

ADDENDUM I TO THE FLOOD RISK ASSESSMENT OF THE DRAFT ARKLOW AND ENVIRONS LOCAL AREA PLAN 2018 – 2024

FLOOD RISK ASSESSMENT OF THE PROPOSED ALTERATIONS,
AS PROPOSED BY THE MEMBERS OF WICKLOW COUNTY COUNCIL ON 6th NOVEMBER 2017

THIS REPORT IS ADDENDUM I
TO THE 'FLOOD RISK ASSESSMENT OF THE
DRAFT ARKLOW AND ENVIRONS LOCAL AREA PLAN 2018 – 2024'

1.0 INTRODUCTION

This addendum I to the Flood Risk Assessment Report of the Draft Arklow and Environs Local Area Plan 2018 - 2024 outlines the Flood Risk Assessment of the proposed zoning alterations to the Draft Plan as proposed by the Elected Members.

It should be noted that changes are not made to the original Flood Risk Assessment Report at this stage; this addendum forms part of the documentation of the ongoing FRA/Plan-making process. It supplements and should be read in conjunction with the Flood Risk Assessment Report issued in July 2017.

1.1 PROCESS FOR MAKING PLAN

The Proposed Alterations to the Draft Plan constitute a further stage in the process of making a new Local Area Plan for the settlement of Arklow and Environs.

The Draft Plan and accompanying Flood Risk Assessment, Appropriate Assessment Screening and Environmental Report were placed on public display from 05.07.17 to 15.08.17. The Chief Executive prepared a report on the submissions/observations received during the display period and submitted it to the Elected Members for their consideration.

Having considered the Draft Plan, associated documents and the Chief Executive's Report, the Members of Wicklow County Council, resolved to amend the Draft Development Plan in accordance with the provisions set out in Section 20 of the Planning and Development Act 2000, as amended.

The Proposed Alterations are required to be placed on public display for a period of not less than four weeks. Written submissions or observations with respect to the Proposed Alterations are taken into consideration by the Members before the making of the actual Local Area Plan.

1.2 PURPOSE OF THIS REPORT

This is addendum I to the Flood Risk Assessment and the purpose of this report is to carry out a flood risk assessment on the proposed zoning alterations. A Stage 1 Flood Risk Identification Assessment will be carried out for each plot of land where it is proposed to amend the zoning, identifying where lands are within the flood zones A, B or C. Where the proposed zoning has lands within flood zone A and/or B, the justification test shall be applied.

In Section 2 of this addendum, the full list of the proposed zoning alterations are provided with the assessment following each amendment. The proposed zoning alterations are proposed material alteration No.s 2, 3, 4, 5, 6, 7, 11, 14, 15, and 16, as they are numbered in line with Part 2 of the Proposed Material Alterations document.

The text in ~~blue strikethrough~~ is the text as contained in the Draft Plan and is proposed to be deleted. The text in red is proposed as amending, new text to the Draft Plan. The SFRA of the Proposed Material Alterations is considered in green.

1.3 ASSESSMENT CONCLUSIONS

The proposed zoning alterations to the draft Local Area Plan have been assessed to identify what flood zone 'designation' applies to the lands. Where it is proposed to zone lands that are located in flood zones A and B, the 'plan-making justification test' has been applied.

Justification Test

The 'Plan-making Justification Test' has been designed to rigorously assess the appropriateness, or otherwise, of particular developments that, are being considered in areas of moderate or high flood risk (flood zones A and B). The processes is described in chapter 4 of the Flood Risk Guidelines and used at the plan preparation

and adoption stage where it is intended to zone or otherwise designate land which is at moderate or high risk of flooding.

Consequently at this stage of the plan making process, where the justification test fails and where development is proposed in flood zone A/B the following shall apply:

- comply with the objectives of the Wicklow County Development Plan 2016-2022/ Flood Objectives FL1 to FL9 / Arklow and Environs LAP,
- carry out the sequential approach in the Flood Risk Guidelines and Section 1 of the SFRA and the developer shall carry out the requirements of the sequential approach.

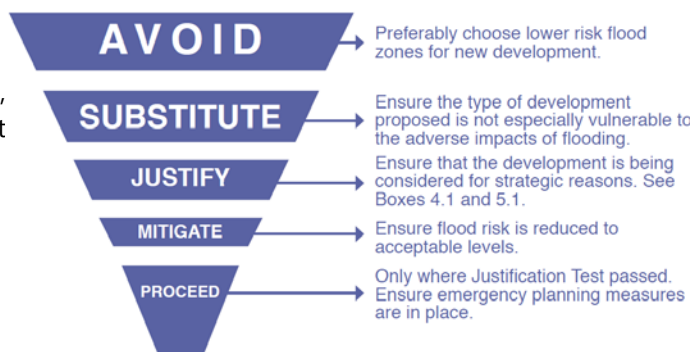


Figure 1.1 of the Flood Risk Guidelines – Sequential approach principles in flood risk management

Where the zoning has lands within flood zone C, localised flooding from sources other than rivers/ watercourses and the coast can still occur and may need to be taken into account at the planning application stage. Where development is proposed in flood zone C the developer shall carry out the sequential approach in the Flood Risk Guidelines and in Section 1 of this SFRA and the developer shall carry out the requirements of the sequential approach.

