



Limerick Smarter Travel

Stage 2 Submission

April 2010



Limerick County Council
Comhairle Chontae Luimnigh

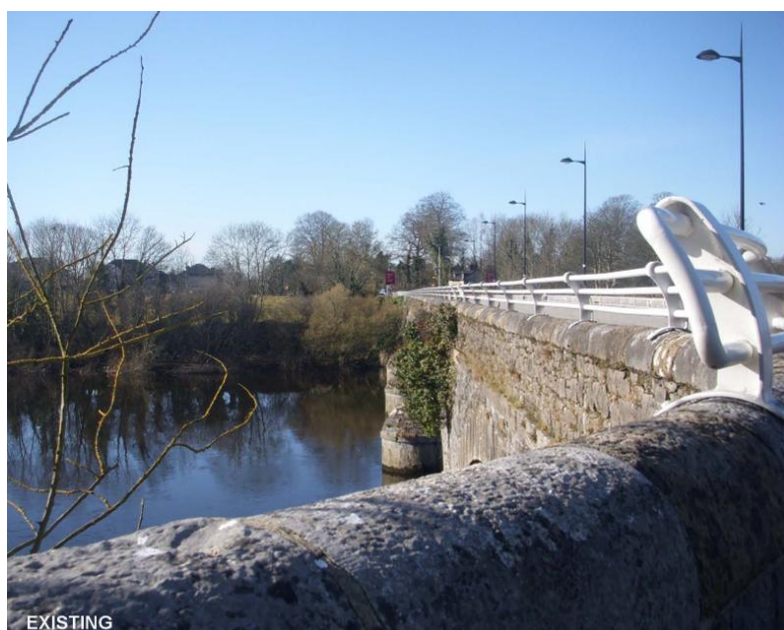


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As part of the development of our Stage 2 submission, Limerick City, Limerick County and the University of Limerick have prepared a number of before and after visuals to highlight how smarter travel can have a significant positive impact on our community






Mott MacDonald



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Foreword

Limerick City, Limerick County and the University of Limerick are extremely excited about the potential for our community to host a Smarter Travel Demonstration area. Limerick has already started to embrace smarter travel and we see the National Competition for Smarter Travel Areas providing a fantastic opportunity for our community to work together and truly change the way we travel – and our attitudes and approach to transport overall. The potential is enormous and we are keen to make the most of it.

Limerick is an area of great diversity. There are affluent residential communities existing side by side with some of the most deprived areas in the country. We have a thriving  Mott MacDonald immigrant community and a lively and growing student population. We have a major centre of highly skilled employment at the National Technology Park and are a gateway to tourism in the wider Mid West region. This diversity presents us with many transport challenges:

- Connecting people in our deprived areas to goods and services;
- Congestion (on the school run) due to the car dominant households of Corbally and Castletroy; and
- Major trip attractors in the University and the National Technology Park.

Yet these challenges also provide us with significant smarter travel opportunities:

- Sustainable connectivity will greatly enhance the opportunities for those in our more deprived areas;
- Smarter travel will increase opportunities for our businesses through improved travel times – and the ability to sell a greater quality of life to employees and investors alike; and
- Through our student and school population we can ‘lock in’ a smarter travel mind set from an early age.

Through looking at how we can truly change the way people think about travel we can make a significant improvement to our community – and act as a beacon for the rest of Ireland in changing travel behaviour. To this end, our team of Limerick City, Limerick County and the University of Limerick provide an unbeatable foundation for taking forward this initiative.

It is also important at this point to acknowledge the extremely valuable support of the business community, wider education community, local residents and public sector organisations which are pivotal in making Smarter Travel a reality in Limerick.



Limerick City, County and UL officials are strongly supportive of our Smarter Travel Bid



We are looking forward to creating an exemplar smarter travel community that the rest of our area and the whole of Ireland can be proud of.

Tom Mackey, Limerick City Council Manager

Mayor Kevin Kiely, City of Limerick
Tom Cosgrove, Professor of Civil Engineering, University of
Limerick
David Naughton, Cathaoirleach, Limerick County Council
Gerry Behan, Acting Limerick County Manager

Tom Naughton Kevin Kiely Tom Cosgrove
David Naughton Gerry Behan



Executive Summary

Limerick City and Limerick County Councils see the Smarter Travel Area Project as a great opportunity to bring about real change in the way people travel within the Limerick area.

For the preparation of the Stage 2 submission **we are engaging with strong partners from the political, education and business communities** who have supported the bid preparation and who are committed to the development of an exemplar smarter travel community here in Limerick. The University of Limerick, home of **first class international research capabilities**, is a strong design partner who will not only steer our programme and ensure that initiatives are implemented to achieve their maximum effect, but also focus on smarter travel development for the country as a whole. We also have the **support of key businesses, Shannon Development, Limerick Chamber and numerous schools and colleges.**



The table below shows how we propose to give Limerick Smarter Travel an exciting and leading edge:

Theme	Description
Innovation	We want to build on the current best practice in smarter travel and add to it where possible – stretching new boundaries to encourage modal shift.
University of Limerick	Our strong foundation for this bid is based on the City, County and the University working together.
Timing	With major infrastructure enhancements in the area, the time is ideal for taking forward smarter travel.
Planning & Commitment	Smarter travel is being embedded in local and regional policy to fully reflect and take forward the national goals.
Political buy-in	There is no question that political support is crucial. We have that at the highest levels.
Regeneration	Southill within our study area is a focus of regeneration in Limerick.
Connectivity & Social Inclusion	Smarter travel should – and will here in Limerick – engage with all sectors of the community.

Limerick has a strong, yet diverse community that faces many challenges (such as enhanced social inclusion). We have developed a unique ‘hub’ based approach. This process of targeting different hubs within the study area allows us to segment our target groups. It ensures messages and initiatives are specifically tailored to each hub. This will lead to maximum effects rather than blanket measures across the entire study area which do not address the needs of the individual communities. **Tackling issues in the regeneration hub, most notably in Southill, is a key theme of our proposal.** It is our aim for smarter travel to be inclusive for all and to provide a means to overcome the barriers of social exclusion and isolation. We see it as a way of linking communities together – not only physically but also emotionally by being one smarter travel community.

Our submission is based on innovation and the latest thinking and developments across all areas of smarter travel – including behaviour change strategies, design guidelines and best practice. **We are the only local authority in Ireland applying for match funding from Intelligent Energy Europe and we are applying to become a CIVITAS city, of which there are currently no others in Ireland.**

We have set ambitious targets and aspirations for the study area as a whole as well as for each hub. **This includes increasing cycle mode share for the study area from 3% to 14%** and to drive car mode share down from 55% to 38% in Castletroy. These are only two examples of our overall aim of achieving the national 2020 mode share targets by 2016 – four years early. Evidence, such as that from the UK Sustainable Travel Towns, indicates that with a focused yet flexible approach this is entirely possible.

In order to achieve this we have put together an integrated package of infrastructure and softer behaviour change measures which are all supported by a consistent thread of marketing and communications. The measures are grouped as follows:



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Limerick SmarterTravel

Groupings of infrastructure initiatives
Cycling and walking infrastructure
Supporting cycling and walking measures
Softer cycling measures
Cycling policy and safety
Electric vehicles
Public realm improvement
Groupings of behaviour change initiatives
Travel planning
Car sharing and car clubs
Community owned initiatives
Research and marketing
Policy changes
Best practice

We realise the importance of closely linking these areas as new infrastructure alone is not going to turn a committed car user into a cyclist. Vice versa carrying out cycle training will not increase the number of cyclists if there is no secure bike parking at their journey destination for example. Public transport measures are already being considered and developed by a Public Transport Feasibility study which Limerick is currently carrying out (Appendix L).



A strong delivery team from across Limerick City and County Councils, the University of Limerick and further external partners will ensure that we have all the expertise necessary to successfully implement our proposed package of measures. Besides having extensive knowledge of working in Limerick our team has a strong background and experience in smarter choices, cycling and cycling network issues and is of sufficient seniority to make major project and programme decisions.

This competition provides us with a great opportunity to really cement in behaviour change and mode shift that will last for generations to come. Some of the key aspects of our proposal which will ensure longevity of the project include resilient infrastructure, community owned initiatives and ongoing planning, political and research support. It is our over-arching aim to bring about behaviour change on a lasting basis.



Overall Key Goals by 2015

To increase cycling modal share by a factor of 4.7

To decrease car mode share from 51% to 37%.

To increase walking modal share from 31% to 35%.

To increase public transport modal share from 9% to 12%.

5% of people will suppress one trip per week through e-working.

City Centre: To make it safer for cyclists and increase cycling modal share by a factor of 5.

Corbally: To reduce the number of short distance car journeys and encourage people to walk and cycle over these distances. Car driver modal share is to be reduced from 44% to 28% in 2015.

Southill: To dissuade people from becoming aspiring car owners and showing that smarter travel is a cheap, comfortable and healthy alternative to the car. 74% of mode share will be sustainable modes.

Castletroy & University of Limerick: To significantly reduce the proportion of car trips made in the area, especially short journeys. Reduce car driver modal share from 41% to 23%.

National Technology Park: To encourage walking and cycling for shorter trips through workplace travel planning. Increase walking modal share from 14% to 30% and cycling from 1% to 11%.



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1. Vision

“To create an exemplar smarter travel community that promotes enhanced connectivity and quality of life for all through the best utilisation of sustainable transport opportunities.”

Limerick and its surrounding hinterland have been identified in the National Spatial Strategy as a key engine for growth and driver of balanced regional development. The Smarter Travel Areas programme offers a unique opportunity to develop the gateway as a beacon for exemplary sustainable travel. It is our ambition to improve connectivity via sustainable modes within the study area. Through Limerick’s role as a “gateway”, leveraging the knowledge and intelligence built up throughout the process, we will then roll successful measures further afield across the rest of the City, County and the wider region.

The key objectives of the proposal are to connect four key hubs within the boundaries of Limerick City and Limerick County, and in so doing, create a new understanding of mobility within the region through how the hubs are connected. These include Limerick City Centre, Castletroy, including the University of Limerick and the key employment centre of the National Technology Park, the residential suburb of Corbally and the regeneration area with Southill at the centre and Singland and Ballysimon as secondary areas. All of these hubs display different transport characteristics and demographics. For example, Southill has low car ownership and high levels of deprivation – Smarter Travel will be a catalyst to improving access for Southill residents to employment, goods and services. However, the National Technology Park sees some 73% of trips made by private car. Smarter Travel here will help improve travel opportunities and make the area a better place to do business. Effectively, we are tailoring our proposal to meet the varying needs of our community through a reflexive design process – that is we are building an understanding of how people respond to smarter travel. Whilst smarter travel is certainly about reducing unnecessary car usage, it can also do much more. This is detailed further in our submission where we look at the needs of the different study hubs.

However, through extensive research as part of our submission preparation, we consider we are well placed to achieve our goals:

- We have a large proportion of work and education related car trips below 10km (53%). This is our target market for modal shift, particularly to walking and cycling.
- The completion of the Limerick Southern Ring Road including Phase 2 (Tunnel) will remove a large volume of through traffic, enhancing the local environment and creating the right set of conditions for smarter travel to thrive.
- We are aiming to spend approximately €49 per head of the population per year (excluding match funding). This compares to spending of approximately €11 per person per year in the UK Sustainable Travel Demonstration Towns project which achieved a reduction of 5-7% in car driver distance travelled. Our concentrated expenditure will hence reap a greater impact.
- Led by the University of Limerick’s Mobility Project, the smarter travel bid is underpinned by design to build knowledge and understanding. We can then build implementation within a clear understanding of how people respond to smarter travel, and make the most precise and effective use of resources.
- Stakeholders from across the area have joined together to support and facilitate the success of Limerick Smarter Travel. Limerick City, County and the University of Limerick are supported by business groups, schools, regeneration organisations and communities. Our approach to smarter travel is already beginning to embed itself in the wider Limerick ‘approach’ to travel and transport.
- This proposal is only the beginning for smarter travel in the Limerick area. Our Mid West Strategic Plan (MWASP) is centered on the core plank of sustainability. We are building in (see Design Report Appendix 1) to our proposals in both design and also future policy. There is no point in developing measures that cannot last – everything in this proposal – from the hard to the soft measures will have longevity.

2. Key Themes of the Proposal

2.1 Introduction

We have developed an ambitious set of proposals and targets for our smarter travel bid – which reflects our commitment, drive and enthusiasm for smarter travel. In the Vision section, we set out a number of principles that support our targets. It is important to be realistic, as well as optimistic. We consider that our proposal is certainly both. In this section we elaborate on some of the themes which support our proposal and give it an exciting and leading edge:

- Innovation founded on evidence based design – we want to build on the current best practice and add to it where possible – stretching new boundaries to encourage modal shift.
- Partnership with the University of Limerick – our strong foundation for this bid is based on the City, County and the University working together.
- Timing – with major infrastructure enhancements, the time is ideal for taking forward smarter travel.
- Planning and commitment – smarter travel is being embedded in local and regional policy to fully reflect and take forward the national goals.
- Political buy-in – There is no question that political support is crucial. We have that at the highest levels.
- Regeneration – our proposal supports Limerick Regeneration's work in Southill (and surrounding areas).
- Connectivity and social inclusion – Smarter travel should engage with all sectors of the community.

All of this is underpinned and supported by a strong team who are committed to smarter travel.

2.2 Innovation founded on evidence based Design

Innovation is an important aspect of our submission. Creating a sustainable travel community relies on innovation in many aspects. We have incorporated innovative ideas and concepts into our proposal that will help us achieve our own targets and attract people to and make them aware of smarter travel choices. A number of particularly innovative aspects of our submission are shown in Table 2.1.

Table 2.1: Innovative aspects of the proposal

Innovation	Description
The partnership	Local Authorities and the University working together to create the best comprehensive approach to smarter travel by applying the knowledge and design intelligence within the University to the pragmatic problems of smarter travel implementation in a truly innovative partnership.
Design	Our proposals are based on design; an iterative process of testing, evaluation, surveying, measuring, listening, engaging, designing, redesigning.
Targeting behaviour change	Our 'hub' based approach recognises that we will need to use different behaviour change approaches for different markets. We will utilise marketing segmentation techniques to ensure that we apply behaviour change principles effectively.
CIVITAS Initiative	Limerick City is applying to become a CIVITAS city. There are currently no CIVITAS cities in Ireland. CIVITAS is a programme of cities to implement smarter travel and its primary objective is to promote and implement sustainable, clean and energy efficient transport systems in urban areas. Limerick being a CIVITAS city will in turn reflect positively on Ireland and the Department's Smarter Travel Area Programme.
Intelligent Energy Europe	We are applying for match-funding from the Intelligent Energy Europe Scheme. We have joined a partnership to submit an application to the programme in June. We will apply for funding for the following types of projects: Capacity building; spreading of know-how, skills and methods; exchanges of experience; development of market and intelligence; policy input; awareness raising and information provision; and education and training.

Innovation	Description
Social inclusion	The regeneration area of Southill is included in the study area. The primary aim here is not to encourage mode shift from the car to more sustainable modes as 59% of households in the area do not own a car. Smarter travel offers a unique opportunity to connect this area of Limerick with the rest of the study area, helping to overcome and prevent further isolation and exclusion. Residents of the area will also benefit from further related impacts e.g. improved health and better access to health services and other facilities. We are also looking to ensure that smarter travel crosses language barriers and will strive to engage with our thriving immigrant communities and ensure that Limerick Smarter Travel is fully encompassing.
Cycling measures	We have included a number of innovative cycling measures in our proposal. These includes a cycle hire scheme like the hugely successful dublinbikes, the trialling of bike racks on local bus services and the provision of hand and foot rails for cyclists at advanced stop lines. Limerick Cycling has conducted a survey of Limerick roads, categorising these by degree of cycling proficiency (Appendix 6).
Match funding	We are utilising plans for the laying of electricity cables to dovetail with our proposals for developing new cycle tracks and lanes. This co-ordinated approach – reflective of the principles of the UK Traffic Management Act – will reduce disruption and also significantly, provide a source of match funding.
High quality design	High quality design is the foundation of our measures, be they educational campaigns or new infrastructure, it will all be presented clearly, durably, and with intelligence. We are looking to implement the highest quality design in our measures. This is so that we can be sure that our infrastructure will be attractive and safe to use – and also long lasting. A constant process of knowledge building feeds into the design process, and ensures that the physical infrastructure is beautiful, durable, and highly useful. More information can be found in our Design Report Appendix 1.



