Appendix 2 - Baseline Data Information and Maps

The information in this section represents baseline data which has been taken at either Highland wide level or, when available, Caithness and Sutherland level.

Biodiversity, Flora and Fauna	Key information	Data Source
Protect, enhance and where necessary restore designated wildlife sites and protected species	There are currently 150 SSSI's, 29 SAC's, 15 SPA's, 4 NNR's, 3 RAMSAR in the Plan area.	SNH website for information on designated sites, site condition and qualifying interests/features: www.snh.org.uk Scottish Biodiversity Strategy (Scotland's Biodiversity - It's In Your Hands; 2020 Challenge for Scotland's Biodiversity)
	Flow Country, nominated to UNESCO as a tentative World Heritage Site, is a vitally important habitat on a regional and international scale. It is the largest expanse of blanket bog in Europe, and covers about 4,000 km ² and home to a rich variety of wildlife, and is used as a breeding ground for many different species of birds.	The Peatlands of Caithness and Sutherland - Management Strategy 2005 - 2015
Improve biodiversity, avoiding irreversible losses.	Highland region supports 192 of the 238 priority species in Scotland and 40 of the 42 priority habitats. 455 of the priority species of conservation importance are found in Highland.	Highland Biodiversity Action Plan www.highlandbiodiversity.com Habitat and Birds Directive – Annex 1
Provide appropriate opportunities for people to come into contact with and appreciate wild life and wild places.	Proportion of population living within 200m of a footpath. The core paths plan is yet to be completed but this information will be added to the baseline data when the plans are adopted, Summer 2008.	The Highland Councils Core path plan.
Fisheries and Aquaculture	Natural Resources of the Seas around Highland.	http://www.highland.gov.uk/yourenvir onment/agriculturefisheriesandforestr y/fisheriesandaguaculture/
Protected species		THC's Statutorily Protected Species Supplementary Guidance
		SNH website
		Presence of protected species may be able to be derived from the NBN Gateway <u>http://data.nbn.org.uk/</u> (although absence of any record is not conclusive that the species is not

		present).
Forest and Woodland	The forestry map below shows the key features within the existing forestry industry across Highland. In the Plan area there are 1,338 Semi- natural woodland sites, 1,010 ancient woodland sites and 8 Tree Preservation Orders.	The Highland Forest and Woodland strategy. http://www.highland.gov.uk/yourenvir onment/agriculturefisheriesandforestr y/treesandforestry/highland-forest- and-woodland-strategy.htm Forestry Commission Scotland: http://www.forestry.gov.uk/scotland Native Woodland Survey of Scotland http://scotland.forestry.gov.uk/suppor ting/strategy-policy-guidance/native- woodland-survey-of-scotland-nwss (This report became available after the SEA site assessments but will inform future assessments)
Protect and enhance the connectivity of green networks	Mapped extent and mapping methodology for identification of green networks in Highland	Green Networks: Supplementary Guidance <u>www.highland.gov.uk/developmentpl</u> <u>ans</u> .











Population and Human	Koy Information	Data Source
Health	Key Information	Data Source
Population and demographics	 Information on the current situation and forecasts for future demographic changes at local, regional and international levels. Population of Highland increased from 208, 914 to 232,132 between 2001 and 2011 (11% increase) Population is projected to increase by 15% by 2035. There is expected to be 16, 029 more people of retirement age and 5507 fewer children than in 2004. Therefore the population is expected to age. 3 data zones in highland Region fall within the 5% most deprived zones in Scotland. 2 data zones fall within the top 5% least deprived. A large proportion of Highland Region is referred to as "Fragile" in terms of remoteness and scarcity of population. An average of 8 people live per sq km, throughout the region, reducing to 2 people per sq km in some parts. In Caithness and Sutherland the population has grown by 1,312 between 2001 and 2011 to 37,020 but is expected to decline to 35,556 by 2031. Current population density in the Plan area is 5.1 people per km2 (compared to Highland at 8.7 people per km2 and 67.4 for Scotland. Sutherland is the most sparsely populated area of Scotland with only 2.2 people per km2. 	 Highland Council population Projections 2004- 2024 http://www.highland.gov.uk/NR/rdonl yres/20D86A3A-5750-42B3-927D- 21000CD24694/0/bn8popproj.pdf Census statistics and analysis www.ons.gov.uk Scottish Household Survey 2012 http://www.scotland.gov.uk/Topics/St atistics/16002 Scottish index of multiple Deprivation 2004 http://www.highland.gov.uk/NR/rdonl yres/796EA9D0-C754-4A2D-9799- DBB026E6A611/0/simd2004_paper. pdf Highland Council Definition of Fragile Rural areas in Highland. http://www.highland.gov.uk/NR/rdonl yres/267DCD97-B9B0-4BF3-BE1C- 15D662186C48/0/fragile_paper.pdf
Health and well-being	Baseline information on the current situation and forecasts for future trends on a variety of topics including health, crime, environmental health.	www.isdscotland.org www.scotland.gov.uk Transport Scotland: Household Survey 2012 www.audit-scotland.gov.uk http://www.transportscotland.gov.uk/ news/scottish-household-survey- travel-diary-2012
School rolls	Many of the primary and secondary schools are significantly under capacity.	School roll forecasts http://www.highland.gov.uk/yourcoun cil/highlandfactsandfigures/schoolrollf orecasts.htm
Physical activity and active travel	Information on physical activity organisations and current and planned	2012 Scottish Household Survey