Sequential approach at the Development Management Stage

A sequential approach to planning is a key tool in ensuring that development, particularly new development, is first and foremost directed towards land that is at low risk of flooding. The sequential approach described in Fig. 1.1 of the Flood Risk Guidelines should be applied to all stages of the planning and development management process. It is of particular importance at the plan-making stage but is also applicable in the layout and design of development within a specific site at the development management stage. Fig. 3.1 of the Flood Risk Guidelines sets out the broad philosophy underpinning the sequential approach in flood risk management, while Fig. 1.2 of the Flood Risk Guidelines describes its mechanism for use in the planning process.

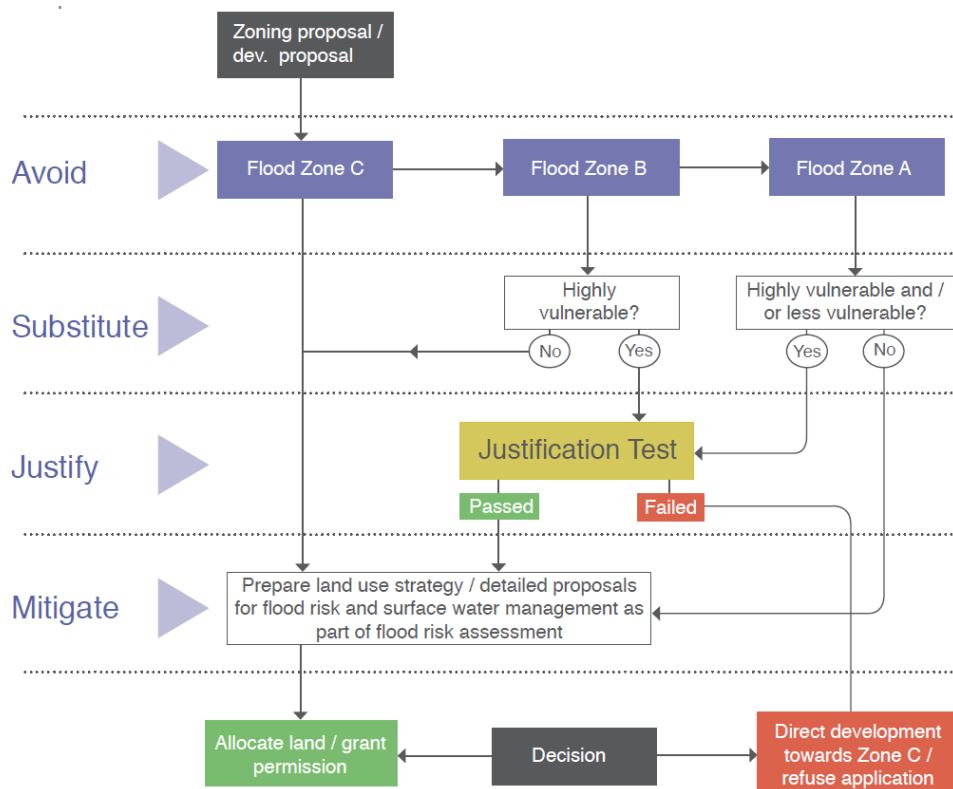


Figure 1.2 of the Flood Risk Guidelines - The Sequential Approach Mechanism for use in the planning process

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; and Essential ancillary sleeping or residential accommodation for staff required by uses in this category (subject to a specific warning and evacuation plan).

Source: DoEHLG The Planning System and Flood Risk Management Guidelines

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

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

Source: DoEHLG The Planning System and Flood Risk Management Guidelines

2.0 Strategic Flood Risk Identification Assessment

Definition of Flood Zones

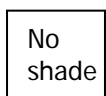
In the 'Planning System and Flood Risk Management: Guidelines for Planning Authorities', 'Flood Zones' are used to indicate the likelihood of a flood occurring. These zones indicate a high, moderate and low risk of flooding from fluvial or coastal sources and are defined as follows:



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 and 1% or 1 in 100 for river flooding and between 0.1% or 1 in 1000year and 0.5% or 1 in 200 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 100 for both river and coastal flooding). Flood Zone C covers all areas of the plan which are not in zones A and B, hence it is not highlighted on the FRA maps.



Proposed alteration site boundary

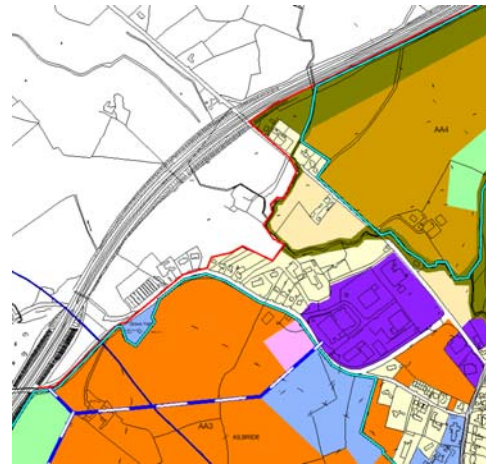
Land Use Map legend

	Settlement boundary		CE Community & Education		PU Public Utility
	RE Existing Residential		WZ Waterfront		EX Extractive Industry
	R28 New Residential		E1 Employment		Action Area boundary
	R20 New Residential		E Special Employment		Opportunity Site boundary
	R10 New Residential		OS1 Open Space		Indicative road route option
	R Special New Residential		OS2 Open Space		Arklow Town Marsh pNHA
	LSS Local Shops and Services		AOS Active Open Space		1,000m SEVESO buffer
	TC Town Centre		T Tourism		MU Mixed Use

