

SAFETY and URBAN DESIGN

Transition Zones on National Roads

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Landscape Architect



It requires **different design solutions** for **different contexts**.

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A supplement to DMURS



TII Publications



The Treatment of Transition Zones to Towns and Villages on National Roads

DN-GEO-03084
August 2018



Standards

Design Manual for Urban Roads and Streets

Website www.dmurs.ie

2019 DMURS version

and

Supplementary Material/ 5 Advice Notes

Launched August 2019



An Roinn Iompair,
Turasoireachta agus Spóirt
Department of Transport,
Tourism and Sport



An Roinn Tithíochta,
Pleanála agus Rialtais Aitiúil
Department of Housing,
Planning and Local Government



TII Publications



The Treatment of Transition Zones to Towns and Villages on National Roads

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Standards

1.0 Introduction

This advice note defines the meaning and function of Gateways and Transition Zones as they apply to the approaches to our towns and villages. It also explains the function of gateways and transition zones in relation to speed reduction/ passive traffic calming, wayfinding and place making. It describes the analytical process required to allow designers identify:

1. the extent of the transition zone, and
2. the optimum position of gateways.

This is followed by guidance on the design of gateways and transition zones.¹

A transition zone is the zone between the rural environment and more urbanised development. It is an area where speed reductions must occur when entering an urban area from a higher speed road (see Figure 1).

Gateway features are easily identifiable elements along the route which signal a change of context. These gateways can be used to influence driver behaviour, wayfinding, and signal an entrance to an urban area.

To identify the extent of a transition zone and suitable locations for gateways, the designer must analyse the street or road to see where the context changes, ie: where the context transitions from rural fringe to village/town centre.

1.1 Street Context - Classification and Method for Analysis

In most circumstances the characteristics of a place enable straightforward classification of its context, eg: Rural; Transition Zone; Town (see also Figure 2). However, there are places where context is more ambiguous. In such cases designers are required to carry out an analysis to identify the context of a place.

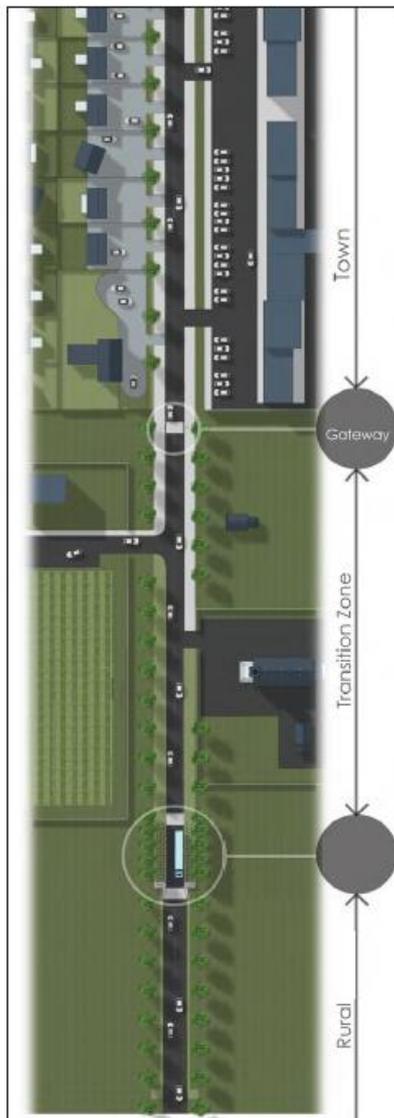


Figure 1 Illustration of a typical inner and outer Gateways, and Transition Zone from a rural road to a town/village.



TII Publications



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¹ For urban national roads, the designer is also required to comply with DN-GEO-03084 Treatment of Transition Zones to Towns and Villages on Urban Roads (2018).

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Transition Zones

‘It requires **different design solutions** for **different contexts.**’

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Understanding Local Context

ADVICE NOTE 1 - Transition Zones and Gateways



RURAL FRINGE

Boundary – hedgerow and trees

Footpath – none

Kerb – none

Access – infrequent or limited to farmland

Road width – carriageway only

Street lighting – none

Built form – infrequent

Speed limit – greater than 60kph



TRANSITION ZONE

Boundary – hedgerow and garden hedges with occasional boundary walls and gates

Footpath – commencing to one side

Kerb – occasional to one side

Access – increased individual access

Road width – carriageway, including setback/layby

Street lighting – occasional or none

Built form – occasional buildings offset from road

Speed limit –50-60kph



TOWN/SETTLEMENT

Boundary – garden hedges, walls, railings

Footpath –both sides

Kerb – continuous dropped at crossings

Access –individual, school and housing access

Road width – carriageway only, no setback or parking

Street lighting –one side

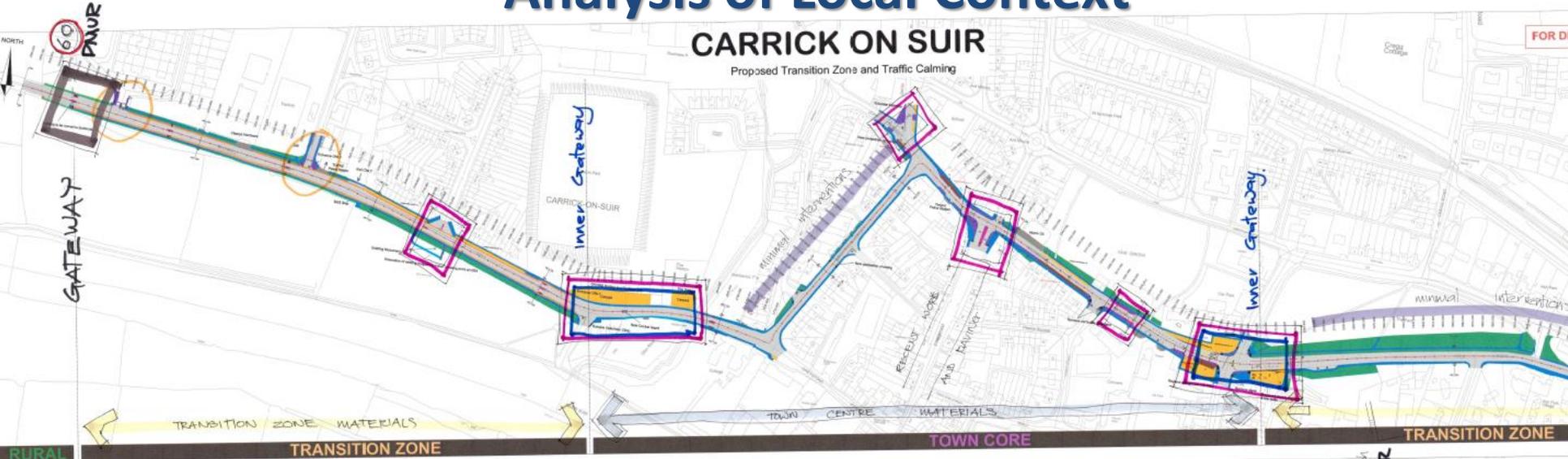
Built form – closer to road, more regular building line

