

## FINAL REPORT



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# BANDON TRANSPORTATION AND PUBLIC REALM ENHANCEMENT PLAN

## FINAL REPORT

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## Vision Statement:

***“To strengthen Bandon’s position as a premier market town through the creation of a unique sense of place, which supports ease of movement for all, embraces its rich built and natural heritage, and enhances its role as the Gateway to West Cork.”***





## 1. INTRODUCTION

### 1.1 Background and Study Requirements

1.1.1 SYSTRA and J.B. Barry & Partners were appointed by Cork County Council in February 2015 to undertake the Bandon Transportation and Public Realm Enhancement Plan (Bandon TPREP). The overall aim of the Bandon TPREP is to ensure that there is an integrated approach to public realm enhancement and transportation engineering for the future development of the town. Specifically, the goals of the study are to:

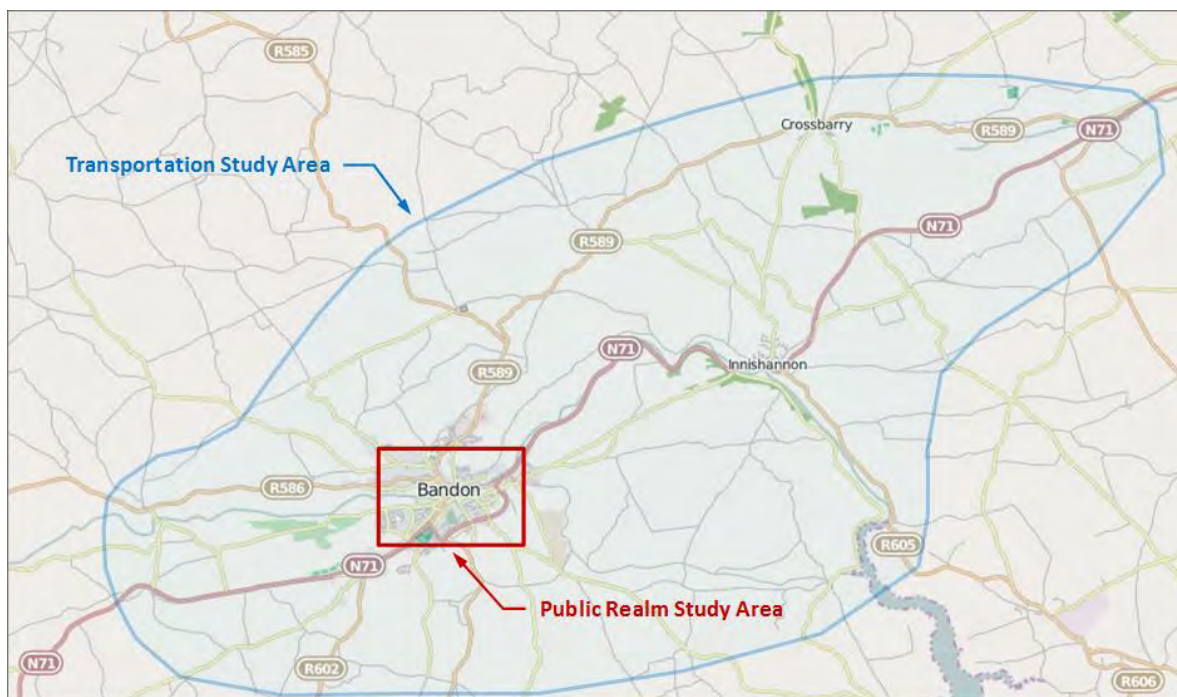
- Optimise the transport network to improve accessibility and safety for all modes of transport;
- identify opportunities for improving the Public Realm in Bandon to enhance the movement experience and social interaction throughout the town;
- provide a guide to future investment in transport infrastructure and public realm enhancement; and
- identify the capacity of the town centre for additional retail and other development.

1.1.2 The study will determine the transport infrastructure improvements and policy measures required to accommodate the anticipated expansion of the town that will result in a growth in vehicular, pedestrian and cyclist traffic volumes. The study will also examine the potential to enhance the public realm in specific locations to increase the vibrancy and attractiveness of the town and to encourage active travel.

### 1.2 Overview of the Bandon TREP Study Area

1.2.1 The full Bandon TPREP Study Area is illustrated in Figure 1.1, below, and stretches from the Civic Amenity Road to the West of Bandon Town, to the N71 junction at Halfway in the East.

1.2.2 The study area was chosen to incorporate the town centre and strategic road network accessing Bandon. The extent of the study area allows the Bandon TPREP to examine both local issues within the town centre, and issues associated with the strategic routing of traffic through Bandon.



**Figure 1.1 Bandon TPREP Study Area**

### **1.3 National and Regional Policies that inform Bandon TPREP**

1.3.1 A number of National, Regional and local government policies, plans and guidelines have been reviewed as part of the preparation of the Bandon TPREP. These relevant plans have been summarised in Appendix A of this report and include:

- Infrastructure and Capital Investment (2012 – 2016);
- National Spatial Strategy (2002-2020);
- Smarter Travel;
- Southwest Regional Planning Guidelines (2010-2022);
- Cork County Development Plan 2014;
- Bandon Electoral Area Local Area Plan (2011 Vol. 1 2nd Edition Jan 2015);
- Walking & Cycling Strategy for Bandon – Active Travel Town;
- Bandon Action Programme;
- Bandon Town Wall Conservation Management & Interpretation Plan (2012);
- Bandon Flood Relief Scheme; and
- Bandon Watermain and Sewer Network Project.

### **1.4 Outline of Study Approach**

1.4.1 The overall methodology for developing the Bandon TPREP is described in detail in Chapter 2 of this report and consists of six key stages, namely:

- Project Inception;
- Evaluation of Existing Situation;
- Visioning, Evaluation Framework & Strategy Development;



- Strategy Assessment;
- Future Plan; and
- Final Report

## 1.5 Structure of Final Report

### 1.5.1 The remainder of this report is structured as follows:

#### **Chapter 2 – Methodology for Undertaking Study**

Chapter Two provides an outline of the methodology used and steps taken in devising the Bandon Transportation and Public Realm Enhancement Plan.

#### **Chapter 3 – Existing Conditions**

Chapter Three provides a summary of current transport and public realm conditions in Bandon

#### **Chapter 4 – Vision and Objectives**

Chapter Four outlines the vision, objectives, key performance indicators and overall evaluation framework developed to assess the various transport strategies leading to a preferred integrated package of measures and recommendations which will comprise the Bandon TPREP.

#### **Chapter 5 – Recommended Transport Strategy**

Chapter Five outlines the recommended strategies developed to support the vision and objectives for Bandon.

#### **Chapter 6 – Town Centre Public Realm Design**

Chapter Six provides details of the public realm design recommended on key corridors within the town centre as part of the Bandon TPREP.

#### **Chapter 7 – Implementation of Bandon TPREP**

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

#### **Chapter 8 – Conclusions and Recommendations**

Finally, Chapter Eight provides a general summary of this report and the key study recommendations.



## 2. METHODOLOGY FOR UNDERTAKING STUDY

### 2.1 Introduction

2.1.1 This chapter provides an overview of the methodology used to develop the Bandon TPREP. There are six key stages which are illustrated graphically in Figure 2.1 below and include:

- Project Inception;
- Evaluation of Existing Situation;
- Visioning, Evaluation Framework & Strategy Development;
- Strategy Assessment;
- Future Plan; and
- Final Report

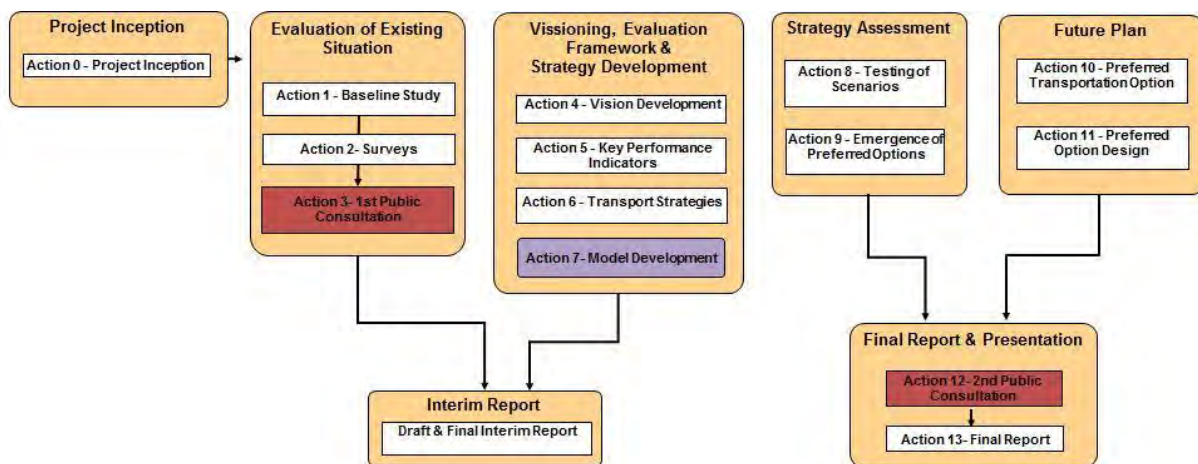


Figure 2.1 Bandon TPREP Study Methodology

### 2.2 Project Inception

2.2.1 The purpose of the Project Inception stage was to ensure that a full understanding of the requirements of the brief and study objectives was established. An Inception meeting was held at the beginning of the project in March 2015 to establish lines of communication and to identify the key stakeholders and the extent of information and data availability.

### 2.3 Evaluation of Existing Situation

2.3.1 The purpose of this stage was to facilitate an understanding of the existing land use, urban design and transport environment within the Bandon TREP study area by undertaking the following:

- Baseline Study;
- Traffic surveys; and
- 1st Round Public Consultation



### Baseline Study

- 2.3.2 A series of site visits were undertaken in during March 2015 to help develop a greater understanding of existing land use, urban design and transport situation and issues.
- 2.3.3 During the site visits the following actions were undertaken:
- detailed observations were made of current traffic management arrangements and how they affect each mode of transport;
  - an examination of the conditions experienced by each road user type (i.e. mobility impaired individuals, pedestrians (including school children), cyclists, cars, taxi's, buses, heavy goods & delivery vehicles and so on);
  - an examination of travel behaviours of people travelling around the Bandon Area and how they respond to the existing transport network arrangements;
  - a street scape assessment to evaluate the public realm in Bandon;
  - observations of local land uses and their influence of traffic and transport arrangements;
  - detailed auditing of junction arrangements including traffic lane definition, junction type, priority arrangements for public transport, access arrangement for schools and key land uses etc. (this information was required for the traffic model developed specifically for Bandon to test traffic management proposals);
  - an evaluation of road safety issues; and
  - an extensive set of photographic records.

### Traffic Surveys

- 2.3.4 A comprehensive set of traffic surveys were commissioned during March 2015. This data was primarily used to further inform existing traffic and transport issues within the Bandon area, and to inform the development of the Bandon Traffic Model (BTM).
- 2.3.5 In summary, the following traffic surveys were undertaken:
- Junction Turning Counts (JTC) at 28 locations;
  - Automatic Traffic Counts (ATC) at 12 location;
  - Bluetooth Origin Destination Surveys at 4 locations;
  - Bluetooth Journey Time Surveys on three key routes; and
  - Pedestrian counts at 15 locations.
- 2.3.6 Information on all traffic surveys undertaken including results and analysis are provided in the *Bandon TPREP Traffic Survey Data Collection Note*.





## 1<sup>st</sup> Round Public Consultation

- 2.3.7 The public consultation process forms an important component of the Bandon TPREP as the responses assist in developing a detailed understanding of the current issues affecting Bandon Town and its environs. The consultation process also provides an insight into potential solutions to these issues and a view as to how Bandon should develop in terms of transport improvements.
- 2.3.8 The public consultation process carried out for the Bandon TPREP involved a number of stages including a public exhibition, travel survey questionnaires, direct correspondence with key stakeholders and meetings with local schools and local transport operators.

### **Public Exhibition**

- 2.3.9 On the 16 April 2015 a public exhibition was held in Bandon Town Hall between the hours of 16:00 and 20:00. Members of the public were invited to attend and the event was advertised in local newspapers and on local radio. The purpose of the exhibition was to make people aware of the study and to invite them to make submissions and outline any issues or concerns they may have.
- 2.3.10 The event was hosted by members of the Bandon TPREP study team from Cork County Council, SYSTRA and J.B. Barry & Partners. Visitors who attended were invited to view a number of presentation boards which outlined the aims, objectives, methodology and timeframe for the development of the Bandon TPREP. Some examples of the presentation boards used are illustrated in Figure 2.2, overleaf.
- 2.3.11 The exhibition was well attended, with a constant flow of visitors throughout the evening. In total over 150 people attended the exhibition and over 36 completed questionnaires were received during the exhibition or by post shortly after the event.

### **Travel Survey Questionnaires**

- 2.3.12 Three different types of travel survey questionnaires were prepared and sent to the following groups:
- Key stakeholders and members of the general public;
  - Local Schools; and
  - Local Transport Operators.
- 2.3.13 Invitations to complete the survey were circulated to major employers and interest groups in the area. As mentioned above, a number of questionnaires were filled out in person by members of the public attending the public exhibition.





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**BARRY**  
& PARTNERS  
consulting engineers

**SYSTRA**

## Bandon Transportation and Public Realm Enhancement Plan

### What is the Vision for Bandon?

An important element of the study is the creation of a clear vision setting out the future aspirations for Bandon. The vision will look to create a successful and vibrant town centre through improving the efficiency of the transport network. The vision will be guided by local, regional and national planning policy and will explore the key themes that are presented below, but we would welcome your views as to what should be included in the future vision for Bandon.



Create a vibrant  
Town Centre



Encourage  
greater levels  
of walking &  
cycling



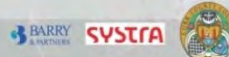
Reduce  
congestion by  
providing for  
sustainable  
transport



Improved  
public realm  
shared space



More efficient  
transport  
network



## Bandon Transportation and Public Realm Enhancement Plan

### We Want to Hear Your Views of the Town Centre



- ▶ Do you find it easy to walk in the town centre?
- ▶ Is it an attractive place to shop and meet friends?
- ▶ Is there too much traffic in the town centre?
- ▶ Is it easy to find parking?



## Bandon Transportation and Public Realm Enhancement Plan

### We Want to Hear Your Views on Walking & Cycling in Bandon



- ▶ Is Bandon a safe and attractive town to walk & cycle?
- ▶ Do you cycle in Bandon? if not, why?
- ▶ Do children walk or cycle to school in Bandon?
- ▶ What improvements do you think are required to encourage walking and cycling?



Figure 2.2 1<sup>st</sup> Round Public Consultation Posters

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2.3.14 The main purpose of the travel surveys was to gain information on the following:

- Travel patterns within Bandon Town;
- Mode of transport used;
- Traffic and transport issues within Bandon; and
- Perception of transport facilities and public realm in Bandon.

2.3.15 A total of 65 local stakeholders were contacted by letter/email and invited to make submissions. Those contacted included public agencies, private agencies and Community groups. Local land owners, businesses and private individuals were also encouraged to make submissions with any relevant issues.

2.3.16 Approximately four weeks were allowed for the receipt of submissions in relation to the study. The number and names of the local stakeholders who were contacted in relation to this study, and the number of written submissions received are illustrated in Table 2.1. This table shows that a broad representative response was received from local groups and stakeholders.

**Table 2.1 Groups consulted**

Group/Organisation	Contact Method	No. Contacted	Responses
Public Bodies	Letter/ Meetings	4	3
Cork County Council sections	Letter/Meetings	9	4
Special Access Groups	Letter	5	1
Relevant Business, Community and Special Interest Groups	Letter/ Meetings	6	4
Local Transport Operators	Letter/ Meetings	27	10
Schools	Letter/ Meetings	14	8
General Public	Public meeting	Open invitation	36

2.3.17 A full summary and comprehensive review of the submissions received is contained within the *Bandon TPREP First Public Consultation Report* attached in Appendix D of this report.

## 2.4 Visioning, Evaluation Framework & Strategy Development

2.4.1 The purpose of this stage was to develop an overarching vision for the Bandon TPREP including specific objectives and Key Performance Indicators (KPIs) used to measure the performance of various test strategies. This stage also includes the identification of strategies for testing along with the development of a strategic local area traffic model.



## Develop Vision, Objectives and Key Performance Indicators

- 2.4.2 A strategic vision for Bandon was developed along with a set of specific objectives and KPI's. These represented the foundation for an evaluation framework which was utilised to measure the performance of various urban design and transport strategies identified for Bandon. Please refer to Chapter Four of this report for a detailed description of the defined Bandon TPREP Vision, objectives and KPIs, and the developed evaluation framework.

## Transport Strategy Development

- 2.4.3 A series of workshops were held, both internally and between the wider project working group, to identify key strategies which could assist in improving traffic flow and the overall public realm in Bandon Town. The strategies were developed based on the following:

- Baseline review of current conditions within Bandon;
- Feedback from Public Consultation;
- Review of local and regional policy; and
- Review of previous studies carried out in the area.

- 2.4.4 The strategies developed were focused around a number of key areas, namely:

- Road & Street Hierarchy;
- Town Centre Circulation;
- Junction Improvements;
- Pedestrian & Cyclists;
- Schools transport;
- Public Transport;
- Heavy Goods Vehicles; and
- Parking.

## Traffic Model Development

- 2.4.5 To adequately assess the various transport strategies developed for the Bandon TPREP, a strategic traffic model has been developed in SATURN<sup>1</sup> for the Bandon Local Area. Figure 2.3 and 2.4, overleaf, provide an illustration of the Bandon Traffic Model (BTM) road network and the extent of the modelled area.
- 2.4.6 SYSTRA are currently developing the Southwest Regional Model (SWRM) for the National Transport Authority (NTA) which covers Cork City, Cork County and neighbouring counties. The SWRM was utilised as a base for developing the strategic traffic model for the Bandon TPREP. The base SWRM was updated with additional network and zonal detail to provide an enhanced representation of the road network, and route choice, in the study area.
- 2.4.7 Traffic survey data collated for Bandon from March to April 2015 was then utilised to calibrate and validate the base BTM to ensure that it provides a robust and accurate representation of traffic flow in our study area. The BTM was calibrated and validated using two primary guideline documents, the British Design Manual for Roads and Bridges (DMRB) Volume 12a

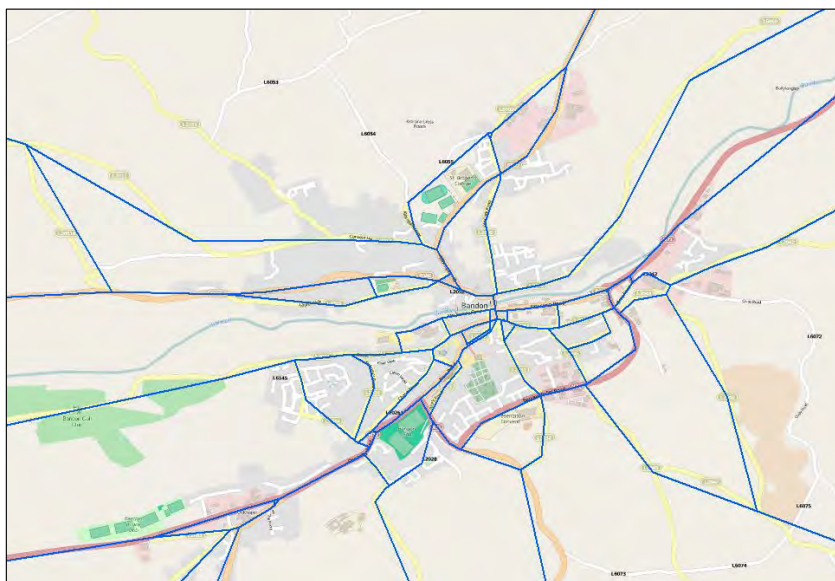
<sup>1</sup> SATURN (Simulation Assignment of Traffic to Urban Road Networks) is a detailed highway traffic assignment software package with additional facilities for matrix manipulation and demand estimation from counts.



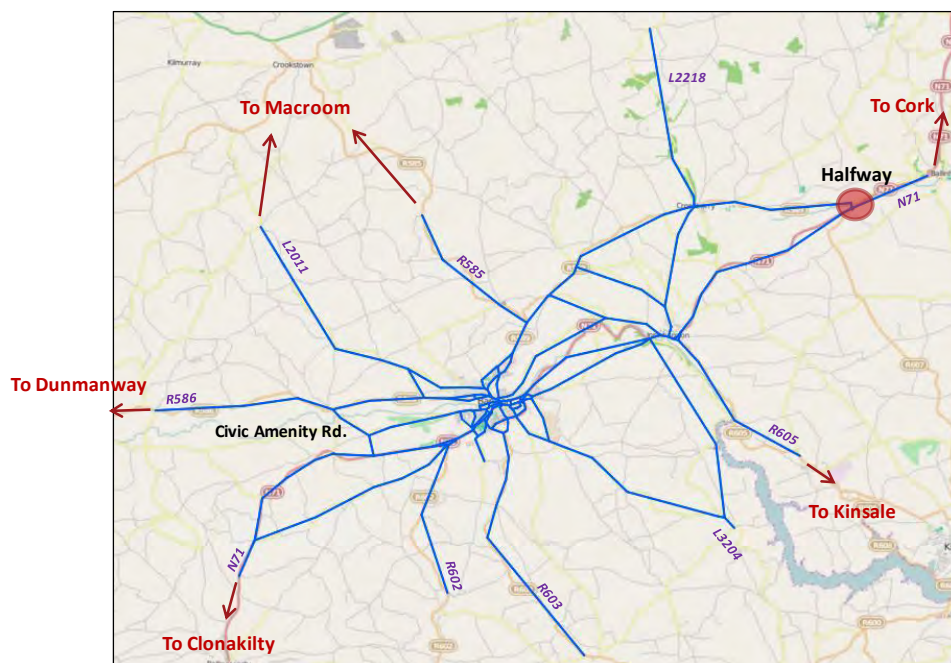


and the NRA Project Appraisal Guidelines Appendix 3. The DMRB Volume 12a guidelines are a widely accepted standard in Ireland (with the NRA basing their guidelines on this document) that provides extremely robust validation criteria to which certain types of highway models should adhere.

- 2.4.8 For further information on the development, calibration and validation of the BTM, the reader is referred to the *Bandon TPREP Model Development Report* contained in Appendix E of this report.



**Figure 2.3 Bandon Traffic Model Road Network**



**Figure 2.4 Bandon Traffic Model Area**



## 2.5 Strategy Assessment & Future Plan

### Testing of scenarios and emergence of preferred options

- 2.5.1 As noted previously in this chapter, an evaluation framework has been developed to test the various strategies for Bandon against an identified vision and key objectives (see Chapter 4 for further details).
- 2.5.2 The overall strategy testing methodology includes the use of the BTM and the developed evaluation framework, and is illustrated in Figure 2.5, overleaf. In summary:

#### **Step 1:**

- 2.5.3 Three identified town centre circulation options were preliminarily assessed based on a select number of key objectives which specifically relate to Bandon Town Centre using the BTM for the forecast year of 2020. The three town centre options, and the associated results of the preliminary assessment, are presented in Appendix B of this report.

#### **Step 2:**

- 2.5.4 The preferred town centre option was then tested versus a 'Do Nothing' scenario and a scenario which includes HGV restrictions in Bandon town centre.
- 2.5.5 The 'Do Nothing' Scenario essentially represents baseline conditions i.e. growth in traffic in line with Cork Co. Co. projections, however, no alterations to current road infrastructure.
- 2.5.6 At this stage, the various short/medium term strategies which are common to all forecast scenarios have been included for assessment, namely:
- Specific junction improvements;
  - Pedestrian & Cyclist facilities;
  - Public Transport initiatives;
  - School travel plans; and
  - Parking strategies.
- 2.5.7 Specific junction improvements have been tested using a combination of the BTM, and individual junction models in software packages such as PICADY<sup>2</sup>, ARCADY<sup>3</sup> and LINSIG<sup>4</sup>. The results of this junction analysis are presented in Appendix B of this report.
- 2.5.8 The three test scenarios were passed through the full evaluation framework, i.e. measured against all objectives and KPIs, and the preferred option was identified for a forecast year of 2020. The results of the 2020 analysis are outlined in Appendix B of this report.

<sup>2</sup> PICADY is a software package used to assess capacities, queues and delays at priority junctions.

<sup>3</sup> ARCADY is a software package used to assess capacities, queues and delays at roundabouts.

<sup>4</sup> LINSIG is a software package used for the assessment and design of traffic signal junctions.

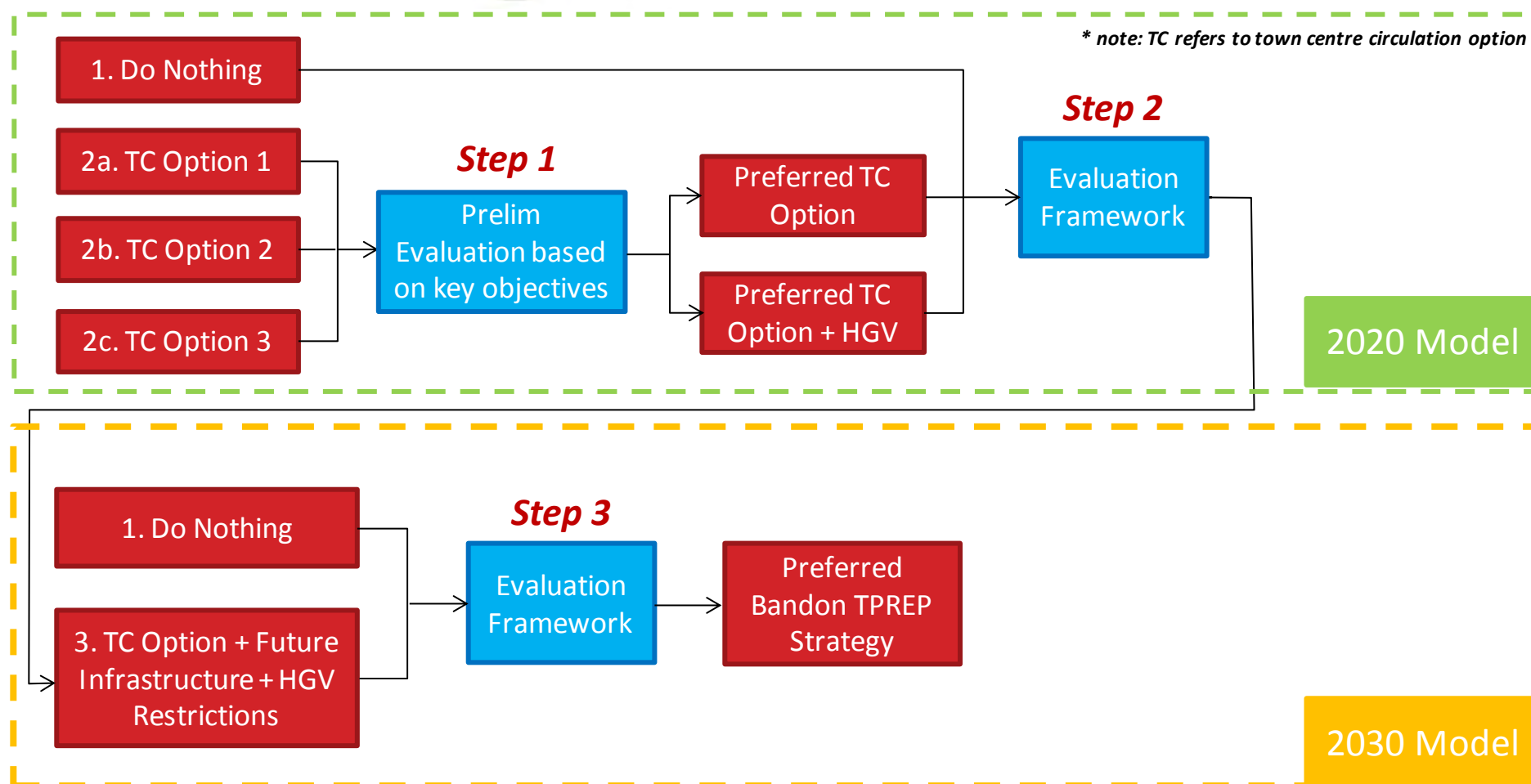


Figure 2.5 Bandon TPREP Strategy Testing Methodology





### **Step 3:**

2.5.9 For the 2030 forecast year, two proposed major infrastructure options were added to the preferred town centre circulation strategy, namely:

- Continuation of the Southern Bypass; and
- Construction of the Northern Relief Road.

2.5.10 This scenario was then tested versus a 2030 'Do Minimum'. Similar to Step 2, the scenarios were tested using the full evaluation framework, and the identified preferred option forms the 2030 Bandon TPREP Strategy. The results of the 2030 strategy testing are presented in Appendix C of this report.

### **Preferred Transportation Option Design**

2.5.11 Based on the results of the strategy testing, the Bandon TPREP 2020 and 2030 recommendations for urban design and transport were produced.

2.5.12 Preliminary design drawings were produced for a number of key identified junctions within Bandon Town Centre in line with the finalised strategy. Conceptual drawings outlining the planned public realm enhancements on key corridors within the town centre were also produced.

2.5.13 The preferred Bandon TPREP strategies were then fed into a Draft Final Report, which is to be brought forward for a 2<sup>nd</sup> round public consultation in mid-2016.

## **2.6 Final Report**

### **2<sup>nd</sup> Round Public Consultation**

2.6.1 A second and final public exhibition was held in the Bandon Town Hall on the 31<sup>st</sup> May 2016. Members of the public were invited to attend and the event was advertised in local newspapers, on Cork County Council's website, on local press and radio. The purpose of the exhibition was to present the future strategy for development in Bandon and to give the members of the public and stakeholders a further opportunity to give their opinions on the Bandon Transportation and Public Realm Enhancement Strategy.

2.6.2 The event was hosted by members of the Bandon T-PREP team from Cork County Council, SYSTRA and J.B. Barry & Partners consultants. Visitors who attended were invited to view a number of presentation boards which outline the draft recommendations of the Bandon TPREP.

2.6.3 Visitors were encouraged to talk to members of the project team and discuss any issues or concerns in relation to the draft plan proposals. Blank feedback forms were available for visitors to fill out and return before 21<sup>st</sup> June 2016.

2.6.4 Submissions and feedback received during this round of consultation were reviewed and responded to in the 'Design Team's Report on the 2<sup>nd</sup> Round Public Consultation'. This report is enclosed in Appendix G. A meeting was held with the elected members of the Bandon Kinsale Municipal District on the 29<sup>th</sup> September 2016 to present the feedback from the 2<sup>nd</sup>



Public Consultation event and to discuss the recommended measures to be included in the Final Report. Members of the Bandon Kinsale Municipal District approved the inclusion of the Bandon TPREP as an objective of the Draft Bandon Local Area Plan 2017 at the meeting. The minutes of this meeting are enclosed in Appendix H.

### **Final Report**

- 2.6.5 The Final Report includes all of the recommended edits which were summarised in the 2nd Round Public Consultation Report.



### 3. EXISTING CONDITIONS

#### 3.1 Introduction

3.1.1 This chapter provides a summary of current transport and public realm conditions in Bandon Town, and includes the following:

- **Current Travel Characteristics:** A review of 2011 Census data providing information on travel behaviour for residents of Bandon including aspects such as mode share, car ownership etc.
- **Feedback from 1<sup>st</sup> Round Public Consultation:** A review of submissions received during the 1<sup>st</sup> round phase of public consultation including key issues noted;
- **Pedestrian and Cycling Facilities:** A review of current facilities and infrastructure available for pedestrians and cyclists including items such as cycle lanes, pedestrian crossings, footpath widths etc.;
- **Public Realm Conditions:** A review of the public realm environment which currently exists within Bandon Town including identification of areas for improvement;
- **Bus Operating Arrangements and Conditions:** A review of current bus facilities within Bandon Town and services which operate in the area;
- **Baseline Traffic Evaluation:** An overview of traffic issues identified in Bandon Town including an operational review of key junctions identified through baseline site visits; and
- **Goods vehicle Arrangements:** A review of HGV traffic within Bandon and the associated issues.

3.1.2 From this baseline review, a thorough picture of the current transport situation and public realm in Bandon was identified and used to inform the development of the TPREP transport strategy measures.

3.1.3 Please note that the following sections are summarised from the *Bandon TPREP Interim Report*. The reader is referred to this document for any further information required on the baseline assessment of current transport and public realm conditions in Bandon

#### 3.2 Current Travel Characteristics

3.2.1 This section provides details on the current travel characteristics for the population living in the Bandon TREP Study Area, including their primary mode of transport, purpose of travel, journey distances and so on. This information informs our understanding of the transportation system and how it works.

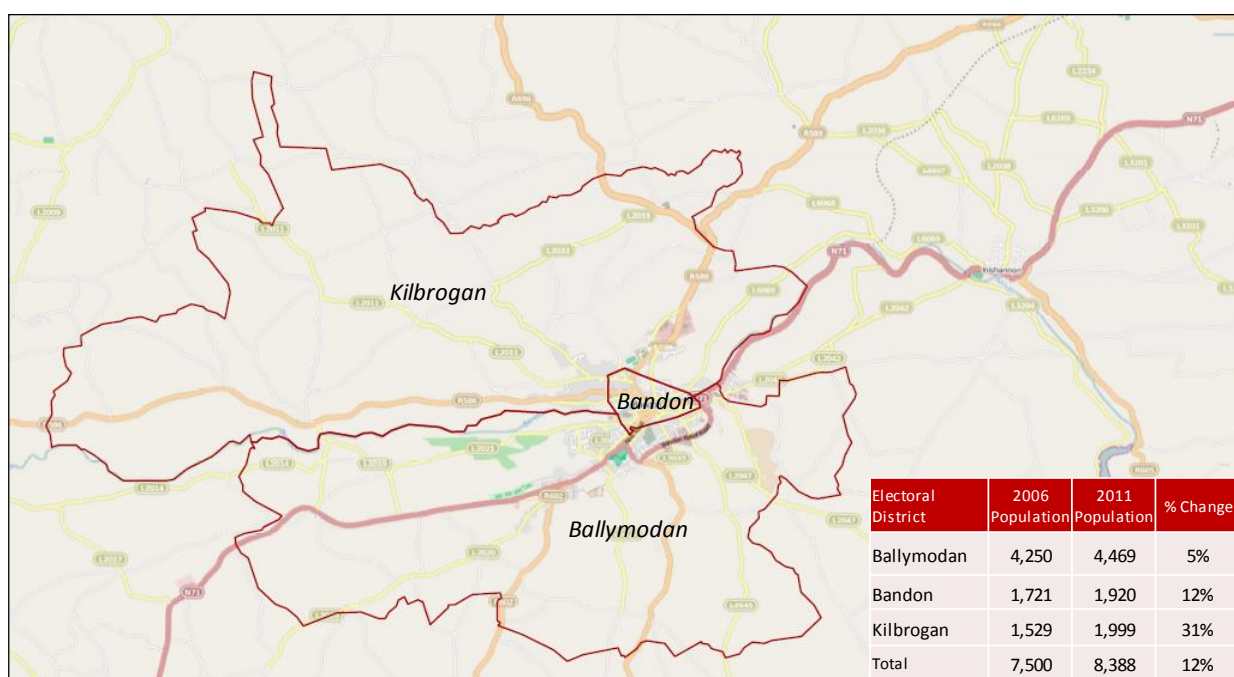


3.2.2 The review of the study area's travel characteristics has been facilitated by an analysis of Place of Work, School or College Census of Anonymised Records (POWSCAR) data for the Bandon/Kinsale Municipal District carried out by Cork Co. Co. which primarily focuses on travel to work.

### Population and Demographic

3.2.3 Figure 3.1, below, illustrates the population<sup>5</sup> for the three Electoral Districts (EDs) incorporating Bandon Town and its environs, namely:

- Bandon ED
- Kilbrogan ED; and
- Ballymodan ED.



**Figure 3.1 Bandon EDs Population Statistics**

3.2.4 The study area EDs had a total population of 8,388 in 2011 which represents a 12% increase compared with 2006 (7,500). The largest demographic in Bandon is the 20-44 years old age group which accounts for 38% of the total population. Those aged between 0-19 represent the next largest demographic at 28%. 45 to 64 year olds account for 23% and over 65 year olds represent 12% of total population.

### Car Ownership

3.2.5 Car ownership is a key factor in travel pattern behaviour. The availability of a car is a critical input into deciding where to travel and how to travel. For those who do not have access to a car, accessibility to education, employment and public facilities is generally made by walking or cycling and by public transport, if available.

<sup>5</sup> Population information taken from Census 2011 Small Area Population Statistics (SAPS)



- 3.2.6 Table 3.1, below, outlines the level of car ownership for the three EDs encompassing the Bandon TPREP Study Area. Table 3.1 shows that, overall, the level of car ownership within the study area is high with 84% of households owning one or more cars. This indicates the reliance on the private car as the dominant transport mode.
- 3.2.7 This high level of car ownership is not unusual for places like Bandon as the need for a car is greater in rural areas where development is more dispersed and essential facilities are not within walking or cycling distance. Dispersed populations are also difficult to serve by public transport in a cost-efficient way. Therefore, the private car is often the only choice of transport in rural areas.
- 3.2.8 Bandon ED encompasses the heart of Bandon town centre i.e. the area around South Main Street, North Main Street and Kilbrogan Hill. Households in this area are in close proximity to areas of employment and education which can be accessed by walking and cycling. As such, this ED experiences lower levels of car ownership.

**Table 3.1 Study Area Car Ownership (% Households)**

Electoral District	No Car	1 Car	2 Cars	3 Cars	4 or more Cars
Ballymodan	13%	42%	36%	7%	3%
Bandon	32%	45%	20%	3%	1%
Kilbrogan	6%	38%	43%	10%	4%
Total	16%	42%	33%	7%	3%

**Implications for Bandon of High Levels of Car Ownership**

The high levels of car ownership within the Bandon TPREP study area indicates that the car is viewed as the most convenient way for many people to travel to work and education. Because of the high car ownership levels, targeting public transport interventions in this area may not yield an up lift in public transport use.

Reduced car use can lead to a host of significant benefits to the individual and the local economy including reduced congestion, improved road safety and an improved environment for pedestrians and cyclists.

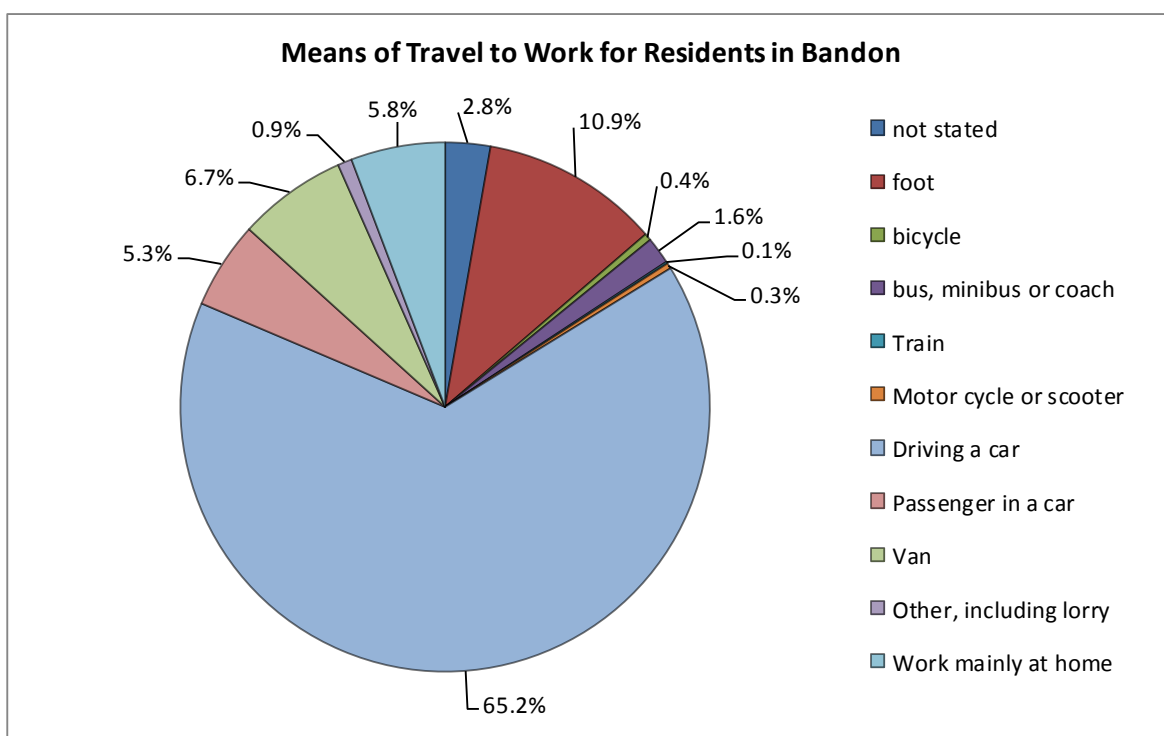
**Travel to Work Mode Split**

- 3.2.9 Figure 3.2, below, illustrates the percentage mode share for travel to work for employees residing in the Bandon TPREP Study area. The results indicate that car/van is by far the most commonly used means of transport for work trips, accounting for 77% of all trips to work made by people living in Bandon (combination of 'Driving a car', 'Passenger in a car' and 'Van').



3.2.10 The second most popular means of travel to work is by foot (10.9%). This represents residents living in Bandon and walking short distances to employment within the town. This is reflected in the relatively high number of households in the Bandon ED which do not own a car (see Table 3.1).

3.2.11 Public transport and bicycle use is particularly low accounting for only 1.6% and 0.4% of all work trips made by people living within Bandon respectively.



**Figure 3.2 Travel to Work Mode Share**

#### **Implications for Bandon of Low Levels of Walking, Cycling & Public Transport Use**

The low levels of active travel suggest that there may be potential for a mode shift from car towards walking and cycling if enhancements are made to pedestrian and cycling facilities within the Bandon TPREP study area.

The low levels of public transport use for work trips in the Bandon area indicates that public transport does not provide an attractive mode option when compared to car.

#### **Key Employment Movement Desire Lines**

3.2.12 Figure 3.3 and Table 3.2 below, taken from analysis carried out by Cork Co. Co., provide a representation of where employees, residing in the Bandon TPREP study area, are working within Cork City and Cork County.





**Table 3.2 Analysis of employment locations for employees residing in Bandon**

Location	Employee s	% of Total
Cork City EDs	469	19%
County Metropolitan EDs	314	13%
North EDs	6	0%
West EDs	245	10%
Outside Cork City & County	45	2%
Within Study Area	1,088	44%
Within Greater Cork Ring EDs	1,399	56%
Total Employees	2,478*	

*\* Note: Total Employees does not add up to previous categories as grouped locations overlap. Total Employees residing in study area excludes mobile, home and uncodeable workers.*

- 3.2.13 The results in Table 3.2, above, indicate that the majority of employees residing in Bandon are actually working in Bandon, Kilbrogan and Ballymodan EDs (i.e. Bandon Town). Outside of the study area, Figure 3.3 illustrates that the location of employment is quite dispersed to various areas in Cork City and County.

#### **Implications for Bandon of Employment Locations**

A significant proportion of work trips (44%) are defined to be internal within the study area. This suggests that, with improvements to walking and cycling facilities within the town, it may be possible to increase modal share in these areas.

Outside of the Bandon EDs, the dispersed nature of the travel to work patterns, and given that most of these trips are made by car, indicates that it will be difficult to provide an alternative to the car for many of these trips.





### 3.3 Feedback from 1<sup>st</sup> Round Public Consultation

3.3.1 As outlined previously in Chapter 2 of this report, 1<sup>st</sup> round public consultation was carried out to inform the public of the Bandon TPREP study and its implications for the local area. It also provides an insight into perceived issues within the town and a view as to how Bandon should develop in terms of transport improvements.

3.3.2 A total of 65 local stakeholders were contacted by letter/email and invited to make submissions. Those contacted included public agencies, private agencies and Community groups. Local land owners, businesses and private individuals were also encouraged to make submissions with any relevant issues. Table 2.1, outlined previously, provides an overview of the stakeholders contacted and the number of submissions received.

#### Local Public and Stakeholder Submissions

3.3.3 Submissions in the form of written responses, and/or by meeting, have been received from the following public bodies and private stakeholders:

- Bus Éireann;
- National Roads Authority;
- National Transport Authority;
- An Garda Síochána;
- [REDACTED] ([REDACTED])
- [REDACTED]
- [REDACTED] ([REDACTED])
- [REDACTED] ([REDACTED])
- [REDACTED]
- [REDACTED]
- [REDACTED] ([REDACTED])
- [REDACTED] ([REDACTED])

3.3.4 Members of the general public were invited to complete questionnaires at the 1<sup>st</sup> round public exhibition. This questionnaire was also made available on the Cork Co. Co. website for the four week consultation period.

3.3.5 By the end of the consultation process a significant number of submissions had been received. A review of these submissions identified the following main areas of concern:

- **Traffic congestion** is frequent within the town centre and is especially bad during peak hour periods;
- A **large volume of HGV's** pass through the town centre as all of the alternative routes have deficiencies and the single river crossing limits viable options;
- **School traffic** causes congestion near the schools during drop-off/pick-up periods;
- A number of junctions are congested due to **lack of capacity** and incorrect junction priority;



- The **N71** is not the preferred route for HGV's due to unsafe road gradient, inappropriate junction priority, poor sightlines and poor junction design;
- **Poor parking** practises cause congestion especially within the town centre;
- **Road surfaces** in general are in need of improvement;
- Improved disabled parking facilities are required;
- **Bus facilities** could be improved;
- **Pedestrian facilities** are inadequate, particular issues include poor surfacing, footpath widths, lack of appropriate crossings, dis-jointed network, poor street lighting and limited pedestrian amenity areas;
- **Unsafe pedestrian access** to Riverview Shopping Centre from South Main Street; and
- There are many **derelict and vacant sites** available with potential to increase the amenity and aesthetics of the town

#### Schools Submissions

- 3.3.6 School traffic is a significant contributor to congestion in the Bandon Town area during the peak periods. It is therefore important that this study understands the travel patterns associated with each of the local schools.
- 3.3.7 A total of 14 schools were contacted as part of the consultation process for the Bandon TPREP. They were sent an introduction letter and a specifically designed schools questionnaire to complete and return. The schools contacted are listed in Table 3.3.

**Table 3.3 Schools Contacted**

School Name	School Type
Bandon Bridge National School	Primary School
Bandon Grammar School	Secondary School
Presentation College	Secondary School
Hamilton High School	Secondary School
Crossmahon National School	Primary School
Scoil Phadaírg Noafa (Boys NS)	Primary School
St. Brogan's College	Secondary School
Laragh National School	Primary School
Teach ná Nog	Montessori School



ECE Language School	Post-Secondary
Castlealack National School	Primary School
The Haven	Montessori School
Presentation Convent National School	Primary School
Gaelscoil Dhroichead ná Banndan	Primary School

3.3.8 A survey questionnaire was sent to each of these local schools and the questions were grouped into a number of categories as follows:

- School description
- Cycling
- Walking
- Bus
- Pick up and drop off
- General traffic issues
- Car parking
- Staggered start times

3.3.9 There are five primary schools and four secondary schools within the study area. Crossmahon National School is located a short distance west of the study boundary, but given that their catchment is primarily within the study area, they are also considered to be a local school.

3.3.10 All national primary and secondary schools within the study area were invited to participate in a consultation meeting with a member of the Bandon TPREP team. This consultation gave the local schools an opportunity to talk through any issues or concerns they might have as well as providing a valuable source of information on travel behaviour in the study.

#### **Cycling**

3.3.11 The rate of cycling to school is very low in the area. Cycling is perceived to be dangerous and local roads too steep. As a consequence, schools are reluctant to promote cycling as a means of travel. However, consultation with the local schools suggests that pupils are interested in cycling.

3.3.12 Cycling appears to be more common amongst boys attending secondary school. Bandon Grammar school could benefit from better cycling facilities in the surrounding local roads.

3.3.13 Almost all the schools offered the 'cycle to work scheme' to members of staff which allows them to purchase a bicycle tax free.

#### **Walking**

3.3.14 Walking is a popular means of travel to and from school. However, most of the local schools have very wide catchment areas and this reduces the propensity for pupils to walk to school.

3.3.15 A minority of schools stated that the standard of access for pedestrians was inadequate. In this respect, the most common issue raised by local schools related to the lack of pedestrian



crossing facilities near the school entrance. A lack of pedestrian pavements was also mentioned as being of concern in some locations.

### **Bus**

- 3.3.16 The majority of the local schools have a dedicated school bus service, be it directly with Bus Éireann or a private operator.
- 3.3.17 The location of bus stops is not ideal for some schools and some stops do not have shelters or timetable information. The majority of schools north of the River Bandon use an area known as The Shambles as a combined set-down and pick-up area.
- 3.3.18 St Brogans secondary school have an inadequate and unsafe situation where one bus traveling to and from North Bandon set-down/pick up at the road side with no adequate provisions.

### **Pick Up and Drop Off**

- 3.3.19 The majority of the schools surveyed stated that pick up and drop off activity at the school results in traffic congestion. In some cases, delays caused by school related traffic are a frequent occurrence. Often, the impact can be more pronounced in the afternoon as parents wait for pupils to leave school.
- 3.3.20 Many of the local schools are located beside residential areas and parking associated with pick up activity overflows into these estates which impacts on residents.

### **General Traffic Issues**

- 3.3.21 The local schools were invited to raise any general traffic issues that affected access to the schools. The following issues were raised:
- There is significant congestion on routes such as Convent Hill, Kilbrogan Hill and Clancool estate roads;
  - Some junctions such as Convent Hill/Kilbrogan Hill, N71 junction at Old Chapel and Allen Square/Dunmanway Road are perceived to cause delays;
  - Unsafe pedestrian crossing at Convent Hill, Macroom Road, Allen Square, N71 west, N71 Bypass, Clancool estate roads; and
  - Insufficient visibility at access road to Presentation Convent secondary school.

### **Car Parking**

- 3.3.22 All but two of the schools surveyed have an on-site car park. The school car parks generally have one space per full-time member of staff and one or two additional spaces for visitors. The allocation of car parking spaces was organised within four of the schools on a needs basis; the remaining schools operated a 'free for all'. The majority of the secondary schools do not permit student parking on-site.
- 3.3.23 Demand for car parking at the schools is high and the majority of schools with car parks stated that demand exceeded supply generally.





### **Public Consultation Summary Staggered Start Times**

- 3.3.24 The schools either have an early start time of 08:30 or a late start time of 09:30. The finish times are also staggered at 14:00 or 14:30 for the primary schools.
- 3.3.25 A full summary and comprehensive review of submissions received as part of the 1<sup>st</sup> Round Public Consultation are contained within the *Bandon TPREP First Public Consultation Report* attached in Appendix D of this report.

## **3.4 Pedestrian and Cycling Facilities**

### **Pedestrian Facilities**

- 3.4.1 Pedestrian facilities are of varying quality throughout Bandon town with issues such as narrow footpaths, lack of crossing facilities and poor surfacing and lighting noted during public consultation.
- 3.4.2 One of the most vulnerable groups of pedestrians is school children, and as such they deserve further consideration. Apart from distance, one of the key factors determining the levels of pedestrian activity related to school trips is the safety of the pedestrian environment. Young children particularly will be less inclined to walk when there are high traffic volumes or excessive traffic speeds along their route. The existence of a continuous pedestrian network allowing for journeys on foot from door (of home) to door (of school) and vice versa is crucial if pedestrian related school journeys are to be encouraged.
- 3.4.3 Another vulnerable pedestrian group are those with reduced mobility, which includes the elderly and mothers with prams/buggies. These pedestrians take longer than average to cross the road, which can become an issue.
- 3.4.4 The following sections of this chapter provide an overview of the pedestrian facilities and conditions at a number of key areas in Bandon town centre.



