

Northern Ireland  
Environment Agency

River Basin Management Plans (2015 - 2021)

# Programme of Measures

**Key Sectors:** Quarries and Mines, including Oil and Gas Exploration  
**Pressure Type:** Diffuse and Point Source Pollution

*Pressure Type – Diffuse and point source pollution*

## **Quarries and Mines, including oil and gas exploration**

There are approximately 160 quarries and sand pits across Northern Ireland, supplying the construction industry with raw materials. Northern Ireland is an important source of high quality aggregates for use across the UK and Europe. The varied geology in Northern Ireland provides products such as sand and gravel, basalt, sandstone and limestone.

### **Why is this a significant issue?**

Pollution of surface waters can occur as a result of rainfall run-off from the land area around a quarry or mine, hydrocarbon or herbicide spills, excess herbicide or fertiliser applications and runoff from soil and spoil heaps which may contain toxic metals and phosphates.

Pollution of surface waters can also occur indirectly due to pollutants being transported in groundwater.

Mineral extraction by its very nature poses risks to groundwater. Removal of the overlying land in the working area means that the vulnerability of the groundwater to pollution is increased as the natural protection is removed. Therefore, it is important that proper precautions are taken to ensure the risk of pollution is minimized. Pollutants may include oils, fuels and hydraulic fluids, metals (for example, Cadmium, Mercury), pesticides and flocculants used in settlement ponds and nutrients.

Unconventional gas exploration and extraction refers to the use of high volume hydraulic fracturing (fracking) of previously impermeable rock to permit the extraction of natural gas on a commercial scale from unconventional sources such as shale gas deposits, coal seams and tight sandstones. At present, there is no exploratory or commercial drilling underway in relation to this in Northern Ireland.

### **What are we already doing about this?**

New legislation was introduced through the Planning Reform (Northern Ireland) Order 2006 which requires the initial review of old mineral permissions. Mineral mapping has been undertaken to highlight where specific reserves are located, what type they are and what constraints exist in the form of environmental designations. Northern Ireland Government Departments, through the Shale Gas Forum, are in the process of identifying the regulatory framework applicable to onshore oil and gas exploratory activities in Northern Ireland, and the linkages between the existing regulatory regimes. Such activities may include high volume hydraulic fracturing. As part of the planning process, NIEA requests hydrological risk assessments for quarries, to assess risks from dewatering and how they can be mitigated. NIEA provides guidance notes for applicants.

**What further actions will deliver environmental improvements?**

The following table summarises the measures which we will take forward in the second cycle (Table 1).

These are measures which will improve our understanding of the pressures, enable us to improve the evidence base to target actions, and build on actions already complete.

In the current economic climate there is no certainty at this stage around future funding and budgets that will be available throughout the lifetime of this plan. However DOE will in collaboration with other departments and agencies continue to make a strong case for additional funding through the standard government bidding processes.

**Key Sector: Quarries and Mines, including oil and gas exploration**

**Pressure Type:** Diffuse and point source pollution

**Table 1 Summary of supplementary measures for 2015 to 2021**

<b>Improvement Required</b>	<b>Actions</b>	<b>Delivery mechanism</b>	<b>Lead Department / Agency</b>	<b>Support Provider</b>	<b>Deadline for delivery of action (year end)</b>
<b>Reduction in pollution</b>	Significant all-Ireland research project that will contribute to providing the evidence base for the regulation of fracking	Research programme	NIEA		2016
	Promoting and supporting greater environmental compliance and performance, product innovation, resource efficiency and adoption of best practice	Partnership working	Quarry Product Association (QPA)/ NIEA		In Place/ Ongoing
<b>Restoration of rivers and lakes</b>	Address the challenge of environmental degradation across North West Europe by developing a framework for the restoration of minerals sites (quarries), to provide benefits for biodiversity, habitats and local people. The 'RESTORE' project is being co-ordinated by the RSPB	INTERREG IV funded programme	RSPB		Complete
	Potential for disused/ abandoned quarries to be used as flood attenuation to aid with the management of volume in river systems during flood events	Consideration under future reviews of the Flood Risk Management Plans	DARD Rivers Agency (RA)		2021



## Create prosperity and well being through environment and heritage excellence

Northern Ireland Environment Agency  
Water Management Unit  
17 Antrim Road  
Tonagh  
Lisburn  
BT28 3AL

T. (028) 9262 3004



An Agency within the Department of the  
**Environment**  
[www.doeni.gov.uk](http://www.doeni.gov.uk)



**INVESTORS  
IN PEOPLE**