

NPF Submissions

Forward Planning Section

Department of Housing, Community and Local Government

Custom House

Dublin, D01, W6X0

15<sup>th</sup> March, 2017

**Submission of Inland Fisheries Ireland on the drafting of the National Planning Framework (NPF)**

Dear Sir/Madam

Inland Fisheries Ireland (IFI) is a Statutory Body established on the 1<sup>st</sup> July 2010. Under section 7(1) of the Inland Fisheries Act 2010 (No. 10 of 2010) *the principal function of IFI is the protection, management and conservation of the inland fisheries resource*. Ireland has over 70,000 kilometers of rivers and streams and 144,000 hectares of lakes all of which fall under the jurisdiction of IFI. The agency is also responsible for sea angling in Ireland.

IFI is mandated to ensure that the fisheries of the State are protected. To protect means to keep safe, defend, to shield from danger, injury or change. “*Fisheries*” includes all inland fisheries recreational and commercial, sea angling and mollusc fisheries stipulated under the Fisheries Acts, the physical habitat upon which the fishery relies, the facilities and access, the quantity and quality of the water and the plant and animal life on which fish depend for shelter and food and the spawning areas where in fish deposit their eggs. The protective role of IFI relates to all aspects of the aquatic environment and all factors that influence the biotic communities within waters, which in any way relate to the propagation of fish stocks.

IFI is of the view that the NPF in considering the protection of the quality of the aquatic environment must address not only water quality but also include the protection of the physical environment, hydrological processes and biodiversity. Protection of the aquatic environment must imply a greater commitment than merely to prevent fish mortality or protect water quality. The insidious effects of creeping/chronic pollution are often more serious than dramatic discharges which result in instantaneous fish kills, because sub-lethal pollution may reduce growth, inhibit reproduction functions or so alter the habitat as to render it uninhabitable for certain more desirable species. Maintenance of habitat is a particularly important objective of fisheries authorities. It entails a greater knowledge of the environmental responses of aquatic life to pollution/environmental degradation and tends towards more stringent habitat and water quality objectives. An important aspect in the maintenance of habitat is the protection of the food chain. The protection of each stage of the food chain is the very basis of aquatic habitat protection. Destruction of habitat or contamination of the food chain at any level may eliminate any other form of life depending on it.

The EU Water Framework Directive (2000/60/EC) entered into force in December 2000 requires the protection of the ecological status of river catchments – this encompasses water quality and requires the conservation of habitats for ecological communities. One of the primary objectives of the Directive is to establish a framework which prevents further deterioration and protects and enhances the status of aquatic ecosystems. Protection of aquatic ecosystems requires that river systems be protected on a catchment basis. *Article 5 of the 2009 Surface Water Regulations requires that a public authority, in performance of its functions, shall not undertake those functions in a manner that knowingly causes or allows deterioration in the chemical or ecological status of a body of surface water. Also article 28(2) of the said Regulations states that a surface water body whose status is determined to be less than good shall be restored to at least good status not later than the end of 2015.*

We are now in the second cycle of the Water Framework Directive (2015 – 2021). For this purpose a newer single Catchment Management approach has been adopted. For this purpose Ireland has been broken into up into 46 larger catchments, and 583 subcatchments.

**The NPF must recognise that protection of the aquatic environment/habitat not only requires the protection of water quality but also necessitates the protection and maintenance of physical habitat and hydrological processes/regimes.**

#### **Water Quality and Municipal Sewage Treatment Infrastructure:**

Sufficient treatment capacity must be available both within the receiving sewerage systems locally and downstream of waste water treatment plants over the full duration of the plan in order that the ecological integrity of the ultimate receiving waters are protected. IFI would highlight the importance of building a comprehensive and robust assessment of both local infrastructural needs and Irish Water/Local Authority capacity to meet those needs into the plan. Should particular WWTPs fail to provide expected capacities during the life of the plan, IFI would highlight the risk of associated significant environmental impacts which may result from local development.

