

SEA STATEMENT

FOR THE

TUAM LOCAL AREA PLAN 2018-2024

(AS AMENDED ON 31ST JANUARY 2019)

for: Galway County Council

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Section 1 Introduction

1.1 Introduction and Legislative Context

This is the Strategic Environmental Assessment (SEA) Statement for Tuam Local Area Plan 2018-2024.

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

Directive 2001/42/EC of the European Parliament and of the Council of Ministers, of 27th June 2001, on the Assessment of the Effects of Certain Plans and Programmes on the Environment, referred to hereafter as the SEA Directive, introduced the requirement that SEA be carried out on plans and programmes which are prepared for a number of sectors, including land use. The SEA Directive was transposed into Irish Law through the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 and the Planning and Development (Strategic Environmental Assessment) Regulations 2004. The Regulations have been amended by the European Communities (Environmental Assessment of Certain Plans and Programmes) (Amendment) Regulations 2011 and the Planning and Development (Strategic Environmental Assessment) (Amendment) Regulations 2011.

1.2 Content of the SEA Statement

Where SEA is undertaken, the Regulations require that a Statement is made available to the public and the competent environmental authorities after the making of the Plan.

This Statement is referred to as an SEA Statement.

The SEA Statement is required to include information summarising:

- a) how environmental considerations have been integrated into the Plan;
- b) how the following have been taken into account during the preparation of the Plan:
 - the environmental report,
 - submissions and observations made to the planning authority on the Draft Plan and Environmental Report, and
 - any transboundary consultations (these are not relevant to this SEA).
- c) the reasons for choosing the Plan in the light of the other reasonable alternatives dealt with; and
- d) the measures decided upon to monitor the significant environmental effects of implementing the Plan.

This Statement has been prepared following the issuing of a Direction to amend the adopted Plan's "Land Use Zoning Objectives" Map by the Minister for Housing and Urban Development in January 2019.

1.3 Implications of SEA for the Plan

SEA has been undertaken on the Plan and the findings of the SEA are expressed in an Environmental Report, the first published version of which accompanied the Draft Plan on public display. The Environmental Report was updated in order to take account of:

- Recommendations contained in submissions; and
- Changes to the Draft Plan that were made on foot of submissions.

Galway County Council have been provided with the findings of SEA output during their consideration of the Plan and before the Plan was adopted.

Section 2 How Environmental Considerations were integrated into the Plan

2.1 Introduction

Environmental considerations were presented to the Council for its consideration through:

1. Consultations;
2. Communication of environmental sensitivities throughout the SEA process;
3. Appropriate Assessment;
4. Strategic Flood Risk Assessment;
5. Consideration of alternatives;
6. Integration of environmental considerations; and
7. Integration of individual SEA and AA provisions into the Plan.

2.2 Consultations

As environmental authorities identified under the Planning and Development (SEA) Regulations, as amended, the following authorities were sent SEA scoping notices indicating that submissions or observations in relation to the scope and level of detail of the information to be included in the environmental report could be made to the Galway County Council: Environmental Protection Agency, Department of Communications, Climate Action and Environment, Department of Agriculture, Food and the Marine, Department of Housing, Planning and Local Government, Department of Culture, Heritage and the Gaeltacht and all adjoining planning authorities¹.

Detail on submissions made on foot of the SEA scoping notice is provided under Section 4.2.

Further detail is provided on submissions that were made on the Draft Plan and the SEA Environmental Report while they were on public display (see Section 4.3).

¹ Galway City Council, Mayo County Council, Roscommon County Council, Offaly County Council, Tipperary County Council and Clare County Council.

2.3 Communication of environmental sensitivities throughout the SEA process

Environmental considerations were integrated into the Plan before it was placed on public display. Individual sensitivities that were considered by the Planning Team preparing the Plan included the following:

- European Sites (Special Areas of Conservation and Special Protection Areas);
- Natural Heritage Areas and proposed Natural Heritage Areas;
- Status of Surface and Ground Waters;
- Various entries to the Water Framework Directive's Register of Protected Areas;
- Groundwater Vulnerability;
- Water Services Capacity, Performance and Demand;
- Landscape sensitivity and Protected Views; and
- Cultural heritage (archaeological and architectural) sensitivities.

A number of these sensitivities are mapped on Figures 2.1, 2.2 and 2.3.

2.4 Appropriate Assessment

Appropriate Assessment (AA) has been undertaken alongside the preparation of the Plan.

The requirement for AA is provided under the EU Habitats Directive (Directive 1992/43/EEC).

The preparation of the Plan, SEA and AA has taken place concurrently and the findings of the AA have informed both the Plan and the SEA.

The conclusion of the Stage 2 AA is that Plan is not foreseen to give rise to any significant adverse effects on designated European Sites, alone or in combination with other plans or projects.

2.5 Strategic Flood Risk Assessment

A Strategic Flood Risk Assessment (SFRA) has been undertaken alongside the preparation of the Plan. The requirement for SFRA is provided under 'The Planning System and Flood Risk Management Guidelines for Planning Authorities' (DEHLG and OPW, 2009).

The SFRA provides an appropriately strategic assessment of flood risk within the town of Tuam and has been undertaken in full compliance with the 2009 Flood Guidelines and subsequent circular PL2/2014. The SFRA has been undertaken with the aim of protecting existing and future properties and populations from the adverse effects of flooding.

The preparation of the Plan, SEA and SFRA has taken place concurrently and the findings of the SFRA have informed the SEA. The SFRA has facilitated the integration of flood risk management considerations into the Plan and the Plan is consistent with the requirements of *The Planning System and Flood Risk Management Guidelines for Planning Authorities* (2009) and *Circular PL2/14*.

2.6 Consideration of Alternatives

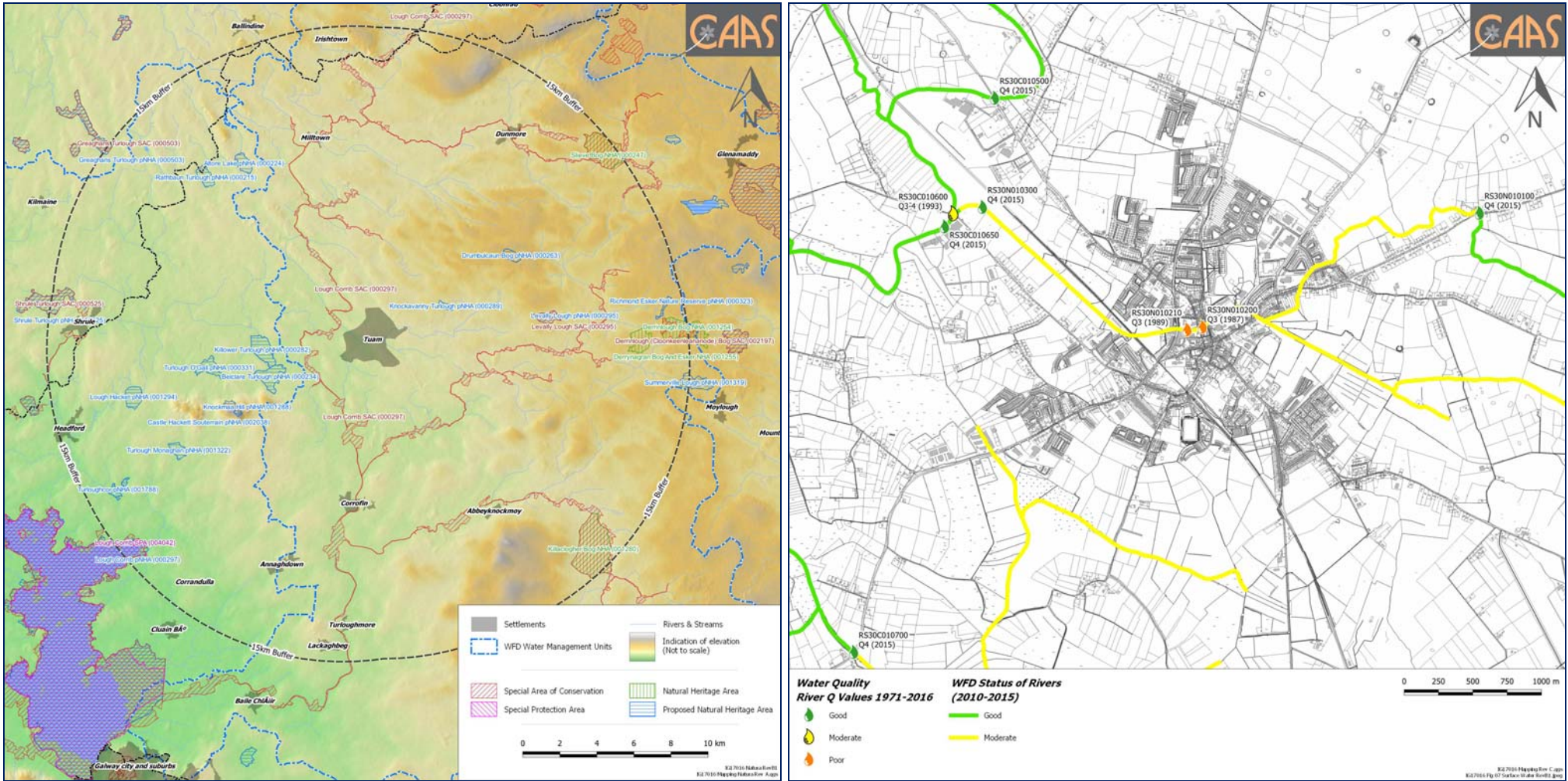
Consideration of the environmental effects arising from a variety of different alternatives for the Plan (see Section 5 and Section 6) has contributed towards the protection and management of the environment in the overall strategy for the Plan.