	 active travel projects. 47.7% of Highland has not walked as a means of transport in the past week and only 40.5% walked for pleasure in the last week. 49% of Highland population has access to a bicycle (second only to Moray at 49.6% 	SHS Transport Across Scotland 2009-2010 Sustrans National Cycle Network Map; <u>http://www.sustrans.org.uk/ncn/map/</u> <u>national-cycle-network</u>
		Active travel audits are available for Thurso and Wick http://www.highland.gov.uk/yourenviron ment/roadsandtransport/transportplann ing/ ActiveTravelMasterplans.htm
	Footpath networks – Highlights the proportion of population living within 200m of a footpath.	The Highland Councils Core Path Plan. <u>http://www.highland.gov.uk/leisurean</u> <u>dtourism/what-to-</u> <u>see/countrysideaccess/corepathplan</u> <u>s.htm</u>
Open Space	Highlights the proportion of population who live within 200m of open space	The Highland Council Open Space Audit

Greenspace Scotland

http://www.greenspacescotland.org.u k/audits-and-strategies.aspx





Air	Key Information	Data Source
2013 Air Quality Progress Report	Generally the air quality in the Highland Council area is good. Risk that 15 minute mean air quality objective SO2 could be exceeded in Castletown as a result of the density of dwellings which burn solid fuels.	http://www.highland.gov.uk/download s/file/405/2013_air_quality_progress _report
Number of Air Quality Management Areas (AQMA) in Highland	None at present	http://www.scottishairquality.co.uk/

Water	Key Information	Data Source
Avoid impact to and where possible enhance the water environment.	Number of rivers/lochs in good Ecological Condition.	EU Water Framework Directive. Highland Biodiversity Action plan SEPA Scottish Water
Flooding likelihood	Within nearly all the main towns and villages there are areas which are at risk of flooding and that both coastal and fluvial flood risk can be an issue in the CaSPlan area.	Scottish Government: the Future of Flood risk Management in Scotland: http://www.scotland.gov.uk/Topics/E nvironment/Water/Flooding/Consultat ion UKCIP09: www.ukcip.org.uk/ www.sepa.org.uk/pdf/flooding/planni ng_flooding.pdf Strategic Flood Risk Assessment - SEPA technical guidance to support Development Planning www.sepa.org.uk/planning/flood_risk/ policies_and_guidance.aspx Land Use Vulnerability Guidance Vulnerability of Highland communities to flooding. SEPA Indicative River and Coastal
Pumping Stations and Sewage Works		Flood Map (Scotland) Scottish Water (2012) Strategic Asset Capacity and Development Plan; <u>http://www.scottishwater.co.uk/you- and-your-home/connecting-your- property/strategic-asset-capacity- and-development-plan</u>
Water Quality	 North Coast –contains 8 coastal water bodies: 4 'high' ecological status and 4 'good' Tongue - 19 natural water bodies in coastal catchment: 3 high and 16 good. River Hope - 5 natural water bodies: 4 'good' and 1 'poor'. River Borgie - 7 natural water bodies: 3 high and 4 good. River Strathy - 4 natural water bodies: 4 good Helmsdale River - 7 natural water bodies: 6 high and 1 good Forss Water – 6 natural, 1 heavily 	SEPA Water Quality Classifications http://www.sepa.org.uk/water/monitor ing_and_classification/classification/c lassification_results.aspx Area Management Plan http://www.sepa.org.uk/pdf/NH%20c atchment%20summaries%20- %20Caithness%20and%20Sutherlan d.PDF Scottish Executives Bathing Water Strategy http://www.scotland.gov.uk/Publicatio ns/2006/03/23151924/0

