

# NORTH SOMERSET LEVELS INTERNAL DRAINAGE BOARD

## CONSERVATION POLICY STATEMENT

### Introduction

The North Somerset Levels Internal Drainage Board has adopted this Conservation Policy, to set out how it intends to meet the duty placed on Internal Drainage Boards under the provisions of the Land Drainage Act 1994 and other relevant legislation, to undertake watercourse management in a way that is compatible with nature conservation interests.

The Board recognises the need to positively demonstrate that its watercourse management and maintenance operations, are undertaken in a manner that, whilst reducing flood risk and managing flows, also safeguards nature conservation interests and, wherever possible, makes a positive contribution to the enhancement of the natural environment.

### The Drainage District

The North of the District has an operational area (Drainage District) covering some 5,829 hectares (14,403 acres) of the low-lying North Somerset Moors and Levels, in two separate catchment areas. The Gordano Valley catchment (973 hectares) is an area of low-lying land between the Tickenham ridge and the coastal ridge known as Portishead Down, whilst the North Area catchment (4856 hectares) lies to the south of the Tickenham ridge, extending westwards to the coast between Clevedon and the river Congresbury Yeo.

The South Area has an operational area (Drainage District) covering some 5,860 hectares (14,500 acres) of the low-lying North Somerset Moors and Levels, inland from Weston-super-Mare and Kewstoke, to Wick St Lawrence, Congresbury, Churchill, Sandford, Banwell, Locking, Hutton and Uphill.

These three catchment areas are below sea level at Mean High Water Spring Tides and are protected from flooding by the sea defences by natural high ground and a network of rivers, rhynes, drains and other interconnecting watercourses. These watercourses are predominantly man-made and demonstrate the significance that several hundred years of water control has made, since the Enclosures Acts of the early nineteenth century, in creating the present, valued, wet grassland landscape from a natural marsh and moorland. Within this area the Board has a supervisory role in respect of all matters relating to the drainage of land.

Whilst the Board has powers to undertake works on any non-main river watercourse within its Drainage District, direct maintenance is limited to the Viewed Rhynes, which form the strategic arterial drainage system. These Viewed Rhynes extend to 185.4km length (118.2miles), of which 8.8km are in the Gordano Valley catchment, 81.6km are in the North Area and 95km are in the South Area. The Board also operates 62 water control structures and 2 sea outfalls.

One of the Board's principal roles is to manage water levels in the strategic arterial drainage system - particularly during summer months, to maintain an adequate water supply for agricultural purposes and wetland conservation, and in winter for land drainage and flood defence. The balance between these, sometimes conflicting, functions can be very fine and present management practices have evolved from close co-operation between the Board, the farming community and the needs of those living in the urban areas served, over many years.

In the Gordano Valley catchment, water level management is the responsibility of the Environment Agency, as the control structures are all on the 'main rivers'. The Agency's management of water levels enables a Raised Water Level Area to be maintained on Walton Moor by the Avon Wildlife Trust, to provide a site for over-wintering wetland wildfowl.

With the exception of 'main rivers', which are watercourses under the control of the Environment Agency and the 'Viewed Rhynes' (watercourses under the Control of the Internal Drainage Board), the responsibility for maintenance of all other watercourses and field ditches rests with the adjoining landowner, known in law as the 'riparian owner'.

### **Soils of the Drainage District**

Within the North and Gordano Valley areas, the Moors and Levels retain the special character of an area of former low-lying marsh and moorland, with seasonally waterlogged soils resulting from long-established water level management practices.

Lying between Portishead Down and Tickenham ridge, the soils of the Gordano Valley are primarily post-glacial Quaternary deposits of estuarine alluvial clays, laid down during periods of raised sea levels, with extensive peat deposits present on Walton and Weston Moors, in the westward part of the Valley. These soils overlie the red-brown clay soils of the Mercia Mudstone Group (formerly known as the Triassic Keuper Marl) that may be seen along the margins of the Valley, more particularly on the north-west side.

The limestones of the Portishead Down and Tickenham ridges result in a calcium-rich surface water run-off into the Gordano Valley providing conditions in the moorland watercourses that support aquatic plant communities that are not found elsewhere in the Board's Drainage District.

At the eastern end of the Valley, the estuarine alluvial clays predominate, but with extensive deposits of sands and gravels believed to result from glacial washout, together with isolated pockets of peat and, on the slightly rising ground to the south-east, fan deposits of hill-wash soils.

