

STRATEGIC ENVIRONMENTAL ASSESSMENT SCOPING REPORT

FOR THE

TIPPERARY COUNTY DEVELOPMENT PLAN 2022-2028

for: Tipperary County Council

Civic Offices
Nenagh
County Tipperary



Comhairle Contae Thiobraid Árann
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Section 1 Introduction and Background

1.1 Introduction and Terms of Reference

Tipperary County Council intends to review the existing South Tipperary Development Plan 2009 (as varied) and North Tipperary County Development Plan 2010 (as varied) and prepare new Tipperary County Development Plan 2022-2028 under Sections 11 and 12 of the Planning and Development Act 2000 (as amended).

As the Development Plan will cover an area the population of which exceeds 10,000 persons, Strategic Environmental Assessment (SEA)¹ is required by the Planning and Development (SEA) Regulations (as amended) to be undertaken on the Plan.

This SEA Scoping Report communicates and defines the scope of the environmental issues which are to be dealt with by the SEA together with the level of detail to which it is intended to address these issues, as per the SEA Guidelines². It has been informed by SEA consultations with environmental authorities.

1.2 Overview of the Draft Plan, SEA and AA Processes

Figure 1.1 provides an overview of the integrated Plan-preparation, SEA, Appropriate Assessment (AA)³ and Strategic Flood Risk Assessment (SFRA)⁴ processes. The preparation of the Draft Plan, SEA, AA and SFRA are taking place concurrently and the findings of the SEA, AA and SFRA will inform the Draft Plan.

Taking into account the scope detailed in this SEA Scoping Report and SEA scoping submissions, and consideration of these submissions by the SEA process, environmental impacts will be predicted, evaluated and mitigated. The findings of the assessment will be presented in an SEA Environmental Report that will accompany the Draft Plan on public display as part of the required statutory public consultation. The findings of both the AA and SFRA will be integrated into the SEA Environmental Report. AA and SFRA documents will also accompany the Draft Plan on public display. The SEA will follow elements of Integrated Biodiversity Assessment⁵.

Submissions received following public consultation of the Draft Plan will be responded to in the Chief Executive's report on public consultation, with updates made to the SEA and AA documentation where relevant. Proposed Material Alterations will be screened for the need to undergo SEA and AA and full, detailed assessments will be undertaken where required.

The SEA and AA documents will accompany the Proposed Material Alterations, if made, on public display. Submissions from that round of public consultations would be responded to in the Chief Executive's report on public consultation, with updates made to the SEA and AA documentation where relevant.

Any proposed modifications would be examined to ensure that they would not be likely to affect the Natura 2000 network of designated ecological sites and to ensure that they would not be likely to result in significant environmental effects.

¹ SEA is the formal, systematic evaluation of the likely significant environmental effects of implementing a plan or programme before a decision is made to adopt it.

² *Implementation of SEA Directive (2001/42/EC): Assessment of the Effects of Certain Plans and Programmes on the Environment Guidelines for Regional Authorities and Planning Authorities (DEHLG, 2004)*, Page 18: "It is recommended that at the end of the scoping procedure, the plan-making authority should prepare a brief scoping report of its conclusions as to what information is to be included in the environmental report, taking account of any recommendations from the environmental authorities."

³ AA is a focused and detailed impact assessment of the implications of a strategic action or project, alone and in combination with other strategic actions and projects, on the integrity of a European site in view of its conservation objectives.

⁴ SFRA is an area-wide examination of the risks of flooding to support spatial planning decisions such as the zoning of particular areas for development.

⁵ As detailed in the EPA's 2013 Integrated Biodiversity Impact Assessment - Streamlining AA, SEA and EIA Processes: Practitioner's Manual.

When the Plan is adopted, the SEA, AA and SFRA documents will be finalised and SEA Statement, which will include information on how environmental considerations were integrated into the Plan, will be prepared. The Plan will be implemented and environmental monitoring will be undertaken.

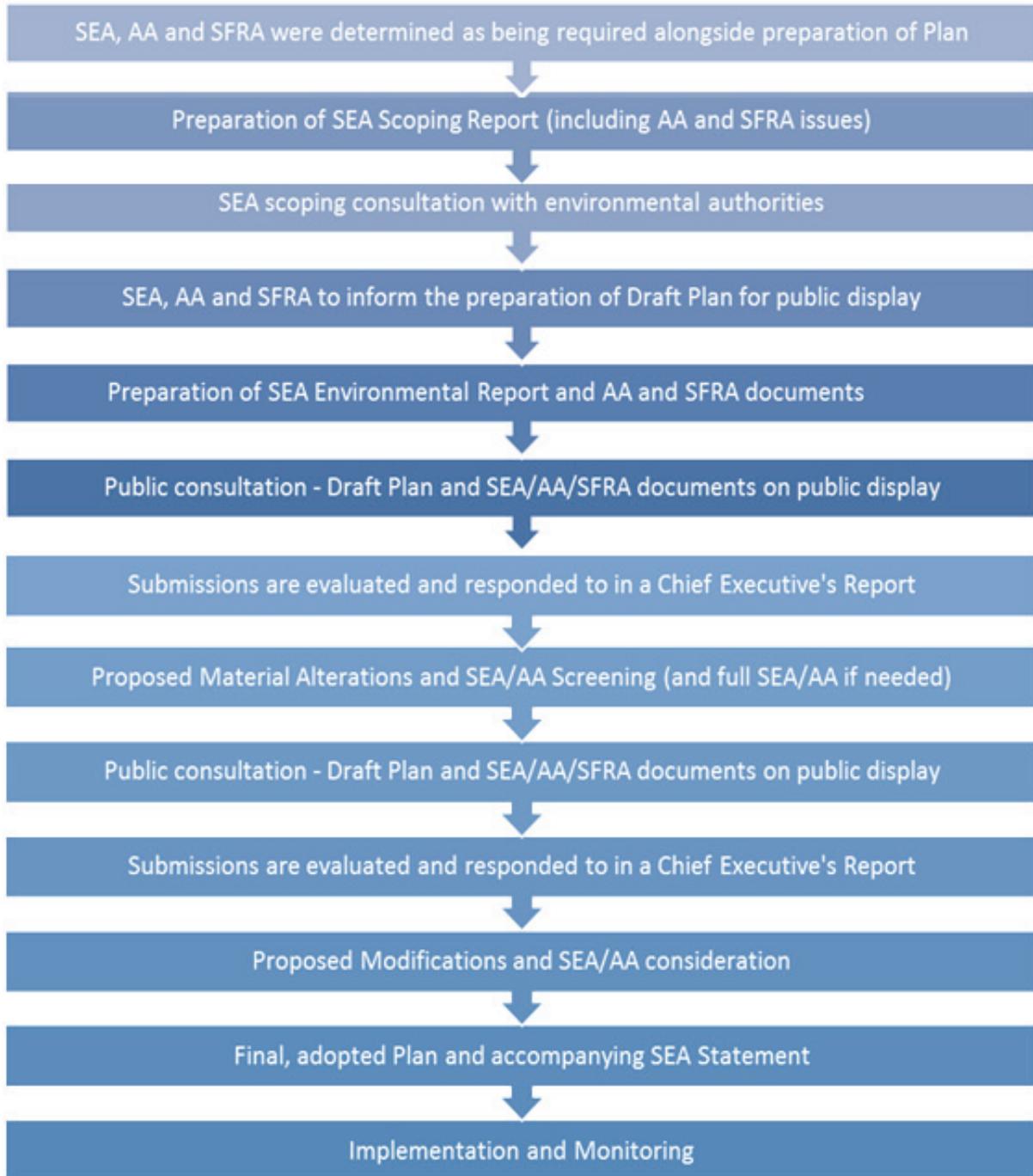


Figure 1.1 Overview of the SEA Process in the Review and Preparation of the County Development Plan (including AA and SFRA processes)

1.3 Process Detail

1.3.1 Legislative Context for SEA

Directive 2001/42/EC 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 (Statutory Instrument Number (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 Regulations have been amended by the European Communities (Environmental Assessment of Certain Plans and Programmes) (Amendment) Regulations 2011 (SI No. 200 of 2011) and the Planning and Development (Strategic Environmental Assessment) (Amendment) Regulations 2011 (SI No. 201 of 2011).

1.3.2 Appropriate Assessment

Screening for Appropriate Assessment (AA), and possibly subsequent stages of assessment, will be undertaken alongside the preparation and adoption of the Draft Plan. AA is an impact assessment process concerning European Sites (which collectively comprise the Natura 2000 network) - these sites have been designated or proposed for designation by virtue of their ecological importance. The Habitats Directive⁶ requires, inter alia, that plans and programmes undergo an AA process to establish the likely or potential effects arising from implementation on the Plan. If the effects are deemed to be significant, potentially significant or uncertain then the Plan must undergo Stage 2 AA.

