



## **Key steps in producing a Resource Management Policy and Plan**

Resource management is a very important aspect of any golf facility's environmental management as the procurement of goods and services, the separation, handling and the disposal of waste takes place in the clubhouse, the course, the professional's shop and green keeper workplace. This area is often poorly covered by golf facilities, yet represents one of the highest risks for infringing environmental regulations.

Bad management can result in pollution, spillages, and dumping of contaminated liquids and materials. As Landfill Tax increases, so does the need for clubs to manage their waste more responsibly to reduce disposal costs.

We recommend that all clubs seek to:

- Implement a Green purchasing policy
- Minimise the amount of waste they produce by
  - Reducing the amount of products used
  - Re-use whatever they can
  - Recycle as much as possible
- Ensure all disposal meets with relevant legislation, and best practice.

The best way to address all these issues is to prepare a Resource Management Policy and Plan. That is a starting point for going on to identify possible waste reduction and cost saving opportunities. It is not simply a matter of doing a few one-off improvements. The best results come from organising a proper action plan, one which can prioritise the most effective measures and allows for effective control and monitoring.

The following basic steps offer a good approach to tackling Resource Management at your club:

## 1. Decide who will be responsible

To ensure things get done, there needs to be a Green Team within the club as this is not the responsibility of just one person. The team could comprise of both employees and members, for example; Club Manager, Catering Manager, Course Manager, Finance Convenor and interested/skilled club member.

The duties of the Green Team should include:

- noting examples and quantities of waste produced
- checking waste transfer notes / invoices from uplift contractors / council
- encouraging others to reduce, reuse and recycle
- regularly reporting findings back to senior club management

## 2. Establish the facts

A clear inventory of products purchased at the clubs should be produced, recording quantities bought and used, cost and where they have come from. A 'club walk-round' to note down what waste is being produced and where. There is a wide range of areas of opportunity to look out for including offices, kitchens, bar, locker rooms, pro-shop, store rooms. Include also the maintenance compound and golf course dumping areas.

Record the type of wastes, the cost of disposal, along with weight and volume where possible.

Ideally, comprehensive waste data should be recorded for the last three years, so you have a view on whether quantities and costs are stable or changing. Key things to look out for are:

**Free Waste Audits are available for SMEs from Resource efficient Scotland:**

<http://www.resourceefficientscotland.com/>

## 3. Compare your performance

Once you have calculated your absolute quantities and costs, it is useful to do some comparisons, both internally and with other, similar golf clubs. You can benchmark your current waste production against data from other clubs by using **The R&A's online Benchmarking service**

**[www.bestcourseforgolf.org](http://www.bestcourseforgolf.org).**

Internal comparisons may be year on year, seasonal or between activity centres: e.g. which is the main waste producer within the club – the club house, or golf course maintenance? Such information can help set priorities and targets for improvement.

## 4. Resource Management Policy

The first step in forward planning is the development of a Resource Management Policy statement. This is important because it means the club's decision makers are consciously committed to the initiative, and the policy is a valuable tool for raising awareness among staff, members and visitors. It will also provide continuity of purpose as personnel and committee members come and go. The policy statement (one/two pages max.) should provide a basic reasoning for why the club is carrying out a Resource management programme, and it should highlight the main objectives together with performance targets to meet these objectives.

## 5. Resources Management Action Plan

Having defined the policy, the next step should be to draw up an action plan. This should cover:

- The various component areas of the golf club (clubhouse, pro-shop, golf course...)
- Specific waste streams (green, chemical, office, kitchen, packaging...).
- The action plan will need to identify tasks to be undertaken, their frequency, how they should be recorded and reported, and by whom focusing on the Waste Hierarchy of Reduce, reuse, recycle before disposal.

It is wise to build up your resource management programme, rather than trying to do too much all at once. Look for 'early-wins', simple, no-cost or low cost achievable actions that can be implemented straight away. These will offer a good platform for future initiatives and give the club membership and management confidence in the programme.

### Green Purchasing

Green purchasing policies can reduce the amount of products and packaging brought into the club in the first place. Apply a 'green filter' to all purchasing decisions, testing:

- whether product/supply is locally available
- pollution risk
- necessity of purchase in first place
- availability of spare parts
- performance quality
- packaging
- durability
- disposability
- energy efficiency

- noise of operation
- potential for reuse and recycling

### **Green Waste**

Depositing mounds of organic matter in out of play areas looks unsightly and results in significant local nutrient enrichment which changes the botanical composition. Similarly, disposing of surplus soil in woodlands is best avoided with purpose built storage areas being preferred. If soil is dumped it can smother the natural vegetation, damage tree roots and alter soil characteristics.