2.3 Partnership with the University of Limerick

Along with the City and the County, our other key partner for this proposal is the University of Limerick (UL). UL will provide widespread engagement across the faculties and divisions of the University. UL involvement will give the project access to the diverse range of expertise, knowledge and intelligence building within the University. It will supplement areas of expertise not normally available within the Local Authority system. It will make a significant contribution to smarter travel delivery across the campus, the city, the county and the region. UL will engage with the design process, engage with their policies and planning strategies, and engage with their students to deliver smarter travel. UL will also advise on how measures need to be tailored to be implemented elsewhere. UL is establishing the Mobility Project, a design laboratory for smarter travel. The Mobility Project is described in greater detail in Appendix P.

The University has already played a key role in developing our Stage 2 proposal. UL staff and students have been involved in the design process for key elements of infrastructure. UL has also added design input and a vital layer of creative thinking to the shape of our prospective programme. Should our bid be successful, UL will continue to support Smarter Travel through:

- Ensuring that the UL strategic plan complements smarter travel;
- Aligning UL strategic and physical planning with the goals of smarter travel.
- Engaging and mobilising the UL student body and staff to embrace smarter travel.
- Taking a leading role in design that will steer our programme and ensure the detail of initiatives is best identified, and act as a focus for smarter travel design and implementation for the country as a whole;
- Provide essential input to engineering and design through its impressive knowledge base; and
- Provide an additional important link to the business community through its recently launched education programme in supply chain management together with Infineon Technologies (Appendix J).

Departments/institutes committed to the bid include SAUL the School of Architecture, Civil Engineering, Graduate School of Medicine, Institute for Knowledge in Society, Sociology and Centre for Environmental Research. The University already has strong links with overseas institutions that can be harnessed, Design for London and Transport for London are two of its research partners.

2.4 Timing

The strategic importance of the Limerick-Shannon Gateway has recently been recognised in the National Spatial Strategy. A number of inter-city routes of national importance run through and converge in Limerick

City offering direct access to Waterford, Galway and Tralee-Killarney. Until recently there were only three river crossings in Limerick City (Castle Street, Sarsfield Bridge and Condell Road), spread across a distance of 1km in the City Centre. Significant numbers of national traffic hence passed right through Limerick city centre adding pressure to the local road network and causing congestion. It would be difficult to implement smarter travel measures under such conditions as it would not provide a safe environment for more vulnerable road users such as pedestrians and cyclists. Furthermore smarter travel measures are aimed primarily at local traffic. A number of recent developments that draw national traffic and especially HGVs out of the city centre mean that the timing could not be better:

- The Limerick Southern Ring Road which intersects all national routes converging on Limerick and diverts national traffic from the study area.
- The opening of the Limerick Southern Ring Road Phase 2 (Tunnel) in June 2010 will further improve flow within / through the region.¹
- Passenger trains between Limerick and Galway have reopened this spring after 34 years.²
- Limerick is currently carrying out a Public Transport Feasibility Study as part of the Mid-West Area Strategic Plan. The study is currently still in draft format and hence summarised in Appendix L.

2.5 Planning and Commitment



The Mobility Project within the University will engage with planning issues, creating a forum for planning and smarter travel. This will guide the design and planning of all aspects of the physical environment around smarter travel. The project will focus on increasing permeability – enhancing existing desire lines, removing barriers to smarter travel desire lines. Creating a smarter travel physical infrastructure is often simply about removing barriers to permeability – the shortest distance between two places in smarter travel terms is often not using roads but simply being able to take the shortest line. Increasing permeability will be a key strategy of smarter travel. The Mobility Project will analyse current non-vehicular movement patterns – where do people want to go, what shortcuts are currently in use on an ad-hoc basis, examine land-use and ownership issues. We have already incorporated first findings into this submission (ST-10-390).

Limerick County Council has a Settlement Strategy in place which is set out in the County Development Plan and places certain restrictions on ‘single houses in the countryside’. This is in accordance with the National Spatial Strategy and the Sustainable Rural Housing Guidelines. Continued high levels of single rural houses around the city edge would inhibit the sustainable growth of the city and environs. This policy attempts to accommodate ‘rural generated housing’, only when environmental and road safety criteria are met. In a presentation on The New Policy Framework for Transport in Ireland by Aoife O’Grady it was acknowledged that the process will require a number of tough decisions from local authorities but this is nonetheless essential. Table 2.2 shows how we commit to making the required changes.

Table 2.2: Our commitment

Requirements	Commitment
<i>Local Planning practice is in line with smarter travel</i>	<p>Adopted Castletroy Local Area Plan 2009 – 2015 July 2009</p> <p>Policy M1 Movement: <i>Networks that will encourage priority for walking and cycling, public transport provision</i></p> <p>Policy M3 Sustainable Public Transport: <i>support and facilitate the provision of new services through the district and enhancing and expanding existing services</i></p> <p>Policy M4: Pedestrians and Cyclists: <i>Putting pedestrians at the top of the road user hierarchy, followed by cyclists</i></p> <p>Policy M5: Access and Parking: <i>Promote local access routes and pedestrian movement corridors</i></p> <p>Draft Limerick City Development Plan 2010-2016</p> <p>Policy TR.9 Cycling & Walking: <i>to promote cycling and walking as important modes of transport</i></p>

¹ Facing the Challenge of Change: A Spatial Perspective on Limerick (October 2009)

² Limerick-Galway train back on track after 34 years The Irish Times 29/03.2010

Requirements	Commitment
	C. 16 Development Management includes smarter travel workplace facilities and mobility management plans Draft Limerick County Development Plan 2010-2016 Policy CP 03 <i>To provide for an enhanced quality of life for all, based on high quality, sustainable residential, working and recreational environments and transportation networks.</i>
<i>Take out car parking / introduce charges</i>	The Design Report in Appendix 1 and Section 6.6 give details on the reduction of car parking and parking regulation.
<i>Pedestrianisation</i>	Significant enhancement to the public realm in Limerick City Centre, particularly around O'Connell Street
<i>Take away road space from cars</i>	The Design Report in Appendix 1 shows where we propose to reallocate road space from cars to cycles and pedestrians.
<i>Reduce speeds</i>	Section 5.2.5.1 lists the stretches of road where speed reductions will be implemented.
<i>Change signal cycles to slow down traffic</i>	We will change signalling to give more priority to pedestrians and cyclists and place them at the top of the road user hierarchy.

For a detailed overview of background policy please refer to Appendix F.



2.6 Political Buy-in

Our Stage 1 submission confirmed we have the necessary political support. However, it goes much further than buy-in to this competition submission. The planning policies noted above have all been ratified by our politicians and demonstrate the fact that smarter travel is now accepted and supported. Our technical visit to the UK was supported by our key politicians. The foreword to this submission sets out succinctly how this buy-in goes right to the highest level. It is also demonstrated in our actions – the City and the County are developing travel plans (along with UL) to lead by example. Appendix M gives more details.

2.7 Regeneration

In order for the smarter travel initiatives in the regeneration hub to be effective, an emphasis will be placed on participation. We will provide a part of the funding for community owned schemes. Residents of Southill can decide (within approved project guidelines) which measures they would like to take forward and get involved in. One example of this could be a bike-maintenance and repair workshop. This does not only promote cycling as a means of transport but gives young people in the area an opportunity to learn new skills and get involved in community projects. Through Limerick Regeneration (one of our key stakeholders) the community would influence the decision making process and so buy-in to the projects.

2.8 Connectivity and Social Inclusion

Our aim is that smarter travel should be a useful tool for all sectors of the community. We are also looking to ensure that language does not create barriers to smarter travel. We have a thriving immigrant community – and are looking to ensure that our marketing takes this into account. Direct, specific and targeted participation of all target groups is our aim. We will ensure connectivity between all hubs and the wider study area.

3. Overview of the Study Area

3.1 Introduction

This chapter gives an overview of the study area baseline information. This will set the scene for our project ambition in Chapter 4. Information in this section includes:

- A description of the study area and the five key hubs;
- The existing travel situation - what this would be like if smarter travel measures were not implemented;
- An overview of key policies and local context;
- A description of the target markets; and
- An overview of the key partners and stakeholders in our proposal.

3.2 The Study Area

The study area stretches from Limerick City Centre in the west to the Castletroy area which includes the University of Limerick and the National Technology Park. It also encompasses Corbally to the north and the regeneration areas of Southill, Singland and Ballysimon to the south (refer to Appendix 5 Map ST-10-100).

Map 3.1: Study Area (also refer to drawing ST-10-101 in Appendix 5)



The study area is an important driver for regional growth. It stretches across the two local authorities of Limerick City and Limerick County. Population figures for each hub and the study area as a whole are

given below. It is important to note that the addition of the hubs does not equal the study area as there are other parts connecting the hubs included in the study area. The definition of the hubs has changed marginally since the Stage 1 submission. The Castletroy super-hub was created as there is a lot of overlap in this area e.g. UL students or NTP employees living in the Castletroy area. Singland and Ballysimon were included in the regeneration hub as 'sub-areas' as they will receive related benefits from routes connecting into Southill. For analysis of modal shift, figures for Southill will be used as it is here where measures will be implemented. For a map of the hubs including statistics see Appendix 5, Map ST-10-102.

City Centre Hub

- Employment: 16,787
- Residential: 37,800
- Education: 3,600 (1st), 5,869 (2nd), 11,820 (3rd)

Regeneration Hub

- Employment: 5,604
- Residential: 11,547
- Education: 558 (1st), 121 (2nd)

Source: CSO Ireland Census 2006

Corbally Hub

- Employment: 2,223
- Residential: 9,995
- Education: 791 (1st), 767 (2nd)

Castletroy Super-Hub





- Employment: 3,400
- Residential: 9,742
- Education: 1,058 (1st), 800 (2nd), 11,859 (3rd)

We are proposing to establish a smarter travel community that encompasses these diverse groups and vastly improves overall connectivity *and* quality of life.



3.3 Four Key Hubs

The four hubs are key local trip attractors and generators. They enable us to target smarter travel activity across the breadth of the travelling public. The overall aim of the project is to improve connectivity not only across the study area but also further afield.

Hub	Description and aims
City Centre Hub 	<p>Limerick City Centre is the main focus of tourist attractions and retail. The service industry is one of the main employers in the City Centre. The main shopping streets are pedestrianised and there are proposals for further pedestrianisation through development of the City Centre Orbital Route (see Appendix 1).</p> <p>Along with the working population, there is also a significant residential population.</p>
Corbally Hub 	<p>Corbally is a major residential suburb of Limerick City located north of the City Centre. Car ownership levels in Corbally are also high. 86% of household own one or more cars. In 2007 the Corbally Link Road was opened.</p>
Castletroy Super-Hub 	<p>This super-hub breaks down in three sub hubs: Education in UL; Residential in Castletroy and employment focused at the National Technology Park. Castletroy is a comparatively affluent residential area in Limerick south/east of UL and NTP. The NTP is located in the north east of the study area approximately 5km from the City Centre. The main issue for UL is to reduce car ownership among the student population by linking the university with the rest of the study area via sustainable modes.</p>
Regeneration Hub 	<p>The focus of this hub is on Southill but also incorporates Singland and Ballysimon. This is because the infrastructure that will improve connections to Southill will go through Ballysimon and Singland. So they will be 'sub areas of impact'. Southill consists of four housing estates, O'Malley Park, Keyes Park, Kincora Park and Carew Park - made up of approximately 1,100 houses in total.</p> <p>Source: Limerickregeneration.ie</p>

3.4 Travel Situation

Modal split in the study area from the Census 2006 is the most robust data available and is shown below:

Table 3.1: Modal Split in 2006

Mode	Split (%)
Walk	31%
Cycle	3%
Bus/coach/minibus	9%
Train	0%
Motorcycle	1%
Car driver	35%
Car passenger	16%
Other	5%
Source: CSO Ireland Census 2006	

These figures vary slightly from those given in our Stage 1 submission. The most notable point is that the modal share for walking is higher. Since the Stage 1 submission we have increased our study area to include a greater number of wards in the City Centre and in the regeneration areas. In both of these walking is above average. One of the reasons for this is that in both areas car ownership levels are low. 59% of households in Southill and 61% of households in the City Centre do not own a car. Our expansion of the study area creates a more sensibly defined location for taking forward and testing our approach to smarter travel. Our proposal is unique in that we do not only aim to **reduce car modal share and increase cycling and walking** modal

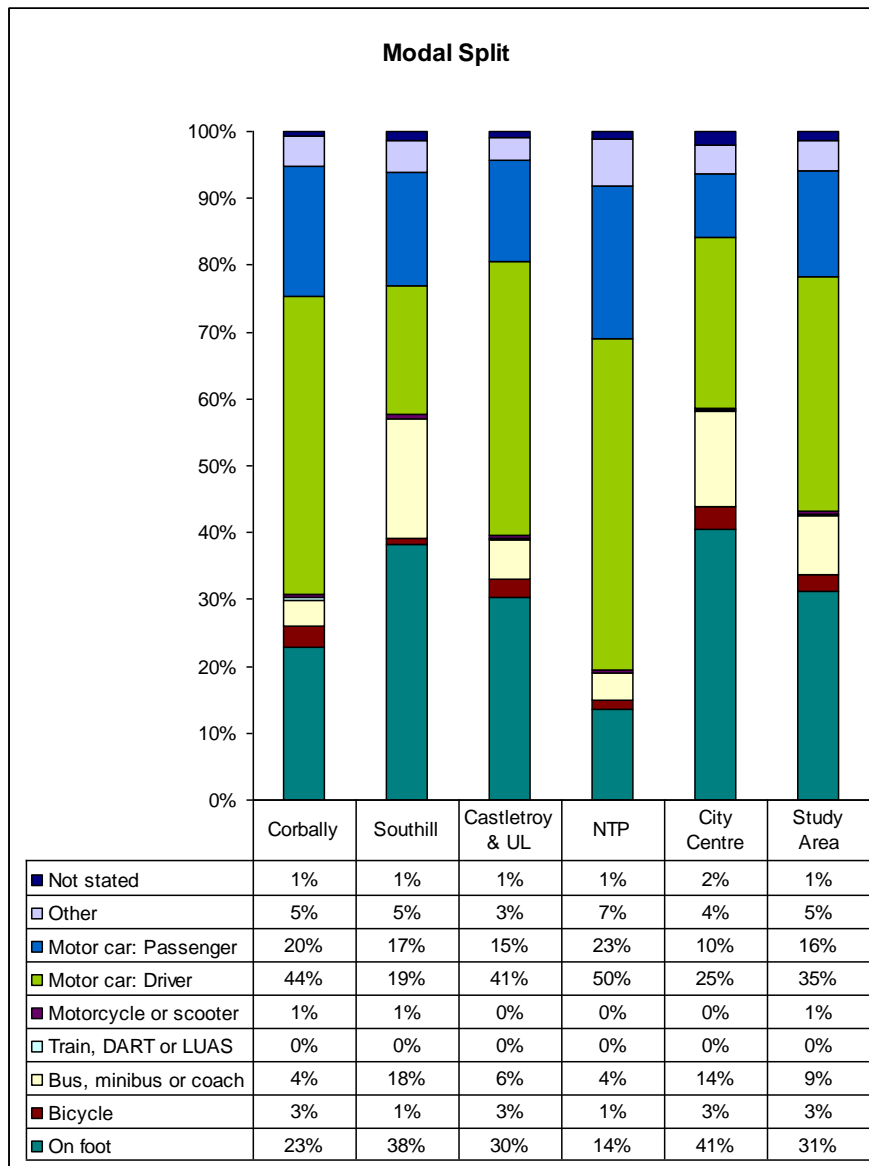
share in the study area as a whole. We are proposing to **connect four hubs** within the study area.

In some hubs e.g. Castletroy, Corbally and UL & NTP the car modal share is very high (Figure 3.1) and the focus will be on reducing car use, in the other hubs there is a major focus on connectivity, permeability and overcoming isolation e.g. by connecting Southill to the City Centre and the wider study area. A further focus here is to stop people aspiring to become car owners and to show them that a car is not necessary to travel flexibly and comfortably in Limerick. For the above reasons there will be a stronger focus on data for individual hubs rather than the study area as a whole. A point to note is that background data such as Census and POWCAR data are collected by ward and UL falls within the ward of Castletroy.

