

CENTRAL MANAGEMENT BRANCH



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Paul Carlisle
Clerk to the Committee for Regional Development
Committee Office
Room 254
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Dear Paul

STRATEGIC DRAINAGE INFRASTRUCTURE PLAN

Departmental officials are scheduled to brief the Committee on 8 October on the subject of the proposed Strategic Drainage Infrastructure Plan. I attach a briefing paper for the consideration of Committee members.

This letter and enclosure is fully disclosable under FOI.

Yours sincerely



ALAN DOHERTY
Departmental Assembly Liaison Officer

**A STRATEGIC DRAINAGE INFRASTRUCTURE
PLAN FOR NORTHERN IRELAND**

**BRIEFING FOR THE REGIONAL DEVELOPMENT
COMMITTEE ON 8 OCTOBER 2014**

**A STRATEGIC DRAINAGE INFRASTRUCTURE PLAN FOR
NORTHERN IRELAND**

Introduction

1. The Minister for Regional Development sought approval from the NI Executive to establish an inter-departmental group to develop a strategic approach to drainage infrastructure across Northern Ireland (NI), in line with the requirements of the Water Framework Directive, the Urban Waste Water Treatment Directive and the European Floods Directive. The goal of the inter-departmental group will be to develop a Strategic Drainage Infrastructure Plan to:
 - plan properly to enable future economic growth;
 - address environmental risks including the risk of infraction proceedings in respect of water quality in Belfast Lough; and,
 - reduce significantly the risk of future flooding particularly but not exclusively in the Belfast area.
2. Executive approval was given at the Executive meeting on 8 July and work is currently underway to set up the inter-departmental group, in the form of a Programme Board, to take forward the development of the Strategic Drainage Infrastructure Plan.

The Problem

3. Drainage infrastructure throughout Northern Ireland is not currently sufficient to meet the future requirements expected of it, with the consequences that are set out in this paper. The problems are most acute in the greater Belfast area.

Economic growth

4. Northern Ireland, and the greater Belfast area in particular, cannot continue to develop economically without growth in the capacity of its drainage infrastructure. The existing waste water infrastructure is not sufficient for a significant level of new

development, whether commercial or housing, in the Belfast area and this situation will become worse if investment in infrastructure fails to keep pace with economic growth. Thirteen large waste water treatment works (WWTW) requiring upgrading can be included within NI Water's PC15 programme of work planned for the next six years on the basis of the ISNI projections. This will, however, leave 58 WWTWs requiring upgrading at the end of that period. This means that by 2021 there will be a significantly greater number of areas where growth will be constrained due to the lack of infrastructure capacity. The use of short-term treatment solutions, based on increased use of septic tanks etc for domestic properties, can only be a temporary measure and does not provide a long-term solution to this issue.

5. A more strategic approach is required to ensure that economic growth is not significantly constrained, particularly in the greater Belfast area where Duncrue WWTW is already operating at design capacity.

Environmental Risk- Belfast Lough

6. Under the Water Framework Directive, our target is to achieve a standard of "Good" water quality in the three areas of Belfast Lough (Harbour, Inner Lough and Outer Lough) by 2015. Only the Outer Lough is currently at "Good". This is unlikely to have improved by 2015 when the NIEA will next report formally to Brussels. Without a credible plan to address the problem, there is a risk that this could lead to infraction proceedings.
7. One of the causes of the poor water quality is that during periods of heavy rainfall the wastewater treatment works at Belfast (Duncrue Street) and Kinnegar cannot cope with the volume flowing into the works. Like all wastewater treatment works, Belfast and Kinnegar are designed to "spill" rather than have the excess pressure result in sewage backing up into homes and businesses. In the case of Belfast, the excess volume (which is a combination of sewage and storm water) spills into Belfast Lough, impacting on the water quality. There are no quick or easy solutions to this problem. Ideally, a large proportion of the surface water generated by heavy rainfall would be channelled separately to Belfast Lough via existing watercourses or through a separate drainage system created for this

purpose. This would greatly reduce the pressure on Duncrue Street WWTW and Kinnegar WWTW, allowing them to operate more effectively. Such an approach would also reduce treatment costs, due to the lower volume handled by the treatment works. There would be no treatment cost for the separated surface water drainage system, as this would carry essentially “clean” rainfall and runoff water. This would significantly improve the quality of the discharges to the Inner Lough and Harbour and thereby make a significant contribution to an improvement in the water quality status of the Lough.

8. Infraction proceedings by the Commission might be avoided if there is evidence of a credible plan in place to resolve the problem and the European Commission can be satisfied that appropriate action is being taken. It is therefore essential that we develop a strategic plan expeditiously.