To the south of the Tickenham ridge, the soils of the North Somerset catchment are more complex, reflecting the underlying geology and the surface topography of the area. In the east, between Nailsea and Flax Bourton, the soils are alluvial clays and loams, with the red-brown clay soils of the Mercia Mudstone Group and fan deposits of hill-wash soils present on the slightly rising marginal ground.

To the west of Nailsea, a raised 'dome' of Pennant sandstone and coal-bearing shales of Carboniferous age, the Tickenham, Nailsea and Kenn Moors are extensive peat deposits overlying post-glacial Quaternary deposits of estuarine alluvial clays, again laid down during periods of raised sea levels. To the south and south-east of Kenn Moor, around Yatton and Claverham, the red-brown clay soils of the Mercia Mudstone Group predominate.

The coastal lands, from Clevedon, south through Kingston Seymour to the Drainage District Boundary at the river Congresbury Yeo the soil is uniformly estuarine alluvial clays with occasional small pockets of peat. Around the village of Kenn, an extensive deposit of sand and gravels believed to result from glacial washout, overlies the alluvial clays.

Within the South Area, the North Somerset Moors and Levels retain the special character of an area of former low-lying marshland, with seasonally waterlogged soils resulting from long-established water level management practices. Now generally wet grassland, these area overlies the extensive post-glacial Quaternary deposits of alluvium and marine clays deposited during periods of raised sea levels, containing isolated pockets of peat and sand, and small intrusions of lias shales, that overlie the rocks of the Mercia Mudstone Group.

## **Statutory Obligations**

The Land Drainage Act 1991, as amended by the Land Drainage Act 1994, places a duty on Internal Drainage Boards (IDBs) with respect to the environment and recreation. In simple terms, the Amended Act requires IDBs so far as may be consistent with their functions, to further the conservation and enhancement of natural beauty and the conservation of flora, fauna and geological or physiographical features of special interest, and to have regard to the desirability of protecting and conserving buildings, sites and objects of archaeological, architectural or historic interest.

IDBs should also take into account the effect that any proposals they wish to promote would have on the beauty or amenity of any rural or urban area, or on any such flora, fauna, features, buildings, sites or objects in that area.

The Environment Impact Assessment (Land Drainage Improvement Works) Regulations 1999 (SI 1999 No 1783) requires IDBs to undertake an assessment of the impact on the environment of projects likely to have significant effects and under the Countryside & Rights of Way Act 2000, IDBs must consult Natural England on proposed works or operations if these impact on the interest features of Sites of Special Scientific Interest (SSSIs).

Under the Habitat Regulations 1994, IDBs are required to consider the likely significant effect of their plans or projects on European designated sites, which in the case of the North area would be the Severn Estuary Special Protection Area. It is however unlikely that the nature, scale and timing of operations undertaken by the Board would impact on this site.

## **Sites of Environmental and Conservation Interest**

Within, or immediately adjacent to, the North Somerset Levels Internal Drainage Board District, the following sites have been designated for their environmental, geological, biological and conservation interest:

### Proposed Special Area of Conservation (SAC)

- Severn Estuary

### Special Protection Areas (SPA)

- Severn Estuary

### Wetland of International Importance (RAMSAR Site)

- Severn Estuary

### National Nature Reserve

- Gordano Valley [ST 432729]

### Sites of Special Scientific Interest

- Biddle Street, Yatton [ST 427648; ST 421650; ST 414649; ST 415648]
- Kenn Church, Kenn Pier and Yew Tree Farm, Kenn [ST 414688; ST 422693]
- Tickenham, Nailsea and Kenn Moors [ST 427686; ST433705; ST 428663; ST 426672]
- Gordano Valley [ST 435732]

- Weston-in-Gordano [ST 451743]
- The Severn Estuary
- Yanal Bog [ST 424607]

