SUSTAINABLE SOILS ALLIANCE

SUSTAINABLE URBAN SOILS HEALTH INITIATIVE (SUSHI)

POSITION STATEMENT

INTRODUCTION

The Sustainable Urban Soils Health Initiative (SUSHI) is a working group of the Sustainable Soils Alliance presently including soil scientists, arboriculturists, landscape architects and local government officers who work within the construction, land development and land management sectors.

The aim of SUSHI is to promote the development of improved national policy and guidance for urban and periurban soils, particularly in relation to development sites.

This is to be delivered through mediating dialogue and practical contributions across agencies, local government, professional and corporate bodies, science, commercial and NGO stakeholders.

THE IMPORTANCE OF SOILS

Soil is one of the three major natural resources, alongside air and water.

Soils in the urban environment fulfil a number of essential services that are central to social, economic and environmental sustainability, and which can help influence climate change. These include:

- support of ecological habitats and biodiversity
- water attenuation and flood regulation
- environmental interaction and filtration (with air and water)
- support for the landscape (gardens, parks, playing fields, open space, street trees)
- food production (gardens, allotments, small holdings)
- carbon sequestration
- nutrient cycling
- contaminated land remediation

These services can only be delivered if the soil has the necessary properties to function properly.

DEVELOPMENT IMPACT ON SOILS

Some of the most significant impacts on soil function, and the services it provides, occur as a result of activities associated with land development (housing, infrastructure, public realm, commercial, retail and private development) yet there is a general lack of awareness and understanding of this within the development sector.

Construction activities can have adverse impacts on soil in a number of ways by:

- Covering soil with impermeable materials, effectively sealing it and resulting in significant detrimental impacts on soils' physical, chemical and biological properties, including drainage characteristics
- Over-compacting soil through mis-management, the use of machinery or the storage of construction materials,
- Contaminating soil as a result of accidental spillage or the use of chemicals,
- Reducing soil quality, for example by mixing topsoil with subsoil, or by mixing soil with other construction materials,
- Soil erosion during the temporary storage of soils.

As a consequence, soils on most development sites perform worse than they did before development, and in doing so, they do not deliver the level of service that are required of them.

EXISTING GUIDANCE ON SOIL MANAGEMENT

Soil protection, management and re-use on development projects should start at the masterplanning stage to ensure that it remains on the agenda all the way through the development process. Although planning approval is a pre-requisite to all development, there is seldom specific direct planning control on the sustainable use and management of soil resources on construction sites or a requirement for the monitoring of soil protection and sustainable re-use.

Even where soil protection is considered in a development scenario it is often in relation to other objectives (e.g. the protection of trees in relation to British Standard 5837:2012 – *Trees in relation to design, demolition and construction)*. Monitoring and enforcement of good soil management is typically lacking, especially in relation to small and medium scale development projects – which constitute the bulk of building work.

Defra's *Construction Code of Practice for the Sustainable Use of Soils on Construction Sites* was published in 2009 and has been the most comprehensive guidance document produced to date, considering site soils from early planning stages right through to construction and aftercare. This effectively provides a *Framework* to follow and should be utilised by local authorities, other land management agencies and professionals for all developments. Where the 2009 Code has been used there have been considerable improvements in soil quality and function. However, the Code is still not widely known in the construction industry, and as yet has failed to improve soil management on the majority of sites.

LOOKING AHEAD

The National Planning Policy Framework has a 'presumption in favour of sustainable development'. To deliver truly sustainable development, and to ensure low carbon or carbon neutral development outcomes, as is now widely recognised as an essential requirement for urban planning, soil management must be properly considered.

There is momentum to the cause from various sectors including international commitments to resolve the climate change crisis and at a central governmental level with the launch of new policies, such as the government *25 Year Plan to Improve the Environment*[1], which refers to terms

[1] Defra. 2018. *A Green Future: Our 25 Year Plan to Improve the Environment.*

such as *carbon sequestration, biodiversity net gain, flood alleviation, sustainable drainage* and *ecosystem services* in its proposals to protect and improve England's natural environment and its impact on climate change. Although all ecosystem services are completely reliant on the soil for their delivery, the Plan does not emphasise this. It does, however, clearly recognise the need to tackle the growing problems of soil degradation to ensure soils natural capital contribution to supporting life and the economy. This is partly where the problem lies; soil and its protection and management are not associated closely enough with these other delivery tasks.

Furthermore, the Plan, while emphasising the need to protect and improve soils on agricultural land, does not specifically pick up on the challenges for soils disturbed by development. Soil remains one of the largest components of landfills, in 2016 representing 55% of tonnage received[2]. If we are to achieve the government's 25 year plan's objective to sustainably manage our soils by 2030, it is essential that the widest possible dissemination of the Plan and its aims are applied to the 'land development' scenario.

In order to achieve this, engagement with a range of parties will be necessary that represent central and local government agencies, professional and corporate bodies, commercial developers, research bodies and NGO stakeholders. These will vary at the different stages of land development, from the early stages of planning through to design, then construction, and finally aftercare.

INITIAL GOALS

Developing a construction norm and code of practice for the 21st Century

The Defra 2009 Code was the starting point for raising the profile of soil in land development and is an important tool for achieving better soil health and function. However, the current version needs updating and expansion. Statutory consultees, such as Natural England who rely on The Code, recognise its current limitations and fully support the need for a revision.

Industry engagement, planning

Despite a level of unsustainable soil degradation, there is also a growing awareness of the need to better manage soil resources within the construction industry as a whole. To support and foster this interest it will be necessary to build common purpose within the sector for developing beneficial soil related initiatives.

Key goals include:

- The launch, and better promotion, of an updated second edition of the Defra Code to raise the awareness of the problems and provide solutions.
- Case study examples of good and bad practice as a powerful education tool.
- Promoting the adoption of appropriate and considered soil management planning on all development sites
- Endeavour to have soil assessment and soil management gain the same status as ecological and arboricultural asset planning in a normal site planning process.
- Work to ensure greater industry stakeholder engagement, education, and promotion through professional bodies, including

[2] Environment Agency. 2019. *The state of the environment: soil*

- RTPI, Landscape Institute, CIRIA, CIWEM),
- Local Authorities (Planning, Environment, Tree Officers, Landscape),
- Developers and housebuilders (and their associations eg. Federation of House Builders, NHBC)
- Construction industry (e.g. Civil Engineering Contractors Association, British Association of Landscape Industries) and
- Research related institutions (e.g. CIRIA, BSi)

SUSHI

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