An Taisce
The National Trust for Ireland

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Regional Spatial and Economic Strategy
Eastern and Midland Regional Assembly
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Sent by email to:
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16.02.18

Re: Pre-Draft Consultation, Eastern and Midland Regional Spatial and Economic Strategy

Dear Sir/Madam,

An Taisce welcomes the opportunity to make comment to the Eastern and Midland Regional Assembly on the pre-draft consultation for the "Eastern and Midland Regional Spatial and Economic Strategy."

Yours faithfully,

Doireann Ní Cheallaigh,

Planning Officer
An Taisce – The National Trust for Ireland

Attachment: LEGAL OBLIGATIONS FOR STRATEGIC ENVIRONMENTAL ASSESSMENT OF REGIONAL SPATIAL AND ECONOMIC STRATEGY

Submission to the Eastern and Midlands Regional Assembly on the Regional Spatial and Economic Strategy for the Eastern and Midlands Region.

1.0 Introduction

The Regional Spatial and Economic Strategies (RSES) will provide a long-term regional level strategic planning and economic framework in support of the implementation of the emerging National Planning Framework (NPF) and the economic policies and objectives of the Government.

The RSES will address more detail at a regional scale, identifying regional assets, opportunities and pressures, distributing future population growth and development across the region in a balanced manner. It is essential that the RSES acknowledges a global environment of increasing climate impact and ecological destruction.

It poses the challenge of accommodating the projected increase in the Region's population in a way that ensures that the needs of the region's current and future population are met (access to high quality housing, jobs, sustainable modes of transport) and provide for the overall health and wellbeing and advances the quality of life of the citizens.

It requires clearly stated, implementable and legally enforceable targets to meet these objectives, in tandem with Strategic Environmental Assessment (SEA), Appropriate Assessment (AA) and Strategic Flood Risk Assessment (SFRA).

The RSES should be committed to making Dublin, the towns and villages healthy, attractive and sustainable, and improve the citizens' quality of life both now and in the future.

Unlike the Regional Planning Guidelines (RPGs), the RSES will provide for both a spatial strategy and an economic strategy as well as Metropolitan Area Strategic Plans (MASPs).

The following sections address the Key Questions posed by the Eastern and Midland Regional Assembly that fall within An Taisce's remit.

2.0 How can we align the location of population growth, employment and housing, by 2030? How can we balance the economic, environment and social dimensions for a better region?

2.1 Dublin and Towns with Populations Greater than 10,000

The main overriding target in the draft NPF is contained in Objectives 1(a), 1(b) and 1(c) which set out clear population and job increase targets for balancing a million-person population growth increase between the 3 regions.

Objective 2(b) provides that "*At least half (50%) of the future population and jobs growth will be focused in the five cities and their immediately adjoining suburbs with a target of around two thirds (66%) to be focused in the cities and their suburbs together with a number of large regionally distributed towns and their environs to be identified through the Regional Spatial and Economic Strategy (RSES) process.*"

Objectives 3(a), 3(b) and 3(c) set out location based targets.

3(a) provides for the delivery of at least "*40% of all new homes nationally within the built-up envelope of existing urban settlements*."

3(b) provides that "*at least half (50%) of the new homes in the five Cities and immediately adjoining suburban areas … would be delivered within the built-up envelope of existing urban settlements*."

3(c) provides that "*in areas other than the five City and suburban areas of Dublin, Cork, Limerick, Galway and Waterford, at least 30% of new homes would be delivered within the built-up envelope of existing urban settlements*."

Table 2.1 of the draft NPF details targeted patterns of development through key National Policy Objectives which include "growing our regions", "building accessible centres of scale" and "compact smart growth".

In order to accommodate for the growth, detailed percentages to achieve compact smart growth are outlined which provide for 50% new housing on infill/brownfield in the three cities and their suburbs and 30% new housing on infill/brownfield elsewhere.

It is a requirement that the RSES is consistent with the forthcoming NPF which will succeed the National Spatial Strategy (NSS) 2002. Section 23(3)(a)(iii) of the Planning and Development Act (as amended) provides that "*In preparing its regional spatial and economic strategy a regional assembly shall —*

(a) *ensure that the strategy is, in particular, consistent with —*[…]

(iii) *national planning policy as set out in the National Spatial Strategy or any successor strategy* […]"

In recent weeks, a lack of political support by members of Fianna Fáil, Sinn Féin and the Labour Party, along with some Independents have been reported. At the time of writing, it has been reported that the National Planning Framework will be launched on Friday the 16th in Sligo, however it is not clear if the targets and objectives set out in the draft have been amended.

2.1.1 Facilitating the Dublin area and larger towns in achieving their full potential at international, national and regional level

There are a number of key factors that need to be considered in order for Dublin and the towns to achieve their full potential and act as "engines" of economic growth. In order for these areas to attract economic activity, they must firstly be attractive in order for both people and industry to locate.

The 'livability' factor is key to drawing activity into cities and towns. These areas require the development of key physical and social infrastructure to provide for the needs of the cities' citizens and to enhance the overall health and wellbeing of their people.

Creating a sustainable urban environment enhances the competitive performance of the cities and large towns. There are a number of benefits to prioritizing sustainable urban environments including the improvement of quality of life, the maximization of land use potential, tourism growth and environmental protection. Key policy areas to ensure the sustainable growth of urban areas include transport policies, land use policies, and environmental policies. In the past, there has been a failure to properly coordinate development with public infrastructure and service needs and civic amenities, which have had a negative impact on the quality of life and competitiveness of our cities. These

failures have resulted in increased car dependency, traffic congestion, long commuting times and increased pressures on our natural and built environment, services including water and waste and effecting our ability to reach our emission reduction targets.

Prioritise Investment in Sustainable Modes of Transport

Objective 28 of the draft NPF provides for: "*Ensure the integration of safe and convenient alternatives to the car into the design of our communities, by integrating physical activity facilities for all ages, particularly prioritising walking and cycling accessibility to both existing and proposed future development, in all settlements"*.

In order for this objective to be achieved, sustained investment in cycling infrastructure, walking route enhancement and public transport (which offer the highest economic and social returns) is required.

Improving Urban Land Use and Planning Policy

An integrated approach to land use and transport policies in our cities is critical to allow the efficient movement of people and goods and to improve the viability of public transport.

It is important that land use planning underpins the efficiency of public transport services. There are essentially two inter-related ways which this can be achieved:

1. By locating trip origin and trip destinations near public transport routes; and
2. By ensuring that new developments are served by public transport services.

All new housing and employment development should be within 15 minutes walking distance of basic public services. The RSES needs to adopt targets for the major percentage of new housing and employment locations to be located with walkable access to public transport and safe cycling and walking routes.

Living in the City

A lack of affordably priced accommodation in central locations has resulted in a move further outside the city. This sprawl has increased car dependency, longer commuting times and is subsequently having a negative impact on quality of life and increasing our transport related carbon emissions.

In order to curtail this sprawl, and as outlined in the draft NPF, 50% of new housing will be required to locate on infill/brownfield in the three cities and their suburbs. An in-depth analysis of vacant homes with the view of re-use needs to be carried out and form part of the RSES.

Provision of Urban Green Space

Urban green space is a fundamental component to competitive cities. With the envisaged population increases, the provision of adequate green space is essential. The value of green space has been well documented, having benefits on both the physical and mental health of citizens and improving the quality of our environment. The RSES should outline focused policies on improving the current green space in cities in order to make these more attractive and accessible to citizens and ensuring that

sufficient and well planned green spaces, commensurate in scale to the long term development requirements.

Improving Environmental Sustainability

A number of environmental challenges are associated with cities including traffic congestion, noise pollution and air pollution, all of which can impact on the competitiveness of the city. There is an overriding need to overcome these challenges.

Protecting the Historic Cultural Heritage

The policies to curtail sprawl in favour of urban development is welcome. However, there needs to be a commitment to protect historic centres from high rise and other inappropriate development. Our historic urban centres are an irreplaceable social, cultural and economic asset which generates a sense of place and should not be compromised. Our cities' and towns' cultural heritage needs to be integrated into overall development policies and objectives to avoid an imbalance between socio-economic development and the preservation of the historic urban fabric of cities.

A report commissioned by the Heritage Council in 2011 'Economic value of Ireland's Historic Environment' demonstrates that Ireland's historic environment generates a range of important wider economic, social and community benefits.

The maintenance and repair of historic buildings, and particularly clusters of historic buildings, can significantly enhance the physical fabric of our cities, create a sense of place, support the growth of tourism activities, attract investment into cities and contribute to enhancing the quality of life and liveability in Irish cities.

The RSES should focus on opportunities for the conversion of redundant or under-used traditional buildings in the historic cores which could act as a stimulus for business investment within as opposed to new greenfield development.

2.1.2 Potential barriers to achieve the targeted levels growth in Dublin and large towns and ensuring that at least half of that projected growth occurs within the urban core on infill and brownfield sites

Given the envisaged increase in job opportunities in the city, demand for city centre living will increase also. As set out in the draft NPF, the five cities are to grow by 50-60% with 50% of the projected growth to occur within the city core.

There are a number of ways to curtail sprawl and ensure this growth occurs with the core. These include:

Assessment of appropriate land for development within the core. All new housing and employment development should be within 15 mins walking distance of basic public services.