#### Wildlife Sites

- Watercress Wood, Backwell [ST 498703] (Ref: 47/19)
- Field south west of Chelvey, Brockley [ST 463682] (Ref: 46/06)
- Fields west of Littlewood Lane, Cleeve [ST 458666] (Ref: 46/10)
- Field east of M5 Motorway, Lodway, Easton-in-Gordano [ST 517763] (Ref: 57/16)
- Colehouse Pond, Kenn [ST 405694] (Ref: 46/01)
- Rhyne along Back Lane, Kingston Seymour [ST 393681] (Ref: 36/16)
- Severn Estuary and adjacent land, Kingston Seymour [ST 376678] (Ref: 36/01)
- West End Meadows, Nailsea [ST 458691] (Ref: 36/01)
- Nailsea and Tickenham Moors, Nailsea [ST 444705] (Ref: 46 + 47/01)
- Fields along Youngwood Lane, Nailsea [ST 467695] (Ref: 46/07)
- Batch Farm Meadow, Nailsea [ST 450692] (Ref: 46/04)
- Nursebatch Farm Fields, Nailsea [ST 453691] (Ref: 46/05)
- Fields between A396 and M5 Motorway, Portbury [ST 501756] (Ref: 47 + 57/02)
- Drove Rhyne, Portbury [ST 497765] (47 + 57/04)
- Fields west of Lower Caswell House, Portbury [ST 480748] (47/26)
- Portishead Quays Nature Reserve, Portbury [ST484767] (47/30)
- Fields north of Upper Caswell Farm, Portbury [ST 483750] (47/25)
- Fields on Caswell Moor, Portbury [ST 494753] (47/24)
- Fields adjacent to M5 Motorway, Portbury [ST 494753] (47/23)
- Fields between railway line and A369, Portbury [ST 503758] (47 + 57/03)
- Gordano Valley, Clapton Moor, Middle Bridge and rhyne, Weston-in-Gordano [ST 453738] (47/05)
- Horsecastle Pond, Yatton [ST 421660] (46/08)
- Fields and rhyne west of Moorland Farm, Banwell
- River Banwell (part)
- Grumblepill Rhyne (part)
- Rhyne south of Dolemoor Lane, Congresbury [ST 419635]
- Congresbury Yeo, adjacent land and rhyne [ST 4286407]
- Meadows and rhyne at Kewstoke
- Pond and marshy field south east of Locking
- Puxton Moor SSSI [ST 409628]
- Towerhead Brook (part) and adjacent land, Sandford [ST 408598]
- Yanal Bog and adjacent rhyne [ST424607]
- Middle Rhyne and Westmead Rhyne (YACWAG) [ST436081 ST436152]

#### **Sites of Environmental and Conservation Interest (Continued)**

##### Local Nature Reserves

- Backwell Lake, Backwell [ST 476694]
- Cheddar Valley Railway Walk, Yatton [ST 427621]

### Scheduled Ancient Monuments

- Duck Decoy, 250m south of Black Rock Villas, Weston-in-Gordano [ST 456742]
- Manorial settlement at Weston Manor, Weston-in-Gordano [ST 444740]
- Moated site 230m south-east of St Peter & St Paul's Church, Weston-in-Gordano [ST 445740]
- Deserted medieval settlement 300m east-south-east of Wraxall House, Wraxall & Failand [ST 487713]
- Minor Romano-British villa 650m north-east of Hewish Farm, Yatton [ST 405652]
- Deserted Medieval farmstead at Gout Farm, Banwell
- Moated site at Nye Farm, Nye
- Woodspring Priory and associated fishponds and field systems

### **Conservation Strategy**

#### Routine Maintenance Operations

The Board will comply with the Wildlife and Countryside Act 1981 when carrying out maintenance operations where there are protected species or habitats. The Board is a Competent Authority under the Habitats Regulations.

Regular maintenance of the Board's 'Viewed Rhynes' is essential for land drainage and flood defence, for agricultural water supply and for maintaining the biodiversity of the watercourse system. This maintenance work is carried out sympathetically and with nature conservation interests kept firmly in mind. Maintenance specifications provide guidance on the appropriate standards to be achieved, taking into consideration the operational needs of the catchment served, the impact of the work on the conservation interest of the watercourse and the natural habitats provided by the watercourse.

Watercourses in rural catchments serving primarily agricultural needs offer the greatest scope for effecting environmental gain and the maintenance specification adopted for these watercourses reflects the advantages to the environment, to conservation interests and to the Board, in reducing the flail mowing of channel banks. Leaving a fringe of uncut vegetation at the water's edge, particularly when the 'first cut' is undertaken, where this is both safe and practical, helps stabilise banks and provides both food and shelter for small mammals.

