists have argued for some time that the environment has played too small a part in considerations regarding development and other plans. It was held that whilst both economic and social issues could be reversible, those decisions made affecting the environment were often irreversible. As an aid to addressing this concern the aim of the SEA process is to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development. The SEA Directive goes as far as indicating the issues that should be included within any appraisal:

1. **Landscape.**
2. **Flora and fauna.**
3. **Biodiversity.**
4. **Climate change.**
5. **Human health.**
6. **Water.**
7. **Soil.**
8. **Population.**
9. **Air.**
10. **Cultural heritage**
11. **Material Assets**

2.3

All of these issues should be included within any plan's assessment. These are not intended to be exclusive and flexibility is allowed with regard to local circumstance, however the interconnectivity between the topics is a requirement. For the purposes of this scoping report four of the topics listed above, Biodiversity and Flora and Fauna and Population and Human Health have been combined into two topics.

2.4

There are other environmental legal obligations that need to be met as part of the plan preparation process and the development of sites, e.g. the Water Framework Directive, Birds Directive 79/409/EEC and the Habitats Directive 92/43/EEC. Details of how these apply to the County borough are given in paragraph B2 of the Biodiversity section.

2.5

Guidance also sets out the screening criteria in order to identify which plans and processes require strategic environmental assessment. The Directive makes it mandatory for land use plans, which set the framework for future development consent, to be subject to SEA. As a result of both the content of the LDP and the fact that it has commenced after the 20th July 2004 an SEA is required for

the Caerphilly LDP. It is not proposed to elaborate on this issue any further.

2.6

Caerphilly County Borough Council is the 'Responsible Authority' for the preparation of the SEA and the Local Development Plan. The Directive makes it mandatory for CCBC to consult with the Environment Agency (Wales) (EA), the Countryside Council for Wales (CCW) and Cadw. Further to this recommendations are made to involve as many appropriate organisations and the public in the early stages of the development of the SEA. These consultation procedures are set out in Section 6 and are tied into the Councils Delivery Agreement with the Welsh Assembly Government. A copy of the Agreed Delivery Agreement can be viewed at the Council's website at www.caerphilly.gov.uk.

2.7

The Planning and Compulsory Purchase Act 2004 also makes a Sustainability Appraisal (SA) mandatory for local development plans. A Sustainability Appraisal contains social and economic considerations in addition to the environmental ones. The processes to be followed in the preparation of an SA are not prescribed in the same way as for an SEA. It is clear, however, that there are advantages to combining the two documents. The Welsh Assembly Government advocates this approach although, to date, no firm guidance is given as to how it should be done. It is considered that an integration of these two appraisals is appropriate, as it is more effective and comprehensive whilst meeting the specific and prescribed requirements of an SEA. For the SEA there is considerable baseline environmental data. However an appraisal

is required to be more than an environmental position statement. For both appraisals the predictive affect of the land use plan is a necessity.

2.8

The SEA regulations prescribe that an Environmental Report is prepared and this report should identify, describe and evaluate the likely significant affects on the environment of

- a) Implementing the plan or programme,
- b) Reasonable alternatives taking into account the objectives and the geographical scope of the plan or programme.

2.9

The level of detail required is not prescribed. However guidance indicates additional primary research is not necessary and only a limited number of indicators should be used to monitor the plan.

3 STAGES IN THE SEA PROCESS

3.1

Environmental assessment is already an established practice for many types of plan and programme but specific requirements and approaches vary. The SEA Directive, as implemented by The Environmental Assessment of Plans and Programmes (Wales) Regulations 2004, however, brings a new emphasis in the following areas:

- Collecting and presenting information on the environmental baseline and current problems, and their likely future evolution,
- Predicting significant environmental affects of the plan, including those of strategic alternatives,
- Addressing any adverse environmental affects through potential mitigation measures,

- Consulting the public and statutory authorities with environmental responsibilities as part of the assessment process, and
- Monitoring the environmental affects of the plan during its implementation.

3.2

There are essentially 5 discreet stages to the development of a Strategic Environmental Assessment. These are shown in table 1 on the following page.

THE SEA STEPS- Sea tasks and the relationship between them (uk-wide guidance)

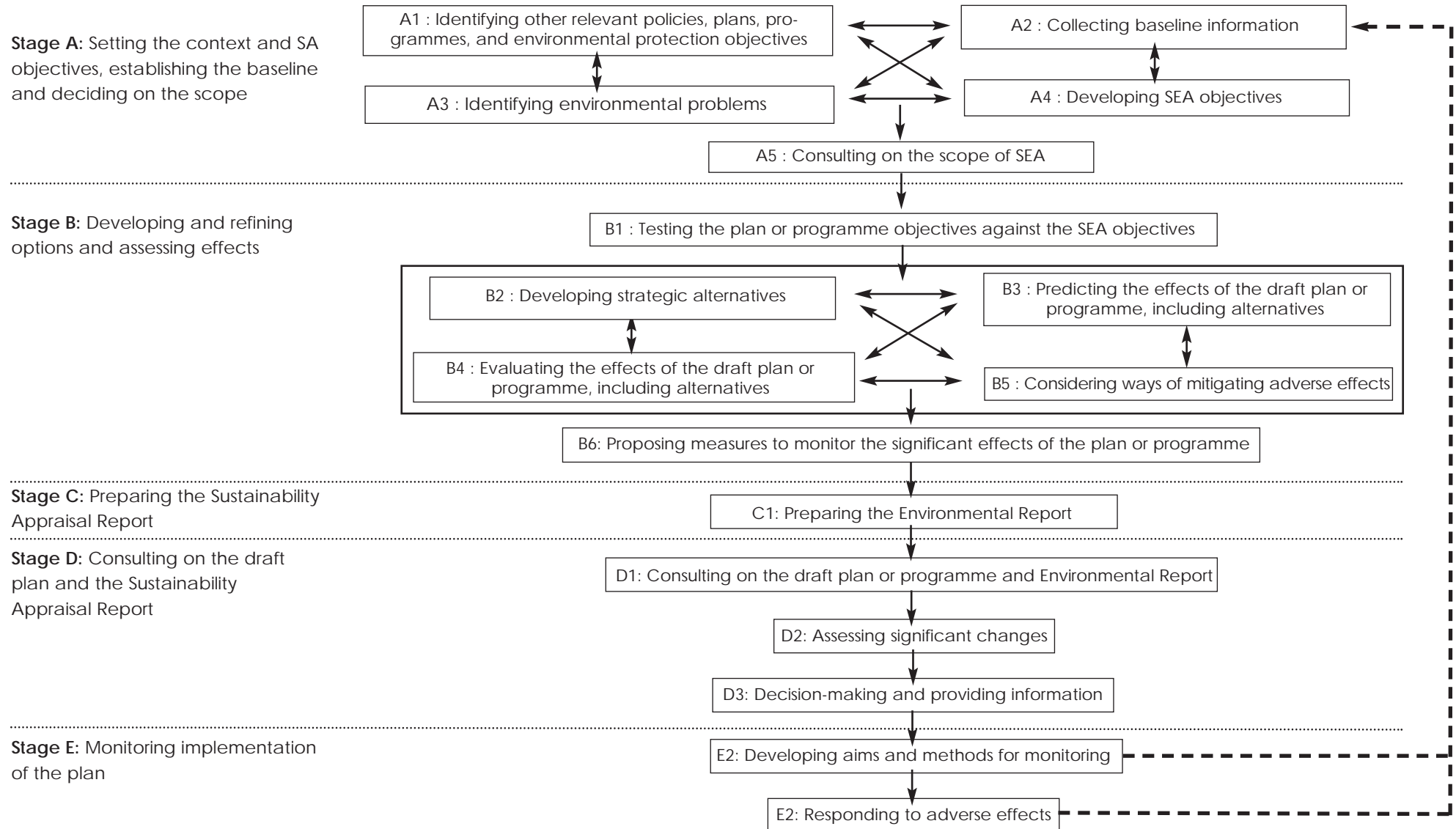


Figure 1 - SEA Process
 (Source:- A Practical Guide to the Strategic Environmental Assessment Directive - ODPM)

4 METHODOLOGY

4.1

This section sets out the proposed methodology for the undertaking of the Strategic Environmental Assessment and Sustainable Appraisal of the LDP. Earlier sections set out broad context for each, i.e. the SEA concentrating on environmental matters whilst the SA includes social and economic considerations as well as the environmental ones. In order to meet the requirements of the SEA Regulations, the SEA/SA must clearly identify where SEA issues (environmental) are being addressed, as well as identifying where SA issues (Social, Economic and Environmental) are being addressed. It should be noted that these happen concurrently and to clearly illustrate this Section 6, which lists the Issues, Objectives and Indicators proposed also identifies which objectives relate to environmental, social or economic considerations.

4.2.1

In 2000, The Local Government Act placed a new duty on local authorities to prepare a community strategy in conjunction with all partner organisations in the area. The Community Strategy is required to set a long-term vision for the area and put in place arrangements to promote the social, economic and environmental well being of local communities. The Community Strategy is designed to be the key document setting the agenda for the future direction and development of the area. It is, therefore, the effective "vision for sustainable development" in Caerphilly county borough and sets the framework for development within the area for the next 10 - 15 years.

4.3

The Caerphilly Community Strategy was launched in November 2004. It was subject to an independent sus-

tainability appraisal by Forum for the Future, the UK's leading sustainable development charity, to assess how sustainable development is considered and integrated into the document. This assessment confirmed that the Strategy "clearly demonstrated its potential to make a significant positive contribution to the sustainable development of the area".

4.4

In addition to creating partnerships the Strategy aims to ensure that organisations and communities work towards the same objectives and that efforts are targeted at areas of need and opportunity. The Caerphilly Community Strategy is based on four themes, the Living Environment, Regeneration, Education for Life and Health, Social Care and Well-Being. The Community Strategy is underwritten by the principles of sustainable development and the sustain-

ability objectives of the Council's Strategy for Sustainable Development (2002). The Scoping Report identifies 25 Sustainability Objectives derived from the Community Plan and The Strategy for Sustainable Development, the methodology for which is outlined in Chapter 5. The Sustainability Objectives are divided by Community Plan Theme.

4.5

It is not surprising that the majority of objectives relate to the Living Environment and Regeneration themes, as the SEA/SA is being undertaken on a land use plan. However, The identified indicators for monitoring the LDP should be able to be used for a wide range of other plans and strategies thus reducing duplication and allowing consistency of approach

4.6

Following this scoping exercise the

first stage of the sustainability appraisal of the LDP will be an assessment of the emerging LDP Strategy and reasonable alternative strategy options. A series of Assessment Tests will be derived from the Sustainability Objectives that will be appropriate for considering strategic issues and impacts. It should be noted that the Assessment Tests for the Strategies will be different from those used to assess the detailed policies and allocations in the LDP due to the fact that the Strategies will have wide ranging effects which require higher level Tests to assess, whilst detailed policies will require much more focussed Assessment Tests. In undertaking the

assessment of the strategies the Scoping Report will be used as a working tool to demonstrate how each of the options performs in terms of sustainability. The results of this appraisal will influence the content of the LDP Strategy as well as informing the decision making process. Article 5 of the SEA Directive requires the relative environmental performance of a set of reasonable alternatives within the LDP to be considered. This process will be undertaken through the use of matrices comparing the Strategy options using symbols to indicate the effects of the strategy. The assessments will be mindful of national and regional policy and the ability of the

LDP to influence these. In some instances other bodies set allocations and targets. These will be considered as part of the process, although the ability for the LDP process to change them maybe limited.

4.7

The next stage in the appraisal process will be the assessment of the detailed policies of the LDP. This appraisal stage will again use a matrix-based approach which can compare the policies and proposals to the sustainability objectives in order to predict the potential impact on sustainable development. The sustainability objectives are given in the next section.

4.8

The methodology to carry out this part of the SEA/SA will follow the format detailed in the ODPM Guidance (2004) on Sustainability Appraisal, as summarised in table 2 below.

4.9

A number of interrogation question (Assessment Tests) will be determined to assess the plan, these being largely derived from the proposed indicators, as shown on the tables within each topic in section 6 of this report. Some flexibility is likely to be required at this stage in terms of both the nature of interrogation and weighting. Similar considerations will apply

Figure 2a - The Sustainability Appraisal Format (for Strategic Options)

Assessment Test	Option A	Option B	Option C	Option D
1	+	X	○	●
2	+	○	+	+
3	+	X	X	○

Figure 2b - The Sustainability Appraisal Format (for detailed Policies and Proposals)

Sustainability Objective and Indicator	Predicted effects		Justification for Assessment
	Nature of effect	Assessment of effect - in short, medium and long term	
1			
.			
.			
25			

to the targets, which when worked up will be included in the Environment Report, as some of these will be specific whilst others will be broader and trend based but again based on the identified indicators. These will be developed, refined and applied by a number of officers including the Chair of the Sustainability Group and the Council's Sustainable Development Co-Ordinator. When assessing proposals and allocations the officer responsible for the policy or proposal will be included in the assessment process. It is likely that outcomes will be summarised by symbols and possibly be colour coded with brief written observations also recorded. These will be reported in the Environment Report.

4.10

By examining all the outcomes from these tables the likely secondary, cumulative and synergistic effects may also be assessed. By virtue of the

diversity of the topics and their inter-dependence the predictive outcomes of actions will, to a greater or lesser extent, be subjective. The process does, never-the-less, ensure that such outcomes are considered. It is not the role of the SA to carryout a detailed analysis for each of the proposed allocations but the method by which the allocations have been chosen provides transparency into the selection process in order to seek the development of the most sustainable proposals.

4.11

The Regulations require that a report constituting the first part of the SEA be produced as part of the development of the LDP strategy options and be subject of consultation with the Pre-Deposit LDP. The SEA Regulations require that the Part 1 of the SEA include:-

- A description of the sustainability baseline and how the development plan can have an impact on this.
- The identification of other plans, programmes and strategies that have relevance to the SA.
- An assessment of initial proposals considered by the LDP.
- An assessment of the LDP strategy and reasonable alternatives against the sustainability objectives.

4.12

The Regulations then require that an environmental Report be produced that assesses the impacts of the detailed LDP against the Sustainability Objectives. The Regulations require that the Part 2 Environmental

Report include:

- Identification of any significant impacts the LDP may have on sustainability and mitigation that

seeks to offset, as fully as possible, any significant adverse effects

- Proposals for the monitoring of the SA

4.13

The Part 1 report will accompany the Pre-deposit LDP to public consultation, whilst the Part 2 Environmental Report will accompany the Deposit LDP to consultation. In both instances the public can comment on the process, conclusions and implications for the LDP.

4.14

Article 10 of the SEA Directive requires that a Monitoring Report be undertaken to assess the ongoing significant effects of the LDP. Further details of this are given in section 7.

4.15

After the adoption of the LDP Article 9 of the Directive prescribes that an SEA Statement is prepared summarising how environmental consider-

ations have been integrated into the plan including the rational for choosing the plan in light of any alternatives.

4.16

Officers from the Strategic and Development Planning Section of Caerphilly County Borough Council are producing the LDP. An Officer from the Council's Countryside and Landscape Services Section is undertaking the SEA/SA of the plan. This means that although the reports are produced simultaneously the sustainability assessment maintains a degree of independence from policy formation and site allocation.

4.17

The Natura 2000 network, provided for in Article 3 of the Habitats Directive, are the main sites of exceptional importance in respect of rare, endangered or vulnerable natural habitats and species within the European Community and consist

of Special Areas of Conservation (SAC's), Special Protection Areas (SPA's) and Offshore Marine Sites (OMS). In an effort to ensure such sites are fully considered as part of the Plan making process the Habitat Regulations require that an Appropriate Assessment (AA) is undertaken for those plans that are likely to have a significant effect on these sites.

4.18

It is recommended in 'Planning for the Protection of European Sites: Appropriate Assessment' 2006, Dept for Communities and Local Government that any AA should be undertaken in conjunction with the Sustainability Appraisal so they can inform each other.

4.19

As part of this process it will be necessary to identify any sites that maybe effected by proposals, including those beyond the county boundary. The characteristics of these sites and

their conservation objectives must be taken into account, as must the effects of other relevant plans and projects on these sites.

4.20

Following the evidence gathering, later stages of the AA require options and effects to be assessed and mitigation methods and alternatives analysed. It is the intention to include the AA within the SEA/SA document and consult on the AA findings and publish at the same stages as for the SEA/SA.

4.21

Caerphilly has one European designated site within the County Borough, i.e. Aberbargoed Grasslands. This site is an area of grasslands of importance in particular for the Molinea Meadows and Marsh Fritillary butterfly. The area is surrounded by urban development and is under threat from a lack of management. CCBC have recently taken a long term

lease on this site and with the assistance of grant aid employed a ranger and farm hand to help manage the site. This is the only European designated site within the County borough and is the site most likely to be significantly effected by the land use plan. Effects may arise from development adjacent to the site resulting in additional use, and in particular anti social use, on the site. Potential pollution from the adjacent industrial estate and increased road use are also potentially a threat but it is the effects of global warming that potentially pose the largest problem as the grasslands are dependent on being wet.