An in-depth analysis of vacant homes with the view of re-use needs to be carried out and form part of the RSES. Circular PL 7/2017 Re: Vacant Homes Action Plan circulated to the Chief Executive of each Local Authority in august 2017 requested the five cities to develop and adopt a Vacant Homes Action Plan by the end of October. These Action Plans were advised to include:

- Initial overview of the estimated level of vacancy in the local authority area from existing sources such as Census 2016 and Geodirectory;
- Outline of the methodology and general approach being used for conducting the initial in-house assessment of vacancy by the local authority for the purpose of obtaining an accurate and up-to-date picture of the real scale of vacancy in the local authority area;
- Any initial results of targeted vacancy surveys undertaken to date; - details of the available incentives to assist in bringing vacant homes back into use;
- Confirmation of the designation of Empty Homes Officer(s) and other staff resources to act as contact points for members of the public, to provide information on the options/incentives available for bringing vacant homes back into use, to co-ordinate the development of the Action Plans - including the initial assessment of vacancy - and the subsequent implementation of relevant actions;
- An outline of the general approach, actions, responsibilities and timelines in relation to the addressing of vacant privately-owned dwellings particularly targeting properties that can be quickly brought back into use for either sale or rent in vacancy action hotspots where there is high housing demand;
- Setting of targets for the reduction of vacant private properties over the period to 2021;
- Possibilities of using CPO powers in targeted areas for the purpose of bringing vacant properties back into use;
- Outline of the approach to addressing vacant social housing, including confirmation of policy and targets in the period to 2021 in relation to the bringing back into use of vacant or underutilised dwellings owned by local authorities (voids);
- Actions and timelines for the purpose of ensuring that there is swift turnaround in refurbishing and re-tenanting Council owned dwellings including more efficient ongoing maintenance and upgrading of their properties, speedier identification and housing of new tenants through for example the choice-based letting initiative;
- Measures to monitor progress in implementing the Action Plans and addressing vacancy levels on an ongoing basis;
- Conclusions and overall summary of actions and targets.

These 'Vacant Homes Action Plans' should be used to inform future housing provision in the cities' core area.

There should be a sequential requirement to show that there is no capacity within the existing urban settlement before green field development is permitted. Greenfield development should only be permitted as urban settlement extensions at densities that can sustain efficient public transport infrastructure.

Poor air quality, traffic congestion, poor provision of public transport and lack of social infrastructure can act as a deterrent to growth. High quality public transport, cycling infrastructure, safe walking routes, green infrastructure and high quality services should be provided in tandem with future growth in order to make our cities more attractive to live and work in.

2.1.3 Key transformational projects to further assist our cities and large towns to grow and prosper as vibrant urban communities with an enhanced quality of life

Prioritising Public Transport, Cycling, and Connected Communities

It is essential that the city is seen as an attractive place for both business and people to locate. The World Health Organisation (WHO) have outlined that the use of 'passive' modes of transport is associated with increased inactivity levels as well as poor air quality, traffic congestion, lack of adequate walking and cycling infrastructure and social infrastructure (including sports and recreation facilities). All of the above can result in a poor quality of life for citizens and be a deterrent for investment in our cities.

It is therefore essential that an integrated approach to land use and transport policies in our cities is adopted to allow the efficient movement of people and goods, improve the viability of public transport, and improve citizens' quality of life. The most realistic and cost effective pathway to radically reducing emissions from the transport sector in our metropolitan areas is via investment in public transport and the creation of attendant public transport friendly, compact places.

The RSES should include targets on the percentage of new housing and employment locations which will meet smart growth criteria including for public transport and safe cycling route accessibility within existing or expanding urban areas. All new housing and employment development should be within 15 mins walking distance of basic public services.

Compact, walkable, cyclable communities that provide key social infrastructure can foster casual social interactions, promote a sense of place and encourage community involvement. The importance of nucleated settlements, connectivity and social cohesion is not just an idealistic notion, it is a solution to number issues that face Irish society including public health and wellbeing, environmental sustainability and vitality and liveability of our cities.

Provision of Green Space

Nearly two-thirds of the services provided by nature to humankind are in decline worldwide and the global ecosystem is close to collapse. Ireland's ecosystem services in terms of their productive output and human utility are estimated to be over 2.6 billion euro per year. This very conservative estimate omits other significant services for example waste assimilation provided by aquatic biodiversity and benefits to human health, social health and environment benefits. Similar to all critical resource, they must be carefully managed to ensure it is sustained as a renewable resource into the future (Department of Environment, Heritage and Local Government, 2008).

The Institute for European Environmental Policy (IEEP) recently explored the links between access to nature and health inequalities in Europe'. In their 2017 report titled 'Nature for Health and Equity' it was found that a 'lack of access to nature and natural areas contributes to health inequality and improving it is key to tackling these challenges'.

This point has been reiterated by the EPA 2016 report 'Health Benefits from Biodiversity and Green Infrastructure which states that 'human health and wellbeing depends on a healthy environment; therefore, management of such a key natural resource has (1) strategic importance for human health (Wolch et al., 2014) and (2) the potential to contribute to the Irish economy.

Green Infrastructure (GI) is rapidly becoming a very important concept in land use planning. The GI approach should be increasingly incorporated into the planning and development process and should become the accepted way to plan and manage urban spaces, reversing the trend of urban societies becoming disconnected from the natural environment.

In 2012 the UK's National Trust published Natural Childhood, a report by Stephen Moss, which examines the phenomenon known as 'Nature Deficit Disorder' and gathers current thinking on establishing a connection between children and the natural environment. The benefits of developing a healthy relationship with nature at a young age are manifold and fall broadly into four categories: health, education, communities and environment.

Public open space must be located so as to create useful but also meaningful form that is an integral part communities. The GI approach should be increasingly incorporated into the planning and development process and will should become the accepted way to plan and manage urban spaces

Land Reform

In the absence of a firm political commitment to national planning, the market produces the places in which we live, in ways which meet a concern for individualism and profit rather than the needs of society. Land reform is therefore essential to give the public and communities a stake in development and future value.

To acquire land to meet public need, Land Value Tax, CPOs and other powers must be used as levers to transfer ownership from private landowners and developers who will not build, to communities, local authorities and other accountable bodies who will.

Extending democratic and community ownership of land whether by leasehold, trust ownership, or outright purchase is crucial to economic revival, to the effective delivery of house building and community regeneration. Taking a public stake in land is not a cost but an essential long term infrastructure investment.

As outlined above, the Vacant Homes Action Plans' should be used to inform future housing provision in the core areas.

With regards to CPO powers, Louth County Council is the most active user of CPOs in response to the housing crisis and have been seen as an exemplar for bringing vacant homes back into use .To date, Louth County council has put 54 vacant properties back into use and a further 16 CPOs are being prepared.

The rise of vacant buildings is not just seen as a means of reviving the vacant structure, but also as a means of reviving the entire area.

2.1.4 Helping cities and large towns effectively co-ordinate sustainable development patterns and delivery of key infrastructure

In order to achieve a national commitment to equivalent living conditions, a core RSES objective should be that no new housing development shall be permissible which is greater than 15-minute walking distance from basic services and infrastructure e.g. public transport, supermarket, childcare

facilities, school, post offices, etc. The RSES should be charged with determining such services and locations, and where there is a deficit, they must be upgraded in tandem with housing development. This simple principle, rigorously enforced, is possible and would go furthest in achieving the objectives of smart, compact growth espoused in the Draft NPF and in regenerating our cities, towns and villages.

Regional Accessibility

If inter-regional urban roads are allowed to become commuter corridors, as has occurred with the national motorway network over the last 20 years, the level of sprawl, rising climate emissions, air pollution, congestion, adverse quality of life and health impact in travel time and unhealthy mobility patterns would be exacerbated.

This point is stated in the summary objective for 'Enhanced Regional Accessibility' in section 9.1 of the NPF which states that "*Investment in connectivity first without urban consolidation measures will likely worsen trends towards sprawl*". However no phasing or sequencing is provided to avoid such an occurrence, and indeed the publication of the draft NPF has coincided with the announcement of the reactivation of the M20 Cork Limerick Motorway plan.

The provisions for enhancing regional accessibility in the RSES should focus on railway network as opposed to being entirely road based. The interregional rail network should be maximized in capacity for passenger and freight use, including travel speed enhancement.

New Smarter Travel targets should be adopted to require that the majority of inter-urban and inter-regional travel be through enhanced rail and bus modal share. Further public subsidy of unsustainable car based development through infrastructure, including road access provision should be curtailed. Further road investment should be limited to locations where urban and village bypassing and enhanced safety provision is required. Urban consolidation measures should first be put in place before new investment in regional interconnectivity, to curtail the current trend towards sprawl.

2.2 Towns with Populations of 10,000 or Less

In 2015, the Heritage Council commissioned a study on Irish Towns[1] and the perceptions of the population towards town living. Based on numerous interviews and focus groups, four key segments of town and rural populations were developed:

- Those who lived in the suburbs and liked it
- Those who lived in the suburbs but would like to live closer to the town
- Those who lived in a town and liked it
- Those who lived in a town and did not like it

The perceptions of those who would like to live in towns but do not currently are especially important to achieving the RSES objectives of increasing small town populations.

The research identified four themes with varying levels of importance in the creation of vibrant and liveable towns.

[1] http://www.heritagecouncil.ie/content/files/irish_towns_research.pdf

Functional and economic concerns (These were generally seen as important in town life but declining in quality in recent years):

- *Job opportunities* – there was general concern about declines in job opportunities and in turn young people moving elsewhere.
- *A lively town* – 60% of those wanting to move to a town said this is important to them in daily life, most people said that this has declined in recent years
- *Garda station* – 70%+ of all four key segments said is important but many people said this has gotten worse
- *Banking services* – 34% of those wanting to move to a town said this was important in daily life
- *Selection of shops* – 81% overall (83% of those wanting to live in a town) said this is important in daily life, 47% said main street shops have gotten worse recently
- Transport links – 40% of those wanting to live in a town saw this as very important and have seen some improvement recently

Social aspects (Social and entertainment aspects were generally ranked as somewhat less important than functional and economic concerns):

- *Lively pub/night club* – 60-65% of all people surveyed said this is not important in daily life,
- *Sports club* – 43% of all surveyed said this is important to daily life
- *Cinema, theatre, music venues* – 41% of all surveyed and 47% of those wanting to move to a town said this is important
- *Selection of restaurants* – This was ranked as the most important social element (51% overall and 54% for those wanting to move into a town)

Personal aspects (These were ranked as being of higher importance than all social elements):

- *Availability of schools* – 54-59% of all segments said this was important
- *Closeness to extended family and friends* – 72-79% overall said this is important

Environmental aspects of the surrounding area including physical environment, security, community (This was the most improved theme in past 5 years, and most important in daily life):

- *Sense of community* – 50%+ said this is important
- *Sense of safety* – This was the most important factor in choosing where to live (57% of total said very important, 38% important), 47% say anti-social behaviour has gotten worse
- *Nice public places like parks* – 28% said this was improving, 78% said this important or very important
- *Cleanliness* – 90%+ said this is important in considering where they live, 40% said this has been improving

Based on this research, the RSES should contain provisions for improving town centre vibrancy and liveability to improve the social and economic vitality of small towns and encourage sustainable population growth. This will in turn encourage job growth. This should include strategies for improved retail and service provision on high streets, improved plans for permeability for pedestrians and

cyclists, improved public transport connectivity, increased provision of public green space in towns, serviced site initiatives, etc.

