Appendix 17 **Tiered Approach to Zoning**



Waterford City & County Council Comhairle Cathrach & Contae Phort Láirge Waterford City and County Council Draft Development Plan 2022 - 2028

APPENDIX 17 – Tiered Approach to Zoning

1.0 Purpose of the Appendix No. 17

This Serviced Land Assessment has been prepared in accordance with the methodology provided in the NPF to determine a residential zoning framework and to support sustainable growth and development over the lifetime of the Plan for the following zoned settlements within the County:

- Waterford City,
- Dungarvan/Ballinroad,
- Clonmel Environs,
- Tramore,
- Dunmore East,
- Lismore,
- Portlaw; and
- Gaeltacht na nDéise

The report should be read in conjunction with Appendix No. 14 Infrastructure Capacity

2.0 Policy Context

The NPF has provided a framework to promote the principles of compact sustainable growth and to seek to ensure effective linkages between the zoning of land and the availability of infrastructure. A standardised methodology to zoning is provided in Appendix 3 of the NPF and key national policy provisions are outlined below:

• Tiered Approach to Assessment

National Planning Objective 72(a) requires local authorities to apply a standardised approach to zoning, to identify lands that are serviced (Tier 1) and land that are serviceable within the lifetime of the plan (Tier 2). Where lands do not fall within Tier 1 or Tier 2, they may not be zoned for development. National Policy Objective 72(b) also requires local authorities when considering the zoning of land to identify infrastructural requirements and where appropriate to provide a delivery strategy and cost estimate.

• Sequential Approach and Sustainable Development

The NPF recognises that the availability of physical infrastructure should not be the sole determinant of the zoning of land. In relation to the prioritising of development lands, Section 10.2 of the NPF states that 'there are many other planning considerations relevant to land zoning beyond the provision of basic enabling infrastructure including overall planned levels of growth, location, suitability for the type of development envisaged, availability of and proximity to amenities, schools, shops or employment, accessibility to transport services etc. Weighing up all of these factors, together with the availability of infrastructure, will assist planning authorities in determining an order of priority to deliver planned growth and development'

3.0 Methodology

Each zoned settlement is assessed below with regards to site identification, site assessment, land-use framework and infrastructure delivery. A more detailed analysis of infrastructure capacity is provided in Appendix 14. The table for each zoned settlement represents the final short list of sites arising from a broader site assessment and all residential zoned lands set out in the Development Plan. The Serviced Land and Infrastructure Assessment has been developed having regard to the policy provisions set out above and the standardised methodology provided in Appendix 3 ofthe NPF.

Population Growth

Chapter 2 of the draft Development Plan has provided for a sustainable population growth rate for the zoned settlements. This is also outlined in Table 1 below. This provided a baseline figure to meet in identifying land suitable for development for residential purposes.

Settlement	2016 Population	2028 Population	% Uplift	Land is required to meet the anticipated population (+ headroom)
Waterford City & Suburbs	48,216	62,382	23	90.6
Dungarvan/Ballinroad	10,388	11,864	12	11
Tramore	10,381	11,549	12	8.7
Dunmore East	1,808	2,002	10	1.7
Portlaw	1,742	1,929	10	1.7
Lismore	1,374	1,521	10	1.3
An Rinn	499	583	14	1
Clonmel Environs	925	1,056	12	1