## South Main Street & Market Street

- Volumes of pedestrian activity observed:
  - Some of the highest pedestrian flows were surveyed on South Main Street in the AM and PM peaks (116 pedestrians between 08:00-09:00 and 393 pedestrians between 17:00-18:00 – see Section 5.2 previously). This is to be expected as South Main Street is the main retail centre in Bandon.
- Footpaths
  - Generally wide footpaths on both side of the road
  - Footpaths narrow on eastern end of South Main Street
- Pedestrian crossing facilities
  - One pedestrian crossing provided on South Main Street and one on Market Street
- Issues:
  - Insufficient crossing points for the level of pedestrian activity
  - Due to lack of crossing facilities, pedestrians were witnessed attempting to cross the road at various points i.e. not using crossing facility available
  - Poor footpath surfacing noted along South Main Street – leads to an unattractive environment for pedestrians



**Picture 1:** Pedestrian Crossing on South Main Street.



**Picture 2:** Generally wide footpaths on South Main Street

**Figure 3.4 Pedestrian Facilities and Issues on South Main Street & Market Street**



## St. Finbarr's Place & Bandon Bridge

- Volumes of pedestrian activity observed:
  - Moderate levels of pedestrian flows were surveyed on Bandon Bridge in the AM and PM peaks (59 pedestrians between 08:00-09:00 and 73 pedestrians between 17:00-18:00 – see Section 5.2 previously).
- Footpaths
  - Generally footpaths are narrow on both sides of the road
- Pedestrian crossing facilities
  - One pedestrian crossing provided on Bandon Bridge
- Issues:
  - No pedestrian crossing at St. Finbarr's Place at the junction with Glasslynn Road – poor pedestrian connectivity to bus stop on Glasslynn Road from town centre
  - Wide junction layout at the Glasslynn Road/St. Finbarr's Place intersection to facilitate HGV movements – results in pedestrians having large distances to traverse which is a particular issue for the mobility impaired
  - Heavy traffic volumes, in particular HGV flows, cause safety issues for pedestrians



**Picture 1:** Narrow footpaths and high volumes of HGV traffic creates an unattractive environment for pedestrians



**Picture 2:** Wide Junction layout at Glasslynn Road/St. Finbarr's Place intersection makes it difficult for pedestrians to cross

**Figure 3.5 Pedestrian Facilities and Issues on St. Finbarr's Place & Bandon Bridge**



## North Main Street

- Footpaths
  - Generally footpaths are narrow on both sides of the road
  - Poor footpath surfacing noted along North Main Street
- Pedestrian crossing facilities
  - One pedestrian crossing provided at the western end of North Main street at the junction with Kilbrogan Hill
- Issues:
  - No pedestrian crossings provided along North Main Street which is particularly an issue at the eastern end close to Bandon Bridge. The lack of crossing points, combined with heavy traffic volumes, leads to high level of pedestrian severance
  - Heavy traffic volumes, in particular HGV flows, cause safety issues for pedestrians
  - Poor footpath surfacing noted which leads to an unattractive environment for pedestrians



**Picture 1:** high volumes of traffic, in particular HGVs, creates an unattractive environment for pedestrians



**Picture 2:** Narrow footpaths, poor lighting and poor surfacing create an unattractive pedestrian environment

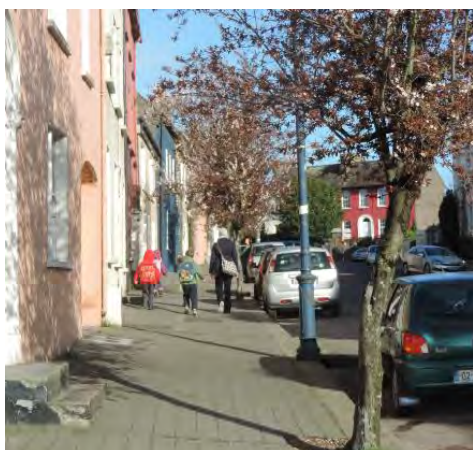
**Figure 3.6 Pedestrian Facilities and Issues on North Main Street**





## Kilbrogan Hill

- Volumes of pedestrian activity observed:
  - High levels of pedestrian flows were surveyed on Kilbrogan Hill in the AM peak (136 pedestrians between 08:00-09:00). The volume recorded in the PM peak (17:00-18:00) was significantly lower (less than 25 people).
  - This suggests that the majority of pedestrians recorded in the AM were walking to school. It was noted during public consultation that some of the school buses drop children off at the area known as 'The Shambles' and they walk up Kilbrogan Hill to access St. Brogan's College and St. Patrick's Primary School.
- Footpaths
  - Generally footpaths are wide on both sides of the road
- Pedestrian crossing facilities
  - Two pedestrian crossings provided on the western side of the Kilbrogan Hill Road at the intersections with the Dunmanway Road (R586) and The Shambles.
  - School warden operating on the Junction between Kilbrogan Hill and Convent Hill to facilitate school pedestrian movements
- Issues:
  - No pedestrian crossing for traversing Kilbrogan Hill Road
  - High traffic volumes noted on Kilbrogan Hill in the peak periods.
  - It was noted during the site visit that traffic travels quite fast on this route under non-congested conditions.



**Picture 1:** Children Walking to school on Kilbrogan Hill



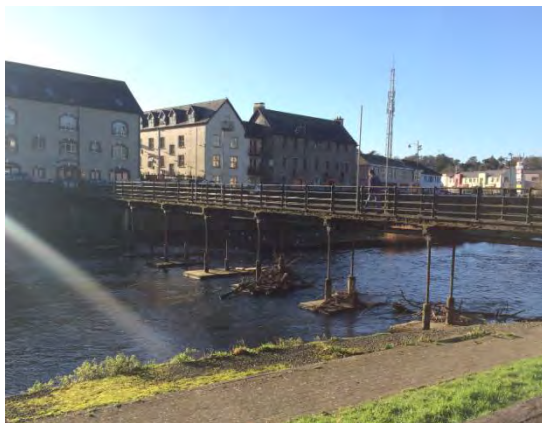
**Picture 2:** Pedestrian Crossing between Kilbrogan Hill and The Shambles

**Figure 3.7 Pedestrian Facilities and Issues on Kilbrogan Hill**



## MacSwiney Quay

- Volumes of pedestrian activity observed:
  - Moderate to high levels of pedestrian flows were surveyed on MacSwiney Quay in the AM and PM peaks (88 pedestrians between 08:00-09:00 and 103 pedestrians between 17:00-18:00 – see Section 5.2 previously).
  - The increase in pedestrian volumes in the PM peak may be due to increased retail activity during this time period.
- Footpaths
  - On the northern side of MacSwiney Quay, beside the river, footpaths are quite narrow reducing to less than 1 metre in places.
  - Large section of MacSwiney Quay has footpath provision on one side only
- Pedestrian crossing facilities
  - No pedestrian crossings on MacSwiney Quay
- Issues:
  - Lack of pedestrian crossings and narrow footpath widths lead to an unattractive pedestrian environment
  - Lack of pedestrian network linking footbridge with key locations such as South Main Street



**Picture 1:** Pedestrian footbridge linking north and south of the river at MacSwiney Quay



**Picture 2:** Narrow footpath widths on MacSwiney Quay

**Figure 3.8 Pedestrian Facilities and Issues on MacSwiney Quay**





### Cyclist Facilities

- 3.4.5 Currently, cyclist facilities are very poor in Bandon Town. There are no dedicated cycle lanes on any routes within the town centre, and there is only one bike parking facility located on South Main Street.
- 3.4.6 The road network within Bandon represents a poor cycling environment due to the following:
- restricted effective carriageway widths along a lot of roads in the town due to the presence of on-street parking;
  - extensive car pick up and drop off activities in the vicinity of schools;
  - lack of cycle lanes and bike parking facilities;
  - presence of large volume of HGV traffic; and
  - difficult topography for cycling (particularly for young children).
- 3.4.7 The above factors represent a major barrier to cycle use in Bandon. As a result, low levels of cycling activity were observed in the area during the site visit, and this was supported by the POWSCAR analysis, where cyclists accounted for only 0.4% of all travel to work trips (see Section 3.1 for further details).
- 3.4.8 Figure 3.9 below illustrates some of the cyclist facilities and issues noted in Bandon. The improvement of these facilities should be taken into consideration in all future planning, particularly to provide a safe environment for children cycling to school.



**Picture 1:** Bike parking facilities on South Main Street



**Picture 2:** Large volume of HGVs, narrow road widths and steep gradients create a poor cycling environment

**Figure 3.9 Cycling Facilities and Issues in Bandon**

## 3.5 Public Realm Conditions

- 3.5.1 Bandon is a tired town. It is tired mainly through the lack of any meaningful positive physical intervention to improve the streetscape or the improvement to the amenities, particularly related to the Main Street shopping experience or the interface with the river. The entrances to Bandon from both West Cork side and from Cork City side is uninviting in that there is no proper welcoming threshold and the wide open streets with little or no appropriately scaled



definition or planting makes the entrance roads untidy. This is all the pity as there was a time when Bandon was the gateway to West Cork, and the town surpassed Clonakilty as the ‘must see’ small town of West Cork.

- 3.5.2 Bandon also only has a single vehicular river crossing, with the nearest alternative crossing points located at Baxter’s Bridge to the west, and Innishannon to the east. This makes for heavy traffic at that crossing which is compounded by the fact that Heavy Goods Vehicles need to access either side of the river to reach their destinations within close proximity to the town.
- 3.5.3 Bandon was a walled town and although traces of the walls can be found there is no obvious outward expression of these walls so that visitors are unaware of this important portion of Bandon’s historical fabric. Bandon also has an important architectural collection of churches that that are juxtaposed in the town North and South of the river but are not readily on display in terms of the interface with the streetscape.
- 3.5.4 Generally towns that grow tired over time suffer from the same maladies, and they can be summarised as follows:

#### **The Accretion of objects:**

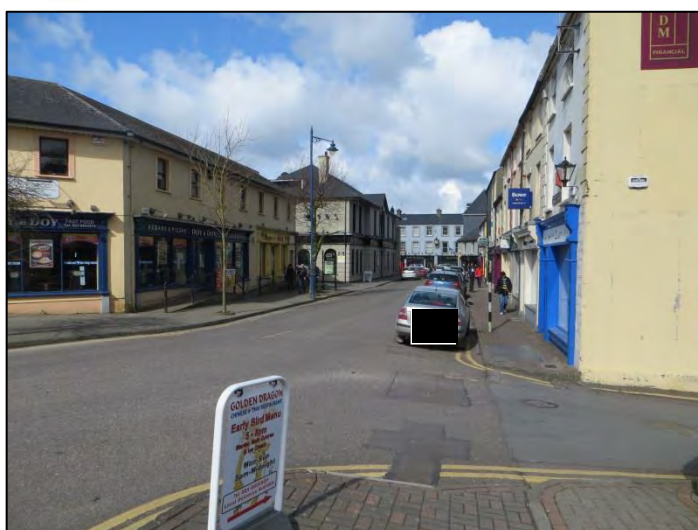
- 3.5.5 This generally alludes to objects that have been placed in the streetscape over many years but have subsequently lost their meaning or use but have not since been removed. This is mainly in the form of obsolete signage, disused fixings to buildings to take electrical connections, old bases for bins etc. Over time these objects add to the clutter of the streetscape, making for an untidy visual experience.



**Figure 3.10 Wires attached to buildings as a good example**

#### **Quality of Finishes:**

- 3.5.6 It is the tactile quality of the finishes to any streetscape that add to or detract from the visual amenity of that streetscape. In the case of Bandon the quality of any finish to any amenity space, be it shopping street, pedestrian walkway, or public park, is of a very poor quality and the materials used are generally of the lowest utilitarian grade.



**Figure 3.11 Example of Poor Quality of Finish in Bandon**

### Definition of Space:

- 3.5.7 Generally the definition of space has a lot to do with how we comprehend our environment. Over time as motorised transport became more popular all the available space was given over to the car and any leftover space was allocated to pedestrians making for a harsh and alien environment for people. Like other towns, wide road widths have become the norm in Bandon with narrow footpaths taking a distant second place. Pedestrian crossing of roads become random and way finding is obscure.



**Figure 3.12 A Large Sea of Tarmacadam at Kilbrogan Hill / North Main Street**

### Traffic Pedestrian Conflict:

- 3.5.8 Linked to the above, there is the conflict between the car and pedestrians where pedestrians cross wide streets without adequate markings that might indicate pedestrian priority for both the pedestrians and the drivers. As the road layouts imply road traffic priority, the drivers increase their speed and make road crossings unsafe and unpleasant.





**Figure 3.13 A major pedestrian route to the Catholic Church terminates at a narrow footpath**

#### **Lack of Amenities:**

- 3.5.9 Bandon lacks the simple everyday amenities for its citizens and visitors using the town as a shopping or leisure venue. There is a lack of trees, of seats, of interpretative signage, etc. Parks and streetscapes are inadequately furnished for seating, resting, etc. The parks are also inadequate venues for other leisure activity like picnicking. Bandon's main asset is its river which divides the town to north and South, but visual and physical access to the river is limited as it is with the Bridewell Stream.



**Picture 1:** An example of a poor park bench



**Picture 2:** All along the river front, no seats or break out points

**Figure 3.14 Example of Lack of Amenities within Bandon**

#### **Dated Street Furniture:**

- 3.5.10 This often has to do with designs that were well intended years ago but have become obsolete due to changing fashion. There are some spaces in Bandon that have attended to years ago



but due to changing circumstance are no longer used as intended. Signage also dates or gets damaged and does not get replaced.



**Picture 1:** Dated pocket park at entrance to town



**Picture 2:** Dated flower boxes

**Figure 3.15 Example of Dated Street Furniture in Bandon**

#### Lack of Reference Points:

- 3.5.11 This point refers directly to the Main shopping streets where to any visitor the townscape looks uniform over the length of the Main Street due to the constant building heights, variable colours to properties, uniform shopfront design etc. thus dissolving the legibility of the street. For a shopping street to function adequately it is important that the user is able to reference his position relative to, say, where a car is parked or his next destination, etc.



**Figure 3.16 Main Street Bandon could just as well be any other small town main street**

- 3.5.12 The above make for Bandon being an uninviting environment for its Citizens and for Visitors alike and for the town to not be the desired destination for shopping or for leisure. For the town to regain its title as the Gateway to West Cork, it will need to improve the public realm





which should in turn improve its commercial and leisure offer thereby transforming the town into a destination of choice

### 3.6 Bus Operating Arrangements and Conditions

3.6.1 At present, Bandon is served by four Bus Éireann (BÉ) Regional Routes, namely:

- Route 236 – Operating from Cork City to Castletownbere via Bandon;
- Route 237 – Operating from Cork City to Clonakilty, Skibbereen and Goleen via Bandon;
- Route 239 – Operating from Cork City to Bandon and Butlerstown; and
- Route 252 – Operating from Cork City to Kenmare via Bandon. This is currently a summer service operating from the 28th June to the 29th August 2015.

3.6.2 The above routes through Bandon are illustrated in Figure 3.17 below and provide a reasonable service for commuters travelling to Cork City with six services operating in the AM peak period of 07:00 – 10:00. This equates to approximately one bus service every 30 minutes taking approximately one hour to access Parnell Place bus station in Cork. Likewise, in the PM peak from 16:00 – 19:00, there are six services operating from Cork City to Bandon for return commuters.

3.6.3 Outside the peak hours, the above BÉ routes provide approximately one service per hour between Bandon and Cork City. For areas to the west of Bandon, the level of bus service available is very much dependant on the destination of travel and time of departure.

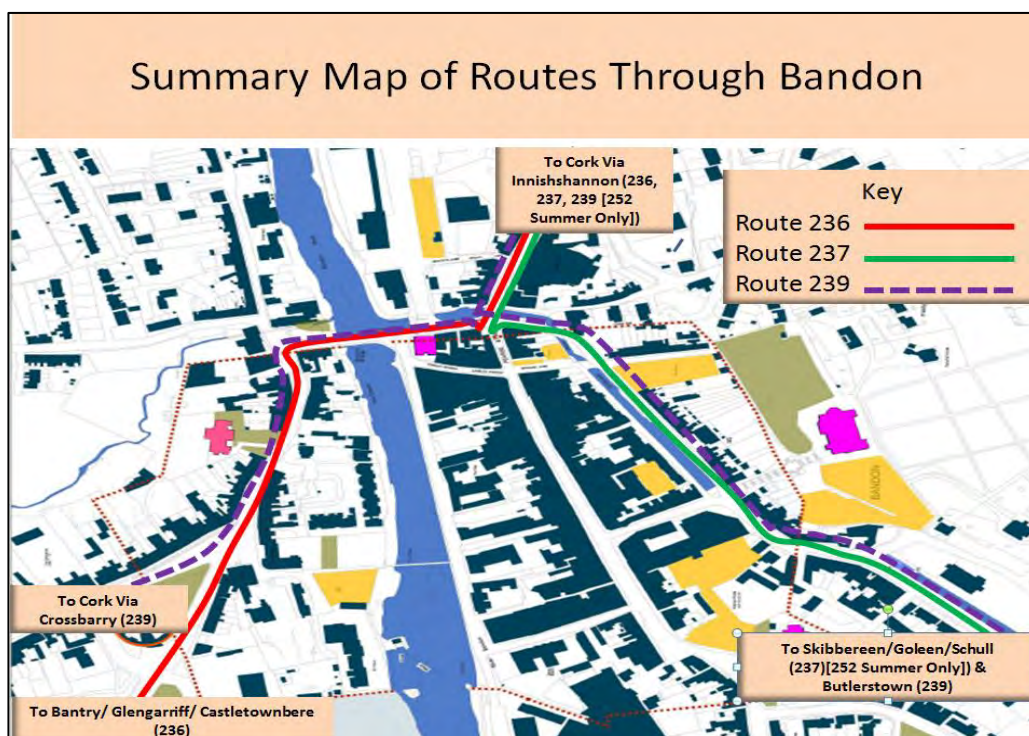


Figure 3.17 Existing Bus Routes through Bandon

3.6.4 The bus stops located in Bandon town are as follows:





○ **Eastbound: Bandon (Kelleher's) Glasslynn Road**

- Bus Shelter for services from Bandon toward Cork on Routes 236, 237 and 239 and 252(Summer Only)

○ **Westbound: Bandon (ESB Depot) Glasslynn Road**

- Bus Shelter for services from Bandon towards Bantry and Castletownbere on Route 236, towards Clonakilty, Skibbereen, Schull and Goleen on Route 237, towards Butlerstown or as a Terminus on route 239 and towards Skibbereen, Bantry and Glengarriff on route 252 (Summer Only)

○ **North Main Street /Alan Square**

- Hail and Ride bus stops for Route 236 Services

○ **Laragh (Bandon Industrial Estate and Opposite Industrial Estate)**

- Bus Poles for Route 236 Services, approx. 5.5 km from Bandon Town Centre

○ **R602 Old Chapel(Eastbound) and (Westbound)**

- Hail and Ride bus stops for Limited Route 239 Services to/from Butlerstown.

3.6.5 As illustrated in Figure 3.18 below, the main bus stop on Glasslynn Rd is located approximately 200 meters (three minutes' walk) from the centre of South Main Street. It was noted during the town site visit, and the public consultation, that residents of Bandon are reasonably satisfied with the location of the bus stop.

3.6.6 As noted in the 'Pedestrian Facilities' section previously, the lack of pedestrian crossing facilities on both St. Finbarr's Place and Glasslynn Road means that there is no clear safe route for people to access South Main Street to/from the bus stops. This is particularly an issue for people with reduced mobility.



**Figure 3.18 Bandon Town BÉ Stop Location**

## 3.7 Baseline Traffic Evaluation

### General Traffic Conditions

3.7.1 The following key points relating to general traffic conditions were noted in Bandon:

- Bandon Town is split north and south by the River Bandon with only one crossing point at St. Finbarr's Place. The provision of a single river crossing means that all traffic travelling north to south (or vice versa) in Bandon must use the route via Bandon Bridge. The volume of traffic utilising the bridge in the AM and PM peaks leads to congestion on the bridge itself, and on roads in the immediate vicinity such as the N71 Glasslynn Road and North and South Main Streets.
- Through public consultation, it was noted that the southern bypass route around Bandon has issues regarding unsafe road gradient on approach to the R603 junction, inappropriate junction priority, poor sightlines and poor junction design. Therefore, a significant proportion of through traffic on the N71 continue to use the route via Bandon town centre which leads to congestion on the local network.
- Through site visits, and public consultation, it was noted that a significant volume of HGV traffic travel through Bandon town centre. This leads to congestion and delay at capacity restricted locations such as North Main Street and Bandon Bridge. The presence of high volumes of HGV traffic also cause safety issues, and create an unattractive environment for pedestrians and cyclists.



## Key Junction Arrangements

- 3.7.2 The vitality of Bandon Town relies on good transport links for all transport users. Network operational issues, coupled with high numbers of regional and district movements through Bandon Town, and in particular across the River Bandon, create severance issues which impact on the local community and function of the town centre.
- 3.7.3 Junctions represent the maximum constraint in an urban transport system as they are the point at which inter and intra-modal conflict occurs. The arrangement at junctions for each mode of transport is therefore crucial in determining the efficiency of the traffic management system in the town for mechanised modes.
- 3.7.4 During extensive site visits, junction arrangements at 13 key locations in the town centre, illustrated in Figure 3.19 below, were reviewed with issues identified. The *Bandon TPREP Interim Report* provides a detailed analysis of the operation of each of these junctions. The following sections of this report focus on some of the issues noted at key junctions during the baseline evaluation.

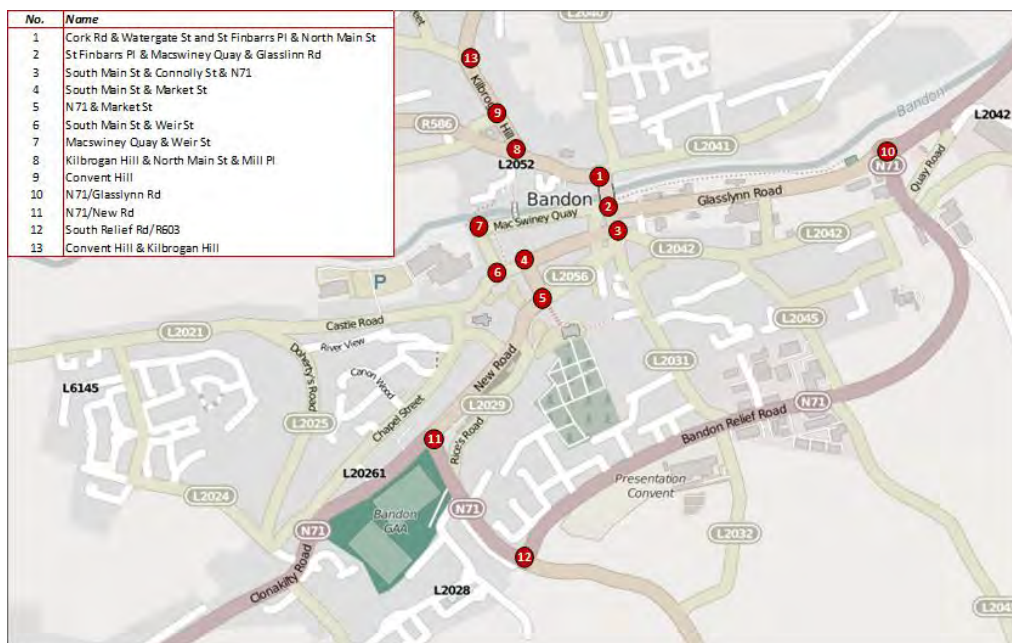


Figure 3.19 Key Junctions – Town Centre

### North Main Street/St Finbarr's Place (Bandon Bridge)/Watergate Street (Junction 1)

- Geometric restrictions which contribute to reduced capacity include:
  - narrow approach widths resulting in one lane approaches on all arms;
  - pinch points caused by poor parking practices and poor road alignment restricts two-way flow up-stream of the junction, especially noticeable on North Main Street;
  - a very tight corner radius requiring northbound HGV to encroach onto opposing lanes (when vacant); and

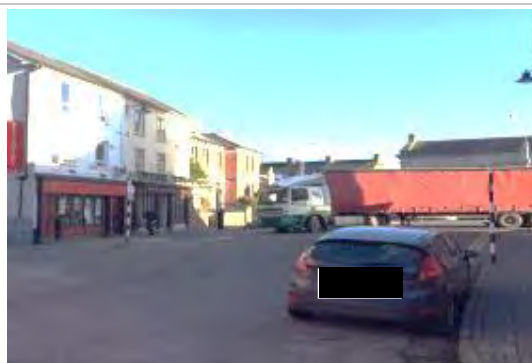


### North Main Street/St Finbarr's Place (Bandon Bridge)/Watergate Street (Junction 1)

- poor sight lines
- Due to the geometric constraints noted above, traffic travelling north on Bandon Bridge and wishing to turn right onto Watergate Street are opposed by heavy traffic flows, and as such, block through traffic attempting to access North Main Street. This causes congestion on Bandon Bridge leading to queuing which was witnessed stretching back as far as South Main Street.



**Picture 1:** Queueing from North Main Street/Watergate St junction as far as South Main Street.



**Picture 2:** HGVs needing to encroach onto opposing lanes (view from North Main Street)

**Figure 3.20 Junction 1 - North Main Street / Watergate St Key Issues**

### Glasslynn Road/St Finbarr's Place/MacSwiney Quay (Junction 2)

- Geometric restrictions which contribute to reduced capacity include:
  - narrow approach widths on St Finbarr's Place and Bandon Bridge resulting in a lack of provision for right turning vehicles;
  - the close proximity of another congested junction (North Main Street/St Finbarr's Place (Bandon Bridge)/Watergate Street T-junction) causing a knock-on effect
- Queuing on Bandon Bridge impacts on vehicles wishing to turn right from Glasslynn Rd leading to congestion and delay.
- Wide carriageway widths at the Glasslynn Rd approach, due to the presence of high volumes of HGVs, provide issues for pedestrians in terms of safety and accessibility for crossing the road.





### Glasslynn Road/St Finbarr's Place/MacSwiney Quay (Junction 2)



**Picture 1:** Queuing for right turning vehicles from Glasslynn Road towards Bandon Bridge



**Picture 2:** Heavy HGV content with wide carriageway and lack of pedestrian provision (view from Glasslynn Road)

**Figure 3.21 Junction 2 - Glasslynn Road/St Finbarr's Place/MacSwiney Quay Issues**

### South Main Street/Market Place (Junction 4)

- Street side parking on South Main Street results in typical high street delays arising from poor parking and delivery practices and manoeuvring in and out of parking bays.
- Pedestrians crossing the road regularly and randomly, as well as using the controlled crossing, conflict with traffic.
- Traffic queues on Market Street are frequent and are not helped by the priority of the junction and the aforementioned delay and slow moving traffic on South Main Street.
- It was noted through public consultation, that queuing occurs at this location in the AM and PM peaks due priority given along South Main Street rather than the predominant traffic flow via Market Street.



**Picture 1:** View from South Main Street



**Picture 2:** View from Market Place

**Figure 3.22 Junction 4 - South Main Street/Market Place**





## Bandon Relief Road (N71)/Kilbrittain Road Junction

- This junction has a number of short comings, including:
  - Steep gradient along the minor road (Bandon Relief Road (N71)) leading to increased down-hill speeds and excessive braking required. There is no climbing lane to cater for HGV traffic.
  - The priority of the junction requires the high volume of westbound traffic on the N71 to yield to the lesser volumes associated with the Kilbrittain Road, causing delay and frustration for road users on the Bandon Relief Road and acting as a deterrent to use.
  - Deep cutting for the road leading to a tunnelling effect. Poor sightlines available for traffic stopped at the stop line on the Bandon Relief Road. Due to the wide carriageway and relatively straight alignment of the Kilbrittain Road, the 50kph speed limit is frequently exceeded.
  - The alignment of the Bandon Relief Road results in poor forward visibility with late appreciation of the junction ahead and increased risk of rear-end shunt type accidents when queuing occurs.
  - No public lighting at the junction.
- A footpath exists along the north-western corner of the junction and extends along the northern side of the N71.
- Traffic volumes are heavy, typical of a national secondary road and the junction is prone to delays during commuter peak hour periods as well as seasonal peak periods associated with a tourist route serving West Cork.



**Picture 1:** View from Kilbrittain Road (north) showing the steep gradient and poor forward visibility on approach.



**Picture 2:** View from Bandon Relief Road of the down-hill approach with a 'tunnel effect'

**Figure 3.23 Junction 12 - Bandon Relief Road (N71)/Kilbrittain Road Junction**



### 3.8 Goods vehicle Arrangements

3.8.1 It was noted through site visits, traffic counts and public consultation, that there are significant volumes of HGVs travelling through Bandon which have a negative impact on walking, cycling and the overall public realm within the town.

3.8.2 There are a small number of employers who generate HGV trips within Bandon Town, such as:

- Bandon Co-Op;
- Anglo Irish Beef Packers;
- The Mart (on Mart day);
- Acorn Water;
- Cloughmacsimon Business Park;
- IDA Industrial Park; and
- Riverview Shopping Centre.

However, the majority of HGVs observed are through traffic i.e. they do not have an origin or destination in Bandon.

3.8.3 The N71, which passes through Bandon, is one of the main routes connecting west and southwest Cork to Cork City. The N71 was diverted around Bandon in a partial bypass to remove through traffic from the town centre. However, a number of issues associated with this southern bypass road were noted through consultation with key hauliers operating in the area, such as, steep gradient, lack of priority, poor sight lines etc. Therefore, a number of hauliers still utilise the town centre route rather than the southern bypass which increases the level of HGV volumes in Bandon town.

3.8.4 Particularly high HGV volumes were noted on North Main Street and Bandon Bridge during site visits and traffic surveys. As noted in previous sections of this report, these high levels of HGVs have a particularly negative impact on walking and cycling in these areas.

3.8.5 Figure 3.24 illustrates some of the key issues associated with high levels of HGV traffic in Bandon. A number of initiatives have been tested as part of the Bandon TPREP strategy to assist in reducing the volumes of HGV through traffic within the town.



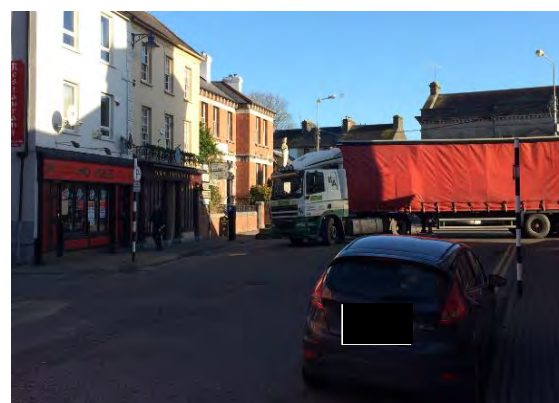
**Picture 1:** HGV traffic on South Main Street (main retail centre). This has negative impact on public realm.



**Picture 2:** Large volume of HGVs on North Main Street can lead to delay. This also creates a negative environment for walking and cycling.



**Picture 3:** HGV movements have defined the layout for a number of junctions in Bandon town i.e. large turning radii. This impacts on the safety for pedestrians crossing the road.



**Picture 4:** In narrow areas of town (e.g. North Main Street), the large turning radius required by HGVs can cause congestion and delay.

**Figure 3.24 HGV Issues in Bandon Town**

### 3.9 Implications and the way forward

- 3.9.1 A large part of the Bandon TPREP transport strategy will be based around improving quality of movement in the area for pedestrians and cyclists. This is coupled with the clear need, which arises from the baseline site visits evaluation, to improve the operation and organisation of the road network in and around Bandon Town for the benefit of all road users. Both of these broad goals will involve redesign of key junctions in terms of their operation to provide for the safe and efficient movement for pedestrians and cyclists and for the more efficient movement of general traffic, and also the redesign of the streetscape in central parts of Bandon. Better organisation and utilisation of available infrastructure and road space for all road users and town centre traffic circulation need to be core considerations.



## 4. VISION & OBJECTIVES

### 4.1 Introduction

4.1.1 This chapter describes the process used to evaluate the public realm and transport strategies leading to a preferred integrated package of measures which will comprise the Bandon TPREP.

4.1.2 The evaluation framework, developed to assess the various Bandon TPREP test strategies, is illustrated in Figure 4.1 below and comprises of the following key elements:

- **Vision Statement:** An urban design and transport strategy is developed by first defining a Vision Statement which outlines the future aspirations for the area and its citizens and provides an over-arching context for the study.
- **Objectives:** Once the study vision was developed, specific and measurable evaluation objectives have been defined for the Bandon area that support:
  - its sustainable future;
  - the Vision Statement;
  - the specific concerns as communicated during the public and stakeholder consultation process; and
  - issues identified from extensive traffic surveys, site visits and from the detailed land use and transport modelling, analysis and evaluation.
- **Test Strategies:** A package of strategy measures will be developed for testing based on current transportation and public realm issues identified within the Bandon Local Area.
- **Key Performance Indicator (KPI) Evaluation:** Both quantitative and qualitative KPIs have been defined to assess how well the test strategies achieve the specified Bandon TPREP study objectives.
- **Preferred Strategy:** Based on the results of the KPI analysis, a preferred package of measures will be defined to form the Bandon TPREP.



**Figure 4.1 Bandon TPREP Evaluation Framework**

4.1.3 The following sections of this chapter provide further information on each of the aspects outlined above including the development of a Vision Statement and objectives, and the definition of KPIs which will be utilised to identify the preferred Bandon TPREP strategy.



## 4.2 Developing a Vision for Bandon

- 4.2.1 The identification of a Vision Statement is a very important part of the Bandon TPREP development process, as, without it, the evaluation objectives would be developed in isolation.
- 4.2.2 The Vision Statement provides the over-arching context for the specific measures within the Bandon TPREP, providing the all-encompassing blanket to which the evaluation objectives fall under, and ultimately the basic justification for the proposed set of public realm enhancements, individual junction and street improvements and so on.
- 4.2.3 Figure 4.1, above, illustrates the link between the Vision Statement, objectives, policies and measures and performance measurement. The Vision Statement creates a sense of what the Bandon TPREP will achieve in the medium to long term so that the public can easily identify with its rationale and purpose. It communicates the desire to improve quality of life in the Bandon Area. Evaluation objectives may then be set within the broad framework provided by the Vision Statement, such that public realm enhancements, urban design and transport are integrated with the future aspirations for Bandon and its surrounding areas. The Vision Statement, therefore, focuses more on the future public realm and transport environment than the current situation.
- 4.2.4 Three key sources were utilised to assist in the development of the Vision Statement for Bandon, namely:
- **National, Regional and Local Policy:** To ensure that the vision for Bandon is in line with existing aims and objectives for the area set out in national and local policy, such as the National Spatial Strategy 2002 – 2020, Smarter Travel: A Sustainable Transport Future 2009-2020, Cork County Development Plan, Bandon Local Area Plan etc. (A review of local and national policy documentation is outlined in Chapter 1 of this report).
  - **Baseline Study:** To gain an understanding of the key issues apparent within Bandon Town, the Project Team carried out extensive traffic surveys and site visits.
  - **Public Consultation:** As outlined previously in Chapter 2, public consultation was carried out in Bandon to allow the local community and key stakeholders to provide their views on the town, including existing issues and potential solutions. This provided the local community (i.e. the people most impacted by any potential strategy) with an opportunity to define a vision for the future of their town.







- 4.2.5 Information gathered through a review of national and local policy, baseline studies and consultation with the general public was utilised to develop the following Bandon TPREP Visions Statement:

**“To strengthen Bandon’s position as a premier market town through the creation of a unique sense of place, which supports ease of movement for all, embraces its rich built and natural heritage, and enhances its role as the Gateway to West Cork”**

### 4.3 Developing Objectives

- 4.3.1 A series of evaluation objectives have been developed to assist in achieving the defined vision for Bandon. The Department of Transport, Tourism and Sport’s (DTTAS) Guidelines on a Common Appraisal Framework for Transport Projects and Programmes sets out high level objectives which can be applied to the Bandon TPREP. These can be broadly categorised as follows:

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

- 4.3.2 The Bandon TPREP objectives have been developed under these headings utilising the SMART criteria i.e. they must be:

**S**pecific: the objectives defined should be clear and unambiguous;

**M**easurable: in order for the various Bandon TPREP strategy options to be tested and evaluated, the defined objectives must be measurable to ensure that the finalised strategy best achieves the identified goals (this will be discussed further in Section 6.4 of this report).

**A**chievable: the defined objectives should be realistic and achievable. For the Bandon TPREP to be adopted in future planning guidelines (such as the updated Bandon Local Area Plan) its objectives must be attainable.

**R**elevant: the objectives must be relevant to Bandon i.e. they should be specifically focussed on improving issues identified in the area.

**T**ime-Bound: this criteria stresses the importance of grounding the objectives within a time-frame. Within the Bandon TPREP Evaluation Framework, the objectives will be defined in terms of short, medium and long-term.



- 4.3.3 The following sections of this chapter outline the various objectives defined under each of the broad DTTAS guideline headings. Figure 4.2, overleaf, illustrates how the Bandon TPREP vision relates to these key headings.

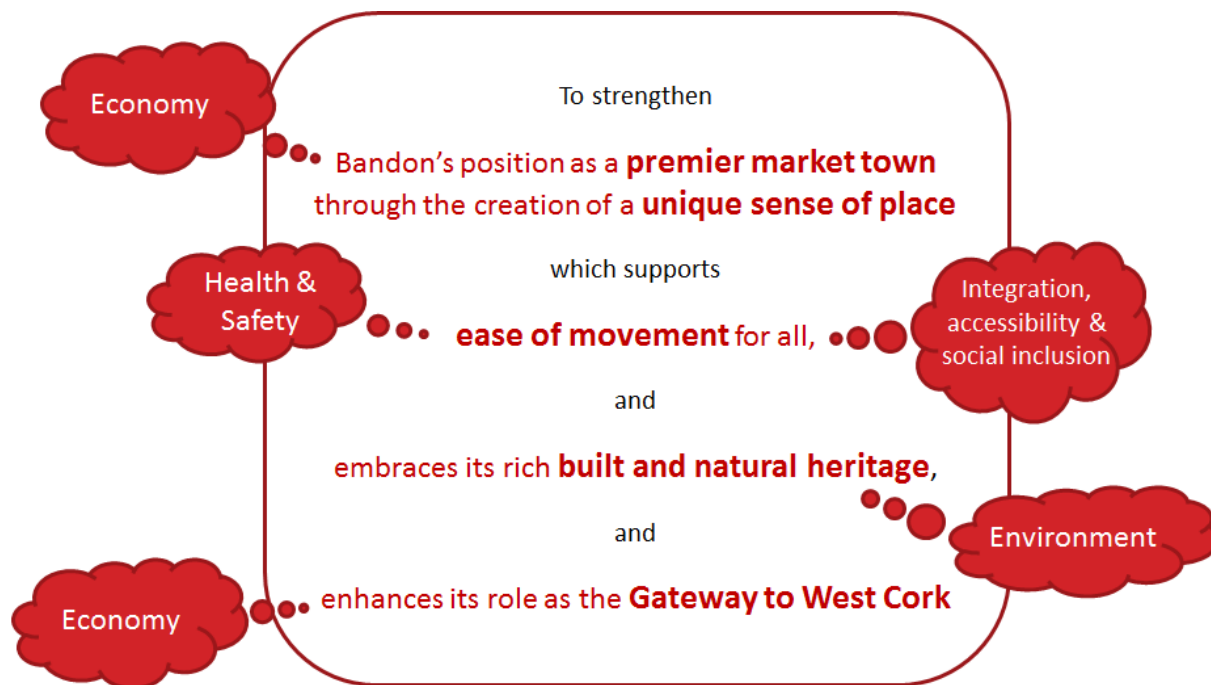


Figure 4.2 Linking Bandon TPREP Vision Statement with Evaluation Objectives

#### Economic

- 4.3.4 Economic evaluation 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 Bandon TPREP can contribute to economic growth by encouraging the regeneration of the town centre making it a more attractive place to be, thus increasing pedestrian footfall. This can be achieved by improving accessibility and by enhancing the appeal of an area through public realm improvements and the creation of potential market/event spaces.

##### Bandon TPREP Economic Objectives

- SUPPORT IMPROVED ECONOMIC COMPETITIVENESS OF BANDON TOWN;
- REGENERATE BANDON TOWN CENTRE TO INCREASE FOOTFALL;
- SUPPORT THE ECONOMIC EXPANSION OF THE TOWN IN KEEPING WITH THE LOCAL AREA PLAN; AND
- IMPROVE THE ATTRACTIVENESS OF THE TOWN CENTRE

#### Health and Safety

- 4.3.5 The Health & Safety evaluation objectives are concerned with a variety of issues including the reduction in injuries and loss of life, damage to property, loss of income and improving the overall well-being of people living within the Bandon area (e.g. improving fitness, reducing obesity).



#### **Bandon TPREP Health & Safety Objectives**

- **FACILITATE A HEALTHY LIFESTYLE FOR ALL PEOPLE LIVING AND WORKING IN THE BANDON AREA;**
- **PROVIDE A SAFER ENVIRONMENT FOR VULNERABLE ROAD USERS;**
- **CREATION OF A CLEANER ENVIRONMENT; AND**
- **IMPROVE OVERALL SAFETY OF ALL ROAD USERS**

#### **Environmental**

- 4.3.6 Environmental evaluation objectives are concerned with conservation of Bio-diversity, Cultural Heritage, and Landscape. The environmental evaluation objectives seek to reduce the harmful impacts of development and transportation on the environment and promote the cultural heritage which currently exists in Bandon Town.

#### **Bandon TPREP Environmental Objectives**

- **PROMOTE THE NATURAL AND BUILT HERITAGE OF BANDON TOWN;**
- **REDUCE THE ADVERSE IMPACT OF NOISE, VIBRATION AND EMISSIONS GENERATED BY TRAFFIC MOVEMENTS;**
- **IMPROVE THE PUBLIC REALM IN BANDON TOWN; AND**
- **PROVIDE AN ENVIRONMENT WHICH SUPPORTS WALKING AND CYCLING.**

#### **Integration, Accessibility and Social Inclusion**

- 4.3.7 According to the Department of Transport, Tourism and Sport's guidelines, a number of aspects of integration need to be considered. For the Bandon TPREP, it will be necessary to demonstrate some consideration of modal integration (i.e. integrating amongst transport modes), and effectively integrating land uses with transport infrastructure in ways that promote sustainable development and efficient use of resources.
- 4.3.8 Social inclusion is concerned primarily with accessibility for those without a car and those whose mobility is impaired. A sub-objective of the Social Inclusion evaluation 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.
- 4.3.9 Accessibility is usually defined as 'ease-of-reaching'. This evaluation objective relates to providing access for people from a variety of 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 residential areas may be categorised by their ease of access to the main facilities provided in the area (e.g. schools, shops etc.).



#### **Bandon TPREP Integration, Accessibility & Social Inclusion Objectives**

- **IMPROVE ACCESSIBILITY FOR ALL;**
- **FACILITATE HIGH LEVELS OF SUSTAINABLE TRAVEL TO SCHOOL;**
- **IMPROVE ACCESS TO PUBLIC TRANSPORT; AND**
- **INTEGRATION OF NEW DEVELOPMENT AREAS WITH THE EXISTING TOWN TO ENCOURAGE SUSTAINABLE TRAVEL**

## **4.4 Key Performance Indicators**

4.4.1 Performance measurement is used to determine if the recommendations proposed under the Bandon TPREP achieve the desired outcomes. Key Performance Indicators (KPI's) have been identified and will be used to measure the performance of the Bandon TPREP strategies under the various objectives outlined above. These KPI's, therefore, must be measurable and clearly related to the desired outcome.

4.4.2 This allows scenarios to be easily comparable and successful scenarios to be identified. Furthermore, the particular attributes which influence a KPI one way or another (for example provision of bus priority, or the location and density of a development) can be fine-tuned to obtain a transport and public realm scenario that meets the targets and, therefore, satisfies the Bandon TPREP evaluation objectives.

4.4.3 The KPI's are both qualitative and quantitative with the Bandon Traffic Model (BTM) being used to calculate the majority of the quantitative KPI's. The qualitative KPI's for each option are given a ranking or score relative to the Base Case Scenario in the following way:

- ✓ - represents a negative change over the base case scenario;
- ✓✓ - represents no change over the base case scenario;
- ✓✓✓ - represents a positive change over the base case scenario; and
- ✓✓✓✓ - represents a very positive change over the base case scenario.

4.4.4 As outlined in Section 4.1, the various Bandon TPREP test strategies will be assessed through an objectives and KPI evaluation framework. Tables 4.1 – 4.4 overleaf, summarise the key evaluation objectives, associated KPI's and means of measurement that are used to evaluate each Bandon strategy option. Note, the approach recommended for the evaluation of alternative strategies is to give each evaluation objective (i.e. economy, health & safety and so on) an equal weighting.



**Table 4.1 Economic Objectives and KPI's**

No.	Objectives	Key Performance Indicators	Units
1	Support improved economic competitiveness of Bandon Town	Area of enhanced Public Realm	m <sup>2</sup>
		Reduced queuing at key town centre junctions	% Change
		Flows on Bandon Bridge	% Change
2	Regenerate Bandon Town centre to increase footfall	Creation of market /event spaces	Rating Scale
		Quality of pedestrian/cyclist linkages to Town Centre	
3	Improve the attractiveness of the town centre	HGV flows on key routes (e.g. South Main Street)	% Change
		Increased HGV flows on external strategic routes	

**Table 4.2 Health & Safety Objectives and KPI's**

No.	Objectives	Key Performance Indicators	Units
1	Facilitate a healthy lifestyle for all people living and working in the Bandon Area	Length of improved walking routes	km
		Length of Cycle Network	km
2	Provide a safer environment for vulnerable road users	Reduced network speeds across Town Centre Cordon	% Change
		Number and quality of pedestrian crossings	Rating
		Reduced HGV flows in sensitive areas	% Change
3	Creation of a cleaner environment	Change in vehicle emissions particularly those that cause higher health risks	% Change





**Table 4.3 Environmental Objectives and KPI's**

No.	Objectives	Key Performance Indicators	Units
1	Promote the natural and built heritage of Bandon Town	Reduced HGV volumes in sensitive areas	% Change
		Enhancement of heritage sites	Rating
2	Reduce the adverse impact of noise, vibration and emissions generated by traffic movements	Reduced traffic volumes on sensitive routes	% Change
		Greenhouse vehicle emissions	CO <sub>2</sub> (Kg's)
3	Provide an environment which supports sustainable travel	Length of improved walking routes	Km
		Walking & Cycling and Public Transport Mode Share	Rating

**Table 4.4 Integration, Accessibility & Social Inclusion Objectives and KPI's**

No.	Objectives	Key Performance Indicators	Units
1	Improve accessibility for all	Walking - Length of improved walking routes	Km
		Cycling - Length of cycle routes	Km
		Bus - Quality of walk facilities to/from PT stops	Rating
		Private car – Reduced queuing at key town centre junctions	% Change
2	Facilitate high levels of sustainable travel to school	Quality of walking/cycling/ traffic management infrastructure in vicinity of schools	Rating
3	Integration of new development areas with the existing town to encourage sustainable travel	Quality of pedestrian/cyclist linkages to Town Centre	Rating



4.4.5 Table 4.5 below provides a summary of the number of evaluation objectives and measurable KPI's that are proposed for evaluating the Bandon TPREP strategies.

**Table 4.5 Number of Sub Objectives and KPIs for each Objective Heading**

Objective Headings	No. Sub Objectives	No. KPIs
Economic	3	7
Health & Safety	3	6
Environmental	3	6
Integration, Accessibility & Social Inclusion	3	6
Total	12	25



## 5. RECOMMENDED TRANSPORT STRATEGY

### 5.1 Introduction

5.1.1 The following chapter presents the recommended strategies which have been developed to support the Bandon TPREP vision by:

- Creating a safe and attractive environment for people to live, work and do business;
- Providing accessibility and ease of movement within Bandon, particularly for vulnerable road users; and
- Supporting the future economic development of Bandon Town, strengthening its position as a premier market town and its role as the Gateway to West Cork.

5.1.2 A series of workshops were held, both internally and between the wider project working group, to identify key strategies which could assist in improving transport and the overall public realm in Bandon Town. The strategies were focused on the following key elements:

- Improving **pedestrian and cycle** movement within Bandon;
- Improving **public transport** facilities and accessibility;
- Developing a strategy for the **management of through traffic** in Bandon town centre;
- Reducing local **traffic congestion** in sensitive areas;
- Developing a **schools travel strategy** to increase use of sustainable modes;
- Developing a strategy for the **management of HGV traffic** within Bandon town centre;
- Achieving **accessibility and social inclusion** in Bandon; and
- Improving the **public realm** within Bandon Town thus making it a more attractive environment to live and work.

5.1.3 The remainder of this chapter outlines the various elements which form the Bandon TPREP and includes the following:

- **Road & Street Hierarchy:** Outlining the overarching hierarchy utilised to develop an effective traffic management strategy including potential medium/long term major infrastructure improvements to assist in the management of traffic flows through Bandon town;
- **Town Centre Circulation:** Describing the traffic circulation alterations proposed within Bandon town centre which will provide greater space for public realm enhancements (such as wider footpaths, shared surface etc.) while also ensuring traffic movements are not significantly impeded;
- **Junction Improvements:** Presenting key junction improvements which will assist in improving traffic flow within Bandon and also aid in facilitating pedestrian and cyclist movements;
- **Pedestrian & Cyclists:** Outlining the proposed Bandon TPREP walking and cycle strategy;



- **Public Transport:** Describing the recommendations for improving Public Transport facilities and accessibility in Bandon;
- **Heavy Goods Vehicles:** Outlining the proposed strategy for managing HGV flows;
- **Parking:** Presenting the parking strategy developed for the Bandon TPREP; and
- **Schools:** Describing the specific school travel plans developed to improve safety for children travelling to school, and encourage walking and cycling as a prominent mode of transport.

5.1.4 It should be noted that, while the proposed strategies have been presented individually for the purpose of this report, they have been developed in cognisance with each other and form an integrated package of measures which are aimed at delivering the defined Bandon TPREP vision and objectives outlined previously in Chapter 4.

5.1.5 All of the preferred strategies outlined in the following sections have been tested using a combination of the BTM, individual junction models and the Evaluation Framework described in Chapter 4; the results of which are presented in Appendix B and C of this report.



## 5.2 Road and Street Hierarchy

- 5.2.1 The development of an appropriate road and street hierarchy is key to the creation of a coherent traffic management strategy which can effectively manage both local traffic movements and through traffic (i.e. traffic which does not stop in Bandon).
- 5.2.2 The following classifications were utilised when developing the road and street hierarchy for the Bandon study area:

### ***Town Centre Streets***

- 5.2.3 The first step in the hierarchy development is the recognition of the multi-purpose function of streets within the town centre. These streets are typically lined with buildings and public spaces and whilst the movement of vehicular traffic is still a key function, there are several other functions of equal, if not greater importance. These include the sense of place, areas of public realm, movement of pedestrians and cyclists, public transport access and car parking.

#### **Guiding Principle for Mobility in Bandon**

Within the town centre streets, proposed intervention measures should be focused on improving pedestrian and cyclist movements and accessibility. Vehicular traffic must be afforded an appropriate level of priority but this priority should, in general be restricted to traffic that is destined for the town centre. Through traffic should be accommodated on alternative routes where possible away from sensitive areas. Heavy goods vehicles should be discouraged, except where delivering to local businesses or where bus services need local access.