Speed limit – 30-50-60kph

Analysis of Local Context

CARRICK ON SUIR

Proposed Transition Zone and Traffic Calming



Transition Zone

N24

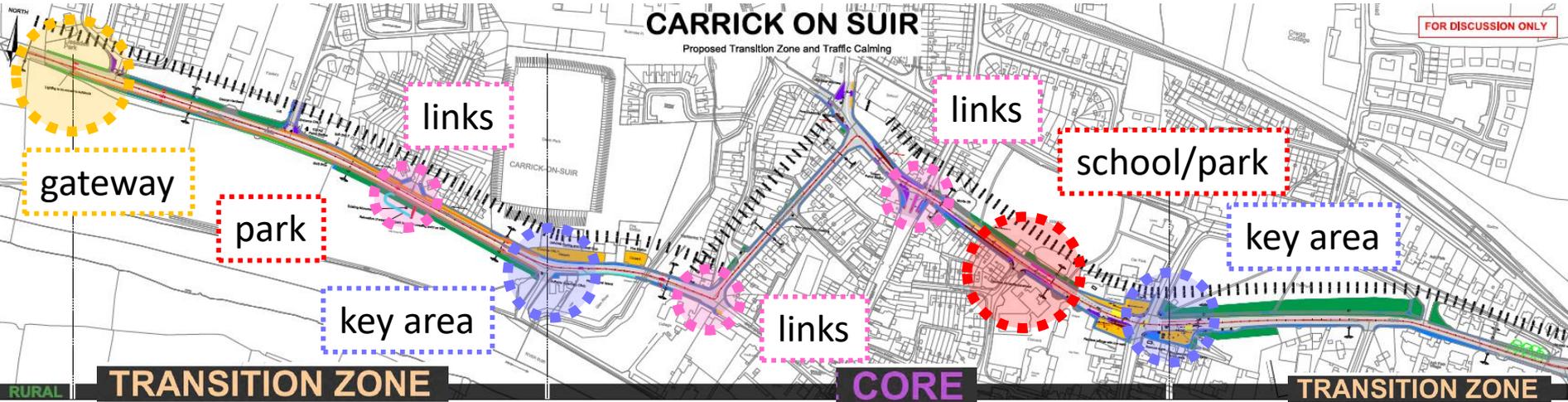
Carrick on Suir, Co Tipperary

Analysis of Local Context

FOR DISCUSSION ONLY

CARRICK ON SUIR

Proposed Transition Zone and Traffic Calming



Transition Zone

N24 Carrick on Suir, Co Tipperary

SCHOOL ZONES

‘a need to especially focus **traffic calming** and **landscape elements** at **school zones** where the users are particularly **vulnerable** to heavy traffic.’