Table 3.2: Percentage of total car drivers and passengers driving 10km or less to work, school or college

Hub	Car driver <2km	Car passenger <2km	Car driver 3-5km	Car passenger 3-5km	Car driver 6-10km	Car passenger 6-10km	Car driver <10km	Car passenger <10km
City Centre	9%	14%	25%	31%	20%	19%	54%	64%
Corbally	16%	12%	30%	36%	22%	24%	68%	72%
Southill	12%	14%	18%	22%	22%	22%	52%	58%
Castletroy Super-Hub								
Castletroy & UL	10%	14%	19%	25%	25%	28%	54%	67%
NTP	8%	8%	15%	21%	24%	33%	47%	62%

Figure 3.1: Modal Split in 2006



Source: CSO Ireland Census 2006

The majority of people driving to work, school or college actually travel relatively short distances. This group will offer the greatest potential for modal shift, as these journeys can be most easily shifted to walking and cycling. 2km is an acceptable distance that a healthy person can walk in under 20 minutes. A healthy person can cycle 10km in around 35 minutes. Table 3.2 shows the percentage of car drivers and car passengers driving less than 10km to work. Especially in Corbally, Castletroy/UL and the City Centre, the majority of car journeys are less than 10km. The predicted population growth in the Mid West Region is approximately 9% between 2002 and 2020.³ For the purpose of our predictions 2006 figures will be used as a baseline as population growth across the entire Mid West is relatively modest; there is a 9% growth from 2002 some of which will already be partly absorbed in the 2006 figures; and a 9% growth in the Mid West does not necessarily equate to a

9% growth in Limerick. Irish smarter travel policy⁴ suggests that between 2009 and 2020 car use will continue to increase and commuter cycling and walking modal share will continue to decline without structured intervention. As a result, greenhouse gas emissions from transport will increase to between 18-20Mt for Ireland as a whole.

3.5 Policy and Local Context

Our Stage 2 Smarter Travel proposal will develop a 'smarter travel core' at the centre of the Mid West Region. This core not only reflects the local and national emphasis on smarter travel, it massively strengthens our commitment to mode shift in our area through policy, planning and action. We see our proposals as not only complying with relevant policy objectives, but taking them to the next level of

³ National Spatial Strategy for Ireland 2002-2020 – People, Places and Potential

⁴ Department of Transport A Sustainable Transport Future – A new Transport Policy for Ireland 2009-2020

success. The table below summarises how we have woven key policy documents into our smarter travel proposal. For a full summary of the policy background refer to Appendix F. In a presentation on The New Policy Framework for Transport in Ireland by Aoife O'Grady, four actions for smarter travel were identified:

1. Reducing the need to travel – We will support the Department's e-working strategy by encouraging smarter working practices.
2. Providing alternatives to the car – This is the cornerstone of our submission.
3. Improving fuel and energy efficiency – We will assist Ireland in its drive to be at the forefront of electric vehicle usage. We are liaising with ESB/Limerick and Clare Energy on this.
4. New institutional arrangements – e.g. ensuring that all appropriate government/local authority bodies work appropriately together to effectively deliver smarter travel.

However, smarter travel does not just play a role in supporting national and regional policies. It can complement and facilitate many local drivers. The box below sets out a range of areas where smarter travel generally, and our Stage 2 proposal specifically, can have a significant impact:

Table 3.3: Local drivers

Local Driver	Description	Link to our Proposals
Master Planning <i>To promote alternative forms of transport for the sustainable development of Limerick City</i>	Limerick City and County spatial planning policies will reflect and support the roll out of smarter travel across the entirety of the two administrative areas.	We are aiming to ensure that new developments have less reliance on the car and that existing sites can be retro-fitted to take advantage of smarter travel.
Master Plan at UL <i>To orient the UL physical masterplan to Smarter Travel</i>	UL is anticipated to expand significantly in the coming years. The UL master plan sets out the framework for this growth.	UL will develop in accordance with the principles of smarter travel, and encourage reduced reliance on the private car.
Walking and Cycling Strategy <i>Limerick City to be bustling with pedestrians and cyclists.</i>	This strategy sets out the detail of how MWASP can drive a marked increase in walking and cycling.	The smarter travel initiatives will help form the foundations of this critical mass of cycling and walking.
Regeneration <i>The challenge is to transform this area into one of the most vibrant and most sustainable suburbs in the country.</i>	The Limerick Regeneration Programme 2009-2018 sets out how economic, physical and social regeneration will be taken forward. Including improvements in the quality of life and health.	Our proposals specifically focus on Southill and the role that smarter travel can play in increasing opportunities for the community. Smarter travel can play an integral role in supporting the regeneration activities.
Social Inclusion and Increased Connectivity <i>A leading organisation in developing and implementing sustainable policies.</i>	Renewed effort to bring an integrated and focused approach to tackling poverty, inequality and exclusion at local level, and to put local authorities at the centre of this effort.	Our proposals are centred on enhancing connectivity between our five 'hubs' to improve access to employment, goods and services. The outcomes of which can be a model for the wider area.
Schools – Green Flag Programme <i>Take environmental issues more seriously</i>	Many schools in Limerick are working towards achieving green flag status.	Our programme will work with schools to ensure that there is a smarter travel culture from an early age. This complements the green flag initiative.
Tourism <i>Initiate and support tourism development as a key element in the achievement of overall economic growth throughout the Shannon region.</i>	Shannon Development (one of our key partners) works to initiate and support tourism development as a key element in the achievement of overall economic growth throughout the Shannon region.	Enhancement of walking and cycling links, and improvement to public realm will facilitate access to tourism and leisure sites
Shannon Development – Future plans at the National Technology Park <i>Finest location for modern, technology companies.</i>	Shannon Development is looking to increase employment at the National Technology Park substantially. Key focus is on high tech, energy related industries	Smarter travel supports this objective in two ways: Facilitating transport in and around the technology park Increasing the attractiveness of the area

3.6 Target Markets

The Limerick Smarter Travel Project addresses four major target groups across our four hubs and the study are as a whole:

- **Employees and Businesses** – The focus lies on the employees and businesses of the National Technology Park and in the City Centre. There are 80 businesses in the NTP spread across 30 buildings and employing approximately 3,000 people⁵. In the City Centre there are 33 businesses which are members of the Limerick Chamber of commerce including Deloitte, Price Waterhouse Coopers and Tesco. Approximately 7,500 people work in the City Centre.⁶
- **Residents** – Residents in the study area are distributed across Corbally, Southill and Castletroy and the City Centre. The socio-economic background and conditions of residents in the hubs differ significantly and measures need to be tailored to the specific local conditions.
- **The University of Limerick and other full-time third level students** – UL has a student body of approximately 11,300 and 1,300 staff. Car ownership among the student population is high and the existing cycling infrastructure on the campus is in low use. In addition to the University of Limerick there are other full time further education institutions:
 - Mary Immaculate Teacher Training College (now affiliated to UL): 3,000 students
 - Limerick Institute of Technology: 4,000 students
 - Limerick College of Art and Design: 1,000 students
- **Schools** – Schools are a very important target group. There are 16 secondary schools and 33 primary schools in the study area attended by approximately 5,600 and 6,800 pupils respectively. Pupils are addressed through their schools e.g. through school travel planning or cycle training. Our proposals are integrated with the Green Flag initiative.



3.7 Key Partners and Stakeholders

The three key partners of the submission are Limerick City Council, Limerick County Council and the University of Limerick. In addition there are a significant number of further stakeholders that have been involved in the bid development process and are committed to our bid. Their involvement is crucial to the success of the interventions. They include:

- Limerick Chamber of Commerce – support the submission and have facilitated our engagement with businesses. Will continue to support roll out of business related initiatives
- Shannon Development – as above
- Limerick Cycling – fed into key elements of the design process and support cycling enhancements
- Limerick Regeneration – facilitated our engagement with Southill. Crucial to our ongoing engagement with this community
- Schools and Colleges – all schools have been involved in the bid preparation process

We have also held focus groups with employees and businesses at the Technology Park and in the City, with residents across the study area and with parents associated with local schools. The output of our focus groups is detailed further in Appendix 2. The focus groups demonstrate that our programme has been put together with input and support from the community. We are keen to ensure that the community fully buys in to our proposals. For a full list of stakeholder commitment refer to Appendix E. We also attach further stakeholder support letters in Appendix P. These are additional to the ones collected for the Stage 1 Submission.

⁵ Mid-West Task force, Interim Report, 2009

⁶ POWCAR Data 2006

4. Project Ambition: Projected Outcomes and Impacts

4.1 Introduction

This chapter sets out the project ambition in terms of percentage modal shift for different modes and hubs. In addition it outlines related impacts such as health and economic benefits and demonstrates the causal link between measures, behaviour change and related impacts. The baseline data used is from 2006 Census and POWCAR. We are confident that we can achieve our ambitions for the study area and aspirations for each hub. Evidence from the UK Sustainable Travel Demonstration Towns shows that we have a strong case for achieving targeted modal shift. This will be outlined in more detail in Section 4.2.2.

4.2 Modal Shift

Table 4.1 shows our modal shift targets after one, three and five years. This shows that our ambitious targets will already be below the national 2020 target for car use and consequently above the national 2020 target for other modes by 2016. Targets differ from the Stage 1 submission because of the increase of the study area and consequently different baseline modal splits. Cycling is an important focus of this submission and we project to increase cycling modal split by a factor of 4.7 over the five year period. We are striving to really drive down overall car use in the area – with only 23% of car drivers by 2016. The percentage increase in walking across the entire study area is comparatively small as there are already high levels of walking in the City Centre and Southill due to low levels of car ownership. Following the outline of target modal shift for the study area as a whole, we outline our aspirations for each hub which, as smarter travel is largely site specific, demonstrates more clearly our ambitious – and focused – targets.

Table 4.1: Target Modal Shift

Mode		Current	Projected (after 1 yr)	Projected (after 3 yrs)	Projected (after 5 yrs)	Limerick 2016 Targets	National 2020 Targets
Car Driver	%	35%	33%	26%	23%	37%	45%
	Absolute	12,367	11,661	9,187	8,126		
Car Passenger	%	16%	16%	15%	14%	14%	55%
	Absolute	5,653	5,653	5,300	4,947		
Walking	%	31%	33%	34%	35%	61%	
	Absolute	10,954	11,661	12,013	12,367		
Cycling	%	3%	7%	12%	14%		
	Absolute	1,060	2,473	4,240	4,947		
Public Transport	%	9%	10%	11%	12%		
	Absolute	3,180	3,533	3,887	4,240		
Other/Not stated	%	6%	negligible	negligible	negligible	n/a	n/a
	Absolute	2,120	-	-	-		
Suppressed Journeys	%	unknown	1%	2%	2%	2%	n/a
	Absolute	unknown	353	707	707		
Total no. of Journeys		35,334	35,334	35,334	35,334		

Quantitative data on leisure trips is currently not available. However, we are proposing measures that will encourage a greater number of leisure trips. These measures include the walk and cycleway along the banks of the Shannon and canal into the City Centre, local signage and the provision of bike racks on buses. Furthermore it can be argued that people commuting by bike or walking are more likely to use sustainable modes for leisure trips as they are already using sustainable travel behaviour.

4.2.1 Aspirations for each Hub

As smarter travel is largely site specific and due to the significant demographic differences between the hubs, separate aspirations for each hub help to demonstrate the ambitious targets in reducing car modal share in the hubs where car travel is dominant and car ownership high. The aspirations for each hub combined with the remainder of the study area will give the blanket modal share targets in Section 4.2.

City Centre

Mode	Current	Projected (after 1 yr)	Projected (after 3 yrs)	Projected (after 5 yrs)	Limerick 2016 Targets	National 2020 Targets
Car Driver	25%	17%	14%	10%	10%	45%
Car Passenger	10%	9%	9%	9%	9%	55%
Walking	41%	47%	47%	50%	81%	
Cycling	3%	7%	10%	15%		
Public Transport	14%	20%	20%	16%		
Other/Not stated	7%	negligible	negligible	negligible	n/a	n/a

Mott MacDonald

Due to low car ownership levels in the City Centre, walking and public transport modal share are relatively high. The key aim here is to make it safer for cyclists and increase cycling modal share by a factor of 5.

Corbally

Mode	Current	Projected (after 1 yr)	Projected (after 3 yrs)	Projected (after 5 yrs)	Limerick 2016 Targets	National 2020 Targets
Car Driver	44%	42%	36%	28%	28%	45%
Car Passenger	20%	20%	20%	19%	19%	55%
Walking	23%	26%	30%	34%	53%	
Cycling	3%	6%	7%	11%		
Public Transport	4%	6%	7%	8%		
Other	6%	negligible	negligible	negligible	n/a	n/a

The key aim for Corbally is to reduce short car journeys and encourage people to walk and cycle.

Regeneration

Mode	Current	Projected (after 1 yr)	Projected (after 3 yrs)	Projected (after 5 yrs)	Limerick 2016 Targets	National 2020 Targets
Car Driver	19%	19%	18%	17%	17%	45%
Car Passenger	17%	17%	13%	9%	9%	55%
Walking	38%	39%	41%	42%	74%	
Cycling	1%	5%	8%	12%		
Public Transport	18%	20%	20%	20%		
Other/Not stated	7%	negligible	negligible	negligible	n/a	n/a

The key aim for Southill is to dissuade people from becoming aspiring car owners and showing that smarter travel is a cheap, comfortable and healthy alternative to the car.

Castletroy Super-Hub: Castletroy & UL

Mode	Current	Projected (after 1 yr)	Projected (after 3 yrs)	Projected (after 5 yrs)	Limerick 2016 Targets	National 2020 Targets
Car Driver	41%	39%	33%	23%	23%	45%
Car Passenger	15%	15%	15%	15%	15%	55%
Walking	30%	35%	37%	41%	62%	
Cycling	3%	4%	7%	12%		
Public Transport	6%	7%	8%	9%		
Other	5%	negligible	negligible	negligible	n/a	n/a

The key aim for Castletroy and UL is to significantly reduce the proportion of car trips made in the area, especially short journeys. These journeys are to be transferred to walking and cycling.

National Technology Park

Mode	Current	Projected (after 1 yr)	Projected (after 3 yrs)	Projected (after 5 yrs)	Limerick 2016 Targets	National 2020 Targets
Car Driver	50%	45%	33%	24%	24%	45%
Car Passenger	23%	23%	23%	23%	23%	55%
Walking	14%	20%	28%	30%	53%	
Cycling	1%	4%	7%	11%		
Public Transport	4%	8%	9%	12%		
Other/Not stated	8%	negligible	negligible	negligible	n/a	n/a

The key aim for the National Technology Park is to encourage walking and cycling for shorter trips.

4.2.2 Evidence

Evidence based design provides understanding about what works and why. At present we can provide precedent data to demonstrate that we can achieve these targets (refer to Appendix 3 for an example). However a large part of the smarter travel project is embedding a cyclical process of engagement and implementation. The Mobility Project in conjunction with the evaluation process will analyse all of the measures implemented to best understand their effectiveness as they are being designed, implemented, and used. This section gives evidence by mode to demonstrate that we can achieve these targets. We have reviewed implementation of smarter travel measures in order to ensure that the measures we are proposing have a successful track record. In addition there will be a summary of key evidence related to specific measures after each set of measures in Chapters five and six. Research has shown that Limerick is one of the most active cities in Ireland with 67% of people surveyed claiming to adhere to government guidelines of half an hour of moderate exercise five times a week.⁷ Being self-reported we expect the actual figures are slightly below this level. We are therefore confident that our smarter travel programme can achieve its ambitions as an already active population will be more receptive to smarter travel initiatives involving walking and cycling.

Car Use – In the UK Sustainable Travel Towns car driver drips by residents fell by about 9% per person during the programme. Overall traffic reductions experienced in inner areas were around 7-8%.⁸ Our

⁷ Limerick is the most active city in Ireland The Irish World 25/03/2010

⁸ Sloman et al. (2010) *The Effects of Smarter Choice Programmes in Sustainable Travel Towns: Summary Report*

anticipated reduction in car driver modal share over the five year period is 12%. Compared to the UK project our proposed project has a significantly higher expenditure per head per year (€49 versus €12 (£11)). As we are planning to utilise the funding in a targeted and concentrated manner we are confident that a 12% reduction in car driver modal share can be achieved.

Walking – The percentage modal share in the study area as whole is already relatively high and we are aiming for an overall increase of 4%. We aim for a more ambitious increase of 11% in Corbally and Castletroy and UL and a 16% increase in the NTP. The UK Sustainable Travel Towns experienced an increase by 10~13% in the number of walking trips per resident.⁹ We are therefore confident that our targeted modal shift is achievable.

Cycling – The number of cycle trips per resident in the UK Sustainable Travel Towns increased by 26~30%.¹⁰ Key results from of a survey into the effectiveness of one-to-one cycle training delivered by Cycle Training UK Ltd 1998-2003 showed that the number of people cycling all year round is up by 40%.¹¹ We aim to increase the modal share of cycling by 11% across the study area as a whole. Considering the above figures we are confident that this can be achieved.

Public Transport – Public transport marketing and ticketing could give a 2% reduction in traffic from 2002 to 2015 and well designed public transport interchanges could give a traffic reduction of just under 1%.¹² Combined with other measures we are proposing such as bike racks on buses we are confident that we can increase public transport modal share by 3%. Further evidence [will also be listed](#) in the Public Transport Feasibility Study.