### ***National Roads***

- 5.2.4 The primary function of National Roads is to serve vehicular traffic travelling longer distances between towns in a safe and efficient manner. As the focus for these roads is primarily vehicular traffic, any interventions introduced should be focused on improving traffic flow, improving safety and reducing congestion where possible.
- 5.2.5 As well as serving national traffic, National Roads have a significant function in terms of linking satellite towns, such as Bandon, to regional centres, such as Cork City, and to the wider national primary road network. As referenced in the vision statement for the study, the creation of strong transportation links is critical to the economic success of Bandon.
- 5.2.6 Whilst this study focuses on measures specific to Bandon and its environs, wider policies/initiatives which strengthen the national road links to regional centres by maintaining an appropriate level of service and development control along corridors are supported by this study. With this in mind, a strategic objective of this study is to strengthen the N71 corridor between Clonakilty and the N40 interchange south of Cork.





### ***Regional Roads***

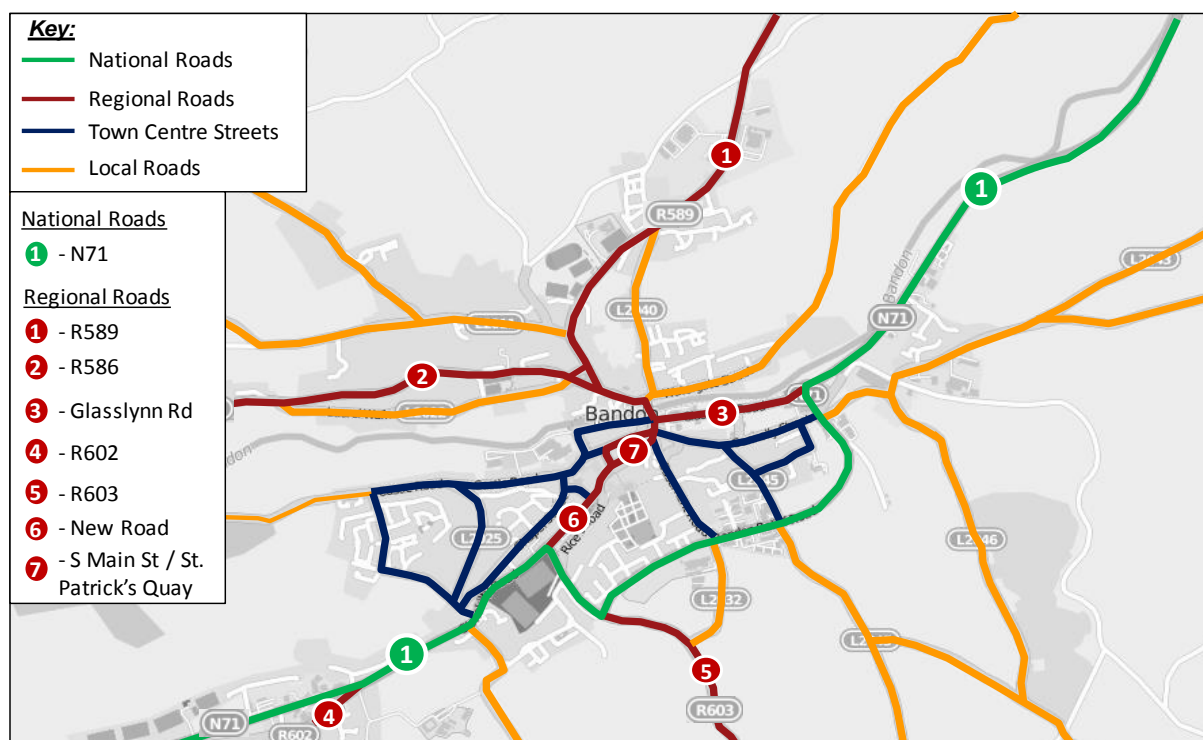
- 5.2.7 The primary function of Regional Roads is to connect towns to each other and to the national road network. Again, similar to National Roads, vehicular traffic is the primary focus for these routes with limited facilities provided for pedestrians outside of the urban environment. Similarly to above, a strategic objective of this study is to strengthen Bandon's connectivity to its hinterland through the upgrade of regional roads where appropriate.

### ***Local Roads***

- 5.2.8 Local roads make up all of the other routes within the study area which are not classified as National Roads, Regional Roads or Town Centre Streets. They vary greatly in quality and can be extremely narrow with sharp turns and low visibility in places. The primary function of the local roads is to connect National and Regional Roads to the wider rural hinterland.

### **Existing Road and Street Hierarchy**

- 5.2.9 Figure 5.1, below illustrates the current road and street hierarchy in Bandon in terms of the road classifications outlined above.



**Figure 5.1 Existing Bandon Road and Street Hierarchy**

### ***National Roads***

- 5.2.10 The N71 is a National Secondary Road which links Cork City with Killarney via Bandon and West Cork. As a result of this function, it is relatively heavily trafficked during peak periods and prone to seasonal variations due to it being a prime tourist route to and from West Cork. Traffic on the N71, in the vicinity of the study area, is generally free flowing until it reaches the priority junctions associated with the Bandon Relief Road/Bandon Town boundaries.



- 5.2.11 Westbound traffic on the N71 enters the study area at the roundabout with the Glasslynn Road to the east of Bandon Town. Traffic travelling in this direction has the option to travel into/through Bandon Town Centre using the Glasslynn Road or alternatively travel to the south of the Town Centre using the Bandon Relief Road.
- 5.2.12 Eastbound traffic on the N71 enters the study area at the mini roundabout with New Road. Traffic travelling in this direction also has the option to travel into/through Bandon Town Centre using New Road or travel to the south of the Town Centre using the Bandon Relief Road.
- 5.2.13 The N71 is generally a two-lane single carriageway road with hard shoulders and a speed limit of 100kph which reduces to 60kph/50kph at urban/rural transitions. Footpath and public lighting exist along the N71 within urban areas.
- 5.2.14 Through site visits and public consultation, a number of issues were noted with the Bandon Southern Relief Road regarding unsafe road gradient on approach to the R603 junction, inappropriate junction priority, poor sightlines and poor junction design.

### ***Regional Roads***

- 5.2.15 The R602 and R603 are two regional routes linking Bandon Town with various towns, villages and townlands to the south of Bandon.
- 5.2.16 The R602 (Timoleague Road) is a regional distributor road that links the N71 at Bandon to Timoleague, a village circa 10km to the south of Bandon. The R602 is a single carriageway rural road which passes through largely undeveloped, agricultural areas until it reaches the outskirts of Bandon at Oldchapel. Traffic along this route is largely free flowing until it reaches its junction with the N71 where traffic slows and can become congested during peak hour periods and during school drop-off and collection periods.
- 5.2.17 The R603 (Kilbrittain Road) is a regional distributor road which links the N71 at Bandon to Kilbrittain, a village circa 8km to the south of Bandon Town. The R603 has a single carriageway and passes through largely rural agricultural areas until it reaches the outskirts of Bandon at its junction with the Bandon Relief Road (N71). Due to the major/minor road configuration of this junction the R603 forms the major road at its junction with the N71. Traffic is largely free flowing along the main length of the R603. The junction priority with the N71 results in some traffic congestion along the minor arm of this junction (i.e. along the N71 east).
- 5.2.18 The R586, R589 and R590 provide local access to and from the west, northeast and north of the town respectively.
- 5.2.19 The R586 is a regional distributor road known as the Dunmanway Road and links the N71 at Bandon Town with the N71 further west near Bantry. The R586 passes through various towns and villages including Dunmanway and Enniskean. It is a single carriageway rural road which extends into the town centre to include North Main Street, Bandon Bridge and the Glasslynn Road as far as its roundabout with the N71 east of Bandon Town. Traffic along this route is largely free flowing until it reaches the Bandon Bridge and the Glasslynn/St Finbarr's Place junctions where traffic can become congested.



- 5.2.20 The R589 is a regional distributor road known as the Crossbarry Road and links Bandon to the N71 at Halfway via the village of Crossbarry. The R589 is a single carriageway rural road until it reaches the outskirts of Bandon and then includes the Macroom Road and Kilbrogan Hill until it terminates at its junction with the R586 on North Main Street. Traffic along this route is largely free flowing until it reaches its junction with North Main Street.
- 5.2.21 Some traffic utilise the R589 as an alternative to the N71 approach to Bandon in order to avoid traffic congestion associated with Glasslynn Road and Bandon Bridge, particularly during peak hour periods. The R589 generally has a good standard of carriageway, typical of a regional road standard, but there are a few tight bends and narrow sections, with few overtaking opportunities, which currently deter some HVGs from using this route as an alternative to the N71 approach to Bandon.
- 5.2.22 The R590 is a regional distributor road which links with the R589 circa 3km north of Bandon Town. The R590 passes through the village of Crookstown which is located 1km south of the N22 National Road, and therefore, provides a link to the N22 which is located circa 12km north of Bandon. The R590 is single carriageway rural road and forms the minor road of a priority T-junction with the R589. Traffic along this route is largely free flowing.
- 5.2.23 The intersection of the R586 and R589 occurs at an area known as The Shambles and extends onto North Main Street where all traffic is then funnelled across the River Bandon via Bandon Bridge. This can cause considerable traffic congestion throughout the day especially during peak hour periods and on busy market days (such as when Bandon Mart is trading). This part of the road network also provides access to four schools located north of Bandon Bridge, and therefore as a result, can also experience significant congestion during the pick-up/drop off periods for schools.

### ***Town Centre Streets***

- 5.2.24 Ideally, all roads within the town centre should be defined as streets i.e. having a multi-purpose function with increased focus on pedestrian/cyclist movements, public transport access and sense of place, rather than vehicular movements. However, due to the issues noted with the Bandon Southern Relief Road (i.e. poor road gradient, sight lines etc.) and the availability of a single river crossing in the town, a significant proportion of through traffic must continue to utilise routes in the town centre via South Main Street, St. Patrick's Quay and North Main Street due to the lack of attractive alternatives. Therefore, these routes are currently classified as Regional Roads in the existing Road and Street Hierarchy.

### ***Speed Management***

- 5.2.25 Speed is a key risk factor in road traffic injuries, influencing both the likelihood of a road crash as well as the severity of the injuries that may result. Higher speeds increase the risk of a traffic accident for a number of reasons, such as:
- Increased likelihood that the driver will lose control of the vehicle;
  - Increased stopping distances;
  - Failure to anticipate oncoming hazards in good time;
  - Failure to react to changes in road conditions in good time etc.



5.2.26 A relatively minor reduction in vehicular speed can have a significant impact on safety for vulnerable road users such as pedestrians, illustrated by the following statistics obtained from the Design Manual for Urban Roads and Streets (DMURS):

- Hit by a car at 60km/h, 9 out of 10 pedestrians will be killed
- Hit by a car at 50km/h, 5 out of 10 pedestrians will be killed
- Hit by a car at 30km/h, 1 out of 10 pedestrians will be killed

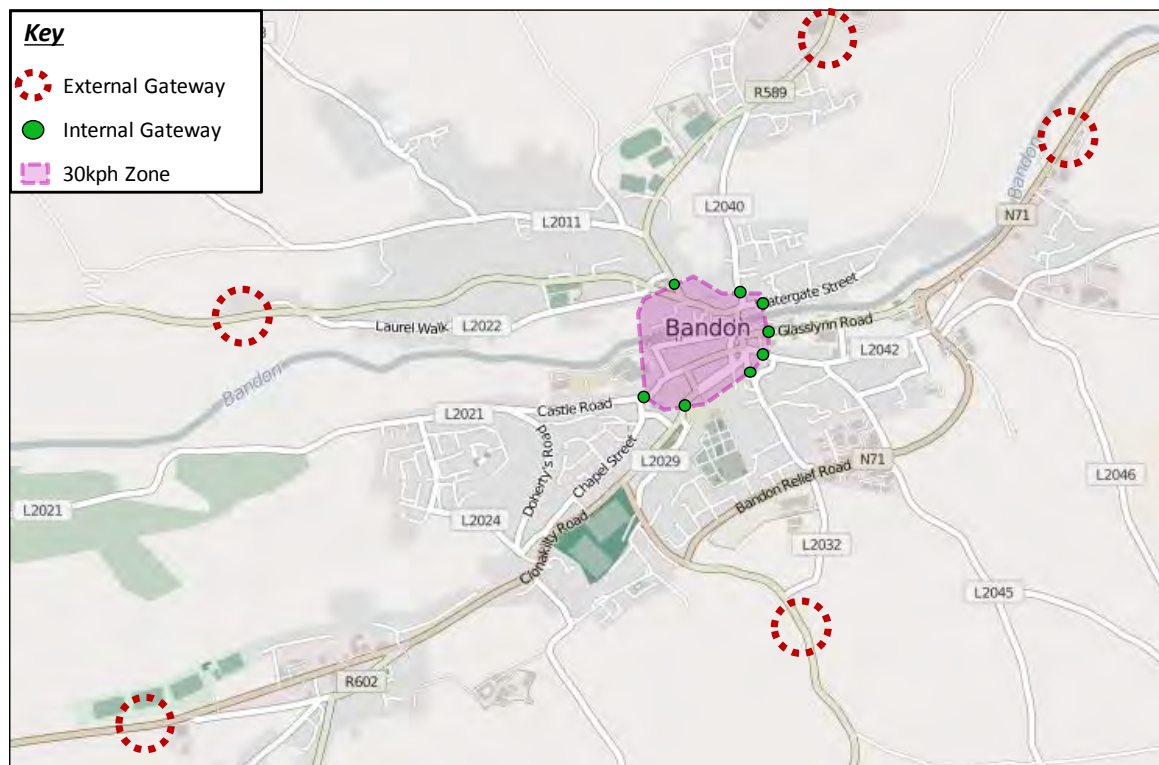
5.2.27 Traffic accessing Bandon along the N71 and the Dunmanway Rd (R586) travels at relatively high speeds with a speed limit of 100kph in operation on the outskirts of town, transitioning to 60kph, and then 50kph, within the town centre.

5.2.28 Studies have shown that the posting of a speed limit alone without any physical speed reducing measure will not result in any significant reduction in speed<sup>6</sup>. Therefore, as part of the TPREP, it is proposed that Gateways be created at key locations where changes in speed limit occur. Gateways are features which are intended to alert drivers to the fact that they are entering an area or length of road that has a different driving environment. Their purpose is to slow down speeding drivers and make them more aware that the road they are entering is one where people live.

5.2.29 Two alternative Gateway types, illustrated in Figure 5.2, have been developed for Bandon Town and include:

- **External Gateways:** Located at the transition from 100kph/60kph, and 80kph/50kph, at the edge of the town. These Gateways include physical engineering measures, such as reducing the effective carriageway width, demarcating the entrance to Bandon Town and reducing speeds of approaching drivers; and
- **Internal Gateways:** Located at the entrance to a proposed 30kph zone within the town centre. The proposed 30kph zone is illustrated in Figure 5.2 and approximately follows the area enclosed by the old town wall. The introduction of this lower speed limit enhances the sense of place associated with the town centre streets, creating a safer environment for walking and cycling. Further information on the benefits associated with the 30kph zone is discussed in Section 5.5 below.

<sup>6</sup> Taken from the *TII Guidelines on Traffic Calming for Towns and Villages on National Routes*



**Figure 5.2 Internal and External Gateway Locations**

5.2.30 The key purpose of the External Gateways is twofold:

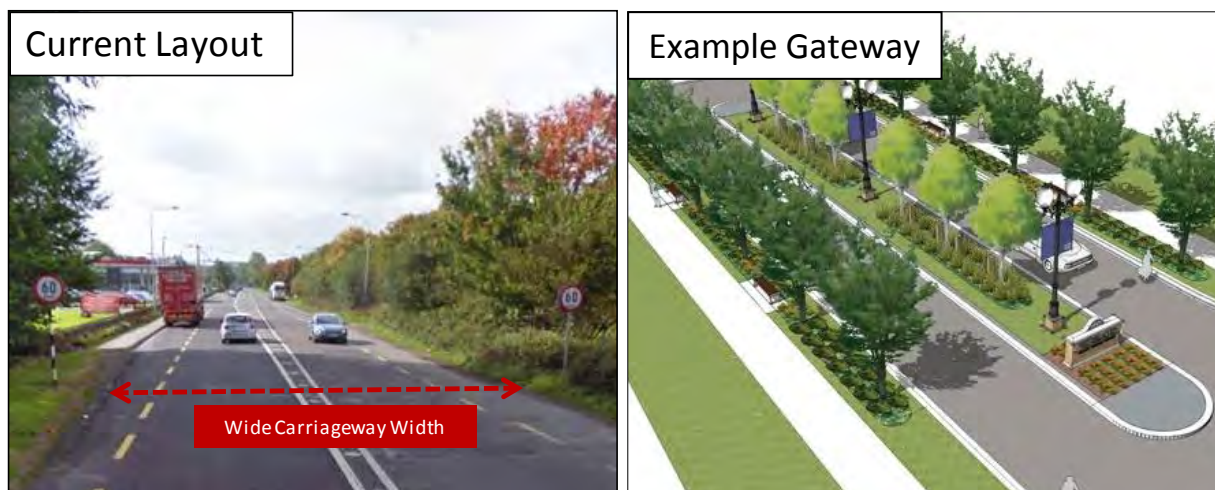
- To reduce vehicular speeds of traffic entering the town; and
- As a public realm initiative to highlight the entrance to Bandon Town.

5.2.31 The TII *Guidelines on Traffic Calming for Towns and Villages on National Routes* outlines key design elements which should be included when constructing Gateways, namely:

- the phasing out of the hard shoulder, using crosshatching inside the edge line to increase the visual effect;
- the narrowing of the carriageway;
- the provision of rumble strips or rumble areas if speeds are not sufficiently reduced by other measures;
- the use of signs with a vertical emphasis;
- the use of appropriate soft landscape elements such as trees, shrubs, and grass verge treatment, which change in composition and degree of formality along the transition zone into the town; and
- the use of the town sign in conjunction with the area speed limit sign in the design of the Gateway itself etc.

5.2.32 Figure 5.3 below, provides an illustration of the current 100kph/60kph transition point located to the east of Bandon on the N71. Also included is a typical example of an External Gateway which is proposed to be introduced as part of the Bandon TPREP.





**Figure 5.3 Current Speed Limit Transition Point and Example Gateway**

- 5.2.33 As illustrated in Figure 5.3, the current road layout has wide carriageway widths which are conducive to high speeds. The Gateway design attempts to reduce these carriageway widths and increase the vertical height of elements such as lighting, traffic limit signage etc. This has an impact on the 'optical width' of the road section. A driver's perception of the appropriate driving speed is influenced by the relationship between the width of the road and the height of the vertical elements. It can be shown that speeds are lower where the height of vertical elements is greater than the width of the road<sup>7</sup>.
- 5.2.34 It is proposed that 'softer' measures are utilised for the creation of the Internal Gateways at the entrance to the proposed 30kph zone. As these Gateways are located within the town centre, vehicular speeds should be relatively low, and therefore, the speed reduction aspect of the Gateway design is no longer a key concern. The Internal Gateway predominantly offers a public realm function notifying the driver of the entrance to the historic centre of Bandon.
- 5.2.35 It is proposed that the Internal Gateways be constructed using pavement treatments, demarking the location of the old town wall where possible. Figure 5.4 below provides an illustration of typical alterations in paving design which could be utilised to construct the Internal Gateways in Bandon.

<sup>7</sup> Taken from the TII *Guidelines on Traffic Calming for Towns and Villages on National Routes*



**Figure 5.4 Example of Paving Alterations for Internal Gateways**

### **Medium/Long Term Road and Street Hierarchy**

- 5.2.36 As part of the Bandon TPREP strategy, two significant medium/long term (10 – 20 years) infrastructure measures have been identified which would assist in reducing traffic congestion within Bandon and would facilitate in removing a large proportion of through traffic, namely:
- **Northern Relief Road:** creation of a second bridge crossing linking the N71 to the R589 Macroom Road to the north east of Bandon Town; and
  - **Southern Bypass:** Continuation of the existing Southern Relief Road onto the Clonakilly Road.

### ***Northern Relief Road***

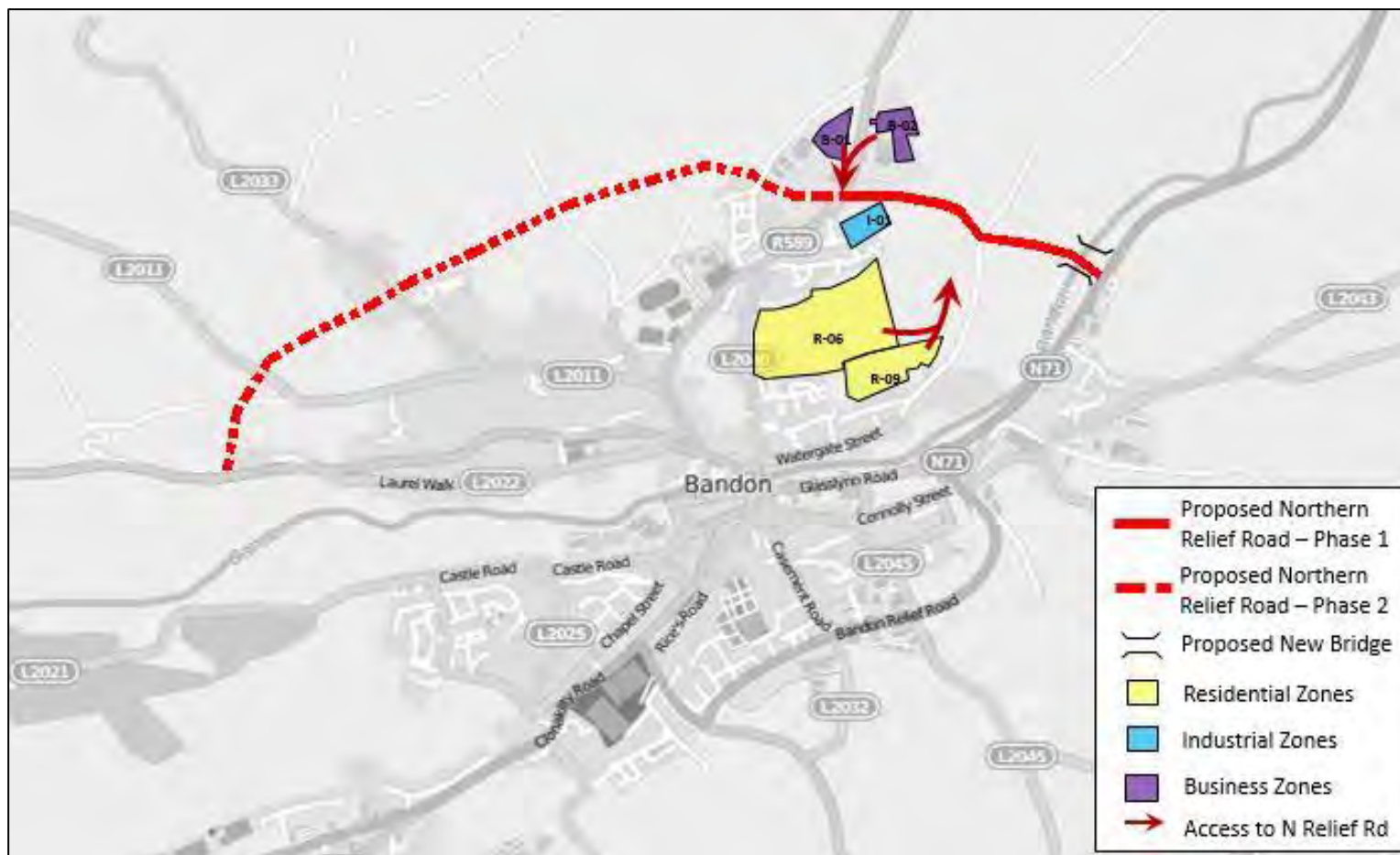
- 5.2.37 As noted during the baseline review of current traffic conditions in Bandon, the presence of a single river crossing within the town causes significant traffic issues (see the Bandon TPREP Interim Report for further information). Traffic travelling from the N71 wishing to access the R586 (Dunmanway Rd) and R589 (Macroom Rd), or vice versa, must enter the town centre and cross the river via Bandon Bridge. Traffic count data indicates that approximately 1,200 vehicles traverse the bridge during the AM and PM peak hours, a significant proportion of which represent through traffic i.e. they do not have an origin/destination in Bandon Town.
- 5.2.38 The high volume of traffic on Bandon Bridge leads to a number of significant issues including:
- Traffic congestion in peak times due to the narrow carriageway widths and junction layouts, particularly on the northern end at the junction with North Main Street and Watergate Street;
  - Creation of an unattractive, and unsafe, environment for pedestrian and cyclist activity; and
  - Noise and vibration causing damage to road surfaces and nearby buildings.



- 5.2.39 This issue is acknowledged in the Bandon Local Area Plan (LAP) which sets out the need for a second bridging point in the town and states:

*‘The town itself suffers from conflict between through and local traffic and as an interim measure there is a need to find some short – medium term solutions to removing the volume of through traffic from the town. The requirement for a second bridging point in the town is also an important issue in assisting the future direction of growth in the town and its environs.’*

- 5.2.40 The proposal for a second river crossing and a Northern Relief Road, suggested as part of the Bandon TPREP is illustrated in Figure 5.5, overleaf, and is adapted from a submission made on the Bandon Kinsale Municipal District Local Area Plan Preliminary Consultation Document 2016.



### Figure 5.5 Proposed Northern Relief Road



5.2.41 It is proposed that Phase 1 of the Northern Relief Road would commence on the N71 at a location approximately one kilometre east of the Irishtown roundabout at the entrance to Bandon. From here, the relief road would proceed in a north-west direction to a junction on the local road between Bandon and Inishannon, and then continue north-west to connect with the R589. Bypassing North of Bandon, Phase 2 of the Northern Relief Road will commence from the connection on the R589, crossing Kilbrogan and Convent Hill, before connecting with the R586 (Dunmanway Road) to the west of Bandon Town. The alignment of the Northern Relief Road is indicative only, and the final alignment will be subject to the normal design and planning process.

5.2.42 It is envisaged that the provision of the Northern Relief Road, and the second river crossing, would offer the following benefits to Bandon Town:

- Reduce traffic volumes on Bandon Bridge and, therefore, reduce congestion and delay in this area. Modelling analysis for the forecast year 2030 indicates that the introduction of the Northern Relief Road will reduce the volume of traffic on Bandon Bridge by an average of 15% in the AM Peak (27% reduction in HGVs), and 17% in the PM Peak (22% reduction in HGVs). Further information on modelling analysis undertaken for the introduction of the Northern Relief Road is presented in Appendix C of this report;
- Provide an alternative route for HGV traffic through Bandon, in particular those accessing industrial sites to the north such as Bandon Co-Op and the Anglo Irish Beef Processors Factory. The removal of HGV traffic from sensitive areas such as Bandon Bridge and North Main Street is vital to improving public realm in these areas, providing a safe environment for pedestrians and cyclists and improving the overall connectivity between north and south of the town centre;
- Provide access to zoned residential lands outlined in the Bandon LAP and potential future zoned lands suitable for employment uses, namely:
  - R-06: 17.4 Hectares of medium density residential development;
  - R-09: 7.1 Hectares of medium density residential development;
  - B-01: 3 Hectare Extension to existing co-operative business development;
  - B-02: 5.7 Hectares of Business development suitable for small to medium sized industrial units;
  - I-01: 2.9 Hectares of Food related industry

\* Above Bandon LAP Zoned Lands illustrated in figure 5.5 above
- Provide access to educational facilities to the north of the river such as St. Brogan's College and St. Patrick's N.S. without the need to travel through the town centre.





### **Southern Bypass**

5.2.43 The current Bandon Southern Relief Road forms a partial bypass of Bandon Town Centre, however, a number of issues have been noted with this route through public consultation, such as:

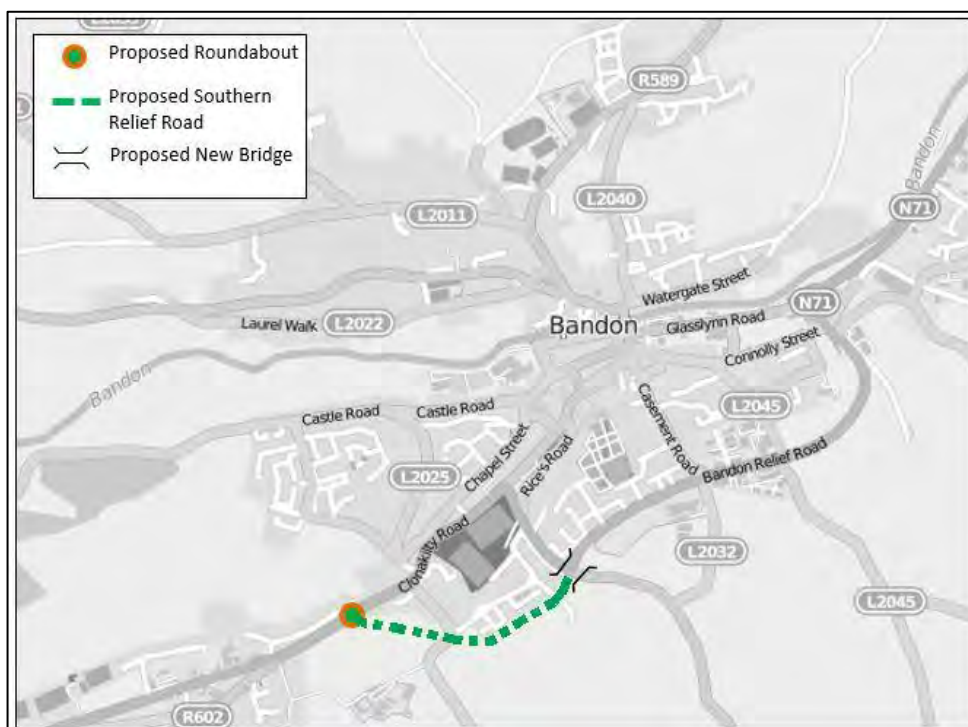
- unsafe road gradient on approach to the R603 (Kilbrittain Rd) junction;
- inappropriate junction priority at western end of the relief road;
- poor sightlines; and
- poor junction design

5.2.44 Therefore, due to the issues outlined above, a significant proportion of through traffic on the N71 (in particular HGVs) avoid the relief road and continue to use the route via Bandon town centre which leads to congestion on the local network.

5.2.45 The Bandon LAP outlines the need for an upgrade and completion of the Southern Relief Road and states:

*'The proposed study for a bypass of Bandon to be commissioned by the National Roads Authority is presently in abeyance because of national economic difficulties. In addition, the completion of the relief road to the south of the town needs further promotion, and an indicative line showing the route that this road might take is identified on the zoning map for Bandon.'*

5.2.46 The Bandon TPREP proposal for a continuation of the Southern Relief Road is illustrated in Figure 5.6 below and its layout is adapted from the indicative routing provided in the Bandon LAP.



**Figure 5.6 Proposed Continuation of the Southern Relief Road**



- 5.2.47 It is envisaged that the Southern Relief Road would cross over the R603 Kilbrittain Rd using a newly constructed bridge and then continue eastward to connect with the N71 Clonakilty Rd.
- 5.2.48 It is noted that the Southern Relief Road currently has a number of direct accesses onto it, thereby reducing its operational capacity. As such, it is recommended that the number of these direct accesses should be rationalised as part of the delivery of the full Southern Bypass.
- 5.2.49 The completion of the Southern Bypass would provide the following benefits to Bandon Town:
- decrease the volume of through traffic travelling in Bandon town centre, and therefore, reduce the level of congestion and delay. Modelling analysis, carried out using the 2030 BTM, indicates that the completion of the Southern Bypass provides significant journey time savings of up to 30% for through traffic (i.e. with no origin/destination in Bandon). This journey time benefit entices a significant proportion of traffic, which previously utilised the route via Bandon town centre, to travel via the new Southern Bypass. Further information on modelling analysis undertaken for the completion of the Southern Bypass is presented in Appendix C of this report;
  - remove a significant proportion of HGV traffic from the town centre, thus improving traffic flow and the overall environment for pedestrians and cyclists.

#### ***Updated Road and Street Hierarchy***

- 5.2.50 The proposed medium to long term road and street hierarchy for Bandon is illustrated in Figure 5.7 below. The availability of viable alternative routing options around Bandon town via the new Northern Relief Road and Southern Bypass Route, means that all roads within the town centre can now be reclassified as ‘Town Centre Streets’.
- 5.2.51 This facilitates the improvement of the town centre environment for pedestrians and cyclist by introducing measures such as:
- Improved footpath widths;
  - Increased number of pedestrian crossings;
  - Reduced vehicular speed in the town centre;
  - Creation of shared surface environment locations;
  - Creation of event space locations;
  - Introduction of HGV restrictions etc.



Figure 5.7 Proposed Road and Street Hierarchy



### 5.3 Town Centre Circulation

5.3.1 A number of the Bandon TPREP objectives are related to improving the attractiveness of the town and supporting its economic expansion. To assist in achieving these objectives, a series of traffic management measures were identified to:

- Improve internal circulation and reduce conflicts at junctions
- Release space for public realm improvements; and
- Release space for the creation of an event space.

#### ***Improve internal circulation and reduce conflicts at junctions***

5.3.2 Through site visits and initial public consultation, a number of issues were noted with the circulation of traffic within Bandon Town Centre, and areas were highlighted which predominantly experience congestion in the AM and PM peaks.

5.3.3 The key areas of congestion, and associated traffic issues, are illustrated in Figure 5.8 overleaf. As part of the Bandon TPREP, alterations to street and junction layouts were investigated to relieve some of these traffic congestion issues and provide opportunities for enhancing the public realm.

#### ***Release space for public realm improvements and creation of an event space***

5.3.4 A key objective of the Bandon TPREP is to improve the public realm within the town, creating a more attractive environment thus impacting positively on pedestrian footfall and the overall economic regeneration of the town centre.

5.3.5 Currently, pedestrian facilities are of varying quality throughout Bandon with issues such as narrow footpaths, lack of crossing facilities and poor surfacing and lighting noted during public consultation. In many cases, the limited footpath widths are primarily due to the narrow streetscape within the town and carriageway widths required for vehicular traffic flow. Therefore, alterations to street operation and layouts within the town centre were investigated to provide enhanced space for public realm improvements such as increased footpath widths, improved surfacing etc.

5.3.6 It was noted during public and stakeholder consultation, that the hosting of weekly events such as markets, concerts etc. could attract larger numbers of visitors to the town centre thus impacting positively on trade within Bandon. Therefore, as part of the Bandon TPREP, alterations to traffic circulation and street layouts were investigated to facilitate an event space within the town centre which could be completely closed to vehicular traffic without causing traffic issues during specific events.





1. Priority given to South Main Street causes congestion on Market Street due to traffic waiting to turn right
- 1a. Congestion on Market Street leads to delay on St. Patrick's Quay for right turning traffic
2. Traffic attempting to turn onto Oliver Plunkett St. cause delay along South Main Street
3. Traffic attempting to turn right towards Cork Rd. and Watergate St. cause congestion on Bandon Bridge which can stretch back to South Main Street
- 3a. Congestion on Bandon Bridge leads to delay for traffic on the N71 wishing to turn right

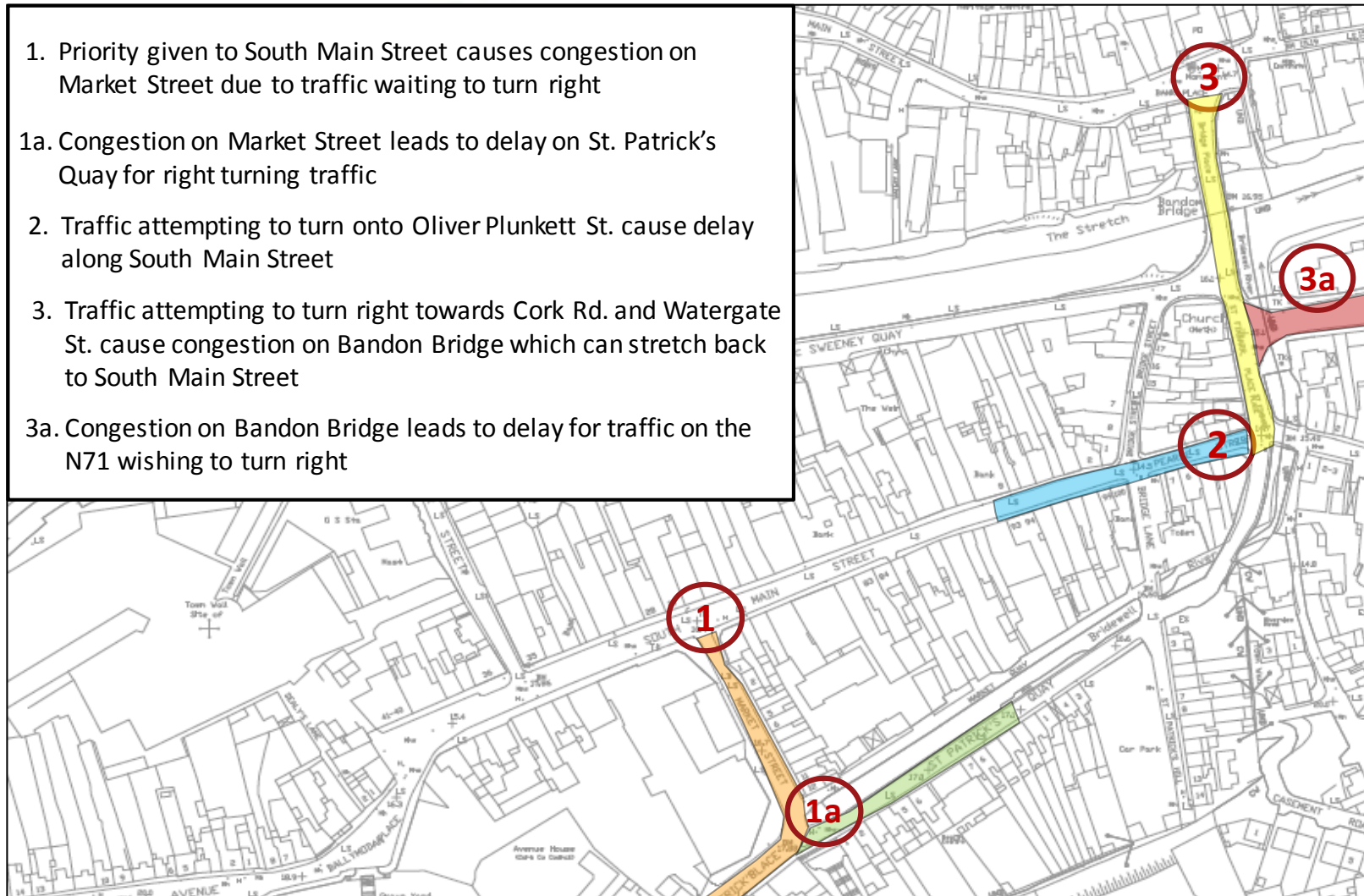


Figure 5.8 Areas Experiencing Traffic Congestion in Peak Periods





### **Town Centre Circulation Options**

5.3.7 To achieve the town centre circulation objectives outlined above, the following alterations to the layout and operation of a number of streets within the town centre were considered as part of a series of options:

- **MacSwiney Quay** - becomes one-way to provide sufficient space to facilitate widening of footpaths and general improvements to public realm beside the river.
- **Market Street** - becomes one-way to facilitate improved footpath widths and pedestrian facilities, and improve traffic circulation.
- **Market Quay and Bridge Lane** - introduction of shared space environment permitting vehicular access but no through road.
- **Bridge Street** - becomes one-way to facilitate improved pedestrian facilities. Currently Bridge Street allows two-directional traffic flow, however, due to the limited carriageway width, and the availability of on-street parking, there is insufficient space to safely facilitate two lanes of traffic.

5.3.8 Three town centre traffic circulation options, illustrated in Figure 5.9 to 5.11 below, were developed to incorporate the street layout alterations described above, and facilitate improved traffic circulation within Bandon Town. The following sections of this chapter provide a brief overview of each of these three options.

#### ***Town Centre Option 1 (TC01)***

5.3.9 TCO1 is illustrated in Figure 5.9 below, and its key features are as follows:

#### **TOWN CENTRE CIRCULATION OPTION 1 (TC01) – KEY FEATURES**

- MacSwiney Quay operates as one-way in a westbound direction:
  - facilitates easy access for traffic from the east/north to the heart of Bandon town centre and key retail destinations such as Bridge Street and Riverview Shopping Centre;
  - facilitates easy access to South Main Street via MacSwiney Quay and Bridge Street/Weir Street;
  - Removes conflict at the junction with MacSwiney Quay and St. Finbarr's Place i.e. no traffic exiting onto St. Finbarr's Place from MacSwiney Quay; and
  - Provides enhanced space for public realm improvements
- Market Street operates one-way in a northbound direction:
  - Removes conflict at the junction between Market Street and South Main Street. It is envisaged that priority will be given to the dominant traffic flow i.e. from Market Street to South Main Street; and



## TOWN CENTRE CIRCULATION OPTION 1 (TC01) – KEY FEATURES

- Facilitates an improvement to the pedestrian environment on Market Street linking it with South Main Street and the potential shared surface on Market Quay and Bridge Lane.

- Bridge Street operates one-way in a southbound direction:
  - Facilitates access to South Main Street from MacSwiney Quay; and
  - Provides space for public realm improvements such as increased footpath widths etc.

- Western end of St. Oliver Plunkett St and Brady's Lane one-way in an eastbound and northbound direction respectively:
  - Provides alternative routing for eastbound traffic from South Main Street. This assists in reducing right turning vehicles entering the Glasslynn Rd/St. Finbarr's Place junction from the south.

- Potential event space on South Main Street between Ballymodan Place and Market Street:
  - Creates a spacious and bright area which can be closed to vehicular traffic for short periods for events such as markets, festivals etc.

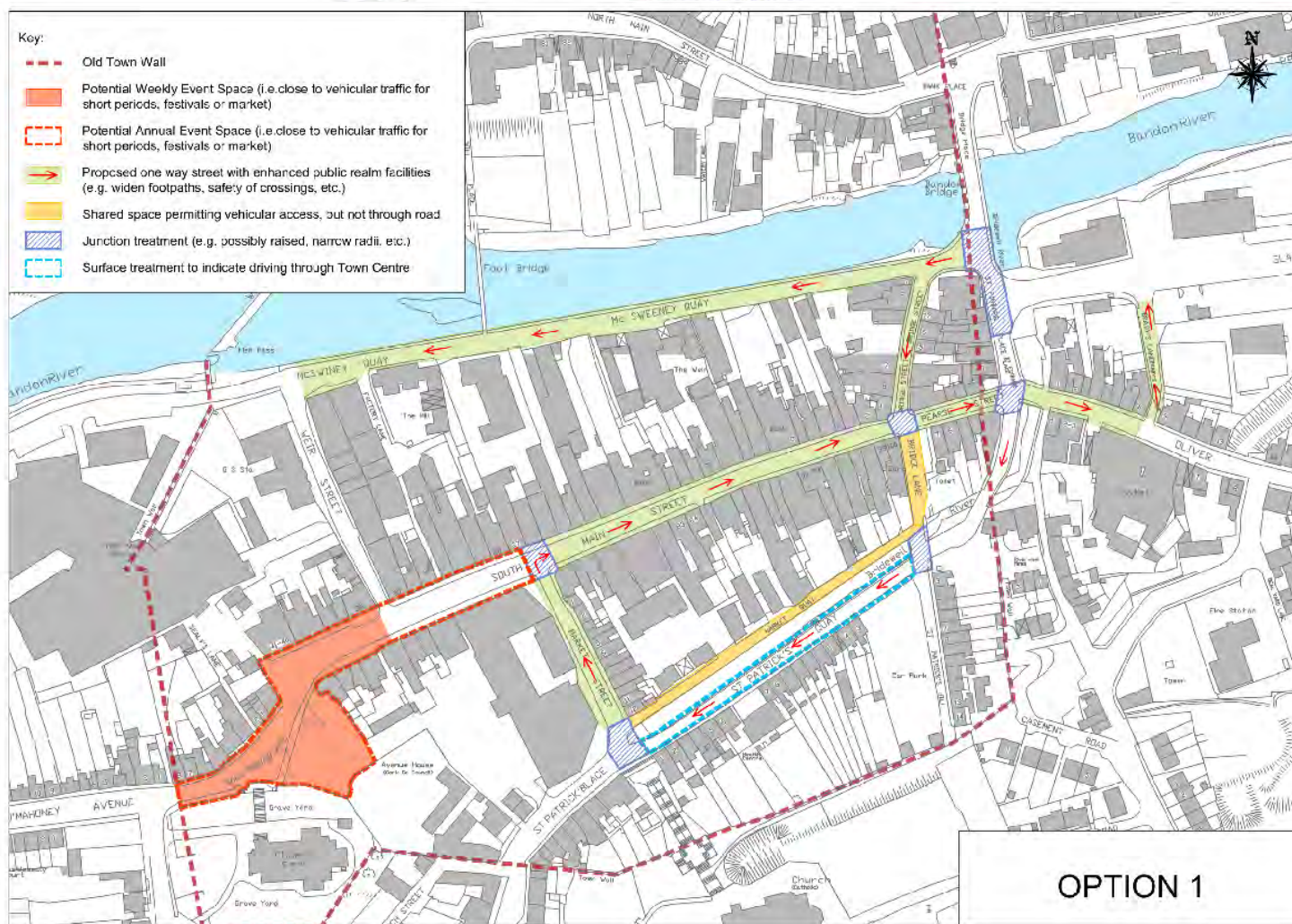


Figure 5.9 Town Centre Circulation Option 1



### ***Town Centre Option 2 (TC02)***

5.3.10 TCO2 is illustrated in Figure 5.10, overleaf, and its key features are as follows:

#### **TOWN CENTRE CIRCULATION OPTION 2 (TC02) – KEY FEATURES**

- MacSwiney Quay operates as one-way in an eastbound direction:
  - Facilitates direct access from Riverview Shopping Centre to MacSwiney Quay and north of Bandon Bridge;
  - It is recommended that the right turn onto St. Finbarr's place be banned at the eastern end of MacSwiney Quay. This should reduce some conflict at the junction between MacSwiney Quay and St. Finbarr's Place;
  - Provides alternative routing for traffic travelling north on Bandon Bridge.
- Market Street operates one-way in a northbound direction:
  - Removes conflict at the junction between Market Street and South Main Street. It is recommended that priority be given to the dominant traffic flow i.e. from Market Street to South Main Street; and
  - Facilitates an improvement to the pedestrian environment on Market Street linking it with South Main Street and the potential shared surface on Market Quay and Bridge Lane.
- Bridge Street operates one-way in a southbound direction:
  - Facilitates access to South Main Street from MacSwiney Quay; and
  - Provides space for public realm improvements such as increased footpath widths etc.
- Western end of St. Oliver Plunkett St and Brady's Lane one-way in an eastbound and northbound direction respectively:
  - Provides alternative routing for eastbound traffic from South Main Street. This assists in reducing right turning vehicles entering the Glasslynn Rd/St. Finbarr's Place junction from the south.
- Potential event space on South Main Street between Market Street and Bridge Lane:
  - Creates an area which can be closed to vehicular traffic for short periods for events such as markets, festivals etc.



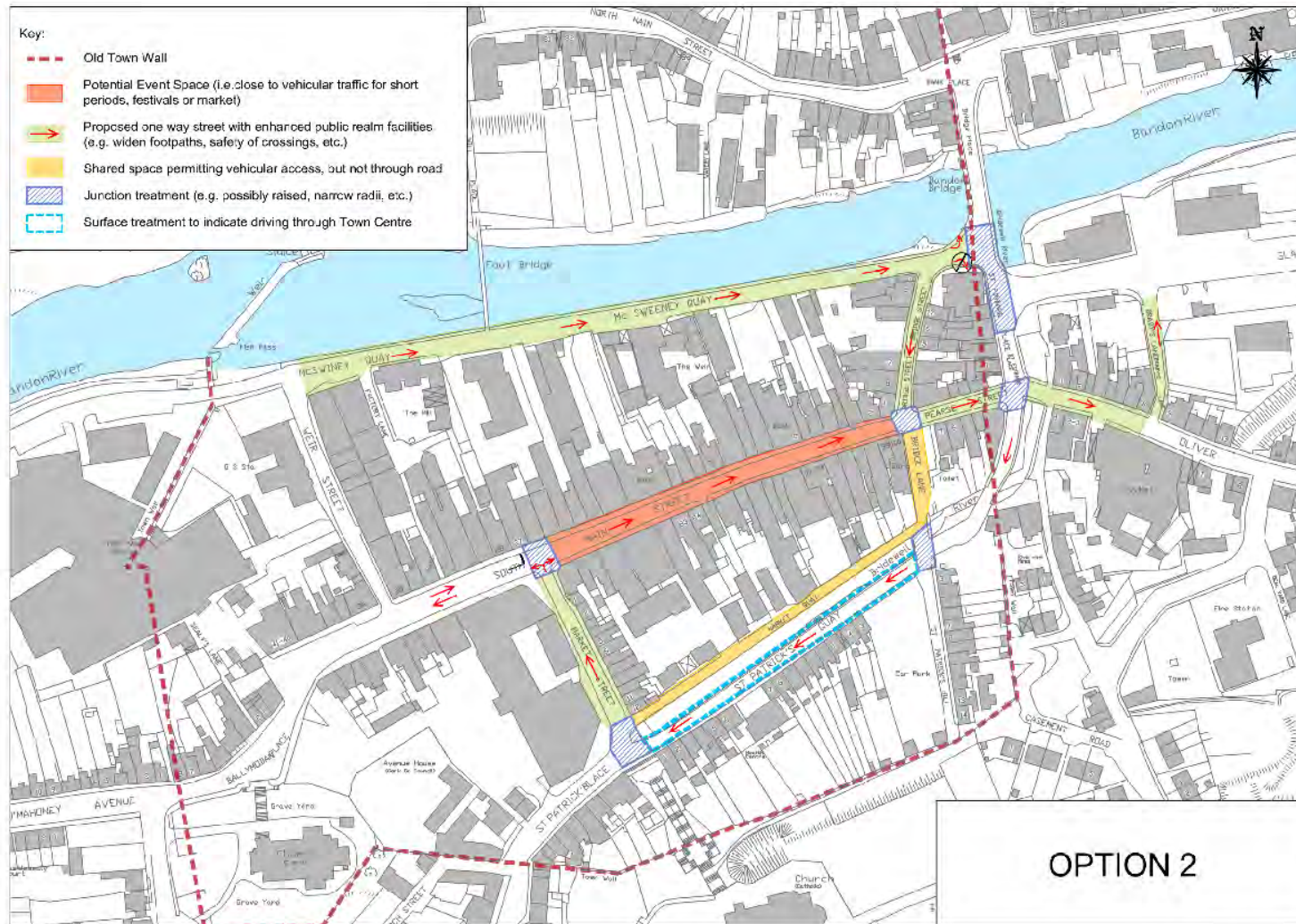


Figure 5.10 Town Centre Circulation Option 2





### ***Town Centre Option 3 (TC03)***

5.3.11 TC03 is illustrated in Figure 5.11, overleaf, and its key features are as follows:

#### **TOWN CENTRE CIRCULATION OPTION 3 (TC03) – KEY FEATURES**

- MacSwiney Quay operates as one-way in a westbound direction:
  - facilitates easy access for traffic from the east/north to the heart of Bandon town centre and key retail destinations such as Riverview Shopping Centre;
  - Provides enhanced space for public realm improvements.
- Reversal of main traffic flow within the town centre:
  - South Main Street operates in a westbound direction;
  - Market Street operates one-way in a southbound direction;
  - St. Patrick's Quay operates in an eastbound direction;
- Based on submissions received during public and stakeholder consultation:
  - Local traders expressed concern that traffic from Cork City was not travelling through the retail centre of Bandon (South Main Street) and, hence, this area was missing out on potential passing trade.
- Bridge Street operates one-way in a northbound direction:
  - Provides access to MacSwiney Quay from Pearse Street and, hence, facilitates recirculation of traffic when the potential event space on South Main Street is closed off; and
  - Provides space for public realm improvements such as increased footpath widths etc.
- Potential event space on South Main Street between Market Street and Bridge Lane:
  - Creates an area which can be closed to vehicular traffic for short periods for events such as markets, festivals etc.