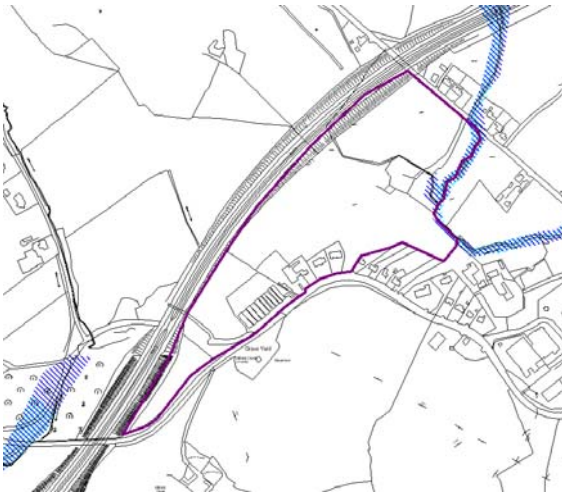
PROPOSED MATERIAL ALTERATION No. 2

From Open Space 2 & R10 New Residential

To Open Countryside



SFRA Assessment



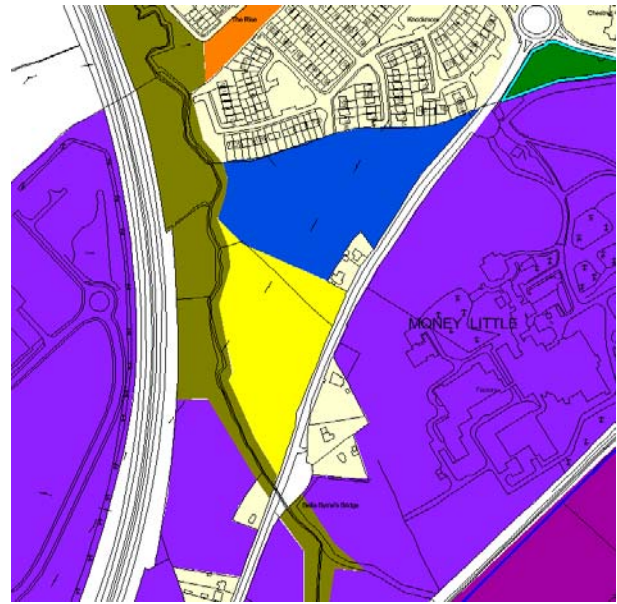
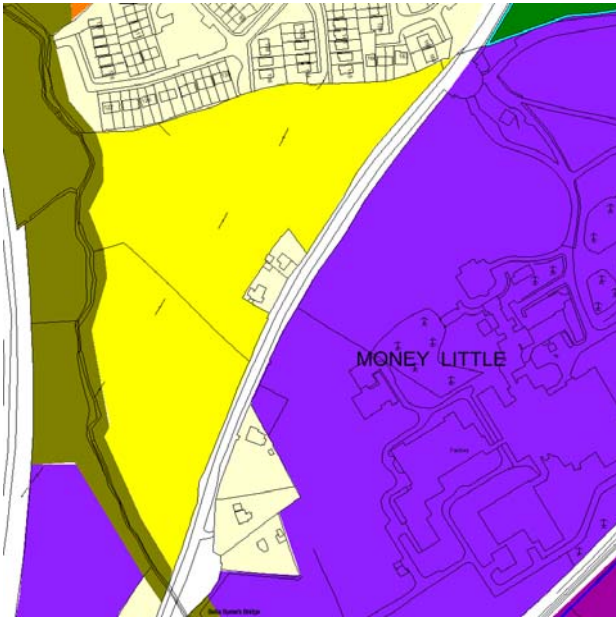
Stage 1 Strategic Flood Risk Identification Assessment

This proposed alteration has no zoning however as part of the stage 1 Strategic Flood Risk Identification assessment it is noted that the site has lands within flood zone A, B and C. Localised flooding from sources other than rivers/ watercourses and the coast can still occur and may need to be taken into account at the planning application stage.

PROPOSED MATERIAL ALTERATION No. 3

From R20 New Residential

To T Tourism



SFRA Assessment



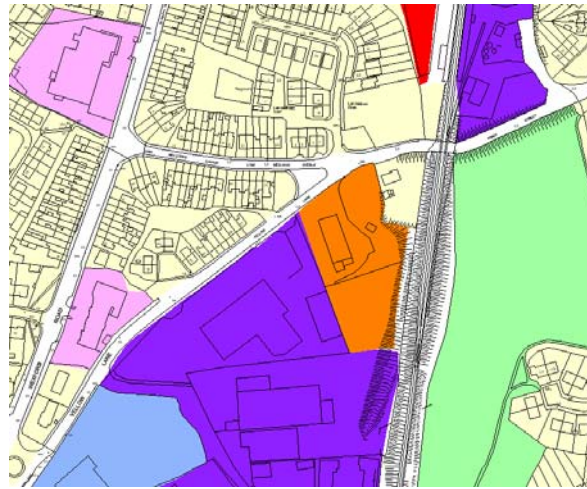
Stage 1 Strategic Flood Risk Identification Assessment

This zoning has lands within flood zone C. Localised flooding from sources other than rivers/ watercourses and the coast can still occur and may need to be taken into account at the planning application stage. Where development is proposed in flood zone C the developer shall carry out the sequential approach in the Flood Risk Guidelines and in Section 1 of this SFRA and the developer shall carry out the requirements of the sequential approach.

