

# Tralee Transport Strategy

## Report for Kerry County Council and Tralee Town Council

MVA Consultancy In Association With DBFL Consulting Engineers and HKT&T

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# Executive Summary

## Introduction

MVA Consultancy, in conjunction with Healy Kelly Turner & Townsend (HKT&T), DBFL Consulting Engineers and Count On Us, was appointed by Kerry County Council and Tralee Town Council to prepare a Transport Strategy for Tralee Town and its environs. The Tralee Transport Strategy aims to improve the transport network within Tralee to benefit the existing population and to provide the basis for sustainable future development of the town.

## Purpose of Strategy and Context

The primary purpose of the Tralee Transport Strategy was to determine the transport interventions required to resolve existing traffic and transport issues (e.g. existing traffic congestion, parking pressure points, poor road safety performance) and to ensure the sustainable future development of Tralee Town and its environs. The strategy makes recommendations on the feasibility of augmenting and developing the transport network, so it will be capable of catering for the short (2010), medium (2016) and longer term (2025) transport demands of the town and region.

The strategy has been undertaken by reference to the Kerry County Council and Tralee Town Council Development Plan (and zoned lands contained therein), the Town Council's Transportation strategy aims, and relevant regional/ national policies, plans and strategies.

Preliminary design recommendations in relation to junctions that were deemed to be deficient from road safety and/ or capacity perspectives have been developed to guide the subsequent implementation of these improvements.

A key aspect of this strategy was the development of a Traffic Model for the town. This model not only formed the basis for testing potential solutions, but may also be used in its current form for detailed assessment/ appraisal of road schemes, parking policy interventions by Kerry County Council. The traffic model will, therefore, meet both the strategy development requirements, and the longer term planning requirements of Kerry County Council and Tralee Town Council.

Given the current budgetary pressures facing local authorities throughout Ireland it is crucial to consider how best use of existing facilities can be made. Measures such as school travel planning, where less trips by car are encouraged, can influence a significant number of trips (whether they be trips to work or school etc.), and are by their nature low cost, and so yield a high economic return. Furthermore, there is potential to access Department of Transport related funding streams, such as the Smarter Travel Project Fund, thus minimising the cost to Kerry County Council of some of the proposals contained within this strategy. Reducing car use is central to current Government transport policy and this underpins many of the key recommendations that are made for Tralee in this strategy.

## Relevant Local and Regional Policy

The Tralee Town Development plan and the Government's Smarter Travel policy were particularly relevant to the development of the Tralee Transport Strategy. These set out long term objectives to increase the modal share of cycling and walking and reduce car dependency. A common objective to nearly all local and regional current policy is to promote increasing use of sustainable modes such as walking and cycling.

The Kerry County Development plan also sets out plans for significant upgrade and reorganisation of the future Tralee road network, the features of which are also essential to the Tralee Transport Strategy. A new major orbital network of link roads is to be constructed within the next few years. These significant projects include: the N22 Tralee Bypass, the Tralee Western Ring Road, and the Tralee Northern Ring Road and are due to be completed in 2016. These orbital routes link up with existing routes and will remove the necessity for many trips to pass through Tralee on their journey.

The future construction of these outer roads will provide many opportunities for improving the transport network and environment in Tralee Town for all road users. As through traffic is diverted around the town via the orbital routes there will be opportunity to reallocate road space from vehicular traffic to more sustainable modes and vastly improve the quality of the transport environment for mobility impaired, pedestrians, cyclists, and public transport users. Improving the quality of journey experience for other modes, particularly walking and cycling, is crucial for encouraging modal shift away from car, particularly during peak traffic times.

### Overall Strategy Development Methodology

Our methodology was devised in accordance with the requirements of the brief, and following detailed consideration of current transport issues facing Tralee Town, and in accommodating its sustainable future growth.

The methodology consisted of the following elements:

- Project inception;
- Baseline evaluation;
- Base year model development:- The Tralee Transport Model;
- Future year model development;
- Tralee vision statement and development of transport objectives;
- Stakeholder and public consultation;
- Optioneering process;
- Preliminary junction redesign;
- Financial, economic and environmental appraisal;
- Implementation Plan;
- Final Report and presentations; and
- Staff training and technical support.

The key aspects of each component of the overall methodology are explained below. The methodology process is described in a flowchart in Executive Summary Figure 2, at the end of this section.

### Baseline Traffic Evaluation

Underpinning the overall study was the development of a comprehensive analysis of the existing conditions experienced by all road users in Tralee. This stage of the strategy, termed Baseline Traffic Evaluation, was completed in December 2009. The baseline study is a stand alone report and is included in Appendix D of this report.

### Traffic Model Development

As mentioned, a detailed traffic model was developed to underpin the assessment of traffic management options that were developed as the study progressed. The Base Year Model Validation Report documents the development, calibration, and validation of the Tralee Traffic Model (TTM) for a base year of 2010. The model covers a wide area including Tralee town and hinterlands. Three time periods were modelled, calibrated and validated. These are the AM peak period from 08:30 to 9:00, the Inter-Peak Period from 14:30 to 14:00 and the PM peak period from 17:00 to 17:30.

The model is a very robust basis for traffic assessment in Tralee, for the following reasons:

- The model realistically represents journey times;
- The model is based on latest Census travel statistics;
- The study area is covered by a large number of counts for both calibration and validation; and
- There is a high correlation between modelled and observed flows.

### Transport Objectives and Vision for Tralee

The Vision Statement for Tralee is as follows:

***"To create streets and places that are safe, attractive and vibrant, to provide integrated and balanced transport facilities with efficient movement for all."***

The Tralee Transport Strategy supports sustainable objectives. These objectives are linked to the Department of Transport Guidelines on a Common Appraisal Framework for Transport Projects and Programmes and include the following:

#### Economic

- Support improved economic competitiveness;
- Support the tourism industry;
- Facilitate jobs growth;
- Grow and regenerate the town via increased inward investment;

#### Environmental

- support Smarter Travel objectives;
- enhance Tourism industry;
- develop a sustainable transport and traffic system;
- reduce car dependency;
- minimise transport related impacts on Air Quality, Noise and Vibration; and
- improve attractiveness of the public domain.

#### Integration, Accessibility and Social Inclusion

- develop integration between transport modes;



- support social inclusion;
- increase accessibility to opportunities and services; and
- enhance transport and land use integration.

### Safety

- Reduce health risks and incidence of accidents and fatalities;
- Protect vulnerable road users; and
- Improve overall safety.

## Stakeholder Consultation Process

Stakeholder consultation forms an integral part of this strategy. Consultation is required for the following reasons:

- Local stakeholders have an in-depth understanding of local issues, given that they experience these conditions on a daily basis. It is therefore crucial to gain an understanding of these issues at an early stage in the study, so that opportunities to address these issues can be considered. Furthermore, public representatives and local community groups are best placed to relay the views of local residents for consideration as part of this study;
- General traffic congestion, impacts on bus operations by reducing bus operating speeds and making it increasingly difficult to operate bus services in a reliable manner. Furthermore it erodes the attractiveness of using bus services; further increasing levels of general traffic congestion. Consultation with bus operators facilitates an understanding of bus operating conditions in the study area, and an identification of any measures to improve operations to improve the operation of existing bus services;
- Local businesses are impacted by traffic conditions as a result of general traffic congestion, which increases the costs (and reduces the attractiveness) of accessing their premises to do business. This is particularly true for businesses in the retail industry, where alternative competing locations are generally available. Deliveries are also impacted by general traffic congestion, as is the availability of conveniently located areas to perform these activities. It is important that these issues are understood in the context of making traffic study recommendations; and
- Traffic associated with school drop-off and pick-up by car significantly can contribute to general traffic congestion in Tralee during the AM peak. It is therefore crucial that this group of stakeholders are consulted so that issues associated with access arrangements to schools are understood.

During this consultation period all key stakeholders groups in the Tralee area were contacted both in writing and by telephone and invited to make submissions and express their views under the following headings:

- Current traffic conditions in Tralee;
- Local issues of interest to the study;
- Strategic issues of interest to the study;
- The Stakeholders plans as they relate to Tralee; and

- Potential solutions.

After carrying out a thorough consultation process we have established that the main concerns of key stakeholders in Tralee relate to;

- The levels of congestion within the town centre;
- The layout and markings of junctions;
- Inadequacy of pedestrian and cyclist facilities; and
- Inappropriate parking and loading activities within the town

### Public Consultation

A period of public consultation was undertaken in the Tralee Town Council Chambers from the 21<sup>st</sup> to the 22<sup>nd</sup> of July 2010. During this period the public were invited to review the strategy proposals and to submit any comments, queries and suggestions they may have.

Many valid concerns and suggestions were expressed to which have been given serious consideration in the context of the transport strategy. Chapter 13 of this report provides a summary of the submissions received from the public and local groups.

### Tralee Transport Strategy – Key Recommendations

#### Specific Short Term and Medium Term Junction Measures

The short term works list is comprised of junctions that are considered a higher priority in terms of achieving the objectives for Tralee. Each of these has been identified as being particularly unsafe or exhibiting poor performance in their current forms and therefore of higher priority than the Medium Term junction upgrades also identified.

#### Short Term Junction Improvements

Junction improvements are planned in the short term at the following locations, for which detailed technical drawings are included in Appendix B:

- S1 - R874 basin View/N86;
- S2 - Upper Rock Street;
- S4 - Austin Stacks Park Roundabout;
- S5 - Balloonagh Cross;
- S6 - Garryruth Road/Ballymullen Road; and
- S7 - Edward Street/John Joe Sheehy Road.

#### Medium Term Junction Improvements

- M1 - Clash Roundabout;
- M2 - Strand Street/Matt Talbot Road;
- M3 - Lower Castle Street/Edward Street;

- M4 – N69 Fairies Cross;
- M5 – Racecourse Road/Clash Road;
- M6 – Racecourse Road/Oakpark Road;
- M7 – Oakpark/Muing Road;
- M8 – R551/Lioscarrig Drive;
- M9 – Rathass Roundabout; and
- M10 – Deans Lane/Boherbee.

Appendix B of this report contains the drawings for each junction intervention mentioned above.

### MOVA Signalised Junctions

Existing traffic lights in Tralee work using a standard staged and phased signal system. They do not have any sensing systems but are set to specified fixed stage times. Increased efficiency can be achieved by installing demand responsive or linked traffic signal control systems. One such system is Microprocessor Optimised Vehicle Actuation (MOVA), which provides enhanced traffic responsive signal operation.

The replacement of existing signals with MOVA signals should assist in improving flows and reducing congestion that occurs in the major junctions around Tralee.

### Limiting Speeds

A 30kph speed limit in the town centre area is recommended when the road plans contained in the Kerry County Council Development Plan is complete.

Lower speeds also provide environmental benefits. Lowering traffic speeds results in reduced traffic noise which benefits the local environment. Lower speeds also improve the perceived safety of the area which in turn makes it more attractive for walking and cycling. Speed limits are a relatively cost effective traffic management measure requiring mainly signage with limited changes to road infrastructure required.

### Shared Space on Russell Street, Bridge Street, New Road and Island of Geese;

To support the Vision for Tralee it is proposed to redesign Russell Street, Bridge St and New Road to incorporate shared space design concepts. The shared space will extend to the junction of Gas Terrace and Island of Geese. This area will be open to vehicles but traffic management measures will be implemented to divert vehicular traffic to alternative routes such as Matt Talbot Road and Denny Street.

### Part time Pedestrianisation of The Mall between Denny Street and Russell Street

It is recommended that the Mall is pedestrianised for periods between 10am and 4pm for all days of the week. The period could be extended for longer, initially at the weekends after an initial trial, depending on the level of success and acceptance.

Weekday trips in the evenings will be allowable in to this area and set down to collect purchases, for example, will be facilitated in the restricted set down areas. (The practicalities of enforcing this system are not within the scope of this study. Retractable bollards are one solution that offers the flexibility to physically restrict access on a flexible schedule and with minimal personnel requirement.) Loading, set down, or any form of motor access will not be permitted at any time between 10am and 4pm for each day of the week (except for Emergency Vehicles).

The overarching consideration of the pedestrianisation scheme is to strengthen the existing economy of the area, by improving the level of access into the area and by facilitating the conditions for improved amenities for tourists, shoppers, and families, directly in the centre of the town. At present, very high levels of vehicle movement through this area results in a car dominated environment.

### **Shared Space on New Road, Island of Geese and Russell Street**

One of the key recommendations of the strategy is the development of a shared space environment on selected streets. Shared space is a street where pedestrians, cyclists and vehicular traffic interact in a space that is not physically divided by kerb or level differences into areas for particular uses. Level surface is a feature of Shared Space schemes. This enables pedestrians to move freely by reducing traffic management features that generally encourage vehicles to assume priority.

To support the Vision for Tralee it is proposed to redesign Russell Street, Bridge St and New Road to incorporate shared space design concepts. The shared space will extend to the junction of Gas Terrace and Island of Geese. This area will be open to vehicles but traffic management measures will be implemented to divert vehicular traffic to alternative routes such as Matt Talbot Road and Denny Street.

### **Restore Denny Street to a Two-way Road**

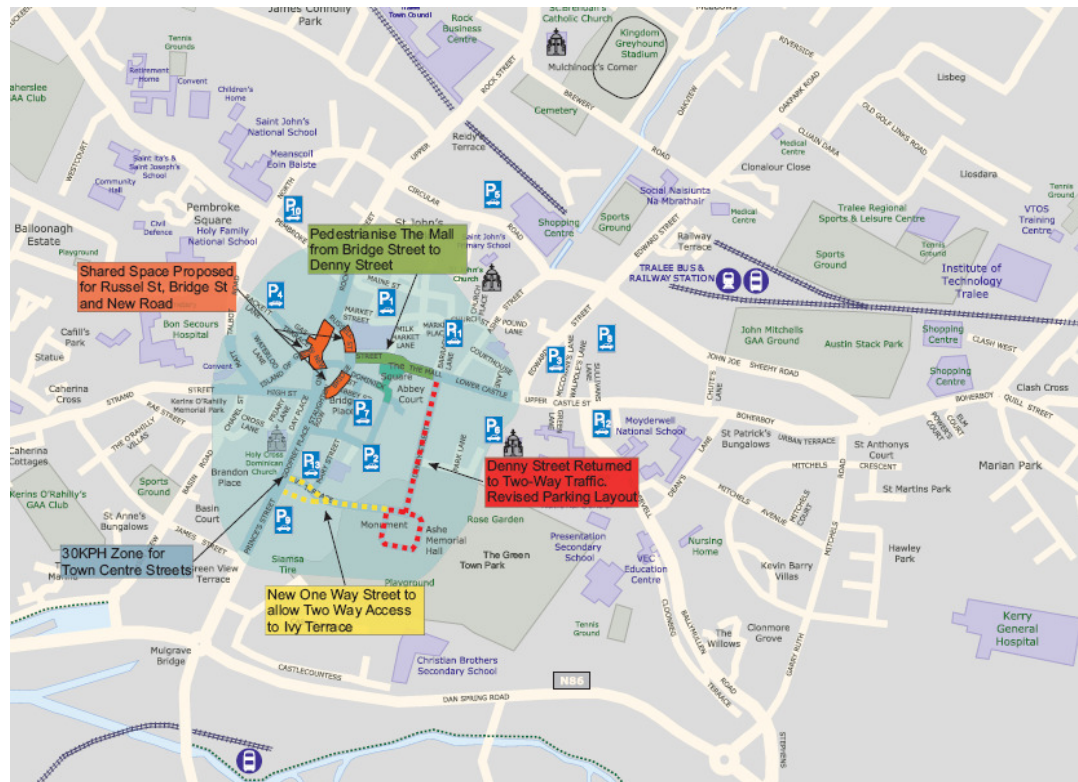
To facilitate the pedestrianisation of the Mall, it is proposed to accommodate diverted traffic along Denny Street by reinstating two-way traffic flow. Denny Street was historically a two way street and possesses ample width to facilitate realigned parking and two-way traffic flows safely. East west traffic movements that previously used the Mall will access Denny Street via a new link parallel to Ivy Terrace, as discussed below.

The current parking layout will be replaced with parallel parking along Denny Street. This will decrease the number of parking spaces but is necessary to provide the space required to allow two-way traffic flows along the street.

### **Vital Link from Ivy Terrace to Princes Quay to enable Denny Street as Two-way**

Ivy Terrace narrows as it approaches Princes Quay making it difficult to provide for two-way traffic. There is insufficient width at the junction with Princes Quay to provide the turning circle required to access Ivy Terrace. To overcome this issue, it is proposed to provide a new westbound link to Princes Quay.

## Executive Summary Figure 1

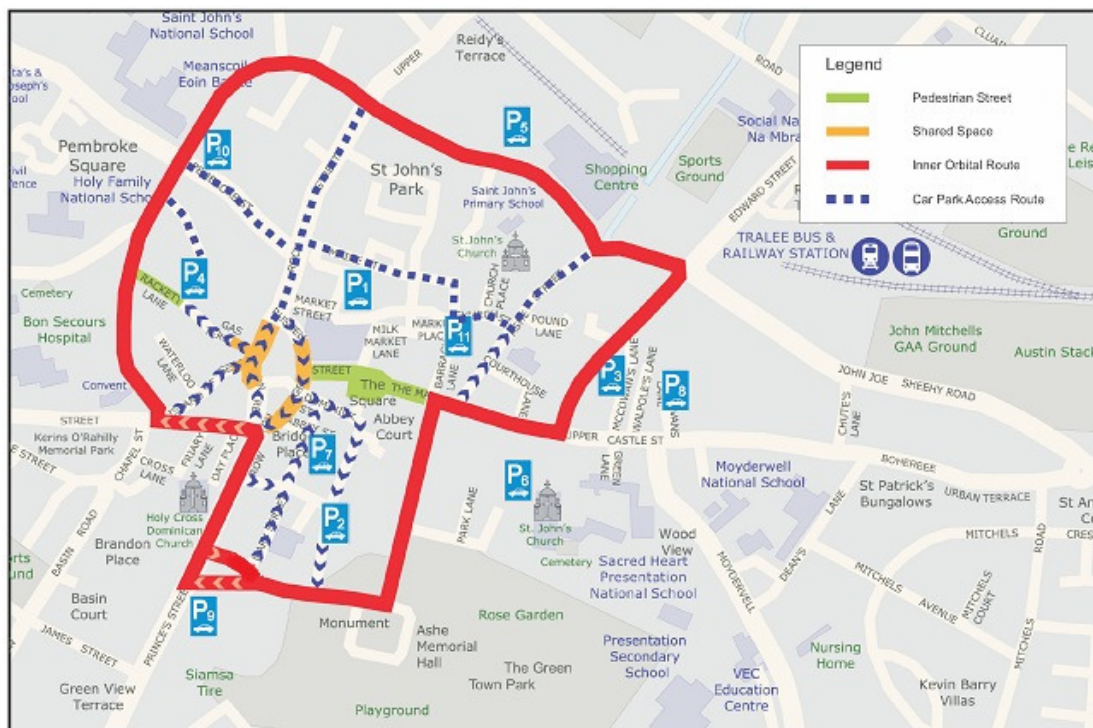


In summary the key town centre measures include:

- Shared Space on Russell Street, Bridge Street, New Road and Island of Geese;
- Part time pedestrianisation of The Mall between Denny Street and Russell Street from 10.00-16.00hrs;
- Restoration of Denny Street to a two way road with the current angular parking arrangement replaced with parallel parking;
- Introduction of drop off area on Denny Street to service the hotels;
- Taxi rank on the Mall relocated to three ranks located on Denny Street, Staughton Row and Rock Street Lower;
- New link road parallel to Ivy Terrace providing west bound access to Princes Quay;
- Signage Strategy to encourage the more efficient utilisation of the off-street car parks;
- Introduction of MOVA signalisation at key junctions to synchronise traffic movement and improve movement for all road users;
- Enhanced cycle measures to improve cycle safety and movement;
- Parking Strategy to encourage people into the town and maintain a high turnover of on-street parking supply thereby increasing footfall;
- Better enforcement against illegal parking;
- New Inner Orbital Route to move traffic around the town centre, as shown below in Executive Summary Figure 2; and
- Introduction of a 30 kph Zone in the Town Centre.

Executive Summary Figure 2

Inner Orbital Route and Proposed Town Centre



The above measures are discussed in detail in Chapter Six which also includes a number of photomontages which illustrate the shared space, pedestrianisation, Denny Street and Ivy Terrace proposals.

### Recommendations for Parking in Tralee

The assessment of existing parking supply shows that, at an aggregate level across the Town Centre, there is spare capacity particularly for off-street parking locations.

The existing parking stock is sufficient to meet present and future parking demands. However, the publicly available off-street parking locations could be better utilised to accommodate demand for car parking within Tralee Town Centre. It is therefore critical to more efficiently manage existing on- and off-street parking supply to ensure a more balanced use of available parking stock.

The key recommended measures related to the parking strategy are as follows:

- Revised On-Street Parking Provision;
- Revised Parking Duration;
- Revised Parking Tariffs;
- Parking Enforcement Strategy; and
- Parking Signage Strategy.

The key parking strategy measure is a proposed period of reduced fee parking in Tralee Town Centre in order to stimulate economic activity and enhance the commercial viability of the town centre. The period of reduced fee parking will also offset any loss of over all on-street parking in the town as space



availability will be ensured if the scheme is enforced correctly. The proposal is to allow the first 30 minutes of on-street parking for 50 cents.

### Key Benefits of Parking Strategy

- The proposed parking management system and charging structure will be a flexible system capable of changing to meet demand;
- It will encourage a beneficial change to parking patterns throughout the town;
- Significant parking spaces in the Town Centre will be released for short stay business and leisure visitors to the town;
- Residential parking would continue to be dealt with through the provision of resident parking permits;
- Disabled drivers will be facilitated by the creation of a necklace of disabled parking spaces that encircle the pedestrian priority zone;
- There will be increased provision for taxis, with a wider catchment area by creating three new taxi ranks; and
- By significantly increasing the volume of 1-hour parking the parking strategy also has the potential to generate revenue which can be used to cover the capital cost of both the parking measures and other measures.

### School Strategy

There is a high concentration of schools within Tralee Town and school transport is a significant generator of demand. Tralee is ideally suited to walking and cycling given the compact nature of the area. This is borne out in the Census which shows a very high proportion of students walking to school.

The strategy of the Tralee Transportation Study is designed to support and encourage sustainable transport to school.

### HGV Strategy

Implementation of HGV advisory routes is recommended in the short term, and also in the longer term when the bypasses are complete. The longer term strategy should seek to remove as much HGV traffic from the town centre and considered restrictions for vehicles above seven tonnes.

It is further recommended that refuse collection should take place outside of the peak traffic periods. This step will minimise the conflict of refuse collection vehicles with other traffic in Tralee.

### Public Transport Strategy

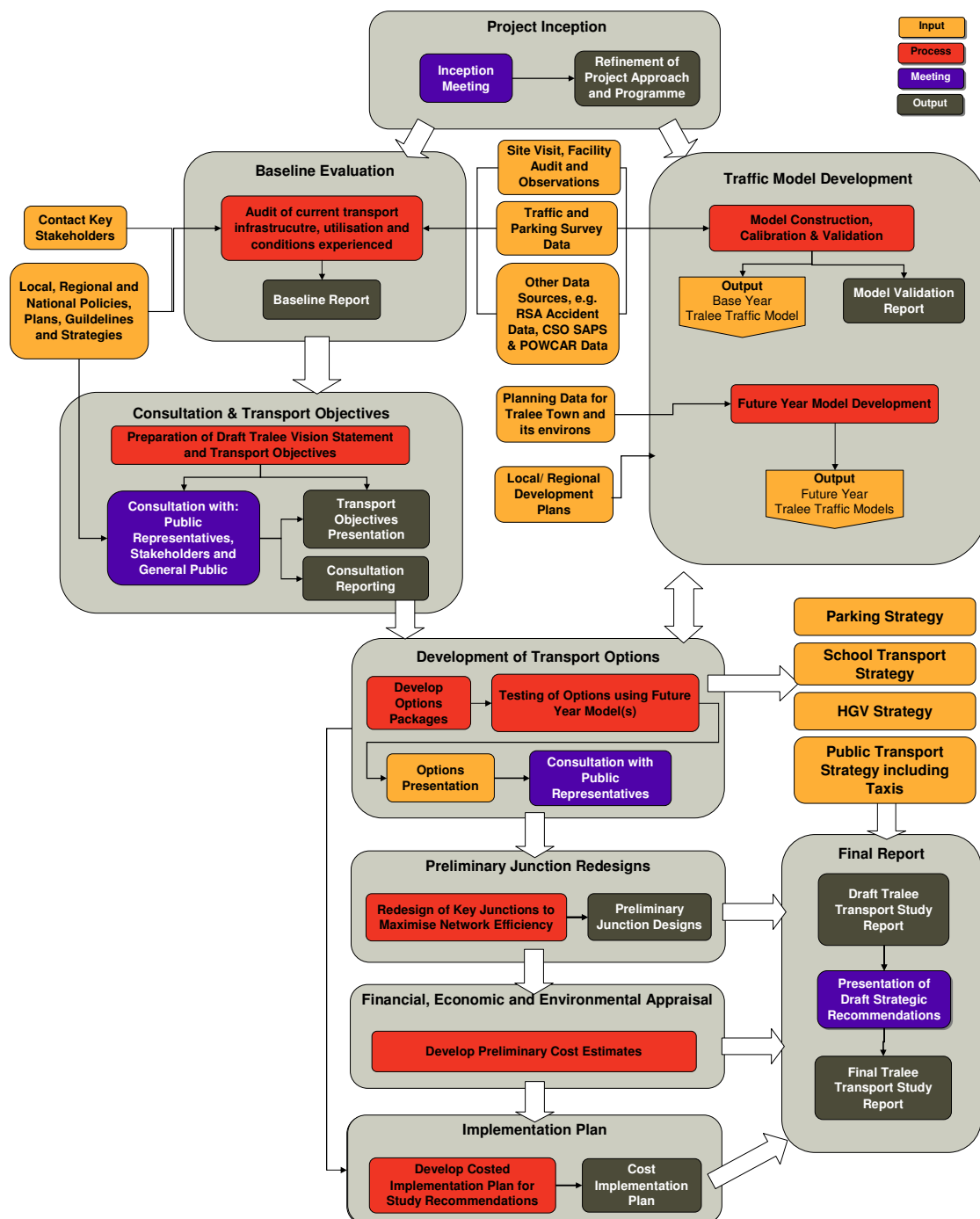
The development of this public transport strategy is focused on achieving the study objectives by improving public transport provision in Tralee.

The overall objective of a future public transport service for Tralee is to provide a viable public transport service linking the existing and future significant residential and employment zones to each other and to the town centre. The service would work with the other transportation initiatives to form part of an integrated public transport service. The service will assist in achieving a viable modal split from the use of the private car and will be an important element in achieving the sustainable development of Tralee.

The strategy proposed for Tralee includes a number of measures which will significantly improve public transport access. These measures improve both the accessibility and attractiveness of public transport, provide sufficient coach parking away from the town centre and improve road safety.

We recommend supporting the existing Tralee Peoples Bus services, and providing clear dedicated bus stop infrastructure at busy town centre locations.

**Executive Summary Figure 3 – Strategy Development Methodology**





# 1 Introduction

## 1.1 Background to the Tralee Transportation Strategy

- 1.1.1 MVA Consultancy, in conjunction with Healy Kelly Turner & Townsend (HKT&T) and DBFL Consulting Engineers, was appointed by Kerry County Council and Tralee Town Council to prepare a Transport Strategy for Tralee Town and its environs. The Tralee Transport Strategy aims to improve the transport network within Tralee to benefit the existing population and to provide the basis for sustainable future development of the town.
- 1.1.2 Tralee is the largest town in County Kerry with a population of almost 20,288 within the town and suburbs according to the 2006 Census, making it the 7<sup>th</sup> largest town in Ireland. The town is situated at the head of Tralee Bay and a number of rivers flow through the town into the bay. Tralee is located at the end of an old roadway that heads over the Slieve Mish Mountains and the town has a long history being a major Norman town in the 13<sup>th</sup> Century. The current layout of the town was created in the 19<sup>th</sup> century. The historical centre of the town comprises many narrow streets and the old layout is still evident today.
- 1.1.3 The town has a number of issues with its transport network that relate to the historical nature of the town centre and regional and district routes which pass through it. The town is highly centric from a transport perspective which focuses travel demand and congestion within the central area. This is further exacerbated by the nature and number of pedestrian crossings, as well as the amount of on-street parking.
- 1.1.4 The rural nature of Tralee and County Kerry means that private car transport is the main mode of transport for many trips which do not originate very near the town. Private vehicle transport will continue to be the most widely used mode for longer trips in and out of Tralee. The population surrounding Tralee is highly dispersed, making it extremely difficult to provide a viable and sustainable public transport option to serve longer trips in and out of the town. Moreover, there is a relatively inexpensive and generous supply of car parking in the town, reflecting the necessity to provide for the many that must make their trip by car. The current level of supply of car parking, however, would further undermine any attempt to develop a viable expanded public transport network as there would be little incentive to not drive.
- 1.1.5 A key issue is underperformance of the available traffic and road infrastructure in the town. This relates to efficiency of operation of the physical aspects of the traffic system, such as signals, pedestrian crossings, parking facilities, loading bays, and the general pedestrian environment. Further to operational issues which must be addressed, there are also serious safety issues to do with improper design at some junctions impacting on the environment for more vulnerable road users such as pedestrians and cyclists. There are many features of the roads and street network in Tralee that exhibit some performance issues or are under or over supplied relevant to current and anticipated needs.
- 1.1.6 Many junctions within the town area suffer delay due to design features such as signalling and road markings. Other behaviours including encroachment from loading, parking and drop off activity also create difficulties for traffic movement on the road network. Within the town centre, high levels of parking activity on key town centre streets can also lead to disruption to normal traffic flow. For walking and cycling road users the facilities available are often insufficient and not of the required standard in some locations to ensure safe movement.

- 1.1.7 The Tralee Transport Strategy has been undertaken to address these deficiencies for all road users and to provide a cohesive and clear strategy for making improvements.
- 1.1.8 It is timely to prepare a transport strategy now to ensure Tralee is fully capable of taking advantage of the significant potential investment forthcoming from Government to promote sustainable travel. The key Department of Transport policy, called “Smarter Travel: A Sustainable Transport Future”, is designed to guide changes in public policy in relation to settlement patterns and investment in non-car transport facilities. The shift in focus will see a changed urban environment that is focused towards high quality urban space geared towards pedestrians and cyclists. This in turn will inject significant economic impetus into Tralee Town Centre by promoting the development of retail, cultural and tourist facilities in a safer, more socially inclusive sustainable town centre.
- 1.1.9 The Tralee Transport Strategy is further influenced by the significant additional roads infrastructure that is already planned for Tralee. By 2016 it is anticipated that new bypass roads will be provided on both the west and east sides of the town, in addition to the already completed bypass link roads to the south and north. This will remove significant volumes of traffic passing through the town and affords the opportunity for greatly enhancing the environment in Tralee Town Centre.
- 1.1.10 The Tralee Transport Strategy also takes full cognisance of recent local, regional and national policy such as the Tralee Town Development Plan and the Kerry County Council Development Plan. The strategy is, therefore, consistent with the most up to date policy and reflects the current and future needs of the population of Tralee Town and its hinterland.
- 1.1.11 The Tralee Transport Strategy follows completion of a comprehensive Baseline analysis of transport issues in Tralee<sup>1</sup>. The Tralee Baseline Traffic Evaluation Report identified underlying strengths in Tralee’s transport network such as the compact, mixed use structure of the town centre which provides very good opportunities for walking and cycling.
- 1.1.12 The Tralee Baseline Traffic Evaluation Report also contains the detailed assessment of current transport conditions in Tralee and a thorough assessment of issues and problems faced by all road users.

## 1.2 Tralee in Context

### Population

- 1.2.1 Tralee town is the County Town of County Kerry and had a population of 20,288 in the town at the last census in 2006. This represented a decrease of 0.4% on the 2002 population of Tralee town and was the first measured decrease in population of the town in 4 decades. This population decrease was however mirrored by a substantial population increase in the suburbs of Tralee, reflecting a strong demand for urban generated rural housing in the environs of the town. In total the population of Tralee and its environs increased from 38,927 in 2002 to 40,729 in 2006.

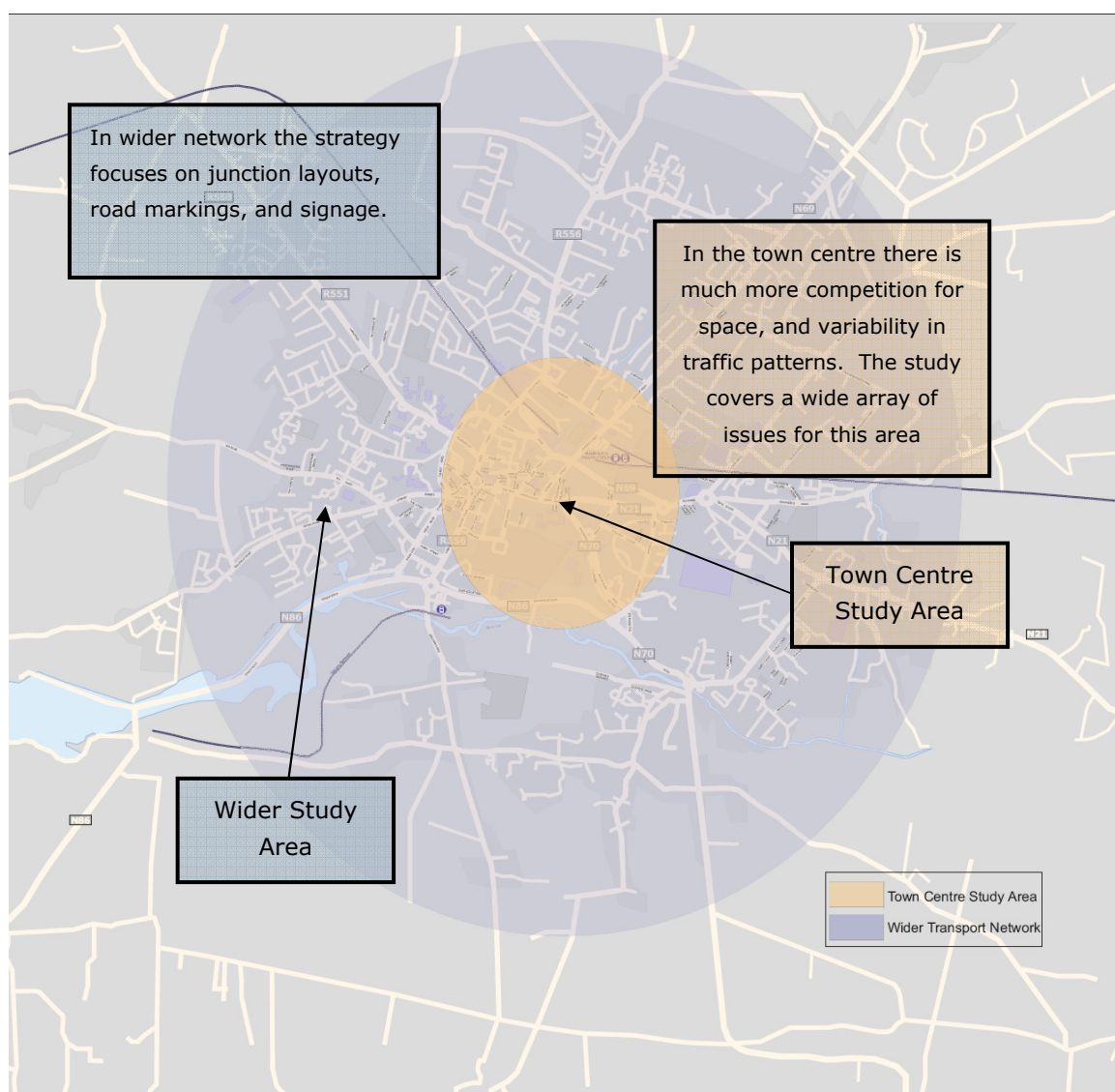
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<sup>1</sup> The Baseline Traffic Evaluation Report was issued to Kerry County Council in January 2010.

## Land Use

- 1.2.2 Tralee town contains a wide variety of different land uses including, residential, educational, health, industry/employment and retail. The land uses which represent key destinations for trips in the study area have been highlighted in Figure 1.1 below.
- 1.2.3 The majority of residential developments in the study area are located outside of the town centre and are largely comprised of medium density developments with a cul de sac type road network. Some local amenities such as churches, schools, sport grounds and local retail are located within the residential areas, shortening travelling distances and providing the potential for walking and cycling.

**Figure 1.1 Tralee Transport Strategy Study Area**



- 1.2.4 The town has a number of transportation issues that relate to the historical nature of the town centre and regional and district routes which pass through it. The town is highly centric from a transport perspective which focuses travel demand and congestion within the central area.

### 1.3 Study Requirements

- 1.3.1 The primary purpose of the Tralee Transport Strategy is to determine the transport interventions required to resolve existing traffic and transport issues (e.g. existing traffic congestion, parking pressure points, poor road safety performance) and to ensure the sustainable future development of Tralee Town and its environs. The study therefore needs to answer the question, *'what transport interventions are required, and when, to accommodate existing problems in the town, and to provide for its sustainable future development?'*
- 1.3.2 The strategy makes recommendations on the feasibility of augmenting and developing the transport network, so it will be capable of catering for the short (2010), medium (2016) and long term (2025) demands of the town and region.
- 1.3.3 The strategy makes reference to the Kerry County Council and Tralee Town Council Development Plan (and zoned lands contained therein), the Town Council's Transportation strategy aims as detailed in the Brief, and regional/ national policies, plans and strategies.
- 1.3.4 Preliminary design recommendations in relation to junctions which are deemed to be deficient from road safety and/ or capacity perspectives are made, to guide the subsequent implementation of these improvements.
- 1.3.5 A key aspect of the strategy is the development of a Traffic Model for the town. This model not only forms the basis for testing potential solutions, but also for subsequent detailed assessment/ appraisal of road schemes, parking policy interventions by Kerry County Council. In light of this, we have developed a model that meets both the strategy development requirements, and the longer term requirements of the Council. Furthermore, the model is also able to test the highway impact of potential public transport interventions.
- 1.3.6 The implementation of strategy recommendations is a key aspect of this study. There needs to be cognisance of a wide range of competing factors, including existing constraints and pressure points, forecast future transport conditions, committed transport schemes (i.e. those schemes for which direct lines of funding will not be removed), key triggers for the introduction of transport interventions, the timeframe for implementation of various transport interventions, and funding availability. Specifically, current funding pressures need are given significant consideration in the development of this plan.

### 1.4 Study Approach

- 1.4.1 At the outset of the Study, a methodology was developed and agreed with Tralee Town Council and Kerry County Council. This involved identifying the tasks required to fully address the Study Brief. The Key elements of the methodology make up eleven detailed project stages and are summarised below. The methodology is outlined in detail in Appendix A.

- Stage 1: Project Inception;
- Stage 2: Baseline Traffic Evaluation;
- Stage 3: Base Year Model Development;
- Stage 4: Future Year Models;

- Stage 5: Consultation;
- Stage 6: Developing Transport Objectives;
- Stage 7: Optioneering Process;
- Stage 8: Junction Redesign;
- Stage 9: Financial, Economic and Environmental Appraisal;
- Stage 10: Implementation Plan; and
- Stage 11: Final Report.

### 1.5 Structure of Report

1.5.1 The remainder of this report is structured as follows:

#### **Chapter 2 Transport Characteristics of the Study area:**

- This chapter is in part a summary of the Baseline Traffic Evaluation Report and provides an overview of the existing population, travel and land use patterns in Tralee as well as outlining local issues and a baseline junction evaluation.

#### **Chapter 3 Consultation:-**

- This chapter reviews the written responses relating to traffic and transportation issues received by MVA Consultancy during the stakeholder consultation process carried out at the outset of this study.

#### **Chapter 4 Future Transport Context:-**

- Chapter Four presents the key transport plans and policies that are relevant to the development of the Tralee Transportation Strategy. These documents set the context for the future development of Tralee and its environs.

#### **Chapter 5 Vision, Objectives and Transport Principles:-**

- Chapter Five describes Tralee Transport Strategy and its development. It outlines the Tralee Transport Strategy Vision Statement and a defined set of economic, social and environmental study objectives.

#### **Chapter 6 Road and Street Network Strategy:-**

- Chapter Six presents the proposed strategic and local traffic management recommendations that have been developed to support the transport strategy Vision and Objectives

#### **Chapter 7 Tralee Future Parking Strategy:-**

- Chapter Seven describes the proposed future parking strategy for Tralee town. The recommendations for car parking are considered in terms of the overall parking provision and the demand for various parking usages, together with the spatial distribution of parking spaces.

#### **Chapter 8 School Transport Strategy:-**

- Chapter Eight presents a strategy for implementing a School Travel Plan for all the schools in Tralee. School Travel Plans are designed to encourage pupils, parents and

teachers to travel to school by means other than the private car, these school travel plans can provide real benefits to pupils, parents, teachers and the wider community.

### **Chapter 9 Goods Vehicle Management Strategy:-**

- Chapter Nine outlines a short term and long term management strategy for Goods Vehicle Traffic in Tralee. The aim of the HGV management Strategy is to reduce the impact of HGV traffic in the town centre in order to create a safer, more attractive environment for pedestrians and shoppers, while still maintaining a sufficient level access to support the economy of the town.

### **Chapter 10 Public Transport:-**

- Chapter 10 describes the existing public transport conditions in Tralee and outlines a set of objectives in relation to future public transport, including an improved public transport interchange facility at Casement Station, alternative bus routes and stops, and a relocation of taxi ranks in the town.

### **Chapter 11 Strategy Assessment:-**

- Chapter 11 outlines the development and evaluation of the proposed strategy containing the individual strategies proposed in the previous chapters. It includes an evaluation of the strategies against Transport Network performance, Financial and Environmental appraisal.

### **Chapter 12 Phasing and Implementation:-**

- Chapter 12 outlines the implementation plan for each proposed measure to ensure the strategy can be fully implemented in the short, medium and long term.

### **Chapter 13 Public Submissions:-**

- Chapter 13 includes all of the main submissions and comments received following the public consultation exercise in which the main strategy recommendations were presented.

### **Chapter 14 Recommendations:-**

- Finally, Chapter 14 provides a summary of the key recommendations.

## 2 Transport Characteristics of the Study Area

### 2.1 Introduction

- 2.1.1 This chapter summarises the Baseline Traffic Evaluation Report issued to Kerry County Council in January 2010.
- 2.1.2 The Baseline Traffic Evaluation Report examines existing travel behaviour, demographic trends and travel demand in Tralee Town to enable an understanding of travel patterns and the profile of trip made. In addition to examining travel demand, operational and capacity constraints on the transport network were identified through consultation and site observation. From these early assessments a thorough picture of the current transport situation in Tralee was identified and used to help develop appropriate transport strategy measures.
- 2.1.3 A review of key relevant policy documents was also undertaken as part of the Baseline Traffic Evaluation to gain a clear understanding of transport plans that are proposed for Tralee which the strategy take cognisance of. The main transport recommendations of each of the main policy documents, such as the Kerry County Development Plan and the Tralee Town Development Plan, are summarised later in this chapter.
- 2.1.4 The remainder of this chapter summarises existing transport and travel characteristics in Tralee and is structured as follows:

- Methodology;
- Transport Context – Trip Generators and Trip Profile;
- Road Hierarchy and Traffic Volumes;
- Local Issues;
- Baseline Junction Evaluation; and
- Summary of Transport Characteristics.

### 2.2 Methodology

- 2.2.1 The following tasks were undertaken to gather information about the Tralee transport network, including traffic conditions and issues experienced by all road users:

- Site visits;
- Traffic Surveys; and
- Stakeholder and public consultation. This was an extensive and detailed exercise and is discussed in the next chapter, Chapter Three Consultation.



### Site Visits

2.2.2 A series of site visits were undertaken in Tralee and its environs during October and November 2009. The purpose of these site visits was to gather information relating to the current road network and conditions facing road users in the Town including such issues as junction layouts and arrangements, congestion hot spots, mobility impaired facilities, pedestrian/cycle facilities, loading facilities, etc.

2.2.3 During the site visits the following actions were undertaken:

- detailed observations on current traffic management arrangements and how they affect each road user classification;
- an examination of the conditions experienced by each road user type;
- observations of local land uses; and
- an extensive set of photographic records.

### Traffic Surveys

2.2.4 In addition to the site visits detailed above, a comprehensive set of traffic surveys were undertaken during November and early December 2009. The results were primarily used to inform the development of the Tralee Transport Model (TTM) and to establish weekday and weekend traffic flows, speeds, peak time conditions, and typical routing through the network.

2.2.5 The traffic data gathering exercise used a combination of different survey types, including the following<sup>2</sup>:

- Classified<sup>3</sup> junction turning count surveys (15 locations);
- Registration plate surveys (12 locations);
- Journey time surveys (3 routes, each way);
- Automated traffic counters (ATCs) over seven survey days (14 locations);
- Off-street car-park surveys (11 locations); and
- On-street car-parking surveys within Tralee Town Centre.

## 2.3 Overview of Current Transport Conditions

2.3.1 Tralee Town has a number of issues with its transport network that relate to the historical nature of the town centre and regional and district routes which pass through it. The town is highly centric from a transport perspective which focuses travel demand and congestion within the central area. Localised traffic delay may be further exacerbated by the nature and number of pedestrian crossings, as well as the wide prevalence of on-street parking.

2.3.2 The situation of Tralee as the dominant town in a wide rural area means that private car transport is the main mode of transport for trips to the town with a distance greater than

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<sup>2</sup> Summary maps showing the locations surveyed for each of the above is included in the Baseline Traffic Evaluation Report, Figure 8.1.

<sup>3</sup> Classified by vehicle type, e.g., car; light goods; heavy goods; bus; taxi; motorcycle; bicycle



three or four kilometres. For this hinterland area the car is the only viable option due to the highly dispersed pattern of settlement.

- 2.3.3 There is a generous supply of car parking throughout the town in on and off-street locations. In the context of this strategy, a large and increasing supply of parking would be considered contrary to the promotion of smarter, more sustainable modal choices. However this study recognises the complexity of parking and its provision and comprehensively covers the issues in both the Tralee Baseline Traffic Evaluation Report and in later in this report, in Chapter 7.
- 2.3.4 Figure 2.1 below shows the locations of the main social, civic, and employment facilities in Tralee. The groups are:

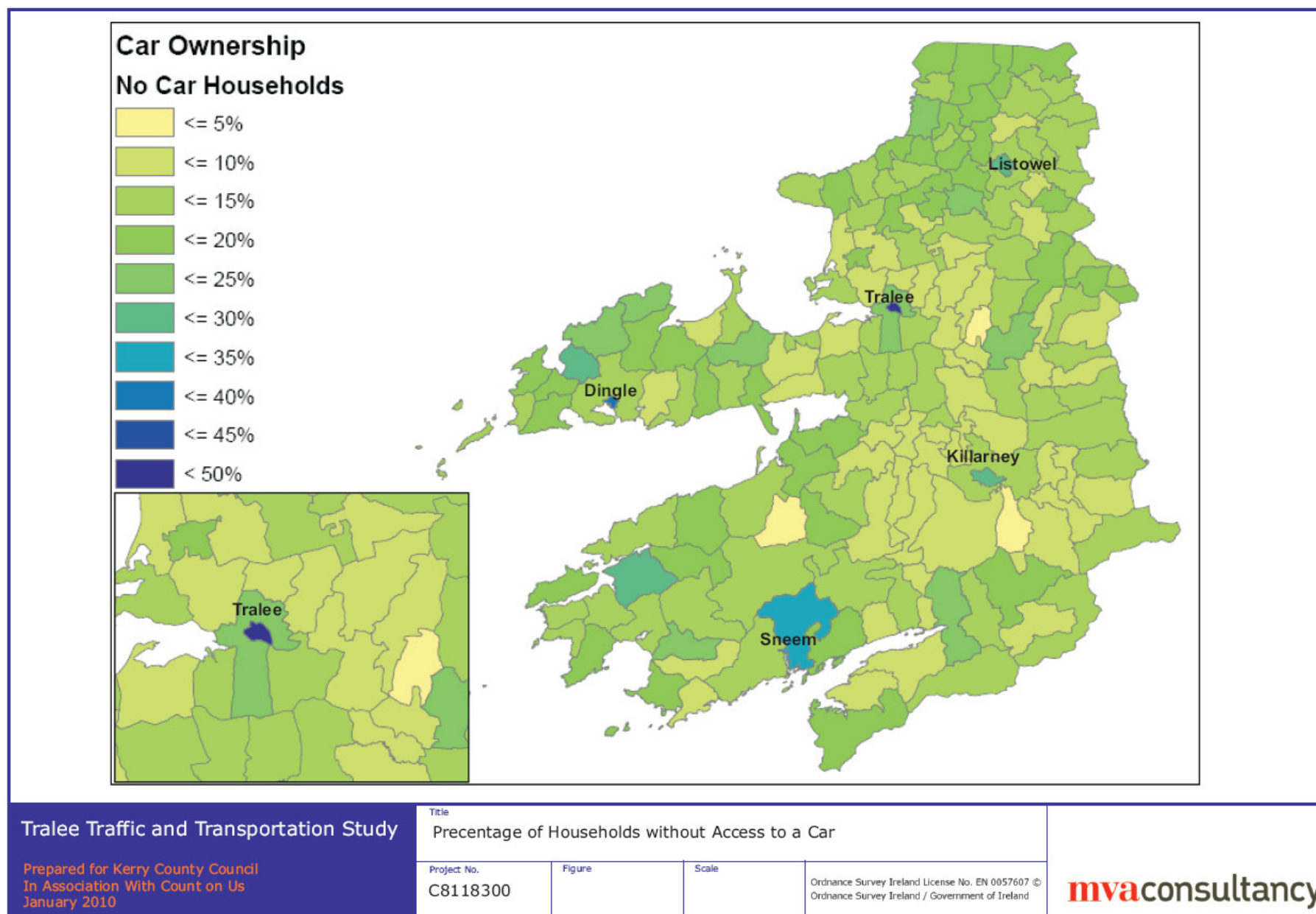
- Education Centres (Schools);
- 3<sup>rd</sup> Level Institutes;
- Retail Centres;
- Employment Centres; and
- Hospitals.

### Car Ownership

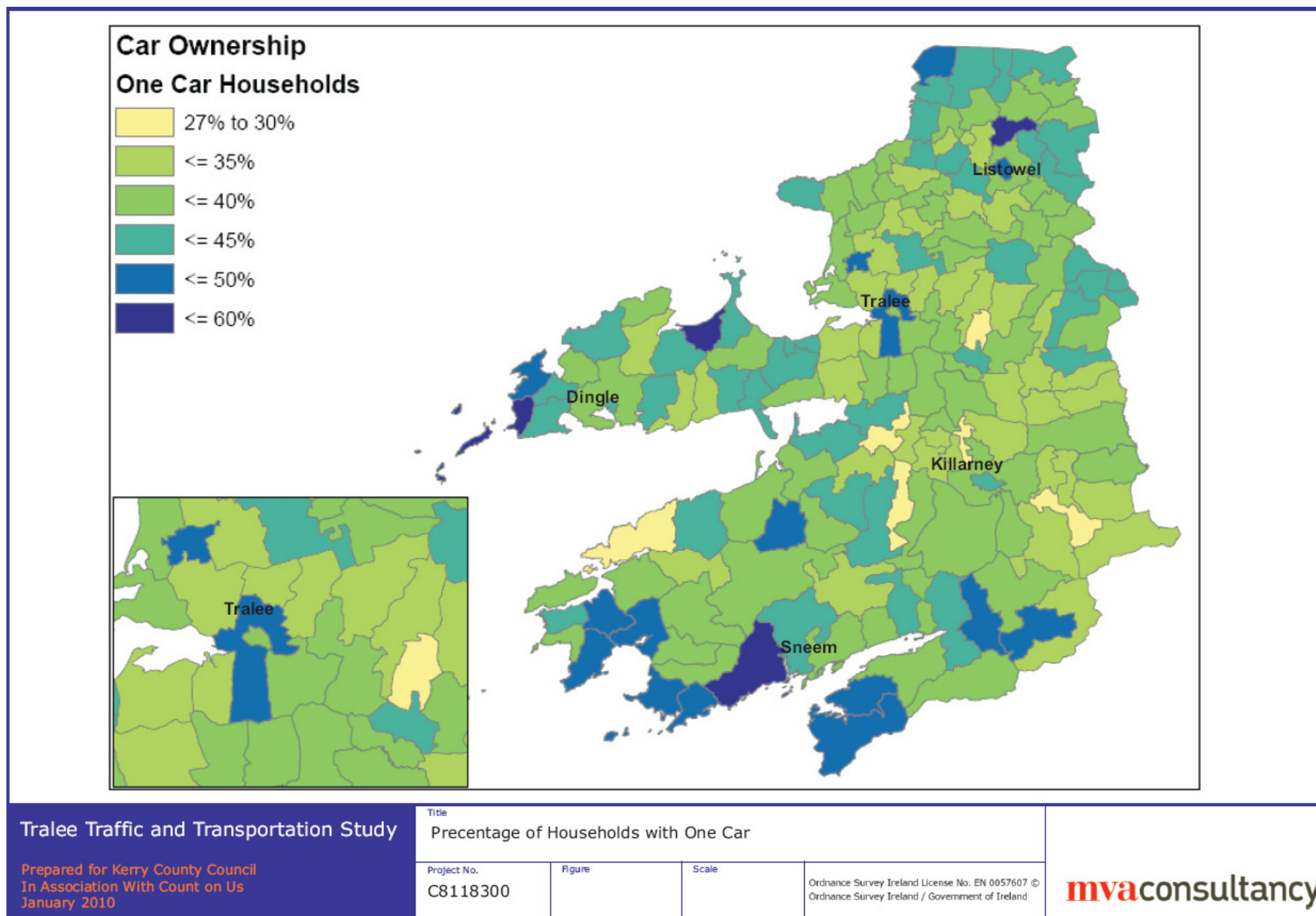
- 2.3.5 Car ownership plays an important role in deciding where and how to travel. High levels of car ownership in Tralee leads to similarly high levels of car use for all types of trips, and there are few restrictions or alternatives in place that would encourage people to not use their car.
- 2.3.6 Those who do not own a car may or may not have restricted accessibility to education, employment and public facilities, depending on their proximity to such services or a suitable public transport network. Car ownership becomes less important the shorter travel distances are, by virtue of compact urban forms with mixed land uses, where friendly conditions prevail for walking and cycling, or where there are bus and rail alternatives.
- 2.3.7 The level of car ownership in County Kerry is relatively high (13.5% of households have no car; 38.4% have one car; and, 48.1% have two or more cars). By comparison 15.2% of households in Clare, 21% in Limerick and 40% in Dublin City do not have access to a car. The rate of car ownership in Kerry demonstrates the reliance on private car transport as the dominant transport mode in the county.
- 2.3.8 Figure 2.2 and Figure 2.4 below show the Kerry-wide profile of car ownership for households with zero cars and with one car respectively.



**Figure 2.2 Percentage of Households without Access to a Car**



**Figure 2.3 Percentage of Households with One Car**

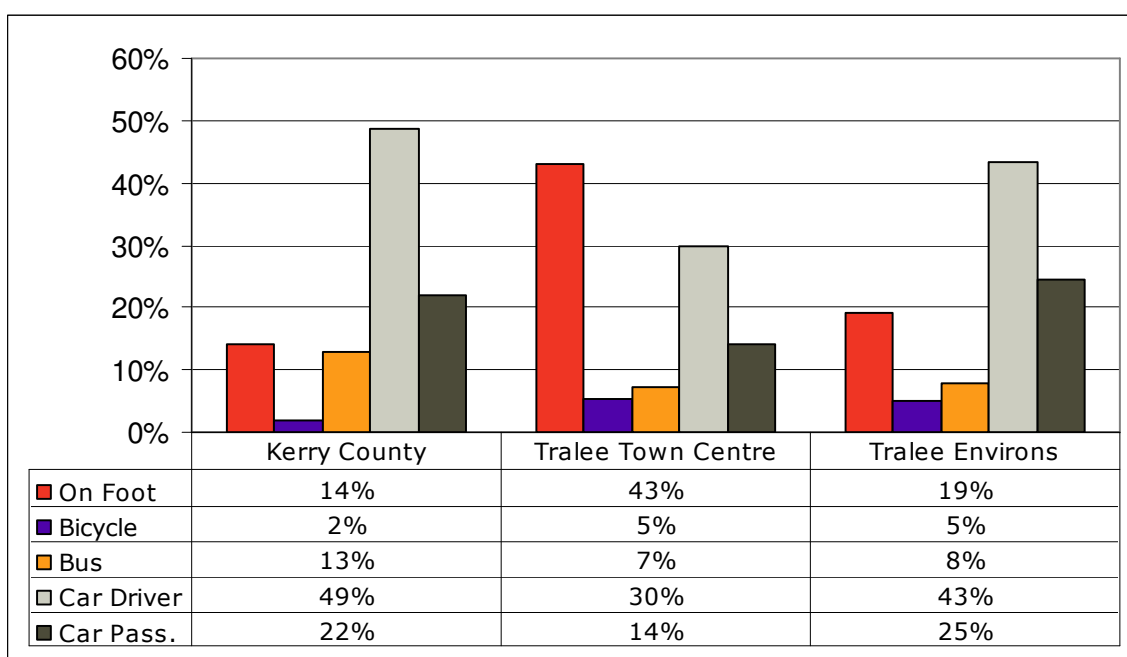


- 2.3.9 From our evaluation of Census statistics, there is a much lower car ownership rate within the central area of Tralee Town, where almost 50% of households do not have access to a car. The lower rate of car ownership extends into the areas surrounding the town centre wherein there are relatively few households with two cars or more. Within the urban area, there is greater opportunity to access employment and education within walking and cycling distance. The need for a car, therefore, is greatly reduced and it is sometimes more cost efficient not to own a car. Car parking within the urban area is also more restricted and can limit the number of cars per household.
- 2.3.10 In the county as a whole, there are a significant number of one car households, for an average household size of just under three persons.
- 2.3.11 With a rate of car ownership in Tralee town of around 50%, it is vitally important to recognise the transport needs of those without access to a car, and to achieve the appropriate balance for all modes of transport in the traffic management arrangement.

### Travel to Work and Education – Census Data

- 2.3.12 A key source of travel pattern data is the Census, which provides very useful information on the journey to work and education for those aged over five. This Census data and the analysis it supports is crucial to understanding existing travel patterns in the study area, for all of the modes of transport, including walking and cycling.
- 2.3.13 Figure 2.4, below, provides details of the mode share for Kerry County, Tralee Town Centre and Tralee Environs for travel to work and education. The very high level of walking to work and education within Tralee Town Centre reflects the compact layout of the town and is a very positive indication of the level of accessibility and transport sustainability within the town. It should be born in mind that a significant proportion of these trips are likely to be to the third level institutions in the town, as students are both less likely to own cars and more likely to opt to live within close proximity to the town centre.

**Figure 2.4 Modal Share to Work and Education (source: SAP Census 2006)**





- 2.3.14 Unsurprisingly, the private car comprises the highest mode share for the County. The relatively high mode share for bus can largely be attributed to trips carried by the school bus network. Similarly a significant proportion of the car passengers would comprise school children being given a lift to school.
- 2.3.15 Journey times to work and education in the county are very short, with the majority of trips under 15 minutes. Journey times are relatively consistent between the urban area and its environs and roughly 80% of all journeys to work and education are under 30 minutes in all areas. This indicates that the network is not highly congested, as people travelling relatively long distances from surrounding areas can complete their journey within 30 minutes, as shown in Table 2.1 below.

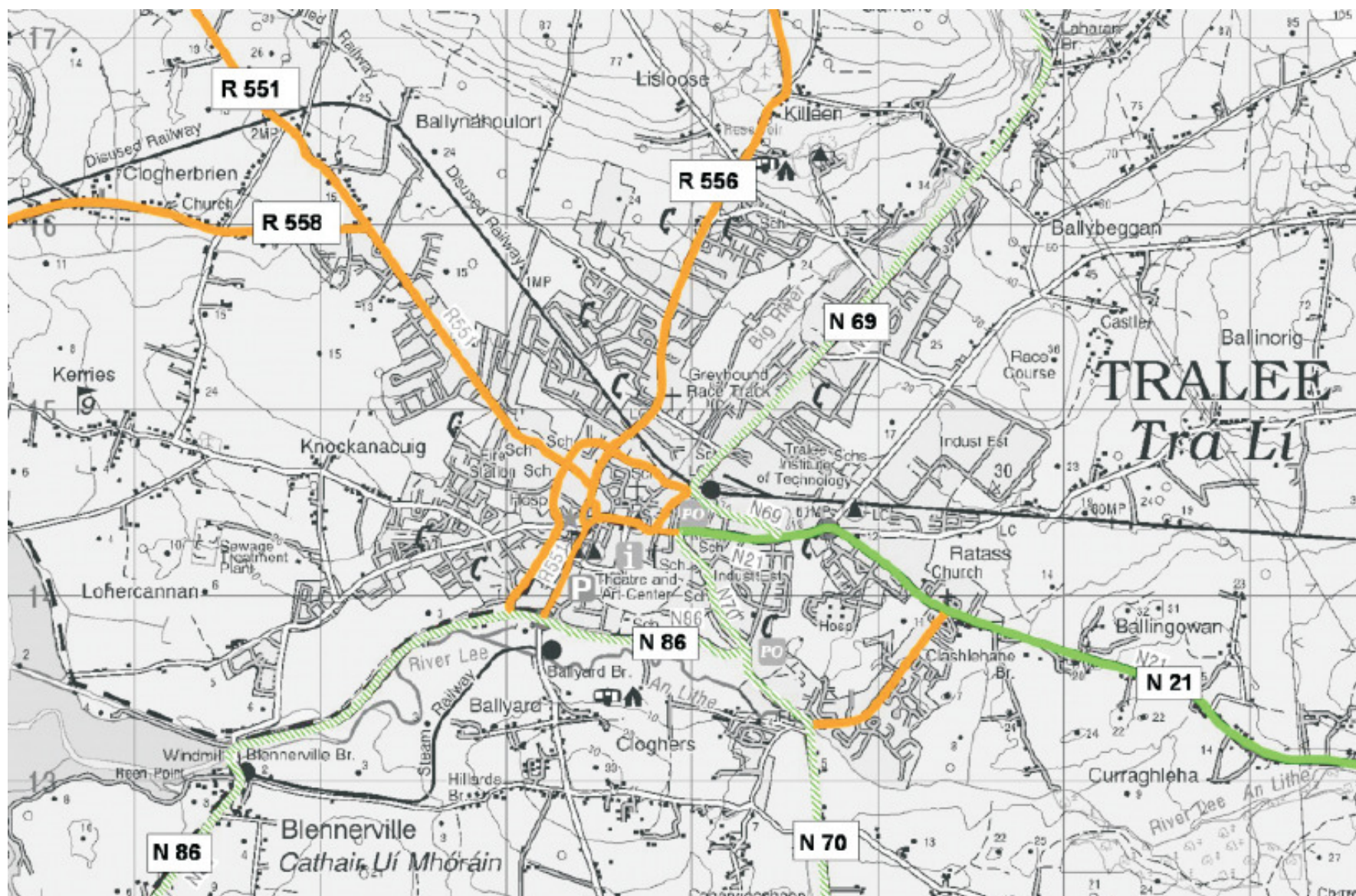
**Table 2.1 Journey Time by Area**

Journey Time	Kerry County	Tralee Town Centre	Tralee Environs
Under 15 minutes	47.7%	60.6%	53.6%
15 to 30 minutes	31.0%	26.5%	32.8%
30 to 45 minutes	13.8%	8.8%	9.5%
45 to 60 minutes	3.2%	1.4%	1.3%
60 to 90 minutes	2.8%	1.3%	1.5%
Over 90 Minutes	1.6%	1.4%	1.4%

## 2.4 Existing Road Hierarchy

- 2.4.1 The existing road network in Tralee was thoroughly examined by site visits, consultation and traffic surveys to identify the key issues currently experienced in the town. The Tralee Baseline Traffic Evaluation Report discusses these comprehensively. Figure 2.5 below shows the existing roads hierarchy of Tralee.

