

Caerphilly County Borough Council



Review of Sites of Importance for Nature Conservation



December 2007

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Caerphilly County Borough Council



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Appendix 1. SINC Selection Criteria Summary

Appendix 2. SINC Summary Schedule (separate document)

Appendix 3. SINC Data Sheets and Maps (separate document)



1 Introduction

Hyder Consulting Ltd was commissioned by Caerphilly County Borough Council (CCBC) to undertake a review of its Sites of Importance for Nature Conservation (SINC). The review involved a combination of desk-based and field-based studies carried out during 2007. The CCBC ecologists subsequently obtained information for the designation of watercourses, checked through all the SINC boundaries digitised onto GIS by the council's planning technicians and made any necessary amendments prior to the publication of the Deposit Local Development Plan (LDP) in October 2008.

Background to SINC in Caerphilly County Borough Council

There were a total of 186 designated SINC within Caerphilly county borough in the Council Approved Unitary Development Plan (UDP), 2003. These were derived from the combination of two sets of SINC from the former Islwyn Borough and Rhymney Valley District Councils. These SINC used different and non-standardised evaluation criteria, and contained variable quality and quantity of data.

Between 1996 and 1998, CCBC re-evaluated the inherited SINC and standardised the selection criteria as part of the UDP process and as a review of the biodiversity database for the county borough. This included a desk study and site surveys of approximately 75% of the SINC.

Since 1998, the CCBC Ecologist became aware that changes were necessary to some of the SINC, and in 2004 new regional guidelines for SINC selection criteria were produced in the "*Guidelines for the Selection of Wildlife Sites Across South Wales*" (Gwent Wildlife Trust, 2004). CCBC therefore determined that changes were necessary to update its suite of SINC in the light of recent developments, to inform the emerging Local Development Plan (LDP) and the planning process.

Review Objectives

The objectives of the project were as follows:

- To provide CCBC with a suite of SINC that meet a robust set of criteria, using the selection criteria in the "*Guidelines for the Selection of Wildlife Sites in South Wales*".
- To present information in written and map form, with new SINC boundary maps in a digital format compatible with the CCBC's 'Arc View' GIS system. (CCBC's planning technicians undertook the GIS element of the study using boundary lines hand-drawn by the surveyor, which were subsequently checked by the CCBC ecologists).
- To flag-up currently identified SINC that no longer meet the selection criteria.
- To undertake surveys of SINC as appropriate to improve the quality of data held or to determine the status of new candidate SINC.

Caerphilly SINC Review Steering Group

The review process was guided by a Steering Group, which was established as a sub-group of the Caerphilly Biodiversity Partnership. The steering group membership comprises the following organisations:

- Botanical Society for the British Isles
- British Dragonfly Society
- Butterfly Conservation
- Caerphilly County Borough Council, Planning Division, Countryside and Landscape Service
- Coed Cymru
- Countryside Council for Wales
- Environment Agency Wales
- Forestry Commission Wales
- Glamorgan Bird Club
- Gwent Amphibian and Reptile Group
- Gwent Ornithological Society
- Gwent Wildlife Trust
- Keep Wales Tidy
- Valleys Bat Group
- Wildlife Trust for South and West Wales

The Steering Group members were involved by providing technical advice, checking the data collected during the review process and considering the proposed SINC boundary changes. All the proposed changes to SINC boundaries, removal of SINC or acceptance of new SINC were discussed at the SINC review meetings. SINC review steering group meetings were held on 10th May 2007, 2nd October 2007 and 11th December 2007. Changes to the SINC were only made where the Steering Group endorsed them. SINC were only de-designated if up-to-date survey data proved that their conservation interest had been lost. In cases where there was uncertainty about the quality of an existing SINC, a precautionary approach was applied assuming that the nature conservation interest remained or that there was potential for it to recover over time, and therefore retaining the SINC status.

In addition to commenting on the individual SINC, another objective of the Steering Group was to provide advice and support in the development of a set of specific site selection criteria from the *Guidelines for the Selection of Wildlife Sites in South Wales* for a "Mid-Valleys Area" in order to make them more relevant to the Caerphilly county borough (and neighbouring local authorities of Rhondda Cynon Taff, Merthyr Tydfil and Blaenau-Gwent). The group will also consider and respond to potential future ecological objections and comments of landowners and other parties as part of the emerging LDP and the planning process.

2 Sites covered by the review

A total of 200 sites were assessed. These comprised the 186 SINC included in the UDP and 14 additional prospective SINC that had been subsequently identified by CCBC. An additional assessment of the watercourses within the county borough was carried out by CCBC in discussion with the Environment Agency Wales, but this part of the study was mainly based on existing data and aerial photography, and did not involve any new fieldwork (other than one site visit to the northern part of the River Rhydney by council staff).

Sites protected as Sites of Special Scientific Interest (SSSI) were excluded from the SINC review. This is because they already have protection under the Wildlife and Countryside Act 1981 (as amended), the Countryside and Rights of Way Act 2000 (as amended) and Policy C10 of the UDP. SSSIs designated purely on geological features were also designated as SINC for their associated biological interest, for example Llanbradach Quarry SSSI. Local Nature Reserves were also excluded from the review as they are considered separately from SINC within Policy C11 of the UDP.

There were many instances where areas outside the defined SINC were considered to meet the SINC selection criteria. It was often possible to extend the SINC boundaries to cover these new areas. However, due to time constraints, it was not possible to include features of possible nature conservation value that were not close to existing SINC. In such cases, the potential sites are mentioned in the data sheets describing the closest SINC (in the 'Additional Information' part of the form). It is hoped that this will allow potential biodiversity interest in these nearby areas to be considered when planning issues arise in or close to the SINC. Some of these additional areas may be considered for subsequent surveys and possible designation at future SINC reviews.

The sites covered by the review are listed in Table 1. The table includes the current Council Approved UDP SINC policy reference numbers as well as the numbers as listed in the 1999 UDP Deposit Plan. The date that each site was visited is also shown.

The former UDP SINC reference numbers have been taken as the site's unique identification number, for example C11.1 becomes SINC 001, which will overcome problems with re-numbering for future development plans.

Table 1. SINC Sites within Caerphilly Unitary Development Plan, 2003

Approved UDP Reference and name (current)	Deposit UDP Ref. (1999)	Survey date(s)
C11.1 Traed y Milwyr	C10.1	07/09/2007
C11.2 Nant y Gaseg Moor	C10.2	07/09/2007
C11.3 Tair Carreg Moor	C10.3	06/09/2007
C11.4 Rhydney Grasslands	C10.4	07/09/2007
C11.5 Cefn y Brithdir	C10.5	23/8/07 & 5/9/07
C11.6 Mile End Pond	C10.6	23/08/2007
C11.7 Coed Cefn-rhychdir	C10.7	23/08/2007

