



Variation No. 5 (a) of the Limerick County Development Plan 2010 – 2016

Limerick Northern Distributor Road

Strategic Environmental Assessment Statement



June 2017

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Document No	Description	Made	Checked	Approved	Date
10.194.24/SEA	SEA Statement	FOK	BC	MC	June 2017

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SEA Statement

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1. INTRODUCTION

This is the Strategic Environmental Assessment (SEA) Statement prepared as part of SEA process of **Variation No. 5 (a)** of the Limerick County Development Plan 2010-2016 (as extended) referred to here after as The Variation. The Variation relates to the inclusion of the preferred route corridor of the Limerick Northern Distributor Road (LNDR) as part of the LCDP 2010-2016. The Variation requires the insertion of an additional Objective under Chapter 8: *Transport and Infrastructure*, 8.2.6.1 *Strategic Regional Roads* of the Limerick County Development Plan 2010-2016 and reference to a Context Map relating to the Preferred Route Corridor.

In accordance with the SEA Directive and transposing regulations an SEA Statement is required to be prepared as soon as practicable after the adoption of a plan or programme. An SEA Statement is required to provide information on the decision-making process and concisely document the following:

- a) The Variation as adopted;
- b) A Statement summarising how environmental considerations have been integrated into The Variation as part of the Limerick County Development Plan 2010-2016 (as extended) to include a summary of:
 - How the SEA Environmental Report (SEA ER) has integrated environmental considerations during the preparation of the Variation; (Section two)
 - How the opinions expressed during consultations have been taken into account (Section three);
 - The reasons for choosing the Variation in light of other reasonable alternatives (Section four); and
 - The measures decided upon to monitor the significant environmental effects of implementing the Variation (Section five).

1.1 Legislative Context

The Strategic Environmental Assessment (SEA) Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment introduced the requirement that SEA be carried out on plans and programmes, including those of land use planning. The SEA of Variation No. 5 (a) has been undertaken in accordance with the requirements of the SEA Directive and transposing Regulations and has sought to meet the requirements of associated best practice guidance. SEA is a formal, systematic evaluation of the likely significant environmental effects of implementing a plan or programme, before a decision is made to adopt the plan or programme.

Article 1 of the SEA Directive states: *“The objective of this directive is to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development, by ensuring that, in accordance with this Directive, an environmental assessment is carried out of certain plans and programmes which are likely to have significant effects on the environment”*.

The requirements for SEA in Ireland are set out in the national Regulations:

- S.I. No. 435 of 2004 (European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004); and

- S.I. No. 436 of 2004 (Planning and Development (Strategic Environmental Assessment) Regulations 2004) as amended by S.I. No. 200 of 2011 (European Communities (Environmental Assessment of Certain Plans and Programmes) (Amendment) Regulations 2011); and S.I. No. 201 of 2011 (Planning and Development (Strategic Environmental Assessment) (Amendment) Regulations 2011) respectively.

The SEA statement is required under article 9(1) (b) of the SEA Directive and Section 13Q of S.I No. 436/2004 and Section 16 of S.I No. 435/2004 (as amended). Section 13Q of SI 436/ 2004 specifically refers to where a planning authority makes a variation in a development plan. It states, the planning authority shall publish a notice of the making of the variation in at least one newspaper circulating in its area and shall state that a SEA Statement is also available for inspection.

The main purpose of the SEA Statement is to provide information on the decision-making process for Variation No. 5 (a), summarising how the SEA process has influenced the preparation of the final Variation. The SEA Statement also provides information on the arrangements put in place for monitoring and mitigation. The SEA Statement is available to the public, along with the SEA Environmental Report, the Natura Impact Report, Strategic Flood Risk Assessment and the adopted Variation.

1.2 Summary of the Implications of SEA for the Plan Making Process

The SEA process is a systematic, on-going process for evaluating, at the earliest possible stage, the environmental quality and consequences of implementing certain plans and programmes on the environment. The SEA process is comprised of the following steps which influenced the Variation process.

- **Screening:** The requirement to carry out an SEA of the proposed Variation was determined to be required as it was deemed likely to have significant effects on the environment. This was undertaken taking into account the relevant criteria set out in Schedule 2A of the Planning and Development Act 2000 (as amended).
- **Scoping:** An SEA Scoping Report was issued in January 2017 to the relevant designated environmental authorities for comment on the scope and level of detail to be considered in the assessment. The Scoping Report included draft Variation text and the Strategic Environmental Objectives (SEOs) which would be used in the evaluation of the environmental effects. Submissions regarding the proposed Variation were received from the designated environmental authorities and all comments have been taken fully into account during the environmental assessment to be contained in the SEA Environmental Report (SEA ER).
- **Preparation of an Environmental Report:** The SEA process is informed by the environmental baseline (i.e. the current state of the environment and identification of existing environmental issues on that aspect of the environment). The environmental aspects include; biodiversity, population and human health, soil and geology, water resources and flooding, air and climate, material assets, cultural heritage and landscape. This stage of the SEA involved the identification and evaluation of the likely significant environmental effects of implementing the Variation and to identify any mitigation required to offset identified adverse effects. The environmental assessment and evaluation stage also considered cumulative and in-combination effects as well as alternatives. A proposed monitoring framework was also established.

- The Natura Impact Assessment (NIR) and the Strategic Flood Risk Assessment (SFRA) are also prepared alongside the development of the Variation and the SEA.
- The version of the Variation that went on public display along with the SEA ER, NIR and SFRA had incorporated the recommended amendments, additions and deletions applied as a result of the SEA, NIR and SFRA processes.
- **Consultation:** The Variation along with the SEA ER, NIR and SFRA were put on public display for a four week consultation period from 25th February to 27th March 2017. A total of 145 submissions were received, some of which related to concerns for environmental considerations.
- Evaluation of the submissions and observations made on the proposed Variation and SEA ER, NIR and SFRA was undertaken including implications on the SEA. This process found that there were no additional environmental issues identified. The Chief Executive's Report to members on Submissions, (20th April 2017) summarises the main points raised by the submissions and provides a response.
- On 29th of May 2017 the Elected Members voted to make the Variation without modifications.
- The **SEA Statement** is issued summarising how environmental considerations were integrated into the Variation process, how consultations were taken into account, alternatives considered and monitoring measures. The reasons for choosing the Variation in light of other reasonable alternatives. The document also summarises the measures decided upon to monitor the significant environmental effects of implementing the Variation.

In summary, the SEA process has run in tandem with the Variation process and has informed and influenced the preparation of the Variation (text and map), to the Limerick County Development Plan (LCDP) 2010-2016 (as extended). The SEA process influenced the Variation put on public display which was then adopted by elected members.

1.2.1 Summary of the Implications of Habitats Directive on the Plan Making Process

Under the provisions of Article 6 of the Habitats Directive 92/43/EEC, the Variation underwent a Habitats Directive Assessment (HDA). The AA Screening considered that there was potential for the proposed Variation to have a significant impact on certain Qualifying Interests of the Lower River Shannon SAC. It was identified at AA Stage 2 that these impacts would require mitigation to ensure that the adoption of proposed Variation would not have a significant effect on the Lower River Shannon SAC. The Natura Impact Report (NIR) was prepared on this basis assessing the implications of the proposed Variation for the Lower River Shannon SAC in view of its Conservation Objectives. The findings of the ER and NIR informed each other to ensure no adverse impacts on the environment would occur, specifically, on Natura 2000 sites.

The NIR found that the adoption of proposed draft Variation, without mitigation, had the potential to have an adverse impact on the Lower River Shannon SAC. In order for Limerick City & County Council to conclude that there would be no adverse impact on the Lower River Shannon SAC or any other Natura 2000 site as a consequence of the adoption of proposed Variation, additional mitigation measures were required to be introduced into the Variation text. The NIR process resulted in the inclusion of additional text as part of the Variation.

