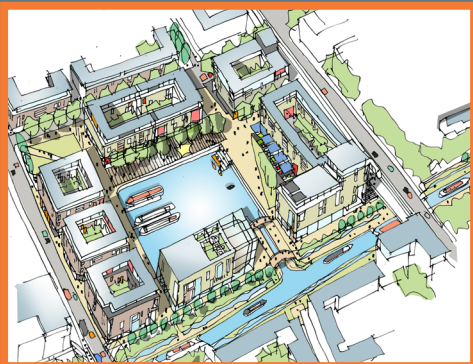


Clonburris Strategic Development Zone & Local Area Plan Planning Framework



Strategic Environmental Assessment Statement

5th November 2009



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Section 1. Introduction

1.1 Terms of Reference

This is the Strategic Environmental Assessment (SEA) Statement of the Clonburris SDZ/LAP Planning Framework.

1.2 SEA Definition

SEA is a systematic process of predicting and evaluating the likely environmental effects of implementing a plan, or other strategic action, in order to ensure that these effects are appropriately addressed at the earliest appropriate stage of decision-making on a par with economic and social considerations.

1.3 Legislative Context

Directive 2001/42/EC of the European Parliament and of the Council, of 27 June 2001, on the assessment of the effects of certain plans and programmes on the environment, referred to hereafter as the SEA Directive, introduced the requirement that SEA be carried out on plans and programmes which are prepared for a number of sectors, including land use planning. The SEA Directive was transposed into Irish Law through the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (SI No. 435 of 2004), and, the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (SI No. 436 of 2004). Both sets of regulations became operational on 21 July 2004.

The SEA Directive and the instruments that passed it into Irish Law require that after the adoption of a plan or programme, the plan or programme making authority is required to make a Statement available to the public, the competent environmental authorities and, where relevant, neighbouring countries. This Statement is referred to as an SEA Statement (DEHLG, 2004)¹.

1.4 Content of the SEA Statement

The SEA Statement is required to include information summarising:

- a) How environmental considerations have been integrated into the plan,
- b) How the environmental report, submissions and observations made to the planning authority on the Draft Plan and Environmental Report, and
 - any transboundary consultations have been taken into account during the preparation of the plan.
- c) The reasons for choosing the plan, as adopted, in the light of the other reasonable alternatives dealt with, and
- d) The measures decided upon to monitor the significant environmental effects of implementation of the plan.

1.5 Implications of SEA for the Plan Making Process

As a result of the above legislation, the Clonburris SDZ/LAP Planning Framework was required to undergo Strategic Environmental Assessment (SEA). The findings of SEA were expressed in an Environmental Report which was submitted to the Elected Members alongside the Draft Plan. The purpose of the report was to provide a clear understanding of the likely environmental consequences of decisions regarding the future accommodation of growth in Clonburris.

Amendments made to the Draft Clonburris SDZ/LAP at each stage of the process were evaluated in order to ascertain any further environmental consequences to those identified within the Environmental Report. Identified consequences were included within the Managers Reports to Council Members on the proposed amendments and variations. At each stage of the process the Elected Members were required by the legislation to take into account the Environmental Report - before the adoption of the plan or programme.

1. Department of the Environment, Heritage and Local Government (2004) Implementation of SEA Directive (2001/42/EC): Guidelines for Regional Authorities and Planning Authorities Dublin: Government of Ireland.

Section 2. How Environmental Considerations were integrated into the Plan

2.1 Introduction

Environmental considerations have been integrated into the adopted Plan through a number of mitigation measures which were recommended to be included in the Plan in the Environmental Report and as part of the plan-making process. The measures recommended by the Environmental Report and their level integration into the Plan are identified in the sections below.

2.2 Mitigation Measures for Specific Environmental Topics

Bio-diversity, Flora & Fauna.

- A detailed management and maintenance regime for the Grand Canal and Cappagh Overflow to accommodate amenity and environmental needs.
- A detailed landscape masterplan to establish a network of green spaces.
- Creation of an Environmental Database of baseline bio-diversity in the plan area.
- The need for EIA to be prepared for development projects within the plan area, should such projects be above the EIA regulation thresholds.

Population.

- A Social and Affordable Housing strategy for Clonburris to effectively implement varied housing needs.