Approved UDP Reference and name (current)	Deposit UDP Ref. (1999)	Survey date(s)
C11.8 Mynydd Manmoel	C10.8	03/08/2007
C11.9 Cefn Gelligaer	C10.9	08/03/2007(north), 06/09/2007 (south)
C11.10 Craig Ysgwydd-gwyn	C10.10	06/09/2007
C11.11 Cwm-llydrew Wood	C10.11	05/09/2007
C11.12 Cwm-llydrew Meadows	C10.12	05/09/2007
C11.13 Nant Bargoed Flush	C10.13	05/09/2007
C11.14 Ysgwydd-gwyn-isaf Valley	C10.14	06/09/2007
C11.15 Coed Deri-Newydd	C10.15	05/09/2007
C11.16 Pont Caradog & Nant Llan Woodlands	C10.16	22/08/2007
C11.17 Cwm Syfiog Woodland	C10.17	23/08/2007
C11.18 Troed-rhiw'r-fuwch	C10.18	23/08/2007
C11.19 Y Graig Mire	C10.19	23/08/2007
C11.20 Coed Waun-Bleiddian	C10.20	03/08/2007
C11.21 Manmoel Meadows	C10.21	03/08/2007
C11.22 Twyn - Bleiddiaid	C10.22	30/07/2007
C11.23 Mynydd Pen-y-fan	C10.23	01/08/2007
C11.24 Pen-y-fan Pond and Meadow	C10.24	27/7/ 07 & 1/8/07
C11.25 Hafodrisclawdd	C10.25	01/08/2007
C11.26 Nant-y-felin Wood	C10.26	1 & 17/8/07
C11.27 Coed Argoed	C10.27	01/08/2007
C11.28 Markham Tips	C10.28	03/08/2007
C11.29 Hollybush	C10.29	03/08/2007
C11.30 Llwyn-Bach Woodland	C10.30	03/08/2007
C11.31 Coed-y-moeth & Cwmsyfiog	C10.31	17 & 22/8/07
C11.32 Pen-yr-heol Meadows	C10.32	17/08/2007
C11.33 Markham Railway Line	C10.33	17/08/2007
C11.34 Pen-rhiw'r-eglwys	C10.34	17/08/2007
C11.35 Pen-y-waun	C10.35	17/08/2007
C11.36 Bedwellty Churchyard	C10.36	17/08/2007
C11.37 Nant Cwm-crach	C10.37	17/08/2007
C11.38 Tir-y-ferch-gryno	C10.38	22/08/2007
C11.39 Cwmsyfiog River Meadow	C10.39	22/08/2007
C11.40 Pen-y-fan-fach Grassland	C10.40	30/07/2007
C11.41 Nant Gwynt Woodland	C10.41	30/07/2007
C11.42 Coed Trinant	C10.42	30/07/2007
C11.43 Pentwyn Fields	C10.43	30/07/2007
C11.44 Princetown Meadow	C10.44	07/09/2007

Approved UDP Reference and name (current)	Deposit UDP Ref. (1999)	Survey date(s)
C11.45 Cwm Afon Railway Line	C10.45	11/07/2007
C11.46 Cwm Afon	C10.46	11/07/2007
C11.47 Park Drive Hollow	C10.47	22/05/2007
C11.48 Gwerthonor-isaf Wood	C10.48	22/05/2007
C11.49 Gelligaer Court Meadows	C10.49	22/05/2007
C11.50 Tir Jacks Slopes	C10.50	22/05/2007
C11.51 Pottery Road Woods	C10.51	22/05/2007
C11.52 Cefn Hengoed Hillside	C10.52	22/05/2007
C11.53 Penallta Meadows	C10.53	06/07/2006
C11.54 Waun Rhydd	C10.54	11/07/2007
C11.55 Nelson Bog	C10.55	10/07/2007
C11.56 Brooklands Marsh	C10.56	11/07/2007
C11.57 Llancaiach-fawr Meadows	C10.57	10/07/2007
C11.58 Coed Gelliau'r-gwellt	C10.58	10/07/2007
C11.59 Nant Caeach	C10.59	11/07/2007
C11.60 Nant-gau and Darren Woodlands	C10.60	24 & 27/7/07 & 17/8/07
C11.61 Valentec Nature Reserve	C10.61	27/07/2007
C11.62 Caeau Cwm-corrwg	C10.62	24/07/2007
C11.63 Blackwood Riverside Woodlands	C10.63	24/07/2007
C11.64 Penmaen Woodlands	C10.64	27/07/2007
C11.65 Pen-rhiw Bengi Marsh	C10.65	24/07/2007
C11.66 Nant Philkins Fields	C10.66	16/07/2007
C11.67 Remploy Factory Grounds	C10.67	16/07/2007
C11.68 Cwm Dows Valley	C10.68	16-18/7/07
C11.69 Coed Cwm Philkins	C10.69	16/07/2007
C11.70 Cyncoed Fields	C10.70	16/07/2007
C11.71 Pentwyn-isaf Woodlands	C10.71	24/07/2007
C11.72 Glan-brynar Woodlands	C10.72	19/07/2007
C11.73 Greenlands Meadow	C10.73	19/07/2007
C11.74 Nelson Ponds	C10.74	10/07/2007
C11.75 Ton-y-pistyll Fields	C10.75	18/07/2007
C11.76 Chapel Pastures	C10.76	18/07/2007
C11.77 Ty'n-llwyn Pastures	C10.77	18 & 19/7/07
C11.78 Nant yr Odyn	C10.78	19/07/2007
C11.79 Penmaen Carr	C10.79	19/07/2007
C11.80 School Grassland	C10.80	04/07/2006
C11.81 Coed Duon	C10.81	21/05/2007
C11.82 Crown Estates Meadows	C10.82	04/07/2006

Approved UDP Reference and name (current)	Deposit UDP Ref. (1999)	Survey date(s)
C11.83 Trelyn Woodland & Meadow	C10.83	21/05/2007
C11.84 Crown Roundabout Marsh	C10.84	04/07/2006
C11.85 Bryn Ysafan Meadow	C10.85	04/07/2006
C11.86 Victoria Road Slopes	C10.86	06/07/2006
C11.87 Upper Trelyn Marsh	C10.87	04/07/2006
C11.88 Britannia Wood	C10.88	21/05/2007
C11.89 Ty'n-y-pwll Wood & Tip	C10.89	21/05/2007
C11.90 Cefn Forest Wood	C10.90	21/05/2007
C11.91 Coed y Gelli	C10.91	21/05/2007
C11.92 Cwm Gelli Wood & Meadow	C10.92	21/05/2007
C11.93 Crumlin Old Farm Meadows	C10.95	17/05/2007
C11.94 Pant-Glas Meadow	C10.96	17/05/2007
C11.95 Cwm isaf Woodlands	C10.97	17/05/2007
C11.96 Llanerch-isaf Woodland	C10.98	17/05/2007
C11.97 Coed Goferau	C10.99	04/05/2007
C11.98 Ty-mawr Wood	C10.100	17/05/2007
C11.99 Pant-ysgadwen Fields	C10.101	18/07/2007
C11.100 Pennar-gannol	C10.102	04/05/2007
C11.101 Tir-goppi Meadows	C10.103	18/07/2007
C11.102 Cwm Pennar	C10.104	20/04/2007
C11.103 Pen-rhiw-bica	C10.105	04/05/2007
C11.104 Tyle-coch Wood	C10.106	04/05/2007
C11.105 Coed Ffordd-fawr	C10.107	19/04/2007
C11.106 Cwm Hafod-fach woodlands	C10.108	04/05/2007
C11.107 Coed Gawni	C10.110	04/05/2007
C11.108 Pontbren	C10.111	17/05/2007
C11.109 Coed Cil-lonydd	C10.112	17/04/2007
C11.110 Coedcae Watkin Dafydd	C10.113	17/04/2007
C11.111 Gwyddon Valley/ Mynydd Maen	C10.114	17 & 18/4/07
C11.112 Pwllgwinau	C10.115	17/04/2007
C11.113 Mynydd Eglwysilan	C10.116	11 & 13/9/07
C11.114 Nant Cae'r moel Swamp and Woodland	C10.117	11/09/2007
C11.115 Glawnant Field	C10.118	11/09/2007
C11.116 Tai'r-waun Meadows	C10.119	11/09/2007
C11.117 Nant Cae-dudwg Mire	C10.120	13/09/2007
C11.118 Coed Penallta and railway	C10.121	06/07/2006
C11.119 Tir-twyn Woodlands	C10.122	28/06/2007
C11.120 Coedcae Mawr	C10.123	28/06/2007

