Appendix A: Sources, References and Limitations of Data

	Chapter	Data type	Reference / Data source / Data limitations

1 Current Overview of National Nature Reserves

1.2a	Location, number and total area (ha) of NNR	Stat, map	CCW corporate MapInfo dataset: *NNR Final Bounds (m:\gis_data\live\protected_sites\nnr.tab).* Last updated: 15/04/2008. Clipped to remove all NNRs land which crosses into England (entitled *nnrwalesonly,* held by Kathryn Hewitt, Environmental Information Team, Knowledge Management Group, CCW.)
1.2b	Area of Wales (ha)	Stat	*Ordnance Survey Standard Area Measurements for Statistical Outputs for Geographies in the United Kingdom.* Area measurement to Extent of the Realm boundaries (i.e. Mean Low Water) based on 2002 *OS BoundaryLine data* (1:10,000 OS Landplan raster data) http://www.statistics.gov.uk/geography/downloads/SAM_DEC_2004_USERGUIDE.doc This measurement includes intertidal land down to Mean Low Water.
1.2c	Percentage of Wales covered by NNRs	Stat	N/a
1.3	Smallest, largest and median NNRs (name and area)	Stat	As 1.2a
1.4	First declared NNR, and new declarations within the reporting period. (Area, declaration date, location)	Stat	As 1.2a
1.5a	Area and percentage of NNRs in the uplands	Stat, map	CCW Corporate MapInfo dataset: *Ph1 Terr. Uplandbdy (m:\GIS_Data\Live\Biological\Habitats\Phase_1\upland_boundary\upland_boundary.tab).* Last updated: 12/9/2006. Clipped with *nnrwalesonly,* to show only NNRs in uplands.
1.5b	Area and percentage of NNRs below mean high water mark	Stat, map	CCW corporate MapInfo dataset: *Mean High Water Mark (m:\GIS_Data\Live\Ordnance_survey\os_boundaryline\hwm.tab).* Converted to polygon, and clipped with *nnrwalesonly,* to show only NNRs below MHW.
1.5c	Percentage of NNRs in lowlands (terrestrial)	Stat, map	N/a
1.6	Number of NNRs within 1km & 5km of larger urban area (town or city)	Stat, map	CCW corporate MapInfo dataset: *OS. Stratigi Urban areas (m:\os strategi\urban.tab).* Last updated: 01/10/2002. Filtered so only 'Large urban areas' were used, and clipped to show only urban areas in Wales. Buffered to 1km or 5km, then clipped with *nnrwalesonly,* to show where NNRs intersect with the urban area or buffer zone.

2 Skomer – Wales' Marine Nature Reserve

2.2a	Number in Wales, name, area, declaration date	Stats	CCW corporate MapInfo dataset: *Sites (MNR) (m:\gis_data\live\protected_sites\mnr.tab).* Last updated: 22/01/2008.
2.2b	Location	Map	As 2.2a
2.5	Features of Skomer MNR	Stat	Philip Newman, Marine Nature Reserve Officer Skomer, West Region, CCW. Personal communication.
2.6	National and international importance of the MNR (Area designated SSSI, SAC, National Park)	Stat	Corporate MapInfo datasets-*Sites (SSSI) (m:\gis_data\live\protected_sites\sssi.tab).* Last updated: 22/01/2008. And *Sites (SAC) (m:\gis_data\live\protected_sites\sac.tab).* Last updated: 22/01/2008. And *Sites (National Parks) (m:\gis_data\live\protected_sites\national_parks.tab).* Last updated: 22/01/2008. Clipped with CCW corporate MapInfo dataset: *Sites (MNR) (m:\gis_data\live\protected_sites\mnr.tab).* Last updated: 22/01/2008, to identify areas of designation contiguous with the MNR.
2.7	Annual CCW budget for Skomer MNR	Stat	Philip Newman, Marine Nature Reserve Officer Skomer, West Region, CCW. Personal communication.