### Figure 2.5



### 2.5 Local Issues

#### Accident Data

- 2.5.1 Accident data was interrogated to establish the location, severity level, road-users affected and historic prevalence of accidents within the study area. These maps were provided by Tralee Town Council and Kerry County Council. Data for accidents not involving pedestrians is included in Figure 2.6 below, while pedestrian accident data follows in Figure 2.7.
- 2.5.2 There is a higher rate of accidents within the town centre, though the majority are minor. Outside of the town centre, accidents are more prevalent in the vicinity of junctions. The data reflects recorded accidents and there are likely to be more minor unrecorded accidents.
- 2.5.3 As would be expected, serious accidents involving pedestrians or vehicles are not very common and occur for the most part on the higher speed main roads leading in to the town. Within the town there are numerous occurrences of both accident classes, though the severity tends to be classified as minor.
- 2.5.4 For vehicular accidents the occurrences tend to be near junctions, whereas for pedestrian accidents, there is less of a pattern and occurrences are spread out between junctions. This is clearly to do with the tendency for pedestrians to cross at all points rather than just where there are controlled crossings at junctions.



**Figure 2.6 Location of Road Accidents in Tralee (over 5 years)**





**Figure 2.7 Location of Pedestrian Accidents in Tralee (over 5 years)**





### Parking

- 2.5.5 There is considerable demand for parking within the study area. The population density of the town centre is relatively high and this often creates a conflict between residential parking demand and visitor parking demand. There are a number of off-street car parks which comprise both surface and multi-storey facilities. Parking demand measures, including residential disc parking zones and parking charges, are used to manage the demand. Nonetheless, demand for short-term on-street parking is high.
- 2.5.6 In total there are 940 on-street demarcated spaces in the town. There are just over 2,000 off-street spaces in multi-story or surface level car parks.

### Loading and Unloading

- 2.5.7 Loading and Service Bays are distributed throughout the town centre and seem to operate effectively in places. Consideration could be given to restricting loading and servicing at peak periods within the town centre.
- 2.5.8 Some premises however provide no loading bays and delivery vehicles have to park on street at their destination. This in turn contributes to congestion as traffic must stop before passing the parked vehicle. This situation has been noted to arise on Denny Street which has loading bays near the north end of the street but not elsewhere.
- 2.5.9 Overall, despite some localised issues, facilities for loading/ unloading did not appear to be a major issue as regards impact on business activities, or impact on traffic congestion in Tralee Town Centre.

### Public Transport

- 2.5.10 Tralee is reasonably well served by inter urban public transport services by way of long distance bus and rail links. Tralee Railway Station and Bus Station are located side by side off John Joe Sheehy Road, a short distance from the town centre.
- 2.5.11 There are limited local bus services provided by Tralee Peoples Bus. Nonetheless, the local bus services provide important links and accessibility to those who rely on it. Two routes are operated both of which serve the town centre hourly.
- 2.5.12 School bus services play an important role in connecting the many schools in Tralee with the wider residential population. For example, St Ita's and St Joseph's School are served by seven buses, with escorts, collecting students from a wide catchment area.

### Walking and Cycling

- 2.5.13 The pedestrian environment is generally good in the town centre, however there are a few locations where inadequate crossing facilities and/ or long pedestrian waiting time which create barriers to pedestrian activity.
- 2.5.14 The cycling environment in Tralee could be improved considerably. At present, there are a large number of roundabouts which are not ideal for cycling. The existing cycle lane provision is disjointed and lacks the connectivity needed for a high quality cycle network.

Finally, there is a lack of supportive cycle infrastructure, particularly cycle parking within the Town Centre.

- 2.5.15 Because of the relatively small size of Tralee town, under 4km in diameter, there is significant potential for increased pedestrian and cycle use in Tralee. Should this potential be realised, it would yield significant benefits in that it would reduce car use, thus reducing traffic congestion and improving the urban environment.

### **Mobility Impaired**

- 2.5.16 During preliminary consultation the National Council for the Blind Ireland highlighted the fact that many junctions have inappropriate facilities for visually and mobility impaired people in the town and that attention should be paid to upgrading these junctions in the future.

## **2.6 Baseline Junction Evaluation**

- 2.6.1 Junctions represent the major point of conflict between road users, with intra modal (e.g. general traffic to general traffic) and inter modal (e.g. general traffic/ pedestrian/ cyclist) conflict occurring. In terms of the efficient operation of an urban traffic management system, the layout and operation/ management of junctions is essential to ensure that a fair balance is achieved between the competing needs of each transport mode. Given the conflict between road users that exists at junctions, the traffic management arrangements in place determine how well the junction will perform from a safety perspective. As a result, the junction arrangements at key junctions within the town are described within this section of the note.
- 2.6.2 This Transport Network Review is based upon observations made on-site. We believe these represent typical / average day to day operation of the transport network in Tralee and the findings from these observations coupled with the stakeholder review responses outlined within Chapter 4 will form the basis of our recommendations for improving the operational capacity of the Transport Network within Tralee.
- 2.6.3 We have categorised the issues observed in Tralee into the following three categories:

- **Operational Issues** - This relates to a junction or an area where the operation is the main issues, this could include conflict between different modes or uses;
- **Capacity Issue** – This relates mainly to a junction or an area where capacity is the main issue, this could also be down to operational issues, but mainly relates to demand exceeding capacity, and includes confined / restricted road widths; and
- **Pedestrian and Cyclist Issues** – This relates to a junction or an area where pedestrian and cycle facilities are the main issue, this could be due to junction arrangements, pavement widths or crossing facilities.

**Table 2.2 Summary of Junction location and Issues Identified**

Location	Traffic Operation	Traffic Capacity	Pedestrian and Cycle Environment
Rock St / New Rd / Russell St Junction	✓		✓
Russell St / Bridge St / Bridge Lane / Abbey St Junction	✓		✓
Bridge St / Staughton Rd / High St / New Rd Junction	✓		✓
Island of Geese / Gas Terrace / New Rd / Bridge Lane	✓		✓
Denny St / The Mall / Lower Castle St Junction	✓		
Castle Street			✓
Ivy Terrace / Staughton Rd / Prince's St Junction	✓		✓
Basin View / N86 Junction		✓	
Matt Talbot Rd / Island of Geese / High St Junction			✓
Balloonagh Cross: Pembroke St / North Circular / Matt Talbott Junction	✓	✓	
Rock Street / North Circular Rd Junction	✓		
Edward St / North Circular Rd / John Joe Sheehy Rd	✓		
Clash Cross Roundabout	✓	✓	
Dean's Lane / Boherbee	✓		✓
N69 / Fairies Cross	✓		
Racecourse Rd / Oakpark Rd	✓		
Racecourse Rd / Clash Rd	✓		✓
Oakpark Rd / Muing Rd	✓		
R551 / Lioscarraig Drive	✓		

2.6.4 The issues identified at these junctions and others are detailed in the Tralee Baseline Traffic Evaluation Report, Chapter Five.

### 2.7 Summary of Transport Characteristics

2.7.1 This chapter provided a brief overview of the transport characteristics within Tralee Town and its environs. The Tralee Baseline Traffic Evaluation Report provides a more detailed review of the existing situation. Some of the main points about the existing transport characteristics of Tralee, however are provided in summary here:

- There is a dispersed range of trip generators within the Town Centre with a large number of education facilities as well as significant employment, retail and social infrastructure;
- Traffic volumes in Tralee are not particularly high throughout most of the day, however the road network experiences peaks in traffic flow associated with trips to or from work. Saturdays are busy in the town with many people driving to the area to avail of shopping and leisure facilities, as well as the large non-office employment component of the town economy;
- A number of national and regional roads converge on the Town Centre which generates through traffic and over-capacity demand at some junctions;
- Census Statistics Office data for 2006 shows that the majority of trips to work and education by all modes takes less than 15 minutes and nearly all take less than 30 minutes. This suggests that severe congestions may be less regular or intense than what is actually perceived;
- Car ownership levels within the urban study area are at around 50% of adults. This is indicative of the high proportion of social housing in this area and of the compact layout of Tralee which allows many trips to be undertaken by walking or cycling;
- The numbers of people walking to work within the urban area of Tralee is very high, at about 45%; this is very supportive of the need to improve the quality and quantity of footpath facilities and areas of pedestrian priority;
- Many junctions within the study area have been identified as having capacity or safety issues; these junctions are recommended for short term upgrading in order to mitigated delay or safety issues;
- Heavy Good Vehicles are not very prevalent in the study areas, nonetheless there is little directional signage to encourage HGV movement around the core town area;
- Taxis are the dominant mode of public transport and currently many taxis regularly queue up from the northern side of Mall backing up to Bridge St upper to Bridge Lane, which may at times also overflow causing illegal taxi parking and consequences for safety;
- The Tralee Peoples Bus is the only bus service. The service provides a vital and important link for those who rely on its services and it should continue to be supported. The services are indirect and limited, but provide the greatest catchment for the local public who may at times not have the option of other travel modes.

## 3 Stakeholder Consultation

### 3.1 Introduction

- 3.1.1 At the outset of the study an extensive public and stakeholder consultation was undertaken, this chapter reviews the written responses relating to traffic and transportation issues received by MVA Consultancy during the stakeholder consultation process.
- 3.1.2 This process forms an important part of the study as the responses play a key role in developing a detailed understanding of the current traffic issues affecting Tralee and of potential solutions to these issues.
- 3.1.3 The stakeholder consultation process is described in more detail in the Baseline Traffic Evaluation Report.

### 3.2 Approach to Consultation

- 3.2.1 To ensure a varied and representative response a total of 116 different stakeholders and representatives were contacted and invited to make submissions. Among those contacted were:

- Public representatives (including local councillors);
- Church / parish representatives;
- Hospitals and Nursing Homes;
- Residence Associations;
- Local Gardaí and fire services;
- All primary, secondary and third level education facilities in the study area;
- Major employers in the study area and the chamber of commerce;
- Local transport stakeholders (Bus Coach operators / taxi firms etc); and
- Organisations for the disabled.

- 3.2.2 During this consultation period all key stakeholders groups in the Tralee area were contacted both in writing and by telephone and invited to make submissions and express their views under the following headings:

- Current traffic conditions in Tralee;
- Local issues of interest to the study;
- Strategic issues of interest to the study;
- The Stakeholders plans as they relate to Tralee; and
- Potential solutions.

#### Online Workplace Travel Survey

- 3.2.3 To further supplement our understanding of the existing travel situation in Tralee Town an online travel survey was established and instigated in November 2009. The website was published in the local press, The Kerryman newspaper. In addition, invitations to participate in the survey were sent to a number of key employers within Tralee.
- 3.2.4 A significant response was received from the following major employers and educational establishment:

- Kerry County Council;
- Tralee Town Council; and
- Institute of Technology, Tralee.

### 3.3 Stakeholder Consultation Summary

- 3.3.1 By the end of the consultation process a significant number of submissions had been received from a variety of different stakeholders. A review of these submissions identified six main areas of concern which are discussed below.

#### Traffic Congestion

- 3.3.2 The main issue of concern from a lot of respondents was the level of congestion during peak times in the town. The areas which were deemed to suffer the highest levels of congestion were; Town centre, Rock Street, North Circular Road, Basin Rd/ Matt Talbot Road, Deans lane, Stephens Terrace (Munster Bar), Quill Street / Boherbee.
- 3.3.3 Some of the main causes cited for this congestion were; through traffic, the location, frequency of pedestrian crossings within the town, illegal parking and lack of additional infrastructure provided to cope with increased population.
- 3.3.4 Some potential solutions put forward to alleviate congestion were to implement one way systems where possible and to construct bypasses or a ring road around the town.

#### Road Layout and Marking

- 3.3.5 A number of issues of concern were also raised in relation to road layouts and road markings. Some of the roundabouts in the town have no marked lanes in the centre which causes drivers to hesitate and reduces capacity. It is also felt that trees at some junctions reduce visibility especially for larger vehicles.
- 3.3.6 The road layout at the following junctions also cause problems;

- The exit from Dunnes Stores on upper Rock Street should be left turn only;
- The Layout of the junction of Brewery Road and Upper Rock Street is considered dangerous and should be changed to a roundabout;
- The junction of Oakpark road and Killeen Road was problematic as there is poor visibility; and



- Edward Street is narrow and parking should not be provided on both sides.

#### Parking and Loading

- 3.3.7 Respondents highlighted parking and loading activities as a cause for concern also. Specifically:

- Illegal parking (sometimes for loading /un-loading) leading to congestion;
- Parking charges being too expensive;
- Insufficient drop off facilities at schools leading to cars/ buses stopping in the carriageway to pick up /drop off.; and
- Multi-storey car parks are difficult to negotiate.

- 3.3.8 Specific locations highlighted for these activities were on Castle St, Denny St, Oakpark Rd, Rock St and Ashe Street. One possible solution put forward was to incentivise and encourage use of multi-storey car parks in the town.

- 3.3.9 The lack of parking facilities for staff and students of the third level facilities in the town was also a cause of concern.

#### Cyclists and pedestrians

- 3.3.10 The primary cause of concern with regards to cyclists and pedestrians is that the current infrastructure is inadequate. It is felt that there is a lack of off road cycleways and pedestrian routes. It was also felt that the numerous pedestrian crossings both controlled and uncontrolled were adding to traffic delay.

- 3.3.11 The need for additional pedestrian infrastructure was highlighted in many submissions. A submission from the National Council for the Blind Ireland also highlighted the fact that many junctions have inappropriate facilities for visually and mobility impaired people in the town and that attention should be paid to upgrading these junctions in the future.

#### Taxis

- 3.3.12 A number of respondents expressed concern that taxis parked in the centre of town restrict general traffic flow and also obstruct large vehicles. Specifically the Taxi rank on Bridge lane and Bridge Street was deemed unsatisfactory.

#### Bus

- 3.3.13 A number of issues relating to bus and bus services were raised during the consultation process. The most common issues raised were that there is a lack of bus lay-bys at schools to allow safe boarding and alighting of buses. Bus stop facilities throughout the town are also deemed to be insufficient as there are very few marked bus stops. It is also felt that there is a lack of viable public transport as a means of travel for those without access to a car.

#### School Access Issues

- 3.3.14 The following specific school related traffic management issues have been identified at primary and secondary schools:

- Clearways and double yellow lines are present in the immediate vicinity of the school but did not appear to be enforced as there were cars parked in the area;
- Some footpaths on the approaches to schools are narrow or discontinuous;
- There are locations without safe crossing points which results in uncontrolled pedestrian crossing and risk taking behaviour;
- There is a lack of well designed drop off areas; and
- There is a lack of bus drop off points and the distance to some bus stops is too great.

#### Other issues

3.3.15 Some other general comments received during the consultation process were;

- There is a lack of parking for staff at some schools;
- There is a need for better signage throughout the town; and
- The level crossing at Clash can cause tailbacks in both a northbound and southbound direction.

#### Business Access Issues

3.3.16 Access issues for businesses have a major bearing on business activities for the following reasons:

- Congestion on the road network reduces the effective catchment of businesses (in particular retailers), given the additional journey times required to reach the destination;
- Congestion adversely impacts on the ease to which deliveries can be made, and increases the cost associated with making such deliveries;
- Parking at the destination, in terms of the supply of parking (parking stock) and parking management policies dictate whether a parking space will be available for customers when they reach their destination, and how conveniently located the parking spaces are in relation to the businesses;
- Loading provision (loading bays/ double yellow lines/ available parking spaces) affects the ease at which deliveries can be accommodated;
- Public transport provision, given that congestion, and parking supply/ management policies will act as an incentive for people to use public transport and that large portion of the population do not have a car available to them; and
- Quality of walking and cycling environment, given the potential to encourage additional use of these modes. In addition, retail activities are dependent on pedestrian movements, whether as a full trip, or as a short walk at the end of a car journey. The quality of the pedestrian environment has a major bearing on the experience of the shopper, in particular when significant competition exists from bespoke shopping centres.

#### 3.4 Conclusions

3.4.1 After carrying out a thorough consultation process we have established that the main concerns of key stakeholders in Tralee relate to;

- The perceived levels of congestion within the town centre;
- The layout and markings of junctions;
- Inadequacy of pedestrian and cyclist facilities; and
- Inappropriate parking and loading activities within the town.

## 4 Future Transport Context

### 4.1 Introduction

- 4.1.1 This chapter describes the key transport plans and policies that are relevant to the development of the Tralee Transport Strategy. These set the context for the future development of transport and supporting infrastructure in Tralee and its environs. Recognition of existing plans is vital and their objectives must be supported by the Tralee Transport Strategy.
- 4.1.2 The Tralee Town Development plan and the Government's Smarter Travel policy are particularly relevant. These set out long term objectives to increase the modal share of cycling and walking and reduce car dependency. The key points from these policy documents, among others, are summarised in Table 4.1. An objective common to most of these is to promote increasing use of sustainable modes such as walking and cycling.
- 4.1.3 The Kerry County Development plan also sets out plans for significant upgrade and reorganisation of the future Tralee road network. New major orbital link roads are to be constructed: the N22 Tralee Bypass, the Tralee Western Ring Road, and the Tralee Northern Ring Road in 2016. These orbital routes link up with existing routes and will allow bypassing of Tralee, removing the need for long distance car travel through the town centre. For the remainder of this report we have termed this set of road proposals the Tralee Orbital Road Network.
- 4.1.4 The future construction of the Tralee Orbital Road Network will provide many opportunities for improving the transport network and environment in Tralee Town for all road users. As through traffic is diverted around the town via the orbital routes there will be opportunity to reallocate road space from vehicular traffic and vastly improve the quality of the environment for mobility impaired, pedestrians, cyclists, and public transport. Improving the quality of journey experience for other modes, particularly walking and cycling, is crucial for encouraging modal shift away from car.
- 4.1.5 In addition to the longer term strategic network proposals noted above there are a number of shorter term measures proposed in the Tralee Town Development Plan 2009-2015. This details new local ring roads within the town council boundary and also for the upgrade and improvement of a number of local roads and junctions.
- 4.1.6 Hence the remainder of this chapter is structured as follows:

- Policy Document Review;
- Smarter Travel;
- Strategic Proposals; and
- Local Road Schemes.

### 4.2 Policy Document Review

- 4.2.1 There are five key policy documents and studies with particular relevance to Tralee. These are as follows:

- Tralee Town Development Plan 2009-2015;
- Kerry County Development Plan 2009-2015;
- Tralee Land Use and Transportation Study 2002-2020;
- Tralee and Killarney Environs Local Area Plan; and
- Southwest Regional Planning Guidelines.

4.2.2 The main objectives and policies set out by these is summarised below in Table 4.1. There are a number of common themes throughout these documents that set the context for the development of the Tralee Transport Strategy. These include:

- Controlling and limiting the supply of urban generated one-off rural housing;
- Restricting the development of out of town retail;
- Developing Tralee Town centre in an integrated and sustainable way;
- Improving the design of roads and the quality of roads provision for cyclist, pedestrians, and persons with disabilities; and
- Implementing traffic calming and divert unnecessary traffic out of the town.

4.2.3 Of the policies set out below, one of the main threads to emerge is the need to improve facilities for pedestrians and cyclists.

4.2.4 In the next chapter we discuss the specific objectives that form the basis of The Tralee Transport Strategy and also support the main policies identified here.

Table 4.1 Summary Objectives from relevant principal plans and previous studies

	Tralee Town Development Plan	Kerry County Development Plan	Tralee Land Use and Transportation Study 2002-2020	Tralee and Killarney Environs Local Area Plan	Southwest Regional Planning Guidelines
Statement of Strategy	The vision and planning strategy seeks to strengthen the role of the town as an economic driver in the region in addition to further developing its range of tourism attractions and the unique quality of life to offer to its citizens and visitors..	The overall aim of the Kerry County Development Plan 2003 -2009 is; “to provide for an improved quality of life for all the people in the county while regulating development in a sustainable manner”.	Tralee Town Council and Kerry County Council commissioned a Land Use and Transportation Study (LUTS) for the Tralee Electoral Area with the aim of providing a framework for the integration of land use, transportation, social, economic and environmental factors. The Tralee LUTS is a twenty year planning strategy which has been incorporated into the Tralee Development Plan	The Tralee and Killarney Environs Local Area Plan was produced in 2007 with the purpose of developing the “Linked Hub” (as outlined in the NSS) for Tralee and Killarney	The strategy covers the South West Region, which incorporates county Kerry together with county Cork.  Tralee falls into zone 2” Kerry Tralee-Killarney Joined Hub. Development priorities that have been identified for Tralee in these guidelines were:
Key Issues, Objectives and Opportunities	<ul style="list-style-type: none"> <li>■ Tralee experienced population decline of 0.4% between 2002 and 2006, at the same time population of Kerry increased 5.2%;</li> <li>■ The implementation of <b>housing control policies in rural areas</b> is therefore of paramount importance to reverse the trend of population decline within the town boundaries and unsustainable housing patterns in the rural environs;</li> <li>■ The <b>provision of cycling facilities</b> has health benefits as well as promoting a modal shift away from the private car thus decreases traffic congestion in the town.</li> <li>■ Policy of Tralee Town Council to <b>discourage commuter parking</b> in the town centre and ensure there is adequate parking provision for shopping business and leisure use</li> </ul>	<p>Some of The key issues and aims identified in the Plan are:</p> <ul style="list-style-type: none"> <li>■ Increased demand for unsustainable dispersed rural housing</li> <li>■ Facilitate the provision of the necessary infrastructure required to promote the sustainable development of the county</li> <li>■ Make <b>improvements to the design of roads</b> in urban areas to accommodate the <b>needs of cyclists, pedestrians, and persons with disabilities</b></li> <li>■ Facilitate the provision of recreational pedestrian and cycle routes throughout the county</li> <li>■ The Kerry County Development Plan also proposes <b>a number of new Roads in the Tralee area</b>. These are the N22 Tralee Bypass, Tralee Western Ring Road, Tralee Northern Ring Road (Phase 2), and Tralee Link Road (Phase 3). Figure 4.1 below shows the alignment of these proposed new roads.</li> </ul>	<p>The key concepts and considerations of the LUTS study are to:</p> <ul style="list-style-type: none"> <li>■ Strengthen the development of the Tralee Electoral Area by reinforcing a <b>balanced and hierarchical urban settlement</b> structure which facilitates developments within defined settlement areas focusing on Tralee as the primary settlement area</li> <li>■ Co-ordinate land uses to encourage a <b>modal shift from the private car to walking, cycling and public transport</b></li> <li>■ Develop a traffic management strategy that focuses on reducing the need to travel and reliance on private transport <b>while fostering the growth of public transport, cycling and walking</b></li> <li>■ Improvements in time-tabling, route coverage and advertising for the bus service in Tralee</li> <li>■ Provision of <b>improved facilities for cyclists</b> through the development of an interconnected network of cycleways</li> <li>■ Facilitate both vehicular and <b>pedestrian access</b> to the town centre</li> <li>■ <b>Plan compact</b> rather than dispersed settlement patterns</li> <li>■ Use <b>traffic calming</b> measures to reduce speeds</li> <li>■ <b>Divert unnecessary vehicular</b> traffic including heavy goods vehicles</li> </ul>	<p>The Tralee Environs Local Area plan sets out a number of development objectives for Tralee, including reserving strategic road corridors for the development of the following routes:</p> <ul style="list-style-type: none"> <li>■ An outer relief route to the east of the town;</li> <li>■ A northern relief route</li> <li>■ A western relief route</li> <li>■ A new street network at Carrigeendale, Farranstephen and Knockanacuig</li> <li>■ A southern relief route that will connect the N21 (Castleisland Road) with the N86 (Dingle Road), south of Blennerville</li> </ul>	<ul style="list-style-type: none"> <li>■ The Town Centre should be rejuvenated and expanded in a planned orderly fashion, to facilitate an increase in retail and office space. In order to retain the validity of the town centre key sites within the Town should be identified and reserved for retail purpose;</li> <li>■ The Town Centre should <b>be upgraded through a strategic and integrated approach</b> to the built and public environment. The quality of the built environment, built heritage and public domain needs to be protected and upgraded in an integrated fashion, delivering a high-quality Town Centre</li> <li>■ Policy should, in accordance with national policy guidance, <b>restrict the development of out of- centre retailing</b>, particularly comparison shopping;</li> <li>■ Planning policies should, wherever possible, support the expansion of the Kerry Technology Park as a key engine of growth for the Area</li> </ul>

### 4.3 Smarter Travel

- 4.3.1 Under the Government **Smarter Travel** policies it would be desirable to promote Tralee as a model town with regards to sustainable travel. This study can give Tralee a substantial head start in making progress towards the government targets. This Transport Strategy can act as a clear framework for ensuring this long term objective is realised.
- 4.3.2 To ensure these long term sustainable travel objectives are met in the long term, it is essential that a town centre environment is created where pedestrian and cyclist activities are accommodated and encouraged.
- 4.3.3 There are five key goals which form the basis of the policy:

- Improve quality of life and accessibility to Transport for all and, in particular, for people with reduced mobility and those who may experience isolation due to lack of transport;
- Improve economic competitiveness through maximising the efficiency of the transport system and alleviating congestion and infrastructural bottlenecks;
- Minimise the negative impacts of transport on the local and global environment through reducing localised air pollutants and greenhouse gas emissions;
- Reduce overall travel demand and commuting distances travelled by the private car; and
- Improve security of energy supply by reducing dependency on imported fossil fuels.

#### Sections Relevant to Tralee

- 4.3.4 With regard to cycling in Ireland the government intend to create a strong cycling culture and ensure that all cities, towns, villages, and rural areas will be cycling friendly. And that cycling will be a normal way to get about, especially for short trips. Next to walking, cycling will be the most popular way to get to school and universities and will become the transport mode of choice for all ages. The document envisages that by 2020 160,000 people will cycle for their daily commute up from 35,000 in 2006. In order to achieve these aims the National Cycle Policy Framework intends to;

- Create a number of traffic free urban centres to facilitate cycling;
- Invest in a national cycle network with urban networks given priority;
- Give cycle Training for school children;
- And integrate cycling with other modes of transport;
- Provide safe pedestrian routes;
  - that serve employment and educational trips; and
  - that link with public transport;
- Prioritise traffic signals to favour pedestrians instead of vehicles;
- Create level grade crossings for pedestrians at junctions;
- Unless it is inappropriate ensure 30km/h speed limits are introduced in all urban areas;
- Widen footpaths where there is high pedestrian flow;

- Signpost pedestrian routes; and
- And enforce the law with regard to encroachment on pedestrian spaces.

- 4.3.5 The actual walking and cycling targets are defined as 15% for cycling and 25% for walking. These targets are very ambitious for many areas that are currently car dependant, but it will be seen below that already Tralee has a high proportion of trips made by walking, according to the Census data.
- 4.3.6 It is evident from the list of Smarter Travel Objectives that any transport plans and traffic management arrangement developed for Tralee must actively focus on improving the attractiveness of travel by cycling and walking.

#### 4.4 Strategic Proposals

- 4.4.1 As mentioned previously, the Kerry County Council development plan 2009-2015 includes proposals for the construction of a number of ring roads, bypass and strategic road upgrades around the town. These are:

- N22 Tralee Bypass (Medium Term NRA Proposal);
- Phases 2a and 2b Northern Relief Roads (Medium Term);
- Phase 3 Western Ring Road (Long Term); and
- Phase 4 Northern Link Road (Long Term).

- 4.4.2 In the long term all of these together will form a near complete ring road system around the town. The N22 Tralee Bypass, proposed by the National Roads Authority, is also known as the Eastern Ring Road. This new road will link the existing N22 and the N69 about 3.5 km to the east of the town centre.
- 4.4.3 The reduced need for travel through the town centre by car presents many opportunities for local improvements to be made within the town centre area. Thus the proposals for the town centre are closely linked to the eventual completion of the Tralee Orbital Road Network. The anticipated timescale for its completion is the improvement of facilities that support the use of sustainable transport modes.
- 4.4.4 Maps of the strategic road layout improvements are provided below in Figure 4.1.





## 4.5 Local Highway Network Schemes

### Inner Relief Roads and Upgrades

- 4.5.1 A number of new roads for Tralee are planned on the periphery of the existing urban footprint of Tralee. These roads will open up new lands for potential future development. By themselves these new link roads will not significantly alter the operation of the overall transport network in the future.

Scheme	Timeframe	Rational
Knockanacuig to Ballyvelly Road	Medium to Long Term	Road improvement to improve carrying capacity and reduce congestion
Knockanacuig Cross to Caherslee Road	Medium to Long Term	Facilitate development of lands as per Tralee West UDF/ open up development lands and improve access from NW of Tralee to SW of Tralee
Croogorts to Caherslee Road	Medium to Long Term	Facilitate development of landbank at Mounthawk/ open up development lands
Ballyard to Cloghers Relief Road	Medium to Long Term	Facilitate development of landbank as per Ballyard/Cloghers AAP/ open up development lands
Ballyard Road Roundabout and Ballyard Road to Kearney's Road	Medium to Long Term	Facilitate development of landbank as per Ballyard/Cloghers AAP/ open up development lands
Cloonmore and Cloonbeg service roads	Medium to Long Term	Relieve Traffic on Mitchels Road
N86 & R874 Basin Road	Short Term	Widening of Existing Road to accommodate right hand turning manoeuvres

- 4.5.2 The existing layout of housing on the road network in Tralee features many cul-de-sac type housing estates feeding traffic on to the main routes which converge in the town centre. Often single estates do not have direct access to their closest neighbouring community creating a need for circuitous trips
- 4.5.3 This configuration often leads to neighbouring housing estates also having poor quality access between each other for walking and cycling and leads to increased use of car transport. The inner relief roads in some cases will provide an opportunity to open up some of these areas to each other and will increase accessibility to local schools, shops and other facilities located outside of the town centre by other modes.

### 4.6 Conclusion

- 4.6.1 This chapter set out the future strategic context for transport in Tralee by detailing the key relevant policy documents and also the plans for the expansion of the Tralee road network.
- 4.6.2 It is vital to understand the policy context and future transport plans that exist. This provides the framework for the development of the Tralee Transportation Strategy.
- 4.6.3 The policy document review identified five key reports. There are many wide ranging recommendations made in these. Of those related to transport, each document sets out the need to support the more sustainable travel modes: walking, cycling, and public transport.
- 4.6.4 The link between these policy aspirations and the proposal for the Tralee Orbital Road Network has been identified. This roads programme will divert through traffic away from the town centre thereby creating a better safer environment for walking and cycling<sup>4</sup>.
- 4.6.5 In the next chapter we define in more detail the Smarter Travel targets and how these relate to Tralee. We use the key objectives highlighted in the policy document review to develop a Vision Statement for Tralee that encompasses these aspirations. Then, specific objectives are defined with respect to these policies. This means defining the desired end-state that each policy is trying to achieve. From this 'objective setting' it is then possible to start developing the specific proposals that form the Tralee Transport Strategy. A crucial element of the strategy is being able to measure progress towards the Vision, in other words, achieving the objectives. We have, therefore, set out objectives that relate to quantifiable measures of performance, such as mode share and so on.

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<sup>4</sup> This conclusion is supported by the traffic modelling results (discussed in detail in Chapter 11: Strategy Assessment).

# 5 Vision, Objectives and Transport Principles

## 5.1 Introduction

- 5.1.1 This chapter defines the strategy and its development. Previously we outlined the current policy environment which aims to promote sustainable travel choices in Tralee in the future, and also the plans for the Tralee Orbital Road Network, which will give much needed traffic relief to the town centre. This is the background against which the Tralee Transport Strategy is developed.
- 5.1.2 A transport strategy is built up by first defining, in the form of a Vision Statement, what the future aspirations are for the town and its citizens, and how these can be supported by the future transport network. The policy review in the previous chapter provides the necessary ingredients for putting together a suitable Vision Statement.
- 5.1.3 Transport and land use planning are among the most effective policy instruments available for building a sustainable future. Transport, linked to an appropriate execution of land use policy, is fundamental to environmental, economic, and social sustainability. These, along with safety, are the pillars of sustainable planning.
- 5.1.4 The Tralee Transport Strategy is a strategy for the transport system in Tralee that supports these sustainability objectives. It is grounded in a Vision Statement that encapsulates the link between transport and sustainability. Then the strategy development process continues with the definition of specific, measurable objectives for Tralee that support its sustainable future, the Vision Statement, and the specific concerns as communicated from the stakeholder consultation process and those issues identified from site visits and from the transport modelling.

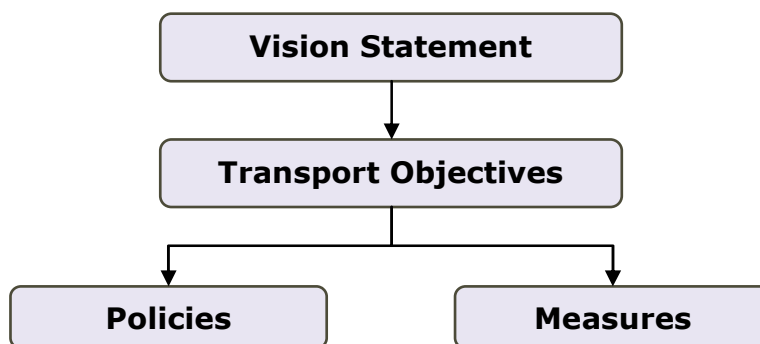
## 5.2 Tralee Vision Statement

- 5.2.1 As mentioned, the development of a vision statement is an important part of the transport strategy process, as, without it, the transport objectives would be developed in a vacuum.
- 5.2.2 The Vision provides the over-arching context for the specific measures within the Tralee Transport Strategy, providing the all encompassing blanket to which the objectives fall under and ultimately the basic justification for the proposed set of individual junction and street improvements. Figure 5.1 illustrates the link between the Vision Statement, transport objectives, policies and measures. The Vision Statement creates a sense of what the strategy will achieve in the longer term so that the public can easily identify with its rationale and purpose. A Vision Statement also demonstrates leadership in terms of the desire to improve quality of life in the town. Objectives may then be set within the broad framework provided by the Vision Statement, such that transport is linked to the future aspirations of the region. The statement also focuses more on the future transport environment than the current situation.
- 5.2.3 In setting the Vision statement, it is vital to impart the importance of a well functioning transport network. Transport has an impact on all aspects of how the town functions, economically, environmentally, culturally and socially. Transport proposals have a long term impact on these and therefore the quality of life for future generations. The Vision

Statement should also stand the test time, as it will be mentioned again in future developments to the strategy, and over the course of the anticipated timeframe of the Tralee Transport Strategy.

- 5.2.4 The Vision Statement builds on the Tralee Town and Kerry County Development Plans, and was developed by reference to relevant local, regional and national policy documentation. It is vital to be consistent with existing aims and objectives as set out in these plans.

**Figure 5.1 Strategy Development Hierarchy**



- 5.2.5 The Vision Statement, presented below, subtly emphasises the need to consider all transport modes in the strategy, and at the same time shows that private car transport is not being discriminated against, in that efficient movement is a priority for the strategy. The 'all' part encompasses all road users, who can each be fairly provided for by employing modern junction design concepts.

### TRALEE VISION STATEMENT

***"To create streets and places that are safe, attractive and vibrant, to provide integrated and balanced transport facilities with efficient movement for all."***

## 5.3 Transport Objectives

- 5.3.1 A series of transport objectives has been developed taking cognisance of the 'Vision Statement' for the Town, and considering the issues identified in the Baseline Traffic Evaluation Report.
- 5.3.2 The broad transport objectives support the broader **economic, social, and environmental objectives**. Developing transport strategies that contribute in all of these areas is the definition of sustainable transport planning. Sustainability as an objective is traditionally defined in terms of society and the environment. Sustainable social objectives should consider the needs of present society and that of the future in mind. Environmental sustainability implies integrating the conservation of natural resources in to the transport policy framework and thus the Tralee Transport Strategy.
- 5.3.3 A large part of Tralee Transport Strategy is based around improving quality of movement in the town centre for pedestrians and cyclists. This is coupled with the clear need which arises from the base line evaluation to improve the operation and organisation of the road network in Tralee. Both of these broad goals will involve redesign of key junctions in terms of their

operation and also the redesign of the streetscape in central parts of the town. Town centre circulation and better organisation of available infrastructure and road space for all road users are core considerations.

5.3.4 These mode specific objectives were developed with reference to the Tralee Town Council's Transportation Strategy and Kerry County Council strategic goals<sup>5</sup>.

5.3.5 The Department of Transport *Guidelines on a Common Appraisal Framework for Transport Projects and Programmes* sets out high level goals or aims of the Tralee Transport Strategy. These can be broadly categorised as follows:

- Economic;
- Safety;
- Environmental; and
- Integration, Accessibility and Social Inclusion.

5.3.6 Specific objectives or desired end-states are then listed under each of these headings. Within these we identify aspects of the transport system that may be improved upon as a means of realising the Vision. These objectives are typically constructed to meet the goals of the relevant National and Local policies, such as reducing congestion, protecting the environment, increasing safety and accessibility for vulnerable road users.

5.3.7 The key objectives within the Tralee Transport Strategy are:

- Develop the town centre in an integrated and sustainable way;
- Make improvements to the design of roads and the quality of roads provision for cyclist, pedestrians, and persons with disabilities; and
- Implement traffic calming and divert unnecessary traffic out of the town.

5.3.8 These objectives are broader than the actual transport strategy. In effect the Tralee Transport Strategy will aim to support the delivery of these key objectives, and in turn the Vision for Tralee.

5.3.9 In transport terms, we believe the broader objectives translate as follows:

- To create more space for pedestrians and cyclist in the town centre;
- To improve the operational efficiency of key junctions in the town;
- To take advantage of reduced traffic in the town centre when the ring road network opens up; and
- To smoothen traffic flow through the town through more effective signage and control, and by rationalising parking provision and enforcements.

5.3.10 To encourage more trips by walking or cycling, it is very important to recognise what general measures should be put in place to gain improvements. The measures can be understood as by what is termed "Hierarchy of Provision". This sets out in order of hierarchy the type of

<sup>5</sup> .as outlined in Sections 1.1 and 1.2 of the Brief

intervention required to support sustainable travel choices. We discuss these in further detail in the next chapter, but for completeness, they are<sup>6</sup>:

	Pedestrians	Cyclists
Consider First	Vehicular Traffic Volume Reduction	Vehicular Traffic Volume Reduction
	Vehicular Speed Reduction	Vehicular Speed Reduction
	Reallocation of Road Space	Junction Treatment
	Provide better crossings along existing desire lines	Off road cycle tracks
Consider Last	New pedestrian alignment or grade separation	Conversion of footpaths or sharing of such for both pedestrians and cyclists

- 5.3.11 The future strategic road network for Tralee, which is discussed in detail below in this chapter, presents opportunities for prioritising both pedestrian and cyclist activity throughout Tralee by reducing traffic volumes and speeds in these areas. It is fitting with good practice therefore to consider how this can be taken advantage of and support with specific measures.

<sup>6</sup> Source: Department for Transport UK, Manual for Streets

**Table 5.1 Tralee Orbital Road Network: Opportunities and Threats**

Objective Category	Opportunities	Threats
<b>Economy</b>	<p>The Tralee Orbital Road Network plan will facilitate easier movement of consumers and goods.</p> <p>The removal of traffic in the town centre could facilitate a strong civic urban centre, attractive street design, and a potentially desirable place for people to live in. This means changing current observed trends of population decline in the centre.</p>	<p>Development could locate on and around the Tralee Orbital Road Network with various activities separated by large distance leading to car centric development. This can result in decline of the town centre, suburbanisation of the population and then an overall decline of the town and suburbs in civic, economic and cultural terms.</p>
<b>Safety</b>	<p>Lower traffic volumes in the town centre resulting from the Tralee Orbital Road Network should lead to less prevalence of conflict between traffic and vulnerable road users</p>	<p>Lower volumes could also result in higher traffic speeds, and while there may be less probability of collisions due to lower volumes, the potential for higher severity of accident exists if speeds are allowed to increase.</p>
<b>Environmental</b>	<p>Environmental objectives in the town centre related to lower traffic volumes will be benefit by the Tralee Orbital Road Network. There would be clear benefits arising in terms of environmental noise and air pollution due to a reduction in circulating or queuing town centre traffic.</p>	<p>Expanding the road network of any town carries with it the usual environmental concerns; however these would all be considered and integrated as part of the normal planning process. Some concerns may include induced traffic, such that the new roads and trip patterns allow the car based culture to worsen.</p>
<b>Social Inclusion</b>	<p>The opportunities of social inclusion presented by the strategic ring roads entail more scope for a town centre open and accessible to all and enhanced access to services.</p>	<p>There are few direct threats to social inclusion presented by this strategy. However if the expansion of the population, particularly lower income households, is allowed to follow a pattern that entails longer trip making and more car use, then clearly there could be some exclusion in the future.</p>



## 5.4 Explanation of Objectives

### ECONOMIC OBJECTIVES

- 5.4.1 Economic objectives can be defined in a number of ways depending on the tools which are available to realise change and the needs of the area. The main instrument available in the context of the Tralee Transport Strategy is the zoning of land and the provision of quality transport infrastructure. Thus plans for the regeneration or development of an area should be reinforced by the transport strategy. Transport can also contribute to economic growth by encouraging new activities in areas where there previously was none. This is achieved by improving accessibility and by enhancing the appeal of an area through street design or improvements in the built or natural environments.

Economic Objectives	Potential Measures
<ul style="list-style-type: none"> <li>■ Support improved economic competitiveness</li> <li>■ Support the tourism industry</li> <li>■ Facilitate jobs growth</li> <li>■ Growth and regenerate the town via increased inward investment</li> </ul>	<ul style="list-style-type: none"> <li>■ Implement cost effective measures</li> <li>■ Improve journey time reliability through junction control</li> <li>■ Improve access to car parks through a parking signage strategy</li> <li>■ Reallocate road space to improve access</li> <li>■ Make best use of strategic network</li> <li>■ Improve travel information</li> </ul>

### ENVIRONMENTAL OBJECTIVES

- 5.4.2 Environment objectives are concerned with conservation of Bio-diversity, Cultural Heritage, and Landscape.

Environmental Objectives	Potential Measures
<ul style="list-style-type: none"> <li>■ support Smarter Travel objectives</li> <li>■ enhance Tourism industry</li> <li>■ develop a sustainable transport and traffic system</li> <li>■ reduce car dependency</li> <li>■ minimise transport related impacts on Air Quality, Noise and Vibration</li> <li>■ improve attractiveness of the public domain</li> <li>■ minimise energy consumption, pollutant emissions</li> <li>■ minimise reductions in non-renewable resources such as green areas and cultural sites inherited from the past</li> </ul>	<ul style="list-style-type: none"> <li>■ promote walking and cycling through developing supportive infrastructure</li> <li>■ maximise potential of the future Bypass to remove traffic from sensitive areas</li> <li>■ support local and community bus services through providing improved bus stop infrastructure</li> </ul>

## INTEGRATION, ACCESSIBILITY AND SOCIAL INCLUSION

- 5.4.3 Social inclusion is concerned primarily with accessibility for those without a car and those whose mobility is impaired.
- 5.4.4 Accessibility is usually defined as 'ease-of-reaching'. The objective relates to providing access for people from varied areas with differing availability and means of transport, to facilities in different locations. This is usually considered from the point of view of residents, such that certain areas in which residential development predominates may be categorised by their ease of access to the main facilities provided by the town. Consideration of accessibility from such areas is helped by further defining the availability of car or access to public transport.
- 5.4.5 Accessibility may also be considered from the point of view of major trip destinations such as areas of employment or retail or leisure facilities. In the case Tralee these are usually located in the town centre. However some major shopping facilities are located further out and would require most trips to be made by car. Again, in these cases accessibility to a facility depends very much on car ownership.
- 5.4.6 A sub-objective within the Social Inclusion objective is that of equity. This is primarily concerned with ensuring that the benefits of a transport strategy are reasonably well distributed across society. Differing groups of people will have differing levels of need. An equitable strategy would generally prioritise the needs of the disadvantaged or those with special needs. This includes disabled or elderly people, but more generally is a group described as having no car available.
- 5.4.7 Within the Social objective there is a need to reprioritise planning and investment in a way that reduces imbalances in accessibility and reduces the level of dependency of society as a whole on car ownership.

### Integration, Accessibility and Social Inclusion Objectives

- develop integration between transport modes
- support social inclusion
- increase accessibility to opportunities and services
- enhance transport and land use integration

### Potential Measures

- ensure impact of interventions on all modes is understood
- ensure improvements satisfy Mobility Impaired & Disabled (MID) requirements
- support the implementation of the rural transport programme (e.g. Kerry Community Transport)

## SAFETY OBJECTIVES

- 5.4.8 The safety objective is concerned with the reduction in injuries and loss of life, or of damage to property and loss of income.

Safety Objectives	Potential Measures
<ul style="list-style-type: none"> <li>■ Reduce health risks and incidence of accidents and fatalities</li> <li>■ Protect vulnerable road users</li> <li>■ Improve overall safety</li> </ul>	<ul style="list-style-type: none"> <li>■ Consider safety implication of all interventions</li> <li>■ Reduce traffic speeds</li> <li>■ Provide adequate signal controlled crossings</li> <li>■ Improve junction layouts and control</li> </ul>

## 5.5 Conclusion

- 5.5.1 This chapter presented the high level objectives of the Tralee Transport Strategy. These are developed to support and implement the Vision for Tralee, which is a statement that enables clear understanding of the rationale for pursuing the recommended traffic and transport schemes for Tralee. The Vision Statement gives a sense of wider purpose to the strategy, in that transport has such a significant effect on all aspects of life. Therefore the Vision Statement links the future aspirations of the town in terms of economy and society to transport.
- 5.5.2 The Department of Transport *Guidelines on a Common Appraisal Framework for Transport Projects and Programmes* sets out high level goals or aims for any transport strategy for criteria under the areas of the economy, safety, the environment, and social inclusion. Therefore we have given specific measures in this chapter that support these objectives.
- 5.5.3 In Chapter Six Road and Street Network Strategy, we set out in detail the recommended transport and traffic measures to support the Vision for Tralee.

## 6 Road and Street Network Strategy

### 6.1 Introduction

6.1.1 The purpose of the Tralee Transport Strategy is to improve the transport network within Tralee thereby providing for all road users and supporting the sustainable development of the town.

6.1.2 This section of the report presents the proposed strategic and local traffic management recommendations that have been developed to support the transport strategy Vision and Objectives defined previously in Chapter Five. The recommendations also take cognisance of the Tralee Baseline Traffic Evaluation findings.

6.1.3 The network strategy for Tralee consists of a comprehensive set of junction, street and road layout designs and design concepts that support the Vision and Objectives. These consider:

- Pedestrian and Vehicular Circulation within the Town;
- Meeting the needs of Pedestrians and Cyclists;
- Harnessing the economic potential of the town centre;
- Construction requirements to achieve goals; and
- Achieving Accessibility and Social Inclusion in the town.

6.1.4 Recommended Measures have been categorised into two sections:

- Town Centre Recommendations; and
- Wider Network Recommendations.

6.1.5 Town Centre recommendations comprise an interrelated set of measures to be implemented over both the short and medium term periods. The short term period extends from the present until 2016 with the medium term covering from 2016 until 2021. The wider network measures are also separated into short and medium term measures.

6.1.6 Following the introduction of traffic management improvement options, the individual traffic management measures are presented. These measures affect a wide range of physical road and street attributes, particularly at junctions where sub-standard layouts had been identified. All of the interventions have been developed in accordance with the Vision and Objectives for Tralee to rebalance the use of road space thereby enhancing the safe movement for all road users.

6.1.7 This chapter includes the following:

- Summary of Key Issues in Tralee;
- Strategy Overview;
- Introduction of Improvement Options;
- Town Centre Traffic Management Measures; and
- Wider Network Measures.

## 6.2 Summary of Key Issues in Tralee

### Road User Conflict

- 6.2.1 Arising from the observations made in Tralee Baseline Traffic Evaluation Report, it was evident that improvements could be made for pedestrian movement, access and safety. Narrow carriageway widths are a feature of some streets in the Town Centre. Central locations such as Bridge Street and Russell Street, which are located in the retail core of the town, contain narrow footpaths with high pedestrian flows. This creates a difficult environment for vulnerable road users to move around safely. Other examples of deficiencies noted include ambiguous road markings, inconsistent provision of tactile surfacing and uncontrolled/unregulated areas with high risk of pedestrian conflict with moving traffic.
- 6.2.2 Vehicular traffic dominates space in this central area where pedestrian circulation is limited. As described previously in Chapter Five, regaining space for vulnerable road users including those with mobility impairments, pedestrians and cyclists is a core objective of the Town centre improvements.

### Capacity Issues

- 6.2.3 Capacity issues arise when traffic demand exceeds the capacity of the junction or one of its approaches. Traffic flow at peak times can often reach a level that is in excess of the capacity for a particular movement through a junction. In some cases this can cause adjacent junctions to experience reduced performance and the effect may also cascade to other parts of the network. Edward Street is an example of a junction where such congestion can occur. At peak times traffic can block back as far as Ashe Street cascading the impact elsewhere.
- 6.2.4 The Tralee Baseline Traffic Evaluation Report identifies junctions in Tralee that experience delay or queue formation, and categorises the problems as either Operational or Capacity related. Junction operation is a function of attributes like visibility, clarity of priority and signal timing. These attributes may be configured in a suboptimal way that can cause traffic flow problems.
- 6.2.5 For a road network the size of Tralee a small number of bottlenecks may contribute to the perception of a more widespread congestion problem. Relatively small peaks in traffic flow in one part of the network may cause deterioration in operation at multiple adjacent junctions or across significant parts of the central road network due to the density of junctions. These effects may be much slower to disperse than to form. Vehicle arrival rates to a congested area are usually unimpeded in Tralee, whereas the dispersion of this congestion depends both on overcoming the immediate operational difficulties and on having spare capacity elsewhere on the network to move queued traffic to.

### Pedestrian Safety

- 6.2.6 Junctions in the wider network such as those along the Oakpark Road, the N21 and the R551 carry significant traffic flows yet do not make sufficient provision for vulnerable pedestrians. Key radial routes carry traffic moving at significant speeds which require crossing measures as these routes can be hazardous for general pedestrians, the mobility impaired and the

elderly. Fast moving roads outside town centres can act as both a physical and social barrier for certain people and should be avoided.

### Poor Cycling Environment

- 6.2.7 Although Tralee's compact town layout offers good potential for cycling, Tralee has a poor cycling environment which contributes to the low levels of cycling recorded. The primary issue for Tralee is the lack of cycle infrastructure in place. With only fragmented cycle lanes in some locations, cyclists are impeded by the large levels of on street parking, set down parking, lack of space on carriageways and cycle parking facilities.
- 6.2.8 The lack of cycle parking facilities in the town acts to discourage cycling as a significant means of travel into the town centre. Lack of secure accessible facilities for cyclists acts as a disincentive for potential day to day cyclists.

## 6.3 Overview of the Tralee Transport Strategy

- 6.3.1 The Tralee Baseline Traffic Evaluation forms the basis from which the strategy is developed. This report also identified underlying strengths in Tralee's transport network such as the compact, permeable structure of the town centre that provides good connectivity opportunities for walking and cycling. Furthermore, the Census 2006 figures indicate that 43% of people living within Tralee Town Centre area walk to work and education. These findings reinforce the walking potential in the town.
- 6.3.2 A key part of the strategy is to take advantage of the significant investment in infrastructure arising from the future completion of the Tralee Bypass. The bypass will provide relief to the town centre from congestion and through traffic and this will provide an opportunity to enhance the town's urban environment. In addition, the strategy takes cognisance of recent local, regional and national policies such as the Tralee Town Development Plan and the Department of Transport's Smarter Travel Policy. Central to these policies is to promote change from the private car to more sustainable modes, such as walking and cycling. In this way the strategy is consistent with the most up to date thinking that reflects the needs of the population of Tralee Town and its hinterland to produce a safer, functioning and flourishing town centre.
- 6.3.3 This study also recognises the current high levels of walking within the Town Centre and aims to balance the needs of competing modes for limited road space.

## 6.4 Introduction to Traffic Management Improvement Options

- 6.4.1 This section sets out the interventions that are proposed for Tralee and the type of benefits they can bring to each road user. The primary user groups targeted in the Tralee Transport Strategy Objectives are the mobility impaired users, pedestrians, cyclists and vehicular traffic (car, Heavy Goods Vehicles and public transport vehicles, including buses and taxis).

### Pedestrian Improvement Measures

- 6.4.2 Improving the environment for pedestrians is a core objective of the Tralee Transport Strategy. Walking accounts for 43% of trips made to work and education in a typical



morning peak (07.00-10.00) within the central area of Tralee town, according to Census 2006 data. Within this area most trips made in the morning peak would be wholly within the town centre, averaging about 1.5km in length or less than 15 minutes walk time. The compact nature of the town within this area is very conducive towards walking and cycling and the evidence presented in the Baseline Traffic Evaluation Report supports this. The opportunity exists, therefore, to increase the walking and cycling mode share for the town through the introduction of sustainable policies and localised traffic management arrangements that are supportive of these modes. Significant steps can be taken towards achieving the Smarter Travel targets, not just in the town centre but also in the surrounding areas of Tralee, by simply creating a more amenable environment for vulnerable road users and by improving the management of traffic.

6.4.3 The following sections describe the interventions proposed for specific areas within Tralee.

### **Pedestrian Environment Improvements**

6.4.4 Pedestrianisation affords maximum priority to pedestrians including the mobility impaired. With the removal of vehicular traffic (particularly through traffic), and the dedication of road space to pedestrians creates a significantly enhanced urban environment which greatly improves the liveability of the town centre. This secure environment for pedestrians encourages people to occupy this space for longer periods which will further add to the economic vibrancy of the town.

6.4.5 In summary, pedestrianisation has three main benefits:

- The creation of an urban space which generates a pleasant urban environment thereby enhancing the amenity value of streets;
- The increased pedestrian flows and the removal of urgency creates a vastly improved retail environment; and
- The promotion of social inclusion by providing a space for people to gather. For example, cultural and tourist activities can be promoted in pedestrian areas.

## **6.5 Shared Space Concept**

6.5.1 One of the key recommendations of the strategy is the development of a shared space environment on selected streets. Shared space is a street where pedestrians, cyclists and vehicular traffic interact in a space that is not physically divided by kerb or level differences into areas for particular uses. Level surface is a feature of Shared Space schemes. This enables pedestrians to move freely by reducing traffic management features that generally encourage vehicles to assume priority. An illustrative example of the shared space concept implemented in a street is shown in Figure 6.1.

6.5.2 In summary the overall benefits afforded by shared space are as follows:

- Vitalise economic activity in a place;
- Make pedestrian movement easy;
- Reduce the dominance of traffic flow;
- Maintain or improve safety;

- Encourage low vehicle speeds;
- Create an environment in which pedestrians can walk, stop or chat without feeling intimidated by motor traffic
- Make it easier to move around; and
- Promote social interaction.

6.5.3 The design of Shared Space streets is inevitably a compromise between the needs of a range of users which seeks to accommodate rather than exclude particular uses. There is sufficient evidence to suggest that well-designed schemes in appropriate settings can bring benefits in terms of visual amenity, economic performance and perceptions of personal safety. These benefits must be set against the dis-benefits to some users (discussed below) and evidence that the perception of road safety can be reduced among some users.

6.5.4 Shared space can create specific difficulties for some visually impaired people especially when crossing traffic. This can be mitigated however by using textured paving to alert the pedestrian that as they are moving onto what is considered the vehicle carriageway. On the other hand, a level surface is generally appreciated by mobility impaired people.

## 6.6 Improved Pedestrian Crossing Facilities

- **Speed Tables:** Speed tables, or raised pathways, bring portions of the roadway to footpath level. This is normally used at pedestrian crossings or at junctions. The primary aim of raising the pathway is to slow traffic arriving at the junction and also to create an awareness that a crossing is ahead. The effect of slowing traffic is to decrease the potential for user conflict between vehicular traffic and modes such as walking and cycling.
- **Signalisation:** Adding signals to a junction offers pedestrians a fixed period to make a safe crossing across a junction. The addition of signals will also promote safe crossing and lessen the amount of informal crossing on roads and at junctions. Traffic signals are also the preferred method of crossing by the blind and mobility impaired as they offer a secure break in traffic and can be used as reference points.
- **Removal of Roundabouts:** Roundabouts are generally inhibiting for pedestrians as they detract from the ideal pedestrian desire line (the shortest possible route). Roundabouts are also difficult to cross. As is the case with the roundabouts in Tralee they are not signalised and pedestrians wishing to cross at roundabouts find it difficult to anticipate traffic entering or leaving the roundabout and finding a safe gap to cross.

**Figure 6.1 Example Shared Space before and After**

## 6.7 Cycle Infrastructure Improvements

6.7.1 As mentioned previously, cycling remains a very under-utilised mode of transport in Tralee, despite the compact layout and amenable terrain of the town. The 2006 Census showed that cycling trips made up about 4% of those trips made to work and education. There is great potential for cycling in Tralee which may be realised if appropriate incentives and facilities are put in place. The cycling network strategy for Tralee is an integral part of the overall Tralee Transport Strategy. The following interventions are proposed to be put in place:

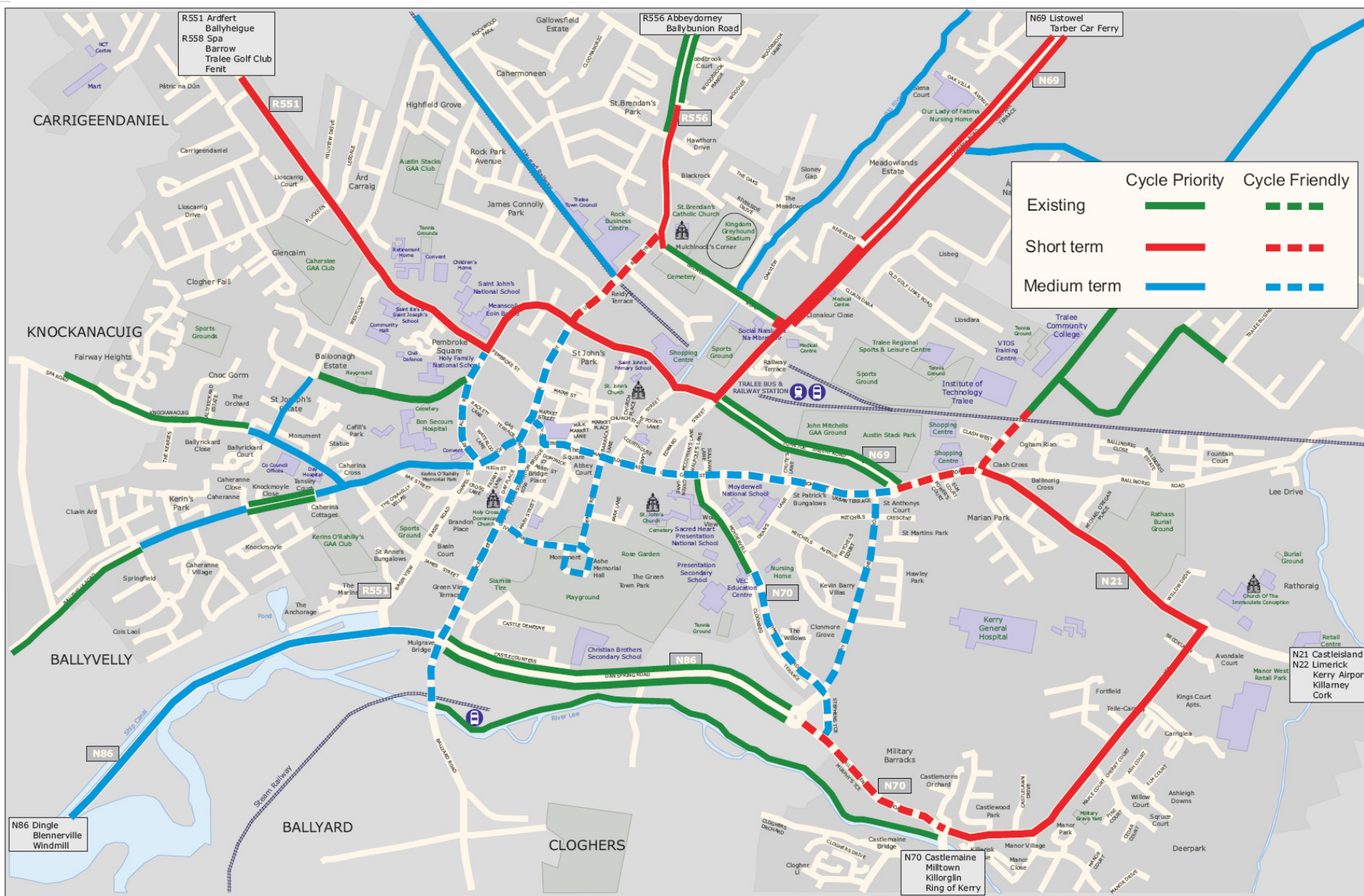
- **Advanced Stop Lines:** Advanced Stop Lines at signalised junctions comprise of a stop line for vehicles, an additional stop line for cyclists at the head of the traffic queue and a lead in lane that allows cycles to move to the top of the queue passing stationary vehicles stopped at the junction. The benefit of providing this facility is that it allows cyclists to clear the junction ahead of other vehicular traffic which not only improves the safety of the junction but also the perception of safety for the cyclists. The perception of safety when promoting cycling is central to achieving mode shift and this must be taken into account when designing infrastructure.
- **Cycle Lanes:** Well designed cycle lanes can be of great benefit to cyclists. At present Tralee has a fragmented cycle network that is impaired by elements such as on street parking and limited carriage widths. Cycle lanes have significant benefits on offer:
  - create a comfort zone, especially for less experienced cyclists nervous about mixing with motor traffic;
  - promote cycling through the provision of infrastructure;
  - assist cyclists in difficult or congested situations;
  - allow cyclists to bypass features intended to slow or exclude motorised traffic;
  - help guide cyclists through complex junctions;

- help control the speed of traffic flows by limiting the width the of all purpose traffic lane; and
- help to raise driver awareness of the presence cyclists.

