



DRAFT
ARKLOW
LOCAL PLANNING FRAMEWORK
2025

STRATEGIC FLOOD RISK
ASSESSMENT



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1.0 INTRODUCTION

1.1 Foreword

This is the Strategic Flood Risk Assessment (SFRA) for the Draft Arklow Local Planning Framework (LPF), which has been prepared and informed by '*The Planning System and Flood Risk Management – Guidelines for Planning Authorities*' (DoEHLG / OPW 2009).

The purpose of the SFRA primarily is to provide an assessment of all types of flood risk to inform land-use planning decisions in the LPF. The SFRA enables the local authority to undertake the sequential approach, including the justification test, allocate appropriate sites for development and identify how flood risk can be reduced as part of the LPF process. At each stage of the LPF process the Elected Members take into account the findings of the SFRA (and any addenda) as appropriate. The SFRA can also be used to assist other planning decisions (e.g. development management) however in any instance a site-specific flood risk assessment may be required when assessing a planning application for development.

After public display of the draft LPF and accompanying SFRA ends, the Chief Executive will prepare a report on the submissions received during the display period and will submit it to the Elected Members for their consideration. Any submissions regarding flooding will be addressed and added as an addendum to this report.

On adoption of the LPF, any SFRA Addenda which may supplement the original SFRA on the draft LPF and along with this 'Foreword' is the 'Strategic Flood Risk Assessment', which accompanies the adopted Arklow Local Planning Framework 2025-2031.

1.2 Disclaimer

Wicklow County Council makes no representations, warranties or undertakings about any of the information provided in this assessment and associated maps including, without limitations, on its accuracy, completeness, quality or fitness for any particular purpose. To the fullest extent permitted by applicable law Wicklow County Council nor any of its members, offices, associates, consultants, employees, affiliates, servants, agents or other representatives shall be liable for loss or damage arising out of, or in connection with, the use of, or the inability to use, the information provided in this assessment including but not limited to, indirect or consequential loss or damages, loss of data, income, profit, or opportunity, loss of, or damages to, property and claims of third parties, even if Wicklow County Council has been advised of the possibility of such loss or damages, or such loss or damages were reasonably foreseeable. Wicklow County Council reserves the right to change the content and / or presentation of any of the information provided in this report at their sole discretion, including these notes and disclaimer. This disclaimer, guidance notes and conditions of use shall be governed by, and construed in accordance with, the laws of the Republic Of Ireland. If any provision of this disclaimer, guidance notes and conditions of use shall be unlawful, void or for any reason unenforceable, that provision shall be deemed severable and shall not affect the validity and enforceability of the remaining provisions.

1.3 Uncertainty

Although great care and modern, widely accepted methods have been used in the preparation of this assessment there is inevitably a range of inherent uncertainties and assumptions made during the estimation of design flows and the construction of flood models.

1.4 Best Available Information

There has been a wide range of datasets utilised in the production of this assessment which are constantly changing and subsequently the analysis of these datasets is only correct at the time of assessment.

It is important to note that compliance with the requirements of '*The Planning System and Flood Risk Management-Guidelines for Planning Authorities*' is a work in progress and is currently based on emerging and incomplete data as well as estimates of the locations and likelihood of flooding. As a result, this Strategic Flood Risk Assessment was based on available information at the time of assessment.

All information in relation to flood risk may be substantially altered in light of future data, new methodologies and/or analysis. As a result, all landowners and developers are advised that Wicklow County Council can accept no responsibility for losses or damages arising due to assessments of the vulnerability to flooding of lands, uses and developments. Owners, users and developers are advised to take all reasonable measures to assess the vulnerability to flooding of lands in which they have an interest prior to making planning or development decisions.

In the development management process it is the responsibility of the applicant to gather relevant information sufficient to identify and assess all sources of flood risk for the development proposal. Any new data and analysis carried out after the time of assessment for this SFRA should be used in conjunction with this SFRA for development proposals.

2.0 BACKGROUND INFORMATION

2.1 Introduction

In accordance with the *'Planning System and Flood Risk Management: Guidelines for Planning Authorities'*, a Strategic Flood Risk Assessment (SFRA) of the Draft Arklow LPF 2025 has been undertaken.

The *'Planning System and Flood Risk Management – Guidelines for Planning Authorities'* were issued in 2009 by the Minister for the Environment, Heritage and Local Government and the OPW under Section 28 of the Planning and Development Act 2000 (as amended). The purpose of the Flood Risk Guidelines is to ensure that, where relevant, flood risk is a key consideration for Planning Authorities in preparing development plans (such as Local Planning Frameworks) and in the assessment of planning applications. The Flood Risk Guidelines introduce mechanisms for the incorporation of flood risk identification, assessment and management into the planning process. Implementation of the Flood Risk Guidelines is intended to be achieved through actions at the national, regional, local authority and site-specific levels. Planning Authorities and An Coimisiún Pleanála are required to have regard to the Flood Risk Guidelines in carrying out their functions under the Planning Acts.

The key planning principles of the Flood Risk Guidelines are to:

- Avoid inappropriate development in areas at risk of flooding;
- Avoid new developments increasing flood risk elsewhere, including that which may arise from surface water runoff;
- Ensure effective management of residual risks for development permitted in floodplains;
- Avoid unnecessary restriction of national, regional or local economic and social growth;
- Improve the understanding of flood risk among relevant stakeholders;
- Ensure that the requirements of EU and national law in relation to the natural environment and nature conservation are complied with at all stages of flood risk management.

Clarification of advice contained in the Flood Risk Guidelines was issued in August 2014 (Circular PL2/2014) referring to two matters. The first was to ensure planning authorities are prudent in the use the draft PFRA or CFRAM flood maps as the sole basis for deciding on planning applications, to make use of site inspections and/or knowledge of local areas, to request a site-specific flood risk assessment by an appropriately qualified engineer where appropriate and to also generally use their professional judgement in this regard.

The second matter amends the text of the guidelines to indicate that during the preparation of the development plan (or a variation of a development plan) in areas located in flood zone A and B, where the existing use zoning is classified as a "vulnerable use", the planning authority should consider if the existing use zoning of the 'vulnerable use' is still the appropriate zoning for the area. Where the planning authority considers that the existing use zoning is still appropriate, the planning authority must specify the nature and design of structural or non-structural flood risk management measures required prior to future development in such areas, in order to ensure that flood hazard and risk to the area and to other adjoining locations will not be increased, or if practicable, will be reduced. With regard to the second matter, the text amendment is noted; where the existing use zoning is in flood zone A/B and is considered a vulnerable use, where necessary a mitigation objective has been incorporated into the local plan/framework and/or an appropriate zoning has been applied for the existing use. Any flood risk management measures are to be considered at the development management stage.

The guidelines aim to facilitate the transparent consideration of flood risk at all levels of the planning process, ensuring a consistency of approach throughout the country. SFRAs therefore become a key evidence base in meeting these objectives.

The guidelines work on a number of key principles, including:

- Adopting a staged and hierarchical approach to the assessment of flood risk; and
- Adopting a sequential approach to the management of flood risk, based on the frequency of flooding (identified through Flood Zones) and the vulnerability of the proposed land use.

2.2 Flood Risk Analysis Stages

The Flood Risk Guidelines recommend that a staged approach should be adopted when analysing flood risk; carrying out only such assessment stage as is needed for the purposes of decision-making. All stages of flood risk assessment may not be needed. This will depend on the level of risk and the potential conflict with proposed development and the scale of mitigation measures being proposed. The Flood Risk Guidelines state that both Stage 1 'Flood Risk Identification' and Stage 2 'Initial Flood Risk Assessment' are required to be undertaken in strategic flood risk assessment for a City or Town within a county plan. On the basis that Arklow is a settlement within the Wicklow County Development Plan 2022-2028, and that the Draft Arklow Local Planning Framework 2025-2031 will be consistent with that County Plan, the Strategic Flood Risk Assessment shall proceed to Stage 1 and Stage 2.

A Staged Approach to Flood Risk Assessment

Stage 1 Flood Risk Identification

To identify whether there may be any flooding or surface water management issues related to either the area of regional planning guidelines, Development Plans and Local Area Plans or a proposed development site that may warrant further investigation at the appropriate lower level plan or planning application level. To suggest measures to be integrated into the CDP/LAP that will contribute towards both flood risk management in the county and compliance with the Flood Risk Guidelines.

Stage 2 Initial Flood Risk Assessment

To confirm sources of flooding that may affect a plan area or proposed development site, to appraise the adequacy of existing information and to scope the extent of the risk of flooding which may involve preparing indicative flood zone maps. Where hydraulic models exist, the potential impact of a development on flooding elsewhere and of the scope of possible mitigation measures can be assessed. In addition, the requirements of the detailed assessment should be scoped.

Stage 3 Detailed Flood Risk Assessment

To assess flood risk issues in sufficient detail and to provide a quantitative appraisal of potential flood risk to a proposed or existing development or land to be zoned, of its potential impact on flood risk elsewhere and of the effectiveness of any proposed mitigation measures.

Source: 'Planning System and Flood Risk Management Guidelines for Planning Authorities' DoEHLG/OPW 2009

2.3 Definition of Flood Zones

In the Flood Risk Guidelines, 'Flood Zones' are used to indicate the likelihood of a flood occurring. These zones indicate a high, moderate or low risk of flooding from fluvial or coastal sources and are defined as follows:

Flood Zone A – where the probability of flooding from rivers and the sea is highest (greater than 1% or 1 in 100 for river flooding or 0.5% or 1 in 200 for coastal flooding);

Flood Zone B – where the probability of flooding from rivers and the sea is moderate (between 0.1% or 1 in 1000 years and 1% or 1 in 100 years for river flooding and between 0.1% or 1 in 1000 years and 0.5% or 1 in 200 years for coastal flooding);

Flood Zone C – where the probability of flooding from rivers and the sea is low (less than 0.1% or 1 in 1000 years for both river and coastal flooding). Flood Zone C covers all areas of the LPF which are not in zones A and B; hence it is not highlighted on the FRA maps.

The flood zones described above are indicative of river and coastal flooding only. They should not be used to suggest that any areas are free from flood risk, since they do not include the effects of other forms of flooding such as from groundwater or artificial drainage systems.

The Indicative Flood Zone map for the LPF area is provided in Section 7 of this report.

2.4 Sources of Information

The Wicklow County Development Plan 2022-2028 underwent Strategic Flood Risk Assessment and was adopted on the 12th September 2022. The Council Executive was assisted by JBA Consulting Ltd in the preparation of that SFRA. As part of that process, countywide flood zone mapping was developed based on a collation of various data sources. In preparing the flood risk zones, a precautionary approach was applied, where necessary, to reflect uncertainties in flooding datasets and risk assessment techniques.

This countywide mapping will be utilised as flood zone mapping for the Strategic Flood Risk Assessment of the Draft Arklow Local Planning Framework 2025- 2031.

Section 2.1 of the Wicklow County Development Plan 2022-2028 Strategic Flood Risk Assessment outlines the sources of information available at the time of assessment. These sources of information included the following (refer to Section 2.1 of the CDP SFRA for full details):

- Catchment Flood Risk Assessment and Management (CFRAM)
- Flood Risk Management Plans (FRMP)
- National Coastal Protection Strategy Study – flood and coastal erosion risk maps
- National Indicative Fluvial Mapping
- Previous Strategic Flood Risk Assessments
- OPW Historic Flood Points and Extents
- OPW Benefiting land maps
- Alluvial deposit maps
- Historic 'Six Inch' maps
- Historic 'Six Inch' maps with flood feature applied
- Expert advice from OPW
- In house studies
- RSES and associated Regional Flood Risk Appraisal (see details to follow)
- Consultation with the relevant municipal area engineer in WCC (see details to follow)
- An examination of contours of the land
- Aerial photography
- Information on flood defence condition and performance
- River Basin Management Plans and reports
- Local libraries and newspaper reports
- Interviews with local people, local history/natural history societies etc.
- Walkover survey to assess potential sources of flooding, likely routes for flood waters and the site's key features, including flood defences, and their condition
- East Coast Railway Infrastructure Protection Project (ECRIPP)
- The Murrough Coastal Protection Study [not relevant to Arklow, only relates to The Murrough in Wicklow Town]
- River Dargle Flood Defence Scheme (Bray) [not relevant to Arklow]
- River Avoca (Arklow Town) Flood Relief Scheme

The Wicklow County Development Plan SFRA flood maps did not integrate the outputs of the OPW's **National Coastal Flood Hazard Mapping (NCFHM)** project which was completed in 2021. These maps and data have now been integrated into the flood risk identification maps used in this SFRA.

2.5 Eastern & Midland Regional Assembly Regional Flood Risk Appraisal

The EMRA Regional Flood Risk Appraisal identified the broad nature of flooding that may affect the primary growth settlements set out in the Regional Spatial & Economic Strategy, i.e. the Dublin Metropolitan Area, Regional Growth Centres, and Key Towns. 'Self-Sustaining Growth Towns' such as Arklow were not included in the assessment.

2.6 Local issues

2.6.1 Arklow Flood Relief Scheme

Arklow town has, for many years, experienced recurring flooding problems that have caused widespread damage to public and private property (August 1986, December 1989, November 2000, February 2002, October 2004, October 2005, January 2010, January 2013 and December 2015). The flood risk in Arklow may also increase in the future, due to a range of factors, including climate change, sediment transport, erosion, development within the catchment of Avoca River and its tributaries, and changes in land use and drainage. Arklow is at risk from potentially worsening flood events having regard to current climate change predictions. Without intervention to address fluvial and tidal flooding, Arklow faces the continued onset of a range of issues associated with flooding. Thus, there are a number of justifications surrounding the need for the proposed scheme.

Hence Wicklow County Council, funded by the Office of Public Works, proposes to undertake engineering works along the Avoca River and surrounds to mitigate the risk of flooding in the Arklow town area in County Wicklow. The proposed works are collectively referred to as the Arklow Flood Relief Scheme.

The proposed scheme is being undertaken for the purpose of preventing the periodical localised flooding of lands and properties in the Arklow town area. The proposed scheme will involve the construction of flood defences and an embankment, as well as conveyance improvements in the Avoca River; including deepening of the river channel, the introduction of new debris and gravel traps and strengthening works to the existing quay walls and Arklow Bridge.

The flood scheme has been designed to withstand a 1 in 100-year flood event from the Avoca River (fluvial) as well as 1 in 200-year tidal flood event.

Overall, the proposed development will comprise of the following elements:

- Works at Arklow Bridge, a protected structure including the underpinning of the piers and southern abutment, removal of existing concrete scour slab and lowering the floor of Arklow Bridge by approximately 1m, construction of new concrete scour slab and remedial works to bridge masonry;
- River dredging works to improve channel capacity, comprising dredging of the river channel from approximately 320m upstream of Arklow Bridge to approximately 520m downstream of Arklow Bridge, including removal of in-river sandbanks and vegetated islands north of Arklow Bridge and trimming of vegetation along the north bank between the debris trap and Arklow Bridge that lies within the river channel and below the design flood level. Occasional future maintenance as required of the river channel by dredging, estimated to be at 10-year intervals;
- Extension into the river channel by circa 12m along an approximate 75m length of the northern river bank upstream of Arklow Bridge;
- Installation of 3 no roosting platforms for birds upstream of Arklow Bridge;
- Construction of debris and gravel traps and a permanent river access ramp on the south bank for their maintenance;
- Annual maintenance of the debris trap and gravel trap using a temporary in-river haul road;
- Flood defences on the south bank of the Avoca River;
- Flood Defences on the north bank of the Avoca River;
- Removal of existing public realm at River Walk and South Quay, including demolition of the river access at the junction of River Lane and River Walk, and a disused slipway (referred to as Coal Quay) on South Quay, existing footpaths, street and decorative lighting, parking spaces and seating;
- Provision of new public realm at River Walk and South Quay, including parking spaces, footpaths, amenity/viewing area, public lighting, planters and floating pontoon. Provision of additional urban space approximately 6m into the river on South Quay immediately south of the Arklow Bridge for a length of approximately 260m and provision of additional urban space extending between approximately 0m and 6m into the river on River Walk for a length of approximately 100m.
- The proposed works include road reconstruction, road regrading, traffic calming measures, provision of a section of interconnector sewer for the Arklow Wastewater Treatment Plant (WWTP) for Irish Water, diversion of utilities, including electricity cables in Arklow Marsh, tree felling, tree trimming, tree planting, landscaping, local

riverbed raising, installation of roosting platforms upstream of Arklow Bridge and all associated and ancillary works.

- Temporary works including establishing six site compounds: northeast edge of Arklow Town Marsh, on lands between the running track and Mill Road, on land between the river and the roundabout located at the junction of Arklow Bridge, Ferrybank and North Quay, on part of St Marys (Main Street) car park, on lands between the eastern end of North Quay and North Pier, and on lands between Arklow Golf Club and South Beach. River access will take place at North Quay, South Quay, River Walk and north-west of Arklow Bridge. These site compounds will operate over the duration of the works and will facilitate the construction of the scheme and archaeological examination and stockpiling of excavated and dredged material.

The proposed scheme will be carried out partly on the foreshore by a local authority. Wicklow County Council made an application for approval to An Bord Pleanála pursuant to Section 226 of the Planning and Development Act 2000 (as amended) and the Planning and Development Regulations 2001 (as amended). The application was lodged on the 31st of May 2021 and an Oral Hearing was held on the 19th of January 2022. Approval was granted by An Bord Pleanála, by order dated 19th July 2022 for both the development consent and the CPO.

The scheme is currently at the detailed design stage and is due to commence construction in 2026. An updated flood map outlining the post scheme scenario will only be finalised and published following completion of the scheme which is currently programmed for 2030. The updated flood map is produced after the works are complete because certain aspects of the scheme may vary during the detailed design and construction stages

The following map prepared by Byrne Looby outlines the overall scheme layout including proposed locations of the flood defence walls, embankments, silt and gravel traps, dredging works and deepening of the bridge floor.

Figure 1: Overall Flood Relief Scheme Layout (Source: Arklow Flood Relief Scheme)

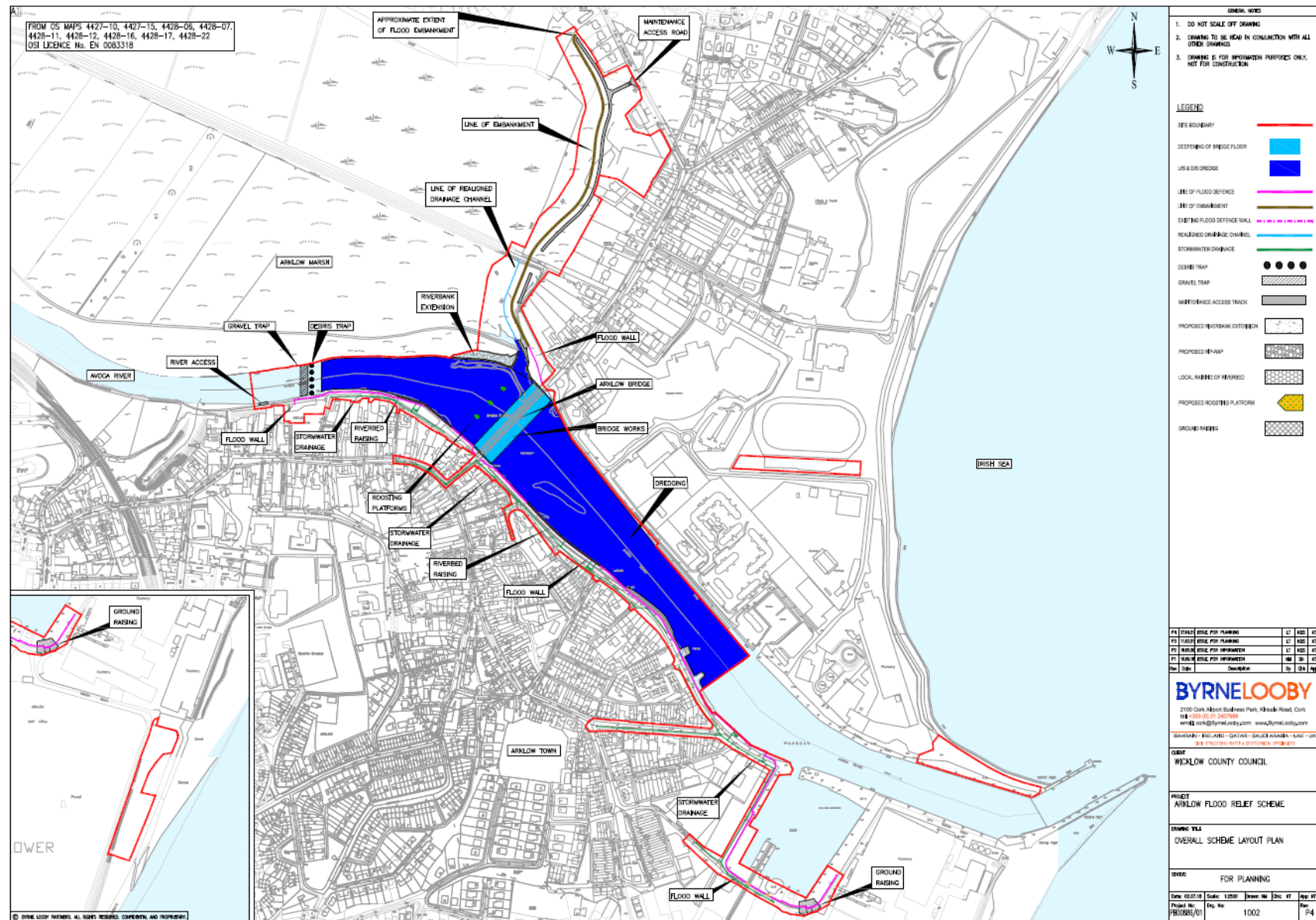


Figure 2: Existing combined 1% AEP Fluvial and 0.5% AEP Coastal Flood Extent (Source: WCC & OPW, 2021)

