

Plastic grass discussion doc for Faversham Town Council Environment Committee

The growing trend of plastic grass in residential gardens and some public spaces is causing concern to anyone interested in human well being and the environment. Plastic grass is being marketed as a clean, convenient, fuss-free alternative to grass/ lawn, and installed in areas where conditions for a lush lawn are considered poor, or in places where garden maintenance is or has to be a low priority. It's also a product that is designed to offer a specific alternative to gardens, for people who want to create an 'outdoor room', where the plastic grass functions like an outdoor carpet in a space for entertaining and socialising. It is also marketed as a product for people with dogs who think it will avoid muddy paw prints indoors.

Plastic grass is chosen by customers because they think it looks neater and tidier than a real lawn, and because there is still a traditional belief that a) gardens must have lawns and b) those lawns require vast amounts of water, herbicide and pesticide, as well as time and energy, to be kept in good condition.

The much smaller 'gardens' (perhaps best referred to as 'outside spaces' rather than gardens) attached to new build housing has further encouraged plastic grass installation. The outside spaces on newer developments are typically small, square and bordered by fencing. This has created conditions less conducive to traditional garden planting, and resulted in little space left over once the BBQ and patio table and chairs are in position. A resident in one of the recent new developments in Faversham is now surrounded by neighbours who have replaced the original turf provided by the housebuilder with plastic grass. According to some Facebook posts, it appears that the original turf was poor quality and harboured leatherjackets. According to some comments, the poor drainage made it difficult to keep the turf in good condition. In the past, medium-sized gardens have helped offset the damage to biodiversity of the housing itself. It has even been argued that older suburban gardens offered greater biodiversity than the farmland they had been built over. While it is clear that today's housing developments have consciously set aside communal 'wildlife-friendly' areas, it is not clear how much of a biodiversity net gain this is if much of the private spaces are covered in plastic or hard landscaping.

But, like the prevalence of hard paving for off-road parking, the popularity of plastic grass is adding to problems of declining wildlife habitat, biodiversity, pollinator provision and foraging space. Like hard paving it also increases intensity of rainwater runoff (increasing the well-publicised problems of storm drainage and sewage outflows) and amplifies overall urban 'heat island' effects in summer. And last but definitely not least, plastic grass is adding to the environmental load of microplastics, shed into the soil, air and waterways, and therefore into all organic systems, as the plastic degrades continuously through wear and tear. These microplastics in turn carry their own load of toxic chemicals and PFAs. Scientific studies reliably link PFA pollution to declining male fertility, and endocrine and hormonal disruption. This is the main reason plastic grass poses a much greater and specific risk to human and environmental health than other forms of hard or aggregate landscaping on its own.

Why do we need to be concerned?

First of all, it is important to keep in mind that plastic grass is plastic! That means it is oil-based so its manufacture encourages further fossil fuel use, which we should be massively reducing, and all the associated emissions. As plastic, it is also notoriously long lasting and won't break down for centuries. Which means that disposal will be incineration - via fly tipping in many cases. While theoretically recyclable, practically it isn't. There are no recycling facilities in the UK for plastic grass. And even if there were, once plastic grass has been laid on soil for a few years, it is too dirty and spoiled to be of use in any recycling process. In addition, plastic grass is a composite product which further reduces ease of recyclability. There really is no point in banning plastic straws and plastic bags if we are going to replace them with another product using vastly greater amounts of plastic, which is destructive and indestructible in equal measure.

It is obvious that in a climate crisis, the last thing we should be doing is permitting open spaces to be carpeted in plastic. But that is what we are doing. By now, everyone is familiar with the role trees play in helping to fight climate heating but the role grass plays is less well-known, and perhaps, less glamorous. Grass, just like trees, also combats climate heating by absorbing carbon dioxide through photosynthesis. Plastic grass, by contrast, directly contributes to climate heating, first through its manufacture, and then through its application by robbing the environment of opportunities for carbon absorption, and finally through its end-of-life process, where it will end up in an incinerator creating polluting waste products. And along the way, it will blithely shed itself in the form of microplastics, further undermining the ability of organisms to play their part in a functioning ecosystem.

Plastic grass has been powerfully marketed as sustainable, for example, by requiring less water for maintenance. Unfortunately, proud owners of plastic grass compensate for the reduced water by increasing their water usage to keep it clean. A whole new range of detergents (constituted of water and possibly sometimes requiring even more water to apply) has now been formulated to maintain an artificial product that nature would have done for free for the real thing. High maintenance lawns have been replaced by the high maintenance cleaning and vacuuming of fake turf.

Gardens comprising grass, plants and trees, are living, breathing, cooling, interactive spaces. Life is able to continue its cycle at a microscopic and macroscopic level. Organic forms of garden connect human beings to their natural environment and to living things. In urban areas, they are an essential buffer zone between the hard concrete construction of houses and the soft sensory-processing system of the human body. Human bodies require sensory things to process: sterile plastic grass provides no benign sensory stimulation, adding to the 'nature disconnect' that is a feature of modern lifestyles. In fact, in the new normal of blistering summer heatwaves, areas carpeted with plastic grass will offer significantly malign sensory experiences, becoming no-go areas for animals and humans as the plastic turf surface temperature increases to intolerable levels. The benign sensory inputs of a living garden, on the other hand, are in the sounds, smells, textures, colours and movement of plants, flowers, insect life and bird life. Watching a blackbird foraging for worms in soil, or an insect pollinating a flower, it is comforting to know that we are a witness to a thriving ecosystem at work, and the awareness that natural systems are 'working', even if we are facing problems in our lives, can help with symptoms of stress and anxiety. If plastic grass continues its mission-creep, both the foraging blackbird and the anxious human will find their space for sustenance and solace shrink to vanishing point.

Swale is one of 123 districts to have recently been awarded an A rating by the Carbon Disclosure Project for its action on climate change. While many of its councillors are expert actors in implementing actions on climate mitigation and adaptation, this may not necessarily be reflected in the choices and decisions of many of the borough's residents. Due to lack of leadership at government and national level, with Defra refusing to consider a ban on plastic grass in residential properties, it perhaps falls to local authorities to provide guidance, information and education so that people can make informed choices about products that have a significant impact on the environment and human health and well being.

Some important advice could be provided in helping reimagine what a modern garden could look like, moving away from traditional concepts of lawn bordered by shrubs and flowering

plants, and providing workable solutions to people who cannot maintain a formal garden. There is plenty of advice available which could be collated and made accessible to residents. Information on the harms of plastic grass could be delivered via campaigns already gaining traction, for example, Kent's Plan Bee.

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Plastic Free Faversham