1.3.3 Strategic Flood Risk Assessment

A Strategic Flood Risk Assessment (SFRA) will also be undertaken alongside the preparation and adoption of the Draft Plan, identifying and assessing flood risk to inform the content of the Plan including policies, objectives and land use zoning. The requirement for SFRA is provided under 'The Planning System and Flood Risk Management Guidelines for Planning Authorities' (Department of the Environment, Heritage and Local Government and Office of Public Works, 2009) and Circular PL 2/2014 (Department of Environment, Community and Local Government).

1.3.4 Outcomes of the SEA and AA Processes

The SEA, AA and SFRA processes will facilitate the integration of environmental considerations into the Plan, including: policies and objectives contributing towards environmental protection and management and the sustainable development; and the integration of environmental considerations into the land use zoning included as part of the Plan.

1.3.5 Scoping and consultations with environmental authorities

As part of the SEA scoping process, environmental authorities⁷ specified under the Planning and Development (SEA) Regulations (as amended), were notified that a submission or observation in relation to the scope and level of detail of the information to be included in the SEA Environmental Report can be made to the Council. Scoping Notices issued to these authorities were accompanied by an earlier, draft version of this SEA Scoping Report.

⁶ Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora

⁷ The following authorities are being notified: Environmental Protection Agency; Department of Environment, Climate and Communications; Department of Agriculture, Food and the Marine; Department of Tourism, Culture, Arts, Gaeltacht, Sport and Media; Department of Housing, Local Government and Heritage; Galway County Council; Clare County Council; Limerick City and County Council; Cork County Council; Waterford County Council; Kilkenny County Council; Laois County Council; and Offaly County Council.

Two submissions were received in response to the SEA Scoping Notices and Draft SEA Scoping Report from the following environmental authorities:

- Environmental Protection Agency; and
- Department of the Environment, Climate and Communications (one from the Waste Policy and resource Efficiency Division and one from Geological Survey of Ireland).

The issues raised in these submissions and associated SEA responses are detailed on Table 1.1 below.

Table 1.1 SEA Scoping Submissions and SEA Responses

Ref.	Issue raised in submission	SEA Response
1	Submission from the Environmental Protection Agency	
A	We acknowledge your notice, dated 17th September 2020, in relation to the Scoping Report/Issues Paper for the Tipperary County Development Plan 2022-2028 (the 'Plan'). The EPA is one of five statutory environmental authorities under the SEA Regulations. In our role as an SEA environmental authority, we focus on promoting the full and transparent integration of the findings of the Environmental Assessment into the Plan and advocating that the key environmental challenges for Ireland are addressed as relevant and appropriate to the Plan. Our functions as an SEA environmental authority do not include approving or enforcing SEAs or plans.	Noted.
B	As a priority, we focus our efforts on reviewing and commenting on key sector plans. For land use plans at county and local level, we provide a 'self-service approach' via the attached guidance document 'SEA of Local Authority Land Use Plans – EPA Recommendations and Resources'. This document is updated regularly and sets out our key recommendations for integrating environmental considerations into Local Authority land use Plans. We recommend that you take this guidance document into account in preparing the Plan and SEA.	The 'SEA of Local Authority Land Use Plans – EPA Recommendations and Resources' document has been considered in the preparation of this SEA Scoping Report and will be kept on file for reference throughout the SEA process.
C	In preparing the Plan, Tipperary County Council should also ensure that the Plan aligns with key relevant higher-level plans and programmes and is consistent with the relevant objectives and policy commitments of the National Planning Framework and the Regional Spatial and Economic Strategy for the Southern Region.	The National Planning Framework, the Regional Spatial and Economic Strategy for the Southern Region and other relevant plans and programmes will be considered as part of the preparation of the Plan and associated environmental assessments, as relevant.
D	Specific Comments: As well as our attached guidance, we include here some key environmental considerations which should also be taken into account in preparing the Plan. <i>State of the Environment Report – Ireland's Environment 2016</i> In preparing the Plan and SEA, the recommendations, key issues and challenges described within our most recent State of the Environment Report Ireland's Environment – An Assessment 2016 (EPA, 2016) should be considered, as relevant and appropriate to the Plan.	The recommendations, key issues and challenges described within the current version of Ireland's Environment (2020) will be considered in the preparation of the Plan.
E	<i>Community Engagement</i> One of the key messages from the State of the Environment Report (EPA, 2016) is the importance and value of Community Engagement. In preparing the Plan and carrying out the SEA (including developing alternatives), the need to proactively engage local communities should be a core consideration.	The public consultation (including the local community) will be provided with an opportunity to make a submission on the Draft Plan and associated environmental documents during public display.
F	<i>Sustainable Development Goals</i> Describing the links with the UN Agenda 2030 for Sustainable Development and the related Sustainable Development Goals (SDGs) would help to frame the Plan (and SEA) within the context of the wider sustainable development agenda and ensure that the Plan is consistent with achieving the SDGs. Relevant targets and actions in Ireland's SDG Implementation Plan (DCCAE, 2018) should be integrated as appropriate into the Plan.	The UN Sustainable Development Goals (SDGs) and relevant targets and actions in Ireland's SDG Implementation Plan (DCCAE, 2018) has been considered in the preparation of this SEA Scoping Report and will be kept on file for reference throughout the SEA process, as relevant and appropriate to the Plan.
G	<i>Critical service infrastructure</i> In proposing and in implementing the Plan, you should ensure that the Plan is consistent with the need for proper planning and sustainable development.	Noted. The SEA will consider implications of the potential additional pressures on existing

Ref.	Issue raised in submission	SEA Response
	Adequate and appropriate critical service infrastructure should be in place, or required to be put in place, to service any development proposed and authorised during the lifetime of the Plan.	critical infrastructure. The SEA will also consider effects arising from the construction of any ancillary developments.
H	<i>Integration of transport & land-use planning</i> The Plan should support the need for compact growth and better integration of transport and land-use planning, including walking and cycling infrastructure, public transport, park-and-ride facilities, etc.	The SEA will seek to ensure that the Plan supports compact growth and sustainable transport solutions.
I	<i>Biodiversity</i> The Plan should include specific actions/objectives and commitments to protect designated habitats and protected species (and associated ecological corridors/linkages) within, and adjacent to, the Plan area. The EPA has published guidance on Integrated Biodiversity Impact Assessment - Streamlining AA, SEA and EIA Processes. Best Practice Guidance. The aim of this guidance is to inform practitioners, plan/project proponents and consent authorities on integrating SEA, EIA and AA processes and requirements to streamline biodiversity considerations. This may be useful to consider in preparing the Plan and SEA.	Provisions contributing towards the protection of European Sites, habitats and species will be integrated into the Plan. The cited guidance has been considered in the preparation of the SEA Scoping Report and will be considered throughout the SEA process.
J	<i>Climate Action</i> You should ensure that the Plan aligns with national commitments on climate change mitigation and adaptation, including those set out in the Climate Action Plan 2019, as well as incorporating any relevant recommendations and measures in sectoral, regional and local climate adaptation and mitigation plans. Key climate-related aspects to consider in the Plan and SEA include: <ul style="list-style-type: none"> • Direct and indirect impacts of the Plan on greenhouse gas emissions and removals (Mitigation); • Direct and indirect impacts of climate change on the implementation of the Plan, e.g. the resilience of critical water service infrastructure to flooding and drought (Adaptation); • The linkages between mitigation and adaptation (inter-relationships). The following resources may be of assistance in incorporating these factors into the Plan and SEA: <ul style="list-style-type: none"> • Ireland’s Greenhouse Gas Emissions Projections for 2018-2040 • Integrating Climatic Factors into the Strategic Environmental Assessment Process in Ireland • Local Authority Adaptation Strategy Development Guideline • Integration of Climatic Factors into SEA in Ireland 	The SEA will seek to ensure that the Plan contributes towards climate mitigation and adaptation and that the Plan is aligned with national commitments on climate change mitigation and adaptation.
K	<i>Key Plans and Programmes</i> Some suggested national/regional/sectoral plans to consider in preparing the Plan and SEA are listed below. <i>Spatial Planning</i> <ul style="list-style-type: none"> - Local Authority Development Plans <i>Sustainable Development</i> <ul style="list-style-type: none"> - National Implementation Plan for the Sustainable Development Goals <i>Tourism</i> <ul style="list-style-type: none"> - National Greenways Strategy - Local authority tourism strategies <i>Climate</i> <ul style="list-style-type: none"> - Relevant sectoral, regional and local authority climate adaptation and mitigation plans/strategies – including Climate Change Adaptation Plan for Built and Archaeological Heritage (DCHG, in preparation). - Relevant OPW Flood Risk Managements Plans and associated flood risk mapping - National Climate Action Plan 2019 - National Energy and Climate Plan (DCCAE, in preparation) - National Mitigation Plan - National Adaptation Framework <i>Biodiversity</i> <ul style="list-style-type: none"> - National Biodiversity Action Plan - All Island Pollinator Plan - Any available biodiversity/heritage plans and habitat mapping <i>Water & Water Services</i> <ul style="list-style-type: none"> - River Basin Management Plan for Ireland 2018-2021 - Water Services Strategic Plan / Capital Investment Programme and Draft National Water Resources Plan (Irish Water) <i>Transport</i> <ul style="list-style-type: none"> - Planning Land Use and Transport – Outlook 2040 (DTTAS, in preparation) <i>Air & Noise</i> <ul style="list-style-type: none"> - Local Authority Noise Action Plans - National Clean Air Strategy (DCCAE, in preparation) 	Recommended key plans and programmes will be considered as part of the preparation of the Plan and associated environmental assessments.