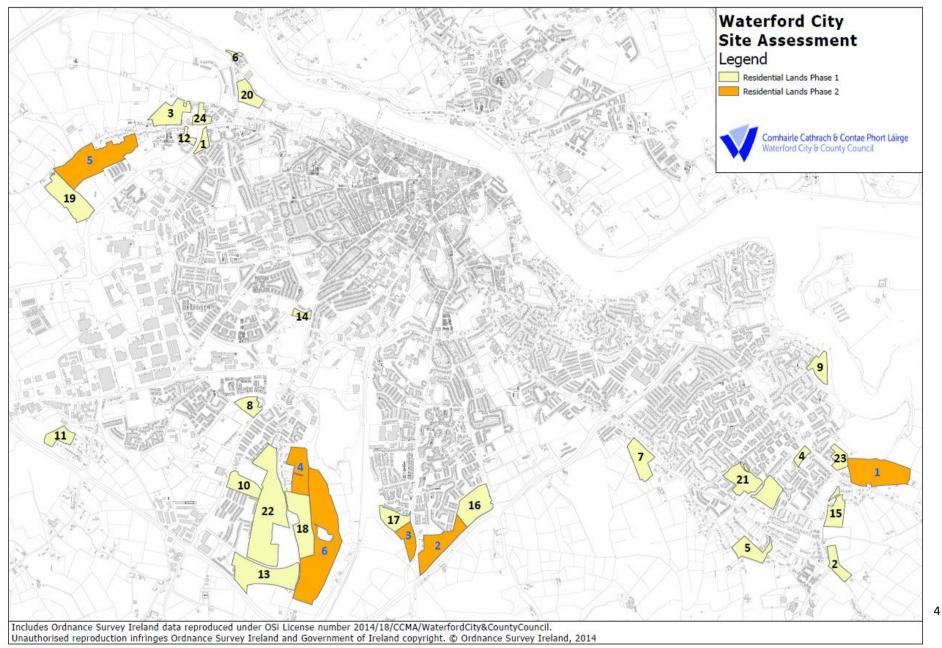
TABLE 1 - POPULATION UPLIFT AND ZONED RESIDENTIAL LAND REQUIREMENT

We have provided a map and table of each zoned settlement which identifies each site and provides an assessment for each selected parcel of land.

4.0 Waterford City Site Identification

- The existing Waterford City Development Plan 2013 2019 included. c.254 ha of zoned land for residential purposes. 59 ha have been developed over the lifetime of the Plan.
- All lands currently identified within the existing plan and a number of contiguous sites were identified for detailed review and assessment. Land identified by the Strategic Flood Risk Assessment to be at risk of flooding was discounted from the assessment. In total 30 sites (24 phase 1 and 6 phase 2 site) were identified for further examination as illustrated in Figure 1 below.

FIGURE 1: WATERFORD CITY SITE ASSESSMENT



4.1 Waterford City Site Assessment

All sites have been appraised based on infrastructural requirements and land use criteria. Tables 2 and 3 provide a summary of the evaluation process which applies to Waterford City and to all zoned settlements in the County. Table 4A provides an explanation of the weighting/scoring description of infrastructure availability in Waterford for Phase 1 lands and Table 4B provides the same explanation for Phase 2 lands. It should be noted that the overriding infrastructural consideration and constraint for Waterford City are as follows:

- Capacity of the public waste water network with regards to the Avondale Sewer.
- Development of lands on outer ring road at Williamstown will put further pressure on network.
- A significant upgrade of the sewer network is required to service lands south of Greenfields/Fairfield.

Score	Infrastructure Requirements
1	Existing infrastructure can support the development of the site, subject to on site works, some minor works at access points or linking into available existingsystems.
2	Some off-site works are required but could be delivered as part of a planning application to develop the site or capital investment is identified to facilitate development over the course of the plan.
0	The land could not reasonably be serviced over the course of the plan and capital investment works have not been identified to meet the infrastructural need to develop the site over the course of the plan. These sites are discounted, and no further assessment is made.

TABLE 2 INFRASTRUCTURE CAPACITY

Characteristic	Description
Compact Growth	Proximity to the town centre and services – distance of no more than 1km or 5 min walk from the town and neighbourhood centre is desirable
Public Transport	Whether public transport modes are available within proximity of the site or connected walking & cycle routes provide easy access to public transport and services
Co-Ordinated Development	That the development of the land will contribute to or complete the strategic development of the wider area

TABLE 3: PLANNING ASSESSMENT CRITERIA

Ref:	Site Name	Phase	Area(ha)	Roads	Footpath	Water Supply	Waste Water	Compact Growth	Public Transport	Co-ordinated Dev.
1	Ballynamona (WCCC)	1	1.34	1	1	1	1	✓	✓	✓
2	Ballygunner (WCCC)	1	2.74	1	1	1	1	✓	✓	✓
3	Aughavnagh	1	5.27	1	1	1	1	✓	✓	✓
4	Grantstown	1	1.15	1	1	1	1	✓	✓	✓
5	Williamstown Road (East)	1	4.18	1	1	1	1	✓	✓	✓
6	Bilberry	1	0.51	1	1	1	1	✓	✓	√
7	Williamstown Road (West)	1	4.81	1	1	1	1	✓	✓	✓
8	Ballybeg (North)	1	2.55	1	1	1	1	✓	✓	√
9	King's Channel	1	2.91	1	1	1	1	✓	✓	✓
10	Kilbarry Road	1	3.96	1	1	1	1	✓	✓	✓
11	Balltnaneashagh	1	2.89	1	1	1	1	✓	✓	✓
12	Bawndaw (WCCC)	1	1.05	1	1	1	1	✓	✓	✓
13	Kilbarry (LIHAF Road South)	1	11.02	1	1	1	1	✓	✓	✓
14	Matties Hill	1	0.91	1	1	1	1	✓	✓	✓
15	Knockboy	1	3.85	1	1	1	1	✓	✓	✓
16	Kilcohan (Kill Saint Lawerce)	1	6.95	1	1	1	1	✓	✓	✓
17	Kilcohan (Greenfields)	1	3.48	1	1	1	1	✓	✓	√
18	Kilbarry (Lacken Road East)	1	8.91	1	1	1	1	✓	✓	√
19	Carrickphierish	1	8.01	1	1	1	1	✓	\checkmark	√
20	Rocklands	1	3.35	1	1	1	1	✓	\checkmark	√
21	Grantstown (Padocks)	1	9.38	1	1	1	1	✓	✓	√
22	Kilbarry (Lacken Road West)	1	21.23	1	1	1	1	✓	✓	√
23	Knockboy (North)	1	2.26	1	1	1	1	✓	✓	√
24	Gracedieu (LIHAF)	1	1.80	1	1	1	1	✓	✓	√
Total			114.43							