- **Removal of Roundabouts:** The combination of route choice, high level of vehicular flow and high speeds can make some roundabouts hazardous for cyclists. Many studies show that there is a higher risk of accidents for cyclists at roundabouts than any other place. It is difficult for cyclists to find a safe and secure road position given the changing of lanes and the unpredictability of traffic on a roundabout. The perceived danger associated with roundabouts is also a deterring factor for route and mode choice. Roundabouts along major radial routes into Tralee replaced with cycle friendly infrastructure are likely to improve cycle mode choice by providing a viable safe alternative to road users.
- **Cycle parking Facilities:** The lack of cycle parking facilities is seen as a major deterrent to cyclists. Provision of secure freely available parking in popular locations such as workplaces, retail centres, schools and leisure areas can provide an excellent stimulus for people to cycle instead of using the car. They also improve the visual amenity of an area as bicycles chained against fences, shop fronts and lampposts can take away from the appearance of a location.
- **Full cycle network:** A full cycle network is proposed as shown overleaf in Figure 6.2. There is also a safety issue also arising from lack of facilities. Bicycles parked against lampposts, shop fronts and other unconventional parking locations can be hazardous to pedestrians and in particular the mobility and visually impaired.



### Figure 6.2 Proposed Future Cycle Network in Tralee



## 6.8 Traffic Management Improvements

### Junction Realignment

- 6.8.1 Visibility, access and predictability are all key components that make up a safe functioning junction. There are a number of junctions that have been modified and reshaped in Tralee over the past ten to fifteen years due to increased traffic levels. Some of these junctions are, however, lacking these components. Junctions can be improved significantly by carrying out some straightforward measures.
- 6.8.2 Small basic changes such as pavement build outs and defining turning movements can affect the speeds and predictability of junction movements. Such modifications can lead to a vast improvement in safety for all road users, particularly pedestrians and cyclists. Other junctions require significant realignment with entire sections of road rebuilt to improve visibility and access. Tralee will undergo works of varying proportions in a number of locations with the aim of improving the functionality and safety of the junctions within Tralee.
- 6.8.3 The improved visibility and functionality of a junction will also have significant effects in increasing the flow and capacity of a junction. This will decrease pressure on the network as a whole as localised bottlenecks are removed.

### Limiting Speeds

- 6.8.4 The limiting of speeds where there are high levels of interaction between vehicular and vulnerable road users has obvious benefits for the safety of all road users. By reducing speeds the risk of accident and the severity of those accidents are greatly decreased. Lowering speeds in areas where on-street parking, set down parking and deliveries are in competition for space with pedestrians and cyclists will result in reduced levels of conflict and hazard for all road users.
- 6.8.5 Lower speeds also provide environmental benefits. Lowering traffic speeds results in reduced traffic noise which benefits the local environment. Lower speeds also improve the perceived safety of the area which in turn makes it more attractive for walking and cycling. Imposing low speed in sensitive areas could be achieved through a combination of signage, street layout, and strict enforcement.

### MOVA Signalised Junctions

- 6.8.6 Existing traffic lights in Tralee work using a standard staged and phased signal system. They do not have any censoring systems but are set to specified fixed stage times. Increased efficiency can be achieved by installing demand responsive or linked traffic signal control systems. One such system is Microprocessor Optimised Vehicle Actuation (MOVA), which provides enhanced traffic responsive signal operation.
- 6.8.7 MOVA uses vehicle sensors buried below the road surface, but unlike traditional Vehicle Actuation it uses a computer to optimise the signal timings using data from all the approaches to the junction. MOVA is able to vary the maximum cycle time in response to actual traffic flows, rather than the flows assumed for that time of day. It can also adjust the individual timings for one approach in response to conditions all round the junction. This



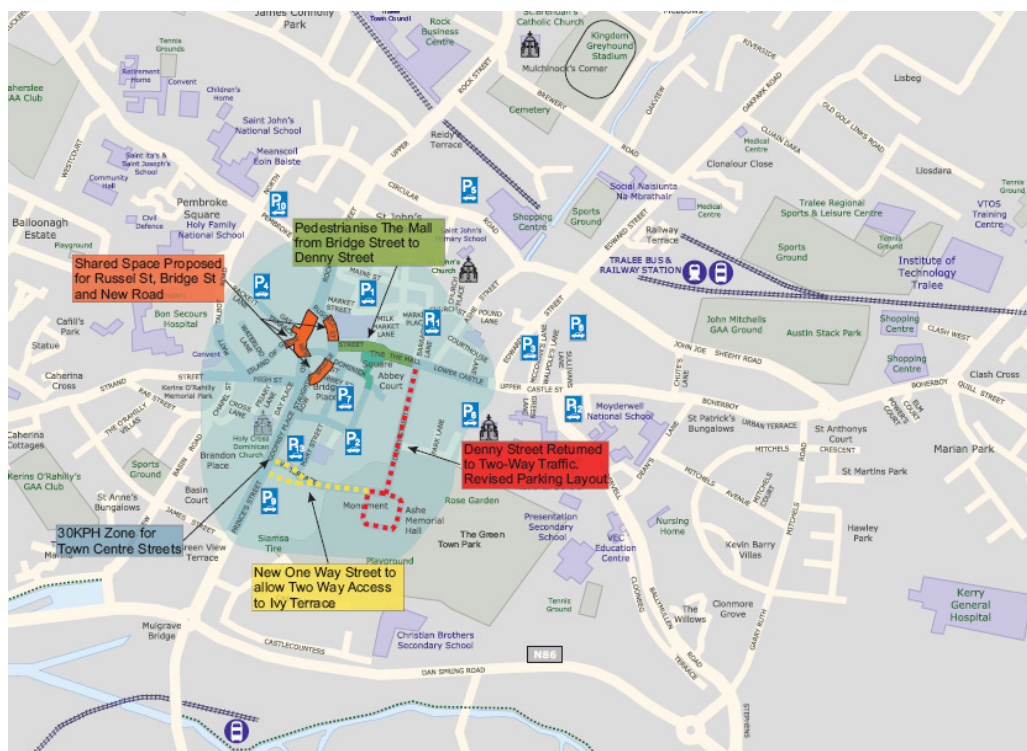
system makes for a significantly more efficient control system, in particular for multi lane approaches.

- 6.8.8 The replacement of existing signals with MOVA signals should assist in improving flows and reducing congestion that occurs in the major junctions around Tralee. Improving the efficiency of signalisation system in the town will affect the network as a whole by easing congestion at trouble spots around the town that cause negative knock on effects elsewhere in the network.

### 6.9 Town Centre Traffic Management Measures

- 6.9.1 To facilitate a rebalancing of road space in the town centre towards a more pedestrian and cycle friendly environment a number of interventions are proposed. Figure 6.3 below provides an overview of the measures planned to redefine vehicle movements in the town centre. These include:

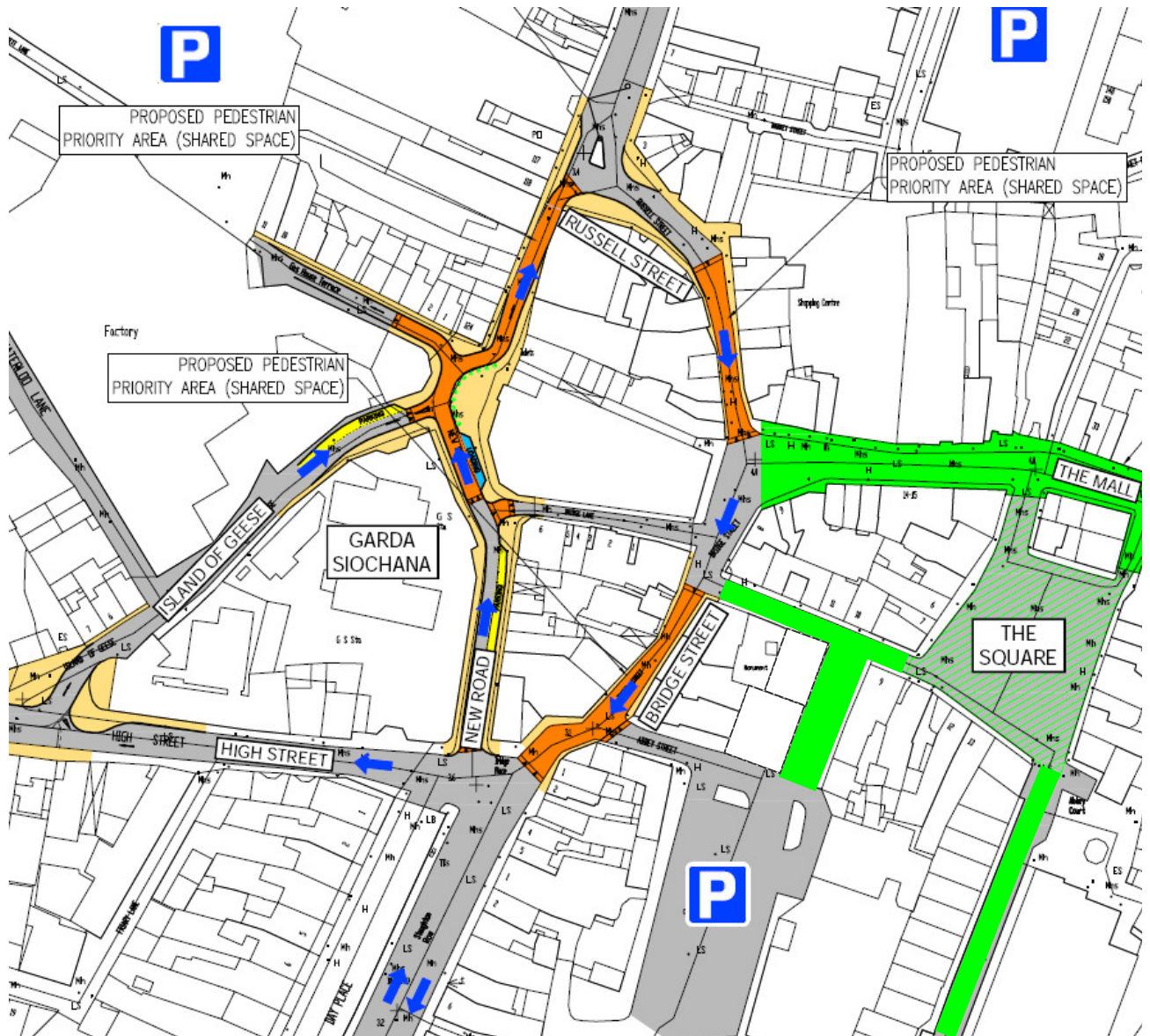
- Shared Space on Russell Street, Bridge Street, New Road and Island of Geese;
- Pedestrianisation of The Mall between Denny Street and Russell Street;
- Restore Denny Street to a two way road;
- New link road parallel to Ivy Terrace providing west bound access to Princes Quay; and
- 30 kph Zone in the Town Centre.

**Figure 6.3 Town Centre Primary Traffic Measures**

### Shared Space Russell Street, Bridge Street and Island Of Geese

- 6.9.2 To support the Vision for Tralee it is proposed to redesign Russell Street, Bridge St and New Road to incorporate shared space design concepts. The shared space will extend to the junction of Gas Terrace and Island of Geese. This area will be open to vehicles but traffic management measures will be implemented to divert vehicular traffic to alternative routes such as Matt Talbot Road and Denny Street.
- 6.9.3 A reorganisation of parking is proposed for this area with priority offered to commercial loading vehicles and provision of parking for the nearby Garda station. Parking issues and proposals are discussed in detail in Chapter Seven.
- 6.9.4 Chapter Eleven provides analysis of the effect of diverting traffic from the shared space areas. The results of this assessment show that with the Tralee Orbital Road Network in place, even if all traffic was removed from this central area the road network would operate efficiently and would not be over capacity. Figure 6.4 provides an overview of the shared space proposals in this area.
- 6.9.5 Figure 6.5 shows Bridge Street as it is, followed by a photomontage in Figure 6.6 from the same point of view showing how the shared space proposals would look. Figure 6.7 shows the existing situation on Russell Street followed by a photomontage of the Shared Space design in Figure 6.8.
- 6.9.6 The photomontages demonstrate the improved environment for pedestrians and the reduced perception of priority for motorists. Although cars may still use the streets in an unrestricted manner, the nature of the street design requires motorists to proceed with caution, in a manner that is self-enforced.

**Figure 6.4 Proposed Shared Space on Russell St, Bridge St and Island of Geese**





**Figure 6.5 Bridge Street looking South: Existing View**



**Figure 6.6 Bridge Street Looking South: Shard Space Photomontage**





**Figure 6.7 Russell Street Looking North: Existing**



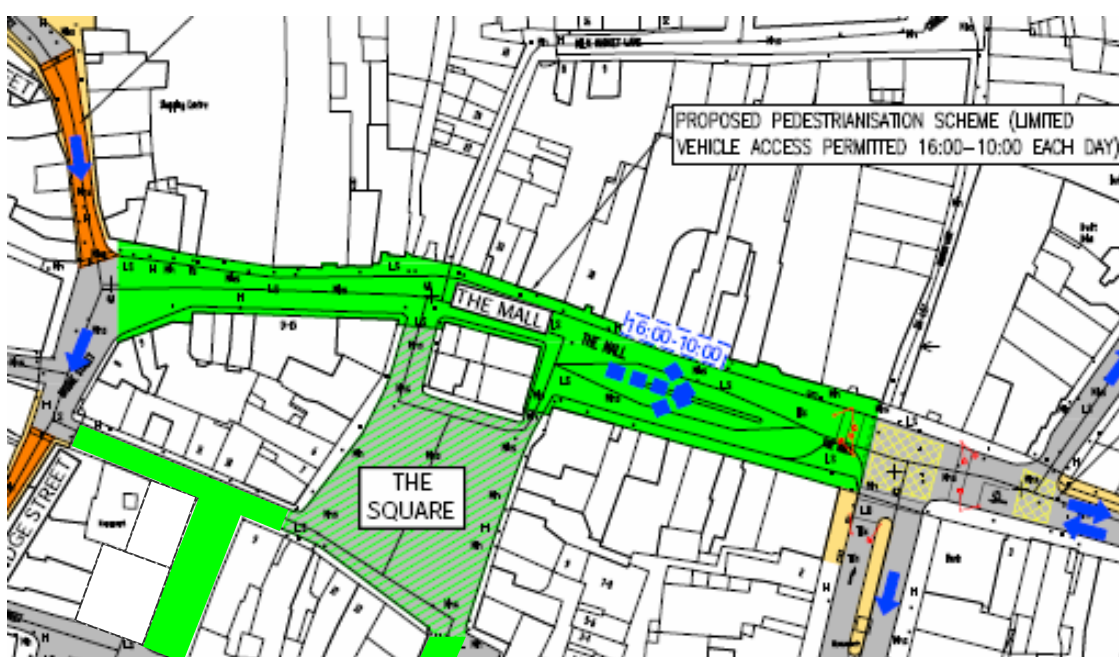
**Figure 6.8 Russell Street Looking North: Shared Space Photomontage**



### 6.10 The Mall – Pedestrianisation

- 6.10.1 Pedestrianisation is the term used to describe separation of vehicles from pedestrian traffic. The definition of it is 'to restrict vehicle access to a street or area for the exclusive use of pedestrians'. A common type in Ireland is part-time pedestrianisation, where vehicular access is permitted during certain times, the schedule depending on the type of town and the usual activities on the street, and the longer term aspirations for the area. Common to nearly all schemes is a period during which goods vehicles can access the street to provide deliveries.
- 6.10.2 The area under consideration for full or part-time pedestrianisation in Tralee is between Bridge Street and Denny Street, comprising Bridge Street Lower at the western end and The Mall at the other end.

**Figure 6.9 Area Proposed for Pedestrianisation**



- 6.10.3 The Mall is at the centre of Tralee and is a key retail area, with a number of shops fronting the street, including bars, cafes, and retailers of shoes, sporting goods, cosmetics, books and music.
- 6.10.4 At present the Mall is used as a thoroughfare for high levels of west to east traffic (it is one way in this direction), as a queuing area for taxis, for general parking and for loading and unloading. The taxi rank on the north side of the street provides official stopping space for up to 10 taxis. The number of active for-hire taxis in this area has been noted to frequently exceed the number of available spaces. Consequently a significant portion of the Mall road space is often dominated by taxi vehicles and can back up in to the Bridge Street end. On the opposite side of the street to the taxi rank is a loading area which may be used by delivery vehicles or by private car transport. This area is not well regulated and during busy periods is heavily cluttered with mix of parked vehicles, set down activity and commercial delivery. The one traffic lane between these high activity areas is prone to intermittent congestion due to the high level of stop and go manoeuvring between the carriage way and



the side areas. This creates a sense of pressure and vehicle dominance in the area and is highly detrimental to the pedestrian environment.

- 6.10.5 The Bridge Street end of the proposed area for pedestrianisation is quite different in character to The Mall, although is also a key retail area. There is a limited number of pay and display parking spaces on Bridge Street at a rate of €1.20 per hour. The street is narrow, with very narrow footpaths. Double-yellow lines exist on one side where no parking is permitted. It should be noted that traffic regulations permit loading on double-yellow lines. Such activity has been observed on this side of the street. This activity results in infringement of good vehicles in to a narrow area where pedestrians should have security of movement. This discourages walking to the Mall via Bridge Street from the west and may result in lost footfall for the Mall and Bridge Street retailers.
- 6.10.6 As one of the busiest retail areas in the town, it is not surprising that there is a very high demand for the few car parking spaces on the Bridge Street end, and considerable levels of traffic moves through the area in search of parking spaces. In busy times an available space is rare, and turnover not likely to be high given there is unlimited duration purchasable for €1.20 an hour. The level of passing traffic generated by the act of searching for a space on the street is likely to be high during busy times creating further congestion in the area and detracting from the overall street environment.
- 6.10.7 An excess of through traffic, taxi parking, pay-and-display parking, and unregulated loading and unloading, results in an area in which pedestrians are deprived of a safe and hospitable environment. Rebalancing street environments in favour of pedestrians, by reducing vehicle priority or removing traffic completely, has been shown in many studies to significantly increase pedestrian activity. By this, footfall and retail potential are increased.
- 6.10.8 An appropriately designed pedestrianisation scheme, in terms of both the streetscape design and the operational aspects, will greatly benefit Tralee. It will improve the perception of the town centre as a place to be, because pedestrianisation directly improves the attributes of an area that are important to people: safety, the environment, and social interaction. In turn pedestrianisation of this area will vitalise the local economy and of Tralee in general.

### Why Pedestrianise?

- Improving Road Safety through reductions in the potential for conflict between motorists and vulnerable road users;
- Improving the Environment by reducing air pollution in the immediate area and also through reduced general car use;
- Improving Social Interaction by creating a place that puts people first and promotes a sense of inclusion in the surrounding streetscape. This increases comfort within an area for individuals and families and it follows that more time will be spent by potential retail customers lingering in the area and also promote social interaction; and
- Improving Economic Vitality: Many retailers in existing pedestrianisation schemes report increases in sales due to increased footfall. Car traffic is not the driver of retail sales, rather, it is getting more people on to the street. Pedestrianisation meets this objective. People will choose to spend more time in the area when the quality of the public domain is improved and this offers greater potential for the use of Tralee's streets, laneways, and existing square.

- 6.10.9 The vast majority of data supports the view pedestrianisation increases footfall. Selected examples providing evidence of this are discussed below.

#### Effect of Pedestrianisation: Evidence of Performance

- 6.10.10 A review of some significant pedestrianisation scheme studies has been undertaken by the Institute of Transport of Studies in the University of Leeds<sup>7</sup>, the highlights of which are included for information below. Unfortunately there is no similar data available for an Irish pedestrianisation example.
- 6.10.11 Results from a number of studies are provided, based on data from:

- Germany
- Carnaby Street, London; and
- Hebden Bridge Pedestrianisation Scheme, Yorkshire.

#### Germany

- 6.10.12 Table 6.1 shows the findings of a German study completed in 1993 and shows very positive results.

**Table 6.1 Impact of Pedestrian Scheme in Germany**

City (Population)	Impact (Pedestrian Flows)
Aachen (260,000)	25% increase in pedestrian flows after 12 years
Bamberg (70,000)	28-40% increase within one year of change
Darmstadt (140,000)	18% growth three years after completion
Herford (64,000)	31% growth after one year and 40% growth after 4 years
Nurnberg (500,000)	69% growth 5 years after completion
Osnabruck (170,000)	26% growth 2 years after completion
Wiesbaden (280,000)	20% increase following street closure but before reconstruction was completed

Source: Hass-Klau (1993)

- 6.10.13 "The most interesting point of Hass-Klau (1993) was the detailed examination of the impacts of pedestrianisation on firm profitability and turnover. Based on questionnaires sent to firms within and outside pedestrianised areas, the findings with regard to changes in turnover are summarised in Table 6.2. Note that this data was collected in 1978 at the time when the Federal Republic of Germany ("West Germany") was also growing rapidly, and Germany as a whole was not unified. The presence of the control group (i.e. businesses outside the pedestrian areas) helps to strengthen the robustness of the results. This data suggests that

<sup>7</sup> <http://www.konsult.leeds.ac.uk>

pedestrianisation helps to improve the turnover for businesses in the retailing and food industry but has a much less positive impact for the hotel industry. This analysis is consistent with the expectation that increased pedestrian flows can lead to an increase in passing traffic and businesses that rely on this (such as restaurants and retail shops) would benefit from the pedestrianisation. At the same time, it is also likely that pedestrians prefer to shop in the pedestrian zone and hence the change could be due to shifts (from one business to another) in turnover rather than new turnover (i.e. totally new business)."

**Table 6.2 Percentages of businesses indicating different effects on turnover**

Pedestrianised Areas/Sector	Turnover		
	Increase	Reduction	No Change
Retailing	83%	3%	14%
Hotels	28%	8%	64%
Restaurants	63%	1%	36%
Outside Pedestrianised Areas/Sector	Turnover		
	Increase	Reduction	No Change
Retailing	20%	17%	63%
Hotels	20%	2%	78%
Restaurants	25%	5%	70%

### Carnaby Street, London

Carnaby Street is one of London's most important tourist attractions, having been touted as the birthplace of "Swinging London" in popular culture due to its reputation as a centre for fashion retailers. The street itself is approximately 700 feet long and runs parallel to Regent Street, another important commercial street in the Soho area of London. In October 1973, the then Greater London Council decided to pedestrianise Carnaby Street. Note that the pedestrianisation was only partial i.e. taking place between 11 am and 8 pm daily.

The following measures were put in place

- Raised the level of the roadway
- New drainage more appropriate to a pedestrian precinct
- Resurfaced the area with nylon-based tiles
- Bollards at the northern end (these were manually set up daily when the pedestrian zone was in operation)
- Parking restrictions were introduced

### Impacts on demand

Traffic that no longer has access to Carnaby Street was expected to divert to the parallel and surrounding streets. However analysis of traffic data collected from a combination of automatic and manual count surveys indicate that while traffic had increased along Great Marlborough Street (north of the Pedestrian zone) by up to 10%, the local roads actually showed a general decrease. Instead the survey found an increase in the number of taxis on parallel streets to the Pedestrian zone (Kingly Street and Newburgh Street).

A comparison of before and after number of pedestrians entering the pedestrianised area indicate a 30% increase in pedestrian flows into Carnaby Street as a result of the pedestrianisation.

### Hebden Bridge Case Study

This is a summary of the text to be found at the [www.yorkshire-forward.com](http://www.yorkshire-forward.com) website (see footnoted link below<sup>8</sup>).

This pedestrian scheme was implemented in the heart of Hebden Bridge to create a safer and more attractive environment. Supported by Yorkshire Forward's Renaissance Market Towns (RMT) programme, the traffic elimination scheme created greater accessibility for both locals and tourists, creating a unique sense of place and improving publicly accessible areas adjacent to the river. As a result, shopping has become much more enjoyable and the general renaissance of Hebden Bridge has been boosted with the restoration of much of the town's character.

### Background

Hebden Bridge is a market town of over 4,500 people within the Calderdale Borough of West Yorkshire. Located in a river valley eight miles west of Halifax, it serves a wide rural hinterland and is well-known for its independent shops.

The town's centre is a designated conservation area but the quality of the public domain did not adequately reflect that status. Due to its success as a tourist destination the town suffered with growing traffic and accessibility problems.

### Key successes

- As a direct result of the pedestrianisation, there has been a clear improvement to the visual impact and function of the town, making it a better place to live, trade and visit.
- The scheme has gained national recognition:
  - The British Council for Shopping Centres' (BCSC) National Town Centre Environment Awards
  - Second prize in the environment category of Local Government News magazine's annual awards
  - Making the shortlist in the pedestrian environment category of the National Transport Awards 2007.

<sup>8</sup> <http://www.yorkshire-forward.com/improving-places/where-we-live/rural-market-towns/upper-calder-valley/case-study>

– Coverage in The Guardian colour supplement.

- The creation of a shared open space has had a great effect on the town's urban environment. The seven cafés within the pedestrianised area have used the space to their own, and their customers' advantage – with new licensed outdoor seating. One of the awards judges described this as having created a Mediterranean feel.
- Footfall has increased by 100% along the upgraded streets and by 25% in the town as a whole.

### 6.11 The Mall Pedestrianisation: Objective

- 6.11.1 The objective of pedestrianising the Mall is to rebalance the use of road space in favour of a more pedestrian friendly environment. A balanced approach is required in implementing the required changes to bring about this objective.
- 6.11.2 The overarching consideration is to strengthen the existing economy of the area, by improving the level of access into the area and by facilitating the conditions for improved amenities for tourists, shoppers, and families, directly in the centre of the town. At present, very high levels of vehicle movement through this area results in a car dominated environment.
- 6.11.3 Core to the pedestrianisation objective is to promote footfall, civic and social activity in this area, and crucially, to create an environment that vitalises the evening economy. Therefore careful consideration should be given to the hours of operation of the pedestrianised only areas. In areas with low residential populations, such as Tralee town centre, it could be counterproductive to all-day pedestrianise a significant area if there is not already a well established and diverse evening economy. This issue is discussed below.
- 6.11.4 Achieving a more vibrant area by the use of pedestrianisation also requires that the street design be approached with care with attention paid to the paving and general design in front of shops. One goal which should be further explored in consultation with shop keepers could be to allow licensed use of the footpaths for commercial activity in front of shops, such as outdoor café or pub table facilities.

### 6.12 Full or Part-time Pedestrianisation?

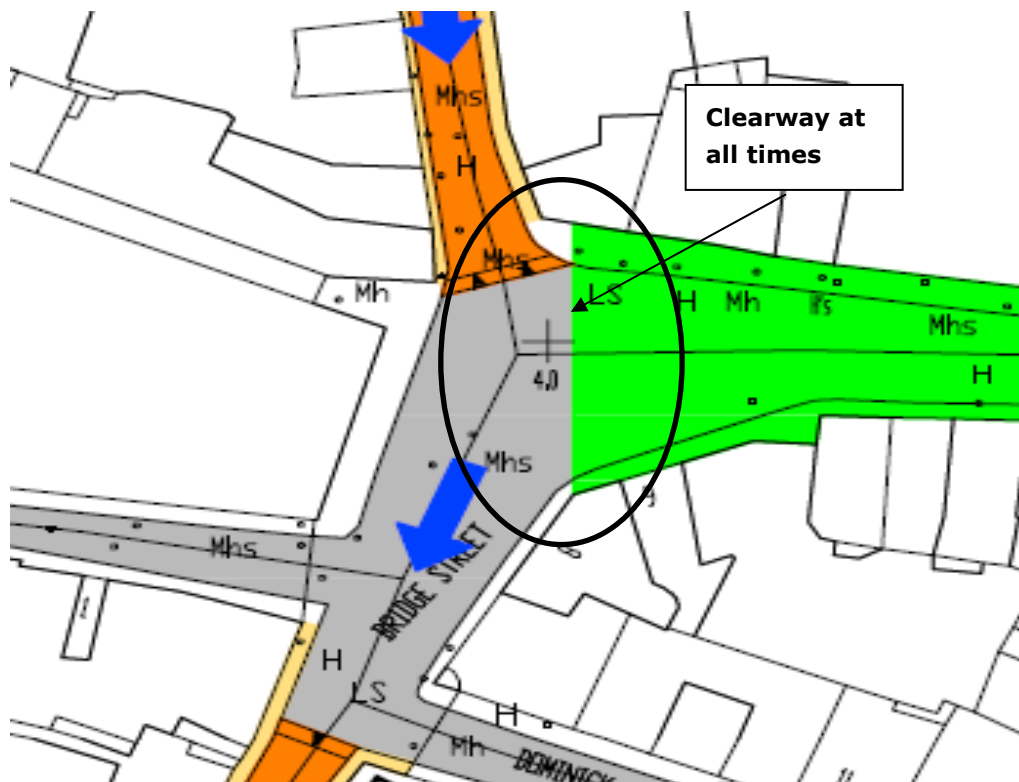
- 6.12.1 All out pedestrianisation was considered as an option, but is likely to be too severe a measure in Tralee at present or in the short term. The Square in Tralee is a 24hr pedestrianised area adjacent to the Mall, linking to it from the south. This is an award winning scheme successful in many respects. In the evenings however, The Square has suffered from a lack of activity. At present, Tralee lacks a sufficiently vibrant and diverse evening economy to merit a wide area of town centre becoming pedestrian only for the later parts of the day.
- 6.12.2 As an example of what may happen on the Mall should full pedestrianisation happen, the Square is instructive of the effects all out banning of traffic can have. As Tralee has very few town centre residents, the situation in which the evening economy drops off so quickly could lead to empty streets in the centre of town if car access is not permitted during those times.

- 6.12.3 If Tralee in the longer term can be rejuvenated as a place to live then all out pedestrianisation can happen, but pedestrianisation itself will not drive this. At the moment, the focus of this strategy is to enhance the environment for existing patterns of pedestrian and economic activity.
- 6.12.4 It is therefore recommended that the Mall is pedestrianised for periods between 10am and 4pm for all days of the week. The period could be extended for longer periods, initially at the weekends after an initial trial period, depending on the level of success and acceptance.
- 6.12.5 Weekday trips in the evenings will be allowable in to this area and set down to collect purchases, for example, will be facilitated in the restricted set down areas. Loading, set down, or any form of motor access will not be permitted at any time between 10am and 4pm for each day of the week (except for Emergency Vehicles).

### 6.13 Pedestrianisation Design Concepts

- 6.13.1 To create the necessary environment for raising the status of pedestrians and reducing the dominance of motor vehicles similar design principles as the Shared Space streets should be adopted. During non-pedestrianised time the street should function as a shared space in which cars are allowed to enter the pedestrian domain and proceed with caution.
- 6.13.2 The traffic management plan will relieve the need for trips made through the town to use The Mall. Instead access will be provided northbound on Denny Street. It is essential that a 30 kph maximum applies in at least all the shared space areas to discourage shortest path route taking through this area. The final design for the Mall should adopt the necessary features to hinder vehicle acceleration and ease of movement. Of particular importance is the need to avoid providing a motorist entering the area with an end to end straight line path. When a driver is able to see their full route through an area from end to end they naturally tend to assume priority and try to minimise delay to themselves.
- 6.13.3 Within the final design techniques should be used that require the driver to constantly re-evaluate their path, and thus be more aware of potential obstacles and require a slower driving speed. This is a well known traffic engineering technique that involves laterally placed obstacles or off-limits areas that require turning movement and driver awareness and reinforce the impression that the street's primary purpose is not for traffic. The recommended set-down areas could be arranged in staggered fashion on alternating sides of the street as a means of accomplishing these requirements.
- 6.13.4 A key design feature which must be also carefully considered is the interface between the pedestrianised area and the area of normal traffic flow at the western end of the Bridge Street part of the pedestrianisation scheme. The particular layout of interface must be designed so that temporary set down by delivery vehicles is not possible in this area at any time. This may be achieved by the use of physical barriers, or through the implementation of a well enforced clearway. The edge of the green area circled in Figure 6.10 is crucial in respect of satisfactory control of out-of-hours deliveries.
- 6.13.5 Appendix C contains a photomontage image for The Mall post introduction of pedestrianisation.



**Figure 6.10 Pedestrianised Area Clearway Interface****6.14 Access for Vehicles****Set-down Considerations**

- 6.14.1 Parking directly on the Mall area is not compatible with the objectives for the area and it is proposed to remove all parking spaces irrespective of the normal daily schedule during which pedestrianisation operates.
- 6.14.2 At the moment the extent of available space for parking activity is out of proportion with the primary retail function of the street and in the context of widely available parking nearby. Also, we propose to create a reduced fee for the first half hour of town centre parking as this will encourage a lot more turnover and thus increase availability of all nearby on-street parking. Increasing footfall on this street as a result of pedestrianisation is a very achievable objective because within the overall strategy, the level of on-street parking in Tralee is not being significantly affected. There will still be a good amount of on-street parking near the Mall, and with proper enforcement, it will have hugely increased turnover. The reduced fee for the first half hour policy will make car access relatively easy to the town centre.
- 6.14.3 However outside of pedestrian only times there will be provision of a limited number of set down areas to facilitate purchase collection.

**Deliveries**

- 6.14.4 Goods delivery is a vital component of the predominantly retail economy of the area to be pedestrianised. Facilitating delivery of goods in to and out of this area is therefore highly important. Current arrangements for goods delivery are not formalised. Deliveries to and from businesses would have to be scheduled in advance in order to gain direct access to a

premises for loading. Outside of the pedestrianised hours, delivery vehicles will not be permitted to the street. Alternative arrangements may be pursued, i.e., temporary use of loading areas outside of the pedestrianised area.

- 6.14.5 It is recommended that it is made very clear by way of appropriate signage that deliveries are not permitted during certain times. Alternative areas where loading is permitted at any time should be clearly signed to avoid illegal stopping next to the pedestrianised area.

### **Taxis**

- 6.14.6 Taxis will not be permitted to stop in the Mall to pick up fares. The scheme area, outside of car free hours, must not become congested with traffic flow, delivery, or taxi activity. There will be some spaces for set down available during the out-of-hours times. There will be no parking anywhere and only loading will be permitted at any time in the designated areas.

## **6.15 Conclusion: Pedestrianisation of the Mall**

- 6.15.1 This scheme has the potential to greatly benefit the traders in the area. The increased footfall is not in doubt and has been shown to always establish itself in pedestrianised areas.
- 6.15.2 Tralee is to be transformed from a traffic perspective with the shared space streets at Island of Geese, Russell St, and Bridge St, all linking in to the Mall area. This represents an immediately expanded town centre with a much improved environment due to the reduction in car traffic. In combination with the plan to allow reduced fee parking for the first half hour the attractiveness of Tralee town centre as a place for shopping and leisure will be greatly enhanced.
- 6.15.3 The positive impact on the local economy should be very noticeable and Tralee will be able to build on its natural strength which is as a historic town centre with great architectural and cultural merit. This is the change necessary to compete with out of town shopping centres which have virtually unlimited parking but do not have any civic value or amenity. Therefore, this plan for shared space and partial pedestrianisation of the Mall is part of the foundation required to secure a long-term sustainable economic future for the town. The potential benefits to tourism and retail cannot be understated as tourists are drawn to town centres that are vibrant, safe, and free from traffic congestion.



### 6.16 Denny Street Two-Way Traffic Reinstated

- 6.16.1 To facilitate the pedestrianisation of the Mall, it is proposed to accommodate diverted traffic along Denny Street by reinstating two-way traffic flow. Denny Street was historically a two way street and possesses ample width to facilitate realigned parking and two-way traffic flows safely. East west traffic movements that previously used the Mall will access Denny Street via a new link parallel to Ivy Terrace, as discussed below.

#### Angular Parking Safety Issues

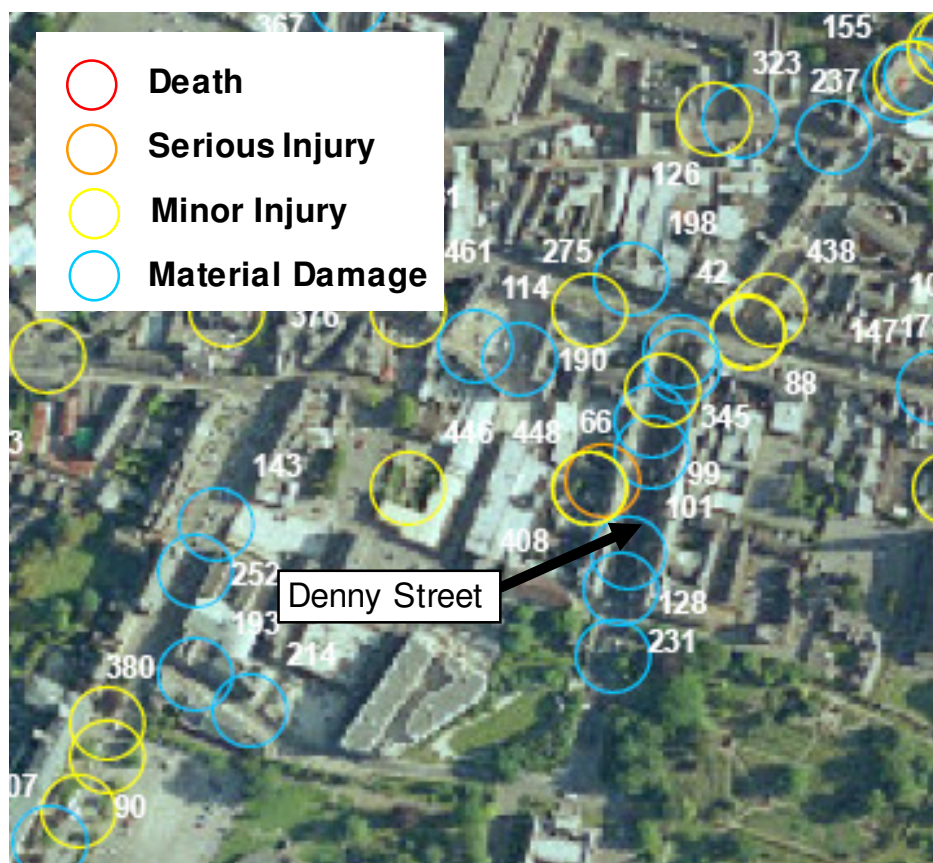
- 6.16.2 The current parking layout on Denny Street has angular parking on both the east and west sides. There is a sizeable amount of literature examining the safety impacts of angled and parallel parking, and the general consensus of these studies is that parallel parking is safer than angular parking. A Nebraska study (US) found higher accident rates for angle parking by any measure as compared with parallel parking (McCoy et al<sup>9</sup>). Angular parking also poses a danger to cyclists as it is difficult for drivers to see cyclists as they are reversing out of the angled parking spaces
- 6.16.3 A review of reported accident data for Tralee over the past five years reveals a high number of material damage accidents and a number of pedestrian accidents occurring on Denny Street, as shown in Figure 6.13 and Figure 6.14 below. This information substantiates the findings of the studies mentioned above which found that angled parking can be hazardous and interfere with traffic flow.
- 6.16.4 The Department of Transport Traffic management guidelines advise that angled parking be used only on wide roads or one way streets and on one side of the road only. The current layout of angled parking on both sides of Denny Street is in contradiction to these guidelines.

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<sup>9</sup> McCoy, P.T, Ramanujam, M., Moussavi, M. and Ballard J. L. (1990). Safety Comparison of Types of Parking on Urban Streets in Nebraska.. Transportation Research Record 1270, 28-41.



**Figure 6.13 Road traffic accidents on Denny Street (over the last five years)**



**Figure 6.14 Pedestrian Accidents on Denny Street (over the last five years)**



- 6.16.5 Because of the safety issues mentioned above and to accommodate two-way traffic the current parking layout will be replaced with parallel parking along Denny Street. This will decrease the number of parking spaces but is necessary to provide the space required to allow two-way traffic flows along the street.
- 6.16.6 The taxi rank currently located on The Mall will be relocated to Denny Street with a rank consisting of approximately 14 spaces. There will also be coach parking provided at the southern end of Denny Street.
- 6.16.7 The pedestrianisation of The Mall will necessitate changes to the current local bus routes. Similar to the discussed traffic diversions, buses will also be diverted onto Denny Street. Two new bus stops, one on either side of the road, will be provided on Denny Street to provide for a high level of access by bus.
- 6.16.8 Figure 6.15 illustrates the proposed traffic layout for Denny Street. Figure 6.16 and Figure 6.17 provide a before and after look of how Denny Street may appear after the improvement works have been carried out.
- 6.16.9 Due to the presence of a large number of hotel bedrooms on Denny Street, it is recommended that a two car space set down area is provided at the tail of the southbound taxi rank to facilitate direct pick up and drop off access to the hotel entrances.
- 6.16.10 As a busy commercial street, facilitating loading and unloading on Denny Street is important, particularly for its hotels and restaurants which are an important part of the town's evening economy. For this reason it is recommended that the set down area at the rear of the southbound taxi rank could be extended by one or two spaces into the rank to allow access for goods vehicles and ensure traffic flow is not disrupted. Similarly, to facilitate goods vehicle arrivals in both directions, 2 or 3 spaces at the rear of the northbound taxi rank and on-street parking area should be designated as a loading/unloading area during business hours.
- 6.16.11 It has also been noted that there are laneway arches on both sides of Denny Street that provide vehicular access and have yellow boxes. The entrance to Abbey Court prohibits vehicular access outside of 7am to 10am. Certain local access may be permitted outside of these hours which would require yellow box discipline to be maintained by taxis at the rank at all times. Similarly, on the eastern street side (Park Lane Mews) the taxi rank would have to break to allow for access in and out of the Imperial Hotel access arch.
- 6.16.12 It should be noted that the number of parking spaces and taxis that can be accommodated in the coloured areas shown below have been estimated rather than determined from exact measurements. The exact provision in terms of the number of vehicles will not be known until more detailed engineering designs are progressed from the indicative scheme designs below.



**Figure 6.15 Denny Street Two Way Traffic**



**Figure 6.16 Denny Street Looking South –Existing Conditions**



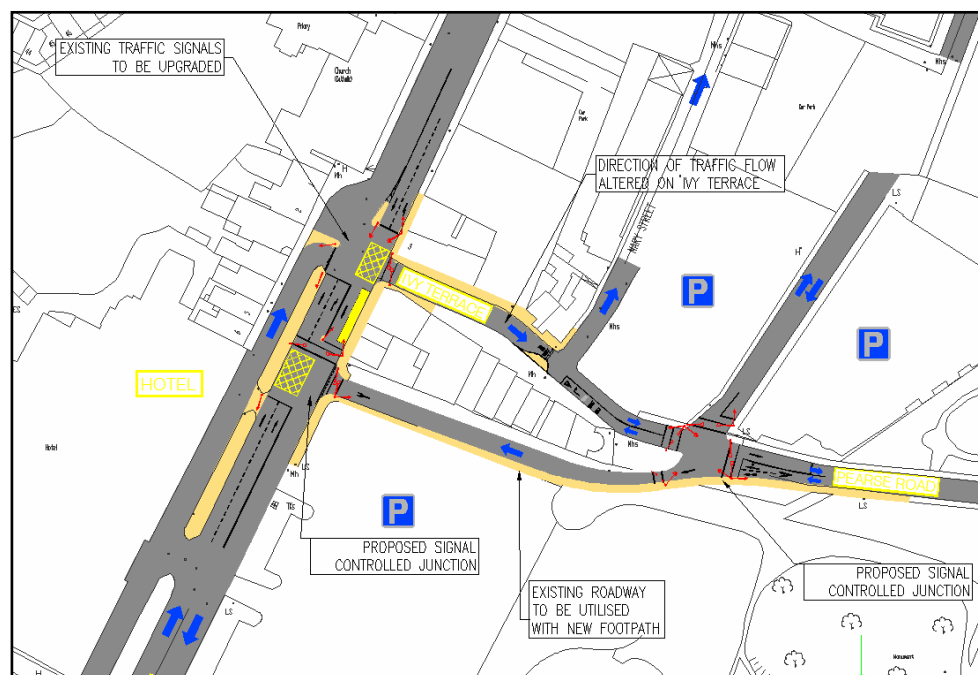
**Figure 6.17 Denny Street Looking South – Proposed**



### New One-Way Street linking Ivy Terrace

- 6.16.13 Ivy Terrace narrows as it approaches Princes Quay making it difficult to provide for two-way traffic. There is insufficient width at the junction with Princes Quay to provide the turning circle required to access Ivy Terrace. To overcome this issue, it is proposed to provide a new westbound link to Princes Quay. This will require the realignment of a pedestrian walkway and the removal of a small number of off street parking spaces. The proposed traffic layout is shown in Figure 6.18 and Figure 6.19.
- 6.16.14 The new link will provide sufficient capacity to cater for traffic diverted from the town centre.

**Figure 6.18 New One Way Link**





**Figure 6.19 Ivy Terrace looking West - Existing**



**Figure 6.20 Ivy Terrace looking West –Proposed New Link**



### 6.17 Junction Upgrades –An Overview of Measures for the Wider Network

- 6.17.1 The Tralee Baseline Traffic Evaluation Report identified a number of locations within the network that require attention in order to enhance the overall network performance. A number of infrastructural measures are proposed to the junctions which aim to bring significant improvement to the operation of these junctions in terms of movement and safety for all road users. The following is an overview of the types of measures proposed for selected junctions.

#### Specific Short Term and Medium Term Junction Measures

- 6.17.2 In the short term, junction improvements are proposed for seven junctions with an additional ten junctions to be improved in the medium term.
- 6.17.3 The short term works list is comprised of junctions that are considered a higher priority in terms of achieving the objectives for Tralee. Each of these has been identified as being particularly unsafe or exhibiting poor performance in their current forms and are therefore of higher priority.
- 6.17.4 The timescale for some other junction improvements is linked to the future delivery of major transport infrastructure (i.e. the Tralee Bypass), and as such are listed as Medium Term.
- 6.17.5 The following section will outline the issues for the 17 short and medium term junction upgrades, the works required in order to address these issues and the benefits which will arise from these works. The locations of short and medium term junction improvements are illustrated in Figure 6.21 and Figure 6.22 respectively.
- 6.17.6 There are 17 junctions identified in this section, although it should be noted this list is not exhaustive and other junctions in the network should not be overlooked for minor improvement. The 17 junctions identified comprise of the junctions that are in need of significant overhaul and are considered priority junctions within the network. For example, based on public feedback and subsequent high level analysis, consideration should be made for the following non priority junctions:

- Assess feasibility of facilitating pedestrian signals at the Ashe Street and North Circular Road
- Consider the realignment and improvement of Rock St, Maine Street and Pembroke Street; and
- the facilitation of pedestrian signalisation on the N86 Dan Spring Road and Princess Street (R556) junction.

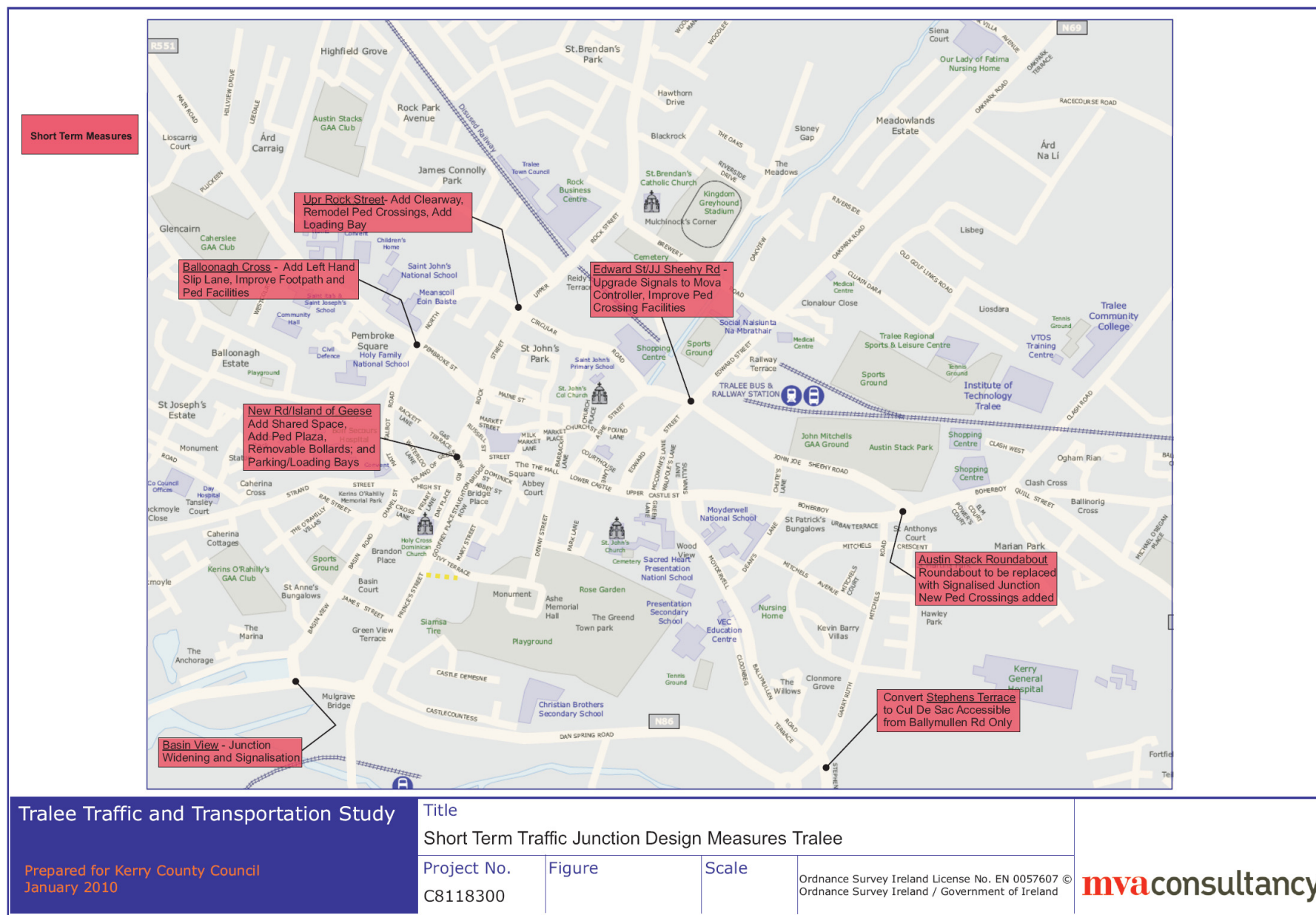
#### Short Term Junction Improvements

- 6.17.7 Junction improvements are planned in the short term at the following locations, for which detailed technical drawings are included in Appendix B. The following are shown in the map in Figure 6.21:

- S1 - R874 basin View/N86;
- S2 - Upper Rock Street;

- S3 - Island of Geese/New Road;
- S4 - Austin Stacks Park Roundabout;
- S5 - Balloonagh Cross;
- S6 - Garryruth Road/Ballymullen Road; and
- S7 - Edward Street/John Joe Sheehy Road.



**Figure 6.21 Short Term Wider Network Junction Measures**

# ST1 – R874 Basin View/N86



Looking north towards Basin View



Looking south towards the N86

## Issues

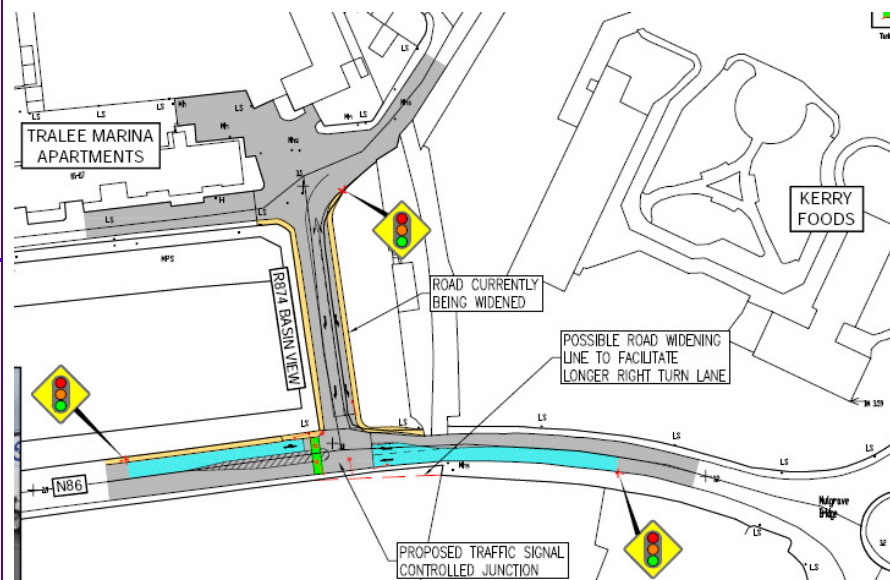
- R874 Basin View meets the N86 national primary road at a straightforward T junction.
- The junction suffers poor visibility and is currently being widened by the council.
- There are no pedestrian facilities here.
- The N86 is a National Primary road carries significant traffic into and out of Tralee linking Dingle with the town.
- Basin View/Road provides a viable route alternative to Princes Street/Quay for those heading north across Tralee however access/egress is difficult and congestion occurs

## Proposed Improvements

- It is proposed that this junction be converted to a signalised junction to allow measured flows in and out of Basin View.
- The inclusion of a right turn flare for west bound users and will require the widening of a portion of the western side of the N86
- A signalised pedestrian crossing to be added

## Benefits

- The signalisation of this junction will allow road users to avail of the less congested Basin View Road when entering/leaving Tralee. This will relieve Princes Quay/Street and its linking junctions of excess demand.
- The risk of having a priority junction leading onto a national primary road will be removed with the signals making this junction considerably safer for all users.
- The added pedestrian crossing will add attraction and safety to the residents of the Marina Apartments, near by employment and also encourage use of the popular canal walk.





## ST2 – Upper Rock Street



Upper Rock St facing south



Upper Rock Street

### Issues

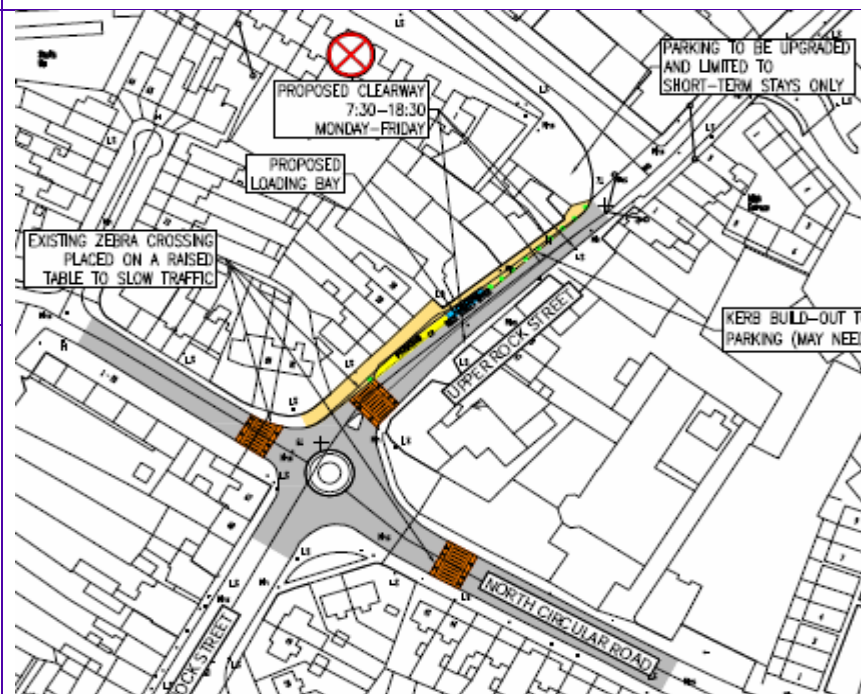
- This roundabout on Upper Rock Street is a busy point of congestion and acts as a pinch point for inbound traffic from Upper Rock Street.
- On-street parking and set down loading for a convenience store on the northern approach to the junction cause significant delay and complication in the junction.
- Illegal set down parking is an issue here.
- The junction contains zebra crossings located on three sides of the roundabout. Currently these are hard to see and can provide a dangerous pedestrian/vehicle conflict.

### Proposed Improvements

- The congestion issue is to be relieved by adding a clearway between 07:30 – 18:30 along Upper Rock Street. A loading bay will be added to remove lorry traffic serving the local convenience store
- The footpath kerb is to be extended out and bollards added to prevent illegal parking causing congestion.
- The zebra crossings are to be raised in order to slow traffic before crossing points and will assist in the functionality of the crossings.

### Benefits

- The primary issue of congestion at this junction is to be relieved by the addition of a clearway and the removal of illegal and set down parking along Upper Rock Street.
- The addition of a dedicated loading bay will remove congestion by lorries serving the local convenience store
- The removal of disruptive traffic will create a safer, more predictable, less congested environment for all users.
- The raising of the zebra crossings will make crossing safer for pedestrians. The effect of raising the crossings will be to ensure drivers slow before the crossing (similar to a speed ramp) to ensure whether there is a pedestrian crossing at the roundabout or not, traffic will be poised to slow at the crossing.



## ST3 – Island of Geese/New Road



Looking South towards New Road and Bridge Lane



Looking north facing Gas Terrace and Rock Street

## Issues

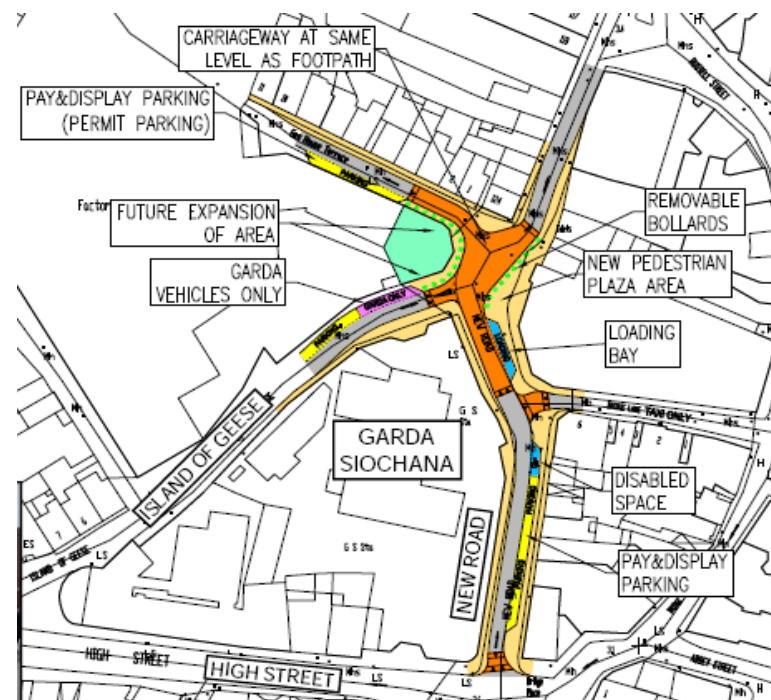
- These roads make up the western portion of the towns circulatory system and carry significant pedestrian and vehicular traffic through the middle of the commercial town centre
- This area is made up of a complex four arm junction where the right of way for the approaching roads can be unclear for users due to unintuitive layout.
- The contrast of narrow links feeding into an open junction creates an insecure environment for pedestrians with no facilities to guide pedestrian flows. Combined with poor pavement quality this is an uninviting area for pedestrian traffic.
- Issues exist with commercial loading, Garda vehicle parking, public parking and disabled parking. Conflict for space causes illegal set down parking leading to congestion.

## Proposed Improvements

- In order to provide a safe attractive pedestrian environment that still maintains traffic permeability it is proposed that shared space principles be applied by raising the road level to footpath height.
- Develop a new pedestrian plaza in the centre
- Designate parking to Garda marked vehicles and commercial loading services while relocating the town's taxis to a more appropriate location.

## Benefits

- The development of a shared space area and public plaza in such a significant location within the town with such levels of commercial frontage offers potential to develop a new town quarter.
- The reduction in through traffic will create a significantly safer and appealing environment for pedestrians.
- Designating specific parking locations will remove the complication of services being without access and parking, in particular Garda marked vehicles and delivery vehicles which need to stop in this location.
- The new developments will create an incentive for traffic to travel around the town centre rather than through removing traffic from the town centre thus improving the general environment in the town.