Ref.	Issue raised in submission	SEA Response
	- National Air Pollution Control Programme (DCCA, 2019)	
L	<p>Available Guidance & Resources</p> <p>Our website contains various SEA resources and guidance, including:</p> <ul style="list-style-type: none"> - SEA process guidance and checklists - Inventory of spatial datasets relevant to SEA - topic specific SEA guidance (including <i>Good practice note on Cumulative Effects Assessment</i> (EPA, 2020), <i>Guidance on SEA Statements and Monitoring</i> (EPA, 2020), <i>Integrating climatic factors into SEA</i> (EPA, 2019), <i>Developing and Assessing Alternatives in SEA</i> (EPA, 2015), and <i>Integrated Biodiversity Impact Assessment</i> (EPA, 2012)) You can access these resources at: www.epa.ie/monitoringassessment/assessment/sea/ 	These resources and guidance have been considered in the preparation of this SEA Scoping Report and will be accessed, as relevant, for reference throughout the SEA process.
M	<p>Environmental Sensitivity Mapping (ESM) Webtool</p> <p>The ESM Webtool is a new decision support tool to assist SEA and planning processes in Ireland. The tool brings together over 100 datasets and allows users to explore environmental considerations within a particular area and create plan-specific environmental sensitivity maps. These maps can help planners anticipate potential land-use conflicts and help identify suitable development locations, while also protecting the environment. The ESM Webtool is available at www.enviromap.ie.</p>	The ESM Webtool has been considered in the preparation of this report and will be considered throughout the SEA process, where relevant.
N	<p>EPA SEA WebGIS Tool</p> <p>Our SEA WebGIS Tool, available through the EDEN portal (https://gis.epa.ie/EIS_SEA/), allows public authorities to produce an indicative report on key aspects of the environment in a specific geographic area. It is intended to assist in SEA screening and scoping exercises.</p>	Available online EPA resources, including mapping resources, have been considered in the preparation of this report and will be considered throughout the SEA and AA processes.
O	<p>EPA WFD Application</p> <p>Our WFD Application provides a single point of access to water quality and catchment data from the national WFD monitoring programme. The Application is accessed through EDEN https://wfd.edenireland.ie/ and is available to public agencies. Publicly available data can be accessed via the Catchments.ie website.</p>	
P	<p>EPA AA GeoTool</p> <p>Our AA GeoTool application has been developed in partnership with the NPWS. It allows users to select a location, specify a search area and gather available information for each European Site within the area. It is available at: http://www.epa.ie/terminalfour/ApproAssess/index.jsp</p>	
R	<p>Environmental Authorities</p> <p>Under the SEA Regulations, you should also consult with:</p> <ul style="list-style-type: none"> • The Minister for Housing, Planning and Local Government, • The Minister for Agriculture, Food and the Marine, and the Minister for Communications, Climate Action and Environment, where it appears to you as the competent authority that the plan or programme, or modification to a plan or programme, might have significant effects on fisheries or the marine environment, • The Minister for Culture, Heritage and the Gaeltacht where it appears to you as the competent authority that the plan or programme, or modification to a plan or programme, might have significant effects in relation to the architectural or archaeological heritage or to nature conservation, and • any adjoining planning authority whose area is contiguous to the area of a planning authority which prepared a draft plan, proposed variation or local area plan. 	Notice has also been given to relevant environmental authorities as part of the SEA scoping process.
2	Submission from the Department of Environment, Climate and Communications (from the Waste Policy and Resource Efficiency Division)	
A	In respect of waste in the within documentation, we would be obliged if the local authority would consult directly with their respective Regional Waste Management Planning Office regarding development of the final plans.	Noted. The Draft Plan will be placed on public display in the future and submissions will be invited. Any submissions made on the Draft Plan and associated environmental assessments will be taken into account before the Plan is finalised. A submission made by the Southern Region Waste Management Office as part of the initial consultation on the review of the Plan is being taken into account by the Draft Plan preparation process.

Ref.	Issue raised in submission	SEA Response
3	Submission from the Department of Environment, Climate and Communications (from Geological Survey of Ireland)	
A	<p>Geological Survey Ireland is the national earth science agency and has datasets including Bedrock Geology, Quaternary Geology, Geological Heritage Sites, Mineral deposits, Groundwater Resources, Geohazards and the Irish Seabed. These comprise maps, reports and extensive databases that include mineral occurrences, bedrock/mineral exploration groundwater/site investigation boreholes, karst features, wells and springs. Please see our website for data availability and we recommend using these various data sets, when undergoing the EIAR, planning and scoping processes. Geological Survey Ireland should be referenced to as such and should any data or geological maps be used, they should be attributed correctly to Geological Survey Ireland.</p> <p>With reference to your letter dated the 08 October 2020, concerning the SEA Scoping for preparation of a new Tipperary County Development Plan 2022-2028, Geological Survey Ireland (a division of the Department of Environment, Climate and Communications) welcome the opportunity to be included in the consultation process at this early 'SEA scoping' stage.</p>	Noted.
B	<p>Geoheritage</p> <p>The Geological heritage county audit was completed in 2019. The resulting report was a contribution to the County Tipperary Heritage Plan 2017-2021. We welcome mention of the County Geological Sites (CGSs) within the SEA scoping under Section 3.4 'Soil'. However, we would encourage their inclusion as specific policy objectives within the County Development Plan (CDP).</p> <p>The following points are suggested by the Geological Heritage Programme of Geological Survey Ireland, as appropriate ways in which to address the need to protect geological heritage in any one of Ireland's local authority areas:</p> <p>As a minimum, Geological Survey Ireland would like the Local Authority to include a policy objective with wording such as:</p> <p>"to protect from inappropriate development the scheduled list of geological heritage sites [Appendix X]." Or "to protect from inappropriate development the following list of County Geological Sites"</p> <p>The Geological Heritage Programme views the Local Authorities as critical partners in protecting, through the planning system, those CGS which fall within their county limits. In many cases these are often sites of high amenity or educational value, already zoned or listed in the plan. Listing in the CDP provides protection of the sites against potentially damaging developments that normally require planning permission, such as building, quarrying, landfilling or forestry.</p> <p>Geological Survey Ireland is the national earth science agency and has datasets including Bedrock Geology, Quaternary Geology, Geological Heritage Sites, Mineral deposits, Groundwater Resources, Geohazards and the Irish Seabed. These comprise maps, reports and extensive databases that include mineral occurrences, bedrock/mineral exploration groundwater/site investigation boreholes, karst features, wells and springs. Please see our website for data availability and we recommend using these various data sets, when undergoing the EIAR, planning and scoping processes. Geological Survey Ireland should be referenced to as such and should any data or geological maps be used, they should be attributed correctly to Geological Survey Ireland.</p> <p>It is also important that the democratic process of public consultation and approval by councillors of the CDP means that stakeholders in the sites and all the local community can buy into the process.</p> <p>CGSs have been adopted in the National Heritage Plan, and will form a major strand of geological nature conservation to complement the various ecological and cultural conservation measures.</p> <p>It is important to note however, that management issues for the majority of geological heritage sites may differ from ecological sites, and in some cases development may facilitate enhanced geological understanding of a site by exposing more rock sections - for example, in a quarry extension. Consultation at the earliest stages can identify any issues relevant to an individual site or proposed development.</p> <p>County Geological Sites are the optimal way of addressing the responsibility of each authority under the Planning and Development Act 2000 and its amendments, to protect sites of geological interest. It would also be necessary to include a policy objective to protect geological NHAs as they become designated and notified to the Local Authority, during the lifetime of the Plan.</p> <p>As always we are available if you require any further information, please feel free to contact the GSI.</p>	This information on geoheritage will be considered when preparing the Draft Plan and undertaking the SEA.

