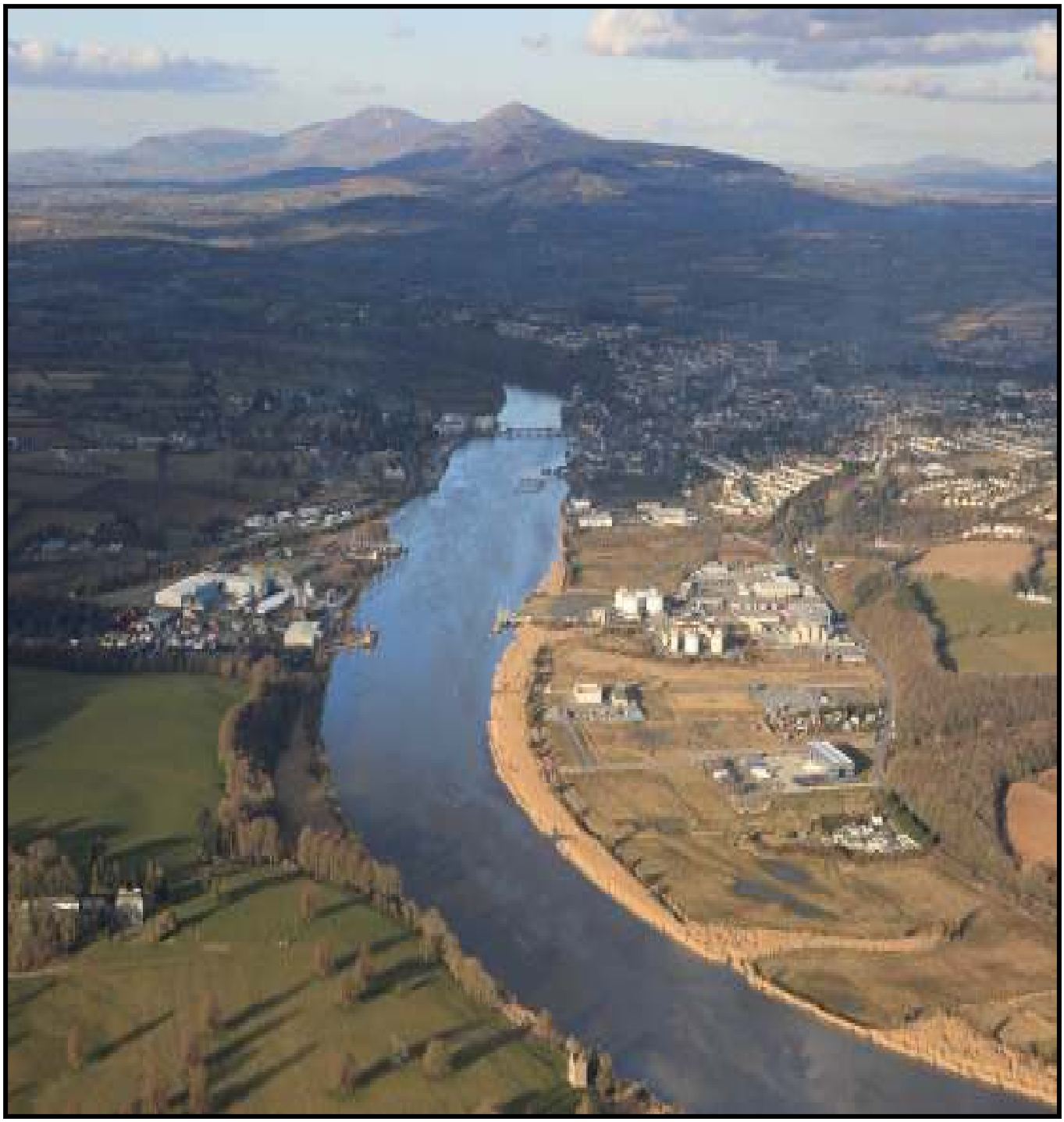
New Ross Town and Environs Development Plan 2011-2017

Appendix V

Strategic Flood Risk Assessment



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Section 1 Context and Background

1.1 Introduction

Flooding is a natural process that can happen at any time in a wide variety of locations. Flooding from the sea and rivers is probably best known but prolonged, intense and localised rainfall can also cause sewer flooding, overland flow and groundwater flooding. Flooding has significant impacts on human activities. It can threaten people's lives and their property, and in addition to economic and social damage, floods can have severe environmental consequences.

The town of New Ross has a long history of flooding from the River Barrow. Due to the town's riverside setting the location of large areas of lands within the river's floodplain is unavoidable. The river, which is tidal at the town, has caused damage to both residential and commercial properties particularly along the quay area of the town. While the town's flooding problem cannot be eliminated, it can be managed appropriately so as to reduce its impact.

1.2 Planning context

Land use management and spatial planning is a key tool in flood risk management. 'The Planning System and Flood Risk Management-Guidelines for Planning Authorities' (DEHLG & OPW, 2009) sets out government policy on development and flood risk management. The overall aim of the guidelines is to deliver sustainable development that minimises the risk of flooding to people and property by the avoidance of inappropriate development in areas at risk of flooding. Planning Authorities are now required to incorporate flood risk management as a key consideration in the preparation of development plans, local area plans and the assessment of planning applications.

The New Ross Town and Environs Development Plan sets out the Councils' policies and objectives for the proper planning and sustainable development of the New Ross Town and Environs for the period 2011-2017. A key element of this plan is the spatial strategy and the associated land use zonings objectives. The spatial strategy aims to ensure that the plan area develops as a sustainable balanced settlement with appropriate amounts of residential, economic, tourism and recreational developments. The strategy also focuses on developing the supportive role that New Ross Town plays to the larger urban centres in the region. This role is recognised in the National Spatial Strategy and the Regional Planning Guidelines (RPGs) for the South-East Region 2010-2022 where New Ross is identified as a larger town with urban strengthening opportunities. It is recognised that the town provides a good base for population and services which will attract investment and employment activities additional to those that need to be located in or near a gateway. The 'Urban Consolidation Priorities for Large Towns' as outlined in the RPGs encourages where possible the use of under-utilised, derelict or undeveloped lands within the town centre.

1.3 Purpose of Strategic Flood Risk Assessment

The Flood Risk Assessment technique for development plans is called a 'Strategic Flood Assessment' hereon referred to as SFRA. The SFRA for the New Ross Town and Environs Development Plan has been prepared by Wexford County Council and New Ross Town Council in association with JBA Consulting Engineers and Scientists LTD.

The purpose of this SFRA is to provide a broad assessment of the types of flood risk to New Ross Town and its Environs, which in turn will inform strategic land-use planning decisions for the plan area. The SFRA will:

- Identify whether and the degree to which flood risk is an issue,
- Identify flood zones within and adjoining the plan area,
- Apply the sequential approach to land use zoning by directing new development towards land that is at low risk of flooding;

- Apply the Justification Test where it is intended to zone or otherwise designate land which is at moderate or high risk of flooding;
- Outline the key requirements for the management of development in areas at risk of flooding.

1.4 Legal Framework

This SFRA has been prepared in the context of EU and national legislation.

The EU Directive 2007/60/EC on the assessment and management of flood risk aims to reduce and manage the risks that floods pose to human health, the environment, cultural heritage and economic activity. Member States are required to assess if all watercourses and coastlines are at risk from flooding, to map the flood extent and assets and humans at risk in these areas and to take adequate and coordinated measures to reduce this flood risk. This will be carried out at river catchment level and in coastal zones.

The Planning System and Flood Risk Management-Guidelines for Planning Authorities (DEHLG, OPW 2009) were issued by the Minister of the Environment, Heritage and Local Government under Section 28 of the Planning and Development Act 2000. Planning Authorities and An Bord Pleanála are required to have regard to the Guidelines in carrying out their functions under the Planning Acts.

The core objectives of the 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 run-off;
- Ensure effective management of residual risks for developments permitted in floodplains;

- Avoid unnecessary restriction of national, regional or local economic and social growth;
- Improve understanding of flood risk among relevant stakeholders and
- 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.

The Guidelines outline three key principles that should be adopted by regional authorities, local authorities, developers and their agents when considering flood risk. These are:

- Avoid the risk, where possible,
- Substitute less vulnerable uses, where avoidance is not possible, and
- Mitigate and manage the risk, where avoidance and substitution are not possible.

Section 2 Strategic Flood Risk Assessment

2.1 Stages

The Strategic Flood Risk Assessment for the plan area is based on two stages

- Stage 1 Flood Risk Identification
- Stage 2 Initial Flood Risk Assessment

2.2 Stage 1 Flood Risk Identification

This purpose of this stage is to identify whether there are any flooding or surface water management issues relating to the plan area that may warrant further investigation.

Flooding and surface water issues in the town were identified by:

- A review of the OPW Flood Maps and geology maps for the area;
- Consultations with the Area Engineer who provided knowledge on flood events in the town and surface water issues.
- Reports prepared in respect of the Interim Flood Relief Scheme for the town also provided detailed information.

Map 1 OPW Flood Maps

The town of New Ross has a long history of flooding from the River Barrow.The OPW flood maps identify the locations that are historically vulnerable to flooding. There are nine incidents of flooding recorded on their flood database for New Ross. Areas of recurring floods include The Quay, Bridge Street, Rosbercon and

Marshmeadows. The causes of these flood events are listed as a combination of high tides, strong winds and rainfall. Source: www.floodmaps.ie

Geology

EPA Maps (http://maps.epa.ie) identify a range of soils within the study area which support various habitats and land uses. Alluvial soils are located along the River Barrow and at Marshmeadows. The presence of such soils suggests flooding activity as these soils are deposited by water flowing over flood plains or in river beds

Flooding Reports

In 2004 Wexford County Council commissioned Consultants to prepare a Flood Alleviation Scheme for the town. The report provided background information on flooding events in the town and a topographical survey to ascertain which areas in the town centre would be prone to flooding. This report related to Quayfront only. The main findings of the report were:

Flooding Events

The report outlines that with a coincidence of Spring Tides, low atmospheric pressure, floodwater in the Barrow and strong southerly winds at high tide level of 3.0m AMD is possible. However, it is noted that floodwater levels reached approximately 3.12m AMD in November 1997 at Rosbercon. Floodwaters were also recorded between 3.1 and 3.2m AMD in February 2002. The report states that such a flood event had an estimated return period of between 1 in 80 year and 1 in 100 year. The return period for such an event in New Ross is likely to be less because New Ross is situated at the top of a relatively narrow enclosed inlet where surge heights could be increased due to the effects of southerly winds and river floodwater.