Please see the preceding sections for specific recommendations in relation to improving town centre vitality, passive transport (walking and cycling), public transport, urban green space, land use and reform.

2.3 Rural Areas

2.3.1 Key infrastructure priorities (physical and social) to address to achieve tangible population and employment growth in rural areas, in particular to assist vibrant regenerated town and village centres

The decline that has occurred in many Irish towns has been caused in part by the building of one off houses in the open countryside.

Serviced sites should be made available. Land in serviced settlements, such as small towns and villages, could be purchased either directly by local authorities or via private initiatives and the required physical infrastructure put in place (e.g. sewers, water, roads, communications etc.). Individual plots would then be sold at a reasonable cost to people who wish to build their own dwelling, subject to certain design parameters. Such an initiative would provide the advantages of a one-off dwelling but in a serviced location, that supports the development of nucleated, walkable communities.

Crucially, in order to be a successful, a Serviced Sites Initiative must be buttressed by corresponding planning and fiscal policies that fully remove the current hidden subsidies and perverse incentives towards self-building in unserviced, isolated locations. While such a proactive initiative would have up-front costs to the Exchequer, it would yield very significant long-term savings, increase the property tax base of local authorities and support wider policies aimed at rural renewal. It would further serve as an important mechanism for achieving the political acceptance of the need for new restrictive housing policies in unserviced rural areas.

In order to achieve a national commitment to equivalent living conditions, a core RSES objective should be that no new housing development shall be permissible which is greater than 15-minute walking distance from basic services and infrastructure e.g. public transport, supermarket, childcare facilities, school, post offices, etc. The RSES be charged with determining such services and locations, and where there is a deficit, they must be upgraded in tandem with housing development. This simple principle, rigorously enforced, is possible and would go furthest in achieving the objectives of smart, compact growth and in regenerating our rural towns and villages.

2.3.2 Supporting growth and diversity in rural economic sectors, particularly agriculture, marine, forestry, tourism, energy and the green economy

The current policy approach to Ireland's rural areas is productivism, either in large-scale agri-business or suburbanised housing. Ireland's low population density and rural areas can be our most precious resource for a post-carbon world in terms of sustainable local food production, native forestry, and decentralised energy generation through, for example, small-scale wind, hydro, biomass, geothermal, combined heat and power, and solar.

If planned correctly, this opportunity could be a significant boon for rural communities, help increase their resilience and buffer them from the vulnerabilities of global uncertainty and energy price inflation.

However, in order to achieve this, the RSES must advocate a decisive shift away from current polluting and carbon-intensive agriculture and settlement patterns towards a new re-localised vision for rural Ireland focused on our historic network of rural towns and villages.

2.3.3 Strengthening protection of the rural environment and rural resources in tandem with objectives for sustainable growth in the rural population and employment

The decline that has occurred in many Irish towns has been caused in part by the building of one off houses in the open countryside, which has been seen as a cost effective option for people. However, dispersed housing externalises very significant hidden costs to society at large. If the true costs were accounted for, settlement in isolated locations would be generally unaffordable for households. Dispersal also considerably increases environmental pressures and heightens the vulnerability of rural householder to cost inflation (e.g. transport fuel, carbon taxes and 'septic tank' charges), service withdrawals and infrastructure downgrades (e.g. hospital, ambulance services, roads, schools, post offices).

The 2017 storms are the predicted outcome of increased climate impact on Ireland from a warming Atlantic. This escalating trend is going to result in increased storm exposure on dispersed rural housing particularly in western and southern coastal counties, with increased frequency of electricity supply outages, and other impacts with consequent societal cost of remedy. As noted by the ESB, the relatively scattered and widespread distribution of the rural population in Ireland is reflected in the extent and the characteristics of the distribution system. Ireland has four times the European average of length of network per capita. The ratio of overhead lines to underground cables is 6:1. With so much overhead line exposed to weather and other events, there is a significant challenge in maintaining an adequate and reliable supply in rural areas.

Having regard to objectives on one-off housing in the draft NPF, the following are noted:

Objective 18(b) of the draft NPF provides that "*in rural areas under urban influence, to facilitate the provision of single housing in the countryside based on the core consideration of demonstrable economic need to live in a rural area…*"

Objective 19 of the draft NPF provides to "*Project need for single housing in the countryside through the local Housing Need Demand Assessment (HNDA) tool and county development plan core strategy processes.*"

Firstly, it is not clear why Objective 18b is limited to rural areas under urban influence, or why a stated "economic need" to live in rural area should be linked to accommodation of a house in the open countryside as opposed to a local village.

Secondly, no definition is provided as to what is 'economic need'. The vagueness and lack of definition for 'economic' need may exacerbate the level of one-off housing and further deteriorate the fabric of Irish towns and villages.

Thirdly, Objective 19 fails to make a projection for the carrying capacity of additional dispersed one-off housing in the countryside in undermining sustainable settlement strategy, undermining of service

basis of smaller towns and villages, traffic generation and exacerbation of car dependence, undermining of sustainable travel, service cost to society at large including implication of supporting an aging population, impact on biodiversity, water quality and on landscape.

In light of the above, the RSES needs to:

- Introduce effective climate, biodiversity and sustainability proofing for all Common Agricultural Policy (CAP) and other rural development funding.

- Provide a clear target for Rural Broadband under the National Broadband Plan.

- Ensure an effective target level of houses for rural communities to be located in villages and smaller towns with walkable access to services.

- Identify the constraint and capacity level for any additional one off houses in the open countryside.

- Roll out a serviced-sites initiative to provide a suitable alternative to one-off dwellings Land in serviced settlements, such as small towns and villages, could be purchased either directly by local authorities or via private initiatives and the required physical infrastructure put in place (e.g. sewers, water, roads, communications etc.). Individual plots would then be sold at a reasonable cost to people who wish to build their own dwelling, subject to certain design parameters. Such an initiative would provide the advantages of a one-off dwelling but in a serviced location, that supports the development of nucleated, walkable communities

3.0 How can we plan for healthier and more attractive places?

3.1 The Health of our Nation

Our current settlement pattern and expected shift in Ireland's demographics is and will continue to contribute to serious health issues. The negative health impacts being experienced can be associated with our current development pattern, our urban design and high car dependency. Such health impacts include obesity, cardiovascular disease and asthma.

Ireland's current settlement pattern is not supporting a healthy lifestyle. The Issues Paper for the Draft National Planning Framework outlined that in 2011 nearly one in ten workers spend one hour or more commuting to work, while 69% of commuters travelled to work by car. Car dependency and long commutes have several health impacts:

- Firstly development sprawl is associated with high levels of driving, driving contributes to air pollution and air pollution causes morbidity and mortality (Frumkin, 2002).
- Secondly, high car dependency and long commutes is decreasing leisure time available to us and contributes to sedentary lifestyles, this lifestyle has long been associated with physical health consequences such as obesity, cardiovascular disease and mental health impacts including anxiety or depression.
- Thirdly, increased vehicle miles travelled and increased car dependency heightens the chances of road traffic accidents, fatalities and injuries.

The way we shape our built environment can influence our everyday lifestyle choices that affect our own personal health.

A number of studies and Action Plans over recent years outlines Ireland's general health and our participation in physical activity. Key finding of these are outlined below.

3.1.1 Physical Activity Levels

With regards to our physical activity, research has concluded that a high proportion of the Irish population are not meeting recommended physical activity levels. Only 32% of adults are meeting the national physical activity recommendations. The number of children reaching the recommended target for physical activity is worrying less with only 19% of primary and 12% of post primary school children meeting the recommended physical activity target (Dept. of Health, 2016).

Of particular note regarding children's activity level are figures indicating the number of children who cycle to school. The number of primary school children cycling to school in 1986 was 23,635. This figure has dramatically dropped to 6,252 (2011) indicating a 73.5% decrease. The number of secondary school children cycling to school in 1986 was 50,648, similarly this figure has also dramatically decreased to 6,692 (2011) indicating a 87% decrease.

The World Health Organisation (WHO) have outlined the use of 'passive' modes of transport to be associated with increased inactivity levels as well as poor air quality, traffic congestion, lack of adequate walking and cycling infrastructure and social infrastructure including sports and recreation facilities. (WHO, Global Strategy on Diet, Physical Activity and Health).

As regards investment, as per the Government's plan Building on Recovery: Infrastructure and Capital Investment 2016-2021, just €100 million (out of €10 billion allocated to transport – i.e. 1%) was committed to active travel (walking and cycling). This needs to change radically in order to secure adequate walking and cycling infrastructure that would promote healthy lifestyle choices and contribute to a reduction in our transport generated GHG emission. The United Nations Environment Programme has called on countries to 'invest at least 10% of their transport budgets in walking and cycling infrastructure to save lives, reverse pollution and reduce carbon emissions' (United Nations, 2016).

3.1.2 Obesity and Associated Risks

A correlation can be made between the physical inactivity levels in Ireland and the level of our population that are over overweight or obese. The Department of Health (2016) have highlighted that only 40% of the Irish population have a healthy weight. If this trend continues, Ireland will face an increase in chronic diseases associated with obesity.