Approved UDP Reference and name (current)	Deposit UDP Ref. (1999)	Survey date(s)
C11.121 Llanbradach Fawr Woodlands	C10.124	14/09/2007
C11.122 Nant Owen Field	C10.125	13/09/2007
C11.123 Maes-y-cymmer Meadows	C10.126	27 & 28/6/07
C11.124 Mynydd Bach Slopes	C10.127	21/06/2007
C11.125 Coed Mawr	C10.128	26/06/2007
C11.126 Mynydd Dimlaith	C10.129	19/06/2007
C11.127 Mynydd y Grug	C10.130	21/06/2007
C11.128 Twyn Yr Orfel	C10.131	03/05/2007
C11.129 Sirhowy Meadows	C10.132	17/06/2007
C11.130 Craig y Prisiad	C10.133	26/06/2007
C11.131 Nant-y-draenog	C10.134	26/06/2007
C11.132 Nant Hafod Tudor	C10.135	29/06/2007
C11.133 Ty Bach Wyllie	C10.136	26/06/2007
C11.134 Pontgam Terrace Meadows	C10.137	27/06/2007
C11.135 Heol-ddu Woodlands	C10.139	27/06/2007
C11.136 Coedcae Newydd	C10.140	27/06/2007
C11.137 Mynydd y Lan	C10.143	29/06/2007
C11.138 Sychpant Farm	C10.144	20/04/2007
C11.139 Cil-fynydd	C10.145	20/04/2007
C11.140 Mynydd – Lan Woodlands	C10.146	20/04/2007
C11.141 Distillery Pond	C10.147	19/04/2007
C11.142 Cwm Gofapi Woods	C10.148	18/04/2007
C11.143 Cwmcarn Slopes	C10.149	18/04/2007
C11.144 Coed Mamgu	C10.150	18/04/2007
C11.145 Twmbarlwm	C10.151	07/04/2007 & 18-19/04/2007
C11.146 Darren Woodland	C10.152	19/04/2007
C11.147 Risca Quarry	C10.153	19/04/2007
C11.148 Cwm-y-nant	C10.154	18/04/2007
C11.149 Ty-sign meadows	C10.155	20/06/2007
C11.150 Mynydd Machen	C10.156	29/06/2007
C11.151 Coed y Mochyn	C10.157	19-20/4/07
C11.152 Ty'n-y-parc	C10.158	07/06/2007
C11.153 Craigyfedw	C10.159	07/06/2007
C11.154 Cwm yr Aber	C10.160	07/06/2007
C11.155 Cwarrau-mawr	C10.161	08/06/2007
C11.156 Coed y Brain	C10.162	14/06/2007
C11.157 Mynydd Meio	C10.163	08/06/2007
C11.158 Gypsy Lane Wetland	C10.164	28/06/2007

Approved UDP Reference and name (current)	Deposit UDP Ref. (1999)	Survey date(s)
C11.159 Wernddu Woodlands	C10.165	07/06/2007
C11.160 Pont-y-pandy	C10.166	08/06/2007
C11.161 Churchill Meadows	C10.167	08/06/2007
C11.162 Caerphilly Common	C10.168	06/06/2007
C11.163 Warren Drive Meadow	C10.169	06/06/2007
C11.164 Cefn Onn Ridge	C10.170	30/04/2007
C11.165 Rudry Common	C10.171	16/05/2007
C11.166 Rudry Woodlands	C10.172	12/04/2007
C11.167 Machen Disused Railway	C10.173	16/05/2007
C11.168 Coed y Maerdy	C10.174	16/05/2007
C11.169 Nant Gwaunybara Mire	C10.175	16/05/2007
C11.170 Graig-y-rhacca woodlands	C10.176	03/05/2007
C11.171 Berth-goch Wood	C10.177	03/05/2007
C11.172 Grag-y-rhacca grasslands	C10.178	19/06/2007
C11.173 Ochryth grasslands	C10.179	20/06/2007
C11.174 Machen Woodlands	C10.180	03/05/2007
C11.175 Pen-Llyn, Machen	C10.181	03/05/2007
C11.176 Tudor Gardens Quarry	C10.182	16/05/2007
C11.177 Coed Cefn-pwll-du	C10.183	12/04/2007
C11.178 Coed-y-squire/ Coedcae	C10.184	11/04/2007
C11.179 Blaengwynlais Meadows	C10.185	18/06/2007
C11.180 Ruperra woodlands	C10.186	10/04/2007
C11.181 Nant Du Woodland	C10.187	05/04/2007
C11.182 Cwm Crynant	C10.188	05/04/2007
C11.183 Ty Melyn	C10.189	04/04/2007
C11.184 Thornhill Quarries	C10.190	04/04/2007
C11.185 Nant Fawn	C10.191	05/04/2007
C11.186 Coedcefnporth	C10.192	11/04/2007

The 14 prospective SINC's identified by CCBC are listed in Table 2. The table also indicates the dates that each one was visited.

Table 2. Prospective SINC's assessed during the review

Reference	SINC Name	Survey date
New SINC 1	Cefn Fforest and Fairview Eco Park, Blackwood	21/05/2007
New SINC 2	Ruperra (Castle and Grounds), Draethen	10/04/2007
New SINC 3	Markham Colliery, Markham	03/08/2007
New SINC 4	Blackwood/Sirhowy Enterprise Way, Blackwood, Woodfieldside to Oakdale	<i>Incorporated within nearby SINC's</i>

Reference	SINC Name	Survey date
New SINC 5	Sirhowy Enterprise Way - Southern end at Penmaen Ind. Est., Pontllanfraith	19/07/2007
New SINC 6	Land South of Gelligaer Infants School, Gelligaer	11/07/2007
New SINC 7	Pen y Fan Industrial Estate, Oakdale	17/05/2007
New SINC 8	Disused Quarry/ Lime Kiln and Woodland, Draethen	10/04/2007
New SINC 9	Triangular Parcel of Land adjacent to Penllwyn Grasslands SSSI, Trelyn, Fleur de lis	21/05/2007
New SINC 10	Field opposite St Sannan's Church, Bedwellty, North of Blackwood	17/08/2007
New SINC 11	Parc Cwm Darran, Deri, nr Bargoed	05/09/2007
New SINC 12	Markham Tips, Markham	03/08/2007
New SINC 13	Crumlin Arm, Monmouthshire Brecon Canal, Risca (county boundary) to Abercarn	31/07/2007
New SINC 14	River corridors, Various	Some sections of rivers incorporated within adjacent SINC*s

* Rivers and streams were subsequently removed from within other SINC*s, as they were designated as SINC in their own right in 2008 following the main bulk of the review undertaken by Hyder Consulting Ltd. This retained the river or stream as an entire entity rather than individual sections between other SINC*s that overlapped with the watercourse, which were likely to be designated for other qualifying features or habitats. A small number of existing SINC*s were subsumed within the river/stream SINC*s, where they were either borderline qualifications in their own right or formed an integral part of the river corridor, for example C11.39 Cwmsyfiog River Meadow was incorporated into the River Rhydney SINC (LDP policy no. NH 3.1) and C11.160 Pont-y-Pandy was subsumed into the Nant yr Aber SINC (LDP policy no. NH 3.136).

3 Desk study review

The review incorporated two separate elements, namely a desk-study review and a site inspection. The majority of the desk-study work was carried out in advance of the site visits.

The desk study involved an examination of paper and electronic copies of data pertaining to each SINC held on file at CCBC. Paper copies of the following were provided:

- SINC maps
- SINC descriptions and species lists
- Unitary Development Plan Council Approved Plan 2003
- UDP Deposit Plan Topic Paper No.5 Countryside and Nature Conservation
- Ancient Woodland Directories for Gwent and Glamorgan
- Biodiversity Action Plan for Caerphilly County Borough

Electronic material provided by CCBC included the following data in GIS format:

- Digitised SINC boundaries (2003)
- Aerial photographs (2001)
- CCW Phase 1 Habitat Survey maps (early 1990s)
- Ancient Woodland Inventory (1986)

The South East Wales Biodiversity Records Centre (SEWBRc) provided data for each SINC. The SEWBRc search provided a full species list based on available data for land within the SINC boundary. In addition, species within 500m of the SINC boundary were also listed, both to assist in identifying nearby areas that may meet selection criteria, and to flag-up species that could potentially be recorded during the site visits.

