

## Standing advice for major developments

### Introduction:

Any development within the Internal Drainage Board's District and catchment is subject to a consent from the appropriate Drainage Board under the Land Drainage Act 1991 and associated byelaws made under section 66. Land Drainage Consent application forms are to be used and they can be found on our website at:

<http://somersetdrainageboards.gov.uk/development-control-byelaws/land-drainage-consents/>

This consent is for the introduction of additional flow or volume, either directly or indirectly.

Byelaw no. 3

*No person shall as a result of development, within the meaning of section 55 of the Town and Country Planning Act 1990 as amended ('the 1990 Act'), whether or not such development is authorised by the 1990 Act or any regulation or order whatsoever or none of them, for any purpose by means of any channel, siphon, pipeline or sluice or by any other means whatsoever, introduce any water into the District or, whether directly or indirectly, increase the flow or volume of water in any watercourse in the District without the previous consent of the Board.*

This means that discharge flow rates and volumes are subject to approval from the Board.

Discharge without consent is illegal.

Please refer to case law: *The Manchester Ship Canal Company Ltd and another (Respondents) v United Utilities Water Plc (Appellant)* - [2014] UKSC 40

This guidance explains what would be acceptable to the Internal Drainage Board (IDB) and the justification for the requirements.

### Run-off rates and volumes:

The discharge hierarchy must be followed, which is:

- Firstly re-use as much water as possible (rainwater harvesting/greywater recycling).
- Then drain to an adequate soakaway or other infiltration system if possible.
- If full infiltration is not possible, use a hybrid solution of infiltration and discharging to a surface water body.
- If a hybrid system is not possible then discharge to a surface water body (e.g. lake, pond, river, rhyne or ditch).
- If you cannot discharge to a surface water body, then discharge to a surface water sewer, highway drain, or other drainage system
- Only drain to a combined sewer when there is demonstrably no other option.

The watercourses (known locally as rhyne) in the IDB district are slow moving and are sensitive to the volume of additional inflow of water. The rhyne network drains to the sea and is subject to tide lock, this means that lower order storm events (20% AEP to 5% AEP) will result in high water levels that will take weeks and not hours to return to normal. As standard drainage systems are designed to half drain in 24-48 hours it will still result in all of the additional volume leaving the site and being discharged into the Board's rhyne network. Cumulative volume of runoff from a number of developments will therefore increase flood risk regardless of any onsite attenuation.

With this in mind, the Board would prefer any increase in volume of attenuation to be provided in features directly hydraulically connected to Board's Rhyne network or the upsizing of smaller rhyne. This could include wetlands or two stage channels. This is on the understanding that it is located close to the development, there is a suitable and modelled form of conveyance and water quality has been dealt with through suitable mitigation measures.

If this is not feasible then any discharge into the Board's District must be no more than 2 litres per second per impermeable hectare.

Vegetated systems must be employed and it must be demonstrated that the first 5mm of rainfall does not leave the development.

Any variations from this standard would require full modelling of the catchment to demonstrate that there is no impact (minimal impact is not acceptable) from the proposed development for all event durations up to 336 hours.

#### **Impermeable Area:**

The Board will only accept the impermeable area to form part of the calculation for the run-off rates. This is to promote the reduction in impermeable areas within a development and because of the issues discussed above. This is also in accordance with the Environment Agency's 'Rainfall runoff management for developments' Report SC030219 which states:

"Percentage runoff from developments: Calculation of the runoff volume from the developed site for preliminary assessment and design of drainage facilities will assume 100% runoff from paved areas and 0% runoff from pervious areas."

In HR Wallingford's FAQ associated with their UK SuDS tool they state that "The tool has been known to be used by applying only the paved area as being the site area. Applied in this way it is implying that all the vegetated areas of the site (gardens etc.) continue to discharge as they did prior to development. It will also result in small values of  $Q_{bar}$ . This is a very conservative position, but is an approach that could be taken if it was thought to be appropriate for a particular situation." This approach is appropriate in the Drainage Board's situation due to the issues discussed above.

#### **Water Quality:**

The quality of the water leaving the development site is as important to the Board as the quantity of the runoff. The Board's District has SSSIs that are designated for their aquatic features. Due to the sensitivity of these features, if using the simple index approach in the SuDS Manual (C753) the pollution hazard indices must be multiplied by 1.1.

### **Existing Watercourses:**

Consents are required for both temporary and permanent works in, or adjacent to, **any** watercourse (except a main river). This includes any of the below:

Mill, dam, weir, culvert or other obstruction to the flow, infilling or stopping up of a watercourse, building, structure, road, footpath, track, tree, shrub willow or similar growth, any pipe or wire crossing a watercourse, any excavation of a watercourse bank or bed, any outfall into a watercourse, fence, post, pylon, jetty, wharf, pier, quay, bridge, loading stage, piling, groyne, revetment, any engine or mechanical contrivance.

Consent is required for anything listed above in or within 9m of a watercourse.

Existing watercourses should be protected with a suitable buffer. Typically the buffer should be 9m both sides of a watercourse that is maintained by the Board on a regular basis (ie. a viewed rhyne) and 6m for all other watercourses. Any variation from this should be discussed with the IDB.

#### **Buffer strips alongside watercourses are valuable for the following reasons**

- Buffer strips can reduce run-off into watercourses and therefore reduce flooding.
- They are essential in allowing access for the maintenance and inspection of watercourses, and for dealing with pollution incidents.
- They provide space for natural fluvial processes such as channel shape and planform adjustment which help restore and maintain the natural dynamic balance of river systems and associated habitats.
- Vegetation stabilises banks and reduces soil erosion.
- They provide a habitat for plants and animals and can form part of a habitat network.
- They provide opportunities for access.
- They can help to improve water quality by filtering run-off before it enters the watercourse.
- They provide opportunities to undertake restoration or improvements of watercourses in the future.
- They improve the visual landscape of the area.

### **Outlet levels:**

Any surface water outlet and any treated effluent outlet should be above the summer water level (often referred to as the summer panned level) and a suitable headwall should be used.

### **Maintenance of surface water drainage features:**

Adequate space and suitable facilities should be provided to ensure that the features can be maintained for the lifetime of the development. This must be demonstrated with a suitable site specific management and maintenance plan that details what maintenance is required, how and when it will be undertaken and who will do it.