PROPOSED MATERIAL ALTERATION No. 4

From E1 Employment & LSS Local Shops and Services

To R28 New Residential



SFRA Assessment



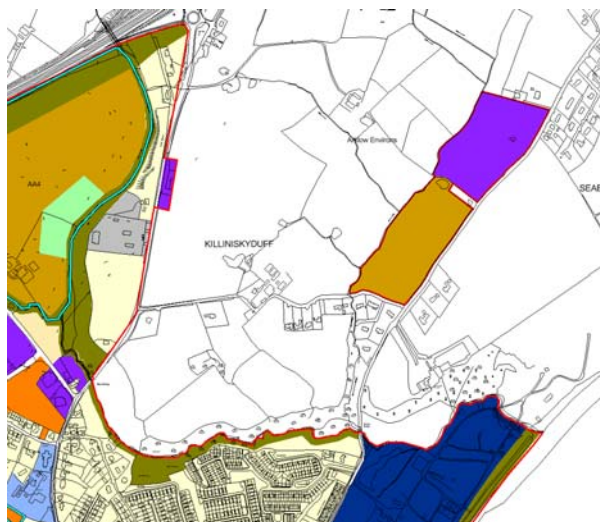
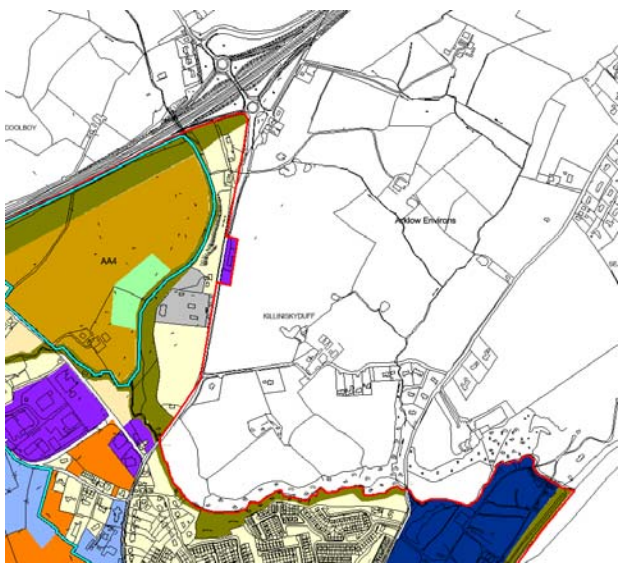
Stage 1 Strategic Flood Risk Identification Assessment

This zoning has lands within flood zone C. Localised flooding from sources other than rivers/ watercourses and the coast can still occur and may need to be taken into account at the planning application stage. Where development is proposed in flood zone C the developer shall carry out the sequential approach in the Flood Risk Guidelines and in Section 1 of this SFRA and the developer shall carry out the requirements of the sequential approach.

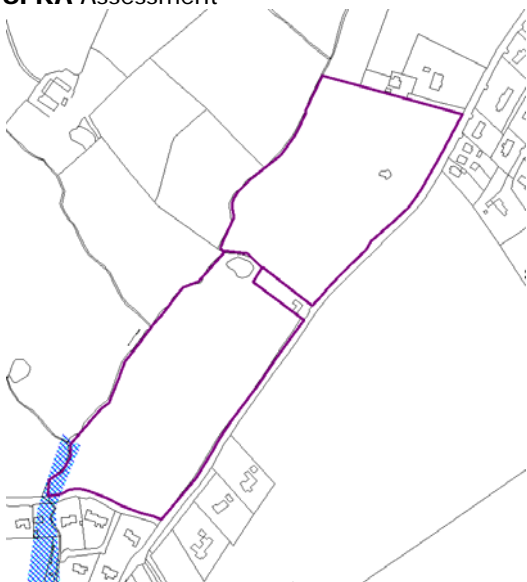
PROPOSED MATERIAL ALTERATION No. 5

From Open Countryside

To RSpecial New Residential & E1 Employment



SFRA Assessment



E1 Employment zoning - Stage 1 Strategic Flood Risk Identification Assessment

This zoning has lands within flood zone C. Localised flooding from sources other than rivers/ watercourses and the coast can still occur and may need to be taken into account at the planning application stage. Where development is proposed in flood zone C the developer shall carry out the sequential approach in the Flood Risk Guidelines and in Section 1 of this SFRA and the developer shall carry out the requirements of the sequential approach.

RSpecial New Residential zoning - Stage 1 Strategic Flood Risk Assessment

Land zoning	RSpecial To protect, provide and improve residential amenities in a format and a density specified in the plan. H9 To allow for the development of a maximum of 40 dwelling units on the lands zoned 'R Special' at Seabank (west of Sea Road).
Flood Zone	A and B
Vulnerability of land use vs. Flood Zone	Land use zoning not appropriate
Requirement for Justification Test	yes

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.	Under the Wicklow County Development Plan 2010-2016, Arklow is designated a 'Level 3 – Large Growth Town II' within the hinterland area of Dublin. Under the 'core strategy' of the CDP, the population of Arklow and Environs is targeted to grow to 23,000. It is prioritised to accommodate a large amount of population growth, to be a strong active town that is economically vibrant with high quality transport links to larger towns/cities.
2	The zoning or designation of the lands for the particular use or development type is required to achieve the proper and sustainable planning 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;	No
	(iii) Is within or adjoining the core of an established or designated urban settlement;	No
	(iv) Will be essential in achieving compact or sustainable urban growth;	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.	There are suitable alternative lands available for this use.
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 Plan SEA process.
	Refer to main SFRA document	
Conclusion		
Justification test FAILED.		
Comment		
<p>A portion of the lands in this zone have been identified as being located in Flood Zone A and B with a high and moderate probability of flooding from rivers/watercourses/coast. The zoning objective does not proscribe exactly where in the zone development should occur. In the event that development is proposed in Flood zones A and/or B, the developer shall:</p> <ul style="list-style-type: none"> - comply with the objectives of the Wicklow County Development Plan 2016-2022, - comply with Flood Objectives FL1 to FL9 and - carry out the sequential approach in the Flood Risk Guidelines and Section 1 of the SFRA and the developer shall carry out the requirements of the sequential approach. 		

