Waste management and other environmental issues

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Waste management

When undertaking the maintenance of SUDS, waste will be generated. This will be predominantly grass and other vegetation, and may be managed on site in wildlife piles. There is still a requirement to comply with all relevant waste management legislation. This is even more pertinent when waste is disposed off site.

The options for disposal will depend on the characteristics of the silt and other material at each site.

On landscape sites green waste can be managed in a number of ways:

1. Shredded for surface spreading – as a mulch mimicking natural leaf or wood fall
2. As wildlife piles to provide habitat, usually when removed from managed landscapes (variation of 1/ above).
3. On-site compost piles (variation of 1/ above).
4. Removed from site to off-site composting facilities (e.g. as Council Green Waste)
5. Removal from site to tip – least preferred and least sustainable

However, the silt and other material removed from SUDS is defined as waste and in some specific situations could be defined as hazardous waste. Sediment that is removed may need to be tested to determine the extent and nature of any pollution in it. Where a management train is provided in low risk areas such as housing it is unlikely that silt will contain levels of pollutants that define it as hazardous waste.

It is also important to comply with the duty of care requirements of the waste management legislation. This means that silt should only be removed from site by authorised carriers and should be taken to authorised disposal locations. The necessary paper work to show this has been undertaken should be completed. Even if silt and vegetation is used on site, an exemption from the Environment Agency will be required.

Further information is provided in The SUDS Manual (CIRIA C697).

A practicable process for managing waste from SUDS in low risk areas, this is still to be agreed with the Environment Agency for SUDS in Cambridge, is as follows:

1. Evaluate whether the site is likely to operate ‘hazardous waste’.

2. If this is the case, e.g. industrial or heavy vehicle management areas, then proceed to ‘hazardous waste’ disposal.

3. Where there is low risk of pollution, e.g. housing, schools, commercial sites, etc.,

- Silt accumulation ‘at source’ – remove and land-apply to vegetated surfaces outside the SUDS design profile but within, say, 10m of the SUDS feature.
- Silt accumulation in wetlands and ponds (very low if source control in place – remove, allow to dewater by the side of the SUDS feature for 24-48 hours and land-apply to vegetated surfaces outside the SUDS design profile but within, say, 10m of the SUDS feature.
- Vegetation or ‘green’ waste – remove from SUDS feature to designated wildlife piles, compost heaps or shred woody waste for in-situ mulch where appropriate – green waste to be applied when composted to ornamental plant beds or native planting areas outside the SUDS feature design profile.

This proposal is designed to manage non-hazardous silt and ‘green’ waste from SUDS systems in a sustainable manner on site. This reduces carbon emissions, landfill and cost to the community with minimal risk to the environment.

Litter should be collected and taken away for disposal off site.

Reuse of materials

The City Council will require demonstration that the creation ponds or basins does not require the wholesale removal of materials from site (with the resultant waste implications and noise and traffic impacts). Wherever possible, materials arising during construction works should be reused on site in a sustainable and appropriate manner that does not compromise the character of the existing landscape, e.g. the formation of shallow bunds or berms that form part of the overall landscape proposals. Where this is not practicable, it will be expected that materials are reused locally. Place partially-buried dead wood and recycled rubble/paving slabs on lower slopes of ponds and wetlands to create refuges for amphibians, reptiles and invertebrates.

Recycled concrete used in a control structure in Cambourne, Cambridgeshire

Creating wildlife piles

Wildlife piles are a sustainable way of managing green waste around SUDS. They provide a natural and cost effective wildlife resource and offer educational opportunities in construction, monitoring and after use.

Two types of wildlife pile can be used around a SUDS pond:

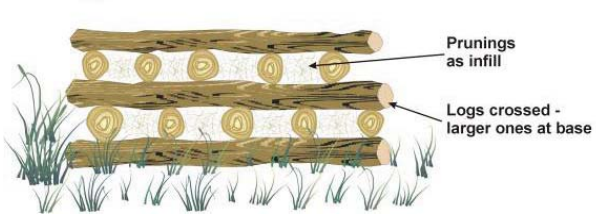
1. Log Pile
2. Hibernation/grass snake egg laying site.

Wildlife piles should be located in suitable areas where they will not be easily disturbed by vandals or dogs. The possibility of protected/ biodiversity species being present where log-piles/ compost heaps are to be dismantled also needs to be considered. Thorough checks should be carried out prior to any dismantling work being carried out and if protected/biodiversity species are found or suspected work should not commence until the species has vacated the area voluntarily. If in doubt the advice of a professional ecologist should be sought.

Log Pile

To construct a log pile, select a sheltered corner either with some sun or in shade for varied wildlife needs.

Pile logs and other woody material in a criss-cross pattern up to about 1m high. Fill the gaps between the logs with prunings. The pile creates different micro habitats for wildlife and can be left as a permanent feature.

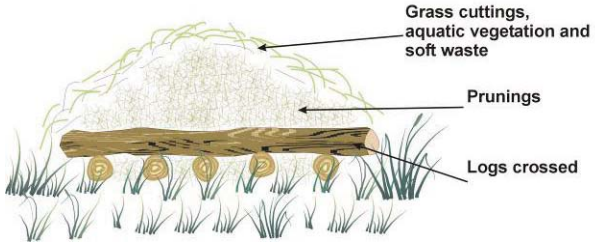


Log Pile

Hibernation/grass snake egg laying site

To construct a hibernation site, select a sheltered corner with sun for at least half the day to allow basking sites for reptiles. Pile logs, prunings and grass cuttings (or any other soft vegetation) in sequence up to a height of 1m to 1.5m.

The pile will heat up during the summer and attract many animals including slow worms and grass snakes that need heat to incubate their eggs and young. Each year, or as material is available, add grass to the pile or create a new pile next to the old one. After 5 years, the first pile can be used as compost and the process repeated.



Hibernation site