

# WELSH BACCALAUREATE

## Advanced

# Individual Project

## Natural Resources Wales



**Cyfoeth Naturiol Cymru**  
**Natural Resources Wales**

### Brief – Air Quality and Air Pollution

Air quality is a measure of how good our air is. It is measured by the type and amount of pollutants contained within it.

Air is polluted if it contains substances that may have a harmful effect on human health and the environment. There are numerous causes and effects in relation to air pollution.

The quality of air in the atmosphere has a huge effect on our health and well-being – that's why Natural Resources Wales works to monitor, manage and reduce air pollution in Wales. Poor air quality can also affect the health of habitats, animals and plants.

Welsh Government, Natural Resources Wales, industry and other stakeholders monitor air quality and measure pollutants to protect and improve air quality in Wales. Welsh Government oversees the Environmental Permitting regime in Wales.

Natural Resources Wales and Welsh local authorities regulate industry by issuing Environmental Permits. They impose permit conditions and carry out monitoring to ensure that emissions are prevented, minimised or made harmless.

**Contact** <mailto:https://www.naturalresourceswales.gov.uk>

Useful links

Welsh Air Quality Forum - <http://www.welshquality.co.uk>

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### Brief – Diffuse Water Pollution

Diffuse water pollution is caused when pollutants from a range of dispersed urban and rural land use activities contaminate our waterways and can have significant impacts on our health and that of the environment and wildlife.

As the control of regulated discharges has become increasingly effective, the significance of other sources of pollution has become more evident. These sources, known as diffuse pollution, typically consist of discharges or contamination that, while relatively minor individually, have a significant collective impact on water quality.

Building on previous work between the Welsh Government and other organisations, Natural Resources Wales has identified eight areas in which to prioritise efforts to tackle diffuse pollution.

1. industrial estates
2. small sewage discharges (private)
3. drainage misconnections
4. surface water drainage from developed areas
5. livestock management
6. land management
7. storage (slurry, fuel, oils, chemicals)
8. mine waters
- 9.

Diffuse water pollution can cause failures in water quality standards required by the EU Water Framework Directive (WFD) and revised Bathing Water Directive (rBWD).

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Useful links

<https://naturalresources.wales/guidance-and-advice/environmental-topics/water-management-and-quality/water-quality/diffuse-water-pollution-action-plan/?lang=en>

<http://gov.wales/topics/environmentcountryside/epq/waterflooding/legislation/waterframework/?lang=en>

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### **Brief – Drainage and Sewer Misconnections**

Misconnections cause pollution by allowing untreated discharges to flow directly into water courses. Discharges from misconnections contain a range of pollutants that can have a significant impact to the receiving environment. Untreated waste water can contain nutrients and other potentially hazardous substances that can have an impact on the environment; for example, through the smothering of river beds or as a hazard risk if ingested by wildlife. Sewage solids and other waste such as surface water run-off can impact drainage infrastructure and pollute local streams, rivers, lakes and beaches, are damaging to wildlife and put our own health at risk.

Before waste water can be treated it needs to be collected. Every day in Wales, over 18,000 kilometres of sewers collect waste water from homes, municipal, commercial and industrial premises and rainwater run-off from roads, roof tops and other sources. However, misconnected drains, which can occur for a range of reasons, cause failures in water quality standards required by the EU Water Framework Directive (WFD) and revised Bathing Water Directive (rBWD).

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Useful links

<https://naturalresources.wales/guidance-and-advice/environmental-topics/water-management-and-quality/water-quality/urban-waste-water/?lang=en>

<http://www.dwrcymru.com/en/My-Wastewater/Misconnections.aspx>

<http://www.connectright.org.uk/campaign>