modified: 5 high and 1 poor

- Wick Coastal 11 natural water bodies: 7 good, 2 moderate, 1 poor
- East Coast 10 coastal water bodies, 7 high, 2 good and 1 heavily modified
- Wick River 5 water bodies: 2 moderate, 2 poor and 1 bad
- River Thurso 15 water bodies (13 natural and 2 heavily modified): 1 high, 13 good, 3 moderate, 1 poor, 1 bad
- River Helmsdale 28 water bodies: 6 high, 21 good, 1 moderate
- River Naver 20 water bodies (1 heavily modified): 19 high and 1 moderate.
- Dunbeath Water 5 water bodies 1 high 4 good
- Berriedale Water 3 water bodies: 1 high, 1 good and 1 moderate
- River Brora 14 water bodies (1 heavily modified): 12 good, 1 moderate
- Brora Coastal 2 water bodies: both good
- River Shin 23 water bodies (3 heavily modified): 20 good, 2 moderate, 1 bad
- River Oykel 16 water bodies: 3 high, 12 good and 1 moderate
- River Caron (Sutherland) 8 water bodies (1 heavily modified) : 1 high, 5 good, 2 moderate.

Scottish Executives Statistics Environment:

European Directive 76/160/EEC, which sets mandatory bacteriological and other health-related standards for bathing waters in Europe.

Monitoring and classification system for water bodies (Water Framework Directive) –

www.sepa.org.uk/water/monitoring_a nd_classification.aspx

River Basin Management Plan for Scotland & draft Area Management Plan –

www.sepa.org.uk/water/river_basin_ planning/early_basin_planning_work. aspx

River Basin Management Plan interactive map: <u>http://gis.sepa.org.uk/rbmp</u>

	-	
Hydro-power	Over 80 hydro-powered stations in Highlands and Islands More than half of Scotland's 145 hydroelectric schemes are in the Highlands and Islands area	Hi Energy http://www.hi- energy.org.uk/hydroenergy.html Scottish Government www.scotland.gov.uk
Wave and tidal renewable energy	Pentland Firth and Orkney Waters commercial lease area hosts 6 of the top 10 tidal energy sites in the UK. Potential to generate up to 1.6GW (gigawatts) from tidal and wave device deployment by 2020.	Hi Energy http://www.hi- energy.org.uk/Renewables/Tidal- Energy.htm Scottish Government www.scotland.gov.uk
Ground Water and River Levels		SEPA River Levels http://www.sepa.org.uk/water/river_le vels.aspx

Centre for Hydrology and Ecology. National Water Archive; <u>http://www.ceh.ac.uk/data/NWA.htm</u>
Scotland's River Basin management plan RBMP Interactive Map <u>http://gis.sepa.org.uk/rbmp/</u>

Climatic Factors	Key Information	Data Source
Vulnerability to effects of climate change		UKCP09 The climate of the United Kingdom and recent trends. <u>http://ukclimateprojections.defra.gov.</u> <u>uk</u> SEPA flood maps www sepa.org.uk SCCIP pilot project LCLIP. <u>www.sccip.org.uk</u> Marine Climate Change Impacts Partnership. Consideration of Climatic Factors within Strategic Environmental Assessment (SEA) <u>www.scotland.gov.uk/Publications/20</u> <u>10/03/18102927/0</u> Scottish Climate Change Impacts
		Partnership (SCCIP) website (<u>www.sccip.org.uk</u>)
Energy consumption	Highland Council energy consumption is 22, 250GWH per annum.	Highland Council Energy Management and Performance Plan http://www.highland.gov.uk/NR/rdonl yres/4EA59619-0EF5-42CC-9889- 7EDA9F997E8E/0/emppfeb06.pdf
Energy from renewable sources	Renewable Energy installations in Highland Council Building is 1200KWh	Highland Council Energy Management and Performance Plan http://www.highland.gov.uk/NR/rdonl yres/4EA59619-0EF5-42CC-9889- 7EDA9F997E8E/0/emppfeb06.pdf
	Promotion of renewable energy.	Highland Council Renewable Energy Strategy http://www.highland.gov.uk/yourenvir onment/planning/energyplanning/ren ewbleenergy/highlandrenewableener gystrategy.htm