Topographical Survey

The report undertook a topographical survey along the quays in New Ross in order to ascertain areas, which would be prone to flooding, and to determine the height of flood barriers required to alleviate flooding. Levels varied from 2.25m

(Old Quay wall between Dunbrody Visitor Centre and Harbour Masters Office), 3.13m AMD (Quay level at the rear of the Harbour Masters Office). The ground level at O' Hanrahans Bridge is higher than the surrounding areas of the quays with a level of 3.85m AMD near the commencement of the bridge deck.

The report recommended that a combination of low walls with demountable barriers on top and permanent earth embankments would be the most appropriate system to deal with the tidal floodwater at New Ross. Having reviewed the proposal the Council sought a revised scheme which could be more readily implemented with the proposed Main Drainage Scheme and which would cater for more frequent flood events.

The revised Interim Flood Relief Scheme (July 2005) involves the construction of a stub wall along the river front between the Dunbrody Visitor Centre and O'Hanrahan Bridge and the construction of a new wall along the quays between O'Hanrahan Bridge and Bridge Street. It should be noted that the interim scheme does not take into account predicted sea level rise due to climate change. The construction of this scheme is currently underway.

Surface water

The scheme also allows for the interconnection of all gullies along the quays with shallow pipe work and separate outfalls with non-return valves. During periods of high water level in the river the surface water along the quays would be diverted via outflow manholes into the proposed foul interceptor sewer. This will address previous surface water issues that existed along the Quay.

Conclusions

Stage 1 identified the areas prone to flooding as The Quay, Marshmeadows, lands at Annefield and parts of Rosbercon.

2.3 Stage 2 Initial Flood Risk Assessment

This stage confirms the sources of flooding that may affect the plan area, to appraise the adequacy of existing information and to scope the extent of the risk through the preparation of indicative flood maps which identify flood zones for river and coastal flooding. Having identified the flood zones, the sequential approach is used to direct, where possible, new development to areas at low risk of flooding.

2.3.1 What are Flood Zones

Flood zones are geographical areas within which the likelihood of flooding is in a particular range. There are three types or levels of flood zones defined for the purposes of the Guidelines:

Zone	Description
Zone A High probability of flooding	This zone defines areas with the highest risk of flooding from rivers (i.e. more than 1% probability or more than 1 in 100) and the coast (i.e. more than 0.5% probability or more than 1 in 200).
Zone B Moderate probability of flooding	This zone defines areas with a moderate risk of flooding from rivers (i.e. 0.1% to 1% probability or between 1 in 100 and 1 in 1000) and the coast (i.e. 0.1% to 0.5% probability or between 1 in 200 and 1 in 1000).
Zone C Low probability of flooding	This zone defines areas with a low risk of flooding from rivers and the coast (i.e. less than 0.1% probability or less than 1 in 1000)

The Guidelines require the flood zones to be mapped. The Flood Zones were identified and mapped by JBA Consulting Engineers and Scientists Limited.

2.3.2 Mapping methodology

The tidal flood mapping was undertaken creating a 10km resolution numerical model to simulate tide and surge processes for Ireland, which was then validated against gauge records. Extreme sea levels were generated and projected inland, giving coastal flood extents in 1 in 200 (0.5%) and 1 in 1000 (0.1%) probability events.

In accordance with the Guidelines the sources of flooding are mapped without regard for any form of flood defence and do not specifically model interaction with anything other than the land surface, stripped of all man made features. This approach is required by the Guidelines to take into account the risk of defence failure or overtopping.

The Flood Maps do not directly take climate change into account. However, climate change flood extents can be assessed using the Flood Zone B outline as a surrogate for Flood Zone A with allowances.

It should also be noted that the flood zones 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.

2.3.3 Flood Zone Map

Map 2 identifies the three flood zones within and adjoining the plan area.

Flood Zone A shows the area that could be affected by flooding, either from rivers or the sea, if there were no flood defences. This area could be flooded:

- From the sea by a flood that has a 0.5% (1 in 200) or greater chance of happening each year, or
- From a river by a flood that has a 1% (1 in 100) or greater chance of happening each year.

Flood Zone B shows the additional extent of an extreme flood from rivers or the sea. These outlying areas are likely to be affected by a major flood, with up to a 0.1% (1 in 1000) chance of occurring each year.

These two zones show the extent of the natural floodplain if there were no manmade structures in place.

Flood Zone C is not identified on the map, but it covers all lands which are outside of Flood Zones A and B.

2.3.4 Sequential Approach

Having identified the flood zones within and adjoining the plan area the next step is to apply the sequential approach to land use planning in the area. The Guidelines require a sequential approach to planning and flood risk management as it is considered a key tool in ensuring that development, particularly new development, is directed towards land that is at low risk of flooding. The philosophy underpinning the sequential approach in flood risk management is:

- **Avoid**-preferably chose lower risk flood zoned for new development
- **Substitute**-ensure the type of development proposed is not especially vulnerable to the adverse impacts of flooding

- **Justify**-ensure that the development is being considered for strategic reasons
- **Mitigate**-Ensure flood risk is reduced to acceptable levels
- **Proceed**-only where the Justification Test passes. Ensure emergency planning measures are in place.

2.3.5 Vulnerable Uses

The Guidelines classify the vulnerability of different types of development and match this vulnerability to the appropriate flood zone. The planning implications for each flood zone are:

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 specific warning and evacuation plan)

- **Uses not listed in this table should considered on their own merits**

2.3.6 Application of the sequential approach

The flood zone map was overlaid on the existing plan area. This identified the key areas where flood risk management and future development within them required further consideration. This process identified:

(a) previously developed areas, brownfield sites and under-utilised sites which have a high or moderate risk of flooding and are currently zoned for highly vulnerable or less vulnerable uses

(b) Undeveloped lands that have a high or moderate risk of flooding and are currently zoned for highly vulnerable or less vulnerable uses. There is approximately 42ha of undeveloped lands in Flood Zone A zoned for industry, mixed use and residential land uses.

2.3.7 Rezoning/Dezoning of some undeveloped lands following the application of the Sequential Approach.

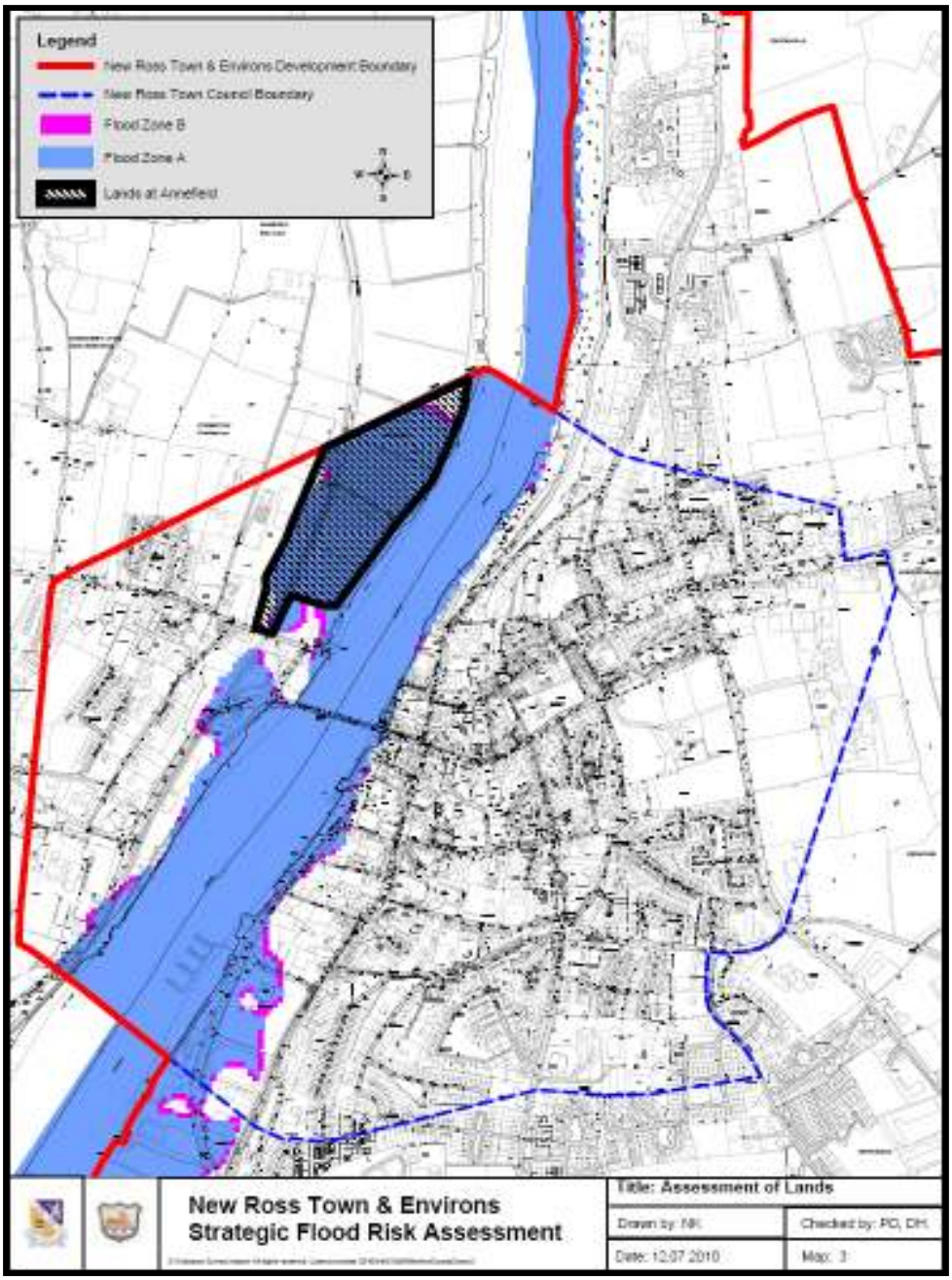
The continued zoning of some of the undeveloped lands for uses that are vulnerable to flooding could not be justified for strategic reasons and would not satisfy the criteria in the Justification Test. It was decided to either replace the existing zonings with lower vulnerability land uses (water compatible uses) or to remove the subject land from the plan boundary. These lands amount to 23ha.