RSpecial New Residential zoning - This zoning also has lands within flood zone C.

Localised flooding from sources other than rivers/ watercourses and the coast can still occur and may need to be taken into account at the planning application stage. Where development is proposed in flood zone C the developer shall carry out the sequential approach in the Flood Risk Guidelines and in Section 1 of this SFRA and the developer shall carry out the requirements of the sequential approach.

PROPOSED MATERIAL ALTERATION No. 6 (associated map change)

From RE Existing Residential



To E1 Employment



SFRA Assessment



Stage 1 Strategic Flood Risk Identification Assessment

This zoning has lands within flood zone C. Localised flooding from sources other than rivers/ watercourses and the coast can still occur and may need to be taken into account at the planning application stage. Where development is proposed in flood zone C the developer shall carry out the sequential approach in the Flood Risk Guidelines and in Section 1 of this SFRA and the developer shall carry out the requirements of the sequential approach.

PROPOSED MATERIAL ALTERATION No. 7 (associated map change and text change)

From Open Countryside

To E1 Employment



SFRA Assessment



Stage 1 Strategic Flood Risk Assessment

Land zoning	E1 Employment To provide for the development of enterprise and employment
Flood Zone	A and B
Vulnerability of land use vs. Flood Zone	Land use zoning not appropriate
Requirement for Justification Test	yes

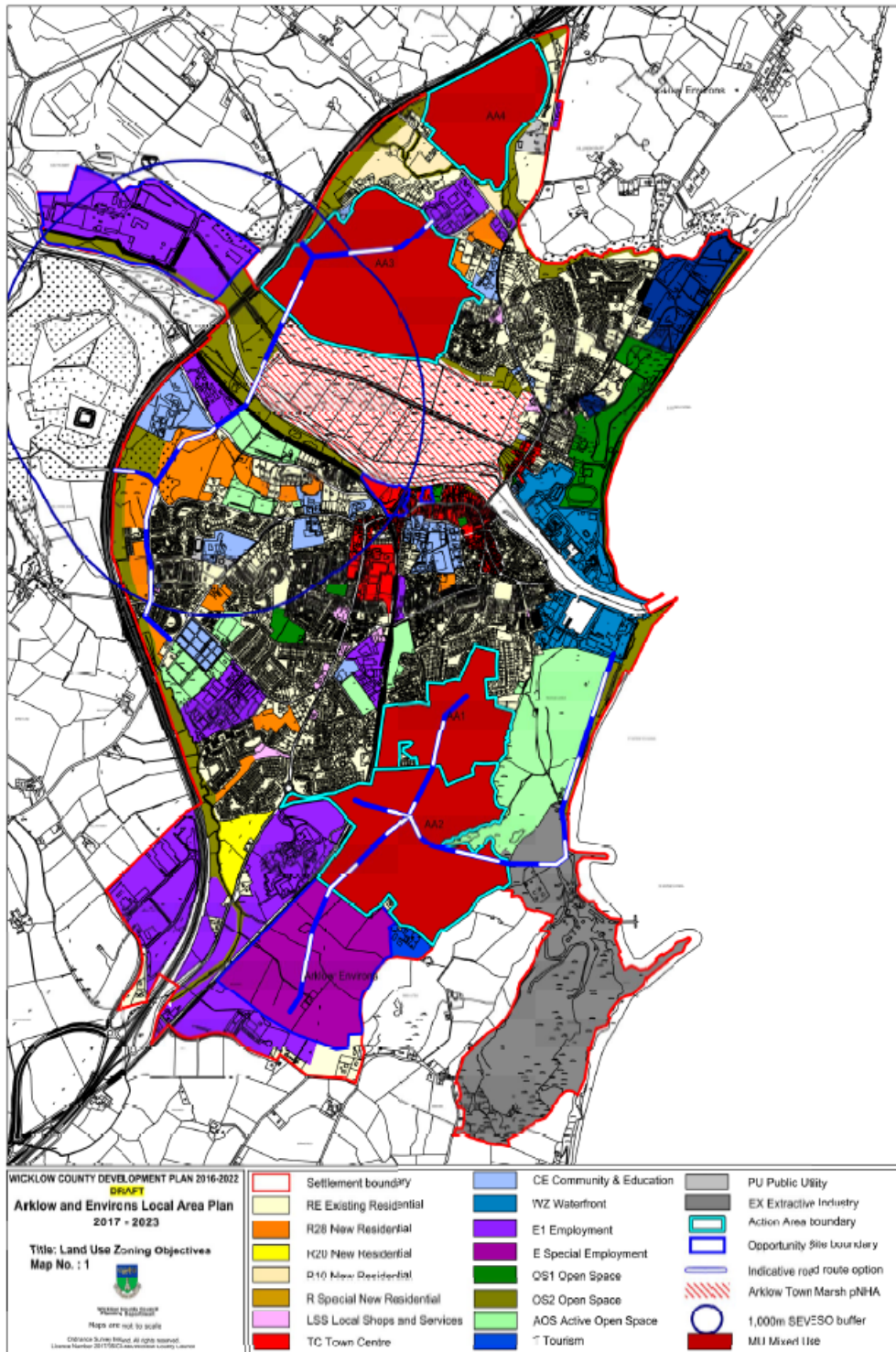
Justification Test							
1	<p>The urban settlement is targeted for growth under the National Spatial Strategy, regional planning guidelines, statutory plans as defined above or under the Planning Guidelines or Planning Directives provisions of the Planning and Development Act 2000, as amended.</p> <p>Under the Wicklow County Development Plan 2010-2016, Arklow is designated a 'Level 3 – Large Growth Town II' within the hinterland area of Dublin. Under the 'core strategy' of the CDP, the population of Arklow and Environs is targeted to grow to 23,000. It is prioritised to accommodate a large amount of population growth, to be a strong active town that is economically vibrant with high quality transport links to larger towns/cities.</p>						
2	<p>The zoning or designation of the lands for the particular use or development type is required to achieve the proper and sustainable planning of the urban settlement and in particular:</p> <table border="1"> <tr> <td>(i) Is essential to facilitate regeneration and/or expansion of the centre of the urban settlement;</td> <td>No</td> </tr> <tr> <td>(ii) Comprises significant previously developed and/or under-utilised lands;</td> <td>This site has been used for distribution in the past.</td> </tr> <tr> <td>(iii) Is within or adjoining the core of an established or designated urban</td> <td>No</td> </tr> </table>	(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;	This site has been used for distribution in the past.	(iii) Is within or adjoining the core of an established or designated urban	No
(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;	This site has been used for distribution in the past.						
(iii) Is within or adjoining the core of an established or designated urban	No						