1.2.2 Summary of the Implications of Strategic Flood Risk Assessment on the Plan Making Process

The integration with Strategic Flood Risk Assessment (SFRA) is provided under 'The Planning System and Flood Risk Management Guidelines for Planning Authorities' (DEHLG, 2009). The current LCDP 2010-2016 identifies the need for the Council to prepare a Strategic Flood Risk Assessment for relevant areas of Limerick County. Issues in relation to Flood risk are examined in greater detail in the separate Strategic Flood Risk Assessment (February 2017) that informed the SEA ER.

The flood risk assessment demonstrates that the flood risk associated with the proposed LNDR can be adequately managed and the use or development of the lands to construct the LNDR will not cause unacceptable adverse impacts elsewhere. The flood risk assessment concluded that a road within the proposed Variation area can be constructed which will not exacerbate flood risk and will have a low residual flood risk. The SFRA can be found as a separate document to the overall Variation.

The NIR involved recommending additional text as part of the Variation text which was considered and incorporated as appropriate into the Variation put on public display.

2. INTEGRATION OF ENVIRONMENTAL CONSIDERATIONS DURING THE PREPARATION OF THE VARIATION

This section presents a summary of how environmental considerations have been integrated into the Variation to the Plan. Legislation and guidance relating to SEA recommends that the process of plan preparation, SEA, Appropriate Assessment (AA) through the NIR and SFRA should be integrated and prepared in an iterative process to facilitate ongoing assessment and evaluation of environmental considerations during the preparation of the Variation to the Plan. In this regard, a multi-disciplinary team worked on the SEA, NIR, SFRA which informed the Variation process.

The SEA process involved a number of key stages (outlined in section 1.2 above). Environmental considerations are integrated from the outset including gathering baseline data, development of strategic environmental objectives (SEOs), identification and assessment of alternatives to the Variation and ongoing consultation with environmental authorities and the public. These various aspects are summarised below.

2.1 Baseline Environmental Data

The baseline data gathered was essential to establish the current state of the environment in order to assist with the identification, evaluation and monitoring of the likely significant effects of the proposed Variation on the environment. The baseline information forms the platform to identify existing environmental problems. From this, the highlighted environmental issues and sensitivities can then be used to establish the Strategic Environmental Objectives (SEOs). The environmental baseline is described in line with the legislative requirements outlined in Schedule 2B of the SEA Regulations 2004-2011, encompassing the following environmental receptors/ topics: biodiversity, population and human health, soils and geology, water, air and climate, material assets, cultural heritage, landscape and the interrelationship between these components.

2.1.1 Strategic Environmental Objectives

The Strategic Environmental Objectives (SEOs) developed for the Variation are methodological measures which are originally developed from international, national, regional and county policies which generally govern Environmental Protection Objectives (EPOs), against which the likely environmental effects of the proposed Variation can be tested. The SEOs can also be influenced by the comments from the statutory environmental authorities at SEA Scoping stage. The SEOs are used as standards against which the provisions of the proposed Variation can be evaluated in order to help identify areas in which likely significant adverse impacts are likely to occur on that SEO, if unmitigated.

A range of SEOs have been previously established in the SEA Environmental Report for the Limerick County Development Plan 2010-2016 listed in Table 1.1 below. For consistency these were applied to the proposed Variation.

Table 2.1 Strategic Environmental Objectives

Environmental Receptor	Strategic Environmental Objectives (SEOs)
Biodiversity	Maintain and enhance bio-diversity.
Population and Human Health	Promote compact settlement patterns, and high quality residential development.

Environmental Receptor	Strategic Environmental Objectives (SEOs)
Water & Flood Risk	Prevent further deterioration in water quality, achieve improvement in water quality. Promote good practice in flood risk management.
Soils and Geology	Conserve and sensitively exploit geological resources. Preserve sensitive geological sites.
Air & Climate	Reduce air pollution, implement climate change aspects of plan.
Material Assets	Sensitively manage natural and man and material assets.
Cultural Heritage	Protect and conserve archaeology, heritage items.
Landscape	Protect historic and natural features of note in landscapes. Sensitively manage landscape change.

The environmental baseline together with the SEOs are used in order to identify, describe and evaluate the likely significant environmental effects of implementing the proposed Variation in order to determine what if any mitigation and monitoring measures are required. Where the likely significant effects are identified as part of the Variation, initially the existing LCDP was checked for the existence of environmental protection measures which could potentially mitigate these effects. Where it is found that the Plan lacks in these, additional mitigation measures will be recommended where necessary.

The objectives are outlined in Table 1.1 above. A list of indicators and targets that will be used to monitor each objective is outlined in Table 5.1 below. The SEOs were used in the Environmental Report to assess the environmental impacts for each element of the proposed Variation and also the alternative options.

2.1.2 Identification of Alternatives to the Variation

Identification of alternatives other than developing the LNDR was carried out by Limerick City and County Council. As a mechanism of measuring the effects of each alternative on the environment, the alternatives were tested against the Strategic Environmental Objectives (SEOs), taking into account the objectives and the geographical scope of the Plan.

The assessment of the Alternative options against the Strategic Environmental Objectives determined which option would be most suitable i.e. which would have the least significant negative and most significant positive impacts on the environment that meet the objectives of the Plan.

A detailed Route Corridor Selection Report (September 2012) was also undertaken for the proposed LNDR and includes a considerable amount of information on the area in which the proposed Variation is situated. Further detail on the alternatives considered and the assessment of same is provided in Section 4 of this SEA Statement as well as Section 7 of the SEA ER.

2.1.3 Consultation

Consultation was undertaken throughout the process integrating environmental considerations into the plan making process. Additionally, the previous Variation process No. 4 informed the integration of environmental considerations from the outset into the development of the Variation 5 (a) process. The SEA Scoping consultation with the designated environmental authorities further informed the scope and level of detail in the SEA ER and key environmental issues that were required to be considered as part of the process. During the Variation public display period

various public consultations and presentations were held with members of the public and elected members that also informed environmental considerations. All submissions were assessed relating to the environmental assessment as part of the SEA and were deemed to be considered appropriate as part of the assessment. Therefore no changes were deemed necessary.

2.2 Strategic Environmental Objectives and Key Mitigation Measures (Existing LCDP 2010-2016) Policies and Objectives

Where the various assessments identified significant adverse effects, consideration was given in the first instance by the multidisciplinary team and policy makers to preventing such impacts or where this was not possible, to lessen or offset those effects. Mitigation measures include application of existing policies as part of the LCDP 2010-2016 (as extended) and those contained in the supporting documents namely the NIR and SFRA.

2.3 Development of the Variation through the SEA Process

Where the likely significant effects are identified as part of the Variation initially the LCDP 2010-2016 was checked for the existence of environmental protection measures which could potentially mitigate these effects. If it is found that the Plan lacks in these, additional mitigation measures are recommended where necessary.

Table 2.1 summarises the principle mitigation policies and/ or objectives contained in the existing Limerick County Development Plan 2010-2016 (as extended) and how they relate to the SEOs which will be relied upon as existing mitigation for the Variation.