Local biological recorders were contacted to request any data that they hold, which they considered might have a bearing on SINC selection. They were also asked to consider possible sites that might warrant inclusion as SINC on the basis of their particular field of interest. The recorders are all volunteers and were not expected to respond if they had already passed data to SEWBRc or if they felt that their input would not affect the review process. The recorders contacted as part of the study are listed in Table 3. (Note that Caerphilly county borough includes parts of two vice-counties used in biological recording with the divide broadly following the Rhymney valley. Vice County (VC) 35 is Monmouthshire and VC41 is Glamorgan.)

Table 3. Biological Recorders contacted during the review

Recorder	Field of interest
Dan Forman	Mammals (VC41)
Peter Smith	Mammals (VC35)
Erica Colkett	Valleys Bat Group
Barry Stewart	Lepidoptera (VC41)
Martin Anthony	Lepidoptera (VC35)
Matt Harris	Amphibians and reptiles (VC35, inc. Caerphilly and Cardiff)
Greg Jones	Orthoptera (VC41)
Steve Williams	Orthoptera (VC35)
Geri Thomas	Birds (VC41)
Chris Jones	Birds (VC35)
Jerry Lewis	Birds (VC41) BTO Rep.
Rob Nottage	Birds (VC35) BTO Rep.
Richard Clarke	Birds (BTO ringing)
Chris Jones	Birds (Wetland birds survey)
Mike Powell	Odonata (VC41)
Ian Smith	Odonata (all Wales)
Trevor Evans	Vascular Plants (VC35)
Julian Woodman	Vascular Plants (VC41)
Sam Bosanquet	Bryophytes (VC35)
Roy Perry	Bryophytes (VC41)
Sheila Spence	Fungi (VC35)
Mervyn Howells	Fungi (VC41)
Michael Kilner	South Wales Arachnid Group
Dave Clements	UK Picture-winged flies & Canopid scheme



The Environment Agency Wales Biodiversity Team and John Bell from Keep Wales Tidy Clean Rivers Project were also approached for assistance in relation to identifying rivers and streams of SINC quality.

4 Fieldwork

An experienced ecologist from Hyder Consulting Ltd visited each of the former UDP SINC sites to confirm its current status, collect sufficient data to assess it against the SINC selection criteria and refine the SINC boundaries. The additional new sites put forward were also visited, apart from the majority of the rivers and streams, of which only those sections next to other SINC sites were surveyed (see below).

Due to the practicality and expense of visiting such a large number of sites, the time spent at each one was necessarily limited to a simple walkover survey. The time spent at each site varied according to its size, the nature of the habitats, ease of access, the availability and quality of supporting desk-study information, and the amount of data required to support its designation as a SINC.

During each site visit, the surveyor recorded information directly onto an existing SINC boundary map, allowing any boundary changes to be marked in the field. A pro-forma site description sheet was used as a template to allow reporting on the habitats, species and land management issues in a consistent format. The surveyor also carried a summary 'crib-sheet' of the SINC selection guidelines, allowing areas to be assessed quickly in the field (included as Appendix 1).

Sites were generally visited during the summer, when the majority of flowering plants are readily identifiable, although SINC sites with a high proportion of woodland were visited earlier in the year (April and May) to allow the woodland ground flora to be assessed most effectively. The site visits were generally undertaken during good weather, so that recording could be carried out most efficiently.

The fieldwork was focussed on habitats and plants, reflecting the primary emphasis of the SINC selection criteria. No attempt was made to record all the plants and animals at any site, but observations of plants, invertebrates, birds, mammals and fungi were recorded incidentally during each site visit if they were deemed to be locally significant by the surveyor. These included dominant plant species, indicator species, protected species, species listed in the local Biodiversity Action Plan (LBAP) for Caerphilly County Borough and any other species referenced in the SINC selection guidelines that were noted during the surveys.

Many of the surveys were undertaken from public rights of way or open access land. In cases where landownership details were known, an attempt was made to contact the owner in advance of the survey. In cases where the landowner was not known, the sites were accessed using the Council's right of access to land under the Town and Country Planning Act 1990 (as amended), taking care not to cause any damage or disturbance. Where the surveyor judged that the access could be contentious, unsafe or difficult without causing damage or disturbance, the site was not accessed, and as much data as possible was gathered by remote means (such as using binoculars from the site boundary).

5 Review output

The main outputs of the review are as follows:

- A suite of draft SINC data sheets
- A hand drawn plan of each site showing the revised SINC boundaries
- A package of the working data used in the review of each SINC
- Input to a summary SINC schedule (produced by CCBC)
- An overview report (this document)

The first four items have been provided separately to CCBC.

6 Fieldwork limitations

Given the very large number of sites to be visited, the fieldwork was necessarily constrained by time, and surveys at all sites had to be brief; they were thus generally limited to a single visit rather than recording at intervals through the year. Fieldwork at most sites, particularly the larger ones, was therefore limited to sampling the dominant habitats and those that appeared most likely to hold potential species of nature conservation value, rather than trying to cover the area completely. Therefore, some species will undoubtedly have been missed, and further survey work at any of the SINC would record more species.

The surveyor carrying out the fieldwork was able to survey habitats and most of the groups of plants and animals used in the SINC assessment. However, some of the groups used in the SINC criteria (e.g. lower plants and insects) require specialist input and consideration of these was therefore mainly limited to desk study information.

Most fungi fruit during the autumn and most sites were therefore recorded at the wrong time of year to detect them. Even so, grassland fungi were confirmed at several sites due to the unusually wet weather during the summer.

Insects were only noted where they could be identified with confidence, therefore limiting the records to readily recognisable species such as butterflies and dragonflies.

Aquatic groups, including fish, White-clawed Crayfish and other aquatic invertebrates, and amphibians cannot be readily recorded by a simple walkover survey. These generally require a specialist search in watercourses and surveys may be seasonally constrained. In a few cases, observations were made of fish and amphibians. Adult dragonflies were also noted where possible, although they were not necessarily recorded at breeding sites.

Many of the SINC would be expected to support good populations of reptiles. However, reptile surveys are best carried out by walking slowly and in particular weather conditions. Therefore, in many cases the presence of reptiles could not be confirmed during the relatively rapid site assessments and the wide variety of weather conditions experienced.

Very few direct observations of wild mammals were made, but this is unsurprising as mammals are generally only recorded by looking for signs. Direct sightings of Brown hare were recorded occasionally, but most other notable species, such as Badger, were only recorded by the presence of field signs. Bats are likely to occur on most SINCs, at least when feeding; and a number of potential roost sites were recorded. However, as no nocturnal surveys were undertaken, no direct records of bats were made.

The weather created a number of difficulties during 2007. The late spring and early summer were much wetter than usual, which meant that some species of butterflies were present in much lower numbers than most years. The practicalities of surveying during wet weather limited the number of available survey days. Even so, in order to meet the survey deadlines it was sometimes necessary to carry out fieldwork during showery weather.

There were some limitations to land access. Fields with livestock, such as bulls or horses, which appeared unpredictable, were generally avoided. Steep slopes, such as quarry faces, were not climbed. In one case, a quarry was not entered due to the presence of a Peregrine nest (to avoid causing disturbance). Dense vegetation was often very difficult and time consuming to pass through, and surveys in woodland, scrub and tall Bracken often had to be restricted to paths and clearings. Areas close to houses were generally not accessed where they could be easily viewed using binoculars. Where SINCs had been converted into domestic gardens, or where gardens had been extended into woodland, the boundary was redrawn, rather than entering the garden to re-survey it (it was assumed that most features of nature conservation value had been removed).