2.7 Integration of individual SEA and AA provisions into the Plan

Table 2.1 links key mitigation measure(s) - which have been integrated into the Plan - to the likely significant effects of implementing the Plan, if unmitigated. The integration of these measures into the Plan occurred over a number of iterations and was informed by, inter alia, various communications through the SEA, AA and SFRA processes.

The measures generally benefit multiple environmental components i.e. a measure providing for the protection of biodiversity, flora and fauna could beneficially impact upon the minimisation of flood risk and the protection of human health, for example.

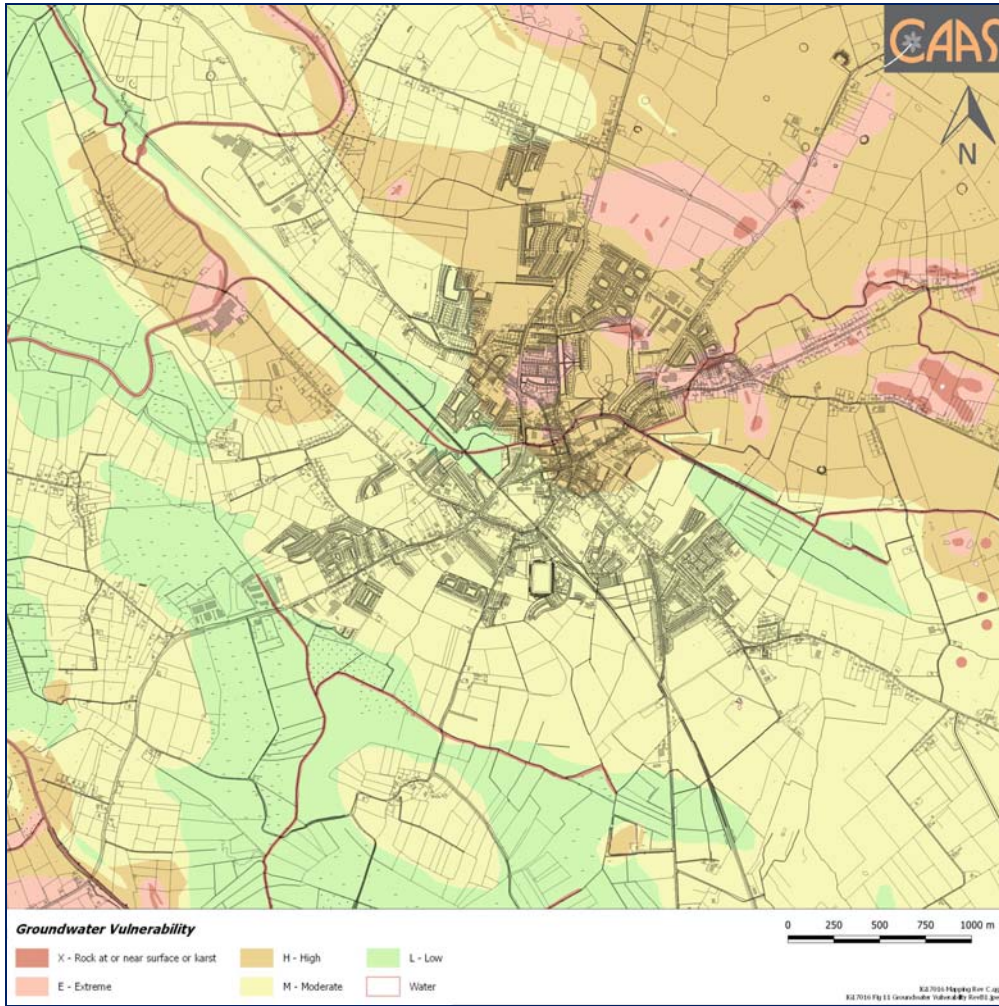
The reference codes are those that accompany the relevant measures in the Plan.



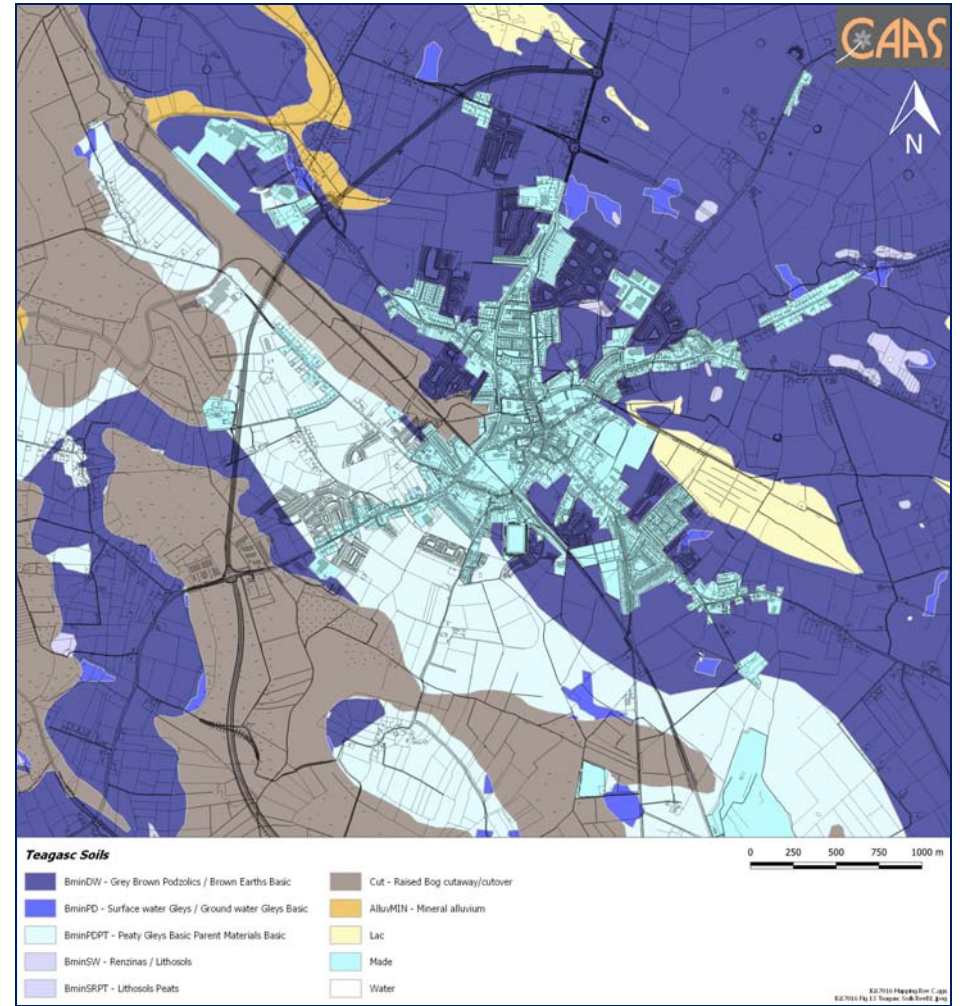
European Sites, Natural Heritage Areas, Proposed Natural Heritage Areas and Water Management Units within 15 km buffer of Tuam

Available information on Water Quality Status (2010-2015) for Surface Water Bodies

Figure 2.1 Selection of Individual Environmental Sensitivities taken into account (1 of 3)