In parts of Europe fines are being imposed for inappropriate grass clipping disposal. In time, it is inevitable that this will come into play here in Britain under European law. Landfill sites will be less available and more expensive so a practical solution would be to **compost** on site or contribute towards a community compost scheme. This would reduce the volume of waste removed off site and create a nutrient-rich product for possible mixing with sand and re-application as an organic top dressing on walkways, worn areas, eroded channels, or other horticultural practices. Many Local Authorities and private companies have a waste carrier's license for organics if it is more practical and preferential to remove organic waste from the site.

**Temporary grass storage bays** /collection points are commonly made from hard based, banded concrete or slabbed bays, bins or sealed containers (often sunk in to the ground to avoid visual intrusion). These could be located discretely around the course to store clippings for a maximum of one month before they are transferred to a larger composting facility (this should also reduce transport costs).

The **central composting facility** must have a hard standing base on a slight slope with a lip to catch any leachate and avoid groundwater contamination. The main compost pile should be turned every six to eight months and any leachate added as a wetting agent. To prevent the addition of rainwater it is best the unit is covered.

To make **good quality compost** it is essential various types of organic matter are composted together – such as grass clippings and more woody material (chipped) along with organic kitchen waste, otherwise anaerobic decomposition occurs leading to unpleasant odours. Generally speaking it takes about twelve months to produce usable compost which can be used on the course as a top dressing for tees or in more ornamental areas around the clubhouse. However, to enable the club

to sell its compost and generate a sustainable income it must be certified. Information on how to go about this is available from The Association of Organics Recycling ( ).

If storage of organic waste is an issue then an alternative method could be to establish a 'grass train' to minimise collection journeys across the course.

Composting and reuse of organic material for microhabitats (log piles, hibernacula, etc.) is another way of managing waste organic material from the golf course. Nutrient enriched soils tend to produce rank vegetation such as areas of Rosebay Willowherb (*Epilobium augustifolium*) and nettles, both of which need management. An occasional nettle clump arising from such practices can be useful butterfly feeding in out of play areas. Rosebay Willowherb can appear untidy but it provides essential habitat for some plant-feeding insects and is a valuable nectar source for bees. Control is established through cutting prior to flowering.

### **Chemical Waste**

In the maintenance facility and golf course, the safe storage, handling and disposal of pesticides and their empty containers have to be looked at closely as part of Health and Safety and *COSHH* Legislation. Clubs should follow a hazardous waste protocol that:

- maintains a register of all hazardous products kept on the site.
- stores, applies and disposes of hazardous products in accordance with legal requirements and label instructions.
- Could use less wasteful equipment cleaning methods - e.g. compressed air and low pressure water hoses.

### **Oil Storage and Disposal**

- Avoid any incidences of oil being tipped into any drains or onto any areas of land.
- Ensure all used oils such as hydraulic fluid or lubricants are stored securely for collection by a registered waste carrier, who may actually pay for the oil, as a valuable material.
- If considering redevelopment of the existing maintenance facility, ensure that an impervious base with oil tight bund is constructed for the storage of an oil storage tank, or oil stored in drums. The bunded areas should be capable of holding at least 110% of the tank or drum volume. Fill pipes, funnels and sight gauges should be enclosed within the bunded area.
- A similar area could be investigated for the storage of used oil awaiting removal from site.
- Could work to improve calibration of machinery to improve working efficiency.

## **Pesticides (and other turf management / domestic chemicals)**

For further information about pesticide use on golf courses see <http://www.amenityforum.co.uk/>

### **>Storage and preparation:**

- Storage of products should be to statutory requirements and BASIS standard.
- Metal containers stored off the ground to prevent corrosion.
- On site storages should be minimal - only what is required for immediate use.
- The amount required should be calculated carefully and the application rate and calibration of equipment precisely assessed minimising the initial volume of waste.
- Avoid back siphoning of pesticide into water by use of a siphon break. Ensure there are no direct connections between a spray tank and water supply.

