



GOVERNMENT OFFICE  
FOR THE WEST MIDLANDS

# ENVIRONMENTAL SUSTAINABILITY GUIDANCE NOTES

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*SUMMARISED VERSION*

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## **Guidance for Completing the Environmental Checklist**

The following information provides a summarised guide for applicants on completing the environmental checklist contained within the application form for the West Midlands Objective 2 Programme 2000-2006. A more detailed version is available both on the CD that contains the application form, and on the GOWM Website ([www.go-wm.gov.uk/European/horizontalthemes](http://www.go-wm.gov.uk/European/horizontalthemes)) and all applicants are encouraged to read this version.

These guidance notes aim to provide an short overview as to why we are asking the questions on the checklist (i.e. why is the issue important), how projects may impact on these particular areas, and what activities could be undertaken to mitigate these impacts.

### **1. Will the project generate an increase in CO<sub>2</sub> emissions?**

Carbon Dioxide (CO<sub>2</sub>) is probably the most common and widely known of the "Greenhouse Gases", so-called due to their ability to trap heat within the atmosphere. It has been argued that excessive amounts of CO<sub>2</sub> entering the atmosphere, as has been occurring since the Industrial Revolution, contribute to the problem of global warming. The Intergovernmental Panel on Climate Change predicts a doubling of greenhouse gases (of which the majority would be CO<sub>2</sub>) by 2050, leading to a 1.5°C-4.5°C increase in average global temperatures. Although there is considerable scientific debate over global warming, the IPCC have concluded that "the balance of evidence suggests a discernible human influence on climate. The Government subscribes to this position.

Climate change could affect the UK in a number of ways, including increased average temperatures (which could lead to poorer air quality in summer months), increased rainfall, sea-level rise, more enhanced seasonal changes to weather and an increased likelihood of extreme events.

The main cause of CO<sub>2</sub> emissions is the burning of fossil fuels for energy use and transport. Because the measurement and monitoring of CO<sub>2</sub> emissions is costly and complex, it is recommended that project applicants use a proxy indicator to highlight expected increases in CO<sub>2</sub>. Suggested indicators would be the increase in energy use that the project will lead to, or the number of additional journeys/vehicle kilometres travelled as a result of the project.

To minimise or reduce CO<sub>2</sub> emissions, actions should be taken to improve energy and resource efficiency, and to reduce the need for motorised transport. Better resource management and process efficiency can produce financial rewards and environmental protection. Moreover, UK Government funded projects have consistently shown that 10% savings can be achieved at zero cost

There are a number of areas where resource efficiency can often be improved. The full Environmental Sustainability Guidance Notes mentioned

above highlights a number of actions that can be undertaken to improve resource and energy efficiency. See also the question on traffic below.

## **2. Will the project generate an increase in SO<sub>2</sub>/NO<sub>2</sub> emissions?**

Sulphur Dioxide (SO<sub>2</sub>) and Nitrogen Dioxide (NO<sub>2</sub>) are both generated through the combustion of fuels for electricity generation, industrial and domestic heating, and transportation. SO<sub>2</sub> and NO<sub>2</sub> can both oxidise in the atmosphere to create acid deposition (including acid rain and dry acid deposition). Acid deposition can have local, regional and international impacts, causing the acidification of lakes, soils and vegetation. Additionally, NO<sub>2</sub> emissions can react with sunlight to create low-level Ozone (O<sub>3</sub>), commonly known as 'summer smog'. Low-level Ozone can also significantly weaken plants and vegetation, and has been known to cause damage to buildings and ancient monuments. Moreover, studies have shown that ozone has health implications, causing asthmatics to have more frequent attacks.

The measurement and monitoring of SO<sub>2</sub> and NO<sub>2</sub> emissions is costly and complex. Therefore, it is recommended that project applicants use a proxy indicator to highlight expected increases in these emissions. Suggested indicators would be the increase in energy use that the project will lead to, or the number of additional journeys/vehicle kilometres travelled as a result of the project.

To minimise or reduce these emissions, actions should be taken to improve energy and resource efficiency, and to reduce the need for motorised transport. As above, better resource management and process efficiency can produce financial rewards and environmental protection, and UK Government funded projects have consistently shown that 10% savings can be achieved at zero cost

There are a number of areas where resource efficiency can often be improved. The full Environmental Sustainability Guidance Notes already mentioned highlights a number of actions that can be undertaken to improve resource and energy efficiency. See also the question on traffic below.

## **3. Will the project require a water abstraction license?**

Water abstraction is the removal of water from a natural source (stream, river or groundwater). This is generally done by either pumping groundwater up to the surface or pumping water out of a river. Water abstraction is done for a number of purposes, including using water as a raw material in industry and draining wet areas to make them arable or dry enough to be developed. The Environment Agency regulates and monitors water abstraction through the issuing of licenses, many of which are time-limited.