		Community Benefits from Renewables <u>http://www.highland.gov.uk/livinghere</u> /communityplanning/communitybenef <u>it/</u>
Air pollution	Carbon Footprint – 11.73-11.99 tonnes C0 ₂ per capita	Stockholm Environment Institute. Taken from the report "A Right Climate for Change", (2007) Local Footprints Project and Stockholm Environmental Institute. Climate Change (Scotland) Act 2009 <u>http://www.scotland.gov.uk/Topics/E</u> nvironment/climatechange/scotlands-
Air Quality Management	None at present in Caithness and	action/climatechangeact http://www.scottishairquality.co.uk/
Areas (AQMA)	Sutherland	
Travel	44% of people within Highland taking public transport or active travel means to work and study.	This should be monitored through the Highland Council green travel plan which is currently under development,
	Active travel audits for Wick and Thurso which includes a variety of baseline information.	Local Transport Strategy http://www.highland.gov.uk/yourenvir onment/roadsandtransport/transportp lanning/localtransportstrategy.htm
Improve the use of sustainable building techniques	Promotion of Sustainable design in the Community.	Designing for Sustainability in the Highlands http://www.highland.gov.uk/yourenvir onment/planning/developmentplans/ developmentplanpolicyguidance/desi gningforsustainability.htm Highland Housing Fair: http://www.highland.gov.uk/yourenvir onment/sustainabledevelopment/sha ringthegreenagenda/highlandhousing fair.htm



Material Assets	Key Information	Data Source
Housing	There are two housing markets within the Plan area: Caithness and Sutherland. In September 2013 there were 20,904 houses in the Plan area. Around 1/3 of housing in Wick and Thurso are affordable but in rural areas it is below the Highland average. Private renting is lower than the Highland average and there are high rates of vacant housing Caithness and second homes Sutherland.	The Highland Council housing land Audit 2006 http://www.highland.gov.uk/NR/rdonl yres/B3104D9D-838A-42F1-B679- AE682078AE23/0/briefingnote24.pdf

House Sales	A quarter of all house sales in Highland are to people from out with the area.	Highland Council Paper – House Sales – What do they tell us about migration in Highland. <u>http://www.highland.gov.uk/NR/rdonl</u> <u>yres/7C0C7DCA-0AB6-4EAE-B6C6- C33A0E03BA52/0/bn2.pdf</u>
Libraries	42 establishments containing a library	Highland Council Housing and Property data files
Vacant homes	There are 93 211 households in highland region and of these just under 10% are vacant or second/holiday homes.	Highland Council Household Estimates (2004) http://www.highland.gov.uk/NR/rdonl yres/ADF1B5B3-1C8D-4C34-97AE- F5B3A35DA583/0/bn3.pdf General registrar for Scotland
		household Estimates 2006: <u>http://www.gro-</u> <u>scotland.gov.uk/statistics/publication</u> <u>s-and-data/household-estimates-</u> <u>statistics/household-estimates-for-</u> <u>scotland-2006/index.html</u>
Supply of Affordable housing	All of the Highland's 23 Settlement Zones identified as not being required to provide affordable housing contributions are located in Caithness and Sutherland.	Highland Council Affordable housing policy: <u>http://www.highland.gov.uk/download</u> <u>s/file/2162/developer_contributions_s</u> <u>upplementary_guidance</u>
Renewable Energy Installations	Renewable Energy Installation account for 536.25kW of Highland Council Energy use.	Highland Council Energy Management and Performance Plan.
Water Treatment Works		Scottish Water Strategic Asset Capacity and Development Plan (2006); Scottish Water (2012) Strategic Asset Capacity and Development Plan; <u>http://www.scottishwater.co.uk/you- and-your-home/connecting-your- property/strategic-asset-capacity- and-development-plan</u>
Waste generation and management	 Waste management facilities within Caithness and Sutherland: 1 incineration/co-incineration 3 transfer stations 7 multiple activity sites 1 other treatment site 	Waste infrastructure maps <u>http://www.sepa.org.uk/waste/waste_data.aspx</u> <u>http://www.sepa.org.uk/waste/waste_infrastructure_maps.aspx</u> Scottish Water - Asset Capacity Documents and Search <u>http://www.scottishwater.co.uk/you-and-your-home/connecting-your-property/asset-capacity-search</u>