Appendix C contains photomontage image of Island of Geese / New Road junction post the introduction of proposed measures



**ST4 – Austin Stacks Park (Boherbee) Roundabout**

Looking West up John Joe Sheehy Road



Looking west towards the N70

**Issues**

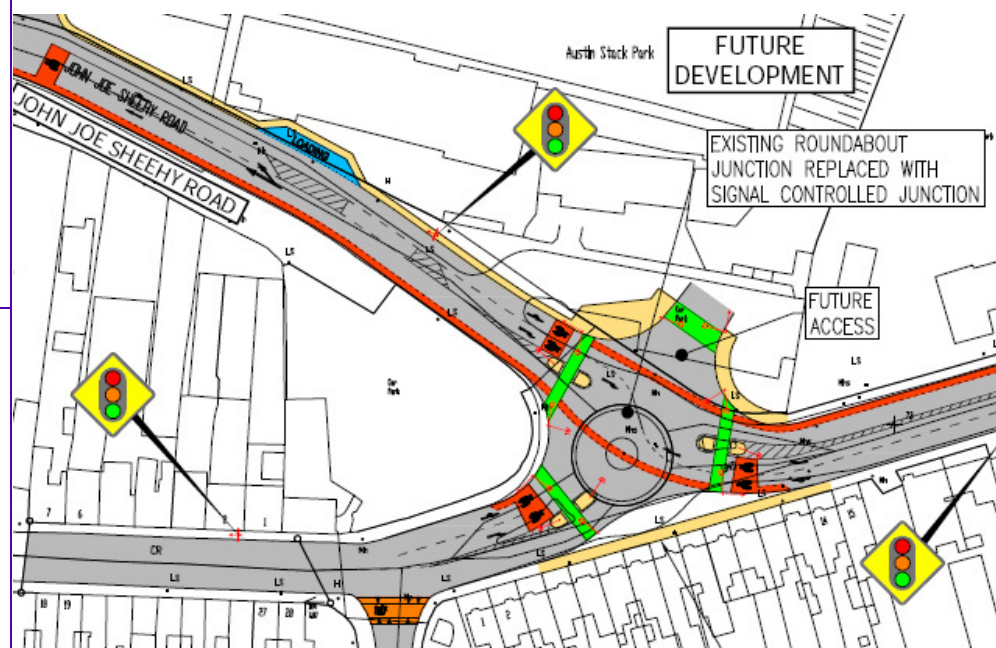
- This roundabout is a major traffic link carrying traffic to and from the N21. It carries significant volumes of traffic.
- The volume and speed of traffic impacts negatively on the more vulnerable road users such as cyclists and pedestrians. As the primary access to Tralee from the east this route is heavily weighted towards vehicular traffic.
- The current zebra crossings in place at this junction are not suited to the speed and volume of traffic currently using this roundabout.
- Cycling facilities at this location are non-existent while the unpredictable traffic movements along with speeds poses a hazard to cyclists.

**Proposed Improvements**

- It is proposed that a complete redesign and realignment of this junction take place with the junction design to change from a roundabout to a signalised junction.
- Advance stopping lines to be provided at each junction arm to facilitate cyclists
- Signalised pedestrian crossings on each arm of the junction

**Benefits**

- The redesign of this junction will create a safer operational environment for all road users with focus in particular on cyclists and pedestrians.
- The signalisation and realignment of lanes will create more predictable and measured traffic movements which will increase safety and minimise queue lengths.
- Increasing pedestrian facilities improves safety, pedestrian mobility and route choice
- Signalisation will allow a better balance and distribution of traffic flows across each junction arm.

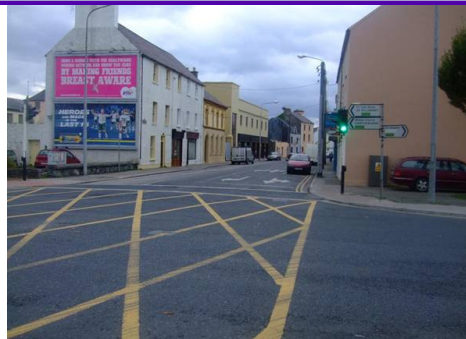




## ST5 – Balloonagh Cross



Looking northeast at the left turn slip road



Looking down towards Pembroke Street

## Issues

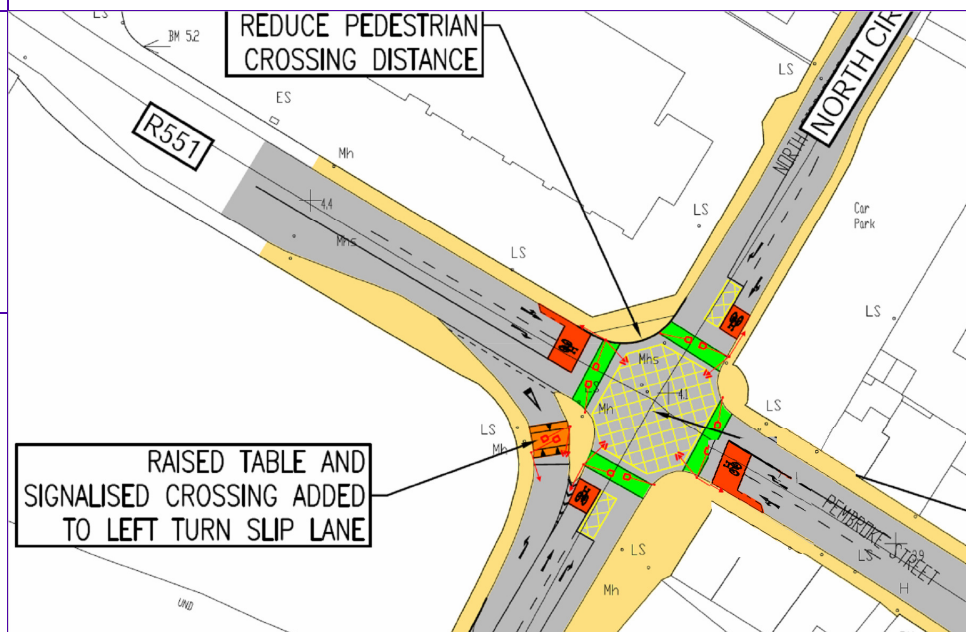
- Balloonagh cross is a busy signalised junction in the west of the town centre. The junction is surrounded by a broad variance of land uses including 2 schools, a supermarket and a housing estate.
- Significant demand arises from the school and supermarket traffic at peak hours leading to large levels of congestion at this junction.
- Pedestrian traffic volumes are also high due to the surrounding land uses. The current pedestrian system does not cater for such volumes.
- There is no provision for cyclists at this junction.

## Proposed Improvements

- Upgrade of existing signal system and incorporate MOVA control.
- Lane management measures by adding central refuge and clear road markings.
- Realign footpaths to reduce pedestrian crossing distance and add signal controlled pedestrian crossings on each arm.
- Add advance stop lines on four arms of the junction for cyclists.

## Benefits

- The issue with this junction is maximizing safety for the softer modes while ensuring maximum traffic flow for the high traffic volumes.
- Enhancing the traffic signal system will ensure improved flows through the junction.
- While maintaining maximum flows, the upgrade of signal systems and the pavement redesign will provide a safer environment for the significant level of pedestrian traffic.
- The raising of the street level to meet the pavement level on the left turn slip road will ensure that motorists decrease speed when using the slip. This will provide a safer crossing for pedestrians and also help motorists merge safely with the R551 eastbound.



**ST6 – Garryruth Road/Ballymullen Road**

Ballymullen Road looking southwest

Garryruth Road looking northeast

**Issues**

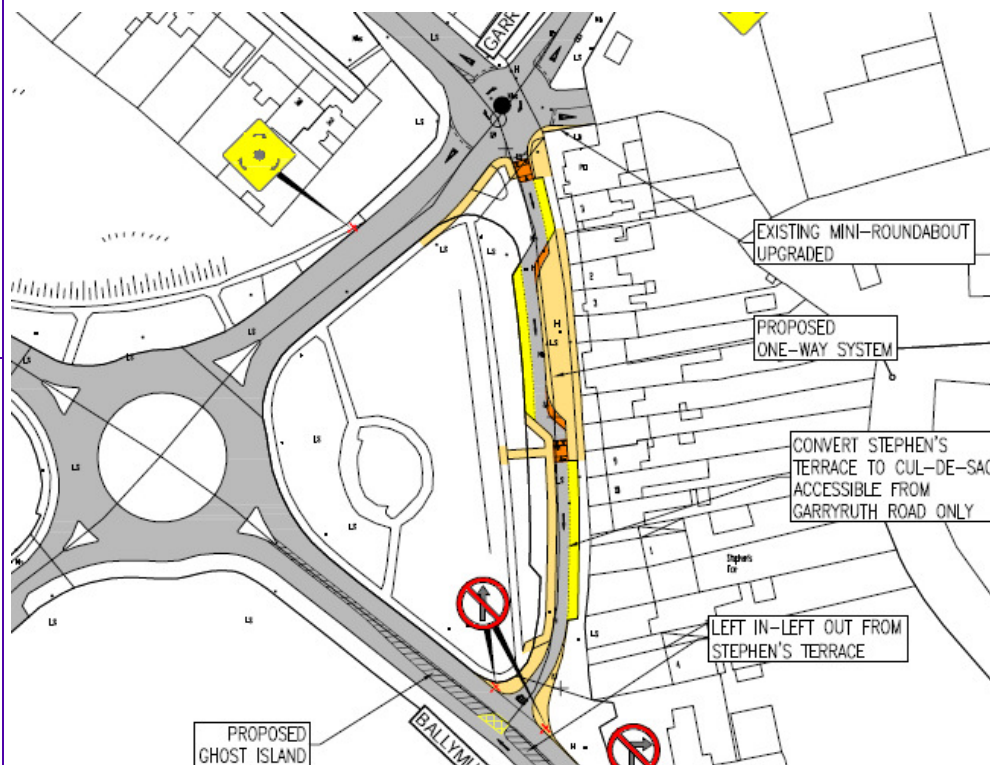
- The Ballymullen Road N70 meets the Dan Spring Road N86 at a large four arm roundabout. These are two significant roads and both have sufficient capacity to meet demand.
- The issue arises where traffic heading northwest up the N70 (Ballymullen Road) is using the St Stephens Terrace to connect with the Ballymullen Road and not using the roundabout provided.
- Vehicles are essentially using St Stephens Terrace as a “rat run” to avoid the roundabout. This causes a negative impact on residents and leads to heightened risks for pedestrians as this road has not the design capacity or facilities to handle such volumes.

**Proposed Improvements**

- With the N86/N70 roundabout in place the St Stephens Terrace link is no longer required as a through link. It is proposed that this road be converted to a one-way street designed for local and business access only.
- St Stephens Terrace to be accessed by Garryruth road end only.
- Significant traffic calming measures to be taken to slow traffic and improve safety. New pavements also to be added.
- Upgrade of the Garryruth/Ballymullen Roundabout.

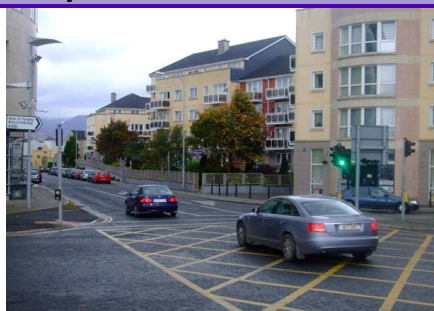
**Benefits**

- The closure of the northern end of the link will bring a significant improvement in the quality of life for the residents of St Stephens Terrace with the removal of normal through traffic.
- This development would decrease the noise and disruption of traffic and increase the safety of residents in the area.
- The right turn ban on Ballymullen Road accessing St Stephens Terrace will improve flows along Ballymullen Rd
- Reduction of through traffic would also remove the impediment of cars between the housing and green space available to them making this facility more viable.



**ST7 – Edward Street/John Joe Sheehy Road**

Looking southeast at John Joe Sheehy Rd



Looking south down Edward St

**Issues**

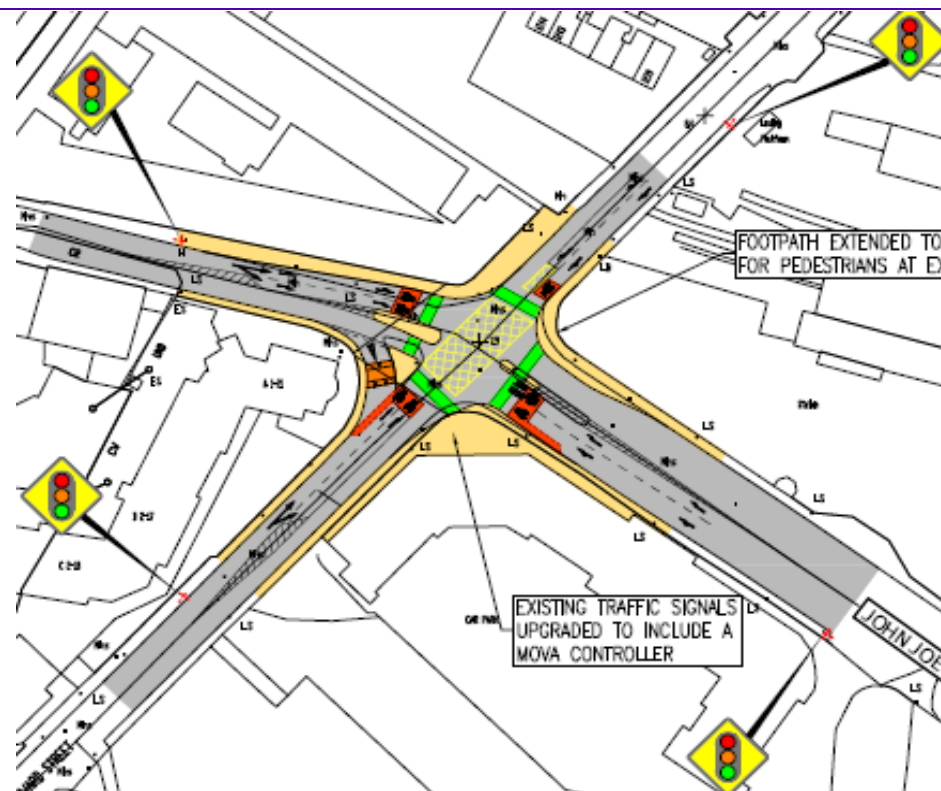
- This is a busy junction north of Tralee Town centre surrounded by apartments, commercial units and Tralee Train Station.
- The primary issue with this junction is of capacity. At peak hours there can be significant queue times with blocking back occurring as far back as the Ashe Street/North Circular roundabout.
- There is a measurable pedestrian presence originating from the surrounding apartments and train station. The size of the junction and length of the crossing makes it an uninviting pedestrian crossing
- There are no facilities to aid cyclists at this junction.

**Proposed Improvements**

- To improve traffic flows it is proposed that signals be upgraded with a MOVA controller.
- The realignment of footpaths would ensure vehicle movements are more predictable and would decrease the length in crossing time for pedestrians. This would include the addition of refuge islands in the middle of the road to break up crossing and to offer greater variation in signal patterns
- Cycling advance stop lines to be added to each arm of the junction to provide for cyclists

**Benefits**

- The upgrading to MOVA demand responsive controllers would help to alleviate the congestion issues at peak times and improve the overall functionality of the junction.
- The footpath redesign would improve safety, increase desirability for pedestrians and also improve crossing efficiency. Time saved with pedestrians crossing would in turn give longer cycle times to vehicular traffic improving junction capacity.
- Provision of cycle facilities along this primary corridor improve the safety for cyclists while the visibility of cycle infrastructure will help promote cycling as a viable mode.

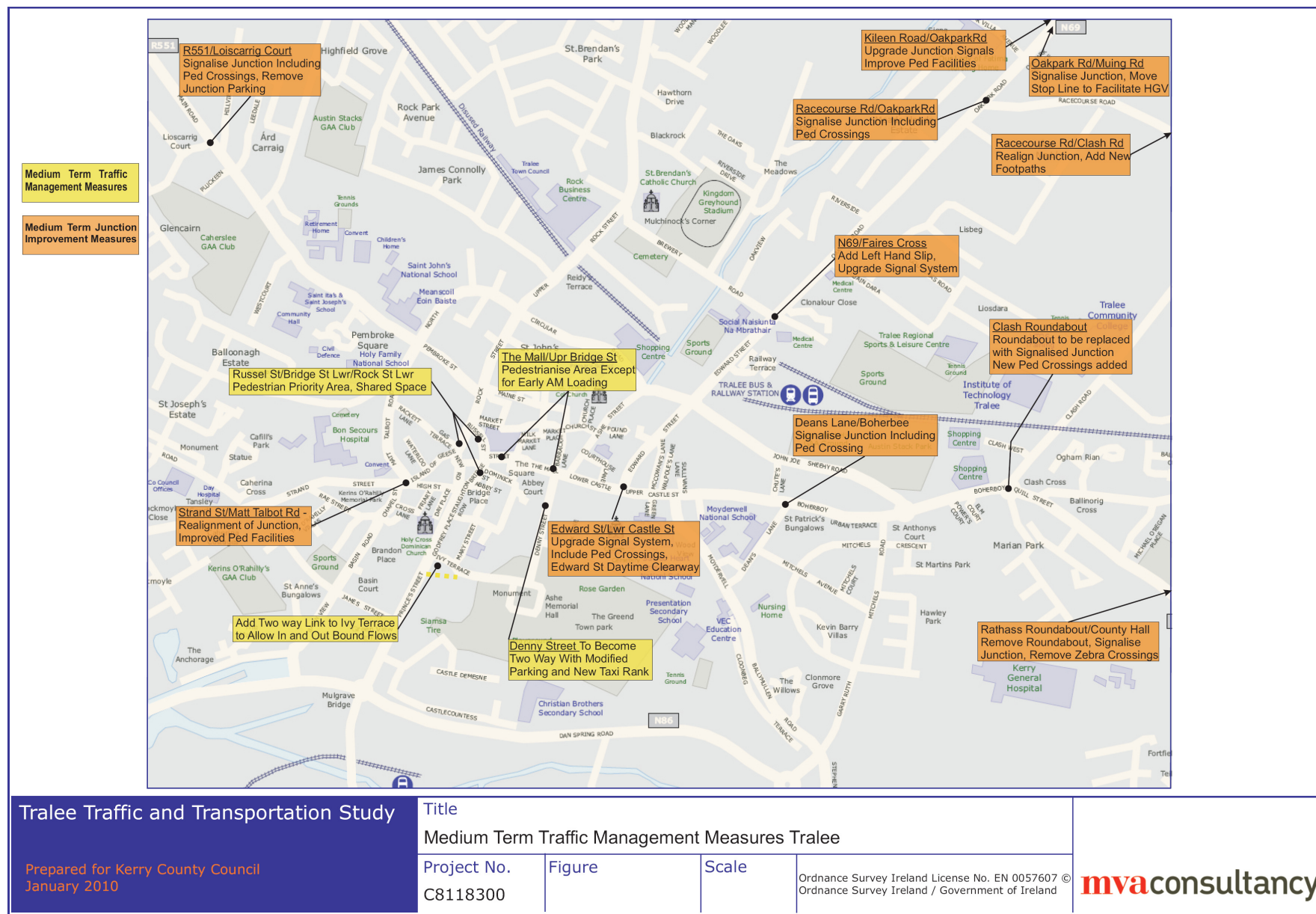


### Medium Term Junction Improvements

6.17.8 The locations of the following medium term junction improvements are shown in Figure 6.22:

- M1 - Clash Roundabout;
- M2 - Strand Street/Matt Talbot Road;
- M3 - Lower Castle Street/Edward Street;
- M4 - N69 Fairies Cross;
- M5 - Racecourse Road/Clash Road;
- M6 - Racecourse Road/Oakpark Road;
- M7 - Oakpark/Muing Road;
- M8 - R551/Lioscarrig Drive;
- M9 - Rathass Roundabout;
- M10 - Deans Lane/Boherbee; and
- M11 - Oakpark Road / Kileen Road.



**Figure 6.22 Medium Term Wider Network Measures**



## M1 – Clash Roundabout



Boherbee facing Quill Street



Boherbee facing Marian Park

### Issues

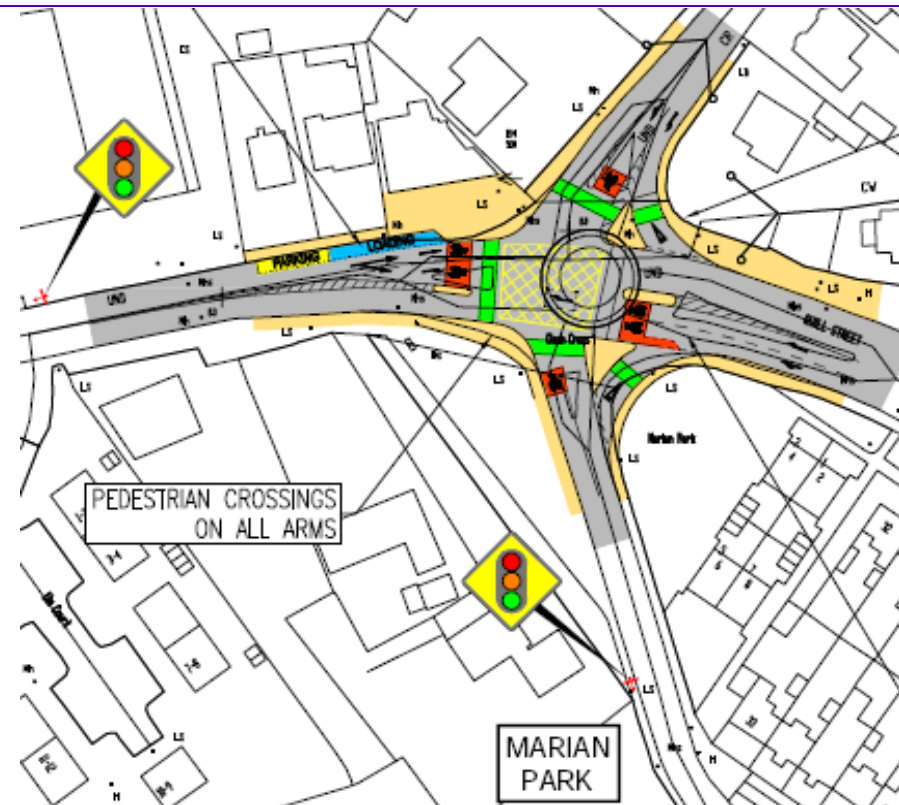
- This junction is on the main approach to Tralee Town from the east.
- A number of residential estates feed onto this junction and the Tralee Community College is located just to the north on Clash road which is a sizable traffic generator.
- At present this junction is operating at near operational capacity. Couple this with the high level of pedestrian flows resulting from the college and surrounding housing there is need for significant redesign of the junction
- The junction has design issues arising from uneven levels which can lead to a sight impediment for drivers. This is a safety issue and should be considered in the junction design

### Proposed Improvements

- It is proposed that this roundabout is replaced with a MOVA controlled signalised junction. Left turn slip lanes to be added on the Quill Street and Clash Road arms.
- Full signalised crossings on all arms including refuge islands.
- Pathways to be enhanced to increase pedestrian capacity and define junction alignment. The Boherbee section of pathway to include a loading bay.
- Advance stop lines for each arm to provide for cyclists.

### Benefits

- The aim of the works is to increase capacity and flow from this heavily utilised junction. The replacement of the roundabout with a signalised junction will add a level of predictability with regards to vehicular movements while increasing junction capacity will increase the margins of safety for all users.
- The improvement in pedestrian facilities will generate a better crossing environment for the large number of users and lessen the risk of accident.
- The slip lanes will allow increase capacity and bypass of the junction for drivers and cyclists arriving from Clash Road and Quill Street. This will further increase the capacity of the junction.



**M2 – Strand Street / Matt Talbot Road**

High Street facing west



Strand Street facing east

**Issues**

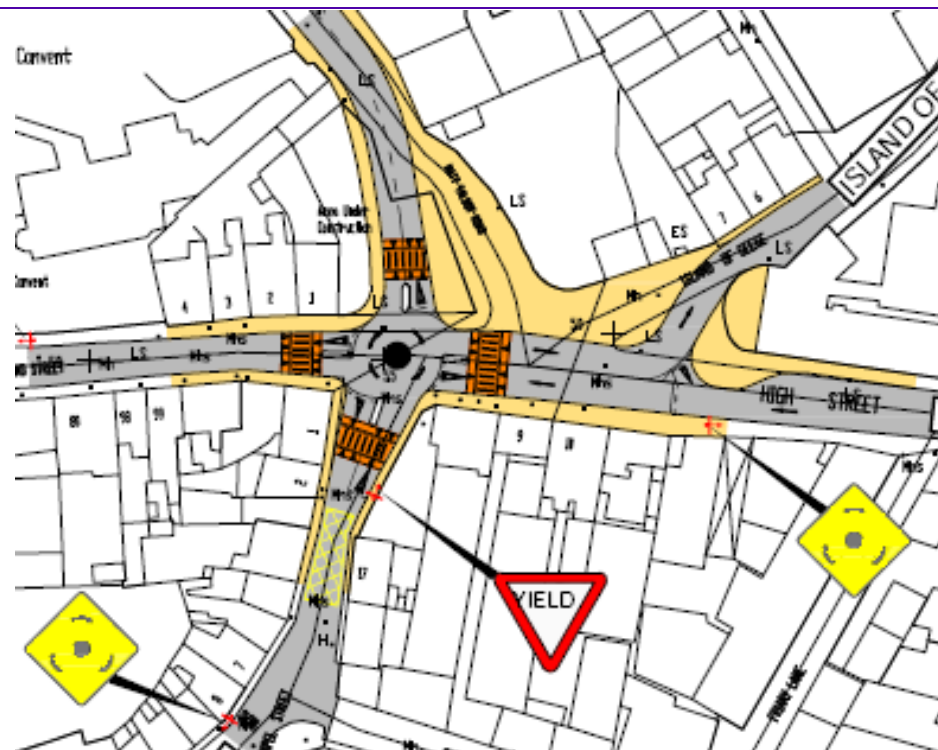
- This junction has 5 arms converging on a non uniform area resulting in a relatively complex 5-arm roundabout, with restricted movements.
- The narrow road with converging on a wide area offers too much driver choice on negotiating the junction and leads to unpredictability in driver movements. This raises a safety issue for both other drivers and soft modes also.
- The wide road area around the junction offers little in the way of pedestrian crossing facilities and long crossing times for pedestrians are also an issue. The area is largely residential with some retails so pedestrians are an issue.
- Chapel and Strand Street both have narrow approaches resulting in poor visibility

**Proposed Improvements**

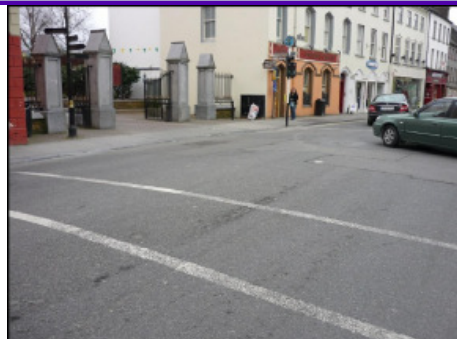
- To add definition to this junction it is proposed that a significant pavement expansion take place with realignment of each junction approach to ensure arm alignment.
- The northern arm of Matt Talbot to be moved west from its current position to realign the junction into a conventional four arm roundabout.
- Raised level non signalised pedestrian crossings to be added.

**Benefits**

- The expansion of pavements and realignment of Matt Talbot road will ensure drivers take the correct turning line and prevent unpredictable movements.
- The increased pavement area provides an improved pedestrian space and offers potential for some small civic amenities such as public seating.
- Raised pedestrian crossings act as a speed ramp to vehicles approaching the junction. The reduction in speed paired with the crossing itself makes for a secure crossing environment for pedestrians.
- Note: This improvement offers significant improvement for the area and could be considered as a short term improvement to tie in with the Island of Geese shared space improvements.



### M3 – Lower Castle Street and Edward Street



Castle Street facing St Johns entrance



Corner of Castle Street and Edward Street looking east.

#### Issues

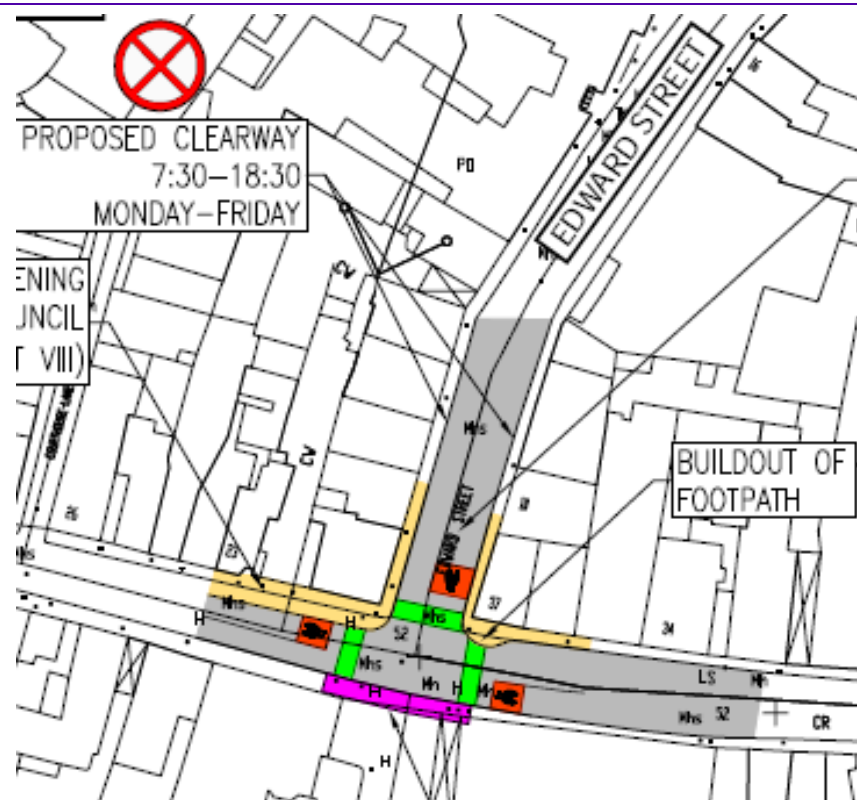
- This junction is located in a busy area of Tralee and is surrounded primarily by commercial properties.
- A high volume of pedestrian traffic passes through this area across all time periods while there is limited pavement room.
- Some pavements are chipped and in poor condition.
- Congestion occurs at this junction and along Castle Street where pedestrian conflict occurs with vehicular traffic

#### Proposed Improvements

- To meet the demand requirements for vehicular and pedestrian traffic it is proposed that the traffic signals be upgraded to a MOVA demand response system. The lower portion of Edward Street to become a clearway during business hours
- Signalised crossings to be added on each arm of the junction
- Pavements to be extended on the north side of Castle Street and to improve the quality and finish of the pavements on the south side
- Provide cycling priority at junction stop lines on all arms.

#### Benefits

- The proposed signal improvement will improve capacity and flow for vehicular traffic along Castle Street as a whole.
- Increased pedestrian space will decrease the pedestrian congestion along Castle Street. Combined with improved crossing facilities the pedestrian environment will be improved.
- The proposed clearway will ensure the junction operates as planned with no illegal and obstructive parking on Edward Street that would cause issues at the junction.





**M4 – N69 Faries Cross**

N69 Oakpark Road facing south



Car turning south out of Brewery Road

**Issues**

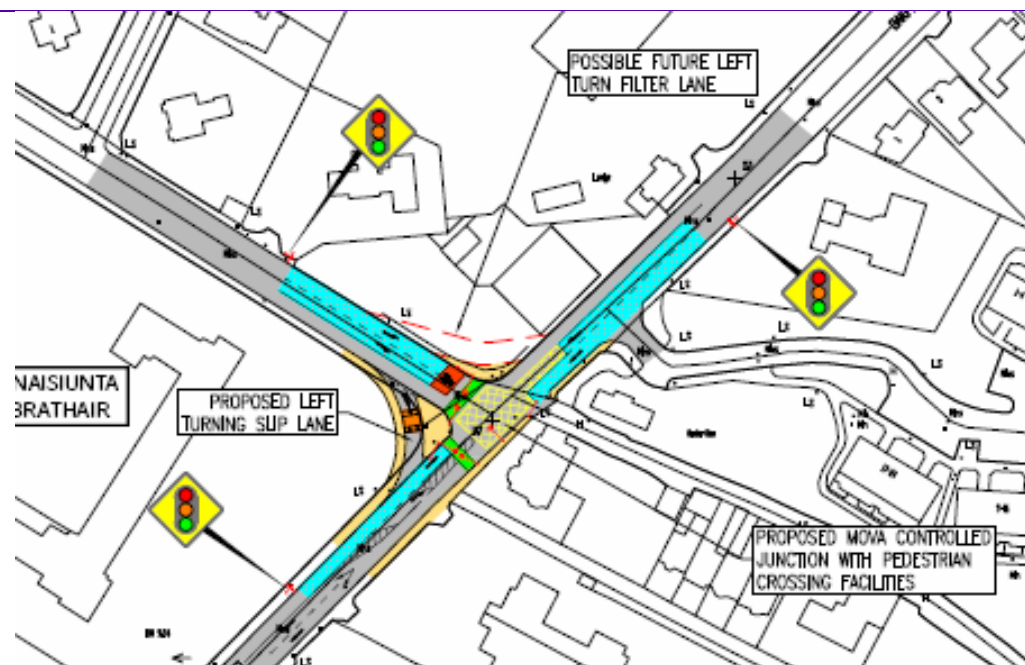
- The Oakpark Road/Brewery Road Junction is a busy T junction located just north of Tralee town centre. Oakpark Road (N69) is one of the primary radial routes accessing Tralee from the north.
- A national school and residential housing surrounds this junction.
- At peak hours school traffic and illegal parking can cause congestion and blocking back at this junction as cars struggle to access and egress Oakpark Road
- Insufficient pedestrian crossing facilities create a dangerous crossing environment. This is an issue of importance given the proximity of the school.
- There are no current cycling priority features at the junction

**Proposed Improvements**

- To improve the functionality of this junction it is proposed that the junction be signalised by MOVA controlled signals and a left turn slip lane be added for cars turning on to Brewery Road from the south.
- A left turn slip for cars exiting Brewery Road is also proposed pending a land ownership assessment.
- Signalised crossings with a refuge island and raised crossing platform.
- Clear signage and road markings based on an anti skid surface.
- Cycle priority for the Brewery Road exit arm.
- Consider Parking Measures to regulate illegal parking.

**Benefits**

- The addition of signalisation will ensure the junction functions in a more efficient manner. Capacity will be increased during peak hours causing positive knock on effects along Oakpark Road.
- The addition of slip roads will significantly increase junction capacity.
- The addition of crossing facilities will make the junction safer for pedestrians in particular the peak school traffic.
- Cycling facilities are key to improving the perception of cycling in Tralee.



**M5 – Racecourse Road/Clash Road**

Clash Road looking south



Racecourse road looking east towards business park access to right

**Issues**

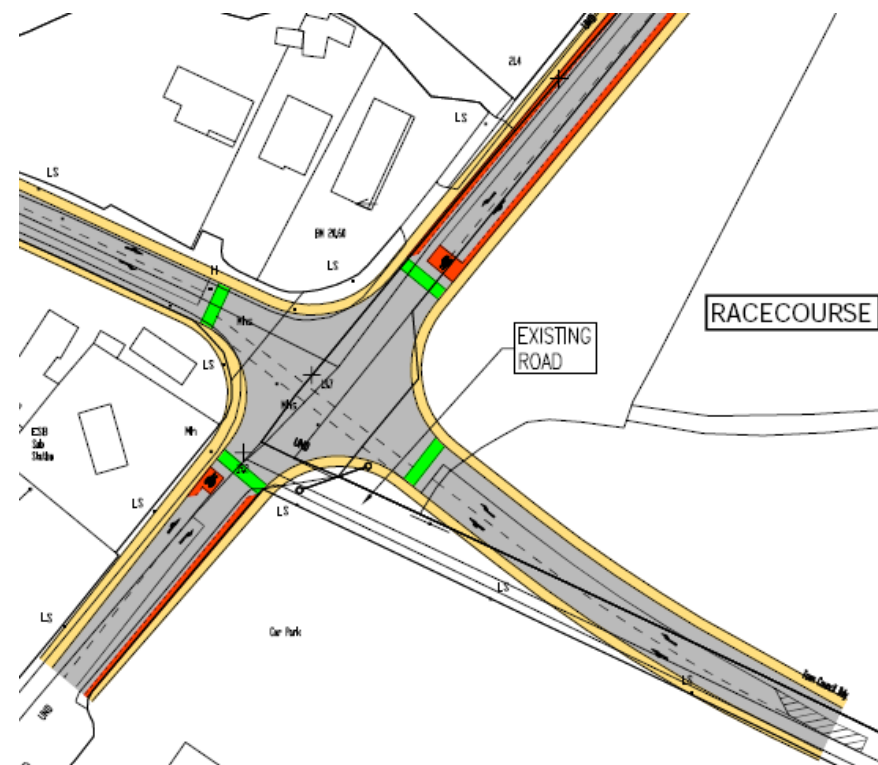
- Clash Road meets the Racecourse Road and the entrance to the Tralee business park at this location. At present the junction is skewed and closer resembles two opposing T junctions rather than a four arm junction. This raises issues of driver uncertainty and right of way which can lead to safety issues with traffic turning on to Clash Road.
- At present there are no pedestrian crossing facilities at this location. Traffic can move rapidly along Clash Road making it difficult for pedestrians to cross safely.
- Cycling facilities are not in place at this junction.

**Proposed Improvements**

- The realignment of this junction is paramount for the safety of road users. To achieve this, the entrance to Tralee Business Park is to be shifted north to oppose the Racecourse Road arm of the junction. The junction is to be remodelled as a conventional unsignalised priority junction. Given the low traffic flows on Racecourse road and the Business park entrance, signals are not deemed necessary. Note Signal control to be implemented as a development proposal.
- Pavements are to be built out to further define junction
- Signalised pedestrian crossings are to be added to allow safe crossing of all roads when necessary.
- Cycle lanes and cycle priority is to be added along Clash Road and at the junction stop lines

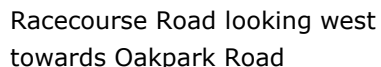
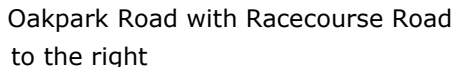
**Benefits**

- The realignment of this junction will significantly improve visibility, safety and functionality at this junction.
- With the signalised crossings in place the provision for safe crossing will be in place on demand for pedestrian crossing.
- Similar to other major radial routes linking Tralee cycle provision will be in place to increase safety and promote cycling in Tralee.





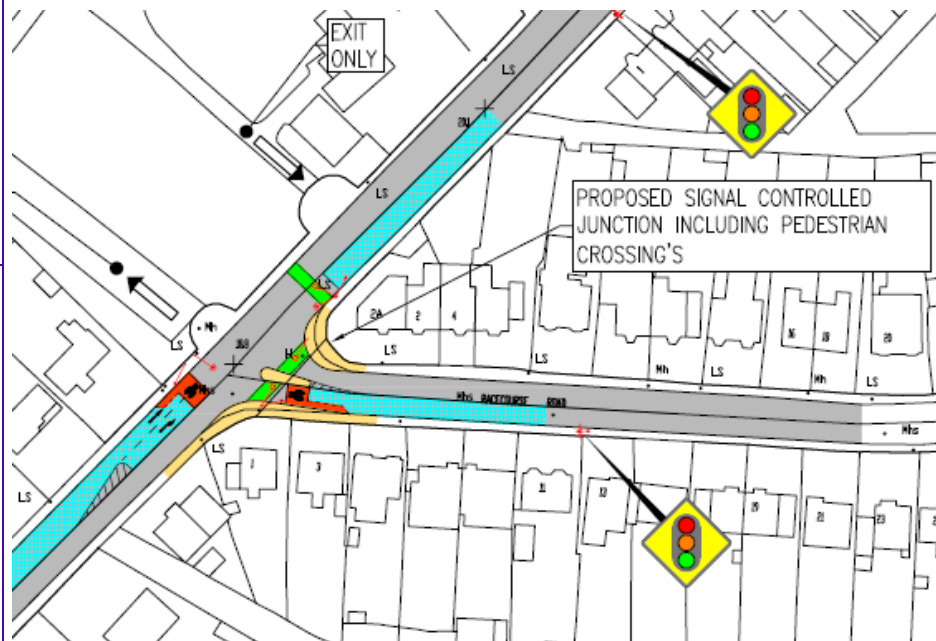
The image consists of two side-by-side photographs. The left photograph shows a street scene on Oakpark Road, looking towards the intersection with Racecourse Road. A silver car is driving away from the camera. In the background, there is a prominent red house with a gabled roof. The right photograph shows the same intersection from a different angle, looking west towards Oakpark Road. A yellow bus is stopped on the right side of the road, and a silver car is driving towards the camera. A red stop sign is visible on the left side of the road.



- Racecourse Road joins Oakpark Road in a slightly skewed T priority junction. Oakpark Road is a major link into Tralee and carries significant traffic flows.
- There presently no cycling facilities or pedestrian crossing facilities at this junction. This poses a considerable risk given the traffic levels along Oakpark Road. The pavement around the junction is also insufficient in terms of width and lane definition.
- The access and egress onto Oakpark Road is difficult from Racecourse Road given the speed and high flow of traffic using the current priority junction type.

- It is proposed that this junction change from a priority T junction to a full MOVA signalised junction with realigned pavement and refuge island to define the junction turning movements further.
- Signalised pedestrian crossings to be added on both arms.
- Anti skid braking surfaces running up to each stop line with clear road markings.
- Cycling priority at junction stop lines

- The signalisation of the junction will provide an improvement on access and egress from Racecourse Road. It will allow for safer regulated turning movements.
- The pavement extension will define vehicle turning movements and also decrease the pedestrian crossing distance. Along with signalisation this will make for a safer pedestrian environment with straightforward crossings.
- Cycling facilities while making cycling a safer mode of transport are central to improving the perception of cycling in Tralee which is in line with smarter travel objectives.



**M7 – Oakpark Road/Muing Road**

Looking west towards Oakpark Road



Looking north up Oakpark Road

**Issues**

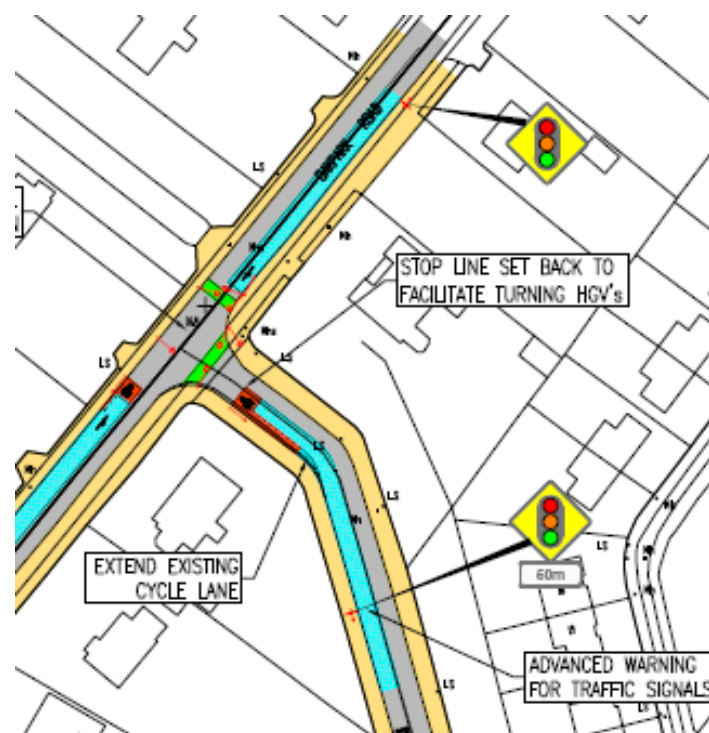
- Muing Road links Oakpark and Ballybeggan Road. Muing is a northern residential area, with Tralee I. T. located immediately to the south.
- Like other links on to Oakpark Road the high traffic flow creates difficulties with vehicles wishing to access/egress Muing.
- This junction is without cycle and pedestrian crossing facilities.
- HGV traffic heading south who wish to make a left turn on to Muing experience difficulty with the angle and width of the bend. Traffic waiting to turn out from Muing Road can restrict HGV turning movements.

**Proposed Improvements**

- The structure of this junction is to remain the same with the major change being the transformation of the junction from a priority T junction to a signalised junction.
- The Muing Road stop line to be moved back to facilitate HGV turning movements.
- Signalised pedestrian crossings added on both arms.
- Cycle priority at each stop line.

**Benefits**

- The signalisation of this junction will improve access to Muing Road. It will also improve the efficiency of the Muing/Oakpark junction in terms of capacity and flow.
- The improvement for HGV turning will improve safety and remove the risk of blocking back on Oakpark Road from congested HGVs
- The improved pedestrian facilities will act to will improve the residential environment and improve connectivity between these residential areas and Tralee I.T.



**M-8 R551/Lioscarraig Drive**

R551 looking north towards Lioscarraig Drive



Looking northwest up the R551

**Issues**

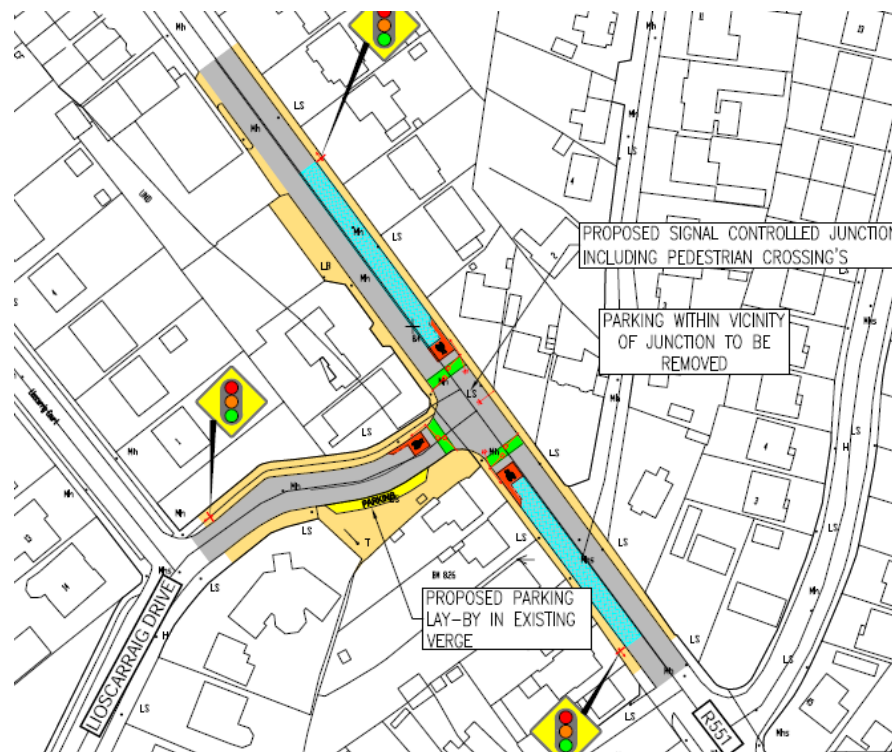
- Lioscarrig is a large residential area in the northwest periphery of Tralee. The significant level of housing is not matched by the junction which links this housing with the R551 to Tralee.
- At present the area is connected to the R551 via a priority T junction. The R551 carries substantial levels of residential traffic at peak hours making access in and out of Lioscarrig difficult at times.
- There are also a number of retail units in proximity to the junction where parking and illegal set down causes issues of congestion around the units and junction.
- There are also no pedestrian links at this junction which leads to potential risks given the level of housing in the area and the retail close to the junction.

**Proposed Improvements**

- In order to improve access to Lioscarrig traffic signals are to be added to this junction. While the structure will remain the same parking will be removed from the junction area in order to dedicate the junction area to turning movements only.
- Additional parking will be added in proximity to the junction to replace removed spaces.
- Signalised pedestrian crossings are to be added for all junction arms.

**Benefits**

- The signalisation of this junction will improve access to Lioscarrig at peak hours and all a level of predictability to vehicle movements within the junction.
- The removal of parking will clear the area of potential causes of blocking back with the parking transferred to a safer more suitable location.
- The pedestrian crossings will provide a more secure link between retail services and the residential areas. This will benefit the young and elderly in particular.
- The cycling priority facilities will allow cyclists access to the junction ahead of motorists which will improve safety.





**M9 – Rathass Roundabout**

Looking South towards Haig's Terrace



Rathass Roundabout facing County Hall

**Issues**

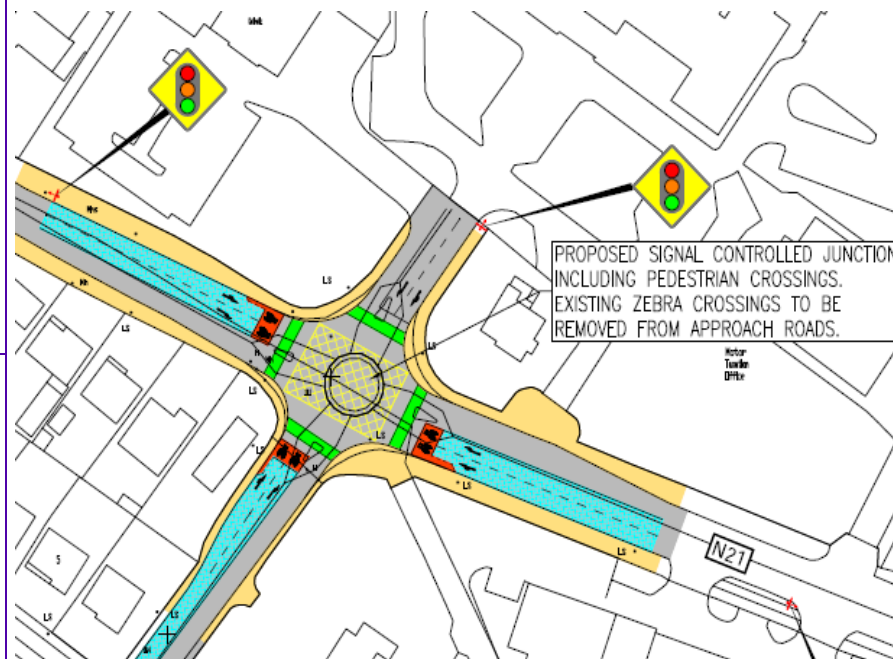
- Rathass Roundabout is a four arm roundabout linking the N21 with the N22 and access to County Hall. This junction carries a substantial flow at peak times.
- The volumes of traffic along the N21 create difficulties for other traffic to access to the junction, in particular at peak times.
- The current design is not favourable for cyclists given the multiple lanes and unpredictable nature associated with roundabouts.
- The surrounding area contains a number of land uses including offices, commercial and residential all feeding into the roundabout. These land uses create pedestrian traffic that is not catered for sufficiently in its current format.

**Proposed Improvements**

- To improve the safety, functionality and efficiency of this junction it is proposed to transform this junction from a roundabout into a signalised four arm junction. Signalisation will give measured access to each arm and will provide predictable traffic movements within the junction.
- Signalised pedestrian crossings are to be added
- The pavements will be extended in areas to define the junction and regulate turning speeds
- Provision for cyclists will be included in this design with priority stopping areas at the junction stop line.

**Benefits**

- The redesign of this junction will offer a more balanced access for all arms while still maintaining strong flow on for the primary movements. MOVA traffic signals allow greater detail in the regulation of movements unlike roundabouts where motorists must anticipate a gap in traffic to access the junction.
- The proposed pedestrian facilities provide a safer means of crossing for the pedestrians in the area and a significant improvement on what is currently in place.
- Roundabouts contain significant elements of risk for cyclists with vehicles crossing lanes and moving without warning. The planned junction along with the cyclist priority areas make this junction safer and more appealing.



## M10 – Deans Lane/Boherbee



Traffic exiting Deans Lane



Boherbee looking west with Deans Lane to the left

### Issues

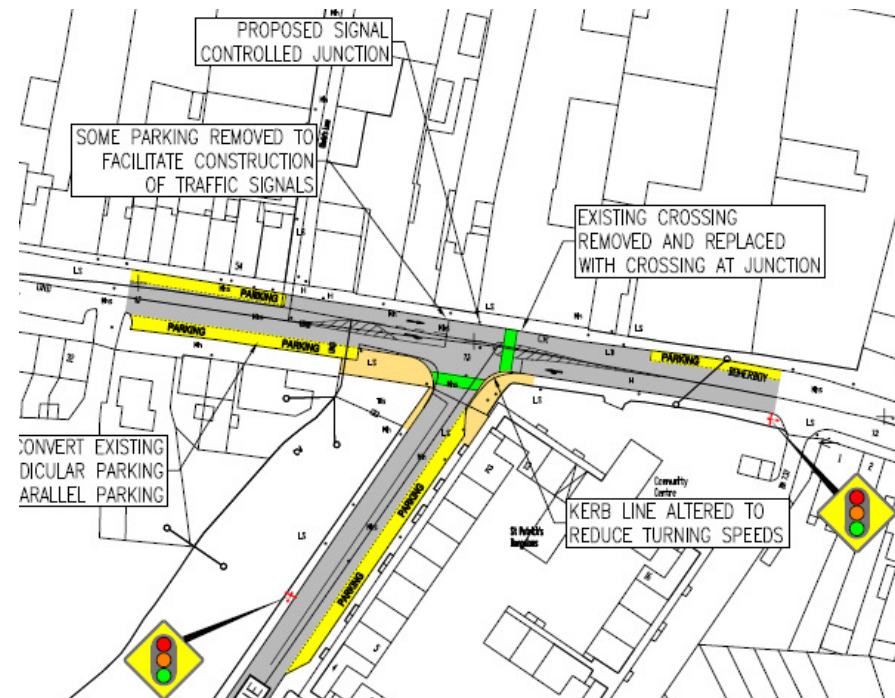
- This junction links Deans Lane Boherbee. There are a number of schools in the near by vicinity of Deans Lane which put severe strain on nearby parking and set down areas in the vicinity of the junction.
- At peak times this junction becomes under load with school arrivals. The lack of signals at this location becomes an issue and leads to queues on Deans Lane and Boherbee.
- Safety is a priority in this location with a large volume of pedestrian traffic so it is important that arrival speeds into the junction are regulated.
- There is significant demand for on street set down parking for school drop offs.

### Proposed Improvements

- It is proposed that this junction change from a priority T junction to a full MOVA signalised junction with realigned pavement.
- Defined on street parking to be put in place to facilitate school traffic.
- Signalised pedestrian crossings on each arm.

### Benefits

- The MOVA demand responsive traffic signals will assist in the distribution of traffic around this junction at peak times when school traffic and not negatively impact on flows on Boherbee at other times.
- Signalisation will also add a new level of safety with the unpredictability of cars moving out of the junction removed by the presence of signals.
- The realigned pavements will also reduce the speed of turning cars lessening the risk of accident.
- Pedestrian crossings carry extra importance at this location given the number of children liable to be crossing at this location.





**M11 – Killeen Road / Oakpark Road**

Oakpark Road looking South



Looking West down Killeen Road

**Issues**

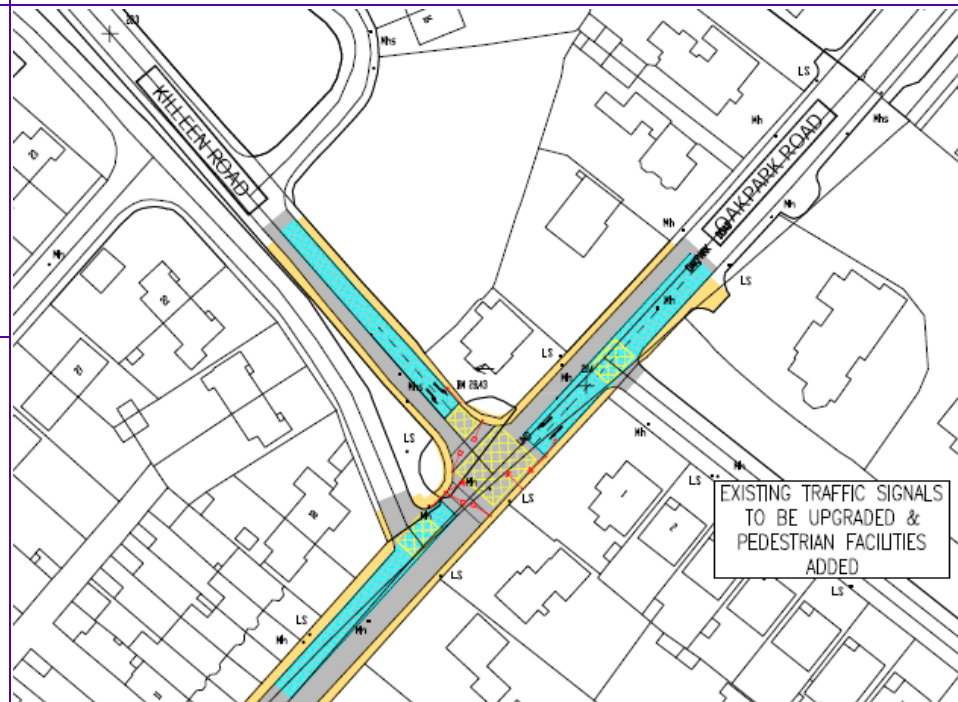
- Oakpark Road is a major radial route accessing Tralee from the north. This junction links the residential area surrounding Killeen Road with Oakpark Road.
- This junction is deemed unsatisfactory in terms of functionality and safety for motorists. This is based on visibility, access and a high level of demand during peak hours.
- The inadequacy of this junction leads to Chestnut Drive becoming a “rat-run” for Killeen Road access.
- There are insufficient pedestrian crossing facilities surrounding this junction. There are also insufficient pavements facilities.
- The access to Oakpark Demesne also creates further complication at the junction.

**Proposed Improvements**

- It is proposed that this junction be upgraded to a full MOVA signalised junction.
- Pedestrian crossing facilities will be incorporated to all junction improvements.
- Pedestrian pavement to improved and integrated with new pedestrian crossings at the junction.
- Improved road marking and route definition to be added to the junction.

**Benefits**

- The MOVA demand responsive traffic signals will assist in the distribution of traffic around this junction at peak times and not negatively impact on flows on Oakpark Road at other times.
- Pedestrian safety will be significantly improved with the improvement of crossing and pavement facilities.
- The improved functioning of this junction should lessen the need for “rat – running” through Chestnut Drive.
- Increasing the efficiency of this junction will improve the flows along Oakpark road.



# 7 Parking Strategy

## 7.1 Introduction

- 7.1.1 The location, availability and pricing of car parking have a major influence on the choice of mode of travel. Effective parking management and enforcement policies are, therefore, essential components of the Tralee Transport Strategy. There is a close link between parking availability and the economic prosperity of a Town Centre. There is also a link between the efficient movement of people and the local economy. A conflict arises, however, when efficient movement is hindered by the parking system itself. It is therefore important to achieve a balance that favours a vibrant local economy by improving the movement around the town for all road users, whilst also effectively managing the use of parking facilities in the Town Centre.
- 7.1.2 The provision of an efficient and well managed parking system of an appropriate scale, complemented by other traffic management arrangements will contribute to the sustainable development of Tralee in accordance with the objectives of this Strategy.
- 7.1.3 This chapter describes the development of a car parking strategy for Tralee. The specific measures proposed for the parking system have been developed to support the key objectives identified in Chapter Four, and to support the Tralee Vision Statement.
- 7.1.4 The car parking system can be considered in terms of the overall parking provision, the location of parking, and the demand for parking. There are a number of parking options available in Tralee, such as on-street, off-street surface, and off-street multi-story, each possibly at a variety of hourly rates and allowable lengths of stay.
- 7.1.5 To support the Parking Strategy, a number of parking surveys were undertaken in Tralee which are described in the Tralee Baseline Traffic Evaluation Chapter 7. These surveys noted occupancy, duration of stay, use of irregular spaces, and time of day, among other key attributes that describe the overall parking situation.

## 7.2 Key Considerations

- 7.2.1 Given the competing demands for long-stay and short-stay parking within the town centre as identified by the parking surveys and described extensively in the aforementioned chapter, it is clear that a parking strategy must be introduced to regulate the existing parking stock in a manner that is appropriate for the Town's needs.
- 7.2.2 In terms of pricing, it is widely acknowledged that shoppers and short-stay parkers are relatively insensitive to price, so do not mind paying higher rates for parking that is close to their destinations. This is particularly the case when the journey purpose is shopping, in which case the duration of stay is likely to be short and proximity to the shopping area is strongly preferred.
- 7.2.3 Conversely, commuters and those wishing to park for many hours are much more sensitive to price. When the duration of stay increases beyond a couple of hours, the cost of parking become far more important in choosing a parking location than the distance to the final destination.

7.2.4 A key principle underpinning the Parking Strategy, therefore, is that there is little benefit to allowing long stay car parking in the town centre. The spaces used currently by long stay car parking would far better serve the retail function of the town. If maximum durations of stay are enforced near to the retail areas then the use of valuable parking spaces by non-retail and non-leisure activities will decrease near these areas. At the same time, parking turnover will increase which will increase the average availability of the parking supply. This will increase the competitiveness of the town centre as a retail and tourist destination. As such, the implementation of a parking strategy which ensures that parking spaces in the most convenient town centre locations are reserved for shoppers/tourists and related users has many benefits for both residents and businesses.

7.2.5 It is clear that parking management can play an important role within the Tralee Transport Strategy for the Town Centre. The parking strategy should not be considered in isolation, but as part of an integrated set of measures to support the sustainable growth of the town.

7.2.6 The Parking Strategy can be used to:

- Optimise use of existing parking stock, by increasing turnover at attractively located car parking spaces, i.e. those in close proximity to retail destinations, and by increasing occupancy at other underutilised locations;
- Promote a shift to more sustainable modes of transport such as walking and cycling;
- Facilitate vulnerable road user priority in Tralee Town Centre; and
- Improve traffic management arrangements along key access roads to the town centre.

7.2.7 To achieve the above objectives, effective management of existing parking stock is required. In the rest of this chapter we discuss strategic methods for improving the management of parking spaces, such as:

- Duration of Stay;
- Pricing;
- Parking Enforcement; and
- Signage Strategy.

### 7.3 Current Parking Charges and Regulations

7.3.1 Tralee has three distinct charging rates for on-street car parking but no maximum duration of stay. The parking charges currently in operation are as follows:

- €1.20 per hour;
- €1.20 per 2 hours; and
- €1.20 per 3 hours.

7.3.2 The equivalent hourly rates are as follows:

- €1.20 per hour;
- €1.00 per hour;
- €0.60 per hour; and

■ €0.40 per hour.