4.2.3 Related Wider Impacts

This section describes the related impacts brought about by our proposed smarter travel measures. Each impact is described in turn. The causal link for each of the related impacts is also identified. Table 4.2 summarises the related wider impacts, with more detail provided in the following sections.

Table 4.2: Summary of Related Impacts

Related Impact	Measures contributing to change	Impact/Outcome	Evidence
Greenhouse gas emissions & quality benefits	All measures reducing the number of car trips and/or vehicle kilometres	Difference in GHG emissions of around 1.4 kilo tonnes	Annual per capita carbon savings of roundly 50kg of carbon dioxide. ¹³
Health benefits	Cycling measures, walking measures, improved signage	49% will achieve 30 minutes of daily activity	All three demonstration towns achieved increases in active travel, which are likely to have resulted in benefits to health. ¹⁴
Reduced accident rates	Cycle and walking route, ASLs, cycle training, reduced speed limits	Increasing trend of no. of persons injured and killed will be reversed.	Reallocation of road space for cyclists resulted in 45% reduction in cycle casualties 11% reduction in pedestrian casualties. ¹⁵
Economic benefits	All measures	Congestion cost saving, saving through car sharing & improved health	In the Summary report evaluating the Sustainable Travel Towns in the UK, Sloman et al. (2010) give a value of 18p of congestion cost saving per vehicle km. ¹⁶

⁹ ibid

¹⁰ ibid

¹¹ Bicycle Federation of Australia (2006) *Best Practice in Adult Cycling-Proficiency Training*

¹² Cairns et al. (2004) *Smarter Choices – Changing the Way We Travel*

¹³ Sloman et al. (2010) *The Effects of Smarter Choice Programmes in Sustainable Travel Towns: Summary Report*

¹⁴ ibid

¹⁵ Department for Transport *Encouraging walking and cycling: Success stories - Introduction*

¹⁶ Sloman et al. (2010) *The Effects of Smarter Choice Programmes in Sustainable Travel Towns: Summary Report*

Related Impact	Measures contributing to change	Impact/Outcome	Evidence
Regeneration benefits	Cycle and pedestrian network, community owned measures	Reduced isolation, increased social inclusion	Evidence from the UK Sustainable Travel Towns: Easier to access a range of destinations; Improving work-life balance. ¹⁷
Public realm benefits	Walking and cycling measures	A friendly, lively and safe public environment	The Green-Schools programme in Dublin has resulted in a reduction of car traffic of 8-15% ¹⁸
Social benefits	Walking, cycling and public transport measures	Social inclusion, strengthened community, associated health benefits	London cycling projects achieved a wide range of positive outcomes, including engaging 'at risk' young people in challenging activities. ¹⁹
Education Benefits	Mainly travel planning	Limerick Smarter Travel is owned by Limerick.	Positive experiences of Smarter Travel Sutton. ²⁰

Greenhouse Gas Emissions Savings and Air Quality Benefits – Our proposed smarter travel measures can have a significant impact on improving local air quality and making a contribution to the global battle of climate change. This will be achieved through reducing the number of car trips made and the distance travelled on individual trips. Fewer cars driving shorter distances on the road means fewer carbon emissions. In addition congestion, which causes great amounts of carbon emissions, will reduce. Air quality is not only affected by carbon emissions but also other pollutants such as nitrous oxide and particulates. These are particularly damaging to the health e.g. causing respiratory disease if breathed in on a regular basis. 'It is estimated that it [air pollution] reduces life expectancy in the UK by an average of 7–8 months'.²¹

At present the average vehicle kilometres per trip are 17km. The Stage 2 evaluation criteria state an average CO₂ emission at 167g of CO₂ per km. This gives total CO₂ saving of 8.6 kilo-tons of CO₂ during the five year period. For the detail of these calculations see Appendix D. This is a very broad approach to calculate greenhouse gas emission savings and there are a number of limitations. First of all, it assumes a constant reduction in trips of all distances despite the fact that smarter travel measures primarily target shorter trips. Secondly, potential increased emissions from additional buses or other forms of public transport are not taken into account. Finally the data only refers to journeys to work. Despite these limitations, the above figure is a good illustration of potential greenhouse gas emissions savings as limiting factors apply to both the baseline and projected data. The Environmental Protection Agency continuously monitors ozone and nitrogen dioxide levels on Park Road in central Limerick. Ozone levels are usually below 100 micrograms per cubic meter and nitrogen dioxide levels are usually below 50 micrograms per cubic meter. The limit for NO₂ is 200 and the information threshold for ozone is 180.²² Therefore, our smarter travel proposals will seek to further improve the local air quality, and associated benefits.

¹⁷ ibid

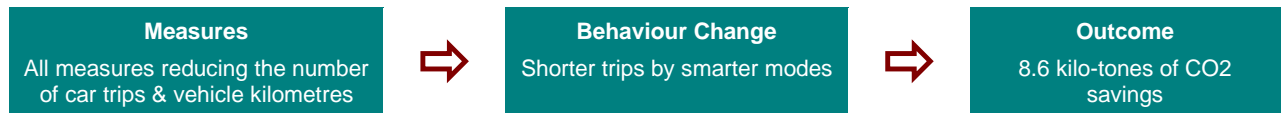
¹⁸ EPOMM (July 2007) The Green- Schools Initiative, Dublin, Ireland

¹⁹ Jake Elster (2000) Cycling and Social Inclusion (<http://sticerd.lse.ac.uk/dps/case/cr/CASEREport8.pdf>)

²⁰ Smartertravelsutton.org

²¹ Department for Transport/Department of Health (February 2010) *Active Travel Strategy*

²² <http://www.epa.ie/whatwedo/monitoring/air/data/pr/gas/>

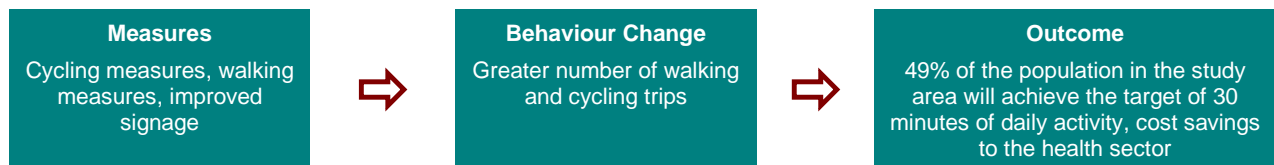


Health Benefits – The smarter travel project will be beneficial to the health of the targeted populations in two ways. Reduction in the number/volume of private cars can bring about improvements in air quality – having positive implications for health (see above). Incidences of respiratory illness as measured through hospital admissions or GP referrals can be used as a baseline and for future monitoring.

Smarter travel directly encourages walking and cycling as alternative modes of travel. The National Guidelines on Physical Activity for Ireland recommend at least 30 minutes of physical activity per day for those ages 18-64. This could include brisk walking or cycling. The number of people achieving this target can be used as one particular measure. Integrating walking and cycling into a daily routine is more likely to be sustained as a form of exercise than going to the gym. Furthermore it is an opportunity for those who lack the funds to join gyms or sports clubs to keep active and healthy. This does not only bring about health benefits but also has positive impacts on the economy – ‘An Australian study estimated that if Australian people became more active for just 30 minutes per day, it could save \$1.5 billion (€815 million – or €31 per head of the population) a year in costs linked to CHD [coronary heart disease], stroke, type 2 diabetes, breast cancer, colon cancer, depression and falls. The level of inactivity in Ireland is even higher than in Australia, so the possible savings to the economy as a result of a healthier population may be even greater per capita.’²³ Data on obesity may also prove a useful supplementary measure of the success of policies to promote healthy travel modes. Our proposal aims to increase the number of people walking and cycling to work by 14% hence significantly increasing the number of people achieving the target of 30 minutes of activity each day. By year five of the programme 49% of the population will have achieved the target this is an increase of an additional 4,970 people achieving the target.

In addition to physical health, using sustainable modes to travel can also have a positive impact on mental health as it takes people out of the isolation of their own car and allows for social interaction be it in car sharing on public transport or through a walking group.

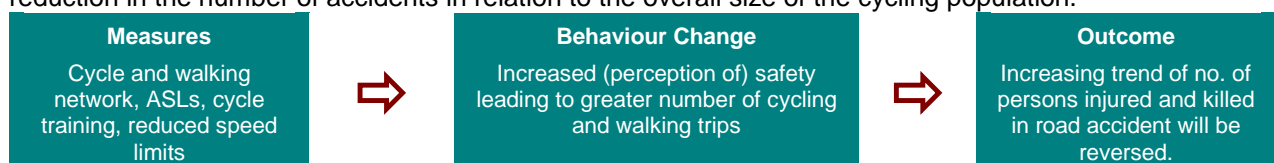
²³ Department of Health and Children/Health Service Executive (2009) *The National Guidelines on Physical Activity for Ireland*



Reduced Accident Rates – Cyclists and pedestrians are particularly vulnerable road users. In the County Limerick the number of persons killed in road collisions increased by 6% between 2004 and 2008. The number of persons injured increased by 18% in the same time period.²⁴ There are a number of measures we are proposing to make cycling and walking in Limerick safe and ensure that people perceive walking as safe. Perception of a lack of safety is a big deterrent to taking up cycling. Measures that will have a positive impact on safety include speed reductions, advanced stop-lines, combined foot/hand rails and cycle training. The Active Travel Strategy outlines that the health benefits of cycling clearly outweigh the safety risks: ‘There is one cyclist death per 33 million kilometres of cycling, while being sedentary presents a much greater risk. Over 50,000 people die in the UK each year due to coronary heart disease related to insufficient physical activity, compared to around 100 cyclists killed on the road.’²⁵ In addition accidents are also a significant economic cost. In 2008 road accidents cost the Irish economy €1.2 billion.²⁶

Evidence from the UK Sustainable Travel Towns shows that an increase in active travel is not necessarily accompanied by an increase in pedestrian and cyclist casualties e.g. the reduction of cyclist casualties in Peterborough was similar to reductions at a national level despite large increase in the number of cyclists in Peterborough. However, where an increase in casualties is experienced it is important to implement measures to improve the safety of active travel²⁷ such as those outlined above.

There are a number of measures which have a particular focus on safety. This includes junction improvements as part of new cycleways, advanced stop lines (with combined hand and foot rails), speed limit changes and cycle training. Travelwise Merseyside found that following cycle training ‘more than 97% of parents and guardians saw an improvement in their child’s cycling safety – with 75% noting “a lot” of improvement.’²⁸ Reallocation of road space for cyclists in Hull brought about a 45% reduction in cycle casualties and an 11% reduction in pedestrian casualties.²⁹ Additionally, the opening of the Limerick Southern Ring Road including Phase 2 (Tunnel) should significantly reduce the amount of through traffic, making the area safer for walking and cycling. We estimate that overall, Limerick should see a substantial reduction in the number of accidents in relation to the overall size of the cycling population.



Economic Benefits

Wider Economic and Business Activity in Limerick – Individual businesses and the region as a whole will experience positive economic benefits as a result of the proposed smarter travel measures. Taking cars of the road network leads to reduced congestion and improved journey time reliability. In the Summary

²⁴ RSA (2010) *Road Collision Facts Ireland 2008*

²⁵ Department for Transport/Department of Health (February 2010) *Active Travel Strategy*

²⁶ <http://www.articlesbase.com/insurance-articles/the-cost-of-road-collisions-hits-the-irish-economy-hard-despite-fatalities-falling-1935946.html>

²⁷ Sloman et al. (2010) *The Effects of Smarter Choice Programmes in Sustainable Travel Towns: Summary Report*

²⁸ <http://www.letstravelwise.org/newsarticle.php?articleID=1078>

²⁹ Department for Transport *Encouraging walking and cycling: Success stories - Introduction*

report evaluating the Sustainable Travel Towns in the UK, Sloman et al. (2010) give a value of 18p of congestion cost saving per vehicle km.³⁰ There are a number of limitations to this approach, including:

- The higher than average cost of congestion in urban areas; and
- An increased value of time since the calculation was made in the early 2000s.

Despite the limitations it is still an excellent way to assess the overall *potential* of the Smarter Travel Programme. We have therefore calculated the total amount of savings for our study area. A further point to note is that in this calculation the reduction in vehicle kilometres over the five year period is assumed to be linear. Over the five year period there are a total of 24,272,860 vehicle kilometres saved. At a value of 18p (approx. 20 cents) of congestion cost saving per vehicle km, the Smarter Travel Areas Programme will bring a saving of approximately €4.9 million.

The National Technology Park is set to expand over the coming years. The IDA has set out targets of creating 105,000 new jobs between 2010 and 2014 with 50% of investment being outside Dublin and Cork. In line with the National Spatial Strategy for Ireland, the IDA will work with local authorities to make potential sites as attractive as possible.³¹ With a focus on smarter travel and clean energy the NTP has significant potential. Current infrastructure will struggle to cope with this increase and new facilities have to be built. The NTP prides itself as a park for high-tech, clean and green industry. Smarter travel offers a substantial opportunity to attract new businesses to the park benefiting the economy of the area as a whole – whilst emphasising the business credentials of the area.



Businesses benefit in a number of ways. There are cost savings on providing and maintaining car parking spaces and the land can be used for more productive activities. Further cost savings will be made on mileage claims, running fleets and business travel³² and reduced sick through associated health benefits.³³

Individuals – Running and maintaining a car is significantly more expensive than car sharing, a season ticket for public transport or the purchase and maintenance of a bike. In making a return journey of 10 miles each way, 5 days a week for 47.2 weeks a year and including fuel, parking and other running costs on average €4,000 per year. Sharing with just one person brings about savings of approximately €800 and sharing with two people saves you over €1,000.³⁴

Wider Benefits to Limerick – Improved health (see above) has economic benefits in terms of savings for the health sector. The Active Travel Strategy UK states that ‘if you include direct costs to the NHS (the treatment of long-term conditions and associated acute events such as heart attacks, strokes, falls and fractures), and lost productivity to the wider economy (from sickness absence and premature death of people of working age), in total this costs the country in the region of £9.8bn a year.’³⁵

Limerick and its surrounding areas are already attracting a significant number of tourists each year. There are numerous attractions in the city but at present public transport connections for tourists are rather limited and infrequent. Investment in smarter travel measures will offer tourists the opportunity to take public transport or walk or cycle along the canal for example. The retail industry will benefit from the programme in that a more attractive, less congested and less polluted City Centre (where the majority of retail business is located) will be more attractive to shoppers. The number of walk-in customers will increase if people walk as a means of transport. Research on the UK Sustainable Travel Towns found that ‘large-scale Smarter

³⁰ Sloman et al. (2010) *The Effects of Smarter Choice Programmes in Sustainable Travel Towns: Summary Report*

³¹ IDA Ireland (2010) *Horizon 2020 – IDA Ireland Strategy*

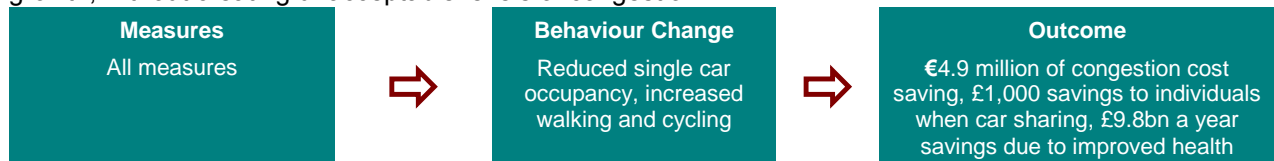
³² Department for Transport (March 2008) *The Essential Guide to Travel Planning*

³³ Cycling England (2007) *Cycling and Health – What’s the evidence?*

³⁴ Figures from *Cost Calculator* on liftshare.com

³⁵ Department for Transport/Department of Health (February 2010) *Active Travel Strategy*

Choices Programmes were partly seen by officers as a way of enabling employment growth, or housing growth, without creating unacceptable levels of congestion'.³⁶

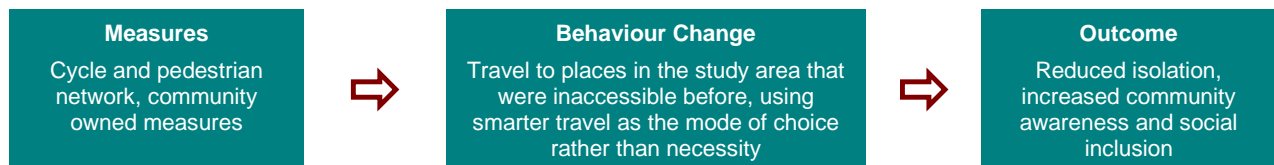


Regeneration Benefits – Southill, one of the hubs in the study area, is subject to a significant regeneration programme. The regeneration programme includes social, economic and physical regeneration. Our proposed Smarter Travel Programme can contribute to all three areas. Active communities contribute to the quality of life and wellbeing – smarter travel measures directly contribute towards creating an active community. Furthermore improved public transport connections as well as walking and cycle links allow for better access to educational and health facilities as well as employment. One of the key aims of physical regeneration is to provide new and improved connections within the hub itself and between Southill and the City Centre. ‘The objective is to create a well connected neighbourhood, based on a network of streets that encourages people to move around on foot, by bicycle, and on public transport.’³⁷ The Permeability study will identify key strategic points where connectivity can be cost effectively enhanced, where broken links with the city can be repaired, and where walking and cycling travel times can be reduced by offering people the quickest way between destinations. We will provide a part of the funding for community owned schemes where residents of Southill can decide which measure they would like to take forward and get involved in within an established and agreed framework. One example of this could be a bike maintenance and repair workshop. This does not only promote cycling as a means of transport but gives young people in the area an opportunity to learn new skills and get involved in community projects.