	settlement;	
	(iv) Will be essential in achieving compact or sustainable urban growth;	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.	There is suitable alternative lands available for this use.
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 Plan SEA process.
	Refer to main SFRA document	
Conclusion		
Justification test FAILED.		
Comment		
<p>A portion of the lands in this zone have been identified as being located in Flood Zone A and B with a high and moderate probability of flooding from rivers/watercourses/coast. The zoning objective does not proscribe exactly where in the zone development should occur. In the event that development is proposed in Flood zones A and/or B, the developer shall:</p> <ul style="list-style-type: none"> - comply with the objectives of the Wicklow County Development Plan 2016-2022, - comply with Flood Objectives FL1 to FL9 and - carry out the sequential approach in the Flood Risk Guidelines and Section 1 of the SFRA and the developer shall carry out the requirements of the sequential approach. 		

E1 Employment This zoning also has lands within flood zone C.

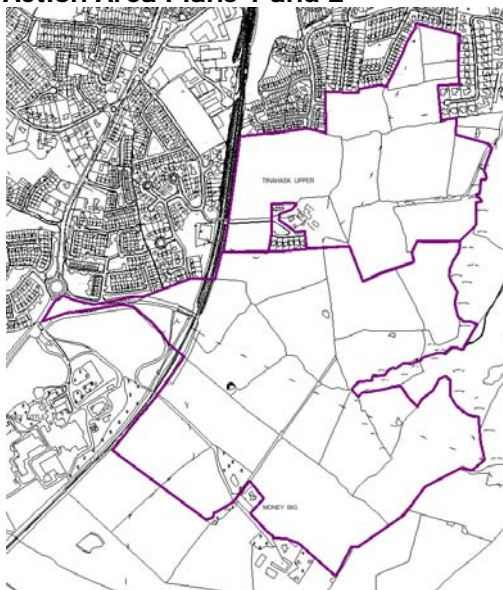
Localised flooding from sources other than rivers/ watercourses and the coast can still occur and may need to be taken into account at the planning application stage. Where development is proposed in flood zone C the developer shall carry out the sequential approach in the Flood Risk Guidelines and in Section 1 of this SFRA and the developer shall carry out the requirements of the sequential approach.

PROPOSED MATERIAL ALTERATION No. 11
 Zoning the Action Area Plans as MU Mixed Use



SFRA Assessment

Action Area Plans 1 and 2

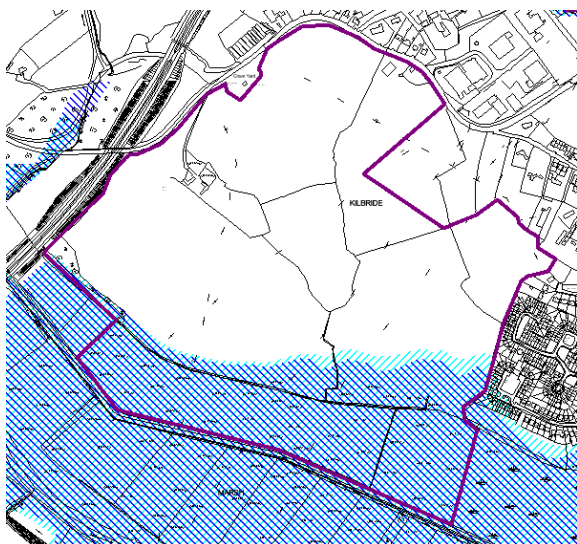


Action Area Plans 1 and 2 -Stage 1 Strategic Flood Risk Identification Assessment