Human Health Air & Noise.

- Measures to minimise the creation and impact of air and noise pollution at the construction and post-construction stages of development.

Soil & Water.

- Measures to ensure that surface water run-off does not enter the Grand Canal.
- Measures to protect existing soil structure where possible.

Sustainability.

- Establishment of a Sustainable Management and Appraisal Committee to provide detailed monitoring and review of designs and applications and provide feedback to continually improve the sustainability of Clonburris.

Transportation & Traffic.

- Promotion and improvement of public transport usage through detailed transport management strategies.
- Measures to maximise walking and cycling within the plan area.

Waste Water & Water Supply.

- Reduction of water usage and implementation of grey-water networks at all stages of development.

Solid Waste Collection and Disposal.

- Establishment and implementation of targets for domestic and construction waste reduction and recycling.

Information and Communications Technology.

- Measures to ensure underground networks do not impinge on identified areas of habitat importance.

Cultural Heritage.

- Measures to ensure development of the site does not unnecessarily impact on archaeological heritage.

Section 3. Environmental Report and Submissions & Observations

3.1 Introduction

This section details how both the Environmental Report and submissions and observations made to the planning authority on the Environmental Report and SEA process have been taken into account during the preparation of the plan.

3.2 SEA Scoping Consultations

Strategic Environmental Assessment scoping letters were sent to the Department of the Environment, Heritage and Local Government (DEHLG), Department of Communications, Marine and Natural Resources (DCMNR) and Environmental Protection Agency (EPA). The responses to these letters were taken into account during the carrying out of the Strategic Environmental Assessment. The responses were as follows:

The indicative list of ‘Nature Conservation Objectives’, as drafted by the Department of the Environment, Heritage and Local Government to be considered, is detailed below.

‘Nature Conservation Objectives’.

- Examine the impacts on the wetland and hedgerow habitats and the Grand Canal pNHA along with the flora and fauna that inhabit them.
- Protect retain and enhance biodiversity generally.
- Riparian zones and floodplains beside rivers, ditches and streams should be left intact.
- Assess effects of development upon backwater channels associated with the Grand Canal.
- Assess otter usage of the Canal, boundary ditches, backwaters and holt locations in the north facing embankment.
- A generous buffer zone is to be maintained adjacent to the Grand Canal the size and length of which is to be decided by ecological assessments.
- Assess and protect any bat populations.
- Establish existence of and protect examples of *Groenlandia densa* (Opposite-leaved Pondweed).
- Conservation of biological diversity (not confined to protected species).

‘Archaeological Objectives’.

- Avoid or lessen Impacts to archaeological heritage.

The *Environmental Protection Agency* offered guidance regarding SEA methodology, data sources and likely issues in Clonburris. This guidance was available on an ongoing basis throughout the Plan preparation process.

Response received from Department of Communications, Marine and Natural Resources indicated consideration was to be given to the following.

- Impacts on water quality by surface water drainage and effluent discharges.
- Interference with inland water morphology and aquatic habitats through watercourse diversions, channel diversions and alterations to bank vegetation.
- Potential reductions or diversion of water flows.

3.3 Submissions and Observations

The submissions and observations made to the Planning Authority on the Clonburriss SDZ/LAP Planning Framework and the Environmental Report after public display periods were dealt with in the Manager's report issued in November 2007. A total of 907 valid submissions were received. These addressed a range of issues related to the Environmental Report directly or to issues that were included in the Environmental Report. These issues were dealt with by recommendations to amend the Plan contained within the Manager's Report. The Manager's Report contained a total of 907 valid submissions. Issues which were raised in the submissions and in relation to which amendments were recommended included the following:

- Concern that the overall quantum of development proposed amounts to overdevelopment resulted in changes to the Plan strengthening the requirements that public transport capacity and evaluation of modal share are addressed before permission for development is given.
- Concern that there was insufficient consideration to Biodiversity was taken on board by expanding the area to be covered by the Biodiversity Action Plan and requiring that a Biodiversity Action Plan be submitted prior to development commencing.
- Clarification that the completion of this Plan and SEA does not preclude or negate the necessity for Environmental Impact Assessments to be prepared for development projects within the Plan area if they are prescribed above the threshold requirements.
- Concern about impacts of development on the Grand Canal pNHA and associated habitats resulted in additional detailed objectives regarding assessment of habitats and consultation with relevant governmental authorities prior to any development being permitted. Additionally, the location of building lines and built form was relocated away from the canal, and buildings heights reduced.
- The introduction as a requirement in Plan that prior to any built development taking place in the Clonburriss District Centre, that an Urban Form Development Framework for Clonburriss District Centre be developed and agreed with the Development Agency/Planning Authority.