Obesity levels in all age groups have increased throughout Ireland. The Irish Universities Nutrition Alliance 'Nutrients Survey' (2011) highlighted that 'the prevalence of obesity in 18-64 year old adults has increased significantly since 1990 from 8% to 26% in men, and from 13% to 21% in women, with the greatest increase observed in men aged 51-64 years. These results highlight that obesity remains a major public health problem in Ireland'. Data indicates that 1 in 4 children, 6 in 10 adults and 3 in 4 adults over 50 are overweight or obese (A Healthy Weight for Ireland, Obesity Policy and Action Plan 2016, The Department of Health).

Findings from a Safefood funded research into the cost of over overweight and obesity on the island of Ireland has estimated the annual cost to be €1.64 billion euros (€1.13billion Republic of Ireland; €510 million Northern Ireland). 35% of total costs (€398 million) represented direct healthcare costs i.e. hospital in-patient; out-patient; GP and drug costs. However, (65%) of the economic costs were indirect costs in reduced or lost productivity and absenteeism and amounted to €728 million. (Safefood 2012).

If Ireland does not take action to curb our high level of inactivity, overweight and obesity, we will face an increase in chronic diseases associated with obesity. Obesity is a major risk factor for some of the leading causes of mortality in Ireland, including cardiovascular disease. According to the CSO '2015 Vital Statistics' diseases of the circulatory system accounted for 9,249 deaths, or an annual rate of 2.0 per 1,000 population. Of these, 4,417 were due to ischaemic heart disease and 1,902 to cerebrovascular disease (CSO, 2015).

Physical inactivity and obesity are modifiable risk factors for many chronic diseases (Hacken, 2009). The current trend of inactivity and obesity is worrying. If enforceable policies are not put in place to support opportunities for physical activity, Ireland will face an unhealthy and costly future.

Recommendations:

- We need to reshape our built environment in order to reverse our inactivity levels – we need a built environment that would encourage walking and cycling as opposed to car dependency. We need more compact towns and cities where distances between origins and destinations are shorter with walking, cycling and public transport prioritised.

- The RSES needs to set our clear strategy and policies to coincide with existing strategies and frameworks which promote a built environment that encourages opportunities for physical activities including 'Smarter Travel', 'The National Cycle Policy Framework', 'A Healthy Weight for Ireland, Obesity Policy and Action Plan', 'A Framework for Improve Health and Wellbeing 2013-2025' and 'Get Ireland Active! National Physical Activity Action Plan for Ireland'.

- Ensure that the planning, development and design of Dublin, towns, and schools encourages a shift from car-orientated urban patterns (cul de sacs) to walkable, transit orientated development patterns.

- The 'National Cycle Policy Framework' needs to be referenced in the RSES together with its implementation. The 19 Objectives within the NCPF should be captured in the RSES

- Create environments that are needed to support 'The National cycle Policy Framework' and 'Get Ireland Active! National Physical Activity Action Plan for Ireland'. The rolling out of 30kph zones in urban areas, particularly town centres, residential estates and in the vicinity of schools and places.

- Update and give effect to the six location test standards for community integration for new housing outlined in Box 5.2 of the National Spatial Strategy. Unlike sustainability/quality of life indicators, these should be threshold standards without which no development should be permitted. This requires that zoning and decision by local authorities and An Bord Pleanala for new housing be conditional on integration with existing communities, affordability and mix of

housing types, walking and cycling access to local services and schools, public transport access to employment locations and availability of recreation facilities.

3.1.3 Air Quality and Our Health

Our built environment and physical spaces not only influences our daily lifestyle choices, but can also expose citizens to harmful pollutants. Air pollution is a clear marker for sustainable development, as sources of air pollution also produce climate pollutants (WHO, 2016).

The World Health Organisation (2016) have highlighted the impacts of poor air quality, stating that to date, air pollution – both ambient (outdoor) and household (indoor) – is the biggest environmental risk to health, carrying responsibility for about one in every nine deaths annually. Health risks associated with poor air quality include stroke, heart disease, lung cancer and chronic and acute respiratory diseases, including asthma (US EPA, 2015). The WHO (2016) estimated that in 2012, 72% of outdoor air pollution-related premature deaths were due to ischaemic heart disease and strokes, while 14% of deaths were due to chronic obstructive pulmonary disease or acute lower respiratory infections, and 14% of deaths were due to lung cancer. It is estimated that more than 400,000 premature deaths are related to air quality in Europe per-year. In relation to Ireland, the number of premature deaths attributed to our air quality is estimated to be 1,200 people annually (WHO, 2016).

WHO have identified ischaemic heart disease to be the leading cause of pre-mature death as a result of poor air quality. Research carried out by the US EPA (2015) show that air pollution can trigger heart attacks, stroke, and irregular heart rhythms – especially in people who are already at risk for these conditions. The United States EPA (2015) have categorised 'at risk' people to be those who have existing heart related disease, chronic lung disease, males over 45, female over 55, family history of heart disease, high blood pressure or high cholesterol, overweight or smoke cigarettes.

Having regard to Ireland's current level of obesity, heart disease and aging population, and given that air pollution can trigger associated risks, it is important that Ireland limits the level of air pollution. In relation to respiratory diseases such as asthma, Ireland has the fourth highest prevalence of asthma in Ireland. Data from the Asthma Society of Ireland show that 7.1% of 18+ population have asthma, 18.9% of 13-15 year olds have asthma and 38.5% of 13-15 year olds reported wheezing. In Ireland, more than 1 person a week dies from asthma.

Sharon Cosgrove, CEP of the Asthma Society of Ireland stated that, "*People with chronic respiratory disease like asthma are more vulnerable to the effects of air pollution. It is vital we do everything we can to limit the levels of air pollution we expose our citizens to and have accurate information on the actual quality of our air.*"

The main pollutants that are of concern are NOx (Oxides of Nitrogen), PM10 and PM 2.5 (Particulate Matter), O3 (Ground Level Ozone) and PAHs (Polycyclic Aromatic Hydrocarbons). These pollutants have serious adverse health impacts. The European Environment Agency (EEA) has stated that:

> "*Particulate matter, nitrogen dioxide and ground-level ozone, are now generally recognised as the three pollutants that most significantly affect human health. Long-term and peak exposures to these pollutants range in severity of impact, from impairing the respiratory system to premature death. Around 90 % of city dwellers in Europe are exposed to pollutants at concentrations higher than the air quality levels deemed harmful to health. For example, fine particulate matter (PM2.5) in air has been estimated to reduce life expectancy in the EU by more than eight months.*"

The high level of car dependency in Ireland, combined with our continued use of solid fuel for heating is contributing to high levels of NOx, PM10, PM2.5 and PAH which have detrimental impacts on our health and well-being. While Ireland does not currently exceed EU target values, we have exceeded WHO guidelines which are more stringent. The 2016 EPA 'State of the Environment' report states that 'in urban areas such as Dublin and Cork, levels of nitrogen dioxide are close to the specified EU limit values for air quality as a result of exhaust emissions from vehicles'. PM10, PM2.5 and PAH levels from domestic solid fuel use are highest in rural towns and villages.

The high levels of PM2.5 have been highlighted by EPA who have stated that 'Ireland faces many challenges in order to meet new air quality standards for fine particulate matter (PM2.5) concentrations by 2020' (EPA, 2016). Ireland needs to achieve heathy standards in accordance with WHO guidelines. The EPA have stated that Ireland should adopt the more stringent WHO values, particularly for PM and O3 emission levels stating that 'with the increased understanding of the science of air quality and its impact on health has come the realisation that compliance with EU air quality limit values is not enough to protect the health of Irish from the negative effects of poor air quality'.

The RSES should provide for a significant reduction in road vehicle use, improved fuel efficiency and land use policies to reduce transport demand and achieve significant modal shift from private passenger vehicle to public transport, with walking and cycling for short journeys and road freight to rail. This approach would reduce our expose to transport generated GHG emissions along with the ancillary benefit of curtailing pollutant air particle emissions, urban sprawl and congestion.

3.2 Prioritising Passive Transport

It is essential that Dublin and the towns are seen as attractive places for both businesses and people to locate. The World Health Organisation (WHO) have outlined that the use of 'passive' modes of transport is associated with increased inactivity levels as well as poor air quality, traffic congestion, lack of adequate walking and cycling infrastructure and social infrastructure (including sports and recreation facilities). All of the above can result in a poor quality of life for citizens and be a deterrent for investment in our cities.

It is therefore essential that an integrated approach to land use and transport policies in our cities is adopted to allow the efficient movement of people and goods, improve the viability of public transport, and improve citizens' quality of life. The most realistic and cost effective pathway to radically reducing emissions from the transport sector in our metropolitan areas is via investment in public transport and the creation of attendant public transport friendly, compact places. The RSES should include targets on the percentage of new housing and employment locations which will meet smart growth criteria including for public transport accessibility within existing or expanding urban areas.

3.3 Health Benefits from the Environment and the Provision of Green Space

Biodiversity is a critical ecosystem resource that provides a free service to human well-being, our society and our economy, which is not inexhaustible and is under consistent and sustained pressure. Nearly two-thirds of the services provided by nature to humankind are in decline worldwide and the global ecosystem is close to collapse. Ireland's ecosystem services in terms of their productive output and human utility are estimated to be over 2.6 billion euro per year. This very conservative estimate omits other significant services for example waste assimilation provided by aquatic biodiversity and benefits to human health, social health and environment benefits. Similar to all critical resource, they

must be carefully managed to ensure it is sustained as a renewable resource into the future. (Department of Environment, Heritage and Local Government, 2008)

The Institute for European Environmental Policy (IEEP) recently explored the links between access to nature and health inequalities in Europe'. In their 2017 report titled 'Nature for Health and Equity' it was found that a 'lack of access to nature and natural areas contributes to health inequality and improving it is key to tackling these challenges'.

This point has been reiterated by the EPA 2016 report 'Health Benefits from Biodiversity and Green Infrastructure which states that "*human health and wellbeing depends on a healthy environment; therefore, management of such a key natural resource has (1) strategic importance for human health (Wolch et al., 2014) and (2) the potential to contribute to the Irish economy (Bullock et al., 2008; EPA, 2012a; EPA, 2016)*."