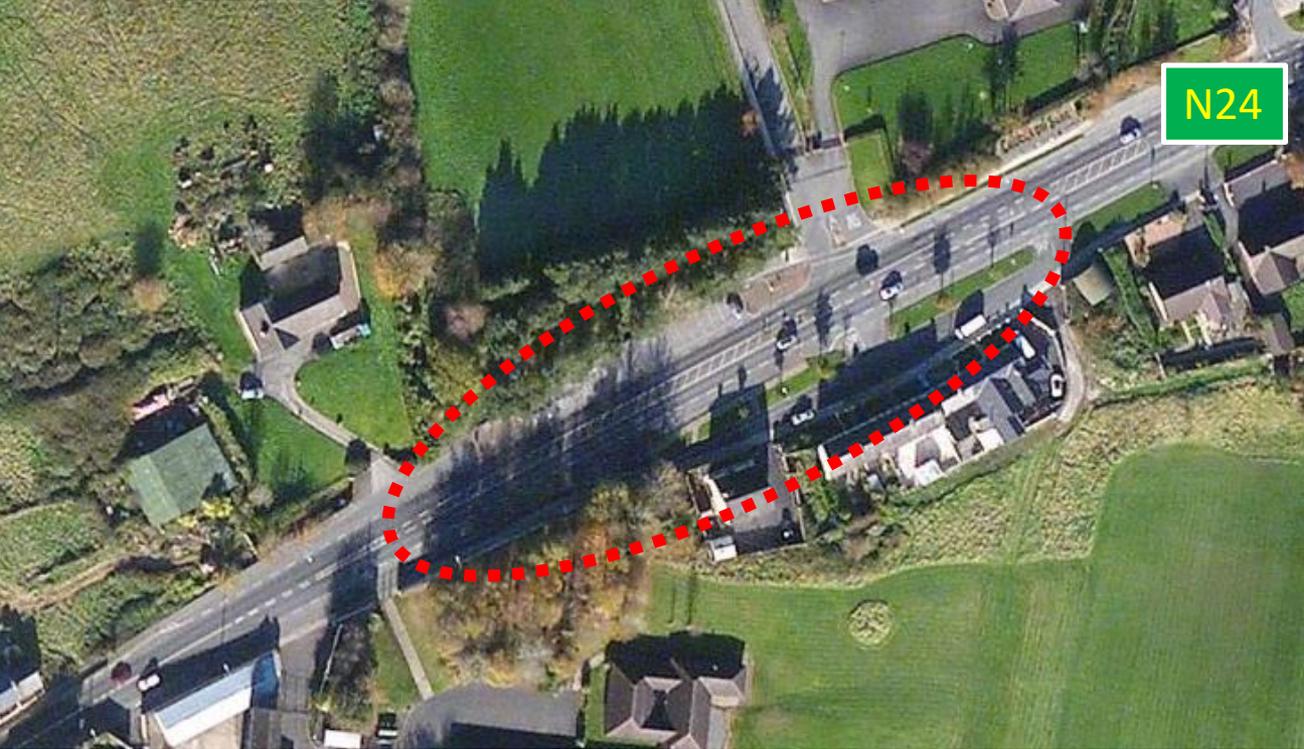
TRANSITION ZONE

RURAL FRINGE

School Zone in Transition Zone

N24

Carrick on Suir, Co Tipperary

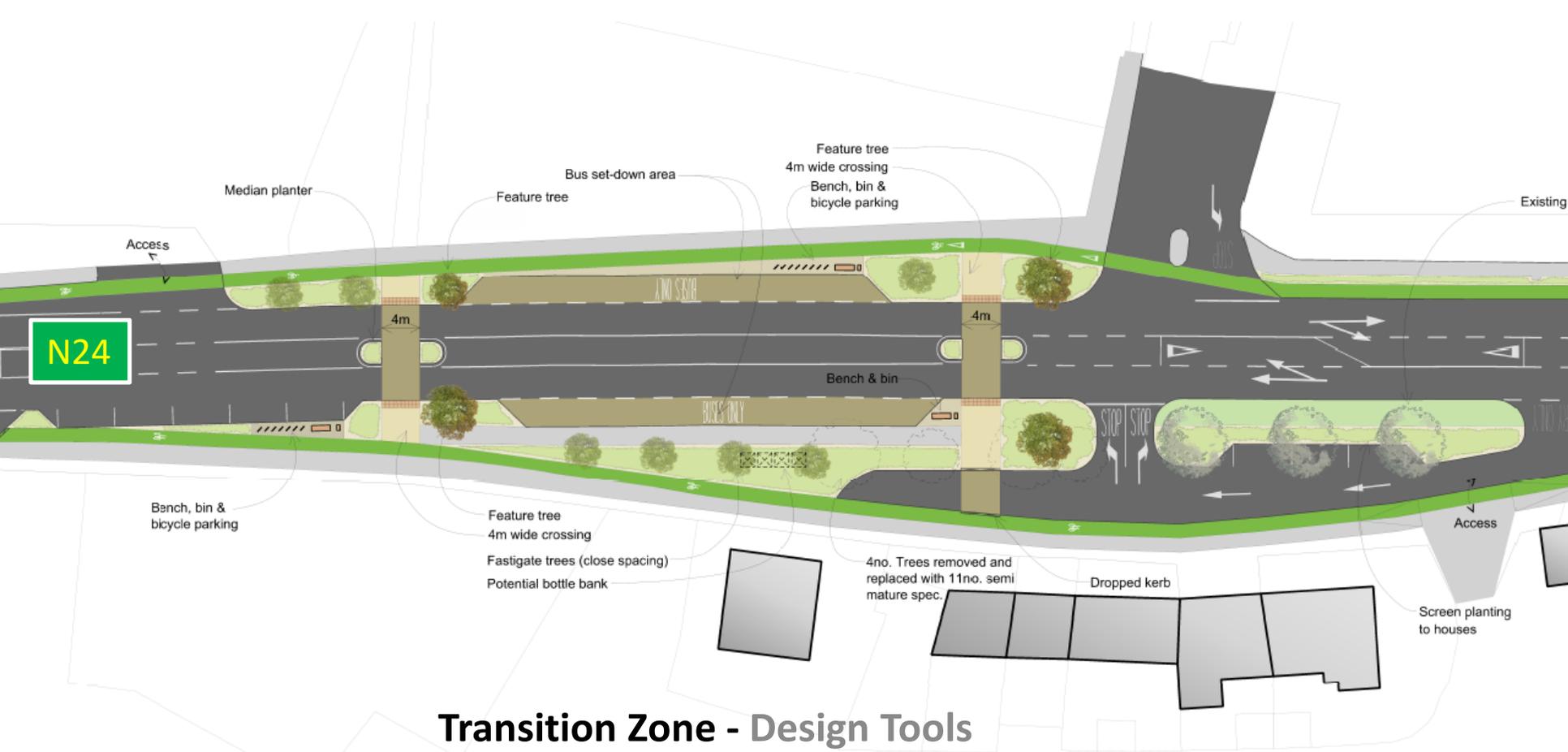


School Zones

p3 DN-GEO-03084

- usage who/when
- safety
- connections
- cycle/bus function
- meeting place
- local identify





1. Reduce the actual width of Carriageways
2. Reduce the perceived width of Carriageways
3. Changes to Surface Materials
4. Introducing Vertical Elements

Traffic Calming

‘Generally as part of **traffic calming** there will be a **reallocation** of the public space in our towns and villages.’