4.22

CCW have identified three other sites, which lie outside of the county borough, which are also of importance and at risk of potential impact from the LDP. First of these sites is the Bristol Channel Marine SPA and pos-

sible SAC, which lies to the south of the county borough. It is also a RAMSAR site. This site is important because the county borough's water courses discharge into this body of water. The area is particularly important for a variety of birds and migratory fish and contains important habitats such as sand and mudflats, shingle and rocky shoreline, reefs and saltmarsh. As such issues relating to water, erosion and pollution are important. The second site is The Cardiff Beech Woods to the south west of the County borough, in the Cardiff and Rhondda Cynon Taff areas. This site is important because they are of a unique gene pool Tilio - Acerion and are at the western limit of their range. The main threats to these are seen to come from increased traffic pollution, increased use and possibly challenges from destructive wildlife. As is the case for the majority of natural sites global environmental

changes pose a potentially massive threat. The third site lies at the opposite end of the County borough, to the north east, namely Cwm Clydach Woodlands. This site is an upland area of beech forest of the Asperulo - Fagetum species that is at its north western range. The prevailing south westerly winds make this area potentially vulnerable to air borne pollution. These will be investigated in more detail at the options stage of the plan preparation process.

5 INVOLVEMENT AND CONSULTATION

5.1

As part of the SEA directive CCBC are required to consult with the statutory consultation bodies for SEA, namely Countryside Council for Wales (CCW), Cadw and the Environment Agency (EA). Good practice guidance recommends that further consultation be undertaken with interested parties and the public throughout the whole process of plan and appraisal preparation, thus allowing transparency and widespread opportunity for involvement. As outlined below, the views of partners have been sought from the outset of the process in order to be as thorough and inclusive as possible.

5.2

With the integrated SEA and SA approach being adopted by Caerphilly there are other bodies that will have a direct impact on the plan that may not necessarily be consid-

ered as part of the SEA regulations. In order to address this and secure a wide variety of views, a Steering Group, hereafter referred to as the Sustainability Group, has been established to assist in the development and guidance of the preparation of the SEA/SA. The three statutory consultees all bring relevant experience and fields on knowledge to the SEA/SA process, i.e. the CCW have expertise within the fields of biodiversity and landscape as well as access to the countryside, coast and urban green space; Cadw have expertise in cultural heritage including archaeology and architecture; and the EA's expertise lies in air quality, climatic factors, soil and water. The early involvement of these bodies allowed the identification of key issues and the most appropriate organisations needed to create the Steering Group. The SEA Directive

requires the involvement of the statutory bodies, which is particularly pertinent as these organisations are regulatory bodies and hold much of the information required as part of the development of the appraisals

5.3

The Sustainability Group is comprised of 31 members, inclusive of the chair and vice-chair of the Group (A full membership list is included at Appendix 2). The members of the group agreed the Terms of Reference for the group on 8 March 2006 (a copy of the Terms of Reference for the group is included as Appendix 3). The minutes of the Sustainability Groups meetings are available on the Councils web site. External representatives, with specialisms in various fields were asked to become members of the Group. In addition to this a range of Council Officers, with matching or complementary spec-

ialisms to those of the external members, were also invited to become members. Originally the numbers of Council and External representatives were equal. However, at the first of its meetings, the Group agreed the inclusion of additional members from the Council. The involvement and views of the Group have been sought throughout the production of this draft document and have provided invaluable input in to its formulation. The involvement of the Group throughout the entire SEA/SA process is fundamental to the production of a coherent, effective and appropriate tool for assessing the emerging LDP.

5.4

The Directive prescribes where the public should have information made available to them and where they should be formally consulted. Details of this are given in the LDP

Delivery Agreement (DA). A copy of the DA timetable, which shows this information, is included at Appendix 4.

5.5

As part of this scoping exercise views are sought on;

- The proposed methodology of the SEA and any matters that should be included.
- The base line environment and whether the correct issues have been identified.
- Whether this information is accurate and sources of further information. This will include identifying where there is insufficient data to make reasonable conclusions.
- The appropriateness of the sustainability objectives for use in the appraisal.
- Other plans and programmes that have environmental and sustainability objectives that would be of relevance to the LDP.

6 THE BASELINE CHARACTERISATION

6.1

The environmental information specified for inclusion by the SEA Regulations is set out in the following sections. The aim is to identify 'relative aspects of the current state of the environment and the likely evolution there of without implementation of the plan or programme' (Schedule 2 of the Regulations).

6.2

For this application of the SEA to the LDP it is important to be practical on the quantity and detail of the information that should be collected. The balance needs to ensure the level of detail is sufficient to provide an understanding of the existing environment to act as a basis for assessment, without making the task unnecessarily onerous. It is not the aim to provide a fully quantified statement on every issue in the plan area. Further details of the issues can be found in many of the documents identified in

Appendix 1. For the purposes of this scoping report the information gathered has been mainly at the local level as much of this has been interpreted from higher level documents and studies.

6.3

The levels of data and information available varies between topics as does the extent to which it can be made specific to the plan area and landuse planning. The SEA regulations require that only information that can 'reasonably be required' needs to be included in the report. Therefore, no new primary data gathering was carried out for the SEA, instead data was compiled from various existing sources.

6.4

The review takes what are considered to be the main environmental issues within the county borough, gives concise details of what the situation is now and where possible

make predictions about the changes to the environmental baseline in the future. In considering the baseline it should be remembered that the land use planning system cannot influence many of the issues which change the environment in either a beneficial or negative way and is more direct in terms of its influence in some circumstances than in others.

6.5

Each topic covered below provides some background information in terms of the topic area and the main issues affecting the County borough are identified. These issues are summarised in bullet point form. For the Sustainability Appraisal these have then been developed into 25 objectives each of which has a number of draft indicators to be used for monitoring the policies and proposals through the plan period. The objectives themselves are to be used in the assessment of the content of the LDPs

strategic direction, policies and proposals. How these fit in with the Community Strategy is outlined in section 4.2.

6.6

It should be noted that many of the issues raised in the characterisation relate to more than one topic area. If all the issues were reported in all relevant areas it would result in a significant level of duplication and reiteration that could lead to the document becoming unwieldy and difficult to comprehend. More seriously though, it could lead to an issue resulting in Indicators in more than one topic area, which could unbalance the assessment of the plan. Consequently it is has been decided that issues are covered only once, in a specific topic area.

POPULATION AND HUMAN HEALTH

Background

P1

The county borough has a population of around 169,500¹ making it one of the largest Local Authorities in Wales. Caerphilly County Borough Council comprises some 50 distinct towns and villages, many of which are linear settlements located on the valley floor. The largest town is Caerphilly, the 2001 Census showing a population of some 31,000. The other primary towns are Blackwood, Bargoed, Newbridge, Risca and Ystrad Mynach. The population of the county borough are mainly born in Wales (90%) with 17% who can speak, read or write Welsh. The Welsh speakers are spread throughout the county borough. Ethnic minorities make up only 1% of the population.

(¹ 2001 Census)

P2

The overall population has remained fairly stable over the last decade at around 170,00. However there has been some variation within the county borough, most of the area has seen a population decline, particularly in the north, where the upper Rhymney Valley population has fallen by 8% between the 1991 and the 2001 Census. The more populated Caerphilly Basin in the south, however, has seen its population increase by 4% over the same period. In terms of future population levels this will have a very significant effect upon the environment in terms of the needs for new development and additional pressures on infrastructure, services and the environment. Household fission due to divorce and the increasing number of single parent families has led to smaller households. There has been a significant increase in elderly households, reflecting both long-

evity and relative decline in the provision of institutional care. Future population levels in the county borough will strongly influence the total human impact on the environment, because of the need for new development to meet the requirements of residents for housing, infrastructure, and services. The county borough has experienced a longstanding trend of loss of population due to net out-migration, and the aim of the Caerphilly UDP was to seek a position of migration balance by the end of the Plan period, i.e. 2011. In fact this position has been achieved much earlier than expected, and indeed there has recently been net in-migration into the borough. The future population level will depend to a large extent on whether this recent increase through migration continues, or whether the longstanding trends of population loss become re-established.

P3

The structure of the population is shown in Table 3 below. This shows a fairly even distribution between 5 year age bands with a decrease after the age of 60. The structure is similar to that of Wales as a whole. As is the case at the national level the number of children in the county borough has fallen, whilst the number of old people, particularly the very elderly, has risen, 15% of the population being aged 65 and over. It is projected that there will be an increase in the number of older people in the coming decade.

P4

Between 1990 and 2001 the number of live births in the county borough to residents has steadily declined from 2,481 to 1,974 a decrease of 20%. However national projections suggest this downward trend in the birth rate will end. Life expectancy within the county borough is the

Age Group	Male	Female	Persons
0-4	5,600	5,000	10,600
5-9	5,800	5,700	11,500
10-14	6,400	5,800	12,200
15-19	5,400	5,300	10,700
20-24	4,500	4,800	9,300
25-29	5,400	5,500	10,900
30-34	6,100	6,500	12,600
35-39	6,300	6,400	12,700
40-44	5,700	5,800	11,500
45-49	5,300	5,600	10,900
50-54	6,000	6,100	12,100
55-59	5,000	5,100	10,100
60-64	4,200	4,300	8,500
65-69	3,600	4,100	7,700
70-74	3,000	3,500	6,500
75-79	2,300	3,300	5,600
80-84	1,200	2,300	3,500
85-89	500	1,200	1,700
90+	200	700	900
Caerphilly	82,500	87,000	169,500

Figure 3 - Population by Age and Sex (Source:- 2001 Census)

fourth lowest in Wales. It currently stands at 73.7 years for men and 78.7 years for women, both a year less than the Welsh average and approximately 2 years less than the English average which stands at 75.5 for males and 80.3 for females. Premature deaths (deaths under the age of 75) are decreasing within the county borough, however the rate has remained consistently higher than in Wales as a whole.

P5

There are high levels of both limiting long term illness and mental health problems.

P6

With regard to specific causes of death, circulatory disease including heart disease caused over 40% of deaths. Cancers are responsible for one quarter. Whilst death rates through circulatory disease are falling they remain worse than the Welsh average. The cancer situation in

Caerphilly county borough is typical of an economically developed area.

P7

An individual's lifestyle greatly impacts on their health and well being. The county borough has the highest rate of obesity in those persons 18 years and over in Wales.

P8

The most recent Household Survey undertaken indicated that around 80% of the county borough residents report being happy living in their neighbourhoods but this varied between 63% and 91% across all wards. 30% of residents felt crime was a very big problem and 37% felt that anti-social behaviour was a very big problem, however, there is very little relationship between fear of and actual crime. The average reported rate for crimes per thousand population is 96.8 compared with an average for the Gwent Police area of 101.9.

	Caerphilly		Wales	
	Males	Females	Males	Females
Total Economically Active	67	53	68	55
Working Full Time	50	29	47	26
Working Part Time	3	17	3	19
Self Employed	7	2	11	4
Unemployed	5	2	5	2
Full Time Students	2	2	2	3
Total Economically Active	34	47	33	46
Retired	12	16	13	17
Full Time Student	4	4	5	5
Looking After Home/Family	1	12	1	11
Permanently Sick/Disabled	13	11	10	8
Other	3	5	3	4

Numbers may not add up to 100 due to rounding

Figure 4 - Percentage aged 16-74 by economic activity (source:- 2001 census)

P9

Industrial restructuring has seen a dramatic decline in the traditional heavy industries of coal and iron within the county borough, in addition to a decrease in traditional manufacturing. During the 1980s there was a rise in unemployment to some of the highest levels in the UK. Whilst unemployment has recently declined there are areas of the county borough where many families are seeing a further generation growing up in unemployment and poverty. Although unemployment rates are similar to that of Wales as a whole, Caerphilly county borough has higher levels of economic inactivity due to permanent sickness/disability.

P10

The county borough has above average levels of employment in the manufacturing sector and below average levels in parts of the service sector. Gender balance in employ-

ment and levels of part time work are now roughly in line with national averages, although over the past couple of decades there has been a significant shift away from male employment and towards female. Manufacturing employment is decreasing nationally and this, coupled to below average levels of service sector employment leaves the workforce exposed. Employers do however flag an issue over being able to fill vacancies with suitably qualified and skilled staff.

P11

There are large numbers of people within the county borough living on low incomes including those whose income consists entirely of state benefits. Recent figures show that the average gross weekly earnings in the county borough are £389.00 which is lower than the average for Wales of £415.00 (date). Free school means, which are often used as an indicator of income, show that within

the Authority's primary schools those entitled to free school meals during 2001-2002 was 22%, the seventh highest rate in Wales. In addition savings are low within the county borough, having the highest percentage of its population with no savings in Wales, 32% compared with the Welsh average of 23%.

P12

The level of home ownership in the county borough at 73% is similar to the Welsh average of 71%. Some 17% of properties are rented from the Local Authority whilst a further 8.6% are rented from either a regulated social landlord or a private landlord. The Welsh Housing Condition Survey 1998 found that housing conditions in the county borough were amongst the best in Wales. Within the county borough 6% of dwellings were categorised as unfit as opposed to 8.5% as the Welsh average. However, this still implies that approximately 3,800

dwellings are unfit. Table 5 shows the housing stock in the county borough by date of construction and it tends to be the pre 1919 housing stock which is classed as being unfit. Research undertaken in the South East Wales Regional Housing Market Study identified five housing market types within the County Borough of Caerphilly; these are the Heads of the Valley market, the Mid-Valleys market, the North of M4 corridor market, the Newport housing market and the Cardiff housing market. These market areas have distinct characteristics in relation to housing types and population.

P13

A study in the borough in 2002 found that there was an over supply of affordable housing in the north, whilst there was a shortfall in the south of the county borough. Whilst average housing costs are below Welsh and UK averages across the county bor-

	Pre 1919	1919-1944	1945-1964	Post 1964
Percentage of Stock	35	13.7	21.9	29.4
Percentage Unfit	10.1	5.5	5.6	1.2

Figure 5 *Housing Stock In Caerphilly By Date of Stock*
(Source:- Private Sector renewal strategy from Welsh House Conditions Survey)

ough there is a marked price differential between the north and south. Affordability is an issue throughout the county borough as is the actual cost of running a home for many residents on low incomes. Recent research, on a site developed for housing within Caerphilly, indicated that 51.1% of new households originated outside of the county borough. A follow up survey identified that this percentage had actually increased to 68.67%. It also identified a trend that seems to confirm the general view that Caerphilly is increasingly being used as an overspill location for Cardiff households. The overspill effect can have signi-

ficant effects upon housing demand for Caerphilly County Borough as a whole.

P14

Homelessness rates within the borough are average for Wales.

P15

Nearly 40% of the residents of the county borough have no formal qualifications. Some 12% have a first degree or equivalent. The educational achievements of pupils in the county borough are poor in comparison with the rest of Wales as shown in Figure 7. Pupil attainment in the county borough is, however, improving faster than in Wales as a whole.

	Boys		Girls		All Pupils	
	CCBC	Wales	CCBC	Wales	CCBC	Wales
5+ GCSEs Grades A* to C	37	45	49	56	43	50
1-4 GCSEs Grades A* to C	22	24	25	23	24	23
1 or more GCSE Grades D to G	28	22	19	15	24	18
ELQ Only	5	4	2	2	4	3
Neither GCSE nor ELQ	8	6	5	4	6	5

Figure 7
Percentage of Pupils in last year compulsory schooling by examination achievement 2001-2002 (Source:- Digest of Welsh Local Area Statistics)

