



HM Government  
of Gibraltar

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# Sustainable Traffic, Transport and Parking Plan (STTPP)

March 2017





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# Gibraltar Sustainable Traffic, Transport and Parking Plan

Final Document

March 2017

HM Government of Gibraltar

Suite 735, Europort  
Gibraltar





I am delighted to introduce Gibraltar's Sustainable Traffic, Transport and Parking Plan (STTPP) – one of the major manifesto commitments of the GSLP/Liberal Government. I truly believe that making these important changes to the way we move around the Rock are the future if we want to safeguard the environment, encourage a healthier lifestyle and enjoy the benefits of greater traffic flow.

Work in this area started some time ago when Gibraltar introduced the free bus service to encourage users to leave their own vehicles at home, thereby decongesting our roads and reducing the effects of pollution. I am happy to see there has been a steady increase in users of this service.

We will continue this work with the imminent introduction of Redibikes, our bicycle hire scheme, giving users another option of sustainable transport that provides added health benefits.

The Government is determined to reduce the impact of transport operations on the environment. With this in mind, we will move towards procuring more electric and hybrid vehicles for Government departments, where possible. My own official car, G1, is electric. Others will follow.

The health of our nation is also my concern. Using alternative transport, such as cycling, or by walking, as I do to work daily, helps promote a better wellbeing. In Gibraltar, we have the advantage that most distances between points are relatively short. There is often no need to jump in a car or hop on a motorbike to get to our destination. By taking the healthier alternative, we are also encouraging our children to do the same. It is vital that they become aware now of how changes to the way we move will improve their world in the future.

The STTPP is a real plan – an all-encompassing plan. It is an authoritative and well-researched document covering all aspects of the effects that transport will have on our lives and our environment. It is also a plan that will evolve with us, just as our lifestyles evolve.

This is a plan that should be embraced by us all as it is important for Gibraltar, its economy and our health.

I would like to thank those who have worked towards producing this plan for our future and I thank you for reading it and the interest you have shown in becoming a part of its development.

**The Hon. Fabian Picardo MP  
Chief Minister of Gibraltar**





It gives me great pleasure to be able to present HM Government of Gibraltar's, Sustainable Traffic, Transport and Parking Plan (STTPP).

This project is a key manifesto commitment for the GSLP / Liberal Government.

A study of this magnitude has never been conducted locally with regards to Traffic and Transport together with its effects on our environment as a whole in a way that is scientific and solid in its grounding.

The Plan has seen a multi-departmental team approach involving the Ministries of Infrastructure and Planning, (Traffic & Transport) and the Environment. The research and preparatory background for this extensive document has seen many months of painstaking groundwork and research, something which I am eternally grateful to those within the Traffic Team, the Technical Services Department, the Department of Education and other members of the Civil Service for, who embarked on weeks of data collection, questionnaires and surveys to be able to provide the basal statistics required for such a plan. The work has encompassed a very wide consultation process across the board. Opinions and feedback was sought from a wide sector of the community including, members of the public, NGO's, commercial entities and associations, Tenant's Associations, other interest groups, schoolchildren, essential services and of course the road user, often each with competing interests.

Our Traffic Consultants Mott MacDonald who are world-wide professionals in this field have provided the technical expertise to complement the wealth of professional knowledge that already existed within the Technical Services Department and have been instrumental.

The Plan has considered everything from the needs of children and vulnerable groups within our society to the needs of businesses and visitors alike. No plan will ever be able to satisfy every

sectors' interests and there will be a need to find many happy mediums going forward.

Key improvements in the use of public transport will no doubt provide a more reliable service with improved journey times and higher levels of punctuality, which I am certain, will be welcomed by its users. No stone has been left unturned in order to formulate a plan that we will be proudly able to call our own, Gibraltar's Plan, your plan. Using the most innovative and latest techniques we have developed the tools by means of digital traffic modelling to help us predict the reaction and behavior of traffic following a proposal for change. That is, we may now start to analyse what effect a proposed change will be likely to have with respect to traffic flow before we even carry it out.

This plan is clearly a live document, one that will evolve and grow with us. As Gibraltar grows and our needs change, so will it too. It is our intention that the Plan be a fluid plan, one that is malleable to our needs. I am personally satisfied that this has been in fact achieved and that all the work done will see a truly valuable result that we can all be proud of. Not all the concepts within the Plan will be achievable, some will require further work, others may be economically unviable and others may simply never come to be, at least not at this moment in time. But the Plan will hopefully open our minds to the vast potential that exists for improvement, and for the need to change our mindsets in the future.

But, change is change, and human nature does not adapt easily to change at first. With time, I trust that we as a Community will all be able to appreciate the bigger picture and will begin to understand that things have to change if we are to make inroads into our health, our environment and our wellbeing making Gibraltar an attractive place to live, work, visit and do business in, in the future. The plan is hence, simply that, a plan. There are general principles, aims and targets set, and ideas for potential pilot schemes for us to explore, some relatively inexpensive to carry out, others more ambitious. This is by no means a finite list and we will be developing further ideas and plans in the future as we evolve as a people. Traffic and its management is not an exact science but our ideas, we believe will be exciting, brave and innovative. With time, it will hopefully change the way that we live so that we can improve sustainability.

Gibraltar has an extremely high vehicle occupancy rate per capita, yet our largest constraint is our size. Reducing our reliance on private transport, our beloved cars and motorbikes, will be one of the hardest things to achieve but through encouragement, education and perseverance perhaps we may be able to achieve a change in the way that we move. By sharing vehicles, either by means of our buses, public services or through other more innovative ideas such as car-sharing for example, we may be able to evolve. We cannot forget the importance of walking and cycling with regards to our traffic and our environment but also the undeniable and positive effect that it has on our general health, fitness and physique.

Changing our mindset, especially one that spans so many generations, when our cars were an extension of our very own living room, our only means of independence and freedom, our "rite of passage" at a time when many generations shared one single flat will be one of the most

challenging hurdles to overcome.

This is something that will task our generation and those in the future. As science develops so too will our means of local travel. Already we are seeing how hybrid and electric vehicles are slowly becoming more prominent in our society and we need to further encourage the use of these.

I greatly value and appreciate the public support that we have received so far and sincerely hope that we will continue to have the same support as we now embark on the next stage of the plan, its implementation in earnest.

**The Hon. Paul J. Balban MP**  
**Minister for Infrastructure and Planning**



Our quality of life and our health are hugely influenced by what we do with transport. While the use of vehicles clearly improves our mobility and hence our access to work, services and recreation, emissions from burning fuel just as clearly adversely affect our health. We need to strike a balance.

Striking a balance will surely mean that as a community we have to use motorised transport less. It will also mean that we have to strive towards modes of transport that are cleaner.

A plan for sustainability has to assist in striking that balance. It has to provide more efficient access to those areas we want to get to, so that we can each of us reduce our contribution both to pollution and to traffic congestion.

But we need to go well beyond that. We must all make a conscious decision to change our behaviour. We must be willing to use alternative forms of transport more than we do, be it public transport, cycling or walking. We should consider making our next car a hybrid or electric car. We should ponder whether the best response to having difficulty in finding parking is to shout for more spaces, or to use the car less. We should encourage friends and family to do the same.

As our power generation is set shortly to become much cleaner, emissions from vehicles will become the most significant source of air pollution in our urban areas. We must all be willing to assume responsibility for this, and play our part.

The sound guidance provided in the Plan will help us along this journey.

**The Hon. Dr John Cortes MP**  
**Minister for Education, Heritage, Environment, Energy and Climate Change**

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# STTPP Executive Summary

## What is the Sustainable Traffic, Transport and Parking Plan (STTPP)?

The Government of Gibraltar has commissioned a new comprehensive Sustainable Traffic, Transport and Parking Plan (STTPP) in order to fully understand the current transport network problems and identify possible solutions. The view is to move Gibraltar towards more sustainable transport practices that will help deliver the Government's sustainable transport and air quality objectives. The plan is based on the development of a new transport model and evaluation of different options for improving the current traffic, transport and parking situation, with a view of encouraging behavioural change and effecting a shift in modal transport towards more sustainable alternatives.

The STTPP provided the necessary structure to be able to achieve the objectives set out below.

## Why do we need a Sustainable Traffic, Transport and Parking Plan?

Traffic levels in Gibraltar are affected on a daily basis by the large influx of commuter, tourist and commercial vehicles crossing through the land frontier with neighbouring Spain, as well as the regular influx of cruise visitors. Overall, traffic is generally acknowledged to be one of Gibraltar's most long standing problems. As a result, like many other urban areas, Gibraltar suffers from traffic congestion which can have adverse effects on its economy, its environment and image. Local air quality is a particular important issue, with the Government actively identifying ways to improve levels so that European Commission standards are met.

## What are the Objectives of the Plan?

The policies and measures defined in the Gibraltar STTPP cover all modes and forms of transport including public and private, passenger and freight, motorised and non-motorised as well as powered two wheelers.

### **The Vision for Transport in Gibraltar**

**'Gibraltar's future transport system will be one in which users are able to move around in a safe, reliable and sustainable manner increasing its attractiveness as a place to live, work, visit and do business.'**

**There will be a real choice to meet travel needs with good access to employment, health, education, retail and leisure. This will encourage more sustainable travel behaviour.**

**Sustainable modes of travel will be developed in order to minimise adverse impacts on the environment and promote healthier lifestyles.'**

Underpinning this Vision and encompassing the period up until 2026, are a number of key policy objectives (PO) which include:

- ***Objective T1: To manage the transport network effectively to provide network efficiency, reduce unnecessary delays and traffic congestion***
- ***Objective T2: To improve environmental conditions for communities in Gibraltar by reducing the adverse effects of transport on the local environment***
- ***Objective T3: To maintain and improve accessibility to facilities and services for all – including pedestrians, cyclists and bus users, and particularly for disadvantaged people***
- ***Objective T4: To promote and encourage healthier, more sustainable travel choices and improved 'quality of life'***
- ***Objective T5: To reduce road accidents, particularly for vulnerable road users***
- ***Objective T6: To maintain and improve transport and community safety and security, including reducing perceived danger***
- ***Objective T7: To maintain and improve the transport infrastructure***

## **What Does the New Plan Contain?**

The Plan contains a wide range of different measures aimed at reducing the impact of traffic congestion, improving air quality and improving safety for people travelling in and around Gibraltar. Specific initiatives recommended include the following:

### **i) Public Transport in Gibraltar**

A good public transport system is of fundamental importance to support people's quality of life and economic well-being, in particular connecting people to schools, the college and the new university, as well as employment and training opportunities. Good connectivity to key services and destinations are particularly important for the economic prosperity of Gibraltar.

The overall aim is to encourage greater use of public transport in preference to car use. This can be addressed by providing a high quality customer 'offer', with the provision of a reliable, stable and well-maintained public transport network which provides good journey times and high levels of punctuality.