crossing/
key area

inner
gateway

village
gateway

village
gateway

school

N76

60

60

RURAL FRINGE

TRANSITION ZONE

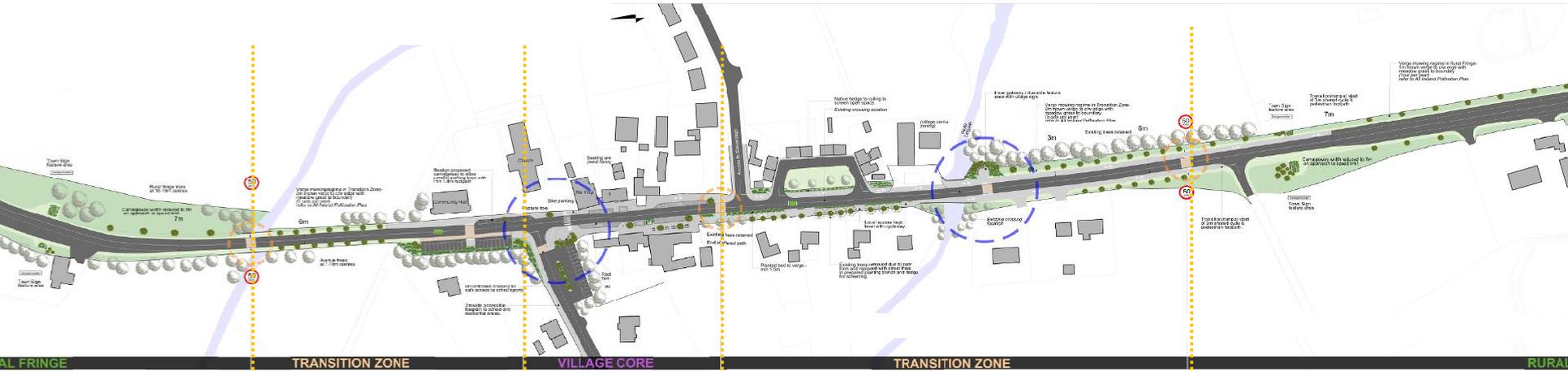
VILLAGE CORE

TRANSITION ZONE

RURAL FRINGE

GRANGEMOCKLER

Proposed Transition Zone and Traffic Calming



RURAL FRINGE

TRANSITION ZONE

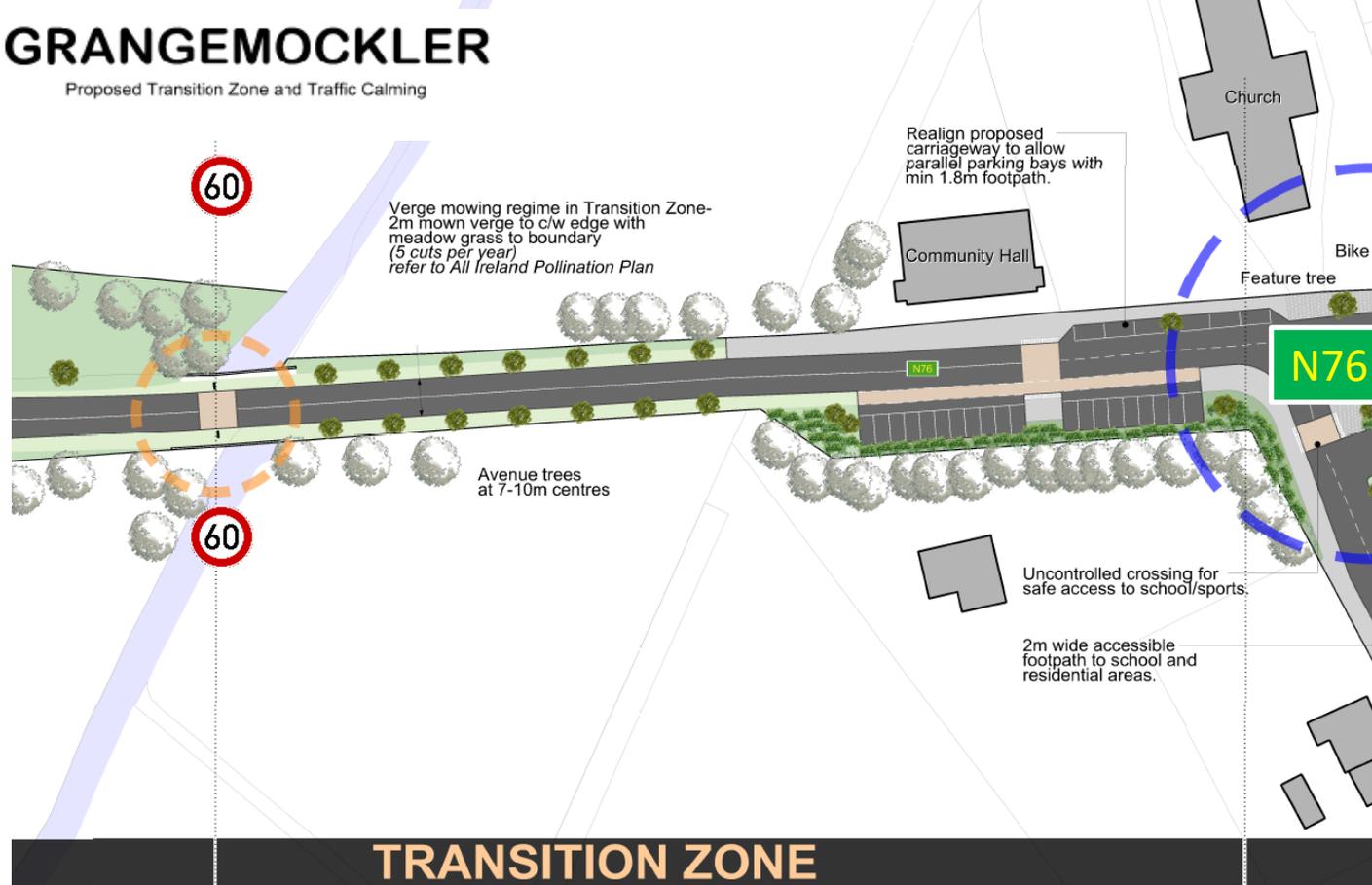
VILLAGE CORE

TRANSITION ZONE

RURAL FRINGE

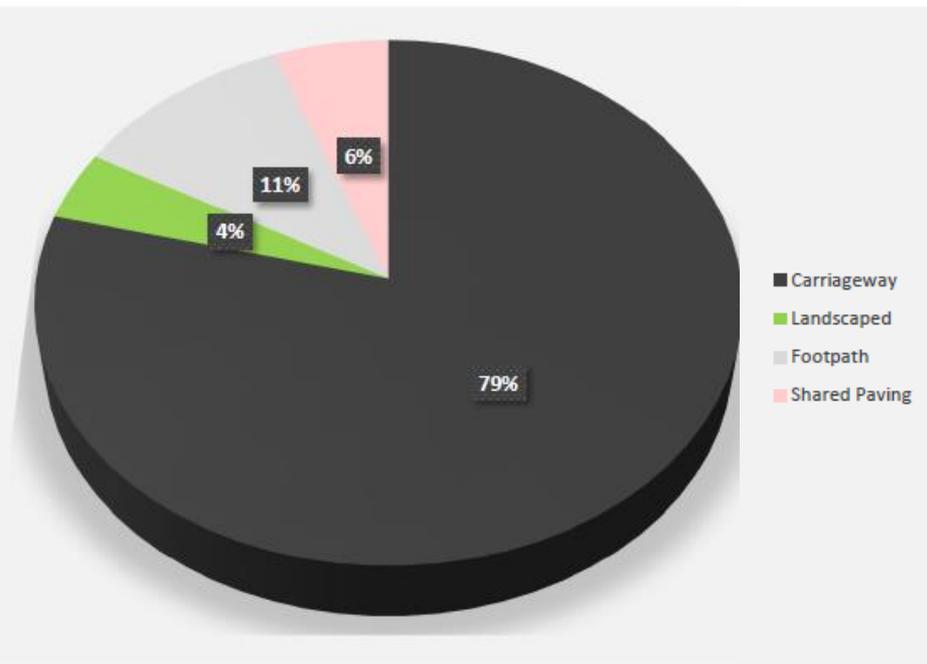
GRANGEMOCKLER

Proposed Transition Zone and Traffic Calming



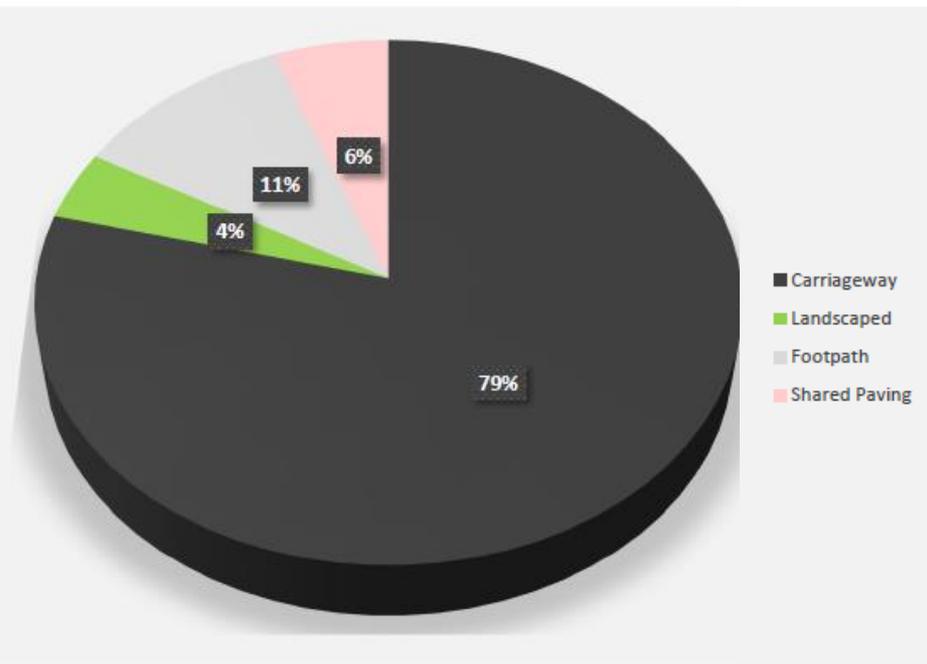
Transition Zone - Design Tools

1. Reduce the actual width of Carriageways
2. Reduce the perceived width of Carriageways
3. Changes to Surface Materials
4. Introducing Vertical Elements
5. Identify Gateways and key areas



