

**ENVIRONMENTAL MANAGEMENT IN THE
LOCH LOMOND & THE TROSSACHS NATIONAL PARK
AUTHORITY**

The development of an **Environmental Management System** for the Authority is essential in order to demonstrate and measure environmental performance. This process is aimed at how the Authority as an organisation works and is the primary purpose of this document. Our role in developing policies and promoting sustainable practices as an example to others is explained fully in the National Park Plan. In due course, environmental practices other than those undertaken directly within the Authority will be considered.

Public bodies such as this Authority are in a position to take a lead in adopting sustainable practices and are encouraged to do so to support the Scottish Executive Greening Government policy in accordance with Local Agenda 21. The purpose of the greening Government agenda is not just to make public bodies more sustainable, but to bring the issue of sustainability and environmental responsibility into daily life. The Local Agenda 21 process is very much rooted in attitudinal change and it is hoped that staff will transfer their environmentally responsible practices from the work place into home life with obvious longer-term benefits to society.

In addition, the secondary statutory aim of the National Park is to promote sustainable use of the natural resources of the area and the National Park Plan states:

The National Park Authority will demonstrate sustainability in its own operations, activities and developments and promote good practice by others.

This strategic objective is supported in the National Park Plan through a number of specified actions including:

Audit and review existing practices within the National Park Authority to inform the development of an Environmental Management System and action plan (NC 178),

Develop a Green Travel Plan for the Authority (NC 179),

Promote and publicise the sustainability achievements of the new National Park Authority headquarters building (NC 180).

The operational activities of the National Park Authority within the Park area are diverse and there are many ways in which the organisation can demonstrate sustainable management practices. Through the development of an Environmental Management System for the Authority, we will be able to put in place and monitor our environmental impact year on year, ensuring continuous improvement commensurate with our own aims and the principles of best practice. Our environmental commitment statement is:

In order to reduce our impact on the environment and climate change, the National Park Authority will make best use of resources, minimise waste, purchase environmentally friendly products and services, and operate environmentally sound practices in all our activities including travel, energy consumption and biodiversity initiatives.

The international standard for Environmental Management Systems is ISO 14001. The National Park Authority will work towards developing the Environmental Management System to achieve at least the ISO 14001 standard. Accordingly, it is our intention that environmental improvement will meet the following outcomes:

- office waste is minimised and certain waste products are re-cycled
- there is an increased use of energy from renewable sources
- energy is used more efficiently and consumption is reduced accordingly
- pollution and harmful products are minimised or prevented
- the environmental impact of products is used as a prime selection criteria during procurement
- site and infrastructure management takes into account biodiversity
- CO₂, particle emissions and environmental negatives associated with energy use and travel are reduced
- staff are more aware of environmental impacts and issues and act in a more environmentally responsible way
- targets for environmental performance are achieved, maintained and improved.

In order to be effective, environmental management needs to adopt realistic and acceptable procedures that can be applied to our working practices and our decision-making processes. It is essential therefore that the staff of the organisation get behind any initiatives and practices by being aware of their purpose and involved in their procedures. For this to happen, it is important that a commitment is given from Board Members and senior management, that it is included in the Corporate Plan and that a staff working group is set up and given time to develop and manage the process. Resources commensurate with the size of the organisation must be allocated to this. An environmentally responsible attitude at work is the key to the success of any Environmental Management System and while this takes time to put into place, many staff are already very aware of good environmental practices.

The starting point

The National Park Authority has a headquarters building, satellite offices, visitor centres and facilities and countryside sites at many locations around the National

Park. This estate portfolio greatly influences the operation of the Authority and the circulation of Authority staff.

The starting point for the organisation, in terms of environmental performance, must be the assessment and description of current practices. A gap analysis that reviews current practices and procedures will form the baseline from which plans and policies can be developed and performance measured. The gap analysis should assess not only environmental performance per se but also public concerns, financial implications and legal requirements.

The topic areas for assessment and policy development have been grouped as follows for the purposes of this report:

- waste
- travel
- energy
- water
- procurement
- biodiversity

The Environmental Management Working Group was tasked with assessing the current practices and developing plans and policies to develop an EMS report. The group comprises different disciplines and levels within the organisation and is flexible to allow staff to participate as their workload dictates. New staff members are always welcome. It is important however for environmental management to be included as a regular item on team meeting agendas so that everyone can contribute and discuss how the organisation is performing or working practices are being improved. The group comprised:

Tim Edwards – Director
Alan Bell – Ecologist
Tony McKinnon – Property Officer
Susan Brooks – Policy Planner
Nigel Brooks – Transport Officer
Gillian Barrie – Sustainable Development Officer

In an organisation such as a National Park Authority, staff are likely to be much more environmentally aware and open to changes in working practices that benefit the environment. However, there will also be many barriers to progress including concerns over roles and responsibilities, the perceived complexity of the issues, making time in already busy schedules and the extent investment and running costs can be made available to instigate and maintain environmentally friendly practices. With clear and concise communication supported by common goals mirrored in other public agencies and led by Government, changes in working practices will lead to environmental management improvements.

Staffing commitment

It is important to allocate staff time to specific tasks and responsibilities. The following table identifies the EMS working group for the Authority:

| Staff member | Title | Role |
|-----------------|----------------------|----------------------------|
| Tim Edwards | Director (VOPs) | Chair |
| Nigel Brooks | Transport Officer | Travel |
| Alan Bell | Ecologist | Biodiversity |
| Susan Brooks | Policy planner | Procurement |
| Gillian Barrie | Sust' Devel' Officer | Group support/contact |
| Lynn Gordon | Administration | Waste/working practices |
| Tony MacKinnon | Property Officer | Energy/water monitoring |
| Gordon Forester | Gateway manager | Gateway/slipway champion |
| Steve Nunn | Senior Ranger | Balmaha/Aberfoyle champion |
| Callum Ritchie | Senior Ranger | Lochearnhead champion |
| Clare Travis | Senior Ranger | Luss/Sandbank champion |

Involvement at Director level is important and the Chair could usefully be rotated amongst the Directors.

The group will be supported by the Sustainability Officer who will act as the point of contact within the organisation for EMS communications. The production of annual figures will be the responsibility of the group while the champions at each location will ensure the implementation of the EMS policies and the monitoring of performance. The Property Officer will implement any infrastructure changes required to achieve agreed outcomes.