Ref.	Issue raised in submission	SEA Response
C	<p>Culture and Tourism</p> <p>Over the past number of years geology has become a large part of Irish tourism. Ireland currently has three UNESCO Global Geoparks, with one aspiring Geopark, Joyce Country and Western Lakes Aspiring Geopark. These Geoparks, along with other tourism initiatives such as the Wild Atlantic Way, Irelands Ancient East, and Irelands Hidden Heartlands have bolstered tourism in various parts of Ireland and helped to increase its levels in areas that were previously not as popular with tourists. We would encourage Tipperary County Council to continue this trend, and to use the geological audit information making it easily available to the general public. We would encourage geology to be a significant part of any tourism initiative that may be introduced.</p>	<p>This information on culture and tourism will be considered when preparing the Draft Plan and undertaking the SEA, where relevant.</p>
D	<p>Dimension Stone/Stone Built Ireland</p> <p>Geological Survey Ireland recently signed a research collaboration agreement between Geological Survey Ireland, TCD & OPW, to run for a 2 year period with the aim of documenting building and decorative stone in Ireland to inform government agencies, building owners and conservationists of the sources for suitable replacement stone in restoration work and to develop a greater awareness among the general public. In addition to promoting citizen science and awareness of local materials, the inventory will aid the public in complying with part 4 of the Planning and Development Act 2000, which requires owners to conserve protected structures. It will also assist local authorities in issuing Section 57 Declarations, which outline 'the type of works which it considers would or would not materially affect the character of the structure or any element of the structure'.</p> <p>This project will build on work already completed funded by the Irish Research Council (March 2019 - September 2020) that carried on primary research on the topic and developed a simple database and web-based platform as well as hosting various heritage displays at venues. The project described above could also be considered as part of Section 3.8.2 'Architectural Heritage' within the CDP.</p>	<p>This information will be considered when preparing the Draft Plan and undertaking the SEA, where relevant.</p>
E	<p>Geological Mapping</p> <p>Geological Survey Ireland's geological mapping programme creates maps that depict the rocks (Bedrock Mapping) and subsoils (Quaternary & Physiographic Mapping) of the onshore area of Ireland. We collect new data by field surveying and borehole drilling, and combine them with existing mapping to produce map products at various scales and levels of complexity. We maintain online data sets of bedrock and subsoils geological mapping that is reliable, accessible and meets the requirements of all users. These data sets include depth to bedrock data and subsoil classifications. We would encourage you to use this data for informing your County Development Plan (2022-2028).</p>	<p>Mineral resources will be recognised as a material asset by the SEA.</p> <p>Aquifer productivity and vulnerability mapping will be included in the SEA Environmental Report and the SEA will reference datasets available from GSI that may be useful to lower-tier project planning, including those relating to Aquifer Productivity, Aquifer Vulnerability, Bedrock Geology, Quaternary Geology, Mineral deposits, Aggregate Potential, Groundwater Resources and Geohazards, such as Landslide Events and Landslide Susceptibility Mapping.</p>
F	<p>Groundwater</p> <p>Groundwater is important as a source of drinking water, and it supports river flows, lake levels and ecosystems. It contains natural substances dissolved from the soils and rocks that it flows through, and can also be contaminated by human actions on the land surface. As a clean, but vulnerable, resource, groundwater needs to be understood, managed and protected.</p> <p>Through our Groundwater Programme, Geological Survey Ireland provides advice and maps to members of the public, consultancies and public bodies about groundwater quality, quantity and distribution. Geological Survey Ireland monitors groundwater nationwide by characterising aquifers, investigating karst landscapes and landforms and by helping to protect public and group scheme water supplies. We recommend the use of our National Aquifer, Vulnerability and Recharge maps within the CDP. Further information is available on our Map viewer.</p> <p>With regard to Flood Risk Management, there is a need to identify areas for integrated mitigation and management and we note reference within the draft SEA scoping report to the OPW datasets on flooding in Section 3.5.2 'Flooding'. Our GWflood project is a groundwater flood monitoring and mapping programme aimed at addressing the knowledge gaps surrounding groundwater flooding in Ireland. The project is providing the data and analysis tools required by local and national authorities to make scientifically-informed decisions regarding groundwater flooding. Although primarily focused on karst areas, this may provide information to benefit the proposed CDP. We recommend using our GWflood tools found under our programme activities (in conjunction with OPW data) to this end.</p> <p>With regards to Climate Change, there is a need to improve the monitoring capacity of groundwater levels in Ireland so that the potential impacts of climate change can be monitored and assessed. In this context the Geological Survey Ireland has established the GWClimate project in January 2020. GWClimate will</p>	<p>The GWflood tools will be accessed, as relevant, for reference throughout the SEA/SFRA process.</p> <p>Regarding geothermal energy, SEA considers the environmental effects of Plan policies and objectives – including any providing for geothermal energy. Potential environmental effects arising from geothermal energy may include contributions towards greenhouse gas emission targets and effects on water quality, ecology, soil stability. Inclusion of Geothermal Suitability mapping is not within the scope of the SEA, however where it forms part of Plan policies/objectives, it would be considered by the SEA.</p>

Ref.	Issue raised in submission	SEA Response
	1) establish a long-term strategic groundwater level monitoring network and 2) develop modelling and analytical approaches for evaluating the impacts of Climate Change to Irish groundwater systems. Further information can be found on the Groundwater flooding page of the Groundwater Programme.	
G	<p>Geohazards</p> <p>Geohazards can cause widespread damage to landscapes, wildlife, human property and human life. While in Ireland, landslides are the most prevalent of these hazards flooding is becoming an increasing risk. Geological Survey Ireland has information available on past landslides for viewing as a layer on our Map Viewer.</p> <p>Geological Survey Ireland also engages in national projects such as Landslide Susceptibility Mapping and Groundwater Flooding (GW Flood), and in international projects, such as the Tsunami Warning System, coordinated by the Intergovernmental Oceanographic Commission of UNESCO. Historical records and geological evidence indicate that, while tsunamis are unlikely events around Ireland, the Irish coast is vulnerable to tsunamis from submarine landslides and distant earthquakes. Associated levels of coastal flooding are expected to be similar to those seen during storm surges, but with much more energetic inundation and a much shorter time to react. Ireland participates in an international tsunami detection and alerting system, coordinated by the Intergovernmental Oceanographic Commission of UNESCO. We recommend that geohazards and particularly flooding be taken into consideration, especially when developing areas where these risks are prevalent, and we encourage the use of our data when doing so.</p> <p>We welcome the inclusion in Section 3.4 'Soils', for consideration of use of Geological Survey Ireland's online mapping data sets for Landslide Events and Landslide Susceptibility.</p>	
H	<p>Geothermal Energy</p> <p>Geothermal energy harnesses the heat beneath the surface of the Earth for heating applications and electricity generation, and has proven to be secure, environmentally sustainable and cost effective over long time periods.</p> <p>Geothermal applications can range in depth from a few metres below the surface to several kilometres. Ireland has widespread shallow geothermal resources for small and medium-scale heating applications, which can be explored online through Geological Survey Ireland's Geothermal Suitability maps for both domestic and commercial use. We recommend use of our Geothermal Suitability maps to determine the most suitable type of ground source heat collector for use with heat pump technologies. The Geothermal Suitability maps could also be considered in Section 3.7.7 as part of the Renewable Energy Potential for the CDP.</p> <p>Ireland also has recognised potential for 'deep' (>400m) geothermal resources. Geological Survey Ireland currently supports and funds research into this national energy resource. Along with our partners in research and industry we have been investigating the potential for geothermal energy in Ireland. Although Ireland does not possess high temperature (high enthalpy) reserves such as those in Iceland or the Azores, we do have the potential to use our resources for low enthalpy application such as district heating and industrial processes that require heating/cooling. We are currently completing a roadmap for geothermal energy use in Ireland which we expect to publish in 2020. For further information please see our geoenergy pages on our website or contact the Groundwater Programme of the Geological Survey Ireland directly.</p>	
I	<p>Natural Resources (Minerals/Aggregates)</p> <p>We welcome the reference to mineral locations and aggregate potential in Section 3.7 'Material Assets'. These are important resources for the future, particularly in relation to the projected public developments, such as sustainable infrastructure development, roads, schools etc., and housing requirements for the County.</p> <p>Geological Survey Ireland is of the view that the sustainable development of our natural resources should be an integral part of all development plans from a national to regional to local level to ensure that the materials required for our society are available when required. Geological Survey Ireland provides data, maps, interpretations and advice on matters related to minerals, their use and their development in our Minerals section of the website. Aggregates are an essential natural resource for the construction industry and with the Government of Ireland "Building Ireland 2040" plan, understanding of aggregate source and supply will be important. The Active Quarries, Mineral Localities and the Aggregate Potential maps are available on our Map Viewer. We would welcome the consideration of aggregate potential sterilisation included as part of the CDP.</p>	

Section 2 Details on the Likely Content of the Draft Plan

The Draft Tipperary County Development Plan 2022-2028 will be prepared over the coming months. The Plan will provide a six-year framework for the sustainable development of the County, while considering the conservation and protection of the built and natural environment. It will set out an overall strategy for the proper planning and development of County Tipperary in terms of social, cultural, economic and physical development and will consist of a written statement supported by mapping and other appendices indicating the development objectives for the County.

The preparation of the Plan will be informed by a process of public participation and consultation. The Plan represents an important policy document that will form the foundations to support and facilitate new housing, sustainable transport systems, economic development and social, community and educational facilities, while at the same time protecting natural and built heritage.

The Plan will be set within the context of the strategic framework of and be guided by the National Planning Framework and the Regional Spatial and Economic Strategy for the Southern Region. The Plan will consist of a written statement and accompanying maps including a Core Strategy, Policies and Objectives in order to contribute towards balanced and sustainable growth in County Tipperary over the Plan period and beyond.