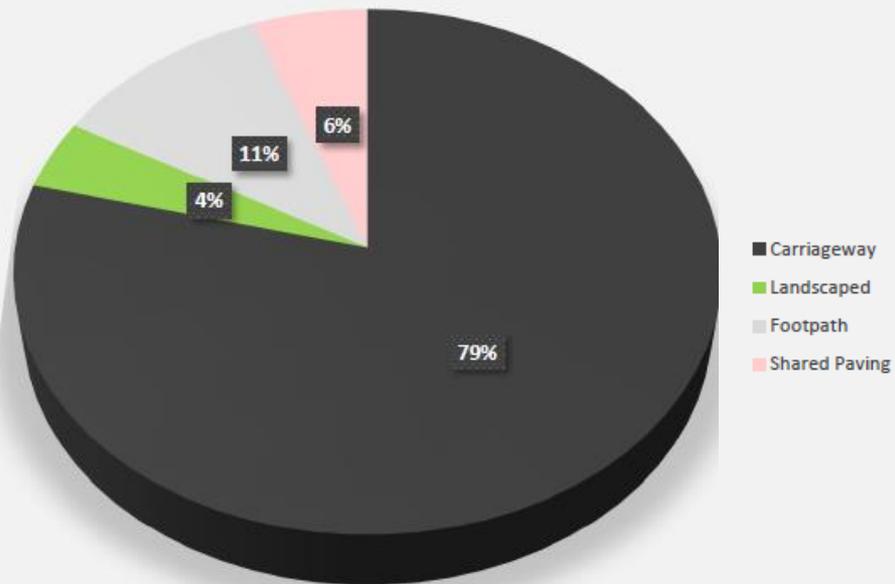
Allocation of existing space



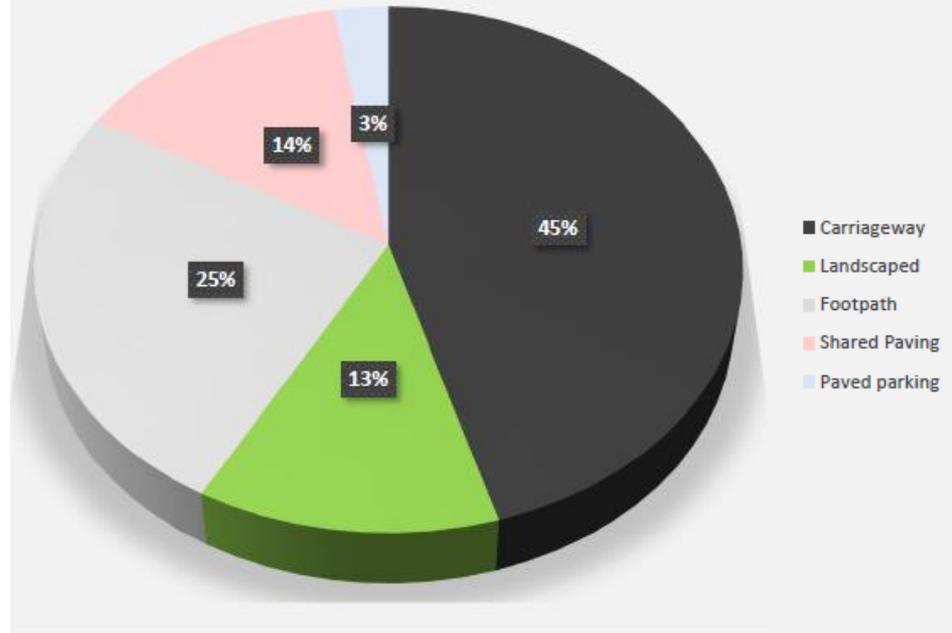


Allocation of existing space

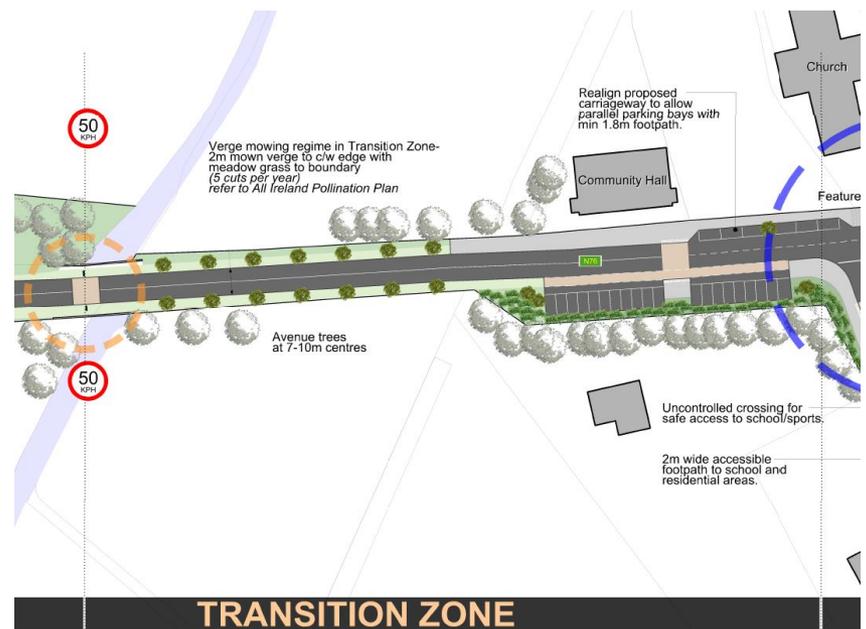




Allocation of existing space



Reallocation of space



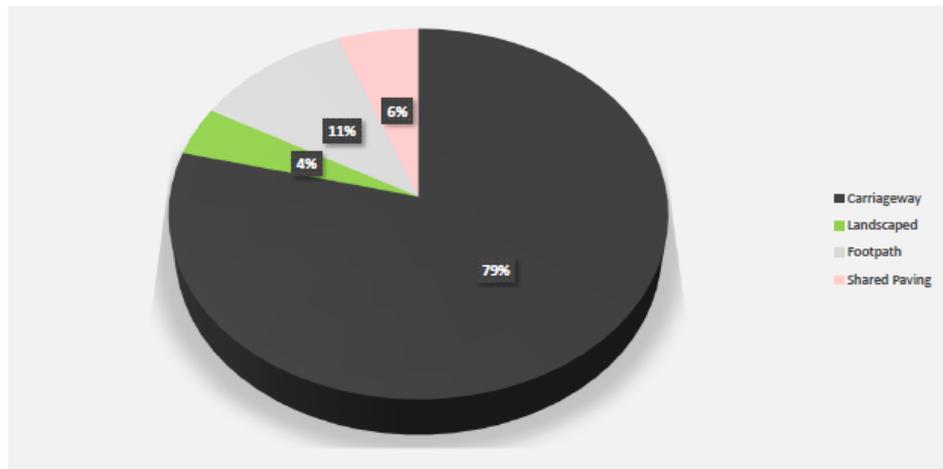
EXISTING LAYOUT

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Quantities (sq. m)																
Carriageway	2427	1967	831	1587	750											7562 sq. m
Landscaped	139	266														405 sq. m
Footpath	157	58	55	450	17	36	106	26	158							1063 sq. m
Shared Paving	229	36	106	25	158											554 sq. m
																0 sq. m
																Total area (approx): 9584 sq. m