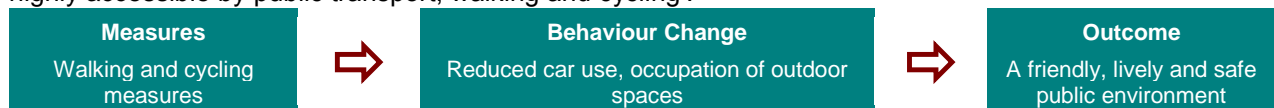
It is not only Southill that can benefit from regeneration. Cycling infrastructure in Castletroy for example is run down and in substantial need of upgrading. Furthermore the programme will contribute towards creating an enhanced, united community of cyclists in Limerick from all districts. This will help to overcome segregation between the different residential areas of Limerick. The City Centre, where relative affluence is below average in some wards will equally benefit from regeneration through smarter travel.

³⁶ Sloman et al. (2010) *The Effects of Smarter Choice Programmes in Sustainable Travel Towns: Summary Report*

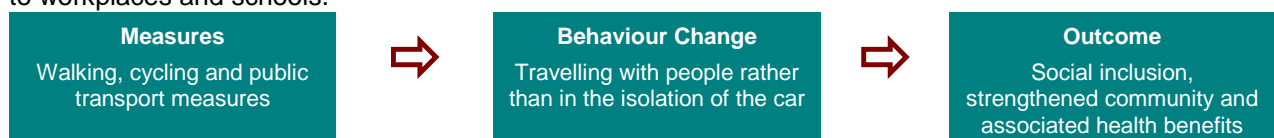
³⁷ Limerick Regeneration (2008) *Limerick Regeneration Programme – A Vision for Moyross, Southill & Ballinacurra Weston and St. Mary’s Park*



Public Realm Benefits – A significant number of measures we are proposing as part of the Limerick smarter travel project contribute to an overall enhanced public realm across the entire study area. Open, pedestrian friendly spaces with adequate lighting and signage will make walking a more attractive option. Fewer cars will bring less congestion, reduced noise levels and better air quality. The cycle and walking route along the riverbank and canal connecting the university with the city centre is a measure which will make a significant contribution to the public realm. We will liaise with urban planners and developers from an early stage to ensure to 'locate day to day facilities which need to be near their clients in local centres so that they are accessible by walking and cycling, and accommodate housing principally within existing urban areas, planning for increased intensity of development for both housing and other uses at locations which are highly accessible by public transport, walking and cycling'.³⁸



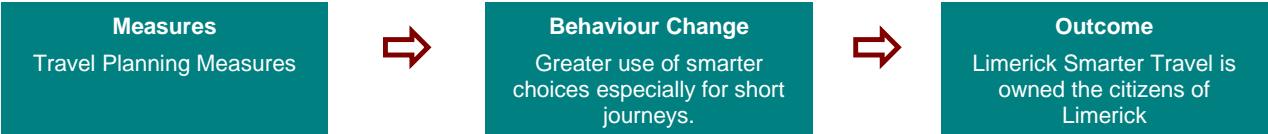
Social Benefits – Social benefits are partly linked to those of public realm benefits. An improved public realm with light and open spaces used by significant numbers of pedestrians can contribute to making the area safer and reducing crime. For older people and people who cannot drive or cannot afford a car, sustainable modes especially walking, allow them to maintain independence, prevent isolation and allow access to services, employment and other facilities. As noted under health benefits, smarter travel measures impact on the social life of individuals as they take people out of the isolation of their own car and allow for social interaction – be it in car sharing on public transport or through a walking group. Our emphasis on community decision making (e.g. in Southill) should contribute to community cohesion – and of 'working together.' Community cohesion will be created between residents of different areas of Limerick including the large immigrant community in the City Centre. The UK Sustainable Travel Towns identified positive impacts in terms of equality of opportunity including reduced health inequalities and wider access to workplaces and schools.³⁹



Education Benefits - Education is at the core of the sustained success of smarter travel; when our children and young people are educated about smarter travel, and use smarter travel, it becomes established in their minds and habits in the same way that 'non-smarter travel' does today. Education about smarter travel will be an ongoing process of smarter travel, education will address people of all ages; old people, middle-aged people, college students, teenagers, as well as young people. Each have different educational needs, and different potentials in terms of how they use smarter travel. The University will help feed education directly into implementation in order that the specific measures of smarter travel actually do improve health, do create more coherent communities, integrates with and builds on the green schools programme, and informs curriculum development to assist teachers and students to re-think movement.

³⁸ Department for Transport/Department of Health (February 2010) *Active Travel Strategy*

³⁹ Sloman et al. (2010) *The Effects of Smarter Choice Programmes in Sustainable Travel Towns: Summary Report*



5. Design of Project: Infrastructure Measures

5.1 Introduction

In this chapter we outline our proposed infrastructure and supporting measures. We give a summary of infrastructure and design measures here as more detail on each measure including design guidelines and specifications is included in Appendix 1 the Design Report and in ST-10-200 to -213/-221/-222. We are also offering match funding for a number of measures and complementary measures. Details on this are also included in the design report. This section focuses on a description of each measure, stakeholders, costs and evidence. It is important to stress that public transport improvements are covered by the Public Transport Feasibility Study – a summary is provided in Appendix L and drawing ST-10-104.

5.2 Detailed Description of proposed Measures

This sub-section lists all measures. The Design Report in Appendix 1 gives a detailed overview including costs. Quarterly phasing is provided in Appendix A. This chapter therefore includes a summary of each measure.



5.2.1 Cycling Measures

Objective two of the National Cycling Policy for Ireland states that urban road infrastructure needs to be designed or retrofitted to be cyclist friendly. Traffic management measures also need to be cyclist friendly. The policy calls for a greater emphasis on the “Hierarchy Solutions”. Table 5.1 outlines these solutions and our proposed approach of incorporating them into the Limerick Smarter Travel Area.

Table 5.1: Hierarchy Solutions

Hierarchy	Incorporation into Limerick Smarter Travel
Traffic reduction	Limerick Southern Ring Road including Phase 2 (Tunnel)
Traffic calming	Reduced speed limits & other traffic management, ASLs for cyclists, Speed limit changes (ST-10-214), Tabletops at junctions
Junction treatment and traffic management	ASLs for cyclists, Parking regulations, Signalisation of roundabouts and overall traffic reduction, Junction improvements (ST-10-215/216)
Redistribution of carriageway	Cycle lanes and walk ways
Cycle lanes and cycle tracks	Cycle lanes and walk ways and supporting measures such as LED lighting and CCTV
Cycleways	Cycle and walkway along the river Shannon and Canal

5.2.2 Cycling and Walking Infrastructure

Improving cycling infrastructure through the redistribution of carriageway, cycle lanes, cycle tracks and cycleways as well as advanced stop lines (ASLs) for cyclists is a key part of the hierarchy solutions of the National Cycling Policy. Our proposal (shown in ST-10-103) addresses these as well as cycle route security and new and improved pedestrian links. The overarching objectives of these measures are to connect the hubs in the study area and enable travel between the hubs by walking and cycling. **It is the aim to increase cycling from 3% to 14% by 2016 and to increase the mode share of walking from 31% to 35% by 2016 in the study area as a whole.** In addition to existing cyclists and pedestrians the target audience of these measures include all residents, employees and students of the study area.

5.2.2.1 Cycle Lanes and Walkways; New and Upgraded Pedestrian Links

Links to key policy	National Cycle Policy Framework Objectives 1, 2, 5 Smarter Travel Policy Document Actions 4, 15, 16, 17
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We are proposing an integrated network of cycle lanes and pedestrian links across the study area linking the four hubs. The network is made up of five routes, ten links and infrastructure in the city centre and at UL. Refer to Appendix 5, Drawing ST-10-102. The table below gives a brief description of each route and link as well as a timescale for implementation. For more detail on each route and link (associated infrastructure such as junction improvements and signalling, maps and visuals refer to the Design Report in Appendix 1). The highlighted routes are those where we are applying to the DOT funding for some or all of the measures. The others we will fund as part of our commitment to continue smarter travel into the future:

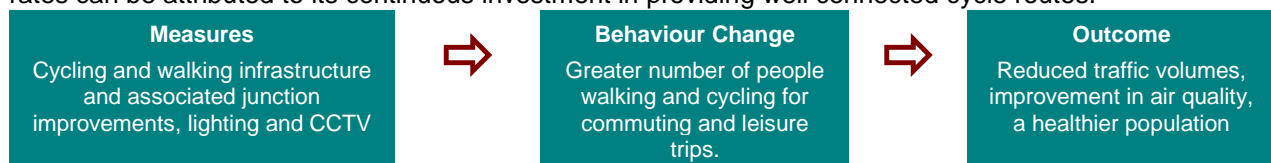
Table 5.1: Key Infrastructure Measures

Routes and Links	Description
Route 2, Link 1 ST-10-320 to -325	The route runs alongside the River Shannon and the Canal for a distance of 3.1km. It is embedded in a Special Area of Conservation. It will incorporate a combined Walkway and Cycleway. The proposed facility will be a minimum of 3m wide, surfaced with bitumen macadam, well lit, well signposted and provided with extensive CCTV facilities to ensure security for users. On reaching Lelia Street, the route will continue via on road cycle lanes for a distance of 1km. Junctions at Clare Street, New Road, Mulgrave Street and Sexton Street will be provided with Advanced Stop zones and Toucan crossings for cyclists. The route will terminate at Colbert Train and Bus Station where a safe and accessible cycle parking facility will be provided. Link 1 connects Route 2 and Route 1. It continues along the south bank of the Shannon and intersects with Route 1 and the R463 at Athlunkard Bridge.
Route 3, Link 2, 4, 5 & 6 ST-10-330 to -335	This route extends from the Cappamore Road junction along the R445 (Dublin Road) to the City Centre. It also includes the proposed cycleway network in the National Technological Park and the existing network on Plassey Park Road. This route has been identified as a key route by Limerick Cycling. The existing AADT on the Dublin Road is 24,100 with 6% Heavy Goods Vehicles. A combined bus/cycleway will extend inbound from the Cappamore junction to the Groody Roundabout. An inbound bus/cycleway has already been constructed from the Killmurray Roundabout to the Groody Roundabout. An outbound cycleway will also be provided from the Killmurray Roundabout to the Cappamore junction.
Route 1 ST-10-310 to -315	This route runs on the existing road (R463) surface from Westbury in Co. Clare to O'Connell Street in Limerick City Centre. The existing AADT is 14028 with 7% HGV. The existing road surface is 7.5m – 8m wide with 2m footpaths and 2m grass verges on either side of the roadway. This geometry provides scope for installing designated cycle lanes in both directions. A 1.5m wide advisory cycle lane is proposed.
Route 4, Links 7, 8 & 9 ST-10-340 to -345	This route extends from the R445 (Dublin Road) via Castletroy College Road, Kilmurray Link Road, School House Road, Golf Links Road, Ballysimon Road and the Tipperary Road to the City Centre. There is an existing cycle lane network in both directions on the Castletroy College Road, the Kilmurray Link Road and the School House Road. Minor junction improvements are required as detailed below. The Ballysimon Road (formally the N24) is an ideal section of road to retrofit cycle lanes in both directions. This section of the route will run via on road cycle lanes from the junction of the Golf Links Road and the Ballysimon Road to the Tipperary Road and the Tipperary Road Roundabout for a distance of 1.5km. The Tipperary Roundabout is being replaced in 2011 as part of the Childers Road widening Contract. Toucan crossings, controlled pedestrian crossings and bus priority detection systems will be incorporated into the new junctions design. Footpath construction is also required on sections of this road.
City Centre	Like most urban centres, the centre of Limerick is several hundred years old. Therefore providing wide cycle paths will not be practicable on most streets and therefore our smarter travel intervention will concentrate on making the city centre safer for cyclists and pedestrians and introducing travel planning and promoting smarter travel.
UL Campus	Enhanced cycle and pedestrian links to complement the key routes linking the University to other parts of the town.
Route 5, Link 3 ST-10-350 to -	This is a critical route and will make a significant contribution to the social inclusion of the Southill Regeneration District. There have been ongoing discussion with Limerick Regeneration to provide this connection which complements their Master Plan. Limerick Regeneration have been very supportive of the project. Link 3 is the priority as it connects the Regeneration Area with the other hubs via the

Routes and Links	Description
354	Childers Road.

Stakeholders – Limerick City, Limerick County, UL, NTP, Residents, Business, Schools, Limerick Cycling

Evidence – The reallocation of road space from motor vehicles to cyclists, by introducing on-road cycle lanes on a large number of roads in Hull found an increase in cycle flows by between 20 and 30%.⁴⁰ In 2008 Cycling in Malmö increased by 11%; with approximately 30% of all transport journeys occurring on a bicycle. As much as 40% of all work-related activities are undertaken by bicycle. Malmö's high cycling rates can be attributed to its continuous investment in providing well connected cycle routes.⁴¹



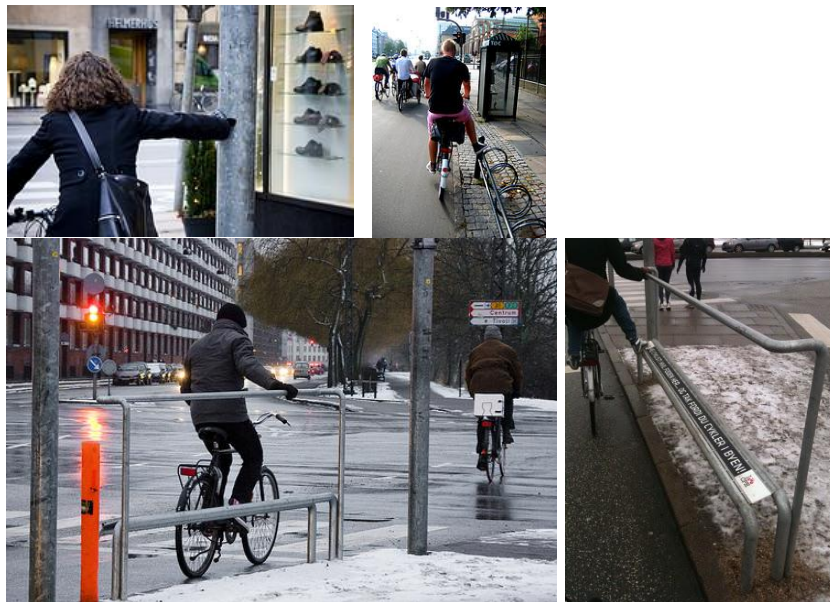
5.2.2.2 Advanced stop lines for cyclists

Links to key policy	National Cycle Policy Framework Objectives 1, 2 Smarter Travel Policy Document Action 15
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Advanced stop lines (ASLs) will be provided at a number of signalised junctions in the study area along the routes and links listed above. ASLs will facilitate the safe passage through signalised junctions giving cyclists a head-start of cars and reducing the number of cyclists overlooked by left turning vehicles at junctions. At a number of ASLs combined hand and foot rails will be piloted. A high railing allows the cyclists to hold on with their hand and a low railing is provided for resting the foot. ASLs will be implemented at the following junctions: Route 1: Signal controlled junction replacing the Corbally Roundabout; Route 2: Junctions at Clare Street, New Road, Mulgrave Street and Sexton Street; Route 3: Signal controlled junctions at St Patrick's Road, Park Road and Pennywell; Route 4: St Patrick's Road and Cathedral Place – 2013/2014; Route 5: Included in the construction of new junction at Roxborough Road.