Green Infrastructure (GI) is rapidly becoming a very important concept in land use planning. The GI approach should be increasingly incorporated into the planning and development process and will should become the accepted way to plan and manage urban spaces, reversing the trend of urban societies becoming disconnected from the natural environment.

GI can be defined as the physical environment within and between our cities, towns and villages. It is a network of multi-functional open spaces, including formal parks, garden, woodlands, green corridors, waterways, street tree and open countryside. It comprises all environmental resources and contributes towards sustainable resource management. This includes a holistic approach to developing the landscape inclusive of other influences such as ecological development, improving air, water and soil quality, flood protection, access provision and linkages, climate change/amelioration, pollution control and quality of life issues, in a sustainable and ongoing manner. GI is important in informing the decision making process on promoting interaction of government departments on the direction and focus of future development.

Health benefits include a decreased risk of childhood obesity, improved physical fitness, improved mental health and even longevity. In one study, 'exposure to nature improved symptoms of ADHD in children threefold compared with staying indoors' (Taylor, 2001). Exposure to the natural environment can reduce stress and aggressive behaviour in all children, and give them a greater sense of self-worth (William, 2007). Even short term 'doses' of nature can make a marked impact on mental health – indeed, as little as five minutes of 'green exercise' can improve mood and self-esteem by a significant margin (Thompson Coon et al. 2001). From an educational perspective, child psychologist Aric Sigman (2007) concluded that "children exposed to nature scored higher on concentration and self-discipline; improved their awareness, reasoning and observational skills; did better in reading, writing, math, science and social studies; were better at working in teams; and showed improved behaviour overall."

GI can also play an important part in fulfilling Ireland's obligation under the EU Habitats Directive to ensure provision is made to adequate linkages between Natura 2000 sites arresting habitat fragmentation.

Recommendations:

- Public open space must be located so as to create useful but also meaningful form that is an integral part communities.

- The GI approach should be increasingly incorporated into the planning and development process and will should become the accepted way to plan and manage urban spaces.

4.0 What are the key strategic natural assets we need to protect?

As highlighted in 'Our Sustainable Future, a Framework for Sustainable Development for Ireland', increasing prosperity, in Ireland and across the world, has allowed many people to enjoy the benefits of goods and services which were once available to just a few. While this shared prosperity represents huge progress, it does so at a cost of increasingly less sustainable patterns of consumption and production. The pressures on resources - raw materials, minerals, metals, food, water, soil, biodiversity, air, biomass and ecosystems - continue to increase. This enduring, negative trend endangers the availability of natural resources and impacts negatively on the quality of our environment and on human health and biodiversity, both within Europe itself and globally (DOE, 2012).

Seto et.al (2011) highlights that the conversion of Earth's land surface to urban uses is one of the most irreversible human impacts on the global biosphere. Ireland's sprawling nature of development and settlement pattern is a driving force for habitat fragmentation, biodiversity loss, agricultural land loss and is having detrimental impacts on Climate Change.

4.1 Biodiversity

Biodiversity is a critical ecosystem resource that provides a free service to human well-being, our society and our economy, which is not inexhaustible and is under consistent and sustained pressure. Nearly two-thirds of the services provided by nature to humankind are in decline worldwide and the global ecosystem is close to collapse. Ireland's ecosystem services in terms of their productive output and human utility are estimated to be over 2.6 billion euro per year. This very conservative estimate omits other significant services for example waste assimilation provided by aquatic biodiversity and benefits to human health, social health and environment benefits. Similar to all critical resource, they must be carefully managed to ensure it is sustained as a renewable resource into the future (Department of Environment, Heritage and Local Government, 2008). Despite these benefits and the importance of biodiversity for our population, pressures cause by human activity is causing major biodiversity loss.

The RSES needs to set our clear strategy for the protection of our biodiversity in order to ensure that we meet the EU Commissions overarching objective of no net biodiversity loss by 2020.

Ireland has a poor record when it comes to protecting the natural environment. An example of this is the fact that the European Commission has brought infringement proceeding against Ireland in a number of cases involving breaches of EU environmental law relating to nature.

Ireland hosts fifty-nine habitat listed under Annex I and twenty-six species listed in Annex II of the Habitats Directive. It is clear from the NPWS Article 17 and Article 12 reports on the conservation status of annexed habitats and species under the Habitats and Birds Directive respectively that current and future conservation threats and pressures on habitats and species are well known (An Taisce, 2017). According to the Department of Arts, Heritage and the Gaeltacht (2013) report on the Conservation Status of Ireland Habitats and Species only:

- 9% of the habitats examined had a 'favourable' status'
- 50% of the habitats examined were 'inadequate'; and

- 41% of the habitats examined assessed were 'bad'.

Of the sixty-one species examined:

- 52% were assessed as 'favourable';
- 20% were assessed as 'inadequate';
- 12% were assessed 'bad'; and
- 16% were assessed 'unknown'

In particular many species of waders and birds associated with lowland farmland have suffered shocking declines of over 80% in their population over the proceeding decades A third of Ireland's wild bees are threatened with extinction. It is likely that many species will follow the corn bunting towards national extinction in the coming decades unless urgent steps are taken to address biodiversity loss.

The European Environmental Agency (EEA) have identified urbanisation, in combination with land abandonment and intensification of agricultural production to have resulted in the decline of our natural and semi-natural habitats. EEA (2015) have suggested that in order to halt further loss and fragmentation, land take incentives for land recycling and compact urban development should be perused.

The RSES needs to align with the EU Birds and Habitats Directive, EU Water Framework Directive, UN Biodiversity Convention and the Marine Strategy Framework Directive.

4.2 Peatlands

Peat soils comprise 20% of the Irish land area, and 75% of organic soil carbon. While extensive through damaged areas of blanket bog remain, raised bogs have been increasingly and severely damaged by decades of peat extraction and drainage and are constituted a rare European habitat.

The hydrological services of Irish peatlands have been highlighted in the BOGLAND report. Peatlands provide a wide range of hydrological functions. Peatlands play a water storage and filtering role. Peatlands can buffer water supplies during short droughts. Peatlands can moderate runoff and reduce the risk of flooding and the hundreds of millions worth of damage that go with it (Renou-Wilson et al., 2011). The unsustainable utilisation of our peatlands has undermined their ability to fulfil their numerous ecosystem services (Renou-Wilson et al., 2011). Current estimates suggest that only c. 15% of Irish peatlands are in a natural state, with the remainder being either moderately or severely damaged. (Douglas et al., 2008).

The removal of large expanses of peatlands by mechanical excavation has inevitably had a major impact on the environment. Both domestic and industrial scale utilisation of peat require that extensive drains be dug to drain these wetlands. Drainage leads to the lowering of the water table and, by exposing the upper layers to the air, results in the drying out of the peat and alters the vegetation it supports (EPA, 2008). The channels left by machine cutting also act as drains, further increasing water removal from the ecosystem. The drainage of peatlands has serious impacts on water quality. The main impacts of peatland drainage on water quality are related to the loss of particulate peat into the aquatic environment. The wider systematic failure to apply the EIA Directive and regulate industrial horticultural extraction and domestic cutting is also causing degradation and run-off affecting lakes and rivers.

Peat is a finite resource and one that is quickly diminishing. Given the multitude of negative impacts that peat extraction and combustion is having on the environment we must now act to stop the degradation of our peatlands and restore them wherever possible.

The unsustainable nature of peat based industries must be recognised. These industries have no long-term future and the massive environmental and climate impact of those open mining operation is currently externalized. An exit date and strategy must be set for all peat based industries and subsidies be redirected to reskill employees in sustainable industries.

There is a need to ensure the full application of the Habitats Directive and conservation management of all Natura 2000 protected peatlands; to provide for the integration of peatland management with carbon management and agricultural and forestry policy. All continued peat cutting for all end uses including horticultural domestic cutting should be subject to EIA and planning control. All peat cutting in or affecting Natura 2000 sites should be subject to Appropriate Assessment.

4.3 Marine Ecosystems

Ireland, as one of Europe's leading maritime countries and with a marine jurisdiction ten times the land area, should be setting an exemplary standard in the implementation of the Marine Strategy Framework Directive.

Ireland has a legal obligation under EU law to provide an effective and compliant strategy to (i) meet the obligations of the Marine Strategy Framework Directive (MSFD), (ii) to maintain the Good Environmental Status of the marine ecosystem, (iii) to apply the precautionary and polluter pay principles in achieving this, and (iv) to set out environmental targets and indicators to achieve and maintain the Good Environmental status of the marine environment by 2020.

This should be a key part of Ireland's wider role in promoting action on the overriding threats to the global marine environment through climate change, ocean warming, ocean acidification, overfishing, marine litter waste and pollution, both through national initiative, through membership of the EU and taking a proactive role in the UN IPCC process, OSPAR, ESOO and other international structures.

Major leadership is required to reduce carbon emissions in order to reverse ocean acidification as much as climate warming. The most recent UN data highlights the converging impact on anthropogenic greenhouse gas on increasing ocean temperatures, and the inability of the ocean to absorb additional CO2, causing acidification and the accelerated damage to the marine ecosystem. The restoration of fish stocks is also key to restore declining populations of internationally important breeding colonies of birds around our coasts.

The RSES is a major opportunity for the region to take up one of the key provision of the MSFD in the designation of Marine Protected Areas. These protected sites should have site specific management plans which protect marine ecosystems from unsustainable practices. Public participation should be promoted so that Marine Protected Areas can provide alternative forms of income for coastal communities as well as helping to restore depleted fish stocks.

4.4 Water Quality

Human activities have led to deterioration in water quality over many years. Ireland faces an immense challenge in achieving 'good' status in all water bodies. The achievement of our Water Framework Directive obligations will have linked benefits in the protection and enhancement of biodiversity,

combating climate change, improving human health, protecting landscape and creating more sustainable settlement patterns.

