GUIDANCE FOR TRAINING CENTRES ON GOOD ENVIRONMENTAL PRACTICE

Contents

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Introduction

As the evidence of human impact on our environment grows, there is an increasing public awareness of and concern about environmental issues. More and more, people are asking how we can take action to reduce our impact on the natural environment. All organisations need to be considering how they can take action to minimise their environmental impacts and training centres are no exception.

There are three main reasons why it makes sense to consider environmental issues:

1. To comply with environmental legislation which will affect every training centre in a number of ways, depending which country it is operating in
2. To save money – especially through more prudent use of energy and water and through managing waste effectively
3. To conserve the boating environment – we are highly dependent on clean, high quality water and surroundings for the enjoyment of our sport. We therefore have a collective responsibility to help promote and maintain a healthy natural environment

This guidance document covers four main topics: Pollution Control, Waste Management, Energy and Water Use and Wildlife and Conservation. These topics will be relevant to all training centres and the advice given should be generally applicable, no matter where in the world the centre is located. Legislation will, of course, differ from country to country, and local or regional legislation may also apply.

Each section outlines the potential environmental issues and then goes on to give reasons why a training centre would benefit from taking some steps to deal with these issues. This is followed by some suggestions of practical actions that can be taken to reduce environmental impacts. In the first three sections (Pollution Control, Waste Management and Energy and Water Use), a summary is given of “Quick Wins” and “Longer Term” measures that can be taken to address each issue.

Pollution Control

What's the issue?

Pollution from training centres may arise from a variety of sources – e.g. runoff from car parks and boat wash down facilities, fuel spills from refuelling areas, the use of toxic cleaning products on or near the water and the scraping of antifouling. Pollution can have a devastating effect on the natural environment – some pollutants are absorbed by marine organisms and thus enter the food chain, other pollutants may kill species and habitats. Algal blooms, unpleasant smells, unsightly slicks and risks to human health are also potential consequences of a pollution incident

Benefits of taking action:

Aside from the fact that pollution is unsightly, a possible human health hazard and can cause damage to species and habitats, most countries will have legislation to prevent and punish pollution incidents. Pollution control is generally about preventing thing happening and putting a few good practice measures in place should ensure that pollution can be avoided.

What next:

Storm-water drains

The storm-water system collects rainfall from outdoor areas through grates possibly around buildings, in yards or car parks. Pipes then carry the rainwater to the water (i.e. the lake, river, estuary or sea).

Any polluting substances contained in this rainwater could therefore enter the water which, in many countries, would be considered illegal. Only clean uncontaminated rainwater should go down the storm water drain.

In order to keep storm water run-off clean:

- Keep waste storage areas covered up and secure
- Store and handle hazardous and trade wastes away from storm water drains – i.e. don't put your oil store next to the storm water drain.
- Install oil interceptors in refuelling areas and car parks. As the name suggests, these intercept any oil in the rainwater and separate it out. Maintain oil interceptors regularly and keep detergents out of them
- Clearly mark storm water drains by painting them blue

Foul sewers

The foul sewer collects waste water flows from inside buildings e.g., water from sinks, toilets and showers. Most foul sewers carry sewage to sewage treatment works where it is treated to improve its quality so that it can then be discharged to rivers, land or the sea.

Any liquids other than domestic sewage (or uncontaminated rainwater) are classified as "trade effluents" and you may need agreement from your Water Company or Water Authority to discharge 'trade' effluent or contaminated surface run off or to use a sink or toilet to dispose of liquid wastes to the foul sewer.

Hazardous waste, such as used oil, oily water, paint and varnish should not be disposed of through the foul sewer.

To make sure your 'trade' discharges are legal:

- If the centre has a trade effluent consent, ensure people using the facilities are aware of this and tell them what kind of substances can be poured down the drain
- Store and handle hazardous wastes carefully and away from foul sewer drains on site
- Clearly mark foul sewer drains by painting them red

Direct surface water run off

Only uncontaminated rainwater should discharge directly from your site surface to the sea / river / lake. If users of the training centre are carrying out antifouling work on their boats (either against piles or a wall, or by hauling the boat out of the water), they must take care to prevent antifouling going into the water.

If washing down and applying antifouling while the boat is leaned against a wall or piles, care needs to be taken to ensure that only the fouling is removed and the water running off from the hull is not contaminated with paint. If using a pressure-washer to remove fouling, it is highly likely that the water runoff will be contaminated with paint. A permanent bund (which is a low wall) or a heavy rope lain across the hard standing can be used to collect any paint residue which, once the hull is clean, can be collected and disposed of appropriately as hazardous waste.