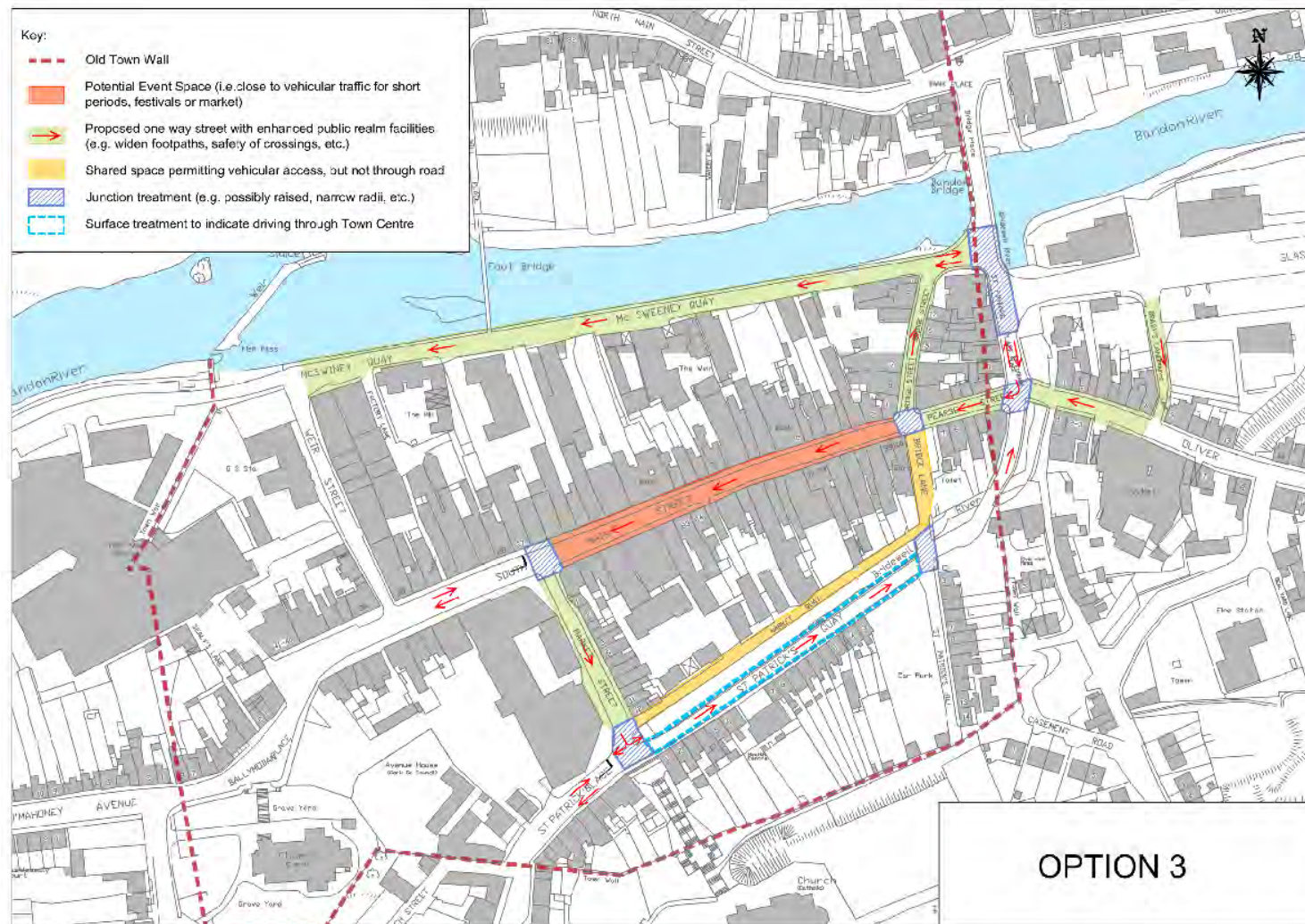


Figure 5.11 Town Centre Circulation Option 3



### Preferred Option

5.3.12 The three town centre circulation options were tested against specific objectives for Bandon town, namely:

**Table 5.1 Town Centre Circulation Objectives and KPI's**

No.	Objectives	Key Performance Indicators	Units
1	Support improved economic competitiveness of Bandon Town	Journey times on key routes	% Change
2	Regenerate Bandon Town centre to increase footfall	Creation of market /event spaces	Rating Scale

5.3.13 The results of the analysis are presented in Appendix B of this report. In summary, Town Centre Option 1 (TC01) was chosen as the preferred strategy as:

- It performs best in terms of providing space for public realm enhancements while facilitating traffic circulation within Bandon town centre;
- It facilitates an event space at Ballymodan Place which was deemed to be preferential over the alternative event space at South Main Street;
- TC03 experiences significant congestion and delay, particularly due to conflicts at junctions either end of St. Patrick's Quay; and
- The street operation in TC02 may be undesirable as it forces traffic from the east and north of Bandon to utilise a circuitous route via St. Patrick's Quay and Market Street when accessing key retail locations within the town centre.

#### Town Centre Circulation – Key Recommendations:

- MacSwiney Quay operates as one-way in a westbound direction;
- Market Street operates one-way in a northbound direction;
- Bridge Street operates one-way in a southbound direction;
- Western end of St. Oliver Plunkett St and Brady's Lane operate one-way in an eastbound and northbound direction respectively;
- Creation of shared surface environment on Market Quay and Bridge Lane; and
- Creation of event space on South Main Street between Ballymodan Place and Market Street.



Benefits of the Town Centre Circulation changes:

- Provides road space to facilitate the introduction of public realm improvements within the town centre;
- Reduces conflicts at junctions within Bandon e.g. Market St / South Main Street and MacSwiney Quay / St. Finbarr's Place;
- Facilitates the creation of a shared surface on Market Quay and Bridge Lane which will provide a more attractive environment for pedestrians and cyclists; and
- Facilitates the creation of an event space which can be closed to vehicular traffic during specific events.



## 5.4 Junction Improvements

### Introduction

- 5.4.1 The review of baseline conditions in the *Bandon TPREP Interim 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 which aim to bring significant improvement to the operation of these junctions in terms of movement and safety for all road users.
- 5.4.2 In total, 19 junctions, illustrated in Figure 5.12 overleaf, were identified for improvement as part of the Bandon TPREP. The following section outlines the upgrades proposed for each of these junctions, including an overview of current issues and design rationale. Also noted, are the various modes which are positively impacted by the proposed junction upgrade represented by the following symbols:



Enhancements to cycle facilities to provide for the safe movement of cyclists



Enhancements to Public Transport to improve pedestrian access



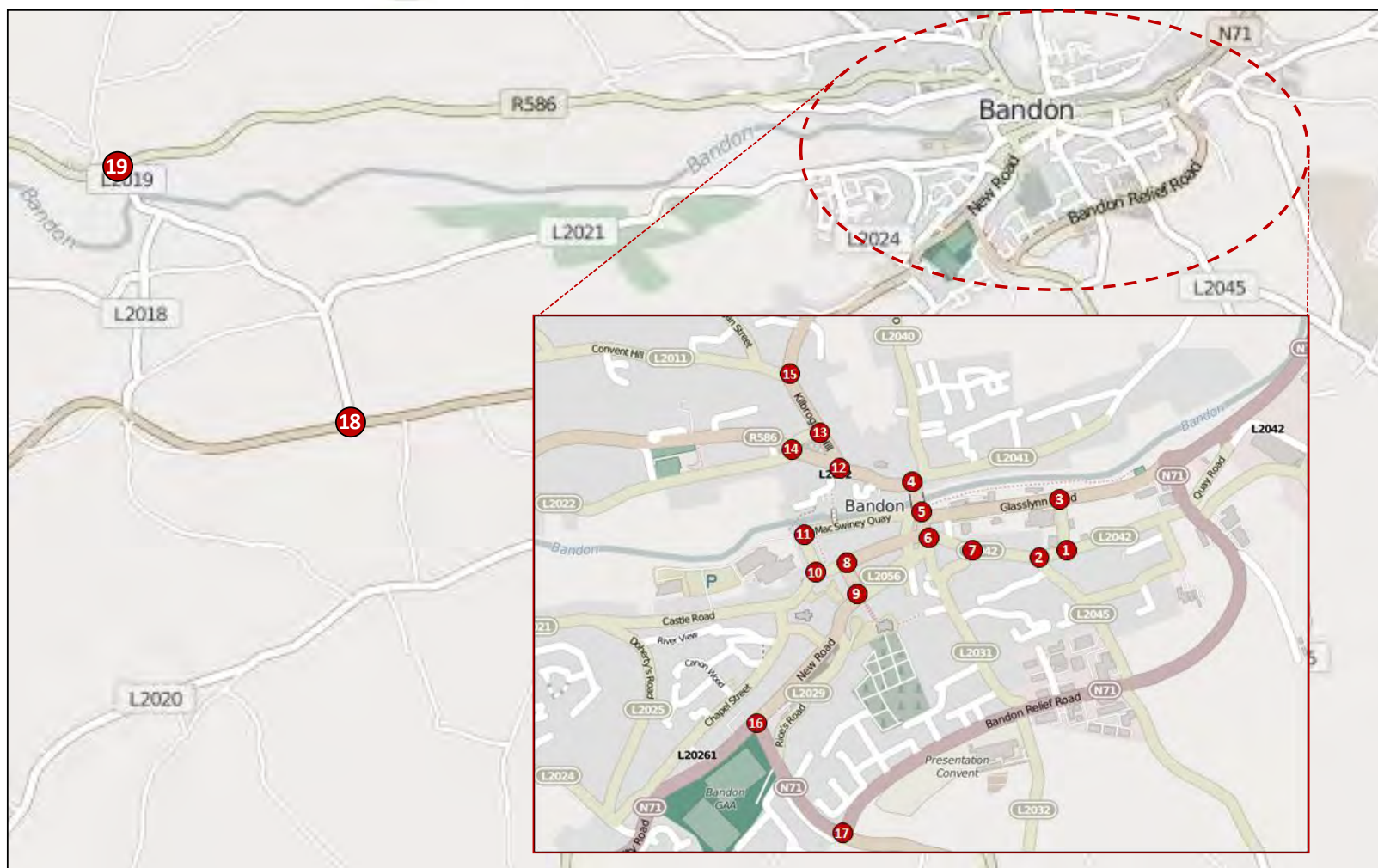
Enhancements to pedestrian facilities to provide for the safe movement of pedestrians



Enhancements to improve efficiency of traffic movement

- 5.4.3 A number of the proposed improvements are relatively minor in nature, i.e. raised road level, build out of footpaths, provision of pedestrian crossings etc., and as such, detailed modelling assessments were not carried out at these locations.
- 5.4.4 At junctions where larger infrastructure changes were proposed, or where a number of potential options were available, a more detailed analysis was undertaken using microsimulation and individual junction models. The results of this modelling analysis are presented in Appendix B of this report.
- 5.4.5 It should be noted that while the following section provides illustrations of proposed junction designs, more detailed drawings are provided at a larger size in Appendix F of this report.





### Figure 5.12 Junction Upgrade Locations



## St Patrick Quay / Pearse Street / St. Finbarr's Place / Oliver Plunkett Street Junction (Junction 6)

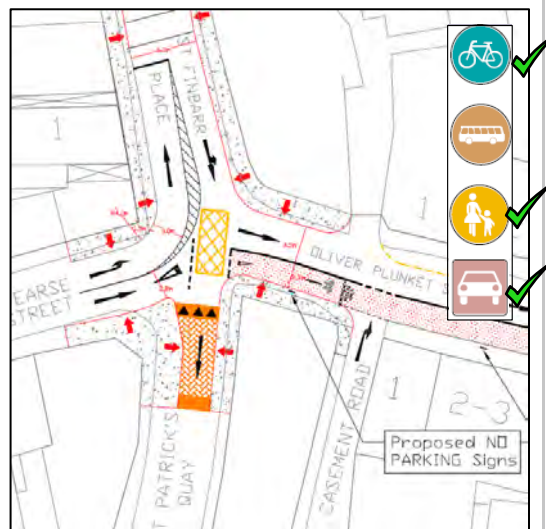
### Current Issues

- The junction layout does not have sufficient capacity to cater for peak hour traffic flows.
- Unattractive entrance to South Main Street
- Lack of pedestrian facilities result in an unsafe environment for pedestrian movements.



### Design Rationale

- Priority given to traffic from Pearse Street to St. Finbarr's Place.
- Oliver Plunkett Street reduces to 3.5m wide to accommodate one-way traffic flow. The design includes for the provision of a contra-flow cycle lane 2.5m wide to facilitate cyclists and a fire tender during emergency events.
- Traffic Calming measures to be implemented on Casement Road to reduce speeds and improve pedestrian safety.
- Improved pedestrian facilities by way of providing 2.0m wide footpaths with pedestrian crossings across all arms.
- A Raised Pedestrian Crossing was chosen for the following reasons:
  - Provides a traffic calming effect at the junction along St Patrick's Quay;
  - Provide improved safety for pedestrians crossing St Patrick's Quay;
  - Assist in reducing vehicular speeds for traffic entering St Patrick's Quay; and
  - Discourage through traffic with alternative routes from entering Bandon Town Centre.



### Junction Performance

- Modelling analysis carried out in PICADY indicates that the junction operates satisfactorily during the AM and PM peak hour (AM Peak shown) with:
  - Average delays of approximately 16 seconds per vehicle experienced on Pearse Street; and
  - Maximum queue lengths of 2 vehicles on Pearse Street.

Arm	RFC <sup>8</sup>	Queue (veh)	Delay (min/veh)
St Patrick Quay	n/a	-	-
Pearse Street	0.494	2	0.27
St. Finbarr's Place	n/a	-	-
Oliver Plunkett Street	n/a	-	-

<sup>8</sup> Ratio of Flow to Capacity (RFC) provides an indication of how close to capacity the junction is operating



## Glasslynn Rd / St. Finbarr's Place / MacSwiney Quay Junction (Junction 5)

### Current Issues

- The junction layout does not have sufficient capacity to cater for peak hour traffic flows.
- Wide road widths and large corner radii encourage high speeds and poor pedestrian accommodation.
- Lack of pedestrian facilities result in an unsafe environment for pedestrian movements.



### Design Rationale

- Right turn pocket provided on St Finbarr's Place to facilitate waiting right turners without impeding through traffic
- Junction compressed with reduced corner radii.
- Improved pedestrian facilities by way of providing 2.0m wide footpaths with pedestrian crossings across all arms.
- A Raised section on MacSwiney Quay was chosen for the following reasons:
  - Provide a traffic calming effect along MacSwiney Quay;
  - Indicate a different road type environment; and
  - Provide improved safety for pedestrians crossing;



### Junction Performance

- Microsimulation modelling carried out in VISSIM<sup>9</sup> indicates that the priority junction option performs quite well in 2020 with little or no average queuing on the Bandon Bridge (North) and St. Finbarr's Place (South) arms.
- Full details of modelling analysis is provided in Appendix B of this report

Arm Name	Average Q (m)
Glasslynn Road Right Turn	37.5
Glasslynn Road Left Turn	1.7
St. Finbarr's Place Straight Through	7.8
St. Finbarr's Place Right Turn	8.7
Bandon Bridge	2.9

<sup>9</sup> VISSIM is a microsimulation multi-modal traffic flow simulation software package developed by PTV Planung Transport Verkehr AG





## North Main Street / Watergate Street / Bandon Bridge Junction (Junction 4)

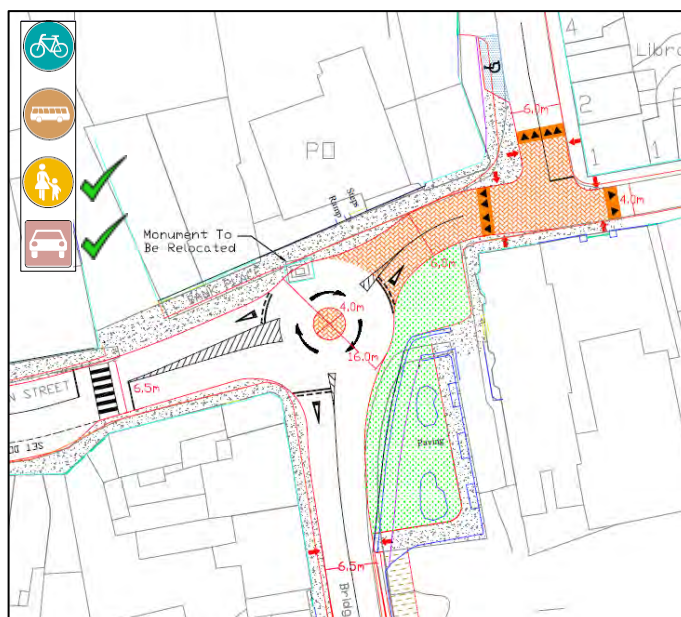
### Current Issues

- Junction does not have sufficient capacity to cater for traffic volumes.
- Junction does not cater for HGVs adequately.
- Poor pedestrian facilities.
- Unregulated roadside parking hinders traffic free flow.



### Design Rationale

- Junction form changed to mini-roundabout with improved performance in respect to:
  - Right turn movements;
  - Capacity; and
  - HGV traffic.
- Improved pedestrian facilities by way of providing 2.0m wide footpaths with pedestrian crossings across all arms;
- Different colour road surface used to indicate different road type;
- Raised table top junction used at Watergate Street/Old Cork Road junction to introduce a traffic calming effect for this area and to accommodate pedestrians; and
- Design takes account of Flood Relief work planned for this area.
- Disabled parking space included on the western side of the post office on Cork Road.



### Junction Performance

- Modelling analysis, carried out in ARCADY, indicates that the junction operates satisfactorily during the AM and PM peak hour (2020 AM Peak results shown).
- Further information on detailed modelling analysis carried out for this junction is presented in Appendix B.

Arm	RFC	Queue (veh)	Delay (min/veh)
Watergate St	0.7	2.23	0.41
Bandon Bridge/St Finbarr's Place	0.64	1.77	0.15
North Main Street	0.74	2.83	0.23



## Kilbrogan Hill / North Main Street / Emmet Row Junction (Junction 12)

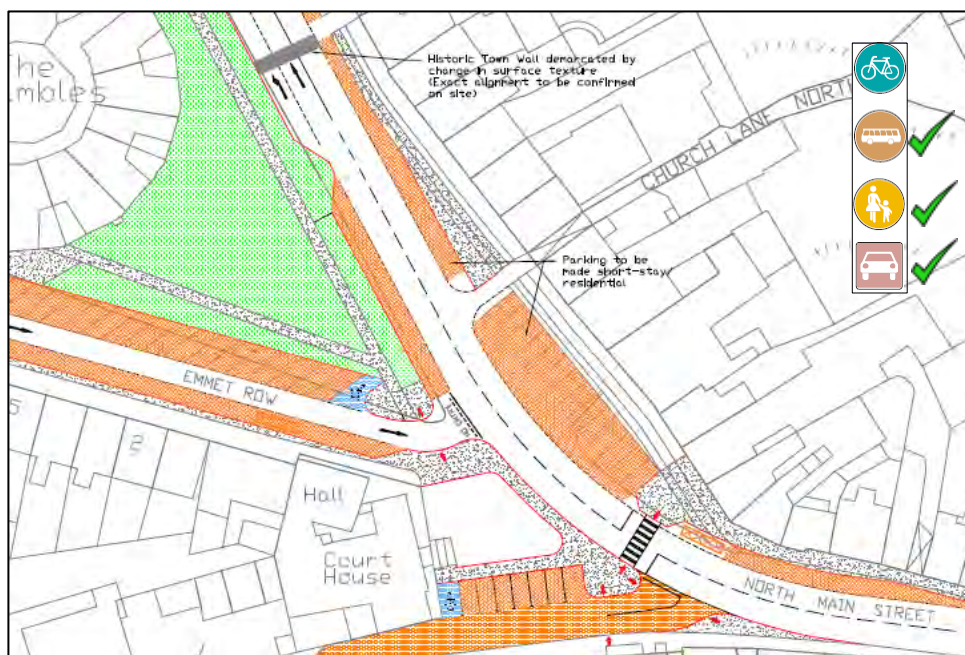
### Current Issues

- Wide road widths and steep gradients conducive to high speed and unsafe approaches.
- Queuing from Bandon Bridge blocks junction.
- Direct car park access to/from Emmet Row result in unsafe manoeuvres.
- Poor pedestrian crossing facilities especially across North Main Street.



### Design Rationale

- Junction layout changed so that:
  - Emmet Road is realigned, is made one-way eastbound and becomes a shared surface environment with local traffic access only;
  - Kilbrogan Hill to North Main Street alignment now forms the major road;
  - Queuing from Bandon Bridge will have minimum impact; and
  - Court House/Town carpark is accessed from side road only.
- Improved pedestrian crossing facilities;
- Additional parking provided on Emmet Row and Kilbrogan Hill;
- Yellow boxes provided to assist traffic exiting side roads/adjacent accesses; and
- 2 loading areas provided along North Main Street and Emmet Row to serve businesses.







## Kilbrogan Hill / The Shambles Junction (Junction 13)

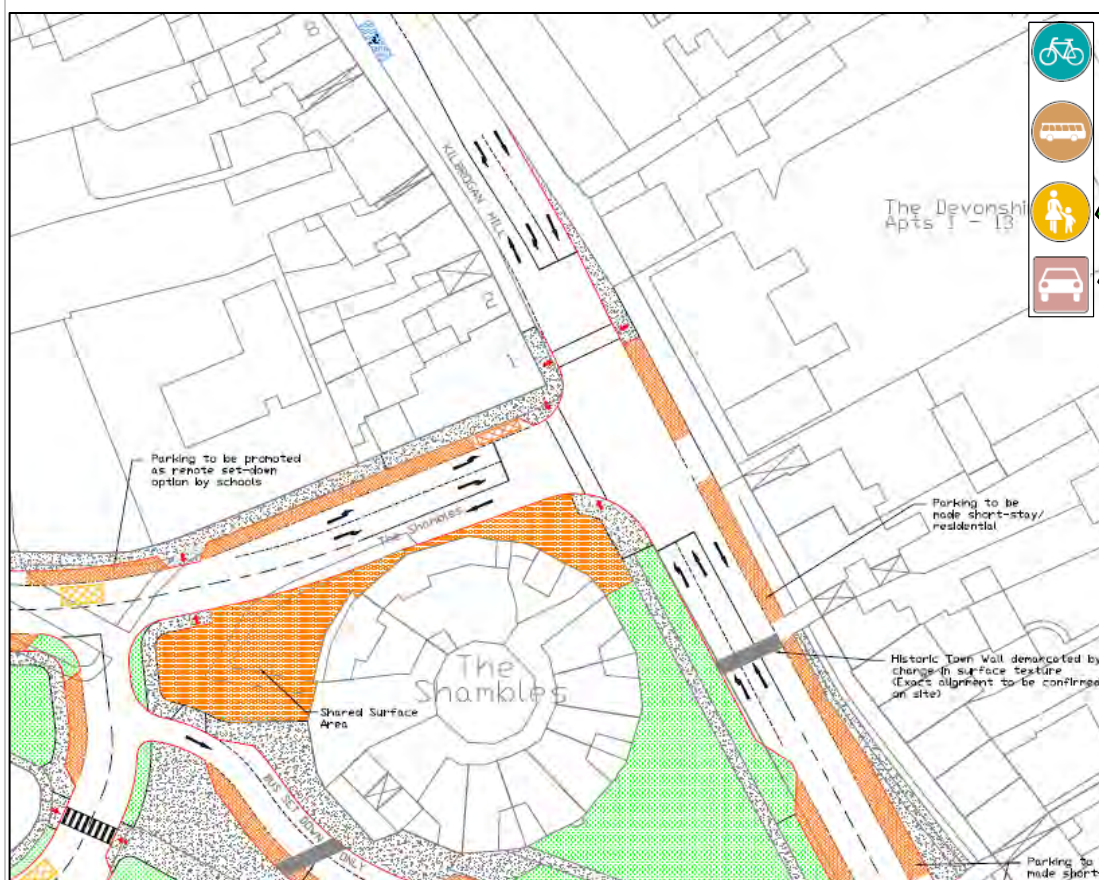
### Current Issues

- Kilbrogan Hill has a significant gradient in the order of 6% with wide carriageways which is conducive to high speeds;
- High vehicular speeds at this location create an unsafe environment for pedestrian and cyclist movements.



### Design Rationale

- Traffic Signals chosen for the following reasons:
  - Provide improved safety for pedestrians crossing the road – particularly important at this location as many school children are dropped off here and walk north to St. Patrick's NS and St. Brogan's College;
  - Assists in reducing vehicular speeds for traffic which is entering Bandon from Kilbrogan Hill – improved safety for pedestrians & cyclists;
  - Discourage through traffic with alternative routes available instead of entering Bandon Town Centre; and
  - Allow for greater control over traffic flow.





## Kilbrogan Hill / The Shambles Junction (Junction 13)

- Flared lanes provide sufficient capacity to allow vehicles to stack without impeding other traffic movements;
- Improved footpaths and dedicated pedestrian crossings improve pedestrian safety and accessibility;
- Disabled parking space on Kilbrogan Hill retained;
- Stop lines set further back from the junction to accommodate turning HGVs;
- Yellow boxes provided to assist traffic exiting side roads/adjacent accesses;
- One loading bay provided along Dunmanway Road to serve businesses; and
- Additional parking provided whilst retaining overall sustainable design objectives.

### Junction Performance

- Microsimulation modelling carried out in VISSIM indicates that the signalised junction operates well in the 2020 busiest peak hour (08:00 – 09:00) with all queues clearing during available green phase;
- Further detailed information on the microsimulation modelling undertaken is provided in Appendix B of this report.

Arm	Average Q (m)
North Main Street Straight	9.9
North Main Street Left	1.0
Dunmanway Road Left	9.4
Dunmanway Road Right	10.9
Kilbrogan Hill Straight	23.9
Kilbrogan Hill Right	28.2



## Allen Square / Dunmanway Road / Emmet Row Junction (Junction 14)

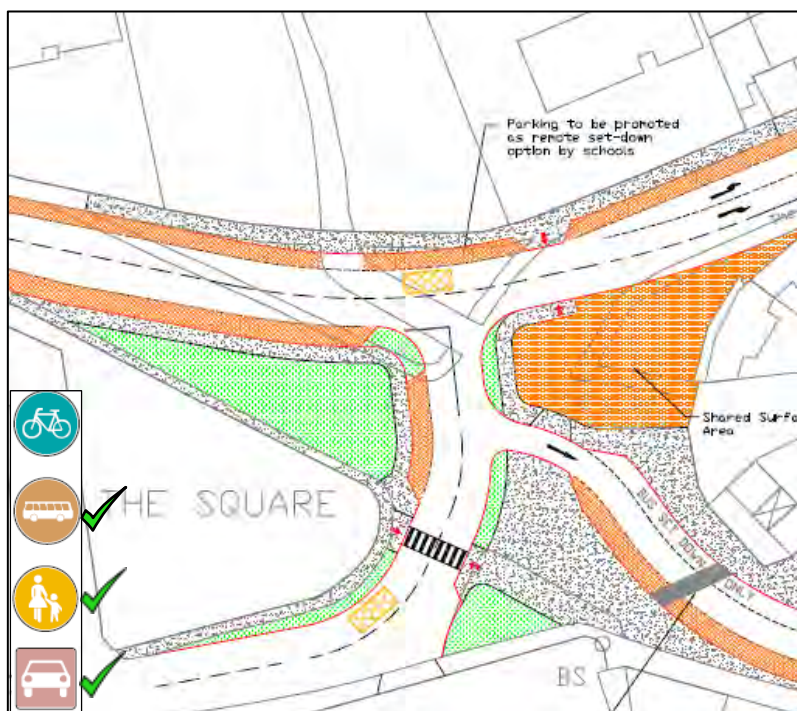
### Current Issues

- Wide road widths and steep gradients conducive to high speed and unsafe approaches.
- Poor pedestrian facilities.
- Poor integration of junctions and road network around The Shambles area.
- Through traffic encouraged and directed towards Bandon Town Centre.



### Design Rationale

- Dunmanway Road realigned to form a signalised junction with Kilbrogan Hill;
- Improved pedestrian facilities by way of providing 2.0m wide footpaths with pedestrian crossings to correspond to pedestrian desire lines;
- Formal roadside parking provided along Dunmanway Road to cater for school set-down;
- Realignment of Dunmanway Road provides additional space around The Shambles for public realm improvements.
- Formal bus stops with bus bays located on Emmet Row to provide safe access for students to/from schools in the area;
- Yellow boxes provided to assist traffic exiting side roads/adjacent accesses.





## Convent Hill / Kilbrogan Hill Junction (Junction 15)

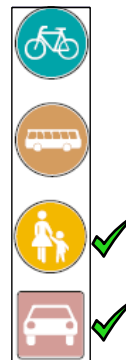
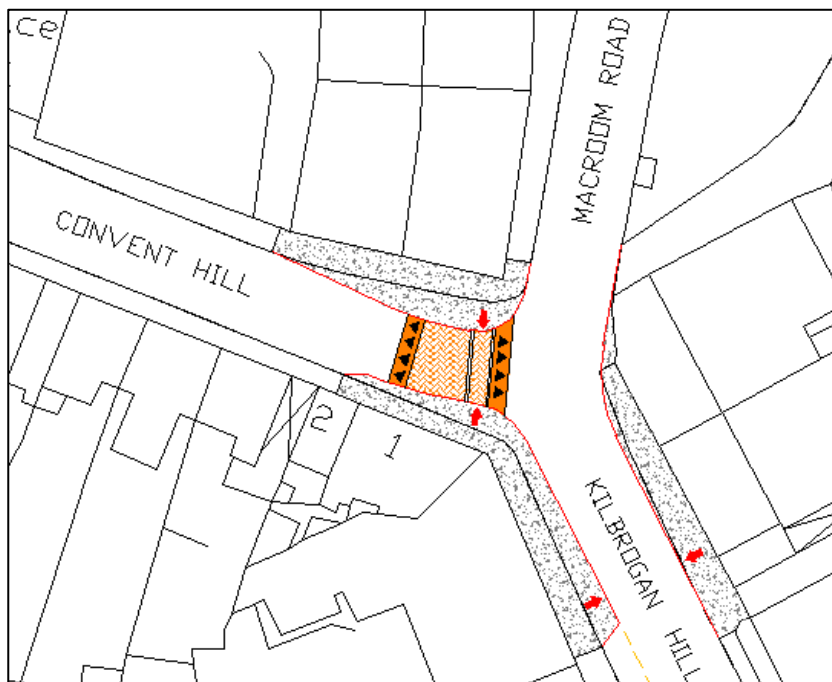
### Current Issues

- Convent Hill and Kilbrogan Hill both have steep gradients which is conducive to high speeds.
- High vehicular speeds at this location create an unsafe environment for pedestrian movements.
- Parking at junction impedes visibility of both pedestrians and vehicular traffic.



### Design Rationale

- Raised pedestrian crossing was chosen for the following reasons:
  - Provides improved safety for pedestrians crossing the road – particularly important at this location as many school children are dropped off here and walk north to St. Patrick's NS and St. Brogan's College; and
  - Assists in reducing vehicular speeds for traffic on Convent Hill.
- The use of kerb build-outs provide:
  - Additional traffic calming effect;
  - A narrow crossing width;
  - Improved visibility; and
  - Improved regulation of roadside parking close to the junction.







## St Patrick's Quay / Market Street / St Patrick's Place (New Road) Junction (Junction 9)

### Current Issues

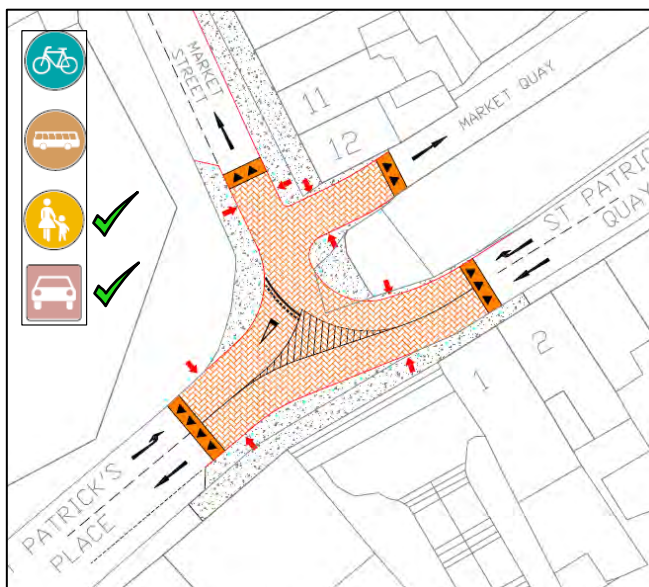
Junction priority does not favour the high volume streams of traffic.

- Wide approach widths along St Patrick's Place and large corner radii encourage excessive speed.
- High vehicular speeds at this location create an unsafe environment for pedestrian and cyclist movements.



### Design Rationale

- Kerb build outs provide:
  - Additional traffic calming effect;
  - A narrow crossing width;
  - Improved visibility; and
- Improved regulation of roadside parking close to the junction.
- Junction design takes account of the proposed flow patterns provided from the Bandon Town Traffic Model;
- Priority given to westbound traffic on St Patrick's Quay;
- Pedestrian crossings are provided on all arms and located to suit pedestrian desire lines;
- A raised junction helps to:
  - Provide improved safety for pedestrians;
  - Assist in reducing vehicular speeds; and
  - Discourage through HGV traffic with alternative routes from entering Bandon Town Centre.



### Junction Performance

- Modelling analysis in PICADY indicates that the junction operates satisfactorily during the peak hour periods (AM results shown):
  - Maximum delays of approximately 13 seconds per vehicle; and
  - Maximum queue lengths of 2 vehicles on St Patrick's Place (New Road).

Arm	RFC	Queue (veh)	Delay (min/veh)
St. Patrick's Quay	n/a	-	-
St Patrick's Place (New Road)	0.608	2	0.22
Market Street	n/a	-	-





## Market Street / South Main Street Junction (Junction 8)

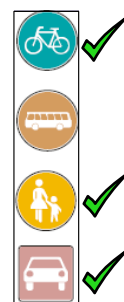
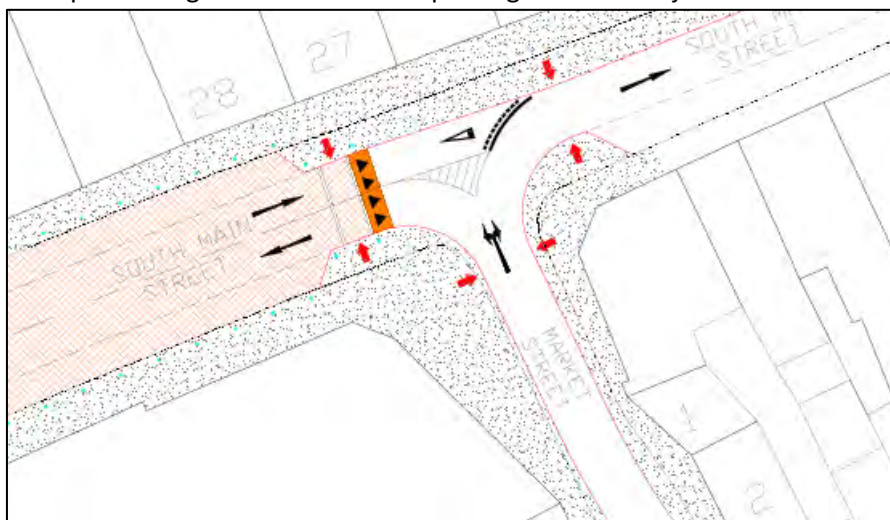
### Current Issues

- Junction priority does not favour the high volume streams of traffic.
- Wide approach widths and large corner radii encourage excessive speed.
- High vehicular speeds at this location create an unsafe environment for pedestrian and cyclist movements.



### Design Rationale

- Junction design takes account of the proposed forecast year flow patterns provided by the Bandon Town Traffic Model.
- Priority given to traffic exiting Market Street.
- Pedestrian crossings are provided on all arms and located to suit pedestrian desire lines.
- A raised surface on South Main Street (west) helps to:
  - Provide improved safety for pedestrians;
  - Assist in reducing vehicular speeds for traffic;
  - Discourage through HGV traffic with alternative routes from entering Bandon Town Centre.
- Kerb build outs provide:
  - Additional traffic calming effect;
  - A narrow crossing width;
  - Enhanced public realm
  - Improved visibility; and
  - Improved regulation of roadside parking close to the junction.





## Weir Street / South Main Street Junction (Junction 10)

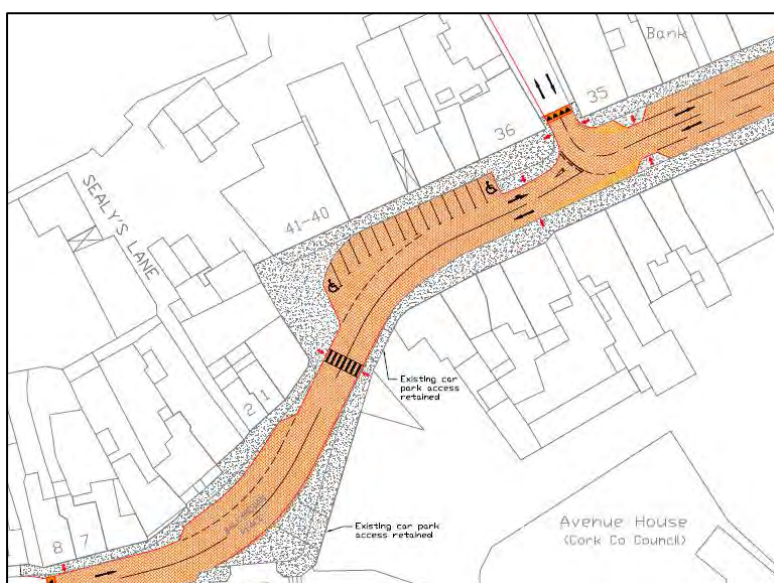
### Current Issues

- Wide road widths with lack of kerb build-outs encourage excessive speed and unsafe environment for pedestrian and cyclist movements.
- Footpath surface and widths are substandard for a high street.
- Streetscape is not attractive



### Design Rationale

- South Main Street surface raised to:
  - Indicate a calmer traffic environment;
  - Provide improved safety for pedestrians;
  - Assist in reducing vehicular speeds for traffic;
  - Discourage through HGV traffic with alternative routes from entering Bandon Town Centre; and
  - Facilitate special events where a pedestrian zone can be easily put in place.
- Pedestrian crossings are provided and located to correspond to pedestrian desire lines.
- Reversal of priority on Weir Street / Ballymodan Place to aid traffic circulation.
- Kerb build outs provide:
  - Additional traffic calming effect;
  - A narrow crossing width;
  - Improved visibility; and
  - Improved regulation of roadside parking close to the junction.





## Weir Street / McSwiney Quay Junction (Junction 11)

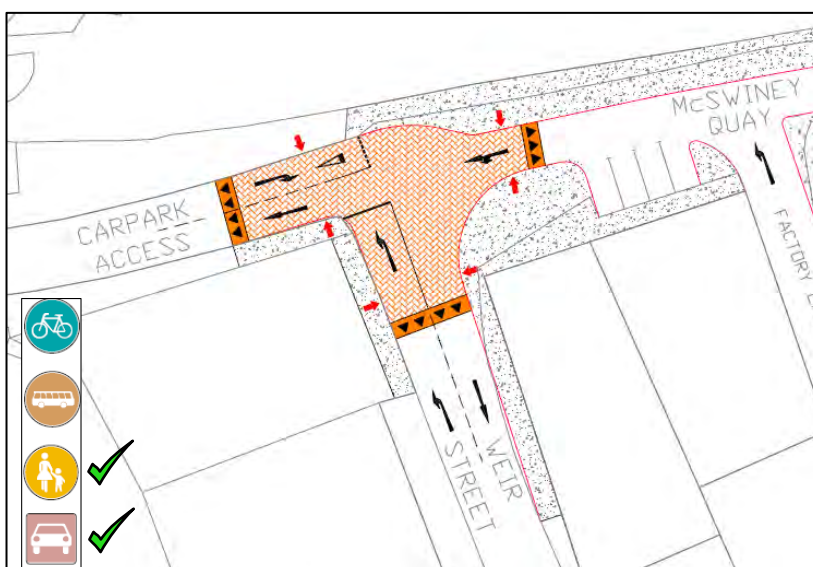
### Current Issues

- Wide road widths and large corner radii encourage excessive speed and unsafe environment for pedestrian and cyclist movements.
- Footpath surface and widths are substandard.
- Streetscape is not attractive and does not take advantage of the adjacent river views.



### Design Rationale

- Junction priority altered to maximise capacity and road safety.
- McSwiney Quay narrowed to 4.0m to accommodate one-way westbound traffic flow in accordance with Bandon Town Traffic Model.
- Junction surface raised so as to:
  - Indicate a calmer traffic environment;
  - Reduce traffic speeds;
  - Provide improved safety for pedestrians; and
  - Assist in reducing vehicular speeds for traffic.
- Pedestrian crossings provided across all arms.
- Existing parking spaces at McSwiney Quay to be retained.
- Articulated vehicles can perform necessary turning manoeuvres.





## Relief Road (N71) / Kilbrittain Road Junction (Junction 17)

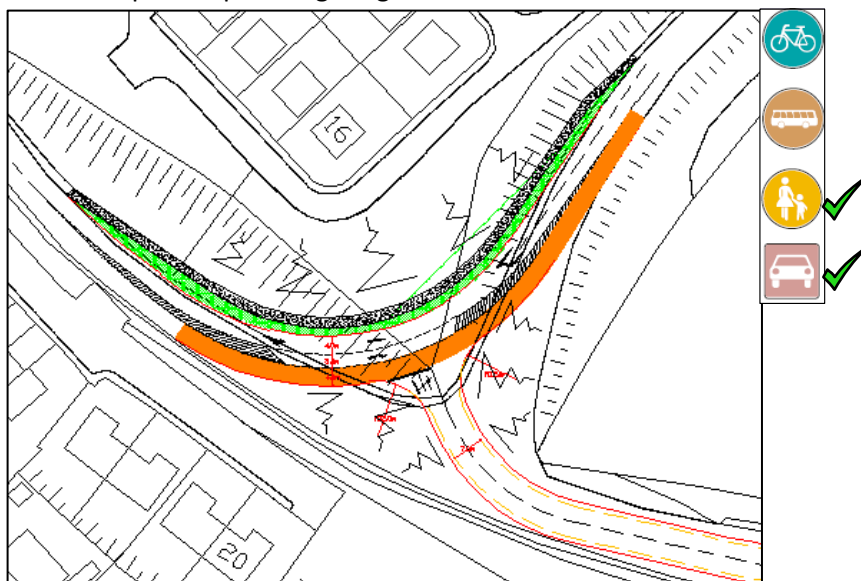
### Current Issues

- Wide road widths and steep gradients encourage excessive downhill speeds and unsafe environment for all road users.
- Priority does not favour Relief Road (N71) traffic leading to traffic congestion on the minor arm.
- HGV drivers find the combination of a steep gradient and junction corner radius difficult to negotiate and unsafe.
- Lack of a climbing deter HGV traffic from using the Relief Road.
- Poor sightlines exist for motorists exiting the Relief Road.
- Poor public lighting.



### Design Rationale

- Junction priority altered to maximise capacity and road safety.
- Design allows for super elevation and reduced longitudinal gradient (subject to Final Design).
- Design allows for the inclusion of a climbing lane (subject to Final Design).
- A grass verge is incorporated to accommodate planting, services and improved segregation for pedestrians.
- Improved public lighting.







## Kilbrittain Road (N71) / N71 (West) / New Road Junction (Junction 16)

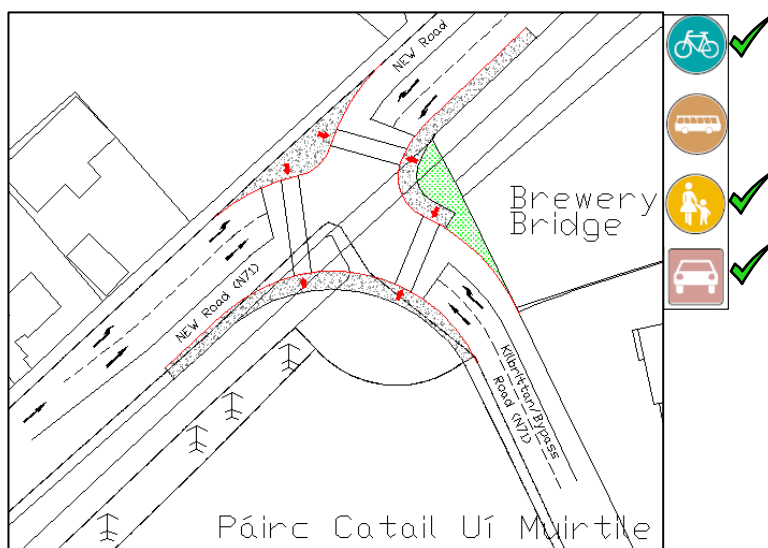
### Current Issues

- Mini-roundabout was a retro-fit junction of an earlier priority type T-junction and does not meet current design standards.
- Junction priority is equal for all arms.
- Little deflection in the east-west direction can result in high vehicular speeds through the junction.



### Design Rationale

- Priority given to N71 (west) to N71 (Relief Road) traffic.
- Pedestrian crossings are provided on all arms.
- Encourage through traffic especially HGVs to use the Relief Road instead of passing through the Town Centre adding to congestion.
- An extension to the existing culvert will be required to facilitate the realignment of the junction to promote movements via the Southern Relief Road.



### Junction Performance

- Modelling analysis carried out in LINSIG indicates that the junction operates satisfactorily during the peak hour periods (AM shown) with:
  - Maximum delays of approximately 24 seconds per vehicle; and
  - Maximum queue lengths of 6 vehicles on New Road

Arm	RFC	Queue (veh)	Delay (min/veh)
N71 (West)	0.55	3	0.3
New Road	0.726	6	0.4
Kilbrittain / Road (Relief Road)	0.569	5	0.36





## Baxter's Bridge Junction Improvements (Junction 18 & 19)

### Current Issues

- Poor sight lines at the R586/Civic Road Junction.
- High traffic speed on both major roads of both junctions (i.e. N71 (west) and R586).
- Inadequate signage design does not encourage traffic to use the Relief Road (N71) as an alternative to passing through Bandon Town Centre.



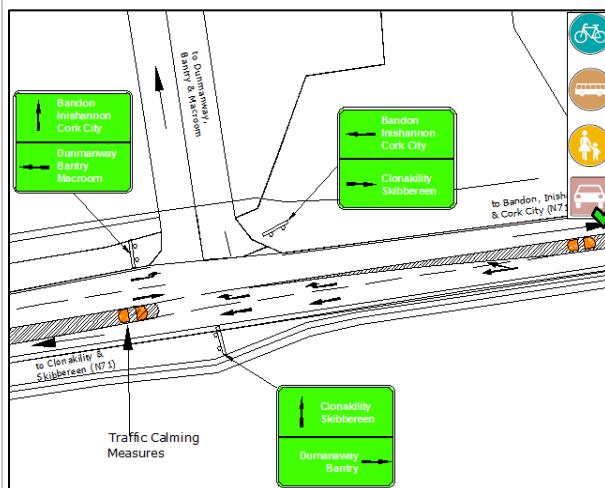
N71/Civic Amenity Road Junction (18)



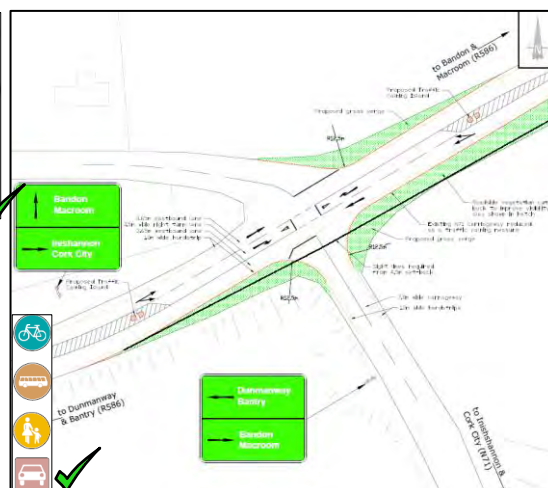
R586/Civic Amenity Road Junction (19)

### Design Rationale

- Traffic islands used as a traffic calming measure.
- More and larger directional signage used.
- Hedge line cut back and carriageway slightly realigned to improve sight lines.



Proposed N71/Civic Amenity Road Jnt (18)



Proposed R586/Civic Amenity Road Jnt (19)



## Oliver Plunkett Street and Glasslynn Road Junction Improvements (Junctions 1,2,3,7)

### Current Issues

- Poor pedestrian crossing facilities.
- Poor visibility from minor roads.
- Junction corner radii and splays conducive to high speed.



Parnell St / Oliver Plunkett St Jnt



Station Road / Glasslynn Road Jnt

### Design Rationale

- Raised crossing used along Oliver Plunkett Street across Deal Yard Lane and Parnell Street.
- Pedestrian crossings realigned and located along pedestrian desire lines.
- Build-outs used to reduce carriageway widths, regulate parking.
- Junction corner radii reduce to between 4.5 and 6.0m in all cases.
- Planted central reserve installed along Glasslynn Road.



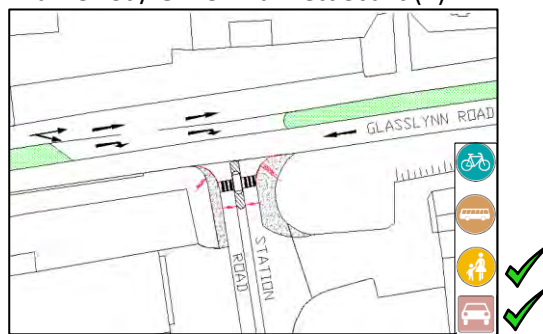
Deal Yard Lane / Oliver Plunkett St Jnt (7)



Parnell St / Oliver Plunkett St Jnt (2)



Station Road / Connolly Street Junction (1)



Station Road / Glasslynn Road Junction (3)



#### Junction Improvements – Key Recommendations:

- Junction improvements are proposed at 19 locations throughout Bandon Town;
- Upgrades are focused on improving safety and accessibility for pedestrian/cyclists and improving efficiency of traffic movements at key locations within the town.

#### Benefits of the Junction Upgrades:

- Enhanced pedestrian and cycle facilities;
- Enhanced safety for pedestrian movements, in particular for vulnerable road users such as school children and the mobility impaired;
- Enhanced access to public transport;
- Enhanced efficiency of traffic movement; and
- Reduced levels of congestion.

