Heads of the Valleys
Open space and Play/Sport area Provision Report

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Contents

1   Background and brief

In July 2006 exeGesIS started a project for Blaenau Gwent County Borough Council (Blaenau Gwent CBC) to identify their Greenspaces and to determine how the current levels of Greenspace provision compared with the standards included in the Toolkit. The CCW and other neighbouring Authorities expressed an interest in extending the area of this work. In December 2006 exeGesIS was commissioned to extend the work to include those Authorities that were a part of an existing consortium around the 'Heads of the Valleys'. The participating Authorities were:

- Blaenau Gwent County Borough Council
- Caerphilly County Borough Council
- Torfaen County Borough Council
- Merthyr County Borough Council
- Rhondda Cynnon Taff County Borough Council

The consortium was coordinated by the CCW and contract administration services were provided by Blaenau Gwent CBC. A list of key contacts is provided in Appendix A

Two Authorities (Caerphilly CBC and Rhondda Cynnon Taff CBC) requested additional tasks to be undertaken, including ground truthing and assessment of Greenspaces and the inclusion of some types of public opens space that fall outside the definition of Greenspace as defined by the Toolkit. This report relates solely to this additional work; please see the main project report for all other information.

2   Methodology

<u>Collation and creation of access points dataset</u>

Access points are locations on the perimeter of a space. Initially access points were created at intersections between spaces and the access network, but it was noted that the results were highly dependent on the quality of the source data used. Also it is the case that many spaces are actually accessible along most of their boundary ad creating just a few access points where paths and roads crossed would have underestimated their accessibility.

The amended approach generated access points automatically along the edge of a space where a polygon lies within 50m of a road or path. While this overestimates access to some sites, it is the best approximation given the data available and is an approach that could be consistently applied across the study area

<u>A dataset showing population distribution</u>

Population data is derived from the 2001 census and was sourced from the Office for National Statistics. This dataset provides a population figure for every Census Output Area polygon in the project area.

<u>Analysis</u>

The task here was to measure the distance between each postcode and the nearest access point on the nearest space.

This part of the work was undertaken using 'Routefinder' network analysis software. The inputs were the access points dataset (for the appropriate area class) and the processed access network. For each of the four area classes, the output was a seamless coverage of polygons representing distance to/from the nearest space.
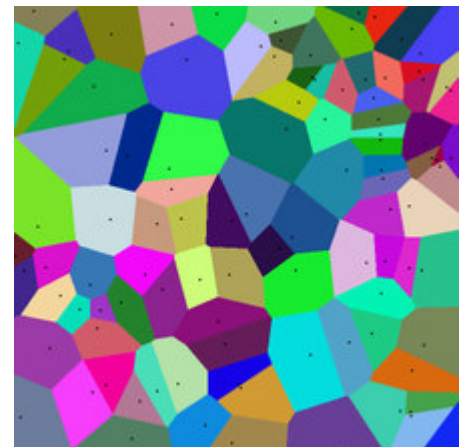
This output uses a 'Voronoi Tesselation' to polygonise the study area; this is a geometric product and therefore an abstraction whereby every part of the study area is allocated to the nearest data point. In practice only those points that are actually on the access network will be have their distance from the nearest space accurately calculated and points off the access network will have an estimated value. In practice the overall results are not sensitive to this, largely because the population lives very close to the road and path network.

The result of the network analysis was combined with the Census Population data to provide a seamless coverage across the study area in which each polygon had associated population and distance to/from space values. The calculation of the population for each polygon assumed a uniform population distribution across census output areas.

Having combined the two datasets, it was possible for the Play/Sport area spaces to apply the criteria from the NPFA standard and assign pass/fail attributes to each polygon:

- 1km to nearest space of 1000m^2

This pass/fail value was then used to calculate the population counts and land area passing/failing each criterion which can be expressed in terms of percentage of Authority population or Authority area.

For the open spaces, there is no such criteria to work to. As such, the distributions of distance to/from the nearest open space are presented.

3   Outputs

The key outputs are:

>   The dataset of play space and sports field outputs
>   Text and photographic outputs from the field survey

Spatial datasets have been provided as ArcGIS or MapInfo files as appropriate for each Authority so that further analysis and presentation work can be conducted in house. For each of the Authorities and for each type of space, an A0 map (PDF format) has been provided. These maps show which parts of each Authority meet or fail to meet the various standards.