- 7.3.3 The maximum hourly rate of €1.20 applies to the majority of town centre on-street car parking.
- 7.3.4 For the remainder of this chapter, we refer to these differently charged areas as 1-hour, 2-hour, and 3-hour. That is, the 1-hour area utilises the €1.20 per hour rate, the 2-hour area utilises the €1.20 per 2 hours rate, etc.
- 7.3.5 It is very important to note here, that unless otherwise mentioned, we propose to re-classify all 1-hour areas as 1 hour maximum stay, 2-hour areas as 2-hour maximum stay, and 3-hour areas as 3 hour maximum stay.

### 7.4 Future Parking Provision and Demand

- 7.4.1 We have estimated the current demand for short and long stay spaces in Tralee town centre based on the surveys undertaken as part of this study. The surveys revealed the level of occupancy in both on-street and off-street spaces throughout a 12 hour period. The peak for long-stay parking occurs mid-week when there is slightly greater demand for work-related parking. However, the peak period of total parking usage is during a Saturday afternoon, and these values are included in Table 7.1 below.
- 7.4.2 The number of spaces used for long-stay parking in the car parks was also obtained from the survey data. The corresponding value for on-street parking spaces was further supplemented by using the percentage of illegal parking from the 2005 Parking Compliance Survey compiled by Greg Lowe on behalf of Tralee Town Council.
- 7.4.3 Best practice guidance recommends that short-stay parking demand should not exceed 85% of the short-stay parking supply. Occupancies greater than 85% can lead to drivers searching for spaces, which can result in driver frustration and add to localised congestion problems. Providing this guide level of spaces in the town centre is a short term parking strategy objective.
- 7.4.4 Unlike short-stay parking, where a small over provision is recommended to facilitate accessibility and convenience of parking opportunities, the long-stay parking requirement can be based on the total long-stay parking demand. This includes employees and residential parking.

**Table 7.1 Existing and Future Parking Requirements**

	<b>2010 Off-Street Demand</b>	<b>2010 On-Street Demand</b>	<b>Total Existing Demand</b>	<b>Predicted Short-Term Demand</b>	<b>Predicted Medium-Term Demand</b>
Estimated Population			22172		26880
Peak Parking Usage	1065	816			
Short Stay (<3 hrs)	703	750	1453	1709	2072
Long Stay (>3 hrs)	362	66	428	428	519
<b>Total Spaces Required</b>			<b>1881</b>	<b>2137</b>	<b>2591</b>

7.4.5 The potential growth in parking demand is based on the assumption that the requirement for parking spaces will increase pro rata with the population growth.

7.4.6 The National Spatial Strategy revised its population projections in 2007, predicting growth for the South West Region to 784,354 people, with 26,880 of those living in Tralee in the year 2020. Similarly, the CSO revised its population projections in April 2008, predicting 25,372 people will live in Tralee in 2020. This equates to between 390 and 470 additional persons per year living in Tralee.

7.4.7 We have made a conservative assumption by taking the upper limit i.e. 470 additional persons per year for our assessment of parking needs in Tralee Town Centre.

7.4.8 Table 7.1 indicates the potential growth in parking demand, if it was allowed to increase without any restrictions or controls, and if the parking system was not managed as part of an integrated transport plan.

7.4.9 The proposed Smarter Travel initiatives (detailed in Section 4.3) for Tralee Town will have some impact on workplace travel patterns, thereby reducing the requirements for long-stay car parking spaces. However, this impact is difficult to quantify, so we will make contingency for 519 long-stay spaces.

7.4.10 Currently, in Tralee Town Centre, there are approximately:

- 2,050 spaces in off-street car parks;
- 1,000 spaces demarcated on-street; and
- Significant volumes of irregular on-street spaces that are used for parking purposes in high demand areas, and particularly in Tralee Town Centre.

7.4.11 Even without the irregular spaces, there is currently sufficient parking stock (3,050 spaces) to meet demand in the present (2,137 spaces) and in the future (2,591 spaces).



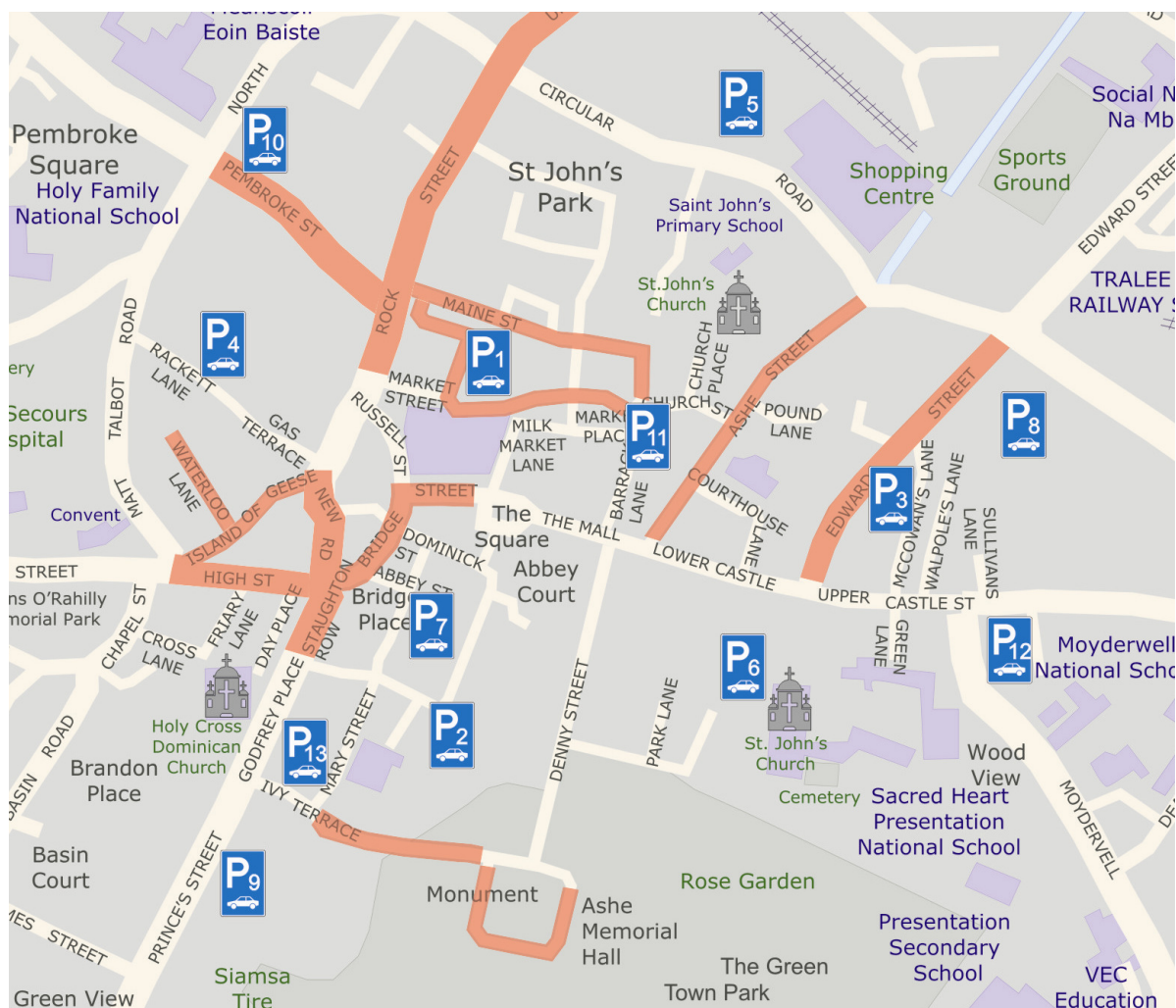
- 7.4.12 However, on the Saturday when the on-street parking survey was conducted, 57 of the 816 vehicles (or 7%) were parked in areas where no formal parking space existed. This value increased during the midweek survey, when 71 of the 748 vehicles (or 9.5%) were parked in such spaces. We would recommend that Tralee Town Council review all parking in non-designated areas and review them for future 'official' use, as this will:

- Raise additional revenue; and
- Make enforcing the parking regulations easier.

## 7.5 Optimising Use of Existing Parking Stock

- 7.5.1 As stated above, there is sufficient parking stock in Tralee Town Centre to meet demand, even during the Saturday afternoon peak period. However, at present, demand for on-street car parking exceeds capacity in some locations, particularly at Pembroke Street, Maine Street, Market Place, Ashe Street, Edward Street, Ivy Terrace, Staughton Row, Bridge Street, New Road, High Street, Island of Geese and Waterloo Road. Increased use of underutilised on-and off-street parking facilities should be promoted to spread the parking demand more evenly across the Town Centre.

**Figure 7.1 Locations where current on-street demand exceeds capacity**



- 7.5.2 At an aggregate level, and particularly within the multi-storey car parks, off-street parking supply is currently underutilised in Tralee Town Centre. It is therefore recommended that Tralee Town Council and Kerry County Council implement promotional measures such as improved signage to raise awareness of underutilised off-street car parking stock. This would achieve an increased turnover at attractively located on-street locations and potentially reduce instances of illegal parking.
- 7.5.3 In conjunction with promoting the use of underutilised car parking, it is also preferable to achieve a more efficient use of existing on-street car parking where demand exceeds supply. The availability of car parking at these locations is important for supporting access to adjoining land uses, whether this is for parking, pick-up/ drop-off or loading activities.
- 7.5.4 The introduction of revised parking zones in the Town Centre is one such measure. The recommendations on revised time limits for parking spaces made within the Parking Strategy address existing parking pressure points, it is essential that regular monitoring and reviews of parking management arrangements be undertaken to ensure optimal utilisation of future parking stock.
- 7.5.5 The measures below aim to address the parking management and enforcement issues identified in Tralee Town Centre.

### 7.6 Parking Strategy for Tralee Town Centre

- 7.6.1 The Parking Strategy outlined below is based around the concept of:

- Defining the character of an Area within the Town Centre – retail, residential, or key traffic route;
- Promoting short term use of on-street parking – particularly in the core Town Centre area, where parking will be limited to a maximum of 1 hour; and
- Supplying parking spaces appropriate to the needs of the Area – short stay or long stay.

#### First 30 Minutes for 50 Cents

- 7.6.2 It is proposed to allow a period of reduced fee parking in Tralee Town Centre in order to stimulate economic activity and enhance the commercial viability of the town centre. The period of reduced fee parking will also offset any loss of over all on-street parking in the town as space availability will be ensured if the scheme is enforced correctly.
- 7.6.3 The proposal is to allow the first 30 minutes of on-street parking for a nominal charge of 50 cents. This would be charged in the usual way, by collection of a pay-and-display ticket at a ticket machine. If a period of time longer than 30 minutes is required, then a fee will apply at a new standard hourly rate of around €2 per hour. The charges for a period of time that is in excess of half of an hour will be calculated on the total actual period including the first 30 minutes, as shown in Table 7.2 below. Therefore one hour parking will be calculated as €2. This is to encourage a high turnover and therefore higher availability of car parking spaces close to the town centre retail areas.

**Table 7.2 Proposed Parking Fees in Tralee Town Centre**

Time	Cost
Up to 30 minutes (Reduced Fee Applies)	50 cents
40 minutes	€1.33
50 minutes	€1.66
1 hour	€2.00

- 7.6.4 The Parking Strategy is further developed below. Parking in Tralee is currently divided up based on the prevailing charge of a particular area. There is no maximum duration of stay currently in operation in Tralee. For the strategy, it is proposed to modify the existing arrangement so that a maximum duration of stay is implemented throughout Tralee. Therefore, 1, 2, or 3 hour maximum duration is assumed for all on-street parking, and a number of the central off-street car parks. No changes to duration-of-stay limits are proposed for any of the multi-story car parks.
- 7.6.5 A detailed explanation of the changes proposed for Tralee is discussed below. In order to discuss the overall Parking Strategy as clearly as possible, we have defined six Areas, illustrated in Figure 7.2, each with their own parking requirements.

### Figure 7.2 Areas of Parking in Tralee Town Centre



### Area 1 - Streetscape Improvements

7.6.6 Tralee Town Council has proposed an area of pedestrian priority in the Development Plan for Tralee Town Centre. As part of the long term proposals contained in the Tralee Transport Strategy:

- Bridge Street Upper, the Mall, The Square, Dominic Street and Abbey Street will be pedestrianised;
- Russell St, Bridge Street, and New Road will become Shared Space;
- A new taxi rank (6 spaces) will be created on Staughton Row; and
- Waterloo Lane and Island of Geese will be permit parking only, associated with residents and Garda marked vehicles.

7.6.7 We define this area as Area 1 – Tralee Town Centre, as shown in Figure 7.2.

7.6.8 In this Area, there are currently 10 on-street parking spaces with a 1-hour rate, and 107 on-street parking spaces with a 2-hour rate. This area also incorporates the Abbey / Tannery surface car park (125), the Matt Talbot Road car park (227), and the Parklands multi-storey car park (210).

7.6.9 The existing on-street hotspots are centred on Waterloo Lane, Island of Geese, New Road, Bridge Street, Staughton Row and High Street. The provision of public spaces in the area will be reduced as other users (pedestrians, disabled drivers, taxis and police vehicles) are given priority. The implementation of the shared space initiatives coupled with the reduction in available spaces should deter opportunistic drive-by behaviour, and encourage more strategic use of near by car parks.

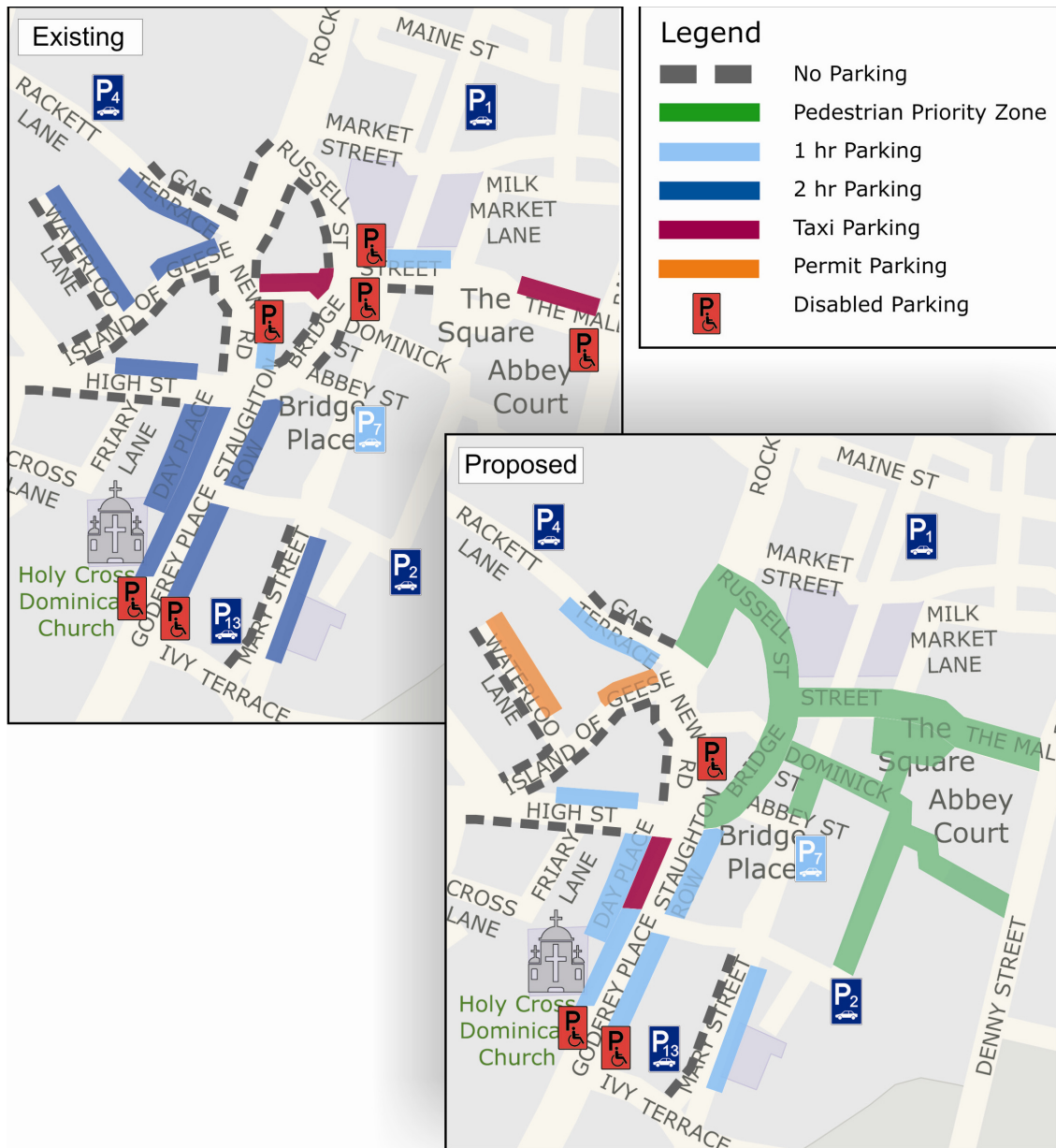
7.6.10 Based on survey data, the streetscape improvements will lead to a reduction in on-street parking of approximately 50 vehicles at peak times, but there is sufficient spare capacity in the car parks to compensate – a minimum of 136 spaces during the Saturday peak period.

7.6.11 Furthermore, it is recommended that all on-street parking be classified as 1-hour maximum stay. Spaces in the Abbey / Tannery surface car park will continue to be designated as 1-hour maximum stay.

7.6.12 In all, implementing a maximum of 1-hour stay in this area will provide 213 spaces (88 on street and 125 in the Abbey Car Park) with the highest possible turnover, right in the heart of Tralee Town Centre. A further 227 (Matt Talbot Road Car Park) spaces are available for 2-hour stays, enabling multi-purpose trips within Tralee Town Centre. Parklands multi-storey car park would remain available for both long and short stay parking.



**Figure 7.3 Reallocation of Parking Spaces in Area 1**



## 7 Parking Strategy

**Table 7.3 Reallocation of On-street Parking Spaces in Area 1**

Location	Existing Spaces	Proposed Spaces	Difference	Comments
Bridge Street Upper	4	0	-4	Spaces lost due to streetscape improvements
New Road	6	0	-6	Spaces reassigned to disabled drivers
The Mall	0	0	0	No public parking spaces existing
Gas Terrace	8	8	0	No change
Godfrey Place	27	27	0	No change
High St	10	10	0	No change
Island of Geese	6	0	-6	Becomes permit parking only
Mary St	17	17	0	No change
Staughton Row (incl Day Place)	32	26	-6	Spaces lost due to new taxi rank creation
Waterloo Lane	7	0	-7	Becomes permit parking only
<b>Total Spaces</b>	<b>117</b>	<b>88</b>	<b>-29</b>	

**Area 2 - Town Centre Parking**

- 7.6.13 Area 2 in Figure 7.2 extends as far north as Maine Street, and as far east as Ashe Street.
- 7.6.14 In this Area, there are currently 45 on-street parking spaces with a 1-hour rate, and 61 on-street parking spaces with a 2-hour rate. Car parks in the Area include Maine Street multi-storey (440 spaces) and Church Street surface car park (21 spaces).
- 7.6.15 There will be approximately six public parking spaces lost on Rock Street Lower to accommodate a new taxi rank. This demand can easily be absorbed into the nearby Maine Street car park. These are the only parking spaces that will be lost in Area 2 under the current proposals.
- 7.6.16 Given the close proximity of the spaces in this area to the commercial and retail centre along Bridge Street / The Mall, we again recommend that all on-street parking and those in Church Street car park (in total 127 spaces) be assigned a maximum stay of 1 hour. This will ensure that there is a sufficient quantum of short-stay parking spaces, evenly distributed around the town centre.
- 7.6.17 This should have the additional benefit of increasing turnover of on-street parking spaces and consequently reducing the need to park in un-demarcated spaces, which is currently a widespread problem in this Area (see Figure 7.4).
- 7.6.18 It is expected that Maine Street multi-storey car park would remain available for both long and short stay parking.

**Area 3 - Traffic Management Improvements**

- 7.6.19 Area 3 in Figure 7.2 covers the region immediately to the south and east of the Town Centre. It currently contains 167 on-street parking spaces with a 1-hour rate, and 109 on-street parking spaces with a 2-hour rate. Car parks in the Area include Edward Street multi-storey (170 spaces) and St. John's (81 spaces) and Prince's St. surface car parks (379 spaces).
- 7.6.20 As part of the long term traffic management proposals contained in this document:
- Denny Street and Ivy Terrace are proposed to become two-way to general traffic; and
  - Both Lower and Upper Castle Street will lose all parking to widen footpaths and improve traffic flow.
- 7.6.21 These improvements will lead to a reduction in on-street parking of 92 spaces, but there is sufficient spare capacity in the car parks to compensate – a minimum of 375 spaces during the Saturday peak period. Furthermore, the Parklands multi-storey car park, while considered part of Area 1, is within 150m of Denny Street, and has an additional 113 spaces available.
- 7.6.22 Within this zone, we propose that Denny Street and Ashe Memorial Hall are classified as 1 hour maximum stay, and all other streets having a 2-hour maximum stay. This will involve the relocation of existing permit parking in these locations to other suitable locations.
- 7.6.23 St. John's Car Park is heavily used to access the Town Centre, and consequently, we recommend a maximum stay of 1 hour.

- 7.6.24 Prince's Street Car Park is currently mixed usage, with both 2-hour and all-day tickets on sale. Currently, approximately 85% of patrons using this car park are town-centre workers availing of the all-day option. However, we believe that this car-park has potential to provide for tourist and leisure activities due to location adjacent to the Town Park.
- 7.6.25 It is expected that Edward Street multi-storey car park would remain available for both long and short stay parking.

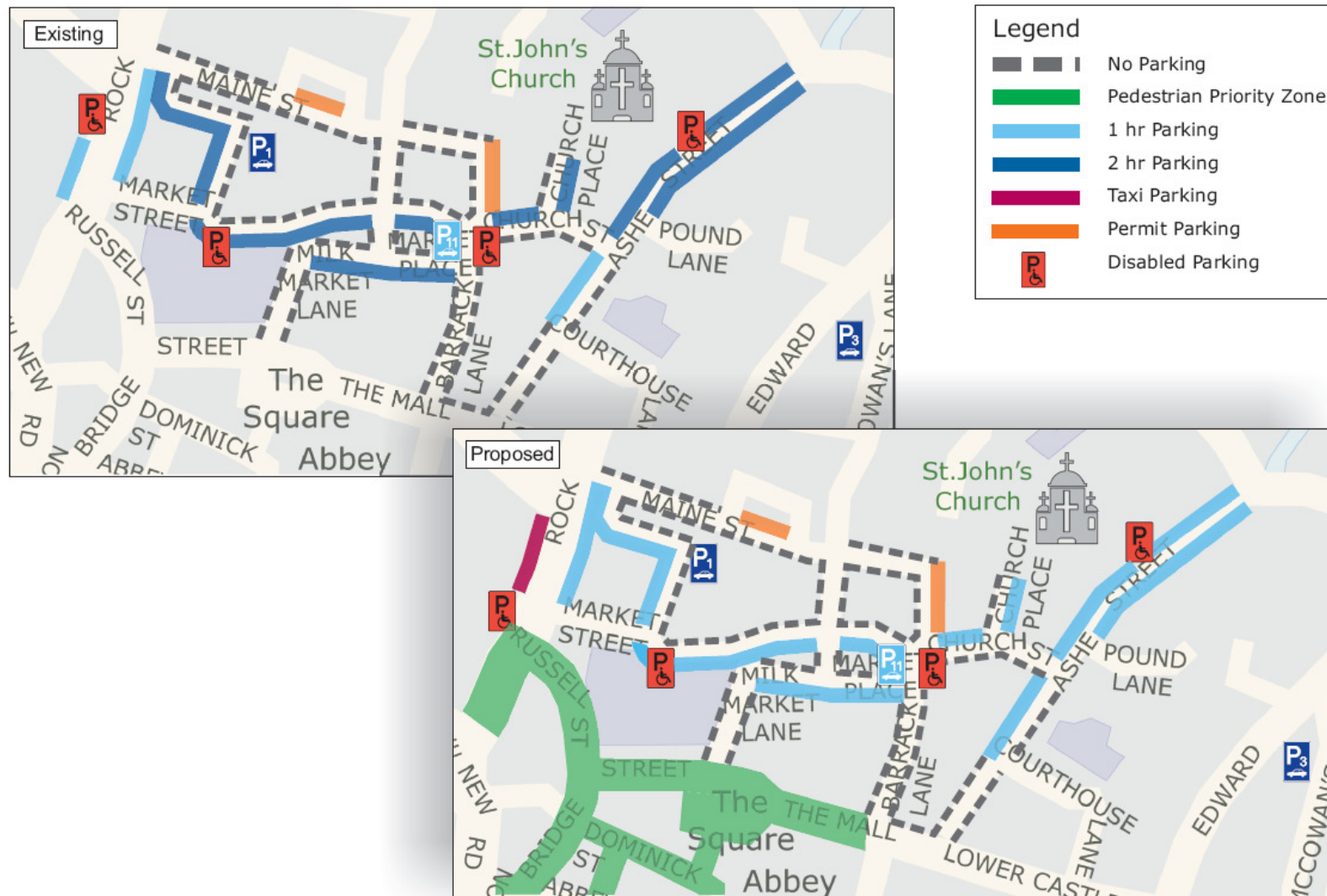
### **Area 4 - Reallocate Parking Depending upon Location**

- 7.6.26 Area 4 covers the region between Strand Street and Prince's Street, as shown in Figure 7.2. It currently contains 129 on-street parking spaces with a 3-hour rate.
- 7.6.27 Due to the reduction in on-street parking in the adjacent Areas 1 and 3, it is likely that this Area will experience increased demand. Also, given its proximity to the expanded pedestrian priority zone, we recommend that all on-street parking in this Area be assigned a maximum stay of 2 hours.

### **Area 5 & 6 - Edge of Town Parking**

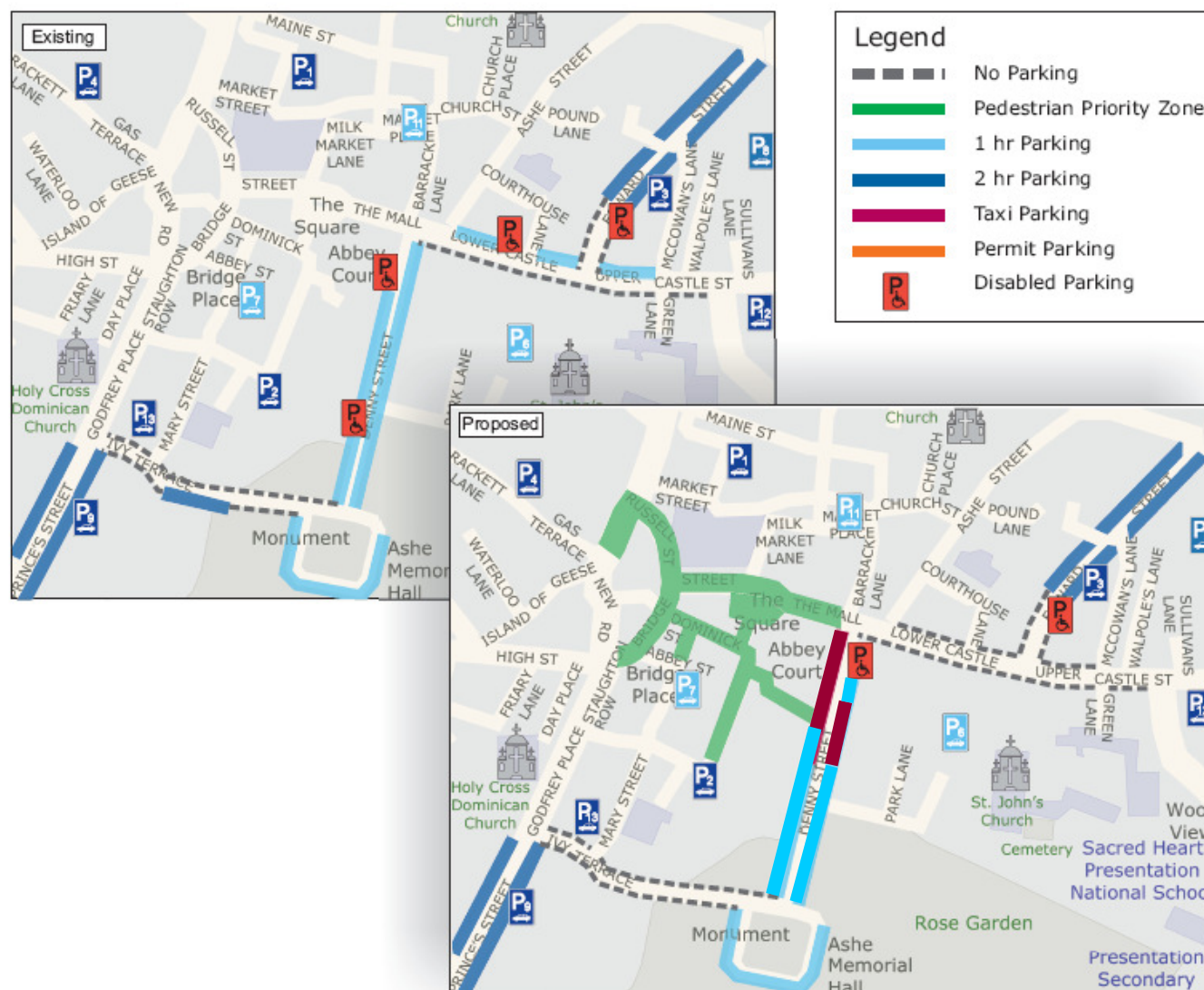
- 7.6.28 Areas 5 and 6 cover the outlying areas to the north-west and south-east respectively, as shown in Figure 7.2.
- 7.6.29 Area 5 contains 45 on-street parking spaces with a 2-hour rate (Rock Street), and 127 on-street parking spaces with a 3-hour rate. Car parks in the Area include Pembroke Street (40 spaces) and Cathair Danna (Dunnes Stores, 307 spaces) surface car parks.
- 7.6.30 The only street in this Area that currently has a 2-hour rate is Rock Street. We believe it would be appropriate to reclassify this as a 2-hour maximum duration, extending to also cover Pembroke Street, as both these streets feed into the north-west corner of the pedestrian priority zone.
- 7.6.31 Area 6 covers the region between Moyderwell and Boherbee as shown in Figure 7.2. It currently contains 16 on-street parking spaces with a 1-hour rate, 4 on-street parking spaces with a 2-hour rate, and 118 spaces on-street parking spaces with a 3-hour rate.
- 7.6.32 The majority of parking in this area is situated along Boherbee. Should the proposed development of Austin Stack Park / John Mitchell's GAA ground go ahead, it will provide over 1200 public car parking spaces in the immediate vicinity. It may then be appropriate to review the limits on the duration of stay and / or the pricing structure in the Area.

**Figure 7.4 Reallocation of Parking Spaces in Area 2**





**Figure 7.5 Reallocation of Parking Spaces in Area 3**



**Table 7.4 Reallocation of On-street Parking Spaces in Area 3**

Location	Existing Spaces	Proposed Spaces	Difference	Comments
Ashe Memorial Hall	50	50	0	No change
Castle Street Lower	12	0	-12	Spaces lost due to traffic management improvements
Castle Street Upper	0	0	0	No change
Denny Street	105	39	-66	Spaces lost due to traffic management improvements
Edward Street	35	35	0	No change
Ivy Terrace	14	0	-14	Spaces lost due to traffic management improvements
McCowans Lane	12	12	0	Becomes permit parking only
Princes Street	48	48	0	No change
<b>Total Spaces</b>	<b>276</b>	<b>184</b>	<b>-92</b>	

### Disabled Parking

- 7.6.33 Designated on and off-street spaces should be provided as far as possible according to the National Disability Authorities Guidelines (Building for Everyone, 2002). Spaces in car parks should be located so as to be convenient and safely accessible from lift cores or street level entrances.
- 7.6.34 The Department of Transport has recently published its review of the “Disabled Parking Scheme”, which gives local authorities the power to designate special parking bays for people with disabilities. At the launch, reference was made to proposed revisions to “Part M Technical Guidance Document of the Building Regulations”, which are likely to be implemented in July 2011. For new developments, 5% of the total number of spaces would be designated disabled car-parking spaces, and this also provides a guideline minimum for on-street car parking.
- 7.6.35 Tralee Town Council has currently designated 45 on-street spaces (4.8%) for use by disabled drivers – 25 spaces with a 1 hour rate, 17 spaces with a 2 hour rate, and 3 spaces with a 3 hour rate. This is just below the 47 spaces recommended by the Department of Transport guidelines (5% or 47 spaces of the 938 existing on-street parking spaces).
- 7.6.36 Under current proposals, disabled parking spaces will be removed from the following locations:
- Lower Castle Street due to traffic management proposals;
  - The Mall due to pedestrianisation;
  - Russell Street due to the introduction of shared space; and
  - Upper Bridge Street due to the introduction of shared space.
- 7.6.37 These spaces all lie along the central axis in Tralee Town Centre where most commercial activity takes place. This area is proposed to become a pedestrian priority zone from which all parking, including disabled spaces, is due to be removed.
- 7.6.38 Replacement disabled parking spaces will be created that encircle the pedestrian priority zone. These spaces should be located as close as possible to the central access to minimise the impact on patrons of the removed spaces. To this end we have identified possible locations where existing public parking spaces could be adapted to create new disabled parking spaces, as shown in Figure 7.6:
- Courthouse Lane, adjacent to the Courthouse;
  - Relocating and expanding the number of spaces on Denny Street;
  - At the Northern end of Abbey Car Park; and
  - Expanding the number of spaces on New Road.
- 7.6.39 The proposed spaces at the Courthouse building will provide for access to Lower Castle Street, either via Ashe Street or the pedestrianised Courthouse Lane. Similarly, those proposed for the northern end of Abbey Car Park will provide for access to The Square and the Mall.

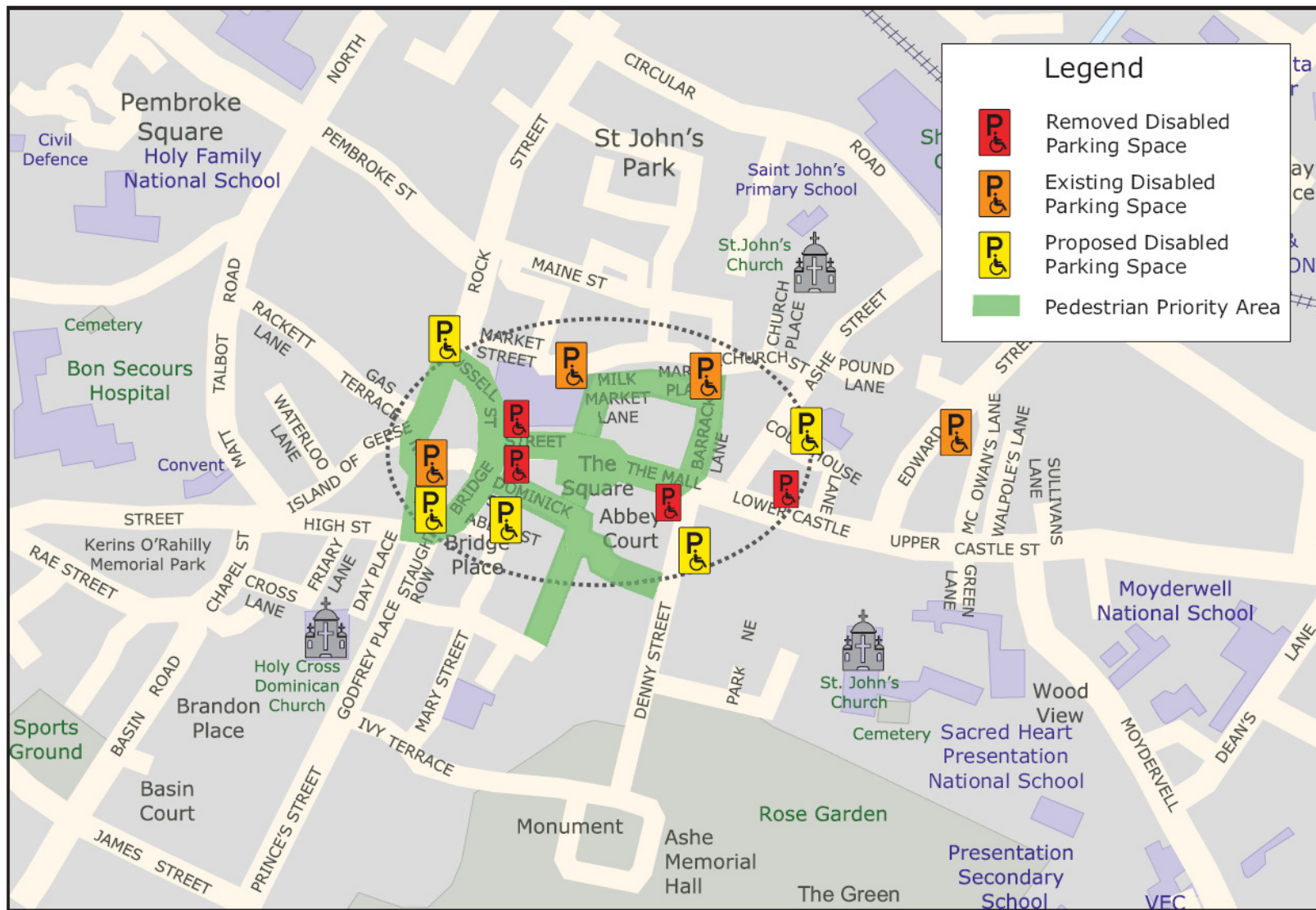
- 7.6.40 The increased provision for disabled parking spaces on New Road will compensate for those lost on Russell Street and Upper Bridge Street. This location is at the eastern end of the pedestrian priority zone in Tralee Town Centre. Access to The Square is via Bridge Lane, a distance of approximately 100m.
- 7.6.41 All footpaths along the preferred access routes to the Town Centre will need to be reviewed, to ensure they are fit for purpose.

### Residential Parking

- 7.6.42 All existing residential parking permits will be retained and extended as necessary, in order to ensure that residents can park adjacent or near to their property.
- 7.6.43 It is recognised that town centre parking may overspill into residential areas, and various means of control will be necessary to mitigate this:

- In areas of mixed residential and commercial use, on-street parking controls should be extended to allow parking with a three hour maximum duration, in addition to the provision of a residential permit system;
- Residential lanes with little or no commercial activity should be subject to a one hour maximum duration for non-residential parking; and
- In areas subject to overspill a review of road markings should be carried out to ensure that single/double yellow lines are implemented where appropriate, to prevent town centre parking in residential areas.

**Figure 7.6 Disabled Parking surrounding the Pedestrian Priority Zone in Tralee Town Centre**





### Employee Parking

- 7.6.44 Analysis of the survey data revealed that long-stay parking occurs at all car parks in Tralee Town Centre. This behaviour leads to low turnover on Town Centre parking spaces, which can prevent potential customers of Town Centre businesses accessing them for convenience trips. Prevention measures are discussed later in Section 7.7.
- 7.6.45 Prince's Street car park is the only Town Centre surface car park under Tralee Town Council control with designated all-day parking. Some all-day parking is also provided at the Cameo and Pembroke Street private car parks. Consequently, Prince's Street is the most popular site for Town Centre employee parking, and currently caters for approximately one third of long-stay demand. The multi-storey car parks similarly account for approximately one third of mid-week demand, however this value decreases to 16% at weekends.

**Table 7.5 Long-Stay Parking Use in Tralee Town Centre Car Parks**

	Mid-week		Saturday	
	Spaces Used	% Demand	Spaces Used	% Demand
Multi-Storey CPs	126	30.7%	56	15.5%
Prince's Street CP	121	29.5%	127	35.1%
Short-Stay Surface CPs	163	39.8%	179	49.4%
<b>TOTAL</b>	<b>410</b>		<b>362</b>	

- 7.6.46 To cater effectively for demand, long-stay parking spaces should be convenient, cost-effective and secure. The multi-storey car parks represent an obvious option as they are close to the town centre, offer an all-day price structure, and operate CCTV thus giving enhanced security. It was assumed that those requiring long-stay spaces in the Town Centre (Area 1, Area 2, or Area 3) will make use of the multi-storey car parks.
- 7.6.47 Should future conditions result in significantly increased demand for long-stay parking, we recommend the provision of dedicated long-stay facilities at edge-of-town locations. This will minimise the impact on the short-stay parking spaces provided at the desirable locations close to the Town Centre.

### Taxi Parking

- 7.6.48 There are currently 17 taxi spaces demarcated in Tralee Town Centre – 10 on the Mall, 1 on Bridge Street, and 6 on Bridge Lane. Under current proposals, the location of this taxi rank will no longer be viable, as it is situated in the pedestrian priority zone.

- 7.6.49 As outlined in Chapter 10: Public Transport Strategy, which includes the taxi strategy, we propose to create 3 new taxi ranks:

- Denny Street – 14 spaces;
- Staughton Row – 6 spaces; and
- Rock Street Lower – 6 spaces.

- 7.6.50 This represents an increased provision for taxi services, with a wider catchment area, as shown in Figure 10.3.

### Coach Parking

- 7.6.51 Prince's Street is a popular location for pick-up and drop-off of tourists, providing easy access to both Tralee Town Park and Tralee Town Centre. During on-site visits, coach parking was observed in Prince's Street car park, though it was not clear if access was restricted to particular operators. Dedicating some of this car park facility for use by all coach operators would be supportive of tourism growth in Tralee.
- 7.6.52 Consequently, we recommend that these facilities be regularly reviewed to ensure that Tralee remains an attractive destination for tourists.

### Motorcycle Parking

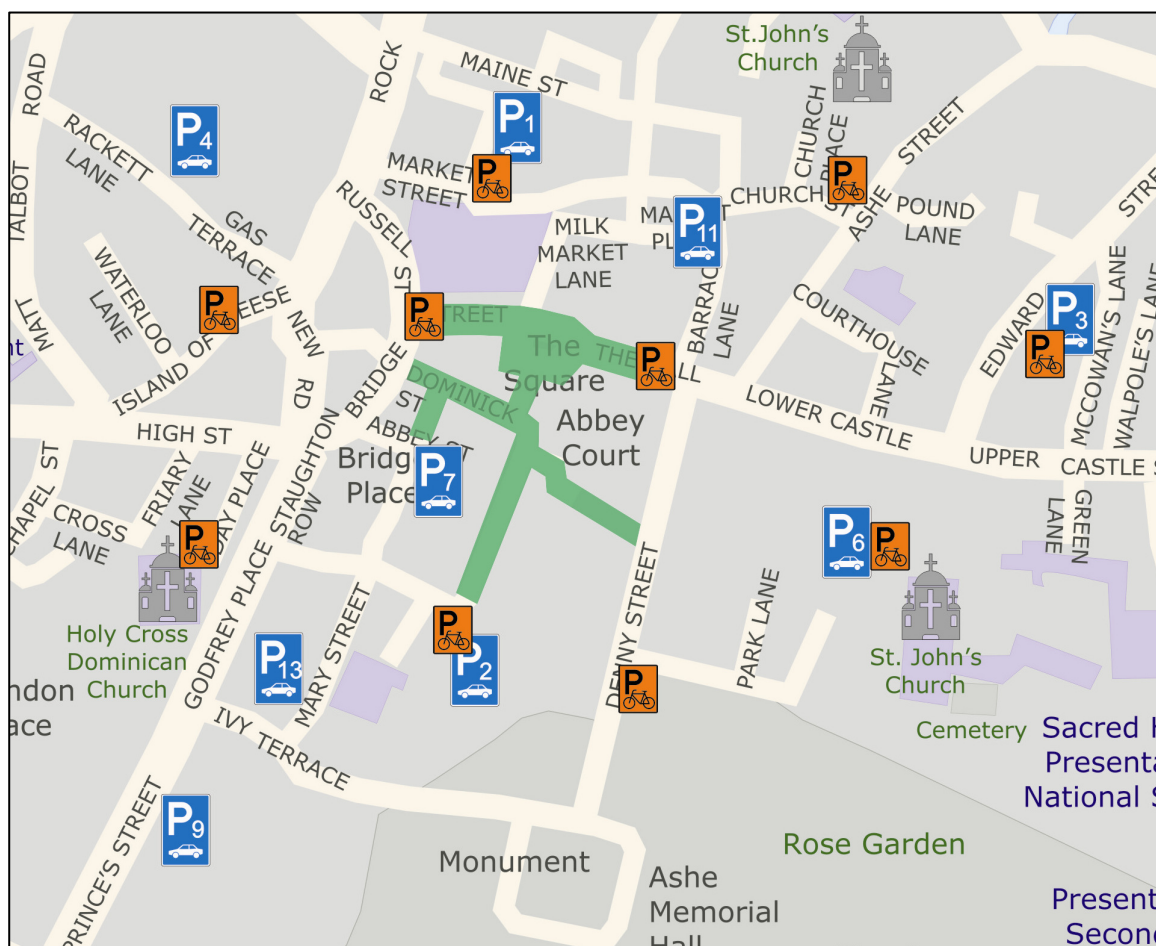
- 7.6.53 At present there is no provision for motorcycle parking within the town. It is recommended that 1-2 parking spaces in each off-street car park be converted to facilitate motorcycle parking.

### Cycle Parking

- 7.6.54 The introduction of a Town Centre speed limit of 30 kph, as proposed in the Tralee Transportation Study, will create a 'Cycle Friendly Zone' where motorists must share the road space with cyclists. Within the zone there will be a much more attractive and safe environment for cycling, as cyclists and motorised traffic will travel around Tralee Town Centre at similar speeds.
- 7.6.55 With the future introduction of the National Cycle Policy, and the expected increase in the number of people choosing to access Tralee Town Centre by bicycle, there is an urgent need for the provision of secure cycle parking facilities to ensure that the town centre is an attractive destination for cycling trips. Possible suitable locations are shown in Figure 7.7.
- 7.6.56 The sites at the Bridge St / Russell St junction and The Mall / Denny St junction which are at the edge of the pedestrianised zone were deemed particularly appropriate as:
- It encourages cyclists to dismount when they leave the roadway, then park their bicycle, and continue their journey through the pedestrianised zone on foot; and
  - The cycle parking racks will also act as a visual safety barrier, warning pedestrians against walking onto the adjacent carriageway where motorists may be passing.

- 7.6.57 Sheltered bicycle parking facilities should also be considered at public amenities (library, garda station, courthouse, churches, park entrances, etc.) which are major trip destinations in the Town Centre area; and at public transport stops to encourage the linking of sustainable transport modes in the town. Provision of secure bicycle parking at the Railway Station is particularly important in this context.

**Figure 7.7 Proposed Cycle Parking Locations in Tralee Town Centre**



## 7.7 Review of Proposed Parking Provision

- 7.7.1 Table 7.5, below, summaries the long-stay and short-stay town centre parking provision at the current time, and following the implementation of the proposed improvements to the town centre, as described in the above Parking Strategy.
- 7.7.2 It is clear that the Parking Strategy meets the objective of providing for the future long-stay parking needs of Tralee Town Centre, as outlined in Table 7.1 (519 parking spaces).
- 7.7.3 However, the all-day parking spaces are also available for short-stay parking use. The proportion of short to long stay parking use will primarily be determined by price (as discussed in the following section).

**Table 7.6 Levels of Existing and Proposed Parking Stock by Duration of Stay**

	Existing Spaces	Proposed Spaces
<b>Maximum 1-hour stay</b>	<b>1 Hour Rate</b>	<b>Maximum 1 Hour @ Increased 1 Hour Rate</b>
On-Street Spaces with <b>Reduced Fee for First Half Hour</b>	238	293
Off-Street Spaces	454	454
<b>Maximum 2-hour stay</b>	<b>2 Hour Rate</b>	<b>Maximum 2 Hour @ 2 Hour Rate</b>
On-Street Spaces	326	299
Off-Street Spaces	0	0
<b>Maximum 3-hour stay</b>	<b>3 Hour Rate</b>	<b>Maximum 3 Hour @ 3 Hour Rate</b>
On-Street Spaces	374	219
Off-Street Spaces	394	394
<b>Limitless Duration</b>	<b>Existing Rates</b>	<b>Existing Rates</b>
Prince's Street CP	379	379
Multi-Storey CPs	820	820
<b>TOTALS</b>		
Confirmed Short-Stay Parking (<3 hrs)	<b>1786</b>	<b>1659</b>
Possible Long-Stay Parking (>3 hrs)	<b>1199</b>	<b>1199</b>

- 7.7.4 Assuming that half of this parking stock is accessed by short-stay customers, then the total quantum of short-stay spaces available will be 2259 spaces (1659 + 50% of 1199 spaces). This will be sufficient to cater for the future short-stay parking needs of Tralee Town Centre, as outlined in Table 7.1 (2072 parking spaces).
- 7.7.5 These proposals will allow the town to implement other transport initiatives such as improving the pedestrian space, walking routes, cycling routes etc. while maintaining an adequate provision of short-stay spaces within the town centre, with occupancy levels close to 78%.

- 7.7.6 This level of parking stock will also allow Tralee to fulfil its role as a shopping and tourist destination and allow for any potential latent demand for short-stay parking that may be present.

### 7.8 Parking Tariffs

- 7.8.1 Cost, together with location and supply are the factors which determine the attractiveness of parking. The issues of duration and location have been dealt with above. We now explore the potential for parking tariffs as a control measure, as there is a direct correlation between parking demand and price of parking.

#### On-street Parking

- 7.8.2 On-street parking charges are relatively low in Tralee Town Centre, which makes use of these facilities attractive for users. The introduction of higher tariffs could achieve a more optimal use of existing parking facilities. However it will be important to maintain a balance between parking provision and maintaining Town Centre vitality and a vibrant local economy.
- 7.8.3 The key factor determining the revision to parking charges is the need to ensure parking demand is reduced to below 85%. This is the level at which the optimal balance between use of available parking stock, and ensuring some availability of parking spaces is achieved.
- 7.8.4 For both Edward Street and Rock Street (which are listed in Table 7.7) we feel that the existing limits on the duration of stay for on-street parking are appropriate. Consequently, the preferred method of parking control is to raise the cost of on-street parking. We strongly recommend that the parking tariffs at these locations be reviewed.
- 7.8.5 Customers will need to be informed of any changes to the pricing structure, and also the proposed timeline for their introduction.

#### Public Car Parks

- 7.8.6 Approximately 80% of customers use Prince's Street surface car park for long-stay parking. Given the location of this car park in close proximity to the Town Park and the Town Centre, it has potential for serving as the main tourist parking area for both coaches and cars. However, the parking tariff within this car park would need to act as the controlling factor, being set at a level that is acceptable for occasional long-stay usage but not for regular use by town centre employees.

#### Private Car Parks

- 7.8.7 All existing privately operated car parks not currently charging for parking (banks, pubs, restaurants, hotels, etc.) should be encouraged to implement charging. In order to ensure that the Council has an input into how private car parks are operated, any future developments should be conditioned to provide a Mobility Management Plan, which would contain a Car Park Management Section.



**Table 7.7 On-street Parking Hot Spots outside the Pedestrian Priority Zone**

Location	Capacity (spaces)	Peak Midweek Excess Demand (spaces)	Peak Saturday Excess Demand (spaces)	Maximum % Excess Demand	Current Maximum Stay (Hours)	Proposed Maximum Stay (Hours)	Proposed Method to Reduce Demand
Ashe Memorial Hall	50	2		4%	1	1	Enforcement
Ashe Street	42	10	17	40%	1 - 2	1	Shorter duration parking should improve turnover and reduce demand
Edward Street	35	6		17%	2	2	Review tariffs
High Street	10	2	4	40%	2	1	Shorter duration parking should improve turnover and reduce demand
Maine Street	0	14	9	-	2	1	Review parking provision and enforcement
Market Place	26		4	15%	2	1	Enforcement
Pembroke Street	26	2		8%	3	2	Shorter duration parking should improve turnover and reduce demand
Rock Street	45	3	1	7%	2	2	Review tariffs
Rock Street Upper	7	6	1	86%	3	3	Review parking provision and enforcement
Staughton Row / Day Pl	32	1	3	9%	2	1	Shorter duration parking should improve turnover and reduce demand
Waterloo Lane	7	10	8	143%	2	-	Enforcement of permit only parking

## 7.9 Parking Enforcement

- 7.9.1 Managing the parking needs associated with the sustainable development of the Town Centre will be key to the success of the Tralee Transport Strategy. It is essential that the Parking Strategy is not undermined by inappropriate use of the parking provided in the Town Centre. Simple steps which will help to encourage good parking behaviour include:

- clear demarcation of all spaces (either on- or off-street);
- visible signage indicating the tariff and maximum duration of stay; and
- provision of attractive pedestrian linkages from the off-street car parks to the Pedestrian Priority Zone.

- 7.9.2 The above steps will clearly define where people can legally park, for how long, and how to easily reach their destination. However, such measures need to be supported by more stringent enforcement of existing and future parking restrictions. Given the high levels of parking infringements currently experienced across the Town Centre, serious consideration should be given to increasing the frequency and extent of parking warden beats.
- 7.9.3 Good enforcement is vital to the implementation of any on-street parking scheme. An Garda Siochana are responsible for enforcement of parking restrictions, although in a number of areas the road authority has an increasing role. Strong compliance can be achieved through the use of parking officials. Early consultation with An Garda Siochana is very important to gain their support for any proposals and to ensure if required that adequate priority is given within their enforcement activities.

### Analysis

- 7.9.4 Analysis of parking survey results demonstrates that parking demand exceeds capacity at several on-street hot-spots, as shown in Figure 7.1. The corresponding list in Table 7.7 details the streets where excess demand was recorded during the parking surveys, outside of the pedestrian priority zone, where all public parking is being removed.
- 7.9.5 The excessive demand results in illegal parking including parking on double yellow lines and in chevron areas. Such parking activities can result in obstructions to general traffic, and have negative safety impacts for all road users.
- 7.9.6 Where there are high levels of parking outside of regulated spaces, improved road markings and enforcement should be sufficient to correct this potentially unwanted activity.
- 7.9.7 Those streets where we have proposed a reduction of the limit to parking duration, or an increase in tariff, should experience a corresponding reduction in demand, coupled with an increase in turnover. As a consequence, parking in irregular spaces should be diminished.
- 7.9.8 Three other streets require special consideration:

- Both Maine Street and Upper Rock Street showed high levels of excess demand – 14 and 6 parking spaces respectively. We would strongly recommend that Tralee Town Council review the parking provision at these locations, with a view to creating additional demarcated spaces for future use; and

- Waterloo Lane experienced the highest level of excess demand at 143%. It is situated at the edge of the pedestrian priority zone, and providing any public parking in this area would encourage inappropriate opportunistic drive-by behaviour. It has therefore been designated as permit parking only under the current proposals.

**Table 7.8 Current Volumes of Parking exceeding the Proposed Maximum Duration of Stay in Surveyed Car Parks**

Location	Proposed Maximum Duration of Stay	Tuesday		Saturday	
		Volume of Patrons Currently Parking for Longer	% of Patrons Currently Parking for Longer	Volume of Patrons Currently Parking for Longer	% of Patrons Currently Parking for Longer
Matt Talbot Road CP (227 spaces)	2 hr	124	13.1%	98	7.6%
St John's CP (81 spaces)	1 hr	95	36.8%	123	38.7%
Abbey / Tannery CP (125 spaces)	1 hr	225	25.0%	260	28.4%
Church Street CP (21 spaces)	1 hr	38	36.5%	45	40.2%

7.9.9 A similar analysis of parking survey results demonstrates the potential effects of proposed changes to the maximum duration of stay in key Town Centre car parks, as shown above in Table 7.8.

7.9.10 The large volume of patrons currently using Matt Talbot Road, St. John's, and Abbey / Tannery Car Parks for more than an hour indicates that overstaying the proposed allowed parking limit is a serious issue. Well defined and easy-to-use payment mechanisms should lead to increased compliance with the parking regulations.

7.9.11 Tralee Town Council should aim to seek 100% compliance with parking regulations. The enforcement team could be directed to areas that have been identified as requiring improved enforcements, in particular those listed in Table 7.7 and Table 7.8 above.

## 7.10 Signage Strategy

7.10.1 It is recommended that a signage strategy should be implemented to direct users to underutilised off-street car parks on the approach to Tralee Town Centre. The signage strategy needs to be developed by reference to the road network. In particular, following

the opening of Ivy Terrace and Denny Street to two-way traffic as recommended in the Tralee Transport Strategy, drivers should be directed onto this road and away from the Town Centre.

- 7.10.2 A high standard of clear directional signage to car parks should be provided to assist optimal routing to car parks. Preferably these signs would be implemented as Variable Message Signs (VMS). Proposed locations for signs are shown in Figure 7.8.
- 7.10.3 The proposed locations of the VMS signage were chosen on the basis of:
- Locations at which there is a clear choice of route to different car parks;
  - The most heavily used directions of approach to key car parks; and
  - The predicted traffic flows at these locations.
- 7.10.4 There are VMS signs covering the approaches from the N21, N70, Prince's Street, and N69 (Edward Street / Castle Street junction), as well as Ballyvelly Road and Spa Road, which covers approximately two-thirds of the vehicles approaching Tralee. The signs will give real time information on the number of spaces available in the largest multi-story and surface car parks in the town centre.
- 7.10.5 The approach of the R551 / R558 (Caherslee) and the R556 (Abbeydorney) to the north-west of Tralee will be covered by static signs. The Tralee Traffic Model predicts that vehicles on these approach roads predominantly park in the car parks in the north-west of Tralee. Consequently, VMS signs are not required.
- 7.10.6 Static signs will also be placed at other strategic junctions, as use of appropriate signage will encourage the use of the most appropriate car park, thereby avoiding cross town trips, and congestion in the Town Centre.
- 7.10.7 In addition, improved wayfinding to and from the core Town Centre would facilitate improved access for pedestrians and cyclists, thereby further increasing the attractiveness.





### 7.11 Financial Impact of Parking Strategy

- 7.11.1 The financial impact of parking is dealt with in Section 11.11 Results of Parking Financial Appraisal.

### 7.12 Key Findings and Recommendations for Parking in Tralee

- 7.12.1 The assessment of existing parking supply shows that, at an aggregate level across the Town Centre, there is spare capacity in both off- and on-street parking locations. This is true for both weekdays and weekends. The aggregate accumulation for off-street car parking is 45% and 47% for the Thursday and Saturday respectively. The equivalent parking accumulation figures for on-street car parking is 75% and 82% respectively.
- 7.12.2 The existing parking stock is sufficient to meet present and future parking demands. However, the publicly available off-street parking locations could be better utilised to accommodate demand for car parking within Tralee Town Centre. It is therefore critical to more efficiently manage existing on- and off-street parking supply to ensure a more balanced use of available parking stock.
- 7.12.3 The recommendations included in this Parking Strategy should be considered in terms of the overall parking provision and the demand for various usages, together with the spatial distribution of parking spaces. A summary of the proposed parking measures for implementation are shown below:

<b>Measure P.1</b>	Revised On-Street Parking Provision
<b>Measure P.2</b>	Revised Parking Duration
<b>Measure P.3</b>	Revised Parking Tariffs
<b>Measure P.4</b>	Parking Enforcement Strategy
<b>Measure P.5</b>	Parking Signage Strategy

- 7.12.4 Generally, changes to the number and location of available parking spaces have been proposed in response to the transport initiatives contained in the Tralee Transport Strategy:

- Reduction of on-street parking spaces along Ivy Terrace, Denny Street and Castle Street to allow for improved traffic management along this alignment. This facilitates the creation of the pedestrian priority zone;
- Removal of all on-street parking in the Pedestrian priority Zone;
- Creation of a necklace of disabled parking spaces encircling the pedestrian priority zone, to ensure ease of access; and
- Relocation and expansion of the existing taxi rank to three new sites serving the east, south-west, and north-west of the Town Centre.

- 7.12.5 To ensure the most appropriate use of the available parking stock, both now and in the future, the maximum duration of stay and the tariff applied to spaces were reviewed. This will ensure the correct balance of short-stay and long-stay parking stock is provided, and that the occupancy levels of the short-stay spaces are kept below 85%. As a result, there

should be improved turnover, improved revenue, reduced illegal parking behaviour, and increased commercial gain for businesses and traders within Tralee town.

- 7.12.6 More stringent enforcement of existing and future parking restrictions is required to reduce parking contraventions within the Town Centre. This should become easier if all spaces (either on- or off-street) are clearly demarcated and signs indicating the tariff and maximum duration of stay are clearly visible. Future conditions should then foster a culture within the town where it is deemed unacceptable to park illegally or avoid paying for parking.
- 7.12.7 It is also recommended that a signage strategy should be implemented to direct users to underutilised off-street car parks on the approach to Tralee Town Centre. VMS signs will give real time information on the number of spaces available in the largest multi-story and surface car parks in the town centre. Effective signage will encourage the use of the most appropriate car park, thereby avoiding cross town trips, and congestion in the Town Centre.
- 7.12.8 The parking strategy proposes a sustainable and efficient parking system which will meet the predicted future parking demands of the town. The future demand of 2,072 short-stay and 519 long-stay parking spaces during the peak hour is supported by the provisions of 2,259 short-stay and 599 long-stay public parking spaces based on the measures outlined previously. This will allow the town to implement other transport initiatives such as improving the pedestrian space, walking routes, cycling routes etc. while maintaining an adequate provision of short-stay spaces within the town centre, with occupancy levels close to 78%.
- 7.12.9 Addressing the above issues will ensure that the most conveniently located car parking spaces are available for use by those who value them most, i.e. those wishing to avail of short stay car parking in Tralee Town Centre. These users are primarily visiting Tralee Town Centre for the purposes of retail related trips, and are therefore of significant economic importance to the Town Centre.

### Key Benefits

- The proposed parking management system and charging structure will be a flexible system capable of changing to meet demand;
- It will encourage a beneficial change to parking patterns throughout the town;
- Significant parking spaces in the Town Centre will be released for short stay business and leisure visitors to the town;
- Residential parking would continue to be dealt with through the provision of resident parking permits;
- Disabled drivers will be facilitated by the creation of a necklace of disabled parking spaces be created that encircle the pedestrian priority zone;
- There will be increased provision for taxis, with a wider catchment area by creating three new taxi ranks;
- By significantly increasing the volume of 1-hour parking the parking strategy also has the potential to generate revenue which can be used to cover the capital cost of both the parking measures and other measures; and
- The removal of long-stay parking from the town centre increases the number of spaces available overall and results in a higher turnover of parkers within these high-demand

spaces. Furthermore, ensuring that the most conveniently located parking spaces are reserved for short-stay users (who have a greater potential spend) stimulates commercial activity and increases the vitality and attractiveness of the town centre. This strategy also benefits long-stay parkers as they are provided with a dedicated, secure location to park their car for the day.