The emphasis in the new transport strategy is to support cross border movement, integration of local bus services and better walking and cycling routes to encourage more trips by these modes, whilst recognising that car travel will still be important for certain trips.

It is recommended that the bus service is enhanced initially by upgrading the existing bus stops and signage framework that are currently in use and introduce new technology to reliably inform passengers about the services in real time. The aim is to improve the overall bus system via the introduction of real-time communication systems in order to increase its efficiency and avoid the public from having to wait unnecessary periods of time at bus stops. A review of the signage infrastructure is the cornerstone to a successful enhancement of the bus system. Signs must be well placed, standardised, clear and easy to understand. A similar setup to that of the UK bus transport system or network can be adopted in which each bus stop clearly displays the route and intersection point. Furthermore, with the introduction of smart information signs at bus stops, the public can

track their bus and obtain a good time representation of when it will arrive at the selected stop. This will adopt a new principle of “meeting the bus” as opposed to “waiting for the bus” approach that is disliked by the large majority. This new tracking technology will lend itself to future upgrades in the form of a smartphone app which a large percentage of the public can make use of. There is currently a “web-based” bus tracker app for 3 different bus routes which is currently being developed further and will be re-introduced as an iOS/android app available to the general public at no cost to the user. The system will allow future development of additional features which could include cashless online payments that would help reduce delays on entering the bus for all paying passengers.

**In the longer term, the STTPP includes the following recommendations:**

- *Simplify the public transport network to make it easy for the public to understand with:*
  - *A higher frequency network to provide fast, regular services; and*
  - *Investigate the possibility of new bus interchange ‘hub’ locations with better facilities for passengers as a long term solution.*
- *Additional social bus services to meet the needs of the elderly/mobility impaired people.*
- *Bus services supported by significant quality improvements:*
  - *Modern buses (accessibility, comfort, low emission); constantly achieved by upgrading buses as new technology develops;*
  - *Real-time passenger information (bus, shelters, main attractions, phones);*
  - *Smartcard ticketing (fast boarding, tourist’s tickets) in conjunction with a smartphone app and ticket stations;*
  - *Shelter and interchange facilities;*
  - *Greater bus stop capacity (vehicles and passengers); and*
  - *Bus Stop Ticket Machines.*

## ii) Parking Management

Parking control in Gibraltar forms part of the demand management approach for the STTPP as part of an Integrated Transport Strategy. To be effective, it needs to be complemented by other policies which provide good quality alternatives to the use of private vehicles. The strategy recommends a number of different parking elements as part of a complementary approach to help reduce the unnecessary use of private cars in urban areas including off street parking, on street parking (including Residents’ Parking Zones and enforcement), Private Non Residential Parking (PNR) as well as motorbike/bicycle parking and disabled parking requirements.

The approach recommended within the parking strategy is to maximise opportunities from the existing transport network and managing existing assets more effectively to help reduce the impact of vehicle congestion on the network. The overall aims of the parking proposals are the adoption of a coordinated and consistent long term strategy for parking in Gibraltar. The rationale is based on establishing a strategy that supports the economic vitality of Gibraltar by providing and protecting adequate and suitable parking for residents and commerce, whilst ensuring that non-essential parking activity is reduced and controlled.

It is recommended that there be a gradual introduction of new parking controls which will be delivered in a phased programme, with the initial phase focusing on establishing the introduction of a new Gibraltar Environmental Zone (GEZ). An environmental zone can be considered as a low emission zone achieved by the control of parking and the enhancement of traffic fluidity via the reduction of private car usage and the promotion/improvement of public transport. The GEZ will focus on managing parking activity in the core central area of Gibraltar, which is where the centre of all activity lies.

**The STTPP includes the following recommendations:**

- *Gradual introduction of on-street parking controls and charges:*
  - *A pilot scheme of on-street controls should be considered in various locations to improve daytime and evening access to homes and businesses;*
  - *Introduction of parking controls at public on-street and off-street car parks.*
- *Informing the public and take on board any constructive feedback in order to enhance the desirability of introducing residential parking zones:*
  - *If there is a strong demand, introduce pilot schemes and subsequently assess the efficiency of these.*
- *Continue to monitor and review how enforcement is delivered via the new Parking Management Officers (PMO) that have recently been introduced. This new parking management function will be responsible for the delivery of a reliable and focused parking control and hence parking monitoring function;*
- *Review the technology of parking equipment including consideration of cashless payment options and possible control centre with CCTV (Closed Circuit Television) monitoring; and*
- *Review and refresh the current Blue Badge system – including criteria and allocation of permits. This is currently ongoing.*

### iii) Sustainable Travel including Walking and Cycling & Mobility Management

A key objective of the Plan is to encourage use of more sustainable modes of transport including walking and cycling. In considering pedestrian facilities in Gibraltar, the key aims include the following:

- Ensuring that the pedestrian environment is friendly, safe and accessible to use;
- Try to permit that more people are able to walk (and more frequently); and
- Allow all pedestrians to move about with ease, comfort and confidence along the streets and roads.

In order to maximise the attractiveness of walking, it is important to improve the overall quality of pedestrian routes to and from key destinations such as the town centre, employment areas, bus interchange points and district centres. Therefore, a 'network' of high quality pedestrian routes (as part of a Pedestrian Route Network), is recommended. This will offer high quality facilities for

pedestrians, including routes to educational and employment institutes, retail centres, Government offices, health & leisure sites and public transport facilities. Where possible, pedestrian routes should be studied and considered.

Cycling is often convenient and practical for many journeys and encouraging more people to take up cycling can help deliver a broad range of transport outcomes and wider environmental and health goals. It is an efficient form of transport with minimal impact on the environment and is inexpensive for the user.

The Government is keen to promote and encourage more cycling activity as part of its integrated transport approach and is looking to develop a cycle route network, where possible, relative to the wider STTPP process. However, a comprehensive Cycle Strategy has yet to be developed for Gibraltar. A number of recommended aims and objectives are proposed to ensure cycling is a viable form of transport capable of contributing significantly to the development of sustainable transport solutions for the city.

Key aims of the strategy are to increase the absolute number of cyclists and increase the modal share of cycling. Improving facilities and conditions for travel by cycle are not, on their own, likely to generate significant numbers of new cycle trips. Promotional activities are likely to have a significant influence on actual levels of cycle use, however to successfully encourage a greater uptake of this mode requires good quality facilities to be introduced at the onset.

Mobility Management aims to encourage and promote sustainable travel use by influencing individual travel behaviour and making alternatives to car use more attractive. Initiatives include those that encourage people to reduce their travel where possible and to use more sustainable modes of travel, thereby helping to ease congestion and the harmful impacts this has on the environment. Measures can also help to improve people's health by encouraging more active travel and enhance social inclusion such as car sharing networks.

There are a variety of different Mobility Management measures used worldwide including sustainable travel information, promotional campaigns, travel planning and the development of car clubs and car sharing initiatives. Travel plans are a particularly useful tool for setting out options for changing travel behaviour by exploring ways to minimise travel and become less dependent on car use, particularly in relation to businesses and schools.



**The STTPP includes the following recommendations:**

- *Development of pedestrian and cycle priority routes:*
  - *Introduction of better facilities to encourage more walking and cycling on key routes throughout Gibraltar – this includes safer crossing points and better signage;*
  - *Introduction of Bicycle Sharing Schemes (RediBikes).*
- *Establishing more priority for pedestrians and cyclists on town centre routes:*
  - *Consideration to the pedestrianising of Market Place and its closure to through traffic;*
  - *Priority on Corral Road, Fish Market, Reclamation Road, and Main Street; and*
- *Development and implementation of sustainable travel plans for schools and businesses:*
  - *Encourage greater use of non-car modes and management of traffic at peak periods.*

#### iv) Environmental Enhancements

It is critical that the STTPP is fully integrated with Gibraltar's Air Quality Action Plan which sets out how the Government will meet National and European Commission (EC) Air Quality Standards. A number of key sustainable transport initiatives have been identified that seek to directly or indirectly reduce environmental impacts which form part of the Government's integrated approach to managing traffic, transport and parking in Gibraltar.

A key objective of the STTPP is to reduce the environmental impacts from vehicles in terms of air pollution and climate change as well as noise and the health problems that these issues bring. It is important to encourage an approach to land use planning which reduces the need to travel and ensure schemes are developed in a manner that maximises environmental benefits and minimises environmental impacts. It is recommended that a greater priority is afforded to taking action to make more efficient use of energy, which can be achieved by educating drivers on how to be more fuel-efficient and encouraging the use of less polluting vehicles.

Many of the STTPP policies seek to make Gibraltar less car-dependent and the recommended approach is to combine the provisions of better sustainable travel alternatives by taking complementary planning and enforcement action. A variety of different initiatives are recommended within the STTPP which contribute towards reducing the impacts of air and noise pollution, many of which are seeking to establish a shift in travel mode towards greener, more sustainable travel options.

**The STTPP includes the following recommendations:**

- *Working in partnership with all the bus operators to bring about an improvement in the quality of services including the constant upgrading of vehicles to more modern ones as technology develops leading to the introduction of vehicles with constantly lower emission;*
- *Measures to improve air quality in the urban town centre through the introduction of on-street parking controls with priority for electric/ low emission vehicles;*
- *Development of non-motorised travel such as walking and cycling including the improvements on priority pedestrian and cycle routes linking residential districts and facilities with the town centre to reduce the level of unnecessary car use;*
- *Developing sustainable travel plans with local businesses, schools and communities to enable people to understand how their own travel patterns can contribute towards achieving a more sustainable, cleaner and attractive environment. This can be achieved by promoting sustainable travel options such as car clubs and car sharing (as part of an overall Mobility Management strategy);*
- *Reducing the impact of new developments on the existing transport infrastructure, by improving transport links and public transport around these areas; and*
- *Reducing the adverse impacts of transport schemes, such as noise levels, through considerate planning and design.*

## v) Road Safety and Traffic Management

Making Gibraltar a safer place to live and work remains one of the priority themes for the Government, with an emphasis on speed management to reduce the occurrence and severity of traffic accidents on the road network.

The STTPP includes a speed management strategy as part of a package of measures to influence travel behaviour and ameliorate environmental problems. As part of the commitment to improving safety of vulnerable road users such as pedestrians, cyclists and those riding motorcycles, engineering, enforcement, education and training initiatives will all be developed. It is recommended that a number of measures be considered to ensure safety in transport and to minimise the adverse effects of transport on health including the following:

- A review of currently applied speed limits has been undertaken to determine if they are still appropriate for the local environment. Based on this review a number of changes to speed limits across Gibraltar have already been undertaken to control and regulate vehicle speeds more effectively; and
- An ongoing programme of focused enforcement with the monitoring of results supported by appropriate resources and equipment such as mobile and static speed cameras.

Within the STTPP there are a number of recommendations for traffic management measures aimed at improving the flow of traffic and improving access to key destinations as well as facilitating access by sustainable modes such as buses, taxis and non-motorised modes.