Flood risk

9. Instances of serious flooding have occurred across Northern Ireland on several occasions in recent years. The development of towns and cities in Northern Ireland has placed an excessive burden on drainage systems and climate change predictions suggest that flood risk is likely to increase.
10. The Department of Agriculture and Rural Development, through its role as a competent authority for the Floods Directive, has identified the main sources of flooding across Northern Ireland and is developing Flood Risk Management Plans reflecting how it is proposed to manage flood risk. DOE also plays an important role in flood risk through its scrutiny and consenting process on environmental matters, promoting sustainable drainage systems, climate change adaptation planning, providing direction to local government and overseeing the Executive’s flood hardship payment schemes.
11. Each of the drainage agencies (DARD, Transport NI and NI Water) contributes to managing flood risk from drainage infrastructure within their respective remits. Action has been taken to address localised flooding issues more coherently through the establishment of an inter-agency Flood Investment and Planning Group led by DRD to coordinate work by DARD, Transport NI and NI Water. DRD is also developing a Long-Term Water Strategy to contribute to addressing flood

risk through the alignment of policies across the water sector, which was issued for consultation in June 2014.

12. Where there is a clear statutory duty, flood risk is being managed with measures or programmes in place. However, there remains a gap between the work led by DARD identifying flooding risks and the work to address local flooding issues led by the Department. In particular, there is a gap when it comes to having properly “joined up” plans to address flooding caused by intense rainfall overwhelming our drainage systems.
13. This issue was considered in the PEDU ‘Review of Response to Flooding June 2012’ which recommended that Rivers Agency, Transport NI and NI Water work with their parent departments to review current flood defence expenditure priorities and report to the Executive on their adequacy to meet the potential threats over the next 10 years. The Executive considered the outcome of this review and noted the requirement for an additional targeted programme of £120m over the next 10 years and agreed that it should be prioritised in the next iteration of the Investment Strategy. It is now clear that this level of funding will be inadequate to deliver a programme of work which will properly meet the objectives of supporting economic growth, protecting the environment and addressing flood risk.

Belfast Flooding

14. Belfast has been identified by the Preliminary Flood Risk Assessment, required under the Floods Directive, as the largest of the 20 significant flood risk areas in Northern Ireland. The risk is real as demonstrated by the number of properties in the east and south of the city that have flooded in recent years. DARD is currently delivering a major flood alleviation scheme in East Belfast as part of the wider Belfast City Council led Connswater Community Greenway Project. This work will reduce the risk of flooding from rivers and the sea, but the risk from surface water following intense rainfall still needs to be addressed. NI Water has already concluded that large scale projects are necessary to improve the sewerage systems in these areas. Indicative funding in the Executive’s Investment Strategy (and NI Water’s proposed PC15 investment plans) for 2015-21 is inadequate to cover the costs of these projects.

A strategic approach to infrastructure planning

15. The scale of the challenges described above require a holistic and integrated approach to future drainage provision. There is already considerable joint working by DARD, DOE and DRD to address flooding problems and improve/protect water quality in the environment. However, there is as yet no agreed cross-departmental infrastructure plan at strategic level to support economic growth, provide for the long term management of flood risk or improve water quality in the wider environment. With the approval of the NI Executive, an inter-departmental group with the remit of developing an agreed Strategic Drainage Infrastructure Strategy to address this is in the process of being set up. This work would be taken forward in phases, initially focusing on South and East Belfast due to the particularly urgent need for an agreed plan for that area.
16. This approach will deliver the most sustainable and integrated outcome. There is precedent elsewhere for such an approach; for example; In Glasgow the authorities have moved towards establishing a Metropolitan Strategic Drainage Partnership to manage flood risk in the city. The European Floods and Water Framework Directives are also pushing Departments towards more coordinated working and Belfast City Council recently commissioned consultants to report on flooding in the City.

Funding

17. The PEDU report estimated that some £120m would be required to address flooding problems in high risk areas and the Executive identified this as a priority for the next Investment Period. However, this figure did not include any estimate for the strategic infrastructure to deliver longer term, more sustainable, solutions outlined in this paper. It is likely that additional funding (of at least £750m) will be needed to progress an integrated drainage infrastructure solution for the greater Belfast area alone. This investment is necessary to properly address the risk of infraction proceedings, reduce flooding risk and support future economic development in the greater Belfast area. This is entirely separate from the capital public expenditure that NI Water will need for the period ahead, which will be based on the Regulator's determination in PC15.

Moving Forward

18. DRD will take the lead in coordinating this work because, through Transport NI and NI Water, it is the main infrastructure provider. It is proposed that the work will be taken forward through a Programme Board group involving officials from DOE, DARD, DFP and DRD, together with NI Water, Belfast City Council and SIB.
19. The Programme Board will begin work in autumn 2014. The focus of the project over the first few years will be to develop a drainage infrastructure plan to enable a long-term work programme for South and East Belfast to be developed and costed. Subsequently, the Programme Board will develop similar plans for the rest of Belfast (Phase 2) and the remaining significant flood risk areas in NI (Phase 3).