



Surface Water Management across the Manhood Peninsula A Key Statement from the Manhood Peninsula Partnership

The aim of this Key Statement is to influence all those who can act to improve surface water management and drainage and across the Manhood Peninsula, including:

- Local communities, particularly Parish Councils as they prepare flood action plans; develop Neighborhood Plans; and respond to planning applications
- Riparian landowners as they manage their agricultural and horticultural land holdings, and the local ditches and rifes
- Chichester District Council (CDC) as it assists with land drainage management; delivers coast protection schemes in the light of Shoreline Management Plans and Coastal Defence Strategies; decides on planning applications; delivers the Local Plan, and develops a Green Infrastructure Strategy and an Infrastructure Delivery Plan
- West Sussex County Council (WSCC) as it manages flood risk in its role of Lead Local Flood Authority; prepares a Surface Water Management Plan; implements the Local Flood Risk Management Strategy; manages local roads; and comments on Sustainable Drainage (SuD) Systems and highways and transport aspects of planning applications
- The Environment Agency (EA) as it exercises responsibility to maintain water flow and carry out flood defence works along watercourses specifically classified as Main River or Critical Ordinary Watercourse under the Water Resources Act 1991
- Local businesses as they consider sponsorship of projects
- Funding bodies as they consider requests for contributions towards project costs

Surface Water Management and Drainage across the Manhood Peninsula

The Manhood Peninsula Partnership (MPP) supports and advocates coordinated strategic planning by the bodies responsible for drainage and surface water management across the peninsula.

Why water management is a significant concern for the Manhood Peninsula

The peninsula is low-lying with poor drainage and a high water table, making it particularly vulnerable to the impacts of prolonged heavy rainfall and rising sea-levels, exacerbated by the effects of climate change.

The underlying geology of the peninsula is formed by deposits of London Clay, with Brick Earth above. The low permeability of the double layer of clay, combined with the high water table, the neglected ditch network and the absence of significant gradients, leads to recurrent problems with surface water.

Aside from the dangers and impacts of coastal flooding, which are managed by the Environment Agency and Chichester District Council, large parts of the area are at risk from inland flooding. The area suffers from fluvial flooding from a network of rivers and an unmanaged and unplanned ditch system as well as surface water and ground water flooding. The peninsula also suffers from hydraulic overloading of the main sewage system, due to surface water inundation and many incidences have been reported in recent years where the local sewerage system has been overwhelmed leading to sewage entering properties and ditches. There are also some problems where saturated ground fills isolated septic tanks, which results in foul water discharge into streams.

The existing ditches and watercourses are not capable of handling the capacity of water generated and running off hard surfaces during heavy rainfall. Modern maps show a few well-spaced out contours on the peninsula, with height ranges from 4 to 7 metres above mean sea level. Average gradients for surface water run-off in the area are 1:1,000 or less. The peninsula is crisscrossed by drainage ditches originally designed for agriculture dating back to the 1800s and earlier. These ditches were dug primarily as retention ditches and were never designed to be a drainage network. Many of the original ditches and most of the small ponds, shown on mid-19th century tithe maps, have disappeared. Many of the remaining ditches are in poor repair or have been inappropriately placed in culverts. The standard of protection provided by this 'system' of ditches is very variable, however it typically provides protection up to a 3% annual probability flood event (that is a once in 30 year flood event based on historical data).

Climate change scenarios including rising sea levels and more intense rainfall will make the drainage situation in the Manhood worse, with sea level rise increasing the duration of tide locking and heavier rainfall increasing surface water flooding. Recent rainfall events and future climate change predictions suggests that even if all the existing ditches were maintained adequately the lack of a planned ditch network, new retention ponds and designated flood meadows/marshland in the area will mean surface water and ground water flooding will become more frequent and severe.

Residents are concerned that new housing developments during the last decade or so have exacerbated land drainage problems, particularly when the land on which new houses have been built has been raised higher than neighbouring land and properties. Meanwhile, Sustainable Drainage (SuD) Systems in areas of high water tables are considered relatively untested and may be ineffective in storm events without alternative run-off/emergency pond systems being available.

Key benefits of surface water management and drainage

Maintaining, improving and extending the drainage network on the Manhood peninsula would improve the currently failing water management situation. It would:

- Make the communities and economy of the peninsula and of Chichester District as a whole more flood resilient for the future
- Minimise the loss, distress and disruption that flooding causes to residents and businesses
- Minimise the problems arising from surface water infiltration into the foul water system

Viewing the drainage network as an opportunity to develop recreational routes and ecological corridors would:

- Bring together existing projects so that projects are linked and not carried out in isolation from one another in order to create the maximum benefit; for example, linking WSCC's surface water management plan, the Manhood Wildlife & Heritage Trust and CDC's mapping and creation of ecological corridors, and the Manhood Peninsula Partnership's Green Links around the Manhood (GLaM) initiative
- Boost the local and wider economy by enhancing the area as a holiday destination