A range of network improvements and junction improvement schemes are able to improve traffic flow at key junctions on the road network as well as enhance access points to the city centre.

**The STTPP includes the following recommendations:**

- *Options to improve frontier traffic movement into and out of Gibraltar;*
- *Junction improvements to improve traffic flow and provide better facilities for pedestrians, cyclists and bus users – including:*
  - *The permanent construction of the temporary pilot roundabout at Glacis Road, following the completion of the Ocean Spa Plaza development;*
  - *A review of the junction setup at Waterport Road Roundabout.*
- *Vehicular restrictions on Corral Road, Fish Market Road, Reclamation Road and Main Street;*
- *The consideration for better management of freight and deliveries into and throughout the town centre;*
- *Use of technology to reduce the impact and disruption of roadworks;*
- *Improve roads, cycle paths and pedestrian facilities; and*
- *Introduction of speed management, monitoring and control including speed camera technology at known ‘hotspots’.*

## vi) Forward Planning & Urban Design

This covers how transport can help enable the local economy to thrive, as well as provide an attractive place to visit and work in, and in particular how transport can contribute to improving the local street environment, urban design and development of public open spaces. Public transport can support this by encouraging fewer vehicles in the town centre and providing better and higher quality conditions for both residents and tourists alike.

The impact of traffic in the city centre will be reduced by the introduction of a series of improvements over the next 10 years. This includes reinvigorating Gibraltar’s central pedestrian priority zone and establishing more accessible and safer streets – particularly to key destinations such as Ocean Village, Waterfront Developments and retail areas. Key elements of the overall approach include improving the pedestrian priority zone by reviewing and updating access arrangements for commercial and service vehicles. It is recommended that the pedestrian priority zone be increased and that the southern end of the town centre become better integrated through greater pedestrian priority. Consideration to the development of ‘shared space’ along Corral Road, Fish Market, and Reclamation Road will create attractive locations and gateways to the city centre for local residents and tourists to enjoy.

Effective land-use planning is important for the delivery of long-term sustainable transport solutions in Gibraltar. It is essential that new developments make adequate provision for sustainable transport, including walking as well as good access by public transport.

## Implementation Plan and STTPP Delivery

It is important that an efficient programme management system is put in place that enables effective and consistent monitoring and reporting to be undertaken for all schemes contained within the STTPP programme. Cost estimates for the measures and proposals contained in the STTPP will be required in order to establish an achievable annual implementation and delivery programme.

Schemes will be regularly reviewed to assess overall performance against target implementation dates and budget allocations. This will allow any potential problems and delays to be identified at an early stage and facilitate remedial action to help modify the programme should it veer off track.

Detailed plans and programmes will be published in a separate STTPP Implementation Plan which will be regularly updated reflecting schemes that have been implemented and those being brought forward in the next phase of STTPP roll out.

## Monitoring - How will the Plan be Assessed?

A number of potential STTPP performance indicators (PIs) have been identified that support the new vision statement and will help to assess the impact of transport interventions on STTPP policy objectives. These include the following indicator themes:

- **Transport System:** core transport statistics for Gibraltar including total number of Road Kilometres Travel and proportion of trips undertaken by public transport/ walking/cycling etc;
- **Travel Times:** including average journey time per kilometre and bus services running to schedule;
- **Road Safety:** People Killed or Seriously Injured (KSI) and accidents involving pedestrians and cyclists;
- **Public Transport:** including patronage, reliability, punctuality and user satisfaction;
- **Accessibility and Mobility:** including pedestrian and cycle monitoring;
- **Parking:** including occupancy and behaviour (level of abuse of parking regulations and fines);
- **Environment:** including nitrogen dioxide and other emissions as well as noise levels; and
- **Social Satisfaction Surveys:** in terms of public transport as well as quality of pedestrian/cycle environment and also car ownership.

## Reviewing the Plan to accommodate change

All plans should be regularly reviewed and modified if they are to remain relevant and useable. At this moment Gibraltar faces two very significant interventions which will undoubtedly effect transport patterns but as yet cannot be fully appraised.

The completion of the Gibraltar Airport and Frontier Access Road (GAFAR), including the tunnel under the eastern end of the runway, will significantly alter the routes of motorised vehicle

movements including bus services travel. These changes are predictable and have been modelled when assessing the impacts on the wider road network and bus journey times. What is as yet less clear is the impact on pedestrians and cyclists currently travelling across the runway. As part of the STTPP the implications of complete and partial closure of the cross-runway access have been considered and options ranging from shuttle buses to a new pedestrian only underpass examined. At present discussions between the various stakeholders and further investigations of the options are on-going and once the way forward is agreed the proposals will be incorporated into either a revised STTPP or the accompanying Implementation Plan.

The ramifications of Brexit for Gibraltar are widespread ranging from the performance of the economy, which in turn effects the demand for travel, to the day-to-day movement of people and goods across the frontier. At this time of on-going negotiations, strategizing and forecasting there is limited value in developing 'what if' scenarios or producing detailed plans. However, as more details of potential changes emerge the wider impacts can be modelled using the tools developed for STTPP and options for dealing with any specific frontier changes produced which can be introduced into an updated STTPP.

# 1 Introduction

## 1.1 Introduction

Overall, traffic is generally recognised to be one of Gibraltar's most long standing problems. As a result, like many other urban areas, Gibraltar suffers from traffic congestion which can have adverse effects on its economy, environment and image.

Traffic congestion is directly affected by:

- Daily peak hours due to the commuting to/from schools and workplaces
- School terms times
- Inclement weather
- Border restrictions
- Airport movements
- Incidence of road traffic accidents or obstructions on the public road network.

Local air quality is a particular important issue, with the Government actively identifying ways to improve levels so that EC standards are met.

## 1.2 Phased Delivery of Sustainable Transport Measures

The STTPP sets out the Government's sustainable transport vision and objectives together with a series of proposals that have been developed to achieve these. The contents of the Plan have been subject to extensive consultation with a wide variety of different stakeholder interests, together with that of the general public. It is recognised that this plan is looking at possible transport improvements within a 10-year timeline. Therefore, a wide range of initiatives have been identified for possible implementation within short, medium and longer-term timescales.

Once the strategy has been adopted, the Plan will undergo further development work with schemes and initiatives further developed in consultation with local residents and businesses. At that time, specific timescales and budgets will be identified and programmes of measures developed as part of the STTPP. Progress with the development and implementation of these schemes will be regularly monitored and reviewed to assess their success in contribution to the STTPP's vision and objectives.

In the meantime, a series of 'quick win' transport solutions have been identified and work has started in earnest to bring these forward. This includes:

- Undertaking a review of how the current Night Bus service operates to provide additional transport options for evening trips in Gibraltar;
- The development of traffic management measures such as the pilot roundabout project at Glacis Road / Bayside Road aimed at improving the flow of traffic at this busy junction. This is currently implemented as a pilot scheme and will be permanently constructed following the completion of the Ocean Spa Plaza development.

- Establishing new school drop off zones aimed at improving access and safety for children being dropped off/picked up from school. The scheme completed last year at St. Joseph's school included the relocation of the bus stop to improve access for bus services and prevent congestion during school arrival/pick-up times. Change in demography as a result of the construction of the new affordable housing at Mons Calpe Mews and Beach View Terraces will alter school catchment areas and will most certainly impact traffic flows throughout Gibraltar;
- Improved pedestrian crossing points to improve accessibility and safety for pedestrians in Gibraltar. This includes the introduction of the new pelican crossing at Ragged Staff and Trafalgar Interchange which is helping pedestrians at this busy and often congested junction;
- Introduction of more Pay & Display parking areas to improve the turnover of parked vehicles preventing parking stagnation and improving access to commercial and residential areas, as well as the workplace.

## 1.3 Document Structure

This document sets out the background to the transport and traffic problems in Gibraltar, supported by key data obtained through extensive survey work. This is reinforced by means of feedback from a wide variety of stakeholder groups and organisations. It then presents a new transport vision and strategic framework before describing the different elements that underpin the new traffic transport and parking plan. The document concludes with details on the implementation programme and recommended monitoring framework that will gauge how well the interventions will deliver the new STTPP objectives.

The chapter structure is outlined in Table 1.1

*Table:1.1 STTPP Document Structure*

	Chapter	Outline
Chapter 1	Introduction	Introduction to the STTPP.
Chapter 2	Context for Travel & Transport In Gibraltar	Background on the key policy areas relating to transport and background data on current trends and travel patterns including strategic modelling forecasts.
Chapter 3	Developing a New Transport Vision & Strategy for Gibraltar	Setting a new transport vision that responds to the transport challenges, as well as policy objectives and support elements.
Chapter 4	Parking & Demand Management	Details of parking issues and proposals.
Chapter 5	Public transport	Details of public transport issues and proposals.
Chapter 6	Sustainable Travel & Mobility Management	Details of walking and cycling issues and proposals as well as smarter travel choice options (travel plans).
Chapter 7	Environmental Enhancements	Details of environmental issues and proposals to mitigate these.
Chapter 8	Road Safety & Traffic Management	Details of road safety and traffic management issues and proposals to address these.
Chapter 9	Forward Planning & Urban Design	Details of planning and design issues and proposals.
Chapter 10	STTPP Implementation Planning	Setting out issues relating to implementation of the STTPP and also how the Plan will be monitored.
Chapter 11	STTPP Monitoring	Details on monitoring the STTPP.

## 2 Context for Travel & Transport in Gibraltar

### 2.1 Introduction

It is acknowledged that congestion is becoming an increasingly regular and sustained part of daily life in Gibraltar. Frontier queues crossing into Spain causes significant traffic congestion and circulation problems. The result can bring about gridlock, not just on the Spanish side but also for cars leaving Gibraltar. The increasing number of flights also results in traffic build-up especially during the busy flight arrival and departure times where WCA remains closed for up to 10 minutes per aircraft movement. The knock-on effect has a major impact in Gibraltar's internal road network at peak times, not just in the north around the airport or on the approach to the Frontier. In the Old Town, parking pressures are increasing as a lack of off street parking results in tourists, frontier and local workers using residential streets as day time parking.

A primary goal of the STTPP is to respond to the challenge of addressing the increasing levels of congestion and the associated impact on the environment (in terms of meeting air quality standards), economy (attracting inward investment & supporting tourism objectives) and society (improving access to key facilities).

