

Note No. 002: Pots and Plastic Waste

Guidance Notes are intended to examine the sustainability or otherwise of types of materials, products and practices currently used by designers and the landscape industry at large.

A list of pros and cons is presented, together with references where available for further reading.

No reference is made or to be inferred to any company, brand or trademark.

The SGLD may make a recommendation or have a preferred position on the use or non-use of the material in question.



Introduction

Plastic waste has become a big issue and horticulture is no small part of the problem. Every garden project directly generates plastic waste, most of which has limited or no route for being recycled.

Whilst the industry is focusing on pots and making some effort in this direction, other sources of plastic are equally problematic. These include, but are not limited to: pot carry trays, seed and plug trays, labels, ties, groundcover membranes, fleece, windbreak mesh, artificial grass, polytunnel covers etc.

Understanding our impacts and options is important in informing our design decisions. Looking in both direction in the supply train and final site disposals is important as much of the plastic waste will have occurred off-site, yet be directly linked to it.

Much of the garden plastic waste produced is of a once-only use; some of which cannot be recycled. Re-cycling should be seen as the last option and we need to aim our efforts at other aspects of sustainability:

Refuse—Reduce—Reuse—Recycle

Refuse

Specify it out of your supply chain and get the message sent upstream. Choose & specify loose supply of aggregates, compost and mulches, rather than bulk bags or smaller, 50 – 70 litre bags. Contractors may prefer these for convenience but insist; this is an easy win. Also refuse plastic going to the waste stream (landfill). Get the client and contractor on-board with this from the start. Refuse the use of groundcover membranes and artificial turf, neither are necessary.

Reduce

If we can reduce the volume and type of plastic being used, then we reduce the volume we add to the waste stream. Being *less* damaging by producing *less* waste is not ultimately a sustainable solution but it is a start. Don't be satisfied with this result though, aim for zero waste. A bulk bag is *probably* better than twenty 50 litre plastic bags if loose materials cannot be delivered.

Reuse

Gardeners are good at reusing pots but this does not apply to the landscaping trade where commercial pressures apply. Talk to plant suppliers about the return of pots for re-use. Most won't do this as it's not commercially worthwhile, but some will. A reused pot is one kept out of the waste stream—for now. A re-used bulk bag (H&S rules won't let suppliers reuse them) or 60 litre compost bag is a re-used resource and may save new bags being used when clearing waste or storing surplus materials.

Recycle

This should be seen as our last option. Manufacturers are focussing on changing pot colours to taupe or other colours to avoid use of carbon black pigments, which cannot be picked up in domestic waste sorting facilities. It is worth noting, however, that most pots are intrinsically recyclable if done via a plastic reprocessor—talk to your plant supplier about returning pots to them for recycling (if they won't re-use). Many plastics are recyclable, often there is no current market for them at a cost that makes it financially viable. Another issue is that many local authorities still will not accept plastic pots, even the new coloured ones, although this is likely to improve with time.

Things may improve as thermochemical processes are perfected and become mainstream. Through pyrolysis and other processes, plastic waste is turned back into an oil, which can be processed into plastic again. It will be some years before this becomes accepted technology and has a noticeable effect on waste streams.

See links section for recycling options.

Options for Specific Products

Pots & trays

Given that most landscape waste is not recycled via domestic facilities (or shouldn't be), pots can be recycled via a plastics reprocessing company (see links). Some trays are currently not accepted for reprocessing.

Alternatives: Ask suppliers for biodegradable pots from coir or cardboard. Plant seasonally and use bare-root stock.

Plastic bags, wrap

If we can't avoid the delivery of materials in plastic bags (really?) then opening them carefully so they can be reused is essential. They can take the place of waste disposal bags, or be used to store loose com-post, etc. Ultimately they still end up as waste and currently, there is little or no viable market for plastic film-type materials. Shrink wrap can be recycled but a lot of it is needed to make this viable for collection by a reprocessor.

Alternatives: loose delivery, possibly natural fabric bags as alternatives

Geotextile membranes

Avoid the use of weed-suppressing membranes. They rarely work in the long-term and they do interfere with ecological processes—let the soil live and store carbon. Non-woven membranes as sub-base carriers are sometimes a necessity and these at least are in-situ for the long-term.

Alternatives: Biodegradable mulch sheets or rolls or just mulch.

Artificial grass

The mixed polymers and rubber-crumb underlay make artificial grass unrecyclable. See guidance note 001 for more information.

Alternatives: Duh, grass. Gravel.

Irrigation pipe

Most irrigation pipes are LDPE /MDPE and this is recyclable. Rigid PVC pipes may not currently be accept-ed for recycling due to lack of market. Porous or "leaky" irrigation pipe is made from recycled rubber crumb but typically becomes clogged quickly, becoming a disposal problem.

Alternatives: None. Possible use of non-plastic drainage channels to distribute irrigation, especially from a rain garden system. Best to do without irrigation, design planting for resilience and improve the soil's water storage capacity. Use lawns with microclover mix to help retain green during drought.

See links section for recycling options.

Links

Recoup—plastics recycling charity the have a membership of plastics reprocessing companies:

<http://www.recoup.org/>

HTA Plastics Waster Recycling Scheme (aimed at nurseries)

<https://hta.org.uk/assurance-compliance/hta-recycling.html>

WRAP—The Waste and Resources Action Programme:

<http://www.wrap.org.uk/>

WRAP/LI—Designing out Waste:

http://www.wrap.org.uk/sites/files/wrap/Designing_out_Waste_landscape_opportunities.pdf

RHS Plastics Waste Policy:

<https://www.rhs.org.uk/about-the-rhs/policies/plastic-policy>

Information on chemical recycling:

<https://www.sciencedaily.com/releases/2019/04/190412085241.htm>

HTA Taupe pot initiative:

<https://hta.org.uk/assurance-compliance/plastic-pot-initiative.html>

BBC gardening article on plastics:

http://www.bbc.co.uk/gardening/today_in_your_garden/ethical_plastic.shtml

Horticulture Week articles:

<https://www.hortweek.com/plastic-horticulture>