Section 3 Scope of Environmental Baseline Data to be used in the Assessment

3.1 Introduction

The SEA Environmental Report that will accompany the Draft Plan on public display will include information on state of the environment in the County, including maps of individual environmental components, environmental sensitivity mapping and a description under the topics identified by the SEA Directive and transposing Regulations (i.e. biodiversity and flora and fauna, population and human health, soil, water, air and climatic factors, material assets, cultural heritage and landscape). The SEA Environmental Report will consider the zone of influence for the Plan and will include baseline information beyond the Plan boundary for certain environmental components e.g. European Sites and the landscape character areas and protected views and prospects of adjacent planning authorities.

3.2 Biodiversity and Flora and Fauna

The SEA will consider available information on designated ecological sites and protected species⁸, ecological connectivity (including stepping stones and corridors) and non-designated habitats. The SEA will also identify data sources which may be appropriate to local, project level development and assessments.

Information to be considered by the SEA under this topic includes:

- Special Areas of Conservation⁹ (SACs) and Special Protection Areas¹⁰ (SPAs);
- Natural Heritage Areas¹¹ (NHAs);
- Proposed Natural Heritage Areas (pNHAs)¹²;
- Nature Reserves¹³;
- Wildfowl Sanctuaries (see S.I. 192 of 1979)¹⁴;

⁸ Protected species including: Annex IV (Habitats Directive) species of flora and fauna, and their key habitats (i.e. breeding sites and resting places), which are strictly protected wherever they occur, whether inside or outside the above sites, e.g. Otter and bats; Other species of flora and fauna and their key habitats which are protected under the Wildlife Acts 1976-2000, wherever they occur; 'Protected species and natural habitats' as defined in the European Liability Directive (2004/35/EC) and European Communities (Environmental Liability) Regulations, 2008, including: Birds Directive – Annex I species and other regularly occurring migratory species, and their habitats (wherever they occur) and Habitats Directive – Annex I habitats, Annex II species and their habitats, and Annex IV species and their breeding sites and resting places (wherever they occur).

⁹ designated under the Habitats Directive (Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora). **There are 23 SACs designated within or partially within the County, including: Blackwater River (Cork/Waterford) SAC (002170); Galtee Mountains SAC (000646); River Shannon Callows SAC (000216); Redwood Bog SAC (002353) and Lough Derg; and North-East Shore SAC (002241). These and other sites beyond the County border that could be affected by the Draft Plan will be considered by the assessments.**

¹⁰ designated under the Birds Directive (EC Directive 200/147/EC on the conservation of wild birds). **There are 4 SPAs designated within or partially within County, including: Lough Derg (Shannon) SPA (004058); Middle Shannon Callows SPA (004096); River Little Brosna Callows SPA (004086); and Slievefelim to Silvermines Mountains SPA (004165). These and other sites beyond the County border that could be affected by the Draft Plan will be considered by the assessments.**

¹¹ NHAs are designated due to their national conservation value for ecological and/or geological/geomorphological heritage. They cover nationally important semi-natural and natural habitats, landforms or geomorphological features, wildlife plant and animal species or a diversity of these natural attributes. NHAs are designated under the Wildlife (Amendment) Act 2000. **There are 12 NHAs designated within or partially within the County, including: Arragh More Bog NHA (000640); Mauherslieve Bog NHA (002385); Nore Valley Bogs NHA (001853); Scohaboy Bog NHA (000937); and Arragh More Bog NHA (000640).**

¹² pNHAs were published on a non-statutory basis in 1995, but have not since been statutorily proposed or designated. These sites are of significance for wildlife and habitats. **There are 63 pNHAs designated within or partially within the County, including: Lough Derg (000011); Mitchelstown Caves (000651); Spring Park Wetlands (000941); Philipston Marsh (001847); and Templetney Quarry (001982).**

¹³ Nature Reserves are areas of importance to wildlife, which is protected under Ministerial order. There are currently 78 Statutory Nature Reserves in Ireland. Most are owned by the State but some are owned by organisations or private landowners. **There is one Nature Reserve within or partially within the County: Redwood Bog Nature Reserve.**

¹⁴ Wildfowl Sanctuaries are areas that have been excluded from the 'Open Season Order' so that game birds can rest and feed undisturbed. There are 68 sanctuaries in the State. Shooting of game birds is not allowed in these sanctuaries. **There is one Wildfowl Sanctuary within or partially within the County: Marlfield Lake (WFS-64).**

- Certain entries to the Water Framework Directive Register of Protected Areas¹⁵;
- Freshwater Pearl Mussel catchments¹⁶;
- Salmonid Waters¹⁷;
- Flora Protection Order¹⁸ sites;
- Tree Preservation Orders (TPOs)¹⁹;
- Ecological connectivity and networks;
- CORINE Landcover²⁰;
- Watercourses, wetlands and peatlands data; and
- Other sites of high biodiversity value or ecological importance.

The SEA will be informed by the findings of the AA (see Section 1.3.2) and will follow elements of Integrated Biodiversity Assessment with reference made to the EPA's 2013 *Integrated Biodiversity Impact Assessment - Streamlining AA, SEA and EIA Processes: Practitioner's Manual*.

Potential overlaps in designations and settlements/zoning will be closely scrutinised by the SEA and AA. There are many sites of importance to birds and it will be important to also consider the wording associated with the zoning of lands adjacent to these sites.

3.3 Population and Human Health

In 2016 Census the total population of County Tipperary was 159,553 persons, showing the trends of an increase in total population in the County by c. 0.5% (799) persons) since the previous Census. The transitional population projection for County Tipperary (NPF Implementation Roadmap, DHPLG, 2018) until 2026 is 173,500-177,000 persons²¹.

County Tipperary's Key Towns include Clonmel, Nenagh and Thurles. Clonmel is the largest town in the County with a population of 17,140 and a significant employment location, while Nenagh and Thurles are strategically located urban centres with accessibility and significant influence in a sub-regional context, as identified by the Southern Regional Spatial and Economic Strategy. Key Towns provide important connections with adjoining regions and have the capacity and future growth potential to accommodate above average growth in tandem with the requisite investment in employment creation, services, amenities and sustainable transport.

The new population provided for in the Draft Plan will interact with various environmental components. Potential interactions include:

- Recreational and development pressure on habitats and landscapes;
- Increase in demand for waste water treatment at the municipal level;
- Increase in demand for water supply;
- Potential interactions in flood-sensitive areas; and
- Potential effects on water quality.

With regard to human health, impacts relevant to the SEA are those which arise as a result of interactions with environmental vectors (i.e. environmental components such as air, water or soil through

¹⁵ These areas are those identified as those requiring special protection under existing national or European legislation, either to protect their surface water or groundwater, or to conserve habitats or species that directly depend on those waters. **Various entries to these registers are found within and adjacent to the County.**

¹⁶ **In County Tipperary, these areas are found in the following river catchments: Suir; Suir-Clodiagh Tipperary; Suir-Tar; Suir-Aherlow; Suir-Multeen; Suir-Thonoge; Nore Lower; and Nore Upper.**

¹⁷ Salmonid waters are designated and protected as under the European Communities (Quality of Salmonid Waters) Regulations 1988 (SI No. 293 of 1988). Designated Salmonid Waters are capable of supporting salmon (*Salmo salar*), trout (*Salmo trutta*), char (*Salvelinus*) and whitefish (*Coregonus*). **There are two rivers in County Tipperary designated as Salmonid Rivers under these Regulations: the River Aherlow; and the River Nore.**

¹⁸ The current list of plant species protected by Section 21 of the Wildlife Acts is set out in the Flora (Protection) Order, 1999. **There are 5 Flora Protection Order Sites in Tipperary.**

¹⁹ TPOs are a planning mechanism whereby individual trees or groups of trees can be identified as important and protected by a TPO.

²⁰ Land cover is the observed physical cover, as seen from the ground or through remote sensing, including for example natural or planted vegetation, water and human constructions which cover the earth's surface.

²¹ *Regional Spatial and Economic Strategy for the Southern Region 2019-2031*.

which contaminants or pollutants, which have the potential to cause harm, can be transported so that they come into contact with human beings). Hazards or nuisances to human health can arise as a result of exposure to these vectors arising from incompatible adjacent landuses, for example.

3.4 Soil

The majority of the County is covered by luvisols. Areas of alluvium are identified along the main waterways. Areas of brown earths are found in southern and western regions of the County. Podzols and surface water gleys are also found along the eastern and western edges of the County.

Peat soils are found in the east, west and south-west of the County. Peat soils are often indicative of areas that are the most sensitive to development due ecological sensitivities and impeded drainage issues. Settlements within County Tipperary are generally located away from peatland areas.

The SEA will examine issues including the loss of soils/soil sealing, as a result of greenfield development, and interactions with biodiversity and carbon storage, such as those that can occur as a result of development in peatland areas.

Under the Irish Geological Heritage (IGH) Programme important sites that are capable of being conserved as Natural Heritage Areas (NHA) are being identified. Those not selected for NHA designation are being promoted as County Geological Sites (CGSs). All sites of geological heritage importance are currently classified as CGSs until such time that the most significant sites can be designated as geological NHAs. There are 69 County Geological Sites²² in County Tipperary.

Previous Landslide Events Mapping and Landslide Susceptibility Mapping from the Geological Survey of Ireland will be considered by the SEA.