Table 2.1 SEA Principle Existing Mitigation Measures (LDCP 201-2016)

Environmental Receptor and Strategic Environmental Objective (SEO)	Principle Existing Mitigation Measures – policy, objectives (LCDP 2010-2016)
<p>Biodiversity (Bio) Maintain and enhance bio-diversity.</p>	<p>Objective: EH O1, EH O2, SE 015, SE 016, COM 032, Policy: CP 10, SE 01, ED P7</p> <p>AA Principle existing Mitigation policy Objective (LDCP 201-2016): Objective: EH O1, EH O2, SE 015, SE 016, COM 032, EH O20: IN 033, IN 036, IN 039, IN 040, Policy IN P12 Policy: CP 10, SE 01, ED P7</p>
<p>Population and Human Health (Pop & HH) Promote compact settlement patterns, and high quality residential development.</p>	<p>Policy: IN P1, IN P3, IN P4, IN P5, IN P6, IN O8, IN P7</p> <p>Objective: IN O1, IN O2, EH 023</p>
<p>Soils and Geology Conserve and sensitively exploit geological resources. Preserve sensitive geological sites.</p>	<p>Policy: EH P1</p>

Environmental Receptor and Strategic Environmental Objective (SEO)	Principle Existing Mitigation Measures – policy, objectives (LCDP 2010-2016)
<p>Water & Flood Risk Prevent further deterioration in water quality, achieve improvement in water quality. Promote good practice in flood risk management</p>	<p>Policy: IN P11, IN P12</p> <p>Objective: IN O24, IN O33, IN O35, IN O36, IN O 38, IN O39, SE O16, SE O17, SE O18, SE O19</p> <p>Mitigation Measures proposed in the Strategic Flood Risk Assessment (February 2017)</p>
<p>Air & Climate Reduce air pollution, implement climate change aspects of plan.</p>	<p>Objective: EH 022</p>
<p>Material Assets Sensitively manage natural and man and material assets.</p>	<p>Policy: IN P10, ED P8, EH O20</p> <p>Objective: IN O12, IN O13, COM O33, EH O19</p>
<p>Cultural Heritage Protect and conserve archaeology, heritage items.</p>	<p>Objective: EH O25, EH O26, EH O27, EH027A, EH O29, EH O31, EH O32, EH O36, EH O38, EH O29</p>
<p>Landscape Protect historic and natural features of note in landscapes. Sensitively manage landscape change.</p>	<p>Policy EH P2</p> <p>Objective EH 035, EH O6, EH O12, SE O7</p>

In summary, by undertaking the SEA, AA and assessing the in-combination effects, the most significant effects have been eliminated through avoidance, removal or specifying certain mitigation measures such as bridge design measures at crossing locations. In order to ensure that no significant effects remain at project level and to ensure that the current Variation has been appropriately assessed, further mitigation (as outlined in Section 11 of the NIR and the mitigation measures identified in the SFRA) have also been included to ensure these are addressed at project level.

An overview of the how the Variation evolved and the influence that the SEA, AA & SFRA processes had on its development is presented in Table 2.2. The main influence is where existing policies and objectives were found not to address the likely significant negative impacts through recommending additional mitigation measures. These mitigation measures were considered by the policy making team and incorporated (as detailed in Table 2.2) as part of the Variation in order to address the likely significant negative effects on the environment.

The SEA process did not result in the proposal of specific text amendments however it relied upon the specialist studies undertaken as part of the Variation process namely the Appropriate Assessment documented in the NIR together with the SFRA to inform the biodiversity and flood environmental impacts. The Proposed text from the NIR is presented in blue underlined font in Table 2.2 below. The final Variation text amendments proposed that resulted from the various processes is presented in green underlined.

Table 2.2 The Influence of SEA on the Development of the Variation

1. Development of Variation
<p>Draft Variation Text at SEA Scoping Stage <i>Limerick Northern Distributor Road:</i> <i>It is an objective of Limerick City & County Council to support the Limerick Northern Distributor Road, which will connect the Coonagh to Knockalisheen Road Scheme to the existing R445 (old N7) and adjoining road network to the east of Limerick City.</i></p>
1(A) - Strategic Environmental Assessment (SEA ER)
<p>The SEA process resulted in identifying likely significant negative effects on the environment and identified that for the most part suitable mitigation measures to address these is provided for by existing policies and objectives of the LCDP 2010-2016. However, on the basis of the Appropriate Assessment, it was determined that, in the absence of appropriate mitigation, significant adverse effects on the Conservation Objectives of the Lower River Shannon SAC would likely arise from the proposed Variation. By undertaking the AA and assessing the in-combination effects, the likely significant effects have been eliminated through avoidance, removal or specifying certain bridge design measures at crossing locations. Mitigation measures to counteract this negative impact were established as part of the NIR and are included in the varied plan wording. Therefore, no further mitigation measures are required to be included in the SEA.</p> <p>As a result of undertaking a Strategic Flood Risk Assessment it proposed to include mitigation measures to address the possible Flood Risk in the area. These mitigation measures are included in the varied plan wording. Therefore, no further mitigation measures are required to be included in the SEA.</p>
The Influence of the other Assessments on the policy making process:
1(B) - Appropriate Assessment (NIR) - Proposed Text in blue
<p>Extract from NIR (Section 11) Proposed Text: In relation to the LNDR, it is an objective of Limerick City & County Council:</p> <ul style="list-style-type: none"> c) To ensure all mitigation and monitoring measures outlined in the Environmental Report and Natura Impact Report shall be taken into account at project level. Section 11 of the Natura Impact Report (dated February 2017) for the Proposed Variation provides details of mitigation measures which shall apply to any future development of the LNDR. d) To ensure all mitigation and monitoring measures outlined in the Strategic Flood Risk Assessment shall be taken into account at project level. <p>The NIR mitigation measures include the following:</p> <ul style="list-style-type: none"> e) The design of the proposed River Shannon crossing shall be informed by the requirement to avoid adverse impacts on the Qualifying Interests of the Lower River Shannon SAC. f) The bridge abutments shall be set back a sufficient distance to allow for the retention of existing riparian habitats and areas with the potential to develop into Annex I habitat, this will ensure maintenance of ecological connectivity on the banks of the River Shannon and River Mulkear. g) The bridge deck shall be constructed at a sufficient distance to allow for the development of any Annex I alluvial woodland habitat present on banks of the River Shannon and River Mulkear and there shall be no net loss of habitat. <p>Note: At project stage, the provision of the LNDR will be subject to a project-level AA, as required by Article 6(3) of the Habitats Directive. This assessment, together with the appropriate application for Strategic Infrastructure will be presented to An Bord Pleanála for consideration, in accordance with the Strategic Infrastructure Act, 2006.</p>

1(C) Strategic Flood Risk Assessment (SFRA)

There was no specific text recommended to be inserted to the Variation as a result of the SFRA process however a number of recommendations were outlined to include:

All watercourse crossings both culverts and bridges should be designed not to impede the flood conveyance through the structure and not cause any significant change in flood levels, flow depths and velocities that would result in any noticeable increase in flood risk or erosion/accretion either locally in the vicinity of the crossing or more remotely both in the upstream and downstream reaches.

Road runoff storm outfall discharges to receiving watercourses should be designed not to exacerbate flooding by increasing peak flows. Mitigation of such impact from storm outfalls may require flood attenuation storage with the outflow controlled to greenfield runoff rates, particularly for the smaller watercourses where the contribution effect will be largest.

The proposed road should be set at a minimum level that provides sufficient freeboard above the 100year with climate change flood event (Climate change allowance of 20% which for Ireland is generally equivalent to the current 1000year flood becoming the future 100year flood) so as to have a low flood risk over its design life and sufficiently elevated for its storm drainage system to function appropriately during flood events

Where overbank flood areas have been identified, namely the Mulkear River and the River Shannon floodplains, overbank flood conveyance needs to be retained by providing sufficient overbank openings through bridge spans as not to significantly impede flood flows and produce an unacceptable increased in upstream flood level and flood risk to properties and lands.

The larger river crossings of the River Shannon and Mulkear at Castletroy should have a bridge soffit level with sufficient clearance above the 100year with Climate change flood to allow floating debris to pass underneath. The River Shannon Crossing and the envisaged Link Road Crossing of the Mulkear River should cater for navigation and boating requirements when defining the soffit level of the bridges.