Communication

It is of vital importance that any identified changes in working practices are clearly and sensibly communicated to Authority staff. Changes may include, for example, double-sided photocopying or switching off computers and monitors if away from their desk for any length of time. To be successful, actions like these need to become second nature for staff. To help staff get into the habit, clear benefits need to be articulated, the benefits need to be measured to show improvement and champions need to be identified within each team and at each office location. To raise the profile of this initiative with staff, the following measures will be implemented:

- An initial newsletter/information sheet circulated to staff introducing the initiative and discussing the issues
- A site on the Authority web site will set out the Authority's strategy, objectives and performance measures. A bulletin board will form part of this location to encourage dialogue and participation.
- Inclusion in the Authority internal newsletter including progress reports and environmental 'action of the month'.

- Creation of opportunities for staff to take part in the group or specific actions in their office.
- Lunchtime (with a free lunch!) seminars on environmental management topics and issues.
- Distribution of attractive posters to publicise changes in working practices and promote good environmental stewardship.
- Training in environmental management at induction and for existing staff.

National Park buildings

The recently approved National Park new Headquarters project is due to be completed by Autumn 2007. The project has sustainability as a core design principle in line with Environmental Management System principles. The project is at the concept development stage at present and environmental solutions such as a carbon neutral building are being explored. An initial Building Research Establishment Environmental Assessment Method (BREEAM) assessment has been undertaken with an 'excellent rating' as the target.

Options are being explored which include the use of wood fuel and other renewable energy sources, the use of locally sourced timber for structural use, a predominance of natural materials for all building purposes, low energy mechanical and electrical services, the inclusion of a Sustainable Urban Drainage System (SUDS) feature and the incorporation of green travel plan principles.

Investment in existing Authority buildings will be made to improve environmental performance. This may include the installation of renewable energy sources, water conservation mechanisms and energy consumption initiatives.

Monitoring and reporting

It is also essential to put into place mechanisms and procedures that allow staff to monitor and measure the identified performance targets. These need to be easily gathered and directly relevant to ensure timely and consistent results. The EMS group will be responsible for compiling quarterly reports for consideration by the senior management team. Annual figures will be presented to the Scottish Executive for their reporting purposes and the Authority will include these measures in their annual report.

Performance targets will be reviewed quarterly by the EMS group to ensure they are realistic and on target and the process overseen by the internal Resource Monitoring Group and reported to the National Park Board through the corporate plan.

In response to the request by the Minister for Environment and Rural Development, the National Park Board, at their meeting on 6th March 2006 (Ref

NPA/01/2006/03) agreed to submit to the Scottish Executive this Environmental Management System report by the end of the 2005/06 financial year. Results from all public bodies will be reported annually by the Scottish Executive on their web site.

The Scottish Executive have set up the Environmental Good Practice Forum to support public bodies and a representative from the Authority will attend these meetings as required.

Environmental actions

Environmental tasks that have been identified to improve environmental performance are listed below. This is supported by subject reports setting out the initial audit of environmental management practices currently in place within the National Park Authority. The action table highlights the actions for 2006/07 as the Authority targets and what can be achieved in the first year of operation of an EMS.

The following list sets out the actions required to improve environmental performance in the Authority. These are further defined through the individual subject action sheets in the next section.

Water –

- Develop benchmark levels of current consumption
- Install flow restricting devices and other efficiency technologies in all Authority buildings
- ensure efficient servicing of water systems to prevent leaks and other events that waste water
- Investigate the environmental impact of office drinking water dispensing systems
- Monitor all Authority activities to identify and remove impacts on water quality

Waste –

- Collect and establish baseline information on waste generated at all Authority buildings and monitor levels of re-use and recycling.
- Set up and maintain contracts to recycle waste paper, cardboard, toner cartridges, drinks cans, packaging and other office products.
- Set up and maintain a green waste, composting scheme.
- Arrange for the re-cycling, redeployment, repair or re-sale of obsolete IT equipment such as computers, telephones and printers.
- Reduce the use of paper by double-sided printing and copying and maximising the use of alternative technologies and electronic media.
- Minimise the use of non-rechargeable batteries, especially those with high levels of lead, mercury and cadmium.

- Ensure staff are aware of environmental best practice including legal requirements for waste production and disposal.
- Recycle fluorescent tubes using an approved processing mechanism
- Ensure staff, manufacturers, suppliers and contractors minimise the volume of packaging used.
- Ensure hazardous substances are stored, used and disposed of in accordance with current legislation and environmental best practice
- Keep an efficient register of assets to enable efficiency of use.
- Prevent the venting of ozone-depleting substances from appliances and ensure planned maintenance of all refrigeration and air conditioning equipment containing ozone-depleting substances.

Procurement –

- Purchase energy and water efficient and environmentally friendly products.
- Procure electricity from renewable sources where available
- Timber and timber products from suppliers must be from sustainably-managed forests, including in relation to indigenous forest dependent people.
- Ensure that suppliers can demonstrate that they operate credible environmental management schemes with internationally recognized principles.
- Consider buying reclaimed timber or products where applicable.
- Purchase recycled paper containing at least 75% genuine post consumer waste, including agri-pulp.
- Ensure any virgin pulp comes from sustainably-managed woodlands and that at all stages the process of manufacture is chlorine-free.
- Ensure material published by the Authority is sealed using water-miscible varnish and is bound using water-based adhesive. Inks used should be based on vegetable oils or other sustainable equivalents.
- Do not purchase appliances that contain hydrofluorocarbons or perfluorobutane in preference to substitutes with a lower global warming potential.
- Ensure no products are purchased which contain chlorofluorocarbons (CFCs) or hydrochlorofluorocarbons (HCFCs), halons, carbon tetrachloride, 1-1-1 trichloroethane, methyl bromide or other ozone depleting chemicals.
- Use building materials and furnishings which are low emitters of formaldehyde and volatile organic compounds.
- Consider the use of biodegradable substances such as wood or vegetable based lubricating oils.
- When procuring new or refurbishing old premises, ensure BREEAM assessments are undertaken and attained.
- Ensure that the Authority takes into account the whole life costs and not just the initial price when assessing value for money.

- Evaluate the environmental performance of those tendering when relevant or the contract by integrating an environmental checklist into tender evaluations.
- Ensure appropriate environmental terms and conditions form part of any biodiversity related contract.
- Substitute the use of non-renewable peat with organic wastes such as coir or bark chippings.
- Check the use by staff and contractors of products containing harmful solvents to identify and either eliminate or replace by low-solvent or solvent-free products.
- Minimise the use of hazardous chemicals by replacing with environmentally friendly products or changing working practices.