The Planning and Development Act 2000 requires that the plan must *be consistent as far as possible with National Plans, Strategies and Policies which relate to proper planning and sustainable development*. The policy of granting planning permissions for developments with associated increased loading on inadequate or already overloaded municipal sewage treatment plants is clearly not a sustainable practice. Taking account of the adverse effects of increased wastewater discharges on the general well being and quality of rivers, Inland Fisheries Ireland considers that in areas where treatment facilities necessary for development do not exist, planning permissions should either be refused on the grounds that such development is premature or the developer should be constrained by an appropriate condition requiring that connections to sewer will not be permitted until sewage works upgrading is completed and operational. In suitable locations a developer could be required to install a package treatment plant capable of providing full secondary treatment for a proposed development until such time as the sewage works upgrading and expansion is completed and operational.

### **Water Quality and Integrated Constructed Wetlands (ICWs):**

IFI welcomes the installation of systems intended to treat wastewaters and improve the quality of discharges to the environment. Such wetland systems must in our view be designed by engineers and scientists, and installed and operated under their supervision. We would expect that wetland systems should satisfy the criteria detailed in the November 2010 publication "*Department of the Environment, Heritage and Local Government, Integrated Constructed Wetlands, Guidance Document for Farmyard Soiled Water and Domestic Wastewater Applications*".

Integrated Constructed Wetlands (ICWs) must be viewed as an adjunct to good agricultural practice and not as a low cost way of getting rid of farm waste. Farmers must firstly be required to provide safe and secure storage for animal manures, slurries, silage effluent, dairy wastes and soiled waters. Such materials should be regarded as a resource to be reused and recycled in accordance with DAFF recommendations and guidelines. In accordance with good practice, clean water from roofing systems and yards should be kept out of effluent and waste holding facilities so as to ensure efficient use of such containment facilities. Good management practices also minimises the areas of farmyard which become soiled and contaminated.

Due to the extensive size and water demands of ICWs it may be necessary to consider the implications of surface water abstractions to sustain the wetlands during periods of dry weather. In Glaslough, Co. Monaghan the ICW system has been designed so that water from a small stream can be diverted into the ICW during sustained periods of low rainfall to prevent the ICW system from drying out. Such abstractions could have implications for assimilative capacity in the watercourse subject to the abstraction. Indeed, abstractions from watercourses during dry weather or drought periods could have serious implications for the aquatic habitat, fish stocks and consequently the ecological status of watercourses in terms of the Water Framework Directive (WFD). It is important that a precautionary approach is taken from a policy perspective as it is a requirement under the WFD that the ecological status and water quality of all waters are protected and where necessary improved.

### **Aquatic Habitat Protection (including protection of Riparian Habitat):**

A policy in relation to aquatic habitat protection should be included in the NPF. Protection of the aquatic environment has to date been generally addressed on an ad-hoc basis under planning control/legislation. The current planning regulations do not sufficiently address issues of watercourse protection and management. The impacts of some developments on the aquatic environment may only become apparent in the long term. Developments such as road and bypass development, urbanisation, flood relief, afforestation, river drainage have caused and are causing major disturbances to the physical habitat. "Development" can require that extensive sections of watercourses be drained, altered and diverted, flood plains may be modified to accommodate housing and industrial development, impermeable surface areas in towns and on motorways have increased giving rise to increased runoff, and smaller streams and rivers have been culverted to accommodate development. The Planning Authority under the terms of the EU Water Framework Directive (WFD) (2000/60/EC) is legally obliged to protect the ecological status of river catchments and channels. Therefore consideration has to be given to other factors including flow, drainage, dams, bank erosion, quality of instream vegetation and riparian habitat etc.