It was not possible to survey the full extent of the rivers and streams in the county borough due to the limited amount of time available and these SINC were designated using existing information and one site visit. Hyder Consulting Ltd did not therefore undertake comprehensive surveys of the entire length of the three main rivers and two main tributary streams, although some survey information is included for some sites where they were located adjacent to or included part of the river/stream. A desk top study of existing information on migratory and resident fish species and records of Otter on the three main rivers and two main tributary streams in the county borough was undertaken by the Council's Ecologist using data from the Environment Agency Wales and SEWBReC. A site visit was undertaken by the Council's Ecologist and Chief Countryside Ranger, with several years experience of undertaking Otter surveys and monitoring of the rivers in the county borough, to survey the upper reaches of the River Rhymney at Blaenrhymni reservoir for signs of Otter to supplement the data received from the Environment Agency Wales and SEWBReC.

7 SINC Boundaries

SINC boundaries were drawn in accordance with the *Guidelines for the Selection of Wildlife Sites in South Wales*.

The ecologist from Hyder Consulting Ltd used the former UDP SINC maps to revise the boundaries as necessary and OS maps supplied by CCBC to draw boundaries for the proposed new SINCs (apart from the rivers and streams).

Boundaries were discussed at SINC Review Steering Group meetings and in subsequent correspondence with the steering group members by email.

Observable physical barriers or topographical features were used as defensible boundaries wherever possible. In some circumstances defensible boundaries were not evident and additional habitat has been included within the site boundary that might not qualify in its own right, but has been included up to an obvious barrier on the ground or as part of a whole management unit. Some site boundaries were drawn to edge of woodland or along the edge of tree canopies using the aerial photograph 2006.

The revised boundaries and proposed new sites were digitised by CCBC's planning technicians and checked by the Council's ecologists. Some minor amendments were made where necessary, particularly to ensure that the boundaries were defensible.

The boundaries of the rivers and streams SINC were drawn as a desktop exercise by the Council's ecologists, taking into account adjacent semi-natural habitats such as woodlands, wetlands and species-rich grasslands. The adjacent habitats were identified using Phase 1 Habitat Survey data, aerial photographs and local knowledge. The boundaries were drawn to reflect the importance of the linear corridor as a feature of importance for associated species, including otters and bats. Where there is a lack of adjacent semi-natural habitat, the river and riverbanks are included to ensure that the whole of the river system is protected and opportunities for enhancement are highlighted through the planning process.

8 Difficulties during SINC review process

The current review was limited to the 186 existing and 14 proposed SINC. However, during the study it quickly became evident that many species of nature conservation value occur outside the existing SINC network and that there are likely to be many unsurveyed areas that also meet the SINC selection criteria. A number of potential SINC have been identified nearby on the datasheets. The current SINC network should not be regarded as providing a complete suite of areas of nature conservation value within the county borough.

One of the most difficult parts of the review was defining SINC boundaries. This was a particular problem when features of nature conservation value occurred patchily or irregularly within an otherwise species-poor site. Difficulties were also encountered where there was a gradual transition from high quality to poor quality habitat, with no clearly defined features to mark as a SINC boundary. In these cases, it was sometimes necessary to include species-poor habitat within the SINC simply to allow mapping up to a clearly defined boundary. This was not considered to be a problem, as a mosaic of habitats (including those of relatively low intrinsic value) is often important in providing a greater range of resources for species. It is also covered in the *Guidelines for the Selection of Wildlife Sites in South Wales* (pages 8 – 9). In a few cases where SINC were extended (particularly along areas of woodland), an arbitrary boundary line was

drawn because time constraints did not permit surveying to the full extent of the potentially qualifying habitat.

In other cases, the application of the SINC selection criteria was open to flexible interpretation. For example, the distinction between damp neutral grassland and marshy grassland is not always clear-cut, even within a single field. In these situations, the list of indicator species for marshy grassland was generally referred to, as it is the more stringent (requiring 12 indicator species, as opposed to 8 for neutral grassland). Distinguishing between neutral grassland and semi-improved acid grassland was also difficult in some cases.

Almost all the SINC were found to meet selection criteria for habitats, plants and assemblages of indicator species. Very few qualified purely because of the presence of particular animals. Most notably, only a few qualified on the basis of their value for birds. This does not mean that only a few sites meet the fauna criteria, but simply that the data available for review was very limited.

The limited availability of species records has almost certainly resulted in the value of some sites being underestimated. It is very likely that many SINC would also qualify for their bird, reptile and invertebrate assemblages and/or for their presence of particular species of nature conservation importance, such as Dormouse or White-clawed Crayfish. Whilst this would not affect the status of already designated sites, in some cases the availability of more data might necessitate revision of the SINC boundaries.

Careful judgement was required when reviewing the desk study records, especially where the records were old and unverified. In many cases, there was no suitable habitat for particular species, although the area may once have been suitable. For example, several records of Large blue butterfly from limestone areas in the south of the county borough were not included in the datasheets, as this species is almost certainly extinct in Wales. Probable misidentifications were also omitted, such as records of Deadly nightshade from several wet woodland sites, which typically contained Woody nightshade.

Some of the desk study information was only available as lists within 1km grid squares. This type of data could generally not be linked to particular site boundaries and was therefore not very useful where small SINC occurred within the same grid square as well-recorded sites (e.g. Sites of Special Scientific Interest).

The SINC datasheet was intended to provide summary data about each site in a simple and consistent format. The intention was to enable the information to be available on a single sheet of paper, to simplify future use of the datasheets. In most cases, the information fitted easily into the template, but the quantity of data for the larger and more complex sites sometimes made it necessary to reduce the font-size of the species lists to fit all of the data onto one sheet. The format is therefore something that may need to be re-considered, possibly allowing the data to spread onto more pages, or deleting some of the commoner species (if they are not essential for supporting the SINC designation).

The management of a project of this scale within a limited budget inevitably resulted in a few practical difficulties, particularly as the deadline was brought forward and the scope extended after the project had begun. There were also delays in commissioning

data from SEWBReC, which meant that some sites had to be surveyed before the desk study had been completed. However, Caerphilly CBC were able to re-adjust the scope of works to give priority to fieldwork by allowing the surveyor's output to be limited to a series of draft documents, to be finalised by Caerphilly CBC and the Steering Group.

9 Condition of SINC in Caerphilly CBC

It is difficult to provide an overview of habitat condition within the SINC network as it covers a very broad spectrum. Some SINC had been very badly damaged, resulting in their SINC status being removed. Others were in very good condition. Although a few SINC appear to have been increasing in nature conservation value, the general impression from the review is that most of the SINC appeared to be in a poorer condition during 2007 than they had been when reviewed previously. The reasons for the changes are varied, but a few general trends are discussed below.

Much woodland within the county borough is in good condition, being managed in a manner that benefits biodiversity. In particular, some replanted ancient woodlands have been felled and do not appear to have been replanted with conifers (e.g. part of Cefn Mably Woods, SINC 185). Grazing animals access much woodland and in some this is very beneficial. However, other very heavily grazed woodlands have lost much of their ground flora diversity, particularly where grazed by sheep (e.g. SINC 171 Berth-Goch Wood). In areas where grazing animals have been excluded for many years the woodlands have often become colonised by dense shrubs, such as Holly or regenerating Beech saplings (e.g. Cwm Kendon Woodland SINC 95) and have virtually no ground flora. Conifers form parts of many SINC, particularly where a light canopy of Larch allows ancient woodland ground flora species to persist (e.g. Gwyddon Valley SINC 111 and Coed Medart SINC 143). However, in some cases SINC status has been removed from areas heavily shaded by dense conifers (e.g. parts of Cwm Hafod-Fach SINC 106). Some of the areas of woodland that lost their SINC status were those that have been converted to domestic gardens (e.g. parts of Machen Woodlands SINC 174 and Forge Wood SINC 167).

