



Energy efficient solar panelling

## 2.16 Sustainability

### 2.16.1 Context

Sustainability has become a key issue in planning since the Earth Summit in Rio 1992 which accepted that sustainability is 'the ability to meet the needs of the present without compromising the needs of those in the future.' This principle of sustainability is now a cornerstone of planning policy as established in the Planning and Development Act 2000. The Act states that "a development plan shall set out an overall strategy for the proper planning and sustainable development of the area." The plan therefore must be drawn up with sustainability issues at its core, thus ensuring that environmental protection is integral to the development process.

As part of this plan it is intended that all new development must address sustainability criteria. The local authority will assess new developments with regard to their contribution to each of the areas set out in the sustainability indicators (see Section 3, Development Control).

### 2.16.2 Strategic Environmental Assessment

The Planning and Development Act 2000 requires planning authorities to include in their plans information on 'the likely significant effects on the environment of implementing the plan'. This requirement is in anticipation of the implementation of the EU Strategic Environmental Assessment Directive by 2004. The Directive requires all authorities preparing development plans to prepare a Strategic Environmental Assessment (S.E.A.) describing the potential effects on the environment.

An S.E.A. is similar to an Environmental Impact Assessment (EIA) in that it attempts to influence proposed actions in order to minimise potential adverse environmental impacts. However an S.E.A. it is concerned with the implementation of an entire development plan, rather than an individual project.

The process aims to;

- help ensure that the full scope of environmental considerations is dealt with in the Plan and
- to influence proposed actions in order to minimise adverse environmental effects.

It has the additional benefit of raising awareness of the consequences of a plan. (see Appendix G, Strategic Environmental Assessment)

### 2.16.3 Principles of Sustainability

The key principles of sustainability relate to the need to minimize unnecessary consumption of depletable natural resources and to reduce energy consumption and greenhouse emissions, which contributes to global warming. Everybody has an impact (an ecological impact) on the earth and from this 'ecological footprints' have been calculated. The 'ecological footprint' refers to how much land and water is required to produce all the resources consumed and to dispose of all the waste produced. Ireland has an ecological footprint of 5.9 hectares/per capita<sup>40</sup> compared to the available 1.7 hectares per world citizen. This highlights the importance of sustainability and being aware of our impact on the earth (To gain more information on this issue see the footnotes below)<sup>41</sup>

In order to maintain a good quality of life, over future decades and for future generations, it is essential that principles of sustainability are addressed, as decisions made in this development plan period will have a long term impact on both the function and form of Sligo, and the quality of life of its inhabitants.

<sup>40</sup> Ecological Footprints of Nations, How Much do they Use? – How Much Nature Do They Use? Mathis Wackernagel, Larry Onisto, Alejandro Callejas Linares, Ina Susana López Falfán, Jesus Méndez García, Ana Isabel Suárez Guerrero, Ma. Guadalupe Suárez Guerrero, Rio+5 Forum Study 1997.

<sup>41</sup> Calculate your own ecological footprint at: [www.lead.org/leadnet/footprint/into.htm](http://www.lead.org/leadnet/footprint/into.htm)



Additional information and resources on sustainable development can be found in Appendix H.

The Principles of Sustainability can be summarised as follows:

**• Protection of Natural Resources**

Essentially all natural resources need to be carefully used in a sustainable manner so that there is always an equal balance or harmony between the environment and human development. These resources include land take, water consumption and the use of depletable materials such as fossil fuels, which are non-renewable and because fossil fuel emissions contribute to the greenhouse effect. Fossil fuels are used in transport and general energy consumption in heating, lighting, businesses and agriculture. Land is also a depletable resource as in many cases it can mean the loss of habitats, flora and fauna and contribute to the depletion of agricultural and recreational land. Water is also a resource where over consumption can lead to threats to habitats, biodiversity and the natural water table. Refer to sections 2.8 - Sligo and the Natural Environment, and 2.9 Open Space and Public Amenity.

**• Natural Ecosystems**

Plants and animals are particularly important to protect because they contribute to the harmony or balance of nature and add to the quality of life. Plants (flora) contribute to what is referred to as the carbon balance; that is the ability of plants to soak up Co2 and many other pollutants caused by burning fossil fuels. The survival of a plant species is often dependent and on the existence of a specific animal species and vice versa. Equally animals (fauna) are part of the inter-linked eco-system, illustrated by the co-dependency of flora and fauna. For this reason bio-diversity is increasingly seen as a key element of sustainability. Refer to sections 2.8 - Sligo and the Natural Environment, and 2.9 Open Space and Public Amenity.

**• Water Quality**

All life depends on water. Maintaining water quality is necessary to ensure continued safe consumption, free from harmful bacteria and pollutants. It is also important for the natural environment and natural ecosystems. Refer to section 2.15 Engineering, Infrastructure and Utilities.

**• Waste Management**

The massive amount of waste produced by humans must also be significantly reduced or recycled to increase more sustainable living. Waste covers a wide range of areas including; construction, industry, agriculture and household refuse. Refer to section 2.15 Engineering, Infrastructure and Utilities.