The flood risk assessment concludes that a road within the proposed variation area can be constructed which will not exacerbate flood risk and will have a low residual flood risk. This can be achieved through suitable mitigation by appropriate sizing and configuration of bridge and culvert crossings of rivers, floodplains and streams intercepted by the road, together with suitable design of road drainage in accordance with the requirements of SUDs* (Hydro Environmental Ltd. SFRA, February 2017, Page 49)

In order to prevent a worsening of flooding as a result of road scheme, either localised or upstream or downstream, it is recommended that the following mitigation be included at the crossings of the Thornfield Stream

- full storm attenuation be provided for any potential road drainage outfall discharging to this stream,
- channel and overbank conveyance be provided at the crossing point and through the floodplain areas so as not to increase flood levels and flood flows. (Hydro Environmental Ltd. SFRA, February 2017, Page 44)

Final Public Display Text Additions (in green and underlined)

It is an objective of Limerick City & County Council to support the Limerick Northern Distributor Road, which will connect the Coonagh to Knockalisheen Road Scheme to the existing R445 (old N7) and adjoining road network to the east of Limerick City which will incorporate Smarter Travel features in accordance with the requirements of the Habitats, Water Framework, Floods, and EIA Directives. Full consideration of all environmental requirements has been made in the progression of the scheme to date. This will continue up to and including project level.

In relation to the LNDR, it is an objective of Limerick City & County Council:

- a) To ensure all mitigation and monitoring measures outlined in the Environmental Report and Natura Impact Report shall be taken into account at project level. Section 11 of the Natura

<p><u>Impact Report (dated February 2017) for the Proposed Variation provides details of mitigation measures which shall apply to any future development of the LNDR.</u></p> <p>b) <u>To ensure all mitigation and monitoring measures outlined in the Environmental Report and Natura Impact Report shall be taken into account at project level. Section 11 of the Natura Impact Report (dated February 2017) for the Proposed Variation provides details of mitigation measures which shall apply to any future development of the LNDR.</u></p> <p>c) <u>To ensure all mitigation and monitoring measures outlined in the Strategic Flood Risk Assessment shall be taken into account at project level.</u></p>
<p>Consultation</p>
<p>No modification, additions or deletions were deemed to be required as a result of environmental issues raised during the public consultation period. Furthermore, no changes were proposed during the vote from the Elected Members therefore no changes are required to the SEA.</p>

Avoidance of conflict with SEOs and the environment is dependent upon compliance with the existing policies and objectives of the Plan, together with the mitigation and monitoring measures which have emerged through the SEA, Habitats Directive Assessment process and the Strategic Flood Risk Assessment process which have been integrated into the proposed Variation process. Due to the nature of the Proposed Variation, which involves introducing a preferred route corridor within which a road will be located, there still remains a considerable amount of uncertainty as to the exact scale, type and construction methodology of the road development and river crossings in particular. These are best assessed at appropriate project level assessments i.e. EIA. AA etc. (as per the Variation wording).

2.3.1 Summary of How Environmental Measures were integrated into the Variation

This SEA process was informed by the assessment of the environmental baseline (i.e. the current state of the environment – biodiversity, water, cultural heritage etc.). This baseline assessment was used to facilitate the identification and evaluation of the likely significant environmental effects of implementing the proposed Variation and the subsequent monitoring of the effects of the Variation as made to the LCDP 2010-2016 9as extended).

Reasonable alternatives were identified and assessed as part of the SEA ER. As a result of this assessment the preferred option was determined. The preferred option was formulated to address the requirements of the scheme objectives which is demanded by national, regional and local policy as well as incorporating sustainable travel elements such as walking and cycling.

The SEA process identified likely significant effects as part of the Variation. Initially the LCDP 2010-2016 was checked for the existence of environmental protection measures which could potentially mitigate these effects. Where it is found that the Plan lacks in these, additional mitigation measures are recommended where necessary. On the basis of this assessment it was determined that, in the absence of appropriate mitigation, significant adverse effects on the Conservation Objectives of the Lower River Shannon SAC would likely arise from the proposed Variation. By undertaking the AA and assessing the in-combination effects, the likely significant effects have been eliminated through avoidance, removal or specifying certain mitigation measures such as bridge design measures at crossing locations. Mitigation measures to counteract these likely significant negative impacts were established as part of the NIR and are included in the varied plan wording. Therefore, no further mitigation measures are required to be included in the Plan to address the likely negative impact on Lower River Shannon SAC.

As a result of undertaking a Strategic Flood Risk Assessment it is proposed to include mitigation measures to address the Flood Risk in the area. These mitigation

measures are included as part of the policy making process in the varied plan wording (See Section 2.4).

Limerick City & County Council has determined that, on the basis of the objective information provided in the SEA, NIR and SFRA and with the adoption of the additional mitigation measures as part of the wording described above, the proposed Variation No. 5 (a) to the LCDP will not, either alone or in-combination with the existing *Policies and Objectives of the LCDP and other plans and projects*, have *likely* significant effects on the environment or have an adverse effect on any Natura 2000 site.

Monitoring of the Plan throughout its lifetime will ensure that any potential adverse environmental impacts, unforeseen at this stage, will be identified early so as to prevent any deterioration of the environment in the future.

2.4 Adopted Variation

Adoption of the variation: The variation was adopted at the council meeting of 29th of May 2017. The wording of the resolution that made the variation was as follows:

"That the proposed variation no. 5(a) to the Limerick County Development Plan 2010-2016 (as extended) for the incorporation of the preferred route corridor for the Limerick Northern Distributor Road (LNDR), as recommended in the Chief Executive's report dated 20th April 2017, be made in accordance with section 13 of the Planning and Development Act 2000 (as amended)."

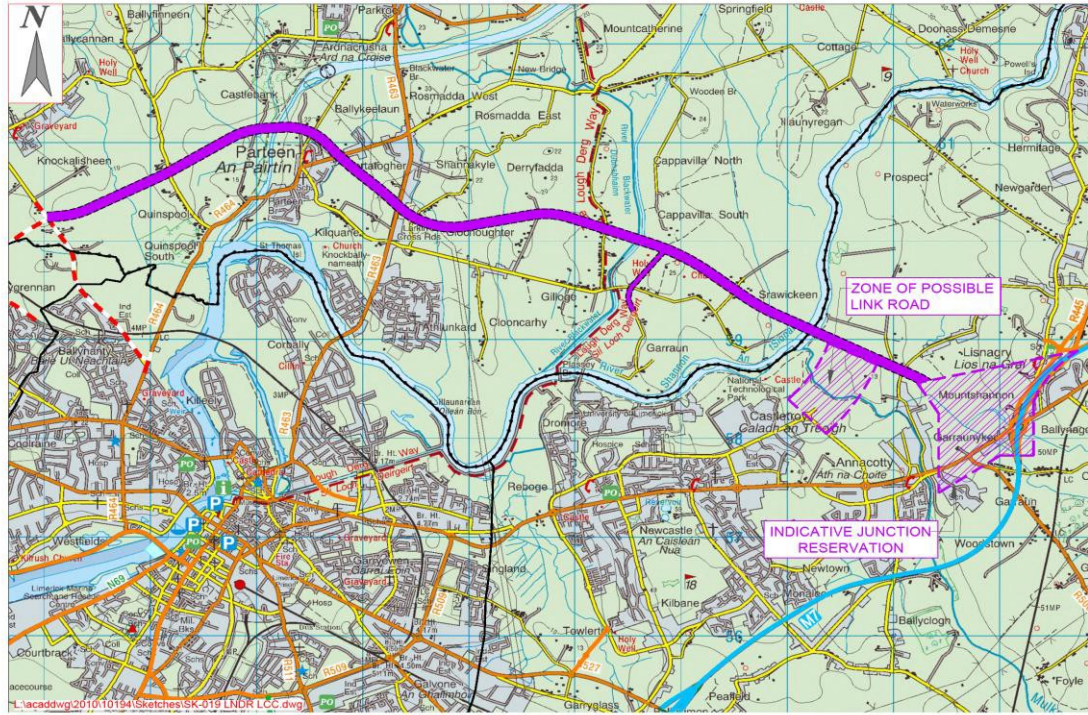
On this basis, A new objective is added to Page 8-14 of Chapter 8, Page 8-14, under Policy IN P8 and existing objectives to be re-numbered accordingly:

Objective IN O14: Limerick Northern Distributor Road:

It is an objective of Limerick City & County Council to support the Limerick Northern Distributor Road, which will connect the Coonagh to Knockalisheen Road Scheme to the existing R445 (old N7) and adjoining road network to the east of Limerick City which will incorporate Smarter Travel features in accordance with the requirements of the Habitats, Water Framework, Floods, and EIA Directives. Full consideration of all environmental requirements has been made in the progression of the scheme to date. This will continue up to and including project level.