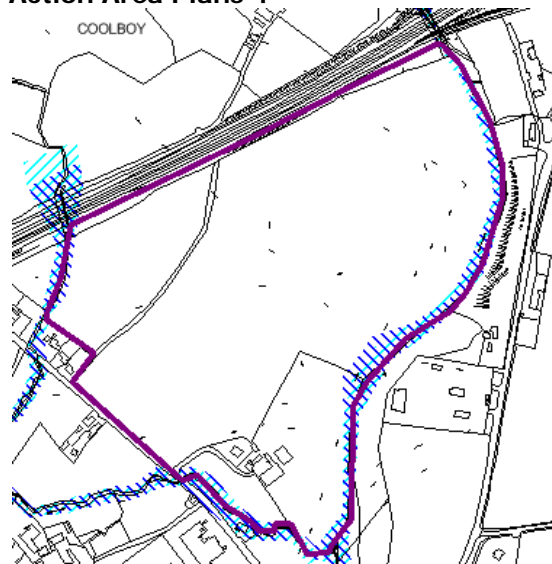
This zoning has lands within flood zone C. Localised flooding from sources other than rivers/ watercourses and the coast can still occur and may need to be taken into account at the planning application stage. Where development is proposed in flood zone C the developer shall carry out the sequential approach in the Flood Risk Guidelines and in Section 1 of this SFRA and the developer shall carry out the requirements of the sequential approach.

SFRA Assessment

Action Area Plans 3



Action Area Plans 4



Action Area Plans 3 and 4 -Stage 1 Strategic Flood Risk Assessment

MU Mixed Use zoning - Stage 1 Strategic Flood Risk Assessment

Land zoning	MU Mixed Use To provide for mixed use development
Flood Zone	A and B
Vulnerability of land use vs. Flood Zone	Land use zoning not appropriate
Requirement for Justification Test	yes

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.	Under the Wicklow County Development Plan 2010-2016, Arklow is designated a 'Level 3 – Large Growth Town II' within the hinterland area of Dublin. Under the 'core strategy' of the CDP, the population of Arklow and Environs is targeted to grow to 23,000. It is prioritised to accommodate a large amount of population growth, to be a strong active town that is economically vibrant with high quality transport links to larger towns/cities.
2	The zoning or designation of the lands for the particular use or development type is required to achieve the proper and sustainable planning 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;	No
	(iii) Is within or adjoining the core of an established or designated urban settlement;	No
	(iv) Will be essential in achieving compact or sustainable urban growth;	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.	There are suitable alternative lands available for this use.
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 Plan SEA process.
	Refer to main SFRA document	
Conclusion		
Justification test FAILED.		
Comment		
<p>A portion of the lands in this zone have been identified as being located in Flood Zone A and B with a high and moderate probability of flooding from rivers/watercourses/coast. The zoning objective does not proscribe exactly where in the zone development should occur. In the event that development is proposed in Flood zones A and/or B, the developer shall:</p> <ul style="list-style-type: none"> - comply with the objectives of the Wicklow County Development Plan 2016-2022, - comply with Flood Objectives FL1 to FL9 and - carry out the sequential approach in the Flood Risk Guidelines and Section 1 of the SFRA and the developer shall carry out the requirements of the sequential approach. 		

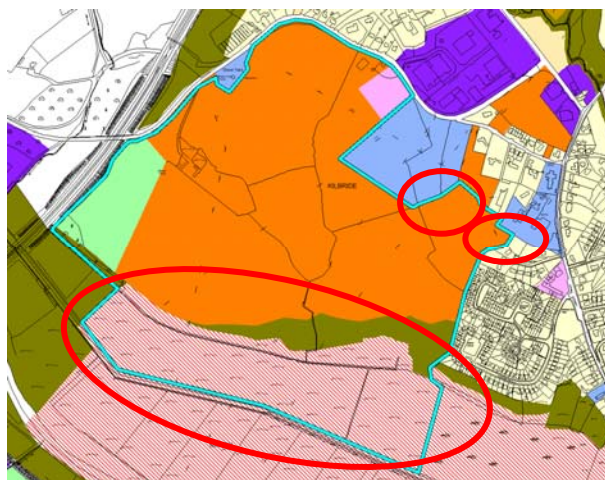
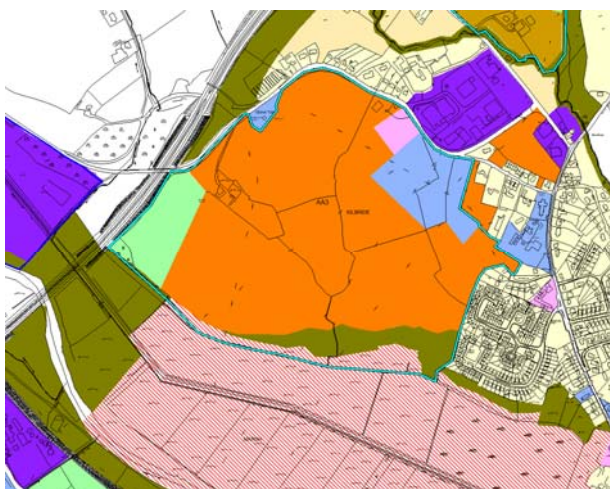
MU Mixed Use zoning - This zoning also has lands within flood zone C.

Localised flooding from sources other than rivers/ watercourses and the coast can still occur and may need to be taken into account at the planning application stage. Where development is proposed in flood zone C the developer shall carry out the sequential approach in the Flood Risk Guidelines and in Section 1 of this SFRA and the developer shall carry out the requirements of the sequential approach.