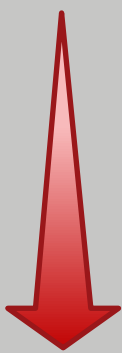


## 5.5 Walking and Cycling Strategy

### Introduction

- 5.5.1 Through public and stakeholder consultation, it was noted that pedestrian facilities within Bandon Town are currently inadequate with particular issues including poor surfacing, footpath widths, lack of appropriate crossings, dis-jointed network, poor street lighting and limited pedestrian amenity areas.
- 5.5.2 In order to address these inadequacies, the Bandon TPREP Walking and Cycling Strategy has been developed through detailed analysis of local issues and opportunities which were identified in the baseline review of current conditions in Bandon (see the *Bandon TPREP Interim Report* for further information).
- 5.5.3 In addition, the Walking and Cycling Strategy takes cognisance of recent local, regional and national policies such as the National Transport Authority's National Cycle Manual, the Cork County Development Plan and the Department of Transport, Tourism and Sport's Smarter Travel Policy. The strategy also takes into consideration the Walking and Cycling Strategy for Bandon Active Travel Town Strategic Recommendation Report which was produced in June 2013.
- 5.5.4 In designing the Walking and Cycling Strategy for Bandon, a hierarchical approach, outlined in Table 5.2, was utilised based on guidance from the NTA's National Cycle Manual and planning guidelines from the Department for Transport in the UK.

**Table 5.2 Pedestrian and Cyclist Hierarchy of Provision**

Consider First	Pedestrians	Cyclists
	Traffic reduction	Traffic reduction
	Speed Reduction	Speed Reduction
	Reallocation of road space to pedestrians	Junction treatment and traffic management
	Provision of direct at-grade crossings	Redistribution of the carriageway (bus lanes, widened nearside lanes etc.)
	Improved pedestrian routes on existing desire lines	Cycle lanes and cycle tracks
Consider Last	Segregated Walking Infrastructure	Segregated Cycle Infrastructure

### Bandon TPREP Walking and Cycling Strategy

- 5.5.5 The finalised Bandon TPREP Walking and Cycling Strategy is summarised in Figure 5.13, overleaf. It should be noted that the following section provides an overview of the key aspects of the strategy, whereas, details on specific improvement measures are presented on a corridor by corridor basis in Chapter 6 of this report.



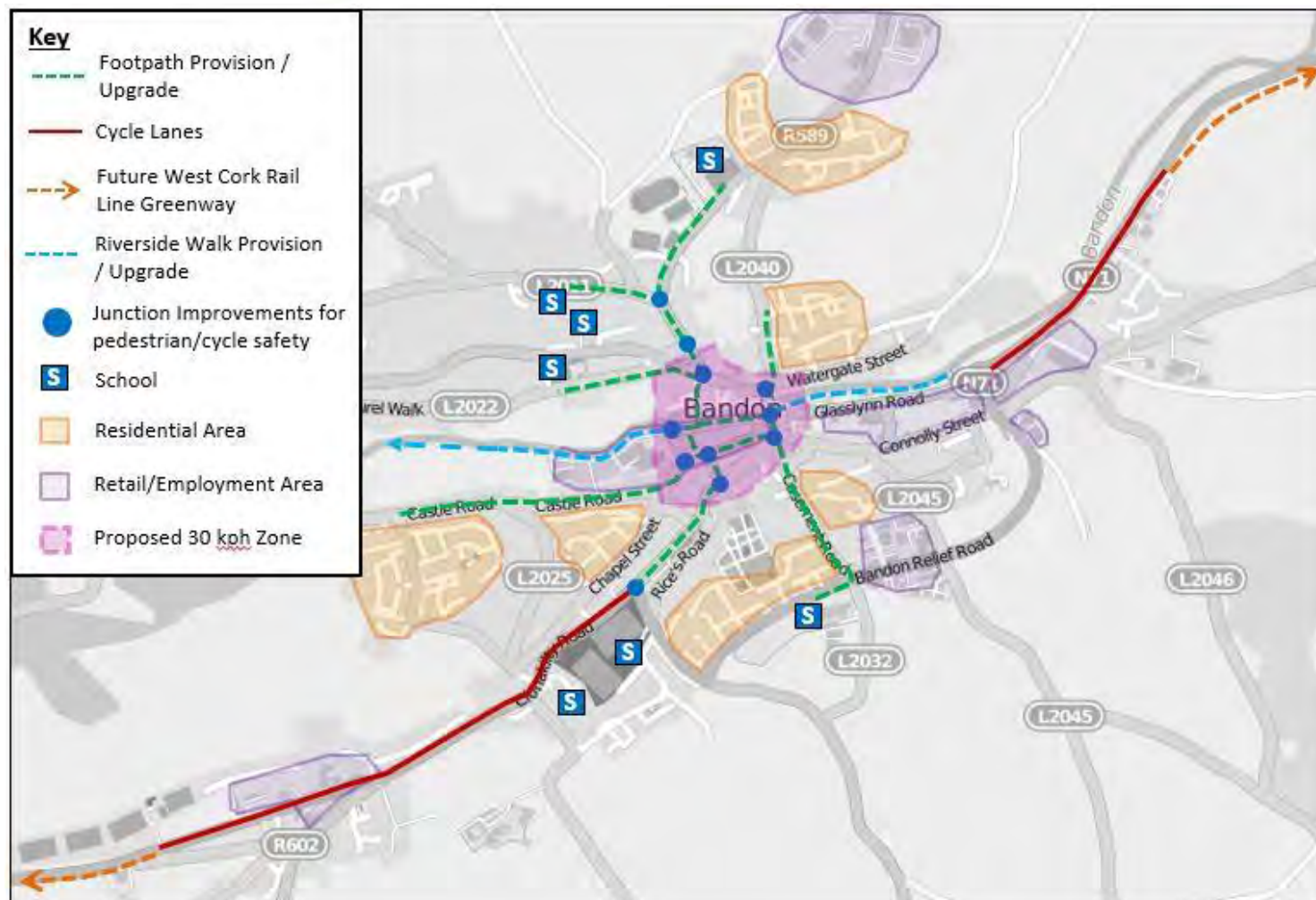


Figure 5.13 Bandon TPREP Walk & Cycling Strategy



### ***Traffic Reduction***

- 5.5.6 It was noted during the baseline review of existing traffic conditions, that Bandon experiences a significant proportion of through traffic which does not have an origin or destination within the town centre. The development of the Road and Street Hierarchy, outlined in Section 5.2 previously, identifies the need to remove unnecessary through traffic from the town centre and create streets which have a multi-purpose function providing greater emphasis on pedestrians and cyclists. This is achieved through the upgrading and development of alternative routing options such as the North Relief Road and continuation of the Southern Bypass. Please refer to Section 5.2 for further information.
- 5.5.7 The presence of high volumes of HGV traffic within Bandon town centre creates an unsafe and unattractive environment for walking and cycling. As part of the integrated package of measures which form the Bandon TPREP, a strategy has been developed for the management of HGV flows through the town centre. The reader is referred to Section 5.8 of this report for further information on this HGV strategy.

### ***Speed Reduction – 30 kph Zone***

- 5.5.8 In keeping with the hierarchical approach mentioned previously, it is proposed to introduce a 30kph speed restriction on the streets making up the town centre in Bandon. It is envisaged that the 30kph zone would approximately match the area enclosed by the old town wall and include the following streets:
- St. Patrick's Quay;
  - St. Finbarr's Place;
  - South Main Street;
  - Ballymodan Place;
  - Weir Street;
  - Market Street;
  - MacSwiney Quay;
  - Bridge Street;
  - North Main Street; and
  - Glasslynn Rd West
- 5.5.9 Figure 5.13, above, illustrates the area to be covered by the proposed 30kph speed restriction. The limiting of speeds where there are high levels of interaction between vehicular traffic 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.
- 5.5.10 Lower speeds will also provide environmental benefits by reduced traffic noise which benefits the local environment. The lower speeds also improve the perceived safety of the area which in turn makes it more attractive for walking and cycling.



### ***Reallocation of road space to pedestrians***

5.5.11 As noted previously in Section 5.3 ‘Town Centre Circulation’, a number of street layouts have been altered to allow for improved pedestrian facilities including increased footpath widths. In summary:

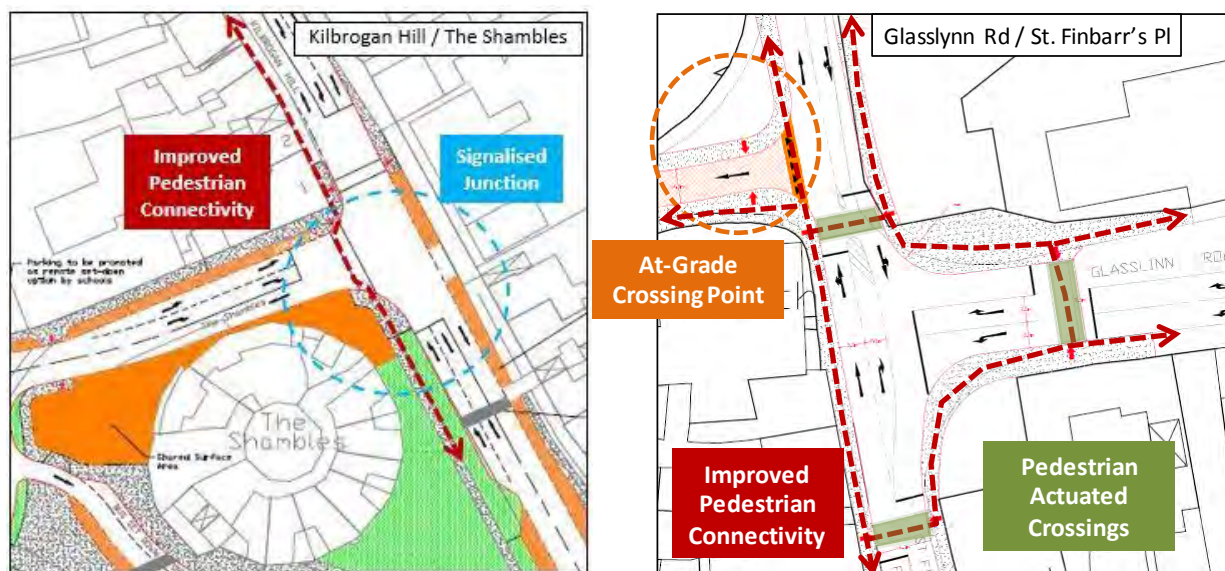
- MacSwiney Quay becomes 1-way;
- Market Street becomes 1-way;
- Bridge Street becomes 1-way; and
- Creation of shared surface streets at Market Quay and Bridge Lane.

5.5.12 Detailed information on specific pedestrian infrastructure introduced is presented on a corridor by corridor basis in Chapter 6 of this report.

### ***Junction treatment and provision of at-grade crossings***

5.5.13 As noted in Section 5.4 above, a number of junction improvements within Bandon town centre are proposed as part of the Bandon TPREP to provide a safer environment for pedestrian and cyclists, and to reduce congestion at key areas on the network.

5.5.14 The junction upgrades have been designed to provide improved safety and connectivity for pedestrian and cyclist movements, in particular vulnerable users such as school children, the mobility impaired etc. Some examples of these junction upgrades are illustrated in Figure 5.14 below. For further information, including design rationale, the reader is referred to Section 5.4 of this report.



**Figure 5.14 Example Junction Updates**

### ***Improved pedestrian routes on existing desire lines***

5.5.15 As part of the Walking and Cycling Strategy, a number of pedestrian routes within Bandon town centre have been identified for upgrade (highlighted in green in Figure 5.13 previously).





- 5.5.16 The proposed pedestrian infrastructure improvements are primarily focused on providing safe linkages to the town centre and local schools, and include footpath upgrades, pedestrian crossing provision and junction improvements. Further details on specific improvement measures are provided in Chapter 6 of this report on a corridor by corridor basis.
- 5.5.17 Figure 5.16, overleaf, illustrates a more detailed movement framework for the Bandon town centre core outlining key pedestrian desire lines and areas of infrastructure improvement. As outlined previously, this section provides an overview of the general Walking and Cycling Strategy, while more detailed specifications are provided in Chapter 6.
- 5.5.18 It is envisaged that north and south of the river will be linked in the short term via the existing footbridge and upgrades to pedestrian facilities on the Bandon Bridge, and in the medium/long term by a proposed cantilever walkway illustrated in Figure 5.15 below. This will assist in providing access from areas north of the river (e.g. Cork Rd) to the town centre and bus stops located on Glasslynn Rd.

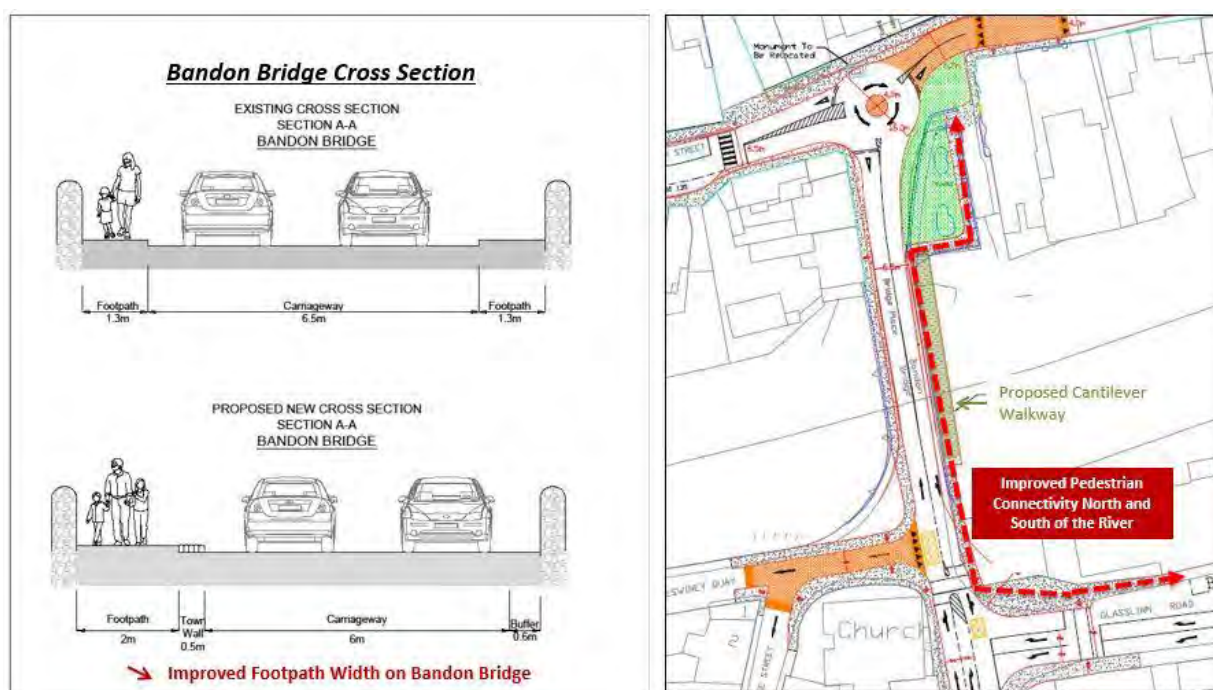


Figure 5.15 Proposed Pedestrian Improvements on Bandon Bridge



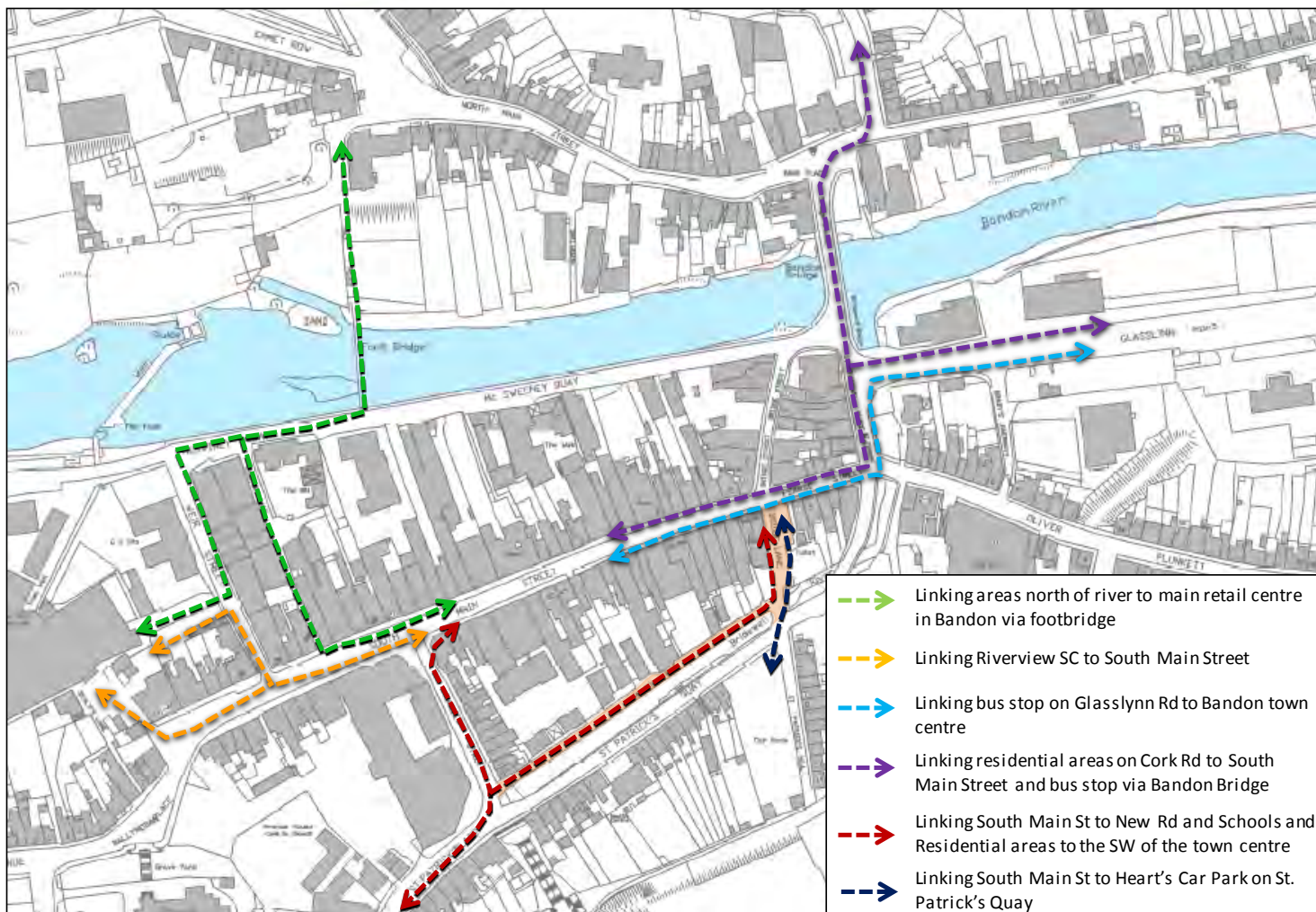


Figure 5.16 Bandon Town Centre Pedestrian Desire Lines



### Cycle lanes

- 5.5.19 The Bandon TPREP Walking and Cycling Strategy takes cognisance of other proposals for the study area including the development of the West Cork Rail Line Greenway. The proposed Greenway in most sections follows the alignment of the abandoned West Cork Rail Line, illustrated in Figure 5.17 below. It will provide a high quality amenity linking Cork City with regions to the west and south of Cork.

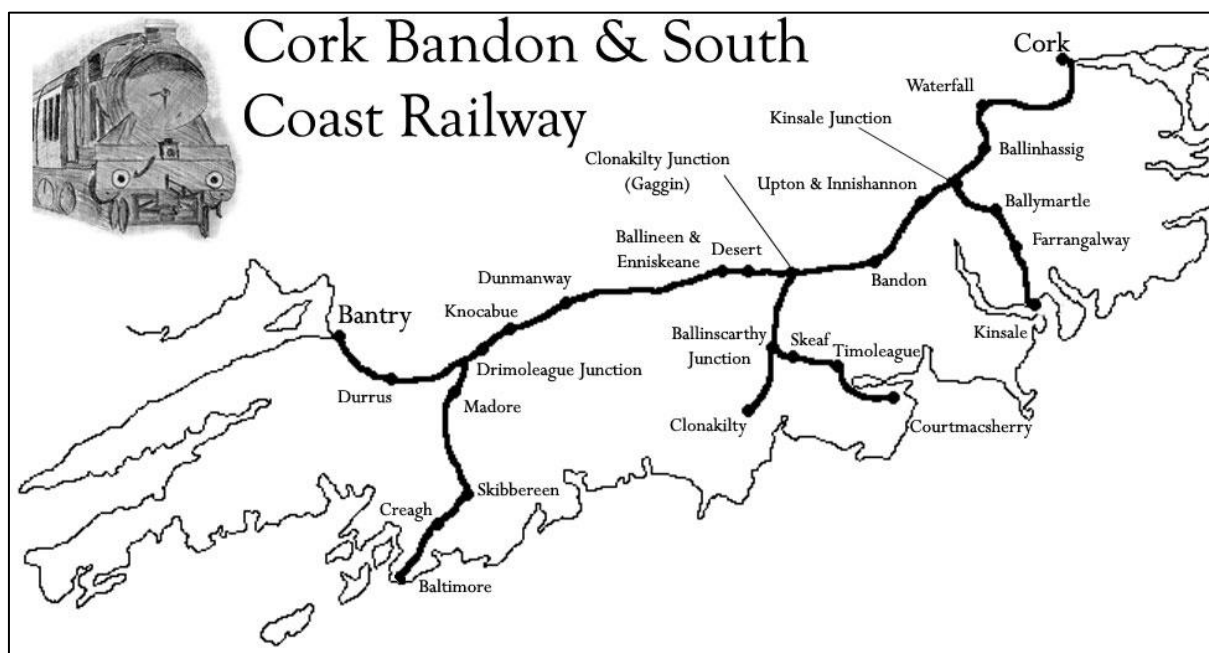
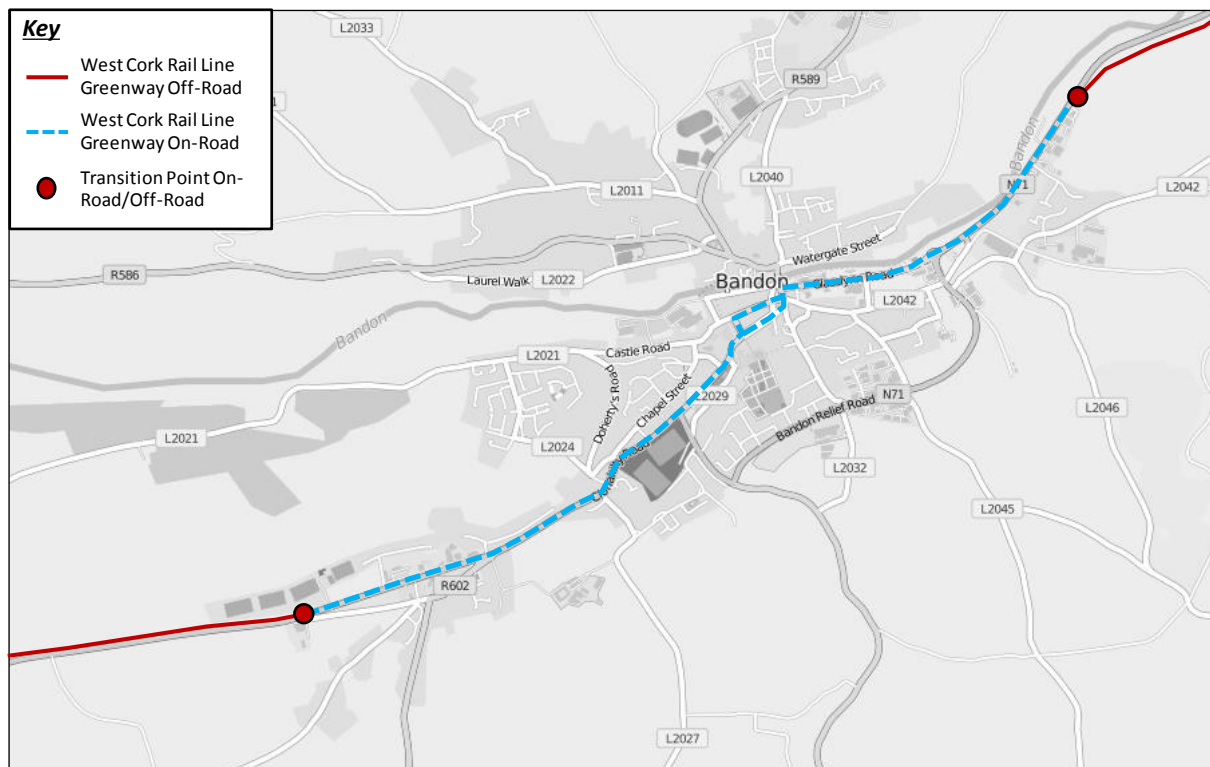


Figure 5.17 West Cork Rail Line Route

- 5.5.20 The *West Cork Abandoned Rail Line Greenways: Preliminary Feasibility Assessment Report* from 2011 carried out an assessment of the potential for a Greenway including a review of routing options and strategic issues and opportunities.
- 5.5.21 For the section of Greenway through Bandon, illustrated in Figure 5.18 overleaf, it was noted that the route will follow the alignment of the old railway line off-road until it reaches Billies Restaurant to the east of Bandon. It will then be required to divert on-road using the existing street network within Bandon Town before returning off-road again immediately west of Old Chapel.
- 5.5.22 In order to facilitate and compliment the development of the West Cork Greenway, the Bandon TPREP includes measures which are aimed at providing an attractive cycling environment through the town, in particular the construction of new cycle lanes on the N71 to the east and west of Bandon (illustrated in red in Figure 5.13 previously).



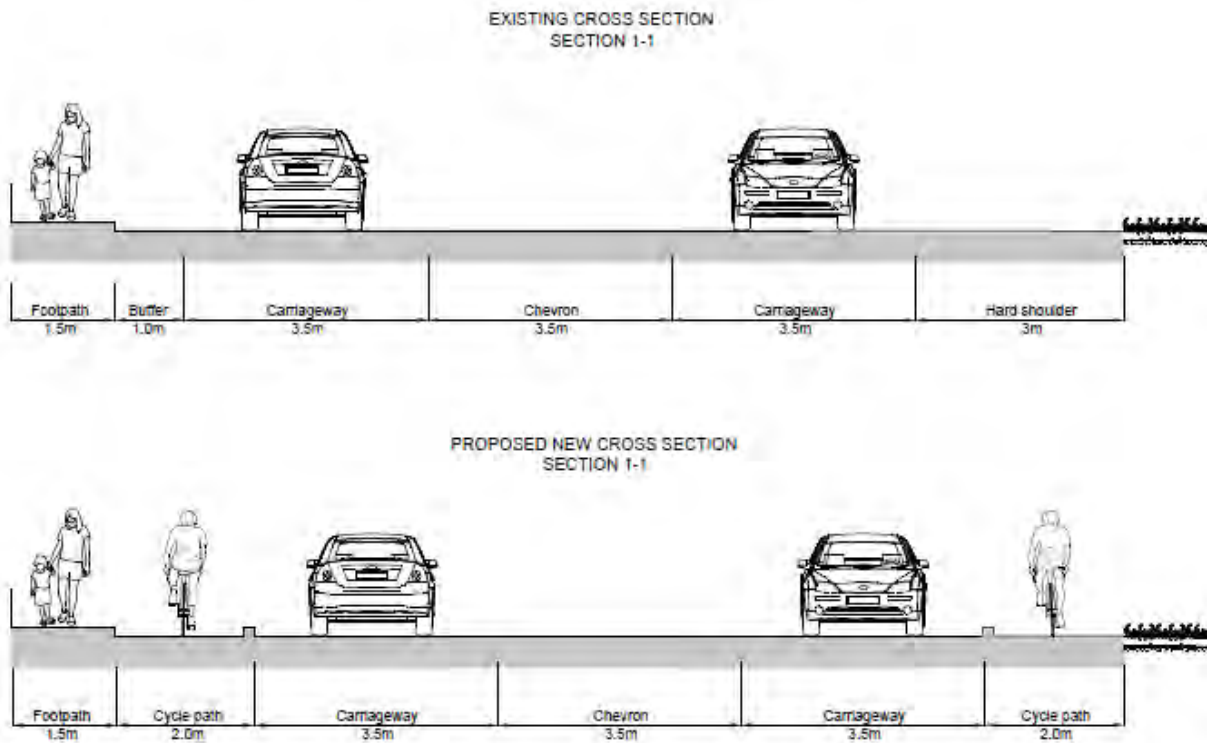
**Figure 5.18 West Cork Rail Line Greenway Route through Bandon**

5.5.23 The proposed cycle lanes to the east of Bandon, recommended as part of the TPREP, are intended to provide a safe and attractive cycling environment linking the Greenway, at the point where it diverts on-road, to the town centre. Segregated cycle lanes are proposed at this location as traffic speeds are relatively high with a limit of 60kph in operation. The NTA National Cycle Manual indicates that segregation is generally appropriate where:

- actual motorised speeds are above 50km/h; or
- on such roads where the speed limit is set at 60km/h or higher.

5.5.24 Figure 5.19 below provides an indicative illustration of a typical cross section on the N71 east of Bandon (at location 1 illustrated in Figure 5.13 previously) highlighting the updated road layout and position of the proposed cycle lanes.

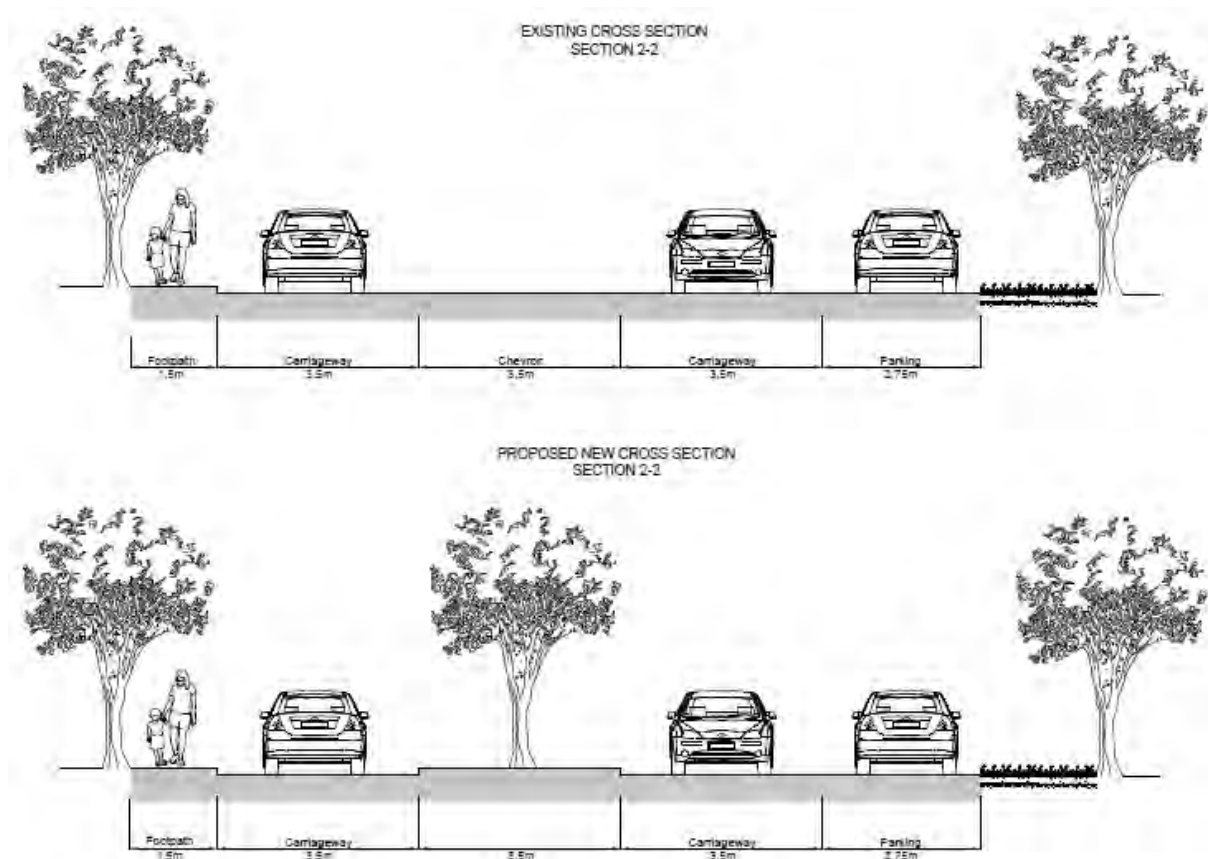
5.5.25 This section of road is relatively wide with a broad hard shoulder and central chevron marking and therefore has sufficient space to facilitate the introduction of segregated cycle lanes. It is proposed that the cycle lanes will be separated from the carriageway by low-level kerbing with sufficient break points provided to allow vehicular access/egress along the route where required.



**Figure 5.19 N71 East of Bandon Typical Cross Section**

5.5.26 As part of the Bandon TPREP, to the west of the N71 roundabout it is proposed that Glasslynn Road be upgraded with a central tree lined median installed to create a boulevard effect. This will provide an attractive entrance feature for visitors travelling into the town while also encouraging reduced vehicular speeds creating a safer environment for walking and cycling. Further details on the updated design for Glasslynn Road are provided in Chapter 6 of this report, however, Figure 5.20 overleaf, provides an indicative illustration of a typical cross section from the proposed upgrade (at location 2 illustrated in Figure 5.13 above).

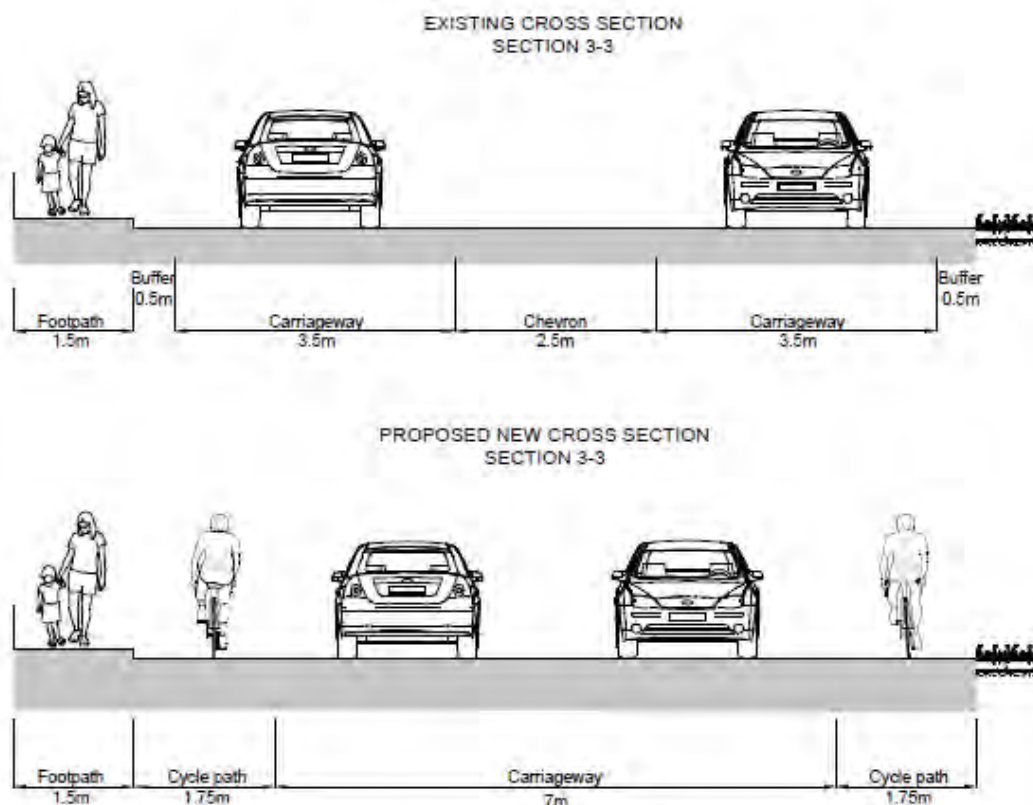




**Figure 5.20 N71 Glasslynn Rd Typical Cross Section**

- 5.5.27 The introduction of the central tree-lined section will visually narrow the streetscape, resulting in a calming effect with reduced vehicular speeds, thus creating a safer environment for cyclists to share the road space with vehicles in the town centre.
- 5.5.28 The cycle lanes proposed to the west of Bandon, as part of the TPREP, are intended to provide a safe environment for cyclists linking the point at which the Greenway diverts on-road at Old Chapel to the town centre. It is envisaged that the proposed cycle lanes will be completely segregated from traffic for the section of road which operates within a 60kph speed limit, reverting to advisory (i.e. non-segregated) lanes once this speed limit reduces to 50kph in accordance with guidelines from the NTA National Cycle Manual.
- 5.5.29 Figure 5.21 provides an illustration of a typical cross section from the N71 west of Bandon (at location 3 illustrated in Figure 5.13 previously) indicating the position of the proposed cycle lanes and their impact on road layouts. By removing the central chevron marking which currently exists at this location, sufficient space is created to introduce a 1.75m<sup>10</sup> wide cycle lane in each direction.

<sup>10</sup> The chosen cycle lane width is calculated from the National Cycle Manual based on single file cycling



**Figure 5.21 N71 West of Bandon Typical Cross Section**

5.5.30 The narrow streetscape within the town centre in areas such as North Main Street, South Main Street, St. Patrick's Quay and St. Finbarr's Place make it extremely difficult to provide dedicated cycle lanes in these areas. However, proposed pedestrian infrastructure improvements discussed previously such as widened footpaths, raised junctions etc., will assist in providing a safer environment for cyclists.

#### ***Segregated Walking and Cycle Infrastructure***

- 5.5.31 The river Bandon is central to the town, and the provision of a safe, attractive walkway will create a high quality amenity for locals and visitors. The strategy recommends the upgrade of the current Graham Norton Riverwalk (including improved lighting etc.) to the east of Bandon Bridge and to connect it to the Future West Cork Railway Line Greenway. The connection with the Greenway should be via a pedestrian footbridge. The Graham Norton Riverwalk should also be linked with the north side of the river via a proposed cantilevered-boardwalk on Bandon Bridge.
- 5.5.32 In addition, it is recommended to provide a similar walkway to the west of Bandon Bridge as far as Castlebernard (highlighted in blue in Figure 5.13 above).
- 5.5.33 As noted previously, it is envisaged that the recommended cycle lane and pedestrian infrastructure improvements will link Bandon town centre to the proposed West Cork Rail Line Greenway which would provide a high quality amenity attracting visitors to the town.



- 5.5.34 As noted previously in Section 5.3, the Bandon TPREP proposes alterations to the layout and operation of a number of streets within Bandon town centre to facilitate the introduction of public realm improvements and assist in reducing conflicts at key junctions. In order to promote and encourage cycling within Bandon town centre, safe and direct cycle routes have been development to ensure that cyclist are not significantly discommoded by any alterations to street operation.
- 5.5.35 At specific locations where the traffic flow arrangement could discommode cyclists, alternative facilities have been provided. For example, on the proposed one way section at the Western end of Oliver Plunkett Street, a new contra flow cycle lane has been proposed. This will allow cyclists entering Bandon from the east, along Oliver Plunkett Street, to access St. Patrick's Quay and South Main Street (via Bridge Lane) without having to be re-routed via Brady's Lane and Glasslynn Road.
- 5.5.36 In addition to the cycle lane on Oliver Plunkett Street, it is proposed that a new segregated cycle track be constructed linking Ballymodan Place with St. Patrick's Place, highlighted in blue in Figure 5.22 overleaf. The provision of this link will provide a safe route for cyclists wishing to access/egress the town centre from areas to the west of Bandon such as Old Chapel. This cycle link will also provide a direct access to the new proposed event space located at Ballymodan Place.

**Walking and Cycling Strategy – Key Recommendations:**

- Footpath upgrades proposed along pedestrian desire lines linking key residential areas within Bandon to local schools and the town centre;
- Introduction of 30kph zone within the town centre to provide a safer environment for walking and cycling;
- Creation of shared surface environment at Market Street and Bridge Lane;
- Cycle lanes proposed linking Bandon Town to the West Cork Rail Line Greenway; and
- Upgrade and extend of the current Graham Norton Riverwalk.

**Benefits of the Walking and Cycling Strategy:**

- Increased connectivity between schools and residential areas;
- Improved access to schools;
- Safer village centre with increased priority for pedestrians and cyclists;
- Improved accessibility to Public Transport; and
- Improved vibrancy of the town centre.



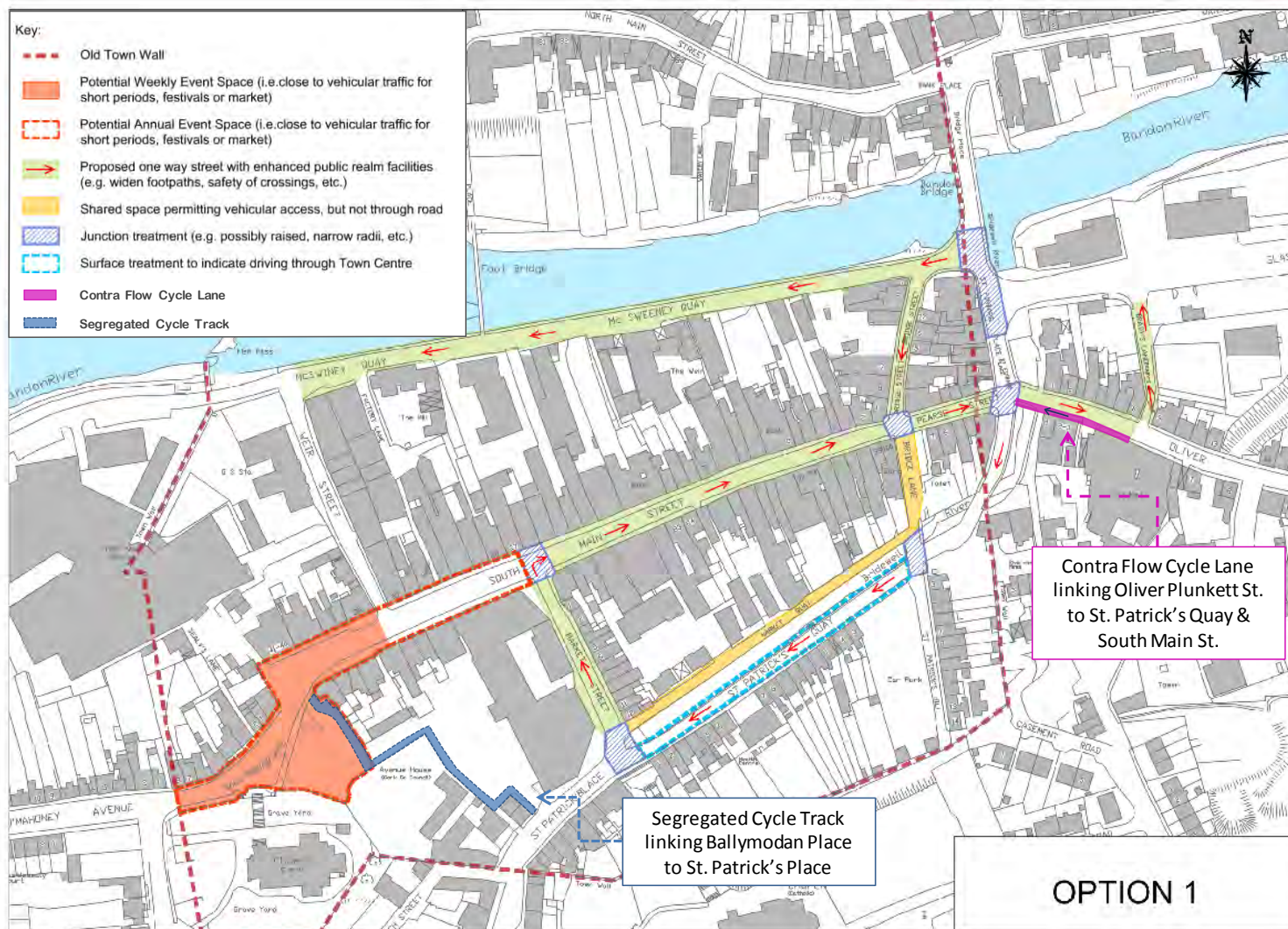


Figure 5.22 Proposed Town Centre Cycle Infrastructure





## 5.6 School Travel Plan

### Introduction

- 5.6.1 School traffic is a significant contributor to congestion in the Bandon Town area during the peak periods. This study seeks to understand the travel patterns associated with each of the local schools. A School Travel Plan is one way of understanding these travel patterns and most importantly help reduce a schools reliance on private cars. A School Travel Plan is simply a written document which outlines a number of measures which a school aims to undertake to encourage pupils, parents and staff to travel to school by means other than by private car.
- 5.6.2 The School Travel Plan involves promoting the four key sustainable modes of travel:
- Walking;
  - Cycling;
  - Public transport;
  - Car-pooling.
- 5.6.3 The following sections outline the general best practice measures and actions that schools can take to encourage pupils, parents and staff to use the four key sustainable modes of transport mentioned above. Also discussed are specific measures that each school within Bandon can incorporate to encourage safe sustainable travel.

### Walking

- 5.6.4 Walking is a great way for pupils to travel to school and get around the locality. As a form of exercise, walking helps tone muscle and burn calories, keeping people healthy. Walking is also a cost free mode of transport. The National Transport Authorities School Travel Kit sets out many best practice measures and actions which can help schools promote walking:
- **Raise awareness of walking** – introduce poster competitions, promote local walking trails and the health benefits of walking;
  - **Create an incentive** – create prizes for the top walkers, healthy breakfast morning for all those who choose walking, etc;
  - **Develop an initiative** – pick a day you would like people to walk and then promote it, e.g. Walk on Wednesday (WOW). This could be linked to raising awareness and creating an incentive;
  - **Walking Bus** – A walking bus is run by a group of adult volunteers who walk a route to a school, stopping off at certain points to collect and drop off children;
  - **Fancy Dress / Themed Walks** – around certain times of the year organise fancy dress walks to school or go for a nature walk, for example at Halloween, Christmas or St. Patricks Day;
  - **International Walking Events** – promote Green-Schools National Walk to School Week takes place in May and International Walk to School month occurs in October;



- **Network** – Speak to your Local Authority and Community Gardaí about managing parking and traffic outside your school or to improve pedestrian infrastructure in your area;
- **Carry out a Walkability Audit**- involves students and teachers walking around their school or local area with clipboards, paper and a camera to 'log' areas for improvement.

### Cycling

5.6.5 Cycling has many benefits which are not just limited to health, happiness and local environment. Cycling emits less pollution than other modes of transport. The National Transport Authorities School Travel Kit sets out many best practice measures and actions which can help schools promote cycling:

- **Cycle training** – teach students to become experienced and confident cyclists by undertaking cycle training courses during or after school time;
- **Raise awareness** – introduce poster competitions promote local cycling routes and cycle parking locations;
- **Create an incentive** – create prizes for the top cyclists, healthy breakfast morning for all those who choose cycle, etc;
- **Create an initiative** – pick a day you would like people to cycle and then promote it, e.g. Cycle on Wednesday (COW). This could be linked to raising awareness and creating an incentive;
- **Cycle parking** – each school will need somewhere safe and secure to leave bicycles. The bicycle parking will need to be suitable so bicycles can be locked by their frames (not the wheels), near entrances, covered, and well-lit with people passing by;
- **Bike doctor** – Bike maintenance classes are a good way to encourage children to use their bikes on the journey to school;
- **Bike Week** – National Bike Week takes place every June.

### Public Transport

5.6.6 Public transport can cater for longer distance trips that may not be possible by foot or bike. The National Transport Authorities School Travel Kit sets out many best practice measures and actions which can help schools promote the use of public transport:

- **Raise awareness** – introduce poster competitions to encourage people to use public transport, highlight the benefits and displaying public transport timetables;
- **Create an incentive** – create prizes for the people to use public transport;



- **Talks on public transport** – invite a local representative from a bus, rail or tram company to talk about public transport (for example, how to read time tables, how to board, how to flag buses, fare structures and how to pay) and responsible behaviour when using such transport.

### Car Pooling

- 5.6.7 If walking, cycling and public transport are not suitable options, then organising a car pool or car share scheme maybe a viable and sustainable alternative. The National Transport Authorities School Travel Kit sets out many best practice measures and actions which can help schools promote car sharing;

- **Information day** – have an information day at a school. This could be incorporated into a sustainable travel open evening where people can be invited to pin their details and location on a map allowing for connections to be made between potential car poolers;
- **Coffee Mornings** - ‘No pressure’ meetings or coffee mornings give people a chance to get together, find out what’s involved and see if it’s for them;
- **Raise awareness** –information days to get people thinking about car shares and perhaps get them interested;
- **Create an incentive** – Reward schemes for parents who car-share, such as allowing them to access parking easier than those who don’t car share.

### Scheme Promotion

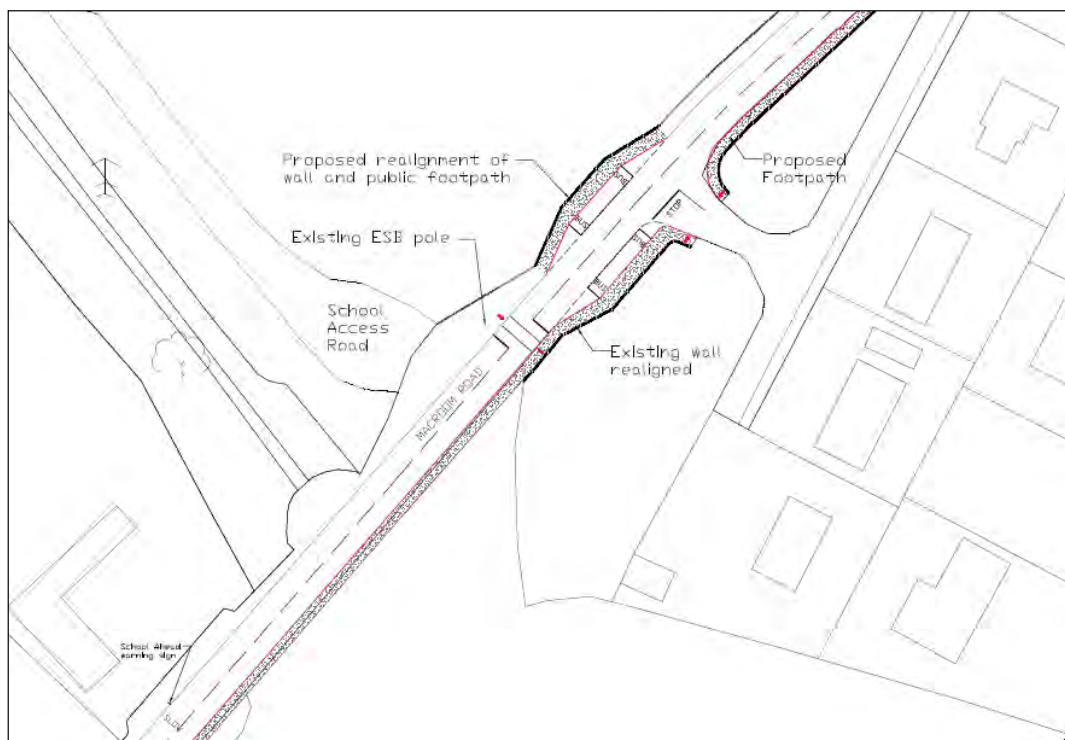
- 5.6.8 The Green Schools Programme suggests that in order to promote sustainable travel to a school you will need a dedicated ‘champion’ who can give his/her time on a regular basis. The ‘champion’ can be a teacher or a parent or both. The role of the ‘champion’ or committee is to promote walking, cycling, public transport and car sharing to the school through initiatives and actions, as well as to garner support from the wider community.