The subject lands are:

- Lands at Annefield
- Lands to the south of Aldi
- Lands to the south of Marshmeadows

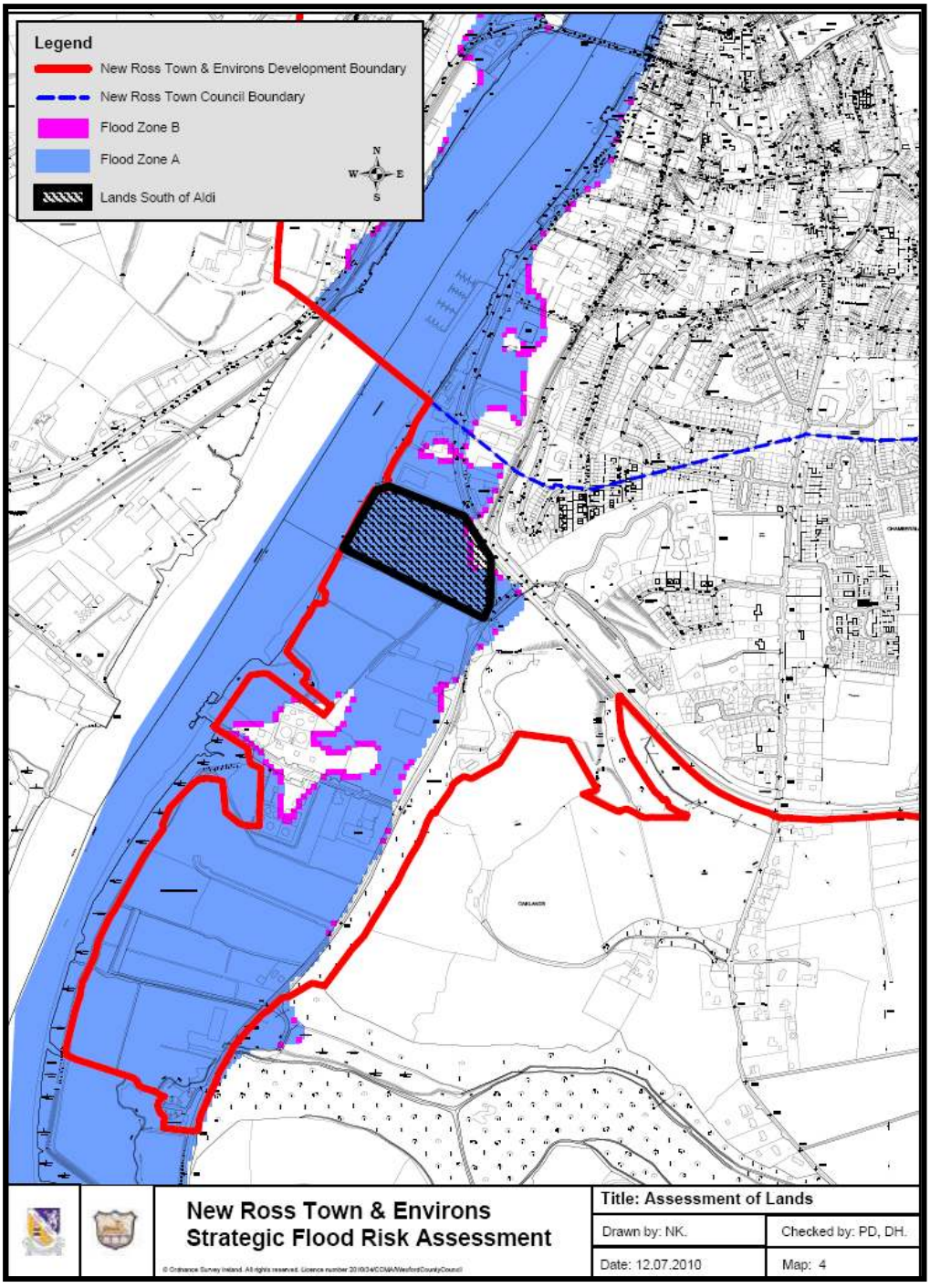
2.3.7.1 Lands at Annefield

It is proposed to rezone these lands from Mixed Use and Residential to Open Space and Amenity (OSA). The subject lands are outlined in Map 3 below.



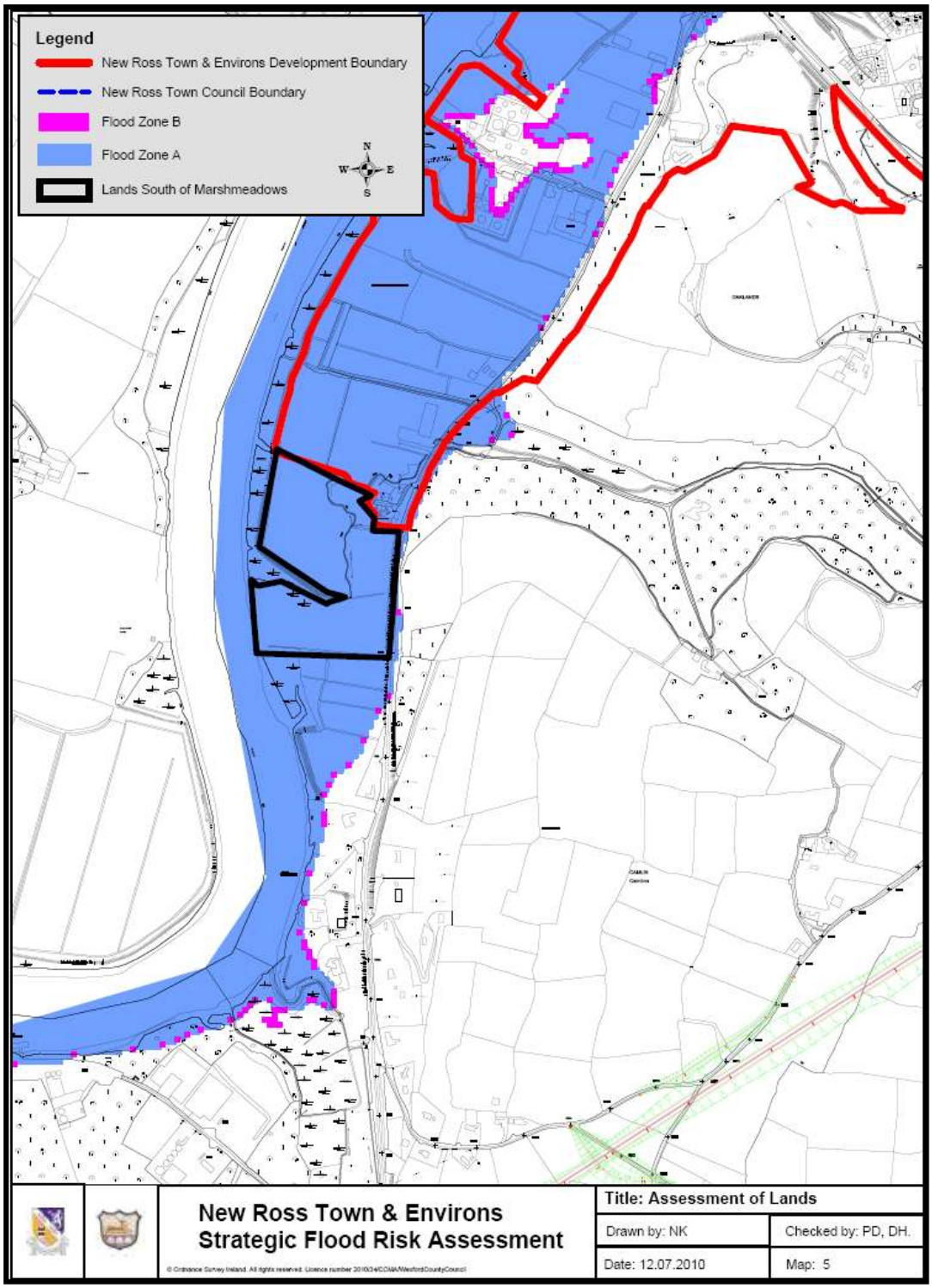
2.3.7.2 Lands south of Aldi

It is proposed to rezone these lands from 'Town Centre' and 'Employment & Enterprise' to Open Space and Amenity (OSA). The subject lands are identified on Map No. 4 below.



2.3.7.3 Lands to the south of Marshmeadows

It is proposed to remove some Industrial zoned lands from the plan boundary in the interesting of preserving the floodplain at this location. This is discussed in further detail in Section 3.2.3. These lands are identified on Map No. 5 below.



2.4 Conclusions

For strategic reasons and in the interests of the proper planning and sustainable development of the area it is proposed to retain the zoning of the previously developed lands, brownfield and underutilised sites and the remaining undeveloped lands (19ha)for uses and development that are highly vulnerable or less vulnerable to flooding. The subject lands are:

- The Quay
- Lands to the south and south west of the Town Park
- Part of Marshmeadows
- Stafford's Lands at Rosbercon
- Lands to the west/north-west of the Moorings, Rosbercon
- Lands to the west of the Boat Club, Rosbercon

In accordance with the Guidelines the required justification tests were carried out for all these lands are discussed in further detail in Section 3.