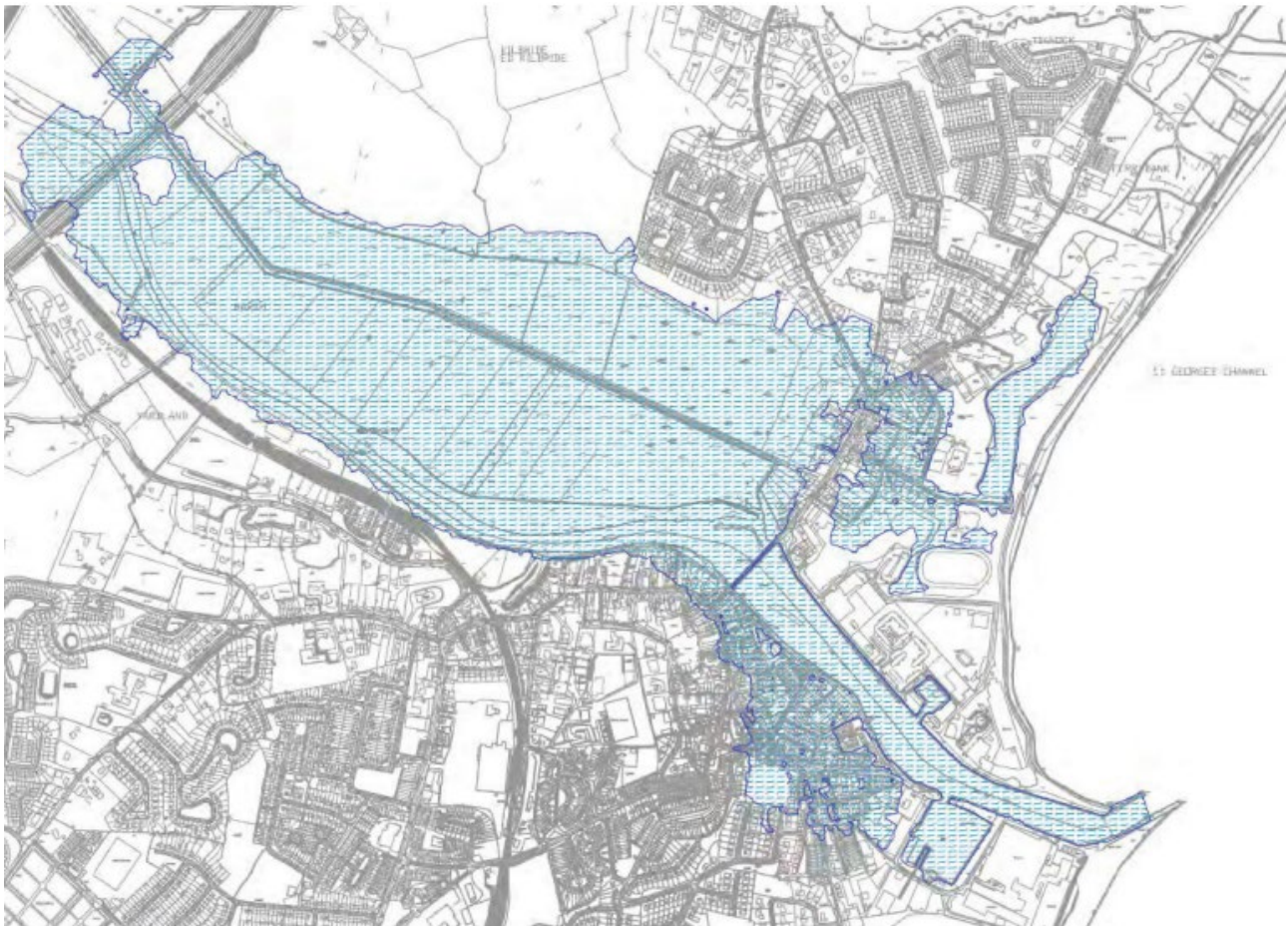
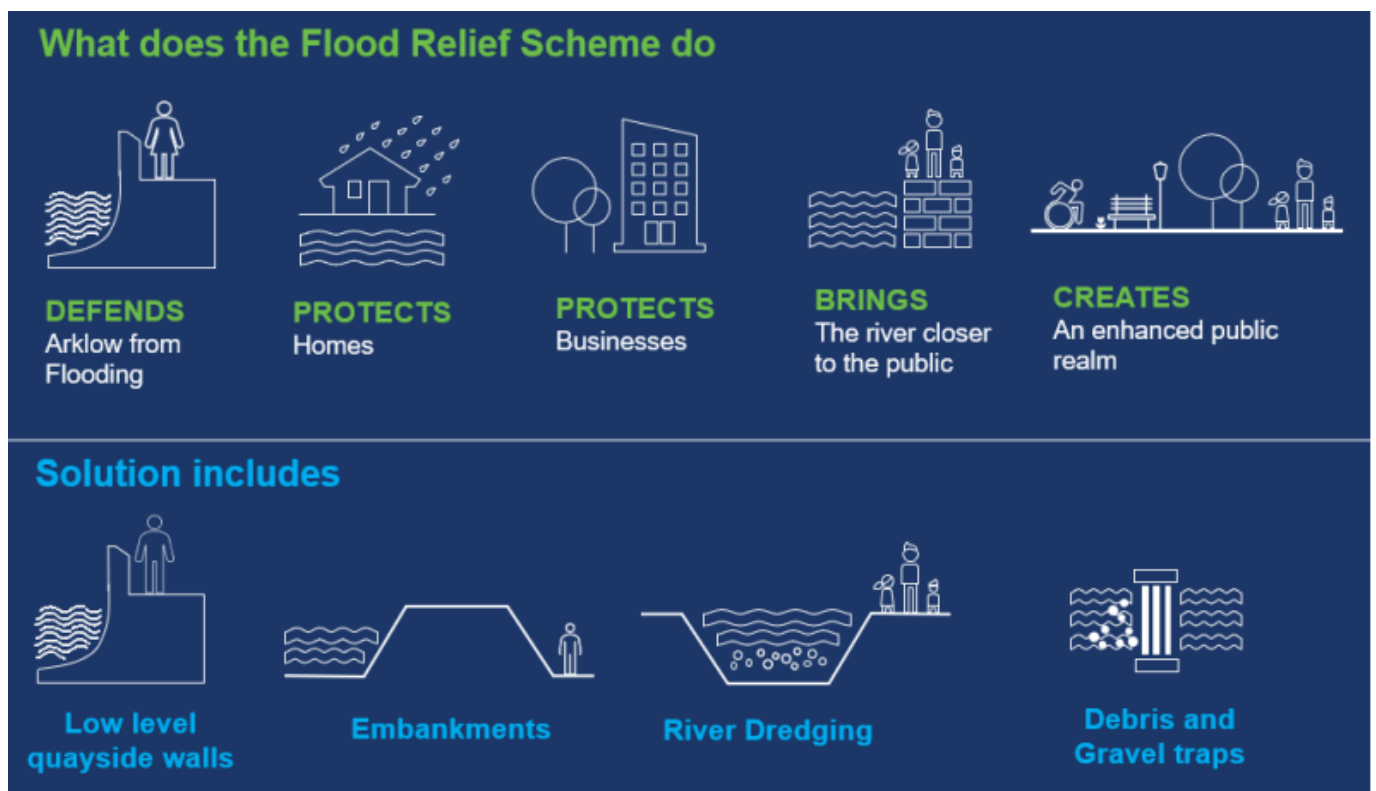


Figure 3: Overview of Design Objectives & Proposed Solution (Source: Arklow Flood Relief Scheme)



2.6.2 Flood Risk Management Plan (Avoca – Vartry)

In 2018, the Office of Public Works published a Flood Risk Management Plan for the Avoca-Vartry River Basin. Arklow was included in this plan as an Area for Further Assessment (AFA). Arklow is a community at potentially significant flood risk within the Avoca-Vartry River Basin from both fluvial and coastal sources. There are a range of issues associated with flooding including tangible and intangible flood damages, extensive community disruption, health and safety issues and development restrictions.

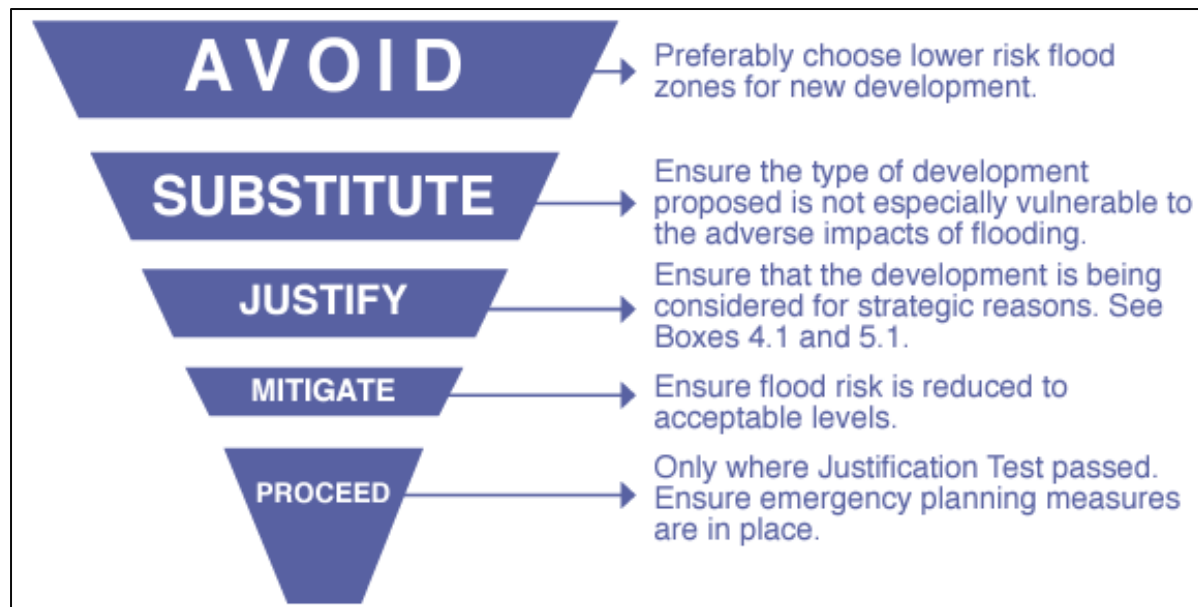
Alongside a recommendation of various general measures, Section 7.4 of the Avoca-Vartry FRMP sets out proposed measures for each area identified as an AFA. As the development of a flood relief scheme is underway for Arklow, no additional measures for Arklow AFA are proposed.

2.7 The Sequential Approach and Justification Test

Each stage of the SFRA process aims to adopt a sequential approach to the management of flood risk in the planning process. The sequential approach to flood risk management is set out in Figure 4¹. In summary, the key principles of the sequential approach include:

1. Avoid flood risk, where possible;
2. Substitute less vulnerable uses, where avoidance is not possible; and
3. Mitigate and manage the risk, where avoidance and substitution are not possible.

Figure 4: The sequential approach to the management of flood risk.



In other words, where possible, development in areas identified as being at flood risk should be avoided; this may necessitate de-zoning lands within the plan area. If de-zoning is not possible, then re-zoning from a higher vulnerability land use, such as residential, to a less vulnerable use, such as open space, may be required. Where rezoning is not possible, exceptions to the development restrictions are provided for through the '**Justification Test**'.

The plan-making Justification Test is used at the plan preparation and adoption stage where a planning authority needs to consider the future development of areas at a high or moderate risk of flooding, for uses or development vulnerable to flooding that would generally be inappropriate. In such cases, the planning authority must be satisfied that it can clearly demonstrate on a solid evidence base that the zoning or designation for development will satisfy the Justification Test. Tables 1.1 and 1.2 below illustrates those types of development that would be appropriate to each flood zone and those that would be required to meet the Justification Test.

Section 2.2 sets out the Justification Test for plan making. Where the planning authority considers that land should be zoned for 'inappropriate development' that does not meet the criteria of the Justification Test, the flooding risk should be mitigated, so that the flood risk is reduced to an acceptable level by means of land use strategies or by means of detailed proposals for the management of flood risk, as addressed in a Flood Risk Assessment.

¹ 'Planning System and Flood Risk Management Guidelines for Planning Authorities' DoEHLG/OPW 2009

Table 1: Matrix of vulnerability versus flood zones to illustrate both appropriate development and development that is required to meet the justification test.

Development Types			
	Flood Zone A	Flood Zone B	Flood Zone C
Highly vulnerable development (including essential infrastructure)	Justification Test	Justification Test	Appropriate
Less vulnerable development	Justification Test	Appropriate	Appropriate
Water compatible development	Appropriate	Appropriate	Appropriate

Table 2: Classification of the vulnerability of different types of development.

Classification of Vulnerability of Different Types of Development	
Vulnerability Class	Land uses and types of development which include*:
Highly vulnerable development (including essential infrastructure)	Garda, ambulance and fire stations and command centres required to be operational during flooding; Hospitals; Emergency access and egress points; Schools; Dwelling houses, student halls of residence and hostels; Residential institutions such as residential care homes, children's homes and social services homes; Caravans and mobile home parks; Dwelling houses designed, constructed or adapted for the elderly or other people with impaired mobility; and Essential infrastructure, such as primary transport and utilities distribution, including electricity generating power stations and sub-stations, water and sewage treatment, and potential significant sources of pollution (SEVESO sites, IPPC sites, etc.) in the event of flooding.
Less vulnerable development	Buildings used for: retail, leisure, warehousing, commercial, industrial and non-residential institutions; Land and buildings used for holiday or short-let caravans and camping, subject to specific warning and evacuation plans; Land and buildings used for agriculture and forestry; Waste treatment (except landfill and hazardous waste); Mineral working and processing; and Local transport infrastructure.
Water compatible development	Flood control infrastructure; Docks, marinas and wharves; Navigation facilities; Ship building, repairing and dismantling, dockside fish processing and refrigeration and compatible activities requiring a waterside location; Water-based recreation and tourism (excluding sleeping accommodation); Lifeguard and coastguard stations; Amenity open space, outdoor sports and recreation and essential facilities such as changing rooms; Essential ancillary sleeping or residential accommodation for staff required by uses in this category (subject to a specific warning and evacuation plan).

**Uses not listed here should be considered on their own merits.*

3.0 STAGE 1 - FLOOD RISK IDENTIFICATION (FRI)

3.1 Risk Identification

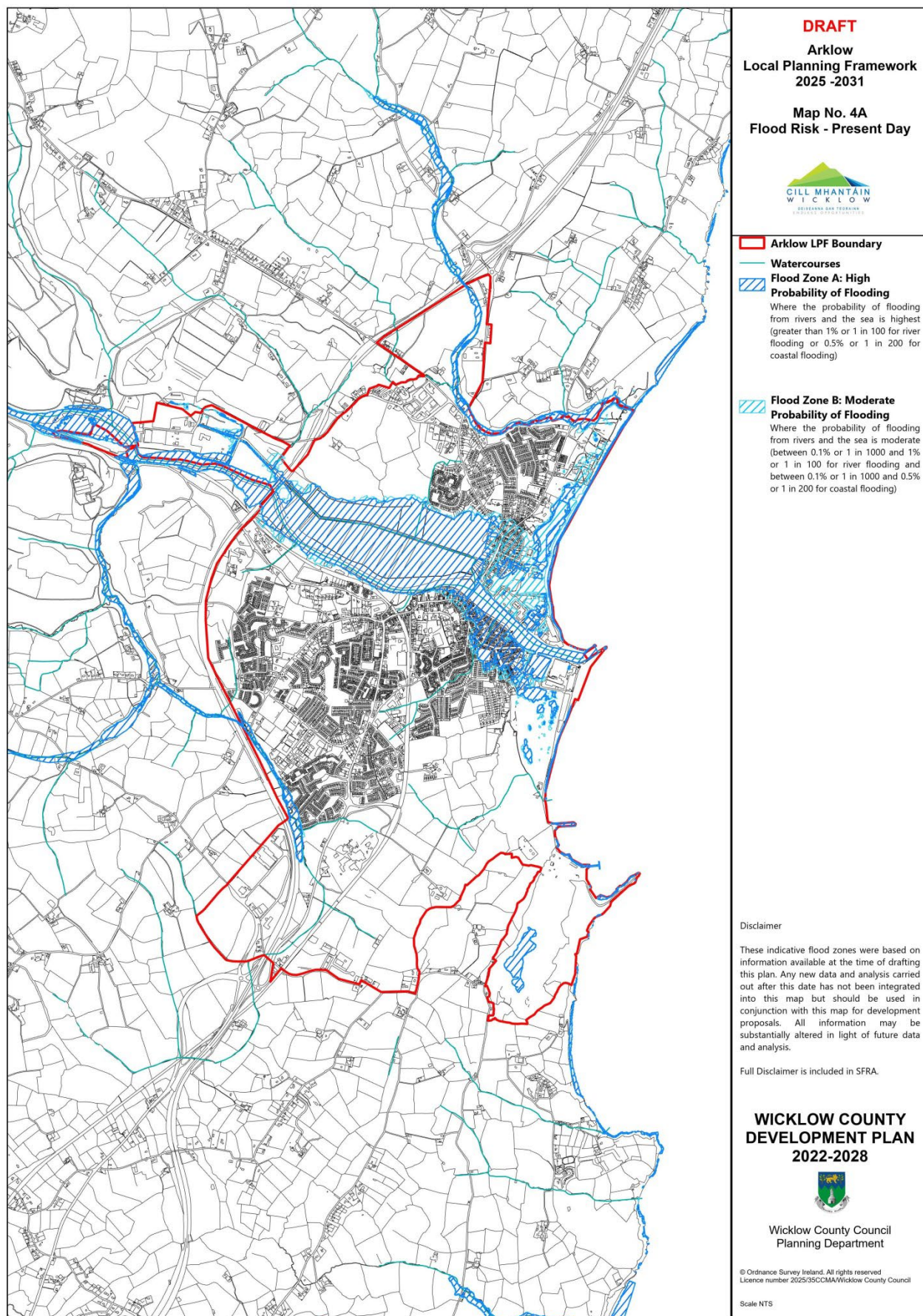
'Identification' is the process for deciding whether a plan or project requires a flood risk assessment and is essentially a desk-based exercise based on existing information. In order to establish whether a flood risk issue exists or may exist in the future, a range of sources have been consulted.

3.2 Indicators of Flood Risk

The county-wide flood mapping developed during the Wicklow County Development Plan 2022-2028, which is enhanced with the integration of the NCFHM data, indicates areas of flood risk within the Arklow area. On this basis, it is determined that assessment should immediately proceed to Stage 2 Strategic Flood Risk Assessment

The primary source of information is the flood zone maps produced by the OPW (Preliminary Flood Studies, Areas for Further Assessment, CFRAM mapping – these are only available for limited areas/watercourses). Given the limitations to these maps, the Flood Risk Guidelines also recommend that flooding from other sources such as surface water systems or adjoining hillsides that are difficult to map, need to be carefully considered.

Figure 5: Flood Risk - Present Day



4.0 STAGE 2 - INITIAL FLOOD RISK ASSESSMENT

4.1 Flood Risk Assessment

Following the guidelines, this flood risk assessment shows the zoning objectives of the plan and their typical permitted uses. In accordance with the guidelines, an assessment was undertaken to determine the appropriateness of land uses (allowed by virtue of land use zoning) to each flood zone. The assessment is undertaken in accordance with Tables 3.1 and 3.2 of the guidelines (included as Tables 1 and 2 above) and compares the vulnerability to flooding of different types of development with a specific site's location in any flood zone. Where the zone is deemed to be appropriate no further action is required in the FRA. Where the zone requires the Justification Test to be carried out, it is done so, with any necessary mitigation measures recommended.

The draft Arklow Local Planning Framework 2025 2031 includes the following land use zonings:

ZONING	OBJECTIVE	DESCRIPTION
RE: Existing Residential	To protect, provide and improve residential amenities of existing residential areas	To provide for house improvements, alterations and extensions and appropriate infill residential development in accordance with principles of good design and protection of existing residential amenity. In existing residential areas, the areas of open space permitted, designated or dedicated solely to the use of the residents will normally be zoned 'RE' as they form an intrinsic part of the overall residential development; however new housing or other non-community related uses will not normally be permitted.
RN1: New residential Priority 1	To provide for new residential development and supporting facilities during the lifetime of the LPF.	To facilitate for the provision of high quality new residential developments at appropriate densities with excellent layout and design, well linked to the town centre and community facilities. To provide an appropriate mix of house sizes, types and tenures in order to meet household needs and to promote balanced communities.
RN2 New residential Priority 2	To provide for new residential development and supporting facilities where it can be demonstrated that such development would accord with the Core Strategy housing target for that settlement in accordance with the objectives set out in the LPF.	To facilitate for the provision of high quality new residential developments at appropriate densities with excellent layout and design, well linked to the town centre and community facilities. To provide an appropriate mix of house sizes, types and tenures in order to meet household needs and to promote balanced communities.
TC: Town Centre	To provide for the development and improvement of appropriate town centre uses including residential, retail, commercial, office and civic use.	To develop and consolidate the existing town centre to improve its vibrancy and vitality with the densification of appropriate commercial and residential developments ensuring a mix of commercial, recreational, civic, cultural, leisure and residential uses, while delivering a quality urban environment, with emphasis on regeneration, infill town and historic centre conservation; ensuring priority for public transport where applicable, pedestrians and cyclists, while minimising the impact of private car based traffic and enhance and develop the existing centre's fabric.

ZONING	OBJECTIVE	DESCRIPTION
LSS: Local Shops & Services	To provide for small scale local neighbourhood shops and services	To facilitate the limited development of small scale local neighbourhood shops and retail services and other local service uses that meet only the retail or service needs of residents in the immediate catchment and are not of such a scale or type that would detract or draw trade from lands designated town centre.
E: Employment	To provide for the development of enterprise and employment	To facilitate the further development and improvement of existing employment areas and to facilitate opportunities for the development of new high quality employment and enterprise developments in a good quality physical environment.
CE: Community & Education	To provide for civic, community and educational facilities	To facilitate the development of necessary community, health, religious, educational, social and civic infrastructure.
AOS: Active Open Space	To protect and enhance existing and provide for new active open space	Subject to the protection and enhancement of natural biodiversity, to facilitate the further development and improvement of existing active open spaces, formal exercise areas, sports grounds, playing pitches, courts and other games areas and to facilitate opportunities for the development of new high quality active recreational areas.
OS1: Open Space	To protect and enhance existing public open space and provide for recreational open space.	Subject to the protection and enhancement of natural biodiversity, to facilitate the further development and improvement of existing parks and casual play areas, to facilitate opportunities for the development of new high quality amenity open areas and to restrict developments / activities (such as the use or development of such lands for formal sports grounds for organisations that are not available for a broad range of the public) that would reduce the opportunities for use by the wider public.
OS2: Natural Areas	To protect and enhance existing open, undeveloped lands.	To protect, enhance and manage existing open, undeveloped lands that comprise flood plains, buffer zones along watercourses and rivers, steep banks, green breaks between built up areas, green corridors and areas of natural biodiversity.
PU: Public Utility	To maintain lands providing services infrastructure	To allow for lands to be designated for public utilities such as waste water treatment plants, large ESB substations, gasworks etc
T: Tourism	To provide for tourism related development	To provide for the sustainable development of tourism related structures, uses and infrastructure. To provide for the development of tourism facilities including accommodation of an excellent sustainable design and aesthetic quality. Tourism related office, civic and cultural and commercial development will be facilitated.
MU: Mixed Use	To provide for mixed use development	The nature of the mixed use development envisaged for any particular site is set out in the text of the LPF.