According to the EPAs Water Quality in Ireland Report 2010-2012 (2015), 47% of rivers, 58% of lakes and 55% of transitional water were not of good status for the period 2010-2012. The two most important suspected causes of pollution in rivers are agriculture and municipal sources, accounting for 53% and 34% of cases respectively. There was for example also a 5% reduction in satisfactory quality lakes (10 lakes) compared to 2007-2009 (EPA, 2015)

Agriculture is also one of the main land uses in high status catchments and is as a result one of the most important pressures and threats on these extremely sensitive waterbodies. The percentage number of high quality sites had almost halved in the 22 years between 1987 and 2012 (EPA, 2015). Only 11.5% of rivers, 9% of lakes and 3.6% of transitional waters were considered to be of high status for the 2010-2012 period (EPA, 2015). The smallest pressure can impact on high status. Small increases in the amount of P and N (Nitrogen) can damage the sensitive ecology associated with these sites (Ní Chatháin et., 2012). Identified pressures include land-use changes associated with agriculture such as field drainage and fertilisation, animal access to waters, and sheep dip pesticides (Ní Chatháin et., 2012).

Livestock manures and slurries, and access to watercourses by cattle and sheep, can lead to significant losses of bacteria, viruses and protozoa to drinking, bathing and shellfish waters. This can affect the amenity value of the water environment and pose a risk to human health (Mawdsley et al., 1995; SEPA, 2007). Plants, soil and ultimately water courses which may subsequently be used as catchments for public water supplies may all be affected. (Mawdsley et al., 1995; SEPA, 2007).

The ongoing intensification of agriculture in areas with high status water bodies is a major concern and should be addressed in the RSES.

5.0 How do we address water and waste water capacity issues in our large urban centres?

5.1 Municipal and Urban Wastewater

According to the EPAs most recent water quality assessment the most widespread water quality problem in Ireland continues to be elevated nutrient concentrations (EPA, 2015). These water quality problems are noted to be greatest where there is intensive agriculture and where population densities are highest due to wastewater discharges to waters.

After agriculture, wastewater discharges to water from human settlements, including towns, villages and rural houses was the biggest source of water pollution. In 2012, the relative contribution of nitrogen and phosphorus to surface waters was 5% of nitrogen and 30% of phosphorus from wastewater discharges. The Implementation Review County Report issued by the European Commission highlighted Ireland's position stating there are substantial implementation issues in Ireland when it comes to the Urban Waste Water Treatment Directive (EC, 2017).

Municipal sources of pollution accounted for 28% of the river and canal sites with slight pollution. The majority of these cases were due to suspected nutrient losses from municipal wastewater treatment plants. Municipal wastewater accounted for 39% of the moderate pollution in our rivers and canals. Municipal wastewater treatment plants are the suspected cause of pollution for eight of the 13 seriously polluted river sites (bad ecological status). Serious pollution resulting from urban wastewater and industrial pollution was reduced to 17 km of river channel length. This was down

from 53 km in 2009. Urban wastewater treatment (UWT) also accounted for 4.9% of N and 28.7% of P in the marine environment (EPA, 2015). Wastewater discharges, emergency discharges from storm water outfalls, and drainage from domestic wastewater systems are the greatest issue for bathing water quality in Ireland. In 2014 there were 27 incidents related to sewage pollution (EPA, 2015). Waste water discharges were considered a contributing factor to the poor classification of all 7 of the 136 EU identified bathing waters which failed to comply with minimum water quality standards and were classified as 'poor' in 2014. These pollution incidences have serious impacts on the environment, human health and tourism.

Some of the key finding of the EPA's report (2015) were:

Infrastructure

- 12 (7%) large urban areas did not meet the European Union Directive requirement to provide secondary (biological) treatment.
- 7 large urban areas did not comply with the European Union Directive requirement to provide infrastructure to reduce nutrients and discharged effluent which did not meet nutrient quality standards.
- Untreated sewage was discharged from 45 areas, 27 of which are located in counties Cork, Donegal and Galway.

Effluent Quality

- 143 (82%) large urban areas complied with the mandatory European Union effluent quality and sampling standards.
- Just 24% of the waste water load discharged into sensitive areas from large towns and cities complied with mandatory European Union nutrient quality standards, up from 17.5% in 2013. Dublin and Cork were the major contributors to this low rate of compliance.

Incidents:

- 72% of the 1,294 incidents reported to the EPA related to breaches of discharge quality standards.
- 42% of incidents were attributed to insufficient treatment capacity and 21% of incidents were attributed to operational and management practices

Due to investment there have been improvements in wastewater treatment infrastructure and monitoring. However there is still significant non-compliance with the statutory timelines specified in waste water discharge licences for completion of improvement works and some important infrastructural works necessary to improve waste water discharges and comply with the European Union Directive requirements are still overdue. Approximately 46% of the improvement works due between 2009 and 2014 were reported as complete at the end of 2014, with the remainder still outstanding. Irish Water must address these matters and ensure compliance with licence requirements. Ireland's failures in relation to wastewater discharges are well documented with as case currently open in the European Court of Justice against Ireland on the UWTD and case 2013/2056.

Given the scale of the problem the level of investment being made by Irish Water into waste water treatment plants needs to continue and grow. Investment in infrastructure, monitoring and a reversal in the recent decline in capital expenditure are essential to provide the waste water treatment necessary to protect receiving waters and meet obligations under EPA authorisations and European

Directives. The targets set out in Irish Waters 25 years Water Services Strategic Plan, are not ambitious enough.

Point sources of pollution need to be eliminated. The elimination of all raw sewage discharges needs to happen as soon as possible. The discharge of poorly treated sewage is also not acceptable and needs to be addressed. All wastewater infrastructure must be in compliance with the requirements of the Urban Waste Water Treatment Directive and waste water discharge authorisations.

Sensitive areas as defined by the Urban Waste Water Treatment (Amendment) Regulations as waters that are eutrophic or may become eutrophic unless protected. The emphasis on eutrophic status is too narrow and is indicative of the fixation on the achievement of "good status". A broader environmental perspective must be considered when the need for investment is being made. The need to protect high status sites and designated aquatic habitats must be considered. Priority should also be given to waters designated under the Habitats and Birds Directives. Top priority should be given to eliminating point source discharges and wastewater discharges from important freshwater pearl mussels, Atlantic salmon and shellfish waters.

The quantum of zoned land must be carefully matched and phased with the existing and/or planned Population Equivalent capacity of the local waste water treatment plan. Where there is no commitment in the Water Services Investment to fund additional waste-water treatment capacity, surplus zoned land should be dezoned in accordance with the sequential approach. Appropriate wastewater treatment infrastructure must be put in place in tandem with new development, and any new development without simultaneous provision of such infrastructure should be considered premature.

5.2 Private Waste Water Treatment

Despite the proliferation of dispersed settlement, much of the soil conditions throughout Ireland are unsuited to private on-site waste water disposal. The legacy of this inappropriate development will be a significant challenge for the achievement of our binding Water Framework Directive targets.

Ireland has binding legal obligations under the European Communities Environmental Objectives (Groundwater) Regulations 2010 and European Communities Environmental Objectives (Surfacewater) Regulation 2009.

6.0 How do we support national commitments and respond to climate change in our region?

Climate change is a global issue that requires global solutions and participation from all countries. Ireland's greenhouse gas emissions per person are cited to be amongst the highest of any country in the world. Planning policy will play a significant role in both mitigating and adapting to Climate Change.

Ireland currently has legally binding targets to provide 40% of electricity, 12% of heat and 10% of transport energy from renewable sources, together with a 20% reduction in greenhouse gas emissions by 2020. The Department of Communications, Climate Action and Environment have acknowledge that Ireland will fall far short of meeting these targets. Beyond 2020, Ireland has been

mandated to reduce national emissions from transport, agriculture and buildings combined by 30% relative to 2005 levels. The Paris Agreement forged at COP21 provides further impetus for strong action on climate change mitigation in Ireland and internationally.

Emission figures compiled by the EPA (2012) identify agriculture as the single largest contributor to the overall emissions in Ireland, at 30% of the national total, followed by energy (power generation & oil refining) at 22% and transport at 19%. The remainder is made up by the residential sector at 12%, industry and commercial at 15%, and waste at 2%.

Ireland has major issues in energy efficiency which it needs to address in power generation, home heating and transport. The Director General of the EPA, Laura Bourke highlighted Ireland's position and efforts in reducing our GHG emissions, stating that:

> "*Ireland's economy is growing strongly again and the growth in the number of people at work benefits all of society. However, we haven't yet achieved a decoupling of economic growth from emissions, something most evident in the transport sector. For our current growth to be sustainable we must implement measures to decarbonise the transport and energy sectors, as described in the EPA's recently released State of the Environment Report, and ensure that increases in agricultural production aren't at the expense of the environment. Ireland is not currently on the right track to meet its 2020 targets, nor is it on the right emissions trajectory*."

It is clear that Ireland is currently facing significant challenges in meeting emission reduction target in the coming decades. If urgent action and policy implementation does not occur, Ireland will continue to see the impacts of sea level rise and intense storms and rainfall - increasing river and coastal flooding. Water shortages and water quality impacts will prevail and changes in the distribution of plant and animal species will continue to occur.

Strong policies are required to ensure that Ireland can achieve a low carbon, climate resilient, sustainable economy. The RSES needs to align with the overall objectives of the Climate Action and Low Carbon Development Act 2015 and must be integrated with the National Climate Mitigation and Adaptation Plan and provide measured targets to reduce transport emission; energy demands; sea level rise; flood risk; and infrastructure vulnerability. A positive approach to identifying suitable areas for renewable energy generation and its supporting infrastructure, and by maximising the opportunities for community-led and decentralised energy production must be encouraged.

Broad recommendations:

- There is no time for contradictory policies in respect of climate change. All policies favouring carbon and energy intensive infrastructure should be purposively discontinued, such as motorways, airport expansion and data centres. In the context of climate change and resource depletion, such investments carry a substantial risk of becoming stranded assets.

- Distributed electricity generation should be favoured as far as possible, including small hydro, solar power, geothermal and wind power, linked to community-based and cooperative ownership models.