3.5 Water

3.5.1 Status and Quality

The Water Framework Directive (WFD) requires that all Member States implement the necessary measures to prevent deterioration of the status of all waters - surface, ground, estuarine and coastal - and protect, enhance and restore all waters with the aim of achieving *good status*. All public bodies are required to coordinate their policies and operations so as to maintain the good status of water bodies that are currently unpolluted and improve polluted water bodies to *good status*.

Most of the County is located within the catchments of the Suir or Lower Shannon and partially within the catchments of the Nore, Shannon Estuary South and Blackwater (Munster). Lough Derg is partially situated in the County, at the border with Counties Galway and Clare.

The SEA will use information from the EPA regarding surface water status, including that contained within their Integrated Water Quality Reports. The SEA will also include information on groundwater status. The WFD groundwater status (2013-2018) underlying County Tipperary is generally identified as being of *good status*, with some areas of *poor status*.²³

The status of rivers and streams (2013-2018) draining County Tipperary ranges from *high* (including: Ollatrim; Aughnaglanny; Cahernahallia; Burncourt; Tar; and Lingaun) to *good* (including: Nenagh; Newport; Bilboa; Aherlow; Nore; Clashawley; Tar; Suir-upstream of Clonmel; and Multeen) to *moderate* (including: Kilmastulla; Ballyfinboy; Aherlow; Fidaghta; Drish; Suir-section running through Clonmel; and Anner) to *poor* (including: Fidaghta; Ara; Rossadrehid Stream; Killenaule Stream; Anner; Black Stream-

²² Geological Survey of Ireland (2019) *The Geological Heritage of County Tipperary An audit of County Geological Sites in County Tipperary 2019*.

²³ An area underlying historic mine at Silvermines, areas underlying two industrial facilities – one northwest of Tipperary Town (Industrial Facility EPA Code P0331-01) and one west of Clonmel (Industrial Facility EPA Code P0225-01) – an area in the east of the County extending into County Kilkenny and an area in the south-west of the County extending into County Cork.

Cashel; Mullinahone Stream; Rossestown; Drish; Clover; Rossestown; Farneybridge; Fishmoyne; Carrigahorig Stream; Cappawhite Stream; and Toem Stream).

Lough Derg is classified as being of moderate status.

In addition, there are a number of *unassigned* rivers and lakes across the County.

Pressures on rivers and lakes that are failing to meet the WFD's overall objective of *good status* will be identified by the SEA and policy responses will be recommended as necessary.

The SEA will also provide information on aquifer vulnerability, aquifer productivity and entries to the WFD's Registers of Protected Areas.

3.5.2 Flooding

Certain areas across the County are at risk of flooding from various sources including groundwater, pluvial and fluvial. There are various historic and predictive indicators of flood risk in the County, including along the Rivers Shannon, Suir and Anner.

The following settlements were identified by the OPW in 2012 as requiring detailed assessment of flood risk (Areas for Further Assessment): Ardfinnan; Ballyporeen; Bansha; Borrisokane; Borrisoleigh; Caher; Carrick-on-Suir; Clonmel; Fethard; Golden; Marlfield; Mullinahone; Nenagh; Newcastle; Newport; Roscrea; Templemore; Thurles; and Tipperary Town.

A Strategic Flood Risk Assessment (SFRA), as required by '*The Planning System and Flood Risk Management Guidelines for Planning Authorities*' (Department of the Environment, Heritage and Local Government and Office of Public Works, 2009) and Circular PL 2/2014 (Department of Environment, Community and Local Government), is being undertaken alongside the preparation of the SEA and the preparation of the Draft Plan. The SFRA will focus on land use zoning provided for by the County Development Plan as well as County-wide flood risk management policy. The SFRA will consider available and emerging information on flood risk indicators, including the OPW's Flood Hazard and Risk Mapping and any flood defences and inter-County interactions.

3.6 Air and Climatic Factors

3.6.1 Air

The EPA's (2020) *Air Quality in Ireland 2019* identifies that:

- Air quality in Ireland is generally good, however there are localised issues;
- Nitrogen dioxide (NO₂) from transport emissions is polluting urban areas. ; and
- Ireland was above World Health Organization air quality guideline value levels at 33 monitoring sites – mostly due to the burning of solid fuel within settlements across the country.

With regards to solutions, the report identifies that:

- To tackle the problem of particulate matter, clean ways of heating homes and improve energy efficiency of homes can be progressed; and
- To reduce the impact of nitrogen dioxide, transport options in the Government's Climate Action Plan can be implemented (including promoting clean public transport and increasing the use of electric vehicles) and transport choices can be considered by individuals.

The current air quality in County Tipperary is identified by the EPA as being *good*²⁴.

²⁴ 05/10/2020 (<http://www.epa.ie/air/quality/>).

3.6.2 Climatic Factors

Requirements for Development Plans and Suggested Responses

Section 10 (2) of the Planning and Development Act 2000 (as amended) requires Development Plans to include various types of objectives, including those detailed Table 3.1 that relate to climate mitigation and adaptation. Table 3.1 also identifies suggested responses to these requirements.

Table 3.1 Climate Mitigation and Adaption Requirements for Development Plans and Suggested Responses

Requirement of under the Planning and Development Act 2000 (as amended) Section 10 (2) (n)	Suggested Development Plan Response, including:
(n) the promotion of sustainable settlement and transportation strategies in urban and rural areas including the promotion of measures to:	
(i) reduce energy demand in response to the likelihood of increases in energy and other costs due to long-term decline in non-renewable resources,	<ul style="list-style-type: none"> • Reducing need to travel using population allocations – taking into account emissions from transport • Maximise adjacency between populations, public transport capacity and locations for employment, retail, services and amenities • New compact growth policy for settlements • Improve permeability and reduce car dependency to do short distance journeys • Promote compact mixed-use settlements which will reduce the need for car-based commuting • Written Plan provisions, including for connectivity, permeability and public transport provision in existing and new settlements.
(ii) reduce anthropogenic greenhouse gas emissions, and	
(iii) address the necessity of adaptation to climate change;	<ul style="list-style-type: none"> • Population allocations taking into account water services and assimilative capacity • Land use zoning – taking into account flood risk • Written Plan provisions
in particular, having regard to:	
location,	<ul style="list-style-type: none"> • Population allocations – water services and assimilative capacity • Land use zoning – taking into account flood risk • Land use zoning – taking into account emissions from transport; and maximising connectivity and accessibilities to employment retail, services and amenities • Written Plan provisions
layout and design of new development;	<ul style="list-style-type: none"> • Written Plan provisions and maximising permeability and connectivity to facilities and amenities

Written Development Plan provisions to address climate mitigation and adaptation are expected to cover the topics of employment uses to serve residents, shared office spaces to serve existing and potential commuters, energy, sustainable mobility, flood risk management and drainage. The SEA will recommend climate action measures for integration into the Plan under headings including: Buildings; Agriculture, Land Management and Forestry; Transport; Energy production; Minerals; Resource Management; Water management; Infrastructure, including flood defences; Wildlife and biodiversity; Economy and tourism; and Human Health, Risk and Insurance.

Climate Action Plan

The Government's 2019 Climate Action Plan reflects the central priority that climate change will have in Ireland's political and administrative systems into the future, setting out governance arrangements including the carbon-proofing of government policies, the establishment of carbon budgets, the strengthening of the Climate Change Advisory Council and providing greater accountability to the Oireachtas. The Climate Action Plan deals with both mitigation and adaptation.

Climate Mitigation

Climate mitigation describes action to reduce the likelihood of climate change occurring or reduce the impact if it does occur. This can include reducing the causes of climate change (e.g. emissions of greenhouse gases) as well as reducing future risks associated with climate change.

One of the key issues relating to the preparation of Development Plans in the context of climate mitigation relates to greenhouse gas emissions arising from transport. Development Plans are primarily land use plans and land use plans and transport are closely linked. By improving sustainable mobility through land use planning, Development Plans have the potential to reduce existing levels of greenhouse gas emissions and limit increases in future emissions. Other beneficial effects arising from climate mitigation include contributions towards reductions in energy consumption, increases in alternative energy usage, maintenance/improvement of air quality and reductions/limits in increase of noise emissions.

The SEA will evaluate the likely significant environmental effects of Development Plan provisions and the reasonable alternatives selected. This assessment will include an analysis of impact of land use zoning on carbon reduction targets.