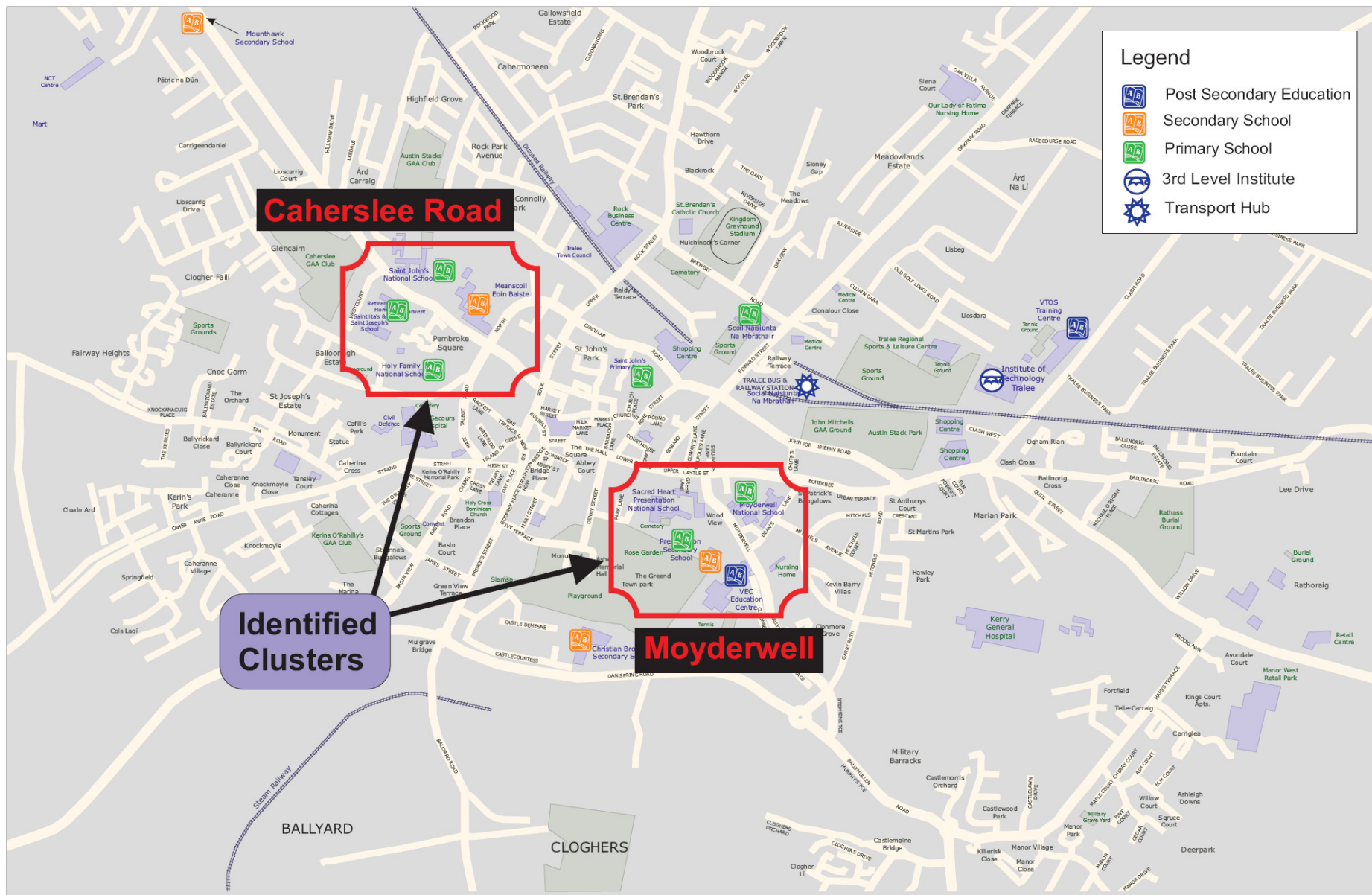
## 8 School Transport Strategy

### 8.1 Introduction

- 8.1.1 There are a large number of schools, both primary and secondary, within the study area and these schools are key generators of transport demand. The school run, by its nature, contributes significantly to the demand for travel during the morning peak period. Travel to school by private car contributes to congestion during the morning peak and results in negative impacts on the environment. To counteract this, ways are sought to reduce the need to travel by car to places of education, particularly during peak traffic times of the day.
- 8.1.2 School Travel Plans are one way in achieving a reduction in car travel to schools. They are designed to encourage pupils, parents and teachers to travel to school by means other than the private car. School Travel Plans can provide real benefits to pupils, parents, teachers and the wider community.
- 8.1.3 The Government's Smarter Travel Policy recognises the benefits of School Travel Plans and aims to ensure that every school and college in the country has a school travel plan to encourage students to use alternative means of transport to the car. In addition to safer travel, School Travel Plans are about improving health; broadening education; and combating social exclusion. At their best, School Travel Plans contribute to improving the quality of the local environment and the quality of life of everyone.
- 8.1.4 Access arrangements to schools are important for a number of reasons. As mentioned, school related car movements associated with parents dropping children off to school can contribute substantially to levels of traffic congestion, in particular during the AM peak period. Furthermore, there are localised problems directly associated with drop-off and pick-up activities directly outside schools. Travel to school also has an impact on quality of life and can affect the health and well being of students.
- 8.1.5 More broad considerations include the numerous public health problems associated with sedentary lifestyles in particular among school children; and environmental problems linked to increased car use and levels of traffic congestion. As a result, a central element of current transport policy is to encourage cycling and walking as access modes to schools.
- 8.1.6 Figure 8.1 illustrates the location of all the schools within the Tralee Town study area. As can be seen from this figure, there are two clusters of schools located to the northwest and southeast of the town centre. This is significant for a number of reasons:

- It indicates the extent of traffic movements associated with school related drop-off and pick-up activities by identifying where schools are located in close proximity to each other; and
- It indicates that potential exists for targeted improvement of transport infrastructure (cycling, walking facilities etc.) and bus services that would benefit access to many schools and thus leverage this investment.

**Figure 8.1 Location of Schools and Education Centres**





## 8.2 What is a School Travel Plan?

8.2.1 A School Travel Plan is a written document which outlines the various ways in which pupils, parents and staff can travel to school. Generally School Travel Plans are focused on encouraging alternative means of travel other than the private car. This involves promoting more sustainable modes of travel such as walking, cycling, school bus and car pooling.

8.2.2 The benefits of implementing a School Travel Plan are numerous, and include:

- improved health and fitness among pupils, parents and staff as active modes of travel such as walking and cycling are promoted;
- improved concentration levels among pupils who walk/cycle/use bus transport;
- safer access to school for all;
- increased road safety awareness among pupils through pedestrian/cycle training and education;
- reduced traffic congestion and pollution in the vicinity of the school;
- reduced carbon emissions due to a reduction in use of private cars for school travel;
- improved community awareness among pupils, parents and staff; and
- increased parent-child interaction among parents and children who cycle/walk to school.

Every single kilometre not driven in a car reduces carbon dioxide emissions by 145 grams

8.2.3 School Travel Plans should not be written to be put on the shelf; ideally they are living documents that will evolve on a continuous basis to respond to the changing needs of pupils, staff and Tralee as a whole. To this end, school travel plans should be incorporated into classroom activities and the curriculum as well as linked to school development and/or improvement plans. School Travel Plans should be supported by a nominated School Travel Advisor within Tralee Town Council or Kerry County Council.

## 8.3 Green Schools

8.3.1 Green-Schools is an international environmental education programme and award scheme that promotes and acknowledges long-term, whole-school action for the environment. One of the main themes of Green Schools is travel. In Ireland, the Green Schools Programme is coordinated by An Taisce in partnership with local authorities and the Green Schools travel initiative is supported by the Department of Transport and the National Transport Authority. There are currently 2,000 schools flying the green flag, 450 of which are actively pursuing their travel plans.

Green Schools programme resulted in a dramatic 22% reduction in car use to school after one year

8.3.2 As part of the Green Schools Travel Initiative, schools develop a School Travel Plan and sets targets for reducing car-based travel to and from school whilst increasing the number of pupils travelling by sustainable modes of transport. The Programme advocates a number of initiatives which can be used to promote sustainable travel:

### Encourage Walking

- **WOW** - Walk On Wednesday or Walk Once a Week. The idea behind the scheme is to dedicate one day a week to walking to school. Ideally schools promote walking to school every Wednesday, however if this isn't suitable schools can choose any day of the week once it's on a regular basis. If schools can't promote walking to school once a week they can hold a Walk Whenever day to increase awareness of walking amongst the school population.
- **Walking Bus**- The Walking Bus is a great initiative to run once there is a strong walking culture established in the school. The initiative requires a large amount of commitment and the majority of walking buses running in Ireland are organised by parents & volunteers.

### Encourage Cycling

- **COW** – Cycle On Wednesday or Cycle Once a Week. This initiative is similar to WOW, except that cycling is the mode promoted.
- **Cycle Training** - Cycle training is useful if schools wish to promote cycling on a regular basis. Cycle training usually takes place over a six week period and addresses issues relating to cycle safety and skills and on road experience. The Government's Smarter Travel Policy supports cycle training for all schoolchildren (this is further supported by the National Cycle Policy Framework).
- **Bike Doctor** - Bike maintenance classes are a good way to encourage children to use their bikes on the journey to school. Often children have bikes at home but are unable to fix a flat tire or attach their lights. The cooperation of local bike shops can be of great benefit to organising bike doctors.

### Using Cars More Efficiently

- **Car Pools/ Car Sharing** - A car pool or car sharing is when two or more people travel together in one car, instead of separately.
- **Park & Stride** - Park & Stride schemes work in the same way as Park & Ride schemes work with public transport. Parents who usually drive their children to school, park away from the school gate and the children walk for the last part of the journey. The drop off point could be a nearby car park or a quiet section of road away from the school.

### General Measures

- **Exclusion Zones** – a designated 'exclusion-zone' is identified around the school access where only cyclists, pedestrians and school buses are allowed. This increases safety for pupils arriving to school whilst also discouraging car transport.
- **Golden Boot Challenge** - The Golden Boot Challenge allows students to score points when they walk, cycle, carshare, park and ride or use public transport to school. The challenge is a great way to start some friendly competition amongst classes and the

challenge can be run every week, month or term. The class with the highest score is awarded the coveted Golden Boot Award for their efforts.

- **Green Tree** - Schools can draw, build or use a tree in their school grounds for this project and hopefully over the term schools can turn their 'trees' from brown to green. Children who walk, cycle, use public transport, car pool or park and stride will get a green 'leaf' every morning which they place on the tree. Children who are driven to school get a brown leaf. The project is a very visible way to promote alternative modes of transport and ideally it can be run along with WOW days.

#### 8.4 Strategy to Improve Transport to Schools

- 8.4.1 As detailed previously in Chapter Six, a number of measures have been recommended to improve accessibility and safety within Tralee Town and to achieve a better balance between all road users by improving pedestrian and cycle priority. These measures include the reallocation of roadspace, the expansion of pedestrian priority areas, improved streetscapes and upgraded junction designs. All of the proposed measures will support a reduction in car dependency and encourage travel, including that to schools, by better alternatives to the private car.

- 8.4.2 In order to achieve the maximum benefit from improvements to the transport network within Tralee, the following general school transport improvement measures are proposed:

- Improvements to pedestrian and cycle accessibility within Tralee;
- Develop the role of School Travel Advisor within Kerry County Council;
- Seek cooperation of An Garda Síochána in identifying safe walking and cycling routes; and
- Encourage schools to participate in the Green Schools Programme.

- 8.4.3 The focus of the future strategy is to support and promote transport to schools by sustainable modes and thereby reduce dependence on the private car. The provision of car set down areas in proximity to schools can impede access by walking and cycling, thereby encouraging more car use and increasing demand for set down areas. This is unsustainable and car set down areas should be discouraged and are not included within the strategy. As an alternative, the use of on-street car parks within walking distance of the schools could be promoted to provide for those whose journey is too far for other modes. This approach will maintain walking and cycling as the dominant modes at the school entrance.

- 8.4.4 There are a number of clusters of schools within Tralee Town. The local authority should make specific efforts to develop links with these schools, through the School Travel Advisor, with a view to highlighting improvements that will support sustainable access. The areas in question are illustrated in Figure 8.1 and the specific measures included within the strategy that will benefit these schools are described below.

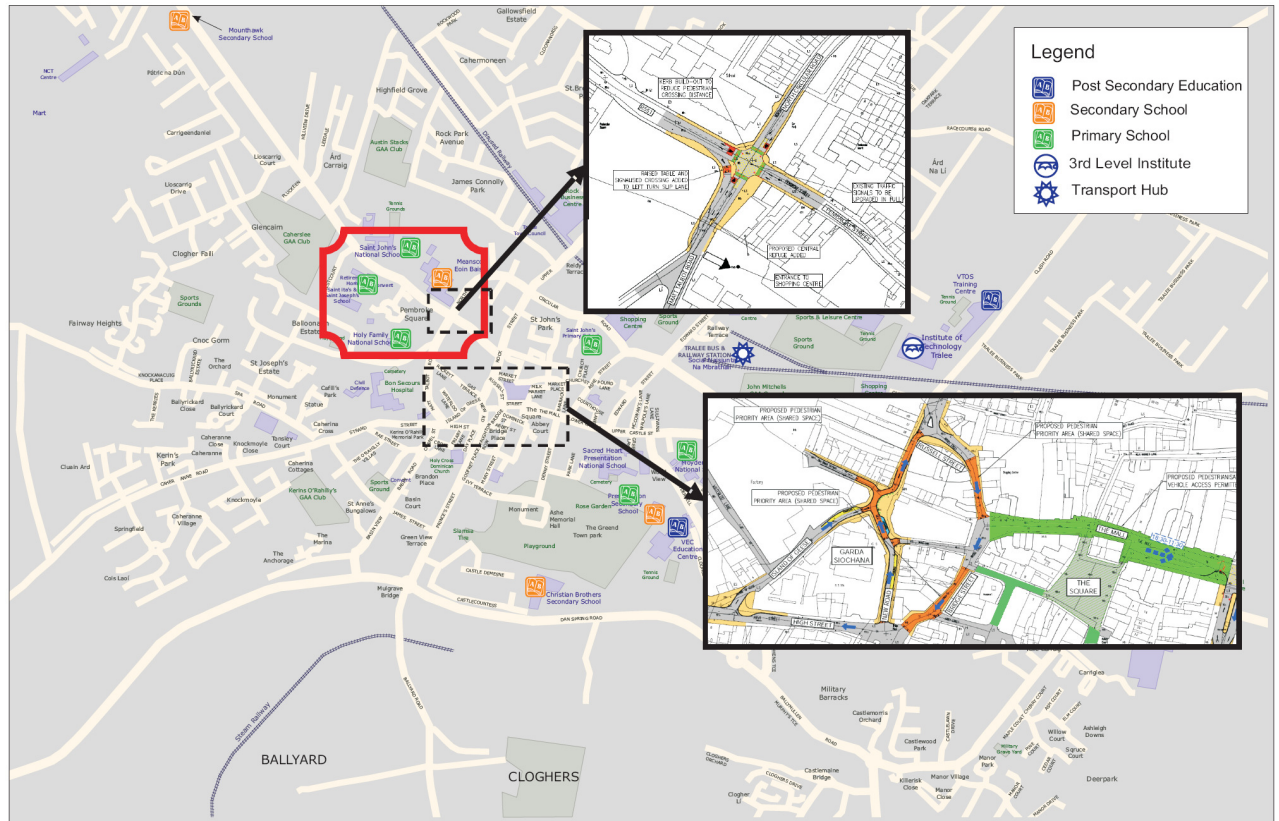
##### **Caherslee Road School Cluster**

Figure 8.1 illustrates the location of the Caherslee Road School Cluster which includes the following schools:

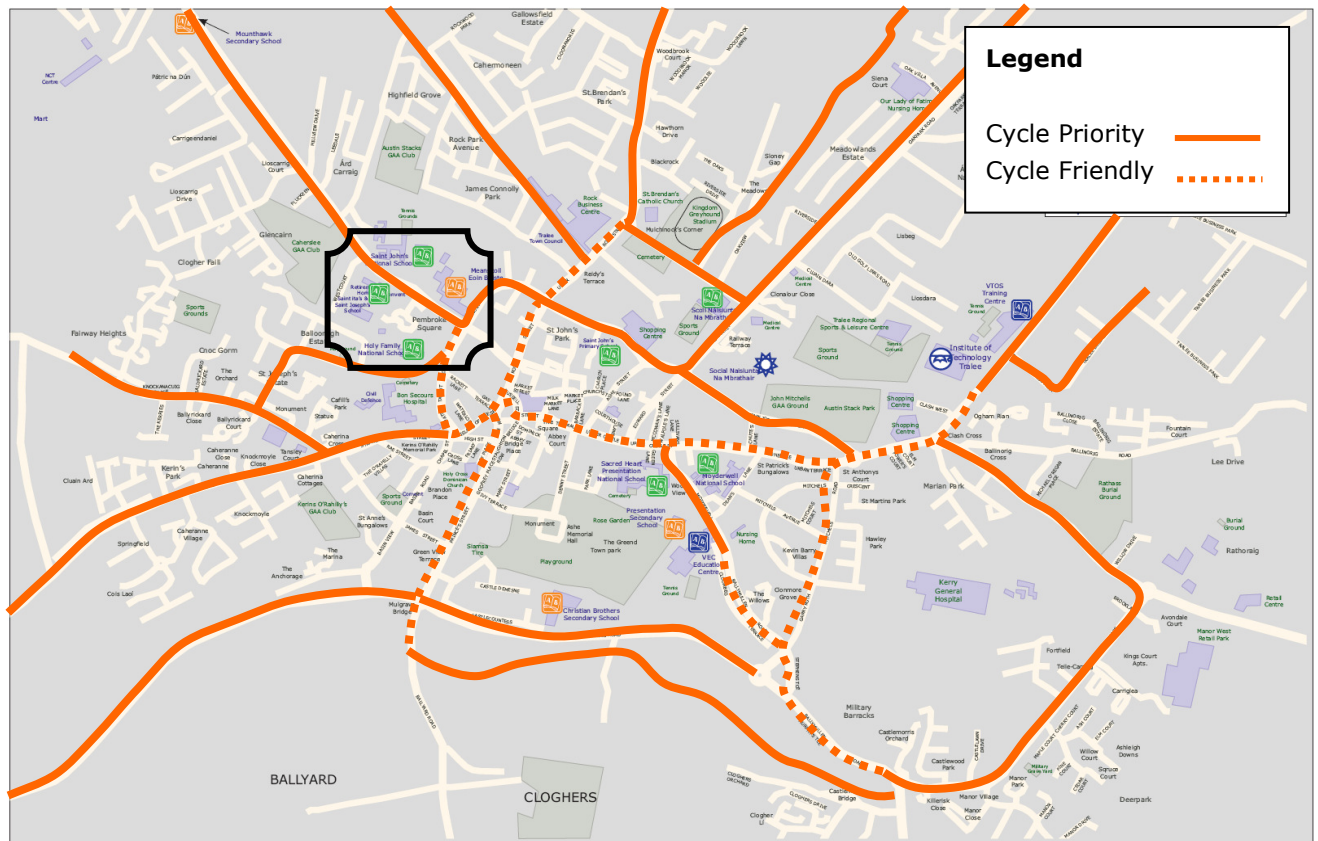
Saint John's National School (570 pupils); Mercy Mounthawk (1,170 pupils); Saint Ita's and Saint Josephs School (special school, 60 pupils); Holy Family National School (440 pupils)

- 8.4.5 Over 2,200 pupils attend the schools on Caherslee Road between North Circular Road and Westcourt. The schools cater for all age groups, both primary and secondary and include a special school. Mercy Secondary School is the largest school in Tralee with over 1,100 students comprising both boys and girls in almost equal number.
- 8.4.6 This area is particularly important in terms of school access and there are some specific proposals that will benefit school access. At the nearby Balloonagh Cross it is proposed to provide the following improvements for pedestrians and cyclists:
- kerb build outs to reduce pedestrian crossing distance;
  - advanced stop cycle areas;
  - full pedestrian crossing signalisation; and
  - raised table at crossing on Matt Talbot Road to slow traffic and improve crossing.
- 8.4.7 Figure 8.2 illustrates the short term junction improvements in proximity to the Caherslee Road Cluster including those at Balloonagh Cross. Further details of junction improvements are provided in Chapter Six (Section 6.10).
- 8.4.8 The Caherslee Road Schools Cluster will also benefit from the development and improvement of Tralee's cycle network. Figure 8.3 illustrates the future cycle network and shows that the Caherslee Road Schools Cluster will be well connected to the improved cycle infrastructure. Priority has been given in the strategy to providing cycle priority that links areas of demand including schools. Therefore improvements along Caherslee Road and North Circular road are proposed for the short term. Further details of the cycle network development are included in Chapter Six.
- 8.4.9 After the junction improvements at Balloonagh Cross are complete and the short term cycle network improvements have been implemented, it would be appropriate to encourage walking and cycling to the schools on Caherslee Road. In the longer term it is proposed to signalise the junction of Caherslee Road and Lioscarrig, which will further improve pedestrian and cycle access to the schools on Caherslee Road.
- 8.4.10 The neighbouring schools of Saint John's National School and Mercy Secondary School would make good candidates for a joint School Travel Plan.

**Figure 8.2 Junction Improvements in Proximity to Caherslee Road School Cluster**



**Figure 8.3 Future Cycle Network Links to Caherslee Road School Cluster**





### Moyderwell

- 8.4.11 Figure 8.1 illustrates the location of the Moyderwell School Cluster which includes the following schools:

Sacred Heart (390 pupils); Presentation Secondary School (675); St Mary's Moyderwell (400); Gael Coláiste (275).

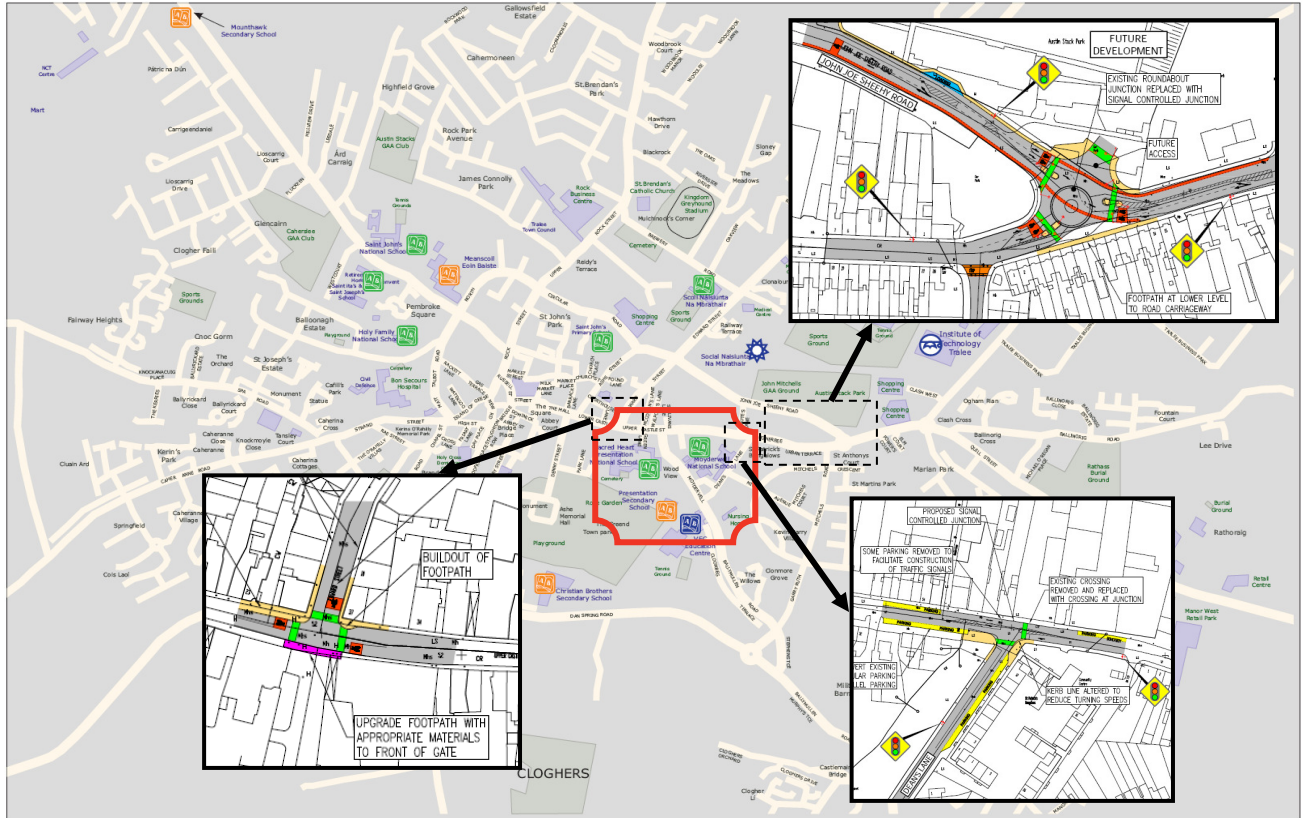
- 8.4.12 The Moyderwell Schools Cluster caters for almost 1,740 pupils. There are a number of junction improvements proposed within the overall transportation strategy that will benefit access to the schools at Moyderwell, particularly for pedestrians and cyclists. The measures include:

- Provision of cycle tracks;
- Footpath improvements;
- Signalisation of pedestrian crossings;
- The addition of traffic calming measures along Moyderwell in proximity to schools
- Advanced stop cycle areas at key junctions; and
- The conversion of roundabouts to signal controlled junctions (e.g. John Joe Sheehy Road / Boherbee junction improvement).

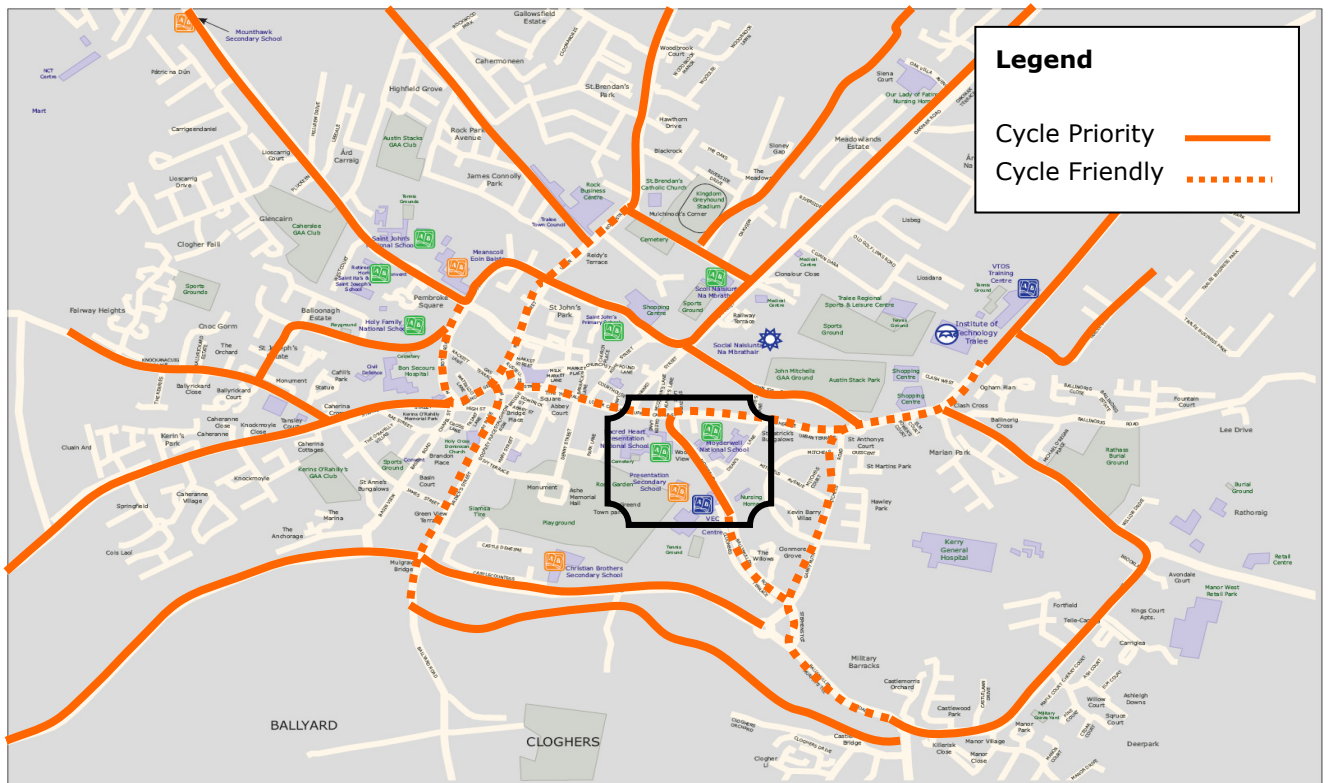
- 8.4.13 Figure 8.4 illustrates the short term junction improvements in proximity to the Moyderwell Schools Cluster including those John Joe Sheehy Road/Boherbee. Further details of junction improvements are provided in Chapter Six (Section 6.10).

- 8.4.14 The Moyderwell Schools Cluster will also benefit from the development and improvement of Tralee's cycle network. Figure 8.5 illustrates the future cycle network and shows that the Moyderwell Schools Cluster will be well connected to the improved cycle infrastructure. Further details of the cycle network development are included in Chapter Six.

**Figure 8.4 Junction Improvements in Proximity to Moyderwell Schools Cluster**



**Figure 8.5 Future Cycle Network Links to Moyderwell School Cluster**



### 8.5 Conclusions

- 8.5.1 There is a high concentration of schools within Tralee Town and school transport is a significant generator of demand. Tralee is ideally suited to walking and cycling given the compact nature of the area. This is borne out in the Census which shows a very high proportion of students walking to school.
- 8.5.2 The strategy of the Tralee Transport Strategy is designed to support and encourage sustainable transport to school. The overall strategy will improve pedestrian and cycle infrastructure within Tralee Town and this will benefit access to schools. Full details of the measures proposed are provided in Chapter Six.
- 8.5.3 To further support sustainable transport to schools, School Travel Plans should be prepared, implemented and maintained. School Travel Plans will include a variety of measures to be tailored for the individual schools involved. These plans should be prepared by the schools in conjunction with input from the local authority and An Garda Síochána. The role of a School Transport Advisor within the local authority should be developed to support and liaise with schools in preparing their Travel Plans.
- 8.5.4 In assessing school transport demand, two school clusters have been identified. The schools within the Caherslee Road and Moyderwell Clusters cater for a very large number of students. The Tralee Transportation Study includes measures which will directly benefit these schools, including junction upgrades with improved facilities for pedestrians and the development and improvement of the cycle network. The local authority should make specific efforts to develop links with these schools, through the School Travel Advisor, with a view to highlighting improvements that will support sustainable access.
- 8.5.5 Through the implementation of the strategy for school transport, support will be given to more sustainable transport options and car dependency will be reduced in the short, medium and longer term.

# 9 Goods Vehicle Management Strategy

## 9.1 Introduction

- 9.1.1 A number of national roads converge within Tralee Town Centre, namely the N21, N69, N70 and N86. The convergence of national roads leads to a degree of Heavy Goods Vehicle (HGV) traffic passing through the town centre. Local HGV traffic is also generated by businesses within Tralee. The Shannon Foynes Port, Ireland's second largest port operation, is directly accessible from Tralee along the N69.
- 9.1.2 Traffic survey data recorded the highest HGV flows on the N21, N22 and R551 within the AM peak. The volume of HGVs is not high at a maximum of 40 HGVs per hour in any one direction. Nonetheless, in sensitive areas such as along narrow roads, near schools and within the town centre, low levels of HGV movement can have negative impacts.
- 9.1.3 The overarching aim of the HGV Management Strategy is to reduce the impact of HGV traffic within the town centre to create a safer, more attractive environment for pedestrians and cyclists, while still maintaining an appropriate level of HGV access to support the economic viability of the town. The strategy has been developed for both short term and long term scenarios. The short term strategy should be implemented as soon as feasible, while the long term strategy is dependent on the delivery of the N22 Tralee Bypass and other road infrastructure development.

## 9.2 Short Term HGV Management Strategy

- 9.2.1 HGV movements must be accommodated to serve Tralee Town and the local businesses that rely on HGV movements. The focus of the short term strategy is to encourage goods vehicles to use the most appropriate streets whilst traversing the town.
- 9.2.2 A network of HGV advisory routes is proposed as shown in Figure 9.1. These routes would link the major roads around Tralee whilst moving HGV traffic away from sensitive areas within the Town Centre. Improved signage should be introduced to encourage HGV traffic to use the advisory routes. The general location of these signs is shown in Figure 9.1.



Figure 9.1 Short Term HGV Advisory Routes

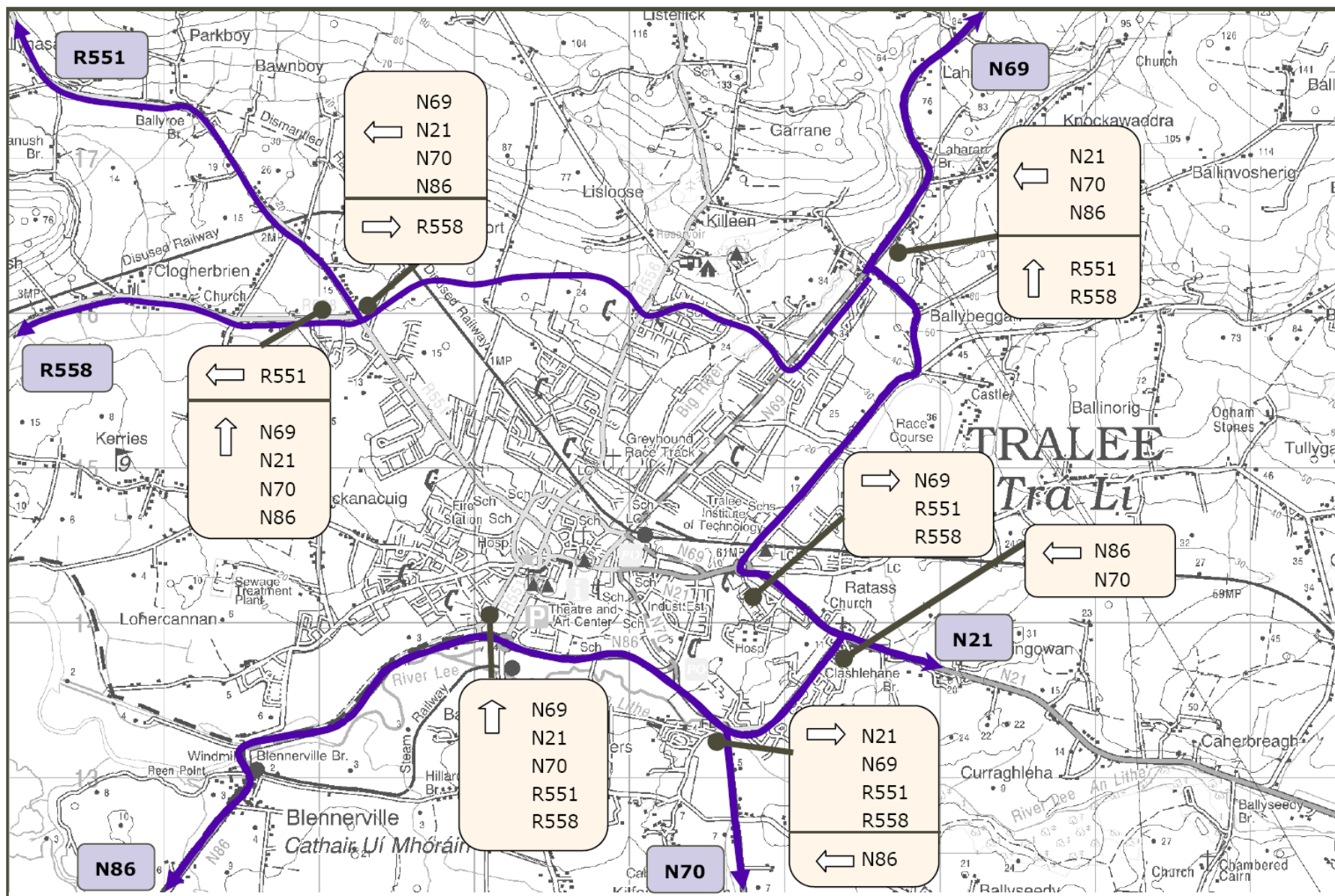
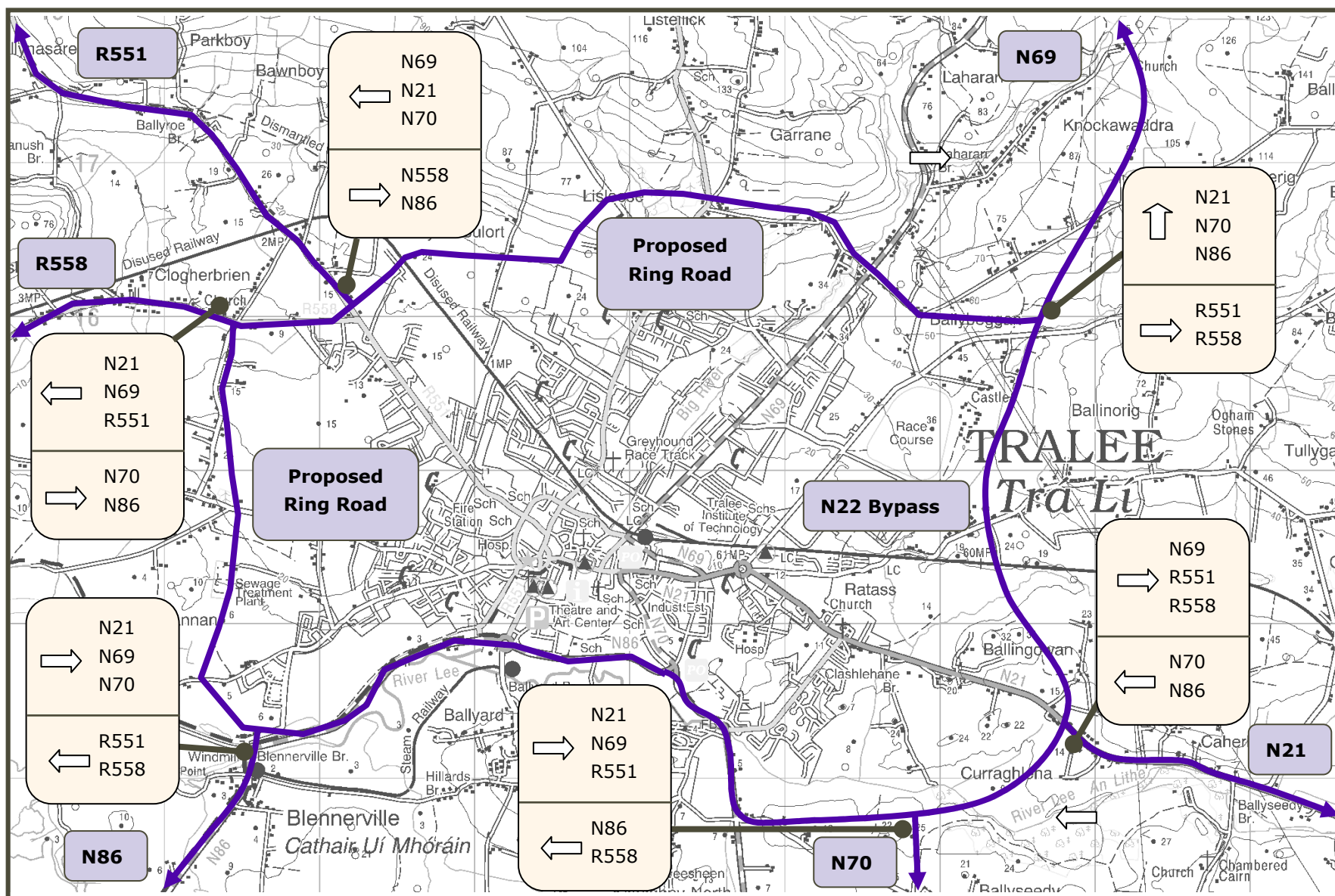
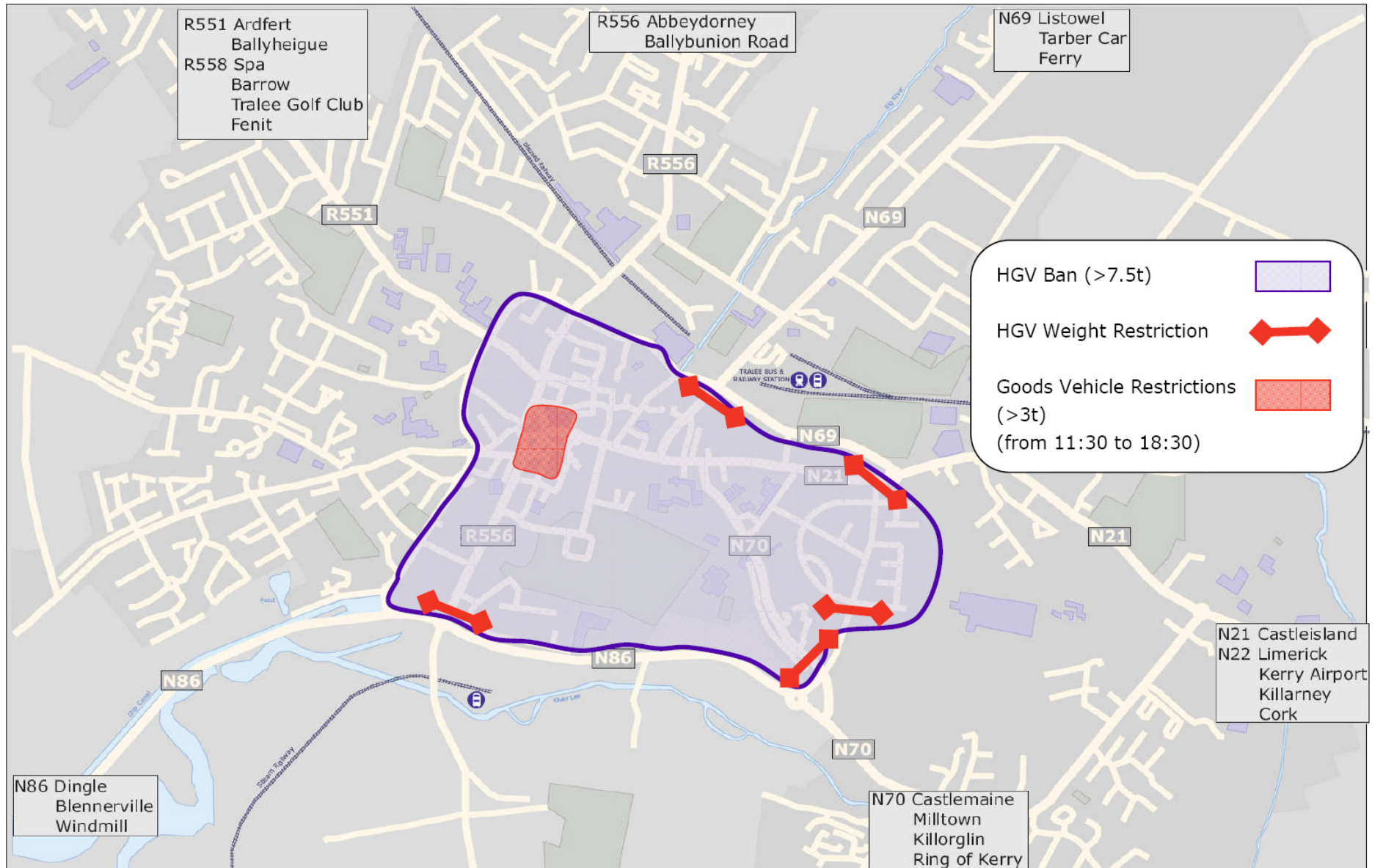




Figure 9.2 Long Term HGV Advisory Routes



**Figure 9.3 Longer Term HGV Restrictions**



### 9.3 Long Term HGV Management Strategy

- 9.3.1 Significant benefit will be derived from the delivery of the N22 Tralee Bypass and the Western and Northern Ring Roads. This infrastructure will afford an opportunity to remove HGV traffic from the town centre.
- 9.3.2 A general 7.5T Gross Vehicle Weight restriction is proposed within Tralee Town as shown in Figure 9.3. This would allow smaller goods vehicles to access properties and commercial businesses. Further restrictions to 3.5T will be applied within the expanded pedestrian / shared space areas within the core town centre. The HGV management proposals recognise the need to provide adequate access to the Tralee Business Park and other industrial areas within the town and the proposed restrictions will not prevent access to these areas.
- 9.3.3 Provision will also need to be retained for servicing the areas where large vehicles are prohibited. Activities such as deliveries of large goods and furniture removals are important activities which must be provided for. It is recommended that the design of a detailed delivery signage strategy be undertaken when the design and the implementation of the major infrastructure measures take place. Exemptions for access may be applied on specific approaches.

### 9.4 Refuse Collection

- 9.4.1 Any contractors or agents who provide domestic refuse collection services should be cognisant of other road users and the impact refuse collection may have on traffic. For this reason during waste collection activity, refuse collection vehicles should, where possible, manoeuvre out of the traffic flow i.e. onto a hard shoulder / verge or as far away from the through traffic lane as practicable.
- 9.4.2 It is recommended that refuse collection should take place outside of the peak traffic periods. This step will minimise the conflict of refuse collection vehicles with other traffic in Tralee.

# 10 Public Transport Strategy

## 10.1 Introduction

- 10.1.1 Public Transport in Tralee currently comprises Taxis, Bus and Rail transport services. Tralee has a large number of taxis per head of population and local bus services are provided by Tralee Peoples Bus. Furthermore, Tralee is reasonably well served by inter urban public transport services by way of long distance bus and rail links. School bus services also play an important role in connecting the many schools in Tralee with the wider residential population.
- 10.1.2 In preparing the strategy, the transport characteristics of Tralee were examined. One of the key findings from analysis of the Census travel data was the very high instances of short trips in Tralee. The majority of trips to work and education take less than 15 minutes and almost all are under 30 minutes. With such short journey times, it is very difficult for bus services to compete with walking and the private car, as people will have completed their journey quicker than waiting for a bus. However, there is still merit in supporting bus services to cater for those who do not have access to a car and particularly for the elderly and for those whose mobility is impaired.
- 10.1.3 Public transport within Tralee must continue to provide for those who rely on the services available. The accessibility of public transport is vitally important to fulfil this role. The proposed Public Transport Strategy seeks to support the existing public transport services through providing appropriate infrastructure such as Taxi Ranks, Bus Stops and Coach Parking. Furthermore, improvements to Tralee's pedestrian infrastructure will improve access to bus stops and taxi ranks for those availing of the services.
- 10.1.4 Tralee is a continually growing town and a popular tourist destination. The measures will therefore aim to improve public transport facilities within Tralee by improving accessibility and supporting public transport for those who do not visit the town by car.

## 10.2 Future Strategy

- 10.2.1 The stated aims within the Government's recently published policy document "Smarter Travel – A Sustainable Transport Future, A New Transport Policy for Ireland 2009-2020" is to achieve an overall target of a 20% reduction in work related commuting by car from the current modal share of 65% to 45%. One of the overarching goals of the policy is to take actions aimed at ensuring that alternatives to the car are more widely available, mainly through a radically improved pedestrian and cycling environment and improvements in public transport accessibility.
- 10.2.2 The focus of the future strategy is to support the continued operation of public transport services in Tralee. The following recommendations form the future strategy for public transport in Tralee for the short to medium term. It is recommended that:

- adequate supporting public transport infrastructure is provided, especially the provision of bus stops in suitable locations and adequate Taxi ranks and/or set-down areas;



- pedestrian and cycle connections to public transport are improved to enhance accessibility;
- public transport is promoted through the dissemination of public transport information, for example at bus stops, in public buildings and through school and workplace travel plans;
- public transport service providers are encouraged to develop the urban public transport service in the town, including the potential for expanded use of school and other publicly funded buses as a “local transport bus” to bring people to a range of services; and
- new developments accommodate public transport, both buses and taxis.

10.2.3 The proposed enhancements to the pedestrian and cycle environment outlined in Chapter Six will benefit public transport users particularly with respect to access to and from bus stops and taxi ranks. Furthermore, the proposed junction improvements will improve conditions for bus movements. The curvature of some existing roundabouts makes it difficult for larger buses and coaches to navigate the town. The replacement of roundabouts with signalised crossings will improve access for larger vehicles.

10.2.4 Specific proposals to achieve the future strategy are presented under the headings of:

- Casement Station Interchange;
- Revised Town Centre Bus Access and Facilities;
- Coach Parking; and
- Taxi Facilities.

### 10.3 Park and Ride<sup>10</sup>

10.3.1 This section provides some background on park and ride transport planning. Tralee is not likely to require a park and ride system, although it may be appropriate to consider the requirements for such a system in general terms.

10.3.2 Many trips to the town centre originate from outlying areas that are not possible to serve directly by public transport. Park and ride offers car drivers the opportunity to use buses for part of their journey. This can help to reduce congestion and can be an attractive alternative to high cost town centre parking. Park and ride facilities can be attractive because they offer either low cost or free parking combined with fixed low cost fares. They can reduce the number of car trips in the most sensitive areas of a town. The provision of park and ride facilities should be considered as part of an integrated transport policy and strategy. In particular it should be consistent with overall parking and public transport strategy.

10.3.3 There are a number of preconditions necessary for a park and ride system to present a viable alternative to a direct trip by car. A Park and Ride site serving Tralee should:

- Be located on the fringe of **congested areas** close to the main national or regional routes with good access;

<sup>10</sup> Information adapted from The Traffic Management Guidelines published by the National Transport Authority.



- Have **good public transport links** into the town/city centre areas offering better journey times than by car. This will require buses to provide an express service avoiding picking up further passengers along the route;
- Offer a frequent **(every 10 minutes) low cost service** using high quality modern vehicles. Passengers should have ready access to information about operation times and frequencies;
- **Offer significantly lower overall cost than for town/city centre parking.** Most locations offer free parking and charge for bus travel. If a park and ride is located close to residential areas then some passengers may walk to park and ride sites to take advantage of lower fares. This needs to be taken in to account in the overall strategy for public transport in the local area as this could result in shortfall in receipts on the conventional services that pass close to the site;
- Be of a well-laid out open design with high quality street lighting to reduce fears for personal safety; and
- Include secure parking for vehicles and cycles.

#### 10.4 Casement Station Interchange

- 10.4.1 Tralee Railway Station and Bus Station are located side by side off John Joe Sheehy Road, a short distance from the town centre. Casement Station is and will continue to be the main public transport interchange within Tralee Town. It is well located on the periphery of the town centre and affords facilities for bus and rail interchange. The recently upgraded Bus Station will continue to serve the needs of Tralee for years to come. Both the Bus and Rail stations are wheelchair accessible.
- 10.4.2 Adequate Park and Ride facilities are provided at the station and taxi services are available to pick up and drop off passengers. Pedestrian links to the station are sufficient.
- 10.4.3 The potential to provide secure cycle parking at the station should be examined. It is recommended that the possibility to provide improved cycle parking be examined in conjunction with CIÉ who own and operate Casement Station. The station will also be connected to the strategic cycle network to allow for greater accessibility.
- 10.4.4 The functionality of Casement Station Interchange could be improved through the integration of local and regional bus services. The possibility of enhancing the bus-bus interchange facility between local and longer distance bus services should be explored.

#### 10.5 Revised Town Centre Bus Access and Facilities

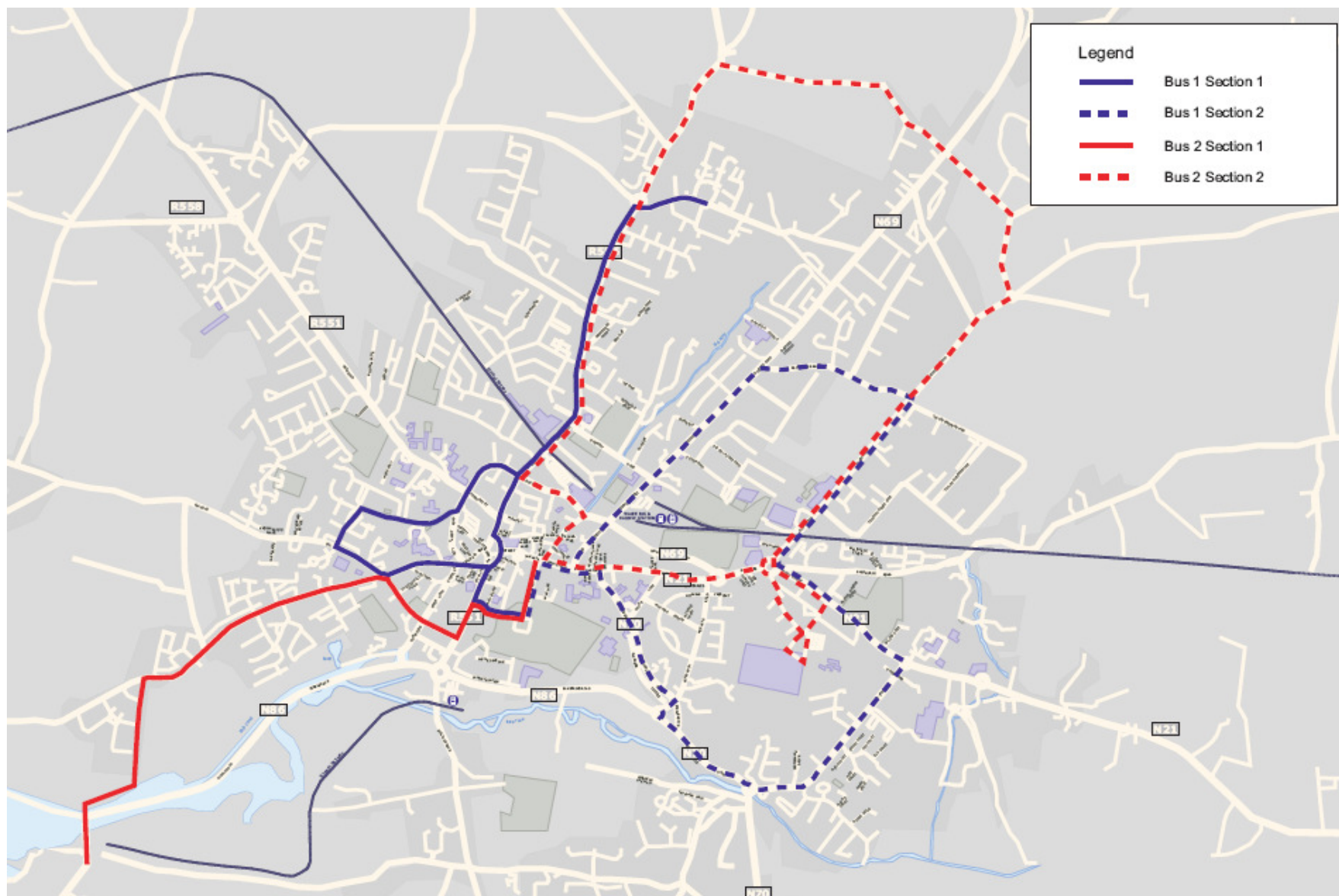
- 10.5.1 There are limited local bus services provided by Tralee Peoples Bus. Nonetheless, the local bus services provide important links and accessibility to those who rely on it. Two routes are operated both of which serve the town centre hourly.
- 10.5.2 The traffic management proposals presented in Chapter 6 will have an impact on the operation of local bus services. The degree of impact is minimal and primarily relates to the proposed expanded pedestrian area. Potential revised local bus routes are illustrated in

Figure 10.1. It is recommended that the local bus services continue to serve the following key locations:

- the town centre by way of new bus stops on Denny Street;
- Casement Station, preferable by way of a stop within the station or alternatively by way of a stop in close proximity to the station entrance;
- Kerry General Hospital;
- Tralee Institute of Technology; and
- Other education and health locations and areas of retail, employment and social infrastructure.

10.5.3 An indicative map of potential bus stop locations is shown in Figure 10.2. Within the town centre, these should be formal, demarcated stops with shelters and seating areas. Outside of the town centre, the stops may be less formal, but sufficient lengths of clearway should be provided to allow for bus set down and pick up. However, it is recommended that busier stops are provided with bus poles, timetables and seating areas. Through the combination of bus routes and stop infrastructure, accessibility to the town centre by bus will be continued and enhanced.

**Figure 10.1** Proposed Revisions to Local Bus Routes



**Figure 10.2**      **Indicative Bus Stop Locations**





### 10.6 Taxi Operation

- 10.6.1 Taxi is the main form of public transport in Tralee. Taxi is effectively a form of on-demand public transport providing service to any destination in Tralee or within a reasonably large distance from it.
- 10.6.2 The main taxi pick-up facilities are currently split into three locations; Bridge Lane, Bridge Street and the Mall. Taxis entering from Bridge Lane, pick up a fare en-route and exit at The Mall. The length of the route, therefore, could also be viewed as one long taxi rank. There are currently 17 taxi spaces demarcated in Tralee Town Centre – 10 on the Mall, 1 on Bridge Street, and 6 on Bridge Lane.
- 10.6.3 The medium term strategy for streets, as described in Chapter Six, will see the expansion of pedestrian areas in the town centre. The reallocation of space will necessitate the relocation of the existing taxi rank to nearby adjacent street locations. In all, three new locations for taxi rank facilities have been identified.
- 10.6.4 The largest of the new taxi ranks will be located on Denny Street and will have space for 14 Taxis. The other two smaller taxi ranks will be located on Staughton Row and Rock Street Lower and will each accommodate 6 taxis.
- 10.6.5 These new locations were considered due to their town centre location and proximity to key destinations, especially town centre retail and business facilities. This new arrangement also gives an increase in the provision in services and serves a wider catchment area of the town, as can be seen in Figure 10.3.





# 11 Strategy Assessment

## 11.1 Introduction

11.1.1 The previous chapters have detailed a list of measures aimed at achieving the objectives of the Tralee Transportation Strategy. The purpose of this chapter is to assess and evaluate each of the measures proposed and the overall strategy, so that a cohesive understanding is gained of the traffic impact across the wider network.

11.1.2 A detailed evaluation of proposed measures was undertaken which involved the following process:

- Network performance Assessment;
- Environmental Appraisal; and
- Financial Appraisal of Strategy measures.

## 11.2 Overview of the Tralee Traffic Model

11.2.1 The Tralee Traffic Model (TTM) was used as the main tool for analysing current and future traffic conditions in the Tralee road network. Using this model, it was possible to determine the impact on traffic speeds and other measures, of making alterations through the network.

11.2.2 The model was developed using SATURN (Simulation Assignment of Traffic to Urban Road Networks). SATURN is a widely used traffic simulation programme ideally suited to the scale and layout of the Tralee road network. A comprehensive description of SATURN, and the specific model developed for Tralee in SATURN, is given in the **Tralee Model Calibration Report: Base Year Model Validation<sup>11</sup>**.

11.2.3 The model was developed to a 2009 base (for AM, inter-peak and PM peak time periods) to be consistent with the traffic counts and surveys undertaken. Census journey to work (POWCAR) data was also used as an input, modified to reflect the change in conditions from 2006 to 2009.

11.2.4 The model can be used to assess the impact of both local and strategic interventions and represents the ideal assessment tool for testing potential study recommendations, and subsequent use by Kerry County Council and Tralee Town Council. Furthermore, it provides a benchmark against which future traffic conditions, as identified in the future year models for 2016 and 2025 can be assessed.

11.2.5 The TTM was developed and calibrated to represent the following half hour time periods:

- AM Morning peak period: 08h30 to 09h00;
- Inter-Peak Inter Peak period: 14h00 to 14h30; and
- PM Evening peak period: 17h00 to 17h30

<sup>11</sup> Issued to Kerry County Council in March 2010.

- 11.2.6 The trip demand matrix representing a base year of 2009 was developed for the TTM using this survey data. The demand matrices are segregated into two vehicle types (or user classes), as follows:

- User Class 1 - Cars and light Goods Vehicles (LGVs). All cars and two axle trucks or other type commercial vehicles are considered LGVs; and
- User Class 2 - Heavy Goods Vehicles (HGV's). This user class is comprised of goods vehicles with 3 or more axles.

### 11.3 Trip Matrix Development

- 11.3.1 Central to the development of the TTM trip matrices was the use of the Census POWCAR (Place of Work Census Anonymised Records) data. POWCAR data is part of the Census program and provides geo-coded data of all employed persons who undertook a journey to work. This enables us to identify the exact origin and destination of each journey to work along with detailed travel, socio economic and demographic data.

#### POWCAR DATA

- 11.3.2 The POWCAR data used for the TTM is derived from the 2006 Census and represents the data set of all trips made to work in Ireland between 07:00 and 09:30 on the day the census was taken. Every person trip made is represented by an I-J record of the trip with the origin and destination being allocated a DED (District Electoral Division) identifier. Each trip record also includes a description of the mode used in making the trip e.g. car, car passenger, bus etc.

### 11.4 Measuring Objectives

- 11.4.1 Key performance indicators (KPI's) which can be output from the purpose built Tralee Traffic Model have been used in the above assessments. These Global Network Summary statistics which can be output by SATURN provide a useful guide when assessing improvements to the highway network and in Environmental Appraisals.
- 11.4.2 Modelled outputs were extracted for the base year, short term (2016), medium term (2021) and long term (2026) modelling scenarios. These model outputs were then used to determine the relative impact of each of the proposed interventions outlined in Chapter Six.
- 11.4.3 The key network statistics used in this evaluation are:

- **Average Speed:** The average speed of all vehicles travelling in the network. This statistic provides an indication of the level of delay or congestion throughout the network, with higher average speeds reflecting reduced congestion;
- **Transient Queues:** This is Queuing which builds up at congested junctions but dissipates quite quickly. E.G. Queuing at a signal controlled junction which builds up during the red phase but is relieved during the green phase; and
- **Carbon Dioxide Emissions:** The total amount of carbon dioxide emitted by all vehicles in the network during the modelled time period. This statistic is also a function

of the delay in the network with a low CO2 figure representing a lightly congested network.