Approximately 12,000 cross border workers commute in and out of Gibraltar on a daily basis. Visitors entering Gibraltar throughout the year via the land border (2,428,115 motor vehicles), cruise ships (342,942 cruise visitors) and the airport (220,000 passenger arrivals)<sup>1</sup> as per 2015 statistics, merely exacerbate congestion on an already strained transport system. These challenges are set to continue with future planned developments adding to transport pressures. These include the World Trade Centre, creating over 170,000 square feet (15,000 square meters) of additional office space, and The Midtown Development which will create a further 35,000 square meters approximately (consisting of office, residential and retail/commercial space) in the centre of Town. The success at attracting more flights to Gibraltar has in turn led to a further one million visitors per year. Further new developments proposed in Gibraltar to support the growing economy and the tourism & leisure industries are expected to add further pressure on the network, thus requiring new approaches to delivering sustainable transport options that meet the needs for regular trips to work, school and for tourism & leisure purposes. Changes in demography from the recent completion of housing developments such as Beach View Terraces and Mons Calpe Mews will alter school catchment areas and will also inevitably impact traffic flows throughout Gibraltar. Existing traffic loads and congestion may either increase or redistribute to other areas throughout Gibraltar. Furthermore, the current administration has committed to additional affordable housing schemes at Bob Peliza Mews (Waterport Road) and at the Eastside Reclamation Development including Hassan Centenary Terraces. This will also affect the demographic shift and in turn alter traffic flows in the near future.

Once the Eastside Development is completed, this will result in a significant increase in economic activity and clearly a further increase or shift in traffic dynamics.

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<sup>1</sup> Source: [www.gibraltar.gi](http://www.gibraltar.gi) (HM GoG Statistics Information – 2015).



*Table 2.1: Brief Review of Current Transport Modes Serving Gibraltar*

Mode	Description
<b>Air Travel</b>	Gibraltar airport is located at the North of Gibraltar, just to the south of the border with Spain and provides international flights to several destinations in the UK and Tangier, Morocco. Successful marketing has led to an increase in flights to Gibraltar including 11 flights on Sundays.
<b>Road Transport</b>	There are approximately 29km of roads within Gibraltar itself, one of which connects with Spain. This road, at present, crosses the airport runway and is closed during flight arrivals and departures.
<b>Bus Travel</b>	There are 8 public bus services all operated by the Gibraltar Bus Company Ltd including the night bus service. There is one additional privately run, commercial route provided by Calypso Transport which provides a connection to the border with Spain. There are no cross-border services.
<b>Coach Travel</b>	Coaches are typically used by tourists to cross the border spending the day or part of the day in Gibraltar. In addition, there is a fleet of mini-coaches operated by 4 distinct tour operators carrying 16-26 passengers each and used to conduct tours throughout Gibraltar especially the Upper Rock.
<b>Taxi Shuttle Service</b>	This service provides a regular shuttle between the cruise terminal and town centre when cruise ships are in Port.
<b>Maritime Transport</b>	The docks provide a limited direct ferry to Morocco during the weekends, and supports cruise liners. There are no local ferry services providing connections to or from the coastline with Spain.
<b>Cruise Travel</b>	The cruise terminal regularly caters for medium to large cruise ships with a maximum capacity of three ships which typically stay for 6-8 hours during the day.
<b>Rail Services</b>	There is currently no operating railway within Gibraltar.
<b>Taxi Services</b>	There are 112 licensed taxis in Gibraltar which typically seat up to 8 passengers.
<b>Motorcycle/ Scooters</b>	Motorcycles are a popular mode of transport in Gibraltar given the restrictions on the road network and their ability to park and cross the border.
<b>Cycling</b>	Cycling is not prevalent in Gibraltar due to concerns about safety issues, a lack of dedicated cycle facilities (cycle lanes) and Gibraltar's steep inclines. Cycle hire used to be provided as part of the Bicycle initiative by the Gibraltar Bus Company. A new scheme is currently being developed to replace the old one. Whilst the route from the centre of town to Europa Point is relatively flat in nature, the level of traffic on the network is a deterrent to encouraging cyclists to use this mode.
<b>Walking</b>	Whilst pedestrians are catered for within Gibraltar, given the topography and climate, walking for long distance trips is not common.
<b>Mobility Scooters and other mobile electric forms of transportation</b>	Whilst illegal to import, there has been an upsurge in the use of electric motorised scooters/skate boards. These small electric personal scooters and other mobile electric means of transport are becoming more popular. Mobility scooters present a challenge in terms of safety for pedestrians within pedestrianised zones and their use on the roads.

## **2.2 Existing Policy Context**

This section summarises the current policy framework within Gibraltar including all relevant local transport and movement policies and aspirations.

### **2.2.1 Gibraltar Development Plan (2009)**

The Gibraltar Development Plan published in 2009 provides the planning framework for development proposals in Gibraltar. The plan takes into account the different competing demands on Gibraltar's limited land resources and provides a co-ordinated set of policies to manage development and growth.

It states that a fine balance needs to be achieved to allow for future economic prosperity without jeopardising Gibraltar's needs.

Transport forms one of the seven strategic principles within the Plan, highlighting that there is a need to 'facilitate and encourage alternative means of transport including the use of public transport whilst catering for the needs of private transport where appropriate'.

Importantly, the Gibraltar Development Plan acknowledges the inter-relationship between land use and transport and provides guidance on how to balance Gibraltar's competing needs, recognising that major developments should consider the traffic implications on the public road network. The existing Development Plan strongly supports the promotion and use of alternative means of transport, with the primary objective being to facilitate and encourage the use of public transport and to cater for the needs of private transport where deemed suitable. Under the Gibraltar Development Plan Policy TR1, the Development and Planning Commission states it will favour proposals which will contribute towards achieving the aim of promoting 'alternative means of transport to private transport'.

### **2.2.2 Air Quality**

The Government of Gibraltar is committed to taking affirmative action to improve air quality in line with EC limit values and requirements. A significant amount of the pollution that contributes to PM<sub>10</sub> and NO<sub>2</sub> concentrations in Gibraltar is trans-boundary in nature (i.e. it is not produced within Gibraltar but is carried via the prevailing winds). Within Gibraltar there are three air monitoring stations. A sub-urban station at Bleak House and roadside stations both at Rosia Road and Witham's Road. The Gibraltar Air Quality Action Plan (AQAP) sets out how Government will encourage other organisations and the business community to take action to improve air quality. The priority is to achieve the national and EC limit values for PM<sub>10</sub> and NO<sub>2</sub> in the short to medium term. Within the AQAP there is reference to a range of measures to control and manage emissions from road transport, several of which are already being implemented.

#### Transport measures within the AQAP

- *Measures and facilities to encourage the greater use of pedal cycles (including the introduction of a new scheme “RediBikes” to replace the Gibi-Bike scheme that was discontinued in 2014);*
- *Bus service improvements including expansion of bus services overall, increased service frequency as usage increases and replacement programme for Gibraltar Bus Company’s vehicle fleet. New bus vehicles with the latest approved Euro type engine have already been purchased and implemented with a focus on continuing maintenance and upgrading of vehicles to the required emission standards in future as technology advances;*
- *Establishing ‘park and ride’ facilities close to the Frontier to reduce the level of town centre bound traffic and demand for on-street parking; this will be recommended upon the completion of the tunnel project known as the ‘Gibraltar Airport and Frontier Access Road’ (GAFAR);*
- *Traffic management measures to improve the flow of traffic including alternative routes and expansion of the network in places to reduce the level of traffic congestion;*
- *Introduction of safety initiatives such as CCTV and traffic calming measures to enforce speed limits within Gibraltar and reduce accident rates; and*
- *Focus on low emission initiatives including a central Low Emission Zone. Promote commercial deliveries made by electric vehicles as well as the introduction of electric charging points at strategic locations within Gibraltar in order to encourage the use of electric vehicles. New Government fleet vehicles to be electric, hybrids or low emission vehicles where possible. Government already implemented its first electric vehicle as its flagship G1 (Chief Minister’s personal transport) and in its fleet of hybrid and plugin hybrid staff car vehicles.*

It is envisaged that the measures contained within the STTPP and detailed in in the AQAP will provide additional reductions in the NO<sub>x</sub> emissions and therefore concentrations of NO<sub>2</sub> to provide additional ‘headroom’ between measured concentrations and the limit values.

### 2.2.3 Noise

The European Parliament and Council Directive 2002/49/EC relating to the assessment of environmental noise was published in July 2002. This focuses on the management and control of road, rail and air transportation noise as well as other noise from industry and ports via use of strategic noise mapping and development of appropriate noise action plans. The requirements of this Directive have been transposed in Gibraltar law through the Environment Regulations 2006. Several rounds of mapping have been undertaken in Gibraltar, and under the regulations, Gibraltar is required to map all major roads with three million vehicle movements in the base year of 2011.

During the first round of the strategic noise mapping exercise three roads were considered as follows:

- Winston Churchill Avenue;
- Queensway; and
- Devil’s Tower Road.

The second round of assessment identified a further four roads which were considered as potential areas which might exceed the three million vehicle threshold set out in the regulations. Each site was assessed using traffic counter information that was used to survey discrete periods and information on traffic flow, composition and speed.

The additional roads where the threshold was found to have been exceeded included:

- Europa Road;
- Rosia Road;
- Glacis Road;
- Line Wall Road.

## **2.2.4 The Integrated Traffic, Parking and Transport Plan (April 2010)**

The Integrated Traffic, Parking and Transport Plan released in 2010 stated that there are several factors which have combined to increase the amount of traffic on local roads. It highlighted the relationship between increasing number of vehicles and the impact of parking demand. The plan stated that the measures included to mitigate the traffic problems were broadly constrained due to the limited availability of land. Therefore, the number of roads and the space needed to build new ones was limited, indicating that making better use of current infrastructure was required. Naturally, this assumes that making better use of alternatives to the private vehicle is beneficial, including public transport, walking and cycling.

The plan recognised that the success and growth of the Gibraltar economy had resulted in increased traffic flow and therefore it was not possible to eliminate traffic during peak times indicating that congestion was to be expected. The Integrated Plan stated that in order to improve the environment for pedestrians, new pavements would need to be provided in areas where there was little provision and that current infrastructure needed to be reviewed to assess accessibility and obstructions. Measures and facilities to encourage the greater use of pedal cycles would also be introduced with the aim of reducing the amount of traffic on the roads and encouraging people to travel by alternative means.

The Integrated Plan also looked to improve and expand the bus network by a combination of route changes, provision of free bus services (on the majority of routes), increased frequency, late night bus services, introduction of new, modern vehicles, and replacement of all bus shelters. Whilst several of these measures have been introduced in the past years, others are still awaiting delivery and these are reflected in the direction of the new STTP and implementation approach. The Integrated Traffic, Parking and Transport Plan (2010), although a positive step in the right direction only scratched the surface in terms of the research and background needed to create a truly substantive and authoritative Plan.

## **2.2.5 Existing Policy Context - Conclusions**

The review of existing policies in Gibraltar indicate that there is a framework in place which guides and shapes the provision of transport in Gibraltar. However, the increasing problems of traffic congestion and air quality highlight the need to strengthen the policy framework to focus on improving sustainable transport options and establishing a plan for future transport.

Within this STTPP, a new policy framework is proposed and looks at a programme of interventions aimed at delivering a 'step change' in the level and quality of sustainable travel options that meets future travel demands.