Section 3 Justification Test

3.1 Justification Test

The Guidelines states that where a planning authority is considering the future development of areas in an urban settlement that are at moderate or high risk of flooding, for uses or development vulnerable to flooding that would generally be inappropriate, 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.

Section 4.23 of the Guidelines relate to the Justification Test and outline all of the criteria that must be satisfied. The criteria are:

Justification Test for Development Plans[1]
Where, as part of the preparation and adoption or variation and amendment of a development/local area plan, a planning authority is considering the future development of areas in an urban settlement that are at moderate or high risk of flooding, for uses or development vulnerable to flooding that would generally be inappropriate as set out in Table 3.2, all of the following criteria must be satisfied: **1** The urban settlement is targeted for growth under the National Spatial Strategy, regional planning guidelines, statutory plans or under the Planning Guidelines or Planning Directives provisions of the Planning and Development Act 2000, as amended. **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;

[1] The Planning System and Flood Risk Management-Guidelines for Planning Authorities (DEHLG, OPW, 2009), p37.

(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.

3. A flood risk assessment to an appropriate level of details 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.

N.B. The acceptability or otherwise of levels any residual risk should be made with consideration for the proposed development and the local context and should be described in the relevant flood risk assessment.

3.2 Application of the Justification Test

3.2.1 Approach

For all the subject lands the justification for Criteria 1 and 3 is the same. In the interests of avoiding repetition Criterion 1 is discussed in Section 3.2.2 and Criterion 3 is discussed in Section 3.2.4. Criteria 2 will be discussed separately for each of the lands in Sections 3.2.3

3.2.2 Criterion 1

The urban settlement is targeted for growth under the National Spatial Strategy, regional planning guidelines, statutory plans or under the Planning Guidelines or Planning Directives provisions of the Planning and Development Act 2000, as amended.

New Ross is designated under the National Spatial Strategy (NSS) and the Regional Planning Guidelines for the South-East Region 2010-2022 (RPGs) as a Larger Town with urban strengthening opportunities. It has been targeted for growth having regard to its strategic location, capacity for growth and potential to deliver on the core objectives of critical mass and balanced regional development. The proposed development strategy in the New Ross Town and Environs Development Plan 2011-2017 underpins the envisaged growth of New Ross as a large town providing a range of services for the surrounding rural hinterland as well as providing a supportive role to the Regional Gateway. The Core Strategy sets out a spatial strategy that is based on consolidating the existing built urban area through planned redevelopment and infill development in the town centre and by the sequential development of greenfield lands. This gives direct effect to the policies and strategy of the Regional Planning Guidelines.

3.2.3 Criterion 2

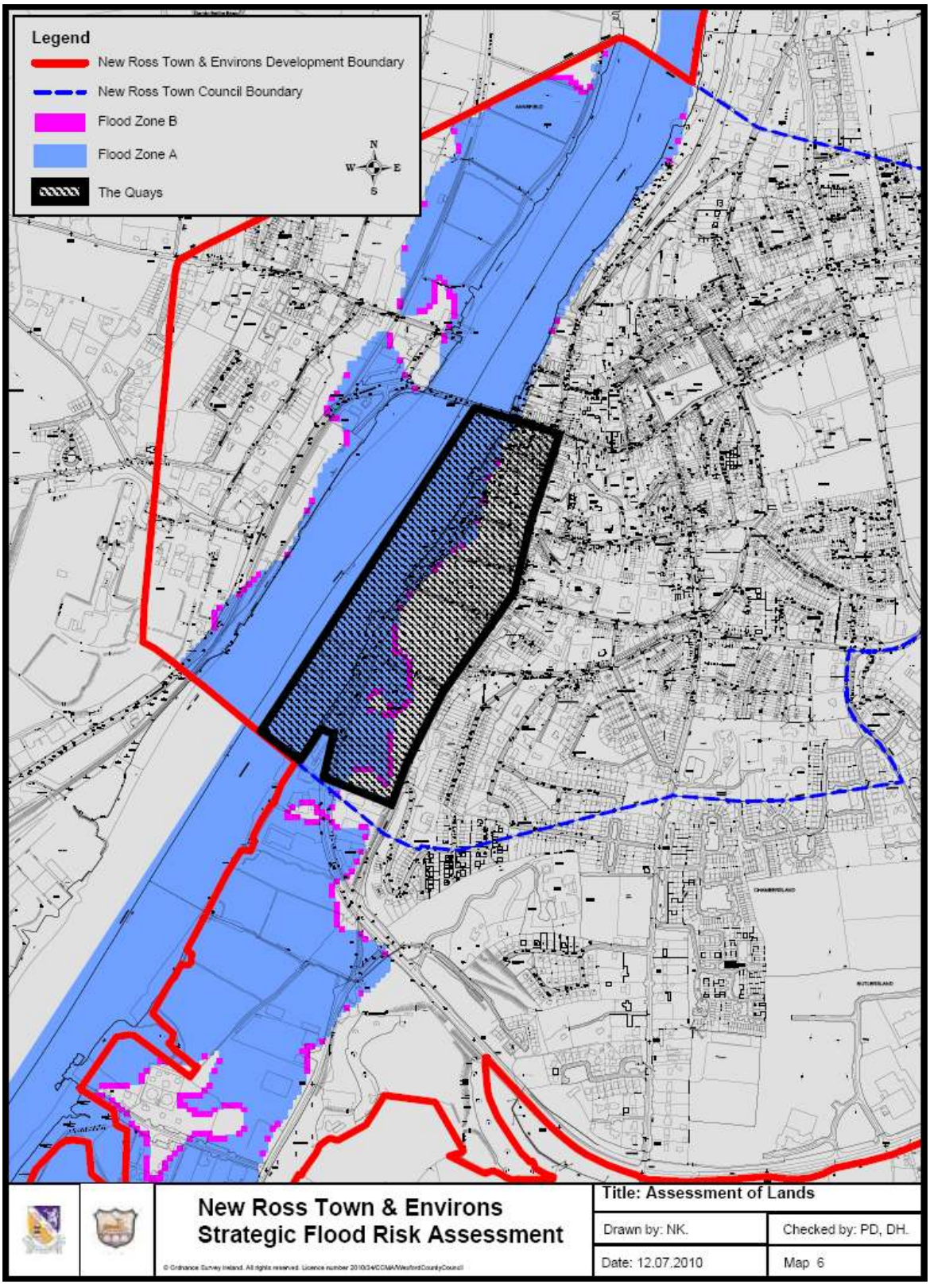
3.2.3.1 The Quays

Description

The subject lands are identified on Map No. 6. A significant amount of The Quay is located within Flood Zone A which is identified as having a high risk of flooding. A small area is also located within Flood Zone B where there is a moderate risk of flooding. Most of the area in Flood Zone A lies to the west of the N25 and includes the public wastewater pumping station, oil tanks, Dunbrody Visitor Centre, the Harbour Master's Office and a public car park. A section of the N25 is also located within Flood Zone A. To the east of the N25 Flood Zones A and B cover part of Lidl car park and the Town Park, Quayside Service Station and a small area along the Quay between Marsh Lane and Sugarhouse Lane (Billy Foley's Yard).

Proposed Land Use

The primary land use zoning for The Quay is Town Centre Uses. This zoning provides for a range of highly vulnerable and less vulnerable uses including retail, commercial, tourism, residential, community, educational and recreational uses. Light industrial uses, recycling centres and enterprise centres are among the uses which are open for consideration. The Town Park is zoned for Open Space and Amenity and the uses allowed in this zoning are considered to be water-compatible.


Legend
New Ross Town & Environs Development Boundary
New Ross Town Council Boundary
Flood Zone B
Flood Zone A
The Quays
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New Ross Town & Environs
Strategic Flood Risk Assessment
Title: Assessment of Lands
Drawn by: NK.
Checked by: PD, DH.
Date: 12.07.2010
Map 6

Justification Test Criterion 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:

The zoning of these lands for the proposed uses is essential to facilitate regeneration and/or expansion of the centre of an urban settlement.

- It will allow for higher densities in the town centre to build the critical mass necessary to create a self-sufficient town and fulfil New Ross' role as a Larger Town;
- It will result in more efficient use of infrastructure and resources;
- It will encourage a reduction in the number and length of car journeys and associated greenhouse gas emissions;
- It will provide opportunities for improved urban design and improved public realm through the creation of space and place;
- It will allow for the appropriate re-use of protected structures and elements of the built heritage which form part of the character of New Ross, to keep them in use and prevent them from further deterioration.

This area comprises significant previously developed and/or under-utilised lands. Historically New Ross evolved around the port and the Quay became the commercial hub of the town. In recent years most of the activity associated with the port has relocated to Marshmeadows. Many of the large industrial sites, which would have traditionally been associated with the port, have become obsolete. This has resulted in a number of brownfield and derelict sites in and/or adjacent to the town centre. The town centre has a high rate of derelict and vacant buildings.

This area is the core of the urban settlement of New Ross Town:

The zoning of these lands is essential in achieving compact and sustainable urban growth. The Development Plan proposes a spatial strategy that concentrates on the renewal and regeneration of underutilised sites within the town centre. Preference is given to the development of brownfield and infill sites but where these are considered unavailable for development, the strategy allows for the sequential development of greenfield lands to the east of the town. This approach is consistent with the Urban Consolidations Priorities for Large Towns outlined in the RPGs, which states that under-utilised, derelict or undeveloped lands within the built-up area should be identified and opportunities realised.

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.