Soil	Key Information	Data Source
Minimise waste and re-	Waste into landfill: The proportion of	HC Waste Data Report -
use or recover it by	waste in Highland being put into landfill.	http://www.highland.gov.uk/NR/rdonl
recycling, composting or	% of recycling/composting.	<u>yres/F6627158-2F0E-4C68-8250-</u>
energy recovery.		9475DA7B8999/0/20062007Annual
	102 requeling points in Llighland in 2010	WasteDataReport.pdf
	183 recycling points in Highland in 2010	SEDA Wests Data Digest Series
	Pooveling rate in Highland has	SEPA Waste Data Digest Series - http://www.sepa.org.uk/nws/data/dat
	Recycling rate in Highland has increased from 34% in 2012/2013 to	a digest.htm
	43% in 2013/2014.	Audit Scotland Annual Statutory
	1070 11 2010/2011.	Performance Indicators reports -
		http://www.audit-
	77,393 tonnes waste to landfill in	scotland.gov.uk/performance/council
	Highland in 2010/2011.	¥
	-	Zero Waste Plan 2010 -
		http://www.scotland.gov.uk/Topics/E

	Target of 70% recycling by 2025	nvironment/waste-and- pollution/Waste-1/wastestrategy SEPA Information on recycling rates – http://www.sepa.org.uk/waste/waste_ data/waste_data_reports/landfill_allo wance_schemea.aspx
Waste Management Facilities	Additional Operational Waste Management Infrastructure Capacity required to meet the Zero Waste Plan Targets Total additional capacity needed 160,000 tonnes Additional capacity needed to manage source segregated recyclables 80,000 tonnes Additional capacity needed to manage unsorted waste 70,000 tonnes Ten year rolling landfill capacity required is 2,000,000 tonnes	http://www.scotland.gov.uk/Topics/E
Erosion	Distance and numbers of path where erosion or poor path construction has or is reducing soil quality and quantity. No data available but possible monitoring of core paths in the future can be used.	The Highland Council Core Paths Plan
Contaminated Land		Highland Council Contaminated Land Database. Scottish Vacant and Derelict Land Survey
Agricultural Land	Land use, employment and production information. Crofting in Highland Prime agricultural land (considered to be 3.2 and above)	National Farmers Union Scotland; http://www.nfus.org.uk/facts_index.as p Scotland's Soils http://www.soils- scotland.gov.uk/data/lca250k Crofters Commission Annual report 2006/07; http://www.crofterscommission.org.u k/documents/croft- englishfinalreport0607.pdf
Soil Quality	Key indicators of soil quality	Soil Indicators for Scottish Soils http://sifss.macaulay.ac.uk

Carbon Rich Soils	Peat soils make up 22.5% of Scotland's soil. Scottish soils are estimated to contain approximately 3000 million tonnes carbon, which is the majority of the soil carbon stock of the whole of the UK.	'Peatlands of Caithness and Sutherland Management Strategy' James Hutton Institute SNH Information Note on Carbon Rich Soils - <u>http://www.snh.gov.uk/planning-</u> and- development/advice-for-planners- and-developers/soils-rocks-and- minerals/soils- and-development/ Scotland's Soils – survey data <u>http://www.soils-</u> scotland.gov.uk/data/soil-survey
Geology	Geological Conservation Review and Regionally Important Geological and geomorphological Sites (RIGS) (aka Local Geodiversity Sites)	http://www.scottishgeology.com/