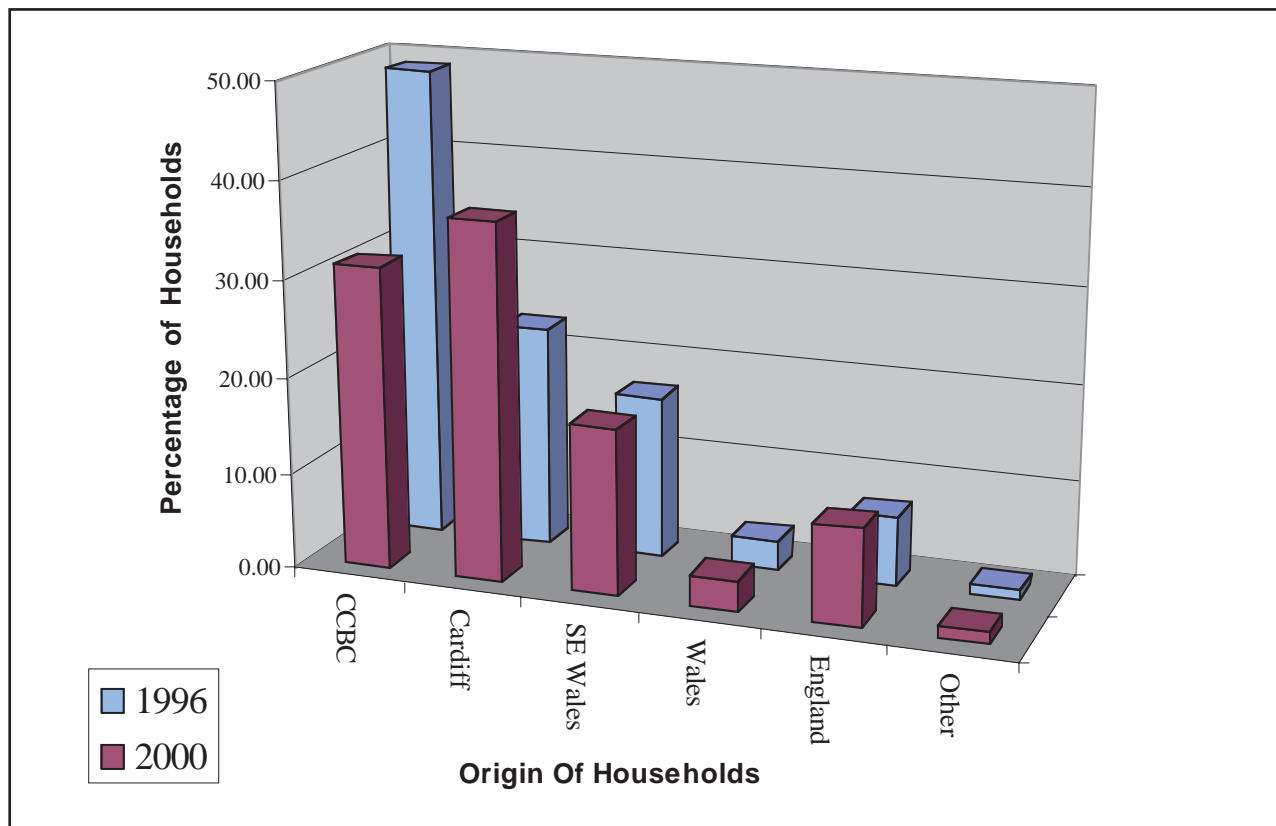


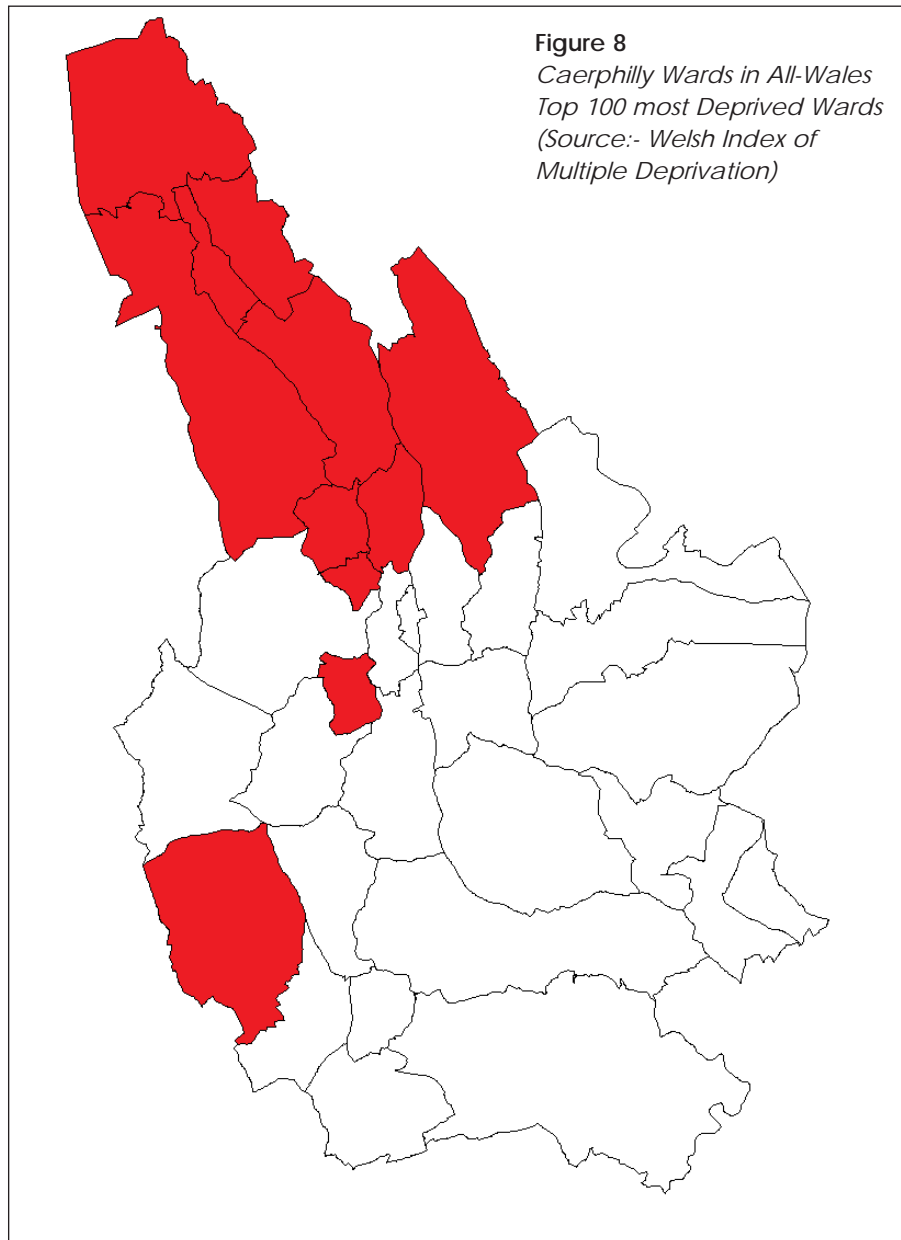
Figure 6 - *Origins of Households on a Caerphilly Housing Site (Source:- Caerphilly Research 1996 and 2000)*

P16

The county borough has 13 of the 100 most deprived wards in Wales according to the Welsh Index of Multiple Deprivation 2000. These are primarily concentrated in the north of the county borough and are indicated on the figure below. Whilst this index has now been updated, 2005, and amended to illustrate much smaller Special Output Areas these tend to still be concentrated in the north of the County borough and are predominantly the large public sector housing estates.

P17

Over 80% of the County borough is countryside that forms an important visual and recreational resource for both residents and visitors. There are also a number of formal Urban and Country Parks in addition to areas of public open space that can be found in all settlements. These green spaces and supporting infrastructure eg footpaths and cycleways con-



siderably enhance the quality of life of residents. The main 'green' recreational areas are shown on the Map below and the protection and enhancement of these will be of considerable benefit in mental and physical health terms.

ISSUES

1. Whilst the population has remained relatively stable it has increased in the south and decreased in the north of the county borough.
2. Declining Household size.
3. There is an age demographic shift, the numbers of elderly people are increasing whilst the young are decreasing.
4. Premature death rates are high particularly in the north of the borough.
5. Caerphilly borough has high death rates from heart attack and chronic pulmonary disease.
6. Obesity levels are the worst in Wales at 20%.
7. Educational qualifications in the county borough are amongst the worst in Wales.
8. There is a large proportion of older properties (pre-1919) which tends to be the poorest stock.
9. There is an over supply affordable of housing in the north of the county borough and an under supply in the south.
10. There are large numbers of permanently sick/disabled members of the workforce.
11. There are large areas of indicated multiple deprivation within the county borough which contains 13 of the top 100 wards within Wales.
12. Affordability of homes
13. Rural Housing in the north of the County Borough
14. Imbalance between skills and training and local jobs.
15. Sectoral dependency of the economy.

SUSTAINABILITY OBJECTIVES AND MONITORING INDICATORS

Population and Human Health					
Living Environment Community Plan Theme					
Issue	Objective	Indicator	Target	Source	SA Area
1 Resource Consumption	To reduce the average resource consumption of each resident	(a) Ecological footprint of each resident (GHa/person)	Reduce the 2006 ecological footprint of residents	Counting Consumption	Environmental
		(b) Number of properties benefiting from energy saving grants	Maintain or increase the yearly rate of the number of properties gaining benefit from energy saving grants, in comparison to the 2005 level.	CCBC Energy Data	Environmental
2 Housing	To improve the condition of housing and ensure the range of housing types are accessible to meet the needs of residents.	(c) Percentage of unfit dwellings	Eliminate the total number of unfit/non-decent homes by the end of the Plan period by reducing numbers each year.	CCBC Performance Plan	Social
		(d) Average house price compared to average earnings.	Reduce house price/earnings ratio	Land Registry data www.statistics.gov.uk	
3 Crime	To reduce the incidence of crime	(e) Burglary from a dwelling per 1,000 of population	Levels of Burglary to remain at least 10% below Welsh Average	www.upmystreet.com	Social
		(f) Percentage of residents by gender expressing fear of crime whilst walking in neighbourhood	To reduce the perceived fear of crime whilst walking within the neighbourhood	CCBC Household Survey	Social

Population and Human Health					
Education For Life Community Plan Theme					
Issue	Objective	Indicator	Target	Source	SA Area
4 Education	To improve educational achievement	(g) Percentage of children at 15/16 with 5 or more Grades A-C passes at GCSE	Maintain a higher percentage rate of children of 15/16 years of age achieving 5 or more Grades A-C passes at GCSE than the Welsh Average	CCBC Performance Plan	Social
		(h) Percentage of adults with literacy 2 numeracy skills	Increase the percentage of adults with literacy and numeracy skills at a rate higher than the Welsh average	CCBC Performance Plan	Social
5 Equalities	To allow equal opportunities for all	(i) Number of racist incidents	Maintain numbers of recorded racist incidents at a lower level than the Welsh average	www.statscom.org.uk	Social
		(j) Percentage of Black Minority Ethnic school children	Maintain a higher percentage rate of children of 15/16 years of age achieving 5 or more Grades A-C passes at GCSE than the Welsh Average	CCBC Performance Plan	Social
		(k) Number of recorded access complaints	Reduce actual numbers of recorded complaints regarding access year on year	CCBC Performance Plan	Social

Population and Human Health					
Regeneration Community Plan Theme					
Issue	Objective	Indicator	Target	Source	SA Area
6 Employment	To increase the percentage of people of working age in employment	(l) Percentage of people of working age in employment	Increase the percentage of people of working age in employment to the UK national average	www.Caerphilly.gov.uk - Census Data	Economic
		(m) Levels of economic inactivity	Decrease the level of economic inactivity to the UK national average	www.Caerphilly.gov.uk - Census Data	Economic
		(n) Number of active volunteers	To retain current levels of volunteering	www.Caerphilly.gov.uk - GAVO Data	Economic
7 Wealth - Level of Economic Activity	To increase the wealth of individuals in CCBC	(o) GVA: trend to reduce differential with rest of UK	To reduce the differential of Caerphilly GVA to that of the UK national average by 20% by the end of the plan period	www.wales.gov.uk	Economic
		(p) Average earnings	Reduce the differential between Caerphilly average earnings and the UK national average by 20% by the end of the plan period	www.wales.gov.uk	Economic
		(q) Number of children receiving free School meals	To reduce the percentage of children receiving free school meals to the UK national average by the end of the plan period.	www.nomisweb.co.uk	Social
		(r) Index of multiple deprivation	Reduce the number of Caerphilly CBC wards within the top 100 most deprived wards.	www.wales.gov.uk	Social
8 Business	To ensure a sufficient range of employment sites are available	(s) Level of inward investment	Increase the average amount of inward investment in comparison to the 2000-2005 average	CCBC Economic Development Data	Economic
		(t) Vacancy levels of industrial and commercial units	Maintain a vacancy rate lower than the average for the South Wales Valleys Maintain a vacancy rate below that of the 2005 rate	CCBC Economic Development Data	Economic
		(u) Business start up rates	Maintain business start up rates are higher than the welsh average	CCBC Economic Development Data	Economic

Population and Human Health					
Health, Social Care & Well-Being Community Plan Theme					
Issue	Objective	Indicator	Target	Source	SA Area
9 Health	To improve the health of individuals	(v) Life expectancy (Standard Mortality Rates)	Increase life expectancy to Welsh average levels by the end of the plan period	www.nhs.uk	Social
		(w) Percentage of population of working age on Invalidity Benefit	Reduce the percentage of population of working age claiming invalidity benefit to UK National average levels	www.nhs.uk	Economic
10 Population	To retain the population of county borough to at least current levels and attain a more balanced demographic structure?	(x) Perceptions of the County borough	Improve the levels of satisfaction expressed by residents of the county borough, particularly in the Heads of Valleys Regeneration Area.	www.Caerphilly.gov.uk/pdf/news	Social
		(y) Population level and balance	Retain or increase existing levels of population Reduce percentage of elderly within the population to Welsh average levels by the end of the plan period	www.Caerphilly.gov.uk/Censusdata	Social
11 Well-Being	To allow all residents easy access to leisure facilities	(z) Percentage of the population with 2 hectares or more of natural greenspace in accordance with the CCW model for accessible natural greenspace (Greenspace Toolkit).	Increase the percentage of population with 2 or more hectares of natural greenspace in accordance with the CCW Greenspace Toolkit	www.ccw.gov.uk	Social
		(aa) Numbers of people participating in sport	Increase number of users of leisure centres and playing pitches in comparison to the 2005 levels.	CCC Leisure Data	Social
		(bb) Numbers of allotments let	Retain or increase the area provided for allotments within the county borough Increase the percentage of allotments let.	CCC Leisure Data	Social

AIR POLLUTION

Background

A1

Historically the major air pollution problem has been associated with the burning of sulphur containing fossil fuels such as coal for heating and industrial purposes leading to smoke and sulphur dioxide. The major threat to clean air is now posed by traffic emissions. Petrol and diesel engines emit a wide variety of pollutants, principally carbon monoxide, oxide of nitrogen, volatile organic compounds and particulates which have an increasing impact on, particularly, urban air quality. Whilst these are generally associated with the urban areas, ozone at ground level tends to be more associated with rural areas and over 80% of the County borough is rural in nature and as such the potential for ozone to be problematic exists although no monitoring information is currently

available. Acid deposition, primarily through acid rain, can also take place at long distances from the source of the pollution. Generally industrial and heating pollutant sources, together with their impact on air quality, tend to be either in a steady state or improving over time. However, traffic generated pollution, which in the UK accounts for approximately 50% of nitrogen dioxide emissions and 90% of carbon monoxide pollution are worsening. In particular the issue of commuter traffic to Cardiff could have increasingly significant effects on the environment of the county borough. In addition to pollution related to combustion, pollutants are often contained within building materials.

A2

The principal pollutants produced through either domestic or traffic sources are sulphur dioxide, carbon monoxide (CO) ozone (O₃) benzene,

toxic organic micro pollutants, particulate matter, nitrogen dioxide (NO₂), hydro carbons, 1,3-butadiene, lead and acid rain. These can all have a detrimental effect on human health, principally through respiratory problems and also on the natural environment.

A3

The prevailing winds into the county borough come from the south-west, having travelled over the Atlantic. In line with current standards there are no major plants or industrial processes causing major air pollution within the county borough, although many industries have the potential to do so. Neither are there any significant power generating facilities either traditional or 'green'. This does not, however, preclude air borne pollution coming into the county borough from beyond. Air monitoring stations within CCBC reveal that air borne pollution is currently generally

not a problem with the exception of two discreet sites. These sites are central Caerphilly and Blackwood Town Centre and both are associated with vehicle generated pollution.

A4

Whilst levels of air borne pollution may be relatively low within the county borough, with air quality meeting National Air Quality Standards (NASQ) objectives there are however large numbers of the population with respiratory problems, in part caused by the coal mining industry and maybe more susceptible to changes. Also a large number of sites of interest for nature conservation that are water reliant and may be particularly sensitive to acid rain. Nitrogen oxides and low-level ozone can also have adverse effects on vegetation. The housing stock of the county borough has a large percentage of older properties that may not have energy efficient heating

systems. The number of properties burning direct solid fuel has however dropped considerably in the past 20 years as people have moved away from coal fires to primarily gas central heating. Due to the linear nature of many settlements and property type being terraced this can result in traffic-generated pollution being concentrated literally on the doorstep for many residents.

A5

Car ownership levels of some 71% are below national levels and when this is coupled to employment opportunities beyond the county borough there is the potential to significantly increase private vehicle usage that would result in an increase in air borne pollution. Increased home-working and the development and use of further green technologies including video conferencing have the ability to reduce air pollution, primarily through a reduction in travelling.

A6

Other forms of pollution identified as being and having the potential to be problematic within the County borough include noise, light and odour. Noise pollution ranges from domestic sources and traffic through to noise generated from construction sites and industrial processes. Often conditions are placed on hours of operation to reduce the effect of noise pollution and noise abatement orders can be issued to reduce noise levels at certain sites. As with many forms of pollution thresholds are set which when breached can result in enforcement action to remedy the problem.

A7

Again measures are often taken to reduce odour pollution and issues of dust/particulate spread prior to these becoming an issue. Light pollution is becoming more of an issue due to new types of development which are

often proposed on the valley sides and uplands where visible from a large area. This would include obvious developments which have floodlighting but is also more subtle in terms of the increasing number of developments in the countryside which has traditionally provided the night background to the County borough.

ISSUES

1. **Damage caused by air pollution to habitats and eco systems.**
2. **Damage caused by air pollution to buildings, particularly those made from limestone.**
3. **Currently low levels of car ownership.**
4. **High levels of out commuting.**
5. **Dispersed services.**
6. **Heavy traffic volumes at certain points.**
7. **High levels of respiratory illness.**

8. **Low levels of energy efficiency.**
9. **Low proportion of energy generated from renewable sources.**
10. **Levels of noise pollution and complaints**
11. **Odour Pollution**
12. **Light Pollution**

Air Pollution					
Living Environment Community Plan Theme					
Issue	Objective	Indicator	Target	Source	SA Area
1 Air Quality	To reduce air, noise, light and odour pollution and ensure air quality improves.	a. Number of incidents when NO2 air quality fails	Consistently reduce the number of incidents of NO2 air quality failure Achieve no incidents of NO2 air quality failure by the end of the plan period	CCBC Air Quality Data	Environmental
		b. Number of sites where NO2 failures occur	Consistently reduce the number of locations of NO2 air quality failure Achieve no locations of NO2 air quality failure by the end of the plan period	CCBC Air Quality Data	Environmental
		c. Number of recorded noise complaints	To reduce the number of justified noise complaints in comparison to the 2005 level	CCBC Complaints Data	Environmental
		d. Number of recorded light nuisance complaints	To reduce the number of justified light complaints in comparison to the 2005 level	CCBC Light Complaints Data	Environmental
		e. Number of recorded odour related complaints	To reduce the number of justified odour complaints in comparison to the 2005 level	CCBC Noise Complaints Data	Environmental

CULTURAL HERITAGE AND LANDSCAPE

Background

CH1

This section contains background information on culture, heritage, land use and landscape, all of which help create the cultural and landscape heritage of the county borough in both perceived and tangible terms.