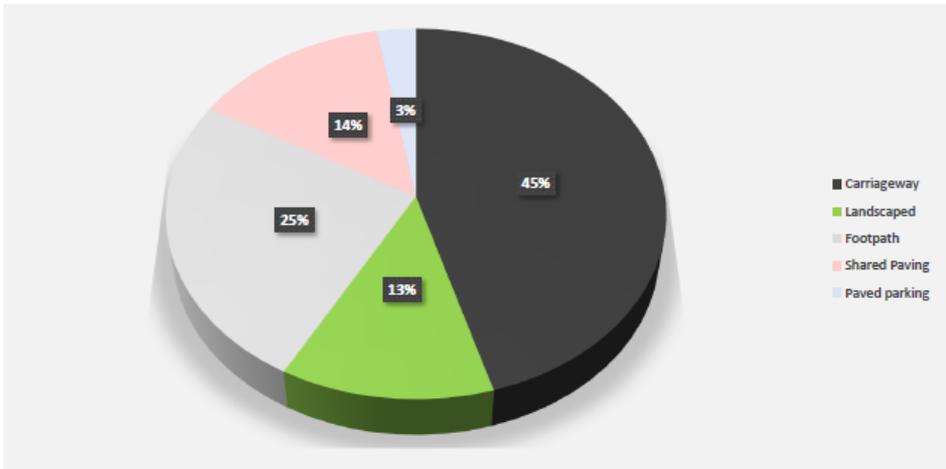
PROPOSED LAYOUT

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Quantities (sq. m)																
Carriageway	488	431	2721	110	61	67	69	406								4353 sq. m
Landscaped	128	173	262	85	193	17	29	53	28	25	12	75	133			1213 sq. m
Footpath	856	20	85	413	38	36	28	34	71	77	13	370	25	25	325	2416 sq. m
Shared Paving	36	76	24	50	320	410	7	34	25	355						1337 sq. m
Paved parking	65	34	17	19	60	70										265 sq. m
																Total area (approx): 9584 sq. m

Trees :

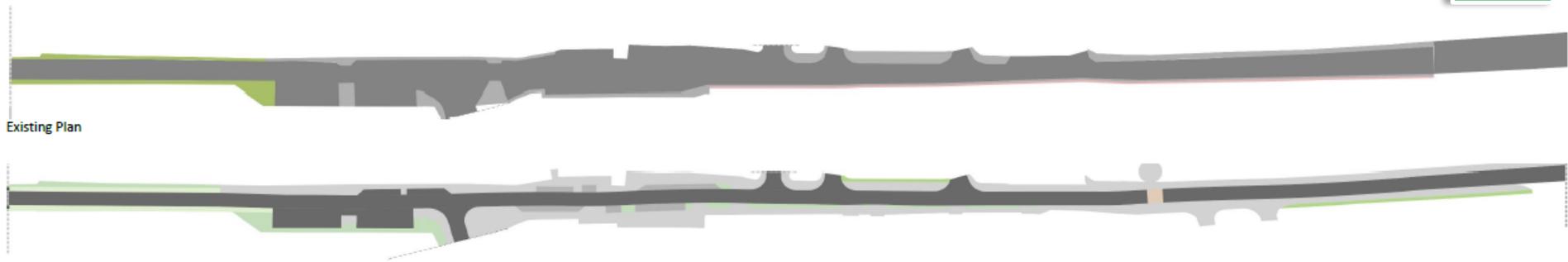


Trees :



All quantities shown are approximate.

N76



Proposed Plan





Transition Zone

N25

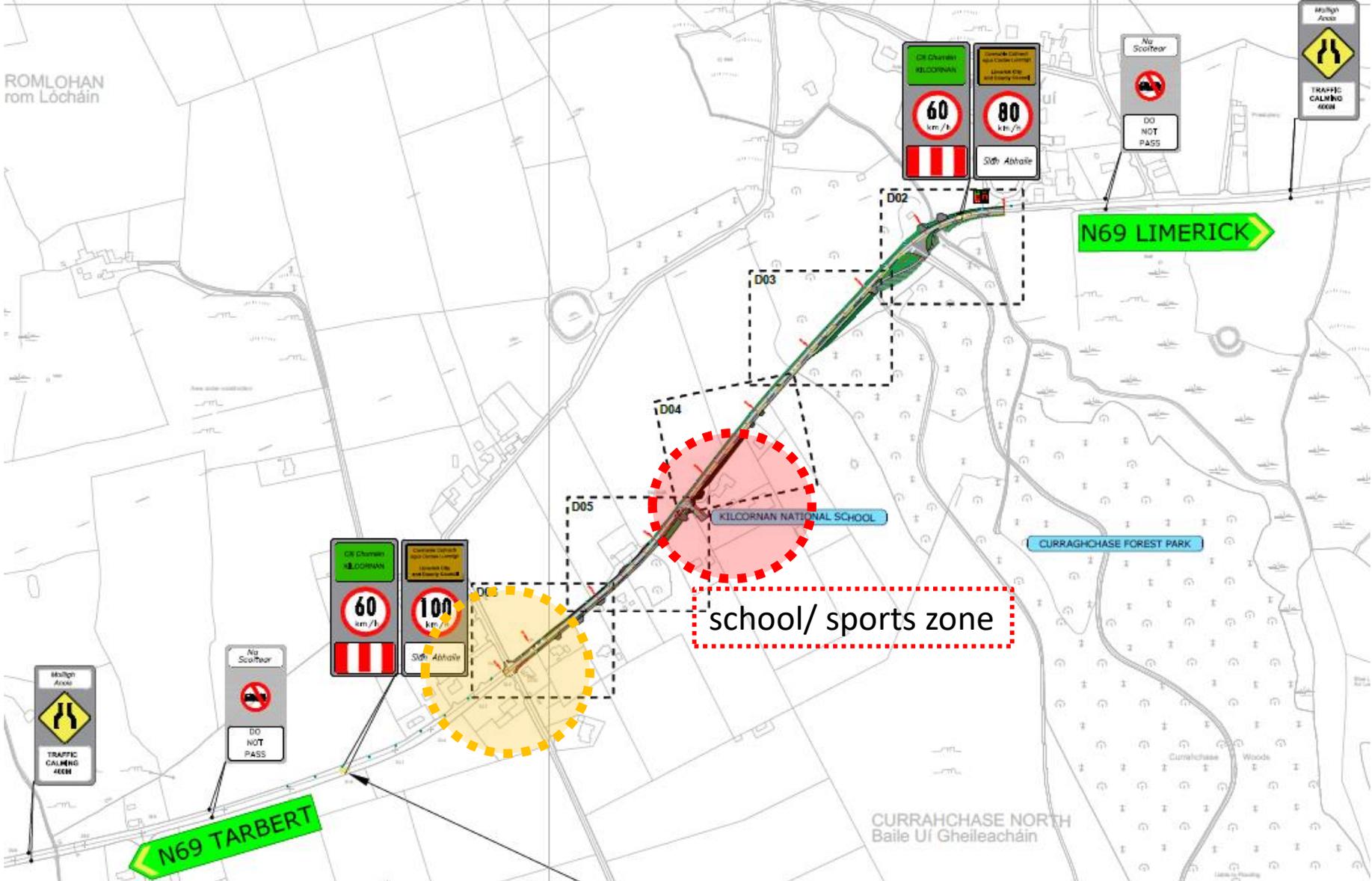
Killeagh, Co Cork

GATEWAYS

Calms traffic by informing drivers of a change in driving conditions ahead, change of context.
Can align with existing speed limits.