In relation to the LNDR, it is an objective of Limerick City & County Council:

- a) To ensure all mitigation and monitoring measures outlined in the Environmental Report and Natura Impact Report shall be taken into account at project level. Section 11 of the Natura Impact Report (dated February 2017) for the Proposed Variation provides details of mitigation measures which shall apply to any future development of the LNDR.
- b) To ensure all mitigation and monitoring measures outlined in the Strategic Flood Risk Assessment shall be taken into account at project level.



3. INTEGRATION OF CONSULTATION INTO THE PLAN MAKING PROCESS

All the constraints and route options for the Limerick Northern Distributor Road (LNDR) are discussed in the Route Corridor Selection Report and Preferred Route Corridor for the Limerick Northern Distributor Road, which was published in September 2012. These route corridor options subsequently underwent environmental assessment and public consultation. As a result of these processes, a preferred route corridor emerged and was subsequently mapped as part of the proposed Variation.

Extensive public consultation has been undertaken as part of the development of the LNDR preferred route which has led to the Variation 5 (a) process and accompanying documents. Consultation has been an important component throughout the development of the Variation. It has been important to meet statutory requirements for consultation with relevant parties and to ensure that the knowledge, experience and views of stakeholders and the general public were taken into account throughout the process and assessments.

3.1 SEA Consultation

In accordance with the SEA Regulations (SI 436 of 2004 as amended) and Planning and Development Act (as amended), the following consultation activity was required:

- (i) Scoping stage: consultation with the SEA Statutory Authorities;
- (ii) Draft plan and SEA Environmental Report stage: consultation with the SEA environmental authorities and the wider public. The draft plan and SEA Environmental Report was put on public display and notice published.
- (iii) Final Variation and SEA Statement stage: The final adopted variation and SEA Statement must go on public display and a notice must be published.

These stages are summarised below.

3.1.1 Scoping Stage

Under the SEA Regulations, designated environmental authorities must be consulted in relation to the scope and level of detail to be included in the Environmental Report. In the case of the proposed Variation, the following authorities have been identified as statutory consultees and will be consulted for a minimum of 3 weeks, in accordance with Regulation 13M(2)(d) of the SEA Regulations:

- (i) The Environmental Protection Agency (EPA);
- (ii) Mr Simon Coveney TD, Minister for Housing, Planning, Community and Local Government
- (iii) Mr Denis Naughten TD, Minister for Communications, Climate Action and Environment
- (iv) Ms Heather Humphreys TD, Minister for Arts, Heritage, Regional, Rural and Gaeltacht Affairs
- (v) Development Applications Unit, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs
- (vi) Mr Michael Creed TD, Minister for Agriculture, Food and the Marine; and
- (vii) Under Regulation 13A(4)(a)(v) of the SEA Regulations, the authority shall also give notice to Clare County Council as the adjoining planning authority.

The SEA Scoping report was issued to the statutory environmental authorities in January 2017. The comments and submissions received influenced the development of the Variation as well as the SEA ER. Table 3.1 summarises the submissions made at the scoping stage as well as how they influenced the development of the proposed Variation and the SEA Environmental Report.

Table 3.1 Summary of SEA Scoping Responses

Environmental Authority	Issue	Concern/Comments	Response / Action Proposed
Environmental Protection Agency (EPA) received 13th February 2016			
EPA	Guidance on Environment & SEA	<p>Refers to Policies, Plans, Reports and Guidance document to be considered in the preparation of the SEA to include:</p> <ul style="list-style-type: none"> • Suggests a list of key plans and programmes to consider (where relevant and appropriate). • Consideration of SEA Scoping Guidance document & Assessment of Alternatives • SEA Pack, Integration Guidance, SEA Checklist, SEA Spatial Information Sources and guidance on Integrating Climate Change into SEA, is available on the EPA website and should be considered in the preparation of the SEA. • Guidance on Developing and Assessing Alternatives in SEA (EPA, 2015) • EPA State of the Environment Report 2016 – EPA provides a summary of the key issue/challenge under the various environmental topics. • Refers to a SEA WebGIS Search and Reporting Tool • Lists the Environmental Authorities which require Notice. 	<p>Noted and considered as part of the development of the ER.</p> <p>Noted - Notice Given to all in List as part of Scoping Process.</p>
EPA	Guidance on Integration of Environmental Considerations	<p>This submission gives a generic overview of key significant environmental aspects to be considered under each of the SEA environmental topics. It includes some of the latest sources of information which can be consulted as appropriate. The EPA has summarised the key environmental aspects which should be incorporated, as appropriate, in the preparation of the SEA and Draft Plan.</p> <p>An indicative list of plans Plans/Programmes/Strategies which may be considered during SEA</p>	<p>Noted and included as part of the development of the ER.</p> <p>Noted and included in ER Appendix A of the ER as</p>

Environmental Authority	Issue	Concern/Comments	Response / Action Proposed
		process is listed in the submission.	appropriate.
Departments of Arts Heritage, Regional and Rural Affairs and Gaeltacht Affaris (DAHRRGA) received 14th February 2017			
DAHRRGA	Archaeologica l Heritage	<p>Requires a broader view of the diversity of cultural heritage to be found in the Limerick area and in particular to the areas to be affected by any future developments for the roadway.</p> <p>It is recommended that the Cultural Heritage section of the proposed SEA be updated to address the potential for previously unknown terrestrial and underwater cultural heritage to be present and potentially negatively impacted by any proposed future works. It should include addressing the potential that such watercourses have to retain underwater cultural heritage and that such potential will be taken into account in any future appropriate assessments. Particularly include potential for cultural heritage of the River Shannon and River Mulkear, which may be impacted by future works.</p>	Noted and included in Section 8 of the ER.
	Terrestrial and Underwater Archaeology	<p>The RMP is not an exhaustive list of all archaeology in existence, and in this regard the DAHRRGA would like to draw the applicant's attention to the Department's published policy in relation to the archaeological assessment of large-scale developments on sites where there are no previously recorded monuments (Framework and Principles for the Protection of the Archaeological Heritage – Published by Dúchas The Heritage Service).</p>	<p>Noted and Included in the Baseline Description and Section 8 in the ER.</p> <p>Existing policies and objectives are contained within the current Limerick County Development Plan which addresses known or unknown archaeological resources.</p>
	Nature Conservation	<p>It is the opinion of the Department that until the Natura Impact Statement and Appropriate Assessment for the Northern Distributor Road project is complete, it is not possible to rule out adverse effects on the Lower River Shannon cSAC (2165). Therefore, the proposed wording in the Scoping Report may be premature.</p>	<p>Noted.</p> <p>The wording of the proposed Variation has been altered since issuing the Scoping report to the environmental authorities. The changes to the wording are as a result of the assessments carried out for the AA NIR, SFRA and the SEA ER.</p>

The submissions received were incorporated into the next phase of the SEA process, namely the SEA ER. The SEA ER outlines the findings of the assessment on the likely significant effects on the environment of the implementation of the Variation. Issues raised through the Scoping period informed the SEA ER and AA.

3.1.2 Consultation on the Proposed Variation and SEA ER

The Proposed Variation, the SEA ER and SEA Non-Technical Summary, NIR and SFRA were put on public display from Saturday 25th February 2017 to Monday 27th March 2017 inclusive. Submissions and/ or observations with respect to the Proposed Variation to the Plan and the accompanying documents were invited to be made in writing, to the Forward Planning Section, Economic Development and Strategic Planning Department, Limerick City and County Council, 7/8 Patrick's Street, Limerick or emailed to forwardplanning@limerick.ie and received by close of business on Monday 27th March 2017.