The full list of Manager's Recommendations is contained with the Manager's Report on Submissions issued in November 2007

Section 4. Alternatives and the Plan

4.1 Introduction

The following Development Options were considered as part of the Strategic Environmental Assessment process

Option 1. Development as per South Dublin County Council Development Plan 2004

Option 2. Low Density within SDZ/LAP.

Option 3. Medium Density within SDZ/LAP.

Option 4. High Density within SDZ/LAP.

The development of the lands at Clonburriss must balance the requirement for sustainable development with the ecological and infrastructural constraints and quality of life issues of the site and surrounding area. Government policy from national to local level strongly advocates suitably dense development of appropriate land uses adjacent to public transport networks. Additionally, effective use of the public transport infrastructure in order to develop sustainable transport patterns should be uppermost in the proposals for the development of lands on the site. The lands are zoned for residential and District Centre use and are considered appropriate for suitably dense development.

The scoping exercise, desk studies and public consultation procedures undertaken prior to compilation of the SEA informed the design process of the Masterplan. The production of the SEA has been an iterative process, resulting in the Masterplan layout upon which Options 2-4 are based. The environmental and infrastructural issues raised in the SEA have been included in the Masterplan. The most suitable development option therefore, would provide a balance between the strategic location of the site and minimisation of key impact issues. The table below (which notes high scores as being a favourable response) indicates the development scenarios with the most beneficial characteristics from the assessment matrix.

Table A. Comparative Development Scenario Matrix.

Summary Table	Options			
	No. 1	No. 2	No. 3	No. 4
Specific Development Objectives				
Bio-diversity, Flora & Fauna.	5	9	9	7
Population.	3	7	9	8
Air & Noise.	0	3	3	1
Soil & Water.	0	1	1	1
Sustainability.	3	9	11	9
Transportation & Traffic.	2	14	17	11
Waste Water & Water Supply.	1	4	6	8
Energy.	1	7	8	9
Solid Waste Collection and Disposal.	1	3	3	3
Information and Communications Technology.	0	4	7	8
Cultural Heritage.	3	6	6	6
Landscape & Townscape.	1	7	7	6
Total score for each option.	20	74	87	77

While all of the environmental issues affecting the land require amelioration, the table above indicates the favourability of the Masterplan Layout in terms of beneficial advantage for Bio-diversity, Flora & Fauna; Population; Sustainability; and Traffic & Transport in terms of the sustainable design and layout of the proposed plan. The baseline study of the site and surrounding area indicated congestion on the existing road network. The study also indicated that future upgrades to the roads network will make little difference to the congestion currently being experienced.

Focussing appropriate levels and forms of development around public transport upgrades to serve the site is key to any future proposals for the site. The nature, scope of development and form taken must maximise access to public transport, reduce demand for public and private transport movements, co-locate land uses and create walkable neighbourhoods. The careful design of these issues can significantly reduce numbers of two, or even one car households.

4.2 The Options Considered

Option 1: This includes the development of the lands as zoned under the South Dublin County Council Development Plan 2004-2010. The Development Plan proposes an 'A1' zoning for the development of new residential communities subject to the preparation of a LAP, and a 'DC' zoning to allow for the development of District Centre facilities. Additional areas are also zoned for development of existing residential communities and the provision of open space. This option presumes that increased densities will be possible around the Fonthill and Kishoge train stations, but the otherwise the level of development will generally continue as previously experienced. Development could include 7-10,000 residential units, 20,000 sqm of retail floorspace and 50-60,000sqm of employment floorspace.

Option 1, which relies on the Development Plan for guidance, scores poorly in terms of general compliance with the Specific Development objectives. The limited levels of control of development the LAP site resulted in low compliance with development objectives in most of the environmental categories. Objectives which related to environmental categories such as bio-diversity, population, sustainability and transportation & traffic would not be achieved due to the lack of a detailed masterplan for the site. This was in contrast to the much higher compliance achieved by the proposed SDZ/LAP proposal in these categories.