## 2.3 Gibraltar Transport and Development Statistics

At the start of the development of the STTPP, detailed information on the current transport and travel characteristics of residents, commuters and visitors was obtained in order to determine the full picture of the issues, problems and challenges. A wide range of transport-related surveys were undertaken in spring 2013 including the following:

- Roadside Interviews (RSIs): surveys of drivers on their trip characteristics;
- Junction surveys including vehicle and pedestrian/cyclist counts;
- Pedestrian Counts at the major junctions throughout the town area;
- Household Surveys asking a range of social and transport related questions;
- Journey Time Surveys along the main routes throughout Gibraltar;
- Public Transport Surveys including bus passenger surveys and counts;
- Parking Surveys including car park surveys, occupancy surveys and entry/exit counts;
- Cruise Ship Surveys;
- School and business surveys; and
- Online surveys to obtain views on transport issues and solutions.

The headline results from each of these surveys are detailed below. Stakeholder feedback is also referred to throughout this document in support of the various policy initiatives and proposals. More detail on the data collected and analysed as part of the STTPP is set out in Appendix A (STTPP Summary Data Analysis Report).

Table 2.2: Headline Transport Statistics from the STTPP Surveys (Spring 2013)

Survey Type	Headline Results	Conclusions
<b>Roadside Interviews (Vehicles)</b> <i>RSI and traffic counts at seven sites</i>	<ul style="list-style-type: none"> <li>• 61% of car journeys were single occupancy.</li> <li>• Destination purpose: <ul style="list-style-type: none"> <li>- 33% Home</li> <li>- 36% Work/School</li> <li>- 27% Leisure</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• High single occupancy indicating an individual dependence of private vehicle ownership.</li> <li>• Personal transport used equally for all trip purposes indicating dependency on vehicles.</li> <li>• Measures for mopeds and motorbikes need to be integral to plan.</li> </ul>
<b>Roadside Interviews (Pedestrian &amp; Cyclists)</b>	<ul style="list-style-type: none"> <li>• Over 60% of interviewees use a car to get from Spain to border.</li> <li>• Majority of people are walking from the border into Gibraltar but is dependent on queue length.</li> <li>• Taxi and bus used for medium/longer distance trips.</li> </ul>	<ul style="list-style-type: none"> <li>• Better pedestrian routes (Quality, runway closure warning, road crossings, pavement widths).</li> <li>• Bus services (high priority access, reduced waiting, better bus stops, more</li> </ul>

Survey Type	Headline Results	Conclusions
<b>Journey Times</b> <i>Seven set routes analysed repeated over several days</i>	<ul style="list-style-type: none"> <li>• Average journey speeds between 17 – 33km/h.</li> <li>• Journey times typically slower during AM peak periods.</li> <li>• Journey times were slower and more varied on routes around the Old Town area.</li> </ul>	<p>direct services, coordination).</p> <ul style="list-style-type: none"> <li>• Measures to improve journey time reliability should be introduced.</li> <li>• Current scenario affects travel by public transport.</li> </ul>
<b>Cruise Ships</b>	<ul style="list-style-type: none"> <li>• Majority of visitors travel to Main Street while in Gibraltar with nearly one fifth also visiting Upper Rock.</li> <li>• 33% of visitors travel around by Tourist Bus, 21% travel by taxi, 19% by shuttle bus and the remainder walk.</li> </ul>	<ul style="list-style-type: none"> <li>• Not many visitors choose to walk on first visit but will consider doing so next time.</li> <li>• Better pedestrian infrastructure and information needed.</li> <li>• Coordination of taxi and shuttle buses for Cruise Ship visits.</li> </ul>
<b>Public Transport</b>	<ul style="list-style-type: none"> <li>• A large number of passengers board services at Market Place.</li> <li>• Heavy demand on most services in the AM peak and school leaving time 1530hrs.</li> <li>• Some routes/sections have limited number of passengers i.e. Route 7.</li> </ul>	<ul style="list-style-type: none"> <li>• Additional services &amp; frequency key issues.</li> <li>• Market Place stops are inappropriate for a modern bus interchange.</li> <li>• Priority for Buses/taxis.</li> <li>• Improve Information &amp; Ticketing.</li> </ul>
<b>Household Survey Interview</b>	<ul style="list-style-type: none"> <li>• 60% of residents own a car with highest prevalence on the Upper Town.</li> <li>• 76% of car drivers made a trip at least two to three times per week.</li> <li>• Average car journey time is just under 20 minutes.</li> </ul>	<ul style="list-style-type: none"> <li>• High need and usage of private vehicle.</li> <li>• Vehicles trips could be undertaken by more sustainable modes due to trip length/time.</li> <li>• Introduce measures to encourage this.</li> </ul>
<b>Parking</b>	<ul style="list-style-type: none"> <li>• On average, high usage of on street parking spaces (93%) and off street parking spaces (71%).</li> <li>• Over 40% of vehicles parked on-street stay all day, 23% for off-street vehicles.</li> <li>• Nearly 65% vehicles single occupancy, with 90% having one passenger.</li> </ul>	<ul style="list-style-type: none"> <li>• Coordinated car park designation – better use of existing space.</li> <li>• Strategic signing to car parks – reduce circuitous movements.</li> <li>• Demand management through charging and enforcement.</li> <li>• Supported by technology – Automatic Number Plate Recognition (ANPR), phone payments, Variable Message Signing (VMS).</li> </ul>

Survey Type	Headline Results	Conclusions
<b>Primary School Hands-up survey</b>	<ul style="list-style-type: none"> <li>• More than half of primary school children walk to school.</li> <li>• Changes in demography due to the recent completion of housing developments will alter school catchment areas and may impact traffic flows throughout Gibraltar.</li> <li>• Significant number of pupils would prefer to cycle to school.</li> <li>• 70% of pupils own a push bike for leisure purposes.</li> </ul>	<ul style="list-style-type: none"> <li>• Latent demand for cycling to school.</li> <li>• Need to introduce initiatives to encourage and promote cycling and walking (i.e. training, activities, infrastructure).</li> </ul>
<b>Secondary School Online Survey</b>	<ul style="list-style-type: none"> <li>• Over two-thirds of students walk to school.</li> <li>• Reducing or slowing traffic would encourage more students to walk.</li> <li>• Improving reliability of bus services would encourage bus travel.</li> </ul>	<ul style="list-style-type: none"> <li>• Traffic management measures need to be introduced around school roads.</li> <li>• Support should be provided to schools to introduce measures to promote sustainable travel.</li> <li>• Cooperation with bus and school services.</li> <li>• Review of opening hours.</li> </ul>
<b>Business Online Survey</b>	<ul style="list-style-type: none"> <li>• 32% commute to work by moped or motorbike.</li> <li>• Two-thirds of respondents would walk or cycle if facilities improved.</li> <li>• More people would commute by bus if frequencies increased.</li> </ul>	<ul style="list-style-type: none"> <li>• Support should be given to businesses to help encourage active travel.</li> <li>• Bus services need to be reviewed/improved to meet commuter needs.</li> </ul>
<b>General Travel Survey</b>	<ul style="list-style-type: none"> <li>• Moped/Motorbike, car (no passengers) and walking main modes.</li> <li>• A quarter of people living in the Town Area would walk more if there was less traffic or journey times were longer.</li> <li>• A quarter of respondents would cycle more if the number of cycle facilities increased.</li> </ul>	<ul style="list-style-type: none"> <li>• General public are likely to travel by alternative modes if infrastructure is available.</li> <li>• Improvements to public space (similar to pedestrianisation of Main Street) would have dual-benefits.</li> </ul>

(Source: Mott MacDonald Limited)

### 2.3.1 Demographic Statistics

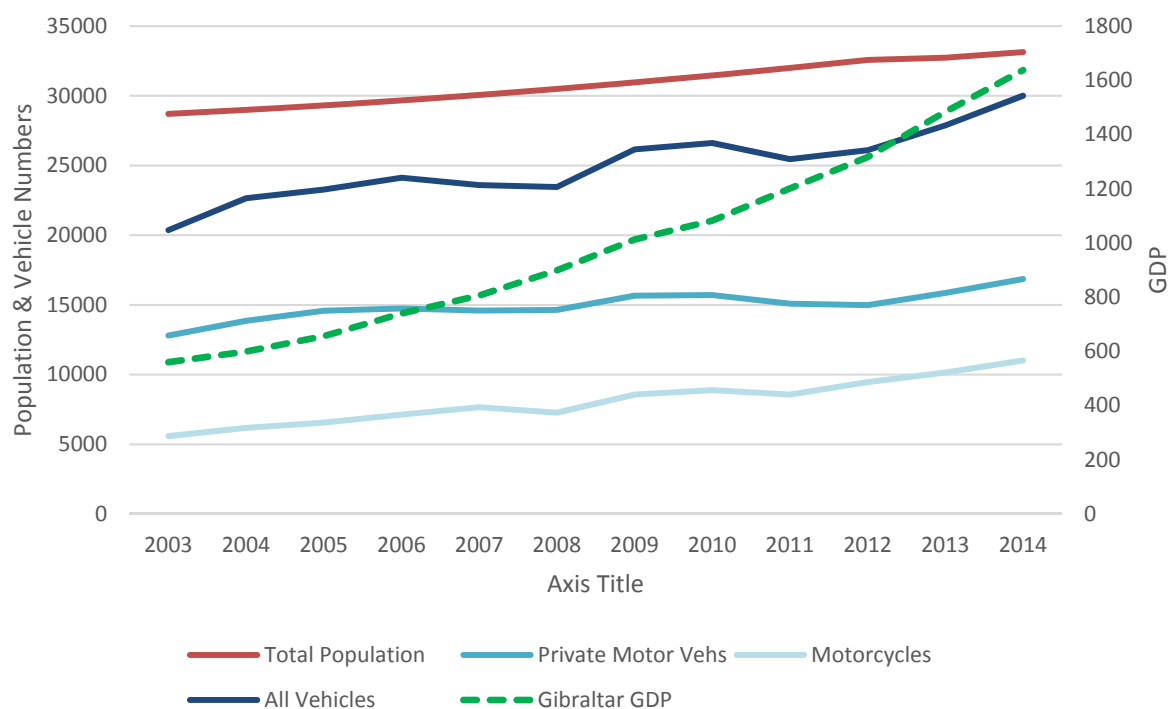
Resident based vehicular ownership and use (primarily cars and motorcycles) is now reaching saturation point with the number of registered vehicles nearly equalling the total resident population, not just those residents with a driving licence (as illustrated in Figure 2.1). Based on recent census and published statistics it is apparent that there is a strong correlation between GDP growth and an increase in jobs. However, because the resident population size is constrained in part by the availability of accommodation this has led to an increase in cross



border vehicle trips indicating that the number of vehicles crossing the border is not just a function of low fuel and cigarette prices. In 1982 the population of Gibraltar totalled 29,350 with a figure of 11,650 jobs and in 2014 the population had risen marginally to 31,140 whilst the total number of jobs had increased significantly to 24,422<sup>2</sup>.