CULTURE

CH2

The culture and cultural heritage of the county borough has been assessed under the Landmap process and this is perhaps the most difficult to undertake and could be considered as being particularly subjective. The majority of cultural heritage within the county borough is associated with the industrial revolution and the mass in-migration of people from all parts of the UK and abroad. What is clear that the

majority of people moving into the Caerphilly area during this period were moving from the land and into industry. The countryside was then and still is now to a lesser extent, a powerful influence. Nowhere within the county borough is the countryside far away and it is easily accessible to a lesser or greater degree.

CH3

Stories and traditions within the county borough can be traced back in history to the mythology of the Mabinogion and a strong verbal heritage is retained within the area.

CH4

Whilst during and after the mass in-migration of the industrial revolutions there were palpable divisions in terms of religion, language, politics and settlement there evolved what can be loosely described as the 'south walian' which is not so much a reference to nationality but more a state of mind. This provided strong

social cohesion and community ownership. Across the county borough a vibrant culture merged in the latter years of the 19th and early years of the 20th century based around the chapel, music, performing arts and sport.

CH5

Poets, artists and preachers can be associated with various landscapes and buildings throughout the county borough, such as the poet Islwyn and Capel Babel in Ynysddu. Caerphilly Castle and industrialised Rhymney were favoured by painters. Some of the great engineering feats were considered worthy of depiction by these artists including the viaducts at Crumlin and Maescywmmmer. Photography and improved reporting spread the plight of residents of the county borough to a wide audience through, for example, the disasters at the Universal Colliery in Senghenydd. Caerphilly has been perceived as a

politically militant area which is perhaps not surprising in view of the hardship its communities endured. It has a landscape of lock-outs, strikes, hunger marches, poor living and working conditions and solidarity in the face of opposition as demonstrated by the community spirit of the 1984-85 miners strike. The large number of voluntary organisations operating locally perhaps reflects the community cohesion that developed over this period.

CH6

The communities within the county borough have changed and are continuing to change through diversity of employment, the need to commute to places of work, the types of settlement they live in, financial status and disposable income. The Landmap study identifies 30 distinct cultural areas within the county borough of which 14 are evaluated as of being high importance.

HERITAGE

CH7

In particular the upland open moorlands of the county borough have been inhabited since pre-historic (primarily bronze age) times, with evidence remaining of hut circles, artificial platforms and cooking mounds in addition to ritual and burial cairns which survive amidst evidence of later medieval occupation and landuse.

CH8

The upland ridges formed naturally defensive sites and a large roman fort was located at Gelligaer. The Caerphilly mountain ridge to the south of the county borough formed an effective barrier between the Princedom of Senghenydd and the Anglo Norman occupation on the coastal plain. It was 200 years before the Anglo Normans breached Caerphilly Mountain to establish the magnificent castle at Caerphilly and various other fortifications exist along

the ridges of the County borough. The field patterns in the upper Sirhowy Valley and in particular around Manmoel are vestiges from the medieval agricultural period.

CH9

Further down the valley sides predominantly natural landscape is superimposed by features that relate to the major change that occurred in the South Wales area in the late 18th early 19th century - the advent of a large scale coal mining industry. These features include ribbon housing development (terracing) of both sides of the valleys with associated public and municipal buildings. The towns and villages so represented were ill planned, congested and hurriedly built to meet the demands of new immigrant communities. Later as the industry developed the terraced housing which was initially developed near the pits and ironworks later moved up the valley sides in an attempt to provide

higher standards of accommodation. These provide the rich industrial heritage of the area which is increasingly becoming recognised as a unique attribute of both the area and wider South Wales Valleys.

CH10

Later developments lost much of this 'genus loci' as traditional designs were abandoned and geographical features proved less of an obstacle due to mechanisation. Planning legislation largely protected the rural areas and the development of estates occurred, usually on the fringe of existing towns, however these new developments provided few of the civic/community type buildings associated with earlier developments.

CH11

The LANDMAP assessment of the county borough in terms of the historic aspect split the county borough into 7 areas of which 5 have been graded of high value, whilst the Rhymney Valley is considered to be

outstanding and therefore of national/international importance.

CH12

The wealth of archaeological and historic remains and buildings within the county borough has resulted in there being 356 listed buildings of which 2 are grade 1 and 30 grade 11*. There are 46 scheduled ancient monuments and 4 historic parks and gardens, these being Maes Manor, The Van, Ruperra Castle and Cefn Mably. Gelligaer Common is the County borough's only registered Historic Landscape and this is under threat from a range of sources including changing farming management and abuse from the use of off road vehicles. Ruperra Castle is the subject of development pressure for conversion to residential use. Proposals have been submitted that incorporate inappropriate forms of development. It is important, in order to ensure the integrity of the heritage at Ruperra castle that such inappro-

appropriate development is not permitted. By contrast Caerphilly Castle has potential to increase its tourism and promotional role for the town of Caerphilly. Such improvements must be delivered in sympathy to the heritage importance of the castle itself.

CH13

There are also 14 Conservation Areas within the county borough. These designations cover a wide range of buildings, monuments and archaeological sites ranging from the pre-historic to the modern. Unsurprisingly many relate to development during the industrial revolution with there being a large number of important civic, religious and industrial buildings and structures included within the lists. Many of these buildings and structures have lost their reason for being and due to this, often coupled to their location, size and functionality have either been abandoned or are under threat. New legislation is

likely to increase the number and range of sites and monuments that will benefit from further protection.

CH14

A key issue in respect of the authority's industrial heritage is its protection and, more importantly, the beneficial reuse of its buildings. Bringing these buildings back into beneficial use will help to ensure their continued retention. However, bringing the buildings back to beneficial use should not be done at the expense of their heritage value.

LANDSCAPE AND LANDUSE

CH15

The landscape of the county borough is determined by mans influence upon it and the use that the land is put to. The county borough's landscape offers a rich variety of forms and character which are lived and worked in including features such as hedgerows, stone walling, and more recent features such as

reservoirs and forestries. Of the land area some 80% can be classified as rural. Approximately two thirds of this 'rural' land is under agriculture, with the majority of the remainder being woodlands or land despoiled by

industry. There are some 300 active farms within the county borough.

CH16

The main landuses within the county borough are shown in figure 9, below.

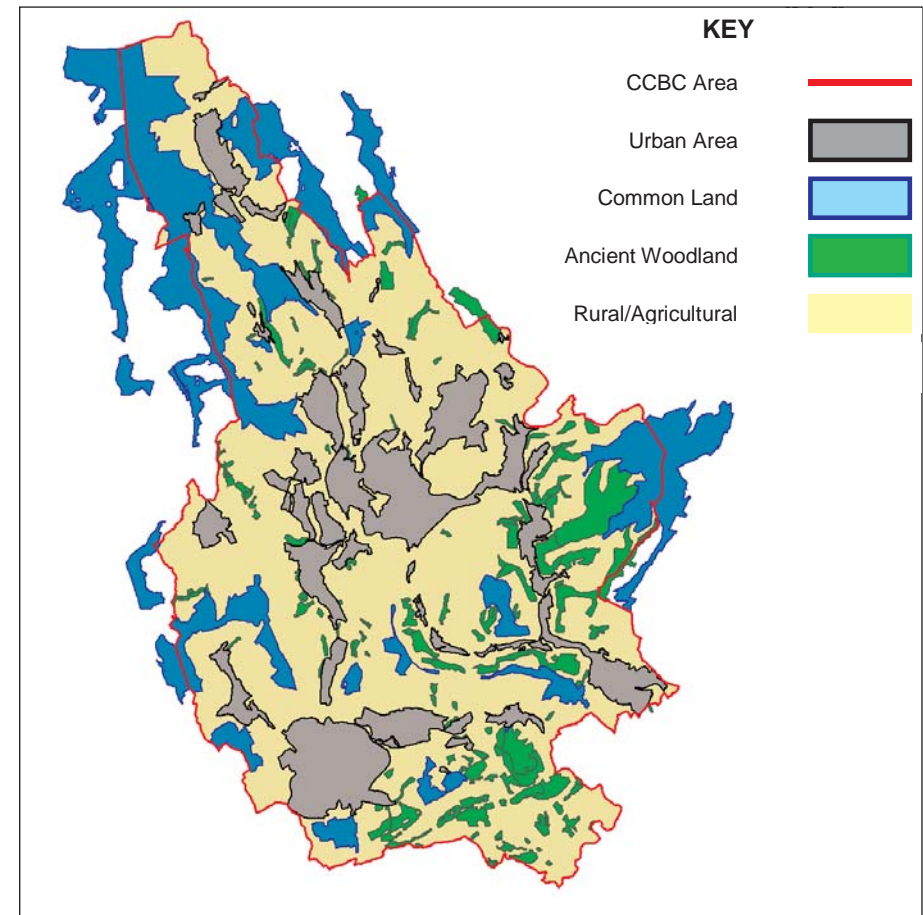


Figure 9 - Landuses within Caerphilly County Borough (Source:- CCBC various)

CH17

The density and locations of settlements within the valleys has a marked effect upon the character of the county borough. Where the landscape form results in development being concentrated on the valley floor and lower valley sides, this has the result of interrupting views to the higher valley slopes and ridge lines which has a consequent effect upon perceived values. These elevated areas do however provide a rural backdrop visible from most streets and areas within towns of the county borough. There are numerous land reclamation schemes and unreclaimed tips on the valley sides and hilltops of the county borough which seem incongruous into the wider landscape setting. The majority of the county borough does however remain open. These open areas and agricultural land practices results in a diversity of landscape patterns which alone do not constitute primary land-

scape elements, but with other elements contribute to the overall landscape character. The forms and types of field boundaries, woodland coppices and open commons reflect a variation in land ownership and management regimes that contribute to the rich landscape tapestry with commons and woodlands in public ownership being accessible by the general public. The urban fringe, where the built form and open countryside meet, is in many ways the defining quality and character of parts of the county boroughs landscape when considered in visual and sensory terms.

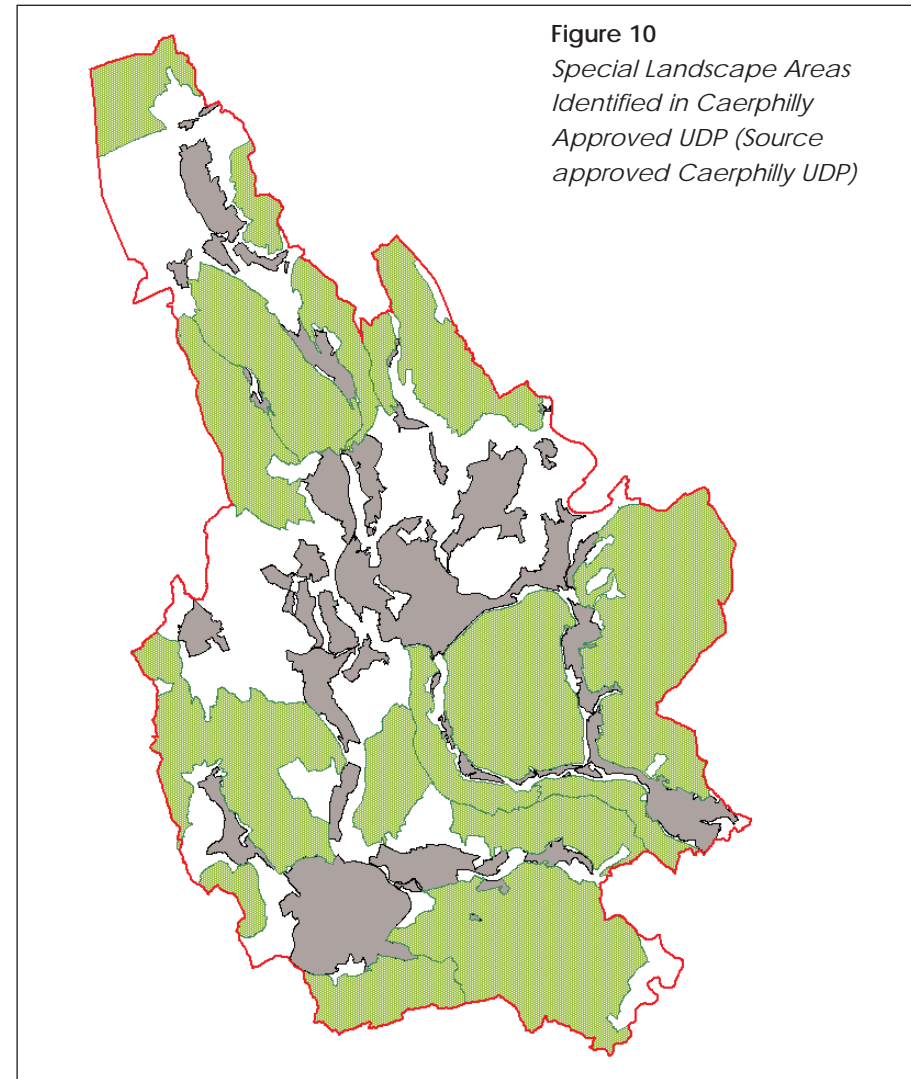
CH18

The visual and sensory analysis of the county borough as part of the Landmap process indicated the landscape value of the Ebbw Valley as being either outstanding or high, thus being of international/national importance.

CH19

Previous landscape studies undertaken into both the former Rhymney

Valley and Islwyn District Council areas using a landscape character methodology has resulted in the



designation of special landscape areas. These areas are deemed to be of importance on a sub-regional or local level in terms of their immense value and by virtue of the contribution the landscape makes to the visual setting of towns and villages. 17 special landscape areas have previously been designated with the county borough and these are predominantly, although not exclusively, the upland areas.

ISSUES

1. Threats to listed buildings/ scheduled ancient monuments /historic features.
2. Provision of cultural facilities.
3. Threats to landscape and structures of cultural significance.
4. Breakdown of social cohesion and organised groups.
5. Threats from development to the built form and structure of the urban fabric.
6. Development within the countryside.
7. Change to agricultural practices.
8. Access to the countryside and green space.
9. Opportunities to access recreation.
10. Welsh language and numbers of children in Welsh Medium Education.
11. Recreational conflicts as well as those from agriculture.
12. Urban Green Space
13. Verbal Heritage
14. Light pollution

Cultural Heritage and Landscape					
Living Environment Community Plan Theme					
Issue	Objective	Indicator	Target	Source	SA Area
1 Landscape	To protect the landscape value of the most important landscapes in the county borough and maintain a clean and accessible environment to encourage a greater sense of belonging.	a. Numbers of refused planning applications in landscape designated as SLAs	Maintain or increase the proportion of applications refused within designated SLAs	CCBC Development Control Monitoring	Environmental
		b. Area of land under agreed management for landscape improvement or protection	Increase year on year the amount of land under approved management	Tir Gofal www.ccw.gov.uk	Environmental
		c. Area of land beyond defined settlement boundaries developed for non agricultural uses	Reduce the area of land, outside of defined settlement boundaries, developed each year for non-agriculture related uses in comparison to 2005 levels	CCBC Development Control Monitoring	Environmental
		d. Numbers of reported incidents of fly tipping and abandoned cars.	Reduction of incidents of fly tipping and abandoned cars in comparison with 2005 numbers	CCBC Environmental Health Monitoring	Environmental
		e. Area of land subject to an environmental management agreement tied to a planning consent	Increase in area of land subject to environmental management through Section 106 agreements	CCBC Development Control Monitoring	Environmental
		f. Area of land within Historic Landscapes affected by new developments	Realise no cases where development has been permitted on land within historic landscapes against Cadw advice.	CCBC Development Control Monitoring	Social

Cultural Heritage and Landscape

Living Environment Community Plan Theme

Issue	Objective	Indicator	Target	Source	SA Area
2 Culture	To protect the cultural identity of the county borough	g. Percentage of school children in welsh medium education	Maintain existing levels of pupils being taught through welsh medium education	CCBC Performance Plan	Social
		h. Number of community groups registered with the Gwent Association of Volunteers (GAVO)	Maintain or increase the numbers of voluntary organisations registered with GAVO, in comparison to the 200 level.	GAVO Monitoring Data	Social
3 Historic Assets	To protect and enhance important historic assets	i. Number of buildings on the "Buildings at Risk" register	To continually decrease the number of listed buildings on the register (once the Register has been produced).	CCBC Register of Buildings at Risk (when produced).	Social
		j. Number of developments following advice of the Glamorgan and Gwent Archaeological Trust (GGAT)	Realise no cases where development, which affects historic assets, that have been permitted contrary to GGAT advice.	CCBC Development Control Monitoring	Social
		k. Number of planning refusals for development proposals on land within Historic Parks and Gardens	Realise 100% of planning applications for development in Historic Parks and Gardens be determined in accordance with GGAT and/or Cadw advice.	CCBC Development Control Monitoring	Social
		l. Number of Listed Buildings and Scheduled Ancient Monuments improved and/or brought into beneficial use.	Increase the number of Listed Buildings and Scheduled Ancient Monuments improved and/or brought back into beneficial use throughout the plan period	CCBC Development Control Monitoring	Social

WATER

Background

W1

The county borough can be divided into three catchments, the Rhymney, Sirhowy and River Ebbw catchments. All three rivers rise on the southern edge of the Brecon Beacons before descending steeply through the valleys and then onwards across a flat plain before entering the Severn Estuary to the east of Cardiff. Each catchment can be divided into two main parts; a steep sided, wet, mountainous upper valley with limited flood plain and short steep tributaries and a flatter wider valley below, the latter is in the Machen area for the River Rhymney and the Risca Crosskeys area for the rivers Ebbw and Sirhowy which have merged at their confluence at Crosskeys. Being narrow valleys with limited flood plains many properties lie in close proximity to the banks of the main rivers and its

tributaries. These urban developments and historic industrial developments have resulted in extensive river bank protection works and the loss of riverine habitats. Despite this the main rivers and tributaries follow a largely natural course.