## 11.5 Transport Modelling Scenarios

11.5.1 This assessment used key network statistics to evaluate the alternative modelling scenarios against each other for the short term (2016), medium term (2021) and long term (2026). The model scenarios tested for each of these years are:

- Do Nothing Scenario (DN);
- Town Centre Traffic Management Only (TCTM);
- Do Everything Scenario (DE); and
- Do Everything with Smarter Travel Targets (DEST).

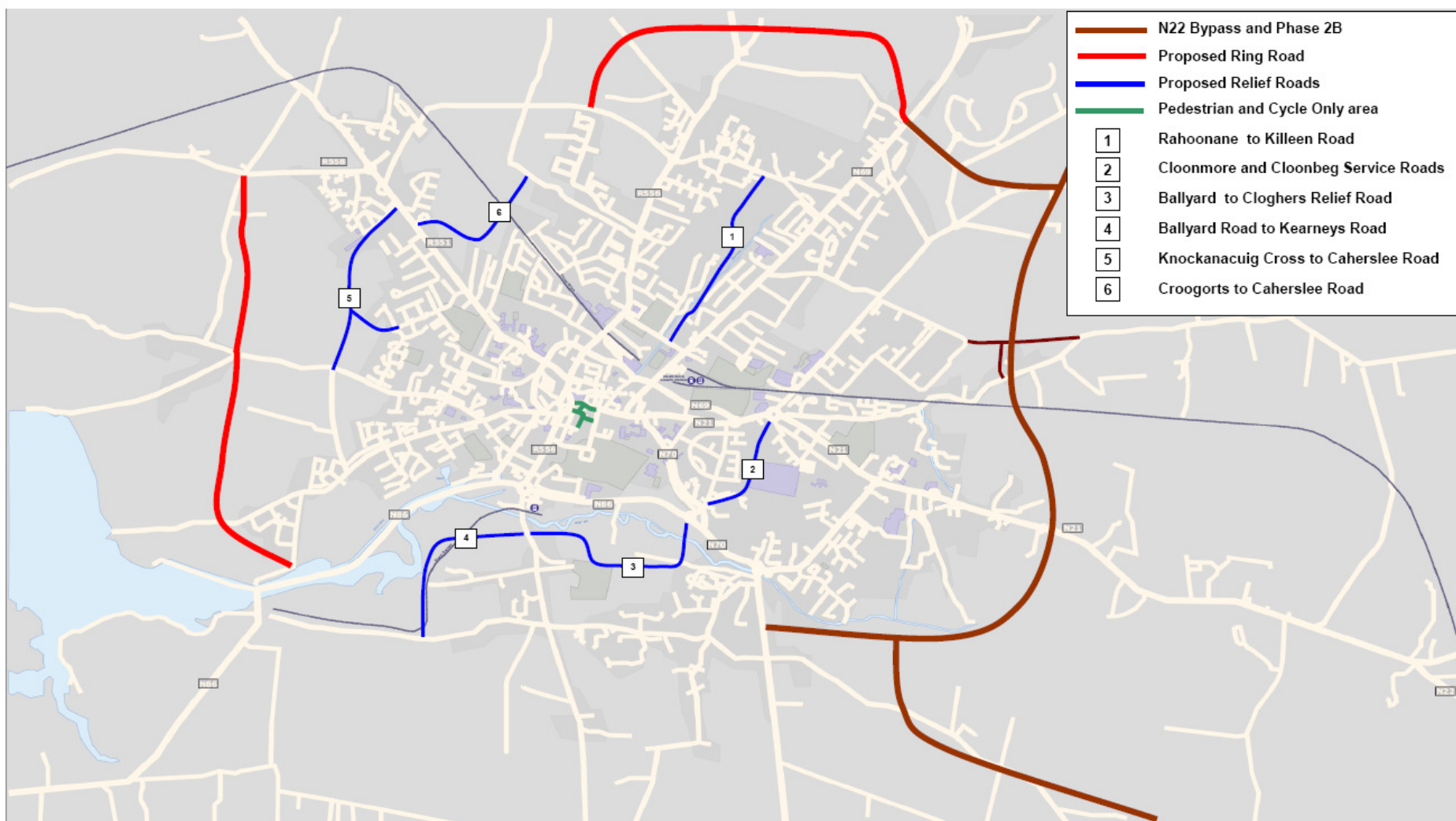
11.5.2 In general terms the Do Nothing scenario is a scenario in which existing traffic and travel patterns are allowed to grow unrestrained along with the growth of the town. It includes no new infrastructural improvements on the existing road network. The Do Nothing scenario is used as a baseline to test the strategy measures against.

11.5.3 The Town Centre Traffic Management Only Scenario include future year travel demand with the short and medium term local junction upgrades, two way traffic on Denny Street, pedestrianisation of the Mall and the introduction of shared surface areas on New Road and Bridge Street. For the purposes of our modelling all short term initiatives were assumed to be completed by 2016 and all medium term initiatives were assumed to be completed between 2016 and 2021.

11.5.4 The Do Everything Scenarios include future year travel demand with all strategic network interventions outlined in the 2009 Tralee Town Development Plan (Tralee Orbital Road Network and Inner relief Roads) as well as the local junction upgrades and traffic management initiatives included in the Town Centre Traffic Management Scenarios. Figure 11.1 below illustrates the strategic network interventions included in the Do-Something Scenarios.

11.5.5 The Do Everything with Smarter Travel scenarios include all network interventions outlined in the Do Everything Scenarios with a reduced demand for vehicle trips in line with National Smarter Travel targets for cycling walking and cycling factored in.

**Figure 11.1 Strategic Network Interventions as per Tralee Town Development Plan**





11.5.6 The strategic Network interventions outlined in Figure 11.1 above are as follows:

### **Tralee Eastern Bypass**

11.5.7 The Tralee Eastern Bypass is a committed scheme and is assumed to be in place by 2016. The main aim of the Eastern Bypass is to take traffic away from the town centre and provide easier access from the south of the town to the north and vice versa.

### **Northern and Western Ring Road**

11.5.8 The Northern and Western Ring Roads have been outlined in the Tralee Town Development Plan for construction in the medium to long term and therefore have been included in our 2021 and 2026 forecast year models. The main aim of these roads is to remove traffic from the town centre and allow easier access for traffic travelling from east to west and from north to southwest. The Northern Ring road will link the Tralee Eastern Bypass with the Bracker O'Regan Road and the Western Ring Road will connect the Ballyvelly Road with the R558.

### **New Development Roads / Inner Relief Roads**

11.5.9 The Tralee Town Development Plan also recommends the construction of a number of development and inner relief roads, the aim of which are to facilitate the development of certain land banks in the town and to help relieve congestion. These roads were assumed to be included in the medium to long term and include;

- Rahoonane to Killen Road;
- Cloonmore and Cloonbeg Service Road;
- Ballyard to Cloghers Relief Road;
- Ballyard Road to Kearney's Road;
- Knocakanacuig Cross to Caherslee Road; and
- Croogorts to Caherslee Road.

11.5.10 In Table 11.1 a summary of the proposed infrastructure improvements in provided which have been included in each of the modelling scenarios.

**Table 11.1 Traffic Modelling Scenarios**

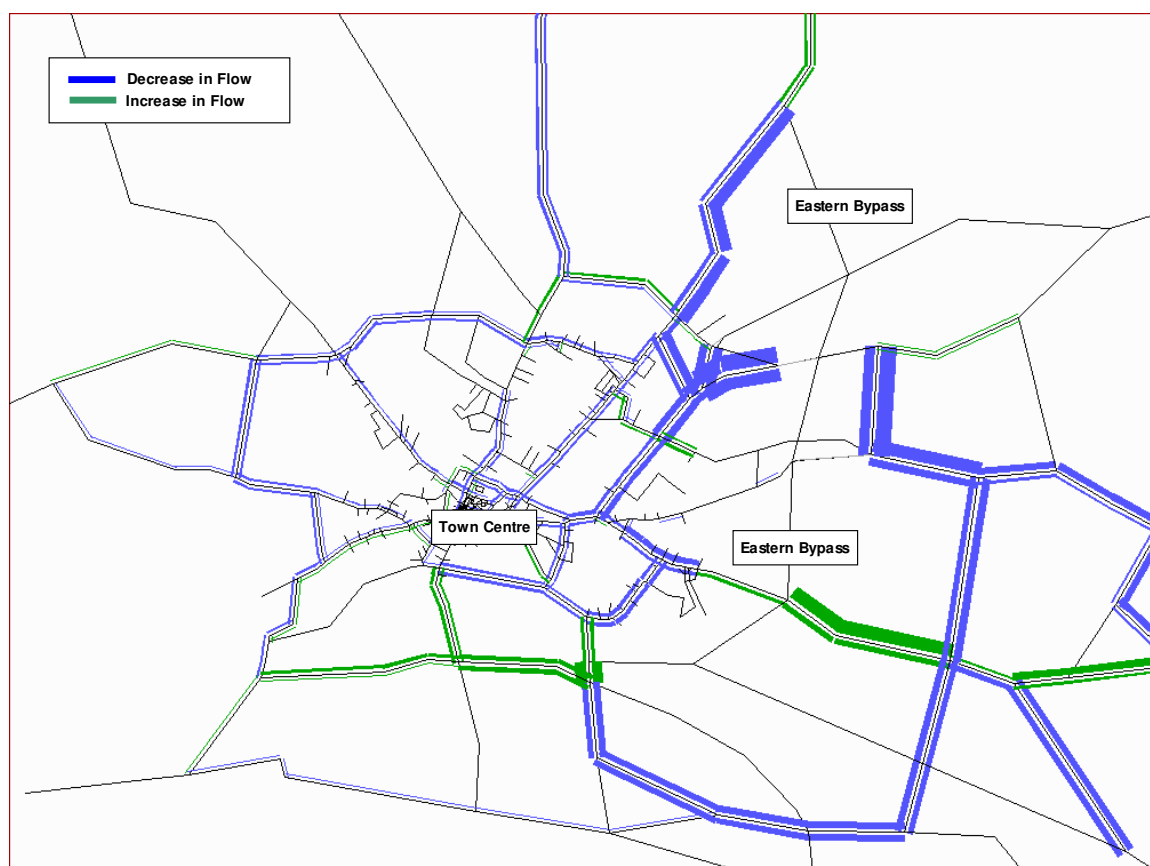
Forecast Year Scenario	Strategic Intervention						
	Existing Network	Short Term Junction Upgrades	Medium Term Junction Upgrades	Shared Space / Ped Areas	Tralee Bypass	Tralee Orbital Road Network	Walking / Cycling Smarter Travel Targets
2010 Validated	✓						
2016 Do Nothing	✓						
2016 Town Centre Traffic Management	✓	✓					
2016 Do Everything	✓	✓			✓		
2016 Do Smarter Travel	✓	✓			✓		✓
2021 Do Nothing	✓						
2021 Town Centre Traffic Management	✓	✓	✓	✓			
2021 Do Everything	✓	✓	✓	✓	✓	✓	
2021 Do Everything Smarter Travel	✓	✓	✓	✓	✓	✓	✓
2026 Do Nothing	✓						
2026 Town Centre Traffic Management Plan	✓	✓	✓	✓			
2026 Do Everything	✓	✓	✓	✓	✓	✓	
2026 Do Smarter Travel	✓	✓	✓	✓	✓	✓	✓

## 11.6 Network Performance - Short Term

### Impact of the Tralee Town Bypass

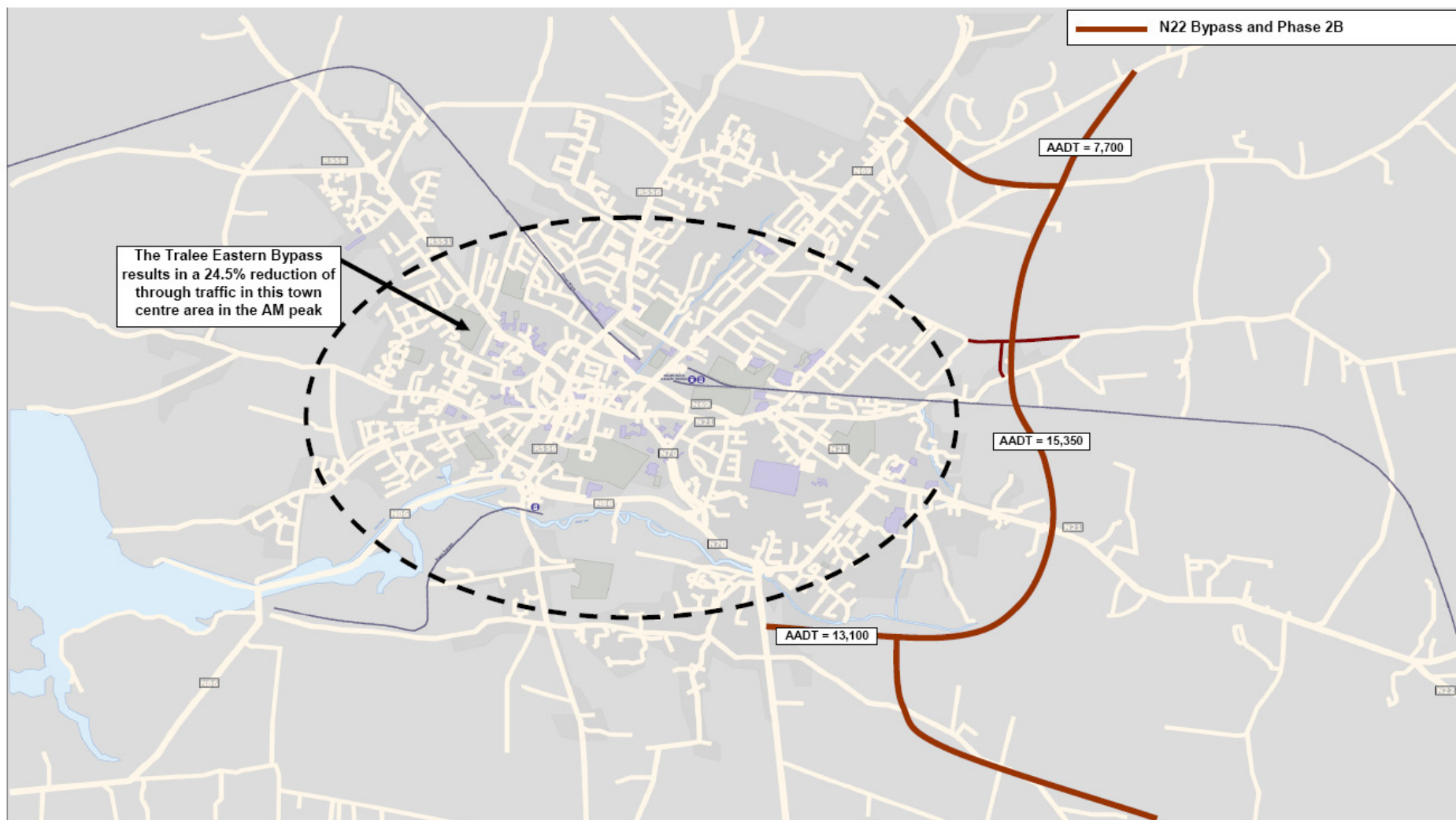
- 11.6.1 The Impact of the Tralee Town Bypass in the short term has been assessed using the 2016 Tralee Traffic Models. Results from this model analysis have shown that The Tralee Bypass in 2016 is estimated to have a maximum AADT<sup>12</sup> figure of 15,350 in the Do Everything Scenario.
- 11.6.2 Further analysis of the impact of the Eastern Bypass has shown that traffic passing through the centre of the town decreases by approximately 24.5% in the AM peak as a result of the introduction of the bypass. Figure 11.2 below is an output from the traffic model and illustrates those links in which traffic has increased or decreased as a result of the Bypass being in place in 2016. The colour blue represents a decrease in traffic flows and green represents an increase in traffic flows. Figure 11.3 below illustrates 2016 AADT flows on the bypass and the reduction in through traffic in the town centre area as a result of the Eastern Bypass.
- 11.6.3 These modelling results indicate that traffic normally travelling through Tralee Town is diverting to the Bypass. More specifically the Bypass enables traffic to divert from other strong north / south routes such as the N22, Clash Road and Oakpark Road as well as some of the local rural roads to the east of the Bypass.

**Figure 11.2 2016 Reallocation of traffic as a result of the Eastern Bypass**



<sup>12</sup> AADT = Average Annual Daily Traffic. AADTs were calculated by estimating peak hour factors from the 24hr traffic counter data.

**Figure 11.3** 2016 Eastern Bypass AM peak Traffic Flows



### Impact of Town Centre Traffic Management Junction Improvements

11.6.4 The traffic management measures proposed for the short term include the following junction upgrades:

- S1 - R874 basin View/N86;
- S2 - Upper Rock Street;
- S3 - Island of Geese/New Road;
- S4 - Austin Stacks Park Roundabout;
- S5 - Balloonagh Cross;
- S6 - Garryruth Road/Ballymullen Road; and
- S7 - Edward Street/John Joe Sheehy Road.

11.6.5 Table 11.2 below provides information on traffic statistics extracted from the Tralee Traffic Model for these junctions. This information includes vehicular flow travelling through the junction, the extent of the delay suffered and volume over capacity (using denoted as Volume/Capacity or V/C) percentages for each of these junctions in the short term. The statistics are presented for the AM Peak Period (08.30-09.00) for the Do Town Centre Traffic Management Scenario. This scenario was used as it does not include the Bypass and therefore represents a worst case scenario for the town centre junctions.

11.6.6 In the tables below 1 PCU = 1 Passenger Car Unit. This measure includes both car- at 1 PCU/car- and heavy goods vehicle- at 3 PCU/vehicle.

**Table 11.2 Short Term Traffic Management Junction Analysis Results**

Junction	Actual Flow Through Junction (PCUs)	Average Delay (Seconds)	Volume over Capacity (V/C) %
S1 - R874 basin View/N86	599	42	38%
S2 - Upper Rock Street	1212	48	82%
S3 - Island of Geese/New Road	330	52	92%
S4 - Austin Stacks Park Roundabout	815	41	49%
S5 - Balloonagh Cross	1090	88	59%
S6 - Garryruth Road/Ballymullen Road	829	45	61%
S7 - Edward Street/John Joe Sheehy Road	958	78	54%



- 11.6.7 The results of this analysis indicate that all junctions upgraded in the short term will operate within capacity during the AM Peak period in 2016, as all V/C measures are within 100% (that is, volume is less than capacity during peak times).
- 11.6.8 There will be relatively minor delays at the above junctions. The longest delays observed were at Baloonagh Cross and the junction of Edward Street and John Joe Sheehy Road. As these Junctions experience some of the heaviest flows in the network some delay is considered to be unavoidable.
- 11.6.9 The busiest junctions in the network are the Upper Rock Street / North Circular Road and Baloonagh cross junctions, with traffic flows of 1212 and 1090 PCUs respectively for the half hour AM Peak period.

### General Network Statistics

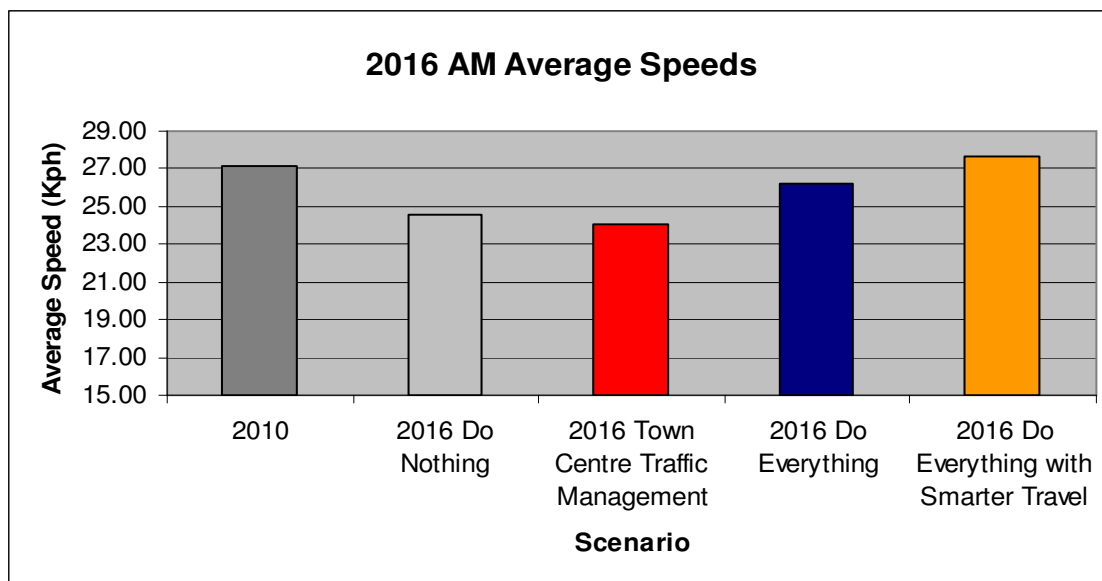
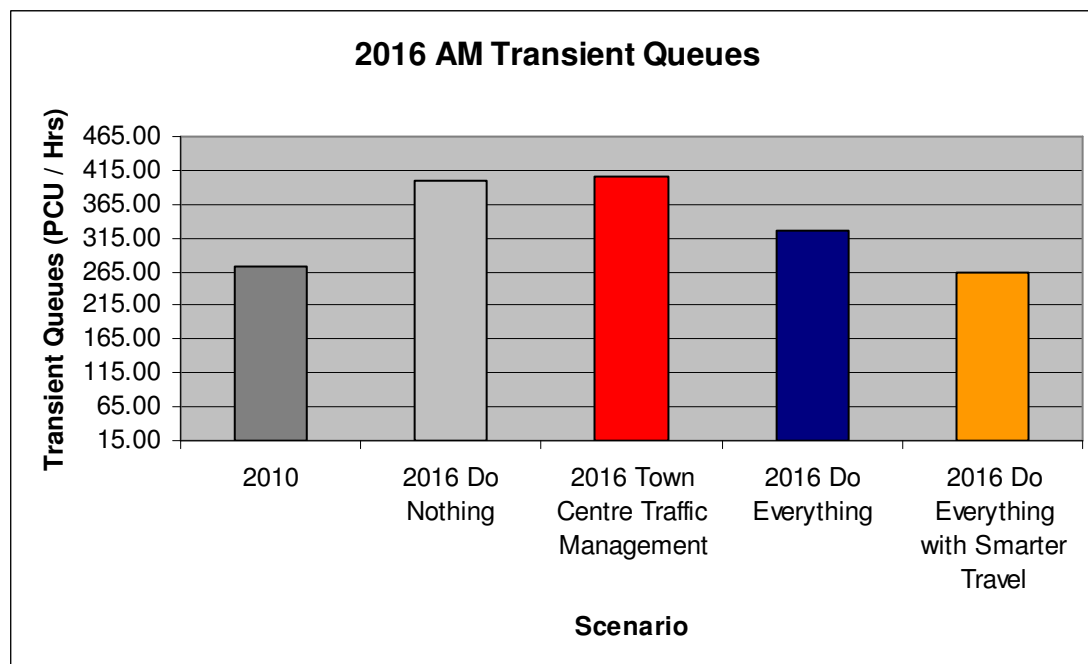
- 11.6.10 Table 11.3 and Table 11.4 below describe the key network statistics during the AM peak half hour period (08:30-9:00) for the base year and Short Term (2016) model scenarios respectively. For comparison, these are also charted in Figure 11.4 and Figure 11.5.

**Table 11.3 2010 (Base Year) Network Statistics**

Scenario	Average Speed (Kph)	Transient Queues (Pcu/ hrs)
2010 Base Year	27.10	273

**Table 11.4 Short Term (2016) key Network Statistics**

Scenario	Average Speed (Kph)	Transient Queues (Pcu/ hrs)
Do- Nothing	24.6	399
Do- Town Centre Traffic Management	24.10	407
Do - Everything	26.2	326
Do – Everything & Smarter Travel	27.7	263

**Figure 11.4 2016 AM Average Speeds****Figure 11.5 2016 AM Queuing**

- 11.6.11 These results show that in the short-term (2016), if town centre traffic management interventions are implemented in isolation average speeds decrease slightly and delays slightly increase above the Do Nothing Scenario. However when these traffic management interventions are combined with the introduction of the Bypass, average speeds on the network increase by more than 10% above the Do-Nothing Scenario with a subsequent drop in delays.

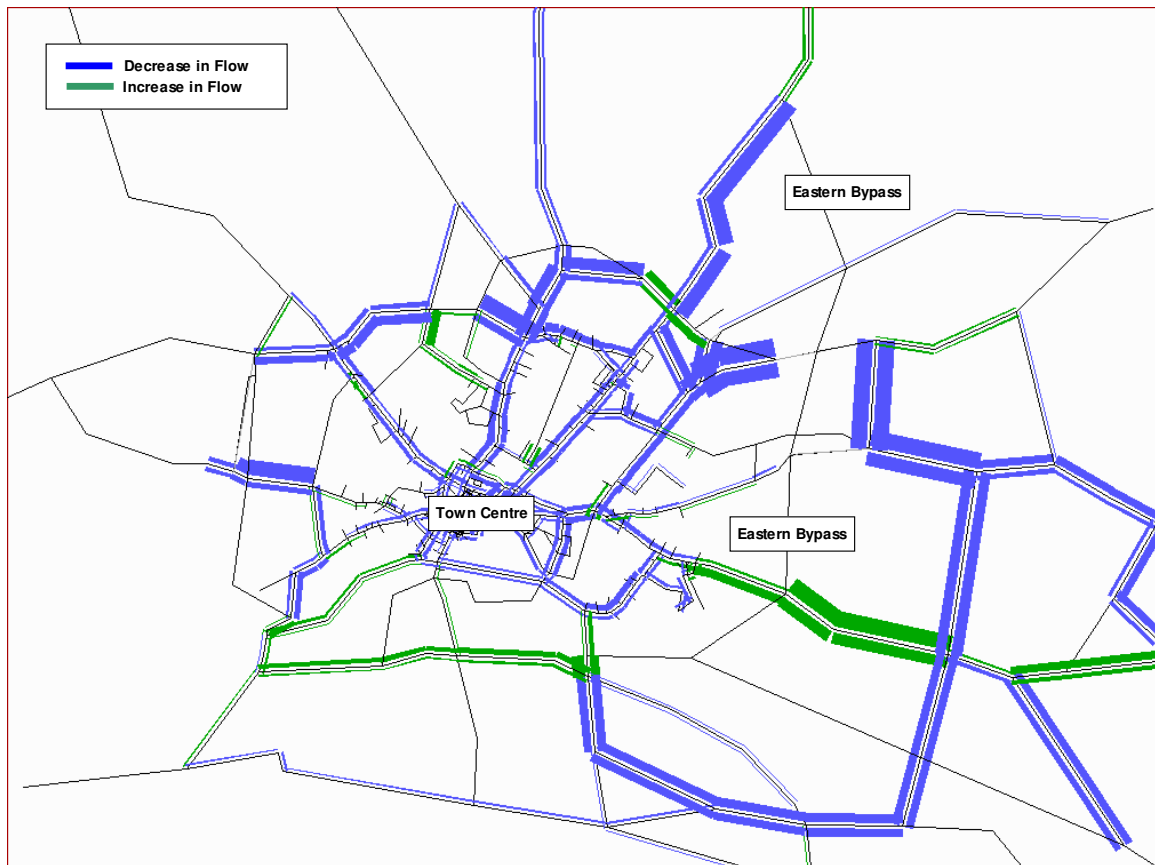
- 11.6.12 In the Do Something with Smarter Travel scenario, average speeds increase a further 5.7% and delays are further reduced. This is as a result of the mode shift away from private vehicles to non motorised forms of transport such as walking and cycling.

### 11.7 Network Performance Stats -Medium and Long Term

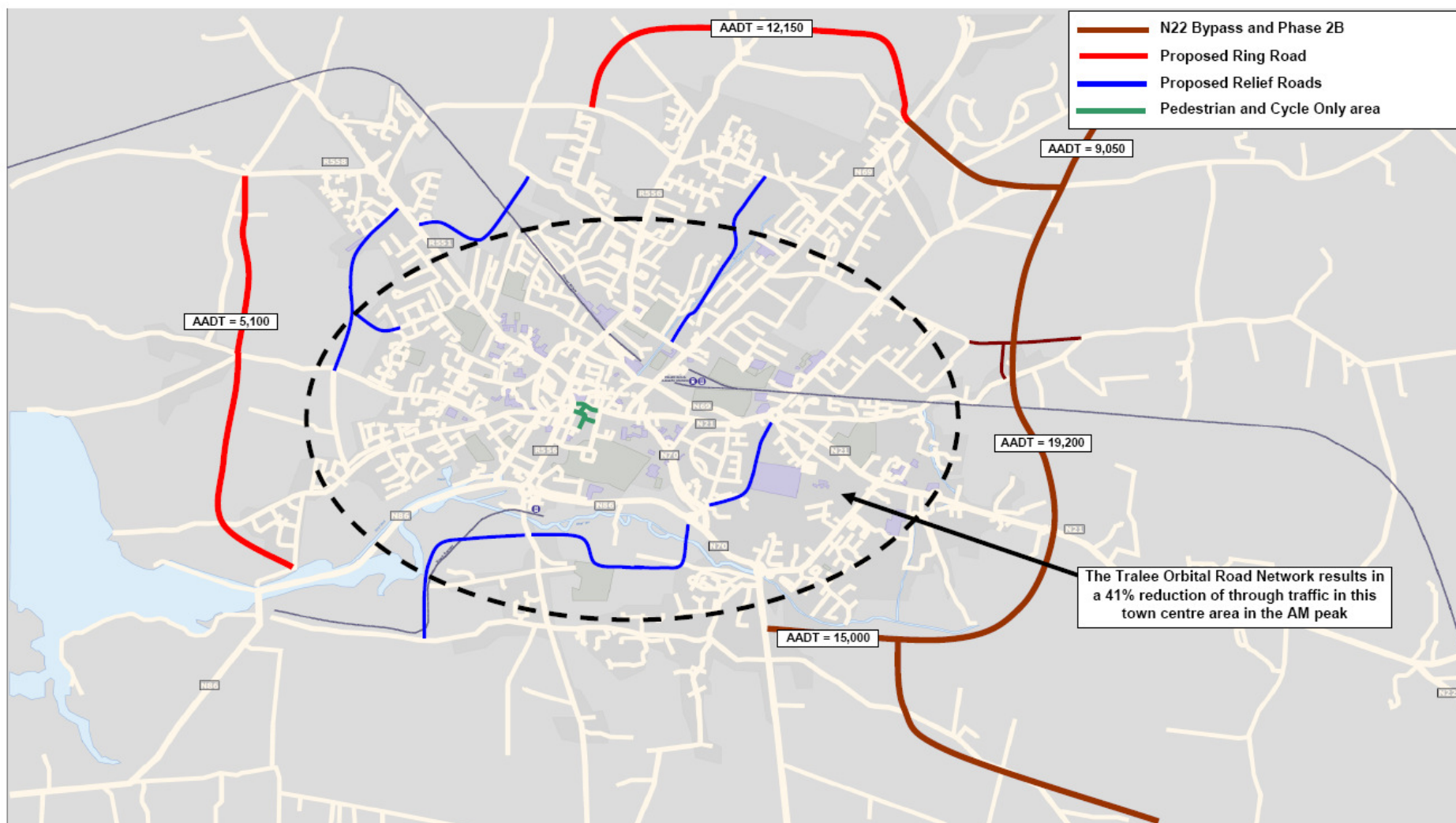
#### Impact of the Strategic Network Interventions

- 11.7.1 The Impact of the full range of medium to long term strategic interventions described in Figure 11.1 has been assessed using the 2021 and 2026 forecast year Tralee Traffic Model. Figure 11.7 and Figure 11.8 below illustrate the 2021 and 2026 AM Peak half hour flows on the Tralee Bypass and Northern and Western Ring Roads. These figures show that the bypass has an AADT flow of 19,216 in the medium and 20,233 in the long term. The Northern Ring Road has an AADT flow of 12,166 vehicles in medium term and 13,016 in the long term. The western Ring Road has an AADT flow of 5,100 vehicles in the medium term and 5,283 vehicles in the long term.
- 11.7.2 These figures show that in the medium and long term the Bypass and Northern Ring Road will carry significant flows. In contrast flows on the Western Ring Road are relatively low, this is in part due to the development of the Knockanacuig Cross to Caherslee Inner Relief Road which joins with the Knockanacuig to Ballyvelly Road and provides an alternative route to the Western Ring Road.
- 11.7.3 Figure 11.6 below illustrates the links on which traffic has increased or decreased as a result of the full implementation of the Tralee Orbital Road Network in 2021. 2026 is not shown as the pattern is almost identical to that of 2021. The colour blue in this figure represents a decrease in traffic flow and green represents an increase in flow.
- 11.7.4 Analysis of town centre traffic flows shows that through traffic in the town centre area is reduced by approximately 41% in the medium term (2021) and 40.2% (2026) in the long term during the AM peak period as a result of the implementation of the Tralee Orbital Road Network and Inner-Relief roads. This illustrates that these Strategic interventions lead to a significant decrease in the amount of through traffic using the key radial routes leading into and out of the town centre area.

**Figure 11.6 Reallocation of traffic as a result of the Tralee Orbital Road Network**

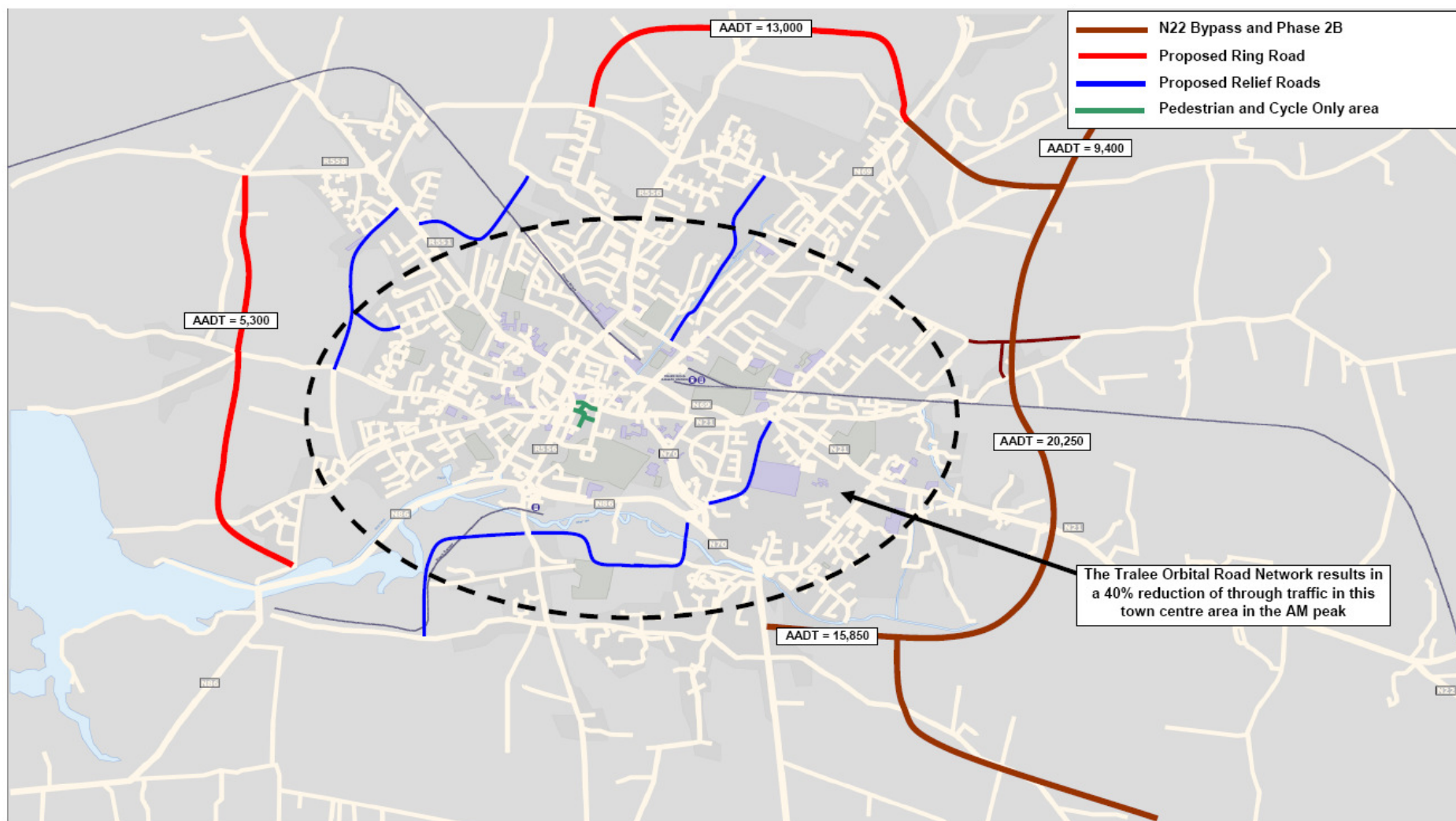


**Figure 11.7 Medium Term (2021) Bypass and Ring Road AM peak Traffic Flows**





**Figure 11.8 Long Term (2026) Bypass and Ring Road AM peak Traffic Flows**



### Analysis of Shared Surface and Pedestrianisation Schemes

- 11.7.5 The removal of such a large proportion of through traffic facilitates the introduction of the town centre initiatives, namely the pedestrianisation of Upper Bridge street and The Mall area as well as the introduction of shared surface areas on Russell Street, Bridge Street and Lower Rock Street.
- 11.7.6 When the Tralee Orbital Road Network scheme is in place with the pedestrian orientated schemes (Do Everything Scenario) average speeds are seen to increase by 33.9% in the medium term and 27.3% in the long term, compared to the Do Nothing Scenario, as traffic is moved out of the town centre and onto the orbital routes and thus freeing up the congested town centre network.
- 11.7.7 To further test if the surrounding road network was able to facilitate the implementation of shared surface areas on New Road and Bridge Street, a model test run was carried out in which the Tralee Orbital Road Network was not implemented and the proposed shared surface areas were completely closed to traffic. The results of this test run showed that, while congestion did increase, the resulting increased flow was within the capacity of the surrounding junctions.

### Impact of Town Centre Traffic Management Junction Improvements

- 11.7.8 The traffic management measures included in the medium and long term include the seven short term junction upgrades mentioned above plus the following additional upgrades:

- M1 - Clash Roundabout;
- M2 - Strand Street/Matt Talbot Road;
- M3 - Lower Castle Street/Edward Street;
- M4 - N69 Fairies Cross;
- M5 - Racecourse Road/Clash Road;
- M6 - Racecourse Road/Oakpark Road;
- M7 - Oakpark/Muing Road;
- M8 - R551/Lioscarrig Drive;
- M9 - Rathass Roundabout; and
- M10 - Deans Lane/Boherbee.

- 11.7.9 Table 11.2 and Table 11.6 provide information on traffic statistics extracted from the Tralee Traffic Model for these junctions. This information includes vehicular flow travelling through the junction, the extent of the delay suffered and volume over capacity (V/C) percentages for each of these junctions in the medium and long term. The statistics are presented for the AM Peak Period (08.30-09.00) for the Do Town Centre Traffic Management Scenario. This scenario was used as it does not include the Bypass and therefore represents a worst case scenario for the town centre junctions.

**Table 11.5 Medium Term Traffic Management Junction Analysis Results**

<b>Junction</b>	<b>Actual Flow Through Junction (PCUs)</b>	<b>Average Delay (Seconds)</b>	<b>Volume over Capacity (V/C) %</b>
S1 - R874 Basin View/N86	676	69	43%
S2 - Upper Rock Street	1213	69	87%
S3 - Island of Geese/New Road	222	13	62%
S4 - Austin Stacks Park Roundabout	784	42	47%
S5 - Balloonagh Cross	1105	105	61%
S6 - Garryruth Road/ Ballymullen Road	871	88	70%
S7 - Edward Street/John Joe Sheehy Road	1094	100	63%
M1- Clash Roundabout	1109	138	66%
M2- Strand Street/Matt Talbot Road	826	7	49%
M3 – Lower castle Street / Edward Street	674	39	47%
M4 – N69 Fairies Cross	838	18	37%
M5 – Racecourse Road / Clash Road	963	159	62%
M6 – Racecourse Road / Oakpark Road	708	31	34%
M7 – Oakpark / Muing Road	786	80	65%
M8 – R551 / Lios Carraig Drive	530	15	33%
M9 – Rathass Roundabout	879	147	71%
M10 – Deans Lane / Boherbee	287	16	18%

**Table 11.6 Long Term Traffic Management Junction Analysis Results**

<b>Junction</b>	<b>Actual Flow Through Junction (PCUs)</b>	<b>Average Delay (Seconds)</b>	<b>Volume over Capacity (V/C) %</b>
S1 - R874 Basin View/N86	708	84	46%
S2 - Upper Rock Street	1218	79	89%
S3 - Island of Geese/New Road	225	13	63%
S4 - Austin Stacks Park Roundabout	807	45	48%
S5 - Balloonagh Cross	1120	114	62%
S6 - Garryruth Road/ Ballymullen Road	860	99	70%
S7 - Edward Street/John Joe Sheehy Road	1131	109	66%
M1- Clash Roundabout	1111	151	66%
M2- Strand Street/Matt Talbot Road	849	7	51%
M3 – Lower castle Street / Edward Street	713	42	50%
M4 – N69 Fairies Cross	860	18	38%
M5 – Racecourse Road / Clash Road	972	180	63%
M6 – Racecourse Road / Oakpark Road	732	32	35%
M7 – Oakpark / Muing Road	854	85	71%
M8 – R551 / Lios Carraig Drive	555	15	35%
M9 – Rathass Roundabout	891	145	72%
M10 – Deans Lane / Boherbee	313	17	19%

- 11.7.10 The results of this analysis indicate that all junctions upgraded in the medium and long term will operate within capacity during the AM Peak period in 2021 and 2026.
- 11.7.11 The above junctions will experience relatively minor delays. The longest delays observed over the medium and long term were at Clash Cross, Race course Road / Clash Road and Rathass Roundabout. As these Junctions experience relatively heavy flows some delay is considered to be unavoidable.

## 11 Strategy Assessment

- 11.7.12 The busiest junction in the network in the medium and long term was the junction of Upper Rock Street / North Circular Road, which had flows of 1213 PCUs in the medium term and 1218 PCUs in the long term.

### General Network Statistics

- 11.7.13 Table 11.7 and Table 11.8 below outline the Key network Statistics for the medium term (2021) and long term (2026) scenarios during the AM peak half hour period (08:30 – 09:00). These statistics are also illustrated in Figure 11.9 to Figure 11.12 below.

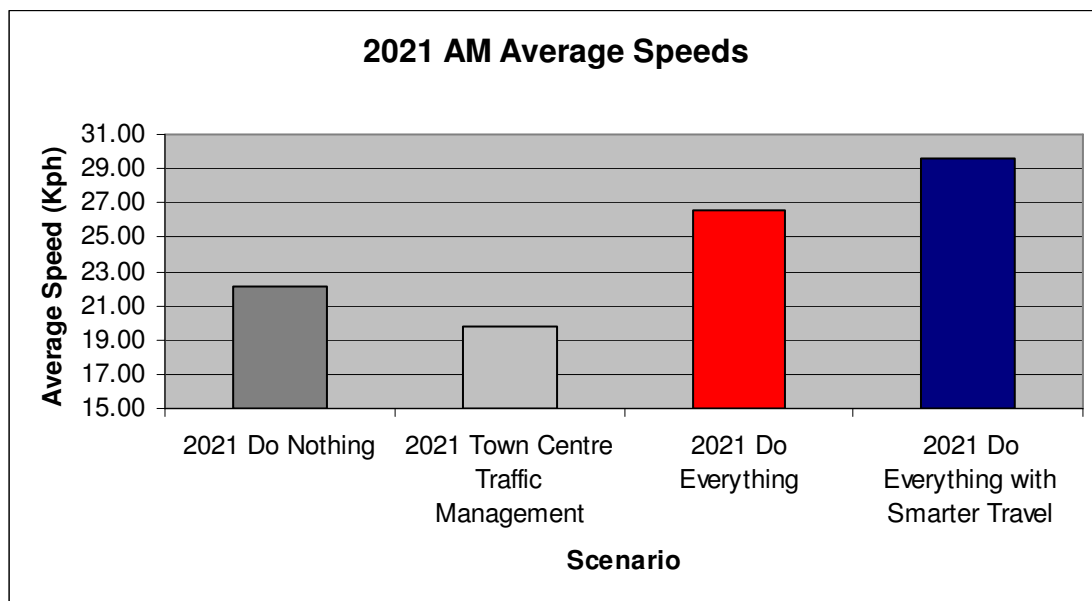
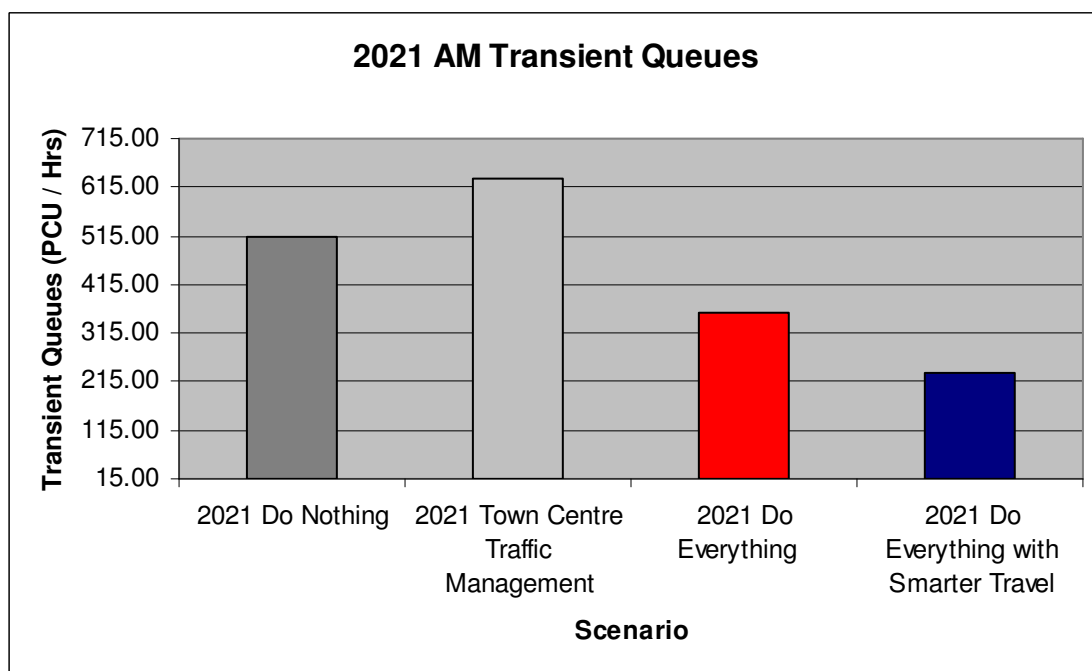
**Table 11.7 2021 key network Statistics**

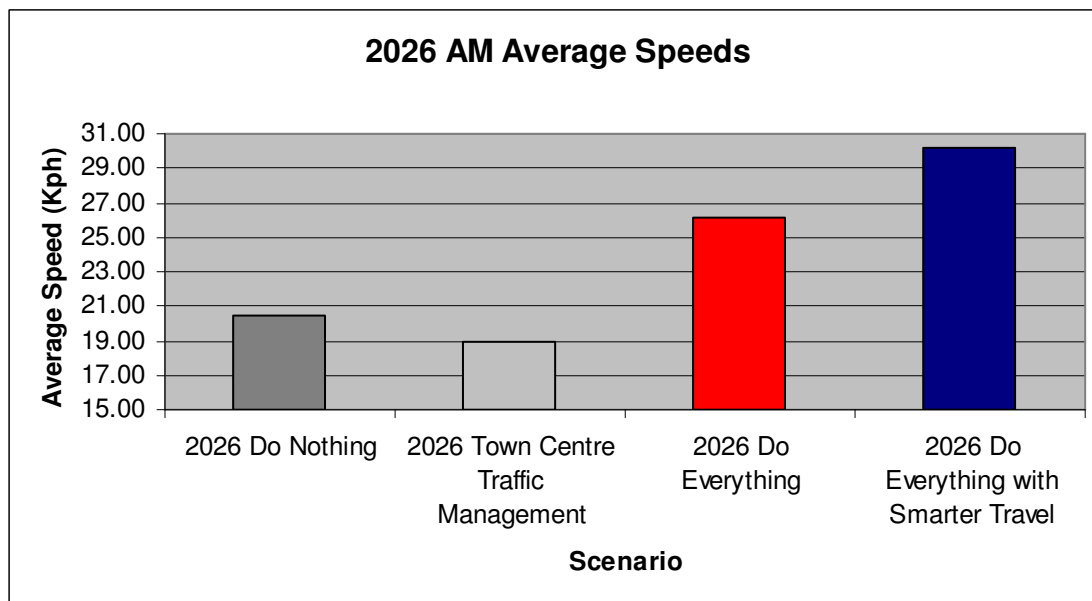
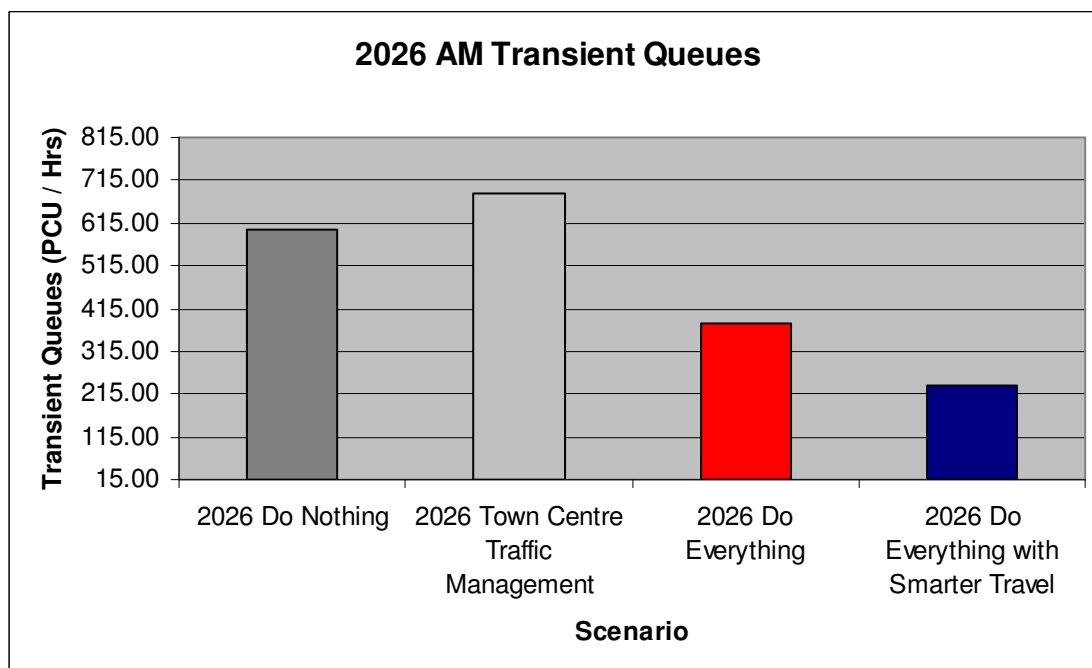
Scenario	Average Speed (Kph)	Transient Queues (Pcu/ hrs)
Do- Nothing	22.1	515
Do- Town Centre Traffic Management	19.8	633
Do - Everything	26.6	358
Do – Everything & Smarter Travel	29.6	235

**Table 11.8 2026 key Network Statistics**

Scenario	Average Speed (Kph)	Transient Queues (Pcu/ hrs)
Do- Nothing	20.5	598
Do- Town Centre Traffic Management	19.0	684
Do - Everything	26.10	382
Do – Everything & Smarter Travel	30.2	234



**Figure 11.9 2021 AM Average Speeds****Figure 11.10 2021 AM Queuing**

**Figure 11.11 2026 AM Average Speeds****Figure 11.12 2026 AM Queuing**

- 11.7.14 These results show that, as in the short term, when the town centre traffic management network interventions are implemented in isolation, the average speeds decrease and delay increases.
- 11.7.15 Once the town centre traffic management interventions are put in place with the proposed network interventions from the Tralee Town Development Plan (the Tralee Orbital Road Network plus a number of inner-relief roads) delays are significantly reduced and average speeds are significantly increased. The increase in average speeds between the Do-Nothing and Do-Everything scenarios is 20.3% in 2021 and 27.3% in 2026.

- 11.7.16 In the Do Everything with Smarter Travel Scenario delays are further reduced and average speeds are further increased as a result of the mode shift away from cars towards walking and cycling as a result of the Smarter Travel initiatives.
- 11.7.17 This analysis also shows the importance of the strategic interventions as part of this Transportation Study. The construction of the Tralee Bypass and Ring Roads has the effect of removing a large proportion trips from the town centre allowing the implementation of the pedestrianised area and pedestrian priority streets without causing disruption to traffic or increasing journey times.

### 11.8 Environmental Appraisal

***"We aim to minimise the negative impacts of transport on the local and global environment through reducing localised air pollutants and greenhouse gas emissions."***

*Department of Transport, 2009*

- 11.8.1 The above statement is one of five key goals set out in the Department of Transport's recent 'A Sustainable Transport Future – A New Transport Policy for Ireland 2009 – 2020'. It is a clear signal that the need to deliver a more sustainable and cleaner transport system has achieved a prominent place on the climate change and wider political agenda. Emissions from road transport related activities play a significant role in the achievement of local and national policy objectives:
- At a local level, the key considerations relate to ambient air quality. This is of special concern in urban areas, given the increased traffic related activities and increased residential densities in these areas and the potential to affect a wider population base. Local emissions of concern are benzene, 1,3-butadiene, carbon monoxide (CO), nitrogen oxides (NOx) and particulates (PMs). These have received increasing attention with the accumulation of evidence linking them respiratory and cardio-pulmonary disease, lung cancer and potential to exacerbate incidences of asthma. Maximum environmental ambient air concentration values are determined by relevant EU directives; and
  - At a broader level, transport emissions contribute to the increasing concentration of gases associated with climate change. The principal road transport related greenhouse gasses carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O). Reducing these emission outputs is essential to the achievement of national emissions targets, as set through international agreements such as the Kyoto Protocol. The most recent national emissions data available at present <sup>13</sup> indicates a 46.6% (excluding international aviation) overall growth in CO<sub>2</sub> emissions over the period from 1990 to 2007. The most recent trends for the period between 2007 indicate a reduction in CO<sub>2</sub> emission at a national level. In 2007, all sectors of the economy contributed towards this reduction, with the exception of transport, where a 5.1% increase was recorded.

<sup>13</sup> Energy in Ireland 1990 – 2007, 2008 Report published by Sustainable Energy Ireland

- It is in the above context that the achievement of more sustainable future travel patterns has an important role to play in improving local air quality standards, and in reducing national CO<sub>2</sub> emissions outputs.
- The following table provides output from the Tralee Traffic Model in relation to general traffic related pollutants in the Tralee area. This has been undertaken in the context of Medium Term (2021), using available emissions outputs from Saturn component of the model for the Do Nothing Scenario, the Town Centre Traffic Management Scenario, the Do Everything Scenario and the Do Everything with Smarter Travel Scenario.
- The outputs within this table are intended only to give a guide as to the comparative emissions levels between scenarios.

**Table 11.9 General Traffic Related Environmental Pollutants (for 08:30 to 09:00hrs Time Period) 2021**

<b>Environm ental Pollutant</b>	<b>Do-Nothing</b>	<b>Town Centre Traffic Management only</b>	<b>Do Everything</b>	<b>Do Everything with Smarter Travel</b>
CO <sub>2</sub> (kg)	2661.36	2794.1	2225.79	1727.07
CO (kg)	301.2	325.35	240.59	181.37
NO <sub>x</sub> (kg)	58.95	62.86	54.49	43.54
HC (kg)	53.59	57.83	43.26	32.77
PB (kg)	0.28	0.3	0.24	0.18
PM <sub>10</sub> (kg)	0.28	0.3	0.24	0.18

### Ambient Air Quality Impacts

- 11.8.2 The primary sources of key environmental emissions namely NO<sub>2</sub>, PM<sub>10</sub>, CO and to some extent VOC (Benzene) is road transport. Of these emission types, forecast emissions outputs from the Saturn model are available for CO and PM<sub>10</sub> only.
- 11.8.3 As can be seen from this table, the Do Everything and Do Everything with Smarter Travel Scenarios perform positively in terms of improving local ambient air quality. For CO, a 20% reduction in emissions values is forecast between the Do Nothing and Do Everything Scenario, and for PM<sub>10</sub> a 14% reduction is forecast.
- 11.8.4 Even greater reductions in emissions are seen between the Do Nothing and Do Everything with Smarter Travel Scenario. For CO, a 40% reduction in emissions is forecast between the Do Nothing and Do Everything with Smarter Travel Scenario, and for PM<sub>10</sub> a 35% reduction is forecast.

### National Emissions Impacts

- 11.8.5 The key environmental emission type for which output limits have been set through international agreements is CO<sub>2</sub>. The full implementation of the strategy with smarter travel targets being met will give rise to a 35% reduction in CO<sub>2</sub> emissions above the Do-Nothing Scenario.
- 11.8.6 This equates to an annual reduction of 6,118 tonnes and represents a significant decrease in transport related CO<sub>2</sub> emissions. Such a reduction will have a significant role to play in the achievement of reduced emissions at a national level.

## 11.9 Financial Appraisal

### Introduction

- 11.9.1 The network evaluation section of this chapter has indicated that, based on forecast future demand, Do Everything with Smarter Travel would best meet the transport needs of the area.
- 11.9.2 Financial appraisal is included below for the following:

- Preliminary capital cost estimates for the full set of proposed junction upgrades, shared space, and pedestrianisation schemes<sup>14</sup>;
- An appraisal of the Car Parking Strategy in terms of the potential impact on future parking revenues is provided based on preliminary estimates;
- Indicative costs for Car Parking Signage; and
- Indicative costs for the VMS strategy.

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<sup>14</sup> Capital costs for local junction upgrades have been provided by DBFL Consulting Engineers and are preliminary estimates only.



## 11.10 Results of Junction Upgrades Capital Costs Estimates

Table 11.10 Junction Upgrades Preliminary Capital Cost Estimates

Code	Junction	Cost (€)
S1	R874 Basin View/ N86	108,000
S2	Upper Rock Road	41,000
S4	Austin Stacks Park Roundabout	288,000
S5	Balloonagh Cross	99,000
S6	Garryruth/ Ballymullen Road	23,000
S7	Edward Street/ John Joe Sheehy Road	169,000
M1	Clash Roundabout	318,000
M2	Strand Street/ Matt Talbot Road	172,000
M3	Lower Castle St./ Edward Street	108,000
M4	N69 Fairies Cross	158,000
M5	Racecourse Road/ Clash Road	297,000
M6	Racecourse Road/ Oakpark Road	134,000
M7	Oakpark Road/ Muing Road	131,000
M8	R551/ Lioscarrig	115,000
M9	Rathass Roundabout	313,000
M10	Dean's Lane/ Boherbee	110,000
M11	Rock Street/ New Road	387,000
M13	Bridge Street/ Staughton Row	188,000
M14	Ivy Terrace/ Prince's Street/Denny St.	680,000
<b>Shared Space: Island of Geese/ New Road and Russell Street/ Bridge Street</b>		<b>410,000</b>
<b>The Mall Pedestrianisation</b>		<b>1,350,000</b>
<i>(Table continues overleaf...)</i>		

Code	Junction	Cost (€)
	<b>Short Term Junction Upgrades Total</b>	<b>728,000</b>
	<b>Medium Term Junction Upgrades Total</b>	<b>3,111,000</b>
	<b>Shared Space + Pedestrianisation</b>	<b>1,760,000</b>
	<b>Grand Total</b>	<b>5,599,000</b>

### 11.11 Results of Parking Financial Appraisal

11.11.1 This section discusses the potential impact on parking generated revenues resulting from the implementation of the full Transport Transport Strategy. This is a rough estimate of how cash-flow might be impacted rather than a thorough cost-benefit analysis. As such, the analysis does not include costs such as those required for car park barriers, new signage, or alteration of existing signs.

11.11.2 As discussed earlier, the strategy requires removal of a number of short term spaces in the central areas to accommodate pedestrianisation, shared spaces, and general improvement works. A key recommendation is also to allow the first half an hour to be provided at a reduced fee of 50 cents in on-street town centre spaces with 1 hour maximum stay.

11.11.3 The methodology for calculating the financial impact is straight-forward.

#### Step 1

11.11.4 A combination of maximum allowed duration and average occupancy (as surveyed for midweek and weekend conditions,) is used to calculate the normal income per space. Multiplying this by the number of spaces gives the total lost income for the particular area where spaces are given up.

#### Step 2

11.11.5 The loss of some spaces is expected to result in the increased uptake of spaces in other locations where spaces are available. As explained in Chapter 7: Parking Strategy, this spare capacity is largely provided for in one of the many off-street car parks. Uptake of parking in these will offset the loss of revenue established by step 1 above.

#### Step 3

11.11.6 The effects of introducing a new parking charge for on-street town centre spaces with 1-hour maximum stay are also estimated. The primary function of the new proposed price structure is to act as a demand control measure, thus ensuring more availability of Town Centre spaces for short-stay retail trips. It is not intended as revenue generation measure.

- 11.11.7 The results for Step 1 are shown in Table 11.11 and the results for Step 2 are shown in Table 11.12. The results for Step 3 are shown in Table 11.13.