Where it is necessary to cut aquatic weed twice annually, the commencement of the first cut has now been delayed until mid-June (but will not normally be commenced until after the 1<sup>st</sup> July on watercourses within the SSSIs) and the second cut has been programmed to commence in early September.

On an increasing number of watercourses, the 'first cut' will be on one bank only and, where it has been decided to reduce the number of cuts to one per year, the single cut will usually be undertaken in mid to late August. On certain minor watercourses the single cut has, however, been deferred until early September.

As it is usual to experience increased rainfall in the autumn months, the aim is to complete all aquatic weed-cutting operations by the third week of October, to avoid unnecessary damage to banks, gateways and to agricultural land generally, caused through working on heavy clay soils made wet by autumn rainfall.

In urban areas, the maintained watercourses have been provided for arterial drainage and stormwater storage purposes and are designed to protect property from the risk of flooding. Consequently it is essential that their maintenance reflects this strategic role, without which the flood risk would be unacceptable. Nevertheless, when channel maintenance works are undertaken the timing of these operations will, wherever possible, be set to minimise the risk of environmental damage.

Where delay is not possible, or appropriate, prior inspections of the watercourses concerned will be carried out to establish the presence (or otherwise) of nesting birds, water voles and other species, and to ensure that wherever possible, disturbance is avoided.

The Association of Drainage Authorities (ADA) 'Water Vole Policy' will be followed.

The Board will consult with conservation bodies in compliance with any statutory obligation and may, in addition, consult with any conservation group or similar body that may have positive and helpful input, into achieving an environmental enhancement of watercourses under the Board's operational control.

### Water Level Management Plans

Water Level Management Plans (WLMPs) provide a means by which the water level requirements for a range of activities in a particular area, including agriculture, flood defence and land drainage, conservation, amenity and recreation, and water resources can be formalised and, where possible, integrated.

Invariably, these different activities can result in conflicting requirements and, in preparing and implementing WLMPs, the North Somerset Levels IDB will seek to strike a reasonable and sustainable balance between conflicting needs. Through its WLMPs, the Board will also seek to assist the statutory conservation authorities in maintaining 'favourable condition' of the SSSIs in its Drainage District.

### Herbicide Use

The Board does not, as a matter of course, use herbicides for vegetative control. Where, in exceptional circumstances machine access is not possible and hand weed cutting is deemed unsafe, the use of an herbicide may be considered. In such circumstances, only herbicides specifically cleared for aquatic use would be used.

Herbicides will only be used in accordance with the requirements of the Management of Health and Safety at Work Regulations 1999, the Control of Substances Hazardous to Health Regulations 2002, the Food and Environment Protection Act 1985 and the Control of Pesticides Regulations 1986.

The Environment Agency would be consulted and their approval sought for any application of herbicide.

### Habitat Improvement

The banks of watercourses affected by engineering works will, where possible, be reinstated to their natural form and retain features of ecological and conservation interest. Where appropriate, habitat improvements will be included in the engineering works undertaken to encourage colonisation by otter, water vole and other species in suitable locations. Bankside and water-edge planting will be undertaken where appropriate, to encourage the colonisation and natural regeneration of aquatic species lost as a result of former works and water management practices.

## **Conservation Objectives**

The North Somerset Levels IDB will:

- Continue to develop operational guidelines for incorporation into future work programmes to safeguard and enhance the existing nature conservation resources, taking into account the operational needs of the Drainage District.
- Work with Natural England and others to promote the enhancement and protection of conservation interests, in so far as may be consistent with its operational functions.
- Through the application of Land Drainage Consents and Byelaws, seek to control the inappropriate use of the strategic arterial watercourse system, where such use could result in damage to natural features of conservation interest and habitat importance.
- Publish annually a report on the conservation interests it has promoted, supported and safeguarded through its operations and in the administration of Land Drainage Consents.
- Advise North Somerset Council of its contribution to the biodiversity of the District, arising from its operations and the administration of Land Drainage Consents.
- Advise North Somerset Council through consultation on planning applications of any environmental mitigation works it considers should be required in conjunction with development proposals affecting watercourses within its Drainage District.

### **For further Information Please Contact:**

The Clerk or Engineers to the Board

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This Policy has the support of Natural England and was adopted by the North Somerset Levels IDB at their meeting on 23<sup>rd</sup> August, 2011.