Biodiversity -

- Maintain the Authority's estate using good biodiversity husbandry and the use of native flora.
- Enhance the biodiversity value of the Authority's estate holdings through enhancements such as ponds, nesting boxes etc.
- Ensure biodiversity features are considered as part of any building design options, e.g. scope for incorporation of nesting boxes, green roofs, etc.
- Use natural methods of control such as using native resistant species to minimise the use of pesticides.

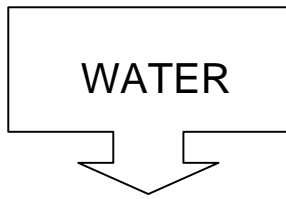
Energy –

- Install more efficient heating, ventilation and lighting equipment and controls and where possible improve the fabric of Authority buildings to make them more energy efficient.
- Continue to research new products, methods and technologies which target energy consumption.
- Ensure a high degree of plant maintenance through mechanical and electrical servicing for optimum efficiency.
- Encourage staff to save energy in the workplace through campaigns and other awareness raising methods.
- Consider the installation of combined heat and power plant, heat exchange units, solar cells, wind generators and displacement cooling systems.

Travel –

- Establish base line information and recording system to quantify vehicle mileage (both to/from & on work) and quantify CO2 emissions resulting from this mileage.
- Increase awareness of the environmental consequences of travel choices
- Develop Green Travel Plan including how to reduce the need to travel.

- Reduce CO2 emissions resulting from mileage by changing to lower polluting vehicles.
- Keep up to date with changing fuel/ vehicle technology.
- Make lower emission fuel available to a wider proportion of the Parks vehicle fleet.
- Establish a policy framework that encourages sustainable travel choices.
- Make bio fuel available to diesel engine boats.
- As petrol fuel boats need replacing consider alternative fuel boats.
- Monitor the performance of the solar boat.
- Reduce number of single occupancy car journeys.
- Provide up to date public transport information to staff.
- Provide education package regarding choosing and running vehicles.
- Develop measures to encourage cyclists



Objective:
To minimise the use of water by the Authority

Actions:

- Put in place mechanisms that help reduce the amount of water the Authority uses on an annual basis at all offices, centres and public facilities.
- Investigate sources other than the water supply network for use at certain facilities.
- Consider mechanisms that do not contribute waste water to the water system.

Current status summary:

Some water management mechanisms are in place at public facilities but there is no measure of water consumption for the Authority as a whole or water conservation measures in place in Authority Offices.

Total amount of water used in 2005 was 29,678.9 Litres.

Current situation

Water is a precious natural resource and its sustainable management is essential to protect the water environment and to meet current and future demands.

The water used by the Authority in all its buildings, excluding the public facility at Firkin Point, comes from the water supply network and is discharged into the foul water network, all unmonitored.

An increase in consumption has taken place due to the additional 5 storage and workshop units the Authority has recently occupied in the Lomond Industrial estate.

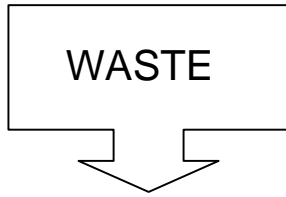
Some gents toilets have body heat sensors fitted. These sensors reduce the amount of water being used in flush urinals. A measure of this is that the previous system used 8 litres of water every 10 minutes to flush urinals over a course of 24 hours. The water management system has reduced the amount of water used in a 24-hour period to 430 litres thus saving 522 litres of water. This system will have to be installed in all toilet facilities throughout the Authority offices and properties in the Park.

All major toilet facilities have shut off ball valves fitted to the hot and cold water pipes these have been fitted to reduce water being wasted by defective tap washers etc.

The use of alternative low water technologies, such as composting toilets, will be evaluated.

Action

- put in place mechanisms for monitoring the use of water to establish a baseline for each Authority location such as water meters.
- investigate the installation of water butts for the collection of rainwater which can be linked to the flush toilet cistern water system at some locations



Objective:

To minimise office waste by reduction, reuse, repair and recycling methods.

Actions:

- Establish baseline information on waste generated at all Authority buildings and monitor levels of re-use and recycling.
- Reduce the solid waste produced from Authority premises by 5% in the first year through using resources more efficiently and improving recycling schemes.
- Increase recycling rates to 60% of total waste produced within 3 years of EMS operation.
- Establish and maintain contracts to recycle waste paper, cardboard, toner cartridges, drinks cans, packaging and other office products.
- Set up and maintain a green waste composting scheme.
- Arrange for the re-cycling, redeployment, repair or re-sale of obsolete IT equipment such as computers, telephones and printers. Care must be taken that the Authority is not passing on environmental problems to others.
- Reduce the use of paper by double-sided printing and copying and maximising the use of alternative technologies and electronic media.
- Ensure staff are aware of environmental best practice and legal requirements for waste production and disposal.
- Ensure staff, manufacturers, suppliers and contractors minimise the volume of packaging used.
- Minimise the use of non-rechargeable batteries, especially those with high levels of lead, mercury and cadmium.
- Recycle fluorescent tubes using an approved processing methods.
- Ensure hazardous substances are stored, used and disposed of in accordance with environmental best practice and within legal requirements.
- Keep an efficient register of assets.

Current status summary:

Some waste management practices already in place and monitoring is ongoing.

Current situation

HQ, Gateway, Stores, CDG Unit:

- There are labelled bins and bags for plastics, glass, paper and cans.
- West Dunbartonshire Council provides recycling bins at HQ and collects paper, plastic and cans from offices once a month.
- Wardens collect recycling materials from Gateway, Stores and CDG once a week, combine it with recycling materials from litter picks, weigh material and take it to Greenlight in Dumbarton.
- Printer cartridges are collected at HQ and sent to Recycling Appeal.
- The store person collects all plastic containers from various sites during his deliveries. All containers are crushed in the stores into manageable loads and are then taken by the store person to Greenlight depot for recycling. This practice has been ongoing for some time now within the stores.
- All end of life paper items within the stores are also taken to Greenlight for recycling.
- All defective plant or equipment is stored in the stores and recorded into a disposal book and at the end of the year it is disposed off in accordance with the recycling policy.
- We currently generate approx. 14,610kg of waste per year and of this WDC currently collect and dispose to landfill approx. 7722 kg of waste per year (from HQ).

Area Offices:

- Area offices carry out similar types of recycling (paper, glass, plastics, cans,) however, this is dealt with on an ad-hoc basis at time.
- There are some examples of green waste recycling (composting/ use of wormery).
- Re-use of certain waste materials in educational events and activities.