- All new buildings must be either 'energy positive' or 'Zero Energy'; but even more importantly, a rapid programme of deep retrofit (to near zero energy) of the existing national building stock must be activated without delay.

- Land-use to mitigate and adapt to climate change and global resource depletion must be fundamentally rethought. Instead of the current profit-driven productivist model, natural land management offers greater potential for flood attenuation, coastal zone management, woodland creation, peatland restoration and local bio-energy resources to fuel, relocalised energy networks and sustain relocalised rural economies.

6.1 Agricultural Emissions

Current quantity and export driven Irish agricultural targets as set out in Food Harvest 2020 and Food Wise 2025 are in direct conflict with maintaining and enhancing biodiversity, as well as climate mitigation. Food Harvest 2020 was approved without SEA. Food Wise 2025 was subject to SEA, so that if monitoring of agricultural intensification shows adverse impacts, which is now clearly occurring, corrective action is now required.

The current annual cattle herd increase of 6% per annum is being accommodated by the planning system in granting permission for additional animal housing and poor enforcement control of wetland drainage. This is creating renewed water quality pressures in meeting the Nitrates Directive, and the overlapping impact of slurry and fertilizer run off is affecting water quality.

The most recent data presented by the Department of Agriculture, Food & the Marine at the EPA National Water Forum in June 2017 revealed that 12% of farms with a derogation are failing to comply and of the remaining 130,000 the failure rate is 30%. This challenges Government and industry claims on the sustainability of Irish agriculture concluding that "Overall, Irish agriculture in its current form is damaging to climate, water quality and biodiversity" and is not contributing to global food security. It concludes that "Agricultural intensification has caused significant negative impacts to Irish biodiversity". It cites the impact of agricultural intensification or inappropriate afforestation causing the "bad" conservation status of a wide range of internationally important Irish habitats, the decline of ten key farmland birds and that "One third of Irish wild bees are under threat of extinction". It also highlights the need for the large expansion of area based high nature upland farming.

The coalition of Irish development NGOs forming "Stop Climate Chaos" and The Environmental Pillar both of which include An Taisce have published a report "Not So Green: Debunking the Myths around Irish Agriculture" in 2016.

The following recommendations of the deliberations of the Citizens' Assembly should be integrated into the RSES:

- 89% of members recommended that there should be a tax on greenhouse gas emissions from agriculture. There should be rewards for the farmer for land management that sequesters carbon. Any resulting revenue should be reinvested to support climate friendly agricultural practices.

- 99% of members recommended that the State should review and revise supports for land use diversification with attention to supports for planting forests and encouraging organic farming.

6.2 Transport Generated Emissions

The 2016 EPA Update Report 'Greenhouse Gas Emissions Projections to 2020' highlights Ireland lagging position in our targets. Under transport it was concluded that emissions from this sector under the 'with measures scenario' are projected to increase by 16% in the period of 2014-2020. Under 'With Additional Measures' emissions are projected to increase by 10% (the latter scenario assumes the target of 10% renewable fuel use in transport is reached, 50,000 electric vehicles are deployed and more efficient eco-driving practices are in place)[2]. Our rising transport emissions are closely linked to the economic and employment growth that Ireland is experiencing.

With population and employment growth set to continue over the next two decades, the RSES needs to align with existing relevant strategies including the Department of Transport's policy 'Smarter Travel: A Sustainable Transport Future - A New Transport Policy for Ireland 2009-2020' which sets out a series of overriding policy objectives, summarised as follows:

1. Future population employment growth will predominantly take place in sustainable compact forms which reduces the need to travel for employment and services;
2. 500,000 more people will take alternative means to commute to work to the extent that the total share of car commuting will drop from 65% to 45%;
3. Alternatives such as walking, cycling and public transport will be supported and provide to the extend that these will rise to 55% of total commuter journeys to work;
4. The total kilometers travelled by the car fleet in 2020 will not increase significantly from current levels.

Our land-use and settlement patterns will play a major role in the transition to a low carbon economy and society. The benefits of consolidated nucleated settlement patterns will facilitate a reduction in transport congestion; vehicle miles travelled and transport generated emissions. The establishment of strong consolidated population centres would reduce energy demand; support local energy solutions; harness bio-regional resources; sustain re-localised circular economies; underpin regional development and produce more resilient, convivial and healthy places to live. Proposals for new fossil fuel dependent infrastructure, such as motorways, risk becoming stranded assists and contribute to induced demand for car-dependency and unsustainable sprawl.

6.3 Building Standards

It has been highlighted in the issues paper that will be a need for an absolute minimum of a half a million new homes, which is at least 25,000 additional homes, every year. All new builds should be built to a 'nearly zero energy' standard.

Although improvements have been made in recent years, 'Ireland's housing stock has been identified as being amongst the least energy efficient in Northern Europe'.[3] Buildings accounted for 35% of total final energy consumption and around 59% of electricity consumption in Ireland in 2014, making it the second largest energy end-use sector behind transport. Furthermore the building sector has been consistently identified as a major potential source of cost effective energy efficiency improvements at international level by bodies such as the IEA and at national level (SEAI – Energy Efficiency 2016 report).

[2] https://www.epa.ie/pubs/reports/air/airemissions/2020_GHG_Projections_2016_Bulletin.pdf

[3] http://arrow.dit.ie/cgi/viewcontent.cgi?article=1035&context=engschcivart

According to the Greenhouse Gas Emissions Projections to 2020 EPA update report, residential sector emissions are projected to increase by 1% under the 'with measures scenario' by 2020. Under the 'with additional measures scenario' emissions are projected to decrease by 13% by 2020. The latter scenario includes savings associated with Sustainable Energy Authority of Ireland's Better Energy Homes (residential retrofit) scheme and proposed future amendments to building regulations.

In order to curb our emissions generated in the building sector, higher standards of building regulations are required including efficiency standards for all heating and ventilation systems; standards for all energy systems appliances and installations in all sectors; and thermal performance installation building materials installation standards inspection and certification to meet progressive energy efficiency targets.

The floor size of a given house is a factor which determines associated energy use and costs per dwelling. House sizes impact on the amount of energy demanded in the residential sector as bigger dwellings tend to have a larger demand for heating due to their greater wall surface area and therefore higher heat loss. The number and size of large one off or non-estate dwellings that have been built in recent years are contributing to our high demand for energy. In 2015, the average floor area of non-estate houses granted permission was 243 square metres, compared to 143 square metres for houses in estates and 95 square metres for flats[4]. New builds should take account of landform, orientation, and massing in order to minimise energy consumption.

Given the relatively high energy costs for households, particularly in rural Ireland, there will be quantitative monetary benefits from improving the energy efficiency of our homes and businesses. New approaches to heating will be required including small-scale heat projects and retrofitting. No new development should not be permitted without reaching 'nearly zero energy' building standard. Improving the energy performance of the national building stock should not be a matter of personal preference, but a fundamental public policy imperative.

7.0 How do we measure the success of the RSES?

Please refer to the attached document on implementation and monitoring. It outlines the legal responsibilities on the authority in the formulation of the plan, ongoing monitoring and any necessary remedial action required under the Strategic Environmental Assessment Directive (SEA).

[4] http://www.seai.ie/Publications/Statistics_Publications/Energy_in_Ireland/Energy-in-Ireland-1990-2015.pdf

An Taisce
The National Trust for Ireland

LEGAL OBLIGATIONS FOR

STRATEGIC ENVIRONMENTAL ASSESSMENT

OF REGIONAL SPATIAL AND ECONOMIC STRATEGY

The Regional Spatial and Economic Strategy RSES is subject to requirement for SEA under Article 3(2) of Directive 2001/42/EC as it is a plan and programme for "*town and country planning and land use* "and which "*sets out the framework for future development consent of projects*" listed in the SEA Directive.

The preparation of the RSES needs to demonstrate exemplary engagement and compliance with the provisions of the SEA Directive and address the 2001 Guidance provided by the European Commission: *"Implementation of Directive 2001/42 on the Assessment of the Effects of Certain Plans and Programmes on the Environment"*

http://ec.europa.eu/environment/archives/eia/pdf/030923_sea_guidance.pdf

In 2016 The Commission published relevant European case law and further guidance which needs be addressed:

http://ec.europa.eu/environment/eia/pdf/EIA_rulings_web.pdf

The preamble to the Directive states that it arises from a range of Treaty obligations and other considerations including under (1):

Article 174 of the Treaty provides that Community policy on the environment is to contribute to, inter alia, the preservation, protection and improvement of the quality of the environment, the protection of human health and the prudent and rational utilization of natural resources and that it is to be based on the precautionary principle. Article 6 of the Treaty provides that environmental protection requirements are to be integrated into the definition of Community policies and activities, in particular with a view to promoting sustainable development

The SEA Directive sets out a sequential process for the relevant plan or programme:

1. Preliminary evaluation of state of the environment and relevant International, EU and national obligations
2. Assessment of likely significant effects on the environment under a range or headings
3. Mitigation of environmental impacts
4. Monitoring and the taking of "remedial action" if unforeseen adverse impacts arise

These are sent out in the following provisions of the Directive:

Article 5(1) requires provision of an Environmental Report. The preliminary information required is set out the **Annex 1 (b) to (e**) addressing the current state of the environment, environmental characteristics, existing environmental problems, and relevant obligation at International EU or national level:

(b) the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme;

(c) the environmental characteristics of areas likely to be significantly affected;

(d) any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC and 92/43/EEC;

(e) the environmental protection objectives, established at international, Community or Member State level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation;

Annex 1(f) defines the considerations for assessing "likely significant effects on the environment" including: "*biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors."*

Annex 1(g) sets out the requirement for Mitigation and offsetting of any significant adverse effects: "*Annex 1(g) the measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme."*

Article 10 sets out the provisions for monitoring and remedial action:

1. *Member States shall monitor the significant environmental effects of the implementation of plans and programmes in order, inter alia, to identify at an early stage unforeseen adverse effects, and to be able to undertake appropriate remedial action,*
2. *In order to comply with paragraph 1, existing monitoring arrangements may be used if appropriate, with a view to avoiding duplication of monitoring*

The provision of Article 10 are not just for monitoring, but the remediation of unforeseen adverse effects. Section 8.12 of the Commission guidance states that " *Unforeseen adverse effects is better interpreted as referring to shortcomings of the prognostic statements in the environmental report (e.g regarding the predicted intensity of the environmental effect) or unforeseen effects resulting form change of circumstances."*

1. PRELIMINARY ISSUES AND ENVIRONMENTAL PROTECTION OBJECTIVES

The overriding environmental issues facing the Region and relevant objectives can be summarised as follows:

- Climate Mitigation to achieve the level of emissions reduction action required under the Paris Agreement 2015 at Regional level.