### **>Disposal and Containers:**

- After spraying all equipment should be cleaned, washed and rinsed. The tank should be flushed with small volumes of water rather than simply filling and emptying. This will reduce the volume of water used in the rinsing process.
- Empty containers of gassing powders should be filled with dry sand or earth and punctured before disposal.
- Dilute pesticides should never be poured into soakaway drains, or into drains connected to septic tanks. They should be:
  - Re-used in further batches of same spray
  - Applied to previously treated areas
  - Sprayed onto turfed land of minimal wildlife and habitat value e.g. practice ground
  - Employ a specialist waste disposal contractor to remove
  - Concentrate pesticide should be used in the approved manner. If the pesticide is unused and unwanted it may be able to return it to the supplier. Otherwise a specialist waste disposal contractor should be used. Contact the Council Waste Recycling Officer for more information.
- Empty containers must be triple rinsed before disposal, ideally during mixing and preparation opportunities. Puncture and crush containers after cleaning. Contact SEPA to confirm most appropriate methods of disposal for your area.

### >Spillages and Training:

- Establish appropriate emergency procedures and train all staff in their operation.
- Keep up to date with all Health & Safety regulations and COSHH legislation.
- Spill trays must be able to hold 1000 litres of fuel spillage (or the equivalent of the full tank volume).
- Contain spillages using absorbent material or sand.
- Do not hose into any drains, soakaways or streams.
- Contaminated materials should be removed by specialist disposal contractors.
- If there is a risk that ground or surface waters have before contaminated contact SEPA immediately.
- Ensure all staff are properly and fully qualified and trained for the safe, efficient and humane use of pesticides and are competent in their duties.
- All efforts should be made to minimise chemical use through the adoption of an Integrated Approach to Turfgrass and Pest Management.

### > Sprayer Testing

- Sprayers should be tested in accordance with legislation. See National Sprayer Testing Scheme at <http://www.nsts.org.uk/>

### Clubhouse Waste

Un- avoidable waste should be separated for collection for the office, the bar and the kitchens. Aluminium cans, bottles, paper, plastic cups, cardboard and office equipment can all be recycled simply by storing them in separate bins and contacting local organisations. Food waste must now also be separated from other waste.

For information of local waste collection and recycling services see <http://www.recycleforscotland.com/>

### Pro Shop Waste

One area of the golf club that generates a lot of waste is the packaging from the professional shop. See <http://www.resourceefficientscotland.com/resource/quick-guides-small-retailers>

## 6. Communicate

Communicating the Resource Management Policy and Plan is essential for its success. Facility could run a waste awareness campaign to encourage reduced consumption of materials and lessen wasteful behaviour.

For ideas as to how to engage with staff and members see

<http://www.resourceefficientscotland.com/motivate-staff-be-resource-efficient>

## 7. Control, record and monitor

Resource Management is a continuous process. It is not a one-off exercise. The goal should be continual improvement. Facility should have clearly stated aims for the reduction and management of waste, and objectives that will enable it to minimise resource consumption.

The best way to achieve such continuity of purpose is to have an effective recording and monitoring system. It is essential to keep a regular check on waste streams and bills so that you can see whether your waste management measures are having any effect.

Another benefit from monitoring is that you will be able to identify and/or keep abreast with further cost saving opportunities – e.g. new recycling opportunities.

## Further Advice and Funding:

Scottish Golf has templates to help with producing a Resource Management Policy, Plan and recording sheet. Contact Environment Manager Carolyn Hedley [c.hedley@scottishgolf.org](mailto:c.hedley@scottishgolf.org) for more information.

Resource Efficient Scotland [www.resourceefficientscotland.com](http://www.resourceefficientscotland.com)

Zero Waste Scotland [www.zerowastescotland.org.uk](http://www.zerowastescotland.org.uk)

WRAP Scotland [www.wrap.org.uk](http://www.wrap.org.uk)

Recycle for Scotland [www.recycleforscotland.com](http://www.recycleforscotland.com)

Love Food Hate Waste [www.scotland.lovefoodhatewaste.com](http://www.scotland.lovefoodhatewaste.com)

Keep Scotland Beautiful [www.keepsotlandbeautiful.org](http://www.keepsotlandbeautiful.org)

Remade Scotland [www.remade.org.uk](http://www.remade.org.uk)

SEPA Waste Advice [www.sepa.org.uk/waste.aspx](http://www.sepa.org.uk/waste.aspx)

Waste Legislation [www.netregs.gov.uk](http://www.netregs.gov.uk)