Option 2: This option allows for low density development under the SDZ/LAP planning framework. A detailed Planning Scheme would be provided as well as a Local Area Plan, along with phased development of public facilities in tandem with residential and other development. Development would be phased to coincide with public transport improvements with high density development around public transport nodes. It is projected that development could include between 10-11,000 residential units, 40-50,000 sqm of retail floorspace and 150,000-170,000 sqm of employment floorspace.

The assessment revealed that Option no. 2 would provide a high quality environment for residents and users of the site. High levels of environmental protection would be achieved in the form of preservation of the Canal and associated structures, along with reduced amenity demand on more fragile sites. Adequate public transport and the creation of a distinctive sense of place all combine to provide an attractive district. The option is considered, however, not to be the most sustainable option for the development of the site. In order to develop the site in the most sustainable manner, optimum use should be made of the infrastructural servicing of the land. It is considered that the optimum use of the land would be represented by providing a maximum of density and population which can support the proposed public transport, but which would not create significant negative effects on the receiving environment.

Option 3: This option allows for medium density development under the SDZ/LAP planning framework. A detailed Planning Scheme and LAP would be provided, along with phased development of public facilities in tandem with residential and other development. Development is to be phased to coincide with public trans-

port improvements with high density development around public transport nodes. It is projected that development could include 15-16,000 residential units, 60-65,000 sqm of retail floorspace and 160-180,000 sqm of employment floorspace.

Option 3 proposes the optimum level of development for the site without significant adverse impact on the environmental or infrastructural issues identified in the scoping sections of the Environmental Report. The quality of the receiving environment is maintained while the quality of life issues relating to the users of the site and surrounding area are of a high standard. Option no. 3 creates the conditions for the most sustainable development of the site in achieving a balance between accommodating the majority of the requirements of the resident population on the site, while attempting to minimise impact on the receiving and surrounding environment.

The population would be of a sufficient size to create the critical mass required for the provision of a hierarchy of local facilities, without impacting on the Grand Canal and associated areas of biodiversity value. The design and phased development of the lands in accordance with the plan would provide for the location of high density development in proximity to, and supporting, public transport nodes. Additionally, it is considered that the proposed population will not create significant additional demand for car-based movements. This will result in controlled impacts on the surrounding roads network.

Option 4: This option allows for high density development under the SDZ/LAP planning framework. A detailed Planning Scheme and LAP is to be provided, along with phased development of public facilities in tandem with residential and other development. Development is to be phased to coincide with public transport improvements with high density development around public transport nodes. It is projected that development could include 20-21,000 residential units, 70-75,000 sqm of retail floorspace and 180-200,000 sqm of employment floorspace.

Option 4 would appear to be the most efficient option in terms of provision of networks and services. The density and scale of retail, commercial and employment development proposed within the option scored highly in terms of provision of facilities which in turn allow for the creation of sustainable walkable neighbourhoods, and should reduce travel demand and facilitate sustainable transport patterns. Option 4 did score negatively with regard to a number of the most significant Specific Development objectives.

During assessment under the Traffic & Transportation section of Table 7.2 (Evaluation of Development Scenarios for Lands at Clonburris), it became clear that Option 4 would create unacceptable levels of additional congestion on the surrounding road network. Traffic and transportation studies undertaken during the course of assessment of the site indicated that the public transport network would not have sufficient capacity to accommodate the transport needs of the population under Option 4. It is believed that the inability to satisfy the transport needs of the population by way of public transport would result in increased private transport trips, creating congestion on the surrounding roads network.

The scale and quantum of residential and other development would be too great for travel demand to be substantially contained within the site or managed effectively by public transport. This would potentially result in greater levels of car usage, causing congestion within and outside the site. The level of car ownership would also reduce the quality of life within the site through increased congestion, reduction of safety and accessibility for pedestrians and cyclists. The increased population would also negatively impact on the protected areas associated with the Grand Canal due to increased amenity demand and footfall pressure.