3 Protection of National Nature Reserves

3.4a	NNRs owned by CCW or other party – area and percentage	Stat	CCW corporate MapInfo datasets- *LA Comp CCW holdings (m:\gis_data\live\land_mangement\landagency\completed_ccw_land_holdings.tab).* Last updated: 01/04/2008. Clipped with *nnrwalesonly*, to identify NNRs which are owned by CCW.
3.4b	Owned by CCW but site leased to third party – area and percentage	Stat	CCW corporate MapInfo datasets- *LA Comp Letting by CCW (m:\gis_data\live\land_mangement\landagency\completed_letting_by_ccw.tab).* Last updated: 01/04/2008. Clipped with *nnrwalesonly*, to identify NNRs which are leased by CCW to third party. (NB. Current copy has error at Skomer Island NNR).
3.4c	Owned by third party but leased to CCW – area and percentage	Stat	CCW corporate MapInfo datasets- *LA Comp Letting to CCW (m:\gis_data\live\land_mangement\landagency\completed_letting_to_ccw.tab).* Last updated: 01/04/2008. Clipped with *nnrwalesonly*, to identify NNRs which are owned by third party but let to CCW.
3.4d	Owned and managed by third party under Section 16 agreement	Stat	CCW corporate MapInfo datasets- *LA Completed Agreements (m:\gis_data\live\land_mangement\landagency\completed_agreements.tab).* Last updated: 01/04/2008. Filtered to show only S.16 agreements and clipped with *nnrwalesonly*, to identify NNRs which are under S.16 agreement.
3.4e	Owned and managed by third party under Section 15 agreement	Stat	CCW corporate MapInfo datasets- *LA Completed Agreements (m:\gis_data\live\land_mangement\landagency\completed_agreements.tab).* Last updated: 01/04/2008. Filtered to show only S.15 agreements and clipped with *nnrwalesonly*, to identify NNRs which are under S.15 agreement.
3.4f	Owned and managed by third party under other agreement	Stat	Derived from above statistics.

4 Visiting National Nature Reserves

4.2a	Km of PROWs on NNRs. Lengths broken down by Footpath, Bridleway and Byway.	Stat	CCW Corporate MapInfo datasets- *Rights of Way (All Wales) (m:\gis_data\live\access\rights_of_way\all_prow.tab).* Last updated: 06/11/2006. Clipped with *nnrwalesonly* to identify PROWs on NNRs.
4.2b	Area of statutory open access land (all types) in Wales (ha), including the following:		
I	CRoW Act, Open Country	Stat	CCW Corporate MapInfo datasets- *(m:\GIS_Data\Live\Access\Access_Land\Statutory Access\Open Country.tab).* Last updated: 08/02/2008. Clipped with *nnrwalesonly* to identify open country contiguous with NNRs.
II	CRoW Act, Registered Common Land	Stat	CCW Corporate MapInfo datasets- *(m:\GIS_Data\Live\Access\Access_Land\Statutory Access\ Registered Common Land.tab).* Last updated: 30/04/2008. Clipped with *nnrwalesonly* to identify Registered Common Land contiguous with NNRs.
III	CRoW Act, Forestry Commission Freehold Forests	Stat	CCW Corporate MapInfo datasets- *(m:\GIS_Data\Live\Access\Access_Land\Statutory Access\ Public Forests.tab).* Last updated: 06/02/2008. Clipped with *nnrwalesonly* to identify Forestry Commission Freehold Forests contiguous with NNRs
IV	Other open access legislation	Stat	CCW Corporate MapInfo datasets- *(m:\GIS_Data\Live\Access\Access_Land\Statutory Access\ Other Statutory Access Land.tab).* Last updated: 28/11/2007. Clipped with *nnrwalesonly* to identify other open access legislation contiguous with NNRs
V	Intertidal land	Stat	CCW Corporate MapInfo datasets- *(m:\GIS_Data\live\Biological\Habitats\marine\Phase1_intertidal\intertidal_Wales.tab).* Last updated: 20/11/2007. Clipped with *nnrwalesonly* to identify intertidal land contiguous with NNRs
4.4	Visitor statistics: Total number of visitors per year for all NNRs; Number of NNRs in each category.	Stat	*Current estimates for NNR visitor totals, CCW, 2004.* Tom Hellawell. Unpublished report.
4.5	Visitor and interpretation facilities: paths; car parks; toilets; interpretation boards; leaflets; visitor centre; picnic sites; shop/café; sculpture/artwork	Stat	NNR Access Statements. Mike McCabe, Operational Support Group, CCW.
4.6	Facilities for disabled visitors: Access statement; fully accessible routes; disabled parking; accessible toilets; accessible by public transport	Stat	As 4.5

4.9	Visitor characteristics: Age range, Socio-economic group, Level of education, Ethnicity, Level of disability, Size of group, Presence of children under 15, Place of residence, Previously visited, Revisit rate, Means of transport, Holiday or day visitors, Planned visit or just passing, Reason for visiting, Activities undertaken	Stat	*R. Elwyn Owen Associates for CCW, Monitoring the Profile, Awareness and Attitudes of Visitors to National Nature Reserves 2002-2005, Summary Report, March 2005* Surveyed NNRs were Skomer Island, Stackpole, Cadair Idris, Yr Wyddfa, Oxwich, Dyfi, Cors Caron, Coedydd Aber, Newborough Warren and Ynys Llanddwyn, Coedmor.