**• Energy Efficiency**

This concept promotes the use of energy production through more sustainable means, where there is a less reliance on fossil fuels and greater use of wind, hydro, solar and tidal power; the promotion of energy efficient designs, including passive solar heating, passive cooling, use of shelter-belts, use of site layout to minimize wind exposure, and increased insulation (heat reduction measures), etc.

**• Integration of Land Use and Transportation**

Often both the distribution of land uses and the established densities in many cities like Sligo are not sufficient to sustain an efficient public transport system. By integrating land use and transportation more effectively, this can reduce car travel demand, which in turn reduces energy consumption, congestion and pollution and promotes a more environmentally sustainable transport solution. These issues are addressed in section 1.4 - Developing a Strategy and in section 2.1 - Effective Transport and Movement.



Wind Turbine

- **Encouraging local economic buoyancy**

New living and working arrangements and flexibility in the way we live and work such as working from home, working locally and internet grocery shopping (e-tailing) are becoming more commonplace due to the advancement of communication technologies and can reduce car trip generation. It is now possible to have worldwide conferences and instant cheap communication throughout the world through the use of the internet and other technologies. This type of working has benefits for sustainable living as it encourages mixing of uses and reduces unnecessary trips while also helping to ensure local economic buoyancy. Opportunity will be given within the land use planning system to accommodate developments, which might contribute to more sustainable urban systems, such as 'live-work' units (where the home or office/workshop merge). This issue is addressed in policies contained with section 2.7, Residential Strategy and Neighbourhoods, and section 2.15 Engineering, Infrastructure and Utilities.

- **Eco-Efficiency**

Eco-efficiency aims at breaking the link between economic growth on the one hand, and environmental degradation on the other. To achieve eco-efficiency, the local authority will promote cleaner and more efficient methods of production to reduce pressures on the environment and the use of natural resources.

- **Encouraging Indigenous Business**

Whilst inward investment is a very important element of the local economy, local business growth is important to the long-term economic sustainability and stability of Sligo and its Environs. Locally produced goods also mean that it can contribute towards local self-sufficiency reducing the need to import goods nationally and internationally, this includes the reduction of food miles, i.e., the reduction of transportation of food. Local industries and crafts can encourage improved local identity and encourage locally provided jobs. They also add to the vitality of the community and sense of place. Refer to section 2.14, Employment, Enterprise and Economic Development.

- **Reduction in Social Inequality**

It has been recognised that social sustainability is also a key element to the success of sustainable development. The Planning and Development Act 2000 recognises this and states that a development plan must include objectives for "the integration of planning and sustainable development of the area with the social, community and cultural requirements of the area and its population" Sec10 (2)(d). The plan promotes good access to local facilities as it reduces the need to travel by car; this is particularly important where facilities are needed for those who don't or cannot drive such as the elderly, children and the otherwise socially excluded. These issues have been addressed in the policies contained within section 2.10, Recreation and Community Facilities, section 2.7, Residential Strategy and Neighbourhoods, and section 2.12, Tourism, Arts and Culture.

- **Quality of built space**

The quality of built space improves the livability of urban areas and therefore the quality of life, it can also further reduce the need to travel and can have an effect on reducing crime in urban areas. Refer to section 2.13 - Urban Design.

- **Open space provision**

Having access to good quality open space of different types can encourage urban living. Open space gives space for active recreation (sports activities) and also for more passive activities such as bird watching, visual amenity, walking and cycling. Good quality open space can enhance feelings of well-being and can provide a connection to nature. Refer to sections 2.8, Sligo and the Natural Environment, and 2.9 Open Space and Public Amenity.



Energy efficient housing, Friburg, Germany

• **Urban renewal**

Renewal and regeneration are important factors in the physical sustainability of urban areas. Urban regeneration and renewal are also critical principles in the reuse of existing land banks, thus reducing the infringement of urban areas into the countryside. It also provides increased accessibility to existing facilities and services, helping to support and sustain existing developments. Refer to section 2.4, Urban Renewal and Regeneration.

**2.16.4 Summary - The Development Strategy and Sustainability**

The principle of densification therefore has been established in the form of the “centre city” model as set out in section 1.4.6; this strategy was devised with sustainable values at its core. The key principles behind the strategy are also key sustainability principles, namely;

- Easy access to public transport corridors, stations and transport nodes,
- Increased densities along significant transportation corridors
- Accessibility to mixed-use functions and services, provided through a comprehensive network of neighbourhood centres.
- Protection and enhancement of key landscape features.
- A good distribution and mix of open spaces throughout the plan area
- Promotion of urban renewal and regeneration, particularly to the immediate northwest of city centre and in the port area.
- Promotion of heritage and culture, to enhance the attractiveness of the City and Environs.

**2.16.5 Policies and Objectives**

The key policies and objectives in relation to sustainability have been integrated into the previous elements of Section 2.

**Development Control**

The Development Control Section (Section 3) outlines a number of sustainability indicators that shall be used by the local authorities in their assessment of planning applications so as to ensure that proposals conform with the proper planning and sustainable development of the area.