TABLE 4A: WATERFORD CITY PHASE 1 SITE-SPECIFIC INFRASTRUCTURE ASSESSMENT

Ref:	Site Name	Phase	Area(ha)	Roads	Footpath	Water Supply	Waste Water	Compact Growth	Public Transport	Co-ordinated Dev.
1	Knockboy (North)	2	11.01	1	1	1	1	~	✓	~
2	Kilcohan (Kill Saint Lawerce)	2	7.44	1	1	1	1	~	✓	~
3	Kilcohan (Greenfields)	2	3.05	1	1	1	1	~	✓	~
4	Kilbarry	2	6.06	1	1	1	1	~	✓	~
5	Carrickphierish	2	14.12	1	1	1	1	~	~	~
6	Kilbarry	2	23.79	1	1	1	1	~	✓	~
Total			65.45							

TABLE 4B: WATERFORD CITY PHASE 2 SITE-SPECIFIC INFRASTRUCTURE ASSESSMENT

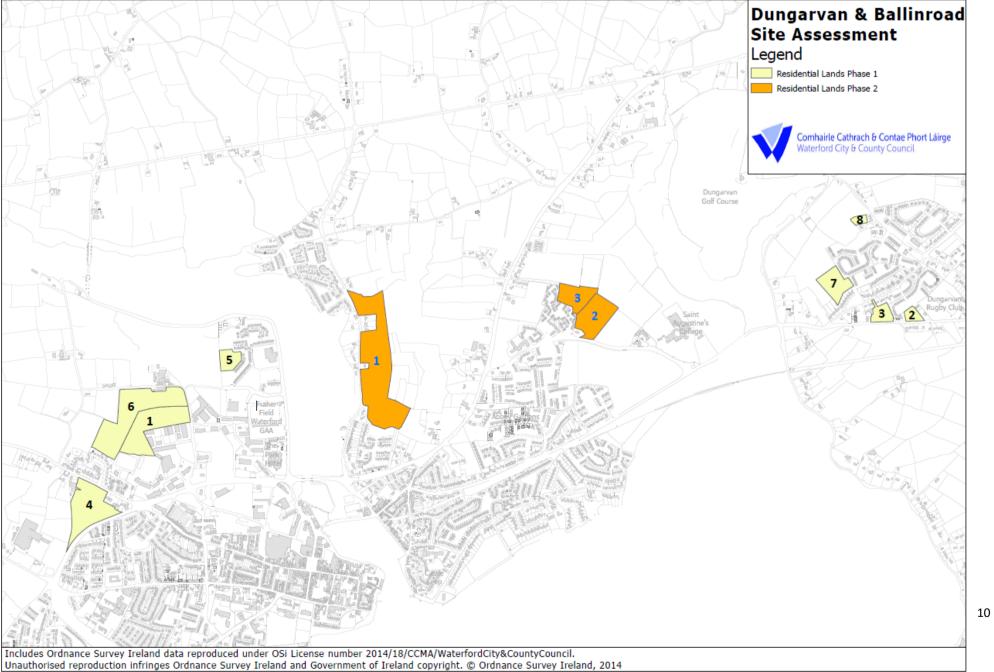
4.2 Waterford City Land Use Framework

Having regard to the NPF methodology for land zoning, the population targets, infrastructure capacity and the comprehensive review of the lands, the above sites are considered to meet land zoning requirements and will support the sustainable growth of Waterford City during the life time of the plan.

5.0 Dungarvan/Ballinroad Site Identification

- In relation to Dungarvan/Ballinroad the existing Dungarvan Town Development Plan 2012 –
 2018 and the Waterford County Development Plan 2011 2017 has included c.73 ha of zoned land for residential purposes. 6 ha have been developed over the lifetime of the Plan.
- All lands currently identified with in existing plan and a number of contiguous sites were identified for detailed review and assessment. Land identified by the Strategic Flood Risk Assessment to be at risk of flooding was discounted from the assessment. In total 11 sites (8 sites phase 1 and 3 sites phase 2) were identified for further examination as illustrated in Figure 2 below.