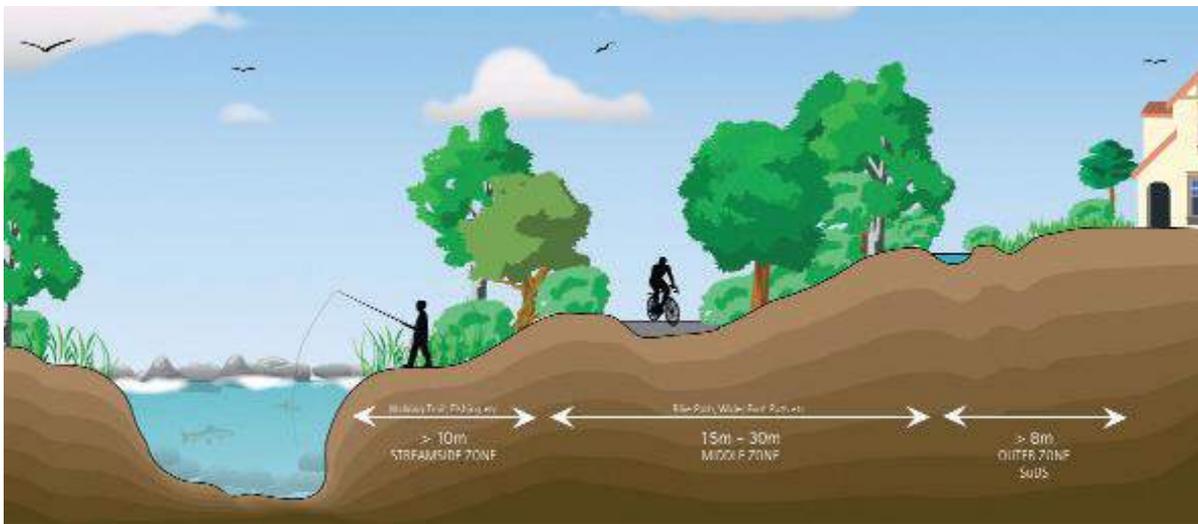
The impacts of development when not policy driven or environmentally managed are numerous, i.e. destruction of instream habitats, interference with fish spawning and nursery areas, obstruction of fish passage, removal of angling pools, changes in flow regimes. The above is an indication of some effects on fisheries which can be caused by development. The destruction of riparian areas along river banks results in fragmentation of riparian habitat within the river corridor, loss of cover for fish and aquatic animals and can further reduce the value of waterways as amenity areas.

Watercourses are natural corridors for fish and wildlife movement. They may be of significant amenity value or have such potential. They may also be of significance in terms of a town's traditional and social history. Where development is proposed in the few remaining areas within our towns, open watercourses are considered an obstacle and are frequently the first natural features to be realigned/ culverted or covered over etc. It is a poor reflection on the development objectives which exist both at National and Local Planning level for the protection of the natural environment, when a stream or river which has existed forever in a locality with its own habitat, wildlife etc; is allowed to be covered over and in effect lost forever. The disparity which currently exists must be acknowledged, e.g. a Tree Preservation Order will provide for the protection of a single mature oak tree in an area while in that same area permission may be given to culvert or cover over a stream or river. IFI requests that such disparity be addressed within the Development Plan. It is essential that watercourses be maintained in an environmentally and aesthetically sensitive manner for future generations to cherish and protect.

To insure that impacts from development/change in land use practices (including flood plain development) do not interfere with the aquatic environment it is essential that those areas adjacent to waterways (riparian buffer zones) are managed in a manner which will lessen impacts to these habitats. A riparian/buffer zone is a vegetated area near a stream, which helps shade and partially protect a stream from the impact of adjacent land uses. It is a discrete ecological and geographical entity. It is the point of contact between the land (i.e. the terrestrial ecosystem) and the freshwater body (i.e. the aquatic ecosystem). It plays a key role in protecting/improving water quality in associated watercourses (streams, rivers, and lakes), thus providing environmental benefits. With the decline of many aquatic ecosystems due to development (both urbanisation and agricultural production), riparian buffers have become a common conservation measure aimed at improving water quality and lessening pollution impacts. The riparian/buffer zone must be sufficiently wide to protect the watercourse. Riparian buffers in addition to water quality benefits (bank stabilisation, interception of nutrients, sediments and pesticides) also provide habitat benefits in terms of providing shade, enhancing instream diversity (overhanging vegetation creates niches and supplies invertebrates and leaf-litter into the aquatic zone) and help mitigate habitat fragmentation by providing connectivity i.e. as linear features in the landscape, riparian zones/woodlands can reduce fragmentation by connecting isolated habitats/woodlands, thereby creating greater structural diversity and critical mass. Protection of aquatic zones can require riparian/buffer zones of up to 50m. The width of the riparian/buffer zone will depend on factors such as land use, land topography (e.g. slope), soil type, channel width/gradient and critical habitats to be protected.