W2

Due to the county borough's westerly location and its mountainous nature in addition to proximity to the sea, the catchments receive a high annual average rainfall of slightly short of 1400mm. Despite the catchment's altitude little of this falls as snow. Although the rainfall is throughout the year the thin sandy soils, the sandstone and the rocks of the coal measures do not retain large quantities of water in storage and therefore provides little base flow support to the water courses. Consequently the main rivers are 'flashy' in nature, with quite rapidly diminishing flows during dry periods, very rapid rises in river

levels during heavy storms and periodic flooding during the winter months. The base flows of these rivers has however reduced since the closure of the coal mines which pumped considerable amounts of underground water into the main river channels. The average daily flow of the River Rhymney as it flows into the estuary is 5.95 cubic metres per second, whilst during a dry summer this is reduced to approximately .6 of a cubic metre per second. Figure 11, below, indicates the parts of the county borough designated as 'flood plain', categories C1 and C2 as defined by the Welsh Assembly Government's TAN 15. Flooding may become more frequent as a result of global warming and many commercial and residential properties within the county borough fall within the area at risk of flooding from a once in 1000 year occurrence. The Environment Agency seek to ensure

that developments should in most instances not be located on flood plains and when practicable should provide permeable surfaces and a wider sustainable urban drainage system in order to reduce flash run off and help diffuse pollution. There is a need to reduce impact from sewers and urban run-off on water quality of rivers by employing separate drainage systems for new and replacement development (reducing surface water discharged to combined sewers) and source control of industrial/urban drainage using passive treatment methods. In addition to the above there are also potential health implications associated with pollution resulting from flooding.

W3

As is the case in many parts of Wales the surface water and ground water interaction is very complex. In the Caerphilly area there is the additional

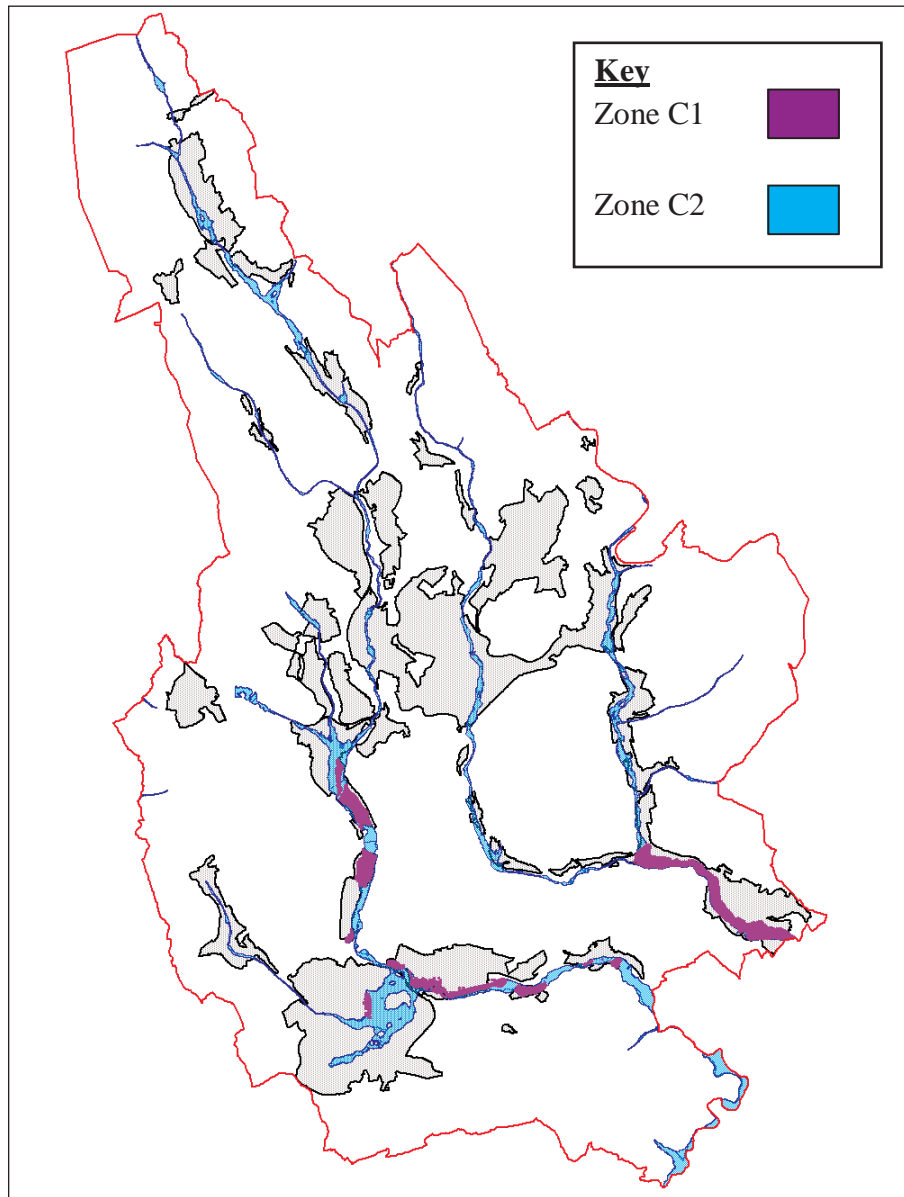


Figure 11 - Flood Zones C1 and C2 (Source: Tan 15)

influence of the connections between old mine workings. There is still some doubt about the behaviour of ground water levels in the aftermath of the cessation of the mining industry. Whilst across much of the eastern part of the coal field ground water levels have probably recovered and stabilised in some parts of the county borough recovery is considered to still be ongoing. Several of the mine water escapes are characterised in the river by the deposition of iron oxides which change the river bed an orange colour. The aquifers within the County borough require protection in terms of both the quantity and quality of water entering them. Mine water discharges are occurring widely within the County borough and range from small limited escapes to larger continuous discharges that in some cases can change the bed of a water course orange through the deposition of iron oxide. This can be particularly noticeable

during periods of low water and has the effect of smothering the bed of the river and destroying the ecosystem. The EA have produced a priority list of sites for treatment across south Wales, through the Coal Authority's remediation programme several of which are within the County borough.

W4

The Environment Agency have adopted a national method for classifying water quality in rivers and canals/the general quality assessment (GQA) which assess both the chemical and biological quality of water bodies. In terms of chemical water quality for the River Rhymer some 77% of the river length is assessed as being good or very good (the top criteria) whilst none of the river has a GQA grade of D, E or F. In terms of biological quality none of the River Rhymer has a grade A very good rating. However 59% of the river is graded B (very good), 38% grade C (good) and only 2% fair with

again there being no poor or bad recordings grades E and F. The biological quality of water for the Ebbw and Sirhowy includes some stretches that are classified as poor whilst the majority is classed as being fairly good (grade C). The chemical quality of water in the catchment is better being mainly good (grade B). The volume of water within the rivers is also critical and the Environment Agency Wales have undertaken comprehensive research into the availability of water for abstraction and concluded that the River Rhymney has capacity for further abstraction, with the exception of the Nant Gledyr a tributary leading into the River Rhymney at Caerphilly, at times of low water flow. The majority of water currently abstracted comes direct from the rivers and their supporting reservoirs of which approximately half is fed into the public water supply with a further 29% going to commercial uses and

20% to industrial use. The majority of public water supply to the county borough does however come from reservoirs beyond the county borough. Industrial abstraction is likely to have significantly reduced recently due to the closure of steelworks.

W5

Pollution of the water courses within the county borough comes from a number of sources and have proven catastrophic for wildlife in the past. Whilst mainly limited to 'one off' industrial pollution incidents there is also an issue with direct sewage connections, a situation much improved as a result of the Primary Sewer improvements undertaken by Welsh Water. Run off from urban developments and the inappropriate disposal of chemicals from industry, domestic residencies and agriculture and landfill sites also have an effect. It is anticipated that the extent and incidence of pollution within the county borough will decrease.

However, the rivers are currently rated as being at significant risk of failing the objectives set out in the Water Framework directive.

W6

Within the county borough five sites of Special Scientific Interest contained in 'wet' habitats. Further to this the rivers, their tributaries and supporting reservoirs are valuable for amphibians, invertebrates, butterflies, birds and mammals, several of which are UKBAP priority species. The environmental interests of the Severn Estuary are protected by the EU Habitats Directive 1994, the EC Birds Directive 1979 and the Wildlife and Countryside Act 1981 and all three rivers in the County borough flow into this. There have been several major incidences of industrial pollution of the rivers within Caerphilly County Borough over recent years.

W7

The average daily water consumption per household in the UK is some

150 litres which can result in capacity problems during dry summer months. This water is also treated with a range of chemicals to ensure public safety standards are met, whatever its end use. Levels of water recycling within the County borough are considered to be low, limited mainly to water provision for gardening, although detailed information is not available to confirm this. With the likelihood of increased drought there is a need to raise awareness of both the public and commercial users of the need for greater water efficiency, particularly given the general belief that water is readily available in Wales.

W8

There are a large number of reservoirs and ponds in the County borough in addition to the three main rivers and Crumlin Arm of the Monmouthshire Canal, the primary recreational use of which is angling for both coarse and game fish. There are 3 'Com-

mercial Fisheries' in the area but most waters are controlled by Angling Clubs. Other water based recreation that takes place includes sailing and canoeing and the river banks are extensively used for recreational access notably along the Rhymney Riverside Walk.

ISSUES

1. Flooding and how to limit its frequency and extent.
2. Impact of mine waters from abandoned coal mines.
3. Impacts of residential and other developments in terms of use and run off.
4. Environmental impact of diffuse or intermittent pollution.
5. Insufficient information on ground water levels to fully protect water resources and the environment.
6. Balancing public water supplies against future demands.
7. Flashiness of storm water.
8. Water abstraction.
9. Water Quality.

Water					
Living Environment Community Plan Theme					
Issue	Objective	Indicator	Target	Source	SA Area
1 Water Quantity, Quality and Use	To protect aquifers and improve the quality and quantity of the water in our rivers and to reduce 60 water consumption	a. Percentage of river lengths good or better quality for Chemical Quality.	Continually improve both the length and rating of the chemical quality rivers in comparison to 2005 levels 100% of rivers reaching Grade C or above, in respect of chemical quality, by the end of the plan period	www.environment.agency.gov.uk/cams	Environmental
		b. Percentage of river lengths good or better quality for Biological Quality	Continually improve both the length and rating of the biological quality rivers in comparison to 2005 levels 100% of rivers reaching Grade C or above, in respect of biological quality, by the end of the plan period	www.environment.agency.gov.uk/cams	Environmental
		c. Litres of water consumed per resident	Reduce the levels of water consumption per resident to below the 2005 levels	www.defra.gov.uk	Environmental
		d. Increase in the number and volume of Environment Agency licensed abstractions	Maintain abstractions within Environment Agency guidelines	www.environment.agency.gov.uk/cams	Environmental
		e. Number of Environment Agency recorded pollution incidents	Year on year reduction in the number and seriousness of EA recorded pollution incidents	Environment Agency Monitoring Data	Environmental
2 Flood	To minimise the number of developments affected by flooding	f. Percentage of development in flood risk area approved contrary to EA advice.	Realise no cases where development is permitted within the flood risk area contrary to Environment Agency advice.	CCBC Development Control Monitoring	Environmental
		g. Number of residents of flood risk areas taking appropriate action.	Increase the number of residents living inflood risk areas taking advice from Environment Agency	Environment Agency Data	Environmental
		h. Number of properties flooded	Reduction of the numbers of properties flooded in comparison to pre-2006 levels	Environment Agency Data	Environmental
		i. Amount of approved development within C1 and C2 as defined by TAN 15	Realise no cases where development is permitted in areas identified within Flood Zones C1 and C2 without agreed mitigation being undertaken.	CCBC Development Control Monitoring	Environmental

GEOLOGY AND GEOMORPHOLOGY

Background

G1

The landforms in the Caerphilly area strongly influenced by the underlying rock types and the geomorphological processes has affected them. The landforms are a product of the differing resistance of erosion of coal measures strata variously affected by folds and faults, and the subsequent erosion and deposition associated with the glaciation. The glaciers flowed from the north or north west to the south and south east along valleys that were initially established by rivers that drained and uplifted plain towards the south. This high level plain reaches a height of approximately 550m in the north of the coalfield and falls to approximately 250m in the south.

G2

The majority of Caerphilly lies within

the South Wales coalfield comprising carboniferous coal measures underlain by millstone grit and carboniferous limestone. To the south of the main coalfield the area comprises Devonian old red sandstone, Silurian mud stones and Triassic Mercia mud stone rocks. This solid geology is overlain by an irregular veneer of drift deposits from the last ice age. Where erosion has cut down into the soft strata the valley floor tends to be broad and flat but elsewhere in the county borough becomes narrow and steep sided where the valley floor lies in harder pennant sandstone. There are numerous north west to south east striking faults within Caerphilly. The southern margin of the Brecon Beacons lies to the north of the coalfield. Here old red sandstone strata dipped towards the south, producing extensive dip slopes formed by resistant quartz sandstone beds. Widespread glacial till and patches of overlying peat cover the

solid rock. Down slope towards the south, the sandstones are overlain by carboniferous limestone, with a distinctive landform produced by swallow holes variably covered by boulder clay and peat. The southern border of the coalfield shows a transition from the gentle dips further north to moderate and steep northerly depths. This has resulted in the development of east to west ridges and valleys. The ridges are formed by erosion of bands of hard rock such as pennant sandstone with the ridges being bordered by scar and dip slopes. The valleys are formed along the outcrop of softer strata such as the lower and middle coal measures lying between the harder bands.

G3

Research undertaken by the Department of Earth Science from Cardiff University as part of the development of Landmap indicates that two areas of Caerphilly County Borough have geological interest of regional impor-

tance. These are the Caerphilly ridge in the south of the county borough and the Nelson to Tredomen area. The latter of these is an excellent example of cross valley glaciation whilst the former contains a range of linear rock types. There are also a range of examples of glacial activity throughout the county borough. There are five geological SSSIs within the county borough, and there is potential for a number of RIGS to be identified as a result of the ongoing work of Countryside Council for Wales. The quality and range of the county borough's geological heritage is an important factor in the character of the county boroughs landscape.

G4

Stability issues arise along the fault lines running through the county borough, notably in the northern parts of the valleys. The village of Troed y Rhiw Fuwch north of New Tredegar was largely abandoned due to geological instability.

G5

A typical cross section through the Authority would show the plateau tops, ridges and steep valley sides covered by podzolic soils of varying types over sandstone with the lower, flatter land covered by poorly drained clay soils of glacial drift origin. Figures 12 and 13, below, broadly illustrates soil cover within the Rhymney Valley and the Islwyn and Ebbw Valleys. With the exception of small land areas within the south of the county borough the MAFF agricultural land classification are lower grades 3,4 and 5, generally the higher the altitude of land the lower the classification. All the above upland soil types are capable of agricultural improvement. The function of soils is also a pertinent issue, particularly in respect of their permeability and the implication in flood risk areas and areas suffering from poor drainage.

G6

In addition to on-going geological processes there are the considerations of the extractive industries within the county borough. These have been taken place for in excess of 2000 years, however it is the impact of the coal industry which has had the most significant effect. Particularly along the northern and southern outcrops of the coal seams shallow mine workings are present which can result in subsidence, both through the collapsing of shafts and the rising of the water table. There are areas of the upper coal measures which have not been opencast and a large number of colliery tips which offer the potential for reclamation. The colliery tips are considered stable from movement but remain major features in the landscape with limited opportunities for further reclamation in some cases, particularly where agriculture is the only likely afteruse. Many of these tips

are however beneficial for wildlife and are of historic interest. Figure 15, below, shows the number of tips within CCBC identified on the Tip Register.

G7

The full extent of contamination within the County borough is not known however there are in excess of a thousand potentially contaminated sites. These range from former domestic refuse tips and industrial tips to sites contaminated by virtue of their previous uses. Detailed records are not available for the content of many of these sites as they contaminated prior to registration and licensing requirements

G8

Domestic waste from within the county borough is taken out of the authority for disposal, having in some cases being passed through transfer stations as the authority is currently without a major landfill site following the closure of Trehir. Whilst levels of

recycling within the authority are improving they remain below UK averages and government targets. New initiatives are likely to further increase recycling levels within the authority. The Council actively promotes recycling and runs a kerbside collection service and when practicable reuses construction materials. There are a number of private sector recycling facilities within the County borough including a composting project near Nelson. CCBC is ranked as having the third highest 'recycling' levels in Wales and is ranked 93rd in the UK, due in part to a high rate of composting. 2005 figures indicate that the authority has a recycling rate of 11.5% and a composting rate of 15.6%.