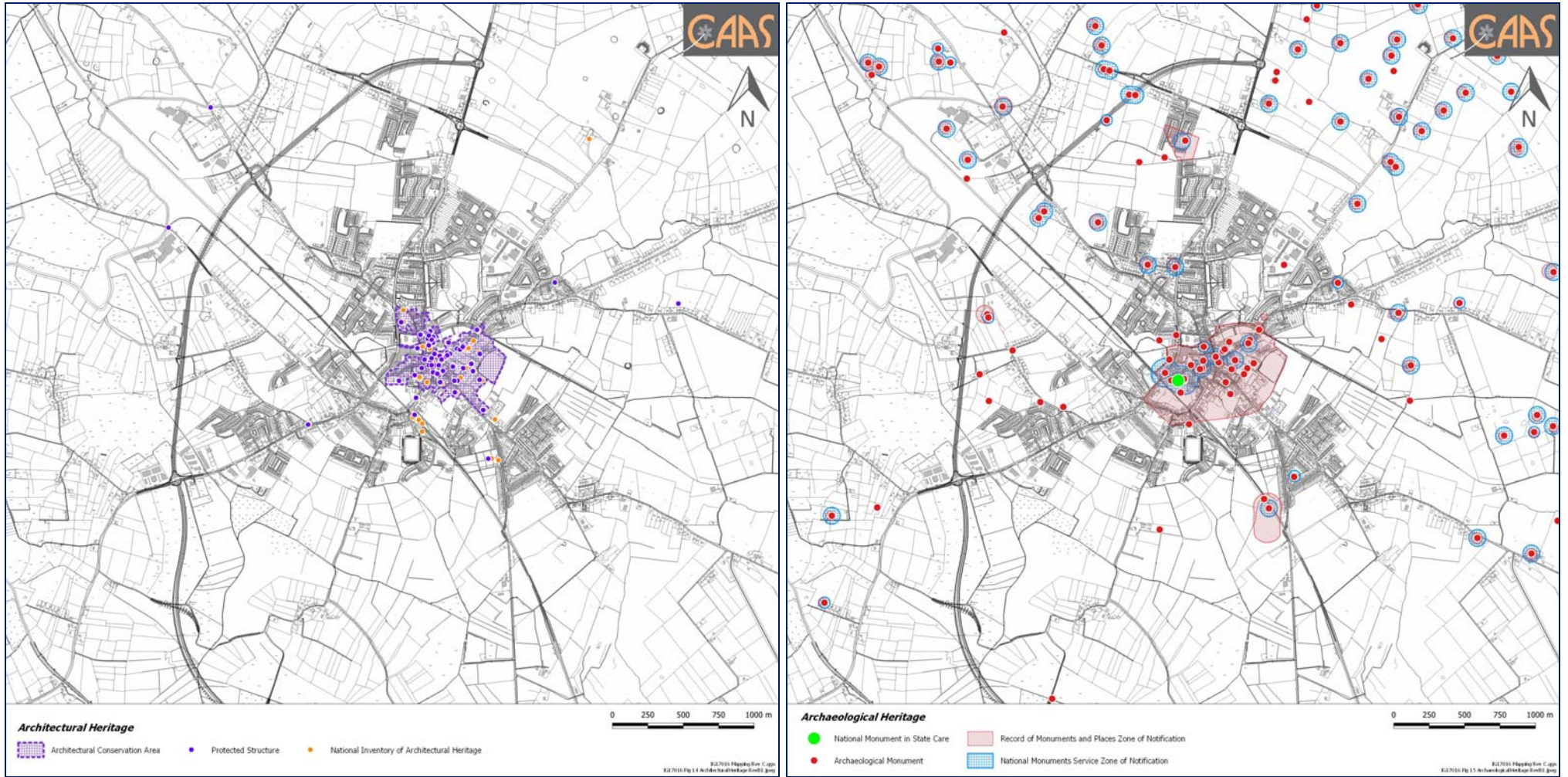


Groundwater Vulnerability



Soils

Figure 2.2 Selection of Individual Environmental Sensitivities taken into account (2 of 3)



Architectural Heritage

Archaeological Heritage

Figure 2.3 Selection of Individual Environmental Sensitivities taken into account (3 of 3)

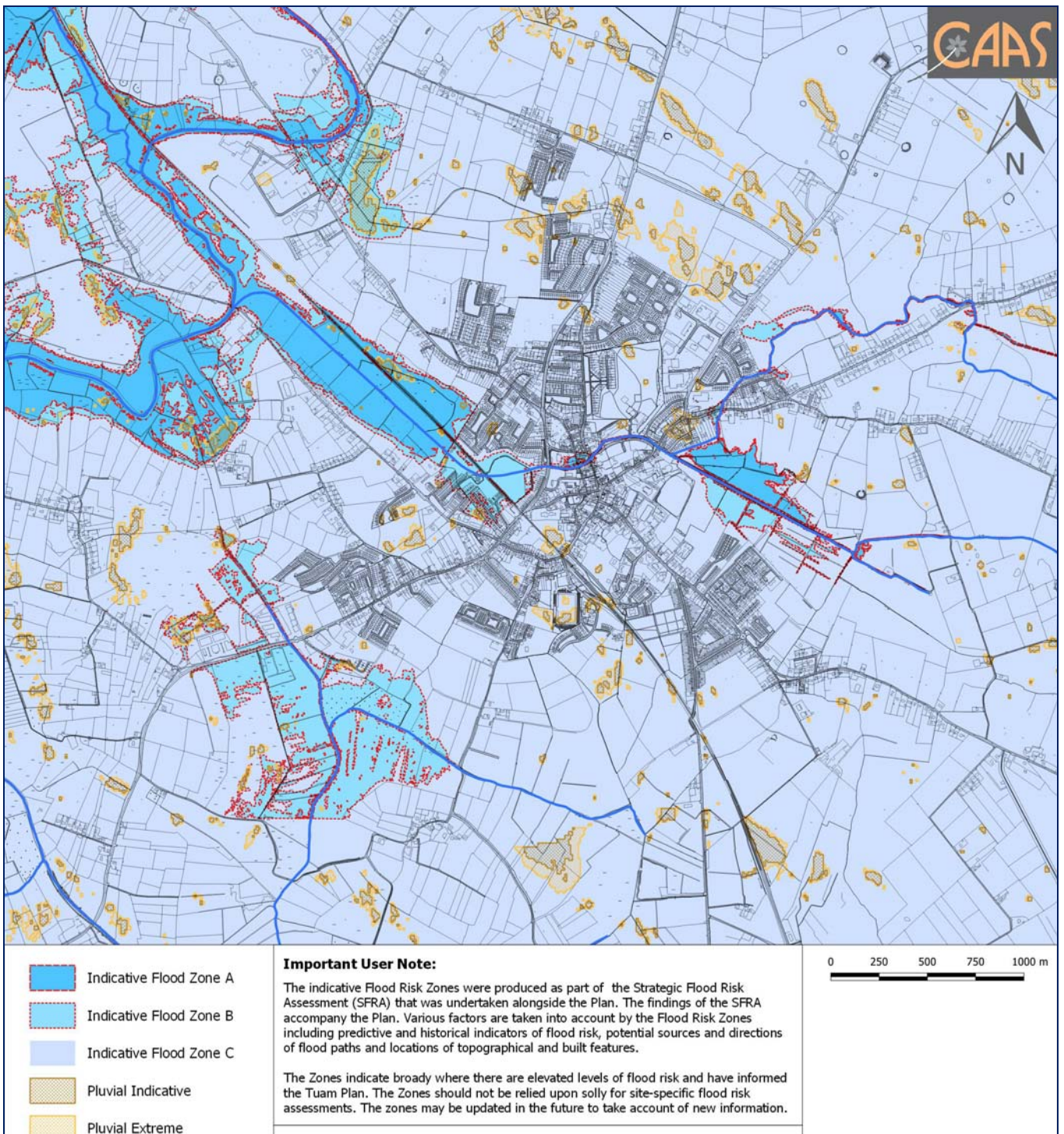


Figure 2.4 Flood Zones Map

Table 2.1 Integration of Environmental Considerations

Environmental Component	Likely Significant Effect, if unmitigated	Mitigation Measures, including:
All	All	Measures from the Local Area Plan <ul style="list-style-type: none"> • Objective LU 12 - Galway County Development Plan 2009-2015 (as varied)² • Objective NH 13 - Construction Environmental Management Plan • Objective TI 4 – Road Schemes/Road Improvements
Biodiversity, Flora and Fauna	<p>Arising from both construction and operation of development and associated infrastructure:</p> <ul style="list-style-type: none"> • Loss of/damage to biodiversity in designated sites (including European Sites and Wildlife Sites) and Annexed habitats and species, listed species, ecological connectivity and non-designated habitats; and disturbance to biodiversity and flora and fauna; • Habitat loss, fragmentation and deterioration, including patch size and edge effects; and • Disturbance (e.g. due to noise and lighting along transport corridors) and displacement of protected species. 	Measures from the Local Area Plan <ul style="list-style-type: none"> • Objective DS 4 – European Sites Network and Habitats Directive Assessment • Objective CF 9 – Amenity Network • Objective ED 6 – Tourism Development • Objective UD 4 – Green Network and Landscaping • Policy NH 1 – Natural Heritage, Landscape and Environment • Objective NH 1 – European Sites • Objective NH 2 – Protected Habitats and Species • Objective NH 3 – Natural Heritage Areas and Proposed Natural Heritage Areas • Objective NH 4 – Impact Assessments • Objective NH 5 – Biodiversity & Ecological Networks • Objective NH 6 – Water Resources • Objective NH 7 – Wetlands, Springs, Rivers and Streams • Objective NH 8 – Riparian Zones • Objective NH 9 – Trees and Hedgerows • Objective NH 10 – Geological and Geo-morphological Systems • Objective NH 11 – Control of Invasive and Alien Species • Objective NH 12 – Consultation with Environmental Authorities • DM Guideline NH 1 – Control of Invasive Species & Bio-Security Measures • Objective NH 13 - Construction Environmental Management Plan <p>Measures from the Galway County Development Plan as varied</p> <ul style="list-style-type: none"> • Policies NHB 1, NHB 2, NHB 3, NHB 5, NHB 6 and NHB 7 • Objectives DS 6, DS 9, EQ1, EQ 4, ICT 1, NHB 1, NHB 2, NHB 4, NHB 5, NHB 6, NHB 7, NHB 11, NHB 13, AFF 6 and DS10 <p>Also see various measures providing for populations in rural and supporting areas.</p>
Population and Human Health	Potential interactions if effects upon environmental vectors such as water and air are not mitigated	Measures from the Local Area Plan <ul style="list-style-type: none"> • Objective TI 7 – Noise <p>Measures from the Galway County Development Plan as varied</p> <ul style="list-style-type: none"> • Policy CC 8 • Objectives TI 12 and EQ 2 <p>Also see measures related to soil, water quality, flooding, waste water treatment and drinking water supply and quality.</p>
Soil	Damage to the hydrogeological and ecological function of the soil resource	<p>Measures from the Galway County Development Plan as varied</p> <ul style="list-style-type: none"> • Objective NHB12 Soil/Ground Water Protection • Objective NH 10 – Geological and Geo-morphological Systems <p>Also see measures related to water quality and waste water treatment.</p>
Water	<p>Adverse impacts upon the status of water bodies arising from changes in quality, flow and/or morphology</p> <p>Increase in the risk of flooding</p>	Measures from the Local Area Plan <ul style="list-style-type: none"> • Objective NH 6 – Water Resources • Objective NH 7 – Wetlands, Springs, Rivers and Streams • Objective NH 8 – Riparian Zones • Objective DS 8 – Flood Risk Management and Assessment • Objective DS 9 – Climate Change & Adaptation • Objective LU 8 – Constrained Land Use Zone (CL) • Objective LU 9 – Flood Risk Areas and Land Use Zones (Refer to Map 1, 2 and Map 5) • Policy FL 1 – Flood Risk Management • Objective FL 1 – Flood Risk Management and Assessment • Objective FL 2 – Flood Zones and Appropriate Land Uses • Objective FL 3 – Structural and Non-Structural Risk

² Objective LU 12 - Galway County Development Plan 2009-2015 (as varied):

The provisions of the Galway County Development Plan 2009-2015 (as varied), including the measures contributing towards environmental protection and sustainability (some of these measures are repeated in Section 9 of the SEA Environmental Report that accompanies this Plan) shall be complied with by any future development.