FIGURE 2: DUNGARVAN/BALLINROAD SITE ASSESSMENT



5.1 Dungarvan/Ballinroad Site Assessment

All sites have been appraised based on infrastructural requirements and land use criteria. Tables 2 and 3 above provide a summary of the evaluation process. Table 5A provides an explanation of the weighting/scoring description of infrastructure availability for Phase 1 lands and Table 5B provides the same explanation for Phase 2 lands in Dungarvan/Ballinroad. It should be noted that the overriding infrastructural consideration and constraint for Dungarvan/Ballinroad are as follows:

- The capacity of the public waste water treatment plant is an issue during peak season. The plant currently has a limited space capacity of circa. 6,500 PE.
- Increased pump capacity at Southways can help service Monang Road.
- Mongang and Shandon lands are readily serviceable.
- Ground water infiltration into network at the spring roundabout.
- Services in Abbeyside are good and gravity sewer by St. Augustine's can service Duckspool area and land north of N25.
- Water network is generally good Storage capacity is limited however Irish Water plan to upgrade storage and treatment plant which should be completed within 5. GSK has additional private supply.
- Water mains undersized on Ballinacourty line.

5.2 Dungarvan/Ballinroad Land Use Framework

Having regard to the NPF methodology for land zoning, the population targets, infrastructure capacity and the comprehensive review of the lands, the above sites are considered to meet land zoning requirements and will support the sustainable growth of the town.

Ref:	Site Name	Phase	Area (ha)	Roads	Footpath	Water Supply	Waste Water	Compact Growth	Public Transport	Co-ordinated Dev.
1	Shandon (South)		4.77	1	1	1	1	✓	✓	✓
2	Ballinroad (East)		0.56	1	1	1	1	x	✓	x
3	Ballinroad (South)		0.97	1	1	1	1	x	✓	x
4	Kilrush		4.64	1	1	1	1	✓	✓	✓
5	Estuary Heights		1.10	1	1	1	1	✓	✓	✓
6	Shandon (North)		7.07	1	1	1	1	✓	✓	✓
7	Ballinroad (West)		1.93	1	1	1	1	x	✓	x
8	Ballinroad (North)		0.35	1	1	1	1	x	✓	x
Total			21.39							

TABLE 5A: DUNGARVAN/BALLINROAD PHASE 1 SITE-SPECIFIC INFRASTRUCTURE ASSESSMENT

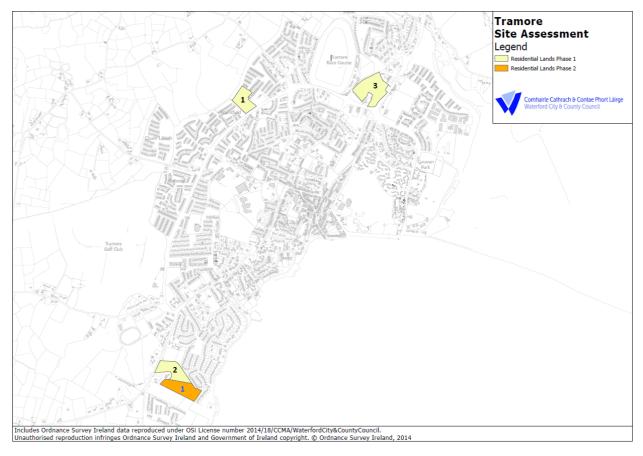
Ref:	Site Name	Phase	Area (ha)	Roads	Footpath	Water Supply	Waste Water	Compact Growth	Public Transport	Co-ordinated Dev.
1	Monang	2	10.83	1	2	1	1	x	x	\checkmark
2	Duckspool (South)	2	3.18	1	1	1	1	×	x	x
3	Duckspool (North)	2	2.07	1	1	1	1	x	x	x
Total			16.09							

TABLE 5B: DUNGARVAN/BALLINROAD PHASE 2 SITE-SPECIFIC INFRASTRUCTURE ASSESSMENT

6.0 Tramore Town Site Identification

- With regards to Tramore the Tramore Local Area Plan 2014 2020 has included c.44 ha of zoned land for residential purposes. 9 ha have been developed over the lifetime of the Plan.
- All lands currently identified with in existing plan and a number of contiguous sites were identified for detailed review and assessment. Land identified by the Strategic Flood Risk Assessment to be at risk of flooding was discounted from the assessment. In total 4 sites (3 phase 1 sites and 1 phase 2 site) were identified for further examination as illustrated in Figure 3 below.