Water abstraction can threaten naturally occurring surface water features such as wetlands, pools and bogs that dry out if too much water is removed from the source that is feeding the wet area. Abstraction from rivers and

streams also causes water flow levels to alter, and can threaten fish and other water species survival.

Wherever possible, projects requiring water abstraction should investigate alternative sources such as collection and storage of rainwater or recycling of water. Whatever means are used, the primary concern is to use the water resource efficiently and effectively. Further information and ideas on resource efficiency and water management can be found full version of these guidance notes.

#### **4. Will the project result in any discharge into waterways?**

Discharges can come from a number of sources – from wastewater such as runoff from roofs and carparks, to the release of chemicals and substances into the environment, to gases released or steam from industrial processes. The majority of discharges eventually end up in watercourses or drainage systems. The Environment Agency regulates and monitors discharges into sewerage or stormwater systems through the issuing of licenses or Authorisations.

Waterways are particularly vulnerable to chemical discharges (often acidic or basic) because even minor changes in pH levels can severely alter the 'health' of a watercourse and threaten species living in or around the river or stream. Moreover, discharges that contain organic material (e.g. hay bales, garden waste) can deoxygenate water as the material rots and degrades. Deoxygenation is the biggest cause of fish kills in urban rivers.

To prevent discharges, a drainage survey can often quickly identify any problems (e.g. wrongly connected pipes). Furthermore, the introduction of silt traps and other filters can often easily remove many substances before they enter drainage systems and watercourses. Finally, the Environment Agency can offer assistance to businesses in developing emergency spillage plans, which can help prevent serious environmental damage in the event of an accident.

#### **5. Will the project result in the loss of managed woodland, including semi-natural ancient woodland?**

Woodland is defined as land that has more than 20% of its area covered with trees. Many woodlands are managed in order to provide wood/timber, enhance their condition as a wildlife habitat, or provide facilities for recreation. Ancient Semi-Natural Woodland (ASNW) is woodland that has been continuously present on a site since before 1600, and is the closest we have today to Britain's original wild woodland.

Woodland has significant environmental, historical, cultural and economic value and it is continuing government policy to protect, enhance and progressively expand woodland cover in appropriate places. Woodland can be damaged or destroyed both directly and indirectly (e.g. through altering the water table, tipping/spreading of material, spillage of toxic materials,

disturbance of woodland creatures, etc.). In ASNW, damage can occur through the introduction of exotic species such as conifers.

There is no mitigation for loss or irreversible damage to ASNW as this woodland is irreplaceable. For normal woodland, consideration to design, planning and landscape management can all help, as well as adjustment to the timing of works, special arrangements or precautions, and specific ongoing management. In all instances, increasing areas of managed woodland is encouraged.

## **6. Will the project result in the loss of ESA land?**

Environmentally Sensitive Areas (ESAs) are areas recognised as having landscape, wildlife or historic interest which have national importance. Within these areas, farmers may enter into 10-year agreements with MAFF through which they are encouraged to follow specific management practices designed to conserve and enhance the conservation, landscape and historical value of the key environmental features of the area, and where possible, improve public access to these areas. There are four ESA areas within the region: South West Peak (part), Shropshire Hills, Clun, and Cotswold Hills (part).

Projects may impact upon ESA land either directly or indirectly (e.g. altering the water table, air/water pollution, etc). Projects that affect ESA land not under agreement will be expected to contribute to the objectives of that area. Where an ESA agreement is in place, applicants must abide by that agreement. Further details can be obtained from MAFF at their Worcester Regional Service Centre, who will forward you to the appropriate ESA Project Officer. Elements that projects might need to consider to mitigate or minimise impact include amendments to the layout and design of the development, adjustment to the timing of works, special arrangements or precautions, and specific ongoing management.

## **7. Will the project impact upon any of the following areas: Natura 2000 sites/SSSIs/Sites of Importance for Nature Conservation?**

Sites of Special Scientific Interest (SSSI) are statutory designations of land. They represent the finest sites for wildlife and natural features in England, supporting many characteristic, rare and endangered species, habitats and natural features. SSSI designation places obligations on landowners and local authorities/decision makers to protect the special characteristics of the sites, and consult English Nature over all developments or changes of management/use that may impact on the land.

The very best of the SSSI series, are additionally designated under European law as Special Areas of Conservation (SAC), under the Habitats Directive, or Special Protection Areas (SPAs), under the Birds Directive. Together SACs and SPAs form a network across Europe known as 'Natura 2000'. Damaging SSSIs, and especially Natura 2000 sites, is unacceptable and must be avoided at all times.

Sites of Importance for Nature Conservation (SINCs) are not statutory designations, but are regionally/locally important sites. SINCs are identified by local authorities and specific development plan policies apply and guide changes in land use requiring planning permission.

Projects may affect Natura 2000/SSSIs/SINCs indirectly by taking place on adjacent land or close by. In such cases, applicants may not be aware that the site exists and therefore undertake measures to guard against impact. Where there is reason to believe that nearby land might be a designated site, applicants should contact the relevant local authority or English Nature (01743 709611).