G9

There are a number of aggregate extraction sites which are either active or have the ability to become active again. The largest of these

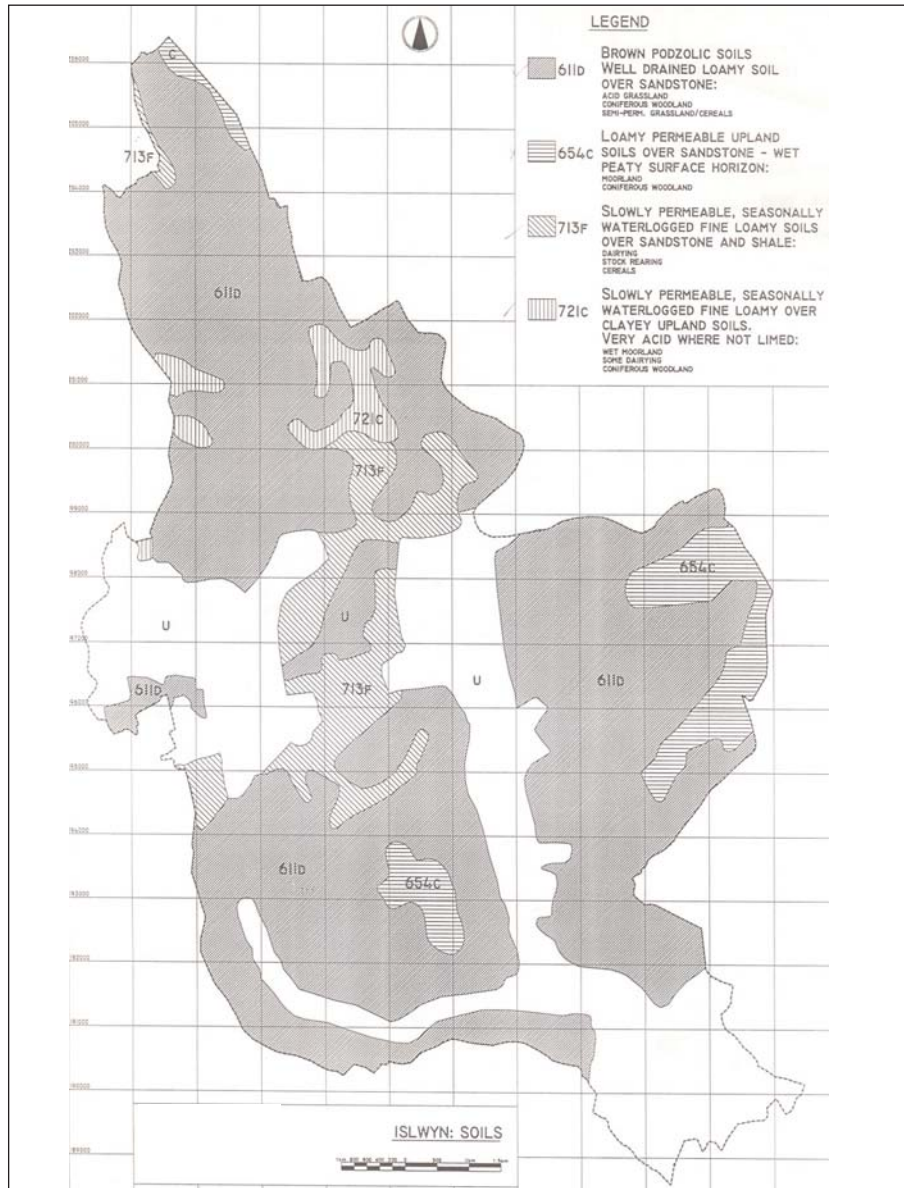


Figure 12 - Soils in Former Islwyn Area (Source: Islwyn Landscape Strategy 1996)

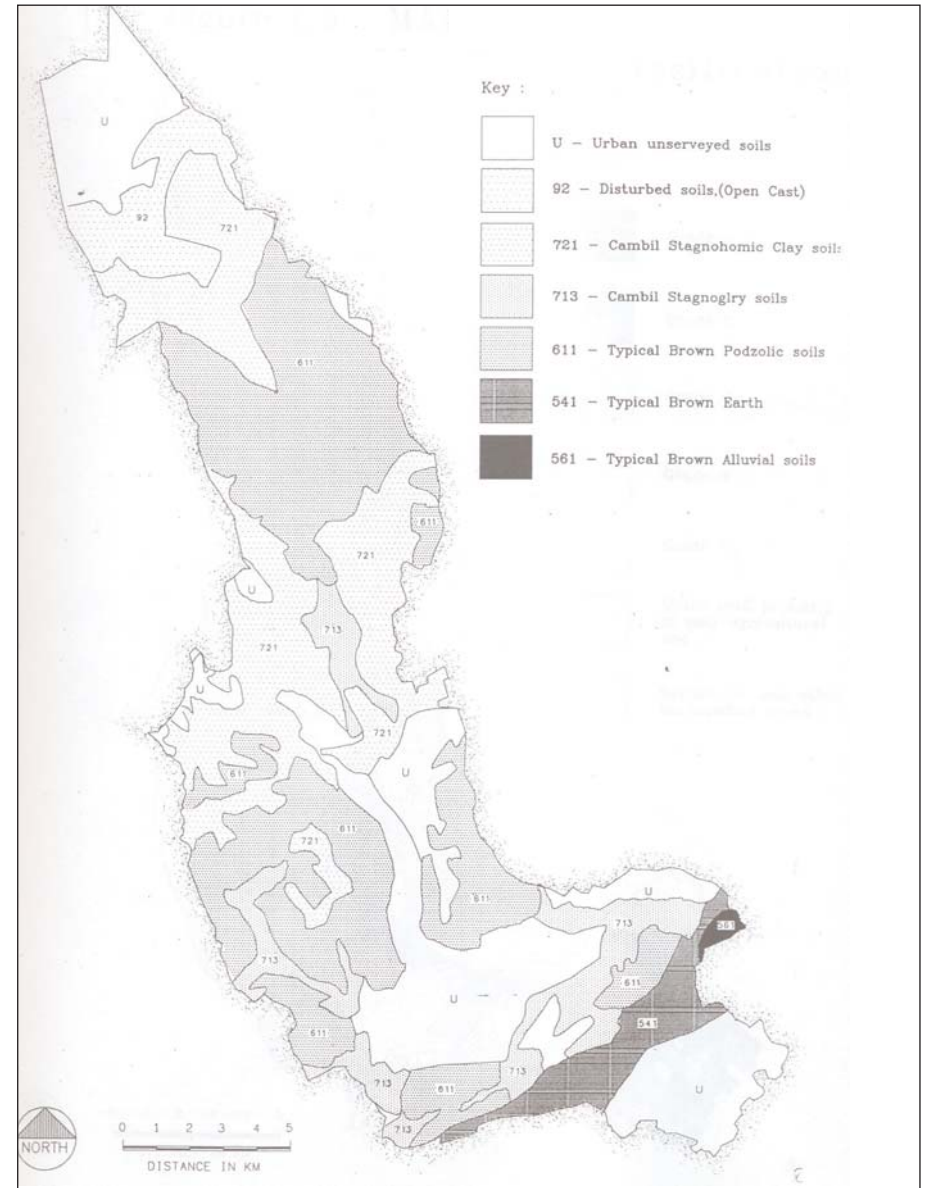


Figure 13 - Soils in Former Rhymney Valley (Source: A Landscape Strategy for the Rhymney Valley, WDA)

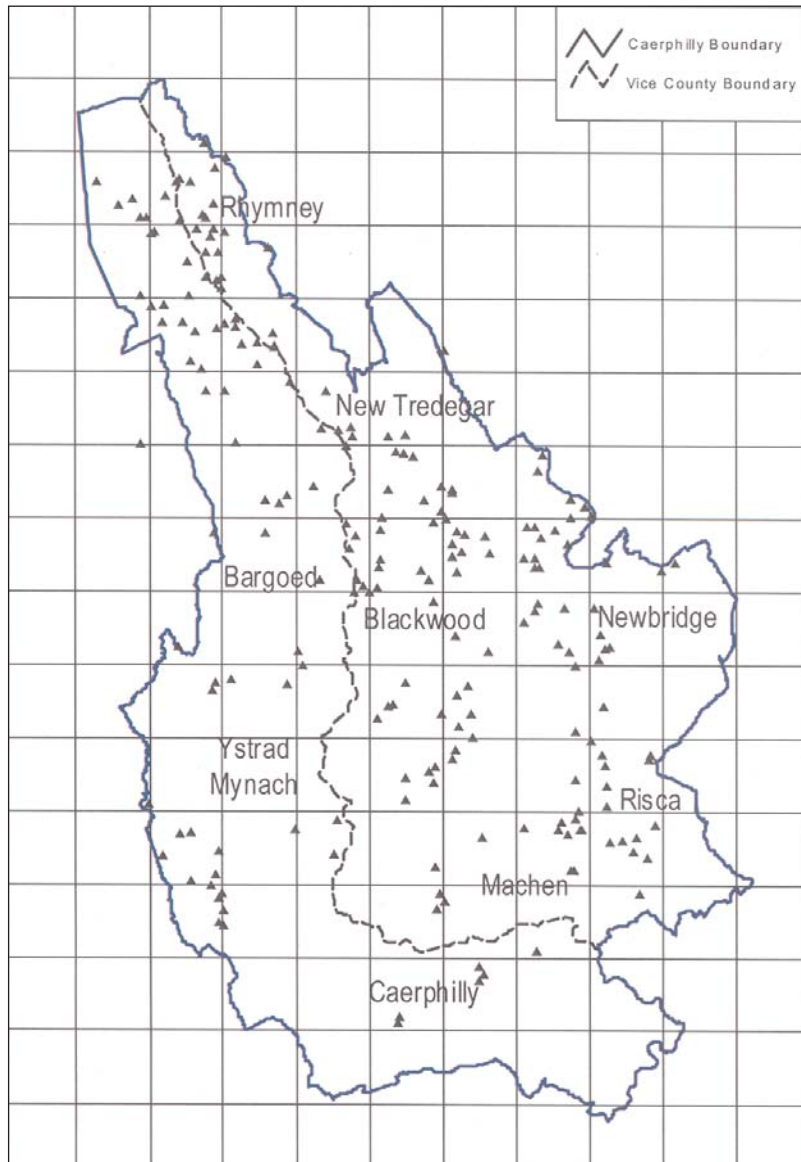


Figure 14 - Location of Tips on the Tip Register
(Source: Local Biodiversity Action Plan)

active quarries are Gelligaer and Machen Quarries. The former extracting primarily pennant sandstone and the latter limestone. Large scale opencasting for coal has historically taken place in the north of the County borough where outcrops are near the surface.

8. Potential future opencast coal extraction.
9. The protection and maintenance of the integrity of designated RIGS and geological SSSIs
10. Soils permeability and implications for flood risk

ISSUES

1. Demand for future aggregate.
2. Shallow mine workings.
3. Geological instability.
4. Problems associated with contaminated land, including issues of remediation, soil function and carbon absorption /release
5. Changing landuse
6. Visibility and accessibility of geological features.
7. Levels of waste produced and amounts recycled.

Geology and Geomorphology					
Living Environment Community Plan Theme					
Issue	Objective	Indicator	Target	Source	SA Area
1 Soils	To make the most efficient use of land and to reduce contamination and safeguard soil quantity, quality and permeability.	a. Hectares of development on agricultural land of grades 1,2 and 3A.	No Grade 1, 2 or 3A agricultural land is lost to non-agricultural development.	www.wales.gov.uk/kpstats/cont/cont/pub/comp	Environmental
		b. Area of development on brownfield land	That ???% of residential development takes place on brownfield land (percentage will not be known until sites are allocated.)	CCBC Development Control Monitoring	Environmental
		c. Hectares of land reclaimed.	Reduce the amount of derelict land throughout the plan period.	CCBC Development Control Monitoring	Environmental
		d. Number of potential contaminated sites brought into use via remediation and redevelopment	Reduce the overall number of potentially contaminated sites within the County Borough	CCBC Environmental Health Data	Environmental
2 Geology	To protect geologically important sites and improve their accessibility	e. Area of approved development on land designated as RIGs or geological SSSIs	No loss of land or setting for Regionally Important Geological Sites (RIGs) or Geological Sites of Special Scientific Interest (SSSIs)	CCBC Development Control Monitoring	Environmental
3 Waste	To reduce the amount of waste produced and increase the reuse of materials	f. Total tonnes of waste to landfill	Reduce the amount of waste going to landfill by 1% per year between 2007 and 2017	CCBC Public Services Improvement Plan	Environmental
		g. Percentage of municipal waste recycled	Increase recycling from municipal waste from 27% to 40% by 2017 and to maintain the increase to the end of the plan period.	CCBC Public Services Improvement Plan	Environmental
		h. Average amount of waste per household	Reduce the amount of waste produced per household per year to ¾ tonne by 2013 & maintain the reduction to the end of the plan period	Public Services Monitoring Data	Environmental
		i. Percentage of biodegradable waste diverted from landfill	Reduce the percentage of biodegradable waste going to landfill to 35% of the 1995 year level by 2020.	CCBC Public Services Improvement Plan	Environmental
		j. Number of sites providing public recycling facilities	Increase the number of facilities over the plan period	CCBC Public Services Improvement Plan	Environmental
		k. Percentage of construction and demolition waste reused	Reuse of construction and demolition waste increased to in excess of 80% by the end of the plan period.	CCBC Public Services Improvement Plan	Environmental

BIODIVERSITY

Background

B1

Bio diversity includes the entire spectrum of life on land and in the water ranging from bacteria, fungi, lower plants and flowering plants to insects, amphibians and reptiles, birds and mammals. Caerphilly county borough is rich in bio diversity. However, during the last 50 years there has been a dramatic loss in the abundance and variety of species and habitats occurring at the global, national and local levels. During the last 100 years the UK alone has witnessed the loss of 100 species and the decline in numbers of species observed during the last 50 years indicate that we are likely to see many more extinctions in the immediate future. The loss of habitat is a primary cause of decline in the range and populations of many UK

species. As a first stage to help combat this decline the UK Government has produced an Action Plan which sets the broad strategy for conserving and enhancing bio diversity. From this UK priority species and habitats have been identified based on the status of critical species and habitats, together with threats to their survival. Details of those within the authority are provided below.

B2

Figure 15 shows the location of designated sites within the county borough. Aberbargoed Grasslands is the only Special Area of Conservation, a European designation, within the county borough. Further to the SEA Directive, the Directive on the Natural Habitats of Wild Fauna and Flora 92/43/EEC (Habitats Directive) requires that an Appropriate Assessment is undertaken for 'any plan or project, alone or in combi-

nation with other plans or projects, that is likely to have a significant effect on any Natura 2000 site'; in this instance the Aberbargoed Grasslands (as it lies within the county borough) and three sites that lie in close proximity to the county borough and may be affected by the LDP policies, i.e the Severn Estuary, Castell Coch Beech Woods, Cwm Clydach Woodlands. The Appropriate Assessment (AA) should concentrate on any implications for the site in view of the site's conservation objectives. It is intended to include the required AA for Aberbargoed within the Sustainability Appraisal. The county borough also has 10 nationally important sites, Sites of Special Scientific Interest of which 5 have been designated for their biological interest and the remaining 5 of geological interest. There are also 4 local nature reserves and 188 sites of

importance for conservation (SINCs) within the county borough. These designations identify areas which are of local conservation interest and in some cases contain habitats and species of national significance. These SINCs, and other sites, are currently being reviewed as part of the LDP process. There are also a number of other 'designated' nature reserves ranging from sites operated by Wildlife Trusts to private businesses and schools.