### St. Brogan’s College

- 5.6.9 St. Brogan’s College is a mixed secondary school located on the Macroom Road, 900m north of Bandon Bridge. The school caters for 460 students and 51 staff members. Following consultation with the school principal and site observations, several issues were raised:
- At present car parking is sufficient for the staff at St Brogan’s and the set down facilities for cars are adequate. However there is no available student parking within the school premises due to space, cost and the school policy not to encourage students traveling by car. Students currently park on the neighbouring residential side streets, which has angered residents. To prevent this from occurring, older students need to be encouraged to car pool and walk utilising the best practice measures set out previously in this Section;
  - Vehicle speeds on the Macroom Road passing the school are excessive. Traffic calming measures such as signage and road markings are needed to reduce vehicle speeds;



- One of the biggest issues facing the school is the set down area catering for buses coming from the north. Currently buses stop in the southbound lane and there are no facilities for children to cross the road safely. A new safer set down arrangement is needed for the bus to pick up and drop off students. A new pedestrian crossing is proposed across Macroon Road which will have an additional traffic calming effect. Figure 5.23 indicates the layout of the proposed bus set down and signal controlled crossing adjacent to the school entrance.. Alternatively in the short term safety measures and marshalling can be utilised to enable the students to safely cross the road;



**Figure 5.23 St Brogan's College – Proposed Bus Set Down and Pedestrian Crossing**

- The remaining school buses utilise a set down area south of the school at The Shambles area and students walk the short distance to the school. Upgrades to the bus set down area by the Shambles and Kilbrogan Hill are being proposed which will benefit all schools north of the river. The proposals will help utilise the space in a more effective, safe manner. A raised ramped pedestrian crossing is proposed at the Convent Hill / Macroon Road junction. At present a Lollipop Lady is stationed at this junction to enable the students to cross safely. Further pedestrian crossing upgrades are proposed at the set down area by the Shambles. The Shambles pedestrian crossing upgrades will also be utilised by the St. Padraig's Boys National School;
- The school can incorporate the travel plan into transition year projects. The students can adopt the travel plan raising awareness about sustainable modes of transport. Incentives and initiatives can be introduced to try and reduce the schools reliance on private cars. Walkability/Cycle audits can be undertaken by the transition year students logging areas for improvement.





### St. Padraig's Boys National School

5.6.10 St. Padraig's Boys National School (BNS) is an all-boys primary school located on Convent Hill, 750m north of Bandon Bridge. Following consultation with the school principal and site observations several issues were raised:

- As mentioned in Section 5.5 previously, an upgrade to the Shambles pedestrian crossing area is proposed to cater for the large amount of students crossing the busy street. A Lollypop Lady is there in the morning and afternoon to accommodate students at present. The upgrade to the bus set down area at Kilbrogan Hill will also benefit St. Padraig's BNS;
- The biggest issue facing St. Padraig's NS is the inadequate set down areas for parents. The area immediately outside of the school is reserved for bus set-down. There is a short drop-off area immediately south of the school which caters for 3 cars. A school traffic warden patrols the bus set down area but often encounters problems with parents looking to drop off students. Problems worsen when the school traffic warden is not on duty. The possibility of extending the existing 3 space set down area to the south of the school by one more space will need to be examined. Any further extension is restricted by existing town houses. There is room to install an additional 6 space set-down area to the north of the school.
- There are inadequate areas for parents to turn around after setting down, leading to unsafe reversing manoeuvres especially when the warden is not on duty. A possible solution would be to consider a roundabout at the intersection with the L2033, approximately 400metres west of the school, as indicated in figure 5.24 overleaf. A roundabout at this location would also provide an entrance feature into the town, thereby helping to reduce vehicular speeds. It would also facilitate safe access for existing and potential future residents located on the L2033;

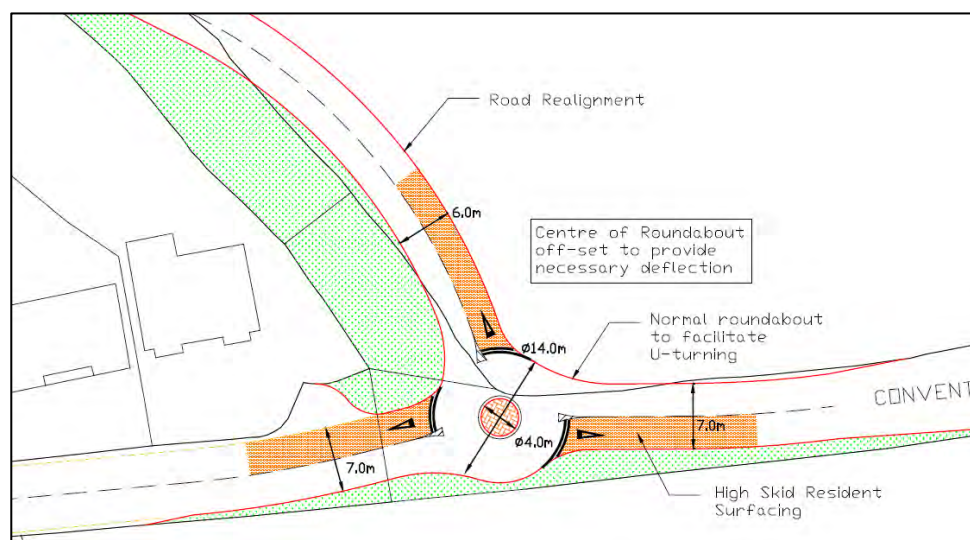


Figure 5.24 Proposed roundabout on Convent Hill to the west of St. Padraig's Boys NS

- As the roads are narrow and space limited, it would be more beneficial to encourage the parents to utilise more sustainable modes of transport. Utilising carpooling schemes



would reduce the need for set down areas. The measures identified previously such as school meetings and information days will help encourage parents to partake in carpooling. Encouraging students to walk utilising the best practice measures outlined above would reduce the congestion on the road;

- There is also insufficient parking for staff in the area. Similar to the set down areas for parents, it would be more beneficial to encourage staff to use alternative modes such as cycling and walking. The school will need to providing sufficient cycle parking and changing facilities for staff.

### **Presentation Primary School**

5.6.11 Presentation Primary School is an all-girls primary school located off the Dunmanway Road, 700m northwest of Bandon Bridge. The school caters for 195 students and 16 staff members. Following consultation with the school principal and site observations several issues were raised:

- The school bus sets-down in The Shambles area and school children walk the short distance to the school (circa 5 to 10 mins). As stated previously, both the bus set down and pedestrian crossing upgrades at the Shambles and Kilbrogan Hill will help utilise the space in a more effective, safer manner;
- Apart from disabled access, car set-downs are not permitted within the school site. All set-downs occur close to The Shambles, from where children walk to school. As the area around The Shambles is already quite busy, it is important to encourage students to walk to school utilising the best practice examples set out earlier in this Section. The school should provide initiatives and incentives for students to get involved in encouraging walking to school;
- As an additional traffic calming measure, it is proposed to install a road kerb on the southern side of the road to provide a consistent 6.25m wide carriageway on the Dunmanway Road. This measure will assist with the safe passage of school children using the existing footpath and also improve sight lines for local residents exiting the various accesses.
- As the surrounding roads are perceived to be dangerous for primary school children to cycle. The school must focus on promoting alternative sustainable modes such as walking and the school bus.

### **Hamilton High School**

5.6.12 Hamilton High School is an all-boys secondary school located at Allen Square, 650m northwest of Bandon Bridge. The school caters for 364 students and 34 staff. Following consultation with the school principal and site observations several issues were raised:

- All parking is by way of a mixture of perpendicular and parallel parking along both sides of the public road. This roadside parking is at capacity and at times causes further congestion along Allan Square. Excessive traffic speeds combined with increased



reversing manoeuvres and pedestrian activity leads to an unsafe environment. Due to the lack of space at either side of the school, relocating the parking spaces is not feasible;

- Cork County Council have plans to resurface this section of Allen Square. With appropriate road markings and signage this will help reduce traffic speeds in the vicinity of the school;
- The pedestrian crossing and bus set down upgrades to The Shambles/Kilbrogan Hill area will encourage students to walk and take the bus to school;
- Students who live close to the school should be encouraged to cycle. The school must provide sufficient cycle parking to facilitate the students;
- The school can incorporate the travel plan into transition year projects. The students can adopt the travel plan raising awareness about sustainable modes of transport. Incentives and initiatives can be introduced to try and reduce the schools reliance on private cars. Walkability/Cycle audits can be undertaken by the transition year students logging areas for improvement.

#### **Bandon Grammar School**

5.6.13 Bandon Grammar School is a mixed secondary school (7 day boarding and daytime) located 1.5km southwest of Bandon Bridge. It has its own private access to the south of the N71. The school caters for 641 students and 81 staff. Following consultation with the school principal and site observations several issues were raised:

- Traffic congestion is significantly less than the other schools in the area due to school drop/collection being catered for within the substantial school grounds. There is also sufficient parking for staff inside the school grounds;
- The main traffic issue related to the school is the access junction with the N71. No right turn access is permitted from the N71. All traffic exiting the school's entrance on the N71 has to turn left onto the Old Chapel Road from where all manoeuvres are then possible. This restricts the number of vehicles utilising the N71 road and places an increased burden on the rear access. The junction also does not have sufficient pedestrian crossings or pedestrian footpaths on the southern side of the road. Improvements are also needed for the junction to cater for right turning cars, pedestrians and cyclists. Figure 5.25 indicates a proposed layout for the R602 intersection with the N71, incorporating on-road cycle lanes (as part of the West Cork Railway line Greenway), a controlled Toucan crossing and rationalisation of the permitted turning movements from the local access roads and roadside properties. The design also includes for a bus set down and turning area to accommodate school bus set-downs or a future Bus Éireann services which could operate from Cork to Bandon only.

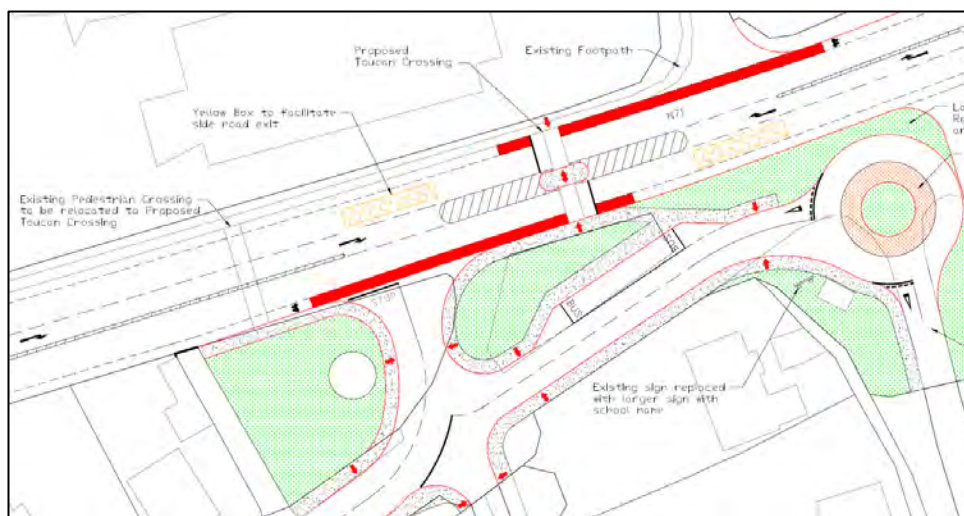


Figure 5.25 Proposed intersection of the R602 and N71 near Bandon Grammar School

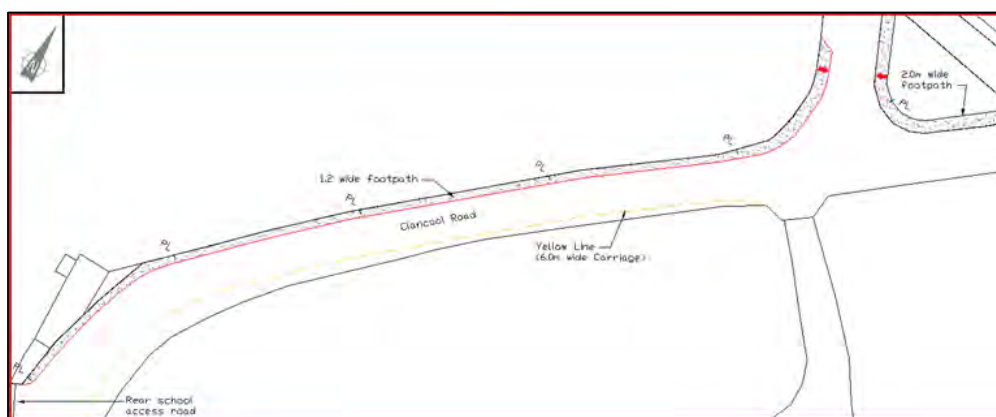


Figure 5.26 Proposed pedestrian infrastructure improvements on Clancool Rd

- Pedestrian facilities are good within the school property. There is a public footpath on the northern (opposite) side of the N71. There are footpaths on the Clancool estate road but none on the last 100m of public road on the approach to the school rear entrance. If improvements are made to these areas, the school can further promote walking as a sustainable mode of travel. The measures listed in the previous section can be utilised to promote walking;
- Cycling is also a viable mode of transport for secondary school students. Improvement to the N71 access will include for a cycle track on both side of the N71 which will allow students to cycle safely to the school. Cycle parking and facilities will need to be introduced in the school to encourage uptake. Students can be encouraged to cycle with incentives such as awards and bike maintenance classes.

### Bandon Bridge National School

5.6.14 Bandon Bridge National School is a mixed primary school located south west of Bandon Town centre, circa 1.5km from Bandon Bridge. It is located on a steep and narrow access road





serving Clancool Terrace and other residential developments. The school caters for 213 students and 20 staff members. Following consultation [REDACTED] and site observations several issues were raised:

- Traffic congestion occurs daily from 8:30 to 8:50 in the morning and from 14:15 to 14:40 in the afternoon. This is due to an inadequate set-down facility, narrow access road and lack of turning areas. Due to the lack of space, adding more set down areas immediately adjacent the school is not a viable option;
- As part of the Bandon TPREP, it is proposed that the current school set-down facilities will be upgraded with improved road markings and pedestrian bollards to promote footpath use;

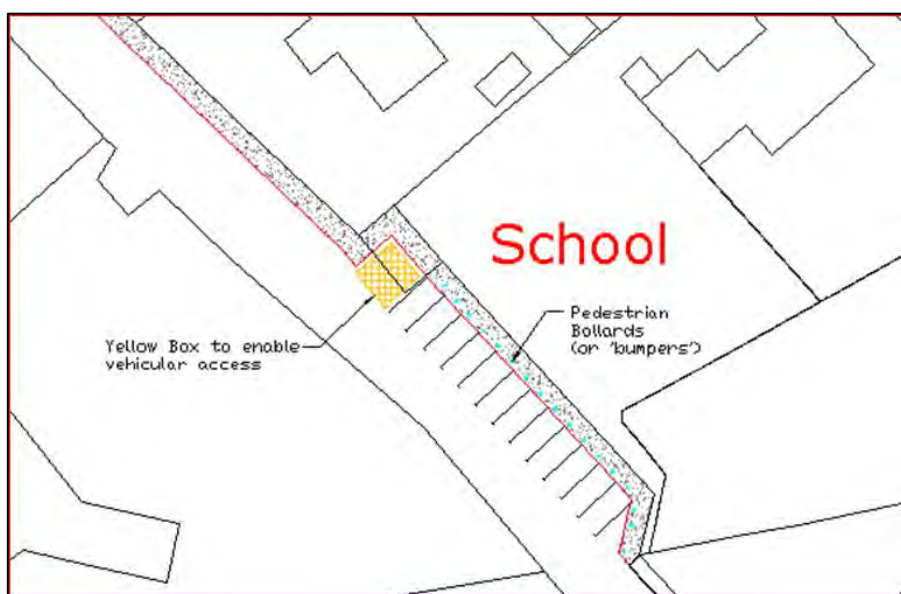


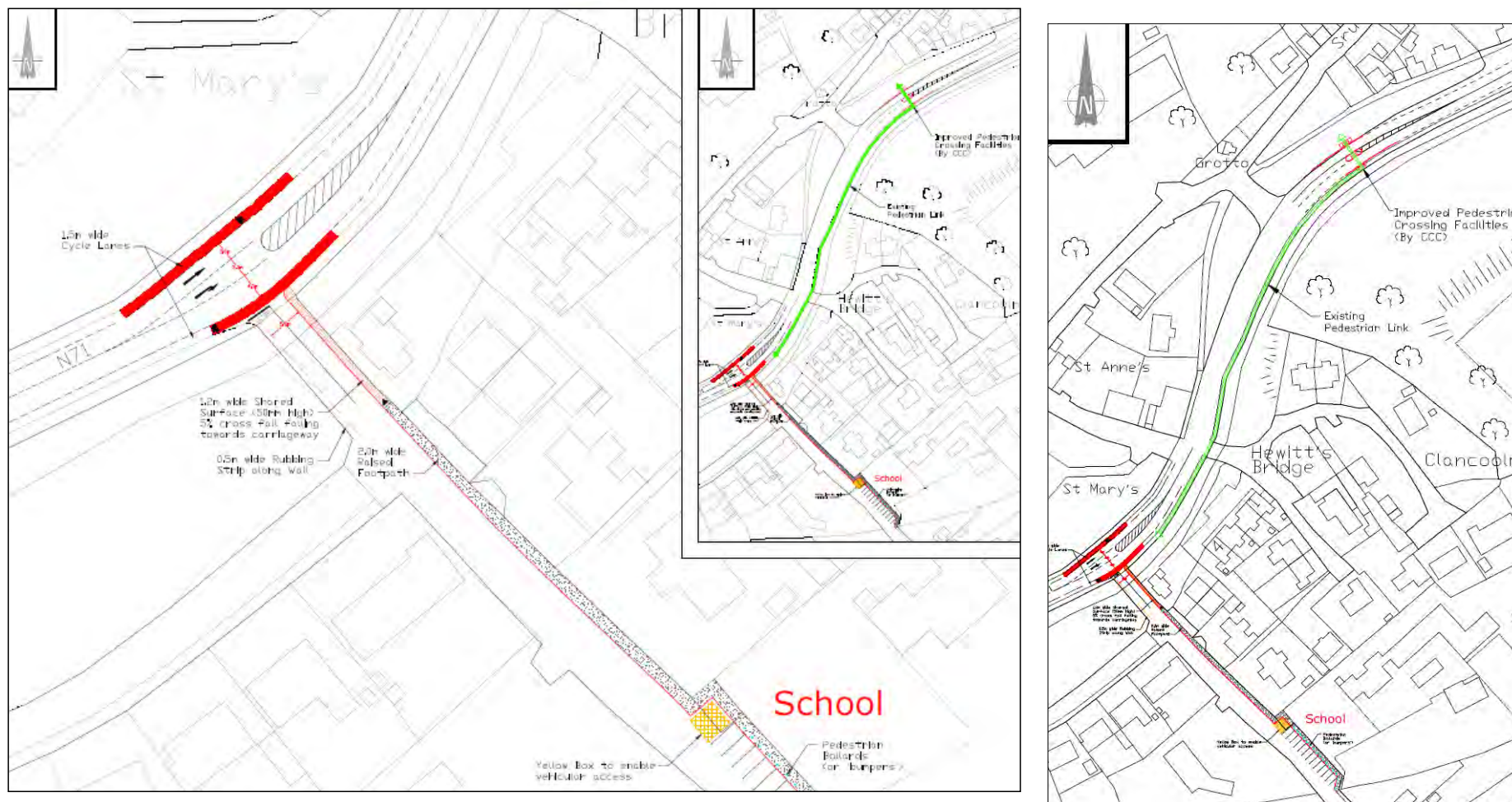
Figure 5.27 Proposed improvements to Bandon Bridge NS set down area

- It is possible to provide set down areas further to the east/west/north/south on the N71 beside the local restaurant “The Poachers Inn”. However the pedestrian facilities approaching the school are very poor from the north;
- There are no footpaths along the access road north of the school. Because of the steep gradient, there is a concrete channel designed for drainage running along the eastern edge of the road, which children tend to use as a footpath when dry. It is difficult for pedestrians to cross the N71 and the lack of connecting footpaths greatly impedes pedestrian access to the school and discourages remote set-down possibilities on the N71. Suitable pedestrian footpath upgrades are needed along the steep access road and an appropriate pedestrian crossing is needed along the N71;
- The pedestrian crossing provided on the N71 at the location of the mini roundabout with the Kilbrittain Road is considered unsafe (due to the high traffic speeds) and is a deterrent to students walking to school. A number of measures can be implemented to improve pedestrian safety at this area. It is proposed to provide an increased number of traffic



calming signs on the approach to the area warning motorists of the crossing school children. Reducing the carriageway width at this junction would help reduce traffic speeds making it easier for pedestrians to cross. In the short term a Lollypop Lady can be introduced to assist crossing;

- As cycling is not an attractive option for young students on the steep roads, walking, or a combination of both, should be encouraged. Improvement to the N71 will include for a cycle track on both sides of the N71 which will allow younger students, accompanied by a parent/minder, to cycle safely to the school and perhaps walk any steep sections;
- Along with the pedestrian upgrades many of the best practice measures set out previously can be utilised to encourage the children to walk. A walking bus for the younger children can be run by a group of adult volunteers who walk a route to a school, stopping off at certain points to collect and drop off children. Initiatives such as Walk on Wednesdays and walking awards can be introduced to encourage all students to walk.



**Figure 5.28 Proposed pedestrian and cyclist improvements on access to Bandon Bridge NS**



### Presentation College (Colaiste na Toirbhirte)

5.6.15 Presentation Convent is an all-girls secondary school located on a rural country road just off the N71 Bypass, 750m south of Bandon Bridge. The school caters for 518 students and 52 staff members. Following consultation [REDACTED] and site observations several issues were raised:

- Staff and visitor parking is catered for within the site. No student parking is available. Traffic congestion occurs at the junction with the N71 bypass. Students park haphazardly along the local access road up to the school. Set-down is catered for within the school site and does not present a problem. The school operates an efficient separate in/out system which works well in terms of car and bus set-down;
- School buses can set-down within the school property in the morning as the bus arrival times are staggered accordingly. Bus pick-up in the afternoon occurs at the same time and therefore buses park along the public road adjacent to the school entrance and also closer to the N71 junction. Congestion arises when cars wishing to access the Presentation Convent are obstructed by parked buses waiting to collect students;
- It is proposed to provide an improved bus set down area along the local road which would leave adequate space for vehicles to pass and a pedestrian footpath. Public lighting could be improved at this location, along with increased signage;

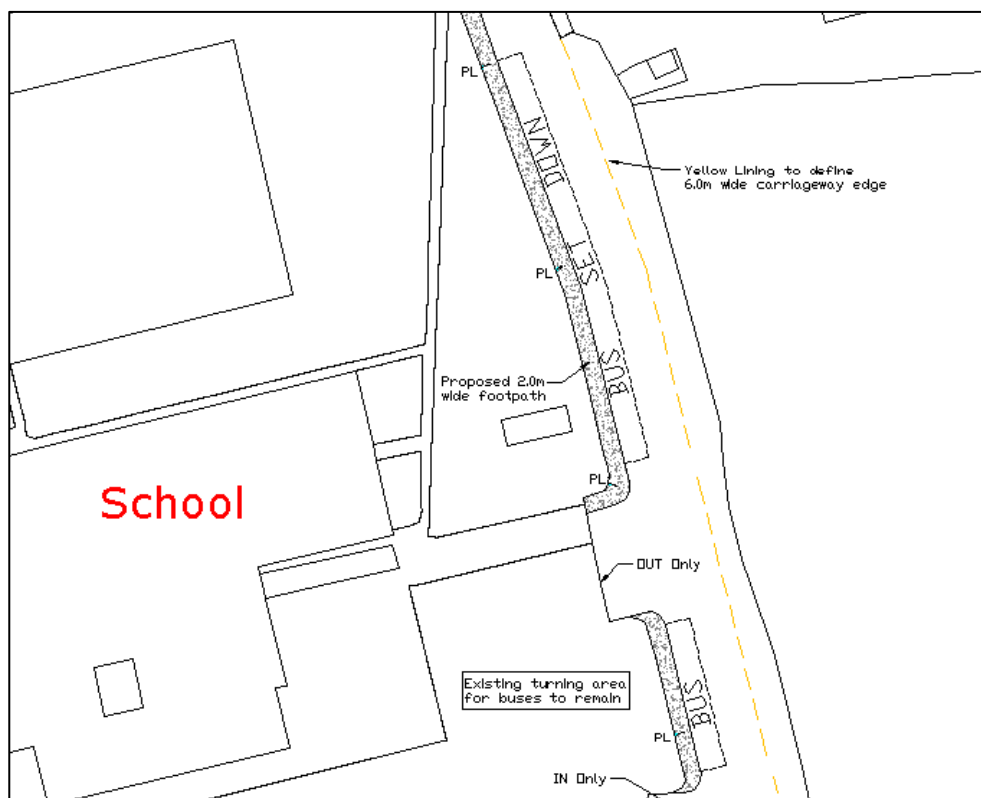


Figure 5.29 Proposed improved bus set-down facilities



- 
- Casement Road
- N71 Bypass Road
- R4.0m
- R8.0m
- 6.5m
- STOP
- R12.0m
- Kerb realignment
- School Ahead warning sign
- Required 90m Sight Line From 3.0m off-set. Ensure all commercial signs are located behind sight line.
- Existing pedestrian crossing redesigned to conform to standards with build-outs added

- These upgrades would help support walking initiatives for the school, which would encourage more students and parents to walk. Transition year projects and student interaction would greatly increase the likelihood of students choosing to travel to school by other means than the private car.



## Summary and Conclusion

- 5.6.16 There is a high concentration of schools within the Bandon area and school transport is a significant trip generator. To further support sustainable transport to schools, a School Travel Plan should be implemented and maintained throughout all schools in Bandon. The School Travel Plan includes a variety of best practice measures to be tailored for the individual schools involved around Bandon. The plan also includes a number of individual engineering measures which will greatly benefit the Bandon schools.

### School Travel Plan – Key Recommendations:

- A School Travel Plan should be drafted for all schools within Bandon Town outlining measures introduced to encourage pupils, parents and staff to travel to school by means other than by private car;
- Proposed measures, specific to each school, have been identified to create a safer environment for walking and cycling and encourage sustainable travel. These include:
  - o St Brogan's College: Inset bus set down areas and a signalised pedestrian crossing;
  - o St Padraig's National School: Roundabout at the intersection of the L2033 to facilitate turning;
  - o Presentation Primary School: School bus set down area in the Shambles;
  - o Bandon Grammar School: Improvements at N71 junction including provision of signalised Toucan crossing, rationalisation of permitted turning movements and school bus set down and turning area.
  - o Bandon Bridge National School: Improved set down area for buses and visitors and improved footpath connections; and
  - o Presentation College: Improved bus set down area, and improvements to the N71 intersection and pedestrian crossing.

### Benefits of the School Travel Plan:

- Improved health and fitness among pupils, parents and staff;
- Improved concentration levels among pupils who walk/cycle/use bus transport;
- Safer access and journeys to school for all;
- Increased road safety awareness;
- Reduced traffic congestion and pollution in the vicinity of the school;
- Improved community awareness among pupils, parents and staff; and
- Increased parent-child interaction among parents and children who cycle/walk to school.



## 5.7 Public Transport Strategy

### Introduction

- 5.7.1 Bandon is currently served by four Bus Éireann (BÉ) Regional Routes, illustrated in Figure 3.7 previously, with six services operating to Cork City in the AM peak period of 07:00 – 10:00. This equates to approximately one bus service every 30 minutes taking approximately one hour to access Parnell Place bus station in Cork. Likewise, in the PM peak from 16:00 – 19:00, there are six services operating from Cork City to Bandon for return commuters.
- 5.7.2 Outside the peak hours, the above BÉ routes provide approximately one service per hour between Bandon and Cork City. For areas to the west of Bandon, the level of bus service available is very much dependant on the destination of travel and time of departure.
- 5.7.3 Based on an initial baseline review of services in the area, and information received through public and stakeholder consultation, it was noted that the level of public transport (PT) service available in Bandon meets current needs.
- 5.7.4 Analysis of Census POWSCAR data indicates high levels of car ownership within Bandon and very low levels (approx. 1.6%) of public transport use for travelling to work. This, combined with the dispersed nature of travel patterns in Bandon, suggests that the introduction of specific public transport interventions (e.g. new routes) may not yield a significant uplift in public transport use.
- 5.7.5 Matrix Associates, in their 'Bandon Action Programme', explored the possibility of operating a local bus route serving the main shopping areas in the town, and key residential locations and schools on the outskirts of Bandon.
- 5.7.6 However, through public and stakeholder consultation, it was noted that a similar local bus route ceased operating in Bandon in 2014 for financial reasons. Based on the scale of Bandon Town, it was determined that it would be extremely challenging to operate a financially viable local bus service.
- 5.7.7 Therefore, strategies relating to public transport in the Bandon TPREP are primarily focused on improving current bus stop facilities and pedestrian accessibility, in particular for vulnerable road users.

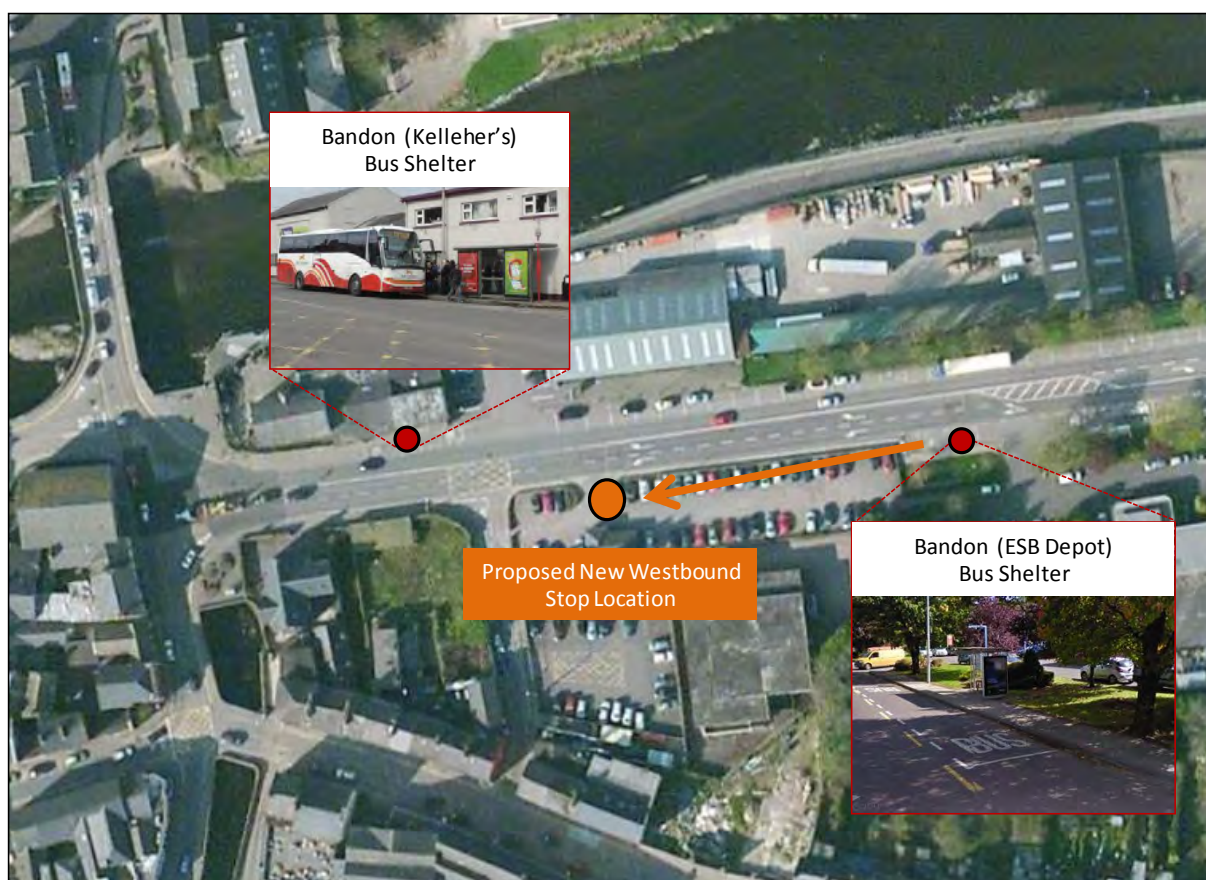
### Bandon TPREP Public Transport Strategy

- 5.7.8 The Bandon TPREP Public Transport Strategy takes consideration of a detailed submission received by BÉ as part of the initial stakeholder consultation and focuses on three key areas, namely:
- The upgrade of existing bus shelters;
  - The provision of additional bus stops; and
  - The improvement of pedestrian accessibility



### Upgrade of existing bus shelters

- 5.7.9 Based on information received through public and stakeholder consultation, it was noted that the existing bus shelters on Glasslynn Road are not of an adequate standard to safely accommodate wheelchair passengers. Therefore, as part of the Public Transport strategy, it is recommended that both of the existing bus stop shelters will be upgraded to accommodate wheelchair passengers inclusive of adequate curbing and pedestrian access.
- 5.7.10 Also, to provide closer access to the town centre, it is proposed that the westbound bus shelter at the ESB Depot will be moved approximately 150 metres west to be located adjacent to the eastbound stop as illustrated in Figure 5.31 below.



**Figure 5.31 Proposed Upgrade of Existing Bus Shelters**

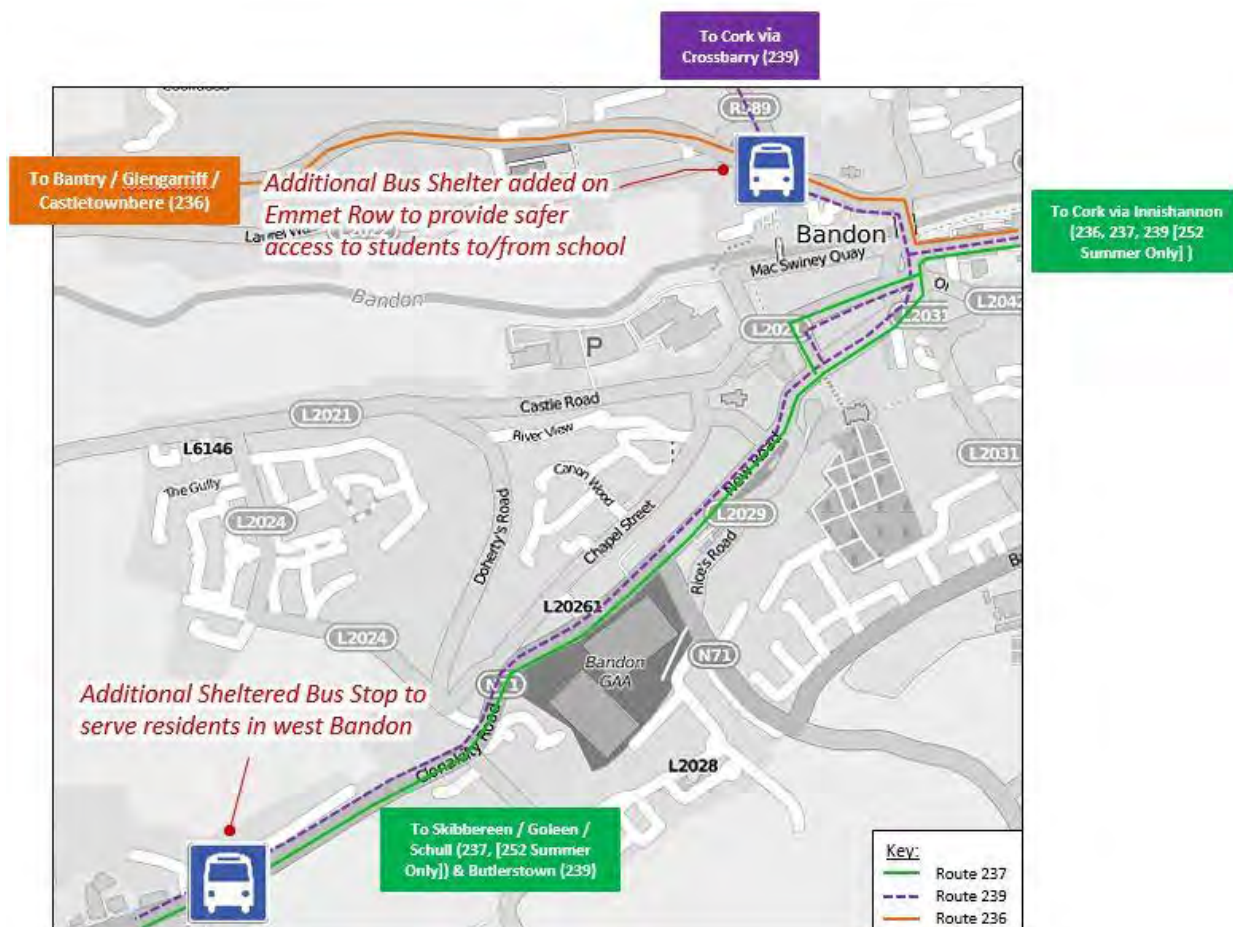
### Provision of additional bus stops

- 5.7.11 Through baseline assessments and feedback from public consultation, it was proposed that additional bus stop shelters should be provided on the western side of Bandon near Oldchapel to serve residents in this area.
- 5.7.12 Consultation with local schools within Bandon indicated that the area known as 'The Shambles', at Kilbrogan Hill, is regularly utilised as a combined set-down and pick-up area for students of schools north of the river. Therefore, it is proposed that adequate bus shelter





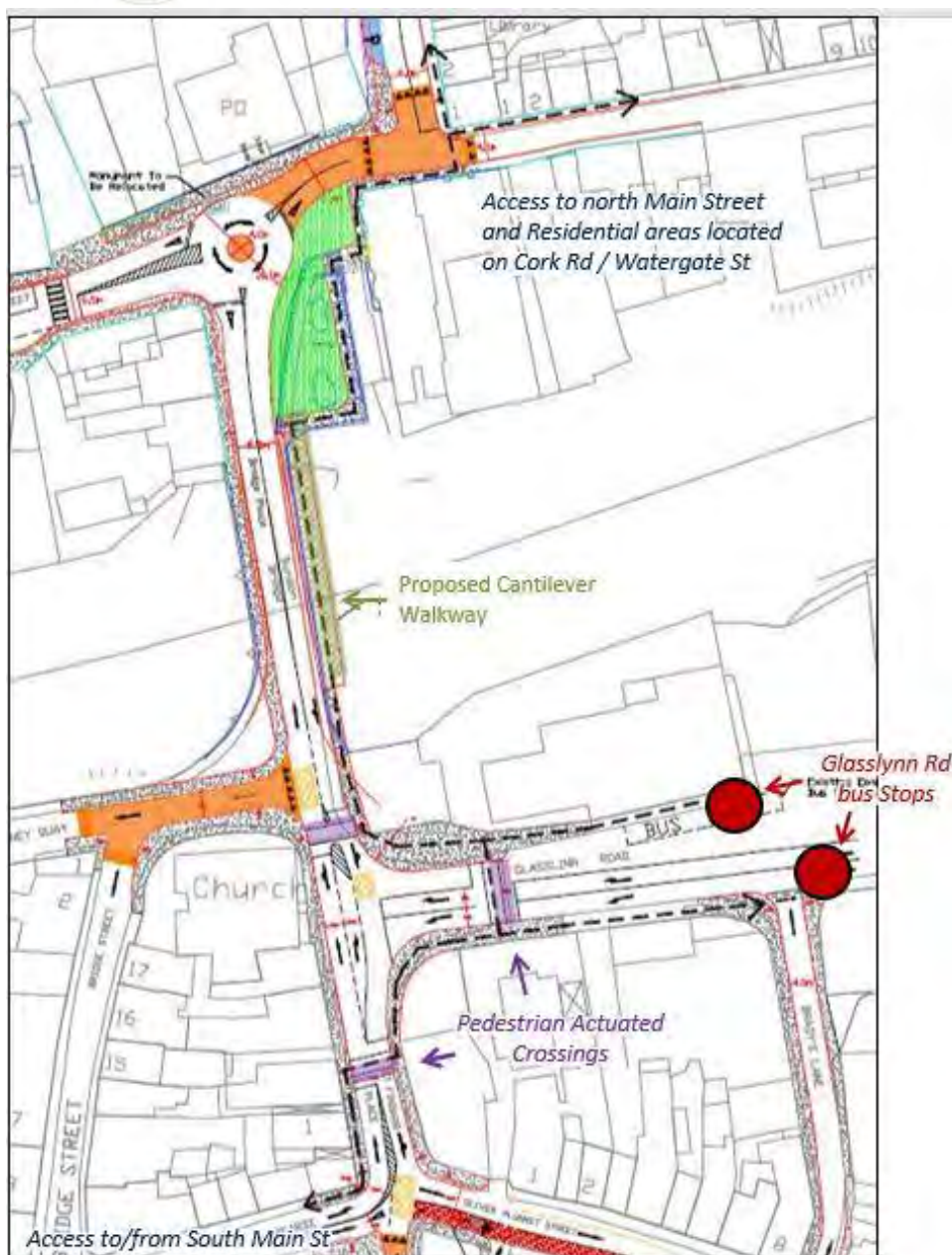
facilities be provided at Emmet Row (illustrated in Figure 5.32 below) to provide safer access to bus services for students.



**Figure 5.32 Proposed New Bus Shelters**

### Improvement of pedestrian accessibility

- 5.7.13 Initial public consultation, and baseline site visits, indicated that pedestrian accessibility to the bus stops located on Glasslynn Road is quite poor. The presence of narrow footpaths, lack of pedestrian crossings and large junction widths and corner radii all contribute to an unattractive pedestrian environment.
- 5.7.14 As noted previously, the Bandon TPREP strategies are an integrated package of measures and, as such, a number of the bus stop accessibility issues have been covered in the Walking and Cycling Strategy discussed in Section 5.5 previously.
- 5.7.15 Figure 5.33 overleaf, outlines some of the pedestrian infrastructure improvements proposed on Glasslynn Road, St. Finbarr's Place and Bandon Bridge which will provide safe access for pedestrians to/from the existing bus shelters. Further details on specific measures introduced are provided in Chapter 6 of this report.



**Figure 5.33 Pedestrian Access to/from Glasslynn Rd Bus Stops**

- 5.7.16 As noted in the previous section, the Bandon TPREP proposes the introduction of dedicated bus stops on Emmet Row to provide safer access for students to schools north of the river. However, to ensure safety of access, these new stops must be complimented by a series of pedestrian infrastructure improvements in the Kilbrogan Hill area.
- 5.7.17 Figure 5.34, overleaf, illustrates proposed improvements to pedestrian facilities linking the new bus stops on Emmet Row to the various schools in the area. Further detailed descriptions of infrastructure improvements in the North Main Street / Kilbrogan Hill corridor are provided in Chapter 6 of this report.
- 5.7.18 Please note that specific travel strategies for access to/from schools have been developed as part of the Bandon TPREP and are discussed in further detail in Section 5.6 above.



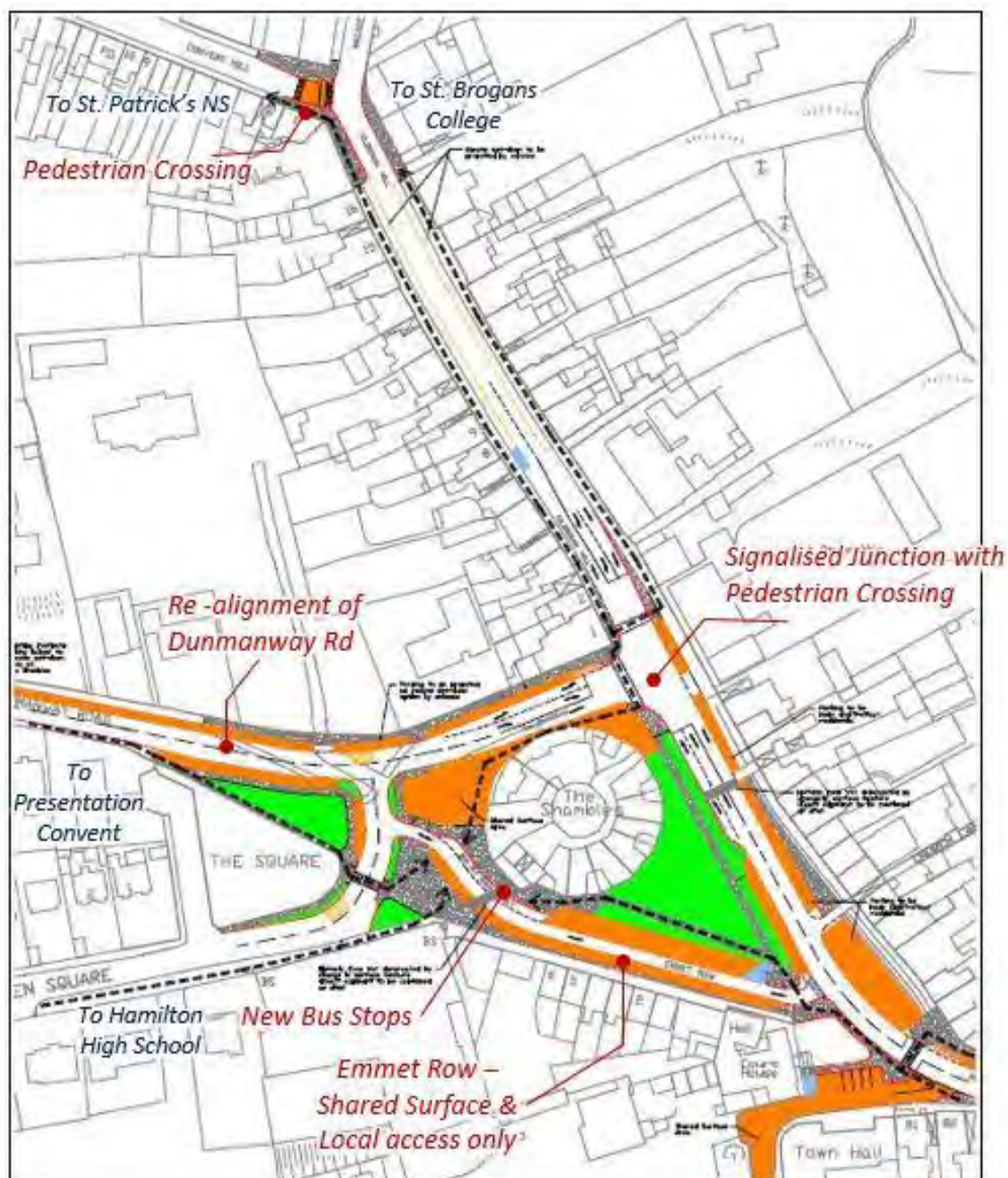


Figure 5.34 Access to/from Proposed New Bus Stops on Kilbrogan Hill

Public Transport Strategy – Key Recommendations:

- Upgrade existing bus shelters to accommodate wheelchair passengers and provide closer access to the town centre;
- Provision of additional bus shelter facilities on Emmet Row and to the west of Bandon at Old Chapel; and
- Improve pedestrian accessibility to/from bus stops through the upgrade of footpaths and junctions within Bandon Town.



Benefits of the Public Transport Strategy:

- Enhanced accessibility to public transport by improving pedestrian and cycle network;
- Improved public transport facilities which can accommodate wheelchair passengers; and
- Enhanced safety for school children by improving access to bus services.





## 5.8 Heavy Goods Vehicle Strategy

### Introduction

- 5.8.1 It was noted through site visits, traffic counts and public consultation, that there are significant volumes of HGVs travelling through Bandon which have a negative impact on walking, cycling and the overall public realm within the town.
- 5.8.2 The N71, which passes through Bandon, is one of the main routes connecting west and southwest Cork to Cork City. This route was diverted around Bandon in a partial bypass to remove through traffic from the town centre. However, a number of issues associated with this southern bypass road were noted through consultation with key hauliers operating in the area, such as, steep gradient, lack of priority, poor sight lines etc. Therefore, a number of hauliers still utilise the town centre route rather than the southern bypass which increases the level of HGV volumes in Bandon town.
- 5.8.3 The overarching aim of the Bandon TPREP HGV Management Strategy is to reduce the impact of HGV traffic within the town centre in order to create a safer, more attractive environment for pedestrians and shoppers, while still maintaining an appropriate level of HGV access to support the economic vitality of the town.
- 5.8.4 The strategy has been developed for both short term and long term scenarios. The recommendations of the short term strategy should be implemented as soon as feasible, while the medium - long term strategy is dependent on the delivery of new infrastructure, most notably the Northern Relief Road.

### Short Term HGV Management Strategy

- 5.8.5 HGV traffic must be accommodated on the National Road Network, and local HGV access is necessary to allow Bandon town to function successfully as a commercial centre.
- 5.8.6 HGVs travelling west-east towards Cork City (or vice versa) through Bandon Town have an alternative route via the existing Southern Relief Road. While this route has its issues (poor gradient, lack of priority etc.), it was still recorded as being relatively well utilised by HGV traffic in the AM and PM peaks based on results from traffic counts carried out in the area.
- 5.8.7 Therefore, in order to remove HGV through traffic from Bandon town centre in the short term, it is proposed that HGV restrictions be introduced on South Main Street and St. Patrick's Quay for all vehicles over 7.5 tonnes gross vehicle weight between the hours of 10:00 to 19:00 Monday to Sunday. The timing restriction utilised is to allow for deliveries into the town centre in the morning allowing businesses to operate effectively. These measures can be implemented following completion of the public realm improvements, to help reinforce the creation of a pedestrian friendly and relaxing town centre.
- 5.8.8 Improved signage should be introduced at gateways to Bandon town to provide clear guidance to HGV drivers as to the restrictions in place, and to promote the use of alternative routing for through traffic via Baxter's Bridge, the R589 and the current Southern Relief Road.
- 5.8.9 Traffic travelling north – south (or vice versa) through Bandon have no option but to utilise Bandon Bridge due the lack of suitable alternative routes and river crossing points. This is a



heavily utilised HGV route, particularly when the Mart is in operation with a significant volume of large agricultural vehicles carrying livestock to/from the meat factory and farmlands to the north of Bandon. Therefore in the short term, without the delivery of any additional road infrastructure, HGV access to Bandon Bridge must be retained.