Environmental Component	Likely Significant Effect, if unmitigated	Mitigation Measures, including:
		<p>Management Measures in Flood Vulnerable Zones</p> <ul style="list-style-type: none"> • Objective FL 4 – Flood Risk Assessment for Planning Applications and CFRAMS • Objective FL 5 – Strategic Flood Risk Assessment and Flood Risk Assessments • Objective FL 6 – Environmental Impact Assessment/Statement (EIA/EIS) & Flood Risk Assessment • Objective FL 7 – Pluvial and Groundwater Flood Risk • Objective FL 8 – New and Emerging Data • Objective FL 9 – Water Bodies and Watercourses • Objective FL 10 – Arterial Drainage Scheme • Objective FL 11 – Improvement &/Or Restoration of Natural Flood Risk Management Functions • DM Guideline FL 1 – Flood Zones and Appropriate Land Uses • DM Guideline FL 2 – Structural and Non-Structural Risk Management Measures in Flood Vulnerable Zones • DM Guideline WQ 1 – Water Bodies and Watercourses <p>Measures from the Galway County Development Plan as varied</p> <ul style="list-style-type: none"> • Policies NHB 4, FL 1, FL 2, FL 3, FL 4 and FL 5 • Objectives NHB 3, NHB12, NHB 14, EQ1, AFF 5, AFF 6, AFF9, CS 4, WS 1, WS 2, WS 7, WS 9, WS 11, WW 1, WW 7, FL 1, FL 2, FL 3, FL 4, FL 5, FL 6, DS 7, DS 8, DS 9 and RA 1 • DM Standard 27: Surface Water Drainage & Flooding
Material Assets	<p>Failure to provide adequate and appropriate waste water treatment (water services infrastructure and capacity is needed to ensure the mitigation of potential conflicts)</p> <p>Failure to comply with drinking water regulations and serve new development with adequate drinking water that is both wholesome and clean (water services infrastructure and capacity is needed to ensure the mitigation of potential conflicts)</p> <p>Increases in waste levels</p>	<p>Measures from the Local Area Plan</p> <ul style="list-style-type: none"> • Policy UI 1 – Water Supply, Wastewater and Combined Drainage Infrastructure • Policy UI 2 – Irish Water’s Water Services Strategic Plan • Objective UI 1 – Irish Water & Water and Wastewater Projects • Objective UI 2 – Water Supply & Water Conservation • Objective UI 3 – Wastewater Disposal • Objective UI 4 – Connections to the Public Sewer & Public Water Mains • Objective UI 5 – Surface Water Drainage and Sustainable Drainage Systems • Objective UI 6 – Wastewater Treatment Plant Buffer • Policy WM 1 – Waste Management • Policy WM 2 – Waste Management Plan • Objective WM 1 – Waste Prevention, Reduction & Recycling • Objective WM 2 – Bring Bank Facility <p>Measures from the Galway County Development Plan as varied</p> <ul style="list-style-type: none"> • Policies WS 1 WS 2 WS 3 WS 4 WS 5 WS 6 WW 1 WM1 WM2 • Objectives WS 1, WS 2, WS 3, WS 4, WS 5, WS 6, WS 7, WS 8, WS 9, WS 10, WS 11, WS 12, WS 13, WS 14, WS 15, WW 1, WW 2, WW 3, WW 4, WW 5, WW 6, WW 7, WW 8, WW 10, WM 1, WM 2, WM 3, WM 4, WM 5, WM 6, CS 4, RHO 5 and EDT 5
Air and Climatic Factors	<p>Emissions to air including greenhouse gas emissions and other emissions.</p> <p>Climate adaptation interactions</p>	<p>Measures from the Local Area Plan</p> <ul style="list-style-type: none"> • Objective DS 9 – Climate Change & Adaptation • Objective CF 9 – Amenity Network • Policy ST 1 – Sustainable Transport, Walking and Cycling • Objective ST 1 – Integrated Land Use and Transport • Objective ST 2 – Sustainable Transportation • Objective ST 3 – Walking • Objective ST 4 – Cycling • Objective ST 5 – Bicycle Parking • Objective ST 6 – Walking & Cycling Strategy • Objective ST 7 – Pedestrian Crossings • Objective ST 8 – Amenity Walking/Cycling Network • Objective ST 9 – Mobility Management Plans • Objective ST 10 – Charging Points for Electric Vehicles • Objective ST 11 – Bus Facilities & Services • Objective TI 7 – Noise • Objective TI 10 – Preparation of a Revised Traffic Management Plan • Objective TI 14 – Junction Upgrade • Objective TI 14 – New Developments & Connection to the Town Footpath & Lighting Network • Objective TI 15 – Footpath, Public Lighting, Cycle Provision & Traffic Calming • Policy ENV 1 – Climate Change Policy

Environmental Component	Likely Significant Effect, if unmitigated	Mitigation Measures, including:
		<ul style="list-style-type: none"> • Objective ENV 1 – Climate Change & The National Climate Change Adaptation Framework • Objective ENV 2 – Climate Change & Green Infrastructure • Objective ENV 3 – Air Quality • Objective ENV 4 – Air Purification • DM Guideline EC 1 – Energy Statements • Objective UD 4 – Green Network and Landscaping <p>Measures from the Galway County Development Plan as varied</p> <ul style="list-style-type: none"> • Strategic Aims 6, 7 and 11 • Policies CC 1, CC2, CC3, CC4, CC5, CC6, CC 7, TI 1, TI 2, TI 3 and TI 4 • Objectives DS 1, DS 2, DS 3, DS 8, CS 3, CS 5, TI 1, TI 2, TI 3, TI 4, TI 16, TI 17, TI 18, TI 19, TI 20, TI 21, DS 8, CC1, CC 2, CC3, CC 4 and CC5
Cultural Heritage	<p>Effects on entries to the Record of Monuments and Places and other archaeological heritage</p> <p>Effects on entries to the Records of Protected Structures, Architectural Conservation Areas and other architectural heritage</p>	<p>Measures from the Local Area Plan</p> <ul style="list-style-type: none"> • Objective ED 6 – Tourism Development • Objective ED 7 – Visual Quality Working Environments • DM Guideline ED2 – Design and Access Statements • Objective UD 6 – Design and Access Statements • DM Guideline UD1 Design and Access Statements • Policy HC 1 – Built Heritage • Policy HC 2 – Cultural Heritage • Objective HC 1 – Architectural Heritage and Protected Structures • Objective HC 2 – Protected Structures • Objective HC 3 – Architectural Conservation Areas • Objective HC 4 – Development Relating to Protected Structures and ACAs • Objective HC 6 – Demolition • Objective HC 7 – Architectural Conservation Area Appraisal and Management Plan • Objective HC 8 – Vernacular Architecture & Structures of Local Interest • Objective HC 9 – Archaeological Heritage • Objective HC 10 – Archaeological Landscapes • Objective HC 11 – Monuments and Places • Objective HC 12 – Archaeological Assessment • Objective HC 13 – Underwater Archaeological Sites <p>Measures from the Galway County Development Plan as varied</p> <ul style="list-style-type: none"> • Policies AH 1, AH 2, ARC 1, ARC 2, ARC 3, ARC 4 and ARC 5 • Objectives AH 1, AH 2, AH 3, AH 4, AH 5, AH 6, AH 7, AH 8, AH 9, AH 10, AH 11, ARC 1, ARC 2, ARC 3, ARC 4, ARC 5, ARC 6 and ARC 7
Landscape	Occurrence of adverse visual impacts	<p>Measures from the Local Area Plan</p> <ul style="list-style-type: none"> • Objective ED 7 – Visual Quality Working Environments • DM Guideline ED2 – Design and Access Statements • Policy UD1 – Urban Design and Landscape • Objective UD 1 – High Quality, Contextually Sensitive Design • Objective UD 4 – Green Network and Landscaping • Objective UD 6 – Design and Access Statements • Objective UD 7 – Landscape Character, Values, Sensitivity and Views/Prospects • DM Guideline UD1 Design and Access Statements • Policy NH 1 – Natural Heritage, Landscape and Environment <p>Measures from the Galway County Development Plan as varied</p> <ul style="list-style-type: none"> • Policy LCM 1 • Objectives LCM 1, LCM 2, LCM 3, FPV 1 and WH 1

Section 3 Instances whereby Environmental Considerations were not integrated into the Plan

27 Material Alterations were proposed after public display of the Plan. Proposed Material Alterations No. 1-16 were determined as requiring full SEA as they would be likely to result in significant adverse environmental effects, if unmitigated. Full SEA (and Stage 2 AA) was undertaken on these Material Alterations and the findings of the SEA were placed on public display alongside the Material Alterations. The Elected Members were also informed of the findings.