ZONING	OBJECTIVE	DESCRIPTION
EX: Extractive Industry	To provide for extraction / quarrying and associated activities including processing of extracted materials and land restoration.	To facilitate the development of extraction/ quarrying, associated activities and land restoration
WZ: Waterfront	To provide for the development and improvement of the waterfront zone, to facilitate the continuation and development of existing employment / maritime / port, residential, public utilities, and community / recreational uses and to promote and provide for new commercial, maritime, residential, tourism and other mixed-use development.	To facilitate the continued and more intensive / efficient use of the existing employment, maritime and port uses; To maintain existing and support the development / improvement of high quality community, amenity, leisure and tourism uses; To facilitate commercial and retail uses at a scale that do not undermine the role of the existing Town Centre; To facilitate the provision of high quality new residential developments at appropriate high densities with excellent layout and design, well linked to the existing town centre, community facilities and water amenities.

The box below gives typical appropriate uses for each zone type. The planning authority shall determine each proposal on its merits, and shall only permit the development of uses that enhance, complement, are ancillary to, or neutral to the zoning objective. Uses that are materially inconsistent with and detrimental to the zoning objective shall not be permitted.

Uses generally appropriate for **residential (RN / RE)** zoned areas include houses, apartments, residential open space, education, community facilities, retirement homes, nursing homes, childcare/crèche, health centres, guest house, bed and breakfast, places of public worship, home based economic activity, utility installations and ancillary development and other residential uses in accordance with the County Development Plan (CDP) and applicable Local Plan.

Uses generally appropriate for **town centre (TC)** include residential development, childcare / crèche, commercial, education retail, retail services, health, restaurants, public house, public buildings, hotels, guest houses, nursing / care homes, parking, office, tourism and recreational uses, community, including provision for religious use, utility installations and ancillary developments for town centre uses in accordance with the CDP and applicable Local Plan.

Uses generally appropriate for **local shops and services (LSS)** include small scale retail, retail services, health, public house, guest houses, parking, residential development, childcare/crèche, commercial, office, tourism and recreational uses, community, including provision for religious use, utility installations and ancillary developments for local shops and services uses in accordance with the with the CDP and applicable Local Plan.

Uses generally appropriate for **employment (E)** zoned land include general and light industry, office uses, enterprise units, education, appropriate warehousing, petrol filling stations (as deemed appropriate), public transport depots, open space, including sports grounds, childcare / crèche, community facilities including community and sports centres, utility installations including ancillary supporting infrastructure and energy storage, and ancillary developments for employment and industry uses in accordance with the CDP and applicable Local Plan.

Uses generally appropriate for **community and educational (CE)** zoned land include community, educational and institutional uses include burial grounds, places of worship, schools, training facilities, community hall, nursing homes, health related developments, sports and recreational facilities, utility installations and ancillary developments for community, educational and institutional uses in accordance with the CDP and applicable Local Plan.

Uses appropriate for **active open space (AOS)** zoned land are sport and active recreational uses including infrastructure and buildings associated with same. Education and community use may be considered appropriate in accordance with the objectives of the LPF.

Uses appropriate for **open space (OS1)** zoned land are recreational uses such as formal / informal landscaped parks with off-road walking / cycling paths, as well as playgrounds, skate parks, Mixed Use Games Areas, outdoor gyms, and allotments.

Uses appropriate for **natural areas (OS2)** zoned land are uses that protect and enhance the function of these areas as flood plains, buffer zones along watercourses and rivers, green breaks between built up areas, green corridors and areas of natural biodiversity. The development of these lands for recreational uses may only be considered where such use is shown to not undermine the purpose of this zoning.

Uses generally appropriate for **public utility (PU)** zoned land are for the provision of necessary infrastructure and services such as roads / footpaths / cycleways, carparks, train station, water and waste water treatment plants, large ESB sub-stations, gasworks.

Uses generally appropriate for **tourism (T)** zoned land are tourism accommodation and tourism / recreational uses such as Bed & Breakfast, cultural uses, holiday homes, hotels, recreational facilities.

Uses generally appropriate for any **mixed use (MU)** area will be specified in the applicable Local Plan.

Uses generally appropriate for **extractive industry (EX)** zoned land are extractive industry uses (the winning of all minerals and substances in or under land of a kind ordinarily worked by underground or open cast mining), including value added production, such as concrete, asphalt and block production, and ancillary developments in accordance with the County Development Plan.

Uses generally appropriate for **waterfront (WZ)** zoned land include aquaculture / fishing, residential, childcare/crèche, civic / cultural uses, community facilities, education, employment / office uses, general and light industry, harbour uses, health related service / uses, hotels, maritime uses, recreational and leisure uses, retail, restaurants, parking, public house, tourism uses, utility installations and ancillary development in accordance with the CDP and the applicable Local Plan.

4.2 Flood Risk Zones and the Application of the Sequential Approach/Justification Test for Arklow

The following is an analysis of the vulnerability of land uses on sites that fall within Flood Zones A and B, and where appropriate, the application of the Justification Test for plan making. The full extent of Flood Zones A and B within Arklow are shown on Map No. 4A 'Flood Risk – Present Day' and Map No.4C 'Flood Risk – Potential Future Scenario' of the draft Arklow Local Planning Framework.

In the assessment to follow, flood risk zones are shown thus:

 **Flood Zone A**

 **Flood Zone B**

Proposed Land Use Zones are as follows:

LEGEND

	Arklow LPF Boundary
	Road Objectives
	Specific Local Objective
	RN(1)
	RN(2)
	RE
	TC
	LSS
	PU
	CE
	T
	WZ
	AOS
	OS1
	OS2
	E1
	EX

LAND USE ZONING: New Residential – Priority 1 (RN1)

There are no areas zoned New Residential – Priority 1 (RN1) that are located within Flood Zones A or B.

Land Use Zoning	RN1
Flood Zone	All sites: C
Vulnerability of Land Use vs. Flood zone	Land use zoning is appropriate
Requirement for Justification Test	No

LAND USE ZONING: New Residential – Priority 2 (RN2)

There are no areas zoned New Residential – Priority 2 (RN2) that are located within Flood Zones A or B.

Land Use Zoning	RN2
Flood Zone	All sites: C
Vulnerability of Land Use vs. Flood zone	Land use zoning is appropriate
Requirement for Justification Test	No

LAND USE ZONING: Special Residential (RS)

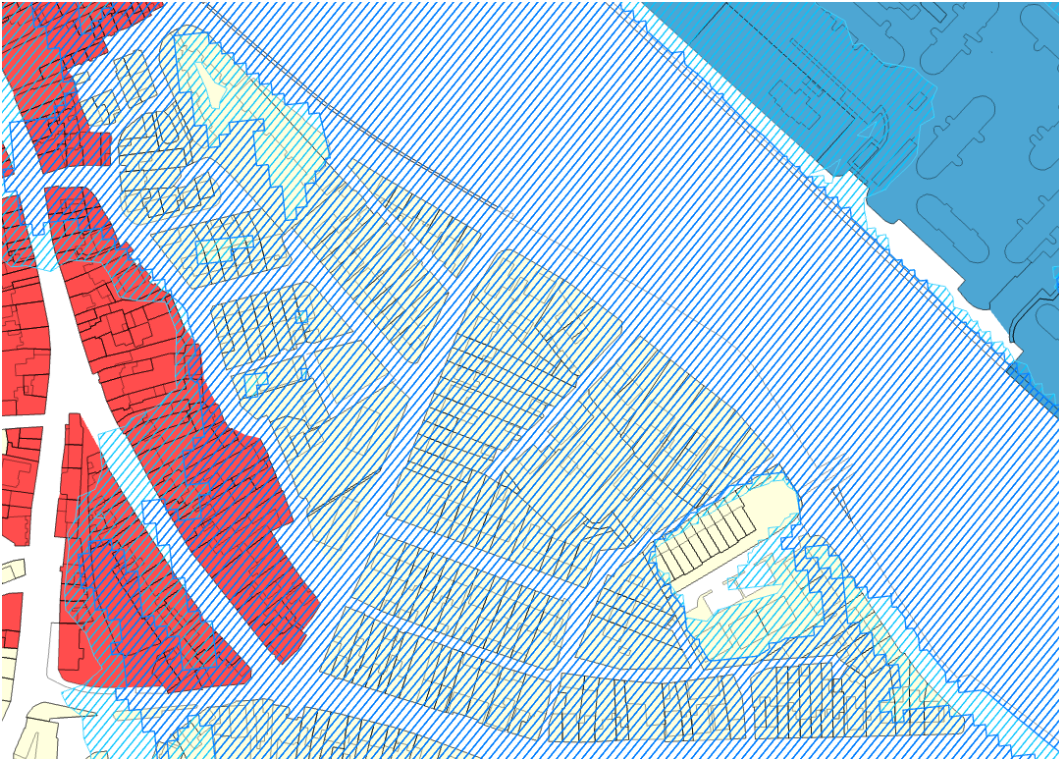
There are no areas zoned Special Residential (RS) that are located within Flood Zones A or B.

Land Use Zoning	RN2
Flood Zone	All sites: C
Vulnerability of Land Use vs. Flood zone	Land use zoning is appropriate
Requirement for Justification Test	No

LAND USE ZONING: Existing Residential (RE)

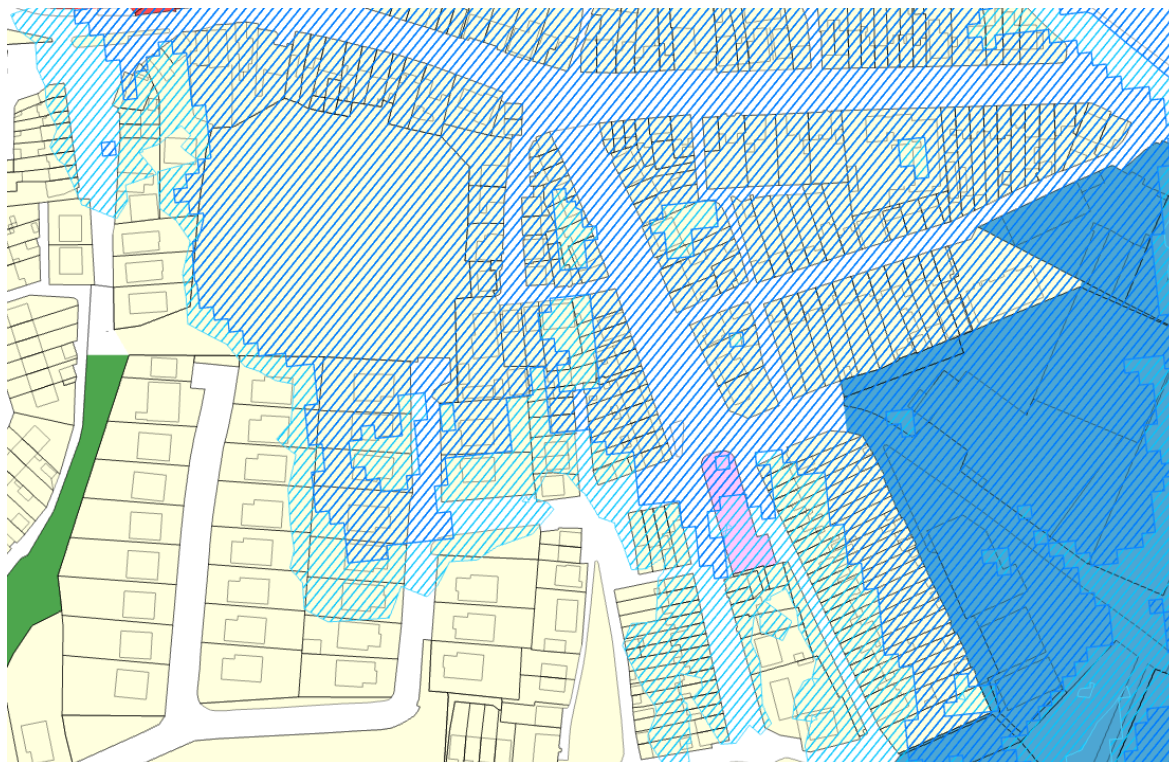
It has been determined that there are 9 No. locations within the LPF area that are proposed to be zoned 'RE – Existing Residential' which are located within Flood Zones A or B.

(i) Bank Hall/The Brook/South Green/South Quay/Harbour Rd



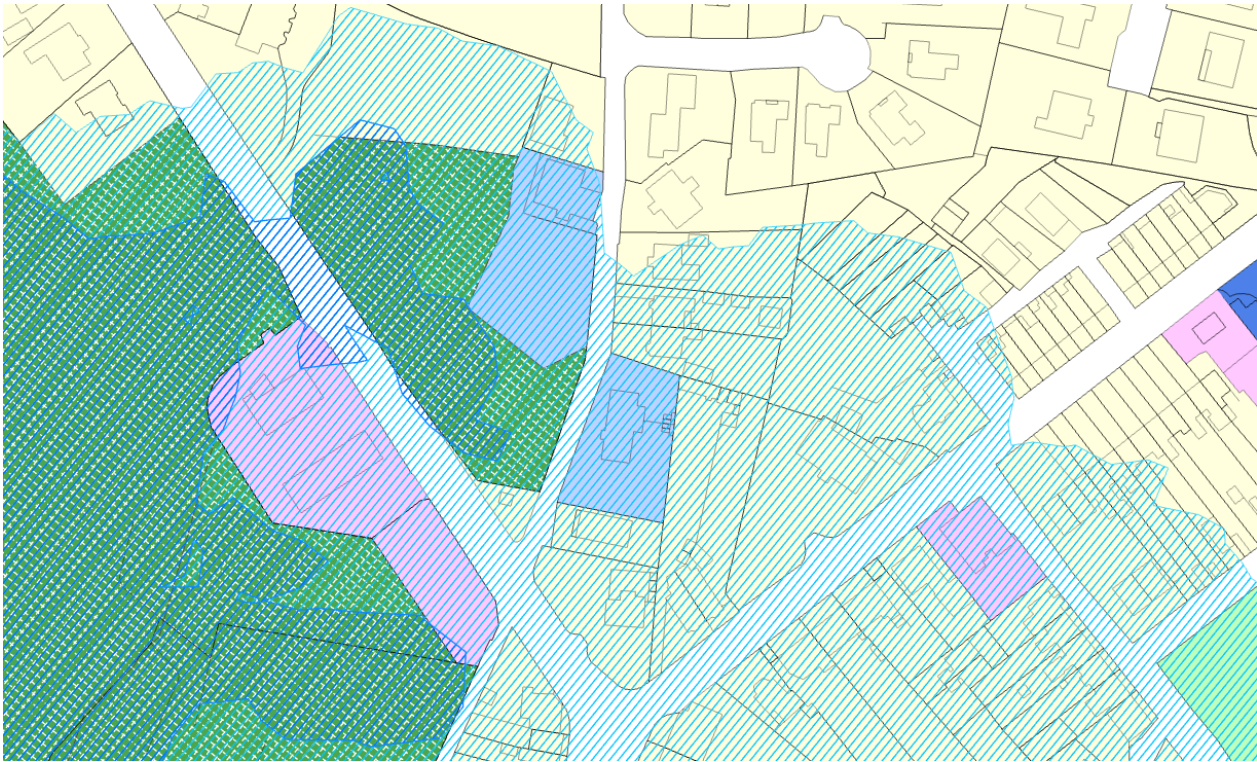
Land Use Zoning	Existing Residential (RE)
Flood Zone	A & B
Vulnerability of Land Use vs. Flood zone	Land use zoning not appropriate
Requirement for Justification Test	Yes

(ii) Tinahask/Tyndall's Ln/Harbour Rd /Rockview Terrace/St.Michael's Terrace/Harbour Ct



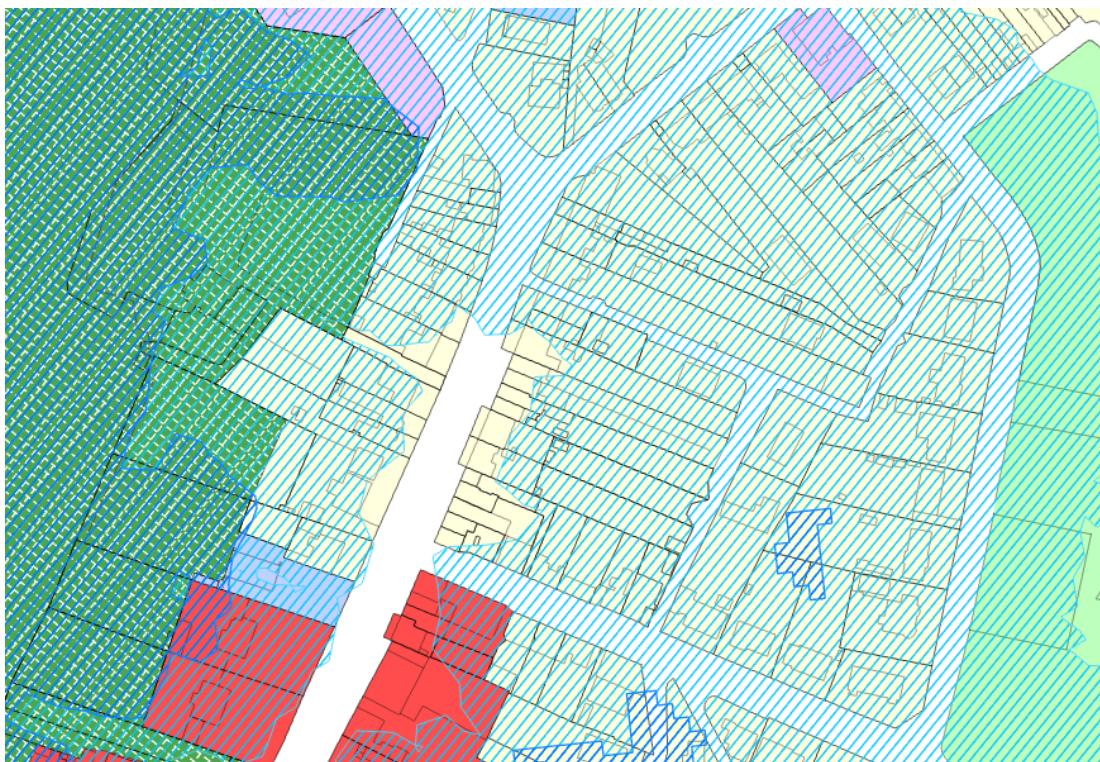
Land Use Zoning	Existing Residential (RE)
Flood Zone	A & B
Vulnerability of Land Use vs. Flood zone	Land use zoning not appropriate
Requirement for Justification Test	Yes

(iii) Arklow North – Dublin Rd/Brigg’s Lane/Sea Rd



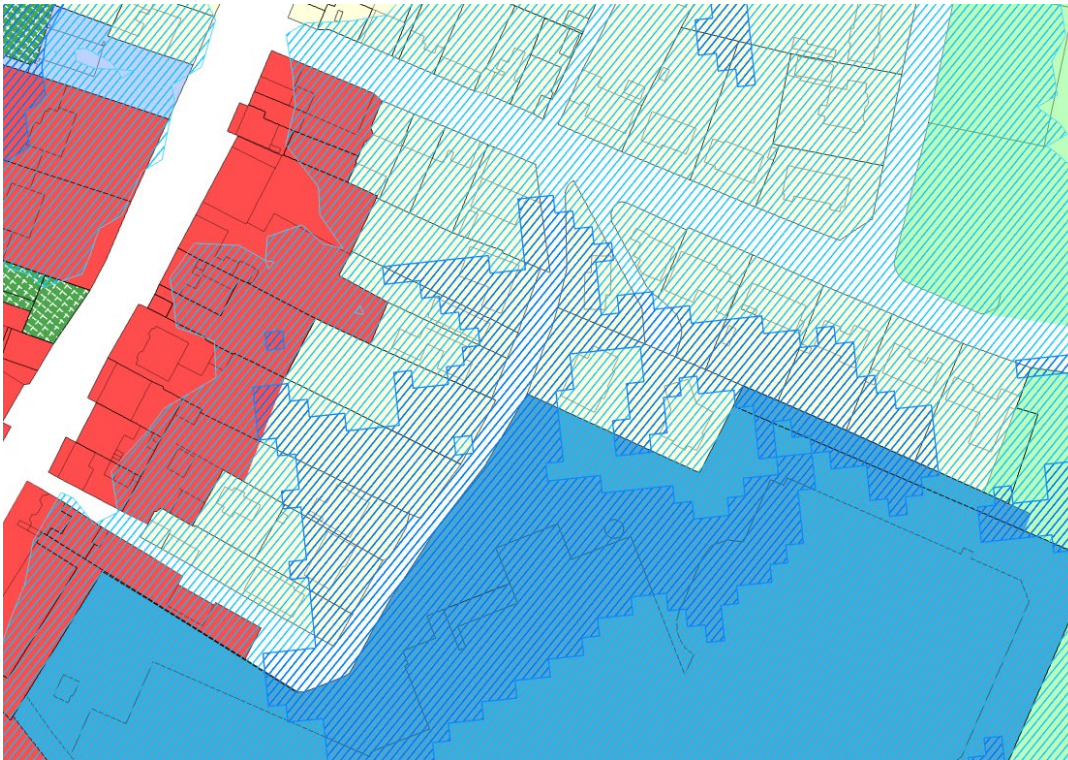
Land Use Zoning	Existing Residential (RE)
Flood Zone	A & B
Vulnerability of Land Use vs. Flood zone	Land use zoning not appropriate
Requirement for Justification Test	Yes