Site drainage plans

In order to know where your drains are going you need an up-to-date site drainage plan. Without one you could unknowingly be causing pollution and opening the Centre to environmental liability. If you do not have a drainage plan for your site you may be able to get hold of one through your landowner if it is rented. Otherwise it would be wise to get one through a surveyor or drainage engineer.

The plan should identify:

1) All site boundaries, outdoor spaces, buildings and access routes

2) Storm water pipes, grates and manholes

3) Open drains and areas where runoff might pond

4) Storm water treatment systems (e.g. oil interceptors)

5) Sanitary and trade waste sewers including all inlets, traps, drains and manholes

6) Closed loop systems, inlets, outlets and overflows

7) Location of the mains water supply stopcock

8) Location of pollution prevention materials (e.g. spill kits)

9) What activities are carried out where

10) Neighbouring sites and sensitive areas

11) Nearby water courses

Your drainage plan should enable you to check where your drains go and that they are connected up correctly and to ensure they are being used for the right purposes.

Dealing with spills

In the event of a pollution incident, the legal consequences and clean up operations can be costly and it would be prudent for training centres that store or handle fuel, oil and other potentially polluting substances to have an incident response plan.

Managing internal incidents

Appoint a designated member or member of staff to co-ordinate dealing with a pollution incident. This person should be aware of the procedure to follow if a pollution incident occurs and should be trained in the use of spill kits.
Prepare a pollution incident response plan for dealing with spills and use it in conjunction with your drainage plan.

The plan should include:
• Contact details for the designated incident co-ordinator and the relevant government or state organisation that deals with pollution.
• Details of where the site drainage plan is kept (this should be easily accessible so that those present when the spill occurs can quickly find out which drains, soakaways and watercourses need immediate protection).
• Details of who to report the incident to. Report all pollution incidents as soon as they happen to the appropriate authority. Should pollution enter the drainage system you should also inform your water company.
• Information on how best to deal with the pollution incident. Ensure that you have absorbent materials, such as sand and other containment equipment suitable for the type and quantity of fuel, oil and chemicals you store and use on your site. Ensure that they are located close to where they might be needed, and that staff know they are there and how to use them. Safety boats can be fitted out with spill kits and bilge filters to pick up small spills.
• The plan should also detail how the materials used in cleaning up a spill should be disposed of (see section on waste management) as these could be classed as hazardous waste.

Pollution Control

Quick wins

- Keep waste storage areas covered up and secure
- Store oil and fuels or any other hazardous substances away from surface water drains (i.e. those drains which collect rainfall from outdoor areas)
- Any oil or fuels stored on site must be kept in a secure container and these must sited within a secondary containment system, or bund
- Hazardous waste such as oil, oily water, paint and varnish shouldn't be disposed of down any drains. This should be stored in containers and taken away as hazardous waste (or, in the case of oil, taken to the nearest oil recycling point)
- Put in place an incident response procedure for dealing with spills and have a spill kit on site and easy to access

In the longer term

- If you have a large car park (50 spaces or more), you should consider installing oil separators. These can be fitted to surface water drainage systems to protect the environment from pollution by oils. They separate the oil from the water, and then retain the oil safely until it is removed. They are installed to contain oil leaks from vehicles and plant and accidental spillages and are particularly important where the surface water drainage system discharges to a sensitive environment.
- Try to locate a site drainage plan and work out which drains are surface water and which are foul sewers. Paint surface water drains blue and foul sewer drains red
- Inform centre users that NOTHING should go down the blue drains except clean water!

Waste Management

What's the issue?

All training centres will produce waste such as drinks bottles, food wrapping and food waste, paper towels, cleaning and maintenance products. This waste needs to be stored on the centre's premises and then taken "away". But where is "away"? Waste that is not recycled or reused is usually either placed into a landfill site (where it then produces methane, a 'greenhouse gas' that is 24 times more powerful than carbon dioxide in terms of global warming) or it is sent to an incinerator. The energy and heat produced by burning waste are increasingly being captured and put to good use, but burning waste can cause air pollution and it produces highly toxic residues which are then hard to dispose of safely.