B3

The county borough contains a number of priority habitats and priority species. The Caerphilly Local Bio Diversity Action Plan has identified 10 broad habitat types and 16 species groups. The UK priority species and habitats, within these designations, that are known to be present within the county borough are set out in Appendix 5

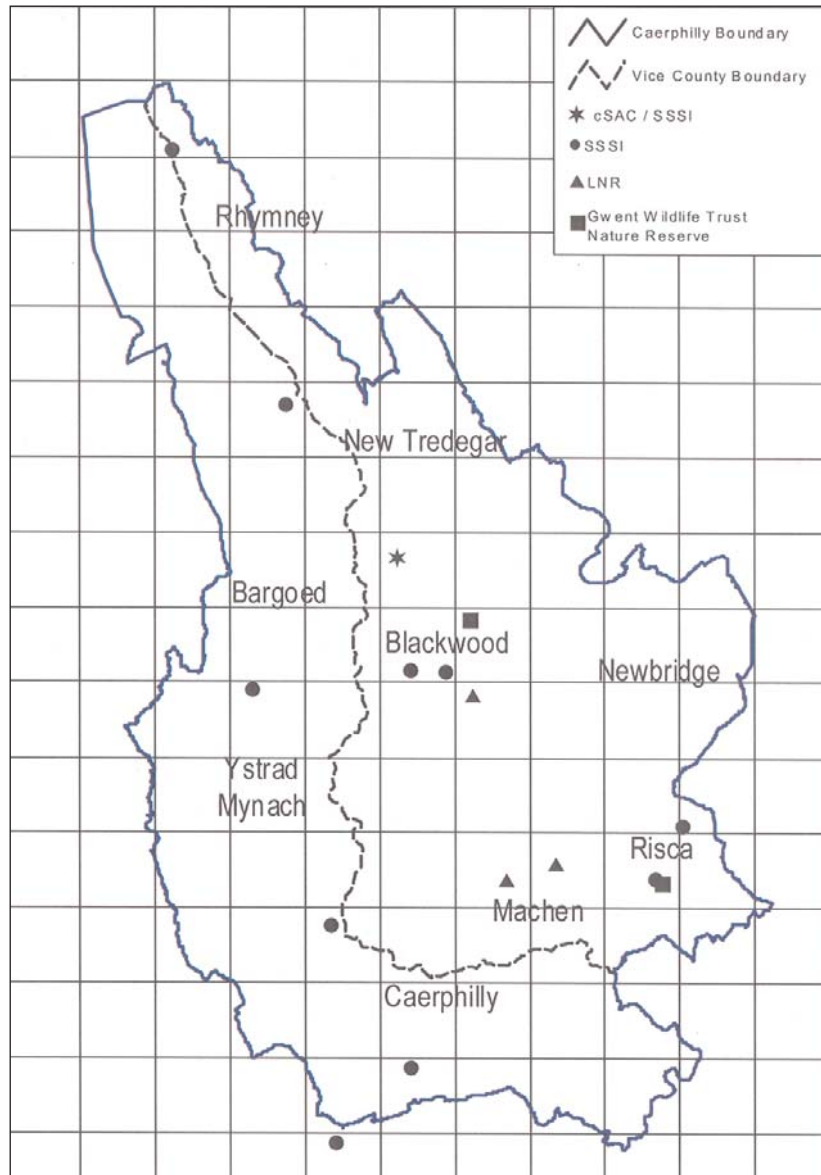


Figure 15 - Designated Sites in Caerphilly County Borough (Source: Local Biodiversity Action Plan)

B4

The main reasons for the loss of biodiversity are considered to be through development, land use change, agricultural intensification, pollution, introduction of non-native species, disturbance, neglect, over exploitation, climate change and a lack of knowledge. Within Caerphilly county borough its wildlife is threatened by many human activities but the two key threats are, considered to be, from development and changes in land management. Of importance here is the loss of wildlife corridors whether this be hedgerow removal, breakup of vegetation along water courses, or creation of barriers within water-courses. There are also threats from invasive species including plants such as Japanese Knotweed and Himalayan Balsam and animals such as Grey Squirrels and Signal Crayfish.

ISSUES

1. Avoid damage to designated wildlife and geological sites within and beyond the County borough.
2. Protect and enhance protected species.
3. Maintain bio diversity avoiding irreversible losses.
4. Retain and improve mosaic of habitats and wildlife corridors.
5. Protect ecology from adverse agricultural changes.
6. Ensure the management of key wildlife sites.
7. Reduce potential damage by climatic change.
8. Provide opportunities for people to understand and appreciate wildlife.
9. Invasive species
10. Recreational and development pressures.

Biodiversity					
Living Environment Community Plan Theme					
Issue	Objective	Indicator	Target	Source	SA Area
1 Bio-diversity	To enhance the biodiversity of the county borough	a. Percentage of selected BAP species stable or increasing	Ensure the presence of all 26 monitored species is retained in the County Borough throughout the plan period. Realise an increase in number and range of selected species over the plan period	Local Biodiversity Action Plan	Environmental
		b. Area of biological SSSI lost to development	No net loss of area of biological SSSI to development	CCBC Development Control Monitoring	Environmental
		c. Area of LNR and SINC lost to development.	Reduce the percentage of land identified as LNR or SINC below that lost under the previous development plan	CCBC Development Control Monitoring	Environmental
		d. Numbers of approved planning applications including loss of hedgerows and woodlands	Less than 1% of planning applications result in the loss or compromise of woodland or hedgerows.	CCBC Development Control Monitoring	Environmental
		e. Reduce the area of coverage of key invasive plant species	Reduce the coverage of Japanese Knotweed, Himalayan Balsam and Giant Hogweed throughout the county borough to 205 of the 2007 level.	CCBC Countryside and Landscape Data	Environmental

CLIMATIC FACTORS

Background

CF1

There is strong scientific evidence that climatic change is largely caused by man, primarily through the use of energy. The emissions of greenhouse gases are contributing to global warming and changing weather patterns. The UK Climate Impact Programme (UK CIP) has developed several different scenarios of the severity of climate change. These are based on different forecasts of increased temperature, rainfall, sea level rise etc. On the whole, research concludes that in the UK winters will become milder, wetter and stormier, whilst the summer months will become hotter and drier resulting in further incidence of drought. Further research carried out by the National Assembly for Wales and the Department of the Environment Farming and Rural Affairs has attempted to

make forecasts on the impact this will have on the way we live, agriculture, vegetation and species distribution. It is clear that that there will be effects on both human health and wellbeing and changing weather patterns which will effect every aspect of the global environment.

CF2

Whilst the impact of climatic change is likely to be global it is considered that its causes are mainly generated by western industrialised countries (details of pollutants contributing to climatic change are outlined in the air pollution section). As such the environmental adage used during the 1980s, of 'think global but act local' holds true as it is the industrialised countries that are best placed to help mitigate climatic change. The National Assembly for Wales advocates the precautionary principle. Climate change will have implications for the design of new buildings.

As a result new building design should adopt green technologies as far as is practical.

CF3

This can be implemented through three main themes, a change in the way that energy is generated moving towards new renewable sources, a change in the way that we use energy by seeking to minimise use, and, preparing for the changes that climate change is likely to bring by reducing vulnerability to the effects of climate change, e.g flooding, disruption to travel by extreme weather.

CF4

Windfarm generated electricity is, potentially, the most likely form that renewable energy generation will take over the LDP period. Windfarms are not without their issues and impacts upon landscape, ecology and the environment generally are

major considerations in considering such uses. TAN 8 - Planning for Renewable Energy identifies seven areas (Strategic Search Areas) where large scale windfarms should be located. None of the identified sites are within the Caerphilly area. Without such a site the authority could be subject to smaller scale proposals for wind generation focussing on small scale local need. Whilst the smaller size of such facilities may reduce the overall impact, small scale provision is still likely to have significant impacts at a local scale.

CF5

Global causes are however likely to lead to instances where mitigation will not be possible e.g where vulnerable species and habitats are at the edge of their geographical range.

ISSUES

1. Unpredictability of climate change.
2. Reduction of greenhouse gas emissions.
3. Risk of flooding and storm damage.
4. New standards of heating and insulation.
5. New methods of power supply.
6. Effect on bio diversity.
7. Effects on human health and well being
8. Increased incidence of drought

Climatic Factors

Living Environment Community Plan Theme

Issue	Objective	Indicator	Target	Source	SA Area
1 Climate Change	To reduce the total amount of CO2 produced within the county borough each year	a. Tonnes of CO2 / year	Reduce CO2 emissions to 80% of the 1999 levels by 2010 and to 69% of 1999 levels by 2021	Counting Consumption Stockholm Convention	Environmental
		b. Carbon Footprint	Reduce the carbon footprint of residents of the county borough below the 2006 level	New monitoring mechanism required	Environmental
		c. Number of businesses adopting Environmental Management Systems.	Year on year increase in numbers of businesses adopting Environmental management Schemes	CCBC Economic Development Monitoring data	Environmental

Regeneration Community Plan Theme

2 Transport	To reduce congestion by minimising the need to travel, encourage alternatives to the car and make best use of the existing transport infrastructure.	d. Levels of private car ownership	Maintain car ownership levels below the Welsh average	WWW.Caerphilly.gov.uk/censusdata	Social
		e. Levels of public transport usage	Year on year increases in public transport patronage throughout the plan period	CCBC Transport Monitoring data	Social
		f. Average journey time data	Realise decrease in average journey times from 2006 level by the end of the plan period Road traffic reduction in accordance with government 10 year plan	CCBC Transport Monitoring data	Social
		g. Number of companies adopting green travel plans	Year on year increase in numbers of businesses adopting Green Travel Plans	CCBC Transport Monitoring data	Economic
		h. Percentage of public footpath network open	Year on year increase in lengths of public footpaths open and passable	CCBC Rights of Way Improvement Plan	Environmental
		i. Number of school travel plans prepared.	100% of schools to have a travel plan by the end of the plan period	CCBC Highways Department Travel Plans	Environmental
3 Energy	To increase the proportion of energy gained from renewable sources.	j. Percentage of energy used in CCB generated from renewable sources	Ensure levels of corporate energy use does not fall below the 50% target set for 2010.	CCBC Corporate Energy Data	Environmental
		k. Amount of renewable energy supplied to the national grid	Increase amount of energy supplied to the national grid over the period of the plan.	www.statistics.gov.uk	Environmental
		l. Number of new build properties generating electricity from renewable sources.	All new housing development to produce at least 10% of their energy requirement by the end of the plan period.	CCBC Planning & Property Services Data	Environmental

MATERIAL ASSETS

Background

MA1

Material Assets are considered to be the infrastructure upon which the functioning of the County borough relies. This includes education facilities (including schools), hospitals and health infrastructure, power generation (including renewable energy) and distribution, highway and communication infrastructure, water infrastructure (including flood defences and utilities).

MA2

The majority of the settlements in the County borough were constructed over a relatively short period of time in response to the changing economy of the area which became dominated by heavy industry. Whilst these settlements were built to cater for the demands of the day the standards fall short of what is expected today. Obvious examples of this are

the road and sewerage systems. The infrastructure put in as part of these developments is in many instances in need of replacement and repair and the design of settlements can make this difficult to undertake. There are no major sewage treatment sites within the County borough and there is existing capacity within the three trunk sewers serving the County. There are however likely to be localised capacity problems in specific areas due to problems with the subsidiary sewers feeding into the main network

MA3

As an example of damaged infrastructure throughout the UK nearly 20% of drinking water is lost to the system through leakages and this situation is likely to be similar within the County borough.

MA4

The provision of recreational facilities which often take large areas of land

are difficult to provide once development has taken place and there is an increasing trend to participate in recreational activities putting additional pressure on existing resources. This is also true for the provision of land and facilities for burials in terms of the location of sites and land requirements, where identifying sites to meet future strategies may be extremely difficult.

MA5

In other areas the County borough is well served by existing infrastructure eg the footpath network. The County borough was the first in Wales to be provided with comprehensive Broadband coverage and is well served by other modern technologies.

ISSUES

1. Capacity of existing Infrastructure.
2. Condition of existing infrastructure.
3. Need to make most of existing IT technologies.
4. Location of provision in relation to areas of demand.
5. To improve the design of development

Material Assets					
Regeneration Community Plan Theme					
Issue	Objective	Indicator	Target	Source	SA Area
1 Material Assets	To improve the performance of material assets within the county borough	a. Length of Highway improved		CCBC Highway Data	Environmental
		b. No.s of CSO (sewers) overflows	Reduction in the number of CSOs throughout the county borough during the plan period	Welsh Water data	Environmental
		c. % satisfaction with town & village centres	Increased levels of general satisfaction expressed by residents towards town and village centres throughout the county borough. Significantly higher increase in levels of satisfaction expressed by residents in the Heads of The Valleys Regeneration Area in comparison to the county borough average.	WWW.Caerphilly.gov.uk/pdf/news	Social
		d. % of households connected to the internet	Year on year increase in the number of households connected to the internet Achieve UK national average levels of internet connectivity across the county borough.	www.bt.co.uk.index	Economic

7 MONITORING

7.1

The regulations require that the targets set as part of the process are monitored. As such baseline data will need to be collected throughout the life period of the plan so that its success can be assessed. The indicators identified have been selected with this in mind. It is likely that much of the information will be sought on an annual basis although this will not be available for all data and in some cases assumptions may need to be made.

7.2.1

In England the Sustainability Appraisal of Regional Spatial Strategies and Local Development Documents (OPDM Nov 2005) indicates that the Annual Monitoring Reports produced by each planning authority should include the findings of the SA monitoring. This advice will be

followed in the production of the LDP and its monitoring.

8 THE PROCESS

8.1

This is the first stage of the process of SA and following consultation has identified key environmental considerations that have emerged as part of the base line survey. These maybe refined further in line with any additional observations received. The next stages in the process are set out below with key dates being specified. These relate to the Delivery Agreement with WAG which can be found on the Councils website.

April 2007

Pre Deposit Draft LDP and Draft Environment Report, 6 week consultation.

2007/08

Undertake changes to LDP and SA

June 2008

Deposit LDP and Environmental Report, 6 week consultation.

October 2008

Consultation on alternative sites and check compliance with SA.

December 2008 SEA/SA Statement.

Appendices

APPENDIX 1 - MEMBERSHIP OF THE SUSTAINABILITY GROUP

External Representatives

(by Company/Organisation):

Countryside Council For Wales	Economic Development Officer
Environment Agency	Health Improvement Officer
Forestry Commission	Community Safety Officer
CADW	Environmental Health (Pollution) Officer
Welsh Water	Highways Officer
British Telecom	Housing Strategy and Resources Manager
WDA	Research Officer
Glamorgan Gwent Archaeological Trust	Leisure Officer
Farmers Union of Wales	Waste Strategy Officer
Health Authority	Education Officer
GAVO	Waste Management Officer
Gwent Police	Chief Planning Officer
	Strategic Planning and Urban Renewal Manager

Council Representatives

(by area of expertise):

Landscape Officer
 Ecologist
 Conservation
 Energy Officer
 Sustainability Officer

APPENDIX 2 - TERMS OF REFERENCE FOR THE SUSTAINABILITY GROUP

**Caerphilly Local Development Plan
The Sustainability Appraisal And
Strategic Environmental Assessment
Working Group
(The Sustainability Group)**

Terms Of Reference

Primary Purpose

1 - The Group will provide expert advice and information to assist in the production of the Sustainability Appraisal and Strategic Environmental Assessment (SA/SEA) for the emerging Caerphilly Local Development Plan.

Objectives

2 - The Working Group will:

- Assist in the development of the methodology for the SA/SEA
- Assist in the identification and quantification of Sustainability Objectives and monitoring criteria.

- Assist in the development and revision of the Assessment Framework against which the LDP policies and implication will be assessed.
- Consider the assessment of the plan implications and make recommendations to the LDP Focus Group/LDP Stakeholder Panel for amendments to the LDP based on environmental and sustainability grounds.
- Make recommendations on consultation matters to the LDP Focus Group.

Membership Mandate

3 - The Working Group is an advisory Group, without decision making powers and as such will only operate successfully if the aim of producing a coherent and balanced SA/SEA is maintained, and compromise and consensus building are

achieved. Therefore Members of the Group will need to:

- be able and willing to make decisions and recommendations on behalf of their body at the meetings in respect of the SA/SEA
- be committed to working toward producing an SA/SEA that will assist and inform the plan making process
- work with the group, accommodating views that are different from their own, seeking consensus and accepting compromise to reach agreement on the issues before the group
- be open minded and consider the whole picture, not seeking to promote sectional interests
- buy into the improved SA/SEA and support and encourage its appropriate implementation

Composition

4 - The Working Group will comprise of the following 29 members:

- Council Representatives
- Landscape Officer
- Ecologist
- Conservation
- Energy Officer
- Sustainability Officer
- Building Control Officer
- Economic Development Officer
- Health Improvement Officer
- Community Safety Officer
- Environmental Health (Pollution) Officer
- Highways Officer
- Housing Strategy and Resources Manager
- Research Officer
- Leisure Officer
- Waste Strategy Officer
- Education Officer
- Waste Management Officer

External Representatives
Countryside Council For Wales
Environment Agency
Forestry Commission
CADW
Welsh Water
British Telecom
WDA
Glamorgan Gwent Archaeological Trust
Farmers Union of Wales
Health Authority
GAVO
Gwent Police

Substitutes

5 - It is accepted that some members may not be able to make every meeting. A representative may be sent in place of the original member subject to two requirements, both of which need to be satisfied:

- The substitute is fully aware of the outcomes of previous meetings and is in a position to actively participate

- The substitute complies with the requirements of the Membership mandate.

6 - Where no suitable substitute is possible, any input the member wishes to make on the information before the Group should be submitted to the Council, in writing, to arrive no later than 3 days before the date of any meeting, in order for the information to be reviewed and presented to the Group as appropriate.

Quorum

7 - The Working group is not a formal decision making body. As decisions will not be made at the meetings it is not necessary to have a quorum limit.

Meeting Chair

8 - The group meetings will generally take the form of a facilitated discussion. Whilst it would not normally be the case that such meetings would require a Chair, the SA/SEA (in con-

junction with the LDP) is being produced within a very strict timescale. Consequently the meetings will need to have a mechanism for resolving issues that cannot be agreed by mutual compromise. Consequently the meeting will be chaired by the Principal Planner (Countryside), with the Vice-Chair being the principal Planner (Strategic and Development Planning).

Meeting Frequency

9 - The Working Group will meet as and when required. This may result in long periods where meetings are not necessary, and periods where a number of meetings are required. In order for members to have the necessary time to include meetings into their schedules, dates for meetings will be set for at least 6 months in advance of each meeting.

10 - It may be necessary, due to unforeseen circumstances, to call a

meeting at relatively short notice (precluding the 6 month advance notice). Special Meetings will only be called where the need for the meeting is urgent and where the outcomes from the meeting are required to ensure compliance with LDP Delivery Agreement. Where a Special Meeting is called, members will be afforded the maximum amount of notice that is possible within the timeframe allowed.