A total of 145 submissions were received, within the statutory timeframe, which raised concerns and offered support for the variation. The breakdown is as follows:

- 46.9% were in favour of the LNDR variation
- 47.6% expressed concerns with the variation; and
- 5.5% made observations which were neither in favour or against the variation

The submissions were considered and evaluated by the SEA, AA and SFRA teams which informed the Chief Executive's Report (20th April 2017) which was submitted to the elected members before the decision to vary the County Development Plan was made.

A number of consultation meetings and presentations were held regarding the LNDR between September 2016 and May 2017 the table below provides details of the type of meeting held, date and location held.

Table 3.2 Consultations regarding LNDR

Meeting	Date	Venue
Meeting with Councillors from Limerick City East Electoral Area	06/09/2016	Kilmurry Lodge Hotel
Workshop with Councillors from the Limerick Metropolitan District	10/01/2017	Castletroy Park Hotel
Meeting with Residents/Locals of the Mountshannon Road	19/01/2017	City Hall, Merchant's Quay
Presentation to the Limerick Chamber of Commerce	13/02/2017	University of Limerick
Presentation to the Economic Development, Enterprise & Planning Strategic Policy Committee	13/02/2017	City Hall, Merchant's Quay
Presentation to the Travel & Transport Strategic Policy Committee	20/02/2017	City Hall, Merchant's Quay
Presentation to Business Owners in Annacotty	08/03/2017	Annacotty
Presentation to Companies in the National Technology Park	08/03/2017	National Technology Park
Presentation to Adare/Rathkeale Municipal District Meeting	14/03/2017	Rathkeale Area Office
Meeting with Companies in Annacotty Business Park	16/03/2017	Annacotty Business Park
Meeting with the IDA and Companies from the National Technology Park	16/03/2017	National Technology Park
Workshop with the Councillors from the Limerick Metropolitan District on Flooding	21/03/2017	Kilmurry Lodge Hotel
Presentation to Cappamore /Kilmallock Municipal District	23/03/2017	Kilmallock Area Office
Presentation to Newcastle West Municipal District	12/04/2017	Newcastle West Area Office
Briefing workshop with Newcastle West Municipal District Elected Members	03/05/2017	Newcastle West Area Office
Briefing workshop with Elected Members	09/05/2017	Absolute Hotel
Meeting with Residents	16/05/2017	Kilmurry Lodge Hotel
Briefing workshop with Adare / Rathkeale Municipal District Elected Members	17/05/2017	Croom Enterprise Centre

3.1.3 Chief Executive's Response to Submissions

A Chief Executive's Report to Elected Members on the submissions received in relation to the proposed Variation was prepared in accordance with Section 13(4) of the Planning and Development Act 2000, as amended. It summarises the issues raised and provides a response in relation to each issue raised and a recommendation in relation to changes to the proposed Variation. The key environmental issues raised in submissions on the proposed Variation are summarised in Table 3.2 below.

In summary, the concerns raised by those who lodged submissions include that congestion will not be solved by the LNDR. It was argued that the LNDR will hamper the growth of the city as it will lead to increased car usage and undermine the development of the city centre and the case for public transport as well as facilitate

peripheral development. The submissions refer to effects such as disturbance, loss of amenity and loss of rural character both during the construction and operational phases of the LNDR. Potential severance to communities and impacts on residential properties and land due to the development of a large-scale road development was also raised as a concern. Many submissions also referred to the development of the future development of a road on a flood plain and concerns that it will exacerbate flooding in the area. The potential impacts on the ecological sensitivity of the area particularly the Lower River Shannon SAC was also highlighted as a concern.

Those in support of the LNDR referred to the need to resolve the chronic traffic congestion which is a current feature of the eastern part of the city. Business owners in particular, referred to the likely investment in the area that ease of access would result from the LNDR. Many submissions referred to the importance of this major piece of infrastructure in helping to guarantee Limerick's future. It was also noted that the concentration of business and educational facilities in the Plassey area would benefit from improved access and the alleviation of traffic problems. The importance of the development of the LNDR for Limerick as an instrument in national, regional and local development was stressed repeatedly.

Table 3.3 Summary of How Public Submissions expressed during Consultation have been taken into account

Environmental Receptor: Summary of the Main Environmental Concern Raised	How the Concern was considered (Response to Concern)	SEA Implications
Biodiversity		
Impacts on ecology of the area including unknown impacts on the Lower River Shannon candidate Special Area of Conservation (SAC).	Likely significant impacts to biodiversity are dealt with as part of the SEA ER. Impacts on the conservation objectives of the SAC were addressed in the Plan level Appropriate Assessment (AA). - Natura Impact Report. Further assessment will be undertaken at Project level EIA and AA when detailed design of the road is known as required. It is considered that sufficient study has taken place at this level of the policy making process.	No Change to SEA or AA required
The LNDR will cross a natural flood plain and will exacerbate flooding. Encouraging the building of housing and Technological Parks will contribute to future flooding.	The Flood Risk Assessment which had been carried out to accompany the Variation concluded that the flood risk associated with the proposed road development can be appropriately managed and mitigated for and that the construction and operation of the road can be engineered not to cause unacceptable adverse flood impacts elsewhere. Flood risk to existing residences will not change as a result of this scheme. Any future development will be subject to Flood Risk Assessment and the policies and objectives of the LCDP in accordance with proper planning and sustainable development of the area.	No change to SEA required

Environmental Receptor: Summary of the Main Environmental Concern Raised	How the Concern was considered (Response to Concern)	SEA Implications
Population and Human Health		
<p>LNDR does not promote a compact or sustainable settlement pattern. Promotes car dependency.</p>	<p>The proposed roadway is designed to alleviate congestion within the City Centre and on arterial routes into the City, therefore improving accessibility and allowing road space to be reallocated to improved pedestrian and cycling facilities, therefore creating improved quality of life for residents of the City Centre and creating a more desirable place to live and work.</p> <p>Proposals to provide public transport will also be encouraged in the area. This will create a range of viable options over the use of the private car. Much of Limerick's economic and educational growth has occurred in the National Technological Park, whose further growth is stymied by congestion. Regeneration Areas too would benefit from better access and connectivity.</p> <p>The LNDR will help to achieve both of these aims and by removing a significant part of through traffic from the city will allow the development of higher quality environment which itself will attract further investment.</p> <p>Modelling has shown that this will be up to 40% and this extra on street capacity will facilitate the delivery of the Limerick 2030 plan where thousands of new jobs will be created in our city centre and in the process we will be able to develop a more pedestrian/cycle friendly city centre and provide additional priority for public transport. New road on the outskirts of the city will facilitate access to new park and Ride locations where workers will be able to park and access the city by public transport.</p>	<p>No change to SEA required</p>
<p>Will not improve connectivity between Moyross and City centre or improve social inclusion</p>	<p>The LNDR does not claim that the LNDR will solve all of the Regeneration Area's transport problems; however it will facilitate access and connectivity to existing and future population of these area and the economic development in the area, which is a core objective of the Regeneration Plan. The provision of improved physical access to areas of employment and education will also provide benefits across the region.</p> <p>Links to and from the city centre can be provided for through modification of existing routes and traffic flows, in addition to further sustainable links such as cycle ways and pathways.</p>	<p>No change to SEA required</p>

Environmental Receptor: Summary of the Main Environmental Concern Raised	How the Concern was considered (Response to Concern)	SEA Implications
Disruption to communities and possible severance to communities	The route has been selected with a view to minimising likely significant impacts on the least amount of people and communities and bringing about the greatest positive impacts to the community. Generally efforts will be made to avoid impacts on a high number of residents or properties at design stage when the final road layout is determined. At project level stage the Environmental Impact Assessment (EIA) will seek to avoid, reduce or minimise and where this is not possible incorporate mitigation measures into the design of the route to alleviate as many of the negative impacts as possible. Continued consultation will be a feature of the planning application and EIA during the development of the road project.	No change to SEA required
Noise and air pollution, access and health and safety.	Guidelines set standards for noise, air, abatement and pollution, access and health and safety standards which will be required to be adhered to. At project level stage the Environmental Impact Assessment will seek to avoid, reduce or minimise and where this is not possible incorporate mitigation measures into the design of the route to alleviate as many of the negative impacts as possible.	No Change to SEA required.
Flooding impacts on people and properties	See response below regarding Flood Risk.	No Change to SEA required.
Water & Flood Risk		
Water supply	The proposed road is a vital piece of strategic infrastructure which will contribute to the future sustainable growth of Limerick, which will place demands on water and wastewater infrastructure, which will be considered at project level.	No Change to SEA required.
Flood Risk The Catchment Based Flood Risk Management Study (CFRAM) for the watercourses included within the study area is yet to be finalized.	Consultation has taken place with the OPW in relation to the CFRAMs. Limerick City and County Council is satisfied that as the latest draft information available the mapping provided is appropriate for inclusion in the SFRA carried out. The SFRA includes modelling for peak and combined flows of the Shannon and Mulkear and also includes modelling for a 1000 year Shannon and Mulkear flood, which clearly indicates the scale and extent of possible flooding under this scenario. It is not considered that the LNDR would add significantly to the flooding risk.	No Change to SEA required.