In adopting the Plan, the Elected Members decided to adopt the following with regard to Proposed Material Alterations³:

- Zoning as proposed by the Draft Plan for MA2, MA3, MA10 and MA16;
- Zoning as proposed by Material Alterations for MA4-MA9 and MA12-MA15); and
- Zoning as proposed by Material Alteration with modification for MA1 and MA11.

Following adoption, in January 2019 the Minister for Housing and Urban Development, directed the Council to amend the adopted "Land Use Zoning Objectives Map" by:

- Reverting back the lands identified as MA4, MA5, MA6 and MA11 as per the proposed Material Alterations (April 2018) to the provisions of the Draft Plan (January 2018), where the subject lands were not included in the Draft Plan and subsequently not zoned; and
- Removing these additional zonings from the Tuam Land Use Zoning Map and reverting the LAP boundary to reflect the Draft Plan boundary as published January 2018.

Notwithstanding this, Material Alterations MA1 (as modified), MA7, MA8, MA9, MA12, MA13, MA14 and MA15 are part of the Plan and would be likely to result in environmental conflicts and associated adverse effects (these were identified in previous SEA documentation that was placed on public display and provided to Elected Members).

Taking into account the considerable extent of lands involved, cumulative adverse effects would be likely to arise on all environmental components as a result of the provision of unnecessary zoning (for which there is no established planning need). Residual adverse effects arising from Material Alterations MA1 (as modified), MA7, MA8, MA9, MA12, MA13, MA14 and MA15 would include:

- Loss of an extent of non-protected habitats and species arising from the replacement of semi-natural land covers with artificial surfaces;
- Losses or damage to ecology;
- Potential interactions with residual effects on environmental vectors. This has been mitigated by provisions that have been integrated into the Plan, including those relating to sustainable mobility and infrastructural provision;
- Loss of an extent of soil function arising from the replacement of semi-natural land covers with artificial surfaces;
- Increased loadings as a result of development;
- Flood related risks remain due to uncertainty with regard to extreme weather events;
- Residual wastes to be disposed of in line with higher level waste management policies;
- An extent of travel related greenhouse gas and other emissions to air;
- Potential alteration to the context and setting of architectural heritage however these will occur in compliance with legislation;
- Potential alteration to the context and setting of archaeological heritage however this will occur in compliance with legislation;
- Potential loss of unknown archaeology however this loss will be mitigated by measures integrated into the Plan; and
- Landscapes will change overtime as a result of natural changes in vegetation cover combined with new developments.

³ Proposed Material Alterations likely to result in significant adverse effects upon flood risk and/or European Sites were either not adopted by the Elected Members (MA2 and MA3) or they were modified to avoid conflicts (MA1 and MA11).

As there is no established planning need for the zoning of these lands, no positive effects arising from reducing the need to develop more sensitive, less well serviced areas beyond the Plan boundary are present under Material Alterations MA1 (as modified), MA7, MA8, MA9, MA12, MA13, MA14 and MA15.

Section 4 Environmental Report and Submissions/ Observations

4.1 Introduction

This section details how both the Environmental Report and submissions and observations made to Galway County Council on the Environmental Report and SEA process have been taken into account during the preparation of the Plan and the SEA.

- Relationship with Key Plans/Programmes;
- Climate Adaptation / Climate Mitigation;
- Scoping Process Guidance;
- SEA WebGIS Search and Reporting Tool; and
- Environmental Authorities.

The submissions from the Department of Culture, Heritage and Gaeltacht provided specific comments and advice covering the following issues:

4.2 SEA Scoping Notices and Submissions

As part of the scoping process for preparation of the Plan, environmental authorities⁴ were notified that a submission or observation in relation to the scope and level of detail of the information to be included in the Environmental Report could be made to the Council.

Submissions were made by the Environmental Protection Agency and the Department of Culture, Heritage and the Gaeltacht. These submissions influenced the scope of the assessments and were taken into account during the undertaking of the SEA, Strategic Flood Risk Assessment (SFRA) and Appropriate Assessment (AA).

- Archaeology - compliance with the National Monuments Acts, and amendments, 1930 to 2004;
- Archaeology - references to national archaeological legislation and policy documents;
- Archaeology - general guidance on the scope of issues that may arise in relation to the Plan and subsequent proposed development; and
- Nature conservation – general guidance on the SEA and AA processes and available ecological information.

The submission from the EPA provided specific comments and advice covering the following issues:

- EPA's State of the Environment report - Ireland's Environment – An Assessment 2016;
- Critical Service Infrastructure;
- Water Related Considerations;
- Flooding;
- SUDS;
- Biodiversity;
- Fisheries;
- Green Infrastructure/Habitat Mapping;
- Landscape;

⁴ The following authorities were notified: Environmental Protection Agency, Department of Communications, Climate Action and Environment, Department of Agriculture, Food and the Marine, Department of Housing, Planning and Local Government, Department of Culture, Heritage and the Gaeltacht and all adjoining planning authorities.

4.3 Submissions on the Environmental Reports for the Draft Plan and Proposed Material Alterations⁵

Various submissions were made on the Draft Plan, Proposed Material Alterations and associated environmental assessment documents while these documents were on public display. Certain submissions resulted in updates being made to the Plan, SEA and AA documents.

On foot of a submission from the EPA (made during public display of the Draft Plan and associated documents), the SEA Environmental Report was updated to include the more detailed text on Opportunity Sites, as follows:

Opportunity Site 1 is a former hospital located on Vicar Street and Opportunity Site 5 is a former industrial site located on the corner of Barracks Street and Liam Mellows Street. As with other previously developed sites, proposed developments will be required to comply with County Development Plan Objective NHB12 - Soil/Ground Water Protection, "Developments shall ensure that adequate soil protection measures are undertaken, where appropriate, including investigations into the nature and extent of any soil/groundwater contamination."

On foot of the same submission, additional information was also included on monitoring issues in the SEA Environmental Report:

- Specific responsibilities for monitoring the various environmental sensitivities in the monitoring programme was added to Table 10.1 "Selected Indicators, Targets and Monitoring Sources";

- Table 10.1 was included in in the Non-Technical Summary of the SEA Environmental Report; and
- Details on how the monitoring of the Plan will be aligned with the monitoring programme established at county level, for the County Development Plan.

On foot of two submissions from the Department of Culture, Heritage and the Gaeltacht (one made during public display of the Draft Plan and associated documents and one made public display of the Proposed Material Alterations and associated documents), the AA Natura Impact Report was updated to provide the following information:

- Further detail on the rational and scientific literature used to produce the content;
- Conservation objectives and specific targets for each of the qualifying interests referred to for both of the European Sites brought to Stage 2 AA;
- Targets and attributes of the two European Sites brought to Stage 2 AA to make it clear that they were considered;
- Further clarity in relation to the use of Conservation Objectives in applying the "Source-Pathway-Receptor" model; and
- Additional detail regarding the targets and attributes of sensitive receptors for which pathways for effects exist.

⁵ Note that a recommendation regarding MA18 (changing of zoning from *Residential Phase 2* to *Residential Phase 1*) was raised in a submission during the Plan preparation process. SEA was not required for this alteration as environmental effects arising from changes to the likelihood in the timing of development at this site, which is adjacent to other Residential lands, would be mitigated by the various environmental protection and management measures that have already been integrated into the Plan to the extent that any residual effects arising would not be significant.

On foot of a submission from the Office of Public Works (made during public display of the Proposed Material Alterations and associated documents) additional information was provided on the justification test with respect to Proposed Material Alterations MA1, MA2 and MA3⁶ and flood risk management provisions contained within the Plan⁷.

4.4 SEA documents including SEA Environmental Report

The Draft Plan and accompanying documents (including SEA Environmental Report and AA and SFRA documents) were placed on public display from January 2018 to March 2018, having integrated various recommendations arising from the SEA, AA and SFRA processes. Responses to submissions made on the SEA Environmental Report and AA and SFRA documents during the period of public display of a Draft Plan were integrated into a Chief Executive's Report and considered by Galway County Council.

27 Material Alterations were proposed after public display of the Draft Plan. Proposed Material Alterations No. 1-16 were determined as requiring full SEA. Full SEA (and Stage 2 AA) was undertaken on these Material Alterations and the findings of the SEA were placed on public display alongside the Material Alterations. The Elected Members were also informed of the findings. Responses to submissions made on the SEA Environmental Report and AA and SFRA documents during the period of public display of the Proposed Material Alterations were

integrated into a Chief Executive's Report and considered by Galway County Council.

Elected Members decided to adopt certain Proposed Material Alterations, some with modifications. Proposed Material Alterations likely to result in significant adverse effects upon flood risk and/or European Sites were either not adopted or they were modified to avoid conflicts. Following adoption, in January 2019 the Minister for Housing and Urban Development, directed the Council to amend the adopted "Land Use Zoning Objectives Map" by reverting back to the zoning provided by the Draft Plan for certain Material Alterations.

Notwithstanding this, Material Alterations and associated modification that are part of the Plan would be likely to result in environmental conflicts and associated adverse effects (see Section 3).

On adoption of the Plan, the Environmental Report that had been placed on public display alongside the Draft Plan was updated to become a final Environmental Report that is consistent with the adopted Plan, taking into account recommendations included in the submissions as well as changes that were made to the original Draft Plan that was placed on public display. Following a January 2019 Direction from the Minister for Housing and Urban Development, the SEA documents were updated to take account of the Direction.

⁶ Additional information provided: "Any Justification Test for these Proposed Material Alterations would fail. This is because there are various lands available for such uses in Tuam. As Justification Tests would not be passed consideration could not be given to the mitigation and management of risk."