Waste that is not disposed of or stored properly is often found, in the form of litter, in the wider environment. Not only does this look unpleasant, but it can also harm and kill wildlife, especially if it enters the water. Birds and mammals can choke on plastics and get tangled up in rope, wire and fishing line, while plastics break down in the sunlight and water into microscopic particles which can then enter the food chain and, ultimately, poison us.

Reducing, re-using and recycling are the best ways to tackle the problem of waste.

Benefits of taking action:

Many countries have strict laws regarding the disposal of waste so it makes sense to keep within the law, as fines can be expensive. Waste disposal can also be a significant cost to a training centre so by reducing the amount of waste produced, money could be saved. Litter around a training centre looks unprofessional and unsightly, so keeping the site clean, tidy and litter-free helps to create a good impression and a more pleasant environment for sailing.

What next:

The waste produced at a training centre is likely to fall into one of the following categories:

1. **General waste** is waste that does not have any alternative recycling or disposal routes or is not classified as catering or hazardous waste. Common examples would be plastic wrapping, and crisp packets.

2. **Recyclable waste** may vary depending on the facilities offered in a particular country. The most usual types are paper, cardboard and glass but cans, tins, plastic bottles and drinks cartons may also be recyclable. Disposing of recyclable waste is often cheaper than disposing of general waste and therefore separating your waste at the centre could save you money.

3. **Hazardous waste** is waste that can be harmful to human health or the environment. Common forms of hazardous waste are: oil, batteries, paint tins, trays and used brushes, and fluorescent light tubes. If boat maintenance activities happen at the training centre then it is likely hazardous waste is being produced

4. **Catering waste** is waste food from restaurants, catering facilities and kitchens. Due to the health risks associated with waste food, this often has to be disposed of separately to other forms of waste.

Reducing waste

Identify what kinds of waste are being produced at the training centre and see if there are ways that this could be reduced. If lots of disposable items are being used (e.g. cups), could these be changed for durable alternatives? Could paper waste be reduced by printing on both sides of the paper

Recycling waste

Find out what kinds of waste can be recycled in your area and contact waste management companies to arrange collection facilities. They will often provide large bins to put the recycling waste in, although you may have to provide the smaller bins that may go inside your building. Sometimes all recyclable waste can be mixed together (i.e. paper, plastic bottles, card, cans etc) and sometimes it needs to be separated into different bins. Whichever way your waste contractor deals with recycling, you will need to clearly label all bins to ensure that people put the right things in them.

Storing waste

Set up a waste storage area within the training centre site. This should be well away from the water and also from any surface water drains (to avoid possible pollution). Ideally, bins should be situated on concrete and should have lids so that once waste is placed inside them, it cannot get out. These will be the large bins that will be emptied by the waste contractor but they should all be clearly labelled so that users know what to put in each one. Waste bins should be provided around the training centre site – also clearly labelled – to minimise the amount of litter.

Waste contractors

Many countries have legislation in place to make sure that waste contractors have the appropriate licenses and that they dispose of the waste that they remove in an appropriate way. Although it is only right to look around for a good price, try to ensure that any waste contractor you use is reputable and that they can give you paperwork (if required in your country) to show that they have removed your waste and taken it to an approved facility. Unlicensed waste contractors may just take your waste, and your money, and dump the waste anywhere.....

Waste Management

Quick wins

- Identify the waste streams that the training centre produces and see if there are ways that waste could be reduced – e.g. using durable plastic or glass cups instead of disposable ones
- Get recycling! Check what can be recycled in your area, contact some waste contractors to get the best price and clearly label bins so that everyone knows what should go in each one.
- In many countries hazardous waste will be dealt with separately from general or recycling waste so make sure hazardous waste stays separate. Hazardous waste includes oil, batteries, paint tins, trays and used brushes, oily rags and fluorescent tubes. Find out how these things are disposed of in your country – oil and batteries may be able to be recycled for example. You will need to set up (and clearly label) a separate bin for hazardous waste and probably arrange a separate waste contract to take it away
- Think about composting organic matter, e.g. paper, vegetable peelings, tea bags and grass cuttings from around the training centre

In the longer term:

- Waste removal is often paid for in terms of volume so you could reduce the frequency of your collections and therefore the cost, if you compact it down. If you produce a lot of card, paper and cans, then it may be worth investing in a compactor to help you do this.
- Look for other ways to reduce the amount of waste generated in the first place – you could ask your suppliers to reduce packaging for example

Energy and Water Use

What's the issue?