Neutral grassland is possibly the habitat subject to greatest decline in quality within the SINC network. A high proportion of neutral grassland SINC appeared to be in poor condition, either because of agricultural improvement (e.g. Chapel Pastures SINC 76, which appears to have been ploughed and reseeded) or intensification (e.g. Pen-yr-heol Meadows SINC 32, where the Wood bitter-vetch population has declined due to increased grazing pressure and a change to management of some fields as a hay crop), or because of under-grazing and encroachment by scrub (e.g. Ton-y-pistyll Fields SINC 75 and Victoria Road Slopes SINC 86, where diverse grassland has become restricted to a few pockets). The best examples of neutral grassland SINC were horse-grazed pastures, managed by low intensity grazing.

Marshy grassland and flush vegetation has similar problems to the neutral grasslands, particularly in relation to over-grazing (e.g. Tai'r-waun Meadows SINC 116) and neglect resulting in scrub encroachment and loss of diversity (e.g. Gypsy Lane Wetland SINC 158). The damp soils of marshy grasslands can quickly revert to willow scrub and tall herb vegetation in the absence of management, and almost all the biological interest

can disappear within a few years (e.g. Churchill Meadows SINC 161 and Tir Jacks Slopes SINC 50).

Calcareous grassland was generally restricted to the south of the county borough, particularly in association with the Cefn Onn Ridge (SINC 164) and former quarries such as Mynydd Machen (SINC 150). In some cases (e.g. Thornhill SINC 184 and Blaengwynlais SINC 179), the grassland habitat is ungrazed by livestock and becoming encroached by scrub. The diverse flora in these areas has become restricted to narrow belts on very shallow soils, where scrub is kept at bay by drought stress and rabbit grazing. New calcareous grassland is forming in some quarries where the disturbance is more recent (e.g. Risca Quarry SINC 147), but without management this too is likely to undergo succession towards scrub. The only SINC where positive management of calcareous grassland was observed was the Dan-y-graig Nature Reserve SINC 151, where scrub is being removed.

Acid grassland and heath occupy much of the upland area of Caerphilly county borough, but these are generally declining in area and in habitat quality. In some cases, the decline in quality is mainly attributable to over-grazing, particularly by sheep (e.g. Traed y Milwyr SINC 1 and Cefn Gelligaer SINC 9) and sometimes cattle (e.g. Waun Rydd SINC 54). Conversely, lack of grazing also results in a decline in value, particularly where Bracken is allowed to become dominant (e.g. Caerphilly Common SINC 162), and many of the 'ffridd' habitats on steep valley-sides (e.g. at Mynydd y Grug SINC 127, Craigyfedw SINC 153 and Coed y Brain SINC 156).

Areas that have been recognised as being of value for Bracken with a relatively species-rich ground flora are also generally declining in quality. This is typically due to lack of management allowing the development of a very dense Bracken canopy with a thick carpet of dead Bracken that suppresses other species (including Violets, which in turn can be important for other species such as High brown fritillary butterflies). The decline in diversity occurs as a combination of natural succession towards woodland (e.g. Coed Argoed SINC 27 and Mynydd Dimlaith SINC 126), and fires (e.g. Coed Mamgu SINC 144 and Mynydd Rudry Common SINC 165).

The number of wetland SINC's within the county borough is surprisingly low, with wetland habitat generally represented as a small component of larger SINC's. Furthermore, the small number of specific wetland SINC's generally appeared in poor condition. For example, the pond at Pwllgwinau SINC 112 was heavily poached by cattle, with very little aquatic vegetation. Mile End Pond SINC 6 was ungrazed and supported very little open water, and the pond at Twyn yr Oerfel SINC 128 had no open water at all. Invasive aquatic plants were observed at several places, most notably at Caerphilly Common SINC 162 which supported New Zealand Pigmyweed and Parrot's-feather. Signs of recent active pond management were seen at the Valentec Nature Reserve SINC 61, where emergent vegetation appears to be raked out periodically to maintain the open water, and at Abercarn Distillery Pond SINC 141, which had been drained down for silt-removal.

Rivers and streams mostly appeared to be in good condition with regard to water quality and substratum. This is also supported by the available fisheries data from the Environment Agency Wales. Most of the main rivers in the county borough satisfy the SINC criteria on these features. However, there are localised pollution problems, particularly south of the Heads of the Valleys Industrial Estate on the River Rhydney,

and mine water seepages such as at Tir-y-berth, again on the River Rhymney. There are also ongoing issues with sewage (CSO) leaks and storm drain discharges. The bank flora of most of the main rivers through the county borough also includes locally abundant Japanese knotweed and Himalayan balsam, though these invasive alien species were less frequent in the upstream sections and tributary streams.

Exposed rock habitat within the SINC network is mainly present as disused quarries and the edges of the upland plateau areas. Sheep graze many rock ledge communities, which limits their value for plants, but also prevents scrub from becoming dominant. However, diverse assemblages of bryophytes and lichens are present in a few areas (e.g. Cefn y Brithdir SINC 5) and cliff-nesting birds, including Peregrine, use some ledges.

The SINC network includes several former colliery tips (e.g. Markham Tips SINC 28) and disused railways (e.g. at Ystrad Mynach SINC 118 and Caerphilly/Machen SINC 167). Brownfield SINC sites such as these are probably under-represented within the SINC network as they generally support rapidly developing vegetation and their features of nature conservation value (such as diverse invertebrate communities associated with ephemeral habitats) are readily over-looked. Brownfield sites are especially vulnerable to change. Part of the Remploi SINC 67 has been converted to a lorry park and much of the remainder has lost value as it has become shaded by scrub.

Occasionally, the decline in SINC quality has arisen as a result of development. In some cases, habitats appear to have been deliberately degraded in order to obtain planning permission (e.g. at Upper Trelyn Marsh SINC 87 and Cefn Hengoed SINC 52). In other situations, SINC sites have been indirectly affected when land nearby has been developed, for example by making grazing difficult (e.g. Marshy grassland at Glan-brynar SINC 72 has not been grazed since the Sirhowy Enterprise Way was built and Ton-y-pistyll Fields SINC 75 have not been grazed since construction of the A472).

Sometimes, development or disturbance only affects a small part of a SINC (for instance, land being annexed to extend a domestic garden, e.g. Coedcae Mawr SINC 120), while in others, many small actions combine to create a larger impact (e.g. tipping from many back gardens adjoining Waun Rydd SINC 54, and disturbance and littering at Coed Duon SINC 81).

Sadly, the SINC sites that were considered to be in good condition were in the minority. However, nature is often very resilient and some degraded sites have already recovered value following implementation of a more favourable management regime. For example, the flush at Pant-ysgadwen Fields (SINC 99), which had previously been heavily over-grazed by horses was found to be in very good condition during the recent survey, whilst several areas of former conifer plantation have developed diverse woodland and heathland vegetation following felling (e.g. Coedcae Watkin Dafydd SINC 110). With the exception of woodlands, such examples are rare, and once a habitat has lost its value it usually appears to be a long term change. In some cases, the change simply produces a different habitat; for example, a marshy grassland may change to scrub that has value for birds or then turn into wet woodland, whilst an upland acid grassland could potentially develop over time into upland Oak and Birch woodland. The inescapable conclusion is that early successional habitats and habitats such as grasslands that depend on ongoing management are particularly vulnerable to loss through neglect. These should be a priority for protection within the SINC network

and through the planning process, but finding ways to optimise their management is the key to retaining them in good condition.

10 Recommendations

The current SINC network should not be regarded as a complete catalogue of areas of nature conservation value within the county borough. Other sites are undoubtedly present that are currently undesignated (for example, where their value is currently unrecognised through lack of survey data or because their features of nature conservation have developed recently). Additional measures are therefore necessary to ensure that areas of value that do not fall within SINC boundaries are afforded adequate protection in the planning process. One possibility to protect these sites through the LDP might be to include a phrase such as:

“Undesignated sites that meet the criteria for Sites of Importance for Nature Conservation will be afforded the same level of protection as those which are designated”.