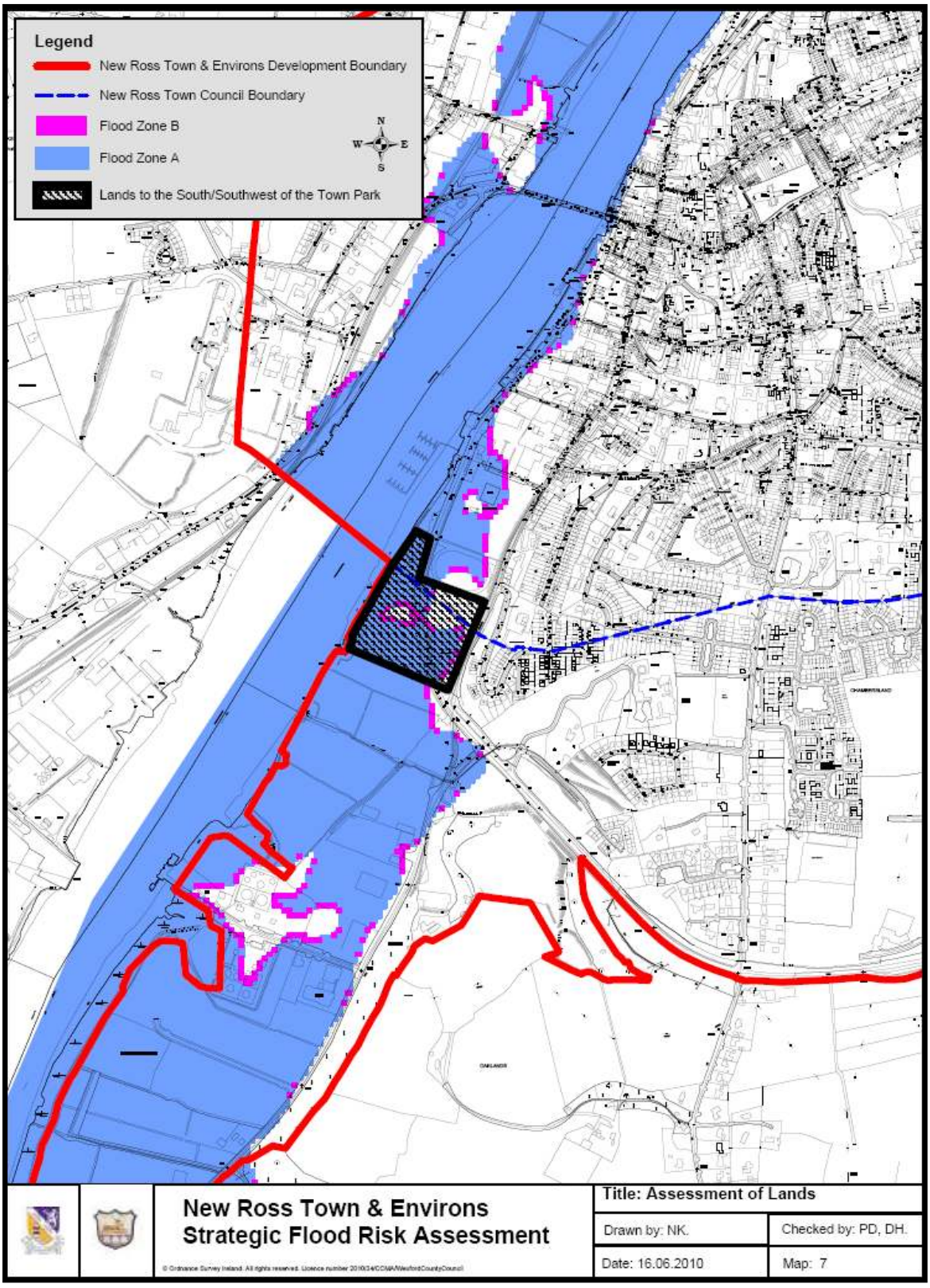
3.2.3.2 Lands to the south/southwest of the Town Park

Description

The subject lands are indentified on Map No. 7. The lands are located to the south and to the west of the Town Park. The N25 traverses this area. The Garda Station, Aldi supermarket, County Home Garden Centre and Sidney Car Sales are located in this area. Substantial parts of these lands are located in Flood Zone A with small portions in Flood Zone B. In the context of vulnerability to flooding, the Garda Station is a highly vulnerable development. The other existing uses are less vulnerable developments.

Proposed land use

It is proposed to zone lands in this area for two uses (i) Commercial and (ii) Community and Education. The latter zoning relates specifically to Garda Station.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New Ross Town & Environs
Strategic Flood Risk Assessment
Title: Assessment of Lands
Drawn by: NK.
Checked by: PD, DH.
Date: 16.06.2010
Map: 7

Justification Test Criterion 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:

This area comprises significant previously developed lands. The development of these lands facilitated the appropriate expansion of the town to the south.

This area is in the core of the urban settlement of New Ross Town:

The development and zoning of these lands is essential in achieving compact and sustainable urban growth.

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.

3.2.3.3 Part of lands at Marshmeadows

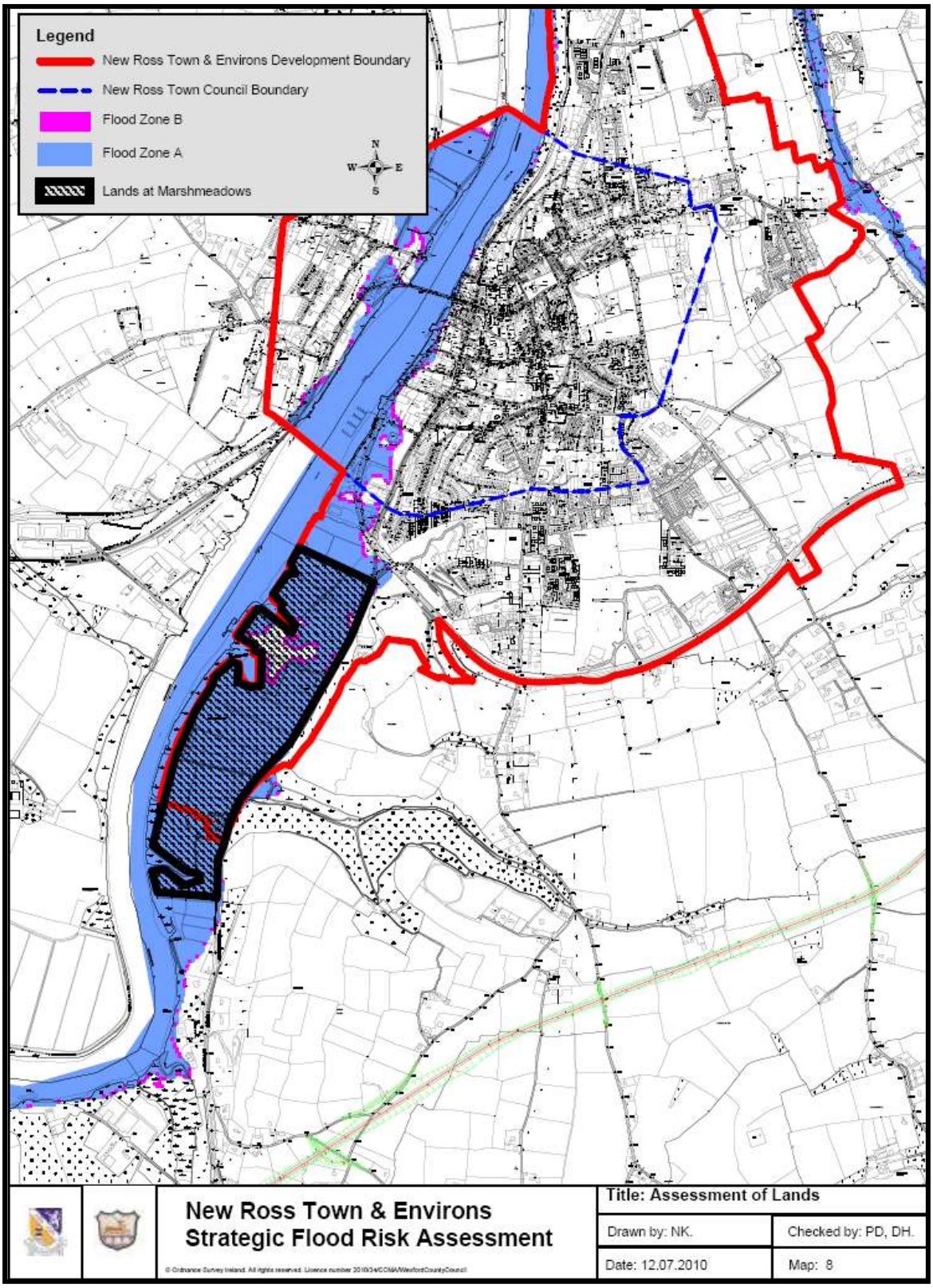
Description

The subject lands are identified on Map No 8. This area is bound to the west by the River Barrow and to the east by R733. The majority of this area is located within Flood Zone A which is high vulnerable to flooding. There are small pieces of lands located in Flood Zone B. There is a small area of land in the vicinity of the Campus Fuels Terminal which is Flood Zone C. The established land uses in this area are industrial and transport related and include two Seveso sites. The town's wastewater treatment plant is also located in this area. There is a Traveller Accommodation scheme located in the southern section of this area. There is approximately 26ha of undeveloped land in Flood Zone A. In the context of vulnerability to flooding, the Seveso sites, town treatment plant infrastructure and the residential scheme are highly vulnerable developments. The remaining industrial and transport uses are less vulnerable developments.

Proposed land use

The primary land use zoning for these lands is Port-Related Activities. This zoning provides for a range of less vulnerable uses including warehousing, industrial and ancillary offices.

There is a Traveller Accommodation Scheme located to the south of this area.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New Ross Town & Environs
Strategic Flood Risk Assessment
Title: Assessment of Lands
Drawn by: NK.
Checked by: PD, DH.
Date: 12.07.2010
Map: 8

Justification Test Criterion 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

(i) It is essential to facilitate regeneration and/or expansion of the centre of an urban settlement. These land uses are not considered compatible with a town centre setting, for reasons including access, traffic, noise, the nature of industrial processes involved and health and safety. As such in the interests of protecting the town centre and encouraging regeneration in the core area by attracting more desirable land uses, the locating of these land uses outside of the town centre would be in the interests of the proper planning and sustainable development of the overall plan area.