Baseline statistics

	Area (km²)	Population	No of Play/Sport spaces	No of open spaces
Caerphilly	277	169,521	136	665
Rhondda	424	231,952	76	532
All (Total)	1048	618,445	212	1197
All (Average)	210	123,691	106	599

Proportion of population (%) meeting NPFA standard

	1km to nearest play/sport area of 1000m^2	
	Pass	Fail
Caerphilly	67.4	32.6
Rhondda	45.7	54.3

Rhondda Cynon Taff Cumulative frequency distribution; distance to nearest open space
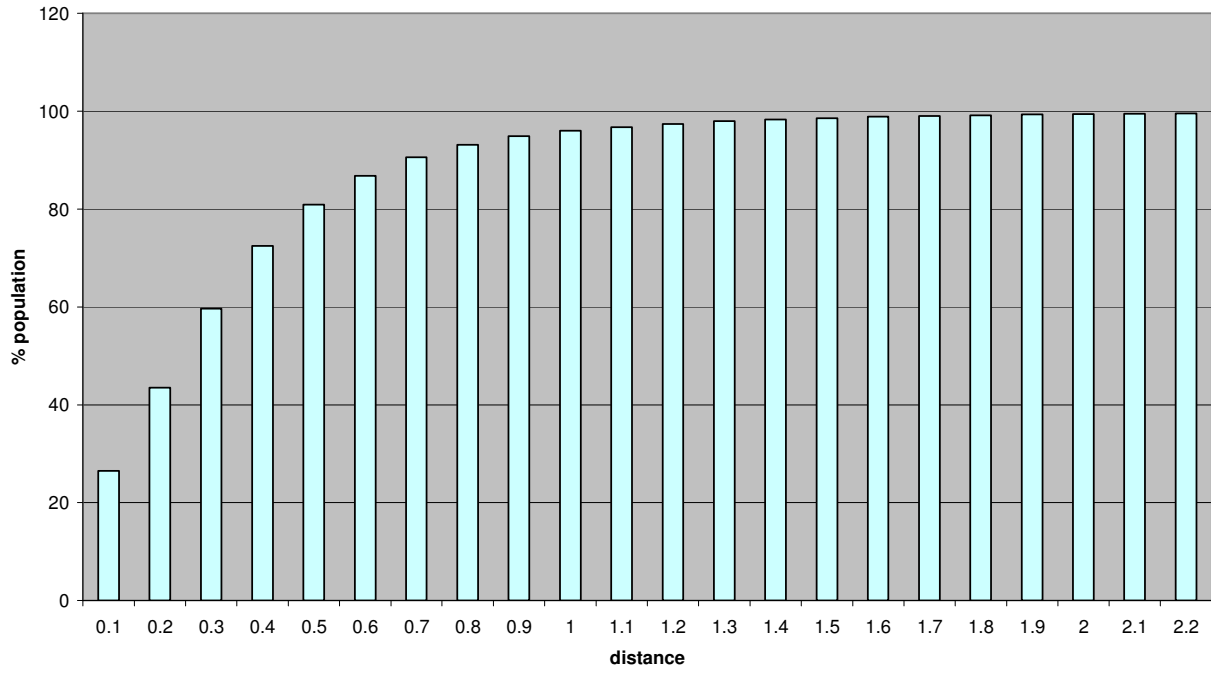
Caerphilly Cumulative frequency distribution; distance to nearest open space
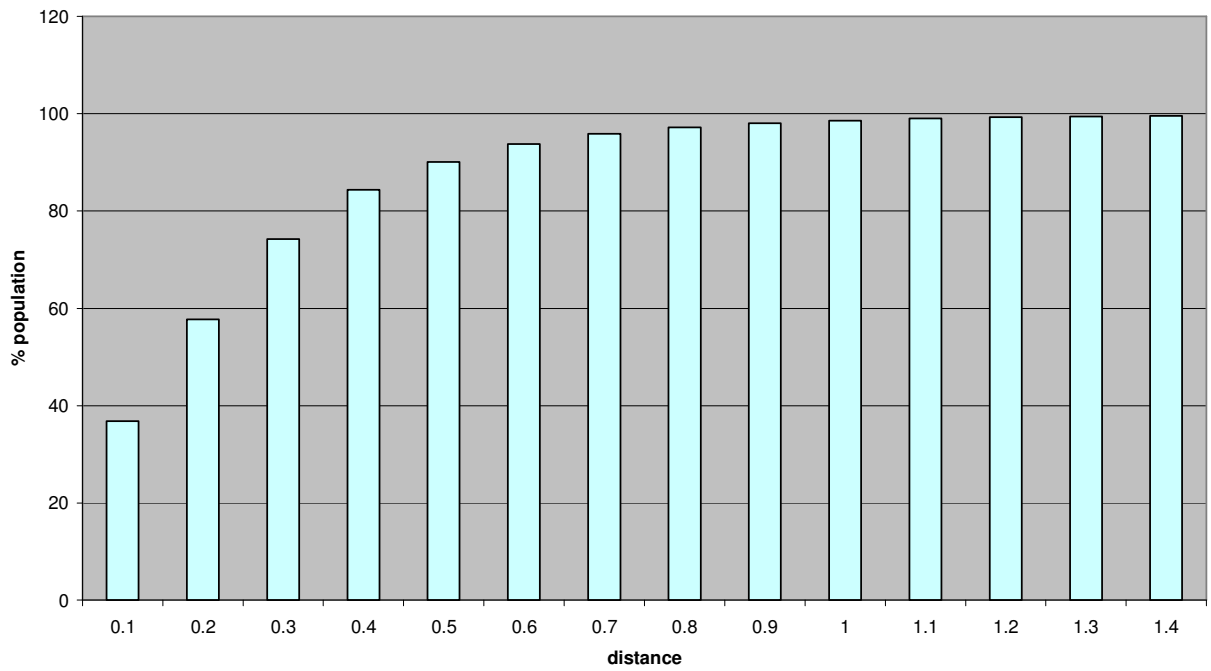
100% of the population live within 2.2km of their nearest open space in Rhondda Cynon Taff and 100% of the population live within 1.4km of their nearest open space in Caerphilly