(iv) Ferrrybank/Clogg Lane/Worsborough Terrace/Seaview Ave



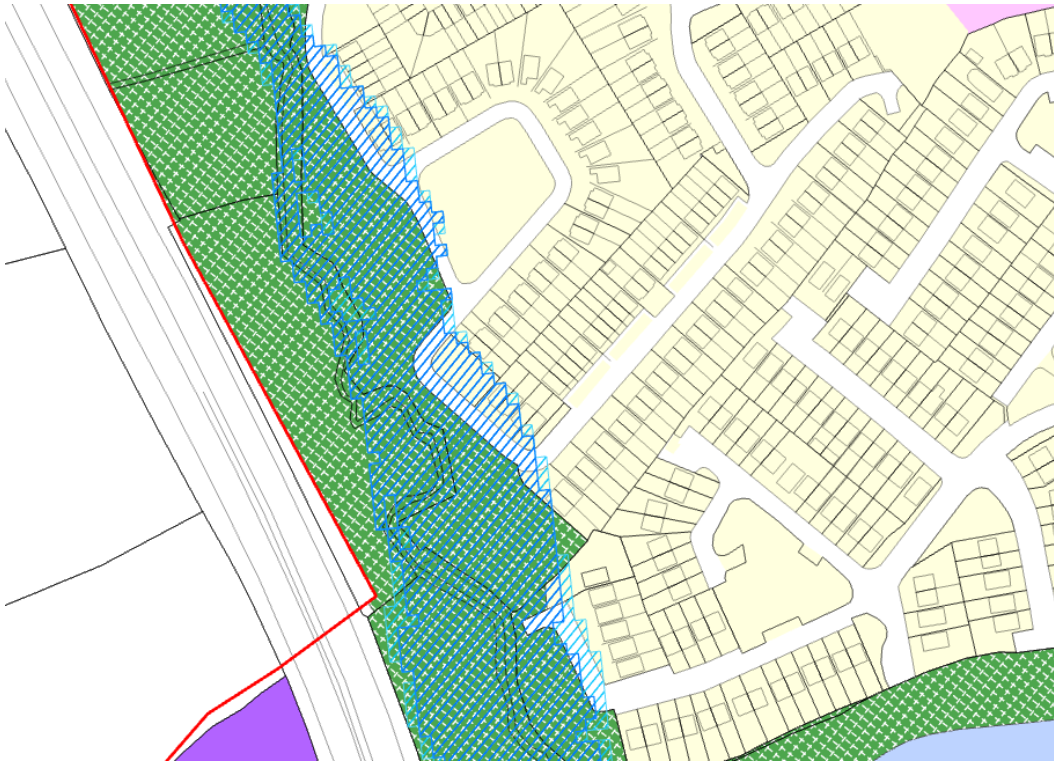
Land Use Zoning	Existing Residential (RE)
Flood Zone	A & B
Vulnerability of Land Use vs. Flood zone	Land use zoning not appropriate
Requirement for Justification Test	Yes

(v) Seaview Ave



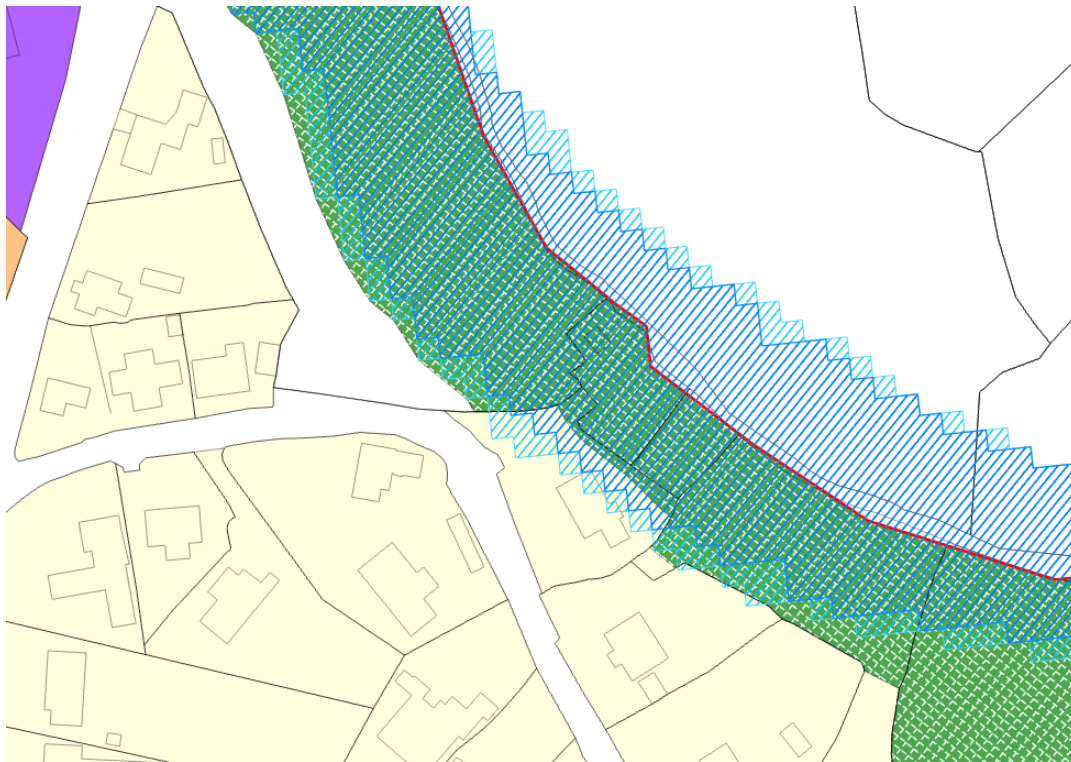
Land Use Zoning	Existing Residential (RE)
Flood Zone	A & B
Vulnerability of Land Use vs. Flood zone	Land use zoning not appropriate
Requirement for Justification Test	Yes

(vi) Knocknarahane Upper – The Crescent



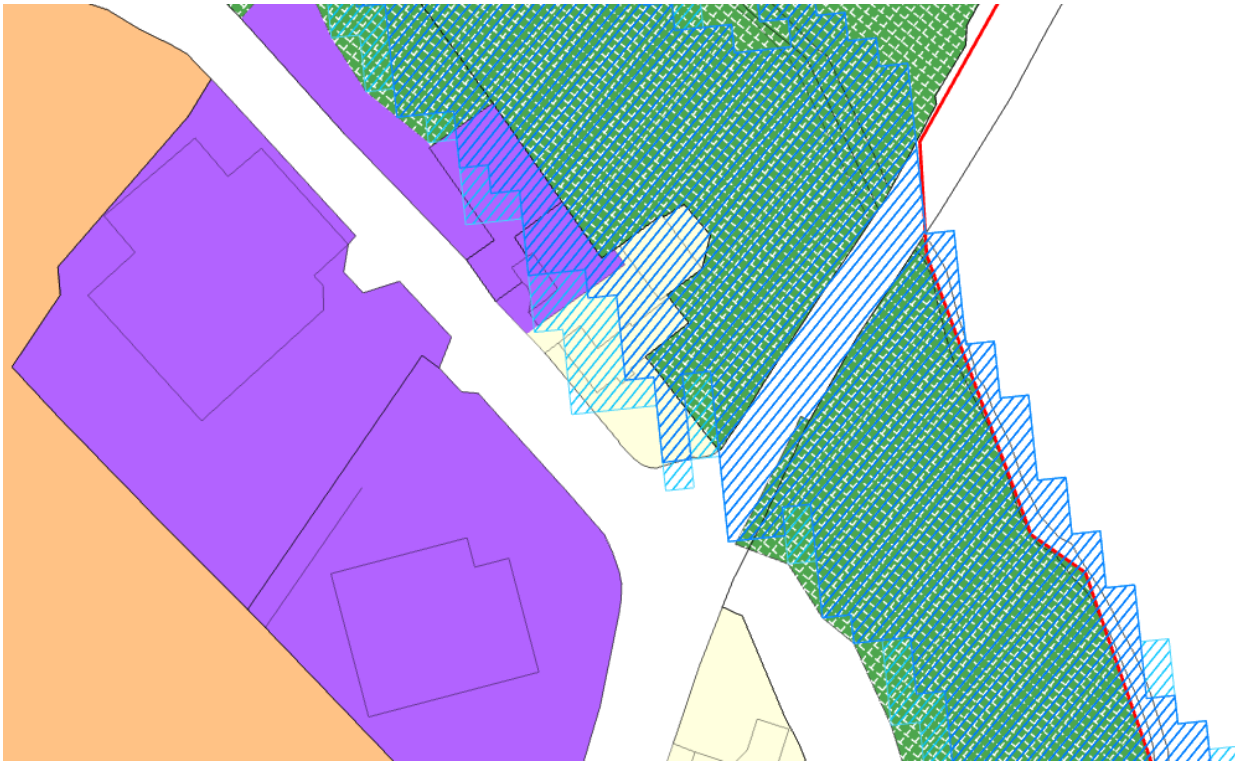
Land Use Zoning	Existing Residential (RE)
Flood Zone	A & B
Vulnerability of Land Use vs. Flood zone	Land use zoning not appropriate
Requirement for Justification Test	Yes

(vii) Ticknock Ln/Cluain Árd



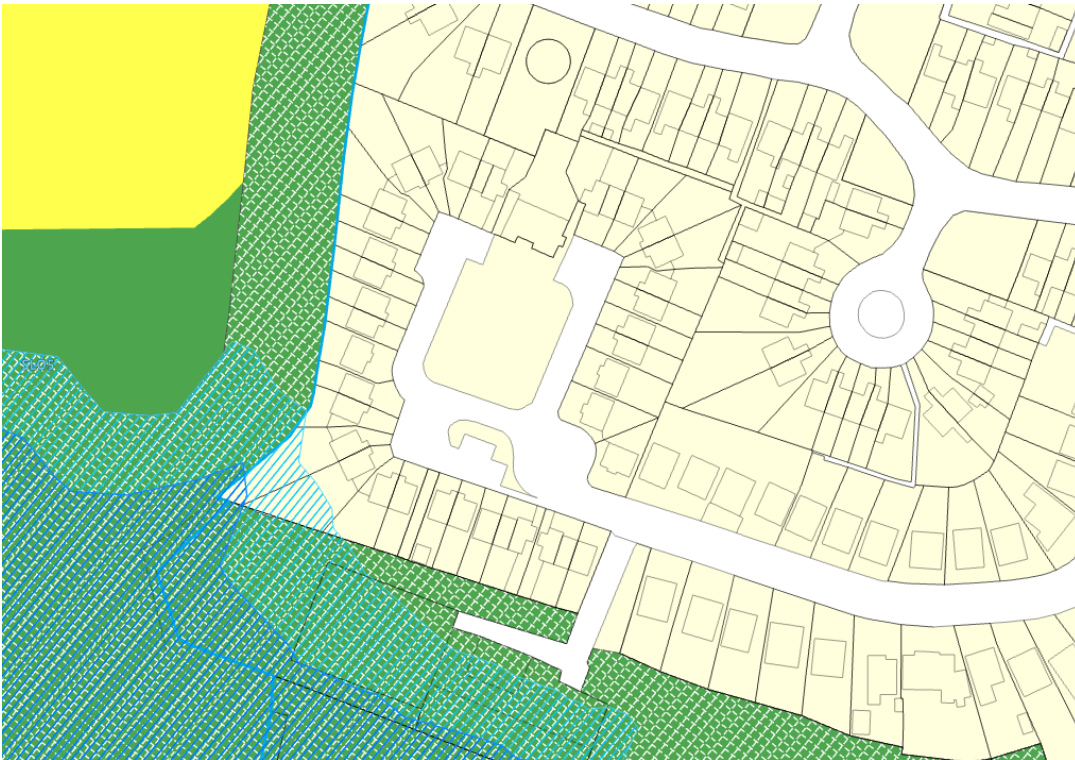
Land Use Zoning	Existing Residential (RE)
Flood Zone	A & B
Vulnerability of Land Use vs. Flood zone	Land use zoning not appropriate
Requirement for Justification Test	Yes

(viii) Beech Road



Land Use Zoning	Existing Residential (RE)
Flood Zone	A & B
Vulnerability of Land Use vs. Flood zone	Land use zoning not appropriate
Requirement for Justification Test	All sites: Yes

(ix) Willow Grove/Avondale Crescent



Land Use Zoning	Existing Residential (RE)
Flood Zone	A & B
Vulnerability of Land Use vs. Flood zone	All sites: Land use zoning not appropriate
Requirement for Justification Test	All sites: Yes

Plan-Making Justification Test

1	The urban settlement is targeted for growth under the National Spatial Strategy, regional planning guidelines, statutory plans as defined above or under the Planning Guidelines or Planning Directives provisions of the Planning and Development Act, 2000, as amended.	The Settlement Strategy of the Wicklow County Development Plan 2022-2028 designates Arklow as a 'Level 3 Self-Sustaining Growth Town' and identifies this settlement typology as being identified for a growth rate of c. 25-30%. The Core Strategy of the Wicklow County Development Plan 2022-2028 sets out a population target of 15,419 by Q2 2028, from a 2016 population of 13,226 persons. The Core Strategy further indicates a total housing growth target of 1,221 units from 2016 to 2031.
2	The zoning or designation of the lands for the particular use or development type is required to achieve the proper planning and sustainable development of the urban settlement and, in particular: (i) Is essential to facilitate regeneration and/or expansion of the centre of the urban settlement; (ii) Comprises significant previously developed and/or under-utilised lands; (iii) Is within or adjoining the core of an established or designated urban settlement; (iv) Will be essential in achieving compact and sustainable urban growth; and (v) There are no suitable alternative lands for the particular use or development type, in areas at lower risk of flooding within or adjoining the core of the urban settlement.	All sites: No All sites: Yes Sites (i),(ii),(iii),(iv),(v): Yes Sites (vi), (vii),(viii),(ix): No All Sites: No N/A – these lands are developed
3	A flood risk assessment to an appropriate level of detail has been carried out as part of the Strategic Environmental Assessment as part of the development plan preparation process, which demonstrates that flood risk to the development can be adequately managed and the use or development of the lands will not cause unacceptable adverse impacts elsewhere.	Assessment of flood risk has been incorporated into the LPF SEA Process

Conclusion

Justification Test failed.

Recommendation

As these lands are currently developed for permitted residential use, the retention of the RE zoning objectives are considered justified. Furthermore, as part of the Avoca River Flood Defence Scheme these lands will have flood defence works carried out and are therefore considered to be defended.

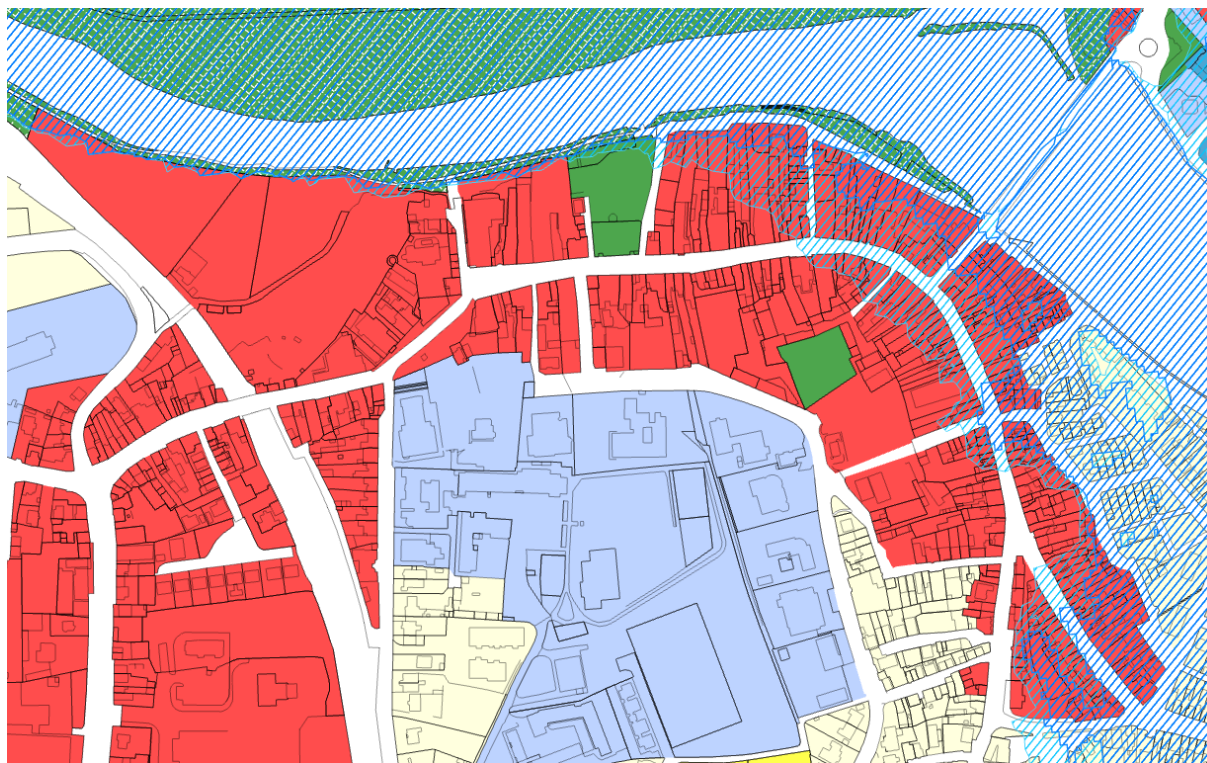
It is acknowledged that flood defences should be ignored in determining flood zones as defended areas still carry a residual risk of flooding from overtopping, failure of the defences and deterioration due to lack of maintenance; therefore should development of these lands be proposed, flood mitigation measures are required (see Section 5.0 Mitigation Objectives below).

Applications for new, infill type residential development will be evaluated in accordance with Chapter 5 of 'Planning System and Flood Risk Management Guidelines for Planning Authorities' (DoEHLG/OPW 2009) and the flood risk management objectives of the Wicklow County Development Plan and the Arklow LPF.

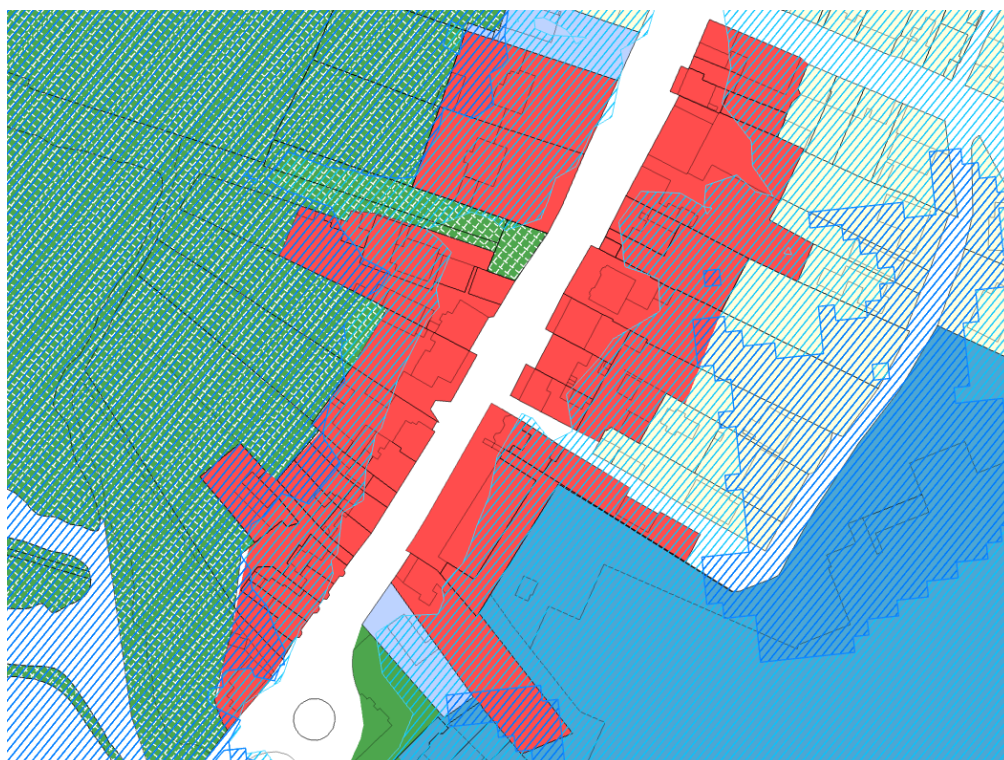
Applications for minor development (e.g. extensions) are unlikely to raise significant flooding issues but will be evaluated in accordance with Chapter 5 of 'Planning System and Flood Risk Management Guidelines for Planning Authorities' (DoEHLG/OPW 200) and the flood risk management objectives of the Wicklow County Development Plan and the Arklow LPF.

There are 2 No. locations zoned 'Town Centre (TC)' that are located within Flood Zones A or B.

(a) Main Street/River Walk



(b) Ferrybank



Land Use Zoning	Town Centre (TC)
Flood Zone	A & B
Vulnerability of Land Use vs. Flood zone	Land use zoning not appropriate
Requirement for Justification Test	Yes

Plan-Making Justification Test

1	The urban settlement is targeted for growth under the National Spatial Strategy, regional planning guidelines, statutory plans as defined above or under the Planning Guidelines or Planning Directives provisions of the Planning and Development Act, 2000, as amended.	The Settlement Strategy of the Wicklow County Development Plan 2022-2028 designates Arklow as a 'Level 3 Self-Sustaining Growth Town' and identifies this settlement typology as being identified for a growth rate of c. 25-30%. The Core Strategy of the Wicklow County Development Plan 2022-2028 sets out a population target of 15,419 by Q2 2028, from a 2016 population of 13,226 persons. The Core Strategy further indicates a total housing growth target of 1,221 units from 2016 to 2031.
2	The zoning or designation of the lands for the particular use or development type is required to achieve the proper planning and sustainable development of the urban settlement and, in particular:	
	(i) Is essential to facilitate regeneration and/or expansion of the centre of the urban settlement;	Yes
	(ii) Comprises significant previously developed and/or under-utilised lands;	Yes
	(iii) Is within or adjoining the core of an established or designated urban settlement;	Yes
	(iv) Will be essential in achieving compact and sustainable urban growth; and	Yes
	(v) There are no suitable alternative lands for the particular use or development type, in areas at lower risk of flooding within or adjoining the core of the urban settlement.	N/A – these lands are developed or under construction
3	A flood risk assessment to an appropriate level of detail has been carried out as part of the Strategic Environmental Assessment as part of the development plan preparation process, which demonstrates that flood risk to the development can be adequately managed and the use or development of the lands will not cause unacceptable adverse impacts elsewhere.	Assessment of flood risk has been incorporated into the LPF SEA Process

Conclusion

Justification Test passed.