(ii) This area comprises significant previously developed and under-utilised lands.

A significant amount of the subject lands are either developed or committed to development through planning permissions. New Ross Port has relocated its operation to Marshmeadows and multi million euro industries are established there in the form of the two Seveso sites Campus Oil and Esso as well as Green Bio-Fuels. It is considered that removing the limited lands that could facilitate their further expansion would have serious implications not only for their continued operations but also for the economy of the town, region and country.

Section 5.1.17 of the RPGs adopted in July 2010 states that the ports of Belview, *New Ross* and Rosslare are of strategic importance to the region for the development of industry, commerce and tourism. These ports must continue to be developed to meet the needs of the Marine, Freight and Cruise Sectors. There is considerable potential to develop the region's port infrastructure in terms of value-added shore based economic activity.

In relation to New Ross, it is stated that local Planning Authorities should where possible facilitate the development of the portal estate at Marshmeadows, to consist of an additional wharf and construction of warehousing and open storage. As such, to restrict any further development would be contrary to this objective.

It is considered appropriate to remove a section of undeveloped lands to the south of the area to preserve the undeveloped flood plain lands. These lands are referred to and described in Section 2.3.7.3 and identified on Map No. 5.

(iii) This area is not the core of the urban settlement of New Ross Town, which is desirable given the nature of the land uses involved.

(iv) The zoning of these lands is essential in achieving compact and sustainable urban growth. The Development Plan proposes a spatial strategy that concentrates on the renewal and regeneration of underutilised sites within the town centre. These sites should be retained for land uses that are more appropriate to a town centre setting, such as retail, commercial, leisure and residential. As such in the interests of achieving compact and sustainable urban growth the industrial uses due to operational requirements are better located in this area.

(v) There are no are other suitable alternative lands for this land use, in areas at lower risk of flooding within or adjoining the core of the urban settlement.
The lands zoned for Industry in the New Ross Environs Local Area Plan 2005 were considered. While these lands have no significant risk from flooding the majority of the lands are already developed by port-related activities. Having considered this and the fact that there are no other available lands on the Wexford side of the river that have a lower risk of

flooding within or adjoining the core of the settlement, these lands are considered acceptable.

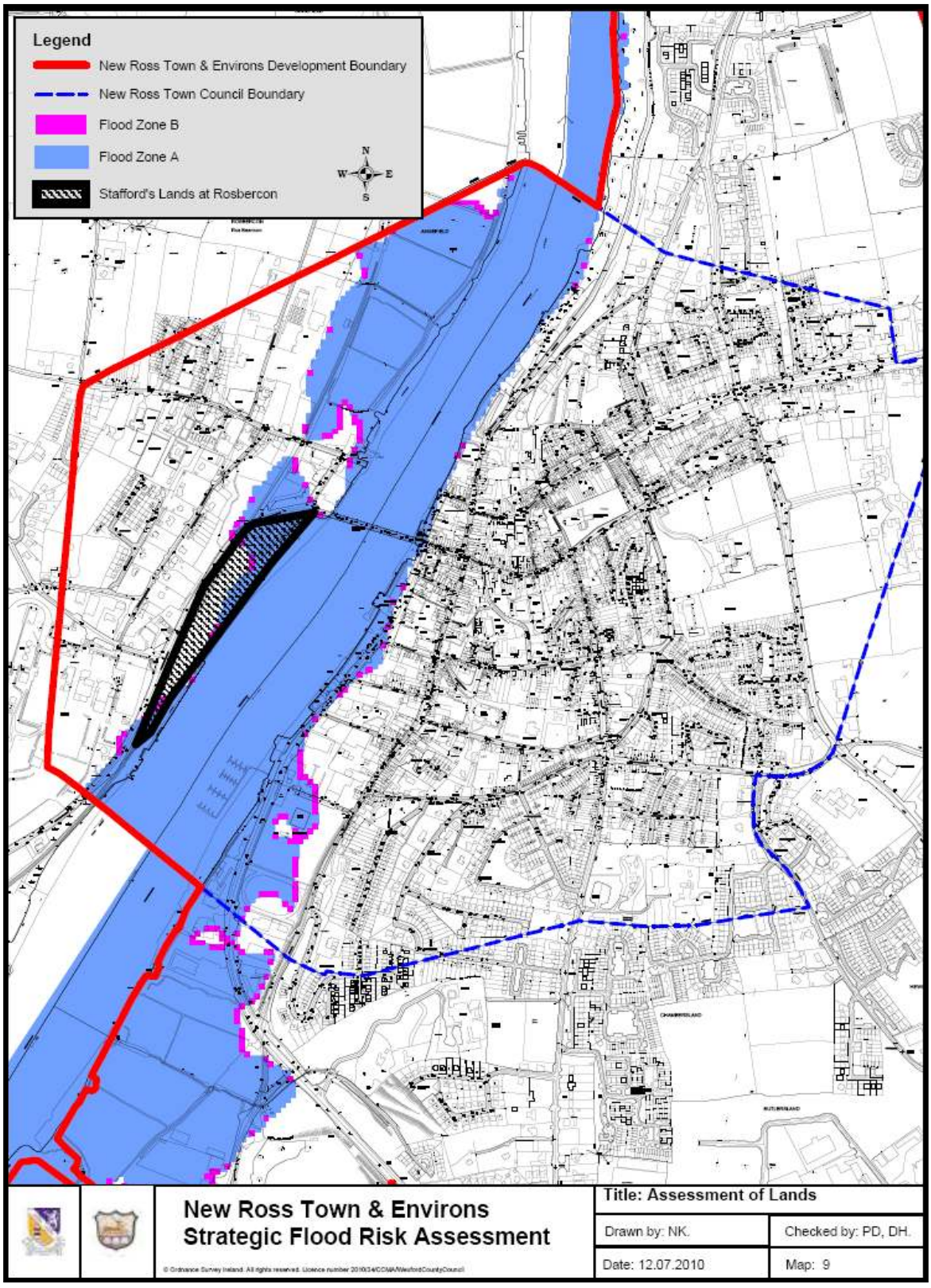
3.2.3.4 Stafford's Lands at Rosbercon

Description

The subject lands are indentified on Map No. 9. These lands are located in Rosbercon, immediately adjacent to O'Hanrahan's Bridge. Access to the lands is from the N25 close to the aforementioned bridge. The site has considerable road frontage along the N25 and is bound between a disused railway and the N25 to the west and the River Barrow to the east. The site is mainly hard surfaced and is currently used as a storage and shipping depot. There are storage buildings, office buildings and weighbridge facilities on the site. There are parts of this site located within Flood Zone A and thus highly vulnerable to flooding. The site's existing industrial use is a less vulnerable development.

Proposed land use

It is proposed to zone this land for mixed use development. This zoning includes residential which is a highly vulnerable development. Retail, commercial, leisure are less vulnerable developments and amenity open space, marina, outdoor sports and recreation facilities which are water compatible uses.


Legend
New Ross Town & Environs Development Boundary
New Ross Town Council Boundary
Flood Zone B
Flood Zone A
Stafford's Lands at Rosbercon
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New Ross Town & Environs
Strategic Flood Risk Assessment
Title: Assessment of Lands
Drawn by: NK.
Checked by: PD, DH.
Date: 12.07.2010
Map: 9

Justification Test Criterion 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) It is essential to facilitate regeneration and/or expansion of the centre of an urban settlement. While this site is separated from the main town centre by the river, it is viewed as an appropriate site for the future expansion of the town to the west of the side of the river.

(ii) This area comprises significant previously developed and under-utilised lands.

(iii) This area is located in the core of Rosbercon which forms an intrinsic part of the urban settlement of New Ross Town.

(iv) The zoning of these lands is considered *essential in achieving compact and sustainable urban growth*. The site is strategically located on the N25, adjacent to the currently disused railway line and has good pedestrian links to the Town Centre. The development of these lands will:

- Allow for higher densities in the core area which will build the critical mass necessary in order to create a self-sufficient town and fulfil New Ross' role as a Larger Town.
- Allow for the efficient use of infrastructure and resources;
- Provide opportunities for high quality urban design and public realm through the creation of space and place

(v) Having regard to the location of these lands relative to the core of the town there are no are other suitable alternative lands for this land use, in areas at lower risk of flooding within or adjoining the core of the urban settlement. It is considered that appropriate mitigation measures can be

implemented through applying the sequential approach to the design and layout of any future scheme so as to reduce flood risk to the development and in particular to any highly vulnerable or less vulnerable development on this site.

