

General information about AIR

Air is a mixture of gases that constitute the earth's atmosphere; mainly nitrogen (78%), oxygen (21%) and the remaining gases (1%) include argon and carbon dioxide. Poor air quality can have both acute and chronic effects on human health. Air pollution can also negatively affect ecosystems, the quality of soil and water, and contribute to climate change.

The main contribution to air pollution is emissions from individual sites (or point sources e.g. from large scale industrial activities) and along transport routes/ nodes (or linear/ nodal sources e.g. road traffic, air traffic). Diffusive sources such as agriculture are also an important source.

Plans may influence activities which have the potential to significantly affect the quality of ambient air and can cause nuisance, such as dust and odour. When released to air in sufficient quantities, these substances can cause:

- **Deterioration in human health:** air pollutants can trigger, or exacerbate, breathing difficulties such as those caused by asthma and bronchitis in sensitive individuals (e.g. children, elderly, sick)
- **Changes in climate:** emissions of greenhouse gases such as carbon dioxide, methane and nitrous oxide alter our climate
- **Acidification and eutrophication of habitats:** pollutants like oxides of nitrogen and sulphur dioxide as well as ammonia undergo changes in the atmosphere. When deposited, they can result in acidification and nutrient enrichment of land and water, harming ecosystems
- **Oxidative damage:** ground-level ozone can cause damage to plants, animals and building materials
- **Nuisance:** odour, light, noise and particulates (including haze and smoke) can affect the overall amenity value of the environment
- **Depletion of the ozone layer:** when certain man-made chemicals enter the stratosphere they can destroy stratospheric ozone and can lead to increased exposure to harmful ultraviolet (UV) radiation