Other

- Vehicle tyres removed by tyre recycling service and taken to end of life station for re-use / recycling.
- No formal policy for disposal of end of life equipment, however in the past some end of life equipment has been made available in a staff scheme.
- Waste generated by Wardens (wood, wire, netting etc) is all reused and recycled as appropriate.

Recycling Rates:

| Waste | Per month (kg) | Per year (kg) |
|----------------------------|---------------------|---------------|
| Paper | 450 kg | 5400kg |
| Cardboard | 100kg | 1200kg |
| Aluminium & steel cans | 4kg | 48kg |
| Plastic | 6kg | 72kg |
| Glass | 4kg | 48kg |
| Printer Cartridges / toner | 5 per month (10 kg) | 120kg |

| | | |
|---|-------------------------|------|
| ELV's & associated wastes (oil and tyres) | Unknown | |
| Green waste | Not currently collected | |
| Office equipment & furnishings | Unknown | |
| Total | 572 | 6888 |

Based on the above figures as an organisation we currently recycle 47.1% of the waste generated in Park offices. As a benchmark, a good practice office operating efficient recycling schemes can achieve a rate of 60-70%.

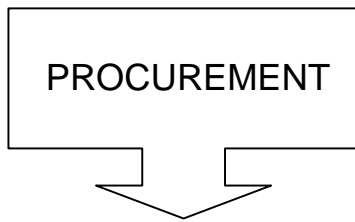
Action

Waste minimisation

- Educate staff to enable a reduction in overall levels of waste produced, in particular the volume of paper consumed.
- Develop waste minimisation and recycling code of conduct for staff.
- Purchasing policy also to look at extent and type of packaging in all items bought by NPA.
- Set targets for reduction in the overall number of items (reams of paper, printer cartridges etc) that are purchased.

Recycle & reuse

- Ensure recycling loop is closed, by purchasing materials with a recycled content. *Links to procurement policy.*
- Develop a more comprehensive re-use and recycling policy to include:
 - glass, kitchen waste
 - tyres, oil, ELV's,
 - waste electrical and electronic equipment.
 - office equipment and furnishings
 - wood, metals, aggregate
- Set target rate for recycling of office waste at all locations.



Objective:

To procure goods and services in more environmentally friendly ways.

Actions:

- Complete a thorough audit of what and how we procure goods and services.
- Introduce sustainable procurement policy, including identification of the management structure and resources (staff and budgetary) required.
- Develop an action plan, identifying specific dates and targets for the following:
 - purchase energy and water efficient and environmentally friendly goods.
 - procure electricity from renewable resources where available.
 - timber and timber products from suppliers must be from sustainably managed forests, including in relation to indigenous forest dependent people.
 - Ensure that suppliers can demonstrate that they operate credible environmental management schemes with internationally recognized principles.
 - Consider buying reclaimed timber or products.
 - Purchase recycled paper containing at least 75% genuine post consumer waste including agri-pulp.
 - Ensure any virgin pulp comes from sustainably-managed woodlands and that at all stages the process of manufacture is chlorine-free (i.e. manufactured using non-bleaching agents).
 - Ensure material published by the Authority is sealed using water-miscible varnish and is bound using water-based adhesive. Inks used should be based on vegetable oils or other sustainable equivalents.
 - Do not purchase appliances which contain hydroflourocarbons or perfluorobutane in preference to substitutes with a lower global warming potential.
 - Ensure no products are purchased which contain chlorofluorocarbons (CFCs) or hydrochlorofluorocarbons (HCFCs), halons, carbon tetrachloride, 1-1-1 trichloroethane, methyl bromide or other ozone depleting chemicals.
 - Use building materials and furnishings which are low emitters of formaldehyde and volatile organic compounds.
 - Use only bio-degradable substances such as wood or vegetable based lubricating oils.

- When procuring new or refurbishing old premises, ensure Building Research Establishment Environmental Assessment Method (BREEAM) assessments are undertaken.
- Ensure that the Authority takes into account the whole life costs and not just the initial price when assessing value for money.
- Evaluate the environmental performance of tenders when relevant or the contract by integrating an environmental checklist into tender evaluations.
- Ensure appropriate environmental terms and conditions form part of any biodiversity related contract.
- Substitute the use of non-renewables with organic wastes such as coir or bark chippings.

Current status summary:

Some sustainable procurement procedures are in place but current practice is mostly ad hoc and rests with individual departments or members of staff, rather than via a central point in the organisation and operating in accordance with an approved sustainable procurement policy.

Current situation

Procurement is the entire process of acquiring goods, services and capital projects. 'Sustainable' procurement is where environmental and social factors are also taken into consideration alongside financial factors when deciding whether and how to procure goods and services.

The 'Canny Buyer' Guidebook (www.cannybuyer.com) describes sustainable procurement as a *'management process used to secure the acquisition of goods and services ("products") in a way that ensures that there is least impact on society and the environment throughout the full lifecycle of the product'*.

Life Cycle is where all the environmental impacts of a product, from design to disposal, are considered.

As part of the development of an Environmental Management System we should be checking to see if there are any areas where we can reduce what we procure, for example, consumable items such as electricity, paper and other types of office stationary. Otherwise, we should be striving to ensure that we increasingly procure products and services that have the least environmental impact, by as far as possible buying products that are from renewable sources, that are produced in ways that cause low levels of pollution, that use recycled materials and that can be recycled easily or disposed of in ways that are not harmful to the environment. This will require a consideration the whole life costs of a product, for example it may be more expensive to purchase initially but savings will be

gained over the life of the product, this could apply to vehicles, materials used on buildings, or methods of heating and insulating buildings.

As a Non Departmental Government Body, the NPA is subject to the provisions set out in the Scottish Public Finance Manual, which states that *'all staff involved in procurement must have regard to the Scottish Environment's policies, where relevant, especially in framing specifications.'* In addition the Scottish Procurement Directive (part of the Scottish Executive) states that *'Procurement of goods and services should be based on value for money having due regard to propriety and regularity. Value for money is described as being the 'optimum combination of whole life cost and quality (or fitness for purpose) to meet the customers objectives in respect of environmental issues and other aspects of sustainable development'.*

Working with others to procure goods and services jointly or to share these, for example premises, vehicles, may offer benefits to the NPA, for example through achieving greater economies of scale, or allowing alternatives to be considered.