Environmental Receptor: Summary of the Main Environmental Concern Raised	How the Concern was considered (Response to Concern)	SEA Implications
<p>The proposed road is planned to be built on a nationally recognised flood plain. Concern regarding increase in flood water levels and risk of flooding.</p>	<p>It is acknowledged that flooding in the area is a problem, however, the Strategic Flood Risk Assessment carried out to accompany the Variation concluded that the flood risk associated with the proposed road development can be appropriately managed and mitigated for and that the construction and operation of the road can be engineered not to cause unacceptable adverse flood impacts elsewhere. Flood risk to existing residences will not change as a result of this scheme.</p>	<p>No Change to SEA required.</p>
<p>The road does not pass the justification test: as outlined by OPW, as other more suitable options were available to the council.</p> <p>The Strategic Flood Risk Assessment (SFRA) published for preferred route is inadequate in many respects.</p>	<p>The requirements for the carrying out of the justification test are outlined in the Planning System and Flood Risk Management Guidelines for Planning Authorities as published in 2009. The Flood Risk Assessment carried out has concluded that making provision for the LNDR satisfies the justification test, given the clear strategic nature of the proposed road transport development, the sequential approach involved in the route corridor selection process and the findings from the flood risk assessment that flood risk to the proposed road development can be appropriately managed and mitigated for and that the construction and operation of the road can be engineered not to cause unacceptable adverse flood impacts elsewhere.</p>	<p>No change to SEA required.</p>
Soils and Geology		
<p>No issues raised</p>	<p>Soil and geological considerations will be considered at the project level EIA at design stage.</p>	<p>No change to SEA required</p>
Air & Climate		
<p>Concerns regarding increase in air pollution in the area.</p>	<p>Road design guidelines set minimum standards for landscaping, air quality and noise emissions which are required to be adhered to.</p>	<p>No change to SEA required</p>
<p>Disturbance in terms of noise, dust pollution and construction traffic during the construction phase.</p>	<p>The project will be subject to Environmental Impact Assessment (EIA) which will provide details in relation to phasing and Construction which will identify measures to avoid reduce and minimise or implement mitigation measures in order to reduce negative impacts on the environment.</p>	<p>No change to SEA required</p>
Material Assets		
<p>LNDR will not solve traffic congestion.</p> <p>Poor spatial planning, which has lead to urban sprawl, under investment in public transport infrastructure and sustainable travel initiatives.</p>	<p>The proposed LNDR represents part of the strategic transport infrastructure required for Limerick City and its environs and the provision of such infrastructure forms part of the planned future sustainable development of the region. The proposed road is a vital piece of strategic infrastructure which will contribute to the future sustainable growth of Limerick. It is consistent with a number of national and regional policy documents including the National Spatial Strategy, Regional Planning Guidelines 2010–2022 and the Mid West Area Strategic Plan 2012–2030.</p>	<p>No change to SEA required</p>

Environmental Receptor: Summary of the Main Environmental Concern Raised	How the Concern was considered (Response to Concern)	SEA Implications
	The proposed roadway is designed to open access to the eastern and northern parts of the city and its environs which will facilitate expansion of the city and alleviate congestion. It should also be noted that walking and cycling infrastructure will be included as part of the LNDR and promotes options over the private car. Public transport will also benefit from the LNDR, Bus Éireann have supported its construction and have stated they will include it in their transport planning.	
The road will compound sewerage issues in the area.	Waste water and all other material assets will be considered at the project level EIA at design stage.	No Change to SEA required.
Cultural Heritage		
No issues raised	Cultural heritage considerations will be considered at the project level EIA at design stage.	No change to SEA required
Landscape		
Concerns regarding change in Landscape particularly to visual impacts of residents in the area.	The SEA promotes sensitively managing landscape changes. This issue is more appropriately assessed at the project level EIA stage. It is expected that the final design will sensitively integrate the road, junction, etc into the surrounding landscape to the greatest extent possible, in order to minimise visual impacts on sensitive receptors and minimise its visual effects on the landscape.	No change required to SEA.
In summary, the SEA and AA team assessed each submission. It was considered that no additions or deletions were required as a result of the submissions and that existing mitigation measures proposed adequately addressed the concerns at this level of the decision making process.		

Based on the above, the next stage in the process was the writing of the Chief Executive's Report to the Members on Submissions (April 2017).

Following receipt of the Chief Executive's Report, the Members of the Council had up to 6 weeks in which to consider the contents of the report and the proposed Variation. Members could then decide to make the Variation with or without the proposed amendments or with modifications to the proposed amendments, as they consider appropriate and subject to the provisions of the Planning and Development Act, 2000 as amended. The formal making of the Variation was made by Resolution of the Council on 29th May 2017.

4. THE REASONS FOR CHOOSING THE VARIATION IN LIGHT OF OTHER REASONABLE ALTERNATIVES

The SEA process (SEA ER) examined reasonable alternatives available to Limerick City and County Council other than developing the LNDR. This section summarises the reasons for choosing the Variation in light of other reasonable alternatives dealt with. The alternatives considered include:

- Option A – ‘Do-Nothing’ scenario which suggests leaving the road network as it currently stands.
- Option B – ‘Do-Minimum’ involves upgrading the existing road network in the area which would involve both online and offline (approx 50%) upgrade works
- Option C – ‘Do Something’ or the ‘Sustainability Option’ would focus on sustainable transport alternatives to developing new road infrastructure e.g. increasing bus services, encouraging active travel and improving cycling routes, encouraging car pooling etc.
- Option D – ‘Do Something’ – ‘Preferred Route Corridor Option’ (this Variation) development of a high quality urban dual carriageway, providing two lanes in each direction and including footpaths and cycle ways. A junction will facilitate connection with the local and strategic road networks including the R445 (old Dublin Road), the M7 motorway.

As a mechanism of measuring the effects of each alternative on the environment, the alternatives were tested against the Strategic Environmental Objectives (SEOs) developed, taking into account the objectives of the Plan and the geographical scope of the Plan. The general basis of the alternatives assessment consists of a comparison of the environmental effects that each alternative option may have. An assessment rating from – 3 (major negative) to +3 (major positive) and associated explanatory text has been provided for each alternative against each of the individual Strategic Environmental Objectives (SEOs). The results of the assessment are detailed in the SEA ER Section 7.

Option A Do-Nothing

Each of the Alternative options above were considered and measured against the Strategic Environmental Objectives to determine which option would be most suitable i.e. which would have the least significant negative and most significant positive impacts on the environment. It is not the purpose of the SEA to take into consideration the economic and social aspects of each option however the scheme objectives are required to be considered which includes improving access and connectivity across the region for populations.