FIGURE 3: TRAMORE SITE ASSESSMENT



6.1 Tramore Town Site Assessment

All sites have been appraised based on infrastructural requirements and land use criteria. Tables 2 and 3 provide a summary of the evaluation process. Table 6A provides an explanation of the weighting/scoring description of infrastructure availability for Phase 1 lands and Table 6B provides the same explanation for Phase 2 lands in Tramore. It should be noted that the overriding infrastructural consideration and constraint for Tramore area as follows:

- Major network capacity issues to all pump stations.
- Upgrade pipe size at Monvoy along Glen Road (225/300mm pipe to 450mm pipe) while 3 additional pumps required at An Garraun.
- Need upgrade of line on Cliff Road due to combined sewer and missed connections.
- WWTP at capacity 6 months of year due to PE and combined storm flows with overflow into back strand.
- Space for additional scarrifiers and settling ponds at WWTP.
- Infiltration of surface/ground water into the network.
- Water Network has a distribution issues esp. north of church and ring road served from Sporthouse with history of breakages on this 10" main. Developer led solutions addressing this distribution on agreement of IW. Increase capacity at Sporthouse by 69% (current 5k PE) plus new 10 inch main. Alternative to facilitate pressurised water from Ballydrislane (Racecourse) with new 10k m3 reservoir to service elevated lands and avoid disruption to Bulterstown area by way of Sporthouse works.

6.2 Tramore Town Land Use Framework

Having regard to the NPF methodology for land zoning, the population targets, infrastructure capacity and the comprehensive review of the lands, the above sites are considered to meet land zoning requirements and will support the sustainable growth of the town.

Ref:	Site Name	Phase	Area (ha)	Roads	Footpath	Water Supply	Waste Water	Compact Growth	Public Transport	Co-ordinated Dev.
1	Monloum	1	2.34	1	1	1	1	~	~	~
2	Newtown (North)	1	2.86	1	1	1	1	X	~	X
3	Crobally Upper	1	4.65	1	1	1	1	✓	✓	✓
Total			9.86							

TABLE 6A: TRAMOR PHASE 1 SITE-SPECIFIC INFRASTRUCTURE ASSESSMENT

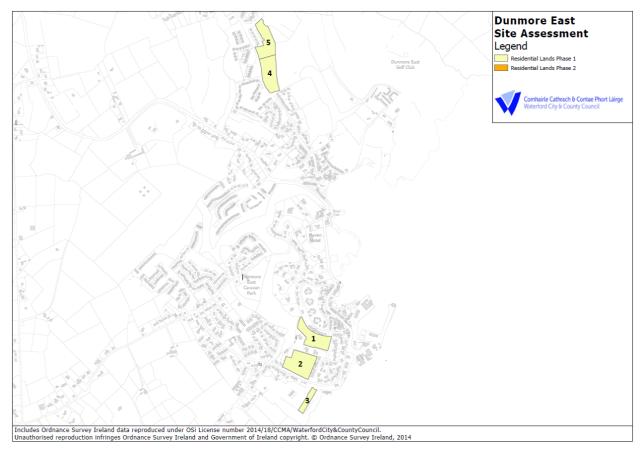
Ref:	Site Name	Phase	Area (ha)	Roads	Footpath	Water Supply	Waste Water	Compact Growth	Public Transport	Co-ordinated Dev.
1	Newtown (South)	2	3.07	1	1	1	1	X	~	Х
Total			3.07							

TABLE 6B: TRAMOR PHASE 2 SITE-SPECIFIC INFRASTRUCTURE ASSESSMENT

7.0 Dunmore East Site Identification

- With regards to Dunmore East the Waterford County Development Plan 2011 2017 has included c.77 ha of zoned land for residential purposes. 3 ha have been developed over the lifetime of the Plan.
- All lands currently identified with in existing plan and a number of contiguous sites were identified for detailed review and assessment. Land identified by the Strategic Flood Risk Assessment to be at risk of flooding was discounted from the assessment. In total 5 sites (phase 1) were identified for further examination as illustrated in Figure 4 below.

FIGURE 4 DUNMORE EAST SITE ASSESSMENT



7.1 Dunmore East Site Assessment

All sites have been appraised based on infrastructural requirements and land use criteria. Tables 2 and 3 above provide a summary of the evaluation process. Table 7A provides an explanation of the weighting/scoring description of infrastructure availability for Phase 1 lands in Dunmore. It should be noted that the overriding infrastructural consideration and constraint for Dunmore East is as follows:

• Water Network Reservoir capacity only 6 hr capacity and not 24 hr as would generally be required, water pressure poor in Killea and Coxtown as a result.