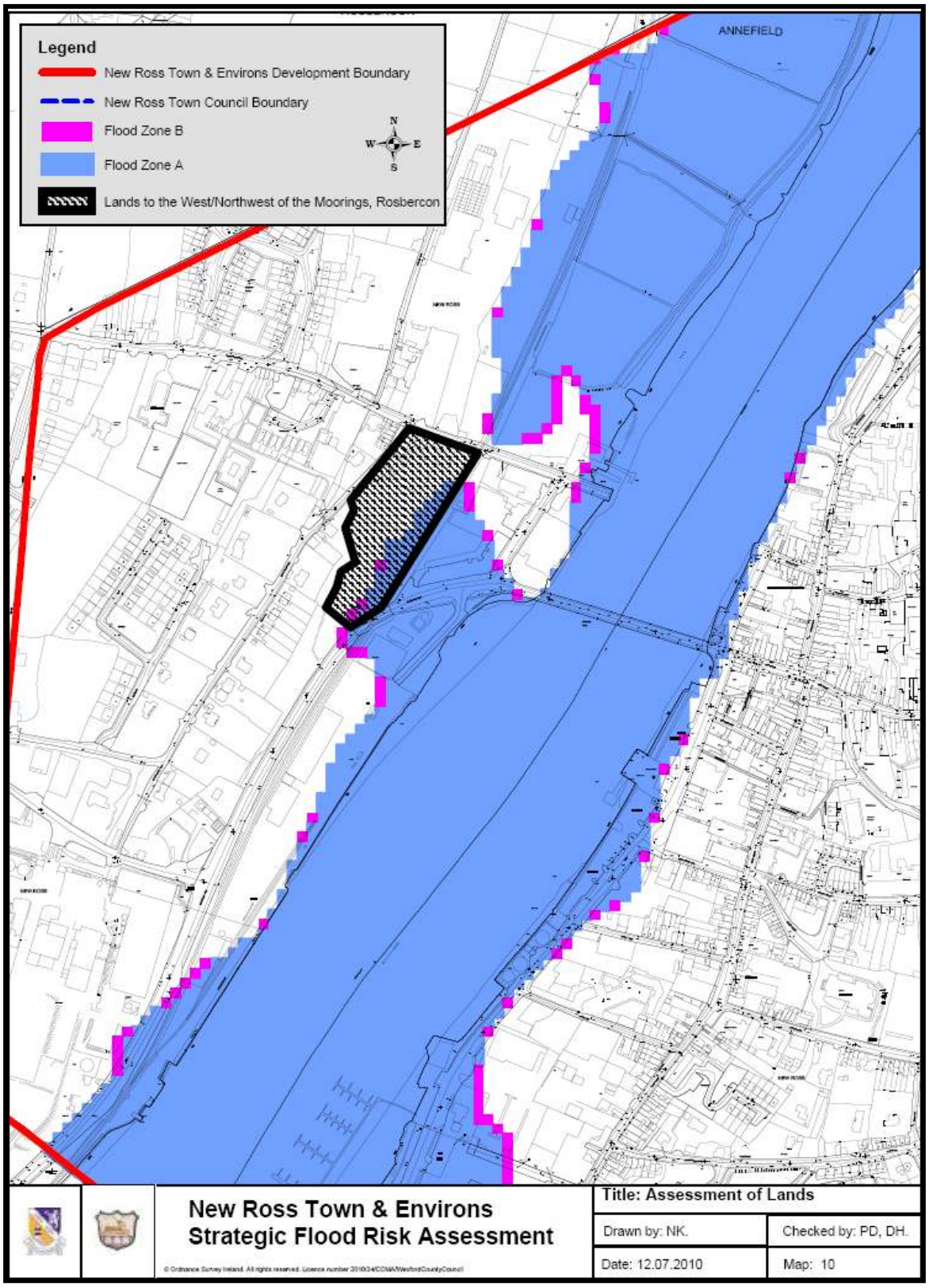
3.2.3.5 Lands to the west/northwest of the Moorings, Rosbercon

Description

The subject land is identified on Map No. 10. It is located to the northwest of the N25 and to the west/north-west of the Moorings at Rosbercon. The site is accessed from the Thomastown Road. There is a strip of land along the eastern and southern boundaries which is located is on Flood Zone A. The remainder of these lands are in Flood Zone C.

Proposed land use

These lands are zoned for ‘Existing Residential and Infill Development’.


Legend
New Ross Town & Environs Development Boundary
New Ross Town Council Boundary
Flood Zone B
Flood Zone A
Lands to the West/Northwest of the Moorings, Rosbercon
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New Ross Town & Environs
Strategic Flood Risk Assessment
Title: Assessment of Lands
Drawn by: NK.
Checked by: PD, DH.
Date: 12.07.2010
Map: 10

Justification Test Criterion 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:

The zoning of these lands for the proposed uses is essential to facilitate regeneration and/or expansion of the centre of Rosbercon.

- It will allow for higher densities in this area to build the critical mass necessary in order to create a self-sufficient town and fulfil New Ross' role as a Larger Town;
- It will result in more efficient use of infrastructure and resources;
- It will provide opportunities for improved urban design and improved public realm through the creation of space and place;

This area comprises significant under-utilised lands.

This area is located in the core of Rosbercon which forms an intrinsic part of the urban settlement of New Ross Town.

The zoning of these lands is essential in achieving compact and sustainable urban growth. The Development Plan proposes a spatial strategy that concentrates on the renewal and regeneration of underutilised sites within the town centre. Preference is given to the development of brownfield and infill sites.

There are other suitable alternative lands for this particular use, in areas at lower risk of flooding within or adjoining the core of the urban settlement. Given that only a section of these lands are located within Flood Zone A it is considered that appropriate mitigation measures can be implemented through applying the sequential approach to the design and layout of any future scheme so as to reduce flood risk to the development.

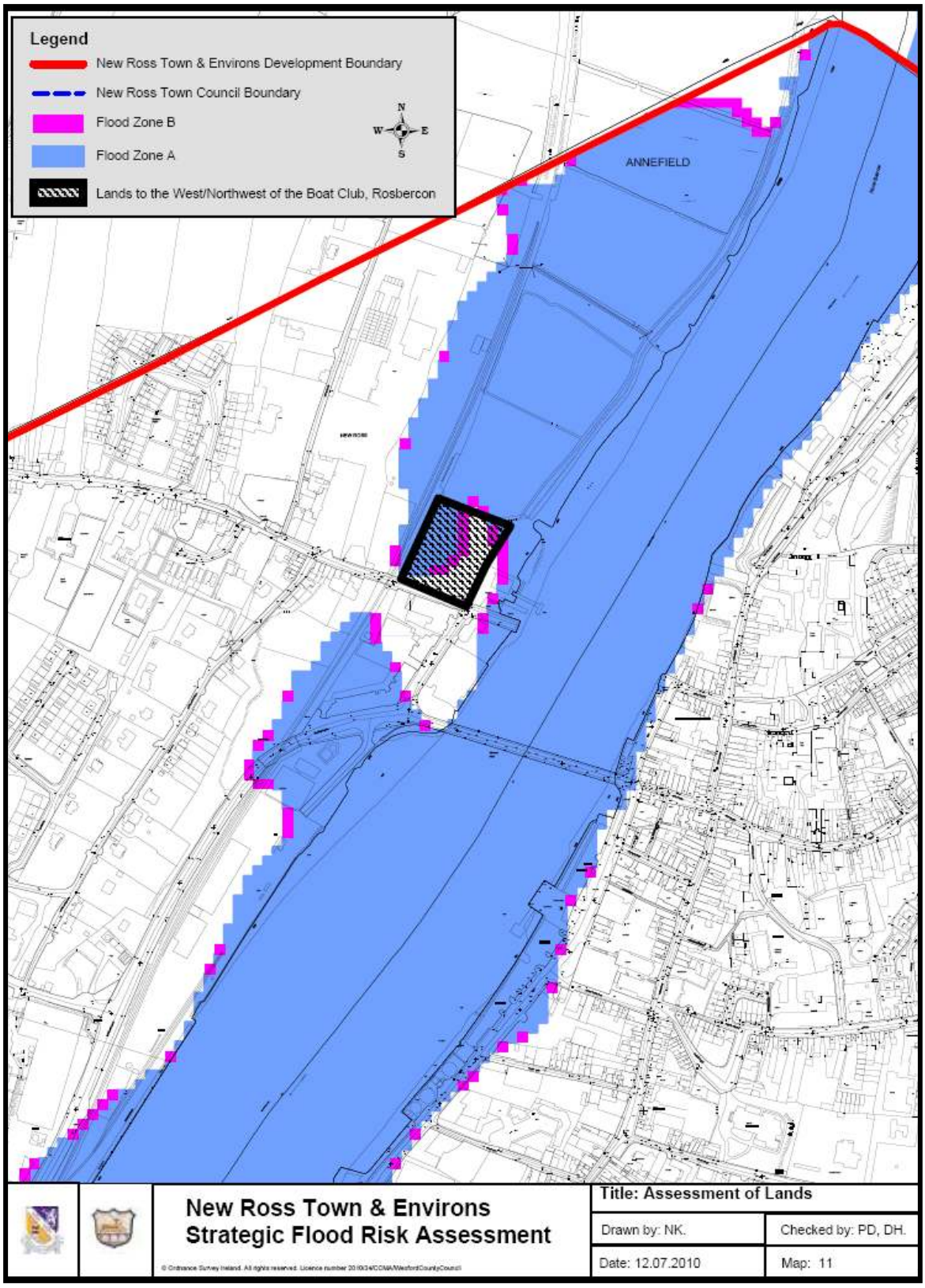
3.2.3.6 Lands to the west/northwest of the Boat Club at Rosbercon

Description

The subject land is identified on Map No. 11. It is located at Rosbercon; bound to the east by the Boat Club, to the south by the Thomastown road and to the north by undeveloped lands. The disused railway is located to the west. Some of this land is located within Flood Zone A and Flood Zone B.

Proposed land use

It is proposed to zone this land for mixed use development. This zoning will include residential which is a highly vulnerable development, retail, commercial, leisure which are less vulnerable developments and amenity open space, marina, outdoor sports and recreation facilities which are water compatible uses.


Legend
New Ross Town & Environs Development Boundary
New Ross Town Council Boundary
Flood Zone B
Flood Zone A
Lands to the West/Northwest of the Boat Club, Rosbercon
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New Ross Town & Environs
Strategic Flood Risk Assessment
Title: Assessment of Lands
Drawn by: NK.
Checked by: PD, DH.
Date: 12.07.2010
Map: 11

Justification Test Criterion 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) It is essential to facilitate regeneration and/or expansion of the centre of an urban settlement. While this site is separated from the main town centre by the river, it is be viewed as the future expansion of the town to the west of the side of the river and will contribute to the enhancement of the townscape and image of the town.

(ii) This area comprises significant under-utilised lands.

(iii) This area is located in the core of Rosbercon which forms an intrinsic part of the urban settlement of New Ross Town.

(iv) The zoning of these lands is considered *essential in achieving compact and sustainable urban growth*. The site is strategically located on the N25, adjacent to the currently disused railway line and has good pedestrian links to the Town Centre.

(v) Having regard to the location of these lands relative to the core of the town there are no are other suitable alternative lands for this land use, in areas at lower risk of flooding within or adjoining the core of the urban settlement.