The assessment of the Alternatives (Section 7 of the SEA ER) found that Options A, B and C did not improve the status of the SEOs across a number of the environmental receptors. While these Options also had a neutral impact across many of the SEOs, the options considered did not meet the scheme objectives in their entirety. Option A, B and C all rated negatively in terms impacts on the population and human health SEO which relates to the promotion of compact settlements patterns and high quality residential development. Furthermore, these Options did not improve the status of the material assets or air quality SEOs, which relates to sensitively managing natural, manmade material assets. The assessment considered that Option A, B, C did not adequately address the existing congestion identified in the immediate area, congestion at existing river crossings or improving

connectivity and accessibility across the region particularly in the northern and eastern fringes of the City.

It was found that Option D, improves the status of SEOs across population and human health, material assets and air quality. There is potential for negative interactions regarding biodiversity and water SEOs however it is considered that with application of the mitigation measures proposed as part of the Variation together with the application of existing policies and objectives of the LCDP these can be dealt with by appropriate mitigation.

Overall, Option D is considered to be the most reasonable, practical, feasible and capable of delivering the scheme objectives while also resulting in improvements in SEOs which is supported by National, Regional and Local policy. Furthermore, this option allows for sustainable elements such as the inclusion of cycling and walking infrastructure as part of the scheme. A detailed assessment of the various elements of the proposed Variation is included in Section 8.2 of the SEA ER.

4.1 Summary of the Reasons for Choosing the Variation over other alternatives

The reasons for choosing the Variation in light of other reasonable alternatives considered include:

- The Variation is consistent with scheme objectives and higher level policies at National and Regional and at Local level.
- It will reduce congestion levels in the immediate areas and city centre and will provide for the integration of sustainable travel options, including supporting a modal shift away from the private car, through the provision of walking and cycling infrastructure as part of the scheme.
- Contributes towards supporting compact settlement patterns in the region and facilitate connectivity and access to eastern parts of the city.
- It has the potential to improve the biodiversity and water SEOs, subject to the implementation of the appropriate mitigation measures and implementation of existing policies and objectives contained within the LCDP2010 -2016 (as extended).
- This Variation is considered to improve the status of the strategic environmental objectives such as population and human health, material assets, air and climate over the other alternatives considered.

5. MEASURES TO MONITOR SIGNIFICANT ENVIRONMENTAL EFFECTS OF IMPLEMENTATION OF THE VARIATION

Article 10 of the SEA Directive requires that monitoring be carried out in order to identify, at an early stage, any unforeseen adverse effects due to implementation of a plan or programme, and to be able to take remedial action. In response to this requirement, a monitoring framework has been proposed for the Variation, based on the SEA objectives and their associated framework of indicators and targets, utilising the data obtained as part of the SEA process.

In accordance with article 13R, the planning authority shall monitor the significant environmental effects of implementation of the Variation of a development plan in order, inter alia, to identify at an early stage unforeseen adverse effects and to be able to undertake appropriate remedial action. For this purpose, existing monitoring arrangements may be used, if appropriate, with a view to avoiding duplication of monitoring.

The purpose of the monitoring is twofold: to monitor the predicted significant negative effects of the Variation; and to monitor the baseline environmental conditions for all SEA objectives and inform the six yearly update of the LCDP. Regular monitoring will also help to identify any unforeseen effects of the plan and ensure that where these effects are adverse, action can be taken to avoid, reduce or offset them.

The proposed monitoring framework has been updated in the SEA Statement and the SEA ER to fully reflect the adopted Variation text with regard to monitoring significant effects on the conservation objectives of the Lower River Shannon SAC and flood risk in the area as proposed by the mitigation measures contained in the SFRA. The monitoring framework will commence immediately upon adoption of the Variation and will be revised periodically to take into account new monitoring methods and increased understanding of the environmental baseline. The monitoring framework is outlined in Table 5.1 overleaf.

Table 5.1 Monitoring Framework

Environmental Topic	Potential Impact	Indicators	Comments
Biodiversity	Fragmentation, loss of habitats, species.	Known losses, reports, surveys by relevant bodies, NPWS, Fisheries.	Requires cooperation and liaison with other bodies.
	Habitat removal, fragmentation, disturbance, pollution events and sedimentation.	Impact on the Conservation Objectives of the Lower River Shannon SAC. Implementation of the NIR mitigation measures (February 2017).	Cooperation with the NPWS, IFI and other bodies.
Population and Human Health	Ground surface/water pollution. Traffic accidents. Noise.	Pollution incidents, Traffic reports.	Could be obtained through Traffic impact assessments produced as part of planning applications.
Water & Flood Risk	Pollution of ground and surface waters, estuary waters. Excessive abstraction.	Water pollution surveys, incidents as brought to light as a result of complaints, sampling.	Cooperation with other bodies such as Fisheries NPWS and Health Board required.
	Risk of Flooding.	Flooding and Increased Risk of Flood. Application of the mitigation contained in the SFRA (February 2017).	Application of CFRAMS (Proposed CFRAM Flood Protection Measures for the Annacotty-Mountshannon Area are presented in the CFRAM Preliminary Options Report for unit of management 25/26 (July 2016). Co-operation with Limerick City and County Council and The Office of Public Works.
Air & Climate	Local air pollution. Green house gas emissions.	Traffic volumes. Comments in individual EIS's submitted.	Contents of EIS submitted to the Planning Authority in the monitoring time frame may be indirect sources of data
Soil & Geology	Contamination.	Reports/Surveys.	Local contamination may occur as a result of pollution.
Material Assets	Use of brown field sites.	Planning applications.	Nil.
Cultural Heritage	Development in or close to protected sites, habitats or structures	Known loss of sites or structures.	Increased liaison with other bodies required.
Landscape	Protect historic and natural features of note in landscapes. Sensitively manage landscape change.	No. of developments permitted and their impacts on cultural/historic landscapes.	Limerick City and County Council planning application records.

6. SUMMARY AND CONCLUSIONS

This SEA Statement summarises how environmental considerations have been integrated into the plan making process. This includes how consultations including stakeholder engagement and public participation, including formal consultation in relation to the SEA Scoping Report, proposed Variation, SEA ER, NIR and SFRA have been undertaken in tandem and provided opportunities for all interested parties to influence the development of the Variation.

The SEA identified that the implementation of the Variation could give rise to a number of positive as well as negative environmental effects and concluded for the most part that the existing policies and objectives of the LCDP provide adequate protection against these potential impacts. However, the process identified likely significant adverse effects namely with regard to the Lower River Shannon SAC and its conservation objectives and concerns regarding the flood regime. The SEA, in tandem with the Appropriate Assessment process determined that in the absence of appropriate mitigation, significant adverse effects on the Conservation Objectives of the Lower River Shannon SAC would likely arise. By undertaking the AA and assessing the in-combination effects, the likely significant effects have been eliminated through avoidance, removal or specifying certain bridge design measures at crossing locations. Mitigation measures to counteract likely adverse impacts were established as part of the NIR and are provided for in the varied plan wording. As a result of undertaking a Strategic Flood Risk Assessment it proposed to include mitigation measures to address the possible flood risk. These mitigation measures are provided for in the Variation wording.

Therefore, the SEA process, informed by the NIR and SFRA processes has arrived at the appropriate mitigation and monitoring measures to mitigate the likely significant negative effects identified and these have been adopted as part of this Variation process into the Limerick County Development Plan 2010-2016 (as extended) detailed in the Variation wording and map as outlined in Section 2.4 above.

A monitoring framework has been outlined with the purpose of monitoring the predicted significant effects of implementation of the Variation, and monitoring the baseline environmental conditions for all the SEOs. The framework will be reviewed and revised during the six-yearly review of the Plan. Monitoring will commence as soon as the plan is implemented.

In summary, the SEA, HDA and SFRA processes took place in conjunction with the preparation of the Variation. The proposed Variation was thoroughly assessed by the SEA and HDA teams and many amendments, additions and/ or deletions were made before the proposed Variation was published on 25th February 2017. Where impacts were unavoidable the proposed Variation, refers to the recommended mitigation measures which have been adopted into the Variation to the LCDP 2010-2016. No further changes were made to the Variation following its publication and its adoption on the 29th May 2017.