7.2 Dunmore East Land Use Framework

Having regard to the NPF methodology for land zoning, the population targets, infrastructure capacity and the comprehensive review of the lands, the above sites are considered to meet land zoning requirements and will support the sustainable growth of the town.

Ref:	Site Name	Phase	Area (ha)	Roads	Footpath	Water Supply	Waste Water	Compact Growth	Public Transport	Co-ordinated Dev.
1	Circular Road	1	1.45	1	1	1	1	✓	~	✓
2	Coxtown (North)	1	1.86	1	1	1	1	~	~	\checkmark
3	Coxtown (East)	1	0.45	1	1	1	1	✓	~	✓
4	Auskurra Little (South)	1	1.56	1	1	1	1	x	~	x
5	Auskurra Little (North)	1	1.46	1	1	1	1	x	~	x
Total			6.78							

TABLE 7A: DUNMORE EAST PHASE 1 SITE-SPECIFIC INFRASTRUCTURE ASSESSMENT

8.0 Portlaw Town Site Identification

- With regards to Portlaw the Portlaw Local Area Plan 2014 2020 has included c.7 ha of zoned land for residential purposes. 0.62 ha have been developed over the lifetime of the Plan.
- All lands currently identified with in existing plan and a number of contiguous sites were identified for detailed review and assessment. Land identified by the Strategic Flood Risk Assessment to be at risk of flooding was discounted from the assessment. In total 2 sites (phase 1) were identified for further examination as illustrated in Figure 5 below.

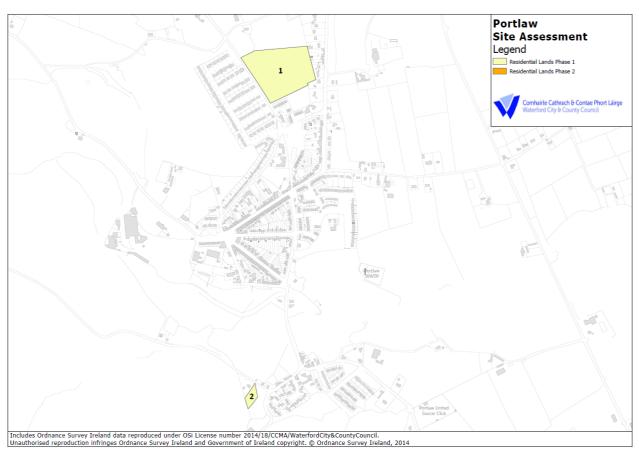


FIGURE 5: PORTLAW SITE ASSESSMENT

8.1 Portlaw Town Site Assessment

All sites have been appraised based on infrastructural requirements and land use criteria. Tables 1 and 2 above provide a summary of the evaluation process. Table 8 provides an explanation of the weighting/scoring description of infrastructure availability for Phase 1 lands in Portlaw. It should be noted that the overriding infrastructural consideration and constraint for Portlaw are as follows:

• Local groundwater source with no capacity for servicing across the town which results in an inconsistent water quality. A new connection to Adamstown is needed.

8.2 Portlaw Town Land Use Framework

Having regard to the NPF methodology for land zoning, the population targets, infrastructure capacity and the comprehensive review of the lands, the above sites are considered to meet land zoning requirements and will support the sustainable growth of the town.

Ref:	Site Name	Phase	Area (ha)	Roads	Footpath	Water Supply	Waste Water	Compact Growth	Public Transport	Co-ordinated Dev.
1	Old Scrouty Road	1	4.64	1	1	1	1	~	~	\checkmark
2	Coolfin	1	0.28	1	1	1	1	~	~	~
Total			4.93							

TABLE 8: PORTLAW-PHASE 1 SITE SPECIFIC INFRASTRUCTURE ASSESSMENT

9.0 Lismore Town Site Identification

- In relation to Lismore the Lismore Local Area Plan 2014 2020 has included c.6 ha of zoned land for residential purposes. 0.77 ha have been developed over the lifetime of the Plan.
- All lands currently identified with in existing plan and a number of contiguous sites were identified for detailed review and assessment. Land identified by the Strategic Flood Risk Assessment to be at risk of flooding was discounted from the assessment. In total 2 sites (phase 1) were identified for further examination as illustrated in Figure 6 below.