Numerous Local Authorities in the review and preparation of their respective development plans have included specific policies which reserve riparian/buffer zones free from inappropriate development along banks of rivers and streams for the purposes of, inter alia, providing habitat, river maintenance, access for anglers, walkers, recreational area and pollution buffer zone and undertaken to maintain such corridors. However some local authorities appear to consider a set-aside adjacent to watercourses solely for the purpose of channel maintenance i.e. biodiversity/amenity etc. requirements are not a consideration. IFI urges all local authorities to acknowledge and address the need for riparian habitat protection. IFI should be consulted in relation to any development (greenfield development or redevelopment of brownfield sites) that could potentially impact on the aquatic ecosystems and associated riparian habitat. IFI can provide guidance on site specific measures to enhance, protect, rehabilitate or establish riparian and aquatic habitats.

The protection of habitats outside designated areas and a Council commitment to reject proposals that would interfere with natural floodplains would greatly benefit both aquatic and riparian habitats. IFI is opposed to any development on floodplain lands.



**Diagram illustrating riparian buffer sub zones** (from IFI guidance document - Planning for watercourses in the urban environment <http://www.fisheriesireland.ie/fisheries-management-1/86-planning-for-watercourses-in-the-urban-environment-1/file>)

### **Invasive Species**

The Development Plan should include policies to ensure that developments do not lead to the spread of invasive species. Invasive species may drive local native species to extinction via competitive exclusion, niche displacement or hybridisation with related native species. For example, Himalayan balsam, Giant hogweed and Japanese knotweed compete with native bank vegetation undermining banks resulting in increased erosion and siltation of fish spawning beds. Giant Hogweed is also a human health hazard. Zebra mussels and Asian clam compete with fish and alter the water chemistry of a waterbody, they can also mask the effects of eutrophication/enrichment. Invasive species can transform habitats and endanger whole ecosystems with serious implications for the environment and the economy. An example of a proactive policy in this regard would be to prohibit invasive species from inclusion in landscape design proposals. Landscaping proposals etc. should require the use of native species from local stock. See [www.invasivespeciesireland.com](http://www.invasivespeciesireland.com)

### **River Crossing Structures:**

The impacts of poorly designed river/stream crossing structures can be serious in terms of habitat loss. Prevention of the free upstream migration of fish species such as Salmon, Trout and Lamprey effectively results in the loss of spawning habitat upstream of the barrier to migration. This could have serious implications for the populations of fish species concerned and contravenes the legal obligation under the WFD to protect the ecological status of river catchments and channels. Indeed, it is an offence under the Fisheries Acts to prevent the free passage of fish. When structures are being designed for crossing fisheries waters, consideration must be given to the following biological criteria: species of fish required to safely pass; size of fish required to pass (life stage); time of year in which fish passage is required; and high and low design passage flows etc. Bridges and bottomless culverts have the least impact on fish passage. IFI recommends that the Plan should include a clear policy on the use of clear span structures where possible on fisheries waters and that IFI should be consulted on any such proposed developments.

### **Stream Fragmentation**

Inland Fisheries Ireland has recently launched a new project called AMBER. The project, which stands for Adaptive Management of Barriers in European Rivers, seeks to raise awareness of the problems posed by stream fragmentation, the pressures on freshwater ecosystems and the need for innovative solutions to restore river connectivity. All major rivers across Europe are disconnected from the sea to varying degrees as a result of barriers, with disastrous impact on many fish species.

AMBER, which is a €6.2 million Euro multi-disciplinary research project, will see 19 partners from 11 countries, including Ireland, combine citizen science and cutting-edge technology to map the distribution of barriers and assess their effects on freshwater organisms. It will work with hydroelectric companies, water providers, NGOs, anglers and local authorities to restore river connectivity. IFI recommends that the NPF should include a clear policy on the prevention of river fragmentation and to encourage the connectivity or the re-connectivity where possible on fisheries waters and that IFI should be consulted on any such proposed developments.

For more information about the AMBER project, visit [www.fisheriesireland.ie/research](http://www.fisheriesireland.ie/research) or visit [www.amber.international](http://www.amber.international).

### **Water Conservation**

The Development Plan is an opportunity to promote policies and awareness of water conservation which may ultimately result in a reduction in water use. Water conservation and water use efficiency are central elements of any strategy to enhance water supply reliability, restore ecosystems, and respond to climate change and changing demographics. Significant increases in water conservation and water use efficiency will be required to ensure reliable water supplies in the future. Best practice should be promoted in respect of water conservation in all developments through methods such as rain water harvesting. Another problem which is particular to summer months (when river/stream flows are often low) is wide scale unregulated water abstraction for crop irrigation. This practice may have significant ecological implications/impacts if large volumes of water are abstracted over a short period of time from small fish nursery or spawning streams. Such abstractions during dry weather or drought periods could have severe repercussions for aquatic habitats, fish stocks and accordingly the ecological status of watercourses in terms of the Water Framework Directive (WFD).