Recommendation

No further action required as these lands meet the criteria of the justification test.

Additionally, as part of the Avoca River Flood Defence Scheme these lands will have flood defence works carried out and are therefore considered to be defended. It is acknowledged that flood defences should be ignored in determining flood zones as defended areas still carry a residual risk of flooding from overtopping, failure of the defences and deterioration due to lack of maintenance; therefore should development of these lands be proposed, flood mitigation measures are required (see Section 5.0 Mitigation Objectives below).

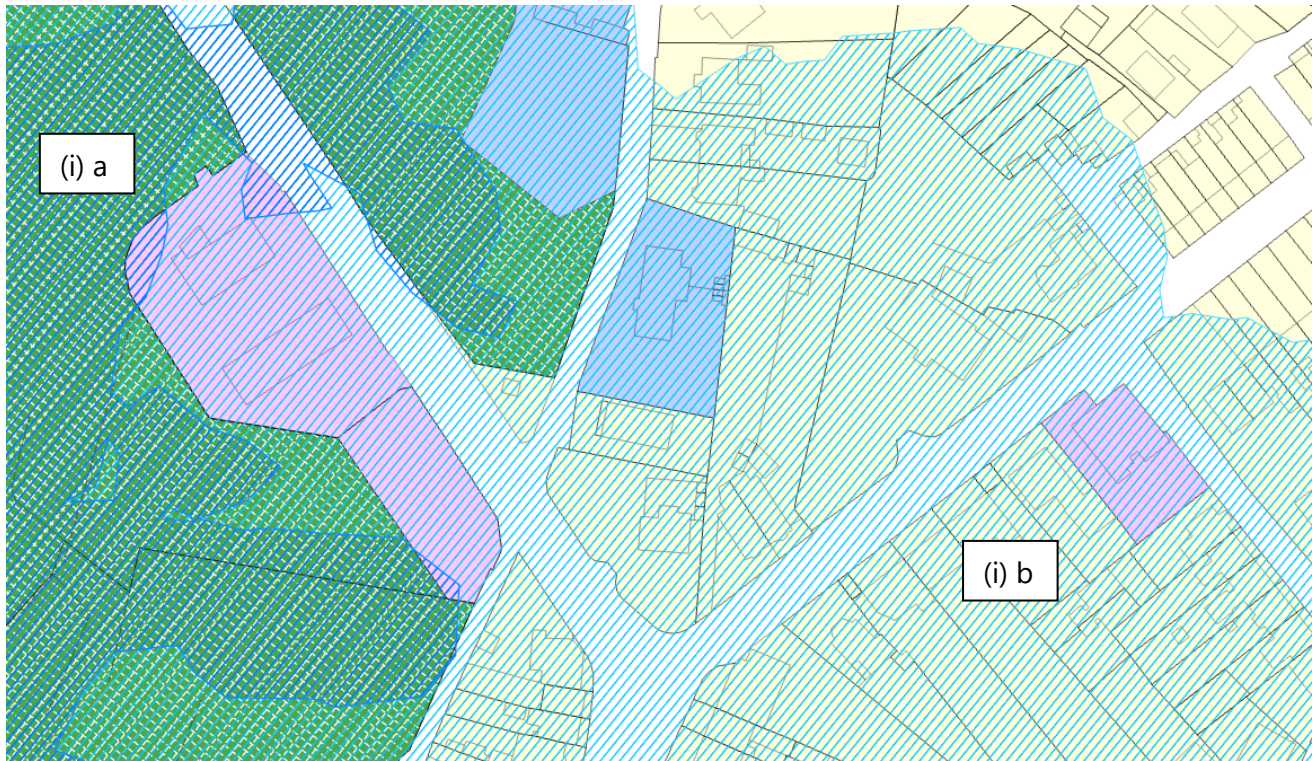
Applications for new, infill type residential development will be evaluated in accordance with Chapter 5 of 'Planning System and Flood Risk Management Guidelines for Planning Authorities' (DoEHLG/OPW 2009) and the flood risk management objectives of the Wicklow County Development Plan and the Arklow LPF.

Should expansion of existing uses be proposed, flood mitigation measures are required (see Section 5 Mitigation Objectives below).

LAND USE ZONING: Local Shops and Services (LSS)

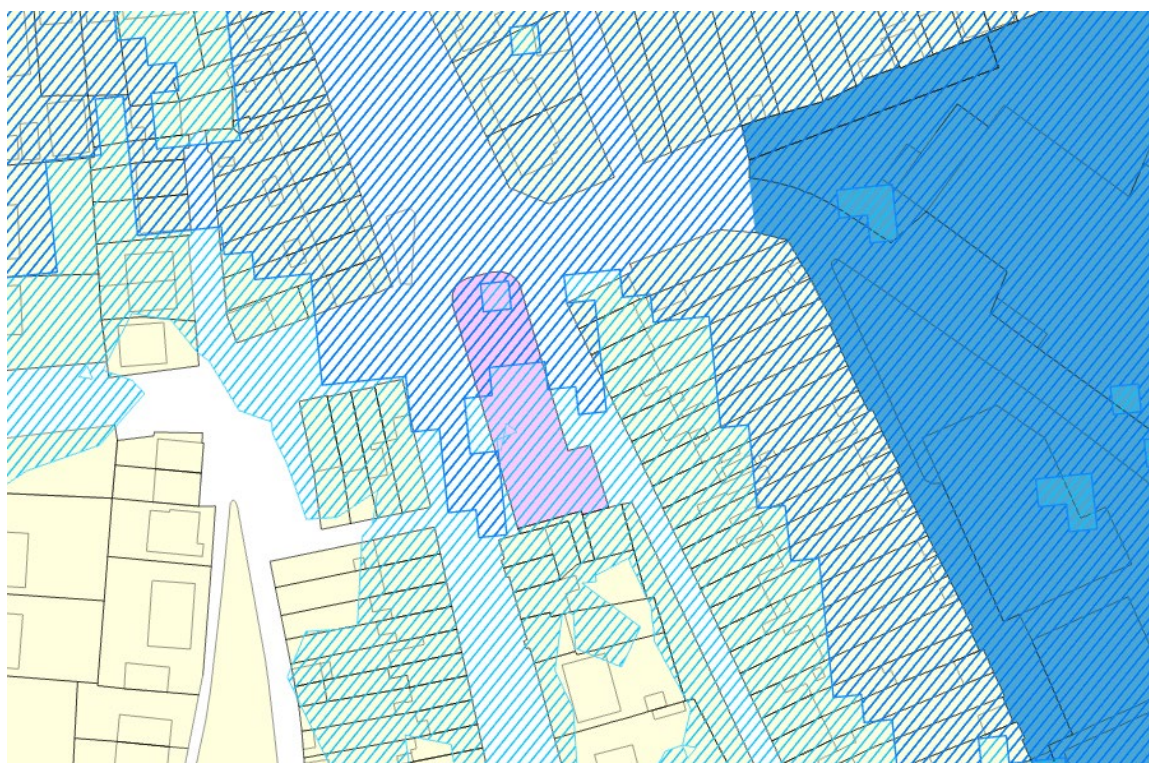
It has been determined that there are 2 No. locations within the LPF area that is proposed to be zoned 'LSS – Local Shops and Services' which is located within Flood Zones A or B.

(i) Dublin Rd/Sea Rd



Land Use Zoning	LSS
Flood Zone	Site (i)a: A & B, Site (i)b: B
Vulnerability of Land Use vs. Flood zone	All sites: Land use zoning not appropriate
Requirement for Justification Test	Yes

(ii) Harbour Ct/Dock Rd



Land Use Zoning	LSS
Flood Zone	All sites: A & B
Vulnerability of Land Use vs. Flood zone	Land use zoning not appropriate
Requirement for Justification Test	Yes

Plan-Making Justification Test		
1	The urban settlement is targeted for growth under the National Spatial Strategy, regional planning guidelines, statutory plans as defined above or under the Planning Guidelines or Planning Directives provisions of the Planning and Development Act, 2000, as amended.	The Settlement Strategy of the Wicklow County Development Plan 2022-2028 designates Arklow as a 'Level 3 Self-Sustaining Growth Town' and identifies this settlement typology as being identified for a growth rate of c. 25-30%. The Core Strategy of the Wicklow County Development Plan 2022-2028 sets out a population target of 15,419 by Q2 2028, from a 2016 population of 13,226 persons. The Core Strategy further indicates a total housing growth target of 1,221 units from 2016 to 2031.
2	The zoning or designation of the lands for the particular use or development type is required to achieve the proper planning and sustainable development of the urban settlement and, in particular:	
	(i) Is essential to facilitate regeneration and/or expansion of the centre of the urban settlement;	All sites: No
	(ii) Comprises significant previously developed and/or under-utilised lands;	All sites: Yes
	(iii) Is within or adjoining the core of an established or designated urban settlement;	All sites: Yes
	(iv) Will be essential in achieving compact and sustainable urban growth; and	All sites: No
	(v) There are no suitable alternative lands for the particular use or development type, in areas at lower risk of flooding within or adjoining the core of the urban settlement.	N/A – these lands are developed
3	A flood risk assessment to an appropriate level of detail has been carried out as part of the Strategic Environmental Assessment	Assessment of flood risk has been incorporated into the LPF SEA Process

as part of the development plan preparation process, which demonstrates that flood risk to the development can be adequately managed and the use or development of the lands will not cause unacceptable adverse impacts elsewhere.

Conclusion

Justification Test failed.

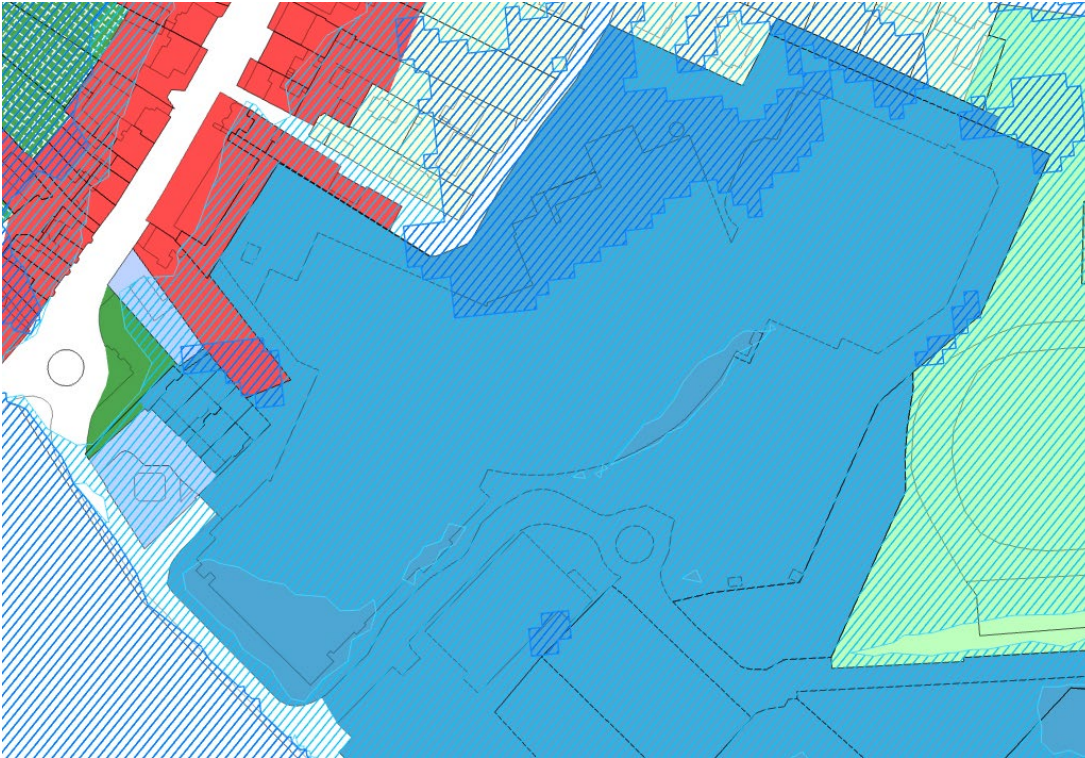
Recommendation

These lands are currently developed for permitted Local Shops & Services uses. As such, it is considered appropriate to retain the LSS zoning objective.

LAND USE ZONING: Waterfront Zone (WZ)

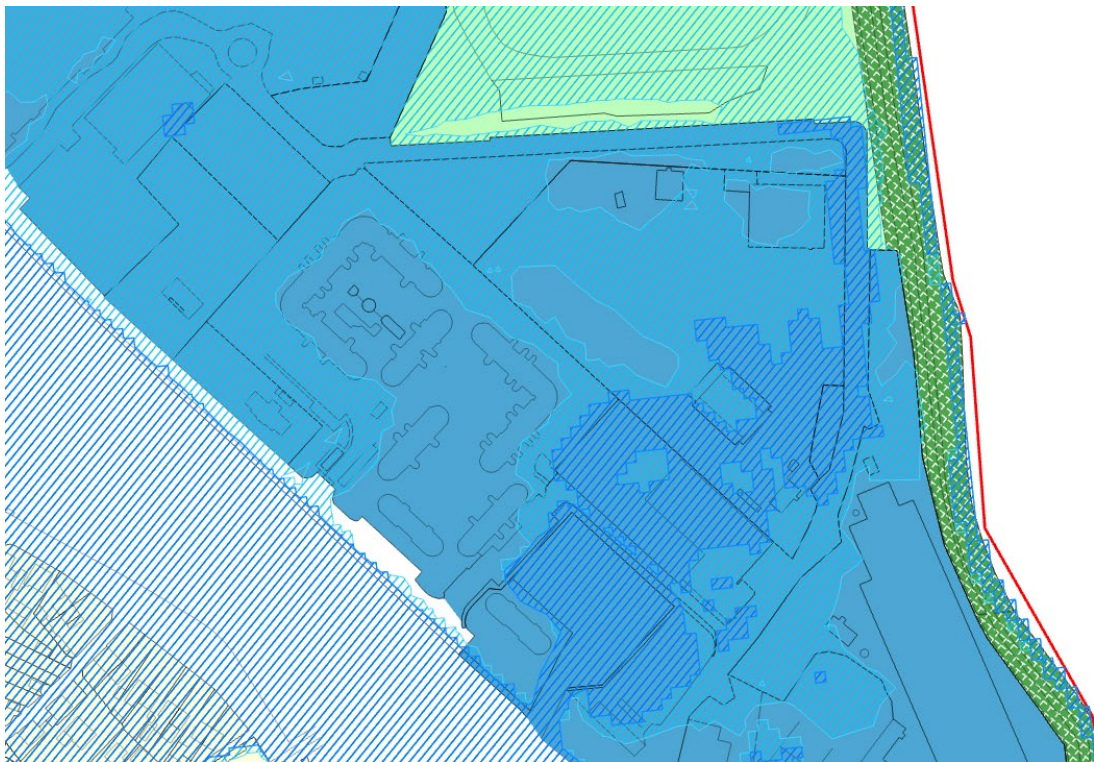
It has been determined that there are 4 No. locations within the plan area that are proposed to be zoned 'WZ - Waterfront' which are located within Flood Zones A or B.

(i) Bridgewater Shopping Centre



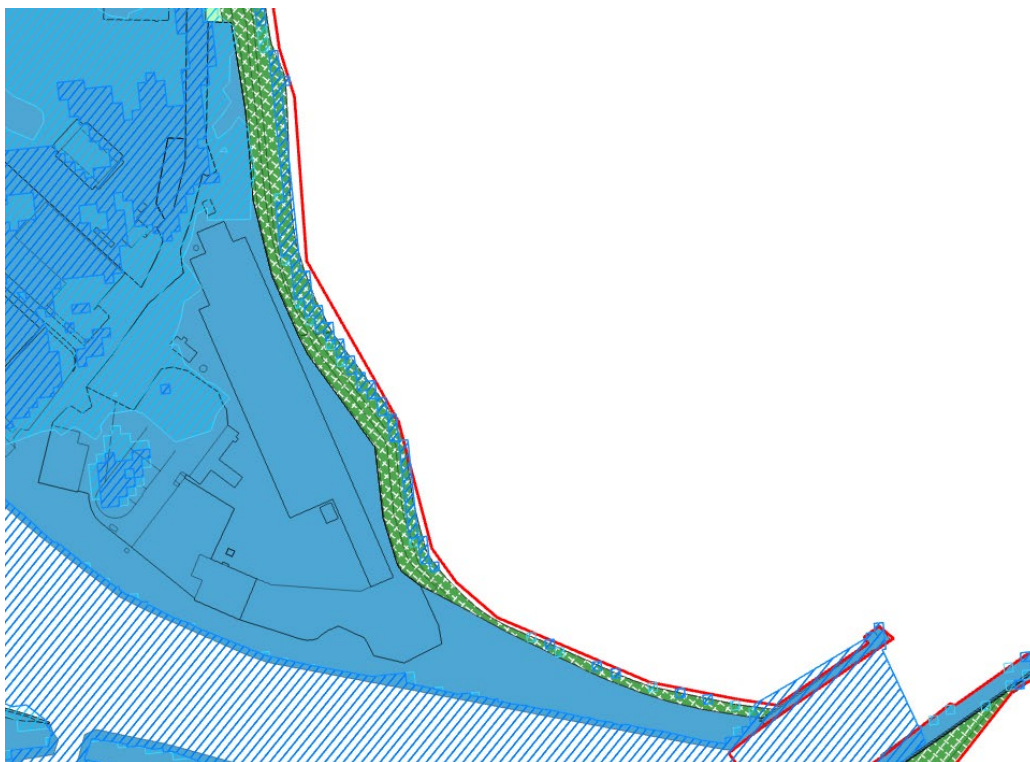
Land Use Zoning	WZ
Flood Zone	A & B
Vulnerability of Land Use vs. Flood zone	Land use zoning not appropriate
Requirement for Justification Test	Yes

(ii) Marina Village/Arklow Shipping



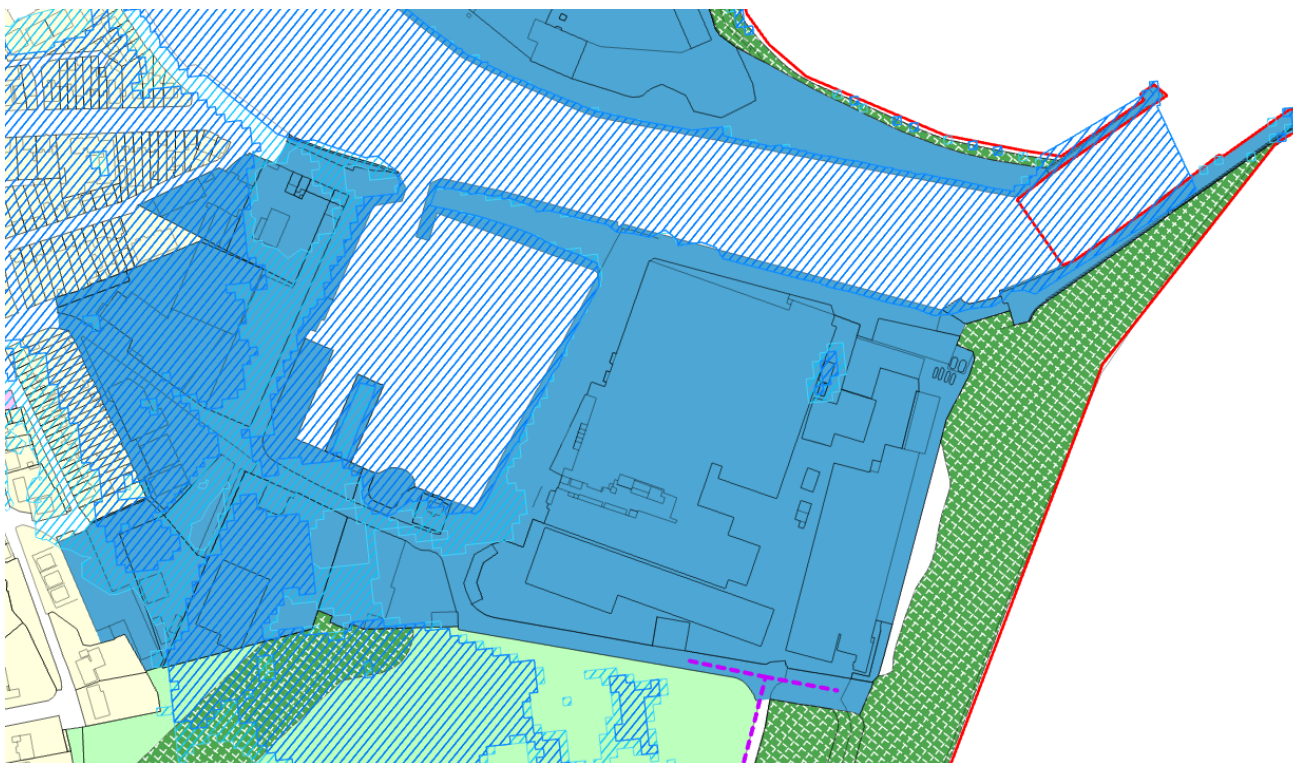
Land Use Zoning	WZ
Flood Zone	A & B
Vulnerability of Land Use vs. Flood zone	Land use zoning not appropriate
Requirement for Justification Test	Yes

(iii) Wastewater Treatment Plant/North Pier



Land Use Zoning	WZ
Flood Zone	A & B
Vulnerability of Land Use vs. Flood zone	Land use zoning not appropriate
Requirement for Justification Test	Yes

(iv) South Quay



Land Use Zoning	WZ
Flood Zone	A & B
Vulnerability of Land Use vs. Flood zone	Land use zoning not appropriate
Requirement for Justification Test	Yes

Plan-Making Justification Test

1	The urban settlement is targeted for growth under the National Spatial Strategy, regional planning guidelines, statutory plans as defined above or under the Planning Guidelines or Planning Directives provisions of the Planning and Development Act, 2000, as amended.	The Settlement Strategy of the Wicklow County Development Plan 2022-2028 designates Arklow as a 'Level 3 Self-Sustaining Growth Town' and identifies this settlement typology as being identified for a growth rate of c. 25-30%. The Core Strategy of the Wicklow County Development Plan 2022-2028 sets out a population target of 15,419 by Q2 2028, from a 2016 population of 13,226 persons. The Core Strategy further indicates a total housing growth target of 1,221 units from 2016 to 2031.
2	The zoning or designation of the lands for the particular use or development type is required to achieve the proper planning and sustainable development of the urban settlement and, in particular:	
	(i) Is essential to facilitate regeneration and/or expansion of the centre of the urban settlement;	All sites: Yes
	(ii) Comprises significant previously developed and/or under-utilised lands;	All sites: Yes
	(iii) Is within or adjoining the core of an established or designated urban settlement;	All sites: Yes
	(iv) Will be essential in achieving compact and sustainable urban growth; and	All sites: Yes
	(v) There are no suitable alternative lands for the particular use or development type, in areas at lower risk of flooding within or adjoining the core of the urban settlement.	No
3	A flood risk assessment to an appropriate level of detail has been carried out as part of the Strategic Environmental Assessment as part of the development plan preparation process, which demonstrates that flood risk to the development can be adequately managed and the use or development of the lands will not cause unacceptable adverse impacts elsewhere.	Assessment of flood risk has been incorporated into the LPF SEA Process

Conclusion

Justification Test passed.