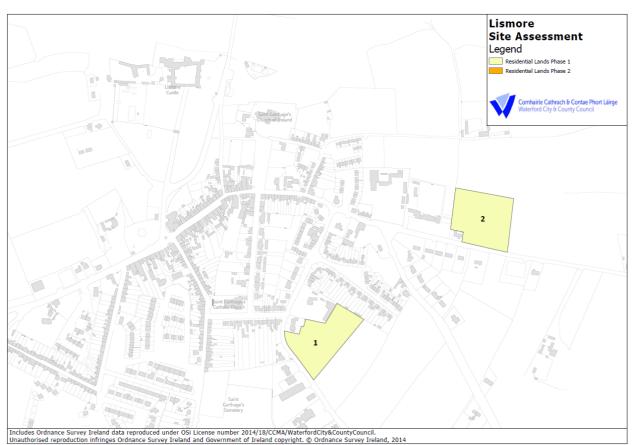


FIGURE 6: LISMORE SITE ASSESSMENT

9.1 Lismore Town Site Assessment

All sites have been appraised based on infrastructural requirements and land use criteria. Tables 1 and 2 above provide a summary of the evaluation process and Table 9 provides an explanatory of the weighting/scoring description of infrastructure availability. It should be noted that the overriding infrastructural consideration for Lismore is as follows:

• Water storage capacity is low with high leakage locally.

9.2 Lismore Town Land Use Framework

Having regard to the NPF methodology for land zoning, the population targets, infrastructure capacity and the comprehensive review of the lands, the above sites are considered to meet land zoning requirements and will support the sustainable growth of the town.

Ref:	Site Name	Phase	Area (ha)	Roads	Footpath	Water Supply	Waste Water	Compact Growth	Public Transport	Co-ordinated Dev.
1	Deerpark/Mayfield Road	1	1.46	1	1	1	1	~	✓	\checkmark
2	Ballyea Road	1	1.61	1	1	1	1	~	✓	\checkmark
Total			3.07							

TABLE 9: LISMORE SITE-SPECIFIC INFRASTRUCTURE ASSESSMENT

10.0 Gaeltacht na nDéise Site Identification

- With regards to Gaeltacht na nDéise Waterford County Development Plan 2011 2017 has included c.33 ha of zoned land for residential purposes. Circa Oha have been developed over the lifetime of the Plan.
- All lands currently identified with in existing plan and a number of contiguous sites were identified for detailed review and assessment. Land identified by the Strategic Flood Risk Assessment to be at risk of flooding was discounted from the assessment. In total 6 sites (5 phase 1 and 1 phase 2) were identified for further examination as illustrated in Figure 7 below.

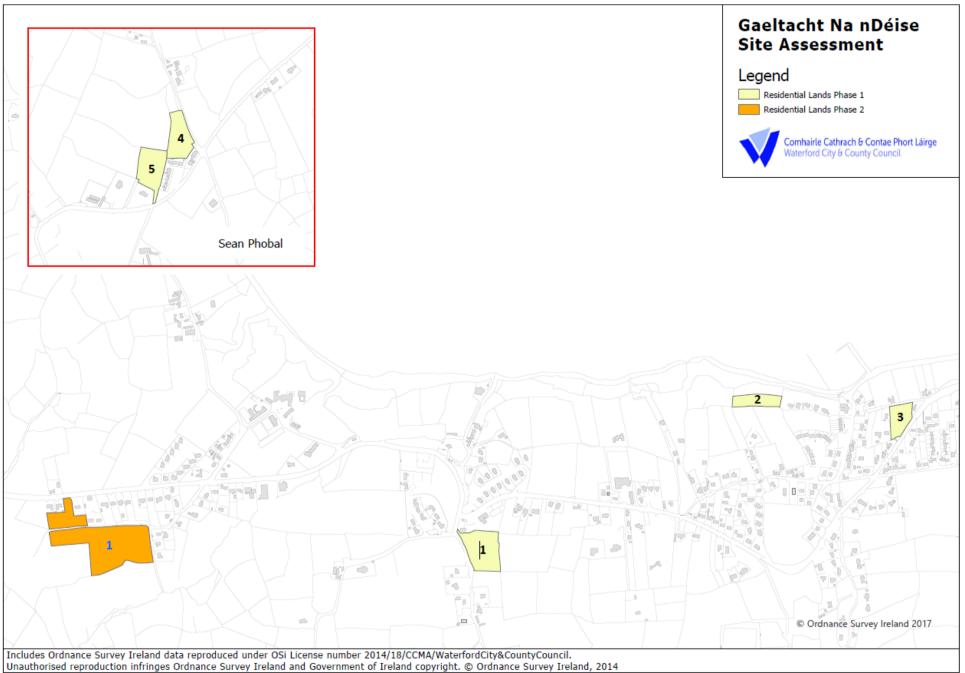
10.1 Gaeltacht na nDéise Site Assessment

All sites have been appraised based on infrastructural requirements and land use criteria. Tables 1 and 2 above provide a summary of the evaluation process. Table 10A provides an explanation of the weighting/scoring description of infrastructure availability for Phase 1 lands and Table 10B provides the same explanation for Phase 2 lands in Gaeltacht na nDeise.