There has been rapid cross border growth in traffic movement and during the first decade of this millennium vehicle volumes increased by 75%. Modelling results show extensive delays from the border to town centre both with and without the introduction of the GAFAR. This will develop further if growth in cross border vehicle trips continues at the current rate.

Figure 2.1: Gibraltar Population and GDP Trends



(Source: Mott MacDonald Limited)

Looking ahead, in terms of Gibraltar's population it is unlikely that current trends will alter and so it is anticipated that total population will increase slowly by around 6.5% over the next 10 years. The scale of new housing projects proposed by the Government would appear to be in line with this level of increase to cater for resident population demand. Information on future new developments and aspirations has been obtained which has helped to inform the assessment of future traffic forecasts as part of the new strategic transport model.

In terms of future economic growth there are limited published future forecasts although it is assumed that recent trends will continue and therefore it is anticipated that there will be a considerable rise in jobs which cannot be resourced from the resident population within Gibraltar alone so further raising the daily cross border movements.

<sup>2</sup> Source: [www.gibraltar.gi](http://www.gibraltar.gi) (Abstract of Statistics 2014).



### 2.3.2 Stakeholder Views on Transport Issues

Stakeholder engagement has played a key role in the development of the policies and proposals. A Stakeholder Involvement Plan (SIP) was established with the aim of setting out how different stakeholder groups were able to share their views on the transport issues and provide feedback on the emerging ideas and concepts. Further details on the consultation issues raised are set out in a separate document, STTPP Consultation Summary Report.

**Key objectives of the SIP were to ensure that stakeholders:**

- *Were fully aware of why and how the STTPP is being developed;*
- *Were involved in the STTPP process and understood that they have a role in developing the solution;*
- *Could be approached to gather further relevant background information;*
- *Were given the opportunity to articulate their views on the problems and opportunities; and*
- *Were able to provide their views on the emerging solutions in the right context (i.e. knowing extent of STTPP).*

A total of 3 forums were established bringing together a variety of representative groups and organisations together including:

- **Business Forum:** selecting a variety of different business interests/types across Gibraltar focusing on travel to work and commercial issues as well as the tourism sector;
- **Transport Providers:** including public transport operators, the Gibraltar Taxi Association, emergency services who collectively are crucial to the successful implementation of the STTPP;
- **Community Interest Groups:** open to wide range of interest groups and organisations including environmental and community-based organisations.

In developing the structure for each forum a common approach was adopted including:

- **Setting the scene:** explaining the background and context for the development of a new STTPP;
- **The current situation:** providing a summary of key transport issues supported by data collected from the extensive survey programme initiated to support the Plan in Spring 2013;
- Agree attendee **specific issues** related to each organisation;
- Obtain **views on emerging ideas and solutions** for inclusion in the STTPP.

In support of the Forums and other meetings that have been carried out, a stakeholder engagement database has been established recording all relevant stakeholder contact details and engagement activities, which will provide an ongoing record of issues raised and discussed.

It will also help facilitate further dialogue with the various stakeholders once the plan is adopted and initiatives progress during the development and implementation stages.

A separate consultation exercise was held with representatives of the education department and head-teachers of schools/college in Gibraltar to understand school travel-related issues more fully. A separate consultation exercise was also initiated with individual schools through the development of online travel surveys which sought to obtain information from staff and pupils of the different schools across Gibraltar to get a good picture of not only Gibraltar-wide school transport issues but also local problems perceived at each site.

The stakeholder forums were complemented by a series of online surveys available via the Government's website providing the opportunity for other residents and visitors to share their views on transport issues and to get views on the priorities of the different sustainable transport solutions. In addition, comments and views from the public as well as Tenants Associations and other groups were considered and taken on board in determining the proposals and recommendations within the STTPP.

Throughout the development of the STTPP, a wide range of Government departments and key stakeholders were approached separately, contributing ideas and providing insight on the key transport issues in Gibraltar. These have included:

- Technical Services Department (TSD);
- Town Planning (Development Plan);
- Department of Enterprise and Economy;
- Department of Education and Head Teachers of the local schools and college;
- Royal Gibraltar Police: Traffic Department;
- Gibraltar Bus Company and Calypso Transport;
- Gibraltar Taxi Association;
- Gibraltar Car Parks Limited;
- Gibraltar Group of Professional Engineers;
- Gibraltar Federation of Small Businesses (GFSB);
- Gibraltar Chamber of Commerce;
- Gibraltar Fire and Rescue Service;
- Gibraltar Health Authority Ambulance Service.

All issues, ideas and recommendations have been presented and discussed at both the STTPP Policy and Working Groups who have overseen and managed the development of the Plan.

Table 2.3 below highlights some of the key transport issues identified through the SIP process and how these issues have been addressed in the development of the STTPP.

Table 2.3: Summary of Key Stakeholder Issues Raised Through STTPP Forums

Stakeholder Issues Raised	How This Response Has Been Taken on Board in STTPP
<b>Public Transport Aspects:</b>	
Concerns about coverage of bus services (full north-south route) and hours of operation (limited options after 9pm).	- Pilot Night Bus Scheme has been implemented and is under review for further extension of evening services or discontinuation under the new bus strategy proposal.
Problematic interchange points (e.g. Market Place) & over-use.	- Proposal to remove Market Place as key interchange point and consideration of establishing a series of smaller interchange hubs as part of new network approach.
Important to provide more priority measures for taxis as PSVs.	- Introduction of GPS for buses and taxis to improve management of services and information provided to public. - Smartphone Apps.
Control of parking within bus stops needs to be improved to better the existing bus service.	- Parking strategy includes greater emphasis on enforcement and in longer term new technology will support this (greater use of CCTV enforcement and control room in partnership with the police).
Better access for coaches in terms of facilities and integration with the cruise terminal.	- Coach park (Midtown) is located in town centre (Reclamation Road) with good access to Main Street and bus services.
<b>Sustainable Travel Modes:</b>	
Pedestrian safety issues for vulnerable road users – No. of problematic crossing points and conflicts between pedestrians/vehicles.	- New pedestrian route network recommended with improved access/crossing points and more accessible 'gateways' into the town centre.
Limited infrastructure to encourage cycling – aim to use existing infrastructure more fully (e.g. City Walls) to provide better links.	- New cycle strategy framework developed including new routes and secure cycle parking and refresh of bicycle scheme and integration with other modes (e.g. bus).
Pedestrian crossing facilities often create delays for vehicles in particular locations due to heavy pedestrian demand (e.g. from cruise terminal and airport into the city centre).	- Pedestrian flows have been analysed and key pedestrian routes recommended. Key crossing points identified with emphasis on improving access to town centre.
<b>Town Centre Access Issues:</b>	
Concerns over access to Main Street with vehicle access (deliveries) and local air quality.	- New parking and traffic management controls in the town centre (as part of new controlled parking zone) will improve access for deliveries – including low emission vehicles.
Within the town centre loading bays are poorly enforced – reducing access to commercial vehicles. Permits for access to pedestrianised areas need policing and enforcement.	- Parking strategy includes stronger enforcement control and regulation.

Stakeholder Issues Raised	How This Response Has Been Taken on Board in STTP
<b>Land-use Planning Issues:</b>	
Particular problems experienced during events in terms of access problems and congestion.	- Strengthening planning requirements in terms of sustainable modes and public transport.
<b>Parking &amp; Traffic Management Issues:</b>	
Cross-border traffic is a long-standing problem which is often outside the control of local authorities.	- Package of measures identified to improve movement to/from the Frontier including bus/taxi enhancements, improved pedestrian facilities and consideration was initially given towards a temporary short term scheme to introduce new permanent 3 <sup>rd</sup> lane with priority access for buses/taxis/cycles when frontier queue builds up (recently of less importance as queues have decreased).
Parking provision in the West District is inadequate to cater for local demand – Morrison’s car park and Europlaza are the only available options. Some areas not used which could create additional parking capacity.	- New parking strategy includes the roll-out of controlled parking zones (following consultation with residents/estates) which will protect local parking/amenity.
Enhancement of existing signage for drivers, pedestrians and bus users are required.	- New signing strategy recommended including Variable Message Signing (VMS) linked to on-/off street parking facilities to reduce drivers searching for spaces.
Require better co-ordination of street works to reduce delays on the network & utilities require parking space to function properly.	- Greater emphasis on developing more efficient street works management system using available technology to ensure that planned events have a minimal impact on the local highway network and that alternative routes are kept free of road works. The challenge is making best use of remaining capacity and managing road space with all infrastructure and utility companies co-ordinating their activities with Government traffic representatives as well as the police.

(Source: Mott MacDonald Limited)

The discussion and exchange of views with the school sector was held in June 2013 with representatives from the Government’s Education Department as well as Head Teachers from Gibraltar’s schools.

**Key issues raised with school representatives include:**

- *Tackling school parking is a primary concern – management of traffic congestion at schools which is reflected in the recommendation/proposal to develop new school travel plans and initiatives as part of the STTPP;*
- *Cycling to school often not an option due to safety issues and the lack of safe, secure cycle facilities;*
- *It is considered important to address the car culture issue in Gibraltar more fully and encourage more sustainable travel activity in school, not least to encourage healthier active travel by pupils; and*
- *Options for establishing new school bus services to help reduce peak period car trips should be investigated further, with the possibility of extending school opening hours to allow children to be dropped off earlier and supervised until school begins.*

The online surveys obtained further details of issues and problems experienced by pupils and staff, as well as identifying opinions on the types of measures that would encourage a change in behaviour towards more sustainable transport modes.

### **2.3.3 Location-Specific Issues Raised in the Stakeholder Forums**

Within the individual stakeholder forums attendees were able to share their views on specific locations throughout Gibraltar where there were perceived transport issues for consideration within the scope of the STTPP.