An initial basic audit of current procurement practices within the National Park Authority shows that procurement is mostly a devolved matter, dealt with by different departments or by individual staff members with responsibility for placing orders (for example stationary, or IT equipment) within set budgets. Sustainable procurement guidance or policy needs to be put into operation and value for money, currently the main criteria used when purchasing goods and services, set against environmental considerations. There are some sustainability checks being used, highlighted as appropriate under the different headings below.

Energy ~ (see also section on Energy and Water)

Our electricity is purchased from Scottish Hydro, Scottish Power and Scottish Gas. We do not know if this comes from renewable sources or not. We monitor the amount of the budget that is spent on electricity year on year but do not monitor actual unit consumption.

Actions

- Investigate feasibility of sourcing our electricity from renewable sources.
- Set a target for all or a % of our energy to come from renewable sources.

Vehicles ~ (see section on Travel)

Office Equipment, Furniture and Materials

All products are currently procured on competitive tender based on best price. No other considerations are taken into account at present.

All our products are bought from 'G cat' – a government catalogue for IT and telecoms related goods and services. The suppliers we use from this catalogue – Dell, Computacentre and PC World have Environmental Statements which need to be assessed within the context of this document.

We do not consider whole life or end of life for any office equipment or furnishings.

Apart from Hewlett Packard printers (which we send back to HP), we do not consider whether recycled materials have been used or whether to recycle at end of life. All printers now purchased are capable of printing double sided.

Some NPA projects use recycled materials, for example footpath construction.

Actions

- Audit all electrical compliances to see how many are classified as 'Tier 1' and check for energy saving specifications. Give consideration to such criterion when replacing equipment.
- Do not purchase appliances which contain hydroflouorocarbons (CFCs) or hydrochloroflourocarbons (HCFCs) or other ozone depleting chemicals.
- For new equipment, give consideration to 'whole life' costs and investigate the options for procuring energy efficient IT equipment (energy star rated products), which use recycled materials wherever possible and which are designed for recycling/ reuse.
- Investigate using specialist companies to dispose of PCs for reuse and develop policy for disposal of IT equipment. Consider passing on to the voluntary sector/community as part of a planned scheme that takes into account final disposal.
- Investigate the environmental policies of our suppliers for IT and telecoms goods and compile a list of preferred suppliers.
- Action for new HQ to purchase all office furniture from a supplier with ISO14001 certification. Investigate options for office furniture procurement from suppliers providing furniture made from sustainable materials and processes.
- Use building materials and furnishings which are low emitters of formaldehyde and volatile organic compounds.
- Where possible, use only biodegradable substances such as wood or vegetable based lubricating oils.
- Acquire timber and timber products from sustainably managed forests, including in relation to indigenous forest dependent people.
- Consider buying reclaimed timber for projects.

Stationery

Copier & headed paper:

100% recycled. Overall, we use approximately 30 reams of paper per week (500 sheets of A4 paper per ream) We do not presently monitor use of letter headed paper.

Publications paper:

Our paper is 80% post consumer waste, or alternatively paper sourced from sustainable forests. We also try to ensure that the printers & manufacturers that we use adhere to environmental principles (e.g. disposal of inks, dyes etc). A formal policy on this will be developed.

Envelopes:

We do not use recycled envelopes but this is currently being investigated.

Toner cartridges:

Used cartridges are returned for recycling but we do not buy them in as recycled.

Other Stationery:

All other stationery is ordered via each separate department. There is no current policy or standard practice. We currently do not monitor what stationery is ordered as an organisation overall.

An initial start has been made at looking into the various catalogues of stationery suppliers to see where there are options to buy 'greener' stationery items, for example, recycled note pads, pens/ mouse mats/ pencils made from recycled materials and so on.

Actions

- Monitor how many reams of paper are used per year for the organisation overall and work this out as x reams/per person/ per year. Investigate ways in which this can be reduced and set targets.
- Purchase recycled paper containing at least 80% genuine post consumer waste including agri-pulp.
- Ensure that any virgin pulp comes from sustainably managed woodlands and that at all stages the process of manufacture is chlorine-free.
- Ensure material published by the NPA is sealed using water-miscible varnish and is bound using water-based adhesive. Inks should be based on vegetable oils or other sustainable equivalents.
- Ensure that all documents are printed double sided.
- For our own publications consider alternative ways of disseminating these, for example, the CD Rom version of the Park Plan or giving people the option of having A Phairc emailed to them instead of posted. More accurate print runs for publications will avoid excess copies.
- Start to buy recycled envelopes and investigate options for buying recycled toner and IT cartridges.
- Review all departments' stationary orders and conduct cost comparisons of the various items currently procured with 'greener' versions. Investigate options such as bulk procurement through a centralised process which would also offer the benefits of financial savings and act as a way of ascertaining where we could reduce the amount of stationary that we order.

Chemicals ~ (also see section on waste)

All chemicals purchased by the park for cleaning purposes must meet the minimum standards set by the Hygiene Act and Pollution Regulations. Ninety Nine percent of materials purchased are biodegradable and create little or no damage to the environment. Cleaning fluids that are being used are water based and those that have chemicals in them must meet the allowed phosphate level set by SEPA that can be discharged into the Loch Lomond.

Chemical data sheets are requested from the suppliers. Low concentrate or substituted by water based cleaning materials only are purchased.

Actions

- Continue to assess cleaning chemicals as per data sheet descriptions.
- Monitor new products and use any that improve environmental performance

Food & Drink

We don't have standard office procedures for ordering food for meetings but must consider the source of products in terms of sustainability.

We use local suppliers (Rigos, Wisgonies) which offers local social and economic benefits.

No criteria for ordering Office Tea/ Coffee at present. Fairtrade coffee has been ordered recently for all NPA offices, except for the Gateway Centre.

With regard to promoting the use of local produce, this should be an aim for the procurement policy ensuring that this does not contravene any existing legislation.

Actions

- Introduce Fairtrade (or other ethically sourced) Tea/ Coffee for all meetings and events, also offer it as an alternative for staff.
- Establish standard procedures for ordering food for meetings etc. Compile a list of preferred suppliers for the NPA, set within EU public procurement rules.

Our Suppliers

We currently do not ask for evidence of a commitment to an overall sustainable development policy to be submitted at the tendering stage from suppliers or ask if they have gained an ISO 14001 recognition.