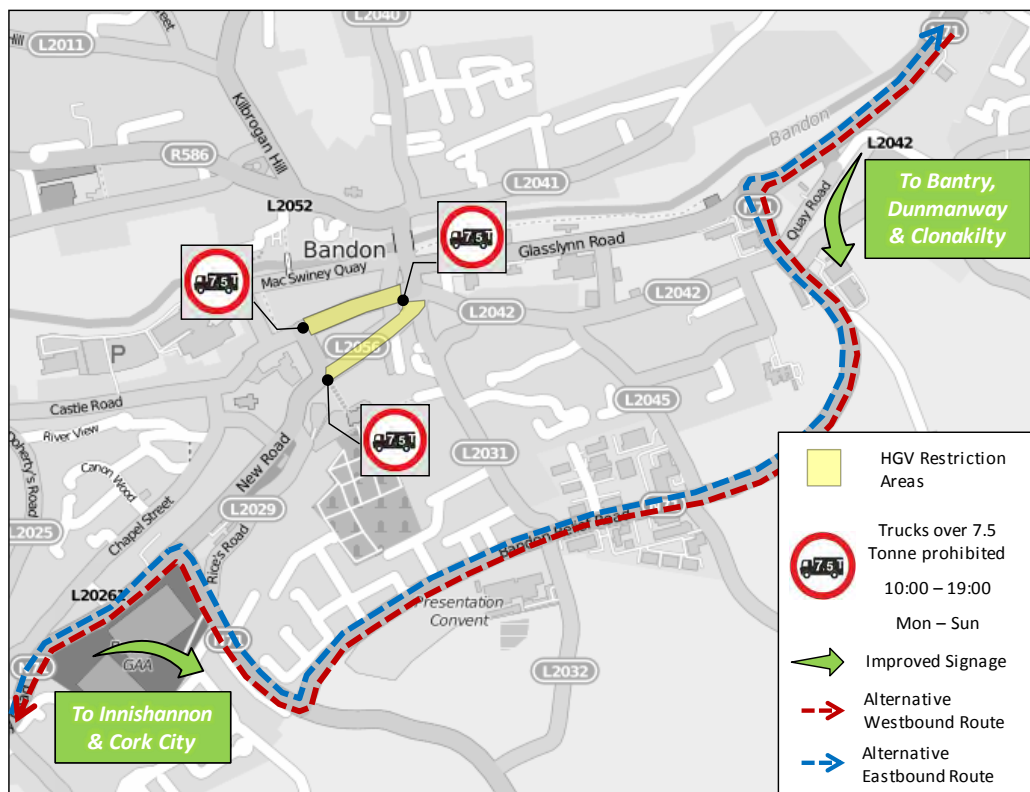


Figure 5.35 Short Term HGV Strategy

## Medium / Long Term HGV Management Strategy

### Full Town Centre HGV Restriction

5.8.10 As noted in the Medium/Long Term Road and Street Hierarchy (Section 5.2) previously, the Bandon TPREP recommends the construction of a second river crossing and new North Relief Road to the east of the town in the medium/long term. The provision of this second river crossing creates a viable alternative route for north – south (or vice-versa) HGV traffic, thus, facilitating the introduction of HGV restrictions on Bandon Bridge in-line with those suggested for the short term on South Main Street and St. Patrick's Quay.

5.8.11 As part of the Medium/Long Term Bandon TPREP Strategy, HGV restrictions are proposed on the following streets illustrated in Figure 5.36, overleaf:

- Bandon Bridge & St. Finbarr's Place;
- South Main Street; and
- St. Patrick's Quay

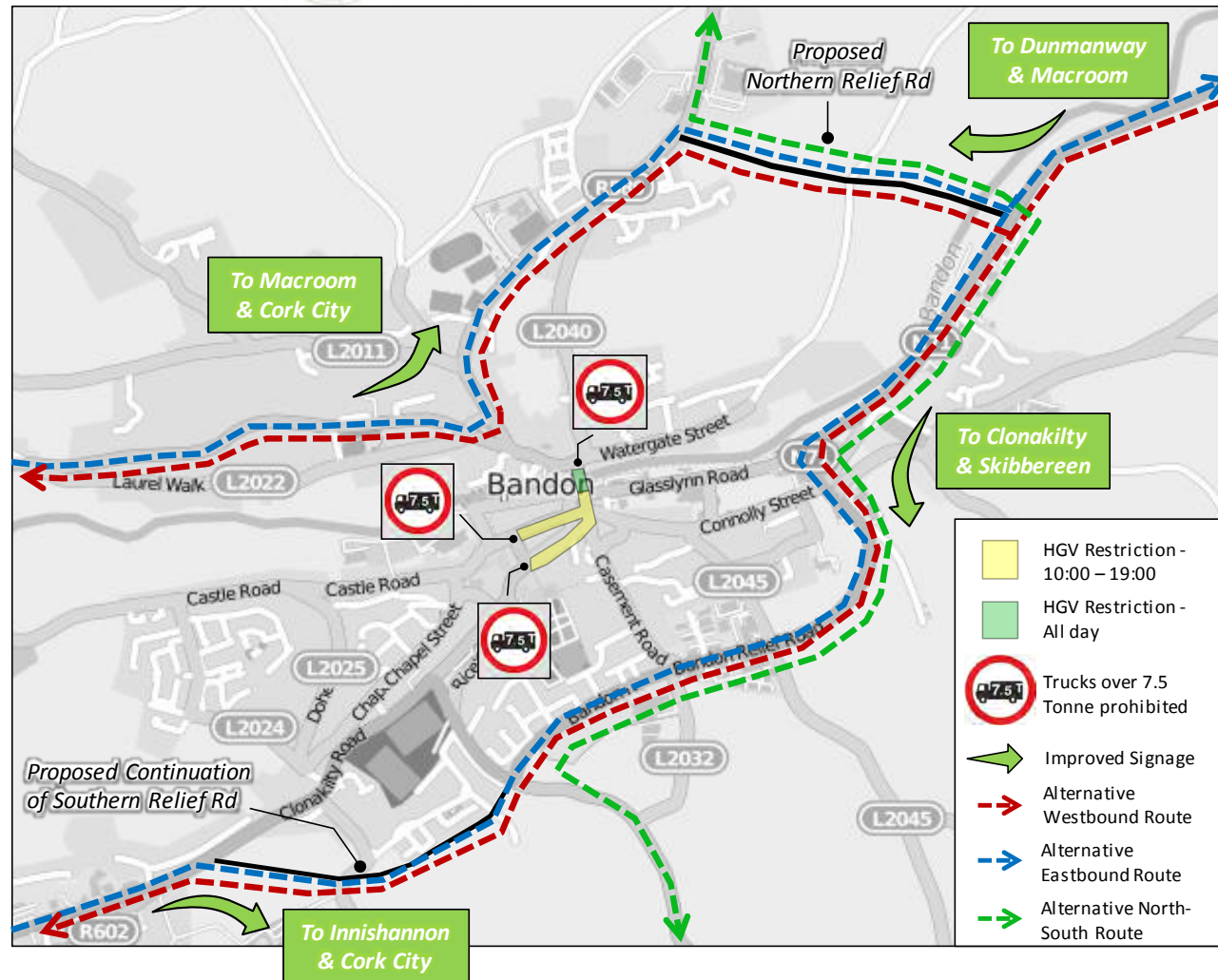


Figure 5.36 Medium / Long Term HGV Restrictions



- 5.8.12 Similar to the short term strategy, it is proposed that the restrictions in commercial areas such as South Main Street and St. Patrick's Quay would apply to trucks in excess of 7.5 tonnes gross vehicle weight and apply from 10:00 to 19:00 on Monday to Sunday. As mentioned previously, the timing restriction utilised is to allow for deliveries into the town centre during the morning period.
- 5.8.13 It is recommended that the restrictions on Bandon Bridge apply all day, as there is no longer a requirement for HGVs to utilise the bridge due to the introduction of the Northern Relief Road and the availability of alternative routes.
- 5.8.14 Implementing restrictions on these key streets will significantly reduce HGV traffic in the town centre thus creating a safer and more attractive environment for pedestrians and cyclists. Appropriate signage would be required at gateways to Bandon town to provide clear guidance to HGV drivers as to the restrictions in place.

***Promote Alternative Routing***

- 5.8.15 The Medium/Long Term recommendations of this plan include major infrastructure developments such as the North Relief Road. Following completion of this study, more detailed environmental and engineering assessments of the proposed roads will be required as part of the statutory planning process. Funding (Public and Private) for the road schemes will also need to be secured. As the feasibility and timeline for delivery of the North Relief Road is uncertain at this stage, the Bandon TPREP strategy proposes a series of smaller scale infrastructure upgrades to alternative routes in the area which will enable the provision of viable alternative routes for HGV's, thus removing a proportion of through traffic from the town centre.
- 5.8.16 Figure 5.37 below, illustrates the two main alternative routes available to traffic travelling through Bandon Town, namely:
- **Crossbarry Route** (highlighted in blue in Figure 5.37): Route via the village of Crossbarry along the R589 continuing east along the R586 Dunmanway Road; and
  - **N71 Route** (highlighted in red in Figure 5.37): Route via the N71 utilising the existing Southern Relief Road.
- 5.8.17 The Crossbarry Route follows a reasonably wide road for most of its length with the exception of three main pinch points located at Brinny Bridge, Crossbarry Village and Curra Road. These areas are illustrated in Figure 5.37 and represent bridging locations over local rivers/streams which would not be able to facilitate two-directional HGV flows.
- 5.8.18 Through baseline traffic reviews and site visits, it was noted that HGVs currently utilise the Crossbarry route which indicates that it has the capacity to facilitate HGV traffic. It was also noted that this route is often utilised as a temporary diversion when road works are being carried out on the N71.





Cork  
County Council  
Comhairle Contae Chorcaí

**BARRY**  
& PARTNERS  
consulting engineers

**SYSTRA**

Upgrade Crossbarry  
Bridge



Upgrade Curra Rd at  
Barrett's Bar



Upgrade Brinny Bridge



Alternative Crossing  
Point at Baxter's Bridge

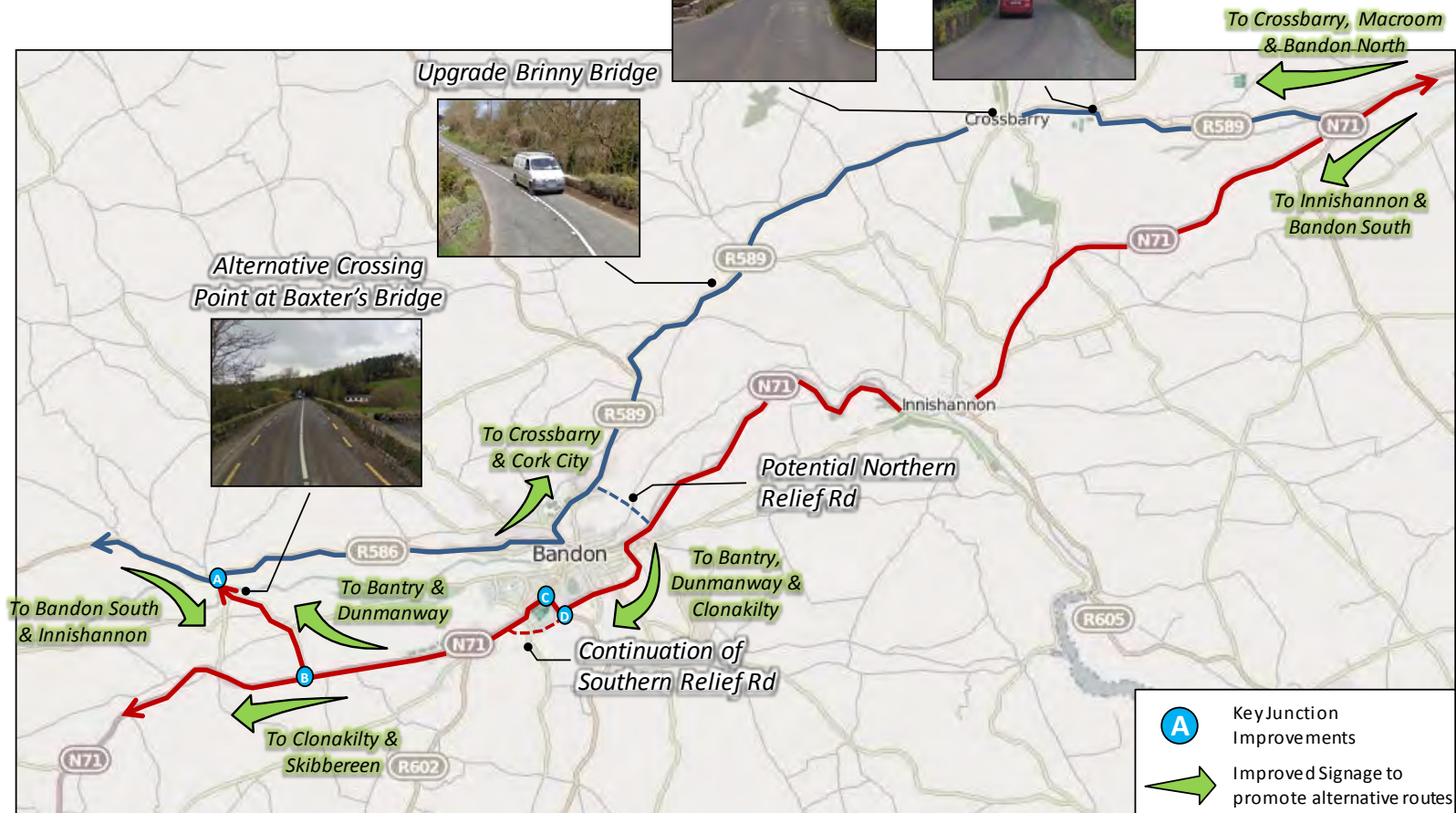


Figure 5.37 Alternative Routing Options



5.8.19 To improve the condition of the Crossbarry Route, the Bandon TPREP suggests localised improvements at the three pinch points noted previously. This could include a number of potential solutions based on timescale and budget, such as:

- Carry out works to increase carriageway widths at these locations;
- Introduce a traffic signal shuttle system which would allow one-directional flow at narrow locations; or
- Improve signage indicating narrow road carriageways and instructing vehicles to yield to oncoming traffic.

5.8.20 The N71 connects Bandon with Cork City and areas in West Cork such as Clonakilty and Skibbereen. Through public and stakeholder consultation a number of issues were noted with the current Bandon Southern Relief Road including steep gradient, poor sightlines etc. and this was identified as a key reason why hauliers currently prefer to travel via the town centre route. In order to promote the use of the Southern Relief Road, the Bandon TPREP outlines improvements to the two junctions on its western end i.e. junctions C and D in Figure 5.37. The specified junction improvements are illustrated previously in Section 5.4 and are essentially focused on improving sightlines and providing greater priority for traffic travelling along the Southern Relief Road.

5.8.21 The two routes outlined above are linked via the Civic Amenity Road (L2019) to the west of Bandon with Baxter's Bridge providing an alternative crossing point over the River Bandon. The Civic Amenity Road has relatively wide carriageway widths which can easily support HGV traffic. As part of the Bandon TPREP strategy, it is proposed that improvements will be made to the junctions connecting with the current N71 and Dunmanway Road (Junctions A and B in Figure 5.37) to improve sight lines and safety for the increased volumes of traffic, in particular HGVs, which may be using this route. The specific junction improvements proposed are illustrated in Section 5.4 previously.

5.8.22 To further promote the use of the alternative route options, it is proposed that improved signage be introduced at key locations, illustrated in Figure 5.37, which should assist in diverting through traffic away from Bandon town centre.

#### HGV Strategy – Key Recommendations:

##### Short Term

- HGV restrictions introduced on St. Patrick's Quay and South Main Street;
- Improved signage to promote alternative HGV routes via Baxter's Bridge and the Southern Relief Road;
- Junction improvements at the intersection of the N71 bypass/Kilbrittain Road and Kilbrittain Road/N71 Clonakilty Road.

##### Medium/Long Term

- All day HGV restriction introduced on Bandon Bridge;
- Promotion of alternative HGV routing through improved signage and upgrade of the route via Crossbarry.



**Benefits of the HGV Strategy:**

- Provide a safer environment for pedestrian and cyclists within the town centre by removing HGV traffic;
- Reduce the volume of traffic in the town centre by promoting alternative routes, thus impacting positively on congestion and delay;
- Facilitate the improvement of public realm within Bandon, and create a more attractive town centre environment, through the removal of HGV traffic.



## 5.9 Parking Strategy

### Existing Observations

- 5.9.1 Currently, on-street pay parking is available throughout Bandon town centre with the first 30 minutes free and a maximum stay of three hours. Figure 5.38 below illustrates the locations and details of the largest off-street parking sites available within the town (*note: parking spaces are approximate values based on site visits*)

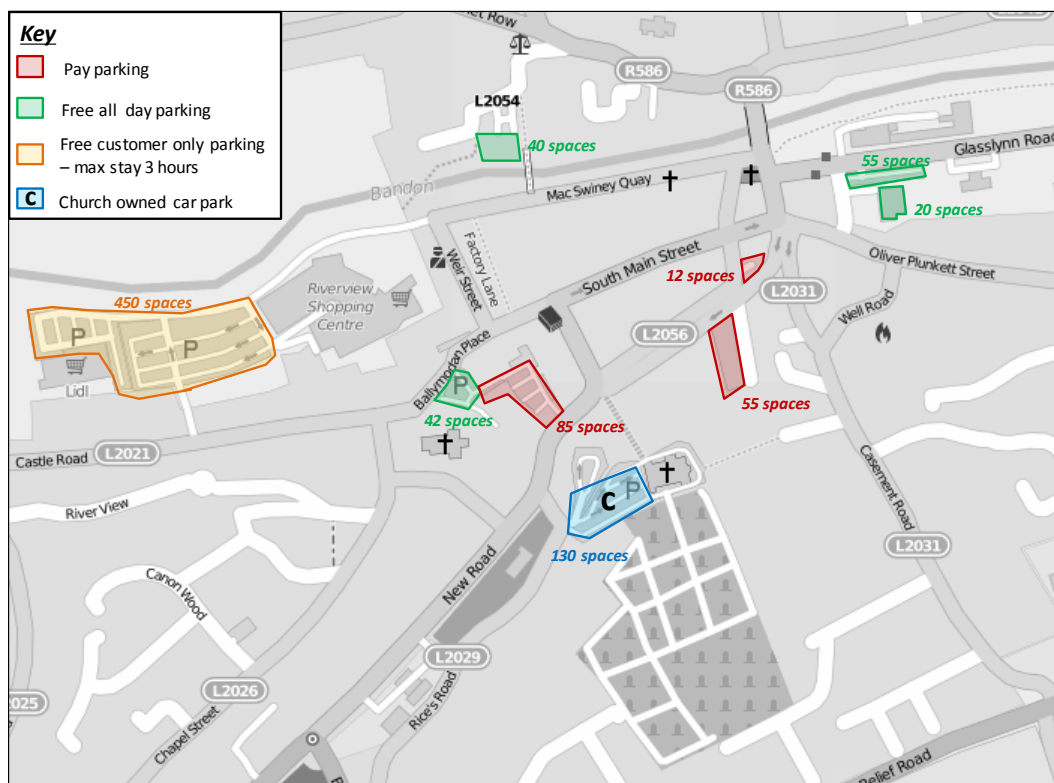


Figure 5.38 Parking Spaces in Bandon

- 5.9.2 Cork Co. Co. provide four free all day car parks at various locations around Bandon town centre (highlighted in green in Figure 5.38 above). It was noted, through discussions with the local traffic warden, that employees within Bandon utilise these sites for parking, and that they are regularly full before 09:00. The local traffic warden also stated that, based on his experience, on-street parking was generally being utilised within regulations i.e. people are not staying more than the specified three hours allowed.
- 5.9.3 Riverview shopping centre and Lidl provide a large car park (circa 450 spaces) for customers with a maximum stay of three hours. Parking fines are in operation for anyone who exceeds this limit. The other major off-street car park, illustrated in blue in Figure 5.38 above, is that located at St. Patrick's Church. This car park is free and is owned by the church to be used during mass, funerals etc. However, it was noted during site visits, that this car park is regularly used by people accessing Bandon town centre.





## Bandon TPREP Parking Strategy

- 5.9.4 The parking strategy for Bandon needs to work in conjunction with, and support, the other recommended transport measures that form the integrated transport plan for the town, and meet with the overarching objectives of the Bandon TPREP, such as:
- Improve **Public Realm** within the town;
  - Support the **economic growth** of Bandon town centre;
  - Improve **accessibility** in Bandon etc.
- 5.9.5 Parking spaces are a valuable resource that needs careful management so as to protect the economic viability of the commercial core of the town. Active parking management is essential as each parking event in the town centre contributes to the local economy. Achieving higher turnover rates and relocation of long stay parking to appropriate locations are key objectives to help maximise the value of Bandon's parking stock.
- 5.9.6 Therefore, based on a review of existing parking conditions, the study brief and the defined objectives for Bandon, a parking strategy was developed to meet the following criteria:
- **Provide Adequate Supply:** The parking strategy should ensure that a sufficient supply of short-stay and long-stay parking is provided to meet demand;
  - **Improvements for All Town Centre Users:** The parking strategy should benefit all town centre users, and support the town centre improvements recommended by the Bandon LAP, and outlined in Chapter 5 and 6 of this report;
  - **Support Efficient Management:** The parking strategy should support the efficient management of the parking stock. Both public parking spaces and publicly available private parking spaces should be considered as part of the overall town parking provision; and
  - **Support Sustainable Growth:** The parking strategy should support and enhance the sustainable growth of Bandon in line with the Bandon LAP. Parking within the town centre should complement, but be secondary to the high-priority pedestrian place and movements functions of the town centre streets. The parking strategy should assist in improving the attractiveness of Bandon as a shopping and tourist destination.
- 5.9.7 In order to support the various transport strategies outlined previously in this chapter and the proposed public realm improvements discussed in Chapter 6, a small number of on-street parking spaces will need to be removed at various locations throughout the town centre.
- 5.9.8 In keeping with the criteria outlined above, the parking strategy seeks to maintain a balanced approach whereby parking spaces are allowed to be removed where necessary to support the overarching objectives of the study, and then re-located to other areas to ensure that there is no loss in overall supply.
- 5.9.9 Figure 5.39 below, illustrates the proposed number of parking spaces to be removed from Bandon town centre due to public realm enhancements, junction improvements, pedestrian infrastructure improvements etc. Figure 5.40 provides an overview of the proposed parking strategy for Bandon including the re-location of removed spaces.

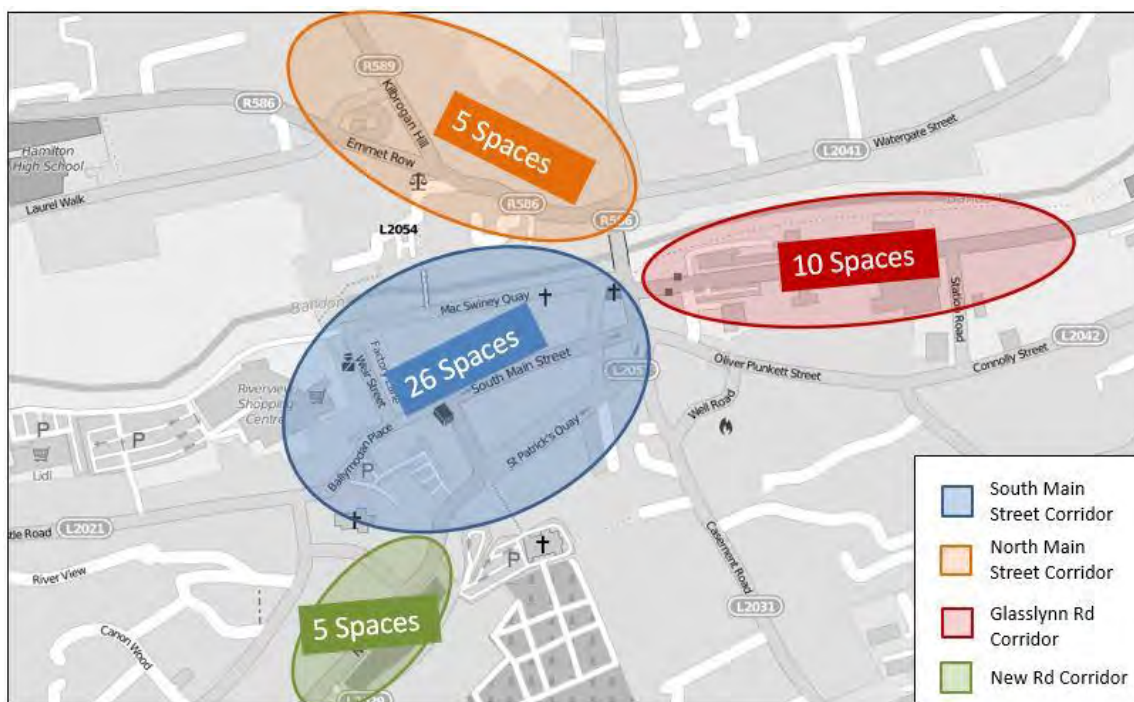


Figure 5.39 Parking Spaces Removed

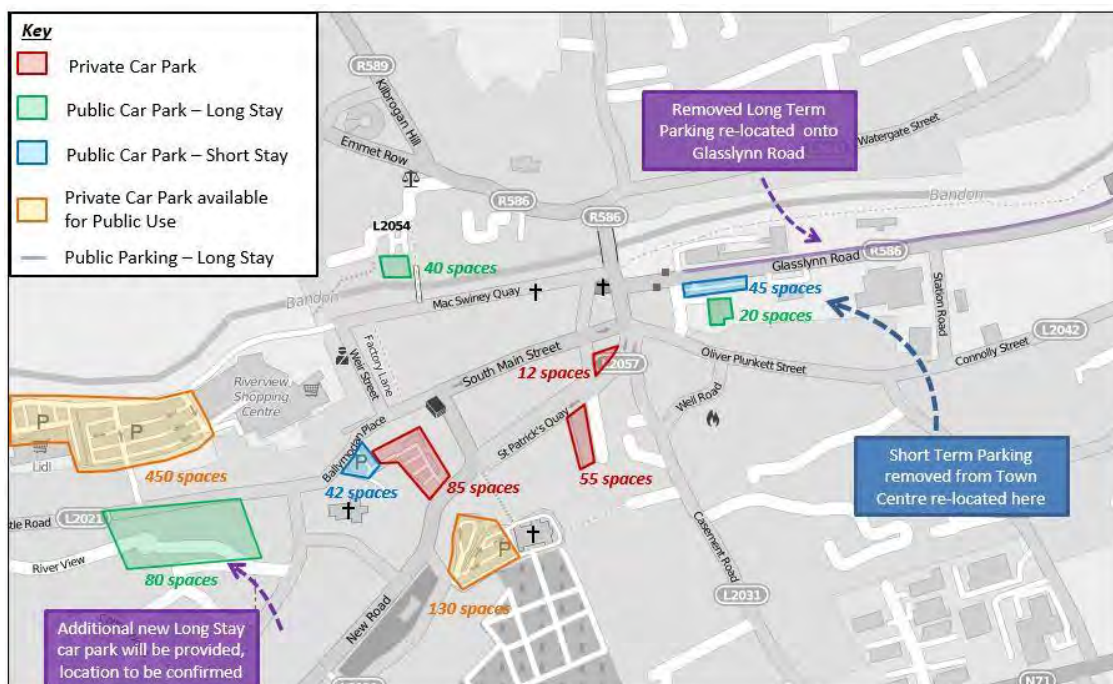


Figure 5.40 Bandon TPREP Parking Strategy

5.9.10 It is widely acknowledged that shoppers and short-stay parkers are less sensitive to price (Within reason) than the availability of parking spaces close to their destination. This is particularly the case in terms of convenience shopping, where the duration of the trip is short.



Conversely, staff and long-stay parkers are very sensitive to price and relatively less sensitive to walking distances between their car and their destination.

- 5.9.11 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.
- 5.9.12 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. However, the strategy strongly discourages the provision of “back yard” car parks at sites within the town centre (within the 30kph zone) as vehicular access to this type of parking degrades the public environment by introducing on street conflicts between pedestrians and vehicles, as well as effective loss of kerbed road frontage.
- 5.9.13 Therefore, as part of the Bandon TPREP, it is proposed that the current long stay public car park on Glasslynn Road be re-designated as short term parking. This provides a viable alternative parking location, which is in close proximity to the town centre, for short-stay users. This accommodates the removal of a small number of short-stay parking spaces within the town centre to facilitate public realm enhancements, junction improvements etc.
- 5.9.14 As part of the strategy, it is proposed that the on-street parking available on Glasslynn Road will be re-designated as long-stay public parking. This is to accommodate for the re-designation of the car park on Glasslynn Road from long-stay to short-stay.
- 5.9.15 As part of the strategy, it is also recommended to provide a new long-stay public car park accommodating 80+ spaces within acceptable walking distance (400metres) of the town centre.

#### Parking Strategy – Key Recommendations:

- Removal of a small number of parking spaces within the town centre to facilitate the junction upgrade and public realm opportunities proposed as part of the TPREP;
- Re-designation of the current long stay public car park on Glasslynn Rd as short term parking;
- On-street parking available on Glasslynn Road will be re-designated as long-stay public parking;
- An additional public long-stay car park will be provided within acceptable walking distance of the town centre, and
- Balanced approach undertaken ensuring no loss in overall parking supply.

#### Benefits of the Parking Strategy:

- Facilitates town centre public realm and junction enhancements;
- Balanced approach between availability of long-stay and short-stay parking; and
- No loss in overall parking supply.



## 6. TOWN CENTRE PUBLIC REALM DESIGN

### Vision Statement:

***“To strengthen Bandon’s position as a premier market town through the creation of a unique sense of place, which supports ease of movement for all, embraces its rich built and natural heritage, and enhances its role as the Gateway to West Cork.”***

### 6.1 Introduction

6.1.1 An important part of the vision statement guiding the core themes of the Bandon Transport and Public Realm Strategy is to “embrace its built and natural heritage”. The study recognises the enormous tourism potential in the town due to its attractive townscape, numerous landmark buildings and vast archaeological artefacts including upstanding remains of the 17th century town wall (Figure 6.1, overleaf, provides an overview of the old town wall and existing historical sites within Bandon). Heritage is a key economic driver and part of this strategy is aiming to harness Bandon’s unique and diverse heritage assets into a tangible set of tourism attractions which can expand the economic base of the town and can also provide a forum for the dissemination of information.

6.1.2 The proposed movement options have been devised to give easier access to all the amenity, work and shopping areas of Bandon, also having regard to archaeological designations and various Architectural Conservation Area designations which are attributed to the historic environment within the plan-area. The proposed strategy has identified opportunities to provide improved access to existing heritage sites, reclaim areas of space for community and event functions and frame landmark buildings by the realignment of the street. As a result of the heritage-led approach, the strategy aims to provide an enhanced sense of place and understanding of the town’s history in the detailed design of key public realm enhancement measures. The main tourism opportunities are outlined below:

- **A town wall heritage trail:** Bandon is a 17th century historic walled town – unique in Ireland. There are opportunities to view upstanding sections at the Shambles and create a town wall trail; the historic gateways to the walled town will be defined and incorporated into the design of the public realm enhancement measures at the Shambles;
- **A series of new public spaces:** Ballymodan Place, Fishmarket Square and a town reception square at “book-ends” of the retail core will create flexible spaces for a variety of activities including community events, seasonal /farmers markets/ concerts etc. aimed to draw additional footfall and retail spend into the town;





- **An enhanced Main Street:** The aim of the strategy on South Main Street is to create a pedestrian-friendly (priority) retail core by reducing the dominance of traffic and parking, widening pavements and de-cluttering the Main Street which will allow greater opportunities for people to sit out and enjoy the town's vibrant atmosphere and attractive townscape;
- **Create Desire Lines:** Using the design and treatment of the street to create desire lines to key historic buildings and places of interest within the town;

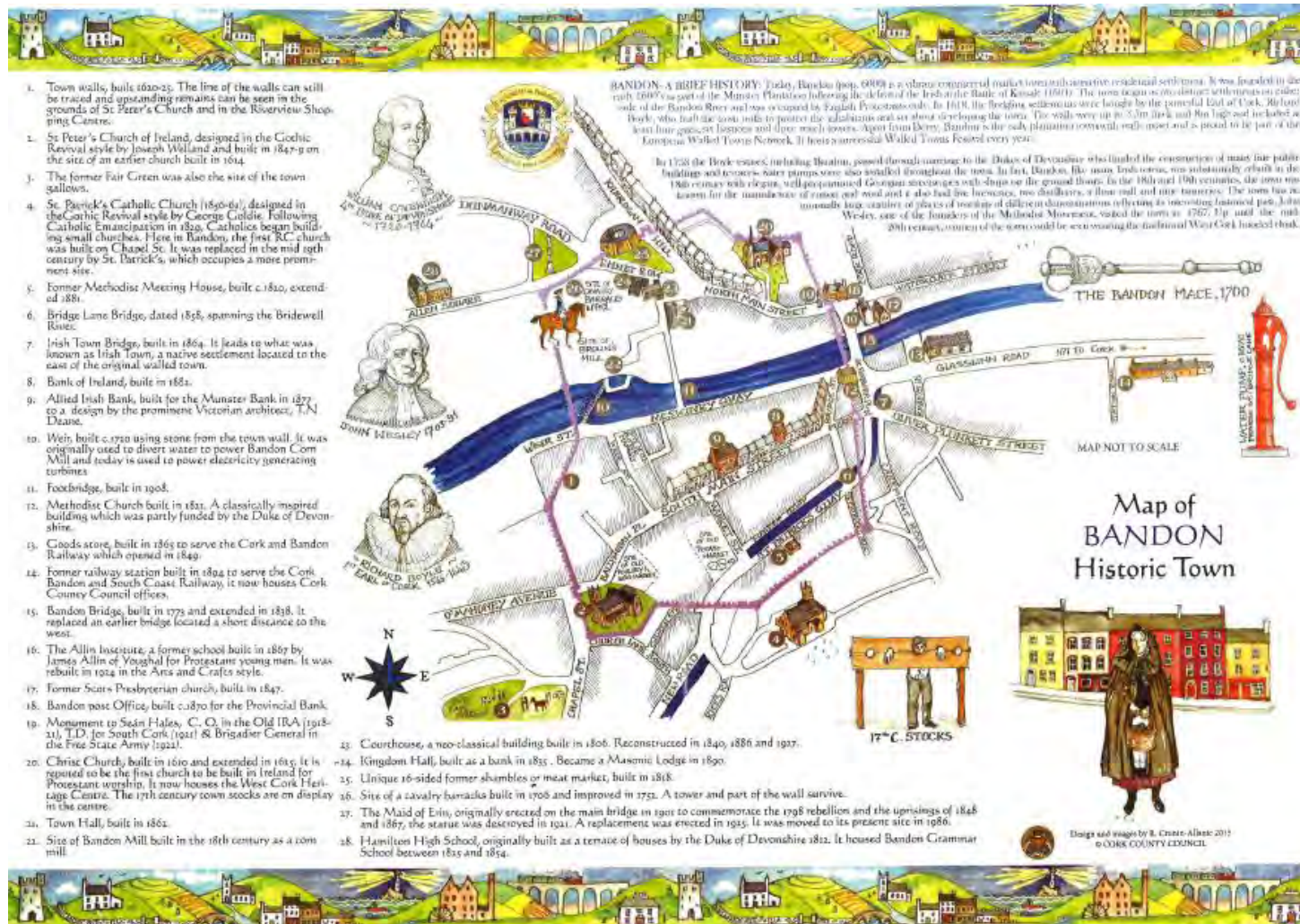


Figure 6.1 Bandon Historic Town Map



- **Realignment of the Glasslynn Road:** This will provide additional parking close to the town centre, create an attractive new boulevard at the entrance of the town and frame the Methodist Church creating an enhanced arrival experience to the town;
- **Reconfiguration at the Shambles, the Courthouse and the Town Hall:** This will create a focus for the community, reduce the negative impacts of high traffic speeds and HGV volumes on Kilbrogan Hill, and create a safer pedestrian environment for school-goers and residents alike.

## 6.2 Intention

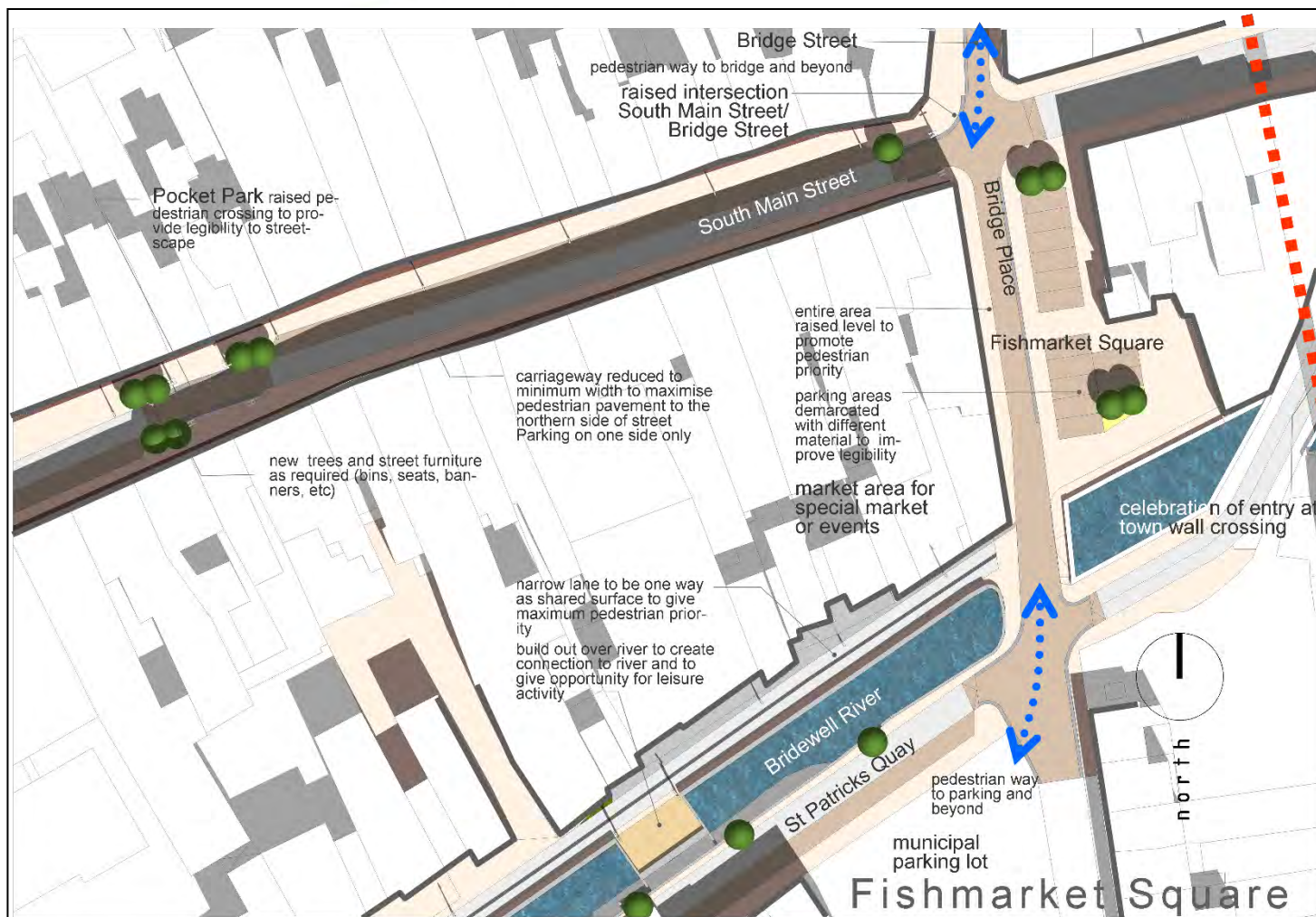
- 6.2.1 A streetscape upgrade for Bandon is a large and complex undertaking and will be implemented over a period of time in phases, to be viable. In principle the overriding aim of the public realm proposals is to create a safe and convenient environment particularly for pedestrians that will enhance connectivity and provide for an improved shopping and leisure activity experience through the provision of an aesthetically pleasing setting.
- 6.2.2 In that respect the intention within the walled town portion of Bandon, where most of the public realm improvements are envisaged, is to provide for raised pedestrian crossing areas and where there is slower traffic or shopping and other leisure activity precincts, level access between pavement and road surface. This generally provides for a pedestrian priority over the motor vehicle in the appropriate areas sometimes enhanced by a change of material.
- 6.2.3 It is intended that most of the work will, and can, only commence on the back of the Main drainage Scheme and the Flood Prevention Scheme. Specifically, two main Public Realm Corridors (i.e. North and South of the river), are identified for upgrade and the following sections of this report provide an overview of the key improvements planned in each area.

## 6.3 South of the River

### South Main Street - Stretching from Ballymoden Place to Fishmarket Square

- 6.3.1 South Main Street is the Main shopping precinct serving Bandon. The street can be divided in two parts separated by the intersection with Market Street and the intersection at Weir Street. The intention would be for the street to remain one way from Market Street going east and in that portion to maintain a constant street width and to level the street with the pavement. The provision of pocket squares on the street would give legibility to the street and break the constant single line of parked cars. The pocket squares also give an opportunity for tree planting, seating etc. Between pocket squares it is envisaged that a blacktop traffic surface would be adequate provided it contained a coloured chip.





**Figure 6.2 South Main Street/Fishmarket Square proposed Public Realm Upgrades**



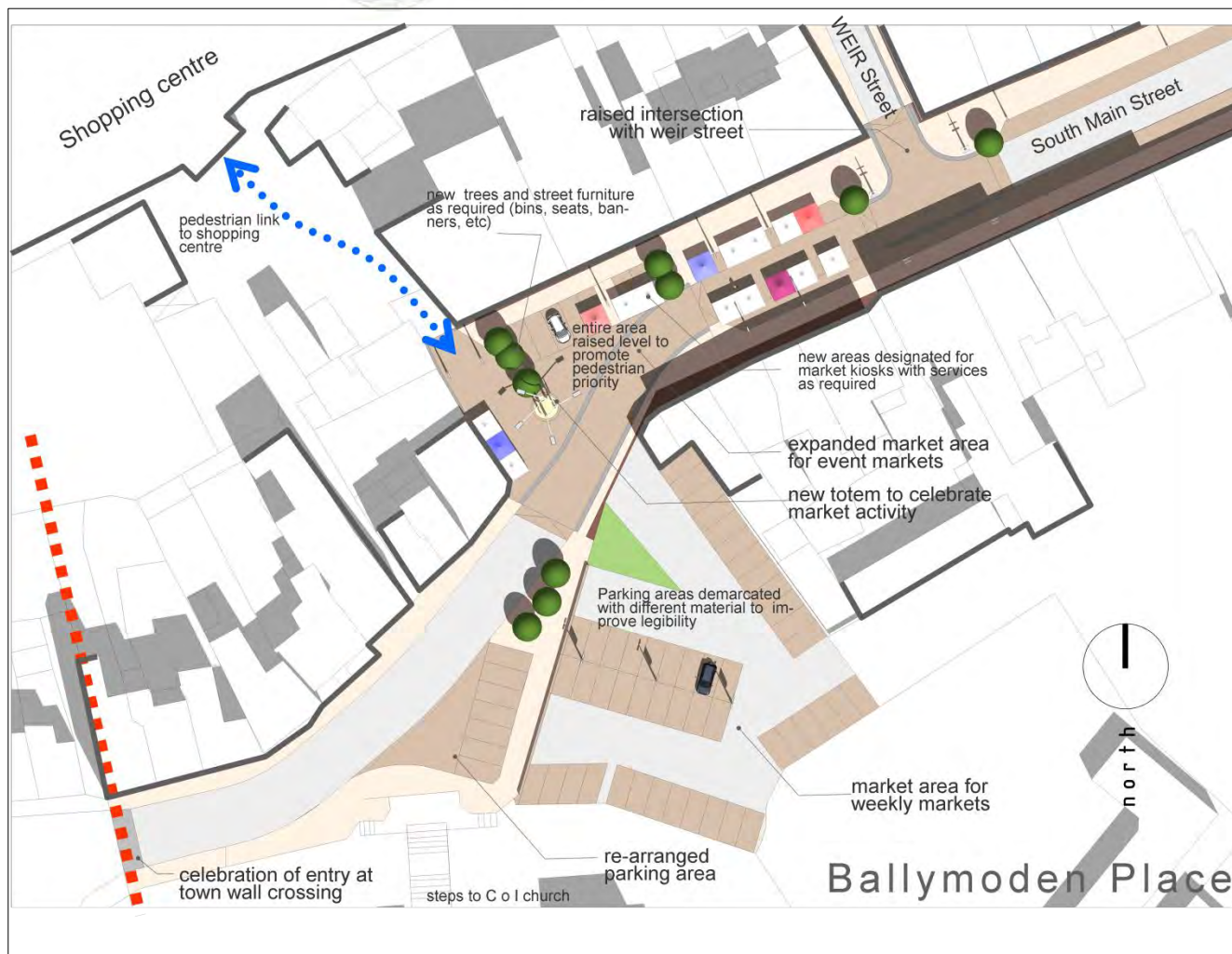


- 6.3.2 Bridge Place (Fishmarket Square, Figure 6.2 above) off South Main Street will be visually and aesthetically transformed back into a 'square' by the use of pavements, tree planting, street furniture, etc. Car parking will remain on the square in a slightly different configuration. This will allow the square to be used as a respite area during busy shopping periods. Figure 6.3 below contains a photomontage which illustrates the favoured intentions for Fishmarket Square.



**Figure 6.3 Photomontage of Fishmarket Square**

- 6.3.3 To the west of Market Street, South Main Street becomes wider creating an opportunity for an activity space in the form of an extended market area (to the existing market in the adjacent parking area) or a performance area. The surface treatment of the entire area from weir Street to include Ballymodan Place would be in stone visually creating a plaza space. This space will be enhanced with street furniture, lighting and tree planting. Traffic will always traverse this space but will be periodically restricted when in use for other activities like a Christmas market, concert, etc. Figure 6.4 and 6.5, overleaf, provide an illustrative representation of the key public realm proposals planned for Ballymodan Place.



**Figure 6.4 South Main Street/Ballymodan Place proposed Public Realm Upgrades**



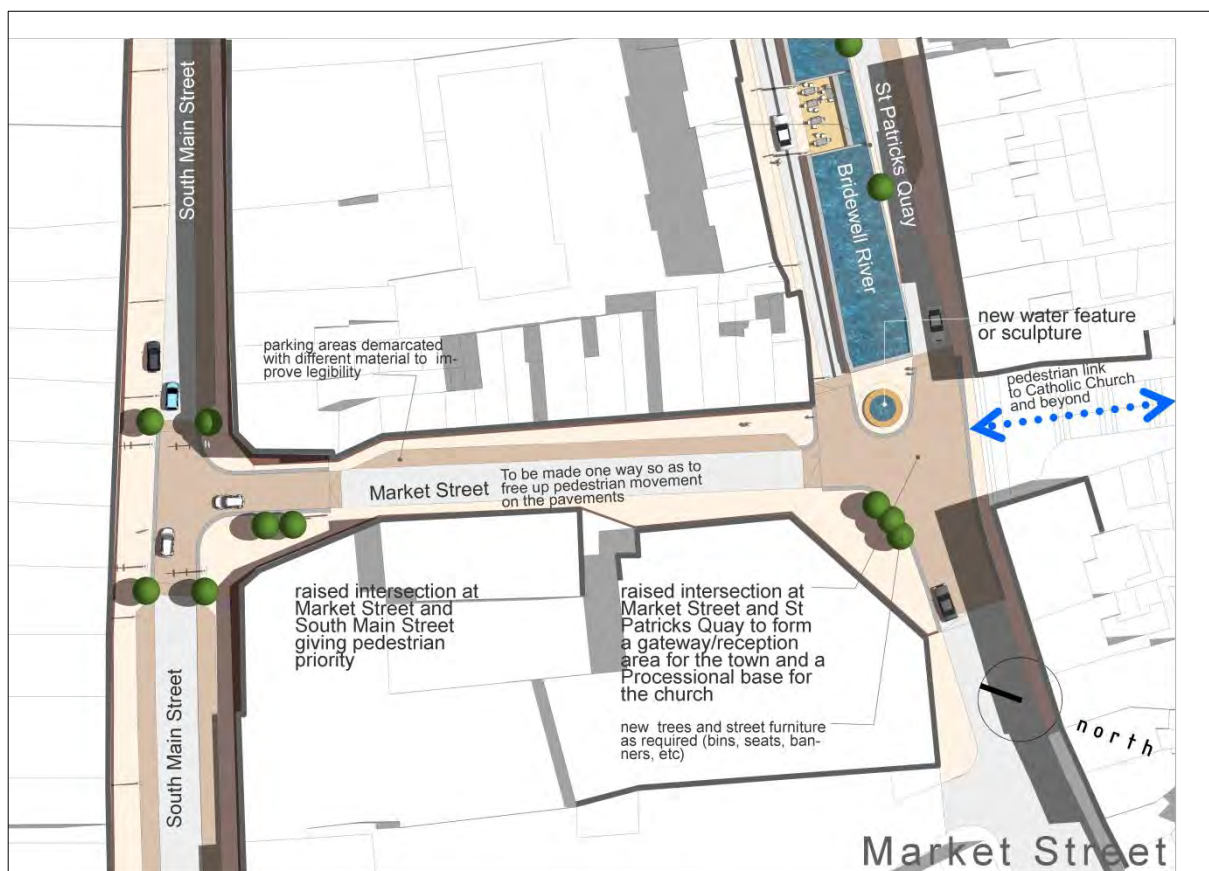


**Figure 6.5 Photomontage of Ballymodan Place**



### Market Street and Market Quay

- 6.3.4 Market Street stretches from the base of the steps from the Catholic Church to South Main Street. The intention is to create a one way street so as to provide for increased pedestrian footpaths to both sides of the street. The trafficked areas can remain blacktop but preferably should be at the same level as the footpaths. All areas for car parking should be paved so as to distinguish them from the road and to visually reduce the road width. A procession square, the Town Reception Square, should be formed at the base of the steps to the church as a welcoming mat to the town. An improved water feature at the bridge to the Bridewell will enhance the streetscape and indicate a point of entry.



**Figure 6.6 Market Street proposed Public Realm Upgrades**

- 6.3.5 It is proposed that Market Quay, running adjacent to the Bridewell River opposite St. Patrick's Quay, will be constructed as a shared surface giving pedestrian priority. Build outs over the Bridewell River will allow public access to the river and will allow for opportunity to extend outdoor cafe seating over the river. Figure 6.7 provides an illustration of potential 'Build Outs' which could be constructed along Market Quay.





**Figure 6.7 Potential 'Build Outs' over the Bridewell River as Amenity Space**

### **Weir Street**

- 6.3.6 It is proposed that Weir Street will become shared surface to accommodate two way traffic, pedestrians and limited parking. Improved pavement and blacktop need to be level to allow for pedestrians to take command of the street and to allow for cars to jump the pavement where necessary.
- 6.3.7 Weir Street provides an important function as it connects South Main Street, MacSwiney Quay and Riverview Shopping Centre. The introduction of a shared surface environment will encourage increased pedestrian and cyclist activity between these key areas within Bandon Town Centre.

### **MacSwiney Quay**

- 6.3.8 MacSwiney Quay runs along the river's edge and needs to be as narrow as possible for a single lane of motor traffic so as to improve the width of the pedestrian footpath alongside the river. This will allow for improved access for pedestrians to the river's edge. As there is no retail it is not as important to have a footpath level with the road on this quay, as long as level crossings are provided at street junctions. Build outs over the river in the form of a viewing platform improve visual access to the river and bridge.
- 6.3.9 Figure 6.8 and 6.9, overleaf, illustrate the proposed public realm upgrades for MacSwiney Quay. The photomontage view is taken from the western end of MacSwiney Quay, at the



junction with Weir Street, and demonstrates the narrowed carriageway widths, widened footpaths and improved pedestrian crossing points and facilities proposed for the area.



**Figure 6.8 MacSwiney Quay, showing potential 'Build Outs' over the river as viewing platform**



**Figure 6.9 Photomontage of MacSwiney Quay**

## Bridge Street

- 6.3.10 It is proposed that Bridge Street will be converted into a single lane, one way street and constructed as a shared surface road. This road, in effect, becomes the main pedestrian feeder from the north side of the river, across Bandon Bridge to South Main Street, and thus, is of significant importance. The creation of a shared surface environment will increase safety and accessibility and encourage pedestrian activity.





## Glasslynn Road

- 6.3.11 Glasslynn Road is probably the busiest road in Bandon as it takes most of the traffic before it is split at St Finbarr's Place. It is also the road that gives a first impression of Bandon. As it is too wide for the amount of road lanes it accommodates, a realignment of the width is necessary, which in turn gives opportunity to create turning lanes and a central isle where these do not occur. A boulevard of trees needs to be planted along this route in the space provided by the islands, and to the sides of the road, thus improving the aesthetic of the long entry and framing the church at the end of the road.