⁷ Additional information provided: "Various provisions have been integrated into the planning framework for the town (including the Local Area Plan and the County Development Plan) that proposed developments must comply with. This includes policies and objectives that will ensure the cautious consideration of all developments within the Plan area with regard to flood risk management, not just those within the indicative flood zones that are identified by the SFRA. Issues covered by these provisions include the need to undertake site-specific FRA outside of the indicative flood zones that are identified by the SFRA (such FRAs would be required to consider access issues) and consideration of effects on flooding elsewhere..."

Section 5 Summary of Alternatives considered

5.1 Introduction

As per the requirements of the SEA Directive, the SEA considered reasonable alternatives, which are capable of being implemented for both the Plan taking into account the objectives and the geographical scope of the Plan. Alternatives are assessed in Section 6.

In addition to assessing the alternatives for the development of the town of Tuam under the overall Local Area Plan, consideration was given to alternatives relating to zoning for smaller areas under the Proposed Material Alterations. Information on these alternatives is also provided below and in Section 6.

5.2 Summary of Alternatives considered for the Overall Local Area Plan

Galway County Council in preparing a Draft Plan for public display developed three alternatives for Tuam.

Alternative 1: Even Development

- Tuam to reach population allocation, resulting in balanced orderly development and implementation of the core strategy as contained in Chapter 2 of the Galway County Development Plan 2015-2021.
- The infrastructure required to be in place to achieve the growth targets is already in place or planned.
- Residential Development to take place on R1 lands in the lifetime of the Plan, unless a comprehensive justification is provided for alternative residential lands.
- Community development facilities to be developed in tandem with economic and residential growth.
- Town Centre developments would be developed in a planned and coordinated manner focused within the town centre.
- Industry would occur in the periphery close to existing infrastructure.
- Opportunity sites identified with clear design and proposed uses identified.
- Open Space and Recreational Lands would be preserved.

Alternative 2: Sporadic Development

- Tuam to reach population allocation, resulting in balanced orderly development and implementation of the core strategy as contained in Chapter 2 of the Galway County Development Plan 2015-2021.
- Additional infrastructure would be required to accommodate sporadic development, more than would be required for Alternative 1 'Even Development'.
- Residential Development to take place on R1 and R2 lands in the lifetime of the Plan, unless a evidence based justification is provided for alternative residential lands.
- Industry would occur at locations including those close to residential development.
- Creation of neighbourhood centres throughout the Plan area and associated dispersal of Town Centre, commercial development and local services.
- Town centre development would be sporadic and uncoordinated around the Town centre zonings.
- Opportunity sites are identified but no clear guidance on the design parameters or uses identified.

Alternative 3: Haphazard Development

- Tuam to reach population allocation, resulting in balanced orderly development and implementation of the core strategy as contained in Chapter 2 of the Galway County Development Plan 2015-2021.
- Additional infrastructure would be required to accommodate sporadic development, more than would be required for Alternative 1 'Even Development' or Alternative 2 'Sporadic Development', development would have to be serviced by private waste water treatment systems which would have to be properly maintained.
- Residential development would occur on a piecemeal and haphazard basis.
- Town centre development would be permitted on a number of different zonings and not concentrated in the Town centre.
- No opportunity sites identified-laissez faire attitude in relation to development.
- Each application would be considered on its own merits and no land use zoning is provided for.

5.3 Summary of Alternatives considered for Proposed Material Alterations

As per the requirements of the SEA Directive, this SEA considers reasonable alternatives, which are capable of being implemented for the Proposed Material Alterations, taking into account the objectives and the geographical scope of the Plan and the Alterations.

27 Material Alterations were proposed after public display of the Draft Plan.

Proposed Material Alterations No. 1 to 16 were determined as requiring SEA.

Proposed Material Alterations MA1 to MA16 proposed various changes in land use zoning. There is no established planning need to zone these lands for Proposed Material Alteration uses. The alternative for each of these Alterations was to retain the zoning, as it was included within the Draft Plan.

The alternatives for the Proposed Material Alterations are arrayed on the table below.

Table 5.1 Alternatives considered for Proposed Material Alterations

Proposed Material Alteration No.	Alternative A: Zoning as proposed by the Draft Plan	Alternative B: Zoning as proposed by the Material Alterations
MA1	These lands are located outside of the Draft Plan boundary.	Industrial
MA2	Open Space/ Recreation and Amenity	Residential Phase 1
MA3	Existing Residential	Residential Phase 2
MA4	These lands are located outside of the Draft Plan boundary.	Residential Phase 1
MA5	These lands are located outside of the Draft Plan boundary.	Residential Phase 1 Existing Residential
MA6	These lands are located outside of the Draft Plan boundary.	Residential Phase 1 Existing Residential
MA7	Residential Phase 2	Residential Phase 1
MA8	Residential Phase 2	Residential Phase 1
MA9	Agricultural	Residential Phase 1
MA10	Business and Enterprise	Residential Phase 1
MA11	These lands are located outside of the Draft Plan boundary.	Residential Phase 1
MA12	Community Facilities	Residential Phase 1
MA13	Agricultural	Residential Phase 2
MA14	Residential Phase 1	Commercial/Mixed Use
MA15	Agricultural	Industrial zoning, with 20 metre Agricultural buffer to adjacent existing residential site
MA16	Business and Enterprise	Commercial/Mixed Use
MA1 to MA16	All above, as per Draft Plan	All above, as per Proposed Material Alterations

Section 6 Summary of Evaluation of Alternatives

6.1 Summary of Evaluation of Alternatives considered for the Overall Local Area Plan

By:

- Concentrating Residential development across a sufficient number of sites, close to the Town Centre;
- Providing for Town Centre developments in a planned and coordinated manner, focused within the town centre;
- Using existing or planned infrastructure;
- Providing for Industrial development in the periphery, close to existing infrastructure;
- Identifying opportunity sites with clear design and proposed uses identified; and
- Preserving Open Space and Recreational Lands

Alternative 1 'Even Development' would result in the greatest degree of significant positive effects and least degree of potential conflicts.

By:

- Concentrating Residential development across a larger number of sites than in comparison to Alternative 1, including some sites that are further away from the existing Town Centre;
- Creating neighbourhood centres throughout the Plan area and associated dispersal of Town Centre, commercial development and local services;
- Providing for Town Centre developments in a sporadic and uncoordinated manner around town centre/Neighbourhood Centre zonings;
- Using existing, planned and additional infrastructure;
- Providing for Industrial development at locations including close to Residential lands; and
- Identifying opportunity sites but with no clear guidance on the design parameters or uses identified

Alternative 2 'Sporadic Development' would result in a relatively moderate degree of significant positive effects and a relatively moderate degree of potential conflicts. In comparison to Alternative 2, development would be spread out over a greater number of sites, some not currently serviced and some Residential sites further from the settlement centre.

Additional infrastructure would be required to accommodate sporadic development, more than would be required for Alternative 1 'Even Development' and there would be higher conflicts between existing and proposed uses.

By:

- Not identifying opportunity sites;
- Following a 'laissez faire' approach in relation to development, with each application considered on its own merits and no land use zoning would be provided for;
- Necessitating development to be serviced by private waste water treatment systems that would have to be properly maintained.

Alternative 3 'Haphazard Development' would result in the least degree of significant positive effects and greatest degree of potential conflicts. Development would be spread out over the entire area associated with the settlement. Although requirements – including those relating to environmental protection/management and sustainable development – would have to be complied with, the potential for cumulative adverse effects would be significantly higher with this alternative.

All of the alternatives would help to sustain existing sustainable rural management practices - and the communities who support them - to ensure the continuation of long established managed landscapes and the flora and fauna that they contain.

The reasons for choosing the alternative for the Plan in the light of the other reasonable alternatives dealt with:

The Selected Alternative that emerged from the planning/SEA process, was placed on public display as the “Draft Plan” and eventually adopted was Alternative 1: Even Development. This alternative was selected and developed by the Planning Team and placed on public display by the Council having regard to both:

1. The environmental effects which were identified by the SEA and are detailed above; and
2. Planning - including social and economic - effects that also were considered by the Council.

The text based and mapped provisions of the Plan (see accompanying Plan documents) facilitate the achievement of Alternative 1 ‘Even Development’.

6.2 Summary of Evaluation of Alternatives considered for Proposed Material Alterations

Alternative A for Individual Proposed Material Alterations

Alternatives that provide for Zoning as provided by the Draft Plan (these alternatives are referred to as **Alternative A**, see Table 5.1) would contribute towards flood risk management in compliance with the Flood Risk Management Guidelines and as a result would contribute towards the protection of human health. As these alternatives provide for various types of built development they would have the potential to conflict with all environmental components. Potentially significant adverse environmental effects arising from this conflict are described on Table 6.1.