A modified version of the Approved UDP Policy C11 (with added words underlined) might read:

“C11 Development proposals within or in the vicinity of ... Sites of Importance for Nature Conservation (SINC) or ... sites that support habitats or species that meet the SINC selection criteria which would have a harmful impact on the protected features of such sites will only be permitted where the need for the development clearly outweighs the need to safeguard the site.”

Some of the SINC selection guidelines are based on the presence of individual species ('Primary species', e.g. Dormouse, Water vole, breeding Lapwing, Marsh fritillary butterfly or Monk's-hood) and these may provide a means for identifying areas that ought to be included within the SINC network. It is recommended that SEWBRc be commissioned to undertake a search for recent records for all such species and to identify all those lying outside the currently designated areas. These records can then be used as a focus for surveying potential new SINC.

The existing level of survey data on many SINC was surprisingly sparse and in some cases was limited to a very few species names, or missing altogether. The data collected during this review has expanded and updated most of the existing data very considerably, but there is much scope for collection of new information. The limitations of the fieldwork part of the review have been described above. In order to make redress for these shortcomings, it is recommended that a programme of follow-up surveys be carried out. These surveys should be targeted towards the '*Potential value/unconfirmed features*' identified on each of the SINC data sheets. Studies of bryophytes, grassland fungi, notable butterfly species, amphibians, reptiles and mammals (especially Dormouse, Otter and bats) are likely to be particularly useful in supporting the habitat assessments carried out to date.

The SINC network comprises many separate parcels of land that have been identified as supporting valuable wildlife. However, the land between these parcels is sometimes important, even though it might be relatively species poor itself. For example, an area of low diversity scrub might be a useful linking habitat between two areas of woodland

supporting bats or Dormice. In such a situation, it may be appropriate to extend the SINC boundary to include the low diversity scrub to link the two SINC. Some links have been made as part of the recent review, but there is still scope to protect more links. In particular, rivers and streams (and, indeed, roadside verges) are likely to serve as movement corridors for several species, but are currently under-represented within the SINC network.

The SINC network is of particular importance to species that exist in meta-populations (that is, they require a number of sites that may not all be occupied permanently). For example, Marsh fritillary butterflies have been recorded at several SINC in recent years, but there are several pockets of potentially suitable habitat nearby that the species could occupy in particularly good years. It is important that sites with potential habitat for such species and links between them are also afforded sufficient protection (or indeed targeted for favourable management) to allow for these natural population fluctuations.

Further survey work would be very beneficial both to confirm the presence of significant species and to monitor the condition of the habitats. In some cases, there are old records of species that may no longer be present (if national trends have been followed), but if re-confirmed would be very significant (such as White-clawed crayfish in streams near Cwm-Crynant SINC 182, Thornhill Quarries SINC 184 and Nant Fawr SINC 185, and Water vole in Mynydd Manmoel SINC 8, Nelson Bog SINC 55, Crown Estate Meadows SINC 82, Tai'r-waun Meadows SINC 116, Nant Cae-dudwg Mire SINC 117 and Gypsy Lane Wetland SINC 158). Re-confirming these species would enable the areas to be targeted with any necessary funding to ensure that the habitats are maintained in good condition.

The review process resulted in many changes to the SINC boundaries, so that new habitats have been incorporated and others de-designated. In some cases this has meant that the SINC names no longer seem particularly relevant (e.g. Ty Mawr Wood SINC 98 actually includes more grassland than woodland; Graid-y-Rhacca Grasslands SINC 172 supports mainly Bracken and scrub with very little grassland; Y Graig Mire SINC 19 doesn't include any mire habitat). It is therefore recommended that SINC names be re-named as necessary to reflect recent changes. It would perhaps be sensible if SINC names did not include habitat information, as it has been shown that habitats can change very quickly as a result of alterations in management.

It has been necessary to remove SINC status from some sites and this has resulted in gaps in the list of SINC numbers. The number for SINC C11.2 is also no longer required as the site has been incorporated within the extended SINC C11.1. Furthermore, the addition of several SINC, which are scattered throughout the county borough, adds to potential confusion in the SINC numbering. Re-numbering the SINC sites is therefore recommended to reflect all of the recent changes. The increased linkage of SINC may complicate the numbering exercise, and some arbitrary boundary lines may be required (for example, to divide river corridors into units). The former UDP policy numbers (C11) have been retained as a unique identification number for all the sites for in-house use by CCBC, for example "C11.55" will be referred to as "SINC 055" and additional sites have been added in numerical order to this list. The unique identification numbers will include those that have been de-designated in the LDP, ensuring that these are not totally lost from the database. All the sites have been re-numbered in the emerging LDP to comply with the new policy

code “NH 3” for Natural Heritage, but the unique identification number is also referenced on the SINC data sheets and maps.

Many SINCs comprise several distinct parcels of land (for example Rhymney Valley Grasslands SINC 4 includes five separate areas). In the Council Approved UDP these SINC sub-divisions were each numbered. However, this has the potential for confusion where parcels are deleted, added or combined. Therefore, this review has described the sub-divisions as grid references, descriptions and boundary maps, without the need for additional numbering. It was recommended that this approach be adopted throughout the SINC network and all sub-division numbering be removed from the boundary maps. This has been implemented in the emerging LDP.

For practical purposes, some of the largest existing SINCs may also be easier to treat as separate SINCs where there are obvious possible dividing lines (for example; Cefn Gelligaer SINC 9 exists as two separate units of land, each of which is larger than most other SINC, and SINC 111 could be split into two separate but adjoining SINC, one being the wooded southern Gwyddon Valley, and the other for the open upland habitats of Mynydd Maen). Cefn Gelligaer SINC 9 has been retained as a single SINC, as it comprises the area of Gelligaer and Merthyr Common that lies within the Caerphilly county borough. Former SINC 111 has been split into two separate SINC – SINC 111a Mynydd Maen and SINC 111b Gwyddon Valley Woodlands – and these have been given separate LDP policy numbers (NH 3.113 and NH 3.124 respectively).

Where SINC occur at the county boundary, their biological features invariably span the border and continue into the neighbouring county. This is particularly apparent where the boundary occurs in upland areas in the north of the county borough and in river corridors. Consultation with neighbouring local authorities is strongly recommended to ensure that cross-border SINC are afforded a similar level of protection in each local authority area. Given that all Caerphilly CBC’s neighbours are involved in the South Wales Wildlife Sites Partnership and therefore use the same SINC selection criteria, it should be relatively simple to achieve a unified approach to sites spanning county boundaries. This was not achieved within the timescale for the emerging LDP, but work to develop a set of *SINC Selection Criteria for the Mid-Valleys Area* has brought together the county borough council’s of Caerphilly, Rhondda Cynon Taff, Merthyr Tydfil and Blaenau-Gwent, which will include looking at cross-boundary site designation in the future.

Perhaps most importantly, this review of SINC in CCBC has identified where habitats are in the process of losing their nature conservation value (see Section 8, above) and/or where the potential exists for significant enhancements. It is therefore recommended that a targeted programme of management be developed using the suggestions set out on the data sheets. This should be linked to funding programmes/ Countryside Stewardship schemes, such as Tir Gofal or the Woodland Grant Scheme (“*Better Woods for Wales*”), to provide incentives for landowners to contribute to the strategic enhancement of biodiversity across the SINC network and beyond.

Further to the publication of the *SINC Selection Criteria for the Mid-Valleys Area* referred to above, a Mid-Valleys Wildlife Sites Steering Group is being set up to oversee the development of wildlife sites in Caerphilly, Rhondda Cynon Taff, Merthyr Tydfil and Blaenau-Gwent county boroughs, with the aim of improving the quality of



SINCs through landowner liaison and appropriate management. The first meeting of this steering group is being due to take place in November 2009.



Appendix 1.

