

Waters of **LIFE**

Waters of LIFE Advisor training

Module 3 - Pollutants of concern

January 2025



An Roinn Tithíochta,
Rialtais Áitiúil agus Oidhreachta
Department of Housing,
Local Government and Heritage

Pollutants of concern

Focusing on the most common significant issues



- The annexes to the WFD specify the monitoring requirements and assessment criteria for water quality parameters
- There are well over 50 parameters that are detailed explicitly in the directives
- There are many parameters that become significant issues High Status Object waterbodies



Pollutants of concern – Nutrients: Phosphate

Impacts from **phosphorous**



Source & pathway from phosphate



Nutrient Surplus



Overland – direct runoff



Manure Application (timing)



Overland – indirect runoff



Soiled water



Pipe - direct

Source & pathway from phosphate



WWTP



Pipe - direct



DWWTS - Septic tank



Overland - indirect runoff



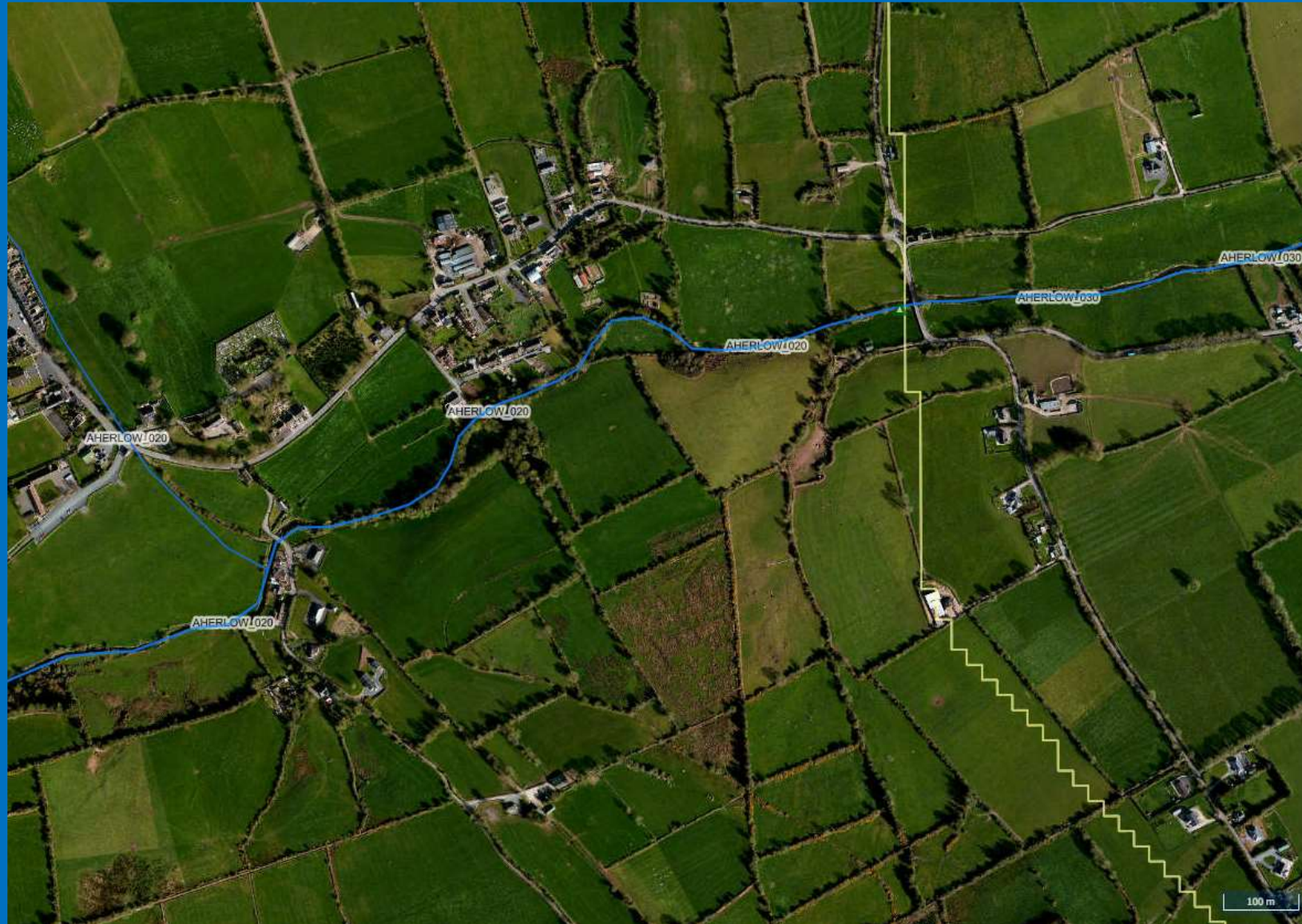
Peat soils



Direct - in situ

Pressure \neq impact – Phosphate

Phosphate



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Pollutants of concern – Nutrients: Nitrate