Table 6.1 Potentially Significant Adverse Environmental Effects, if unmitigated, common to all alternatives

Environmental Component	Potentially Significant Adverse Environmental Effects, if unmitigated
Biodiversity and Flora and Fauna	<ul style="list-style-type: none"> o Arising from both construction and operation of development and associated infrastructure: <ul style="list-style-type: none"> o Loss of/damage to biodiversity in designated sites (including European Sites and Wildlife Sites) and Annexed habitats and species, listed species, ecological connectivity and non-designated habitats; and disturbance to biodiversity and flora and fauna; o Habitat loss, fragmentation and deterioration, including patch size and edge effects; and o Disturbance (e.g. due to noise and lighting along transport corridors) and displacement of protected species.
Population and Human Health	<ul style="list-style-type: none"> o Potential interactions if effects upon environmental vectors such as water and air are not mitigated.
Soil	<ul style="list-style-type: none"> o Damage to the hydrogeological and ecological function of the soil resource.
Water	<ul style="list-style-type: none"> o Adverse impacts upon the status of water bodies arising from changes in quality, flow and/or morphology. o Increase in the risk of flooding.
Material Assets	<ul style="list-style-type: none"> o Failure to provide adequate and appropriate waste water treatment (water services infrastructure and capacity is needed to ensure the mitigation of potential conflicts). o Failure to comply with drinking water regulations and serve new development with adequate drinking water that is both wholesome and clean (water services infrastructure and capacity is needed to ensure the mitigation of potential conflicts). o Increases in waste levels.
Air and Climatic Factors	<ul style="list-style-type: none"> o Emissions to air including greenhouse gas emissions and other emissions.
Cultural Heritage	<ul style="list-style-type: none"> o Potential effects on protected and unknown archaeology and protected architecture arising from construction and operation activities.
Landscape	<ul style="list-style-type: none"> o Occurrence of adverse visual impacts and conflicts with the appropriate protection of designations relating to the landscape, especially with regard to landscapes that are most valuable and most sensitive to change and protected focal points and views.

For interactions under Alternative A, these effects would be mitigated by both provisions integrated into the Plan and existing provisions already in force through the County Development Plan.

Alternative B for Individual Proposed Material Alterations

As a result of providing for various types of built development, alternatives that provide for zoning as proposed by the Material Alterations (these alternatives are referred to as **Alternative B**, see Table 5.1) would have the potential to result in adverse effects on all environmental components within the Plan area and beyond. Potentially significant adverse environmental effects arising from this conflict are described on Table 6.1.

Alternatives B for Proposed Material Alterations MA 1, MA 2 and MA 3, in particular, propose the provision of a range of incompatible uses within areas that are at elevated risk of flooding. The areas that are at elevated risk of flooding have been identified by the SFRA. Submissions have been made with respect to land use zoning flood risk at these lands however no evidence is provided in the submissions showing that the sites are not at elevated levels of flood risk.

Providing incompatible uses in these areas is contrary to proper and sustainable flood risk management and contrary to *The Planning System and Flood Risk Management Guidelines for Planning Authorities* (2009) and *Circular PL2/14*. Any Justification Test for these Proposed Material Alterations would fail. This is because there are various lands available for such uses in Tuam. As Justification Tests would not be passed consideration could not be given to the mitigation and management of risk.

If the lands subject to MA 1, MA 2 and MA 3 were developed, there would be a heightened risk of flooding and associated adverse effects on people and their assets and the wider environment. Such effects are identified on Table 6.2 and range from loss of life, to damage to property, to loss of income.

Table 6.2 Selection of Adverse Effects (on People and Property) that occur as a result of Flooding

Tangible Effects	Intangible Human and Other Effects
Damage to buildings (houses)	Loss of life
Damage to contents of buildings	Physical injury
Damage to new infrastructure e.g. roads	Increased stress
Loss of income	Physical and psychological trauma
Disruption of flow of employees to work causing knock on effects	Increase in flood related suicide
Enhanced rate of property deterioration and decay	Increase in ill health
Long term rot and damp	Homelessness
	Loss of uninsured possessions

In addition to these effects on people and property, there would be elevated potential for water quality to be adversely affected (as a result of flooding of water treatment systems and collection networks and flooding of unknown substances stored onsite). Polluted or contaminated waters would have the potential to adversely affect human health and biodiversity and flora and fauna (including designated European Sites).

Furthermore, Proposed Material Alterations MA 1 and MA 11 propose zoning within the designated Lough Corrib Special Area of Conservation. Development of MA 1 and MA 11 lands that are subject to the SAC designation would lead to a heightened risk of adverse effects upon the qualifying interests of this site.

Alternative A for Combined Proposed Material Alterations

Alternatives that provide for zoning as proposed by Draft Plan (these alternatives are referred to as **Alternative A**, see Table 5.1) would be likely to cumulatively contribute towards flood risk management in compliance with the Flood Risk Management Guidelines and as a result would contribute towards the protection of human health.

As these alternatives provide for various types of built development, they would have the potential to cumulatively conflict with all environmental components. Potentially significant adverse environmental effects arising from this conflict are described on Table 6.1.

The extent of potentially significant adverse environmental effects arising under Alternative A would be of a lesser degree than the extent of potentially significant adverse environmental effects arising under Alternative B.

Alternative B for Combined Proposed Material Alterations

Alternatives that provide for zoning as proposed by the Material Alterations (these alternatives are referred to as **Alternative B**, see Table 5.1) provide a range of incompatible uses within areas that are at elevated risk of flooding. These alternatives would have the potential to cumulatively, adversely and significantly affect human health, new and existing property, the status of waters and ecology.

Furthermore, Alternative B proposes zoning within the designated Lough Corrib Special Area of Conservation. Development of MA 1 and MA 11 lands that are subject to the SAC designation would lead to a heightened risk of adverse effects upon the qualifying interests of this site.

Taking into account the considerable extent of lands involved, cumulative adverse effects would be likely to arise on all environmental components as a result of the provision of unnecessary zoning (for which there is no established planning need) at Proposed Material Alterations No. 1 to 16 lands. The extent of potentially significant adverse environmental effects arising under Alternative B would be of a greater degree than the extent of potentially significant adverse environmental effects arising under Alternative A.

The reasons for choosing the alternative for the Material Alterations that were adopted as part of the Plan:

Elected Members decided to adopt a mix of alternatives for the Material Alterations as part of the Plan⁸ (see also Section 3):

- Zoning as proposed by the Draft Plan (Alternative A) for MA2, MA3, MA10 and MA16;
- Zoning as proposed by Material Alterations (Alternative B) for MA4-MA9 and MA12-MA15); and
- Zoning as proposed by Material Alteration with modification for MA1 and MA11.

Following adoption, in January 2019 the Minister for Housing and Urban Development, directed the Council to amend the adopted "Land Use Zoning Objectives Map" by:

- Reverting back the lands identified as MA4, MA5, MA6 and MA11 as per the proposed Material Alterations (April 2018) to the provisions of the Draft Plan (January 2018), where the subject lands were not included in the Draft Plan and subsequently not zoned; and
- Removing these additional zonings from the Tuam Land Use Zoning Map and reverting the LAP boundary to reflect the Draft Plan boundary as published January 2018.

Various provisions have been integrated into the planning framework for the town (including the Local Area Plan and the County Development Plan) that proposed developments must comply with. This includes policies and objectives that will ensure the cautious consideration of all developments within the Plan area with regard to flood risk management, not just those within the indicative flood zones that are identified by the SFRA. Issues covered by these provisions include the need to undertake site-specific FRA outside of the indicative flood zones that are identified by the SFRA (such FRAs would be required to consider access issues) and consideration of effects on flooding elsewhere.

⁸ Proposed Material Alterations likely to result in significant adverse effects upon flood risk and/or European Sites were either not adopted (MA2 and MA3) or they were modified to avoid conflicts (MA1 and MA11).

Section 7 Monitoring Measures

7.1 Introduction

The SEA Directive requires that the significant environmental effects of the implementation of plans and programmes are monitored. This section details the measures that will be used in order to monitor the likely significant effects of implementing the Plan.

Monitoring can enable, at an early stage, the identification of unforeseen adverse effects and the undertaking of appropriate remedial action.

7.2 Indicators and Targets

Monitoring is based around indicators that allow quantitative measures of trends and progress over time relating to the Strategic Environmental Objectives identified on Table 7.1 and used in the evaluation. Each indicator to be monitored is accompanied by the target(s) that were identified with regard to the relevant strategic actions.

Table 7.1 shows the indicators and targets which have been selected for monitoring the likely significant environmental effects of implementing the Plan.

The Monitoring Programme may be updated to deal with specific environmental issues - including unforeseen effects - as they arise. Such issues may be identified by the Council or identified to the Council by other agencies.

7.3 Sources

Measurements for indicators generally come from existing monitoring sources. Existing monitoring sources include those maintained by the relevant authorities including the Council, the Environmental Protection Agency, the National Parks and Wildlife Service and the Central Statistics Office.

Internal monitoring of the environmental effects of grants of permission in the Council will provide monitoring of various indicators and targets on a *grant of permission* basis. The likely significant effects of development proposals on environmental sensitivities are

further determined during the development management process. By documenting this determination - e.g. whether a proposed development will impact upon a Protected Structure, for example - while granting permissions, or at a later date, the requirement to monitor the effects of implementing the Plan can be achieved.

Where significant effects - including positive, negative, cumulative and indirect - have the potential to occur upon, for example, entries to the RMP, entries to the RPS or ecological networks as a result of the undertaking of individual projects or multiple individual projects such instances should be identified and recorded and should feed into the monitoring evaluation.

7.4 Reporting

Article 10 of the SEA Directive requires Member States to monitor the significant environmental effects of the implementation of plans "*in order, inter alia, to identify at an early stage unforeseen adverse effects and to be able to undertake appropriate remedial action.*" Existing monitoring arrangements may be used if appropriate, to avoid duplication of monitoring⁹.

A stand-alone Monitoring Report on the significant environmental effects of implementing the Local Area Plan will be prepared within three years of adopting the Local Area Plan.

In monitoring the effects of the Plan, use will be made of any data collected as part of the monitoring of other land use plans within the County as relevant (including the County Plan). Similarly, data collected for monitoring the effects of the Plan may be used in monitoring the effects of other land use plans within the County.