The EPA 2019 publication *Ireland's Greenhouse Gas Emission Projections 2018-2040* provides an assessment of Ireland's total projected greenhouse gas emissions out to 2040 which includes an assessment of progress towards achieving its emission reduction targets out to 2020 and 2030 set under the EU Effort Sharing Decision (Decision No 406/2009/EU) and Effort Sharing Regulation (Regulation (EU) 2018/842). Ireland's 2020 target is to achieve a 20% reduction of non-Emission Trading Scheme (non-ETS) sector emissions (i.e. agriculture, transport, the built environment, waste and non-energy intensive industry) on 2005 levels with annual limits set for each year over the period 2013-2020. Ireland's 2030 target under the Effort Sharing Regulation is a 30% reduction of emissions compared to 2005 levels by 2030. There will be binding annual limits over the 2021-2030 period to meet that target. Key Insights identified as part of the report's package of documents are that:

- There is a long-term projected decrease in greenhouse gas emissions as a result of inclusion of new climate mitigation policies and measures that formed part of the 2018-2027 National Development Plan, which was published in 2018. This is evident in the With Additional Measures scenario which assumes full implementation of the programmes, policies and measures included in the National Development Plan.
- Fossil fuels such as coal, peat and gas continue to be key contributors to emissions from the power generation sector. However, a significant reduction in emissions over the longer term is projected as a result of the expansion of renewables (e.g. wind), assumed to reach 41-54% by 2030, with a move away from coal and peat.
- A growth in emissions from the transport sector continues to be projected which is largely attributed to fuel consumption from diesel cars and diesel freight. A decrease in emissions over the longer term, most notably in the With Additional Measures scenario, is largely attributed to assumed accelerated deployment of 500,000 electric vehicles and the impact of greater biofuel uptake.
- Agriculture emissions are projected to continue to grow steadily over the period which is mainly a result of an increase in animal numbers particularly for the dairy herd.
- The implementation of additional energy efficiency measures included in the National Development Plan will see a significant reduction in emissions in the residential, commercial/public services and manufacturing sectors over the projected period.

The projections reflect plans to bring Ireland onto a lower carbon trajectory in the longer term. However, Ireland still faces significant challenges in meeting EU 2030 reduction targets in the non-ETS sector and national 2050 reduction targets in the electricity generation, built environment and transport sectors. Progress in achieving targets is dependent on the level of implementation of current and future plans.

The 2019 emission projections do not consider the impact of new policies and measures that will be included in the forthcoming Government Climate Plan. It is anticipated that future emission projections will include the additional impact of the Government Climate Plan.

The Climate Change Advisory Council's Annual Review 2019 identifies that the most recent projections demonstrate that, under different assumptions, Ireland will not meet its emissions reduction targets, even with the additional policies and measures included in the National Development Plan. The projections also show that progress on reducing emissions is sensitive to the future path of fuel prices. A significant and sustained rate of emissions reduction of approximately -2.5% per year is required to meet our objectives for 2050. However, it must be noted that additional measures within the recent Climate Action Plan are not included in the analysis to date.

Climate Adaptation

Climate adaptation is a change in natural or human systems in response to the impacts of climate change. These changes moderate harm or exploit beneficial opportunities and can be in response to actual or expected impacts.

The National Adaptation Framework 2018, prepared by the Department of Communications, Climate Action and Environment, sets out the national strategy to reduce the vulnerability of the country to the negative effects of climate change and to avail of positive impacts. The National Adaptation Framework outlines a whole of government and society approach to climate adaptation. Under the Framework a number of Government Departments will be required to prepare sectoral adaptation plans in relation to a priority area that they are responsible for.

One of the key issues relating to the preparation of Development Plans in the context of climate adaptation is flooding. Strategic Flood Risk Assessment (see Section 3.5.2) facilitates the appropriate zoning of areas that are at elevated risk of flooding and the integration of flood risk management provisions into Development Plans (see also Section 3.7).

The Tipperary County Council Climate Change Adaptation Strategy 2019-2024 features a range of actions across sectors including: seafood, agriculture, forestry, biodiversity, built and archaeological heritage, transport infrastructure, electricity and gas networks, communication networks, flood risk management, water quality, water services infrastructure and health. The Strategy seeks to:

- Ensure a proper understanding of the key risks and vulnerabilities of climate change;
- Advance the implementation of climate resilient actions in a planned and proactive manner;
- Ensure that climate adaptation considerations are mainstreamed into all plans and policies and integrated into all operations and functions of the local authority.

3.7 Material Assets

Other material assets, in addition to those detailed below, covered by the SEA include archaeological and architectural heritage (see Section 3.8) natural resources of economic value, such as water, air and soil²⁵ (see Sections 3.5, 3.6.1 and 3.4).

3.7.1 Waste Water

Waste water demand and capacity information at settlements that will be considered by the SEA, where available, includes²⁶:

- Population served;
- Loading;
- Capacity;
- Level of treatment;
- Spare capacity or shortfall;
- Compliance with urban waste water treatment Directive;
- Population provided for by the Plan by 2028 that will be served;

²⁵ Soil and geological resources will be considered under this topic including with respect to mineral locations and aggregate potential.

²⁶ Detailed water services information will inform the preparation of the SEA Environmental Report.

- Predicted 2028 loading;
- Planned 2028 capacity;
- Predicted 2028 spare capacity or shortfall; and
- Waste water infrastructure investment needs.

The EPA produces annual reports on the treatment of urban waste water from cities, towns and urban communities. The latest EPA 2019 report *'Urban Waste Water Treatment in 2018'* identifies the priority areas where resources must be targeted, in order to protect the environment from the harmful effects of waste water, and deliver environmental improvements where they are most needed. Based on the EPA's assessment of monitoring information provided by Irish Water and the enforcement activities carried out by the EPA, this report identifies urban areas with the most important environmental issues that must be addressed. There is one urban area in County Tipperary (Mullinahone) listed as a priority area, where improvements are required to resolve environmental issues.

Further to this, Mullinahone is listed as an area where the EPA identified waste water discharges as the sole significant pressure on water bodies at risk of pollution.

3.7.2 Drinking Water

Drinking water demand and capacity information that will be considered by the SEA, where available, includes:

- Population served;
- Demand;
- Supply capacity;
- Spare capacity or shortfall;
- Population provided for by the Plan by 2028 that will be served;
- Predicted 2028 demand;
- Planned 2028 supply capacity;
- Predicted 2028 spare capacity or shortfall; and
- Water supply infrastructure investment needs.

Drinking water must be clean and wholesome. That means it must meet the relevant water quality standards and must not contain any other substance or micro-organism in concentrations or numbers that constitute a potential danger to human health.

Compliance with the drinking water requirements is determined by comparing the results of analyses submitted by water suppliers to the standard for 48 parameters specified in the European Communities (Drinking Water) Regulations (No. 2), 2007. To ensure that these standards are met, each water supply must be monitored on a regular basis.

Under Section 58 of the EPA Act 1992 the EPA is required to collect and verify monitoring results for all water supplies in Ireland covered by the European Communities (Drinking Water) Regulations, 2000. The EPA publishes their results in annual reports which are supported by Remedial Action Lists (RALs). These lists identify water supplies that are not in compliance with the Drinking Water Regulations.

The most recent available EPA Remedial Action List (Q2 of 2020) identifies two Tipperary drinking water supplies Clonmel Poulavanogue (inadequate treatment for cryptosporidium) and Galtee Regional (excessive levels of aluminium in the treated water, poor turbidity removal, and treatment and management issues).

Water quality and management of nutrients from sources such as agriculture, municipal waste water treatment plants and on-site waste water treatment systems will be also considered by the SEA.

3.7.3 Transport

County Tipperary occupies a strategic location on the National Road network with the M7, M8, N52, N62 and N74 traversing the County. Tipperary is well served by a number of mainline and commuter train services including Dublin/Cork, Dublin/Tralee, Dublin/Limerick and Waterford/Clonmel/Limerick Junction. Further to this, Bus Éireann and a number of other private operators provide bus services to the County. The key town of Clonmel and the towns of Carrick-on-Suir, Cahir and Tipperary have been identified by the Southern Region Spatial Economic Strategy as being part of the Limerick-Waterford Transport and Economic network/axis.

3.7.4 Waste Management

Waste management in County Tipperary is guided by the Southern Region Waste Management Plan 2015-2021. The Southern Region comprises Limerick City and County Council; Tipperary County Council; Wexford County Council; Carlow County Council; Kilkenny County Council; Waterford City and County Council; Cork City Council; Cork County Council; Kerry County Council; and Clare County Council.

3.7.5 Public Assets and Infrastructure

Public assets and infrastructure that have the potential to be impacted upon by the Plan, if unmitigated, include; settlements; resources such as public open spaces, parks and recreational areas; public buildings and services; transport and utility infrastructure (electricity, gas, telecommunications, water supply, waste water infrastructure etc.); forestry; and natural resources that are covered under other topics such as water and soil.

3.7.6 Land

The Plan has the potential to assist with the reuse and regeneration of brownfield sites thereby contributing towards sustainable mobility and reducing the need to develop greenfield lands and associated adverse environmental effects. Brownfield lands are generally located within urban/suburban areas.

3.7.7 Renewable Energy Potential

Available information on renewable energy potential within and adjacent to the County – and any associated Plan provisions – will be considered by the SEA.

3.8 Cultural Heritage

3.8.1 Archaeological Heritage

Archaeological heritage is protected under various legislation including the National Monuments Acts (1930-2004), Natural Cultural Institutions Act 1997 and the Planning Acts. The SEA Environmental Report will include information on the archaeological heritage of County Tipperary, including that relating to designations such as entries to the Record of Monuments and Places. These monuments range from 13th century castles to early medieval ecclesiastical sites and 48 are in State Care, including Swiss Cottage (Cahir), Cahir Castle, Roscrea, Timoney Hills, Holycross Abbey, Rock of Cashel and Derrynaflan.