As a public sector body it is important that we comply with European Law and Procurement Rules which are designed to ensure that public procurement is fair, transparent and non discriminatory. When awarding contracts these rules allow two options to be considered: the lowest price and the economically most advantageous tender (EMAT). The Scottish Procurement Directorate specifies

that the EMAT must almost always be used, otherwise referred to as value for money, and which includes the consideration of whole life costs, quality, technical merit and environmental characteristics. Criteria on environmental considerations can be included when awarding contracts provided that they are linked to the performance of the contract and that they are clearly mentioned in the invitation to tender documents.

Sustainability criteria can then form part of the tendering process and be used to help evaluate tenders in conjunction with other criteria. Many organisations use a process of 'pre-qualification' where they look at a range of potential suppliers and 'vet' them against certain criteria. The 'Cannybuyer' guide recommends the use of a questionnaire to acquire information from suppliers. It offers guidance as to how to develop a questionnaire that can be used alongside discussions with the supplier.

Actions

- Give weight to environmental/ sustainability issues as part of the tender evaluation process.
- Develop a statement that sets out what we expect of suppliers, including a commitment to sustainable practices and principles, or a commitment towards improving their sustainability.
- Produce a guide on 'selling to the NPA' for our suppliers, setting out our sustainable procurement policy and objectives
- Build in a set of key criteria on sustainability on all contract specifications.

Web-based technology and e-Procurement

This is an area of procurement that the Scottish Executive is progressing. The Scottish Executive themselves have introduced an e-Procurement system in their own offices, for 2004 alone this was expected to save the use of approximately 162 reams of paper. Their Environmental Performance report for 2003/2004 highlights that the Office of Government Commerce (OGC) calculated that a typical purchase and payment procedure requires a minimum of 6 sheets of A4 paper per transaction, such as purchase orders, invoices and approval sheets (they also worked out that one tree is equivalent to around 11,500 pieces of paper). Our finance records show that between March 2004 and October 2005 we placed around 3,600 orders, working on the OGC calculations this equates to around 21,600 sheets of paper – roughly 2 trees on ordering alone!

The introduction of an e-Procurement system would allow things like ordering, invoicing and payments to be made electronically, thus helping to reduce the amount of paper used.

There is also scope to investigate other options for making greater use of web-based technology to disseminate our own publications. For example distribution

of A Phairc magazine and other documents such as the Corporate Plan, Park Plan and Local Plan.

An e-planning group has been set up and there is potential to introduce a system where planning applications can be submitted, processed and determined electronically, again this would save on using significant amounts of paper.

Actions

- Investigate the options for introducing an e-procurement system for ordering, invoicing and making payments.
(We would need to investigate what suppliers that we currently use have capacity to receive orders and send invoices electronically).
- For all publications, ensure there is an electronic version, and consider for some reports only producing these in electronic format (the final EMS report for example).
- Introduce e-planning function. A joint bid for funds to introduce an e-planning system, together with other Scottish Local Authorities, is targeted for summer 2006.

Training for staff

No overall programme of training or awareness raising has been provided to staff on procurement. Overall we need to develop a sustainable procurement policy which sets out how all budget holders should operate, taking environmental and social considerations into account alongside factors such as need, cost effectiveness and affordability. The option of joining with other agencies or groups to pool training resources is important.

Actions

- Develop a sustainable procurement policy and provide guidance to staff on sustainable procurement, as part of the implementation of the wider Environmental Management System.
- Develop a section on the staff intranet and a suggestions board for staff to share ideas and experiences.
- Develop a programme of training in conjunction with other partners.

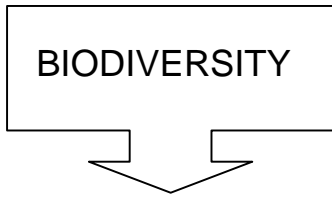
New National Park Headquarters

The development of the new National Park Headquarters represents an excellent opportunity to adopt and implement the principles of sustainable procurement as well as other environmental measures that are covered elsewhere in this report. These should be scoped out at an early stage, particularly in relation to tendering and costing projections. This applies not only to the design and materials used

for the building but also to the procurement of all fixtures and fittings, including things like lighting systems, fridges, paints and varnishes used etc.

Actions

- Ensure that sustainable procurement principles and practices (including Building Research Establishment Environmental Assessment Method (BREEAM)) are built into the:
 - design, construction and running of the new NPA HQ building
 - potential refurbishment of the Callander sub office
 - a review of operating systems of all sub offices, visitor centres and stores buildings with a view to introducing more environmentally friendly operating practices.



Objective:

To manage our sites and infrastructure to maximise their biodiversity value.

Actions:

- Maintain the Authority's estate using good biodiversity husbandry and the use of native flora
- Enhance the biodiversity value of the Authority's estate holdings through enhancements such as ponds, nesting boxes etc.
- Ensure biodiversity features are considered as part of any building and landscaping design options for new builds and conversions, e.g. scope for incorporation of nesting boxes, SUDS features, green roofs, etc.

Current status summary:

Some land and buildings under Authority control are managed for wildlife objectives but others are not and no systematic approach is in place.

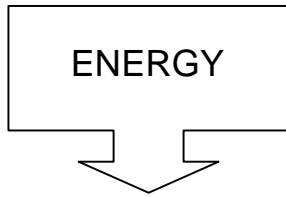
Current situation

The National Park Authority owns or leases 30 properties including 13 buildings, 8 piers or slipways, 15 car parks, and 15 countryside sites including amenity grassland, picnic areas, paths and wildlife areas. The management arrangements for some of these properties include clear biodiversity objectives such as scheduling buildings maintenance to avoid disturbance to bat roosts. Others have not been assessed for their potential.

Actions

- Review management arrangements for all NPA owned and managed sites to audit current biodiversity management and identify scope for improvements.
- Develop site management plans for all NPA owned and managed sites to ensure that their biodiversity value is being maximised with appropriate wildlife-friendly management measures, including:
 - maintenance protocols such as mowing regimes that allow native species to flourish,
 - visitor management in relation to wildlife such as measures to avoid disturbance to nesting birds,
 - habitat creation such as native species planting, pond and wetland creation, retention of dead wood on site and nest box erection.

- Control of invasive species that are damaging to native wildlife.
- Ensure design processes for new buildings and their grounds include full consideration of the scope to incorporate wildlife features:
 - Building design options could include wildlife-friendly features, eg. nesting boxes, bat boxes, green roofs.
 - Design and landscaping of grounds to include consideration of native species planting schemes, nesting boxes, wetland and SUDS features.
- Develop policies within strategies and plans, such as the Park Plan, to support biodiversity action.
- Attend relevant biodiversity forums and meetings to keep up to date with developments.