4.3 Adoption of Clonburris SDZ and Local Area Plan

A series of meetings were held with the Elected representatives in December 2007 and January 2008 in relation to the adoption of the Plan. The major concern of the Elected Representatives in respect of the draft Plan was that the quantum of development proposed, particularly in relation to the ultimate number of residential units, was excessive and that it should be significantly reduced.

Reasons given included

- The perceived adverse impact this quantum of development would have on already congested roads.
- The lack of capacity on public transport systems to accommodate the number of people expected to use it.
- The resulting increase in height and density of development required to accommodate the proposed development which was felt to be out of character with the surrounding area.

The Elected Representatives decided by resolution to make the Draft Clonburris SDZ Planning Scheme, subject to 49 No. variations and modifications as recommended by the County Manager and 4 No. variations and modifications as adopted by Council Motion. The principal intent of the latter motions was to reduce the quantum of development significantly and to tie in development with an earlier phasing of key public transport infrastructure. It was noted in the document relating to the 'Decision of South Dublin County Council on the 9th of January 2008' that the County Manager did not support motions 50 and 52, which reduced the quantum of development allowed and tied additional infrastructural development, which is not directly related to the development of Clonburris, into the phasing of the SDZ.

The decision of South Dublin County Council was appealed to An Bord Pleanála on the following grounds: traffic, phasing of transport infrastructure, quantum of development, density & land-use, issues regarding the district centre, retail, urban form, public open space, services, phasing & implementation, the sustainability toolkit, Cappagh neighbourhood issues and finally the plan making process itself.

An oral hearing was held during May & June 2008 and An Bord Pleanála issued its decision on 5th November 2008. The major elements of the Board's decision relevant to the Strategic Environmental Assessment were as follows:

- › Quantum of Development;
 - Scenario A Up to 9,000 residential units (+1,600 in the LAP)
 - Scenario B Up to 11,000 residential units (+2,800 in the LAP)
 - Scenario C Up to 11,505 residential units (+3,500 in the LAP)
- › The completion of the Scheme does not preclude or negate the necessity for Environmental Impact Assessments to be prepared for development projects within the SDZ area if they are above the threshold requirements listed in the Schedules to the 'Environmental Impact Assessment Regulations implementing Directives 85/337/EEC and 97/337/EU.
- › All planning applications for development (irrespective of whether or not they are below these threshold requirements) that are in locations identified in the Biodiversity Action Plan as sensitive locations, or that would, in the opinion of the Development Agency, be likely to have a significant impact on the biodiversity of the area, shall be accompanied by a biodiversity assessment report.
- › Surveys of existing site characteristics identified above will need to be undertaken for the site prior to submission of planning applications & these surveys will be informed by a biodiversity action plan. The Biodiversity Action Plan shall be subject to consultation with relevant national and local wildlife authorities, including the National Parks and Wildlife Service of the Department of the Environment, Heritage and Local Government. The Plan shall guide the development of all of the SDZ lands, and shall be used to assess

the acceptability of all applications for development. Statement of compliance with the Biodiversity Action Plan is also needed in order to ensure the protection of ecological resources.

- › The floodlit multi-use all weather surface provided for in Clonburris Park shall be located north of the Park, away from the Canal & subject to the conclusions of the Biodiversity Action Plan.
- › An evaluation is required by the Development Agency of the performance of the development to date against the Travel Mode Splits set out in Table T5.6 of the Mobility Management Plan Framework and Strategy dated August 2007 prepared by JMP; and the identification of any additional measures required to ensure that the Travel Mode Splits are met; and a plan for the implementation of such measures.
- › Edges of the canal basin shall be part of the public realm & a clear gap of 2 metres shall be provided along all sides of the basin which shall be open to public access. All boardwalks/mooring points shall be of timber, with metal supports, and not of concrete, and the towpaths shall be finished in compacted stone, not tarmac, asphalt or concrete.
- › The design and implementation of lighting (including internal and external lighting in buildings facing these areas) in locations providing significant habitats for protected species (for example along Grand Canal or Railway Road) should minimise light pollution and ecological impact through use of appropriate lighting levels, lamp selection and design, and lighting controls.
- › Canal overbridges shall include features to facilitate bat-roosting. Design, fabrication and construction method shall also be conceived to minimize disturbance to habitat. Prior consultation shall be required to be undertaken with relevant national and local wildlife bodies, including the National Parks and Wildlife Service of the DoEHLG, on appropriate design and construction method.
- › The Board also instructed to reinstate and enhance continuity of hedgerow habitat along the north side of the canal. On the south side of the canal west of the 11th Lock, where hedgerow is discontinuous, provide continuity of hedgerow habitat by new native boundary planting. On the south side of the canal east of the 11th Lock, where no continuous hedgerow currently exists, no reinstatement is proposed. In this location, the continuity of the ecological corridor will be maintained by the planting of native tree species integrated into the public realm landscaping design. These requirements do not preclude the provision of gaps to provide visual connections of maximum 10 metres width to ensure passive surveillance and access to the towpath.
- › Clonburris Lock drawing: Building line to be set back to allow for continuity of ecological corridor.