5 Features of National Nature Reserves

5.2a	No of different features on NNRs, broken down by type: Habitats, plant species, animal species, assemblage of species, Earth science features, archaeological features	Stat	*NNR Habitat Features Status – June 2007 and NNR/MNR Species Features Status. 2007.* Unpublished report. Provided by Mike McCabe, Conservation Management Advisor, Conservation Management Team, CCW Operational Support Group.
5.2b	Total no of features on NNRs in Wales, broken down as in 5.2a	Stat	As 5.2a
5.2c	Habitat features – number of different component habitat features, broken down by broad habitat groups.	Stat	As 5.2a
5.2d	Habitat features – total number on NNRs, broken down by broad habitat groups.	Stat	As 5.2a
5.2e	Species features – number of different component species features, broken down by broad species groups.	Stat	As 5.2a
5.2f	Species features – total number on NNRs, broken down by broad species groups.	Stat	As 5.2a
5.2g	Species assemblage features – number of different component species assemblage features, broken down by broad species groups.	Stat	As 5.2a
5.2h	Species assemblage features – total number on NNRs, broken down by broad species groups.	Stat	As 5.2a
5.2i	Earth science features – number of different component Earth science features, broken down by group. Geological Conservation Review Blocks.	Stat	MapInfo dataset- *Original GCRs Checked2.tab.* Held by Hannah Brazier. Spatial Information Team, Knowledge Management Group, CCW. Clipped with *nnrwalesonly* to identify GCRs within NNRs.
5.2j	Earth science features – total number on NNRs, broken down by group.	Stat	As 5.2i
5.2k	Scheduled Ancient Monuments – Number on all NNRs; Number of NNRs with SAMs. Number broken down by period & type.	Stat	CCW Corporate MapInfo dataset - *Scheduled Ancient Monuments (m:\gis_data\live\physical\historic_landscapes\sam.tab).* Last updated: 23/06/2008. Clipped with *nnrwalesonly* to identify SAMs within NNRs.
5.2l	Listed Buildings – Number on all NNRs; Number of NNRs with listed buildings. Number broken down by grade & type.	Stat	CCW Corporate MapInfo dataset- CADW *listed buldings (m:\gis_data\live\physical\historic_landscapes\cadw_listed_buildings.tab).* Last updated: 01/06/2008. Clipped with *nnrwalesonly* to identify SAMs within NNRs.

6 National and International Importance of National Nature Reserves

6.1	NNRs which are also designated SSSIs – number, area and percentage area	Stat	CCW Corporate MapInfo dataset-*Sites (SSSI) (m:\gis_data\live\protected_sites\sssi.tab).* Last updated: 22/01/2008. Clipped with *nnrwalesonly* to identify NNRs which are contiguous with SSSIs.
6.2a	All international sites combined super-imposed on NNRs	Map	All MapInfo tables detailed above, combined. Held by Kathryn Hewitt, Environmental Information Team, Knowledge Management Group, CCW.
6.2b	NNRs which are also designated SACs - number, area and percentage area	Stat	CCW Corporate MapInfo dataset-*Sites (SAC) (m:\gis_data\live\protected_sites\sac.tab).* Last updated: 22/01/2008. Clipped with *nnrwalesonly*, to identify NNRs which are contiguous with SACs.
6.2c	NNRs which are also designated SPAs - number, area and percentage area	Stat	CCW Corporate MapInfo dataset-*Sites (Spa) (m:\gis_data\live\protected_sites\spa.tab).* Last updated: 22/01/2008. Clipped with *nnrwalesonly*, to identify NNRs which are contiguous with SPAs.
6.2d	NNRs which are also designated Ramsars - number, area and percentage area	Stat	CCW Corporate MapInfo dataset-*Sites (Ramsar) (m:\gis_data\live\protected_sites\ramsar.tab).* Last updated: 22/01/2008. Clipped with *nnrwalesonly*, to identify NNRs which are contiguous with Ramsar sites.
6.2e	NNRs which are also designated Biosphere Reserves - number, area and percentage area	Stat	CCW Corporate MapInfo datasets-*Sites (Biosphere) (m:\gis_data\live\protected_sites\biosphere.tab).* Last updated: 22/01/2008. Clipped with *nnrwalesonly*, to identify NNRs which are contiguous with Biosphere Reserves.
6.2f	NNRs which are also designated Biogenetic Reserves - number, area and percentage area	Stat	CCW Corporate MapInfo datasets-*Sites (Biogenetic) (m:\gis_data\live\protected_sites\biogenetic.tab).* Last updated: 22/01/2008. Clipped with *nnrwalesonly*, to identify NNRs which are contiguous with Biogenetic Reserves.
6.3a	NNRs which are within National Parks - number, area and percentage area	Stat, map	CCW Corporate MapInfo dataset- *Sites (National Parks) (m:\gis_data\live\protected_sites\national_parks.tab).* Last updated: 22/01/2008. Clipped with *nnrwalesonly*, to identify NNRs within National Parks.
6.3b	NNRs which are within AONBs - number, area and percentage area	Stat, map	CCW Corporate MapInfo dataset- *Sites (AONB) (m:\gis_data\live\protected_sites\aonb.tab).* Last updated: 22/01/2008. Clipped with *nnrwalesonly*, to identify NNRs within AONBs.
6.4	NNRs which are also designated GCRs – number, area and percentage area	Stat	MapInfo dataset- *Original GCRs Checked2.tab.* Held by Hannah Brazier. Spatial Information Team, Knowledge Management Group, CCW. Clipped with *nnrwalesonly* to identify GCRs within NNRs.