Objective:

To minimise energy use by introducing energy management measures.

Actions:

- Install efficient heating, ventilation and lighting equipment and controls, and where possible improve the fabric of Authority buildings to make them more energy efficient.
- Continue to research new products, methods and technologies which target energy consumption.
- Ensure a high degree of planned maintenance through mechanical and electrical servicing for optimum efficiency.
- Encourage staff to save energy in the workplace through campaigns and other awareness raising methods.
- Consider the installation of combined heat and power plant, heat exchange units, solar cells, wind generators and displacement cooling systems in Authority properties.
- Reduce energy consumption at NPA (current) HQ by 4% in first year. Reduce consumption at all other offices and centres by 2% in first year.

Current status summary:

Some energy management practices are in place throughout the National Park Authority and the fitting of additional energy saving devices to other buildings that are being use by the Park is underway. Monthly monitoring and checking procedures are to be introduced with the first results due by July 2006.

Current situation

The Authority is committed to sustainable energy efficiency throughout all its properties. The inefficient use of energy results in a drain on revenue budgets, a reduction of our limited natural resources and more environmental pollution. Savings are assessed using the accounts commission guidelines concerning energy consumption on a property by property basis. A quarterly update on their performance in energy management terms is prepared.

The following chart provides the current estimate of the baseline carbon dioxide emissions resulting from energy use from April to December 2005.

| Energy Value | Conversion Factor | Result |
|---|-------------------|-----------------------|
| 96276.75 kWh Mains Electricity kgCO2 | * 0.43= | 41399 |
| 10345.1 kWh natural gas kgCO2 | * 0.19= | 1966 |
| 580 Litres LPG kgCO2 | * 1.51= | 876 |
| Total emissions 10720.1kgCO2 kg Carbon | | Equivalent to 38851.4 |

Energy saving devices have been fitted to various buildings throughout the Authority. These range from energy management light bulbs, infrared passive light sensors fitted to various offices in the Temp HQ building and the Old Station building to reduce the amount of time lights are being left on.

Actions

Heating

- Make sure all doors and windows to rooms are not opened unnecessarily when heating or air condition is active.
- Do not stack items or have furniture too close to the front of radiators.
- If any room is found to be constantly overheating, report this to rather than have a window unnecessarily open unnecessarily.
- Portable electrical heaters should be avoided as they can interfere with the thermostatic control for the central heating and are generally energy inefficient.

Lighting

- Ensure that lights are switched off when rooms (including the toilets) are vacated or unoccupied.
- When the level of daylight is sufficient, switch off at least some of the lights.

Water

- Make sure all taps are turned off, in particular hot water taps.
- Do not wash in running water, use of the stopper in the wash-hand basin.
- Report any leaking or dripping appliances.
- Make a report if hot water system seems to be too hot.

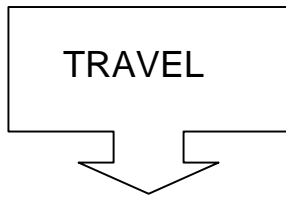
General

- Selectively switch off machines not in use, but remember that some units may need time to heat up.
- Posters and stickers to be made available to help remind and encourage energy saving.

- Regular reports on energy consumption should be made available through the various communication channels set up to publicise the EMS.

Alternative energy

- Feasibility studies at various locations throughout the Park will be carried out with the view of fitting solar panels to buildings



Objective:

To reduce CO₂, particle emissions and environmental negatives associated with National Park travel.

Actions

- Establish base line information and recording system to quantify vehicle mileage and quantify CO₂ emissions resulting from this mileage.
- Increase awareness of the environmental consequences of travel choices.
- Develop a Green Travel Plan.
- Reduce emissions resulting from NP vehicles by changing to lower polluting vehicles.
- Keep in touch with changing fuel and vehicle technology.
- Make lower fuel emission fuel available to a wider proportion of fleet vehicles.
- Reduce the need to travel.
- Establish a policy framework that encourages sustainable travel choices.
- Make bio fuel available to NP diesel engine boats.
- Consider purchasing alternative fuel boats when petrol driven boats are being replaced.
- Reduce the number of single occupancy car journeys.
- Provide up to date public transport information to staff.
- Provide education package regarding choosing and running vehicles.
- Develop measures to encourage cyclists.
- Develop intranet site for travel sharing.

Current status summary:

A Green Travel Plan of the organisation is currently in preparation. This plan will codify the tasks, and targets contained in this report. As part of this process a staff travel survey has been completed. Regarding procurement of replacement and new vehicles and boats this will be covered under the procurement policy that will codify present good practice and seek enhancements.

Current situation

The sites and policy assessment report (a first stage in producing a Green Travel Plan) of July 2005, highlights NP policies impacting on travel arrangements, for example, "Home Working & Alternative Work Locations"

The report, for the 3 sites where most staff are located, looks at the physical and service factors that impact on staff travel to work decisions. This covers factors such as public transport accessible from the site and facilities for cycling.

The report provides pointers to “environmental considerations” – possible changes that should be considered in the Green travel Plan for example when considering the Parks fleet of Vehicles.

The report provides base line statistics regarding staff numbers, fleet vehicles mileage information. The 167 staff of the national Park cover 130,000 miles in addition to 190,000 miles in the NP fleet of vehicles a total of 320,000 National Park Miles resulting from National Park activity. This figure does not include travel to work miles.

A reduction in CO2 emissions from travel on work (in staff own vehicles) of 2% will be sought through a programme of reducing the need to travel, promotion of more sustainable travel choices and using more environmentally efficient vehicles.

The staff travel survey was taken during August 2005. The response level was 50%, sufficient to meet the primary objective of the survey i.e. to inform the content of the Green Travel Plan. The results will enable recommendations on policy and site developments to be targeted on improvements likely to lead to behavioural change and environmental benefits.

Green Travel Plan

Once acceptance of the Sites & Policy report and the survey analysis report has been agreed by senior management, a Green Travel Plan will be produced. The EMS group will act as a steering committee for the project. Staff will all have the opportunity to contribute. A more proactive engagement with staff will take the form of articles in the staff magazine, discussion at team meetings and possible lunchtime presentations. The Transport Initiatives Coordinator will be available to speak at staff and team meetings. The EMS group as a whole will champion the travel plan within the Authority.