Structure Landscape

- › Establish new hedgerow habitat in the landscaping of parks and other public realm, SUDS system swales and other structural landscaping. Where appropriate hedgerows shall be employed as the boundary treatment between plots in medium- and low density housing areas.
- › A Method Statement for the construction, planting regime, and species selection of both 'dry' and 'wet' hedgerows shall be provided with all relevant planning applications.
- › Every major park shall include a wetland-based habitat element appropriate to the scale, layout and character of the space. Where appropriate neighbourhood parks shall include a wetland based habitat element appropriate to the scale, layout and character of the space.
- › The design, planning and implementation of the SUDS system shall have regard to the potential to enhance biodiversity.
- › Roof gardens shall be provided for the use of all residents of buildings of six or more storeys, for which an access and management plan shall be submitted as part of any planning application.
- › At least 10% of all construction materials used in development shall comprise recycled or reused materials, which shall be identified and agreed in advance with the Development Agency. At least 10% of the concrete used in all developments shall incorporate either recycled aggregates or cement containing recycled industrial byproduct (or other similar material acceptable to the Development Agency), or both.

- › Provision of a District Heating Network within each neighbourhood will form part of the fixed infrastructure for the EcoDistrict.
- › All recycling plans will be based on separation at source of three main waste streams: organic waste, dry recyclable waste, and residual waste.

Clonburris Local Area Plan:

The Council determination of and decision on, the Draft Clonburris Local Area Plan took place on 18th December 2007. The County Council proposed to vary the Clonburris Local Area Plan with the adoption of a number of 3 no. variations, principally in relation to the reduction of the quantum of development proposed.

The reduction of the quantum of development proposed in the variations to the LAP would result in an overall population within Clonburris (LAP and SDZ) of between 13,500 and 15,000 persons. This would result in a quantum of residential development between scenarios 2 and 3.

The planning impacts of the proposed reduction were noted in the Managers Report on the 3 no. LAP variations, specifically, that regard must be had to the optimum sustainable use of land in an area to be served by a railway station and improved railway services. This viewpoint was supported by submissions on the variations by the DTO and the NRA.

The Variations to the Proposed Clonburris Local Area Plan were displayed in public until the 5th February 2008. The Manager's Report on the Proposed Variations to the LAP was considered at the Council Meeting on 10th March 2008 and at a Special Council Meeting held on 7th April 2008. The Local Area Plan has now been formally adopted with the variations in relation to the reduction of the quantum of development included.

Section 5. Monitoring

5.1 Introduction

The SEA Directive requires that the significant environmental effects of the implementation of plans and programmes are monitored. This SEA Statement identifies the proposals for monitoring the Plan which were adopted alongside the Plan.

Monitoring enables, at an early stage, the identification of unforeseen adverse effects and the undertaking of appropriate remedial action. In addition to this, monitoring can also play an important role in assessing whether the Plan is achieving its environmental objectives and targets - measures which the Plan can help work towards - whether these need to be re-examined and whether the proposed mitigation measures are being implemented.

5.2 Indicators and Targets

Monitoring is based around the indicators which were chosen earlier in the process. These indicators allow quantitative measures of trends and progress over time relating to the Strategic Environmental Objectives used in the evaluation. Focus will be given to indicators which are relevant to the likely significant environmental effects of implementing the Plan and existing monitoring arrangements will be used in order to monitor the selected indicators. Each indicator to be monitored is accompanied by targets which are derived from the relevant indicator. Table B below shows the indicator and targets which have been selected with regard to the monitoring of the plan.