SINC Selection Criteria Summary

Caerphilly SINC Review Qualifying Criteria for Habitats (Summary)

Habitat	Qualifying criteria
Woodland	Ancient woodland
	Semi-natural woodland with assemblage of indicator species (no defined number)
	Semi-natural beech/ Yew woodland
	Semi-natural upland woodland
	Semi-natural wet woodland
Parkland, orchards and veteran trees	Parkland derived from ancient woodland, still including large mature trees
	Parkland containing good numbers of large over-mature trees
	Over-mature/ veteran trees ≥ 3.7 m circumf. at 1.3m from base, or >200years old
	Traditionally managed orchards which still contain old fruit trees.
Scrub	Structurally diverse and species-rich mixed scrub (≥ 6 woody species)
	Significant stands of gorse
Neutral grassland	Species rich neutral grassland (≥ 8 indicators)
	Meadow foxtail-Great burnet grassland (MG4)
	Crested Dog's-tail Common knapweed grassland (MG5)
	Red fescue – Creeping bent – Silverweed grassland (MG11)
	Tall fescue grassland (MG12)
	Creeping bent – Marsh foxtail grassland (MG13)
Calcareous grassland	Unimproved calcareous grassland
	Species-rich semi-improved calcareous grassland (≥ 8 indicators)
Acid grassland	Unimproved acid grassland
	Species-rich semi-improved acid grassland (≥ 7 indicators)
Marshy grassland	Blunt-flowered rush – Marsh bedstraw fen meadow (M22)
	Purple Moor-grass – Meadow thistle fen meadow (M24)
	Meadowsweet – Wild angelica mire (M27)
	Species-rich marsh/ marshy grassland, including M23 and M25 (≥ 12 indicators)
Bracken	Bracken stands with a species-rich ground flora
Heathland and grass-heath	Unmodified wet heath/ wet grass-heath with Cross-leaved heath
	Unmodified dry heath
	Degraded or secondary heath/ grass-heath with $\geq 10\%$ dwarf shrub heath cover
	Heath/ grass mixtures with ≥ 7 acid grassland indicators
Fen and swamp	Fen habitat not grossly modified by agricultural improvement
	Reedbed and other tall swamps
Bog and flush	Undegraded bog habitat
	Degraded bog which still retains some distinctive habitat features
	Neutral, basic or acid flushes, not grossly modified by agricultural improvement
Watercourses	Relatively unpolluted main river with unmodified bed and banks
	Relatively unpolluted streams / canals with good aquatic, emergent or bank vegetation
	Watercourses with exposed sediment/ erosion features (e.g. soft cliffs)
	Reen or ditch systems with diverse aquatic flora and/or fauna.
Lakes / ponds	Semi-natural bed/banks, good water quality and/ or diverse semi-natural flora.
Hedgerows	Close networks of hedges where the majority are Important under the Hedgrow Regs.
	Close networks of hedges where the majority are HEGS Grade 2 or higher
	Hedges scoring grade 1 using HEGS methodology.
Post-industrial	Post-industrial sites with diverse range of ≥ 20 indicators
Arable/ margins	Fields with ≥ 8 indicators
Mosaic habitats	Coherent sites with at least 3 habitats (where at least 1 approaches selection threshold in its own right) and species-poor habitats occupy $\leq 25\%$ of the area)
	Extensive areas of open countryside where semi-natural upland features predominate
Rock exposures	Limestone pavement
	Inland cliffs, crags and screes with substantive nature conservation interest
Other features	Continuous sections of disused railway lines supporting semi-natural vegetation
	Continuous sections of green lanes / other linear features with \pm continuous semi-natural woody boundaries, wide flowery verges and or unsurfaced trackways
	Areas with significant populations of anthills and/or several are est.>50years old
	Road verges meeting grassland selection criteria (>10years)

The full text, including the lists of indicator species, and primary/ contributory species is given in 'Guidelines for the Selection of Wildlife Sites in South Wales' (Gwent Wildlife Trust, 2004).

Caerphilly SINC Review Qualifying Criteria for Species (Summary)

Species	Qualifying criteria
Mammals	Sites supporting breeding water vole, otter, pine marten, dormouse or red squirrel
	Established populations of brown hare, harvest mouse, water shrew, yellow-necked mouse (Badger setts are a secondary feature)
	Significant bat roosts (defined in table) + associated commuting routes and foraging areas
	Significant bat hibernation roosts
Birds	Breeding populations of any 'primary' species
	Wintering or passage refuelling populations of any 'primary' species
	Breeding populations of ≥8-10 contributory species
	Wintering or passage refuelling populations of ≥12 contributory species
	Any site with ≥100 bird species records in previous 5 years
Reptiles	Sites with ≥3 species of reptiles
	Sites with good populations of any reptile species
Amphibians	Sites with ≥4 species of amphibian
	Sites with good (defined in table) populations of ≥3 species of amphibian
	Sites with exceptional (defined in table) populations of any amphibian species (Sites should include associated terrestrial habitat 0.5ha)
	Sites with good populations of great crested newts (≥10 individuals per count)
Fish	Waters with resident populations of sea/river/ brook lamprey, sturgeon, allis/ twaite shad/ Atlantic salmon, grayling, common goby, bullhead, bleak, smelt, brown trout or sea trout
	Watercourses used as regular migratory routes by anadromous species listed above
Invertebrates (general)	Sites with any UK RDB or s74 species
	Sites with an important assemblage/ population of Nationally Scarce species
	Sites with species recorded from 10 or fewer 10km grid squares in Wales
	Sites supporting a species breeding in ≤4 sites in a vice county
	Sites with significant populations / assemblages of LBAP species
Butterflies and moths	Sites supporting grizzled skipper, brown hairstreak, silver-studded blue, small blue, high brown fritillary, marsh fritillary or pearl bordered fritillary
	Sites supporting significant populations/ assemblages of dingy skipper, wood white, white-letter hairstreak, silver-washed fritillary, dark-green fritillary, small pearl-bordered fritillary or grayling
	Sites supporting Welsh clearwing, silky wave, belted beauty, white-spotted pinion, the Silurian, or orange upperwing
Dragonflies and damselflies	Sites supporting a Nationally Scarce species
	Sites with ≥9 species of dragonflies and damselflies
	Sites with white-legged / small red /southern / variable / red-eyed damselfly, hairy dragonfly, club-tailed dragonfly, downy emerald, ruddy darter or keeled skimmer.
	Sites with significant populations/ assemblages of beautiful/banded demoiselle, emerald damselfly, scarce blue-tailed damselfly, brown hawker, golden-ringed dragonfly, black-tailed skimmer or black darter
Grasshoppers and allied insects	Sites supporting a Nationally Scarce species
	Sites with ≥7 species of grasshoppers and allied insects
	Sites with great green / grey / bog / Roesel's bushcricket, long-winged conehead, house cricket, scaly cricket, Cepero's groundhopper, tawny cockroach
	Sites with significant populations/ assemblages of oak / speckled bushcricket, short-winged conehead, slender groundhopper, lesser marsh / mottled grasshopper, Lesne's earwig
Vascular plants	Sites with any primary species
	Sites with ≥5 contributory species
	Sites with species listed in RDB, s74 list or Nationally Scarce.
	Sites with contributory species that has suffered recent significant national decline
Fungi, mosses and lichens	Grassland sites with ≥8 species of waxcap
	Sites with species listed in RDB or s74 list
	Sites with species recorded from 10 or fewer 10km grid squares in Wales
	Sites with a species recorded from ≤3 sites in a vice county
	Sites with a significant population of a UK or LBAP priority species

The full text, including the lists of indicator species, and primary/ contributory species is given in 'Guidelines for the Selection of Wildlife Sites in South Wales' (Gwent Wildlife Trust, 2004).



Appendix 2.

SINC Review Summary Schedule (separate document)



Appendix 3

SINC Data Sheets and Maps (separate document)