Training Centres will often use large amounts of energy and water – for lighting, heating, powering equipment and for washing down boats and boat maintenance activities. Unless all this energy is supplied by renewable sources (solar, wind, hydro, tidal, geo-thermal), its use will be contributing to the release of carbon dioxide emissions. CO^2 is a greenhouse gas and man-made greenhouse gas emissions are widely acknowledged to be contributing to climate change. Climate change is leading to sea level rise, more extreme weather conditions and increased flood risk – as well as many other undesirable impacts. Clean, fresh water is a scarce resource in many parts of the world and as weather patterns change, rainfall is becoming more unpredictable, so that supplies of water are not as easy to predict as they once were.

Benefits of taking action:

Being more efficient in the way we use energy is one way to ensure that our greenhouse gas emissions are lowered. Reducing energy use is likely to lead to significant cost savings, particularly as the price of energy is on the increase. Similarly, making sure that water is not wasted makes good sense – both from an environmental and a financial point of view.

What to do next?

Energy Efficiency

The best way to manage energy use is to conduct a site walk-around to identify where energy is being used and possibly wasted. This will also highlight if there are any maintenance issues that need to be dealt with. This does not need to be carried out by an expert and can be conducted fairly quickly depending on the size of your site.

It is helpful to monitor energy bills so you can understand how energy is consumed on your premises. Monitoring bills will also help to demonstrate the financial savings that can be made if some of the ideas below are put into place.

- Fit low energy lighting in buildings and switch off lighting and appliances when not in use, or fit motion sensors so that lights only come on when people are in that area of the building
- Ensure refrigerators and vending machines are not installed in front of windows as sunlight will cause them to use more energy to keep cool
- Turn off heating or cooling in areas of the building that are unoccupied
- Insulate heating pipes and any roof spaces in the centre's buildings
- Have boilers, heating and cooling systems regularly serviced
- Keep windows clean to ensure maximum natural light
- Ensure radiators are not obstructed by furniture
- Fit draft excluders to doors and windows
- Install automatic switches on hand and hair dryers
- Switch to a proven green tariff for electricity supply

- Consider installing renewable energy systems such as solar thermal (which will heat hot water for showers) or solar photovoltaic panels, which generate electricity. These may have a high initial cost but may pay-back this amount in just a few years.

Water Efficiency

As is the case with energy use, the best way to identify ways to save water is to do a walk-round of the site and to work out where and how water is being used. This site audit will also help to highlight any maintenance issues, which may also be costing you money. Any leaking water pipes on your property could be your responsibility so look out for any patches of particularly lush vegetation for example, as this could be a sign that there is a water pipe leak.
It is important to monitor water bills to get an idea of average water use for the centre over the year. Water use will probably increase in the summer as boats are used, and washed down, more frequently. By monitoring bills you will be able to see if there are any unexplainable increases in usage which could also indicate a water leak.
The main areas where a training centre will be using water are in showers and toilets, in the bar and kitchen areas and outside in the form of hoses for boat washdown. By implementing some of the measures below, you can start to save water:

- Check for and fix dripping taps and encourage users to report leaks and drips
- Place a cistern displacement device in toilets to reduce water consumption. This could be a purpose made product such as a hippo, or homemade device such as a 1-litre plastic bottle filled with water. Water is saved each time the toilet is flushed. Not suitable for use in low flush toilets (often installed after 2000)
- Install toilets with a dual-flush facility, with instructions clearly marked. These use only 6 litres of water as opposed to 10 litres for the conventional toilet
- Install urinals with flush controllers or waterless urinals (these can save around 65,000 litres of water a year per urinal)
- Install tap aerators (reducing amount of water used by up to 80%) and water-saver shower heads which typically halve flow rates while still providing a powerful shower
- Install automatic shutoff taps or timing devices which will prevent water loss from people forgetting to turn the tap off. Likewise coin operated showers will also limit water usage
- Install flow restrictors on taps which will limit the amount of water discharged when the tap is fully open
- Fit plugs into basins to encourage users to fill the basin rather than use running water – captive plugs will prevent plugs disappearing
- Cover water tanks to prevent evaporation
- Install trigger devices on all hoses to provide automatic shut off
- Install a rainwater collection device outside buildings so that the water collected can be used for boat wash down. Ordinary garden water butts will be too small, but you can buy 1,000 litre Intermediate Bulk Containers (IBCs) which will stack one on top of the other to give you potentially 2,000 litres of rainwater.