Figure 2.2: Districts in Gibraltar – Stakeholder Views on Transport Problems



(Source: Mott MacDonald Limited)

Table 2.4: Summary of District-based Stakeholder Feedback on Transport Issues

District	Transport Issues
<b>Frontier/North District:</b>	<ul style="list-style-type: none"> <li>Management of cross-border traffic and encouraging and promoting more use of Park &amp; Ride to tourists/visitors to Gibraltar.</li> <li>Improved Border area policy required with the construction of the GAFAR to help alleviate and manage cross border traffic.</li> <li>To the north and east area of Gibraltar there are problems with access due to Frontier and Airport traffic – including public transport access issues - particular attention to be paid to improving traffic flow and pedestrian routes at Sundial Roundabout.</li> </ul>
<b>Town Area:</b>	<ul style="list-style-type: none"> <li>Perceived difficulty of access to public transport and non-motorised modes (walking and cycling) due to the nature of road infrastructure in old town area – narrow roads, lack of pavements and steep gradients.</li> <li>Potential to use the city walls for promoting more walking and cycling activity.</li> <li>There is a need for better pedestrian signing in the Town and West District areas (e.g. linking the Hospital and town centre).</li> <li>Limited parking facilities for customers and the general need to improve facilities to help deliveries to Main Street/Irish Town.</li> <li>Congestion problems in Market Place with high level of vehicle and pedestrian conflict.</li> </ul>

District	Transport Issues
<b>Upper Rock:</b>	<ul style="list-style-type: none"> <li>Investigation and consideration into better use of existing tunnel network infrastructure to provide transport access if at all possible and safe do to so.</li> <li>Improve management of Rock Tours including parking management at tourist destinations to control flow of traffic more effectively.</li> <li>Address congestion issues from parked vehicles as well as taxis – consider introducing a hop-on hop-off shuttle service to cater for tourist demand.</li> <li>Access roads/points need to be better managed to control traffic movement on the Upper Rock.</li> <li>Restrict the traffic flow in the Upper Rock during peak times by controlling foreign vehicles. Recently HM Government of Gibraltar imposed a full ban on foreign vehicles on environmental grounds. This has resulted in a limited amount of parking being left available for residents and locals throughout Gibraltar but especially at Grand Parade during the day.</li> </ul>
<b>Westside District:</b>	<ul style="list-style-type: none"> <li>Bus terminus in Market Place is perceived to be in the wrong place – new location needs to be considered which maximises accessibility to the bus network as well as the town centre (retail/employment).</li> <li>Allocation of better facilities for taxis in central areas.</li> <li>Traffic management improvements needed at key junctions such as Waterport Road and Coaling Island Roundabout approaches.</li> </ul>
<b>South District:</b>	<ul style="list-style-type: none"> <li>Problems perceived at Trafalgar Junction &amp; Rosia Road particularly for pedestrians with a lack of safe crossing facilities/points. New pelican and zebra crossings have been installed in these areas.</li> <li>Few good access points to the South District and Europa Point. Pedestrian facilities on Europa Road need to be reviewed. New lengths of pavement have been constructed in the area of Buena Vista.</li> </ul>
<b>Eastside:</b>	<ul style="list-style-type: none"> <li>There are large parking areas at Catalan Bay but these are at capacity during peak tourist periods with limited parking availability (seasonal issue).</li> <li>There is no continuous circular bus route around the Rock which limits accessibility by public transport.</li> </ul>
<b>Europa Point:</b>	<ul style="list-style-type: none"> <li>Limited access by bus with no direct service through to the Frontier/Airport by the Gibraltar Bus Company. A change in bus to the private Calypso service is required to reach the Frontier/Airport.</li> <li>Consideration should be given to pedestrian route enhancements via tunnel approaches to Europa Point.</li> </ul>

(Source: Mott MacDonald Limited)

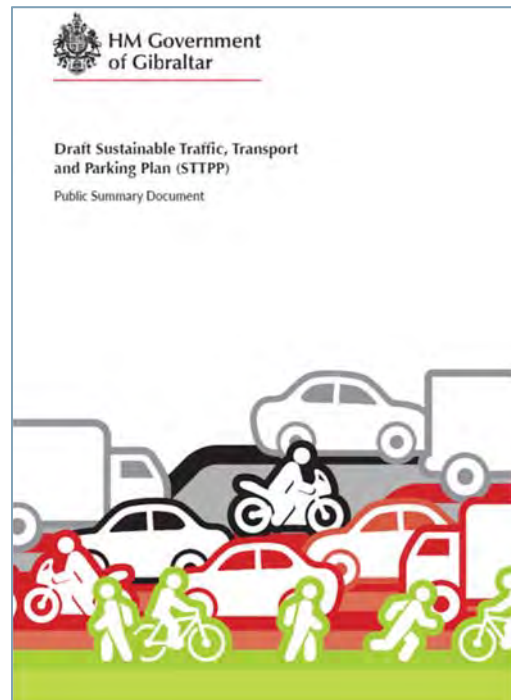
Feedback from the consultation process in terms of issues and problems raised have formed the basis of many of the improvement measures set out in the STTPP.



## 2.4 Consultation on Draft STTPP

In the Spring of 2015 the Government launched a public consultation exercise aimed at seeking views on the draft proposals and initiatives set out within the STTPP. A wide variety of views and comments were received on the consultation document and many suggestions for specific schemes which will be considered more fully as the detailed scheme programmes are developed over the life of the Plan period. A wide range of issues were raised during the consultation period including the following:

- The importance of establishing a reliable bus service as a viable alternative to the car;
- Consideration of promoting the use of electric cars as a way of improving local air quality;
- A desire to see improved bus routes throughout Gibraltar including greater frequency of operation which will provide greater capacity for passengers at busy periods of the day;
- The need for improved information and maps on bus routes and information at stops;
- The need to improve the quality of the taxi service to cater for residents' needs as well as tourists;
- Improving safety for cyclists where facilities can be accommodated in Gibraltar and a desire for more pedestrian crossing facilities to improve safety and accessibility on important pedestrian routes throughout Gibraltar;
- Consideration of schemes to provide parking facilities for residents and tackling parking issues in the town centre;
- Consideration of the use of speed cameras to improve road safety, reduce speed which in turn will reduce vehicular noise and reduce the potential for road traffic accidents. Final adjustments are being made for the implementation of speed cameras with legislation having been passed by Parliament in October 2016 under the Traffic (Amendment) Act 2016;
- Consideration to implement a penalty point system on driver records in an effort to reduce motoring offenses. Legislation for this has also been passed by Parliament under the Traffic (Amendment) Act 2016.



The consultation feedback will be considered and used to help inform the development of specific programmes of STTPP measures over the coming years. Further consultation is recommended on schemes with local residents and businesses as they are developed prior to implementation.



## 2.5 STTPP Strategic Modelling

To underpin the new transport strategy, a new purpose-built strategic transport model has been developed using extensive traffic data collected during 2013. The model contains details of the key daily movements (work, school, leisure etc.) between areas of Gibraltar (zones) including cross border movements and is multi modal reflecting the road network (speeds, junction movements, capacity etc.) and bus routes (frequency, stop location etc.). The model can illustrate existing issues, forecast future situations and help to assess a range of interventions (bus route alterations, junction improvements, parking provision etc.) as well as the impact of new developments.

Figure 2.3: STTPP Strategic Transport Modelling



(Source: Mott Macdonald Limited)

Model matrices for different mode groups have been created for the model based on data from a variety of data sources including household travel surveys, roadside interviews and public transport surveys. In addition, journey time & other count information has been used to calibrate and verify the model. Figures 2.4 and 2.5 highlight areas of known congestion on the local highway network, showing the existing patterns of traffic flows on the Gibraltar road network in terms of capacity for an AM (08:00-09:00) and PM (17:00-18:00) peak hour, with the links coloured showing they are already at, or close to capacity.

Figure 2.4: Gibraltar AM Peak Traffic Flow



Figure 2.5: Gibraltar PM Peak Traffic Flow





The usual peak periods in Gibraltar are centred on business hours of operation as well as being influenced by road closures over the airport runway and border crossing times. Typically, the following peak periods apply:

- AM: 0700–1000hrs;
- PM: 1500–1900hrs.

These are exacerbated during school term times.

## 2.6 Development of Broad Strategic Policy Options

Through discussions with both the STTPP Policy and Working Groups, a number of different land use and policy scenarios were discussed and tested. The final set of scenarios are described in Table 2.5.

Table 2.5: STTPP Strategic Options

Scenario Considered	Description
1. <b>Do Nothing/ Minimum:</b>	<ul style="list-style-type: none"> <li>▪ At the predicted scale of growth modelling results show extensive delays from the border to town centre with and without the GAFAR;</li> <li>▪ Expectation that this would drive up bus, walk and cycle use but this is dependent on having attractive unimpeded bus services and convenient, safe pedestrian and cycle routes;</li> <li>▪ Likely to be greater pressure on current parking; and</li> <li>▪ Associated environmental and congestion disbenefits.</li> </ul>
2. <b>Provide more housing:</b>	<ul style="list-style-type: none"> <li>▪ Greater proportion of employees based in Gibraltar;</li> <li>▪ Travel distances home to work are shorter; and</li> <li>▪ Bigger demands on education &amp; health facilities as well as land availability.</li> </ul>
3. <b>Accommodate increased vehicle traffic:</b>	<ul style="list-style-type: none"> <li>▪ Aims to accommodate more traffic from across the Frontier;</li> <li>▪ Extensive road expansion possibly needed including grade separation;</li> <li>▪ Likely to require new parking for daily influx of cars;</li> <li>▪ Significant environmental impacts;</li> <li>▪ Increased severance from roads and traffic; and</li> <li>▪ Less attractive to tourists.</li> </ul>
4. <b>'Balanced' Interventions:</b>	<ul style="list-style-type: none"> <li>▪ Aim to 'intercept' vehicles at border and offer quicker, more convenient public transport, taxi or walking options for onward journey;</li> <li>▪ It is assumed that external car trip growth is 'constrained' to no more than double internal growth (13% to 2025);</li> <li>▪ Road network is likely to be further stressed but should cope with some junction improvements;</li> <li>▪ Scenario largely retains current balance between internal and external traffic;</li> <li>▪ Requires more parking at the border but limited increase in town;</li> <li>▪ Highly dependent on attracting rather than forcing change of mode on both sides of the border.</li> </ul>

These broad policy options were presented and discussed to both Policy and Working Groups in the context of the current data and projected forecast in terms of population, economic development and associated transport impacts. It was universally agreed that Scenario 4 which delivers a balanced set of interventions was the preferred option. Scenario 4 aims to accommodate a given level of growth but also proposes to introduce a package of measures that manage travel demand while encouraging modal shift through further investment and promotion of sustainable travel modes. This laid the foundation for the establishment of a number of different balanced transport options that were subsequently tested using the new strategic model.

## **2.7 Summary of Balanced Package Scenarios & Modelling Results**

The following transport options were modelled:

- **Do Minimum**
  - GAFAR included; and
  - Minor bus network changes.
- **Option A**
  - GAFAR included; and
  - STTPP longer term bus network changes.
- **Option B**
  - GAFAR included;
  - New one-way traffic on Line Wall Road (reverse flow);
  - Traffic signals at Waterport Road/Glaxis Road;
  - Restricted access on Corral Road/ Fish Market/ Market Place;
  - STTPP longer term bus network changes; and
  - New Harbours Link Road.
- **Option C**
  - GAFAR included;
  - New one-way system on Line Wall Road (reverse flow);
  - Traffic signals at Waterport Road/Glaxis Road;
  - Restricted access on Corral Rd/Fish Market Rd/ Market Place;
  - STTPP longer term bus network changes;
  - Introduction of parking charges; and
  - New Harbours Link Road.

For the morning and evening peak hours, the modelling showed how all the future scenarios compared favourably with the Do Minimum in that vehicle hours (amount of travel by car) were reduced in the morning peak (especially in Option B), along with vehicle queuing times and average speeds also improving. Options A and B in the future scenarios improved conditions in the evening peak but the impact of Option C was less significant.

