The key environmental objectives of the Water Framework Directive (WFD) are for Member States to restore all bodies of surface water to good ecological status and prevent any further deterioration in their status through river basin planning. Ecological status is primarily driven by the biology of surface waters which includes the composition and abundance of a variety of aquatic flora and fauna.

However, the WFD also requires that hydromorphological and physicochemical supporting elements are assessed in their own right for sites at high status and that they support the biological elements at good status. These hydromorphological quality elements include hydrological regime, tidal regime, river continuity and morphological condition.

There are several aspects of the WFD that will undoubtedly have a significant influence on future flood risk/management strategies, restoration opportunities for existing flood defence schemes and for the strategy and design behind future schemes, for example requirements for:

- the assessment of pressures and impacts on the morphology of surface waters,
- the restoration and monitoring of those waters significantly impacted by morphological alterations,
- requirements for the regulation of future engineering activities,
- the designation of Heavily Modified Water bodies and Artificial Water bodies,
- River Basin Management Planning - setting of realistic environmental objectives whilst in balance with important socio-economic activities and industry (flood defence and management, navigation, hydro-electricity etc).

The paper explores these requirements of the WFD in relation to flood management and is illustrated with examples ranging from the development of EC guidance on such issues to their actual implementation in the UK featuring specific case studies. Details are also provided on the need for a wide range of R&D initiatives in the field of hydromorphology and flood/coastal defence.