⁴⁰ The project involved the reallocation of road space from motor vehicles to cyclists, by introducing on-road cycle lanes on a large number of roads in Hull. (<http://www.dft.gov.uk/pgr/sustainable/walking/success/encouragingwalkingandcycling5797>)

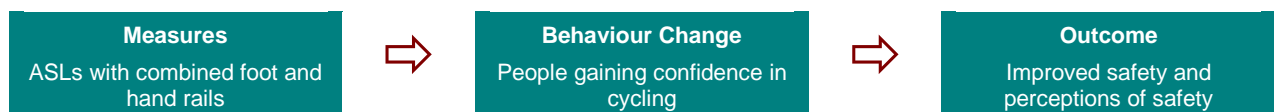
⁴¹ Cullinane, K. and Cosgrove, T. (2010) *Smarter Travel in Six European Cities - A Precedent Study* University of Limerick



Source: Copenhagenzine.com

Stakeholders – Limerick City, Limerick County, UL, NTP, Residents, Business, Schools, Limerick Cycling

Evidence – In addition to road space reallocation in favour of cyclists, ASLs were installed at signalised junctions in Hull. An overall 45% reduction in cycle casualties was experienced.⁴²



5.2.2.3 Cycling route security

Links to key policy	National Cycle Policy Framework Objectives 1, 2, 5 Smarter Travel Policy Document Action 15
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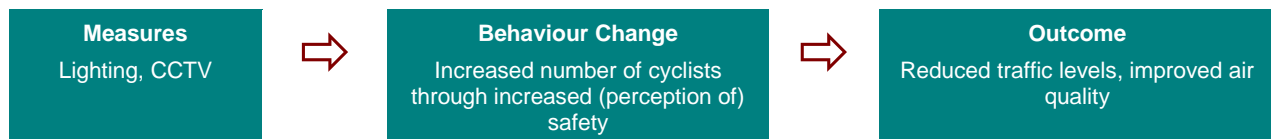
CCTV is to be provided along cycle lanes and at cycle parking facilities along the key routes and links as highlighted in Section 5.2.2.1. Innovative LED lighting will be provided along the river/canal cycleway. It is proposed to use LED lighting to maximise energy efficiency. A number of LED lighting types are being considered. Public lighting and CCTV have been identified as key requirements for safety and security along this route which are if it is to be successful. Consultation has taken place with Waterways Ireland, National Parks and Wild life Service, Shannon Fisheries and Conservation Officers who are all key stakeholders on this route in relation to public lighting. All are very supportive of the project and have undertaken to work with the Limerick Smarter Travel Team to ensure a first class facility. Additional Public Lighting will be required at cycle parking areas.

Stakeholders – Limerick City, Limerick County, UL, NTP, Residents, Business, Schools, Limerick Cycling and organisations included in the text above.

Evidence – In Sutton a 16.8% reduction in cycle theft was experienced due to improved cycle route security the Smarter Travel Sutton Initiative.⁴³

⁴² The project involved the reallocation of road space from motor vehicles to cyclists, by introducing on-road cycle lanes on a large number of roads in Hull. (<http://www.dft.gov.uk/pgr/sustainable/walking/success/encouragingwalkingandcycling5797>)

⁴³ Smarter Travel Sutton (2009) *Second Annual Report*



5.2.3 Supporting Cycling and Walking Measures

Supporting cycling and walking measures include cycle parking, the provision of showers and lockers for cyclists, pool and hire bikes, the provision of bike racks on local bus services, provision for fold up bikes on buses and improved local signage. **It is the aim to increase cycling from 3% to 14% by 2016 and to increase the mode share of walking from 31% to 35% by 2016.**

5.2.3.1 Cycle Parking; Showers and Lockers for Cyclists; Pool Bikes and Hire Bikes

Links to key policy	National Cycle Policy Framework Objectives 1, 7, 9 Smarter Travel Policy Document Action 15
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With these measures a distinction needs to be made between implementation on private land such as business car parks or UL and public land such as the city centre or the rail station.

Private Land – Around the UL campus 500 covered cycle parking spaces will be installed at UL and the NTP. A smarter travel hub will be created in the heart of the UL campus. The hub will supply the campus with secure covered bicycle parking, information on smarter transport routes and links with the UL campus, travel times for pedestrians and cyclists, a cycle repair shop, and a training centre for the cycle training programme. Cycle parks will be provided in close proximity to the principle building entrances such as the library, the foundation building, the Kemmy Business School, the Schumann building, and the Sports Complex. Design will follow Transport for London standards where appropriate. In addition 500 lockers and shower units and 50 pool and 50 hire bikes will be provided at UL, other educational institutions and key employers. Showers and lockers will be installed as part of the travel planning initiatives.

Public Land – The following types of cycle parking will be incorporated into the scheme: open cycle parking, indoor cycle parking, sheltered cycle parking, and Limerick bike scheme (public hire bikes) (ST-10-361/362 & ST-10-370 to -372 & ST-10-400 to -414).

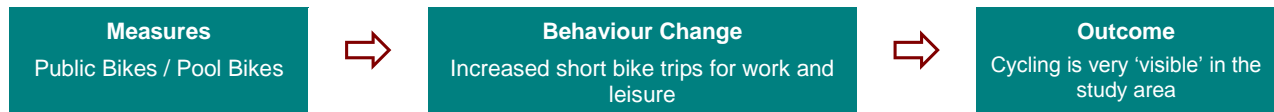
Pool bikes and Public hire bikes – We will aim to facilitate cycling through development of a pool bikes scheme that is available to local employers. They can then set up a pool of bikes for use on business travel and for staff to try out. We aiming to develop a cycle hire scheme similar to that currently operating in Dublin and are in talks with JC Decaux regarding this. This facility will provide twenty bike stations across the study area to encourage short work and leisure cycling trips. The public bikes scheme will be self financing once operational. We are applying for a small amount of pump priming to establish the scheme.

Stakeholders – Employers, Limerick City and County, Public Bike Scheme Operators, Residents

Evidence – Across London there has been a 36% increase in the number of students cycling to school where parking facilities have been provided. There has been a greater increase in the Outer Borough sample than the Inner Boroughs.⁴⁴ In European cities with bicycle parking at public transport terminals the share of bikers can be up to 50%.⁴⁵

⁴⁴ Mott MacDonald (2008) *School Cycle Parking Survey of current Usage for Transport for London*

⁴⁵ Runkel (1993) in Smarter Travel Sutton (2009) *Annual Report*



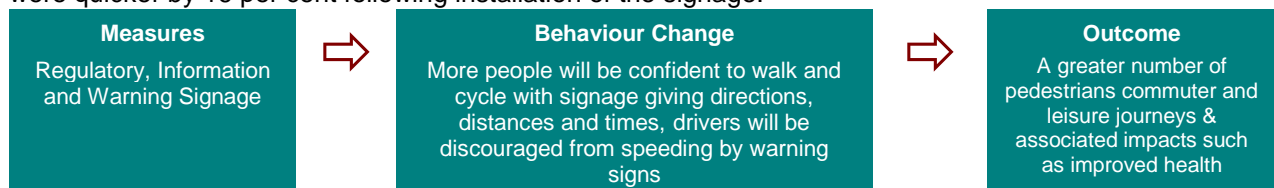
5.2.3.2 Local Signage

Links to key policy	National Cycle Policy Framework Objectives 1, 6 Smarter Travel Policy Document Actions 15, 16
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Signage will be installed to indicate appropriate cycling and walking routes. Distances as well as the time taken to reach specific destinations will be included on the signs. Best practice will be taken from Transport for London's Wayfinding Project. Local signage targets the entire population in the study area, helping to improve people's perceptions of cycling and walking journeys and encourage a greater number of commuting and leisure trips. A full schedule of signage can be found in the Design Report in Appendix 1.

Stakeholders – Limerick City and County

Evidence – Research on the impact of the Legible London prototype in Bond Street found that 85 per cent of those interviewed (2,600 members of the public) found Legible London easy or very easy to use, 90 per cent felt the system should be rolled out across London and almost two-thirds of respondents said the new system would encourage them to walk more. On average, pedestrian journeys in the Bond Street area were quicker by 16 per cent following installation of the signage.⁴⁶



5.2.3.3 Provision of Bike Racks on local Bus Services

Links to key policy	National Cycle Policy Framework Objectives 1, 2, 8 Smarter Travel Policy Document Action 15
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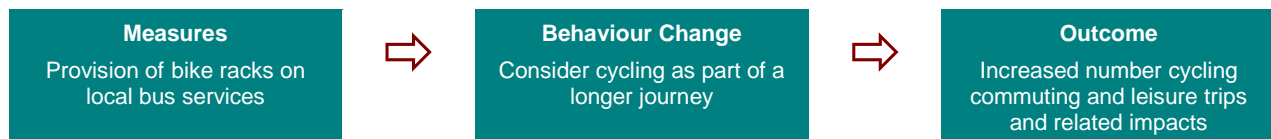
This measure proposes the adaptation of buses to carry bikes on the outside of the vehicle. The bike racks are attached to the front of the bus, and remain folded vertically against the bus when not in use. The racks pull down into a horizontal position to carry two bikes, which can be easily secured by the cyclist. The bikes sit across the front of the bus, and the process of securing or removing a bike takes only seconds. Riders can use the racks for free and only have to pay the normal bus fare. The aim is, in liaison with bus operators, to start with the key routes and roll the scheme out further depending on extent of success. At the same time we will encourage the provision of space of folding bikes on buses.

Stakeholders – Bus operators, Limerick Cycling, City and County

Evidence – Bike racks have been successfully installed on buses across Canada and the United States including Toronto and Charlottesville, Virginia.⁴⁷

⁴⁶ Research conducted by Colin Buchanan for Transport for London
<http://www.tfl.gov.uk/corporate/media/newscentre/archive/13837.aspx>


⁴⁷ http://www3.ttc.ca/Riding_the_TTC/Bicycles.jsp
<http://www.charlottesville.org/index.aspx?page=670>



5.2.4 Softer Cycling Measures

Cycling and walking infrastructure needs to be complemented by softer measures to ensure people can safely use this infrastructure and feel confident and secure. To address this we propose to implement a cycle training and a bike buddy scheme. This is to complement the cycle training measures in schools that are already in place and to build confidence and encourage people to cycle who might initially be too nervous or insecure to do so. Cycling mode shift is to be increased from 2% to 16% by 2020. **The aim is to train 100 people per year over a five year period and to have 50 buddies signed up to the scheme by 2016.** The target audience of these measures are staff and students of UL and other colleges as well as employees at the NTP. To date some 10,000 individuals have already received cycle training in Limerick.

5.2.4.1 Cycle Training & Bike Buddy Scheme



Links to key policy	National Cycle Policy Framework Objectives 1, 11, 12 Smarter Travel Policy Document Action 15
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Cycle Training – Cycle training for adults will focus on staff at National Technology Park and staff and student at UL as well as persons working in the city centre. The programme will consist of 4 levels: Level 1 – Classroom Theory; Level 2 – Practical Off-Road; Level 3 – On-Road Training Suburban Roads and Level 4 – On-Road Training Town Roads. For more detail and quarterly implementation see the Softer Measures Technical Note in Appendix H and the Implementation Programme in Appendix A. A second aspect of cycle training will focus on alleviating the conflict between HGVs and cyclists. Almost 75% of cyclists killed in Dublin were hit by HGVs turning left.⁴⁸ Almost all national HGV traffic has been diverted to the Limerick Southern Ring Road but there is still potential for HGV/cyclist conflicts with vehicles serving business in Limerick. Transport for London, in collaboration with the Police, have carried out special cycle training sessions with cyclists and HGV drivers where roles were reversed to give the cyclist a view of where the lorries' blind spots are and to give the HGV drivers a feeling for cycling among lorries. This has been very successful. We propose to carry out such cycle training in the Limerick. In the UK the maintenance contractor Ringway has started to fit their HGVs with ultrasonic sensors. The aim of this is to prevent collisions from vehicles turning left. Sensors are activated when an HGV signals to turn left and an alarm sounds in the driver's cab if a cyclist or other road user passes too close on the inside. Drivers can then check the situation on a small screen linked to a camera on the outside of the vehicle. In addition when the left signal is activated an audible warning on the outside is triggered announcing 'Caution, truck turning left'.⁴⁹ We propose for such ultrasonic sensors to be installed on 50 vehicles belonging to businesses in Limerick. Further to this pilot we will engage with businesses and their fleet management and to help them roll out the sensors across their fleets.

Bike Buddy Scheme – The scheme is aimed at adults from our study area who are new to cycling or not confident to cycle in urban conditions. The objective is to enable applicants to use a bicycle for their day-to-day urban transport needs. We will recruit mentors (experienced cyclists) who will pair with less experienced cyclists and help them to get more confident, find out new routes and simply enjoy cycling.

⁴⁸ Dublin Cycling/Irish Times (2009) <http://www.dublincycling.com/node/13>

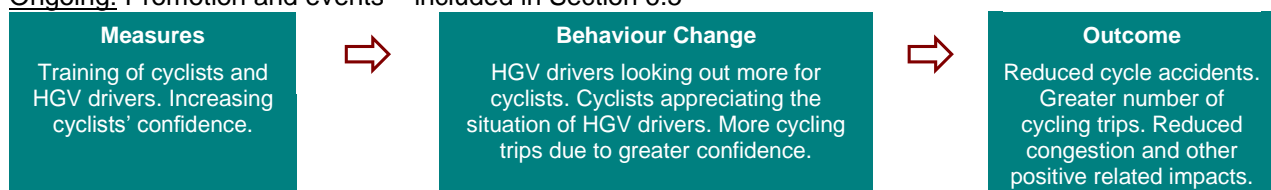
⁴⁹ Transportation Professional (April 2010) *Loud alert warns cyclists of left turning lorries*

The buddy/mentoring programme will be promoted through the Limerick Smarter Travel website and a series of events. It will be co-ordinated by the mobility co-ordinator.

Stakeholders – UL, National Technology Park, Limerick Cycling, Limerick City Council, Limerick County Council, Cycle Safety School Mid-West, Cycling Pursuits, Business logistics/fleets.

Evidence – Results from of a survey into the effectiveness of one-to-one cycle training by Cycle Training UK Ltd 1998-2003 were: The number of people cycling journeys of more than 5 miles is up by 54% after training, and journeys of 3-5 miles are up by 79%. The number of bike trips people make is up by 144% and the number of people cycling all year round is up by 40%.⁵⁰ The ultrasonic sound system has been trialled on Ringway's vehicles for six months and is successful. Potential collisions have been avoided.⁵¹

Ongoing: Promotion and events – included in Section 6.5



This set of measures hardly involves any maintenance of physical infrastructure. Once installed, each business will be responsible for the maintenance of their ultrasonic sensors.

5.2.5 Cycling safety

We will ensure that the right conditions for safe cycling are provided in Limerick through reducing speed limits, driver feedback signage and tabletop treatments at junctions. Costs for these measures are included under each relevant route, link or area in Section 5.2.2.1.

5.2.5.1 Reduced Speed Limits & Other Traffic Management

Links to key policy	National Cycle Policy Framework Objectives 1, 2 Smarter Travel Policy Document Action 30
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Traffic Speed Reduction – Reduction of Speed Limit from 60 kph to 50 kph on the R445 (Dublin Road) from Annacotty roundabout to City boundary, L1171 and the R527 (Old Ballysimon Road) from Junction with Golf Links Road to City boundary. There will also be the introduction of 30 kph speed limit at a number of locations (these include the City Centre Orbital Route, Residential areas of Castletroy, Monaleen, Milford and Newtown, Rhebogue Road). Refer to Drawing Number ST-10-214.

Driver Feedback Signage - This sign consists of a solar powered driver feedback sign showing 'your speed'. These signs have been used with a mobile unit very effectively in recent years (up to 20% reduction in speed) and feedback from the community has been positive as many drivers are not fully aware of their speed in and about their locality. It is intended to erect a number of permanent signs.

Tabletop treatment at junctions – Introduction of tabletop treatment at junctions will have the following effects: reduction in speed, Cyclists and pedestrians right of way through minor road junctions, Significantly

⁵⁰ Bicycle Federation of Australia (2006) *Best Practice in Adult Cycling-Proficiency Training*

⁵¹ Transportation Professional (April 2010) *Loud alert warns cyclists of left turning lorries*

improve safety, Highlights conflict areas, Highlight 30 kph zone, Increased use of cycle lane, Improve cycle times and directness.

Stakeholders – Limerick City and County, Limerick Cycling

Evidence – A 2005 study evaluating 20mph zones in Hull over a ten year period (116 zones overall) reported that road traffic accident rates for all road users (based on Local Authority monitoring data) had fallen on average by 56% across the city, over a ten year period.⁵²

5.2.6 Electric Vehicles

We will assist Ireland in its drive to be at the forefront of electric vehicle usage. We have liaised with ESB and Limerick and Clare Energy Agency to take this forward. ESB have confirmed that by June electric vehicle charging stations will be installed in Limerick although the exact locations are still to be confirmed.