10.2 Gaeltacht na nDéise Land Use Framework

Having regard to the NPF methodology for land zoning, the population targets, infrastructure capacity and the comprehensive review of the lands, the following sites are considered to meet land zoning requirements and will support the sustainable growth of the town.

FIGURE 7: GAELTACHT NA NDÉISE SITE ASSESSMENT



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Ref:	Site Name	Phase	Area (ha)	Roads	Footpath	Water Supply	Waste Water	Compact Growth	Public Transport	Co-ordinated Dev.
1	Cluain na Si	1	1.17	1	1	1	1	✓	~	~
2	Baile na nGall Beag (West)	1	0.50	1	1	1	1	~	~	~
3	Baile na nGall Beag (East)	1	0.54	1	1	1	1	✓	✓	~
4	Sean Phobal (North)		0.83	1	1	1	1	✓	✓	~
5	Sean Phobal (South)		0.93	1	1	1	1	~	×	~
Total			3.97							

TABLE 10A: GAELTACHT NA NDÉISE PHASE 1 SITE-SPECIFIC INFRASTRUCTURE ASSESSMENT

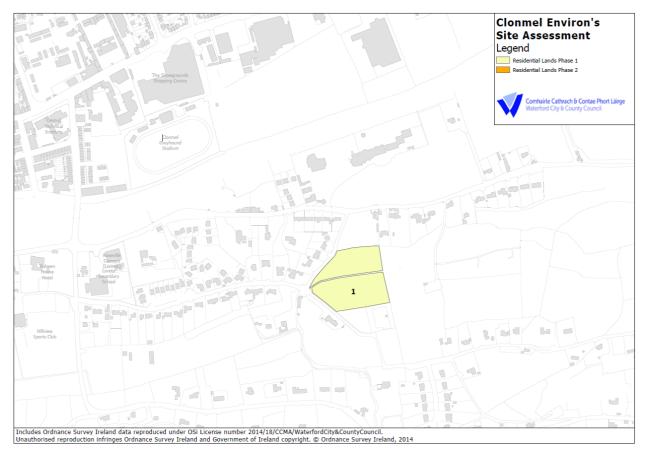
Ref:	Site Name	Phase	Area (ha)	Roads	Footpath	Water Supply	Waste Water	Compact Growth	Public Transport	Co-ordinated Dev.
1	Maoil an Choirnigh	2	3.38	1	1	1	1	x	✓	x
Total			3.38							

TABLE 10B: GAELTACHT NA NDÉISE PHASE 2 SITE-SPECIFIC INFRASTRUCTURE ASSESSMENT

11.0 Clonmel Environs Site Identification

- With regards to Clonmel Environs Waterford County Development Plan 2011 2017 has included c.40 ha of zoned land for residential purposes. Circa Oha have been developed over the lifetime of the Plan.
- All lands currently identified with in existing plan and a number of contiguous sites were
 identified for detailed review and assessment. Land identified by the Strategic Flood Risk
 Assessment to be at risk of flooding was discounted from the assessment. In total 1 site (phase
 1) was identified for further examination as illustrated in Figure 8 below.

FIGURE 8: CLONMEL ENVIRONSSITE ASSESSMENT



11.1 Clonmel Environs Site Assessment

All sites have been appraised based on infrastructural requirements and land use criteria. Tables 1 and 2 above provide a summary of the evaluation process and Table 11 provides an explanatory of the weighting/scoring description of infrastructure availability. It should be noted that the overriding infrastructural consideration and constraint for Clonmel are as follows:

• Security of supply and adequate pressure cannot be guaranteed during periods of adverse weather from Glenary Water Supply.

11.2 Clonmel Environs Land Use Framework

Having regard to the NPF methodology for land zoning, the population targets, infrastructure capacity and the comprehensive review of the lands, the following sites are considered to meet land zoning requirements and will support the sustainable growth of the town.

Ref:	Site Name	Phase	Area (ha)	Roads	Footpath	Water Supply	Waste Water	Compact Growth	Public Transport	Co-ordinated Dev.
1	Old Spa Road	1	1.93	1	1	1	1	~	~	~
Total			1.93							

TABLE 11: CLONMEL ENVIRONS SITE-SPECIFIC INFRASTRUCTURE ASSESSMENT