4   Understanding and making best use of outputs

It is important to understand, in broad terms at least, the process used to create the data and the nature of the data that the analysis was based on. In other words to understand that the outputs can only be as good as the inputs. We believe that the quality of the input data was reasonable and that the outputs therefore reasonably describe provision. However there is room for improvement in data quality and any improvements in data will lead to improved accuracy of the results if the analysis is repeated in the future. Specific data quality and data limitation issues to be aware of are:

The NPFA standard is very detailed relating to various properties of a space. It was not possible to discern compliance from supplied data so all spaces meeting the size criteria were included.

5   Recommendations and further work

Field survey is recommended as a means of assessing compliance with the NPFA standards.

Outputs
It is recommended that the spatial data supplied is imported for use in each Authoritys GIS as this is an effective way of sharing the information with colleagues and will also allow for further analysis to be carried out. Assistance with this can be provided by exeGesIS if required.

The A0 maps have been provided as PDF formal files for convenience, but are best viewed as hard copy. It is recommended that each Authority prints hardcopy maps from the PDF files. Assistance with this can be provided by exeGesIS if required.

Appendix A
Partners and key contacts

Blaenau Gwent County Borough Council
Colin Cheesman
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Appendix B
Datasets supplied

Dataset	Filename	Used for Space dataset	used for network
AddressPoint	AddPnt	n/a	
AerialPhotos	Blaenau Gwent Central	n/a	
	Blaenau Gwent North	n/a	
	Blaenau Gwent South	n/a	
ForestryCommision	1191_20260_411_703	y	
	blaenaugwent_assembly_woodlands	y	
Mastermap	mastermap	y	
ITN	output_ITN	n/a	y
OpenAccess	Blaenau_Gwent_CL	y	
	Blaenau_gwent_conc_OC	y	
PROW	CAMS dataset	n/a	y
	OSCAR ROADS MAP	n/a	
	row	n/a	
UDP	POLYGON OVERLAY	y	
Woodland	drysiogfarm	no	
	TPO's	no	
Cemetaries	cemetaries	y	
CommonLand	Caerphilly_common_land_region	y	
CountryParks	country parks	y	
CountyBoundary	ua_cov_region	n/a	
Designations	Sac_ccbc - special area of conservation	y	
Golf	golf	y	
HLA	hla_2006	y	
Mastermap		y	
NationalPlayingFieldStandard	2005 national playing field standard	y	
Open access	Caerphilly_conc_OC_region	y	
OS10K raster		n/a	
PlaygroundStock	playground stock	y	
Postcodes	postcode units	n/a	
PROW	prow	n/a	y
Roads	roads	n/a	
ITN		*n/a*	*y*
UDP		y	
YouthStock	youth stock	y	
Population	BLPU_pt_22-06-07	n/a	
designations	AONB_region	n/a	
	Areas of Outstanding Natural Beauty_export	n/a	
	Biogenetic Reserves_export	y	
	Biogenetic_region	y	
	Biosphere_region	y	