### Sensitivity Tests on Revenue

- 11.11.8 This is done because there is substantial uncertainty in how the revenue gains (Step 2) can be estimated due to the availability of both private and public car park options.
- 11.11.9 Clearly some of the loss in revenue will not be recovered if former users of on-street parking use private car parks instead. It is not certain to what extent this will occur and therefore we propose two scenarios:
- **No Reassignment: (worst case)** Where the revenue from lost spaces is not considered to come back to Tralee Town Council because the trip is not made due to the lost space;
  - **Reassignment:** This is where all former on-street paid parking users use public off-street paid parking that is either private or TTC operated, and assumes that car parking trips redistribute into either based on the nearest location. Furthermore, if the nearest car park is known to have limited capacity, it was assumed the trip moved in to a different off-street multi-story. Due to the popularity and ease of access of TTC car parks, these are the primary choice. The multi-story private car parks are assumed to be second preference, and therefore if chosen result in lost revenue.
  - **Pricing Structure: (recommended case)** This only affects the spaces in Tralee town centre with 1 hour maximum stay. The parking Strategy outlined in Chapter 7 proposes a reduced fee of 50 cents for the stays of less than 30 minutes. If vehicles park for longer than 30 minutes, then the full €2/hour charge applies, as outlined in Table 7.2. This pricing structure encourages faster turnaround and therefore higher availability of car parking spaces close to the town centre retail areas.

**Table 11.11 Income Lost due to Reduced On-Street Parking Stock**

Location	Maximum Duration	Spaces Lost	Mid-Week Average % Occupancy	Saturday Average % Occupancy	Mid-Week Income Lost	Saturday Income Lost
Castle Street Lower	1	12	51	72	73	104
Denny Street	1	66	76	75	602	594
Ivy Terrace	2	14	93	86	78	72
Staughton Row	2	6	75	81	27	29
New Road	1	6	99	82	71	59
Island of Geese	2	6	100	75	36	27
Waterloo Lane	2	7	100	100	42	42
Bridge Street Upper	1	4	44	46	21	22
Rock Street Lower	1	6	75	87	54	63
<b>SUB-TOTAL</b>		<b>127</b>			<b>(1005)</b>	<b>(1012)</b>
<b>TOTAL WEEKLY</b>						<b>(6037)</b>

**Table 11.12 Income Gained Due to Reassignment<sup>15</sup>**

Location	Operator	Maximum Duration	Mid-Week Additional Spaces Used	Saturday Additional Spaces Used	Mid-Week Income Gained	Saturday Income Gained
St John's CP	TTC	1	10	4	120	48
Edward St MSCP	Private	10	2	8	0	0
Parklands MSCP	Private	10	66	66	0	0
Princes St CP	TTC	2	14	14	84	84
Abbey CP	TTC	1	10	3	120	36
Parklands MSCP	Private	10	2	9	0	0
Matt Talbot CP	TTC	2	13	13	78	78
Maine St MSCP	Private	10	4	4	0	0
Maine St MSCP	Private	10	6	6	0	0
<b>SUB-TOTAL</b>			<b>127</b>	<b>127</b>	<b>402</b>	<b>246</b>
<b>TOTAL WEEKLY</b>						<b>2256</b>

<sup>15</sup> This is a conservative reassignment based on spaces available at peak times.

Off-peak there will probably be a greater percentage of lost demand reassigned to the remaining on-street parking spaces.

**Table 11.13 Profit and Loss Results for Implementation of the Parking Strategy<sup>16</sup>**

	Case 1: Worst Case		Case 2		Case 3: Recommended Case	
	No Reassignment		Reassignment (Table 11.12)		Reassignment (Table 11.12)	
	Existing €1.20/hr in spaces with 1 hour maximum stay		Existing €1.20/hr in spaces with 1 hour maximum stay		Reduced 50c/30min in spaces with 1 hour maximum stay	
	Mid-Week	Saturday	Mid-Week	Saturday	Mid-Week	Saturday
Loss due to reduced on-street parking stock	(1005)	(1012)	(1005)	(1012)	(1005)	(1012)
Gain due to Increased Surface CP use	0	0	402	246	402	246
Gain due to Increased Turnover	823	854	823	854	823	854
Gain due to New 1-hour Pricing Structure	0	0	0	0	109	103
<b>Daily Profit/Loss</b>	<b>(182)</b>	<b>(158)</b>	<b>220</b>	<b>88</b>	<b>329</b>	<b>192</b>
<b>% Daily Profit/Loss</b>	<b>(4%)</b>	<b>(4%)</b>	<b>5%</b>	<b>2%</b>	<b>7%</b>	<b>5%</b>
<b>WEEKLY PROFIT/LOSS</b>		<b>(1066)</b>		<b>1190</b>		<b>1838</b>

<sup>16</sup> This takes no account of increased revenues from improved enforcement.



### Conclusion

- 11.11.10 Case 1 No Reassignment is the worst case option (once the spaces are removed the overall use of parking decreases commensurately). The results shown in Table 11.13 put the estimated possible loss at approximately 4% of parking revenue.
- 11.11.11 The losses incurred due to reduced on-street parking stock are off-set to a great extent by the increase in revenue associated with improved turnover which is primarily due to the expansion of the 1 hour parking zone in Tralee. There is a flat rate charge for on-street parking in Tralee that buys up to the maximum allowable length of stay in that particular zone.
- 11.11.12 Under the Case 2 scenario it is assumed that the removal of on-street spaces results in parking being used elsewhere, either in private or publicly operated car parks, as shown in Table 11.12. The results for Case 2 indicate that under the strategy there will be a modest increase in revenues of two to five percent.
- 11.11.13 The increase in revenue for Case 2 is a conservative estimate of the revenue gains due to reassignment, as it is based on spaces available at peak times. Off-peak there will probably be a greater percentage of lost demand reassigned to the remaining on-street parking spaces, resulting in further increased revenue for Tralee Town Council.
- 11.11.14 Case 3: Recommended Case, represents the full implementation of the Parking Strategy, including the new pricing structure for spaces with a 1-hour maximum stay in Tralee town centre. The results shown in Table 11.13 put the estimated gain at approximately 5% to 7% of parking revenue.
- 11.11.15 Under the Parking Strategy, a reduced charge of 50 cents for the first 30minutes is proposed, with longer stays charged at €2/hour, as per Table 7.2. This is effectively a cost neutral strategy, with the overall revenue gains due to the proposed pricing structure estimated to be just over €100/day. However, the benefit comes in increased availability of short stay spaces close to the town centre retail areas.
- 11.11.16 The above Financial Appraisal of the proposed Parking Strategy takes no account of the increased revenues which would likely result from improved enforcement.

### 11.12 VMS Strategy Preliminary Capital Cost Estimates

- 11.12.1 The table below sets out preliminary cost estimates for the implementation of the variable message signage system. The system comprises technology at three of the main off-street car parks in Tralee (Parklands (210 spaces), Maine St (440 spaces), and Edward Street (170 spaces), since these have the greatest amount of spare capacity and would free up significant space for pedestrians and cyclists in the town centre), the on-street signage technology and all associated communications systems and hardware.

**Table 11.14 VMS Cost Estimates**

Equipment Description (Parking Information System)	Non-Recurring Cost	Recurring Cost
Central Computer System, Hardware and Software	€11,540	
Static Signs (quantity 12)	€21,360	
VMS Controllers and Cabinets (Quantity 5)	€249,187	
VMS Structures and Installation (Quantity 5)	€247,750	
Car Park Monitoring System- Hardware & Installation (for 3 car parks)	€100,000	
Communications System Hardware	€5,900	
Communications System Labour	€3,600	
Maintenance @ 7% of Hardware Costs		€42,783
Parking Management Staff		€35,000
<b>Total</b>	<b>€639,337</b>	<b>€77,783</b>

## 12 Implementation and Phasing

### 12.1 Introduction

12.1.1 This chapter highlights some key aspects of strategy management that contribute to successful programme delivery, and also sets out the timeline for implementation of the range of specific recommendations discussed earlier in this report.

12.1.2 The timeline included below is indicative only, mainly serving the purpose of identifying interdependencies among key measures. Certain proposals included in the strategy may only be implemented following the completion of others, and these relationships are indicated below.

12.1.3 The implementation of measures is broken into:

- short term: to be started as soon as possible;
- medium term: a time horizon of about 5 or 6 years within which these measures should be completed;
- long term: large, ambitious elements of the strategy will by their nature take much longer to plan and construct, and would not normally be completed within a 6 year timeframe.

12.1.4 The planning process required for implementing the shared space schemes, for example, may require more than 5 or 6 years to complete. This means they fall into the 'long term' category, after the completion horizon of all medium term measures. Despite this designation, it should be noted here that actual advance planning for these scheme may need to commence in the short term, depending on how lengthy this process is expected to be.

### 12.2 Strategy Management

12.2.1 Managing the delivery of the strategy is very important, if it is to be delivered complete and achieve all of the intended objectives. It is crucial to nominate a programme manager who can lead the planning and implementation of the overall strategy and all of its individual elements, in a cohesive and coordinated way.

12.2.2 Regular reviews of strategy progress should be held, at least annually, to monitor progress and set future targets clearly. These reviews would also facilitate information exchange and coordination between the Town Council, the County Council, and all of the various transport stakeholders and operators.

12.2.3 The programme manager would have the following responsibilities, among others:

- Planning, design, and implementation of junction upgrades and the road network strategy;
- Initiating appropriate strategies within their departments to strengthen and expand existing arrangements for the enforcement of parking;

- Regular monitoring of parking violations to determine the impact over time of the parking enforcement strategy. It is vital to quickly detect if attempts to control parking violation are effective, and to seek to adapt the enforcement strategy if necessary;
- Nomination of a School Travel Advisor, who will collaborate with organisations such as An Taisce to inform schools on methods and programmes to reduce parent drop off traffic and increase walking and cycling; and
- On-going communication of the Strategy Vision, objectives, and supporting evidence for the measures to the general public and key stakeholders to ensure on-going wider buy-in of the Tralee Transport Strategy and the key recommendations.

### 12.3 Phasing

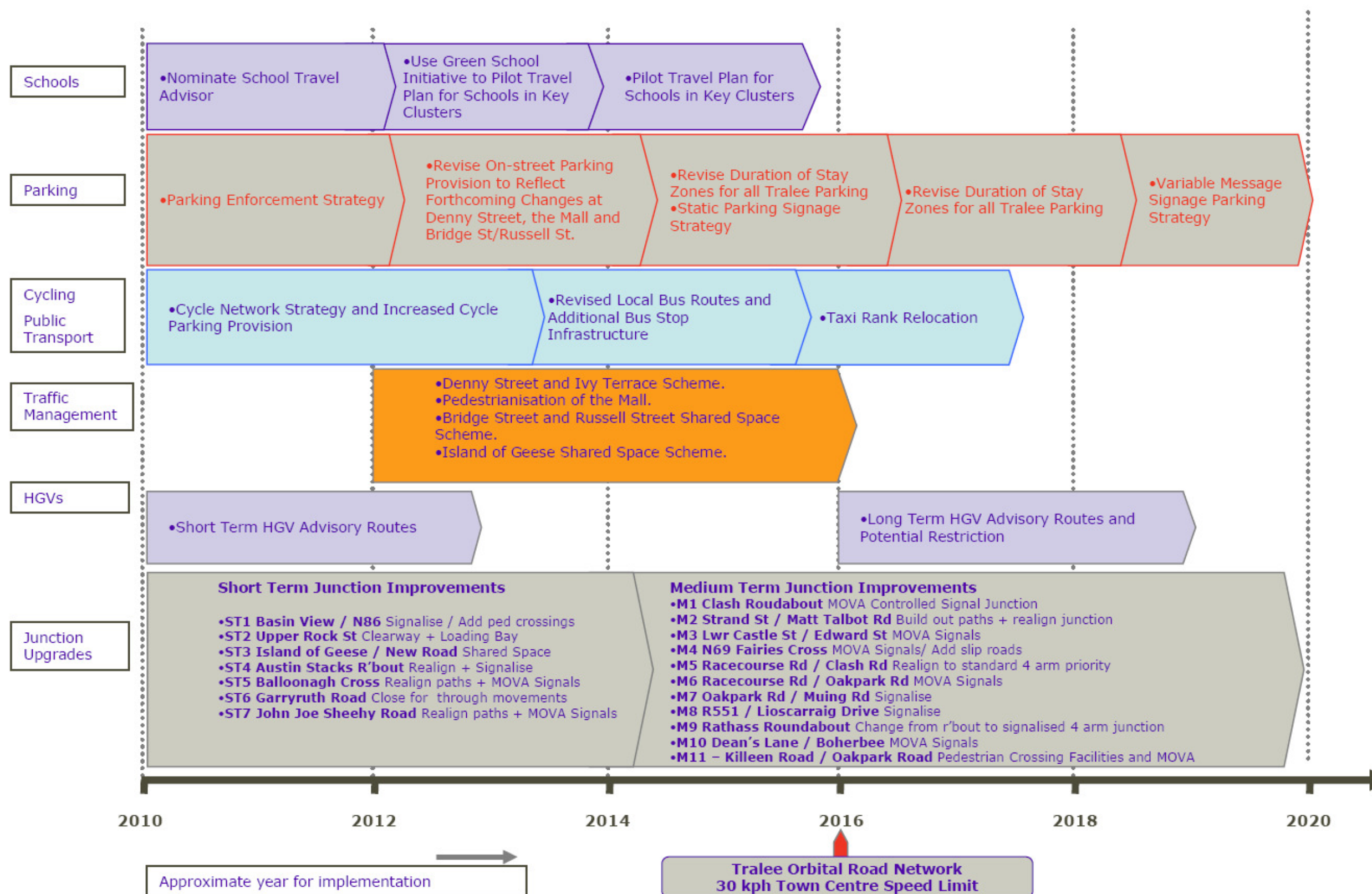
- 12.3.1 A phasing strategy has been developed for each of the key recommendations of the Tralee Transport Strategy. The recommendations are broken up by transport mode. The timeline given is indicative only, as the actual time required for implementation of much of the strategy is uncertain.
- 12.3.2 The date of completion of the Tralee Orbital Road Network is an important milestone in the timeline for the implementation of the Tralee Transport Strategy. Significant volumes of traffic will be removed from the town centre when these bypasses are complete in 2016. Some of the measures within the Tralee Transport Strategy depend on this reduction in car traffic and the decreased pressure on the central road network. The completion of these measures can therefore not happen until the Tralee Orbital Road Network is opened. When open, the removal of town centre traffic will allow the creation of shared space and a 30kph zone, to coincide with lower traffic volumes.

#### Short Term Junction Measures

- 12.3.3 Obtaining the best return from upfront, early investment in the roads infrastructure of Tralee is important. Therefore a set of junctions have been identified for immediate ("short term") upgrading. Very clear needs for improvements at this set of junctions have been identified and outlined in this report and also the Baseline Traffic Evaluation report. Significant improvement to the operational efficiency and safety level of the Tralee urban road network will be achieved with the implementation of these measures, and therefore the completion in full of the short term upgrades listed in Chapter 6 should be made a priority. The expected timeline for completion of these is in the region of 3 to 4 years, but this is uncertain and subject to change depending on funding and other resources.

#### Medium Term Junction Measures

- 12.3.4 The medium term junctions are of a slightly lower priority than the short term. There may be factors that could change this view and promote a number of the medium term junctions to the short term programme, for example if traffic or pedestrian levels were to unexpectedly increase in the vicinity of a particular junction. This depends much on factors that are not possible to foresee at present. The timeline for short/medium term upgrading should be viewed as indicative only and should be adapted if the need arises.

**Figure 12.1 Indicative Implementation Timeline**



## 13 Public Consultation and Submissions

### 13.1 Introduction

- 13.1.1 Following the completion of the Draft Tralee Transport Strategy Report a period of public consultation was undertaken in the Tralee Town Council Chambers from the 21<sup>st</sup> to the 22<sup>nd</sup> of July 2010. During this period residents and local stakeholders were invited to review the strategy proposals and to submit any comments, queries and suggestions they may have.
- 13.1.2 Many valid concerns and suggestions were expressed to which have been given serious consideration in the context of the transport strategy. This chapter aims to address specific concerns that were raised and highlight some of the local issues of importance that may not have been covered earlier in the strategy.
- 13.1.3 It should also be noted that although around fourteen junction-specific junction design drawings were done as part of this strategy, the absence of some junctions on this list (there are many) does not necessarily mean there are no other problem junctions. The Baseline Traffic Evaluation Report highlights some specific issues, but also makes broader general assessment of the road network as a whole, and notes the absence of quality pedestrian facilities in and around the town and the inconsistency in their type and provision. Certain junctions were chosen that were representative of problems at groups of similar junctions, so that the design concepts recommended as a solution at that junction could be applied to others. The junctions identified in the strategy for upgrade, therefore, are those that would have the most benefit in the short to medium term for Tralee in terms of traffic movement and safety.
- 13.1.4 The concerns raised have been grouped by location for reference purposes. The town centre is the location of the majority of the strategic proposals, involving significant changes to the traffic system, parking enforcement, and the streetscape in places. Everyone in Tralee shares an interest in this area, whether they have a business there or makes use of shopping facilities and as such is dealt with first. Following this, submissions and concerns raised for suburban areas are presented.
- 13.1.5 Reference is made to the relevant sections of the report where this helps clarify what is being proposed in the strategy with regard to the essential points of a particular submission. Where merited, we elaborate on the concerns if not sufficiently covered in other parts of this report.
- 13.1.6 Each point of public submission is bulleted, followed by our response in the shaded area.

## 13.2 Submission Relating to the Town Centre

Issue Number	Submission / Comment	Our Response
1.	Reasonable Short-term parking rates in multi-storey and off street should be provided. Free for the first 30 minutes on off street.	It is proposed to provide a reduced fee of 50 cent for the first half hour stay for on-street car parks. Turnover and access to town will be greatly enhanced by this measure. This is addressed in Chapter Seven – Parking Strategy.
2	Comments were received in favour of the pedestrianisation of the Mall only if parking is facilitated through signage, digital displays and customer friendly tariffs.	A signage scheme is part of the strategy to better inform road users. A reduced fee of 50 cent for the first-half hour's parking will encourage access to the town as will the shared space and pedestrianisation measures proposed. See Section 7.10 for further information on the Signage Strategy proposed.
3	A shop owner stated that immediate Free Car Parking should be provided in Bandon Car Park every Saturday.	Bandon Car Park is generally nearly full on Saturdays, as shown by the surveys conducted. Refer to Chapter Seven. Making the car park free will not bring more people in to the town; the opposite would likely arise as the turnover and availability of spaces would be decreased.
4	Balance needed for customers parking to encourage Manor Shopping Centre customers into town.	This will be achieved by enforcing parking restrictions and freeing up more spaces for those wishing to avail of them. A reduced fee of 50 cent for the first half hour's parking will encourage more drivers in to the town. The town will also compete with Manor in terms of a much more attractive shopping environment (through the provision of shared space streets and pedestrianisation of the Mall for certain hours of the day.
5	Cars park illegally in the taxi rank in Shaw's Lane and exit using the taxi lane onto Bridge St / The Mall;	Illegal parking causes widespread problems and proper parking regulation enforcement in Tralee is crucial in order to achieve progress. This is a key recommendation of the strategy.
6	Some junctions are being blocked by parked cars, e.g. Deans Lane onto Boherbee.	Proper enforcement of a strategic pay and display parking system will eliminate problems such as this.

Issue Number	Submission / Comment	Our Response
7	Clearways are a good idea but not from 7.30-1830. 7.30 AM is too early and no retail units will be open.	This is the standard clearway time throughout the country and is structured to help ensure smooth traffic flow during the peak periods. Delivery vehicles can use loading bays which are usually sited near clearway areas.
8	Pedestrian areas should be better linked throughout the town centre e.g. lower Rock Street and Russell Street to Garveys / Brogue Inn Plaza Area	The shared space street surfaces on Bridge Street, Russell Street and Island of Geese combined with the part time pedestrianisation of the Mall will provide a sizable and cohesive pedestrian priority region in the Town Centre. This will also be improved via better co-ordinated and improved junction facilities to safely cater for the movement of all road users
9	Better lighting is needed at pedestrian crossings throughout the town, especially near roundabouts.	Areas with sub-standard lighting arrangements should be identified and reviewed immediately by the Council.
10	Total pedestrianisation of upper bridge street and the Mall will lead to the demise of business which requires close-by parking for their customers to transport heavy or bulky goods.	Pedestrianisation will be implemented on a part time basis, operating between the hours of 11am and 4pm daily. The pedestrianisation proposals and streetscape redesigns in the Mall and adjacent areas, combined with the introduction of a 50 cent fee for on-street parking for up to half hour, will lead to an increased turnover and footfall for businesses located in this area. Refer to Chapter Six for more information on these proposals
11	The main problem with the current traffic flow situation is in the lower rock street area with no co-ordination between traffic lights at Super Value and Rock St / Pembroke Street junction coupled with casual and illegal parking. A further problem in this area is double parking of taxis on upper bridge street.	These are all recognised problems and a series of other problems with the current traffic situation in Tralee have been outlined in the Tralee Baseline Traffic Evaluation Report, included in Appendix D of this document. It is recommended that these signals be looked at and improved in the immediate future.
12	An alternative Suggestion put forward is to "pedestrian prioritise" upper bridge street and the Mall, having a single level surface throughout, with a reduced carriageway width but still allowing traffic to flow, with restricted delivery hours and a set down area for businesses and thus it would negate the need to have two way traffic on Denny Street.	This suggestion has been modelled and is not considered a viable option as the "pedestrian prioritised" Mall area would not have sufficient capacity to carry predicted traffic levels. The level of traffic demand for the mall area is only reduced with the introduction of two-way traffic on Denny Street.

## 13.3 Submission Relating to Denny Street and Ivy Terrace

	Submission / Comment	Our Response
13	A representative of one of the Hotel's on Denny Street has expressed concern at the removal of 60 car parking spaces on Denny Street to facilitate two-way traffic. It is noted that drop off space is needed for customers. A safe area for guest overnight parking is also required. St Johns car park while conveniently located behind the hotel is prone to vandalism and theft.	It is proposed to alter the original plans for Denny Street to include two "drop off/ loading bay" spaces for customers using the Hotels on Denny Street. It is also recommended that security and lighting in St Johns car park should be greatly improved to facilitate overnight customer parking generated by the Hotels on Denny Street.
14	If it is possible to have 2-way traffic on Denny Street the "Croppy Boy" should be moved to the pedestrian area in the Mall for safety reasons.	All safety issues including this concern will be thoroughly assessed at detailed design stage of each individual scheme.
15	Pedestrianisation is to be welcomed as is two-way traffic on Denny Street.	
16	Keep the (aggressive) Taxi drivers out of the Denny Street area. Let us see and enjoy the buildings and Ashe Memorial Hall.	Taxis provide the main form of public transport in Tralee and are therefore very important in transport terms. The taxi proposals recommended by the strategy will improve the service offered by taxis in the town. Refer to Section 10.7 for more information on the strategy proposals for taxis.
17	Parking of large vans on Denny Street is narrowing traffic lanes which is causing cars to swerve in and out of lanes;	On Street parking like this is illegal and dangerous and should be restricted to loading bays only. Full enforcement of traffic regulations and a strategic pay and display parking system will eliminate problems such as this. Consultation with An Garda Siochana to agree future approaches to enforcement is recommended by the strategy.
18	For Pedestrianisation and two-way traffic on Denny Street to work the town council will have to scrap all ideas of putting a new road through the Town Park.	Ivy Terrace narrows as it approaches Princes Quay making it difficult to provide for two-way traffic. There is insufficient width at the junction with Princes Quay to provide the turning circle required to access Ivy Terrace.
19	Some residents have objected to any part of the park being lost to accommodate new roads.	To overcome this issue, it is proposed to provide a new westbound link to Princes Quay from Ivy Terrace. This requires the realignment of a pedestrian walkway, on the northern border of the town park, and the removal of a small number of off street parking spaces.

	Submission / Comment	Our Response
20	The Buildings on Ivy Terrace adjacent to Princes street currently have no loading facilities, which cause congestion when goods vehicles park on the footpath for loading/ unloading purposes. The new proposals make no provision for loading at these premises.	The carriageway on Ivy terrace will remain two lanes in width according to the proposed changes in the area with the existing wide footpaths unchanged. This may leave space for the inclusion of a loading bay on Ivy Terrace. Some of the existing steps or ramps could be moved to cater for a bay but this would require extensive consultation with the traders on the street specifically on this issue.
21	Traffic lights are poorly marked at Ivy Terrace and at entrances to all roundabouts	As part of the introduction of two-way traffic on Denny street and Ivy Terrace the junction of Ivy Terrace and Princes Quay will be re-aligned and upgraded to a MOVA signal controlled Junction. This will greatly improve the operation of this junction.
22	The proposed taxi rank on Denny Street covers the exit from Denny Lane West, this will necessitate moving the rank south by 10 meters and the removal of more parking	A yellow box could be placed outside the lane in the final design stages to allow vehicles enter and exit this lane.
23	No Provision has been made for disabled parking on Denny Street which currently has 6 Spaces.	Chapter Seven of this report outlines that disabled parking spaces will be relocated from the Mall and Bridge St to Denny Street thereby increasing the number of disabled parking spaces on Denny Street.
24	No provision has been made for loading bays on Denny Street which currently has one on the east side and one on the west side	It is now proposed to have two "drop off/ loading bay" spaces on the west side of Denny Street.
25	There is no southbound provision for a coach bay which will ultimately be required	It is anticipated that the parking spaces provided for coaches outside Ashe Memorial Hall on the south end of Denny Street will provide sufficient space for Coach Parking.



	Submission / Comment	Our Response
26	Parallel parking is considered a safer option than angled parking however there does not seem to be any anecdotal or hard evidence relating to traffic accidents on Denny Street. It would therefore be fair to state that any perceived gain in safety in an area which is not considered "dangerous", from a road safety perspective, would be outweighed by the loss of 90/93 car parking spaces to the town centre, which in turn would be catastrophic for trade.	Chapter Six of this report has described the level of recorded accidents that have occurred on Denny Street in the past number of years.  It is generally accepted that the use of angled parking on carriageways with two-way traffic is dangerous and can lead to accidents. For this reason the angled parking on Denny Street is to be replaced with parallel parking. Angular parking is also dangerous to cyclists as the drivers view is greatly obstructed when compared with parallel parking.
27	In practical terms a car park is considered at capacity if 85% are occupied the remaining 15% being utilised to cater for circulating traffic. Car parking surveys in the report show that the Abbey/ Tesco car park is in excess of 85% of capacity on Tuesday from 11am to 3pm and for a considerable amount of time on Saturdays. St Johns Car park was close to 85% capacity for large parts of Tuesday and Saturday. Matt Talbot car park which is marginal to trade in Denny street was well in excess of 85% for most of Saturday. From these statistics there is not so much spare capacity in the town car parks. Certainly nowhere like the 90-93 spaces which will be removed from Denny Street should the proposed plans proceed.	Town centre parking is also catered for by Parklands Multi-Storey car park located 200 meters from Denny Street which has a capacity of 210 spaces. Surveys at this car park have shown that during peak times this car park is only 48% occupied during weekdays and 46% occupied on Saturdays. In general the off street car parks within Tralee Town Centre operate at approximately 50-60%.
28	Both the Imperial Hotel and Grand hotel would suffer immeasurably from the diminution of "on Street" parking in the Denny Street area. These premises depend greatly on footfall and this can only be achieved by easily accessibly parking close to destination. This will put the jobs of 60 people employed in the Grand Hotel at risk.	It is proposed to provide a reduced fee of 50 cent for the first half hour stay for on-street car parks under the renewed parking strategy proposals. This will greatly increase turnover and as a result footfall will be greatly increased by this measure.
29	Furthermore assuming (conservative estimate) that each parking space returns on average €1,650 -€1,750 to Tralee town council per annum the loss in parking on Denny Street will result in a loss in the order of €153,450 - €162,750.	The financial appraisal of parking detailed in Chapter 12 describes a range of possible revenue implications. There may be a small loss due to a reduction in on-street spaces but this is likely to be more than compensated for by higher turnover and proper enforcement.

## 13.4 Submission Relating to Oakpark Road

	Submission / Comment	Our Response
30	The Junction of Oakpark Road and Killeen Road is dangerous and lacks sufficient pedestrian facilities. Sufficient pedestrian crossing facilities are needed at this junction.	It is proposed to upgrade the junction of Oakpark Road and Killeen Road as detailed in Chapter Six of this report. This upgrade will include upgrading the existing signals and adding pedestrian facilities to greatly improve safety.
31	The two lanes southbound on Oakpark Rd from Fairies Cross should not be implemented until after Eircom and O'Regans medical Centre. This would allow space for a right turn flare lane on the northbound carriage way for traffic entering the Eircom building and medical centre.	The proposed layout of Fairies Cross (Medium Term - Junction 4) has been altered so that the two southbound lanes on the Oakpark Road only begin after the Eircom Building and Medical Centre. This proposed new layout also includes pedestrian lights and crossing facilities and a right turn flare lanes for traffic entering the Eircom building and Medical Centre.
32	Pedestrian lights and crossing facilities are needed at Fairies Cross.	
33	Cycle lanes are needed on the full length of Oakpark Road in both directions.	Cycle priority is proposed in both directions along Oakpark Road where feasible as part of the future cycle network outlined in Chapter Six of this report and illustrated in Figure 6.2
34	Chestnut Drive acts as a "rat-run" between Killeen Road and Oakpark Road. Currently there are no signs or warnings coming from Chestnut Drive onto Oakpark road. It would be more appropriate for the stretch of Chestnut drive from the bridge to the Oakpark Road to be for local access only. A continuous footpath is also needed on Chestnut Drive, from Oakpark Road to Killeen Wood	Traffic signal improvements at the Killeen Road and Oakpark Road junction should decrease traffic delay and reduce the need for rat running onto adjacent streets.
35	Traffic Calming should be implemented on the Lower Oakpark Road shopping area.	In general traffic numbers in town will fall with the opening of the N22 Tralee bypass. Other measures such as the redesign of many junctions, increased use of cycling and walking as travel options, and the proper enforcement of parking regulations, will contribute to a much safer and pleasant environment throughout Tralee.
36	A review of the flow of traffic and exiting arrangements from the medical centre on Oakpark Road would be appreciated.	The Tralee Traffic Model developed for the strategy contains this junction. Please refer to junction design M4 on Page 6.47.

	Submission / Comment	Our Response
37	The Junction of Edward Street and Oakpark Road should be converted from a signalised junction to a roundabout.	The primary issue at this junction is of capacity. To improve traffic flows it is proposed that the signals be upgraded with a MOVA Controller. Footpaths will also be realigned to make vehicle movements more predictable and decrease the length in crossing time for pedestrians.

### 13.5 Submission Relating to Rock Street

	Submission / Comment	Our Response
38	The shop owner of Kevin Barry's newsagent has expressed concern at the removal of parking from outside his premises and feels it will have a detrimental affect on his business which employs 22 staff and provides indirect employment to 30 additional staff in Barry's Bakery.	The proposals at this junction have been altered slightly in light of the need to provide a safe and proportionate area for short term use by shoppers.
39	Some submissions suggested placing double yellow lines outside Barry's Shop on Rock Street.	Double yellow lines, possibly with the further addition of bollards, are proposed for at least 5 meters back from the corner junction at the narrowest point on this road.
40	The junction of Pembroke St and Rock St needs careful consideration. There are currently no pedestrian crossing facilities on the Maine Street arm of this staggered junction which needs to be addressed immediately as someone was killed here recently.	We agree that this junction should be reconfigured with on-demand pedestrian signals. Significant reconfiguration of the layout of this junction is not necessary for such a scheme. As such it was not selected for inclusion in the core recommendations. Nonetheless, the junction is very busy with high pedestrian flows in all directions.
41	No Mention has been made of the Junction of Pembroke St and Rock Street which was promised to be reconfigured after lethal accidents. Similarly no safe pedestrian crossings attached to the existing set of traffic lights	Additional warnings and provision for pedestrians should be implemented at this location. MOVA Controlled operation is recommended.
42	An optimisation of the phases on Rock Street / Pembroke St / Maine Street junction would be undertaken to improve the traffic flow considerably.	

	Submission / Comment	Our Response
43	Traffic Light sensors are not working on all junctions along Rock Street and Pembroke Street, which adds to delays.	Traffic Signals in Tralee at present operate on a fixed cycle basis and are not vehicle actuated. All Junctions upgrades outlined in Chapter Six of this report will incorporate MOVA ( <u>M</u> icroprocessor <u>O</u> ptimised <u>V</u> ehicle <u>A</u> ctuation) system for signalised junctions. This system uses vehicle sensors beneath the road and a computer to optimise signal timings and phases based on traffic data on all approached to the junction.
44	It has also been suggested that the junction at Rock Street Post Office/ Brogue Inn/ Supervalu region, should be redesigned in such a way that it would eliminate the prospect of illegal parking, negate the need for traffic lights allowing both vehicular and pedestrian traffic to flow freely. Furthermore an optimisation of the phases on Rock Street / Pembroke St / Maine Street junction would be undertaken to improve the traffic flow considerably. This proposal negates the need to make Denny Street two-way and the attendant intrusion into the Town Park, and consequent junction reconstructions at the Ivy Terrace / Prince's Quay.	<p>Unfortunately to redesign the Rock St / Russell St junction allowing free flowing pedestrian and vehicle movement would not be possible to achieve safely. However, traffic levels will be significantly reduced, as will speeds, when shared space re-design of Russell Street is complete.</p> <p>Rock Street, the central triangle formed by Russell St / Bridge St, leading to New St, is to be traffic calmed in order to improve the environment of the town centre. This is achieved by redirecting some traffic on to Denny Street, and the North Circular Road in combination with the traffic which will use the N22 bypass when open.</p> <p>It is contrary to the core the objectives of this strategy to increase traffic flow through Rock Street / Pembroke St / Maine Street junction, particularly on its north south approaches.</p>

### 13.6 Submission Relating to Other Issues / Miscellaneous

	Submission / Comment	Our Response
45	Junction 2 (Strand Street / Matt Talbott Road): Should be changed from a Medium Term priority to Short Term	The specific order in which the recommended changes are to be made to junctions will be reviewed on an on-going basis by the Council.
46	Cycle Lanes are needed on the southern side of Dan Spring Road. This section currently leads cyclists onto the footpath which is difficult for pedestrians.	Demarcated cycle lanes should be included westbound on the Dan Spring Road as part of the proposed cycle network outlined in Chapter Six of this report and illustrated in Figure 6.2.

	Submission / Comment	Our Response
47	Speed ramps are suggested to slow down traffic in the Moyderwell area	The addition of traffic calming measures along Moyderwell in proximity to schools has been included in our proposals in Chapter Eight (School Transport Strategy) of this report.
48	Footpaths need to be widened at Mounthawk and Caherslee Areas.	This is to be looked at in combination with the provision of cycle lane facilities throughout Tralee.
51	Converting the St Stephen's Terrace section of the Ballymullen Road to a Cul De Sac would be detrimental to businesses located there. An alternative option which should be considered is to convert this section of the Ballymullen Road to one-way southbound.	Proposed improvements in this area have been reviewed and altered to allow traffic move in a southbound direction only along the St Stephens Terrace (Munster Bar) section of the Ballymullen Road.
52	The Study makes no mention of preventing illegal parking on Brewery Road (especially during school drop off and pick up) which causes significant congestion in the area.	Proper enforcement measures will eliminate problems such as this.
53	Pedestrian Crossing facilities are required at the junction of Ashe Street and North Circular Road.	See Section 13.1.3 above
54	On Street parking on Edward Street reduces the carriageway and causes congestion.	Proper enforcement of a strategic pay and display parking system will eliminate problems such as this.
55	Old Railway lines should be developed as walkways and cycle routes. No other developments should be allowed on these old railway lines.	This may be considered by future studies that look in to the pertinent issues in more detail.
56	More cycle lanes are needed in Tralee	A complete cycle network has been proposed in Chapter Six of this report and illustrated in Figure 6.2
57	Park and Ride would be welcomed in Tralee.	Please refer to Chapter 10 for specific information



## 13.7 Submission Relating to Taxi Specific Concerns

	Submission / Comment	Our Response
58	A town Centre Taxi Rank is important. Other ranks would be good for business near nightclubs and Shopping Centres	Chapter 10 of this report outlines proposals to create two small taxi ranks of six spaces each on Staughton's Row and Lower Rock Street. This along with the proposed 14 space taxi rank on Denny Street gives an increase in the provision in services and serves a wider catchment area of the town.
59	The Taxi Rank location on Denny Street is excellent. Can additional space be added for special events?	Additional space for special events would be considered by the traffic management plans surrounding those occasions.
60	The proposed Taxi ranks on Denny street would potentially not be viable due to the fact that there is no "first away" system in operation in Tralee and current regulations give the consumer the right to choose any Taxi at the rank.	This applies to any rank and not just the proposed rank on Denny Street, therefore is not a reason to reconsider the proposals.
61	It would be more beneficial to the Taxi Industry in Tralee to have one rank only with 16 spaces on one side of Denny Street facing up towards Barrack Lane, with a possible "taxis only" turning point at the mall junction, to allow them return down Denny Street.	A "taxi only" U-turn at the northern end of Denny Street would not be possible to carry out safely without signalling the junction of Denny Street and Lower Castle Street, which in turn would lead to unnecessary delay in the area.
62	The Tralee Taxi Association feel the proposed Taxi Rank on Day Place would be workable and a benefit to taxi drivers' once adequate lighting is in place for the safety of drivers and customers. Please also clarify the number of spaces at Day Place	The proposed Taxi ranks on Rock Street and Staughton's Row will have 6 spaces each.  We also agree that the final design of all of the proposed new Taxi Ranks should incorporate adequate lighting in the interests of the safety of customers and drivers.
63	The Tralee Taxi Association would like clarification on the number of proposed spaces for the taxi rank on Rock Street	
64	The Tralee Taxi Association would like to appeal that the taxi rank on Shaws Lane be kept as this is strategically placed.	With the pedestrianisation of The Mall and subsequent relocation of the taxi rank from the Mall to Denny Street it would no longer be practical to maintain a taxi rank on Bridge Lane (Shaws Lane). The strategy provides for two more ranks and more spaces than currently exists.

	Submission / Comment	Our Response
65	<p>The Tralee Taxi Association request that the following be taken into consideration with regard to all taxi ranks:</p> <ul style="list-style-type: none"> <li>- That more adequate lighting is required;</li> <li>- Proper signage placed at strategic points to indicate where the proposed Taxi Ranks will be located;</li> <li>- Security cameras to be located at all rank locations; and</li> <li>- Temporary Ranks are provided at night time at strategic areas in the town, such as night clubs and entertainment venues.</li> </ul>	<p>We agree that the final design of all of the proposed new Taxi Ranks should incorporate adequate lighting and security cameras in the interests of the safety of customers and drivers.</p> <p>Chapter 10 of this report outlines proposals to create multiple taxi ranks, providing for ease of access to taxis at any time and from any location within the town centre.</p>
66	<p>Taxis ranks on both sides of Denny street are unnecessary. It would be possible to have 6 spaces on Denny Street and more behind Ashe hall which move up when space on Denny Street is free.</p>	<p>Having Taxi ranks on both sides of Denny Street will allow the taxis to cater for people who want to travel in northbound and southbound directions easily and safely and will avoid the need for taxis to make any dangerous u-turn movements.</p>
67	<p>Currently the taxi facility at the mall is excessive for general needs with taxis utilising spaces which should be used to serve customers of businesses in the area. Moving the rank will just move this problem</p>	<p>The total number of taxi rank spaces in Tralee is being increased in the interests of having adequate public transport available in Tralee.</p>
68	<p>Taxis ranks should be distributed to many streets in the town with no more than 4 or 5 vehicles for hire fed from a central vehicle holding facility.</p>	<p>Chapter 10 of this report outlines proposals to create two small taxi ranks of 6 spaces each on Staughton's Row and Lower Rock Street. This along with the proposed 14 space taxi rank on Denny Street gives an increase in the provision in services and serves a wider catchment area of the town.</p>

# 14 Recommendations

## 14.1 Summary of the Study Process

- 14.1.1 To conclude, this chapter highlights briefly the key conclusions from each preceding chapter, and brings together the key recommendations.

## 14.2 Transport Characteristics Summary

- 14.2.1 Some of the main points about the existing transport characteristics of Tralee were provided Chapter Two: Transport Characteristics of the Study Area:

- There is a dispersed range of trip generators within the Town Centre with a large number of education facilities as well as significant employment, retail and social infrastructure;
- Traffic volumes in Tralee are not particularly high throughout most of the day, however the road network experiences peaks in traffic flow associated with trips to or from work. Saturdays are busy in the town with many people driving to the area to avail of shopping and leisure facilities, as well as the large non-office employment component of the town economy;
- A number of national and regional roads converge on the Town Centre which generates through traffic and over-capacity demand at some junctions;
- Census Statistics Office data for 2006 shows that the majority of trips to work and education by all modes takes less than 15 minutes and nearly all take less than 30 minutes. This suggests that severe congestions may be less regular or intense than what is actually perceived;
- Car ownership levels within the urban study area are at around 50% of adults. This is indicative of the compact layout of Tralee which allows many trips to be undertaken by walking or cycling;
- The numbers of people walking to work within the urban area of Tralee is very high, at about 45%; this is very supportive of the need to improve the quality and quantity of footpath facilities and areas of pedestrian priority;
- Many junctions within the study area have been identified as having capacity or safety issues; these junctions are recommended for short term upgrading in order to mitigate delay or safety issues;
- Heavy Good Vehicles are not very prevalent in the study areas, nonetheless there is little directional signage to encourage HGV movement around the core town area;
- Taxis are the dominant mode of public transport and currently many taxis regularly queue up from the northern side of Mall backing up to Bridge St upper to Bridge Lane, which may at times also overflow causing illegal taxi parking and consequences for safety;
- The Tralee Peoples Bus is the only bus service. The service provides a vital and important link for those who rely on its services and it should continue to be

supported. The services are indirect and limited, but provide the greatest catchment for the local public who may at times not have the option of other travel modes.

- 14.2.2 [Refer to Chapter Two for more information on the transport characteristics of the study area].

### 14.3 Future Transport Context

- 14.3.1 During this review, detailed in Chapter Three Future Transport Context, we set out the future strategic context for transport in Tralee by detailing the key relevant policy documents and also the plans for the expansion of the Tralee road network.
- 14.3.2 This review highlighted the need to support social and economic sustainability by improving facilities for pedestrians, cyclists, and potentially for public transport. Smarter Travel was identified as being a key document going forward, setting national policy on sustainable travel in terms of land use planning and transport infrastructure provision. The Tralee Transport Strategy has placed the key policies of Smarter Travel at its core.
- 14.3.3 This chapter also highlighted the strategic roads infrastructure already planned for Tralee, including the Tralee Eastern Bypass, and orbital routes to the west and north. Together these form an orbital road network that allows significant levels of through-traffic to be removed from the town centre. This future step-change to the available routing options in Tralee has been recognised by the Tralee Transport Strategy, which aims to take full advantage of the opportunities provided in the town centre.
- 14.3.4 [Refer to Chapter Four for more information on the Future Transport Context].

### 14.4 Vision and Objectives

- 14.4.1 This chapter presented the high level objectives of the Tralee Transport Strategy. These are developed to support and implement the Vision for Tralee, which is a statement that enables clear understanding of the rationale for pursuing the recommended traffic and transport schemes for Tralee. The Vision Statement gives a sense of wider purpose to the strategy, in that transport has such a significant effect on all aspects of life. Therefore the Vision Statement links the future aspirations of the town in terms of economy and society to transport.
- 14.4.2 The Vision Statement for the Tralee Transport Strategy is:

#### TRALEE TRANSPORT STRATEGY VISION STATEMENT

*"To create streets and places that are safe, attractive and vibrant, to provide integrated and balanced transport facilities with efficient movement for all."*

- 14.4.3 [Refer to Chapter Five for more information on the Vision, Objectives and Transport Principles of the Tralee Transport Strategy].
- 14.4.4 Following this, a clear set of transport related objectives were identified that support the delivery of this Vision. These are summarised below.

### 14.5 Recommendations

14.5.1 The transport network strategy for Tralee Town consists of a comprehensive set of junction, street and road layout designs and design concepts that support the Vision and Objectives.

14.5.2 These consider:

- Pedestrian and Vehicular Circulation within the Town;
- Meeting the needs of Pedestrians and Cyclists;
- Harnessing the economic potential of the town centre;
- Construction requirements to achieve goals; and
- Achieving Accessibility and Social Inclusion in the town.

14.5.3 Some of the key recommendations regarding specific junctions are based on the following principles of good design:

#### Junction Realignment

14.5.4 Visibility, access and predictability are all key components that make up a safe functioning junction. Small basic changes such as pavement build outs and defining turning movements can affect the speeds and predictability of junction movements. Such modifications can lead to a vast improvement in safety for all road users, particularly pedestrians and cyclists. The improved visibility and functionality of a junction will also have significant effects in increasing the flow and capacity of a junction.

#### Limiting Speeds

14.5.5 The limiting of speeds where there are high levels of interaction between vehicular and vulnerable road users has obvious safety benefits. By reducing speeds the risk of accident and the severity of those accidents are greatly decreased.

14.5.6 Lower speeds also provide environmental benefits. Lowering traffic speeds results in reduced traffic noise which benefits the local environment. Lower speeds also improve the perceived safety of the area which in turn makes it more attractive for walking and cycling. Speed limits are a relatively cost effective traffic management measure requiring mainly signage with limited changes to road infrastructure required.

14.5.7 For these reasons we have recommended establishing a 30kph speed limit in the town centre area when the Tralee Orbital Road Network is complete.

#### MOVA Signalised Junctions

14.5.8 Existing traffic lights in Tralee work using a standard staged and phased signal system. They do not have any censoring systems but are set to specified fixed stage times. Increased efficiency can be achieved by installing demand responsive or linked traffic signal control systems. One such system is Microprocessor Optimised Vehicle Actuation (MOVA), which provides enhanced traffic responsive signal operation.

14.5.9 The replacement of existing signals with MOVA signals should assist in improving flows and reducing congestion that occurs in the major junctions around Tralee.



**14.6 Junction Upgrades –An Overview of Measures for the Wider Network**

- 14.6.1 A number of infrastructural measures are proposed to the junctions which aim to bring significant improvement to the operation of these junctions in terms of movement and safety for all road users. The following is an overview of the types of measures proposed for selected junctions.

**Specific Short Term and Medium Term Junction Measures**

- 14.6.2 The short term works list is comprised of junctions that are considered a higher priority in terms of achieving the objectives for Tralee. Each of these has been identified as being particularly unsafe or exhibiting poor performance in their current forms and therefore of higher priority than the Medium Term junction upgrades also identified.

**Short Term Junction Improvements**

- 14.6.3 Junction improvements are planned in the short term at the following locations, for which detailed technical drawings are included in Appendix B:

- S1 - R874 Basin View/N86;
- S2 - Upper Rock Street;
- S4 - Austin Stacks Park Roundabout;
- S5 - Balloonagh Cross;
- S6 - Garryruth Road/Ballymullen Road; and
- S7 - Edward Street/John Joe Sheehy Road.

**Medium Term Junction Improvements**

- M1 - Clash Roundabout;
- M2 - Strand Street/Matt Talbot Road;
- M3 - Lower Castle Street/Edward Street;
- M4 - N69 Fairies Cross;
- M5 - Racecourse Road/Clash Road;
- M6 - Racecourse Road/Oakpark Road;
- M7 - Oakpark/Muing Road;
- M8 - R551/Lioscarrig Drive;
- M9 - Rathass Roundabout; and
- M10 - Deans Lane/Boherbee.

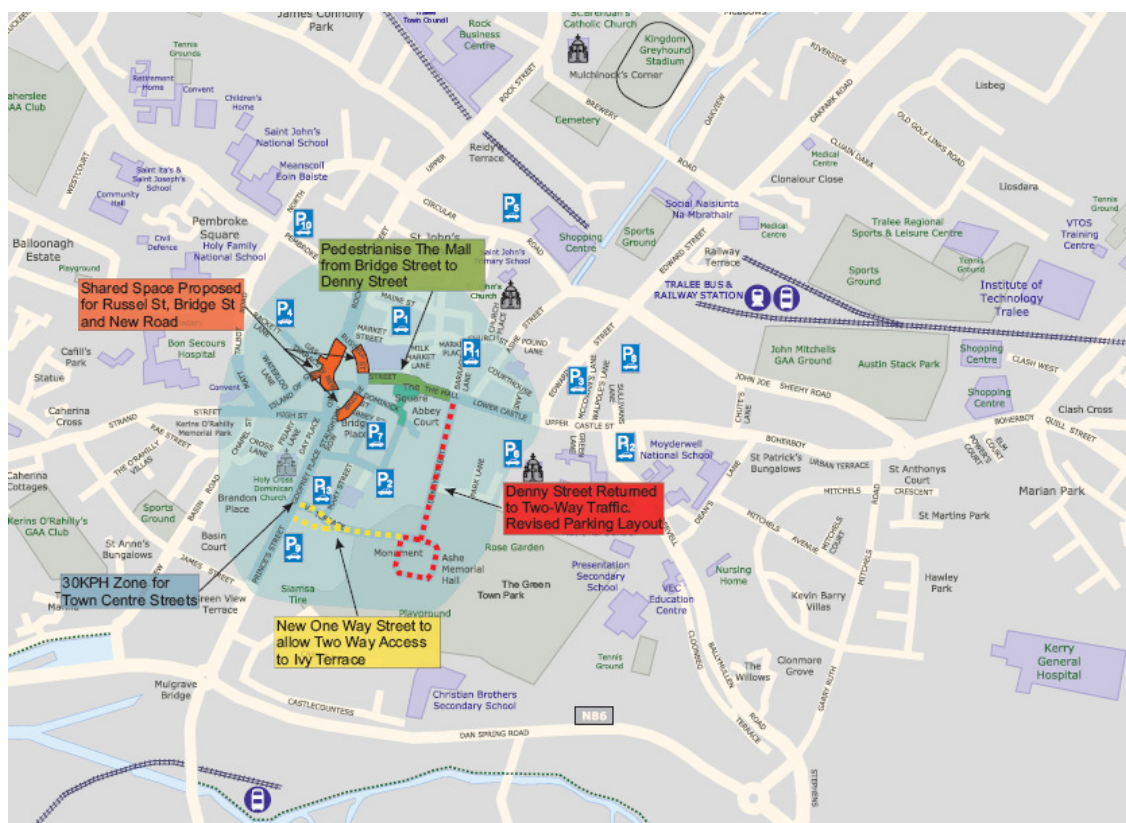
- 14.6.4 Appendix B of this report contains the drawings for each junction intervention mentioned above.

### 14.7 Town Centre Measures

14.7.1 The key town centre measures include:

- Shared Space on Russell Street, Bridge Street, New Road and Island of Geese;
- Part time pedestrainisation of The Mall between Denny Street and Russell Street from 10.00-16.00hrs;
- Restoration of Denny Street to a two way road with the current angular parking arrangement replaced with parallel parking;
- Introduction of drop off area on Denny Street to service the hotels;
- Taxi rank on the Mall relocated to three ranks located on Denny Street, Staughton Row and Rock Street Lower;
- New link road parallel to Ivy Terrace providing west bound access to Princes Quay;
- Signage Strategy to encourage the more efficient utilisation of the off-street car parks;
- Introduction of MOVA signalisation at key junctions to synchronise traffic movement and improve movement for all road users;
- Enhanced cycle measures to improve cycle safety and movement;
- Parking Strategy including a '50 cent half hour' to encourage people into the town and maintain a high turnover of on-street parking supply thereby increasing footfall;
- Better enforcement of illegal parking;
- New Inner Orbital Route to move traffic around the town centre, as shown below in Figure 14.2; and
- Introduction of a 30 kph Zone in the Town Centre.

14.7.2 Figure 14.1, overleaf, presents a visual of the proposed town centre traffic measures.

**Figure 14.1 Town Centre Primary Traffic Measures****Figure 14.2 Inner Orbital Route and Proposed Town Centre Access Routes**

### Shared Space Russell Street, Bridge Street, Island Of Geese

- 14.7.3 To support the Vision for Tralee it is proposed to redesign Russell Street, Bridge St and New Road to incorporate shared space design concepts. The shared space will extend to the junction of Gas Terrace and Island of Geese. This area will be open to vehicles but traffic management measures will be implemented to divert vehicular traffic to alternative routes such as Matt Talbot Road and Denny Street.
- 14.7.4 A reorganisation of parking is proposed for this area with priority offered to commercial loading vehicles and provision of parking for the nearby Garda station. Parking issues and proposals are discussed in detail in Chapter Seven.
- 14.7.5 Chapter Eleven provides analysis of the effect of diverting traffic from the shared space areas. The results of this assessment show that with the Tralee Orbital Road Network in place, even if all traffic was removed from this central area the road network would operate efficiently and would not be over capacity. Figure 6.3 provides an overview of the shared space proposals in this area. Figure 6.6 and Figure 6.8 provide a graphical example of how the shared space proposals would look on Bridge Street and Russell Street.

### The Mall – Part Time Pedestrianisation

- 14.7.6 The Mall is located in the very centre of Tralee and would be considered the high street in terms of retail potential in the town. At present it is a congested street environment with slow moving traffic, taxis, parking and commercial loading impacting negatively on the shopping and pedestrian environment.
- 14.7.7 The strategy recommends that the Mall be pedestrianised for periods between 10.00hrs and 16.00hrs for all days of the week. The period could be extended for longer periods, initially at the weekends after an initial trial period, depending on the level of success and acceptance.
- 14.7.8 Weekday trips in the evenings will be allowable in to this area and set down to collect purchases, for example, will be facilitated in the restricted set down areas. Loading, set down, or any form of motor access will not be permitted at any time between 10.00hrs and 16.00hrs for each day of the week (except for Emergency Vehicles).

### Denny Street Two-Way Traffic Reinstated

- 14.7.9 To facilitate the pedestrianisation of the Mall, it is proposed to accommodate diverted traffic along Denny Street by reinstating two-way traffic flow. Denny Street was historically a two way street and possesses ample width to facilitate realigned parking and two-way traffic flows safely. East west traffic movements that previously used the Mall will access Denny Street via a new link parallel to Ivy Terrace, as discussed below.
- 14.7.10 The current parking layout will be replaced with parallel parking along Denny Street. This will decrease the number of parking spaces but is necessary to provide the space required to allow two-way traffic flows along the street.
- 14.7.11 The taxi rank currently located on The Mall will be relocated to Denny Street with a rank consisting of 14 spaces. There will also be coach parking provided at the southern end of Denny Street.

## 14 Recommendations

- 14.7.12 The part-time pedestrianisation of The Mall will necessitate changes to the current local bus routes. Similar to the discussed traffic diversions, buses will also be diverted onto Denny Street. Two new bus stops, one on either side of the road, will be provided on Denny Street to provide for a high level of access by bus.
- 14.7.13 Figure 6.15 illustrates the proposed traffic layout for Denny Street. Figure 6.16 and Figure 6.17 provide a before and after look of how Denny Street may appear after the improvement works have been carried out.
- 14.7.14 To facilitate drop-off of hotel guests staying in Denny Street premises, it is recommended that a dedicated drop off area be provided. An area near Ashe Memorial Hall building would not interfere with the proposed parking arrangements or taxi rank provision, while providing good access to Denny Street for persons arriving by coach, for example. The preliminary designs for Denny Street show the proposed coach parking area at its southern end on the eastern side.

### New One-Way Street linking Ivy Terrace

- 14.7.15 Ivy Terrace narrows as it approaches Princes Quay making it difficult to provide for two-way traffic. There is insufficient width at the junction with Princes Quay to provide the turning circle required to access Ivy Terrace. To overcome this issue, it is proposed to provide a new westbound link to Princes Quay. This will require the realignment of a pedestrian walkway and the removal of a small number of off street parking spaces. The proposed traffic layout is shown previously in Figure 6.18 and Figure 6.20.
- 14.7.16 The new link will provide sufficient capacity to cater for traffic diverted from the town centre.
- 14.7.17 [Refer to Chapter Six for more information on the Traffic Management Strategy].

## 14.8 Recommendations for Parking in Tralee

- 14.8.1 The Parking Strategy outlined below is based around the concept of:

- Defining the character of an Area within the Town Centre – retail, residential, or key traffic route;
- Promoting short term use of on-street parking; and
- Supplying parking spaces appropriate to the needs of the Area – short stay or long stay.

### First 30 Minutes for 50 Cents

- 14.8.2 It is proposed to allow a period of reduced fee parking in Tralee Town Centre in order to stimulate economic activity and enhance the commercial viability of the town centre. The period of reduced fee parking will also offset any loss of over all on-street parking in the town as space availability will be ensured if the scheme is enforced correctly. The proposal is to allow the first 30 minutes of on-street parking for a nominal fee of 50 cents.
- 14.8.3 The assessment of existing parking supply shows that, at an aggregate level across the Town Centre, there is spare capacity in both off- and on-street parking locations.



- 14.8.4 The existing parking stock is sufficient to meet present and future parking demands. However, the publicly available off-street parking locations could be better utilised to accommodate demand for car parking within Tralee Town Centre. It is therefore critical to more efficiently manage existing on- and off-street parking supply to ensure a more balanced use of available parking stock.
- 14.8.5 The recommendations included in this Parking Strategy should be considered in terms of the overall parking provision and the demand for various usages, together with the spatial distribution of parking spaces. A summary of the proposed parking measures for implementation are shown below:

<b>Measure P.1</b>	Revised On-Street Parking Provision
<b>Measure P.2</b>	Revised Parking Duration
<b>Measure P.3</b>	Revised Parking Tariffs
<b>Measure P.4</b>	Parking Enforcement Strategy
<b>Measure P.5</b>	Parking Signage Strategy

- 14.8.6 More stringent enforcement of existing and future parking restrictions is required to reduce parking contraventions within the Town Centre. This should become easier if all spaces (either on- or off-street) are clearly demarcated and signs indicating the tariff and maximum duration of stay are clearly visible. Future conditions should then foster a culture within the town where it is deemed unacceptable to park illegally or avoid paying for parking.
- 14.8.7 It is also recommended that a signage strategy should be implemented to direct users to underutilised off-street car parks on the approach to Tralee Town Centre. VMS signs will give real time information on the number of spaces available in the largest multi-story and surface car parks in the town centre.
- 14.8.8 The parking strategy proposes a sustainable and efficient parking system which will meet the predicted future parking demands of the town. The future demand of 2,072 short-stay and 519 long-stay parking spaces during the peak hour is supported by the provisions of 2,259 short-stay and 599 long-stay public parking spaces based on the measures outlined previously. This will allow the town to implement other transport initiatives such as improving the pedestrian space, walking routes, cycling routes etc. while maintaining an adequate provision of short-stay spaces within the town centre, with occupancy levels close to 78%.

#### Key Benefits of Parking Strategy

- The proposed parking management system and charging structure will be a flexible system capable of changing to meet demand;
- It will encourage a beneficial change to parking patterns throughout the town;
- Significant parking spaces in the Town Centre will be released for short stay business and leisure visitors to the town;
- Residential parking would continue to be dealt with through the provision of resident parking permits;

- Disabled drivers will be facilitated by the creation of a necklace of disabled parking spaces be created that encircle the pedestrian priority zone;
- There will be increased provision for taxis, with a wider catchment area by creating three new taxi ranks;
- By significantly increasing the volume of 1-hour parking the parking strategy also has the potential to generate revenue which can be used to cover the capital cost of both the parking measures and other measures.

14.8.9 [Refer to Chapter Seven for more information on the Parking Strategy].

### 14.9 Summary of School Strategy Recommendations

- 14.9.1 There is a high concentration of schools within Tralee Town and school transport is a significant generator of demand. Tralee is ideally suited to walking and cycling given the compact nature of the area. This is borne out in the Census which shows a very high proportion of students walking to school.
- 14.9.2 The strategy of the Tralee Transportation Study is designed to support and encourage sustainable transport to school. The overall strategy will improve pedestrian and cycle infrastructure within Tralee Town and this will benefit access to schools. Full details of the measures proposed are provided in Chapter Six.
- 14.9.3 To further support sustainable transport to schools, School Travel Plans should be prepared, implemented and maintained. School Travel Plans will include a variety of measures to be tailored for the individual schools involved. These plans should be prepared by the schools in conjunction with input from the County Council and An Garda Síochána. The role of a School Transport Advisor within Kerry County Council should be developed to support and liaise with schools in preparing their Travel Plans.
- 14.9.4 In assessing school transport demand, two school clusters have been identified. The schools within the Caherslee Road and Moyderwell Clusters cater for a very large number of students. The Tralee Transportation Study includes measures which will directly benefit these schools, including junction upgrades with improved facilities for pedestrians and the development and improvement of the cycle network. The local authority should make specific efforts to develop links with these schools, through the School Travel Advisor, with a view to highlighting improvements that will support sustainable access.
- 14.9.5 Through the implementation of the strategy for school transport, support will be given to more sustainable transport options and car dependency will be reduced in the short, medium and longer term.
- 14.9.6 [Refer to Chapter Eight for more information on the School Strategy].

### 14.10 Summary of Public Transport Strategy Recommendations

- 14.10.1 The development of this public transport strategy is focused on achieving the study objectives by improving public transport provision in Tralee.

## 14 Recommendations

- 14.10.2 The overall objective of a future public transport service for Tralee is to provide a viable public transport service linking the existing and future significant residential and employment zones to each other and to the town centre. The service would work with the other transportation initiatives to form part of an integrated public transport service. The service will assist in achieving a viable modal split from the use of the private car and will be an important element in achieving the sustainable development of Tralee.
- 14.10.3 The strategy proposed for Tralee includes a number of measures which will significantly improve public transport access. These measures improve both the accessibility and attractiveness public transport, provide sufficient coach parking away from the town centre and improve road safety.
- 14.10.4 We recommend supporting the existing Tralee Peoples Bus services, and providing clear dedicated bus stop infrastructure at busy town centre locations.
- 14.10.5 [Refer to Chapter Ten for more information on the Public Transport Strategy].

### 14.11 Summary of HGV Strategy Recommendations and Loading Arrangements

- 14.11.1 Implementation of HGV advisory routes is recommended in the short term, and also in the longer term when the bypasses are complete. The longer term strategy should seek to remove as much HGV traffic from the town centre and considered restrictions for vehicles above 7.5 tonnes.
- 14.11.2 It is recommended that waste collection activity be restricted to outside peak periods, i.e., restricted during the times 8.30am – 9.30am and 5pm to 5.30 pm.
- 14.11.3 [Refer for Chapter Nine of this report for more information on the HGV Strategy].

### 14.12 Future Development

- Possible extension of the shared space areas to the north from Russell St, linking in to Maine Street.
- Pedestrianisation of Maine St and Market Lane / Brogue Maker's Lane areas.
- Old Railway lines should be developed as walkways.

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