3.2.4 Criterion 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.

The Strategic Environmental Assessment (SEA) Environmental Report documents the current state of the environment and outlines the likely significant effects on the environment of implementing the Development Plan. This includes the effects on biodiversity, flora and fauna, population, human health, soil, water and material assets all of which are significantly impacted by flooding and flood risk.

A matrix, shown in Appendix 1 of the Environmental Report, was used to identify conflicts or potential conflicts between the policies and objectives of the Development Plan and a number of Environmental Protection Objectives (EPOs). The EPOs are developed from international, national and regional policies which generally govern environmental protection and include objectives relating to flood risk.

The policies and objectives contained in the Development Plan aim to reduce flood risk where possible and to ensure that new development is not subject to an inappropriate risk of flooding or cause or exacerbate such a risk at other locations. As such the impacts on the environment of implementing the policies and objectives of the plan which relate to flood risk are mainly positive, with the exception of impacts on soil which are identified being both positive and negative.

Although the impacts are mainly positive a number of mitigation measures are outlined in the Environmental Report which aim to reduce flood risk within the plan area. The mitigation measures are measures envisaged to prevent, reduce and fully offset any significant adverse impacts on the environment of implementing the plan. Where positive impacts have been identified mitigation measures are designed to maximise those impacts. A summary of the mitigation measures relating to flood risk is outlined in Table 1 below.

Table 1 SEA Mitigation Measures relating to Flood Risk

MM3	To mitigate the risk of flooding through layout and design of new developments on sites which have been subject to recurring flooding.
MM11	Zone for compatible uses in areas identified as having high probability of flooding (Zone A) and mitigate the risk of flooding through layout and design of new developments.
MM12	Protect and improve natural drainage systems where possible and in the case of development works require the provision of acceptable mitigation measures in order to minimise the risk of flooding and negative impacts on water quality.
MM13	Facilitate the provision of suitable flood risk management infrastructure in the town.
MM14	Require the provision of adequate storm water retention facilities in all new developments, including the use of soft landscaping and sustainable drainage techniques.
MM15	Ensure that development should not itself be subject to an inappropriate risk of flooding nor should it cause or exacerbate such a risk at other locations.
MM16	Separate foul and surface water drainage systems where feasible in order to reduce the volume of material entering the treatment plant and to ensure that all new developments provide separate on-site foul and surface water drainage systems.

All of the mitigation measures have been incorporated into the Development Plan but most will be implemented at the project level, for example mitigation measures relating to siting, layout and design of new developments in areas at risk of flooding.

The Environmental Report also contains a monitoring programme to cross check for significant effects which arise during the implementation stage of the development plan against those predicted during the plan preparation stage. The monitoring programme outlines a number of targets and indicators to measure the impacts of flooding during the lifetime of the plan, so that residual or unforeseen impacts can be monitored and remedial action taken where necessary. The monitoring will take place during the two year review of the development plan in accordance with section 15(2) of the Planning and Development Acts 2000-2007.

3.3 Conclusion

In accordance with Section 4.23 of the Guidelines it is considered that this section has clearly demonstrated that the zoning and development of each of the lands satisfies the Justification Test. On the basis of this it is proposed to apply the following land use zoning objectives:

Lands	**Land Use Zoning**
The Quay	Town Centre
Lands to the south and west of the Town Park	Commercial
Part of lands at Marshmeadows	Port-Related Activities
Stafford's lands at Rosbercon	Mixed Use
Lands to the west/northwest of the Moorings, Rosbercon	Existing Residential and Infill
Lands to the west/northwest of the Boat Club, Rosbercon	Mixed Use

Section 4 Flooding and Development Management

4.1 Development Management Process

The planning authorities shall have regard to the requirements of The Planning System and Flood Risk Management (and Technical Appendices) Guidelines for Planning Authorities (DEHLG, OPW, 2009) when assessing development proposals where flood risk may be an issue. The following key requirements for the management of development in areas at risk of flooding shall be adhered to:

- Development proposals within, or incorporating, areas at moderate to high risk of flooding will require a site-specific and appropriately detailed flood risk assessment.
- Development proposals within, or incorporating, areas at moderate to high risk of flooding will require the application of the development management justification test in accordance with The Planning System and Flood Risk Management (and Technical Appendices) Guidelines for Planning Authorities (DEHLG, OPW, 2009).
- Any proposal that is considered acceptable in principle shall demonstrate the use of the sequential approach to inform the site layout and design of development. Proposals shall demonstrate that appropriate mitigation and management measures can be put in place and that development will not increase flood risk elsewhere.

4.2 Pre-application discussions

Pre-application discussions will be important in identifying the broad range of issues affecting a site and present an opportunity for the planning authorities to make clear to the applicants that an appropriate flood risk assessment should be carried out as part of the application preparation process. It is recommended that where flood issues are present, the planning authorities should highlight the policies and objectives of the development plan in relation to flood risk and the available information on flood zones.

4.3 Site-specific Flood Risk Assessment

Where flood risk may be an issue for any development, a more detailed flood risk assessment should be carried out appropriate to the scale and nature of the development and the risks arising. The detailed Site-specific Flood Risk Assessment should quantify the risks and the effects of any necessary mitigation, together with the measures needed or proposed to manage residual risks. A site specific flood risk assessment should provide the information detailed in Appendix A of 'The Planning System and Flood Risk Management (and Technical Appendices) Guidelines for Planning Authorities' (DEHLG, OPW, 2009) but in general should include:

- Plans showing the site and development proposals and its relationship with watercourses and structures which may influence local hydraulics;
- Surveys of site levels and cross-sections relating relevant development levels to sources of flooding and likely flood water levels;
- Assessments of:
- All potential sources of flooding;
- Flood alleviation measures already in place;
- The potential impact of flooding on the site;
- How the layout and form of the development can reduce those impacts, including arrangements for safe access and egress;
- Proposals for surface water management according to sustainable drainage principles;
- The effectiveness and impacts of any necessary mitigation measures;
- The residual risks to the site after the construction of any necessary measures and the means of managing those risks; and
- A summary sheet which describes how the flood risks have been managed for occupants of the site and its infrastructure.

4.4 Application of the Justification Test in Development Management

Where the planning authority is considering proposals for new development in areas at high or moderate risk of flooding that include types of development that are vulnerable to flooding and that would generally be inappropriate as set out in Table 3.2 of the Guidelines, the planning authority must be satisfied that the development satisfies all of the criteria of the Justification Test as it applies to development management. The following criteria must be satisfied:

1 The subject lands have been zoned or otherwise designated for the particular use or form of development in an operative development plan, which has been adopted or varied taking account of the Guidelines.

2 The proposal has been subject to an appropriate flood risk assessment that demonstrates:

(i) the development proposed will not increase flood risk elsewhere, and if practicable, will reduce overall flood risk,

(ii) The development proposal includes measures to minimise flood risk to people, property, the economy and the environment as far as reasonably possible;

(iii) The development proposed includes measures to ensure that residual risks to the area and/or development can be managed to an acceptable level as regards the adequacy of existing flood protection measures or the design, implementation and funding of any future flood risk management measures and provisions for emergency services; and

(iv) The development proposed addresses the above in a manner that is also compatible with the achievement of wider planning objectives in relation to development of good urban design and vibrant and active streetscapes.

The acceptability or otherwise of levels of residual risk should be made with consideration of the type and foreseen use of the development and the local development context.

Section 5 Conclusion

5.1 Conclusion

New Ross town has a long history of flooding from the River Barrow.The river, which is tidal at the town, has caused damage to both residential and commercial properties particularly along the quay area of the town. While the town's flooding problem cannot be eliminated, it can be managed appropriately so as to reduce its impact.

Land use management and spatial planning is a key tool in flood risk management. 'The Planning System and Flood Risk Management-Guidelines for Planning Authorities' published by the DEHLG and OPW in 2009 aims to deliver sustainable development that minimises the risk of flooding to people and property by the avoidance of inappropriate development in areas at risk of flooding.

The Strategic Flood Risk Assessment (SFRA) was prepared in accordance with the guidelines and forms an intrinsic part of the development plan. The flood zones identified have been used to guide land use zoning in the areas identified as being vulnerable to flooding. Most of the lands in Flood Zone A and Flood Zone B are either developed or brownfield sites. There was approximately 42ha of undeveloped lands in Flood Zone A. It is proposed to either rezone or dezone some of these lands with the result being that there is now approximately 19ha of undeveloped lands in Flood Zone A.

It is considered that a fair balance has been struck between avoiding flood risk and facilitating necessary development, enabling future development to avoid areas of highest risk and ensuring that appropriate measures will be taken to reduce flood risk to an acceptable level for those developments that have to take place, for reasons of proper planning and sustainable development, in areas at risk of flooding.

Legend

- Flood Zone B
- Flood Zone A
- New Ross Town & Environs Development Boundary
- New Ross Town Council Boundary

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GARRANBEHY BIG
Garrán Beithe Mór

TINNAKILLY LITTLE
Tigh na Coille Beag

GLINN
An Gleann

ANNEFIELD
Páirc Anna

GARRANBEHY LITTLE
Garrán Beithe Beag

TINNAKILLY BIG
Tigh na Coille Mór

ROSBERCON
Ros Bearrcon

ANNEFIELD

MILLBANKS
Port an Mhuilinn

MACMURROUGHS

KNOCKAVILLA

BALLYROE LOWE

BAWNMORE

COMMONS
or
NEWTOWN

MAUDLINS

MORRISSYSLAND

SHALLOWSPARK

REDHOUSE

PIGOTTS
or
TANYARD

PORTERSLAND

HEWITSLAND

CHAMBERSLAND

BUTLERSLAND

ARNESTOWN

OAKLANDS

KNOCKMULLIN

New Ross Town & Environs Strategic Flood Risk Assessment

Title: Flood Zone Map

Drawn by: NK	Checked by: PD, DH.
Date: 14.02.2011	Map No: 2