Table B. Monitoring Measures.

Environmental Issue.	Environmental Protection Objectives	Monitoring Proposals.
Bio-diversity, Flora & Fauna.	To maintain the biodiversity of the site through protection of existing habitats where possible.	South Dublin County Council to monitor and enforce ecological assessments, habitat management strategies, and Clonburris Landscape Masterplan submitted as part of the development process. In addition, Waterways Ireland, & National Parks and Wildlife Services to monitor activity on Grand Canal & Associated sites.
Population.	To provide the basis for a new community to meet housing need in the Dublin region in a sustainable manner.	South Dublin County Council to monitor housing mix, house type.
Human Health. Air & Noise.	Not to increase the impact of Air, Soil, Noise & Water pollution on the existing environment.	South Dublin County Council to monitor design proposals and site management procedures. EPA standards to be adhered to.
Soil & Water.	Not to increase the impact of Air, Soil, Noise & Water pollution on the existing environment.	South Dublin County Council to monitor site management proposals, along with identification and maintenance of existing soil structure through use of overall landscape masterplan. EPA standards to be adhered to.

Environmental Issue.	Environmental Protection Objectives	Monitoring Proposals.
Sustainability	To create a sustainable community that utilises best current practice and standards as appropriate.	South Dublin County Council to establish, participate in and monitor the Clonburris Management Committee.
Transportation & Traffic.	To maximise usage of public transport and minimise adverse impact on the existing road network.	South Dublin County Council/DTO to monitor submitted transport management plans, walkable neighbourhood strategies, & public transport strategy plans.
Waste Water & Water Supply.	To ensure appropriate provision of network infrastructure is made to ensure development in this area.	South Dublin County Council to monitor implementation of grey-water schemes along with reductions in water usage.
Energy.	To ensure appropriate provision of network infrastructure is made to ensure development in this area.	South Dublin County Council to monitor solar design objectives, low emissions building strategy and thermal building design proposals, among other energy conserving issues.
Solid Waste Collection and Disposal.	To reduce waste production and maximise recycling.	South Dublin County Council to monitor detailed targets and strategies relating to reducing and recycling domestic waste in addition to enforcing separation of waste and monitoring waste outputs from construction sites. EPA assistance in monitoring such issues will be utilised.
Cultural Heritage.	To protect and enhance items or areas of Cultural Heritage on the site.	South Dublin County Council to monitor noted areas of heritage and cultural value. It is expected that Waterways Ireland, The National Parks and Wildlife Services and the Heritage Council would also be involved.
Landscape & Townscape.	To enhance and protect current landscape features of value on the site and create quality urban environment and public realm on site.	South Dublin County Council to monitor the locations and recommendations noted by any Landscape Masterplan for Clonburris. Additional monitoring relating to the Grand Canal will be provided by Waterways Ireland & The National Parks and Wildlife Services.

5.3 Sources

Measurements for indicators will come from a number of sources;

- The Development Management Process within South Dublin County Council will provide passive monitoring of various indicators and targets on an application by application basis.
- Ecological Assessments, Biodiversity Action Plans, Management Strategies and the Clonburris Landscape Masterplan are to be assessed by the County Council as part of the development process.
- The Clonburris Management and Appraisal Committee will oversee the implementation and measurement of sustainable indicators within Clonburris.
- There are existing sources for each of the indicators and include those maintained by the Council and the relevant authorities e.g. the Environmental Protection Agency, the National Parks and Wildlife Service and the Central Statistics Office.

Where significant adverse effects are likely to occur upon, for example, entries to the Record of Protected Structures or ecological networks as a result of the undertaking of individual projects or multiple individual projects within the Plan area, such instances are to be identified and recorded and should feed into the monitoring evaluation.

5.4 Reporting

Monitoring of the effects of implementing the SDZ/LAP will be reported to the Sustainability Management and Appraisal Committee (SMAC) and the Steering Group, both of which will comprise public representatives, expert policy advisers, members of the Planning Authority and representatives of Government and Statutory bodies.

5.5 Responsibility

The Council/Clonburris Development Agency are responsible for collating existing relevant monitored data, the preparation of monitoring reports for the Steering Group and SMAC, the public publication of these reports and, if necessary, the carrying out of corrective action.