Energy and Water Use

Quick wins

Quick wins

- Insulate your building and fit draught excluders (in colder climates).
- Install low energy light bulbs around the site
- Have boilers and heating systems regularly serviced
- Ensure fridges and vending machines are installed away from heat sources and windows which receive direct sunlight
- Check heating and cooling system timers to make sure they only come on when needed
- Keep windows and light fittings clean to gain maximum light
- Implement a "switch off" policy for lighting and equipment. Consider colour coding switches so people know what can be switched off when leaving the building and what must be left on
- Monitor your bills so you can quickly spot if energy use shoots up
- Put a cistern displacement device in toilets to reduce consumption during flushing. Fit plugs to basins to encourage users to fill the basin rather than running water
- Install trigger devices on all hoses to provide automatic shut-off
- Fit water butts outside buildings to collect rainwater that can be used for washing down boats.
- Monitor your bills – if water use increases significantly, there could be a leak on your site.

In the longer term

- As appliances need renewing (e.g. fridge, oven, microwave, hand driers), look for the most energy efficient ones available. They may cost a bit more, but that expense will quickly be recouped in energy costs saved.
- Insulate wall and roof cavities
- Replace water tanks which heat and store water with instant "heat on demand" systems
- Consider installing renewable energy technologies on your site.
- Install toilets with a dual flush facility.
- Install urinals with flush controllers
- Fit taps and showers with automatic shut-off and / or fit aerators to taps and water-save shower heads
- For major building redevelopments, consider installing a rainwater harvesting system or grey water recycling

Wildlife and Conservation

What's the issue?

Many training centres will be located within nature conservation areas, whether in coastal or inland locations. Nature conservation areas may have local, national or international protection and it is possible that some activities related to the training centre may have a negative impact on the species and habitats that are being conserved. In order to avoid conflict between nature conservation and sailing it is worth giving a bit of thought as to how the training centre can conduct its activities without causing any damage to the surrounding area and the species it contains.

There is a growing problem relating to the introduction and spread of invasive non-native species in coastal and inland waters around the world. Once an invasive species has arrived in "foreign" waters, it may rapidly colonise there and force out or kill off native species – causing major damage to fragile ecosystems. Unfortunately, small boats are one way in which these unwelcome visitors can easily spread, whether by clinging to hull fouling, or by hitching a ride in any cavities on the boat that accumulate water.

Benefits of taking action:

If sailing is perceived to (or actually does) have a negative impact on the natural environment then nature conservation authorities may put in place measures to limit sailing activity in certain areas, or at certain times of year. By putting in place simple measures to reduce any such impacts, training centres can demonstrate that they are aware of the sensitivities and that activities can continue without causing damage.

Training centres can help to limit the spread of non-native invasive species and by showing that the boating community is taking a pro-active stance, can avoid potential mandatory measures to limit the spread of such species. In some countries, certain inland racing events have been cancelled due to the fears of spreading non-native species so it is important to manage this in order for racing to go ahead.

What next:

Operating in a nature conservation site:

Find out the reasons why the area is designated as a nature conservation site. Is it for a particular plant species, or for the wildlife it contains? Try to find out if any protected species are there all year round, or whether they are seasonal occupants. It may be that protected bird species only come to the site during the winter, when less sailing activity occurs, so any impact from sailing will be reduced.

Make centre users aware of any restrictions on areas they may sail in, or areas where they should not be landing. If there are protected species on the seabed, (or river / lake bed) then anchoring may well be restricted or discouraged.

Ask sailors to make use of slipways or designated put in and recovery areas, to avoid trampling on vegetation. It may help to put up a map of the site to show any areas to be avoided, and where landing and launching are permitted.

If there are nesting or feeding birds close to the water's edge, try to avoid sailing very close to them as this will disturb them

Managing the spread of non-native species

Ask all centre users, when recovering a trailer, dinghy, PWC or RIB, to drain water from every part of the boat and all equipment that can hold water

Ask centre users to clean all parts of the boat, trailer and equipment that come into contact with the water before leaving the water catchment area. Remove any visible plant, fish, animal matter and mud and dispose of in litter bins

If any antifouling activity is carried on at the training centre, then this should ideally be done out of the water (i.e. the boat should be lifted clear of the water and antifouled on dry land) but if this is not possible, then all fouling removed from the hull should be collected and disposed of on land, rather than allowed to wash back into the water