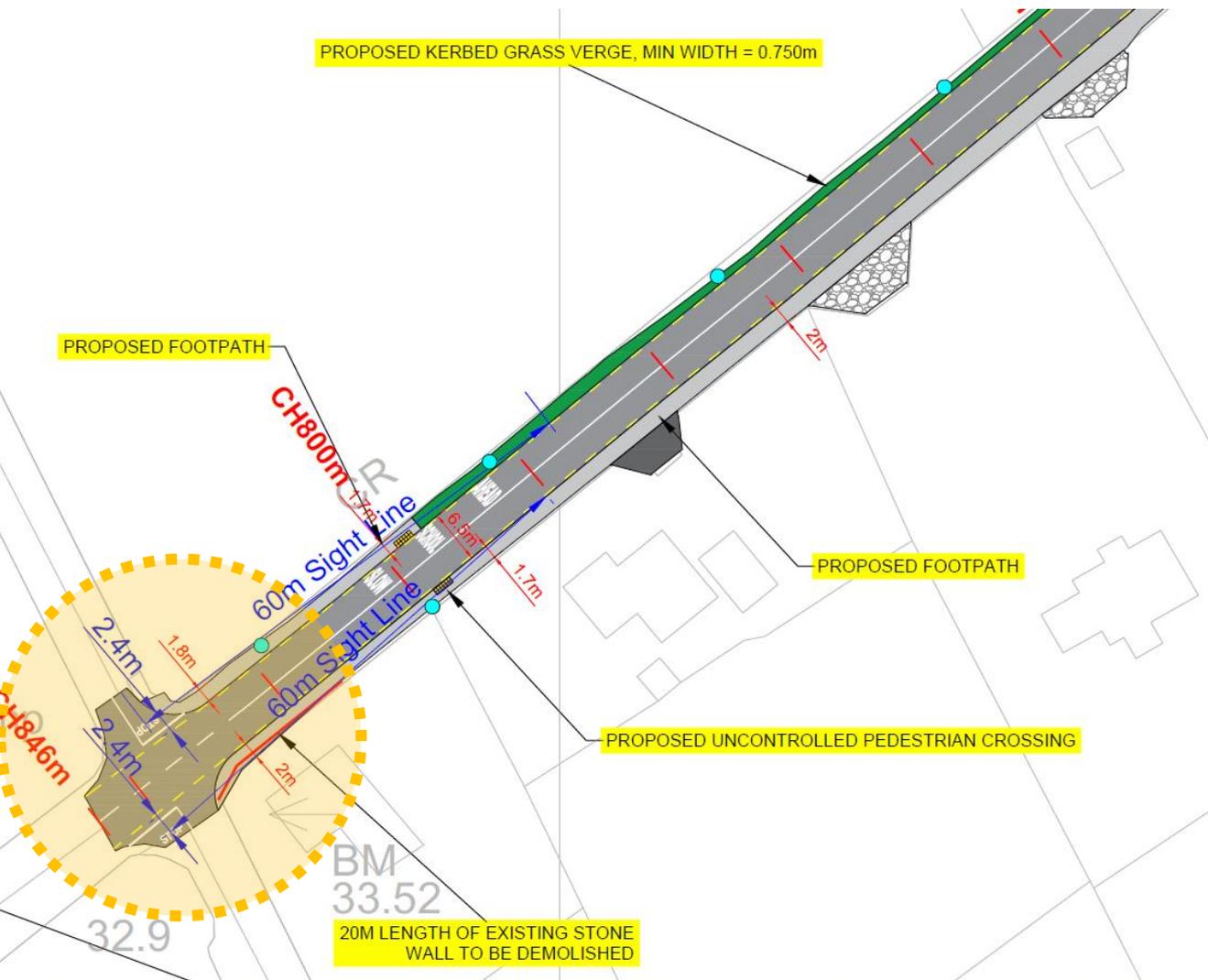
Gateway location chosen ‘ **appropriate** to a village’s **specific characteristics**’

ROMLOHAN
rom Lócháin



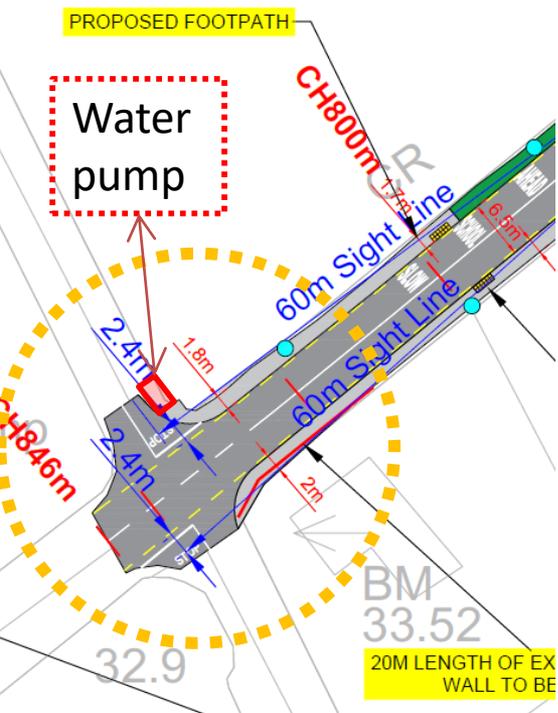
Transition Zone and Gateway

N69 Kilcornan, Co Limerick



Transition Zone and Gateway

N69 Kilcornan, Co Limerick



Transition Zone and Gateway

N69 Kilcornan, Co Limerick

TRANSITION ZONES

How many areas are we talking about?