Source & pathway for nitrate



Grazing animals – urine patches



Nutrient Surplus



Leguminous plants



Downward leaching



Source



Ploughing

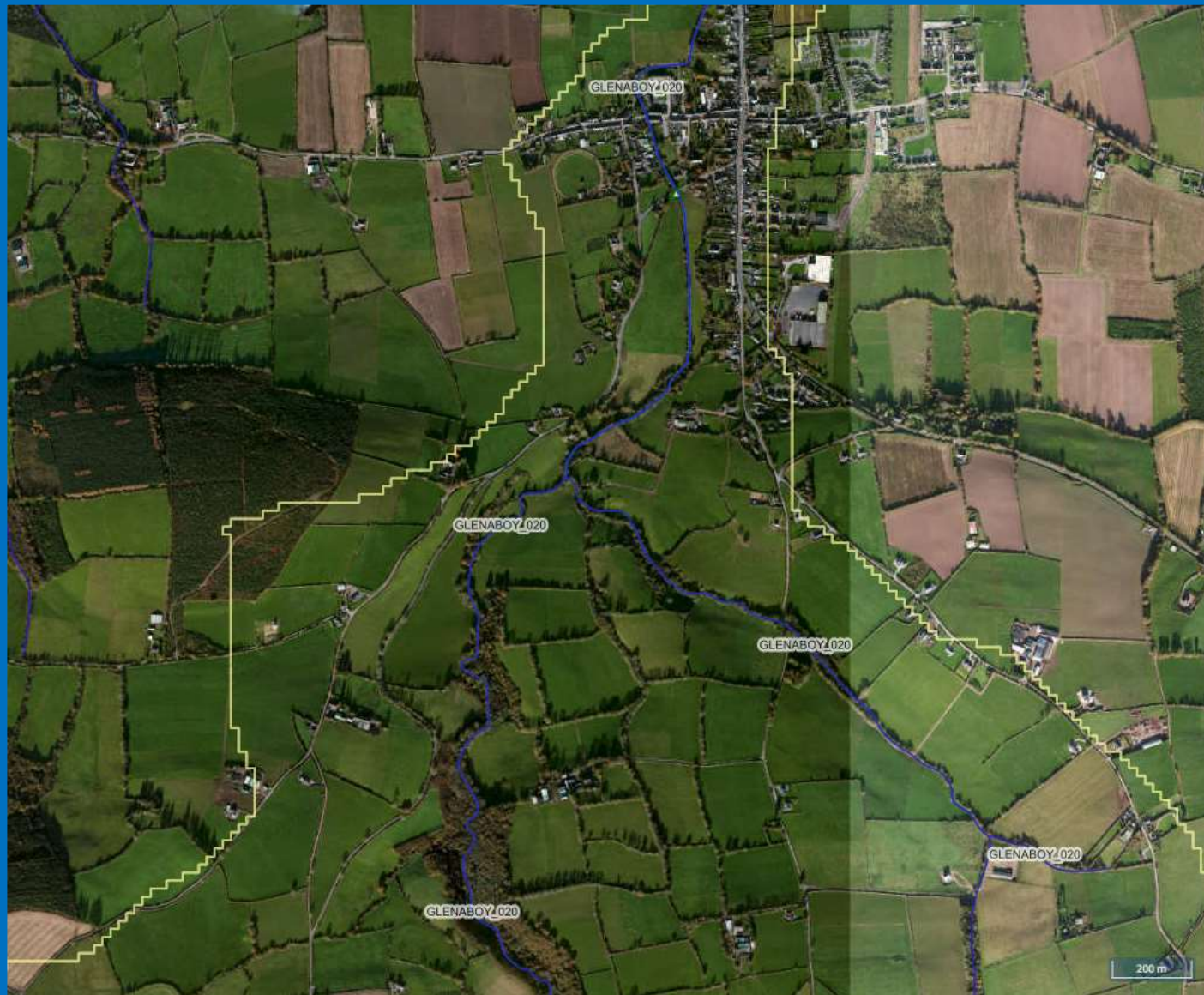
Pathway



Downward leaching

Pressure ≠ impact – Nitrate

Nitrate



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Pollutants of concern – Nutrients: Ammonium



Source & pathway for ammonium



WWTP & DWWTs



Pipe - direct



Organic manure



Overland – direct & indirect runoff



Peat soils



Direct – in situ

Pressure \neq impact – Ammonium

Ammonium



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Pollutants of concern – Sediment



Source & pathway for sediment



Poaching/bare soil



Direct - runoff



Forestry



Indirect - drainage

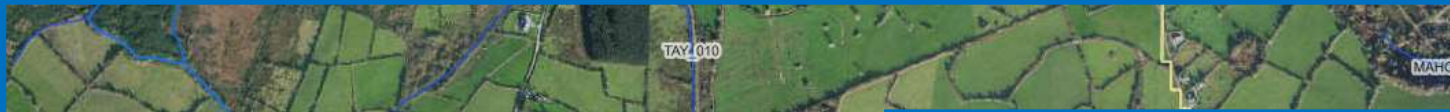


Peat extraction



Direct - in situ

Pressure ≠ impact – Sediment



Pollutants of concern – Hydromorphology



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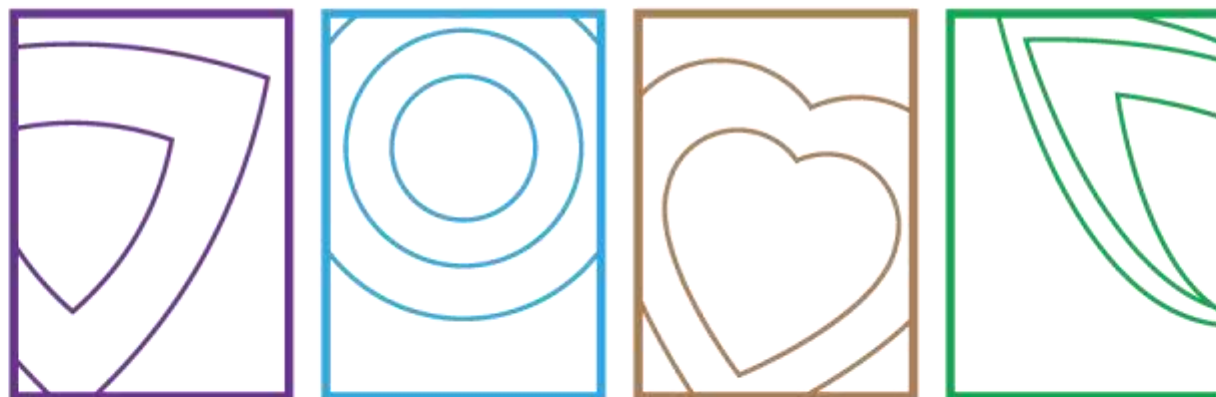
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Source



Pathway





protect

restore

respect

sustain



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Pollutants of concern – Pesticides



Source & pathway for pesticides



Crop protection



Overland – direct & indirect runoff



Rush control



Overland – direct & indirect runoff



Sheep dip



Overland – direct & indirect runoff

Source

Pathway



Domestic use
herbicides

Overland –
direct &
indirect runoff

Pressure ≠ impact – Pesticide



Pollutants of concern – BOD (organic material)

“BOD is the amount of dissolved oxygen needed by aerobic organisms to break down organic material present...”



Source



Pathway



Key Takeaways

Focusing on the most common significant issues



- **Pressure ≠ impact**
- **Issues have multiple sources**
- **The pathway and source is often verified by the advisor or practitioner on the ground**
- **Ask for the reasoning and the method and the data** related to the significant issue – as farmer questions come in





protect

restore

respect

sustain