- Climate adaptation to the increased storm and flood and animal fodder impact which the Region will face with global temperature average increase reaching 1.5 degrees.

- Applying UN Sustainable Development Goals (SDGs) at Regional level and UN New Urban Agenda to larger urban centres.

- Enhancing food security as well as low carbon and local food production networks.

- Achieving health and wellbeing standards with regard to access to clean air and water, services and recreation.

- Reducing resource consumption and waste generation advancing Circular Economy principles.

- Addressing the level of habitats and species with "Bad" or "Unfavourable "status as evaluated under the Habitats Directive.

- Poor food security and over-dependence on beef and dairy exports, which is having adverse biodiversity, water and ammonia impact, as well as on climate emissions.

- Ocean acidification, ocean plastic dispersal, and meeting marine eco system protection obligations of Marine Strategy Framework Directive.

- Meeting EU Directives and other obligations on air, water quality, waste, nitrates and other chemicals.

- Addressing unsustainable settlement and transport generation patterns.

- Meeting objectives of Council of Europe Conventions on landscape, archaeology and architectural heritage.

- Enhancing general quality of life standards, such as reduction in commuting time and access to parks, recreational and sporting facilities.

- Giving consideration to all, including wellbeing of children and an aging population.

2. MITIGATING LIKELY SIGNIFICANT EFFECTS ON THE ENVIRONMENT

The integration of the RSESs with decarbonisation at all levels is an overriding requirement to meet Paris Agreement targets.

In relation to a number of environmental indicators and factors, it is not sufficient to merely mitigate against further deterioration in impacts; significant improvement must be shown. This particularly applies to EU Directive obligations on biodiversity, the marine eco system and water quality, which require enhancement of current status.

The RSES requires specific timetabled and measurable actions at regional level to:

- Decarbonise food production, electricity generation, heating, industry, and transport.

- Integrate food production and processing with measures to enhance cultivation and diversity of plant-based food and local food production networks, and reduce production of animal agriculture.

- Protect high mineral soil for horticulture and crop production.

- Protect high carbon soils with elimination of peat extraction for energy and horticulture.

- Provide for achievement of renewable electricity generation targets at regional level.

- Ensure that new industrial and other developments such as data centres with significant energy demand are integrated with specific new and additional decarbonised energy provision and do not undermine renewable energy targets.

- Support optimum energy efficiency standards in new builds and large-scale retrofits of existing building stock.

- Support co-operative and community-based energy efficiency and renewable energy schemes.

- Focus all new transport, investment, and infrastructure on significantly increasing the modal share of public transport and cycling use and reduce car use, reinforcing compact settlements with good public transport access and curtailing further sprawl.

- Reinforce and enhance the role of the railway network for inter-regional and inter-urban travel, bringing rail line use to a level allowing investment in renewably sourced electrification or other technology. Restrict future port development to locations with rail access.

- Promote participation in car sharing schemes rather than car ownership.

- Recognise that lack of any currently viable mitigation for the climate emissions impact of aviation nullifies any case for airport expansion.

Achieving Sustainable Settlement, Service, and Transport Demand

To achieve this, the following measures are required:

- Proactive measures to deliver affordable and appropriately sited mixture of housing types by means of equitable land value taxation, services charges and other fiscal measures to incentivise sequential and appropriately sited development, disincentives for the hoarding of development land and building vacancy.

- Housing strategies ensuring walkable proximity to public transport of services and amenities to meet needs of students, families, single people, older people, and other households.

- Reinforcement of existing urban village settlements to appropriate density providing walkable access to public transport, enhanced safe cycling routes and services, while maintaining historic character or urban and village centres.

- Requirement for public transport and safe cycling route connections for all significant new or expanded employment facilities, schools, retail areas, other services, and recreational facilities.

- In view of the range of external economic costs of one-off housing imposed on society at large, limit its further accommodation to where there is an economic need, such as employment in agriculture on contiguous land.

- Recognise that dispersed and car based development should not continue, introducing road pricing and parking charge measures in urban edge retail and other locations to secure sustainable transport targets.

- Withhold road access or other service connection to development locations not meeting these requirement or standards.

- Recognise that the combination of need for the reduction of resource consumption, congestion, sprawl, travel distance and car dependence, promotion of healthy lifestyles nullifies any cost benefit case for further Motorway development, even with decarbonisation of road vehicles.

Reversing Biodiversity Loss

The six-yearly Article 17 Reporting under the Habitats Directive on the status of habitats and species completed in 2013 by the NPWS to the EU, shows the scale of the challenge facing Ireland. Of the 59 "Habitat Overall Assessments" only five stood at Favourable status, 30 Inadequate, and 24 Bad. Of the habitats identified as having bad status, there are clear groupings that stand out: firstly in relation to peatlands, including raised and blanket bogs, wet and dry heaths, and secondly for biodiversity rich grassland areas including orchid rich and species rich grasslands, Molinia and lowland hay meadow, and tall herb grasslands.

Of the 61 "Species Overall Assessments" only half were Favourable. 11 were Inadequate, including Atlantic Salmon and Marsh Fruitillary Butterfly and with a continued decline of a number of snail species. Agricultural intensification and forestry were identified as the main pressures on terrestrial and fresh water habitats.

Regional agriculture, forestry, and rural development policy needs to support the effective, timetabled actions move habitats and species with current bad and unfavourable status to favourable. This would include controls on bovine agriculture through the planning system.

Enhancing the Marine Ecosystem

As a country with 90% of its territorial jurisdiction being in the marine area, there is a particular onus on Ireland to take leadership in marine life protection and the implementation of the EU Marine Strategy Framework Directive. For marine fish species which are not reported under the Habitats Directive, the latest figures from the European Commission's Scientific, Technical, and Economic Committee for Fisheries confirm that overfishing continues. According to the most recently updated data, 41 % of fish stocks were still being overfished in 2015. Assessment and conservation status data on marine mammals and habitats generally in Irish waters is inadequate.

The protection and enhancement of the marine ecosystem needs to form the basis of all development and policy interfacing with the marine area.

Meeting Water Quality Targets

2017 EPA data has shown little change in water bodies in an unhealthy state, with a small improvement of 43% from 45% for Irish rivers, the 54% figure for lakes unchanged, and estuaries falling marginally from 70% to 69%. The EPA report shows that failure to prevent deterioration of water status at hundreds of water bodies around the country cancels out the improvements in water status at a similar number of water bodies in other parts of the country and continues loss of the most high status waters.

The RSES will need to demonstrate achievement of Water Framework Directive targets for enhanced water quality.

At the same time both existing demand as well as projected population increases require major investment in water supply and wastewater treatment. This requires a combined targeting firstly of investment to where the meeting of water quality targets is most urgent to achieve pollution abatement and secondly of infrastructure in the areas of increased population demand set out in the NPF.

Enhancing Air Quality

World Health Organisation (WHO) standards for air quality should be adopted. Targeted actions should also be taken to curtail diesel car use in urban areas and pollutant levels from burning fossil fuel and peat or wood.

Putting in Place an Effective Regional Land Use and Landscape Strategy

Coherent and interrelated policies and zoning provisions are needed to define settlement boundaries, biodiversity and landscape character protection, including areas of archaeological and cultural heritage significance, and accommodation of energy, forestry and other infrastructure.

Advancing the Multiple Benefits of Green Infrastructure

There is major potential to combine enhanced safe commuter and school cycle routes, local recreation and wider tourism benefits with an integrated national off-road cycling network integrating greenways and dedicated commuter routes around the main urban centres. This has multiple health and wellbeing benefits and well as reduction of car use and dependence

3. MONITORING

Effective monitoring by the Regional Authority is required in the implementation of the RSES to cover: climate emissions; carbon soil management, including peatlands; biodiversity data; air quality, including ammonia; water quality, including nitrates; transport generation and congestion; modal share between different transport modes; spatial planning data to measure sprawl development and location of population change; evaluation of impacts on landscape archaeology and architectural heritage; and other considerations.

4. **IMPLEMENTATION**

Community engagement in the implementation of the Strategy and SEA mitigation and monitoring measures is critical with the Public Participation Network (PPN) requiring the information provision, support, and resourcing for this.

The lessons learned from the failed National Spatial Strategy Ireland 2002 must be addressed. This is contained in Section 5.2 on a series of location tests required for new residential developments, including access to services. This was not complied with or implemented at local level in individual decisions.

The 2002 NSS predated the introduction of the SEA Directive. With the RSES process now subject to SEA, there is a legal onus to identify, mitigate, and monitor environmental impacts and take remedial action if adverse impacts arise.

5. REMEDIAL ACTION

There is a collective responsibility by the three Regional Authorities and on individual local authorities to achieve effective co-ordination in the achievement of the key National Planning Framework regional population targets and objectives to focus development in the four regional cities.

The onus is on the Regional Authority to ensure that individual local authorities do not undermine either the NPF overall spatial planning targets or the mitigation measures required under the SEA process.

If in the event of

1. The RSES failing to meet the obligations of the SEA Directive in mitigating adverse environmental impacts or;
2. Monitoring of the implementation of the RSES showing adverse impacts eg. increase in traffic generation and congestion and corrective action is not taken by the Regional Authority,

the Regional Authority would be exposed to legal action under the SEA Directive.