Stakeholders – Limerick City and County, ESB, Limerick and Clare Energy Agency

Evidence – Electric vehicles emit 30-40% lower carbon emissions than comparable petrol or diesel cars. This will reduce further over time as the amount of energy which charges the vehicle batteries is generated by renewable sources.⁵³



5.2.7 Station Public Transport Interface

We are proposing extensive public realm improvements around the front of the Rail and Bus Station on Parnell Street. This is strongly supported by the City Manager Tom Mackey and Director of Service Pat Dromey. This will improve footpath widths, pedestrian crossings and include cycle parking and other general improvements such as tree planting. See Appendix N for visuals. For a more detailed description and phasing of this measure please refer to Design Report in Appendix 1. Costs are included under the City Centre summary in table

Stakeholders – Limerick City, Rail Operators, Bus Éireann, Iarnród Éireann

Evidence – Transport for London has invested significant funds into major central London public realm schemes (e.g. Westminster Square, Exhibition Road) to facilitate pedestrian activity.

⁵² Independent Social Research (2009) Impacts of Better Use Transport Interventions: Review of the Evaluation Evidence Base

⁵³ Transport for London, weekly round-up, Issue 445, 24 March 2010

6. Design of Project: Information and Behavioural Change Campaigns

6.1 Introduction

Design and infrastructure measures alone will not bring about the significant changes in modal shift we are attaining to achieve. Therefore, we are placing a great emphasis on behavioural change campaigns. Evidence from Smarter Travel Sutton shows that through a focused smarter travel initiative, Sutton has seen a 75% increase in cyclists in three years. This cost £5 million.⁵⁴ This chapter gives a brief overview of behaviour change theory before describing each measure.

6.2 Behaviour Change Theory

While the infrastructure is a good basis for modal shift, a cycle lane alone will not turn a regular car driver into a cyclist. There is therefore a need for softer measures such as travel planning and awareness campaigns in order to achieve the target modal split. However information provision will equally not be sufficient to bring about behaviour change. Community-based social marketing on the other hand offers an attractive alternative and we have heavily based our marketing strategy on this. We will target the community level and focus on removing barriers while simultaneously enhancing the activities' benefits.⁵⁵ Habit is certainly the single most important factor to address in information campaigns as it is the biggest barrier to behaviour change. The aim is to turn negative habits (such as automatically choosing the car as the preferred mode of transport) into positive habits (such as always considering sustainable modes first). We will try to exploit breaks in habit and target people such as the yearly incoming student population, new starters in offices, office relocations and new residential developments to reach people who have not yet formed a fixed habit. Furthermore for the message to be credible we will have ambassadors such as Munster Rugby Club with whom the residents and employees in the study area can identify. The first step of bringing about behaviour change will be to 'acquire' new people using messages based on enjoyment, health and cost. Once captured it is important to keep people interested and committed to the project using messages based on enjoyment, belonging and commitment. Eventually people will take self-ownership of the initiatives and messages based on well-being, community and investment are communicated.

6.3 Detailed Description of proposed Measures

For a full timetable of quarterly implementation, costs and impacts please refer to Appendix B, C & D. More detail on each measure including implementation is in Appendix H Softer Measures Technical Note.

6.3.1 Travel Planning

Travel planning forms a key component of the Limerick Smarter Travel programme. Travel plans do not only benefit individuals, employees and businesses but also the wider community through for example less, congestion and better air quality. The objective of the travel plan measures below is to encourage people to commute to work using sustainable modes and to also consider sustainable modes for leisure trips. **The overall aim is to contribute to the decrease of car modal share from 51% to 37% over the five year period. More specifically we aim to decrease the number of car drivers among the target group by 20% and to increase suppressed journeys by 1% through people working from home one day a week for example.**

⁵⁴ BBC News *Is the future of urban transport in Sutton?* Published 24/03/2010
(http://news.bbc.co.uk/local/london/hi/people_and_places/newsid_8585000/8585240.stm)

⁵⁵ McKenzie-Mohr, D. (n.d.) *Quick-Reference: Community-Based Social Marketing*

6.3.1.1 Workplace Travel Planning

Employer Travel Plan Networks

Personalised Travel Planning

Encourage & Promote Uptake of Smarter Working Practices

Links to key policy	National Cycle Policy Framework Objectives 7, 10 Smarter Travel Policy Document Actions 5, 8, 9
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Workplace Travel Planning is an essential component of our Smarter Travel Programme. Work related car trips are a significant contributor to congestion on the roads and the associated negative impacts. Therefore, our workplace travel planning measure comprises the following aspects:

- 1 – Travel plan development at employers across the study area, along with assistance to SMEs
- 2 – Development of travel plan networks in Limerick City Centre and at the National Technology Park
- 3 – Personalised Travel planning through the work place
- 4 – Development of a smarter working pilot

Workplace Travel Planning – We will work directly with large employers to assist them in the development of site specific travel plans to reduce car usage both for journeys to/from and within the course of work. We have already identified a number of potential organisations that we can work with from our focus groups, follow up contact and our business survey:



Table 6.1: Extract of Businesses surveyed

Company (No. of employees)			
City Centre		National Technology Park	
HSE (2,883)			
LIT (400)	Savoy Hotel (75)	UL (1,000)	Cook (500)
Brown Thomas (200)	VHI (25)	Vistacon (650)	BDO (75)
Radisson Blu (75)		Revenue Commissioners	
Limerick Youth Service (75)		Castletroy Park Hotel (75)	
Michael Punch & Partners (75)		Deloitte (75)	

It is encouraging to note that 82.2% of companies surveyed support Limerick in becoming a Smarter Travel Area. We would target larger employers first to gain a critical mass. However, we will extend the network over time and provide assistance to all that requested it. There are some 20,000+ employees in the study area. Our aim is to have 75% of employees in companies of 50 employees or more covered by a travel plan. This means covering at least 7,800 employees.

Travel Planning for SMEs - We will also develop a package of assistance for SMEs. SMEs provide a major contribution to the local economy and employ a substantial number of people in our area. This specially designed SME package will reflect the successful 'Enterprise' programme run by Transport for London as part of its 'A New Way to Work' travel plan programme. We will develop a toolkit which sets out how an SME can develop a meaningful travel plan. We will also provide marketing and information assistance. SMEs will also be encouraged to work together to get maximum return on initiatives such as cycle parking. SMEs will also be supported through our travel plan networks.

Development of Travel Plan Networks – We are proposing to set up two travel plan networks – in the City Centre and covering the National Technology Park. We will utilise external expertise to set up these networks, which will act as an umbrella group for organisations delivering travel plans. They will develop over-arching travel plan strategies, which the individual travel plans must complement and support. The networks will also identify initiatives that can be utilised by a number of organisations – e.g. pool bikes for company travel, shared cycle parking etc. In addition to developing site specific travel plans, we are also applying for a lump sum of funding to use for implementation of travel plan support initiatives at pro-active

employers. Employers will have to show some commitment and match funding (time or money) to access this money. Applications for these funds will be agreed by the Programme Manager. One way to interest employers is to link smarter travel with Corporate Social Responsibility. In order to promote the image of Limerick as a sporting city we will encourage activities such as cycling running clubs in workplaces as part of the workplace travel planning.

Personalised Travel Planning – We consider that the most appropriate utilisation of personalised travel planning would be through work places. Feedback from the UK Smarter Travel Sutton project has shown that widespread personalised travel planning across private homes has minimal impact and return for the cost. We met with a member of the Smarter Travel Sutton Team and he gave feedback that PTP was not targeted enough, hence achieving low results. We will therefore undertake direct personalised travel planning in the work place at specific points in time, probably to coincide with workplace events. In addition we will target people when they experience natural breaks in commuting habits such as moving house or starting new job. We will also undertake targeted campaigns through community groups – e.g. in Southill. Where there is an already established group, targeted PTP will have more of an impact.

Encourage & Promote Uptake of Smarter Working Practices – We will initially recruit five employer organisations to pilot a study of smarter working best practices with the study area. We will undertake a study of current practice amongst the five organisations and identify measures for the five organisations to take up. We will provide funding for advice and support measures and to provide equipment such as teleconferencing etc. We will monitor travel patterns for the companies involved and then roll out to a further five companies within five years. We will place an emphasis on encouraging e-working in order to support the Government's drive to have 10% of the workforce e-working at least one day a week by 2020. To lead by example we will set targets to encourage e-working among the City and County councils' staff. We envisage that by 2016 5% of people suppress as least one trip per week through e-working.

Stakeholders – Businesses, employees, PT operators, UL, Limerick Chamber, City and County

Evidence –

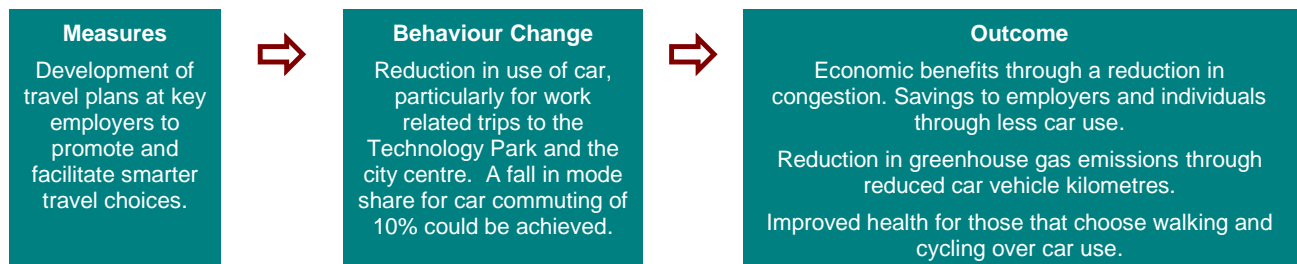
- Buckinghamshire County Council's workplace travel plan initiative is branded 'Travel Choice' cut single-occupancy car commuting from 71.3% to 49.4% over five years.⁵⁶
- According to the UK DfT, Workplace travel plans have the potential to reduce commuter car use by between 10 and 30%, with a cost of £2-£4 per head.⁵⁷
- The Teddington Travel to Work Network (UK) has seen an early reduction in car usage of approximately 5%, in just the first 18 months of the travel plan network.⁵⁸
- Teleconferencing typically reduces business travel by between 10% and 30% in organisations that promote its use.⁵⁹

⁵⁶ Department for Transport (2005) *Smarter Choices – Changing the way we travel*

⁵⁷ Department for Transport (2005) *Smarter Choices – Changing the way we travel*

⁵⁸ Teddington Travel to Work Network June 2008 (Lensbury Club)

⁵⁹ Department for Transport (2005) *Smarter Choices – Changing the way we travel*



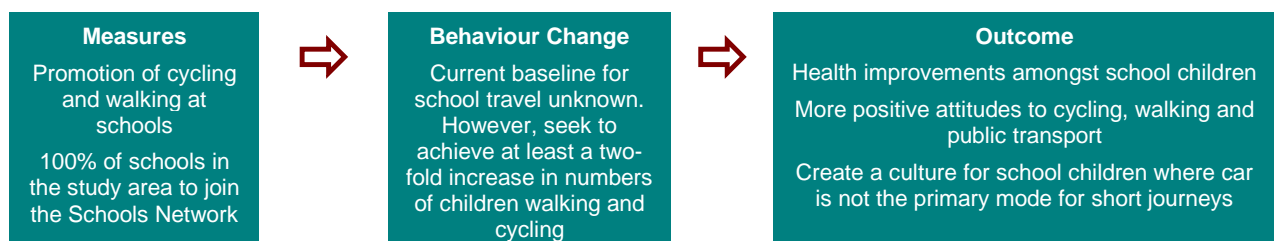
6.3.1.2 School Engagement Strategy

Links to key policy	National Cycle Policy Framework Objectives 4, 7, 10 Smarter Travel Policy Document Actions 7, 15
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One of the key planks of our proposal is the engagement with schools and schoolchildren. We consider that this provides a vital avenue to change attitudes to travel and transport in the region. If we can persuade children at an early age of the benefits of walking and cycling – and the benefits of using the car less – our smarter travel plans and policies will have an even greater chance of success. We aim to address all 33 primary schools and all 16 secondary schools in the area addressing all 12,400 pupils. At a Local Authority Network Sub-Group Meeting on overcoming the barriers to sustainable transport it was identified that the amount of books pupils have to carry to school is often a significant barrier to smarter travel. We will work with schools to implement a number of simple measures to overcome this E.g. through development of e-learning techniques. Castletroy College has the objective of becoming an e-school, providing students with laptops and hence reducing the need to carry large amounts of books. Our initiatives will complement the Green Flag programme. We will support schools that are working towards achieving or already have received the transport flag with complementary activities. Schools which are still some time away from achieving the Transport Green Flag status will receive help to set the foundations for their work upon which they can build at a later point to achieve this status. For detailed quarterly phasing see Appendix A.

Stakeholders – School children, staff, parents, FE students (where applicable), City and County

Evidence – UK Schools engagement has resulted in a reduction of 7.5% of car based trips to school.⁶⁰



6.3.1.3 Student Travel Planning

Links to key policy	National Cycle Policy Framework Objectives 7, 10 Smarter Travel Policy Document Action 7
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The inaugural UL survey of student' attitudes and behaviour regarding sustainable development showed that of UL's 11,000 undergraduate students only 3.4% cycle to college compared to 23.4 who come by car. 12.5% of UL students live within 6km of the campus and drive to college. It is our objective to convert the

⁶⁰ Independent Social Research (2009) *Impacts of Better Use Transport Interventions: Review of the Evaluation Evidence Base*

estimated 1,384 students and additional staff who travel to UL by car from within a 6km radius to cycling and walking. After successful completion of the UL travel plan this will be rolled out to other institutions including Mary Immaculate Teacher Training College, LIT and Limerick College of Art and Design.

Stakeholders – Students, staff, visitors, City and County

Evidence – At the Krakow University of Technology the share of car driver trips travelling to the University campuses has decreased – for employees: from 45% to 41% and for extramural students: from 50% to 30%. The share of carpooling trips has increased – for employees: from 1% to 5%, for full-time students: from 0% to 7%, and for extramural students: from 1% to 17%. Cycling modal for employees has doubled.⁶¹



6.3.1.4 Residential Travel Plans

Links to key policy	National Cycle Policy Framework Objective 10 Smarter Travel Policy Document Action 9 Local Development Plans, MWASP
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A residential travel plan is a useful tool for reducing the impact of trips generated from private residences. It is often a requirement of planning permission, but can also be retro-fitted to existing residential developments. It is proposed that the Limerick programme makes use of both applications:

1 Policy: Establish criteria and guidance for the application of residential travel plans secured through planning permissions. A good place to start will be the Transport for London Residential Travel Plan Guidance. However, thresholds will have to be introduced at a lower level than the 80 units in the TfL guidance. It is proposed that this could be 40 units (or wherever a significant traffic impact is envisaged).

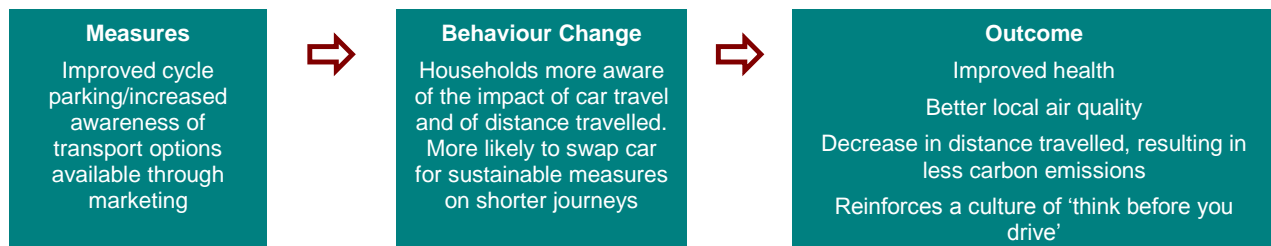
2 Retro-fitting to existing development: We have been reviewing current residential areas to identify appropriate developments for retro-fitting. We propose that we take forward two initial pilots – one at a City Centre apartment development and one in Corbally or Castletroy where there are strong community groupings and ties. The outputs from which can then be promoted across other areas. We are currently discussing with potential sites where this can be developed.