- Encourage the growth of stay visitors in line with Chichester District's economic strategy
- Encourage the involvement of the farming community so that ditches, ponds, and water storage could be created and maintained more cost effectively
- Allow farmers and other landowners to benefit from grants for creation of water storage and wildlife habitat; and increase the opportunities for diversification into areas such as cycle hire, tea rooms, and farm shops on recreational routes
- Help sustain local wildlife populations, including rare species, and enable species arriving and departing on migration the means to traverse the peninsula
- Provide more compensatory habitat, dog walking routes, and recreational destinations, to complement the Solent Mitigation Strategy, enabling development in key employment areas where there is already sufficient infrastructure such as Chichester, Havant, and Portsmouth
- Allow funding to be more easily secured from outside sources and make existing money go further by combining the benefits for each scheme (e.g. so that a drainage ditch is a wildlife corridor with a footpath adjacent)

The MPP recognises that physical works to address surface water management and drainage issues must be done at times of year or in such a way as to avoid or minimises the effect on wildlife, particularly breeding birds or endangered mammals such as the water vole. The MPP urge anyone considering such works to contact CDC, WSCC or the Manhood Wildlife and Heritage Group to ensure that their proposals are appropriate.

Support for improving surface water management and drainage across the Manhood Peninsula

The Manhood Peninsula Partnership has worked to improve understanding of water management and land drainage matters by supporting: the 2004 Land Drainage Study of the Manhood Peninsula by Royal Haskoning survey undertaken during the ESPACE project; the 2008 Birdham Land Drainage study, and the 2011 Defra funded Coastal Change Pathfinder Project.

The Environment Agency, WSCC and Southern Water have made significant investment to improve the quality of water management and land drainage, and to tackle known problem areas. Monies from the WSCC Operation Watershed fund have benefitted many local communities.

Following a series of major flood events, most recently in the summer and winter of 2012, several parishes have been working with WSCC, CDC, the EA and the Manhood Wildlife and Heritage Group to ensure better maintenance of ditches and culverts and at least two Flood Action Groups are now active (covering Sidlesham, Birdham, Earnley and Almodington parishes).

West Sussex County Council is developing a Surface Water Management Plan.

Proposed Actions

The Manhood Peninsula Partnership (MPP) advocates that WSCC, the EA, Southern Water, and CDC, as the bodies responsible for surface water management and drainage across the peninsula, act to:

- Coordinate strategic planning
- Encourage integrated planning/dialogue with and the parishes
- Support and work with parishes and flood action groups
- Develop System Asset Management Plans for the area to review maintenance regimes
- Develop an emergency response plan for the Manhood Peninsula, identifying risks, actions, responsibilities and triggers
- Work with landowners, including RSPB, to create and restore wetlands

- Work with riparian owners to ensure ditches are properly maintained and not compromised by poor maintenance or inappropriate culverting
- Where appropriate, give priority to overground Sustainable Drainage (SuD) Systems, incorporating wildlife and habitat features
- Ensure that surface water and groundwater flooding issues are recognized by CDC as much as coastal and fluvial flood risk in the consideration of planning applications
- Agree development principles that stop development in or near recognized 'wet spots' (as outlined by WSCC/EA maps); avoid development where land is proposed to be raised higher than adjoining land in areas where surface water is known to be a problem; ensure that surface water drainage in and around development sites will be improved, with no run-off impacting property downstream even in storm events; ensure that the design and maintenance of sewerage systems in new developments does not exacerbate foul water flooding
- Ensure that Sustainable Drainage (SuD) Systems are shown to be sustainable and effective over the lifetime of any development and that a management plan is put in place for future maintenance
- Press for guidelines for Sustainable Drainage (SuD) Systems /monitoring to be set by government

Implementation

We need to make sure that the many bodies responsible for drainage on the Manhood Peninsula take account of opportunities for economic development that are in keeping with the environment of the peninsula.

The next stage is consultation with key MPP partners and other stakeholders to refine the proposed actions set out above. Given the extensive range of economic activity supported by very experienced people on the peninsula we also want to use this Key Statement to promote discussion and debate. We aim to invite local business people to join an economic task force for looking at issues affecting the peninsula economy, identifying needs, and suggesting solutions.

Given the organisations that the MPP is seeking to influence, it hopes that the **Surface Water Management across the Manhood Peninsula Key Statement** will be adopted by them and will influence their actions and decisions. As the MPP develops projects it will use this **Key Statement** to support and justify bids for funding and hopes that others will do the same.

Further information about the **Manhood Peninsula Partnership** can be found at:

<http://peninsulapartnership.org.uk/>

Or by contacting the MPP Project Officer, Jane Cunningham 01243 521091 jcunningham@chichester.gov.uk

Implementation

Working within an overall drainage and surface water management framework, we need to make sure that longer-term strategies recognize the aspirations for improved drainage and improved access and wildlife opportunities. We need to be opportunistic, identifying and seizing opportunities whenever and wherever that they arise, particularly as a result of planning applications.

The next stage is consultation with key MPP partners and other stakeholders to refine the proposed actions and to ensure that they are taken up.

Given the organisations that the MPP is seeking to influence, it hopes that the **Drainage across the Manhood Peninsula Key Statement** will be adopted by them and will influence their actions and decisions. As the MPP develops projects it will use this **Key Statement** to support and justify bids for funding and hopes that others will do the same.

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