⁹ Chapter 7 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. DoEHLG 2004

7.5 Thresholds

Thresholds at which corrective action will be considered include:

- The occurrence of flood events;
- Court cases taken by the Department of Arts, Heritage and the Gaeltacht regarding impacts upon archaeological heritage including entries to the RMP;
- Complaints received from statutory consultees regarding avoidable environmental impacts resulting from development which is granted permission under the Plan; and
- Fish kills.

Table 7.1 Selected Indicators, Targets and Monitoring Sources

Environmental Component	Selected Indicator(s)	Selected Target(s)	Source (Frequency)	Source of Data	Reporting Responsibility for this Programme
Biodiversity, Flora and Fauna	B1: Conservation status of habitats and species as assessed under Article 17 of the Habitats Directive	B1: Maintenance of favourable conservation status for all habitats and species protected under national and international legislation to be unaffected by implementation of the Plan ¹⁰	<ul style="list-style-type: none"> Internal monitoring of environmental likely significant effects of grants of permission (grant by grant). Department of Culture, Heritage and the Gaeltacht report of the implementation of the measures contained in the Habitats Directive - as required by Article 17 of the Directive (every 6 years). National Monitoring Report under Article 12 of the Birds Directive. Consultations with the National Parks and Wildlife Service (at monitoring evaluation - see Section 7.4). 	National Parks and Wildlife Service and Galway County Council	Galway County Council
	B2: Percentage loss of functional connectivity without remediation resulting from development provided for by the Plan	B2: No significant ecological networks or parts thereof which provide functional connectivity to be lost without remediation resulting from development provided for in the Plan	<ul style="list-style-type: none"> Internal monitoring of likely significant environmental effects of grants of permission (grant by grant). CORINE mapping resurvey (every c. 5 years). 	EEA/EPA and Galway County Council	Galway County Council
	B3i: Number of significant impacts on relevant habitats, species, environmental features or other sustaining resources in designated sites including Wildlife Sites resulting from development provided for by the Plan B3ii: Number of significant impacts on the protection of species listed on Schedule 5 of the Wildlife Act 1976	B3i: Avoid significant impacts on relevant habitats, species, environmental features or other sustaining resources in designated sites including Wildlife Sites resulting from development provided for by the Plan B3ii: No significant impacts on the protection of species listed on Schedule 5 of the Wildlife Act 1976	<ul style="list-style-type: none"> Internal monitoring of likely significant environmental effects of grants of permission (grant by grant). Consultations with the National Parks and Wildlife Service (at monitoring evaluation - see Section 7.4). 	Galway County Council and National Parks and Wildlife Service	Galway County Council
	B4: Population involved in land management	B4: Sustain the population involved in land management	<ul style="list-style-type: none"> Central Statistics Office Population Data (every c. 5 years). 	Central Statistics Office	Galway County Council
Population and Human Health	PHH1: Occurrence (any) of a spatially concentrated deterioration in human health arising from environmental factors resulting from development provided for by the Plan as identified by the Health Service Executive and Environmental Protection Agency	PHH1: No spatial concentrations of health problems arising from environmental factors as a result of implementing the Plan	<ul style="list-style-type: none"> Consultations with EPA and Health Service Executive (at monitoring evaluation - see Section 7.4). 	EPA and Health Service Executive	Galway County Council

¹⁰ Except as provided for in Section 6(4) of the Habitats Directive, viz. There must be:

- no alternative solution available;
- imperative reasons of overriding public interest for the plan to proceed; and
- adequate compensatory measures in place.

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Environmental Component	Selected Indicator(s)	Selected Target(s)	Source (Frequency)	Source of Data	Reporting Responsibility for this Programme
Soil	S1: Soil extent and hydraulic connectivity	S1: To minimise reductions in soil extent and hydraulic connectivity	<ul style="list-style-type: none"> Internal monitoring of likely significant environmental effects of grants of permission (grant by grant). 	Galway County Council	Galway County Council
Water	W1i: Classification of Overall Status (comprised of ecological and chemical status) under the European Communities Environmental Objectives (Surface Waters) Regulations 2009 (SI No. 272 of 2009) W1ii: Mandatory and Guide values as set by the EU Bathing Water Directive and transposing Bathing Water Quality Regulations (SI No. 79 of 2008)	W1i: Not to cause deterioration in the status of any surface water or affect the ability of any surface water to achieve <i>good status</i> ¹¹ W1ii: To achieve - as a minimum - Mandatory values and, where possible, to achieve Guide values as set by the EU Bathing Water Directive and transposing Bathing Water Quality Regulations (SI No. 79 of 2008)	<ul style="list-style-type: none"> Internal monitoring of likely significant environmental effects of grants of permission (grant by grant). Data issued under the Water Framework Directive Monitoring Programme for Ireland. EPA Quality of Bathing Water in Ireland reports. 	Galway County Council EPA	Galway County Council
	W2: Groundwater Quality Standards and Threshold Values under Directive 2006/118/EC	W2: Not to affect the ability of groundwaters to comply with Groundwater Quality Standards and Threshold Values under Directive 2006/118/EC	<ul style="list-style-type: none"> Internal monitoring of likely significant environmental effects of grants of permission (grant by grant). Data issued under the Water Framework Directive Monitoring Programme for Ireland (multi-annual). 	Galway County Council EPA	Galway County Council
	W3: Number of incompatible developments granted permission on lands which pose - or are likely to pose in the future - a significant flood risk	W3: Minimise developments granted permission on lands which pose - or are likely to pose in the future - a significant flood risk in compliance with <i>The Planning System and Flood Risk Management Guidelines for Planning Authorities</i>	<ul style="list-style-type: none"> Internal monitoring of likely significant environmental effects of grants of permission (grant by grant). 	Galway County Council	Galway County Council
Material Assets	M1: Number of new developments granted permission which can be adequately and appropriately served with waste water treatment over the lifetime of the Plan	M1: All new developments granted permission to be connected to and adequately and appropriately served by waste water treatment over the lifetime of the Plan	<ul style="list-style-type: none"> Internal monitoring of likely significant environmental effects of grants of permission (grant by grant). 	Galway County Council	Galway County Council
	M2: Number of non-compliances with the 48 parameters identified in the European Communities (Drinking Water) Regulations (No. 2) 2007 which present a potential danger to human health as a result of implementing the Plan	M2: No non-compliances with the 48 parameters identified in the European Communities (Drinking Water) Regulations (No. 2) 2007 which present a potential danger to human health as a result of implementing the Plan	<ul style="list-style-type: none"> EPA The Provision and Quality of Drinking Water in Ireland reports (multi-annual). EPA Remedial Action List (every quarter). 	EPA	Galway County Council
	M3i: Total collected and brought household waste M3ii: Packaging recovered (t) by self-complying packagers	M3i: Minimise increases in and, where possible, reduce household waste generation M3ii: Maximise increases in packaging recovered (t) by self-complying packagers	<ul style="list-style-type: none"> EPA National Waste Reports EPA Ireland's Environment Reports 	EPA	Galway County Council

¹¹ Good status as defined by the WFD equates to *Q4* in the biological classification of *rivers* and *Mesotrophic* in the classification of *lakes*.

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Environmental Component	Selected Indicator(s)	Selected Target(s)	Source (Frequency)	Source of Data	Reporting Responsibility for this Programme
Air and Climatic Factors	C1: Percentage of population travelling to work, school or college by public transport or non-mechanical means	C1: An increase in the percentage of the population travelling to work, school or college by public transport or non-mechanical means	<ul style="list-style-type: none"> CSO Population Data (every c. 5 years). 	Central Statistics Office	Galway County Council
Cultural Heritage	CH1: Percentage of entries to the Record of Monuments and Places - including Zones of Archaeological Potential (and the context of the above within the surrounding landscape where relevant) – protected from adverse effects resulting from development which is granted permission under the Plan	CH1: Protect entries to the Record of Monuments and Places - including Zones of Archaeological Potential (and their context of the above within the surrounding landscape where relevant) from adverse effects resulting from development which is granted permission under the Plan	<ul style="list-style-type: none"> Internal monitoring of likely significant environmental effects of grants of permission (grant by grant). Consultation with Department of Culture, Heritage and the Gaeltacht (at monitoring evaluation - see Section 7.4). 	Galway County Council and Department of Culture, Heritage and the Gaeltacht/ National Monuments Service	Galway County Council
	CH2: Percentage of entries to the Record of Protected Structures and Architectural Conservation Areas and their context protected from adverse effects resulting from development which is granted permission under the Plan	CH2: Protect entries to the Record of Protected Structures and Architectural Conservation Areas and their context from adverse effects resulting from development which is granted permission under the Plan	<ul style="list-style-type: none"> Internal monitoring of likely significant environmental effects of grants of permission (grant by grant). Consultation with Department of Culture, Heritage and the Gaeltacht (at monitoring evaluation - see Section 7.4). 	Galway County Council and Department of Culture, Heritage and the Gaeltacht/ Architectural Policy Unit	Galway County Council
Landscape	L1: Number of complaints received from statutory consultees regarding avoidable impacts on the landscape - especially with regard to landscapes which are most valuable and most sensitive to change and protected focal points and views - resulting from development which is granted permission under the Plan	L1: No developments permitted which result in avoidable impacts on the landscape - especially with regard to landscapes which are most valuable and most sensitive to change and protected focal points and views - resulting from development which is granted permission under the Plan	<ul style="list-style-type: none"> Internal monitoring of likely significant environmental effects of grants of permission (grant by grant). 	Galway County Council	Galway County Council