Comments received suggest that a number of staff are broadly sympathetic to the objective of a Green Travel Plan and merely circulating the survey has contributed to some occasional car sharing arrangements. With petrol prices increasing the economic case for limiting travel miles has never been more poignant. Taken together it is hoped that these factors will enable a Green Travel Plan to be agreed that provides a good example of environmental awareness, robust implementation strategy and policy development that can be used as an illustration of best practice by the NPA.

Regarding travel to/from work the Green Travel Plan will contain a number of measures to reduce mileage, particularly of single occupancy cars. Means to reduce mileage will include for example; facilitating car sharing, also where

practicable encouraging modal shift to more sustainable transport by provision of facilities for cyclists and information on public transport. For an organisation such as the Authority it is difficult to translate this into a target reduction of emissions. For example the high percentage of seasonal staff recruited each year make year on year comparisons of travel to work mileage variable.

Fleet vehicles

The future operation of the Authority's vehicle fleet will have a major impact on the organisation's environmental performance and is a visible indicator of the organisation's environmental credentials. Liaison with the Forestry Commission regarding testing of vehicles running on bio diesel has taken place along with comparative experiment in running a vehicle on LPG and diesel.

Subject to the results of the study and facilities becoming available more vehicles will be run on bio diesel and the % of the bio element will be increased. Alternative fuels are not readily available throughout the Park and in tandem with the study into fuels is an exercise to source supplies and storage mechanisms. This will also allow the fuel to be available to the NP's boats

All new vehicles and boats added to the fleet will have their environmental impact assessed. Likewise the maintenance regime for vehicles (both new and current) will be designed to maximise the environmental efficiency of the vehicle. Work practices will be reviewed to minimise mileage. The monitoring of vehicles mileage will be enhanced to record fuel type and savings in terms of CO2 emissions calculated.

The scope to improve the environmental performance of the NP boats in the short terms is limited. The Brigadier runs on diesel and as indicated above refuelling with bio diesel will be available following the installation of suitable facilities. This will also enable the Solar Boats emergency engine to use bio diesel. The provision of a solar boat is a major project for the Park and will put an environmentally friendly boat on Loch Lomond. As boats become due for replacement, consideration will be given in obtaining more environmentally friendly boats.

Actions

- Develop and implement green travel plan
- Investigate and use biofuel technology
- Improve the environmental performance of the boat fleet
- Monitor the performance of the solar boat
- Implement many mechanisms that reduce the need to travel

ENVIRONMENTAL ACTIONS for 2006/07

The following is a table which sets out the actions the Authority will take towards improving environmental performance and an initial set of targets against which the Authority will measure and report success in the first year.

| DESCRIPTION OF ACTION | TARGET - year one |
|--|---|
| <u>Water</u> | |
| Set baseline consumption for all buildings | At start of year 2006 |
| Install flow restricting devices in public toilets | Complete end of 2006 |
| Evaluate use of composting toilets in remote locations | Ongoing - Inchcailloch |
| Evaluate use of office water-cooling dispensers | At start of year 2006 |
| <u>Waste</u> | |
| Develop a waste minimization and recycling code of conduct for staff | By June 2006 |
| Introduce green waste composting facilities at HQ | By June 2006 |
| Reduce paper use at HQ | By 500 A4 sheets per FTE or 2% (which ever is the greater) by end of 2006 |
| Reduce the authority's total waste production | By 3% by the end of 2006 |
| Increase recycling rates at all offices 2006 | By 5% by the end of Dec 2006 |
| <u>Procurement</u> | |
| Agree a sustainable procurement procedure | By September 2006 |
| Investigate feasibility of sourcing electricity from renewable sources | Ongoing with initial report by June 2006 |
| Ensure recycled paper products only are purchased | By June 2006 |

| | |
|---|---|
| Introduce monitoring of paper use and set target to reduce this | By March 2006 |
| Ensure contractors comply with EMS standards | Ongoing policy linked to procurement procedures |
| Agree list of sources for sustainable stationary materials and introduce policy for stationary ordering | By March 2006 |
| Use only environmentally friendly cleaning products | Ensure change by April 2006 |
| Audit use of pesticides and preservatives | Phase out use by April 2006 |
| <u>Biodiversity</u> | |
| Carry out biodiversity audit on all NPA sites | By end of Dec 2006 |
| Incorporate biodiversity features into design specification for new HQ and grounds | Stage D design team report to be approved by April |
| <u>Energy</u> | |
| Reduce consumption of electricity | By 4% at HQ for the year |
| Reduce consumption of energy | By 2% at all other buildings |
| Replace high voltage lights with energy bulbs | Complete next financial year |
| <u>Travel</u> | |
| Reduce CO2 emissions associated with travel to work | By 3% during 2006 |
| Reduce CO2 emissions from Authority fleet Vehicles | By 3% during 2006 |
| Develop a green travel plan for the authority to include specific targets on mileage and emissions | Finish survey analysis by end January 2006 Approval of sites and policy assessment by end Jan 2006 Draft plan by end April 2006 |
| Run a travel-awareness programme | Article in Park Life (internal staff magazine – May) |

| | |
|--|--|
| | Page on Intranet by May Include in EMS publicity programme |
| Develop policy on occasional home working | By Sept 2006 but dependent on corporate services |
| Review travel subsistence policy to focus on encouraging alternatives to single occupancy car journeys | Timetable to be agreed with Corporate Services. |
| Introduce dual fuelled or alternative fuelled vehicles as appropriate and in line with to be developed procurement policy. | Depending on results from the FE fuel survey |
| Reports to EMS group on technological developments and monitoring of specific projects. such as pool car and solar boat | Quarterly as standing item on EMS agenda |
| Introduce fuel storage facility to allow bio diesel to be available to more vehicles and boats | By October 2006 |
| Develop car share strategy to enable occasional and casual sharing | By September 2006 |
| Provide public transport information to staff and provide travel information to new starts | Make National Park Transport Timetable available May 2006 (when new edition due) Provide information Pack to HR for all new staff -September 2006 |
| Develop a resource pack for staff on running and choosing less environmentally harmful vehicles. | Produce and make available on intranet September 2006 |
| Improve facilities to encourage cyclists | Identify and implement any quick wins by September 2006 Site specific plan end 2006 |
| <u>Communication</u> | |
| Set up site on intranet for Authority staff | By end of April 2006 |
| Produce a newssheet for staff | By end of August 2006 |
| Develop a programme of lunchtime briefings | Start programme by end of April 2006 |

ENVIRONMENTAL MANAGEMENT SYSTEM

Establishing environmental performance for the National Park Authority.
Schematic process diagram.