Meeting Information

11 - Information for each meeting will be sent to members of the Working Group to be received no later than 14 days prior to the date of the meeting.

12 - In order to ensure that the meetings are focussed, and to achieve the outcomes necessary and within the timescale laid out by the Delivery Agreement, a schedule of outcomes for each meeting will be

included in the meeting documentation.

Resolving Disagreement

13 - The Group is advisory only in nature and will assist in the production of the SA/SEA. However the decision making process for content of the document will rest with the Planning section of the Council. The Meeting Chair and vice-chair will, therefore, be responsible for considering any issues where a consensus view is not possible, and determine the appropriate action for the SA/SEA. For such issues the Meeting Chairs will report the decision back to the next meeting of the Group.

Reporting Mechanism

14 - A record of the discussions and agreements from each meeting will be produced and will be made available for public inspection on the internet. All records will be

reported to the relevant Scrutiny Committee as part of the process.

15 - Any recommendations for changes to the LDP document, or for consultations on the SA/SEA document will be reported to the LDP Focus Group for decision-making.

APPENDIX 4 - UK PRIORITY SPECIES AND HABITATS IN CAERPHILLY COUNTY BOROUGH

HABITAT KEY					
W	Wetlands	SG	Species-rich Grasslands	PL	Post-Industrial Land
DW	Deciduous Woodlands	CL	Common Land	UR	Urban Habitats
CW	Planted Coniferous Woodland	FF	Ffridd/Coedca		
WC	Wildlife Corridors	H	Heathland		

Common Name	Scientific Name	Broad Habitat Type	Other habitat
1 Amphibians			
Common Frog	Rana Temporaria	Wetlands (mosaic of habitats)	DW, WC, SG, CL, PL, UR
Common Toad	Bufo Bufo	Wetlands (mosaic of habitats)	DW, WC, SG, CL, PL, UR
*Great Crested Newt	*Triturus Cristatus	Wetlands (mosaic of habitats)	DW, WC, SG, H, CL, PL, UR
Palmate Newt	Triturus Helveticus	Wetlands (mosaic of habitats)	DW, WC, SG, CL, PL, UR
Smooth Newt	Triturus Vulgaris	Wetlands (mosaic of habitats)	DW, WC, SG, CL, PL, UR
2 Birds			
Barn owl	Tyto Alba	Mosaic of habitats	DW, WC, SG, CL, PL, UR
*Bullfinch	*Pyrrhula Pyrrhula	Deciduous Woodlands	W, WC, UR
Buzzard	Buteo Buteo	Species-rich Grasslands	DW, WC, CL, PL
Curlew	Numerius Arquata	Species-rich Grasslands	CL, FF, H
Dipper	Cinclus Cinclus	Wetlands	WC, CL
Goshawk	Accipiter Gentilis	Planted Coniferous Woodlands	DW (clearings)
Green woodpecker	Picus Viridis	Deciduous Woodlands	W, WC, SG, CL, FF, H
*Grey partridge	*Perdix Perdix	Species-rich Grasslands	WC, FF, H
Grey wagtail	Motacilla Cinerea	Wetlands	CL, PL
House sparrow	Passer Domesticus	Urban Habitats	

Common Name	Scientific Name	Broad Habitat Type	Other habitat
Kestrel	Falco Tinnunculus	Mosaic of habitats	DW, CW, WC, SG, CL, PL, UR
Kingfisher	Alcedo Atthis	Wetlands	CL
Lapwing	Vanellus Vanellus	Post-Industrial Land	SG, CL (industrial landscaping and arable farmland)
*Linnet	*Carduelis Cannabina	Heathland, Ffridd	WC, CL
Little owl	Athena Noctua	mosaic (open habitats)	DW, WC(hedgerows), CL, PL, UR
Long-eared owl	Asio Otus	Deciduous Woodlands (rides and edges);	CW
*Nightjar	*Caprimulgus Europaeus	Planted Coniferous Woodlands (early growth, clearfell);	DW CL, H, UR
Peregrine falcon	Falco Peregrinus	Post-Industrial Land (quarries)	CL, UR
*Reed bunting	*Emberiza Schoenichlus	Wetlands	DW, CL
*Skylark	*Alauda Arvensis	Species-rich Grasslands	CL, FF, H, PL
*Song thrush	*Turdus Philomelos	Deciduous Woodlands	WC, SG, UR
*Spotted flycatcher	*Musciapa Striata	Deciduous Woodlands	WC, UR
*Tree sparrow	*Passer Montanus	Deciduous Woodlands	WC
Yellowhammer	Emberiza Citrinella	Ffridd/Coedcae	WC, DW, H (gorse stands)
3 Native wild fish			
Brook lamprey	Lampetra Planeri	Wetlands (rivers and streams)	
Bullhead	Cottus Gobio		
Common eel	Anguilla Anguilla		
Native brown trout	Salmo Trutta		
Salmon	Salmo Salar		
Sea trout	Salmo Trutta		
Stone loach	Noemachelius Barbatulus		
3-spined stickleback	Gasterosteus Aculeatus		

Common Name	Scientific Name	Broad Habitat Type	Other habitat
4 Mammals			
Badger	Meles Meles	Deciduous Woodlands	CW, WC, SG, CL, PL
*Brown hare	*Lepus Europaeus	Species-rich Grasslands	DW, CL, H
Brown long-eared bat	Plecotus Auritus	Deciduous Woodlands	WC, CL, PL, UR (open woods)
Daubentons bat	Myotis Daubentonii	Wetlands	CL, PL, UR
*Dormouse	*Muscardinus Avellanaris	Deciduous Woodlands	CW, WC
*European otter	*Lutra Lutra Lutra	Wetlands	DW (wet woodland)
*Greater horseshoe bat	*Rhinolophus Ferrumequinum	mosaic	(W), WC, SG, CL
*Lesser horseshoe bat	*Rhinolophus Hipposideros	Woodland	DW, CW, WC, CL, UR
Natterers bat	Myotis Nattereri	mosaic	W, WC, CL
Noctule bat	Nyctalus Noctula	mosaic	W, DW, (CW), SG, CL, PL, UR
*Pipistrelle bat	*Pipistrellus Pipistrellus	mosaic	W, DW, WC, SG, CL, UR
Whiskered/brandts bat	Myotis Mystacinus/	mosaic	W (some wet areas); DW, CL, UR
*Water vole	*Arvicola Terrestris	Wetlands	(rivers, fen, reedbed, swamp)
Yellow-necked mouse	Apodemus Flavicollis	Deciduous Woodland	(beech and yew woodland) (mixed coppice woods)
5 Reptiles			
Adder	Viper Berus	mosaic	(CW), WC, SG, CL, H, PL, UR
Common lizard	Lacerta Vivipara	mosaic	(CW), WC, SG, CL, H, PL, UR
Grass snake	Natrix Natrix	mosaic	W, (CW), WC, SG, CL, H, PL, UR
Slow worm	Anguis Fragilis	mosaic	(CW) WC, SG, CL, H, PL, UR
6 Beetles			
7 Bees, wasps and ants			
*Red wood ant	*Formica Rufa	Deciduous Woodlands	(lowland beech and yew woodland)
8 Butterflies and moths			

Common Name	Scientific Name	Broad Habitat Type	Other habitat
*Bordered gothic moth	*Heliophobus Reticulata	Species-rich Grasslands	(rhos pasture); DW
*Buttoned snout moth	*Hypena Rostralis	Urban Habitats	PL
*Double line moth	*Mythimna Turca	Species-rich Grasslands	(rhos pasture); DW (rides/glades)
*High brown fritillary	*Argynnis Adippe	Ffridd/Coedcae	DW, SG, CL, H
*Marsh fritillary	*Eurodryas Aurinia	Species-rich Grasslands	(rhos pasture); H (wet heath)
*Pearl-bordered fritillary	*Boloria euphrosyne	Ffridd/Coedcae	SG, CL, H (bracken areas)
Other Moths	Various species	mosaic of habitats	DW (wet woodland) (rides/glades); WC, H, PL, UR
*Waved carpet moth	*Hydrelia sylvata	Deciduous Woodlands	(lowland beech & yew woodland) (coppice)
9 Crustacea			
*White clawed crayfish	*Austropotamobius pallipes	Wetlands	(rivers and streams, canal)
10 Dragonflies & Damselflies			
Dragonflies/Damselflies	various species	Wetlands	DW (rides/glades), WC, CL, PL, UR
11 Grasshoppers & Crickets			
12 Snails And Slugs			
13 Spiders			
14 Fungi			
15 Lichen And Liverworts			
16 Vascular Plants			
Bluebell	Hyacinthoides nonscripta	Deciduous Woodlands	WC, CL, FF, PL, UR
Common reed	Phragmites australis	Wetlands	(reedbeds, swamp, fen)
Cornish moneywort	Sibthorpia europea	Wet Woodland	(wet/damp habitats)
Cowslip	Primula veris	Wildlife Corridors	CL, PL, UR
Orchids	various species	Species-rich Grasslands	W, CW, DW, WC, CL, H, PL, UR
Yellow	rattle Rhianthus	minor Species-rich Grasslands	(neutral grassland); CL, PL

The important species, above, are highlighted with an asterix. It is the intention to monitor the important species only. However, should monitoring of any of the other species listed above be undertaken, this information will be also be utilised.

APPENDIX 5 - SOURCES OF BASELINE AND CHARACTERISATION DATA, INDICATORS AND TRENDS

Population and Human Health

- A1 Total Population: Caerphilly Local Health Board, Caerphilly Health, Social Care and Well-Being Needs Assessment (2003)
- A2 Population of Settlements: www.neighbourhood.statistics.gov.uk
- A3 Population born in Wales: www.neighbourhood.statistics.gov.uk
- A4 Population Change: www.caerphilly.gov.uk/censusdata
- A5 Welsh Speakers: www.Caerphilly.gov.uk/census_data
- A6 Ethnic Minorities: www.neighbourhood.statistics.gov.uk
- A7 Births and Life Expectancy: www.wales.nhs.uk/sites/page.cfm/caerphilly
- A8 Illness and Mental Health: www.wales.nhs.uk/sites/page.cfm/caerphilly
- A9 Cause of Death: www.wales.nhs.uk/sites/page.cfm/caerphilly
- A10 Obesity: www.wales.nhs.uk/sites/page.cfm/caerphilly
- A11 Neighbourhood Satisfaction Survey: www.caerphilly.gov.uk/pdf/news
- A12 Crime Rates: www.statscom.org.uk
- A13 Unemployment Rates: www.caerphilly.gov.uk/censusdata
- A14 Economic Inactivity Levels: www.caerphilly.gov.uk/censusdata
- A15 Labour Market: www.nomisweb.co.uk
- A16 Household Tenure: www.caerphilly.gov.uk/censusdata
- A17 Age of Housing Stock: www.nhs.uk/sites/page.cfm/caerphilly
- A18 Housing Supply: Caerphilly County Borough Council, Housing Needs Survey (2003)
- A19 Housing Affordability: www.landregistry.co.uk
- A20 Caerphilly County borough Council, Planning Research, (unpublished)
- A21 Homelessness: www.caerphilly.gov.uk/supportingpeople/htm
- A22 Educational Achievement: www.Caerphilly.gov.uk/censusdata
- A23 Household Incomes: www.nhs.uk/sites/page.cfm/caerphilly
- A24 Index of Multiple Deprivation: www.wales.gov.uk/keypubstatisticsforwales
- A25 Ecological Footprint: www.sei.se/reap/local/data/LA%20EF%20Accounts%20-%20jan%202006%20-%20Caerphilly.xls

A26 Racist Incidents: www.statscom.org.uk

A27 Volunteering Levels: intranet stellcom/stellent/groups/public/@policycentpub/documents/reports

A28 Welsh Assembly Government, Heads - We Win, A Strategic Framework for the Heads of the Valleys (2003)

A29 Better Environment Healthier People - Environment Agency

Geology and Soils

- E1 Topography: www.landmap.ccw.gov.uk/bridgendcaerphillyrhonddacynontaff/geology
- E2 Rock Types: www.environment-agency.gov.uk/regions/wales/waterresources/858612
- E3 Soil Coverage: Rhymney Valley Landscape Strategy - Landscapes Working for Wales - TACP 1994. Islwyn Landscape Strategy - Landscapes Working for Wales - Land Use Consultants 1996.
- E4 Agricultural Land Classification: www.wales.gov.uk/kpstats/cont/cont/pub/comp
- E5 Tip Locations: www.caerphilly.gov.uk/
- E6 Recycling: www.sewaleswasteplan.org
- E7 Recycling: www.wales.gov.uk/subenv/cont/waste
- E8 Recycling and composting rates: Aiming for Maximum Diversion, Resource, Zoe Lenkiewicz, (2006)
- E9 Recycling Targets: www.caerphilly.gov.uk/pdf/councilperformance/part4-environment

Water

- W1 Rainfall: Environment Agency, Local Environment Agency Plan, Eastern Valleys, Consultation Report (1998)
- W2 Riverflows: www.environment-agency.gov.uk/cams

- W3 Rhymney bio/chemical water quality: www.environment-agency.gov.uk/cams
- W4 Ebbw and Sirhowy bio/chemical water quality: Environment Agency, Draft Ebbw and Sirhowy Catchment Area Management Plan 2005.
- W5 Water Framework Directive: www.environment-agency.gov.uk/business
- W6 Water Users: www.environment-agency.gov.uk/cams
- W6 Wildlife Protection: www.caerphilly.gov.uk/leisure/countryside/biodiversity
- W7 Water consumption and quality: www.defra.gov.uk/env/stats/inlwater

Cultural Heritage and Landscape

- C1 Broad Culture: www.landmap.ccw.gov.uk/bridgendcaerphillyrhonddacynontaff/culture
- C2 Broad History and Heritage: www.landmap.ccw.gov.uk/bridgendcaerphillyrhonddacynontaff/history
- C3 Protected Historic Buildings, Monuments and Landscapes; CCBC Records of Listed Buildings, Historic Parks and Gardens and Historic Landscapes 2006 (unpublished). Derived from Cadw's Registers for Glamorgan and Gwent.
- C4 Rural Landuse: National Assembly for Wales, Rural Development Plan for Wales 2000 - 2006 (2000)
- C5 Landuse: National Assembly for Wales, Rural Development Plan for Wales 2000 - 2006 (2000)
- C6 Visual Landscape: www.landmap.ccw.gov.uk/bridgendcaerphillyrhonddacynontaff/visual
- C7 Landscape Character Area Assessments: Rhymney Valley and Islwyn Landscape Strategies - Landscapes Working for Wales, TACP and Land Use Consultants (2004/2006)
- C8 Special Landscape Area Designations: www.caerphilly.gov.uk/pdf/udp

Air Pollution

- B1 Principal Pollutants: www.foe.co.uk/index
- B2 Main Polluting Industries: www.Eper.cec.eu.int

- B3 National Air Quality Standards: www.aeat.co.uk/environment
- B4 Housing Age: www.caerphilly.gov.uk/censusdata
- B5 Levels of car Ownership: www.statistics.gov.uk
- B6 Levels of Commuting: www.statistics.gov.uk/statbase/KS15
- B7 Caerphilly County Borough council, Air Monitoring data 2005 (unpublished)
- B8 General pollution statistics: www.wales.gov.uk/stats/environment/climate
- B9 Tranquillity: <http://www.cpre.org.uk/resources/pub/pdfs/landscape/tranquillity/mapping-tranquillity.pdf>
- B10 <http://www.cpre.org.uk/resources/pub/pdfs/landscape/light-pollution/night-blight-report-32pp.pdf>
- B11 Air Pollution Information System: www.apis.ac.uk/home.html

Material Assets

- H1 Drinking Water Leakage: www.bbc.co.uk/news
- H2 Internet Coverage: www.bt.co.uk/index
- H3 Footpath Condition: Caerphilly County borough Council; Draft Rights of Way Improvement Plan (2006) (unpublished)
- H4 Highway Condition Survey: www.caerphilly.gov.uk/transportandroads/LTP

Climatic Factors

- G1 Climate Change Scenarios: www.wales.gov.uk/stats/content/env
- G2 Climate Change Impacts: www.wales.gov.uk/yourenvironment/environmentfactsandfigures/climate/weatherandclimate
- G3 www.statistics.gov.uk
- G4 Electricity Generated from Renewable Sources: www.statistics.gov.uk
- G5 Effects and Mitigation: Strategic Environmental Assessment and Climate Change: Guidance for Practitioners, CCW, EA,EN,CAG Consultants et al (2004)
- G6 UK Climate Change Programme: www.defra.gov.uk/environment/climatechange/uk/ukcip/index.htm
- G7 Estimated Emissions: www.wales.gov.uk/keypublicstatisticsforwales/contents/environment/climate
- G8 Energy Use: www.caerphilly.gov.uk/councilperformanceplan

Biodiversity

- F1 Local Biodiversity Action Plan:
www.caerphilly.gov.uk/leisure/countryside/biodiversity
- F2 Sites of ecological importance: www.caerphilly.gov.uk/UDP
- F3 Invasive Species: Draft Invasive Plant Species data 2006 (unpublished)
- F4 South East Wales Environmental record Centre (SEWBRcC):
www.sewbrec.org.uk
- F5 Biodiversity Action-plan Reporting System (BARS):
www.ukbap-reporting.org.uk/
- F6 CCW site monitoring: www.ccw.gov.uk