Figure 6.10 Photomontage of Glasslynn Road

## 6.4 North of the River

### North Main Street

- 6.4.1 North Main Street will continue to be a busy street and in the short term may well have continued Heavy Goods Vehicle movements. This will make it difficult to revive the street as a commercial or residential street. In order to improve the streetscape however, it is important to realign the widths to make them constant up the length of the street and to realign and narrow the street at Kilbrogan Hill. A realignment of the entire road from Dunmanway around the Shambles will free up the space to the front of the Court House and Town Hall reviving a square which once was the market area of Bandon (see Figure 6.11 below). A square appropriately paved should be visually increased in size by extending a raised table crossing at the base of Kilbrogan Hill. From the square down to the pedestrian bridge that crosses the river, a shared surface street will give pedestrian priority linking north and south of the river.



**Figure 6.11 Town Hall Plaza and Shambles Park, at the base of Kilbrogan Hill**



**Figure 6.12 Photomontage of proposed Town Hall Plaza**

### **Bandon Bridge**

- 6.4.2 By swaying the road traffic to one side of the bridge a wider pedestrian footpath can be created on the western side of the bridge increasing safe pedestrian accessibility across the bridge. An attached walkway to the eastern side of the bridge in the long term will give full access from the North to the south of the bridge to both sides of the bridge. St Finbarr's Place will always be a busy street and raised level crossings at the appropriate places will give further access from east to west of that street further enhancing access.





**Figure 6.13 Bandon Bridge Proposed Public Realm Improvements**

- 6.4.3 As noted in Section 5.4 of this report, the Bandon TPREP proposes an upgrade to the junction to the north of Bandon Bridge to improve traffic flow and pedestrian safety in the area. Figure 6.14 illustrates the proposed layout to the north of the bridge with a new mini-roundabout including widened footpaths and raised road levels for pedestrian accessibility.



**Figure 6.14 Photomontage of North Main Street/Bandon Bridge Junction**

- 6.4.4 To the south of the river, it is proposed that the road surface will be raised to footpath level at the junction with MacSwiney Quay. This will provide improved safety and accessibility for pedestrian movements accessing MacSwiney Quay, Bridge Street and South Main Street. This will facilitate the creation of key pedestrian linkages from areas to the north of the river to the main commercial area in Bandon on South Main Street.



**Figure 6.15 Photomontage of MacSwiney Quay/Bandon Bridge Junction**





## 6.5 Materials

- 6.5.1 An important consideration when carrying out a streetscape, particularly in an historical context is the use of materials. High quality materials picking up the colour and texture of an historic streetscape, whether it is of stone or of a more contemporary material like an epoxy paving, should be used, particularly in the high value areas of retail or historical content. The quality of material can reduce as one gets further away from these high value areas as long as durability, detail and colour is still taken into account



**Figure 6.16 Detail of Cobble Stone Roadway, Concrete Paviors and Limestone gutter**

- 6.5.2 Raised pedestrian priority areas should all be made of high quality materials in the retail centre where traffic drives slowly and there is less wear and tear on trafficked surfaces.



**Figure 6.17 An example of a well-executed level surface pedestrian priority zone**



- 6.5.3 Street furniture should be simple yet elegant and should be of a contemporary design so that they become recessive against the backdrop of the buildings, shop fronts etc. Led street lighting on simple tapering columns will be appropriate in this setting, as will simple square planters, seating without ornament, etc.



**Figure 6.18 Example of Street Lighting, Street Furniture, Planter Boxes, Seating, Litter bins**





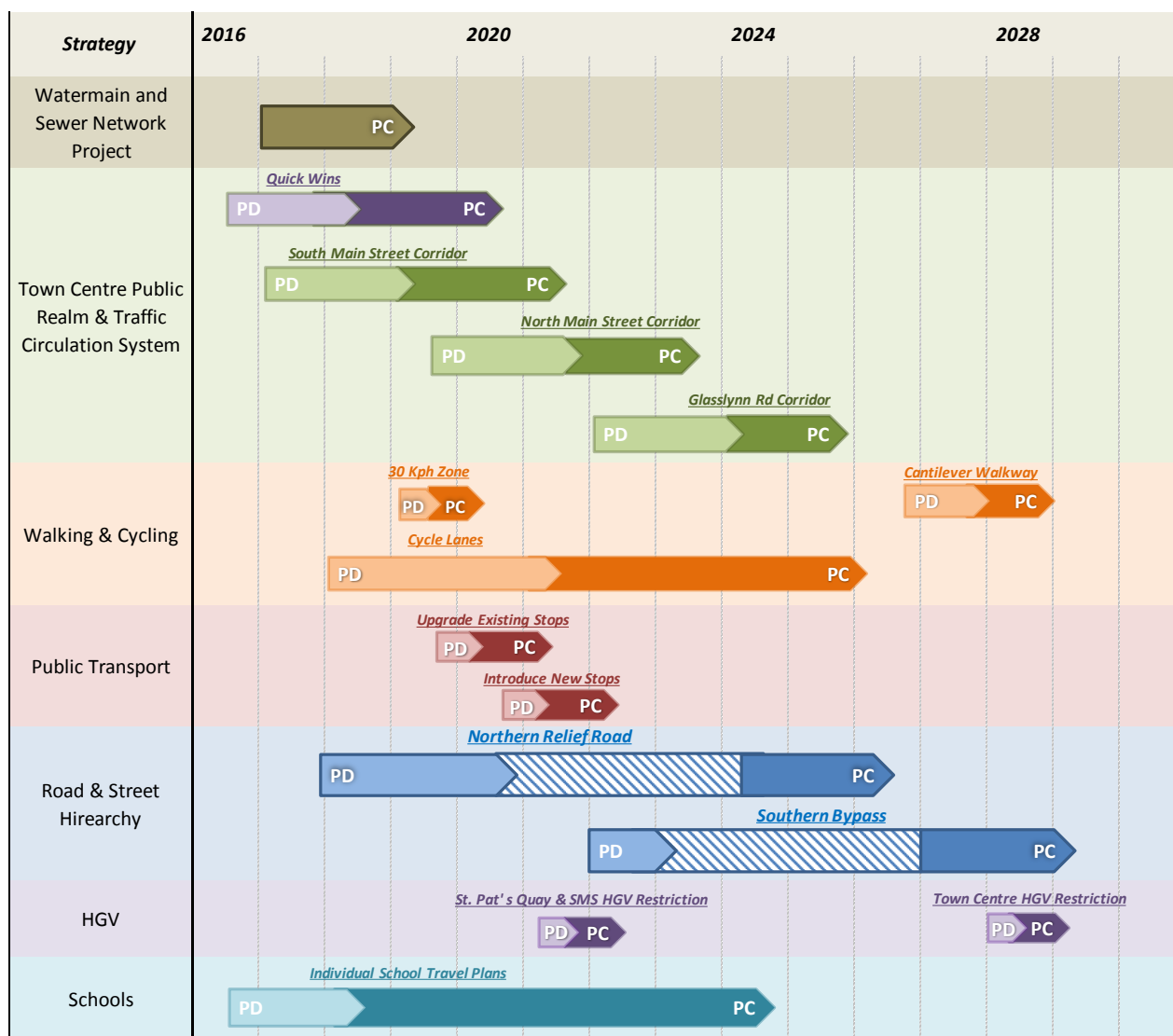
## **7. IMPLEMENTATION OF BANDON TPREP**

### **7.1 Introduction**

- 7.1.1 This chapter makes recommendations on the delivery of the Bandon TPREP Strategy in terms of the key aspects of strategy management that contribute to successful programme delivery and the timeline for implementation of the specific recommendations presented earlier in this report.
- 7.1.2 Also presented are recommendations regarding mechanism to manage the delivery of the Bandon TPREP implementation.

### **7.2 Bandon TPREP Delivery Timeline**

- 7.2.1 Figure 7.1, overleaf, shows the timeline for the implementation of the Bandon TPREP measures. This timeline 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, for example, the public realm improvements in the town centre should only be implemented following completion of the Bandon Watermain and Sewer Network Project.
- 7.2.2 The implementation of measures is broken into three delivery streams, namely:
- Short Term (2016 - 2020) Strategy Measures;
  - Medium Term (2020 - 2025) Strategy Measures; and
  - Long Term (2025 - 2030) Strategy Measures.
- 7.2.3 A phasing strategy has been developed for each of the key recommendations of the Bandon TPREP outlined in Chapter 5 of this report. It is recommended that the transport strategy proposals aimed at increasing the mode share for sustainable modes are front loaded in the implementation plan (e.g. Schools Plan and improvements for walking, cycling and public transport). This will then be followed by general road network improvements.



**Key:**



Period to allow for obtaining funding and other survey/planning requirements

PD = Planning & Design

- Feasibility; and
- Planning & preliminary Design (Part 8)

PC = Procurement & Construction

- Detailed Design;
- Tender;
- Contract; and
- Handover

**Figure 7.1 Bandon TPREP Implementation Plan**



### Short Term (2016 – 2020) Strategy Measures

- 7.2.4 As noted previously in this section, measures aimed at improving and promoting sustainable travel, in particular walking and cycling, have been proposed as short term or ‘Quick Win’ measures in the implementation plan. Therefore, it is proposed that the following strategies begin as soon as possible:
- The introduction of a 30 Kph zone;
  - Upgrading of existing bus stops and introduction of new stops; and
  - Implementation of the school travel plans.
- 7.2.5 The public realm improvements will be carried out separately on a corridor by corridor basis due to the level of disruption that the works are likely to have on Bandon Town Centre and the availability of funding to complete the works.
- 7.2.6 South Main Street is the main retail core within Bandon Town, and it experiences the highest pedestrian volumes, as such, it is envisaged that this corridor be upgraded as soon as possible, following completion of the Bandon Watermain and Sewer Network Project. Whilst the construction of the public realm improvements cannot commence until after the completion of the sewer project, the planning and design for the public realm improvements will take place during the short term period of the plan.
- 7.2.7 The implementation of the above short term measures will lead to a significant improvement to the vibrancy and appearance of Bandon town centre, as well as increasing the operational efficiency and safety level of the local road network.
- 7.2.8 It is envisaged that, in the short term (i.e. pre 2020), feasibility studies will be carried out on the two proposed major infrastructure measures to ensure that they are viable options. The studies should be carried out at an early stage to allow sufficient time to identify viable alternatives in the case that either option cannot be delivered.

### Medium Term (2020 – 2025) Strategy Measures

- 7.2.9 The strategy measures to be implemented in the years 2020 – 2025 include:
- Completion of the public realm, junction improvements and pedestrian and cycle infrastructure improvements on the North Main Street and Glasslynn Road Corridors in line with the various measure outlined in Chapters 5 and 6 of this report; and
  - Introduction of HGV restrictions on South Main Street and St. Patrick’s Quay as outlined in Section 5.8 previously.
- 7.2.10 In the medium term (2020 – 2025), further preliminary work should be carried out on the two major infrastructure proposals planned for Bandon including detailed design, identification of funding streams and the application of planning permission.

### Long Term (2025 – 2030) Strategy Measures

- 7.2.11 The two key strategy measures identified for post 2025 are the delivery of the Northern Relief Road and the completion of the Southern Bypass. As noted in Section 5.2 previously, these major infrastructure measures provide a number of benefits to Bandon town including:



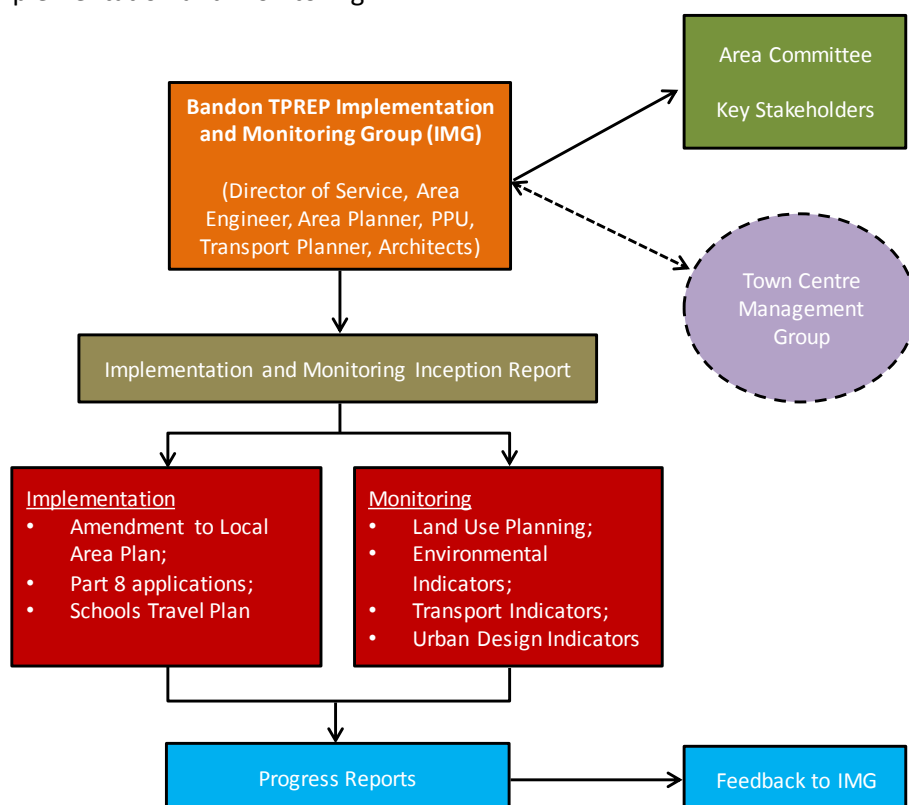
- Reduction of through traffic in the town centre;
- Reduction of traffic volumes on Bandon Bridge;
- Reduction of congestion and delay in the town centre.

7.2.12 The delivery of the Northern Relief Road, and second river crossing, also facilitates the implementation of a HGV restriction for all streets within the town centre thus creating a more attractive environment for pedestrian and cyclist activity.

7.2.13 In order to further improve pedestrian linkages within Bandon town centre, in particular north and south of Bandon Bridge, it is proposed that a new cantilever walkway will be constructed post 2025. This will provide an attractive link for pedestrians to/from housing estates on Cork Road and Watergate Street to the main bus stops on Glasslynn Road.

### 7.3 Implementation and Monitoring Strategy

7.3.1 The Bandon TPREP is a 15 year programme of multi-disciplinary actions covering sustainable land use planning, urban design and transportation. In order to appropriately manage this programme, it is necessary to introduce an Implementation and Monitoring Group (IMG) that will co-ordinate both the programme of works and monitor its progress in relation to its overall vision. Figure 7.2 below describes the mechanism for delivering the strategy in terms of implementation and monitoring.



**Figure 7.2 Bandon TPREP Implementation Strategy**





### Structure of Implementation and Monitoring Group (IMG)

7.3.2 The Implementation and Monitoring Group (IMG) will be set up within the Cork County Council, reporting directly to the Divisional Manager and comprising the following persons:

- Director of Service (Chair of the Group and Champion of the Project);
- Area Engineer – Bandon;
- Development Management Planner;
- Planning Policy Unit;
- Architects Department; and
- Transport Engineer.

### Function of IMG

7.3.3 The first function of the IMG will be to prepare an Inception Report of work to be carried out. In principle, the following functions will need to be included in the Inception Report:

- Preparation of the Amendment to the Bandon Local Area Plan.
- Implementation of Sustainable Schools Travel Plan
- Statutory Planning Processes (Part 8)

7.3.4 The IMG will meet bi-monthly and will inform the Bandon Area Committee and the Key Stakeholders regularly. Once the Town Centre Management Group is set up, it will provide the IMG with information on current issues being faced in Bandon.

7.3.5 Key stakeholders will include representatives from the National Transport Authority (NTA), Transport Infrastructure Ireland (TII) (formally the National Roads Authority) and Cork County Council.

7.3.6 The second function of the IMG will be to identify indicators for monitoring the progress of the project. These indicators can be divided into:

- land use planning (land availability, retail vacancy, employment surveys, planning applications)
- urban design indicators (public realm improvements and new buildings)
- transport indicators (to include pedestrian counts at key locations to monitor footfall, transfer to other sustainable modes, improvements to public transport journey times, queuing and car journey times on the road network, increases in walking and cycling network, number of junction improvements)
- environmental indicators (habitats, water quality, population and human health, air quality, cultural heritage, landscape and material assets).

7.3.7 Monitoring and evaluation is of key importance in determining how successful the TPREP proposals have been in meeting the strategy objectives. In order to demonstrate value for money and identify the overall success of the scheme, it is important to monitor the before and after impacts of the TPREP measures - both as an individual entity and as a package of integrated measures. The IMG will undertake an evidence based approach which measures the performance of the schemes against the economic, environmental, social and safety objectives developed as part of the Bandon TPREP Study.



- 7.3.8 Monitoring the performance of strategy measures can also assist in communicating to local businesses, schools and the wider community the tangible benefits that can be achieved from the implementation of the Bandon TPREP.

#### **Outputs of IMG**

- 7.3.9 The output of the IMG will be to report progress made on the above.



## 8. SUMMARY AND RECOMMENDATIONS

### 8.1 Introduction

- 8.1.1 SYSTRA and J.B. Barry & Partners were appointed by Cork County Council to undertake the Bandon Transportation and Public Realm Enhancement Plan (Bandon TPREP). The overall aim of the Bandon TPREP was to ensure that there is an integrated approach to public realm enhancement and transportation engineering for the future development of the town.
- 8.1.2 The study focused on determining the transport infrastructure improvements and policy measures required to accommodate the anticipated expansion of the town that will result in a growth in vehicular, pedestrian and cyclist traffic volumes. The study also examined the potential to enhance the public realm in specific locations to increase the vibrancy and attractiveness of the town and to encourage active travel.
- 8.1.3 This chapter provides an overview of the methodology used to develop the Bandon TPREP and briefly summarises the key recommendations of the strategy which have been presented in detail in the preceding chapters.

### 8.2 Study Methodology

- 8.2.1 As outlined previously in Chapter 2, and Figure 2.1, the methodology used to develop the Bandon TPREP consisted of the following six key stages:

- Project Inception;
- Evaluation of Existing Situation;
- Visioning, Evaluation Framework & Strategy Development;
- Strategy Assessment;
- Future Plan; and
- Final Report

#### Evaluation of Existing Situation

- 8.2.2 To facilitate an understanding of the existing land use, urban design and transport environment within the Bandon TREP study area, a detailed baseline study was carried out including a comprehensive set of traffic surveys and a first round consultation with local residents and stakeholders.
- 8.2.3 A series of site visits were undertaken during March 2015 which were complimented by detailed traffic survey information including:
- Junction Turning Counts (JTC) at 28 locations;
  - Automatic Traffic Counts (ATC) at 12 location;
  - Bluetooth Origin Destination Surveys at 4 locations;
  - Bluetooth Journey Time Surveys on three key routes; and
  - Pedestrian counts at 15 locations.



8.2.4 Through observations made during site visits, and an analysis of the traffic survey data, the following transportation and public realm issues were noted in Bandon:

- Pedestrian facilities are of varying quality throughout Bandon town with issues such as narrow footpaths, lack of crossing facilities and poor surfacing and lighting noted;
- Currently, cyclist facilities are very poor in Bandon Town. There are no dedicated cycle lanes on any routes within the town centre, and there is only one bike parking facility located on South Main Street;
- The entrances to Bandon from both the West Cork side, and the Cork City side, is uninviting;
- The quality of finish to amenity spaces, be it shopping street, pedestrian walkway, or public park, is of a very poor quality and the materials used are generally of the lowest utilitarian grade;
- There is a lack of trees, seats, interpretative signage, etc. Parks and streetscapes are inadequately furnished for seating, resting, etc.;
- The lack of pedestrian crossing facilities on both St. Finbarr's Place and Glasslynn Road means that there is no clear safe route for people to access South Main Street to/from the local bus stops;
- The volume of traffic utilising Bandon Bridge in the AM and PM peaks leads to congestion on the bridge itself, and on roads in the immediate vicinity such as the N71 Glasslynn Road and North and South Main Streets;
- A significant volume of HGV traffic travel through Bandon town centre. This leads to congestion and delay at capacity restricted locations such as North Main Street and Bandon Bridge.

8.2.5 1st round public consultation was carried out to inform the public of the Bandon TPREP study and its implications for the local area. It also provided an insight into perceived issues within the town and a view as to how Bandon should develop in terms of transport improvements. In summary, the following issues were noted:

- **Traffic congestion** is frequent within the town centre and is especially bad during peak hour periods;
- A **large volume of HGV's** pass through the town centre as all of the alternative routes have deficiencies and the single river crossing limits viable options;
- **School traffic** causes congestion near the schools during drop-off/pick-up periods;
- A number of junctions are congested due to **lack of capacity** and incorrect junction priority;





- The **N71** is not the preferred route for HGV's due to unsafe road gradient, inappropriate junction priority, poor sightlines and poor junction design;
- **Poor parking** practises cause congestion especially within the town centre;
- **Road surfaces** in general are in need of improvement;
- Improved disabled parking facilities are required;
- **Pedestrian facilities** are inadequate, particular issues include poor surfacing, footpath widths, lack of appropriate crossings, dis-jointed network, poor street lighting and limited pedestrian amenity areas;

### Visioning, Evaluation Framework & Strategy Development

- 8.2.6 The Vision Statement provides the over-arching context for the specific measures within the Bandon TPREP. Information gathered through a review of national and local policy, baseline studies and consultation with the general public was utilised to develop the following Bandon TPREP Vision Statement:

**“To strengthen Bandon’s position as a premier market town through the creation of a unique sense of place, which supports ease of movement for all, embraces its rich built and natural heritage, and enhances its role as the Gateway to West Cork”**

- 8.2.7 Based on the identified vision for Bandon, a set of specific objectives and KPI's were developed. These represented the foundation for an evaluation framework which was utilised to measure the performance of various urban design and transport strategies identified for Bandon.
- 8.2.8 Once the vision and objectives for the TPREP study were determined, a series of workshops were held, both internally and between the wider project working group, to identify key strategies which could assist in improving traffic flow and the overall public realm in Bandon Town. The strategies were developed based on the following:
- Baseline review of current conditions within Bandon;
  - Feedback from Public Consultation;
  - Review of local and regional policy; and
  - Review of previous studies carried out in the area.
- 8.2.9 A strategic traffic model was developed in SATURN for the Bandon Local Area to adequately assess the identified Bandon TPREP strategies. The NTA's current South West Regional Model (SWRM) was utilised as a base for developing the strategic traffic model for the Bandon TPREP. The base SWRM was updated with additional network and zonal detail to provide an enhanced representation of the road network, and route choice, in the study area.



## Strategy Assessment & Future Plan

- 8.2.10 The various strategies developed for Bandon were tested through the evaluation framework to identify which options performed best in terms of achieving the defined TPREP vision and objectives.
- 8.2.11 The strategy results were both qualitative and quantitative, with the quantitative results being derived using the developed local area strategic traffic model along with detailed micro-simulation modelling at key junctions within the network. Based on the results of the strategy testing, the Bandon TPREP 2020 and 2030 recommendations for urban design and transport were produced.

## 8.3 Bandon TPREP Recommendations

- 8.3.1 The remainder of this chapter outlines the various recommendations which form the Bandon TPREP and are summarised under the following key headings:

- Road & Street Hierarchy;
- Town Centre Circulation;
- Junction Improvements;
- Pedestrian & Cyclists;
- Schools;
- Public Transport;
- Heavy Goods Vehicles;
- Parking; and
- Public Realm

### Road & Street Hierarchy

- 8.3.2 The guiding principle of the road and street hierarchy developed for Bandon is that within the town centre streets, proposed intervention measures should be focused on improving pedestrian and cyclist movements and accessibility. Vehicular traffic must be afforded an appropriate level of priority but this priority should, in general be restricted to traffic that is destined for the town centre. Through traffic should be accommodated on alternative routes where possible away from sensitive areas. Heavy goods vehicles should be discouraged, except where delivering to local businesses or where bus services need local access.
- 8.3.3 Speed management measures should be introduced in the form of Gateways at the entrance to the town on major roads, and a defined 30 kph zone within the town centre. The introduction of these measures will reduce vehicular speeds of traffic entering Bandon, thus enhancing the sense of place associated with the town centre streets, creating a safer environment for walking and cycling
- 8.3.4 As part of medium/long term road and street hierarchy, it is recommended that both the Northern Relief and completion of the Southern Bypass are delivered. These new routes provide a number of benefits to Bandon, such as:
- Reducing traffic volumes on Bandon Bridge and, therefore, reducing congestion and delay in this area;



- Providing an alternative route for HGV traffic through Bandon; and
- Decreasing the volume of through traffic travelling in Bandon town centre, and therefore, reducing the level of congestion and delay.

8.3.5 The availability of viable alternative routing options around Bandon town via the new Northern Relief Road and Southern Bypass Route, means that all roads within the town centre can now be reclassified as 'Town Centre Streets' i.e. having a multi-purpose function with increased focus on pedestrian/cyclist movements, public transport access and sense of place, rather than vehicular movements.

#### **Town Centre Circulation**

8.3.6 A series of alterations are recommended to the layout and operation of a number of streets within Bandon Town Centre to facilitate the introduction of public realm improvements and assist in reducing conflicts at key junctions e.g. Market St / South Main Street and MacSwiney Quay / St. Finbarr's Place. These include:

- MacSwiney Quay to operate one-way in a westbound direction;
- Market Street to operate one-way in a northbound direction;
- Bridge Street to operate one-way in a southbound direction;
- Western end of St. Oliver Plunkett St and Brady's Lane to operate one-way in an eastbound and northbound direction respectively;
- Creation of shared surface environment on Market Quay and Bridge Lane; and
- Creation of event space on South Main Street between Ballymodan Place and Market Street.

#### **Junction Improvements**

8.3.7 A review of baseline traffic conditions within Bandon identified a number of locations within the network that require attention in order to enhance the overall network performance.

8.3.8 Junction improvements are proposed at 19 locations throughout Bandon Town which are focused on improving safety and accessibility for pedestrian/cyclists, and improving efficiency of traffic movements at key locations within the town.

#### **Pedestrian & Cyclists**

8.3.9 To improve facilities for pedestrian and cyclists, and encourage the use of sustainable modes within Bandon, the following is recommended as part of the Bandon TPREP:

- Footpath upgrades proposed along pedestrian desire lines linking key residential areas within Bandon to local schools and the town centre;



- Introduction of 30kph zone within the town centre to provide a safer environment for walking and cycling;
- Creation of shared surface environment at Market Street and Bridge Lane;
- Cycle lanes proposed linking Bandon Town to the West Cork Rail Line Greenway; and
- Upgrade and extend the current Graham Norton Riverwalk.

### **Schools**

- 8.3.10 To further support sustainable transport to schools, a School Travel Plan should be implemented and maintained throughout all schools in Bandon. The School Travel Plan includes a variety of best practice measures to be tailored for the individual schools involved around Bandon.
- 8.3.11 In addition to this, specific junction upgrades, and improvements to walking/cycling facilities and bus set-down areas have been recommended to improve safety and accessibility for school pupils.

### **Public Transport**

- 8.3.12 In order to improve accessibility to public transport and encourage its use, the following is recommended as part of the TPREP:
- Upgrade existing bus shelters to accommodate wheelchair passengers and provide closer access to the town centre;
  - Provision of additional bus shelter facilities on Emmet Row and to the west of Bandon at Old Chapel; and
  - Improve pedestrian accessibility to/from bus stops through the upgrade of footpaths and junctions within Bandon Town.

### **Heavy Goods Vehicles**

- 8.3.13 It was noted through site visits, traffic counts and public consultation, that there are significant volumes of HGVs travelling through Bandon which have a negative impact on walking, cycling and the overall public realm within the town.
- 8.3.14 In order to manage HGV volumes in the future, in particular those travelling through Bandon Town Centre, a series of short term and medium/long term strategies have been recommended as part of the TPREP study.

#### **Short Term**

- HGV restrictions introduced on St. Patrick's Quay and South Main Street; and
- Improved signage to promote alternative HGV routes via Baxter's Bridge and the Southern Relief Road.





### **Medium/Long Term**

- All day HGV restriction introduced on Bandon Bridge; and
- Promotion of alternative HGV routing through improved signage and upgrade of the route via Crossbarry.

### **Parking**

- 8.3.15 The parking strategy for Bandon needs to work in conjunction with, and support, the other recommended transport measures that form the integrated transport plan for the town, and meet with the overarching objectives of the Bandon TPREP.
- 8.3.16 In order to support the various junction upgrades and public realm opportunities proposed as part of the TPREP, it is recommended that a small number of on-street parking spaces will need to be removed at various locations throughout the town centre.
- 8.3.17 The Bandon TPREP parking strategy seeks to maintain a balanced approach whereby parking spaces are allowed to be removed where necessary to support the overarching objectives of the study, and then re-located to other areas to ensure that there is no loss in overall supply. Therefore, to accommodate the removal of a small number of parking spaces within the town centre, it is recommended that:
- The current long stay public car park on Glasslynn Rd should be re-designated as short term parking; and
  - On-street parking available on Glasslynn Road should be re-designated as long-stay public parking;
  - An additional public long-stay car park will be provided within acceptable walking distance of the town centre.

### **Public Realm**

- 8.3.18 In principle, the overriding aim of the public realm recommendations is to create a safe and convenient environment, particularly for pedestrians that will enhance connectivity and provide for an improved shopping and leisure activity experience through the provision of an aesthetically pleasing setting.
- 8.3.19 In summary, the key public realm recommendations outlined as part of the Bandon TPREP are as follows:
- **A town wall heritage trail:** Bandon is a 17th century historic walled town – unique in Ireland. There are opportunities to view upstanding sections at the Shambles and create a town wall trail; the historic gateways to the walled town will be defined and incorporated into the design of the public realm enhancement measures at the Shambles;
  - **A series of new public spaces:** Ballymodan Place, Fishmarket Square and a town reception square at “book-ends” of the retail core will create flexible spaces for a variety of activities



including community events, seasonal /farmers markets/ concerts etc. aimed to draw additional footfall and retail spend into the town;

- **An enhanced Main Street:** The aim of the strategy on South Main Street is to create a pedestrian-friendly (priority) retail core by reducing the dominance of traffic and parking, widening pavements and de-cluttering the Main Street which will allow greater opportunities for people to sit out and enjoy the town's vibrant atmosphere and attractive townscape;
- **Create Desire Lines:** Using the design and treatment of the street to create desire lines to key historic buildings and places of interest within the town;
- **Realignment of Glasslynn Road:** This will provide additional parking close to the town centre, create an attractive new boulevard at the entrance of the town and frame the Methodist Church creating an enhanced arrival experience to the town;
- **Reconfiguration at the Shambles, the Courthouse and the Town Hall:** This will create a focus for the community, reduce the negative impacts of high traffic speeds and HGV volumes on Kilbrogan Hill, and create a safer pedestrian environment for school-goers and residents alike.

8.3.20 The following table summarises all of the proposed measures contained within this report; identifying the subject matter, the section in the report where more information can be found, a brief description of the proposed measures and the recommended timeframe for their implementation.

8.3.21 The timeframe for implementation has been defined as follows:

- Short Term (ST): 2016 – 2020
- Medium Term (MT): 2020 – 2025
- Long Term (LT): 2025 – 2030



**Table 8.1 Summary Table of Recommended Measures**

AREA	SUBJECT	REPORT REF. SECTION	MEASURE	IMP. PLAN
<b>Road and Street Hierarchy</b>	Speed Management	5.2.29	<ul style="list-style-type: none"> <li>External Gateways: 5 locations - from 100kph to 60kph. Reduce the carriageway width, and provision of lighting, traffic limit signage, soft landscape, rumble strips, etc.</li> </ul>	ST
		5.2.29	<ul style="list-style-type: none"> <li>Internal Gateways: 8 locations - proposed 30kph. Using pavement treatments demarcating the location of the old town wall where possible</li> </ul>	ST
	Northern Relief Road	5.2.37	<ul style="list-style-type: none"> <li>Phase 1 Northern Relief Road: Creation of a second river crossing linking the N71 to the R589 Macroom Road to the north east of Bandon Town. ST: Design and Plan. MT: Construction of Phase 1</li> <li>Phase 2 Northern Relief Road: Creation of link between R589 and Dunmanway Road. MT: Design and Plan. LT: Construction of Phase 2</li> </ul>	ST/ MT/ LT
	Southern By-pass	5.2.43	<ul style="list-style-type: none"> <li>Continuation of the existing Southern Relief Road onto the Clonakilty Road</li> </ul>	MT
<b>Town Centre Circulation</b>	Preferred Option for Town Centre Circulation: Option 1	5.3.12	<ul style="list-style-type: none"> <li>MacSwiney Quay operates as one-way in a westbound direction;</li> <li>Market Street operates one-way in a northbound direction;</li> <li>Bridge Street operates one-way in a southbound direction;</li> <li>Oliver Plunkett St and Brady's Lane operate one-way in an eastbound and northbound direction respectively;</li> <li>Creation of shared surface environment on Market Quay and Bridge Lane; and</li> <li>Creation of event space on South Main Street between Ballymodan Place and Market Street.</li> <li>Change of priority on Weir Street/South Main Street Junction</li> </ul>	ST/MT
<b>Junction Improvements</b>	St Patrick Quay/ Pearse Street / St. Finbarr's Place / Oliver	5.4	<ul style="list-style-type: none"> <li>Priority given to traffic from Pearse Street to St. Finbarr's Place;</li> <li>Oliver Plunkett Street reduces to 3.5m wide to accommodate one-way traffic flow. The design includes for the provision of a contra-flow cycle lane</li> </ul>	ST/MT



AREA	SUBJECT	REPORT REF. SECTION	MEASURE	IMP. PLAN
	Plunkett Street (Junction 6)		<p>2.5m wide to facilitate cyclists and a fire tender during emergency events;</p> <ul style="list-style-type: none"> <li>○ Traffic Calming measures to be implemented on Casement Road to reduce speeds and improve pedestrian safety;</li> <li>○ Improved pedestrian facilities by way of providing 2.0m wide footpaths with pedestrian crossings across all arms.</li> </ul>	
	Glasslynn Rd / St. Finbarr's Place/ MacSwiney Quay Junction (Junction 5)	5.4	<ul style="list-style-type: none"> <li>○ Right turn pocket provided on St Finbarr's Place to facilitate waiting right turners without impeding through traffic;</li> <li>○ Junction compressed with reduced corner radii;</li> <li>○ Improved pedestrian facilities by way of providing 2.0m wide footpaths with pedestrian crossings across all arms;</li> <li>○ A Raised section on McSwiney Quay.</li> </ul>	MT
	North Main Street / Watergate Street / Bandon Bridge Junction (Junction 4)	5.4	<ul style="list-style-type: none"> <li>○ Junction form changed to mini-roundabout;</li> <li>○ Improved pedestrian facilities by way of providing 2.0m wide footpaths with pedestrian crossings across all arms;</li> <li>○ Different colour road surface used to indicate different road type;</li> <li>○ Raised table top junction used at Watergate Street/Old Cork Road junction to introduce a traffic calming effect for this area and to accommodate pedestrians. Design takes account of Flood Relief work planned for this area;</li> <li>○ Disabled parking space included on the western side of the post office on Cork Road.</li> </ul>	MT
	Kilbrogan Hill / North Main Street / Emmet Row Junction (Junction 12)	5.4	<ul style="list-style-type: none"> <li>○ Emmet Row is realigned and made one-way eastbound. Road becomes a shared surface environment with local traffic access only;</li> <li>○ Kilbrogan Hill to North Main Street alignment now forms the major road;</li> <li>○ Court House/Town carpark is accessed from side road only;</li> <li>○ Improved pedestrian crossing facilities;</li> <li>○ Additional parking provided on Emmet Row and Kilbrogan Hill;</li> </ul>	MT





AREA	SUBJECT	REPORT REF. SECTION	MEASURE	IMP. PLAN
			<ul style="list-style-type: none"> <li>Yellow boxes to be provided to assist traffic exiting side roads/adjacent accesses; and</li> <li>2 loading areas provided along North Main Street and Emmet Row to serve businesses</li> </ul>	
	Kilbrogan Hill / The Shambles Junction (Junction 13)	5.4	<ul style="list-style-type: none"> <li>Junction to be traffic signal controlled;</li> <li>Flared lanes provide sufficient capacity to allow vehicles to stack without impeding other traffic movements;</li> <li>Improved footpaths and dedicated pedestrian crossings improve pedestrian safety and accessibility;</li> <li>Disabled parking space on Kilbrogan Hill retained;</li> <li>Stop lines set further back from the junction to accommodate turning HGVs;</li> <li>Yellow boxes provided to assist traffic exiting side roads/adjacent accesses;</li> <li>One loading bay provided along Dunmanway Road to serve businesses; and</li> <li>Additional parking provided whilst retaining overall sustainable design objectives.</li> </ul>	MT
	Allen Square/Dunmanway Road/Emmet Road Junction (Junction 14)	5.4	<ul style="list-style-type: none"> <li>Dunmanway Road realigned to form a signalised junction with Kilbrogan Hill;</li> <li>Improved pedestrian facilities by way of providing 2.0m wide footpaths with pedestrian crossings to correspond to pedestrian desire lines;</li> <li>Formal roadside parking provided along Dunmanway Road to cater for school set-down;</li> <li>Formal bus stops with bus bays located on Emmet Row to provide safe access for students to/from schools in the area;</li> <li>Yellow boxes provided to assist traffic exiting side roads/adjacent accesses.</li> </ul>	MT
	Convent Hill / Kilbrogan Hill Junction (Junction 15)	5.4	<ul style="list-style-type: none"> <li>Raised pedestrian crossing;</li> <li>Kerb build-outs.</li> </ul>	MT
	St Patrick's Quay / Market Street / St Patrick's Place (New Road) (Junction 9)	5.4	<ul style="list-style-type: none"> <li>Kerb build outs;</li> <li>Improved regulation of roadside parking close to the junction;</li> <li>Priority given to westbound traffic on St Patrick's Quay;</li> </ul>	ST/MT



AREA	SUBJECT	REPORT REF. SECTION	MEASURE	IMP. PLAN
			<ul style="list-style-type: none"> <li>○ Pedestrian crossings are provided on all arms and located to suit pedestrian desire lines;</li> <li>○ A raised junction.</li> </ul>	
	Market Street / South Main Street Junction (Junction 8)	5.4	<ul style="list-style-type: none"> <li>○ Priority given to traffic exiting Market Street;</li> <li>○ Pedestrian crossings are provided on all arms;</li> <li>○ Raised surface on South Main Street (west);</li> <li>○ Kerb build outs.</li> </ul>	ST/MT
	Weir Street / South Main Street Junction (Junction 10)	5.4	<ul style="list-style-type: none"> <li>○ South Main Street surface raised to facilitate special events;</li> <li>○ Pedestrian crossings to be provided;</li> <li>○ Reversal of priority on Weir Street / Ballymodan Place to aid traffic circulation;</li> <li>○ Kerb build outs.</li> </ul>	ST/MT
	Weir Street / MacSwiney Quay Junction (Junction 11)	5.4	<ul style="list-style-type: none"> <li>○ Junction priority altered to maximise capacity and road safety.</li> <li>○ McSwiney Quay narrowed to 4.0m to accommodate one-way westbound traffic flow;</li> <li>○ Junction surface raised;</li> <li>○ Pedestrian crossings provided across all arms;</li> <li>○ Existing parking spaces at McSwiney Quay to be retained.</li> </ul>	ST/MT
	Relief Road (N71) / Kilbrittain Road Junction (Junction 17)	5.4	<ul style="list-style-type: none"> <li>○ Junction priority altered to maximise capacity and road safety;</li> <li>○ Design allows for the inclusion of a climbing lane (subject to Final Design);</li> <li>○ A grass verge is incorporated to accommodate planting, services and improved segregation for pedestrians;</li> <li>○ Improved public lighting.</li> </ul>	MT
	Kilbrittain Road Junction (N71) / N71 (West) / New Road Junction (Junction 16)	5.4	<ul style="list-style-type: none"> <li>○ Priority given to N71 (west) to N71 (Relief Road) traffic;</li> <li>○ Pedestrian crossings are provided on all arms;</li> <li>○ An extension to the existing culvert will be required to facilitate the realignment of the junction to promote movements via the Southern Relief Road.</li> </ul>	MT
	Baxter's Bridge Junction Improvements	5.4	<ul style="list-style-type: none"> <li>○ Improvements to sight lines through hedge cutting and slight realignment of carriageway;</li> <li>○ Improved directional signage;</li> </ul>	MT



AREA	SUBJECT	REPORT REF. SECTION	MEASURE	IMP. PLAN
<b>Walking and Cycling Strategy</b>	(Junction 18 & 19)		<ul style="list-style-type: none"> <li>Implement traffic island.</li> </ul>	
	Oliver Plunkett Street and Glasslynn Road Junction Improvements (Junctions 1,2,3,7) and Brady's Lane	5.4	<ul style="list-style-type: none"> <li>Raised crossing at approach of Oliver Plunkett Street, across Deal Yard Lane and Parnell Street;</li> <li>Pedestrian crossings realigned and located along pedestrian desire lines;</li> <li>Build-outs used to reduce carriageway widths and regulate parking in all cases</li> <li>Junction corner radii reduce to between 4.5 and 6.0m in all cases</li> <li>New zebra crossing with central reserve in Station Road</li> <li>Planted central reserve installed along Glasslynn Road.</li> </ul>	MT
	Traffic Reduction	5.5.6	<ul style="list-style-type: none"> <li>Development of alternative routing options such as the North Relief Road and Southern Bypass. Refer to Section 5.2</li> <li>Management of HGV flows through the town centre. Refer to Section 5.8</li> </ul>	LT
	Speed Reduction	5.5.8	<ul style="list-style-type: none"> <li>30 kph Zone in the area enclosed by the old town wall: St. Patrick's Quay, St. Finbarr's Place, South Main Street, Ballymodan Place, Weir Street, MacSwiney Quay, Bridge Street, North Main Street, Glasslynn Road West, Bridge Place, Market Quay, Market Street and Pearse Street.</li> </ul>	ST
	Relocation of road space to pedestrians	5.5.11	<ul style="list-style-type: none"> <li>Increased footpaths widths on MacSwiney Quay (becomes 1-way), Market Street (becomes 1-way); Bridge Street (becomes 1-way) and Creation of shared surface streets at Market Quay and Bridge Lane.</li> </ul>	MT
	Junction treatment and provision of at-grade crossings	5.5.13	<ul style="list-style-type: none"> <li>As outlined in Section 5.4 above for the studied junctions.</li> </ul>	MT
	Improve pedestrian routes on existing desire lines	5.5.15	<ul style="list-style-type: none"> <li>Medium/long term proposal for a cantilever walkway to provide access from areas north of the river to town centre, to the Graham Norton Walk and bus stops located on Glasslynn Road</li> </ul>	MT



AREA	SUBJECT	REPORT REF. SECTION	MEASURE	IMP. PLAN
School Travel Plan	Cycle lanes	5.5.19	<ul style="list-style-type: none"> <li>○ Cycle lanes proposed linking Bandon Town to the West Cork Rail Line Greenway.</li> </ul>	MT
	Segregated Walking and Cycling Infrastructure	5.5.31	<ul style="list-style-type: none"> <li>○ Upgrade and extension of the current Graham Norton Riverwalk.</li> </ul>	MT/LT
	General	5.6	<ul style="list-style-type: none"> <li>○ A School Travel Plan should be drafted for all schools within Bandon Town outlining measures introduced to encourage pupils, parents and staff to travel to school by means other than by private car.</li> </ul>	ST
	St Brogan's College	5.6.2	<ul style="list-style-type: none"> <li>○ Inset bus set down areas and a signalised pedestrian crossing.</li> </ul>	MT
	St Padraig's National School	5.6.9	<ul style="list-style-type: none"> <li>○ Roundabout at the intersection of the L2033 to facilitate turning.</li> </ul>	MT
	Presentation Primary School	5.6.10	<ul style="list-style-type: none"> <li>○ School bus set down area in the Shambles.</li> </ul>	MT
	Bandon Grammar School	5.6.11	<ul style="list-style-type: none"> <li>○ Improvements at N71 junction including provision of signalised Toucan crossing, rationalisation of permitted turning movements and school bus set down and turning area.</li> </ul>	MT
	Bandon Bridge National School	5.6.12	<ul style="list-style-type: none"> <li>○ Improved set down area for buses and visitors and improved footpath connections.</li> </ul>	MT
	Presentation College	5.6.14	<ul style="list-style-type: none"> <li>○ Improved bus set down area, improvements to the N71 intersection and pedestrian crossing.</li> </ul>	MT
Public Transport Strategy	Upgrade of existing bus shelters	5.7.9	<ul style="list-style-type: none"> <li>○ Upgrade existing bus shelters on Glasslynn Road to accommodate wheelchair passengers inclusive of adequate curbing and pedestrian access.</li> <li>○ The westbound bus shelter at the ESB Depot to be moved approximately 150m west to be located adjacent to the eastbound stop.</li> </ul>	ST
	Provision of additional bus stops	5.7.11	<ul style="list-style-type: none"> <li>○ Additional bus shelters to be provided on the western side of Bandon near Oldchapel.</li> <li>○ Adequate shelter facilities to be provided at Emmet Row (The Shambles').</li> </ul>	ST





AREA	SUBJECT	REPORT REF. SECTION	MEASURE	IMP. PLAN
Heavy Goods Vehicle Strategy	Short Term HGV Management Strategy	5.8.5	<ul style="list-style-type: none"> <li>○ HGV restrictions introduced on St. Patrick's Quay and South Main Street for all vehicles over 7.5 tonnes gross vehicle weight between 10:00 to 19:00 Monday to Sunday;</li> <li>○ Improved signage to promote alternative HGV routes via Baxter's Bridge and the Southern Relief Road;</li> <li>○ Junction improvements at the intersection of the N71 bypass/Kilbrittain Road and Kilbrittain Road/N71 Clonakilty Road.</li> </ul>	MT
	Medium / Long Term HGV Management Strategy	5.8.10 - 5.8.22	<ul style="list-style-type: none"> <li>○ All day HGV restriction introduced on Bandon Bridge, when the alternative second river crossing is provided, i.e. new North Relief;</li> <li>○ Promotion of alternative HGV routing through improved signage and upgrade of the routes: <ul style="list-style-type: none"> <li>● <b>Crossbarry Route</b>, via the village of Crossbarry along the R589 continuing east along the R586 Dunmanway Road. Potential solutions: <ul style="list-style-type: none"> <li>○ Carry out works to increase carriageway widths at the three pinch points</li> <li>○ Introduce traffic signals shuttle system which would allow one-directional flow at narrow locations</li> </ul> </li> <li>● <b>N71 Route</b>: via the N71 utilising the existing Southern Relief Road.</li> </ul> </li> </ul>	LT
Parking Strategy	Parking Strategy	5.9	<ul style="list-style-type: none"> <li>○ Removal of a small number of parking spaces within the town centre to facilitate the junction upgrade and public realm opportunities proposed as part of the TPREP;</li> <li>○ Re-designation of the current long stay public car park on Glasslynn Rd as short term parking;</li> <li>○ On-street parking available on Glasslynn Road to be re-designated as long-stay public parking;</li> <li>○ An additional public long-stay car park will be provided within acceptable walking distance of the town centre, and</li> <li>○ Balanced approach undertaken ensuring no loss in overall parking supply.</li> </ul>	MT



AREA	SUBJECT	REPORT REF. SECTION	MEASURE	IMP. PLAN
Town Centre Public Realm Design	South Main Street - Stretching from Ballymodan Place to Fishmarket Square and Bridge Place	6.3.1	<ul style="list-style-type: none"> <li>South Main Street to be 1-way from Market Street to Finbarr's Place;</li> <li>Fishmarket Square and Bridge Place to be upgraded using pavements, tree planting, street furniture, etc.;</li> <li>Ballymodan Place to be upgraded to a plaza with stone paving, street furniture, lighting and tree planting. Traffic will be periodically restricted when in use for other activities like a Christmas market, concert, etc.</li> </ul>	ST/MT
	Market Street and Market Quay	6.3.4	<ul style="list-style-type: none"> <li>Market Street to be 1-way;</li> <li>Increased pedestrian footpaths to both sides of Market Street;</li> <li>Trafficked areas preferably at the same level as the footpaths;</li> <li>Car parking areas to be paved to distinguish them from the road;</li> <li>Town Reception Square to be created at the base of the steps to the church;</li> <li>Improved water feature at the bridge;</li> <li>Market Quay as a shared surface giving pedestrian priority; and</li> <li>Build outs over the Bridewell River for outdoor seating.</li> </ul>	ST/MT
	Weir Street	6.3.6	<ul style="list-style-type: none"> <li>Weir Street to become shared surface to accommodate two-way traffic, pedestrians and limited parking. Improved pavement and surface needs to be levelled.</li> </ul>	ST/MT
	MacSwiney Quay	6.3.8	<ul style="list-style-type: none"> <li>MacSwiney Quay to be 1-way;</li> <li>Footpaths to be upgraded;</li> <li>Level crossings to be provided at street junctions;</li> <li>Potential Builds-outs over the river as viewing platform.</li> </ul>	ST/MT
	Bridge Street	6.3.10	<ul style="list-style-type: none"> <li>Bridge street to be 1-way and shared surface.</li> </ul>	ST/MT
	Glasslynn Road	6.3.11	<ul style="list-style-type: none"> <li>Boulevard of trees to be planted along the central reserve.</li> <li>Reducing road width and providing crossings</li> </ul>	ST
	North Main Street	6.4.1	<ul style="list-style-type: none"> <li>Realignment of the entire road from Dunmanway around the Shambles to create a square in front of</li> </ul>	MT



AREA	SUBJECT	REPORT REF. SECTION	MEASURE	IMP. PLAN
			<p>the <b>Court House</b> and <b>Town Hall</b>. The square to be appropriately furnished with seating, lighting, etc. Car parking to remain but to be removed on important days of celebration.</p> <ul style="list-style-type: none"> <li>Public Park as an amenity for Bandon around The Shambles, including paths on the pedestrian desired lines, seating, new trees, etc.</li> <li>A raised table crossing at the base of Kilbrogan Hill;</li> <li>Shared surface from the square down to the pedestrian bridge that crosses the river.</li> <li>Reduced road width and road speed.</li> <li>Car parking regulated.</li> </ul>	
	Bandon Bridge	6.4.2	<ul style="list-style-type: none"> <li>Wider pedestrian footpath on the western side;</li> <li>Walkway (cantilever) on the eastern side of the bridge in the long term;</li> <li>Finbarr's Place to be raised level crossing at the appropriate locations;</li> <li>Upgrade of the junction to the north of Bandon Bridge to a new mini-roundabout including widened footpaths and raised road levels for pedestrian accessibility; and</li> <li>Road surface to be raised to footpath level at the junction with MacSwiney Quay.</li> </ul>	<p>MT</p> <p>Cantilever: LT</p>



## **APPENDIX A: NATIONAL AND REGIONAL POLICIES THAT INFORM BANDON TPREP**

## **APPENDIX B: STRATEGY TESTING – SHORT AND MEDIUM TERM**

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### **Junction Improvement Testing**

### **Step 2: 2020 Preferred Strategy Evaluation**

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### **Major Infrastructure results**

### **Step 3: 2030 Preferred Strategy Evaluation**

### **Summary & Conclusions**

## **APPENDIX D: BANDON TPREP FIRST PUBLIC CONSULTATION REPORT**

## **APPENDIX E: BANDON TPREP MODEL DEVELOPMENT REPORT**

## **APPENDIX F: DETAILED JUNCTION DIAGRAMS**

## **APPENDIX G: SECOND ROUND PUBLIC CONSULTATION REPORT**

## **APPENDIX H: MINUTES OF THE SPECIAL MEETING OF BANDON KINSALE MUNICIPAL DISTRICT 29/09/2016**



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