Recommendation

While the majority of this area is already developed, there remain some underdeveloped / undeveloped brownfield sites that are under-utilised. The development of these remaining sites is deemed essential to facilitate regeneration and meet compact growth objectives. These lands comprise fully serviced Tier 1 lands.

In addition, as part of the Arklow Flood Defence Scheme, flood defence works due to be constructed at North and South Quay will result in these lands be defended.

It is acknowledged that flood defences should be ignored in determining flood zones as defended areas still carry a residual risk of flooding from overtopping, failure of the defences and deterioration due to lack of maintenance; therefore should development of these lands be proposed, flood mitigation measures are required (see Section 5.0 Mitigation Objectives below).

Applications for new, infill type or minor development will be evaluated in accordance with Chapter 5 of *'Planning System and Flood Risk Management Guidelines for Planning Authorities'* (DoEHLG/OPW 2009) and the flood risk management objectives of the Wicklow County Development Plan and this LPF. Should expansion of existing uses be proposed, flood mitigation measures are required (see Section Mitigation Objectives below).

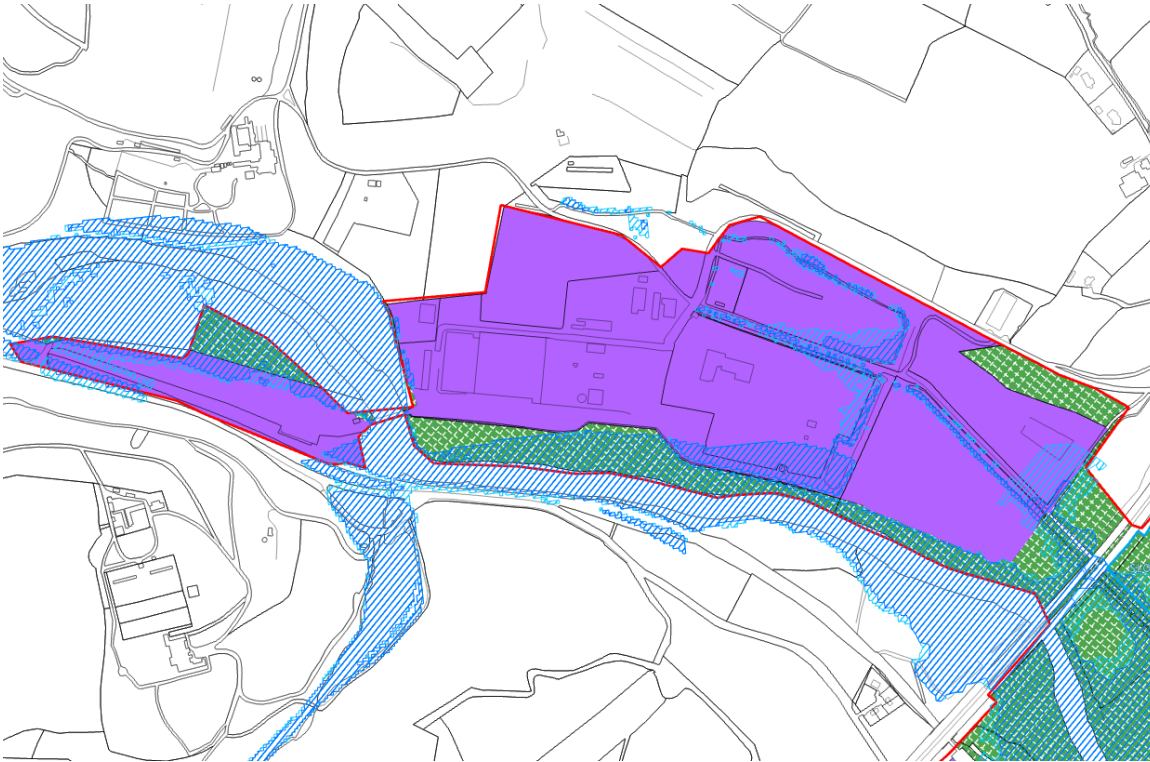
While the majority of these lands are currently fully developed and utilised, the purpose of the zoning of these lands for 'WZ' in the LPF is to allow for the possibility for these lands to be developed for a wider range of uses in the event that the existing low intensity uses in the area are able to re-locate within the settlement to similarly serviced and accessible locations or can be reconfigured within the WZ area to provide for developable areas.

It is therefore considered appropriate to retain the WZ zoning objective.

LAND USE ZONING: Employment (E)

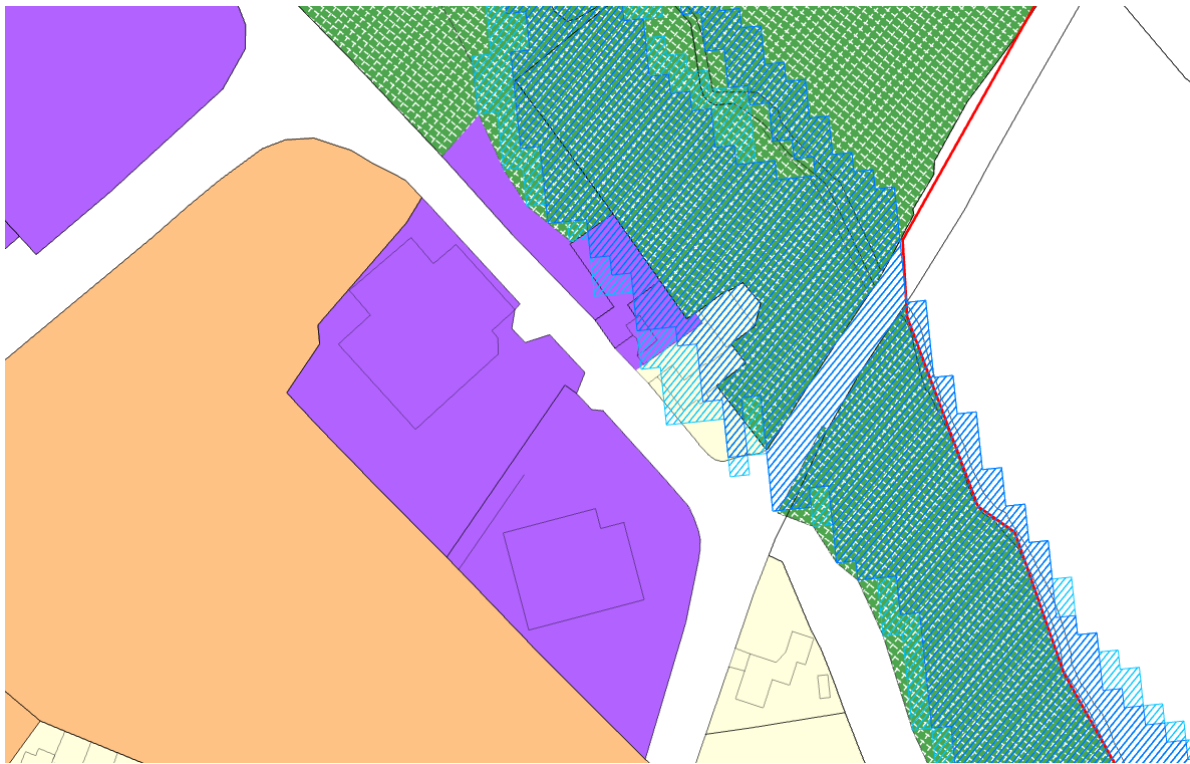
It has been determined that there are 3 No. locations within the LPF area that are proposed to be zoned 'E – Employment which are located within Flood Zones A or B.

(i) Avoca River Park Industrial Estate



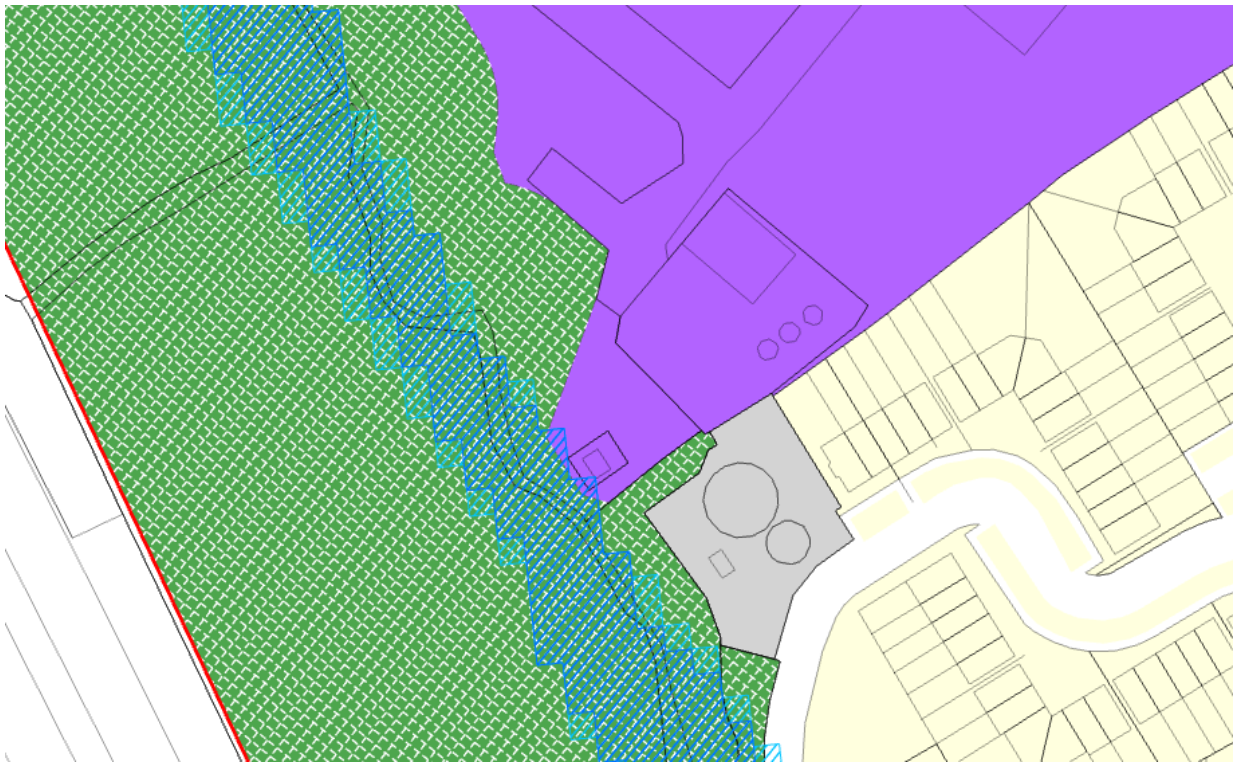
Land Use Zoning	E
Flood Zone	A & B
Vulnerability of Land Use vs. Flood zone	Flood Zone A: Land use zoning not appropriate Flood Zone B: Land use zoning appropriate
Requirement for Justification Test	Yes

(ii) Beech Rd



Land Use Zoning	E
Flood Zone	A & B
Vulnerability of Land Use vs. Flood zone	Land use zoning not appropriate
Requirement for Justification Test	Yes

(iii) Emoclew Rd



Land Use Zoning	E
Flood Zone	A & B
Vulnerability of Land Use vs. Flood zone	Land use zoning not appropriate
Requirement for Justification Test	Yes

Plan-Making Justification Test		
1	The urban settlement is targeted for growth under the National Spatial Strategy, regional planning guidelines, statutory plans as defined above or under the Planning Guidelines or Planning Directives provisions of the Planning and Development Act, 2000, as amended.	The Settlement Strategy of the Wicklow County Development Plan 2022-2028 designates Arklow as a 'Level 3 Self-Sustaining Growth Town' and identifies this settlement typology as being identified for a growth rate of c. 25-30%. The Core Strategy of the Wicklow County Development Plan 2022-2028 sets out a population target of 15,419 by Q2 2028, from a 2016 population of 13,226 persons. The Core Strategy further indicates a total housing growth target of 1,221 units from 2016 to 2031.
2	The zoning or designation of the lands for the particular use or development type is required to achieve the proper planning and sustainable development of the urban settlement and, in particular:	
	(i) Is essential to facilitate regeneration and/or expansion of the centre of the urban settlement;	All sites: No
	(ii) Comprises significant previously developed and/or under-utilised lands;	All sites: Yes
	(iii) Is within or adjoining the core of an established or designated urban settlement;	All sites: No
	(iv) Will be essential in achieving compact and sustainable urban growth; and	All sites: No
	(v) There are no suitable alternative lands for the particular use or development type, in areas at lower risk of flooding within or adjoining the core of the urban settlement.	All sites: These lands are already developed
3	A flood risk assessment to an appropriate level of detail has been carried out as part of the Strategic Environmental Assessment as part of the development plan preparation process, which demonstrates that flood risk to the development can be adequately managed and the use or development of the lands will not cause unacceptable adverse impacts elsewhere	Assessment of flood risk has been incorporated into the LPF SEA Process

Conclusion

Justification Test failed.

Recommendation

These lands are currently developed for permitted employment/industrial uses. As such, it is considered appropriate to retain the E zoning objective.

The zoning objective for future development of these sites does not proscribe exactly where in the zone development should occur and the zones are sufficiently large to provide for the development of desired uses while avoiding development in the at risk area.

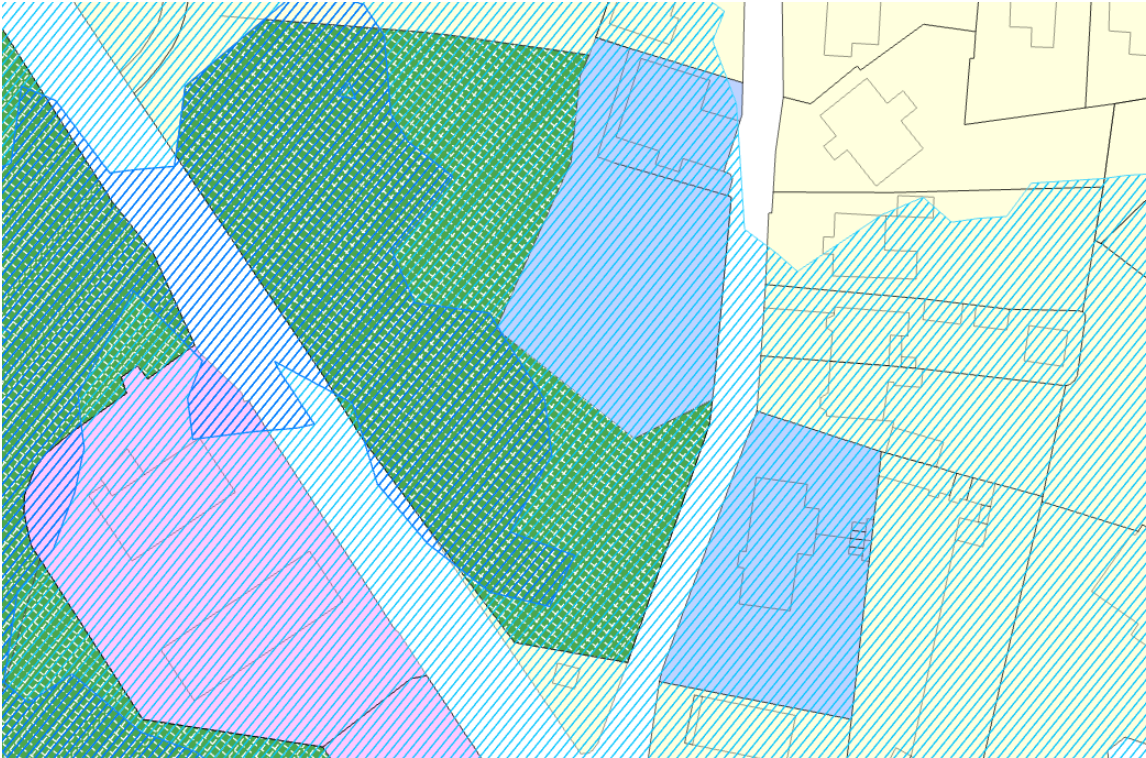
Any proposals for new development should be accompanied by an appropriately detailed FRA, undertaken in accordance with Chapter 5 of 'Planning System and Flood Risk Management Guidelines for Planning Authorities' (DoEHLG/OPW 2009) and the relevant policies and objectives in the County Development Plan and in particular, the sequential approach shall be applied in the site planning, to ensure no encroachment onto, or loss of the flood plain, or that only water compatible development such as Open Space will be permitted for the lands which are identified as being at risk of flooding within that site.

While the types of uses that are generally envisaged and permissible in E zones (general and light industry, office uses, enterprise units, appropriate warehousing, petrol filling stations (as deemed appropriate), public transport depots, open space, including sports grounds, community facilities including community and sports centres, utility installation) are 'less vulnerable' uses in accordance with Table 3.1 of *'The Planning System and Flood Risk Management – Guidelines for Planning Authorities'* (2009), and a 'Justification Test' is only required where such uses are proposed within Flood Zone A.

LAND USE ZONING: Community & Education (CE)

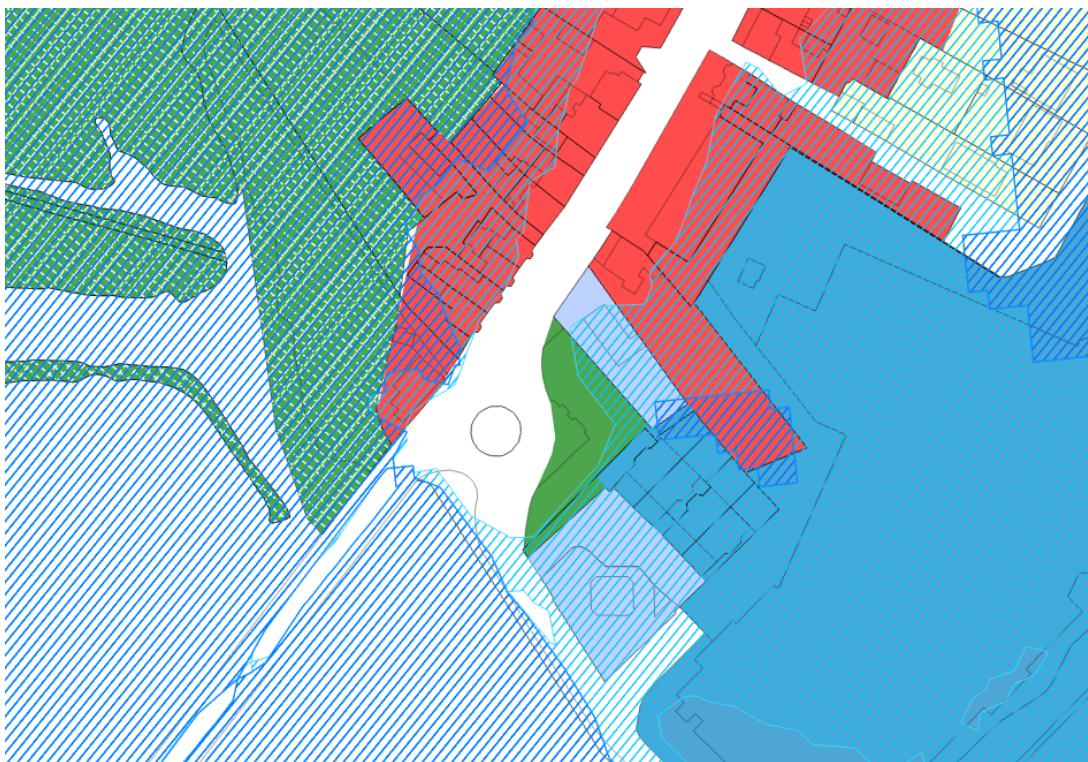
It has been determined that there are 2 no. locations within the LPF area proposed to be zoned 'CE – Community & Education' which are located within Flood Zones A and B.

