

MANAGING THE WATER ENVIRONMENT

20. **Drainage Hierarchy:** The traditional approach of directing drainage to the sewer system or local water course via a network of pipes can no longer be sustained. This approach decreases run off times and prevents groundwater recharge. In addition, rapid transfer of surface water to water courses can lead to downstream flooding and the transfer of pollution. Sustainable Drainage Systems (SuDS) are the preferred option.
21. The drainage hierarchy is:
- i) Surface water drainage should be directed to infiltration as a first priority, including permeable surfaces, swales, flood storage areas, water gardens and soakaways as most appropriate to the character of the wider landscape.
 - ii) Surface water should be directed to surface water body through natural run off.
 - iii) Connection to an existing drainage system – where capacity exists.
22. **Managing Flood Risk:** Development should be directed to sites which are in low flood risk areas or where adequate flood prevention or mitigation measures can be implemented as part of the development, or else must satisfy the NPPF sequential and exceptions tests as applicable that not only protect the development from flooding, but do not increase flood risk elsewhere. Increased flood severity is a highly likely outcome of climate change and should therefore be taken into account when considering

the location of development. The Environment Agency's 3rd annual Assessment Report¹ states that it is impractical to continue to build bigger and higher flood defences to accommodate increasing flood risk. The likelihood and severity of potential flooding must be considered from the outset and high-risk areas should not be considered for development.

23. **Sustainable Drainage Systems:** SuDS are now considered as a standard approach to surface water management. Pathways and private drives should be permeable and public green spaces designed for recreation and surface water attenuation with swales and temporary wetland areas. Attenuation and balancing ponds should be designed with a naturalistic appearance. Avoiding steep sided and enclosed balancing ponds, with over engineered headwalls and fencing which can be unattractive and have reduced ecological value. Well-designed SuDS should form an important element of biodiversity gain and public space provision.
24. Roof water should be directed to soakaways or other SuDS features, and this may be complemented by the use of green roofs to attenuate flow where appropriate.
25. **Managing water demand:** All developments will ideally include technologies designed to reduce the daily water consumption per head as required by building regulations. These may include for example low flow taps, low flush toilets, grey water recycling and rainwater harvesting systems for non-potable water. The Building Regulations (Part G) does enable a water consumption target of 110 litres per person per day in water stressed areas, although the Government Committee on Climate Change² has suggested

¹ Living better with a changing climate, Report to Ministers under the Climate Change Act. Environment Agency, October 2021

² The Committee on Climate Change, UK housing Fit for the future. 2019

that there is scope for a lower water consumption figure to be applied nationally. The Environment Agency 3rd Annual Report states that the impacts of climate change will exacerbate water stress caused by reduced rainfall, evaporation and abstraction, increased efficiency in water use and demand reduction is therefore likely to be increasingly important and may be considered as measures to 'future proof' a development. All measures to reduce the consumption of water per head in a development should be set out in documents supporting an application.