

## **Other environmental effects of a Plan on AIR**

### **Transboundary effects**

A Plan could lead to transboundary effects associated with air (e.g. a Plan in Northern Ireland producing significant environmental effects in the Republic of Ireland).

Transboundary air pollution is a particular problem for pollutants that are not easily destroyed or react in the atmosphere to form secondary pollutants. These pollutants can survive for periods of days or even years and can be transported long distances (i.e. hundreds or thousands of kilometres).

Typical transboundary pollutants include sulphur dioxide, oxides of nitrogen, volatile organic compounds (VOCs), ground-level ozone, ammonia and heavy metals. Transboundary effects typically include acidification, eutrophication and formation of ground-level ozone. Particulate matter could also be an issue in those cases where the source is relatively close to the boundary.

### **New receptors**

A Plan could also, for example, result in exposing new receptors (e.g. residents/users) to existing elevated levels of contaminants (e.g. by promoting housing in proximity of a main arterial route).

Some areas are more likely to experience air quality issues due to local climatic conditions (e.g. poor air circulation, atmospheric inversion). Plans could also lead indirectly to air quality, air pollution or nuisance problems e.g. by promoting construction of tall densely packed buildings affecting air circulation (the 'canyon effect') and therefore causing a local increase in levels of certain air pollutants.

### **Biomass to generate energy**

An emerging air quality issue is the use of biomass to generate energy (inc. micro-generation) which would result in the reduction in emissions of greenhouse gases. However, there are concerns that a significant increase in biomass particularly wood fuel could have a detrimental impact on air quality. This would be a particularly sensitive issue in areas where Air Quality Management Areas (AQMAs) are designated.

The main contaminants of concern are particulate matter, oxides of nitrogen, Polycyclic Aromatic Hydrocarbons (PAHs), metals, dioxins, some of which are not currently regulated under the UK National Air Quality Strategy or the Clean Air Act 1993/ The Clean Air (Northern Ireland) Order 1981.