(i) Dublin Rd/Brigg's Ln

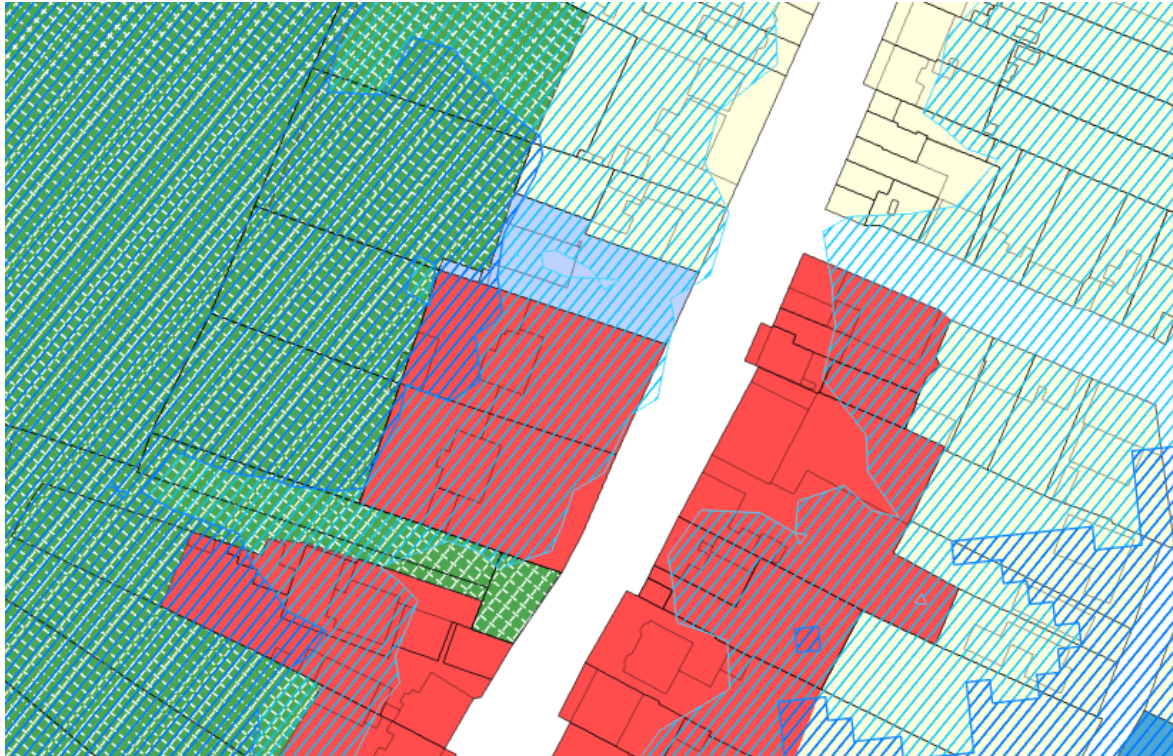


Land Use Zoning	CE
Flood Zone	B
Vulnerability of Land Use vs. Flood zone	Land use zoning appropriate
Requirement for Justification Test	No

(ii) Ferrybank/North Quay



(iii) Ferrybank



Land Use Zoning	CE
Flood Zone	(i),(iii) A&B, (i) B
Vulnerability of Land Use vs. Flood zone	(i),(iii)Land use zoning not appropriate, (ii)Land use zoning appropriate
Requirement for Justification Test	(i),(iii)Yes, (ii)No

Plan-Making Justification Test

1	The urban settlement is targeted for growth under the National Spatial Strategy, regional planning guidelines, statutory plans as defined above or under the Planning Guidelines or Planning Directives provisions of the Planning and Development Act, 2000, as amended.	The Settlement Strategy of the Wicklow County Development Plan 2022-2028 designates Arklow as a 'Level 3 Self-Sustaining Growth Town' and identifies this settlement typology as being identified for a growth rate of c. 25-30%. The Core Strategy of the Wicklow County Development Plan 2022-2028 sets out a population target of 15,419 by Q2 2028, from a 2016 population of 13,226 persons. The Core Strategy further indicates a total housing growth target of 1,221 units from 2016 to 2031.
2	The zoning or designation of the lands for the particular use or development type is required to achieve the proper planning and sustainable development of the urban settlement and, in particular:	
	(i) Is essential to facilitate regeneration and/or expansion of the centre of the urban settlement;	No
	(ii) Comprises significant previously developed and/or under-utilised lands;	Yes
	(iii) Is within or adjoining the core of an established or designated urban settlement;	Yes
	(iv) Will be essential in achieving compact and sustainable urban growth; and	Yes
	(v) There are no suitable alternative lands for the particular use or development type, in areas at lower risk of flooding within or adjoining the core of the urban settlement.	N/A – these lands are developed
3	A flood risk assessment to an appropriate level of detail has been carried out as part of the Strategic Environmental Assessment as part of the development plan preparation process, which demonstrates that flood risk to the development can be adequately managed and the use or development of the lands will not cause unacceptable adverse impacts elsewhere.	Assessment of flood risk has been incorporated into the LPF SEA Process

Conclusion

Justification Test failed

Recommendation

- (a) These lands are currently developed as a permitted education centre and petrol station. These uses are classed as 'less vulnerable' development and as they are within Flood Zone B, are not required to meet the justification test. As such, it is considered appropriate to retain the CE zoning objective.
- (b) Site (ii) is a Methodist Church, which serves as a pre-school Montessori. Both Flood Zone A and highly vulnerable developments require a justification test to be carried out. However, these lands are currently developed for permitted CE use. As such, it is considered appropriate to retain the CE zoning objective.

Applications for new, infill type or minor development will be evaluated in accordance with Chapter 5 of 'Planning System and Flood Risk Management Guidelines for Planning Authorities' (DoEHLG/OPW 2009) and the flood risk management objectives of the Wicklow County Development Plan and the Arklow LPF.

Should expansion of existing uses be proposed, flood mitigation measures are required (see Section 5 Mitigation Objectives).

LAND USE ZONING: Active Open Space (AOS)

As uses permitted under an Active Open Space 'AOS' land use zoning are generally water compatible, all such areas located within flood zones A or B are zoned appropriately.

Land Use Zoning	AOS
Flood Zone	A, B & C
Vulnerability of Land Use vs. Flood zone	Land use zoning is appropriate
Requirement for Justification Test	No

While the types of uses that are generally envisaged and permissible in AOS zones (sport and active recreational uses) are 'water compatible' in accordance with Table 3.1 of *'The Planning System and Flood Risk Management – Guidelines for Planning Authorities'* (2009), this Local Planning Framework makes provision for the potential for AOS lands to be developed for education use (a highly vulnerable use) in accordance with Objective ARK43:

Having regard to the potential longer term education needs in the Arklow area which have not been determined at this time but may arise; the physical and environmental constraints present in the area; and the space required particularly for new secondary schools, the development of new schools shall be permissible in principle in all land use zones in this LPF, other than OS1 and OS2, subject to the following criteria (in addition to all normal planning considerations) being fulfilled:

- *In order to ensure an appropriate spatial distribution of schools throughout the LPF area and to ensure maximum accessibility of all residential areas to schools, no new primary school shall be located within a 10-minute walking time of any existing primary schools or no new secondary school shall be located within a 20-minute walking time of any existing secondary schools;*
- *The site has excellent public transport and active travel infrastructure in situ, or planned and committed to coincide with a new school opening at the site;*
- *No such development will be considered on lands in existing community use where the loss in the use / facility is not being made up for elsewhere within the settlement.*

Some AOS lands in the draft LPF are identified as at risk of flooding. The objective ARK43 does not proscribe exactly where in the AOS zones education development might be considered and the AOS zones are sufficiently numerous and large to provide for the possible development education uses while avoiding development in any area at risk of flooding. Any proposals for new education development will be required to be accompanied by an appropriately detailed FRA, undertaken in accordance with *'The Planning System and Flood Risk Management – Guidelines for Planning Authorities'* (2009), as well as the relevant policies and objectives in the County Development Plan and Arklow LPF. In particular, the sequential approach shall be applied in the site planning, to ensure no encroachment onto, or loss of the flood plain, or that only water compatible development such as Open Space will be permitted for the lands which are identified as being at risk of flooding within the AOS zone.

LAND USE ZONING: Open Space (OS1)

As uses permitted under an Open Space 'OS1' land use zoning are water compatible, all such areas located within flood zones A or B are zoned appropriately.

Land Use Zoning	Open Space (OS1)
Flood Zone	A, B & C
Vulnerability of Land Use vs. Flood zone	Land use zoning is appropriate
Requirement for Justification Test	No

LAND USE ZONING: Natural Areas (OS2)

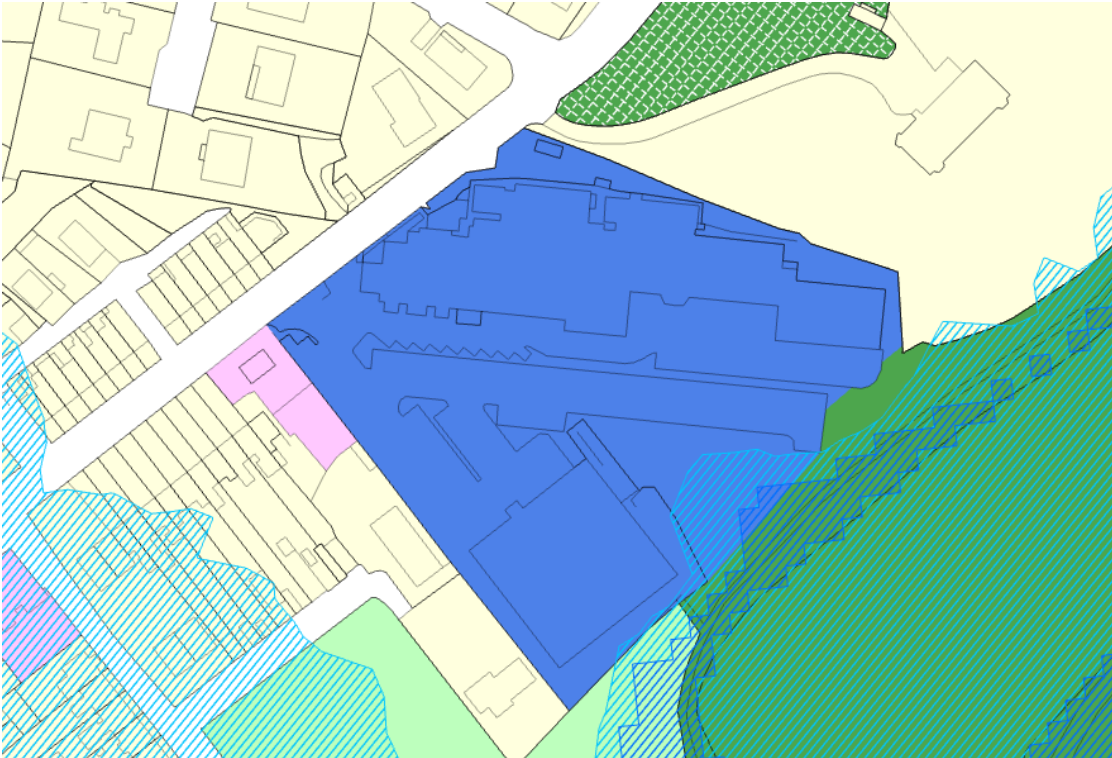
As uses permitted under Natural Areas 'OS2' land use zoning are water compatible, all such areas located within flood zones A or B are zoned appropriately.

Land Use Zoning	Natural Areas (OS2)
Flood Zone	A, B & C
Vulnerability of Land Use vs. Flood zone	Land use zoning is appropriate
Requirement for Justification Test	No

LAND USE ZONING: Tourism (T)

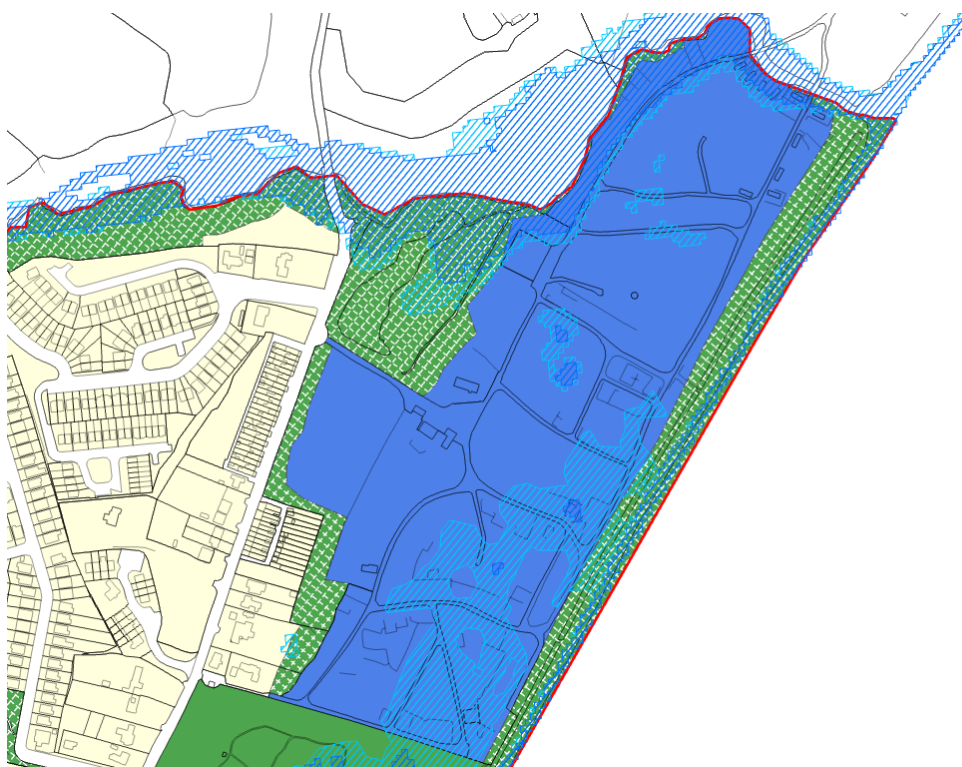
It has been determined that there are 2 No. locations within the LPF area that is proposed to be zoned 'T-Tourism' which is located within Flood Zones A or B.

(i) Sea Rd



Land Use Zoning	Tourism (T)
Flood Zone	A & B
Vulnerability of Land Use vs. Flood zone	Land use zoning not appropriate
Requirement for Justification Test	Yes

(ii) Arklow Holidays Caravan Park



Land Use Zoning	Tourism (T)
Flood Zone	A & B
Vulnerability of Land Use vs. Flood zone	Land use zoning not appropriate
Requirement for Justification Test	Yes

Plan-Making Justification Test

1	The urban settlement is targeted for growth under the National Spatial Strategy, regional planning guidelines, statutory plans as defined above or under the Planning Guidelines or Planning Directives provisions of the Planning and Development Act, 2000, as amended.	The Settlement Strategy of the Wicklow County Development Plan 2022-2028 designates Arklow as a 'Level 3 Self-Sustaining Growth Town' and identifies this settlement typology as being identified for a growth rate of c. 25-30%. The Core Strategy of the Wicklow County Development Plan 2022-2028 sets out a population target of 15,419 by Q2 2028, from a 2016 population of 13,226 persons. The Core Strategy further indicates a total housing growth target of 1,221 units from 2016 to 2031.
2	The zoning or designation of the lands for the particular use or development type is required to achieve the proper planning and sustainable development of the urban settlement and, in particular:	
	(i) Is essential to facilitate regeneration and/or expansion of the centre of the urban settlement;	No
	(ii) Comprises significant previously developed and/or under-utilised lands;	Yes
	(iii) Is within or adjoining the core of an established or designated urban settlement;	(i) Yes, (ii) No
	(iv) Will be essential in achieving compact and sustainable urban growth; and	No
	(v) There are no suitable alternative lands for the particular use or development type, in areas at lower risk of flooding within or adjoining the core of the urban settlement.	N/A – these lands are developed
3	A flood risk assessment to an appropriate level of detail has been carried out as part	Assessment of flood risk has been incorporated into the LPF SEA Process

of the Strategic Environmental Assessment as part of the development plan preparation process, which demonstrates that flood risk to the development can be adequately managed and the use or development of the lands will not cause unacceptable adverse impacts elsewhere.

Conclusion

Justification Test failed.

Recommendation

These lands are currently developed for a permitted Tourism use (Arklow Bay Hotel & Leisure Club and Arklow Holidays Caravan Park). As such, it is considered appropriate to retain the T zoning objective.

Applications for further development will be evaluated in accordance with Chapter 5 of '*Planning System and Flood Risk Management Guidelines for Planning Authorities*' (DoEHLG/OPW 2009) and the flood risk management objectives of the Wicklow County Development Plan and the Arklow LPF.

Should expansion of existing uses be proposed, flood mitigation measures are required (see Section 5 Mitigation Objectives).

LAND USE ZONING: Public Utility (PU)

There are no areas zoned 'PU – Public Utilities' that are located within Flood Zones A or B.

Land Use Zoning	PU
Flood Zone	C
Vulnerability of Land Use vs. Flood zone	Land use zoning is appropriate
Requirement for Justification Test	No

LAND USE ZONING: Mixed Use (MU)

There are no areas zoned Mixed Use (MU) that are located within Flood Zones A or B.

Land Use Zoning	MU
Flood Zone	All sites: C
Vulnerability of Land Use vs. Flood zone	Land use zoning is appropriate
Requirement for Justification Test	No

LAND USE ZONING: Agriculture (AG)

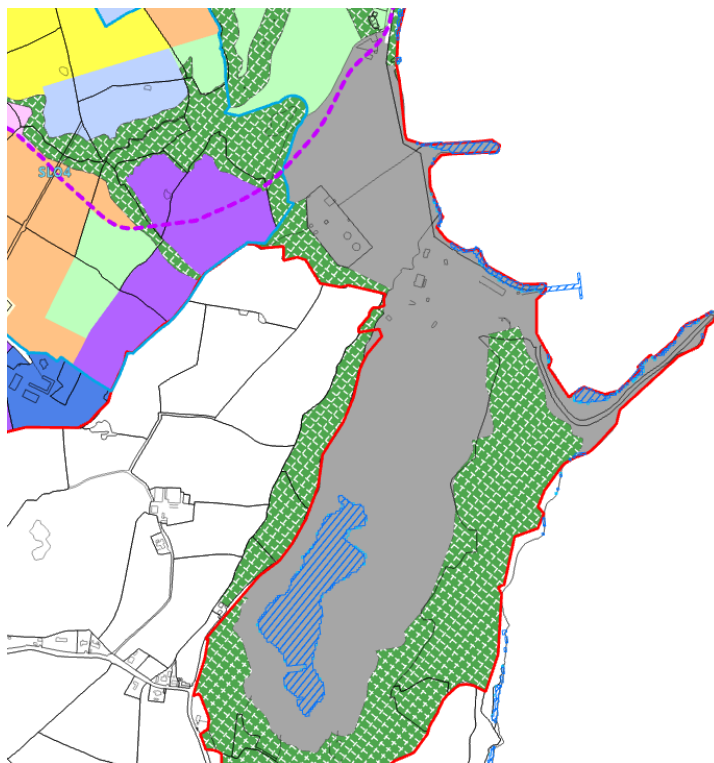
As uses permitted under Agriculture (AG) land use zoning are water compatible, all such areas located within flood zones A or B are zoned appropriately.

Land Use Zoning	AG
Flood Zone	All sites: C
Vulnerability of Land Use vs. Flood zone	Land use zoning is appropriate
Requirement for Justification Test	No

LAND USE ZONING: Extractive Industry (EX)

There is 1 no. area zoned Extractive Industry (EX) that is located within Flood Zones A or B.

(i) Roadstone Quarry



Land Use Zoning	EX
Flood Zone	A & B
Vulnerability of Land Use vs. Flood zone	Land use zoning not appropriate
Requirement for Justification Test	No

Plan-Making Justification Test

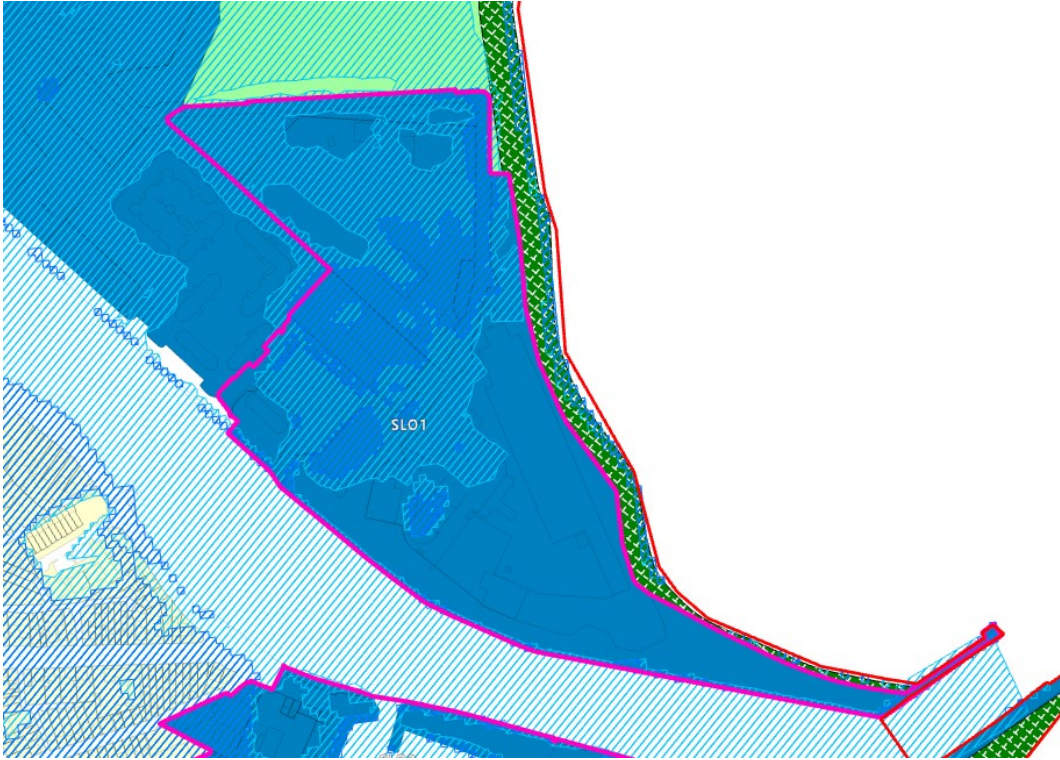
1	The urban settlement is targeted for growth under the National Spatial Strategy, regional planning guidelines, statutory plans as defined above or under the Planning Guidelines or Planning Directives provisions of the Planning and Development Act, 2000, as amended.	The Settlement Strategy of the Wicklow County Development Plan 2022-2028 designates Arklow as a 'Level 3 Self-Sustaining Growth Town' and identifies this settlement typology as being identified for a growth rate of c. 25-30%. The Core Strategy of the Wicklow County Development Plan 2022-2028 sets out a population target of 15,419 by Q2 2028, from a 2016 population of 13,226 persons. The Core Strategy further indicates a total housing growth target of 1,221 units from 2016 to 2031.
2	The zoning or designation of the lands for the particular use or development type is required to achieve the proper planning and sustainable development of the urban settlement and, in particular:	
	(i) Is essential to facilitate regeneration and/or expansion of the centre of the urban settlement;	No
	(ii) Comprises significant previously developed and/or under-utilised lands;	Yes
	(iii) Is within or adjoining the core of an established or designated urban settlement;	No
	(iv) Will be essential in achieving compact and sustainable urban growth; and	No

	(v) There are no suitable alternative lands for the particular use or development type, in areas at lower risk of flooding within or adjoining the core of the urban settlement.	N/A – these lands are developed
3	A flood risk assessment to an appropriate level of detail has been carried out as part of the Strategic Environmental Assessment as part of the development plan preparation process, which demonstrates that flood risk to the development can be adequately managed and the use or development of the lands will not cause unacceptable adverse impacts elsewhere.	Assessment of flood risk has been incorporated into the LPF SEA Process
Conclusion		
Justification Test failed.		
Recommendation		
These lands are currently developed for a permitted quarry. As such, it is considered appropriate to retain the EX zoning objective. Applications for further development will be evaluated in accordance with Chapter 5 of <i>'Planning System and Flood Risk Management Guidelines for Planning Authorities'</i> (DoEHLG/OPW 2009) and the flood risk management objectives of the Wicklow County Development Plan and the Arklow LPF. Should expansion of existing uses be proposed, flood mitigation measures are required (See Section 5 – Mitigation Objectives).		