PROPOSED MATERIAL ALTERATION NO. 14 – Action Area Plan boundary (3 map changes)

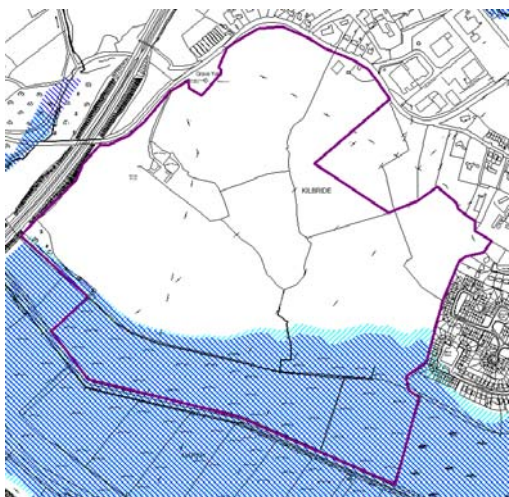
From

To:



(red circles are highlighting AAP boundary change and zoning change)

SFRA Assessment



Stage 1 Strategic Flood Risk Assessment

Land zoning	OS
Flood Zone	A and B
Vulnerability of land use vs. Flood Zone	Land use zoning appropriate
Requirement for Justification Test	No

Where development is proposed in flood zone A/B the developer shall:

- comply with the objectives of the Wicklow County Development Plan 2016-2022,
- comply with Flood Objectives FL1 to FL9 and
- carry out the sequential approach in the Flood Risk Guidelines and Section 1 of the SFRA and the developer shall carry out the requirements of the sequential approach.

MU Mixed Use zoning - This zoning also has lands within flood zone C.

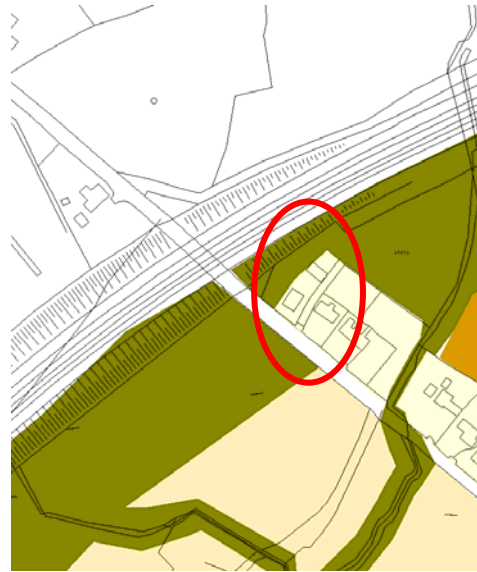
Localised flooding from sources other than rivers/ watercourses and the coast can still occur and may need to be taken into account at the planning application stage. Where development is proposed in flood zone C the developer shall carry out the sequential approach in the Flood Risk Guidelines and in Section 1 of this SFRA and the developer shall carry out the requirements of the sequential approach.

PROPOSED MATERIAL ALTERATION No. 15

From OS2 Open Space



To RE Existing Residential



SFRA Assessment



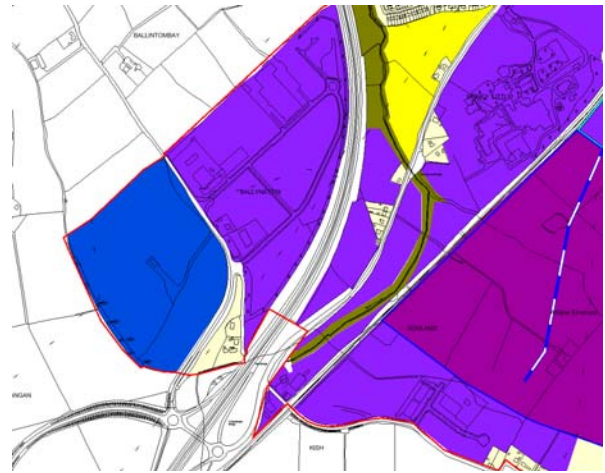
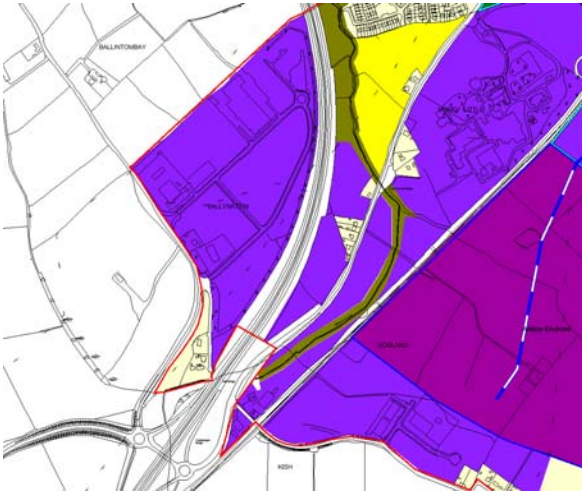
Stage 1 Strategic Flood Risk Identification Assessment

This zoning has lands within flood zone C. Localised flooding from sources other than rivers/ watercourses and the coast can still occur and may need to be taken into account at the planning application stage. Where development is proposed in flood zone C the developer shall carry out the sequential approach in the Flood Risk Guidelines and in Section 1 of this SFRA and the developer shall carry out the requirements of the sequential approach.

PROPOSED MATERIAL ALTERATION No. 16

From Open Countryside

To T Tourism



SFRA Assessment



Stage 1 Strategic Flood Risk Identification Assessment

This zoning has lands within flood zone C. Localised flooding from sources other than rivers/ watercourses and the coast can still occur and may need to be taken into account at the planning application stage. Where development is proposed in flood zone C the developer shall carry out the sequential approach in the Flood Risk Guidelines and in Section 1 of this SFRA and the developer shall carry out the requirements of the sequential approach.