Dataset	Filename	Used for Space dataset	used for network
	Biospheric Reserves_export	y	
	hercoast_polyline	n/a	
	Heritage Coast_export	n/a	
	LNR_region	y	
	Local Nature Reserves_export	y	
	Marine Nature Reserves_export	y	
	MNR_region	y	
	National Nature Reserves_export	y	
	NNR_region	y	
	Ramsar_export	y	
	Ramsar_region	y	
	SAC_region	y	
	Sites of Special Scientific Interest_export	y	
	SPA_region	y	
	Special Areas of Conservation_export	y	
	Special Protection Areas_export	y	
	SSSI_region	y	
other	Car_park_Picnic_and_other_recreation_100707	n/a	
	copy_of_roads_100707	n/a	y
	CYC_fire_points	n/a	
	Gateways	n/a	
	no_thin_100707	y	
	wales2000mbuffer	y	
	Wales_Ownership_28_03_07	y	
AddressPoint	Address Point	n/a	
OS10K		n/a	
mastermap		y	
ITN		n/a	y
other	Ancient & Ancient Semi-natural Woodland	y	
	Cemeteries	y	
	Common Land	y	
	Heads of the Valleys Greenspace MT	y	
	Open Access Land	y	
	Parks	y	
	Playing Fields	y	
	PROW	n/a	y
	Taf Fechan Nature Reserve	y	
OS10K		n/a	
Address Point	Address	n/a	
	ADDRESSP_point2	n/a	
	AddressPoint	n/a	
	ADDRESST	n/a	
Aerial Photos	*2003*	n/a	
	Aerial 2000	n/a	
Dataset	**Filename**	**Used for**	**used**

		Used for Space dataset	for network
	Area 1	n/a	
	Area 2	n/a	
	Area 3	n/a	
	Area 4	n/a	
	Area 5	n/a	
	Area 6	n/a	
	Area 7	n/a	
	Area 8	n/a	
	Area 9	n/a	
	Area 10	n/a	
Countryside	Key_Countryside_Sites	y	
	Local Nature Reserves_export	y	
	LocalNatureReserves	y	
	Open Access	y	
	PROW	n/a	
	PRoW_RCT	n/a	
	SINC_Point	no	
	SINC_POLY	y	
	Sites of Special Scientific Interest_export	y	
	SSSI	y	
	TPOAREA	y	
	ROW_work	n/a	y
	TPOIND	no	
Cynon Valley Local Plan	CVLP_Green_Wedge_region	y	
	CVLP_Landscape_Area_region	y	
	CVLP_Local_Plan_Boundary_region	no	
	CVLP_Other_Open_Space_region	y	
	CVLP_Recreation_Cycle_Path_polyline		
	CVLP_Recreation_Tourism_point	no	
	CVLP_Recreation_Tourism_region	y	
	CVLP_Settlement_Limit_region	no	
Taff Ely Local Plan	TELP_Environment_Designated_Conservation_Areas_region	y	
	TELP_Environment_Green_Wedges_region	y	
	TELP_Environment_Historic_Parkland_region	y	
	TELP_Environment_Notified_SSSI	y	
	TELP_Environment_Registered_Commons	y	
	TELP_Environment_Settlement_Boundaries_region	n/a	
	TELP_Environment_Special_Landscape_Area_region	y	

Dataset	Filename	Used for Space dataset	used for network
	TELP_Environment_Urban_Open_Space_region	y	
	TELP_Infrastructure_Cyclepaths_polyline	n/a	
	TELP_Infrastructure_Pedestrian_Routes_text	n/a	
	TELP_Infrastructure_Pedestrianisation_polyline	n/a	
	TELP_Land_Use_Recreation&Tourism_region	y	
	TELP_Land_Use_Recreation&Tourism_text	n/a	
ITN		no	y
Land Terrier	Acquisitions	no	
	Disposal	no	
	Lease	no	
Mastermap Feb 2007 (post PAI)		no	
Other	BOUNDARY	n/a	
	OS_Contours	n/a	
Parks	GRASS	y	
	Grounds_Maintenance	y	
Address Point	AddPnt	n/a	
MM ITN		no	y
OS10k raster		no	
Other	Allotments	y	
	Areas of Important Urban Open Space	y	
	Cemeteries	y	
	Child & Youth Play Areas	y	
	Civic Space	y	
	Community Space (Amenity)	y	
	Cycle Track	n/a	
	Farmlands	no	
	Green Corridors	y	
	Leisure Centres	y	
	Newtasc	no	
	Outdoor Sports Facilities	y	
	Possible Sites	y	
	Private Gardens	no	
	Public Parks & Gardens	y	
	Rivers Canals & Lakes	y	
	Road Verges & Roundabouts	no	
	Row_work	n/a	y
	SITES TO BE INVESTIGATED	no	
	Urban Fringe Countryside	y	
	Woodlands	y	