LAND USE OBJECTIVE: Specific Local Objectives (SLO)

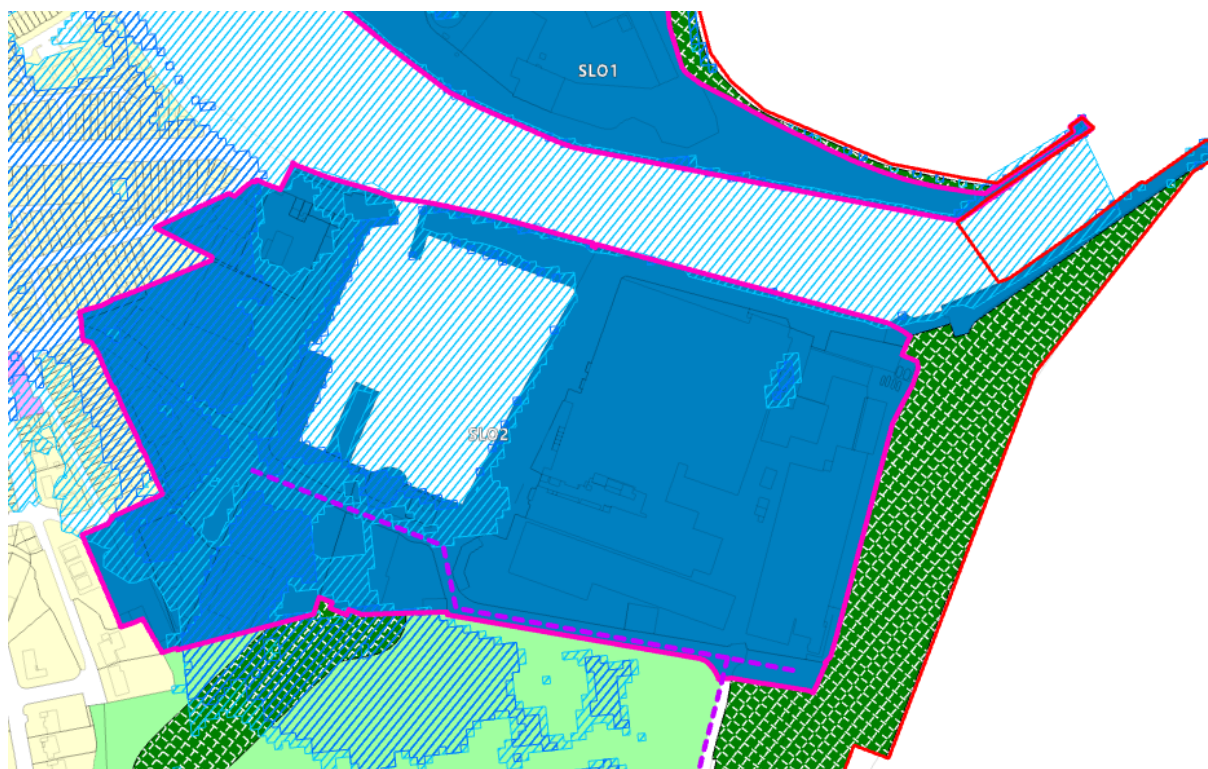
It has been determined that there are 3 No. locations within the LPF area that are proposed to be 'Specific Local Objectives' which are located within Flood Zones A or B. The requirements of the relevant SLO that would be delivered within a flood zone are highlighted in bold.

(i) Northern Waterfront – SLO1



Land Use Objective	SLO1 – zoned WZ
Flood Zone	A, B & C
Vulnerability of Land Use vs. Flood zone	Land use objective is not appropriate
Requirement for Justification Test	Yes

(ii) Southern Waterfront – SLO2



Land Use Objective	SLO2 – zoned WZ
Flood Zone	A, B & C
Vulnerability of Land Use vs. Flood zone	Land use objective is not appropriate
Requirement for Justification Test	Yes

Plan-Making Justification Test

1	The urban settlement is targeted for growth under the National Spatial Strategy, regional planning guidelines, statutory plans as defined above or under the Planning Guidelines or Planning Directives provisions of the Planning and Development Act, 2000, as amended.	The Settlement Strategy of the Wicklow County Development Plan 2022-2028 designates Arklow as a 'Level 3 Self-Sustaining Growth Town' and identifies this settlement typology as being identified for a growth rate of c. 25-30%. The Core Strategy of the Wicklow County Development Plan 2022-2028 sets out a population target of 15,419 by Q2 2028, from a 2016 population of 13,226 persons. The Core Strategy further indicates a total housing growth target of 1,221 units from 2016 to 2031.
2	The zoning or designation of the lands for the particular use or development type is required to achieve the proper planning and sustainable development of the urban settlement and, in particular:	
	(i) Is essential to facilitate regeneration and/or expansion of the centre of the urban settlement;	Yes
	(ii) Comprises significant previously developed and/or under-utilised lands;	Yes
	(iii) Is within or adjoining the core of an established or designated urban settlement;	Yes
	(iv) Will be essential in achieving compact and sustainable urban growth; and	Yes
	(v) There are no suitable alternative lands for the particular use or development type, in areas at lower risk of flooding within or adjoining the core of the urban settlement.	N/A – these lands are developed
3	A flood risk assessment to an appropriate level of detail has been carried out as part	Assessment of flood risk has been incorporated into the LPF SEA Process

of the Strategic Environmental Assessment as part of the development plan preparation process, which demonstrates that flood risk to the development can be adequately managed and the use or development of the lands will not cause unacceptable adverse impacts elsewhere.

Conclusion

Justification Test passed

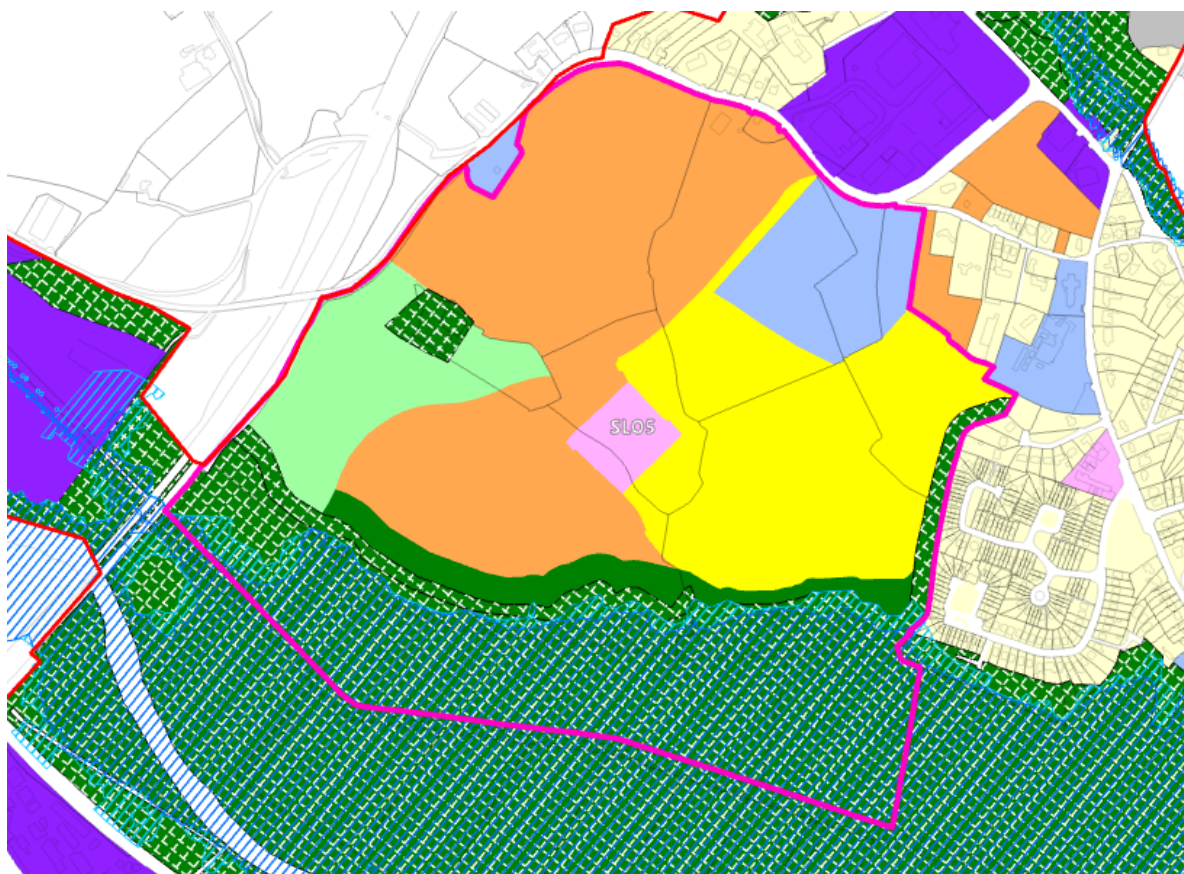
Recommendation

SLO2 is located along the waterfront on a former industrial site, previously home to Arklow Pottery. The site is zoned WZ which permits a range of uses including residential, community, amenity, leisure and tourism. The strategy objectives for this area support high density development up to 5 storeys in height along water frontages.

Future scenario flood mapping undertaken under the CFRAM programme indicates minimal areas of potential flood risk in this area. The zoning objective does not proscribe exactly where in the zone development should occur and the zone is sufficiently large to provide for the development of desired uses while avoiding development in the at risk areas.

Any proposals for new development should be accompanied by an appropriately detailed FRA, 42 undertaken in accordance with Chapter 5 of 'Planning System and Flood Risk Management Guidelines for Planning Authorities' (DoEHLG/OPW 2009) and the relevant policies and objectives in the County Development Plan and in particular, the sequential approach shall be applied in the site planning, to ensure no encroachment onto, or loss of the flood plain, or that only water compatible development will be permitted for the lands which are identified as being at risk of flooding within that site. It is therefore considered appropriate to retain the WZ zoning objective.

(iii) Kilbride – SLO5



Land Use Objective	SLO5 – zoned RN2, CE, LSS, AOS, OS2
Flood Zone	A, B & C
Vulnerability of Land Use vs. Flood zone	Only OS2 lands in Flood Zones A & B. Land use objective appropriate
Requirement for Justification Test	No

5.0 MITIGATION OBJECTIVES

All development proposals within the Draft Arklow Local Planning Framework area will be subject to the full range of objectives of the Wicklow County Development Plan 2022-2028 (or any update thereof). The following mitigation objectives are included in Chapter 14 'Flood Risk Management' of the Wicklow County Development Plan 2022-2028:

- CPO 14.01** To support the implementation of recommendations in the OPW Flood Risk Management Plans (FRMPs), including planned investment measures for managing and reducing flood risk.
- CPO14.02** To support and facilitate flood management activities, projects or programmes as may arise, including but not limited to those relating to the management of upstream catchments and the use of 'natural water retention' measures², **and** ensure each flood risk management activity is examined to determine actions required to embed and provide for effective climate change adaptation as set out in the Climate Change Sectoral Adaptation Plan for Flood Risk Management applicable at the time.
- CPO14.03** To recognise the concept of coastal evolution and fluvial flooding as part of our dynamic physical environment, and adopt an adaptive approach to working with these natural processes. The focus of a flood management strategy should not solely be driven by conservation of existing lands; it should recognise that marshes, mud flats and other associated eco-systems evolve and degenerate, and appropriate consideration should be given to the realignment of defences and use of managed retreat and sacrificial flood protection lands to maintain such habitats as part of an overall strategy.
- CPO 14.04** To ensure the County's natural coastal defences (beaches, sand dunes, salt marshes and estuary lands) are protected and to ensure that their flood defence/management function is not put at risk by inappropriate works or development.
- CPO14.05** To continue to work with the OPW and other agencies to deliver Flood Defence Schemes in the County as identified in current and future FRMPs, and in particular:
- Avoca River (Arklow) Flood Defence Scheme;
 - Avoca River (Avoca) Flood Defence Scheme;
 - Low cost works in accordance with the OPW's Minor Works Scheme;
 - Coastal Protection Projects, where funding allows;
- and ensure that development proposals support, and do not impede or prevent, progression of such schemes.
- CPO 14.06** To implement the 'Guidelines on the Planning System and Flood Risk Management' (DoEHLG/OPW, 2009).
- CPO 14.07** To prepare new or update existing flood risk assessments and flood zone maps for all zoned lands within the County as part of the review process for Local Area Plans, zoning variations and Small Town Plans, where considered necessary.
- CPO 14.08** The zoning of land that has been identified as being at a high or moderate probability of flooding (flood zones A or B) shall be in accordance with the requirements of the Flood Risk Management Guidelines and in particular the 'Justification Test for Development Plans' (as set out in Section 4.23 and Box 4.1 of the Guidelines).
- CPO 14.09** Applications for new developments or significant alterations/extension to existing developments **in an area at risk of flooding** shall comply with the following:
- Follow the 'sequential approach' as set out in the Flood Risk Management Guidelines;
 - An appropriately detailed flood risk / drainage impact assessment will be required with all planning applications, to ensure that the development itself is not at risk of flooding and the

² Natural Water Retention Measures (NWRM) are multi-functional measures that aim to protect water resources and address water-related challenges by restoring or maintaining ecosystems as well as natural features and characteristics of water bodies using natural means and processes

development does not increase the flood risk in the relevant catchment (both up and down stream of the application site), taking into account all sources of flooding;

- Restrict the types of development permitted in Flood Zone A and Flood Zone B to that which are 'appropriate' to each flood zone, as set out in Tables 3.1 and 3.2 of the Flood Risk Management Guidelines unless the 'plan making justification test' has been applied and passed;
- Where a site has been subject to and satisfied the 'Plan Making Justification Test' development will only be permitted where a proposal complies with the 'Justification Test for Development Management', as set out in Box 5.1 of the Guidelines.
- Flood Risk Assessments shall be in accordance with the requirements set out in the Guidelines and the SFRA.

Where flood zone mapping **does not indicate a risk of flooding** but the Planning Authority is of the opinion that flood risk may arise or new information has come to light that may alter the flood designation of the land, an appropriate flood risk assessment will be required to be submitted by an applicant for planning permission and the sequential approach shall be applied as the 'Plan Making Justification Test' will not be satisfied.

- CPO 14.10** To prohibit development in river flood plains or other areas known to provide natural attenuation for floodwaters except where the development can clearly be justified with the Flood Risk Management Guidelines 'Justification Test'.
- CPO 14.11** To limit or break up large areas of hard surfacing in new developments and to require all surface car parks to integrate permeability measures such as permeable paving.
- CPO 14.12** Excessive hard surfacing shall not be permitted for new, or extensions to, residential or commercial developments and all applications will be required to show that sustainable drainage techniques have been employed in the design of the development.
- CPO 14.13** Ensure the implementation of Sustainable Urban Drainage Systems (SUDS) in accordance with the Wicklow County Council SUDS Policy to ensure surface water runoff is managed for maximum benefit. In particular to require proposed developments to meet the design criteria of each of the four pillars of SUDS design; Water Quality, Water Quantity, Amenity and Biodiversity.
- CPO 14.14** Underground tanks and storage systems shall be permitted as a last resort only where it can be demonstrated the other more sustainable SUDS infrastructure measures are not feasible. In any case underground tanks and storage systems shall not be permitted under public open space, unless there is no other feasible alternative.
- CPO 14.15** To promote the use of green infrastructure, such as swales and wetlands, where feasible as landscape features in new development to provide storm / surface runoff storage and reduce pollutants, as well as habitat, recreation and aesthetic functions.
- CPO 14.16** For developments adjacent to all watercourses or where it is necessary to maintain the ecological or environmental quality of the watercourse, any structures (including hard landscaping) must be set back from the edge of the watercourse in accordance with the guidelines in 'Planning for Watercourses in the Urban Environment' by Inland Fisheries Ireland.

6.0 FLOOD RISK & CLIMATE CHANGE

'The Planning System and Flood Risk Management – Guidelines for Planning Authorities' (2009) make reference to the potential effects of climate change on flood risk and flood risk management.

In consultation with the Office of Public Works, future scenario flood mapping has been reviewed in relation to the area of the Arklow LPF. A precautionary approach to future estimates has been taken, in that where multiple future scenarios are available (e.g. mid-range, high-end etc.), the highest-end/worst case scenarios have been reviewed.

The following flood mapping has been reviewed:

CFRAM River Flood Extents High-End Future Scenario:

The High-End Future Scenario extents were generated taking in the potential effects of climate change using an increase in rainfall of 30% and sea level rise of 1,000 mm (40 inches).

CFRAM Coastal Flood Extents High-End Future Scenario:

The High-End Future Scenario extents were generated taking in the potential effects of climate change using an increase in rainfall of 30% and sea level rise of 1,000 mm (40 inches).

National Coastal Flood Hazard Mapping 'High++' End Future Scenario:

The High++ End Future Scenario (H++EFS) maps represent a projected future scenario for the end of century (circa 2100) and include allowances for projected future changes in sea levels and glacial isostatic adjustment (GIA). The maps include an increase of 2000mm in sea levels above the current scenario estimations. An allowance of - 0.5mm/year for GIA was included for the southern part of the national coastline only (Dublin to Galway and south of this).

Having reviewed the above future scenario flood mapping, the following can be stated:

- The increase in fluvial and coastal flood extent generally affects the already developed areas within the Arklow LPF area. As such, it is not appropriate or necessary to change the zoning of these lands from their existing permitted uses.
- Where green field land is affected by future scenario flood mapping, the sites are generally large enough such that the development of desired uses may avoid development in the at risk area utilising the sequential approach in site planning. In some cases, zonings have been changed to more appropriate uses.

On this basis, the written statement of the Draft Arklow Local Planning Framework 2025-2031 should include the following objective:

*Applications for new developments or significant alterations/extension to existing developments in an area identified as at risk of flooding (Flood Zones A and B) as set out in the SFRA and flood maps appended to this LPF **OR** in Flood Zone C but within an area*

- *that is deemed by the Local Authority at any time to be at possible risk of flooding having regard to new information with respect to flood risk in the area that has come to light; or*
- *that is identified as at possible future risk of flooding having regard to climate change scenarios either on Map X attached to this LPF or on any future maps prepared by the OPW during the lifetime of the LPF;*

shall comply with the 'Justification Test for Development Management', as set out in Box 5.1 of 'the Planning System and Flood Risk Management' Guidelines 2009 (as may be amended, supplemented or replaced during the lifetime of this LPF) and shall be accompanied by a site specific Flood Risk Assessment. Site Specific Flood Risk Assessments shall be in accordance with the requirements set out in the Flood Risk Management Guidelines and the LPF SFRA.

7.0 FLOOD MAPPING

See attached maps indicating Flood Zones A and B as relevant to the Draft Arklow Local Planning Framework 2025 - 2031.

Further maps have been included that also indicate the area in which there may be a risk of flooding in the future when accounting for the effects of climate change.

The following maps are attached:

Map 4A: Flood Risk – Present Day

Map 4B: Flood Risk – Present Day & Land Use Zoning Objectives

Map 4C: Flood Risk – Potential Future Scenario

Map 4D: Potential Future Scenario & Land Use Zoning Objectives

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Arklow
Local Planning Framework
2025 -2031

Map No. 4A
Flood Risk - Present Day



Arklow LPF Boundary

Watercourses

Flood Zone A: High
Probability of Flooding

Where the probability of flooding from rivers and the sea is highest (greater than 1% or 1 in 100 for river flooding or 0.5% or 1 in 200 for coastal flooding)

Flood Zone B: Moderate
Probability of Flooding

Where the probability of flooding from rivers and the sea is moderate (between 0.1% or 1 in 1000 and 1% or 1 in 100 for river flooding and between 0.1% or 1 in 1000 and 0.5% or 1 in 200 for coastal flooding)

Disclaimer

These indicative flood zones were based on information available at the time of drafting this plan. Any new data and analysis carried out after this date has not been integrated into this map but should be used in conjunction with this map for development proposals. All information may be substantially altered in light of future data and analysis.

Full Disclaimer is included in SFRA.

WICKLOW COUNTY
DEVELOPMENT PLAN
2022-2028



Wicklow County Council
Planning Department

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Scale NTS

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**Arklow
Local Planning Framework
2025 -2031**

**Map No. 4B
Flood Risk - Present Day &
Land Use Zoning**



LEGEND

- Arklow LPF Boundary
- Flood Zone A: High Probability of Flooding
- Flood Zone B: Moderate Probability of Flooding
- Watercourses
- RN(1)
- RN(2)
- RE
- TC
- LSS
- PU
- CE
- T
- WZ
- AOS
- OS1
- OS2
- E1
- EX

Disclaimer

These indicative flood zones were based on information available at the time of drafting this plan. Any new data and analysis carried out after this date has not been integrated into this map but should be used in conjunction with this map for development proposals. All information may be substantially altered in light of future data and analysis.

Full Disclaimer is included in SFRA.

**WICKLOW COUNTY
DEVELOPMENT PLAN
2022-2028**



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**Arklow
Local Planning Framework
2025 -2031**

**Map No. 4C
Flood Risk - Potential Future
Scenario**



LEGEND

- Arklow LPF Boundary**
- Watercourses**
- Area of Potential Future Flood Risk**

Area corresponding to a moderate risk of flooding (flood zone B) or greater under the CFRAM 'High End' Future Scenario and NCFHM 'High ++' future scenario. For more information, refer to the Arklow Strategic Flood Risk Assessment and any accompanying addenda

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Arklow
Local Planning Framework
2025 -2031

Map No. 4D
Flood Risk - Potential Future
Scenario & Land Use Zoning



LEGEND

- Area of Potential Future Flood Risk
- Arklow LPF Boundary
- Watercourses
- RN(1)
- RN(2)
- RE
- TC
- LSS
- PU
- CE
- T
- WZ
- AOS
- OS1
- OS2
- E1
- EX

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