Accomplishing water conservation and water use efficiency goals will require action by all water users, including residential, commercial, industrial and agricultural water users, local and regional planning agencies, state agencies, chambers of commerce, and business, commercial and industrial professional and trade unions/associations.

### **Sustainable Urban Drainage Systems (SUDS):**

The requirement for the inclusion of SUDS for surface water disposal is a positive indicator of the Council's intention for the sustainable development of the area and should, in conjunction with good management of the site, aid in flooding and pollution management. Such a design should be included in all development design proposals.

### **Management Policies:**

River Management Policies should be an integral part of any development programme and all waterways within the area considered as a natural resource requiring protection and development. The following mechanisms for protection of the aquatic environment could be considered for inclusion in Area Strategic Management:

- River Corridor Management Areas which provide for the protection and development of the aquatic environment (particularly within towns and cities).
- Special Preservation Orders provided for specific habitats in need of protection e.g. an Aquatic Protection Order.
- Special Amenity Areas, identified for their potential as Linear Parklands along waterways.

Within the context of the Plan, a watercourse could be assessed in relation to its existing aesthetic, amenity and recreational value, its potential for improvement and protection and the requirements to achieve this potential i.e. control of further physical interference, water quality deterioration, access, community participation etc.

Rivers and watercourses are assets which provide a basis for the development of visual and amenity features of the areas through which they flow. In housing and industrial site planning they provide a feature around which landscape design and development can be based. They can provide a focus for the involvement of the communities in the protection of water quality and the biological/wildlife diversity of aquatic habitats within these areas.

**The 1997 Habitats Regulations and Special Areas of Conservation (SAC) Directive does not extend to the inclusion of all aquatic habitats of fish bearing importance or of amenity value. Therefore the reliance of the Development Plan on these area designations solely will exclude significant numbers of waterways which are in need of protection.**

**IFI requests that the Development Plan provide for the maintenance and preservation of all watercourses and associated riparian habitats.**

### **A Sustainable National Framework Plan and the Environment:**

In determining the likely significant effects of plans or programmes, regard should be given to the need for the sustainable development of the inland and marine fisheries resource (including the conservation of fish and other species of fauna and flora, aquatic habitats and the biodiversity of inland and marine water ecosystems). Consideration should be given to potential significant impacts on:

- Water quality
- Aquatic and associated riparian habitats
- Biological Diversity
- Ecosystem structure and functioning
- Fish spawning and nursery areas
- Surface water hydrology
- Passage of migratory fish
- Areas of natural heritage importance including geological heritage sites
- Sport and commercial fishing and angling
- Amenity and recreational areas

The NFP should:

- Be consistent with River Basin Management Plans and comply with the requirements of the EU Water Framework Directive (WFD) (2000/60/EC).
- Include policies which preclude developments in areas where the sewage infrastructure facilities necessary for development do not exist.
- Advocate a change from an acceptance of river corridor interference to an assumption against it.
- Promote the integration and improvement of natural watercourses in urban renewal and development proposals.
- Encourage Local participation in urban and rural renewal.
- Include provision for consultation with IFI on developments which may impact on the aquatic environment.

Key IFI publications to be taken on board are:

- *Guidelines on the Planning, Design, Construction & Operation of Small-Scale Hydro-Electric Schemes.* These can be accessed at: <http://www.fisheriesireland.ie/fisheries-research-1/13-guidelines-on-the-planning-design-construction-operation-of-small-scale-hydro-electric-schemes-a-1>
- *Guidelines on protection of fisheries during construction works in and adjacent to waters.* These can be accessed at: <http://www.fisheriesireland.ie/fisheries-management-1/624-guidelines-on-protection-of-fisheries-during-construction-works-in-and-adjacent-to-waters>

Please also insert our website: [www.fisheriesireland.ie](http://www.fisheriesireland.ie) onto your list of useful websites (if relevant).

We look forward to further correspondence in due course.

Yours sincerely

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