Clusters of archaeological heritage are concentrated within and surrounding towns and villages and in lowland rural areas. Upland areas contain smaller concentrations of protected monuments. Zones of Archaeological Potential are identified at numerous locations across the County including at Derrygreenagh, Longfordpass South, Kilsheelan, Cashel and Fethard.

The SEA Environmental Report will include information on the archaeological heritage of County Tipperary, including that relating to designations such as entries to the Record of Monuments and Places.

3.8.2 Architectural Heritage

The SEA Environmental Report will include information on the architectural heritage of County Tipperary, including that relating to designations such as the Record of Protected Structures.

The Record of Protected Structures included in the current County Development Plans are legislated for under Section 12 and Section 51 of the Planning and Development Act 2000 (as amended). Protected Structures are defined as structures, or parts of structures that are of special interest from an architectural, historical, archaeological, artistic, cultural, scientific, social or technical point of view. There are currently over 1000 Protected Structures located in County Tipperary, including country houses, churches, bridges and mills. Notable protected structures in County Tipperary include Farney Castle, Lisheen Castle, Ballyartella Bridge and Gortkelly Castle.

An Architectural Conservation Area (ACA) is a place, area, group of structures or townscape, which is of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest or contributes to the appreciation of a Protected Structure. An ACA may or may not include Protected Structures. In an ACA, protection is placed on the external appearance of such areas or structures. There are currently 33 ACAs designated in County Tipperary.

3.9 Landscape

County Tipperary is characterised by a variety of landscape types including large lowland plains, upland areas and wetlands. Upland areas include the Silvermines, Arra, Galtee and Knockmealdown Mountains, the Slieveardagh Hills, the Devil's Bit and Slievenamon. The Shannon wetlands and Lough Derg are situated in the north-west of the County.

Tipperary's Landscape Character Assessment identifies seven landscape categories with further division to smaller Landscape Character Areas:

- Lowland Pasture and Arable;
- Peatlands and Wet Mixed Farmland;
- Watersides;
- Lakeland Enclosures;
- Farmed;
- Forested; and
- Mountain and Upland.

Visually sensitive areas include upland areas, lakes such as Lough Derg and peatland areas.

In addition to this, there are dozens of Protected Views designated within the County various Amenity Areas.

The above and any other or emerging landscape designations will be taken into account by the assessment.

Section 4 Other Issues Relevant to the Scope of the SEA

4.1 Environmental Issues and Components

Key environmental issues to be considered comprise relating to the baseline for each of the environmental components identified in Section 3 of this report. Written scoping submissions made by the environmental authorities have been taken into account in finalising these submissions.

In compliance with the legislation, the following environmental components, and any relevant interrelationships²⁷, will be considered by the SEA:

- Biodiversity and flora and fauna;
- Population and human health;
- Soil;
- Water;
- Air and climatic factors;
- Material assets;
- Cultural heritage; and
- Landscape.

These topics will be addressed as relevant in the description (mapped and textual) of the environmental baseline, in Strategic Environmental Objectives, indicators and targets and in the identification of likely significant environmental effects, if any, and in the updating of existing Plan provisions (arising from superseded legislation, guidelines, etc.) and the inclusion of new Plan provisions for environmental protection and sustainable development.

4.2 Guidelines and Legislation

The SEA, AA and SFRA will ensure compliance with environmental and planning legislation, including:

- The SEA Directive and the Habitats and Birds Directives;
- The Planning and Development (Strategic Environmental Assessment) Regulations 2004 (SI No. 436 of 2004), as amended by the Planning and Development (Strategic Environmental Assessment) (Amendment) Regulations 2011 (SI No. 201 of 2011);
- The Planning and Development Act 2000 (as amended); and
- The European Communities (Birds and Natural Habitats) Regulations 2011 (as amended).

In addition to complying with the legislation, the processes will be undertaken taking into account the following guidance:

- *Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities.* Department of the Environment, Heritage and Local Government, 2009.
- *Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC,* European Commission Environment DG, 2000.
- *Developing and Assessing Alternatives in Strategic Environmental Assessment,* Environment Protection Agency, 2015. *EPA GISEA Manual: Current Practice and Potential on the Application of Geographical Information Systems as a Support Tool in Strategic Environmental Assessment of Irish Land Use Plans,* Environment Protection Agency, 2009.

²⁷ In addition to being identified in relevant sections of the SEA Environmental Report as they arise, interrelationships between environmental components will be identified.

- *Guidance on Integrating Climate Change and Biodiversity into Strategic Environmental Assessment*, European Commission, 2013.
- *Integrated Biodiversity Impact Assessment – Streamlining AA, SEA and EIA Processes: Practitioner’s Manual*, Environment Protection Agency, 2013.
- *Integrating Climate Change into Strategic Environmental Assessment in Ireland*. Environmental Protection Agency, 2015.
- *Implementation of SEA Directive (2001/42/EC): Guidelines for Regional Authorities and Planning Authorities*. Department of the Environment, Heritage and Local Government, 2004.
- *Managing Natura 2000 sites: The Provisions of Article 6 of the Habitats Directive 92/43/EEC*: European Commission, 2000.
- *The Planning System and Flood Risk Management Guidelines for Planning Authorities*. Department of the Environment, Heritage and Local Government and Office of Public Works, 2009.
- Relevant Official Government Circulars.
- Relevant European Court of Justice Judgements.

4.3 Relationship with other plans and programmes

The Plan is nested in a hierarchy of plans, programmes, etc. that relate to various sectors. The SEA Environmental Report will provide details on the relationship between the Plan and other plans and programmes. The Plan must comply with relevant higher-level strategic actions and may, in turn, guide lower level strategic actions. The SEA, AA and SFRA will take account of the Council’s obligation to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies – the achievement of the objectives of the regulatory framework for environmental protection and management.

In considering the relationship with legislation and other plans and programmes it is important to note that the Plan will be implemented within an area that has existing plans and programmes for a range of sectors (e.g. land use, transport, energy and water management) at a range of levels (e.g. national, river basin district, regional, county and local) that are subject to SEA and AA.

The findings of the environmental assessments of higher and lower tier plans (e.g. those of the Regional Spatial and Economic Strategy for the Southern Region, adjacent County Development Plans and Local Area Plans) will be taken into account by the SEA for the County Plan.

4.4 Consideration of Potential Significant Environmental Effects

As the Draft Plan emerges the SEA will identify, describe and mitigate likely significant environmental effects of implementation.

Plan measures providing for new development and continuance and intensification of use would be likely to result in potential significant adverse effects, if unmitigated, while other Plan measures – including those that will be integrated into the Plan through the SEA/AA/SFRA processes – would be likely to contribute towards environmental protection and management and sustainable development.

The SEA will consider the full range of likely significant environmental effects²⁸, including effects occurring at construction as well as operational stages.

²⁸ These effects include secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects.

4.5 Appropriate Assessment and Strategic Flood Risk Assessment

Screening for Appropriate Assessment (AA), and subsequent stages of AA, as relevant, and Strategic Flood Risk Assessment (SFRA) and are being undertaken alongside the SEA and the preparation and adoption of Draft Plan (see Sections 1.3.2 and 1.3.3). The preparation of the Draft Plan, SEA, AA Screening/AA and SFRA will take place concurrently and the findings of the AA Screening/AA and SFRA will inform both the SEA and the Draft Plan.

4.6 Alternatives

The SEA will examine different reasonable alternatives taking into account the objectives and the geographical scope of the plan. Headings under which alternatives will be considered may include:

- Alternatives for allocation of population/development across settlements, including consideration of the settlement hierarchy;
- Consideration of Policy for Pressure Areas/Rural Areas under Strong Urban Influence;
- Alternatives for Larger Towns; and
- Alternatives for Smaller Towns.

The SEA will seek to ensure that the selection of preferred alternatives by the Council is informed by environmental considerations including:

- Drinking water capacity;
- Waste water capacity;
- Capacity of river to assimilate treated water;
- Sustainable mobility factors e.g. public transport capacity availability, existing services availability (community, sport, retail etc.) and proximity to jobs.

4.7 Mitigation

Measures to contribute towards environmental protection and sustainable development will be recommended by the SEA for integration into the Draft Plan where necessary.

Mitigation measures will address all types of significant adverse environmental effects, including those arising from cumulative effects. Mitigation measures will take into account any suggestions in the submissions from environmental authorities.

4.8 Monitoring

The SEA will include information on the nature and frequency of monitoring to be carried out and organisations responsible for carrying out the monitoring. Emerging guidance from the EPA will be taken into account in this regard.

Section 5 What happens next?

Taking into account the scope detailed in the final SEA Scoping Report, environmental impacts will be predicted, evaluated and mitigated.

The findings of the assessment will be presented in an SEA Environmental Report that will accompany the Draft Plan on public display as part of the required statutory public consultation. The findings of both the AA and SFRA will be integrated into the SEA Environmental Report. AA and SFRA documents will also accompany the Draft Plan on public display.