#### **8. Will the project impact upon greenfield land?**

Greenfield land can simply be defined as land not previously developed. This is distinct from Green Belt land, which is a planning designation the prime aim of which is to prevent urban sprawl by keeping land permanently open. Numerous national and regional strategies are seeking to reduce the amount of development on greenfield land and increase the use of brownfield land (defined as land that has previously been developed).

Greenfield land is not only important for aesthetic reasons, but also provides an essential nature conservation role and supports numerous recreational activities.

Wherever possible, new developments should occur on brownfield land. If greenfield land is to be used, then a strong argument must be made as to why brownfield land is unsuitable or unavailable. The re-use of brownfield land is important for sustainable development, and projects and activities that involve the use of derelict or contaminated land will be particularly encouraged by this Programme.

#### **9. Will The Project Lead To An Increase In The Volume Of Traffic On Local Roads?**

DETR statistics show that road transport accounts for 94% of all passenger transport in Britain. Furthermore, road traffic is forecasted to increase by 60% by 2031. Road transport causes a number of economic, environmental and social problems. The CBI has estimated that congestion costs businesses in the UK up to £15 billion annually. Environmental problems include surface run-off from roads and increased waste (e.g. old cars and tyres), but the majority are caused by the pollutants from vehicle emissions. These pollutants include Carbon Dioxide (potential global climatic change), Sulphur Dioxide (Acid rain), Nitrogen Dioxide (Acid rain and Low-level Ozone), Volatile Organic Compounds and Hydrocarbons (Low-level Ozone and serious health problems – i.e. cancer), and CFCs (Ozone layer depletion). Despite improved technology (e.g. catalytic converters) and greater fuel efficiency, the increased demand for road transport means that the majority of these emissions are increasing. The greatest social problem is increased exclusion of those who do not have access to their own transport (roughly 50% of the population).

The majority of projects will lead to an increase in traffic to some degree. However, this increase should be kept to minimum, and there are a number of ways in which this can be done. Firstly, the location of the project should be considered (e.g. locating a project close to the intended beneficiaries, with other similar facilities (e.g. multi-use/multi-purpose), close to similar developments /suppliers/buyers, or in an area well serviced by public transport, etc.). New developments could also include the infrastructure and facilities to encourage the use of alternative modes of transport (e.g. well lit and secure pathways, dedicated cycle routes, secure bicycle parking, changing rooms/showers, etc).

Projects could also include green transport policies such as promoting the health and economic benefits of alternative forms of transport, car and bicycle pooling, encouraging car sharing, or other staff transport initiatives. Finally, actions could be undertaken to discourage the use of the motor car, such as restricting the availability of car parking, or charging individuals for the use of car parking.

The impact that the inevitable additional traffic has on the local area also needs to be minimised. Examples include creating a situation where the additional traffic movements take place at off peak times of the day, locating projects away from areas of the highway network that are already congested, and developing site access arrangements that minimise conflicts between motor vehicles and other forms of transport.

#### **10. Will the project generate additional waste?**

Waste is generated through manufacturing, industry, business and domestic activities. It is often packaging which produces the most volume of unwanted material (new packaging laws are yet to be fully implemented and the benefit of reduced volumes of packaging felt). Other types of waste include spent products (batteries, old equipment, etc.), spent raw materials (oils and lubricants, water), or left over material (off-cuts, ends, shavings etc). Waste traditionally ends up going to landfill sites and buried. However, waste is not only what ends up in the bin or landfill, but also includes what is discharged into drains, rivers, and the atmosphere (emissions).

Waste can have significant environmental effects because the majority of waste we produce does not biodegrade or decay, and therefore cannot enter the ecosystem and be used by plants and animals. Where waste is broken down by the environment, damaging substances can sometimes be produced (particularly when it reacts with other chemicals and substances). Some waste is directly harmful to plants or animals because it is toxic in some way. Waste can also release environmentally damaging substances as it begins to breakdown.

Before mitigation actions can be identified, it is essential that applicants identify the type and extent of waste that the project will generate. This may

involve looking at similar projects or activities that have been completed, or undertaking a waste audit.

Waste can be reduced by firstly reducing the amount of raw materials you need. For example if your project involves a new building, ask the architect to use standard size windows, doors, and even room sizes (carpet rolls come in standard widths). Sometimes you may be able to source your raw materials locally, rather than having to bring them in from abroad or from another part of the country. This will reduce the transport costs and use of fuel.

If your project is going to result in some waste products or by-products, then try to see if these can be re-used in some way by yourself or someone else (the Environment Agency is involved in Waste Exchange projects). Even heat generated by an industrial process can sometimes be re-used to warm offices nearby. Consideration should also be given to how waste can be separated (e.g. recyclable and that which needs to be disposed), and also how waste might be treated (e.g. waste compaction or treatment to make waste safe).