7 Conservation Management of National Nature Reserves

7.3a	Annual CCW funding for NNRs managed by CCW – maintenance and ongoing management, staffing, capital items, special projects	Stat	Unpublished data. Dewi Jones, Senior Accountant, Finance Group, CCW.
7.3b	Annual CCW funding for NNRs managed by third parties – S.16 management agreements	Stat	Unpublished data. Dewi Jones, Senior Accountant, Finance Group, CCW.
7.3c	Annual EU funding (from all partners)	Stat	Unpublished data. Dewi Jones, Senior Accountant, Finance Group, CCW.

8 Monitoring and Research on National Nature Reserves

8.1	Percentage of CCW resources invested in monitoring, survey and research on NNRs, broken down by type.	Stat	CMS records for 2007-08. Also DT/Council report entitled *Where the resource went*, Tom Hellawell, Senior Conservation Management Advisor, Operational Support Group, CCW.
8.2	Environmental Change Network and Environmental Change Biodiversity Sites; No & name of sites; Measurements carried out	Stat	Unpublished material. Maggie Hatton-Ellis, Monitoring Ecologist - Domestic Sites, Operation Support Group, CCW.

9 Status of National Nature Reserves

9.2	Whole site assessment, number and percentage of assessed NNRs with favourable (including unfavourable recovering) and unfavourable status. Plus level of knowledge assessment.	Stat, chart	*NNR/MNR Species features status and NNR Habitat Features Status June 2007.* CCW unpublished reports. Compiled by Mike McCabe, Conservation Management Advisor, Operational Support Group, CCW. The data reported is based on the opinion of NNR Wardens on the status of NNR features. Their assessment is based on survey data and their professional opinion. JNCC Common Standard Monitoring methods or criteria have not been systematically applied in all cases. Level of knowledge: No information means that no status information was available for any of the features. A site has been included in analysis where status of at least one feature is known – however, there may be a number of other features with no status information (these are not included in the level of knowledge assessment).
9.3	Status of all NNR biodiversity features. Percentage of assessed features with favourable, unfavourable recovering and unfavourable declining status. Plus level of knowledge assessment.	Stat, chart	*NNR/MNR Species features status and NNR Habitat Features Status June 2007.* CCW unpublished reports. Compiled by Mike McCabe, Conservation Management Advisor, Operational Support Group, CCW. The data reported is based on the opinion of NNR Wardens on the status of NNR features. Their assessment is based on survey data and their professional opinion. JNCC Common Standard Monitoring methods or criteria have not been systematically applied in all cases.
9.4	Status of NNR species features. Percentage of assessed features with favourable, unfavourable recovering and unfavourable declining status. Plus level of knowledge assessment. Percentage of species features with favourable & unfavourable recovering status.	Stat, chart	As 9.3
9.5	Status of NNR habitat features. Percentage of assessed features with favourable, unfavourable recovering and unfavourable declining status. Plus level of knowledge assessment. Percentage of habitat features with favourable & unfavourable recovering status.	Stat, chart	As 9.3