Waste Compositional Analysis

Highland weighted average residual waste composition

Material	Wt kg/hh/wk	% Compn	Carbon Factor kgCO2eq Arisings	Carbon Factor kgCO2eq Recycled	Carbon Factor kgCO2eq Incin'd	Carbon Factor kgCO2eq Landfill
Total Glass waste	0.50	5.14%	895	-201	-	26
Total Paper and Card	0.98	10.10%	1026	-342	-540	542
Total Metal	0.33	3.40%	3666	-2457	17	6
Total Plastic bottles	0.12	1.30%	3218	-578	1186	6
Total Dense plastic	0.62	6.38%	3218	-578	1186	6
Total Plastic film	0.71	7.29%	3218	-578	1186	6
Total Garden wastes	1.23	12.47%	0	-46	-56	214
Total Food wastes	2.63	27.00%	3590	-55	-61	257
Total Wood wastes	0.11	1.15%	675	-412	-846	840
Total WEEE	0.07	0.76%				
Total Textiles & footwear	0.47	4.85%	21148	-5990	140	526
Total Miscellaneous combustible	0.23	2.34%				
Total Misc. non- combustible	0.29	3.04%	12	2		3
Hazardous wastes	0.03	0.26%				
Total Healthcare waste	1.23	12.65%				420
Total Fines	0.19	1.93%				
Total	9.76	100%				



Map: Soil types in the Caithness and Sutherland area





Map: Simplified geological map illustrating the nature, age, origins and distribution of rocks

Cultural Heritage	Iral Heritage Key Information Data Source	
Value and protect diversity and local distinctiveness.	Detailed masterplans of Wick and Thurso produced with members of the local community.	Wick and Thurso Charrettes – Final Report http://www.highland.gov.uk/info/178/l ocal_and_statutory_development_pl ans/283/caithness_and_sutherland_l ocal_development_plan/2
Listed Buildings	Number of Listed buildings across Caithness and Sutherland are: A Listed - 66 B Listed - 552 C(S) Listed - 349	Historic Scotland GIS Dataset
Schedule Monuments	Total number of Schedule Monuments in Caithness and Sutherland is 598	Historic Scotland GIS Dataset
Inventory Gardens and Designed Landscapes	There is 1 Inventory Gardens and Designed Landscapes in the Plan area.	Historic Scotland GIS Dataset
Conservation areas	There are 4 conservation areas across	Historic Scotland GIS Dataset

Building at Risk

the Plan area.

There are 172 buildings on the Buildings at Risk register in Highland. Many of these are within Caithness.

Buildings At Risk Register http://www.buildingsatrisk.org.uk/



Landscape	Key Information	Data Source
Retain and improve quality and quantity of publicly accessible open space.	There are 15 separate Landscape Character Types identified within Caithness and Sutherland.	Scottish Natural Heritage: Overview of Scotland's national programme of Landscape Character Assessment (2004) Sutherland landscape capacity study: an analysis of housing potential (2006). Caithness and Sutherland
		Landscape Character Assessment (1998)
National Scenic Areas	Caithness and Sutherland includes 4 National Scenic Areas – Scotland's finest landscapes.	Special Qualities of NSAs Report www.snh.org.uk

Wild Land Areas	There are 10 Wild Land Areas identified	Wild Land Areas
	in the CaSPlan area that make up approx. 45% of the total CaSPlan area.	http://www.snh.gov.uk/protecting- scotlands-nature/looking-after- landscapes/landscape-policy-and- guidance/wild-land/mapping/
Coast	Biodiversity	Highland Biodiversity Action Plan www.highland.gov.uk
	Number, type and specification of harbours in Highland.	http://www.highland.gov.uk/yourenvir onment/roadsandtransport/harbours/
	Coastal Classification	THC Coastal Development Strategy www.highland.gov.uk
	Seal haul-out sites	Scottish Government Seal-Haul out site maps http://www.scotland.gov.uk/Topics/m arine/marine- environment/species/19887/20814/m aps
Impact of Built development	Visual impact of built development	SNH's visual indicator of built development and land use change – <u>http://www.snh.gov.uk/publications-</u> <u>data-and-research/trends/scotlands-</u> <u>indicators/natural-heritage-indicators</u>
Special Landscape Areas	There are 10 SLAs wholly or partially within the Plan area.	SLA Citations www.highland.gov.uk/developmentpl ans