N25 YOUGHAL TO WATERFORD CITY

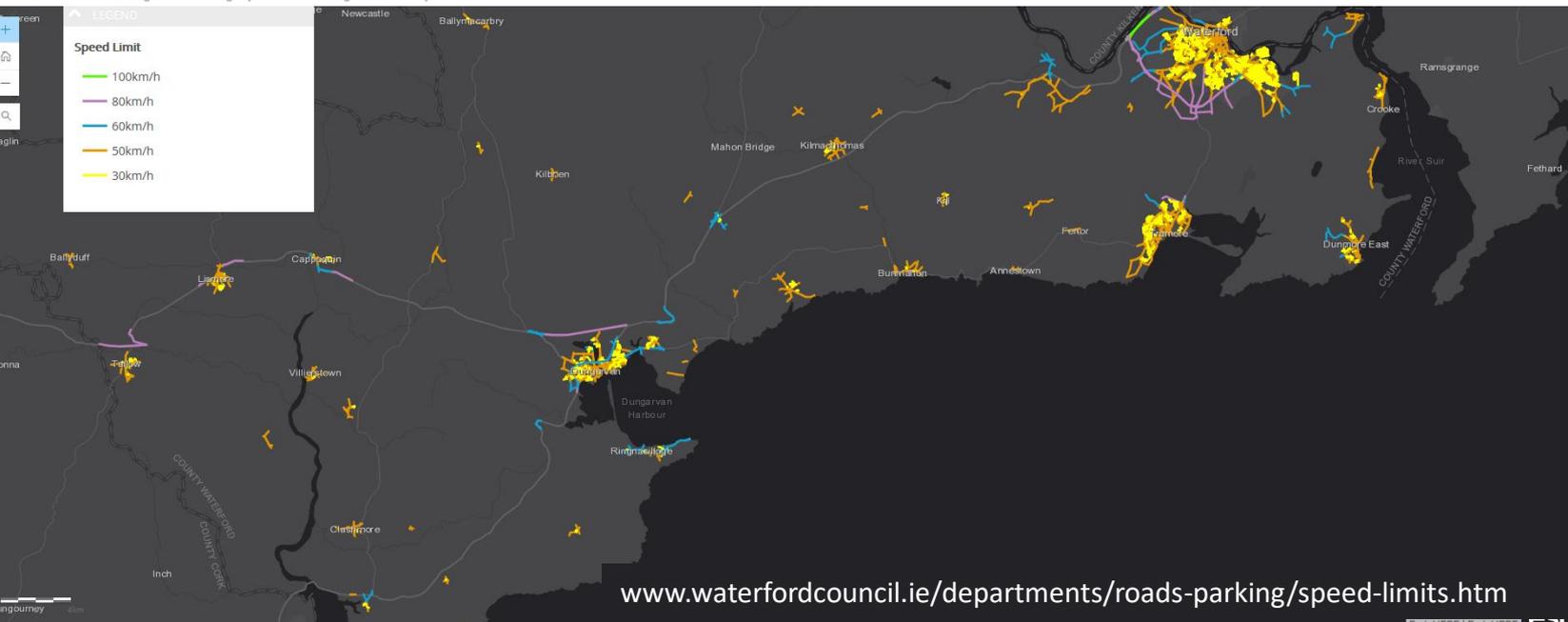
SPEED LIMIT ASSESSMENT

National speed limit		60.60	km
60KPH dangerous bends		3.89	km
60KPH Waterford City		0.23	km
60KPH Dungarvan		4.58	km
50KPH other		0.34	km
Total length:		69.64	km

Special Speed Limit Bye-Laws 2017

The Special Speed Limit Bye-Laws 2017 were adopted by Waterford City and County Council on 10th October 2017 and came into force on 15th November, 2017. For the first time a special speed limit of 30km/h will be introduced in all housing estates in charge by the Council throughout the county.

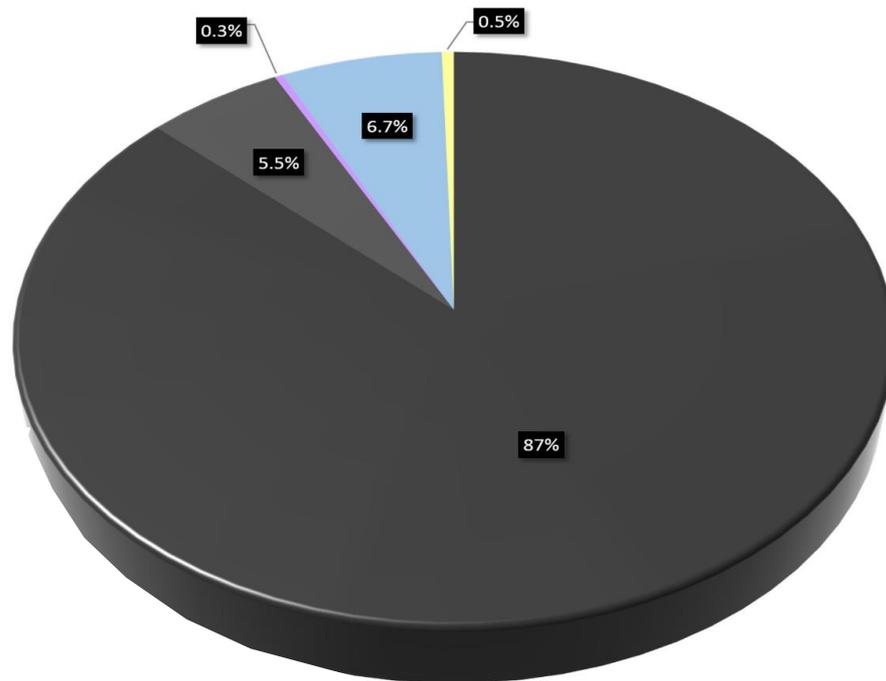
www.waterfordcouncil.ie/speedlimits



N25 YOUGHAL TO WATERFORD CITY

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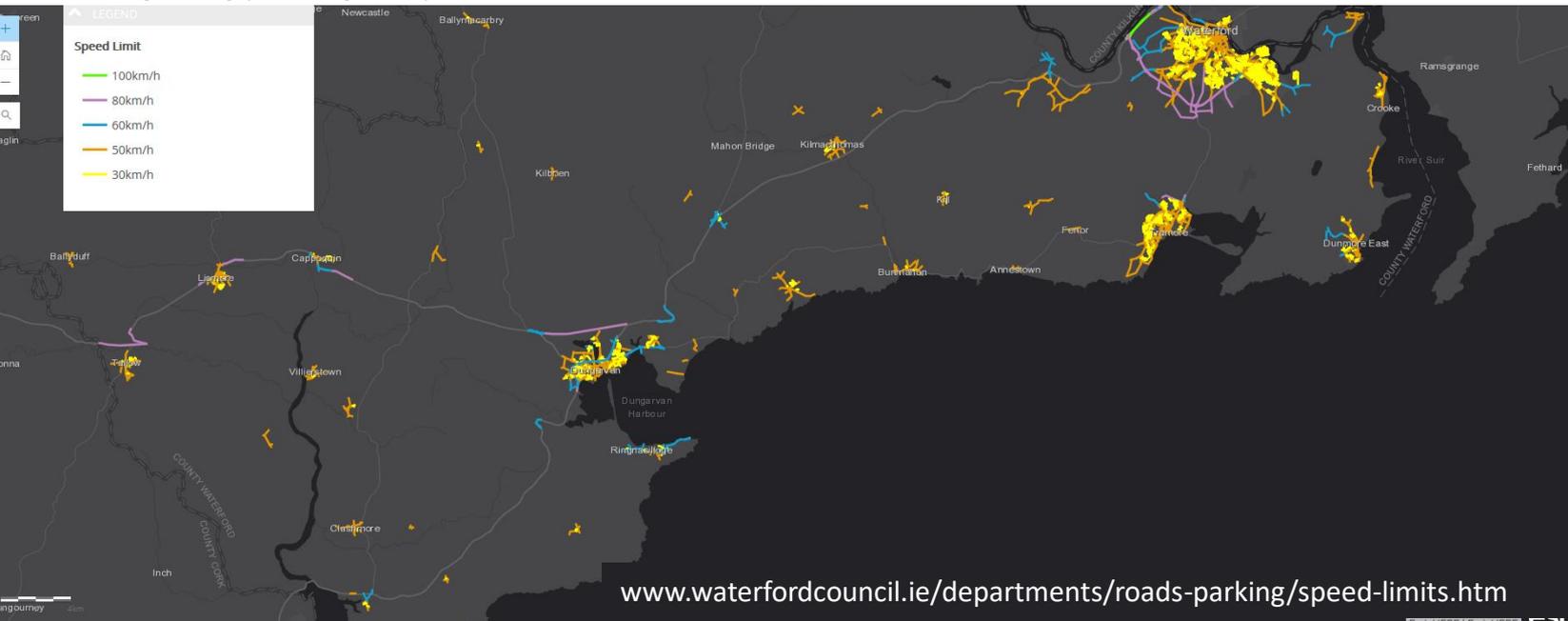


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THANK YOU

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