Stakeholders – City and County, Developers, Apartment Managers, Neighbourhood Groups, Residents

Evidence – An RTP scheme in Poole, UK noted that 38% of households had reduced the overall amount they drove by approximately 5%.⁶²

⁶¹ EPOMM (2009) *Integrated mobility plan for the Technical University of Krakow/Poland*

⁶² Independent Social Research (2009) *Impacts of Better Use Transport Interventions: Review of the Evaluation Evidence Base*



6.3.1.5 Rail Station Travel Plan

Links to key policy	National Cycle Policy Framework Objectives 7, 8 Smarter Travel Policy Document Actions 15, 22 MWASP Local Development Plans
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We are going to set up a pilot station travel plan at Limerick Station, as a template to better understand the potential throughout the rest of Ireland. Like the UK initiatives, the Limerick station travel plan will focus on increasing co-operation and liaison between **Iarnród Éireann, the City Council, bus and coach operators, taxi service providers, and user groups**. Limerick station, also known as Colbert Station, is located on Parnell Street in the South East of the City Centre. The Bus Éireann depot is located adjacent to the railway station which is operated by Iarnród Éireann (Irish Rail). Currently there are only 10 cycle parking stands i.e. 20 spaces which are all covered within station building on platform. The main objectives of this initiative are to:

- Reduce the number of single occupancy car trips to the station;
- Reduce the number of vehicles picking up and dropping off at the station;
- Increase the number of persons accessing Limerick station by foot, bike and public transport;
- Increase the number of passengers using the station; and
- Look at opportunities for integrated parking and rail ticketing.

This will be supported by the planned public realm improvements in front of the station.

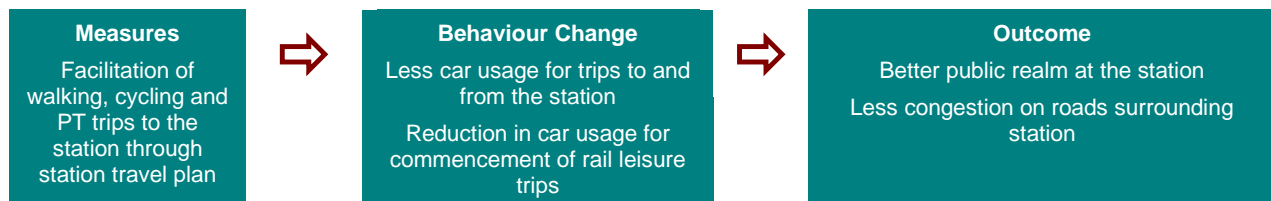
Stakeholders – As identified in bold

Evidence – The first station travel plan at Benfleet in Essex, UK (outside of the ATOC pilots) has already experienced reductions in share of car drivers. This has eased pressure on the car parking in the area.⁶³

A UK study found that the installation of cycle parking at its stations resulted in the portion of people cycling to double from 1.5% to 3%.⁶⁴

⁶³ ATOC (2008) Conference to launch Station Travel Plan Initiative

⁶⁴ Department for Transport (n.d.) *Bike and Rail – A good practice guide*



6.3.2 Car Sharing and Car Clubs

Car sharing programmes and car clubs are an effective way to target individuals who won't or can't switch completely to sustainable modes such as cycling because of the trip distance or goods transported e.g. shopping. The overall aim of these measures is to change people's behaviour from using their own car five days a week to commute to work to car share once or twice a week. Additionally we aim to prevent people who currently do not own a car to aspire to become a car owner. **It is our ambition to reduce car driver trips from 35-23%. Because of car sharing the predicted number of passengers remains relatively constant and we are only expecting a small decrease from 16% to 14%.**

6.3.2.1 Car Sharing Management Programme Car Clubs



Links to key policy and theory	Smarter Travel Policy Document Actions 18, 19
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Car Sharing Management Programme – The car sharing management programme targets all employees of the Technology Park, UL staff and students. The National Transport Authority has launched a car pooling programme similar to the liftshare model in the UK. It will be most effective in terms of quality and cost to created subsections for the University of Limerick as well as the Technology Park on this portal. Individual sites can be created for large employers if required. UL students are most effectively targeted through social media. Research has shown that the average facebook user spends 55 minutes per day on facebook⁶⁵ and the largest demographic concentration are students between 18 and 24 years⁶⁶. A car share page will be created on facebook specifically for students in Limerick.

Car Clubs – Car clubs are a pay-as-you-go alternative to owning a car. The car clubs will be run and maintained by private operators. Five car club bays will be installed in the study area.

Stakeholders – City and County, car hire company, businesses, UL

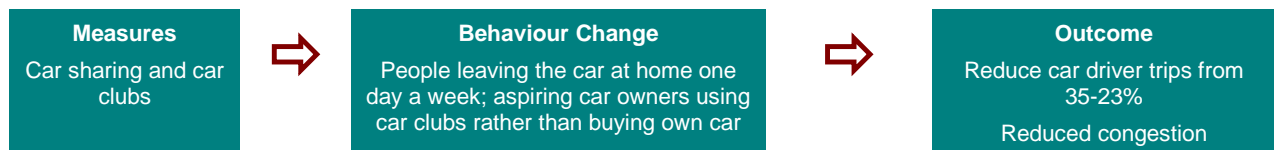
Evidence – In the UK, former car owners increase their use of non-car transport modes by 40% after joining a car club. Two-thirds of those who owned a car before joining saw their mileage fall, by an average of around 25%.⁶⁷ In Norwich (UK) a car pooling scheme targeting employers in a business park was implemented. 2,400 individuals signed up to the scheme. The scheme removed approximately 1,646 single occupancy cars from the network at peak time.⁶⁸

⁶⁵ <http://www.facebook.com/press/info.php?statistics>

⁶⁶ <http://www.istrategylabs.com/2009/01/2009-facebook-demographics-and-statistics-report-276-growth-in-35-54-year-old-users/>

⁶⁷ Ledbury, M. (2004), *UK car clubs: an effective way of cutting vehicle usage and emissions?* Environmental Change Institute, University of Oxford

⁶⁸ EPOMM (2009) *Car-pooling/Norwich (United Kingdom)*



Both databases will require regular maintenance and repeated promotion is necessary to keep the measures up and running. A private operator will be responsible for vehicles and club terminals.

6.4 Community Owned Initiatives

As outlined at previous points in this submission, regeneration and social inclusion are among the key themes of our proposal. We therefore apply for a lump sum of funding for community owned measures. The Mobility Advisor will work with the community to establish which measures they would like to see implemented in their local neighbourhood (within a framework agreed by the delivery team and the Department). These initiatives could include personalised travel planning in Southill or a bike maintenance workshop. **We aim for these initiatives to get the local community involved and give people a sense of ownership and pride of Limerick Smarter Travel.**

Stakeholders – Local communities, city and county, dependent on measures implemented

Evidence – There are several examples of successful community bike workshops e.g. Waterloo USA⁶⁹, Tower Hamlets London⁷⁰



In terms of maintenance it is important to hold regular meetings and make the community feel like their opinions and inputs are listened to and valued. This must feel like something people want to get involved in and where they can see positive outcomes and do not see it as a waste of their time.

6.5 The Marketing and Communications Programme

6.5.1 Introduction

The central aim of Limerick Smarter Travel is to reduce car usage from 51% to 37% by 2016 while increasing cycling from 3% to 14%. These are ambitious aims and the marketing and communications programme will be pivotal to helping these targets to be achieved. Information campaigns have a role in creating awareness of Limerick Smarter Travel. However, its aims and achievements are in creating awareness of infrastructure improvements which will facilitate greater sustainable connectivity between the hubs. If this knowledge is to lead to a required action, in this case a modal shift to sustainable travel, then a more extensive community based marketing approach will be required.

⁶⁹ <http://bikeclub.wordpress.com/2009/12/08/workshop-details/>

⁷⁰ <http://www.towerhamletswheelers.org.uk/workshop/>

6.5.2 Marketing and Communications Strategy

The Marketing and Communications Strategy is will proactively engage and communicate with key target audiences in the four hubs as well as educate, empower and encourage adoption of smarter travel modes, so that the ambitious targets of the Limerick Smarter Travel Programme can be achieved. Behavioural change is most effectively achieved through initiatives delivered at the community level which focus on removing barriers to an activity while simultaneously enhancing the activities benefits. Research indicates that the major influence upon our attitudes and behaviour is not the media but rather our contact with other people. This 'social diffusion', where friends, family members or colleagues heavily influence our adoption of new behaviours, highlights the importance of incorporating into the marketing and communications programme mechanisms which publicise the commitment and achievements of people who are switching to sustainable modes of transport. The marketing and communications programme developed for Limerick Smarter Travel is community based and built on three pillars to drive behavioural change:

- 1: Commitment: Obtaining from target audiences in the five hubs a commitment of an 'intention to act'.
- 2: Prompts: Reminding target audiences of what they should be doing in order to honour their commitment.
- 3: Norms: Building community support for the changed behaviour to become the accepted norm.

The marketing and communications programme will:



- Raise awareness and understanding of the Limerick Smarter Travel project
- Promote more positive attitudes to cycling, walking and using public transport
- Position Limerick as modern, dynamic and visionary in promoting Smarter Travel
- Engender pride and ownership among Limerick citizens in Smarter Travel
- Generate support from the target audiences
- Provide support for companies, organisations and individuals adopting Smarter Travel

Audiences – The target audiences for the marketing and communications programme include: Employers; Employees; Educators; Residents; Students; Partner Organisations; Southill Regeneration Board; Public Representatives; and Parents of school going children in the hub areas.

Research – In preparing the marketing and communications plan extensive research was undertaken into the current attitudes and actions of individuals in the four hub areas. This baseline research has informed the marketing and communications approach which will be undertaken throughout the five year programme. It assisted in identifying the barriers (real and perceived) to individuals using sustainable travel modes and allowed for the testing of the Limerick Smarter Travel Brand, messaging and communications measures. It is envisaged that the first year of the programme will see more extensive and exhaustive testing of messaging with a wider cohort to ensure that the campaign messages will have the desired effect

Campaign Messaging – The campaign messages developed for Limerick Smarter Travel are aligned to the audience, the location and the mode. Messages identified by the focus groups which resonated were:

- Convenience
- Reliability
- Speed – I can get where I am going more quickly
- Cost Savings
- Health
- Environment

Health and Environment were mentioned least and had to be prompted. In all cases convenience and speed of access were mentioned first and most often as the reasons people would chose an alternative mode of transport to their car.

Recruitment of Champions – Research has shown that the more credible the person or organisation delivering the message, the more influence they will have on the audience. To this end, local heroes will be

recruited to act as Champions for Limerick Smarter Travel – potentially from Munster Rugby Club. They will be used throughout the campaign to launch initiatives, to speak at information days in local schools, appearances in photocalls, on Limerick Smarter Travel advertisements etc.

Influencing Business to Change – Employers are perhaps one of the most significant target groups in this five year programme. The marketing and communications programme will target all levels of management within organisations. To be successful, the communications programme must outline clearly to business organisations the business case for smarter travel. This will mean outlining the benefits concisely, with cost savings and productivity enhancements as core.

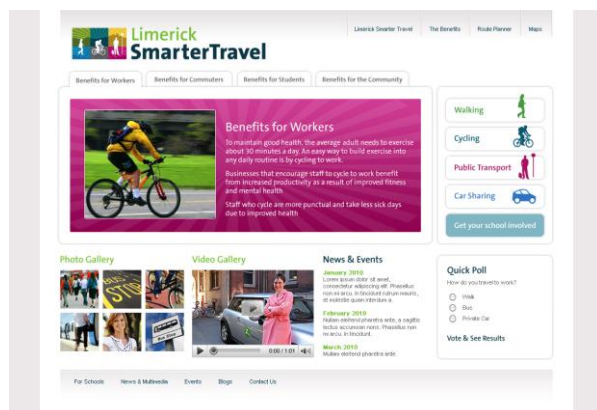
The Brand – The ‘Limerick Smarter Travel’ brand has been developed. A recognised brand with strong values is important to engendering pride in Limerick among wider stakeholders and audiences and in creating awareness of the Limerick Smarter Travel Programme. The brand reflects the values of the Limerick Smarter Travel programme: modern, sustainable, environmental and leadership.

The Marketing and Communications Programme – The Marketing and Communications Programme will use an integrated mix of tools to educate, empower and encourage our target audiences to choose smarter travel modes. The initiatives outlined in this Marketing and Communications programme have the potential to be implemented beyond the five years of this Smarter Travel Programme.

Media Relations – The media will be an important communications channel in terms of creating awareness of Limerick Smarter Travel not only to people living and working in the smarter travel area but to all potential audiences throughout the city and county. The programme will concentrate largely on the local Limerick Media but national newspapers will also be targeted in order to demonstrate to other cities the success of the project in achieving its aims. In particular, opportunities to demonstrate the success of smarter travel in achieving social inclusion will be demonstrated.

Advertising – Traditional advertising is not a primary driver of behavioural change rather it is most often successful in creating awareness of a product or issue and in helping to formulate an individual's attitude. Advertising will therefore be limited and targeted in its usage.

Online/Social Media Engagement



Online and Social Media Engagement will be important for certain audiences such as students in UL / LIT, secondary school children and employees. It is not relevant to people living in Southill where only 5% of people own a computer or have access to the internet. A Limerick Smarter Travel website, Facebook page and Twitter account will be created to target relevant audience segments.

Events – Events such as walk or cycle to work days will be used not only to promote alternative modes of transport but to create a ‘buzz’ about smarter travel

and to make citizens aware that Limerick is now an attractive and safe city in which to walk, cycle and use public transport. These events will be both general in nature, targeting the wider population as well as location specific. Their aim is to get people to consider changing their mode of transport one day a week initially, building up to a more wholesale change.

Information Roadshows – A display stand and promotional DVD will be developed and utilised throughout the campaign to promote smarter travel to community groups; residents associations; sporting organisations; and other partners. The display stands will be used in libraries; shopping centres; in partner organisations and at events to promote smarter travel initiatives to a wide audience.



Signage on the new cycleways and walkways will give people information about how far they are from their destination in terms of distance and time.

Printed Literature – A wide range of information literature will be developed for distribution to households in the smarter travel areas including information on walking for health, public transport, cycling and

other general interest leaflets which will promote smarter travel.

Timeframe for Delivery – The marketing and communications programme is extensive and will be implemented throughout the five year programme. It is envisaged that the Limerick Smarter Travel programme will, over time, be extended to other areas of Limerick and will become embedded in infrastructure and transport planning of both the city and county. The initiatives outlined in this Marketing and Communications programme can be implemented beyond the timeframe of this programme.

Measurement and Evaluation – Measurement and evaluation will be continuous throughout the five year Limerick Smarter Travel Programme. Measurement and evaluation research will be controlled centrally by the Department of Transport. We will be guided by the Department in terms of the how and when such research should be conducted by Limerick Smarter Travel.

A fully worked out Marketing and Communications Strategy, timeline and budget is included as an appendix to this submission.

6.6 Policy Changes

We are proposing a number of policy changes under the following headings: Threshold for Travel Planning, Park and Ride, Real-Time Bus Information, Parking regulations and Speed Limit Changes will be implemented. For full detail of these refer to Appendix F.

6.7 Best practice

Becoming a CIVITAS city already means Limerick is present on an international platform for best practice. Furthermore if the Intelligent Energy Europe proposal is successful, Limerick will receive further funding for the building and spreading of know-how, skills and methods and exchanges of experience. The aim is to establish a national and a local forum of best practice and involve all Irish Smarter Travel Towns and the local communities. While it is difficult to attribute changes in modal share directly to this measure it is nonetheless a valuable building block of the Limerick Smarter Travel Programme. We will establish a sounding board (see Section 7 for further detail) with experts who will provide input on best practice from the UK and Ireland such as Smarter Travel Sutton.

Limerick City and Limerick County Council as well as UL will all set an example of best practice by developing their own travel plans. This is essential in order to gain buy-in from the public. Furthermore UL's Mobility Project will provide best practice guidelines for our programme. Finally, in preparing this submission and throughout the implementation of the programme we will follow lessons from the UK Sustainable Travel Towns for the development and strategy of the programme, programme delivery and evaluation and monitoring where applicable.

See Appendix O for more detail on best practice.

6.7.1.1 Establishment of Best Practice Round Table

Local Level – Establishment of a best practice round table to discuss with different actors including the community of the study area which measures work well and which measures need improvement. The aim is for this to be a platform to share experience and lessons learnt.

National Level – We will establish a best practice round table of smarter travel locations to share experiences and lessons learnt. Not only will this focus on the “hard” measures, but also examine different modals/practice for stakeholder engagement/project governance etc. We also suggest (in conjunction with the Department of Transport) a conference to share best practice across Ireland.

Evidence – Over 150 planning professionals, politicians, and other interested parties attended the final conference of the Sustainable and Accessible Urban Landscapes (SAUL) project.⁷¹ The Mobility Forum in Genoa, Italy received high interest of the citizens in the project activities and measure implementation (e.g.: car sharing, Infomobility Platform, etc).⁷² The Mobility Forum in Burgos, Spain received more than 250 comments on the forum web site.⁷³



71 SAUL - Press Release - 5 July 2006

72 EPOMM (2009) Mobility Forum in Genoa/Italy

73 EPOMM (2009) Mobility Forum in Burgos/Spain