Options A, B and C were also compared with a Reference Case in which changes are introduced to the GBCL bus network but the GAFAR is not implemented. All three options demonstrate a reduction in vehicle person trips compared with the Reference Case, notably Option C. Option C also produces the greatest increase in bus person trips when compared with Options A and B

for which the increase in bus journeys was relatively small; the greatest increase in bus use is achieved under option C with the greatest transfer to walking and cycling compared with the Reference Case.

All three options improve the congestion on the road network in terms of average network speed compared to the Reference Case.

- **Option A:** compared to the Reference Case with the GAFAR included and proposed bus routes, the number of car users falls by 1% with a 4% increase in the number of bus users;
- **Option B:** compared to the Reference Case with the additional highway network upgrades, the number of car users falls by 2% with an increase in the number of bus users by 4%; and
- **Option C:** compared to the Reference Case, the level of car use is seen to fall by 8% with a significant increase (27%) in the number of bus users and also a 3% increase in the total trips transferring from car/bus to walking and cycling. Under Option C the additional increase in the percentage of bus users, who are transferring from using the car for their trips, mainly do so as a result of the introduction of parking charges.

The conclusion is that Option C offers the best results in terms of overall impacts with a reduction in the level of car use and a shift towards more bus use and also greater walking and cycling activity. This is a result of a balanced strategy encompassing 'carrots' (bus service enhancements and network improvements) on the one hand with 'sticks' (parking charges) on the other. It is the recommended strategic approach for the STTPP.

## 2.8 Micro-simulation Modelling

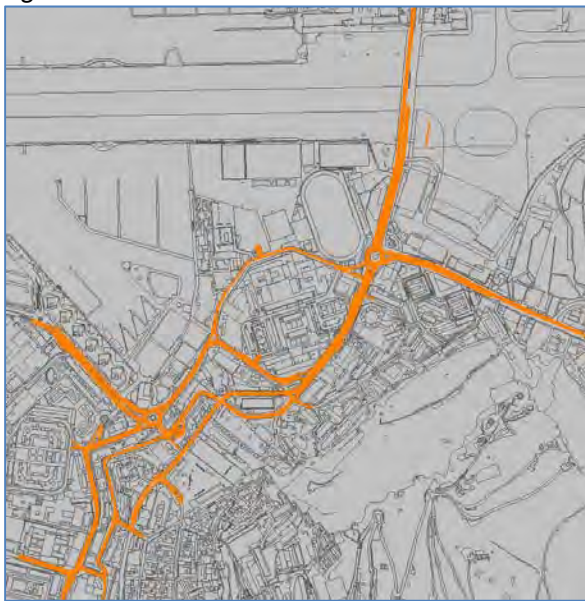
In addition to the development of a strategic transport model, local micro-simulation models have also been developed to examine and review different concepts and proposals put forward within the STTPP. We have tested a variety of proposals including junction changes, reversal of traffic flow etc. using micro-simulation software called VisSim, which has taken information from the new strategic transport model that has been built, including future traffic forecasts on the road network as well as new bus route information and services to represent a picture of what will happen on the local network in the future. As well as the future situation we have also created base models of existing traffic behaviour using survey data collected during spring 2013 which was validated against journey time survey data that was collected as part of this process. The outputs of this work provide an overall picture of travel on the local network including detail on overall congestion impacts, vehicle behaviour as well as queuing.

Two areas were selected as follows:

- **North VisSim Model (Figure 2.6)** includes:
  - Devil's Tower Road;
  - Sundial roundabout;
  - Line Wall Road/Corral Road/Winston Churchill Avenue roundabout;
  - Glacis Road;
  - Waterport Road/Queensway Road roundabout;
  - Queensway;

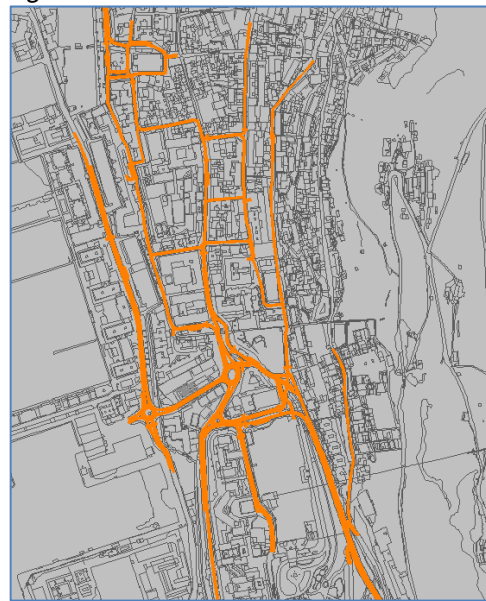
- Fish Market Lane up to Queensway/Reclamation Road junction.
- **South VisSim Model (Figure 2.7) includes:**
  - Europa Road/Elliot's Way junction;
  - Trafalgar Road/Main Street junction;
  - Elliot's Way/Rosia Road junction;
  - Part of Europa Road south and north of Europa Road/Elliot's Way junction;
  - Ragged Staff Road/Queensway roundabout;
  - Part of Main Street south of Trafalgar Road/Main Street Junction;
  - Part of Line Wall Road south of Trafalgar Road/Main Street Junction.

Figure 2.6: Northern VisSim Model



(Source: Mott MacDonald Limited)

Figure 2.7: Southern VisSim Model



(Source: Mott MacDonald Limited)

An example output from the micro-simulation model is shown in Figure 2.8 below.

Figure 2.8: STTPP Micro-simulation output – North Gibraltar Model (Glacis Road/Waterport Junction)



(Source: Mott MacDonald Limited)

## 3 Developing a New Transport Vision & Strategy for Gibraltar

### 3.1 Introduction

Over the next 10 years, local changes such as employment and population growth, together with other international changes such as the development of tourism and cross-border travel will place considerable pressures on Gibraltar's transport network. This new STTPP covers the period 2017 – 2026 as well as longer term implementation aspirations. It sets out how we will meet these transport challenges in Gibraltar. It sets out the context for travel and movement in and around Gibraltar, identifies the key themes for improvements, and provides an implementation plan for delivering the necessary outcomes to encourage more sustainable travel.

Gibraltar is fortunate to have many factors which suggest that travelling by sustainable modes should be a realistic option for the majority of residents and visitors. The favourable climate, compact urban area and the flat terrain which covers the main urban area all support non-motorised travel opportunities. The pedestrian priority zone in the town centre is popular with residents and visitors and supports the local retail and tourism sectors.

However, there are also a number of challenges and constraints which hinder sustainable movement, the most significant of which are:

- The very high levels of vehicle ownership within Gibraltar;
- The high quantity of cross border traffic;
- The influx of visitors wishing to experience the many unique sights and tourist attractions;
- Severe congestion and delays for all road users due to the high traffic flows on the main road network, particularly the access to and from the frontier along Winston Churchill Avenue.

Congestion on the principal road network deters cycling, creates a barrier for pedestrian movement and affects bus journey reliability. Levels of pollution from vehicle emissions has led to an Air Quality Management Area (AQMA) being declared and the challenge is to constrain the level of vehicular growth in Gibraltar whilst at the same time encouraging people to consider alternative modes of travel.

Population and employment levels within Gibraltar are expected to grow over the next 12 - 15 years, increasing the pressure on the transport network. The population demographic will also change over this period with an increased number of older and more dependent people who will need to be provided with access to key services and destinations.



## 3.2 What we want to Achieve

The STTPP has a key role in meeting the wider needs and aspirations of Gibraltar over the coming years to enable everyone to undertake their activities in the most sustainable way and to create a transport system that:

- Addresses the transport-related climate change and local air quality issues in Gibraltar;
- Encourages people to consider walking, cycling and using public transport as viable alternatives to car travel;
- Improves overall mobility in and around Gibraltar with sustainable links between residential areas and the town centre, with good access to opportunities for employment, education, training; and
- Enables people to travel safely, securely and in comfort.

## 3.3 What is the New Vision for Transport in Gibraltar?

Transport has a major influence on our way of life in Gibraltar and with a growing local economy and environmental pressures there is a need to look even further ahead to ensure that the plan for the city is delivered in a sustainable way. Modern society is largely dependent on transport to enable access to a wide range of opportunities and key facilities. Achieving this in the most efficient and sustainable way continues to remain a challenge in the face of wider Government, social, economic and environmental priorities.

Gibraltar's STTPP sets out a long-term transport strategy until 2026 and builds on the views of residents, local businesses and stakeholders who live in and contribute to the economy of Gibraltar.

The policies and measures defined in the Gibraltar STTPP cover all modes of transport including public and private, passenger and freight, motorised and non-motorised as well as powered two wheelers.

### 3.3.1 The Vision Statement

**'Gibraltar's future transport system will be one in which users are able to move around in a safe, reliable and sustainable manner increasing its attractiveness as a place to live, work, visit and do business.**

**There will be a real choice to meet travel needs with good access to employment, health, education, retail and leisure. This will encourage more sustainable travel behaviour.**

**Sustainable modes of travel will be developed in order to minimise adverse impacts on the environment and promote healthier lifestyles.'**

To achieve this vision and address the different transport challenges which face Gibraltar, the strategy has been developed taking a number of key themes into account:

- **Providing quality alternatives to private car use via sustainable means;**
- **Improving strategic links to enhance the wider connections with the key residential and employment areas across Gibraltar;**
- **Encouraging behavioural change and uptake of smarter travel choices to maximise the use of walking, cycling and public transport and continue improving road safety;**
- **Tackling transport emissions to reduce the release of pollutants harmful to health and the environment.**

### 3.3.2 What are the Objectives for the STTPP?

It is important to identify a number of objectives that set out how to achieve Gibraltar's new vision for transport. These are as follows:

***Objective T1: To manage the transport network effectively to provide network efficiency, reduce unnecessary delays and traffic congestion***

This objective recognises that often our transport network fails to deliver an efficient means of travel. Through this objective, it is aimed to:

- Improve the certainty and reliability of journeys by all modes of travel;
- Encourage people to make informed choices for all their trips;
- Take steps to optimise the capacity and efficiency of our transport network to help manage delays that may cause traffic congestion;
- Provide and promote practical alternatives to the car to manage traffic growth;
- Meet the needs of longer distance travellers and the freight sector by providing an efficient transport network and by tackling congestion; and
- Deliver schemes that stimulate and contribute to sustainable economic growth in Gibraltar.

***Objective T2: To improve environmental conditions for communities in Gibraltar by reducing the adverse effects of transport on the local environment***

This objective recognises the harmful impact that transport and particularly the growth in car use can have on the wider environmental conditions in many communities. Through this objective, it is aimed to:

- Tackle traffic congestion, the main source of pollution emissions, by optimising the capacity and efficiency of our transport network;
- Improve air quality, maintain and protect the built environment and promote the use of renewable resources;
- Increase public awareness of air quality and climate change issues.

- Reduce traffic-related noise;
- Reduce community severance caused by traffic, introduce ways of improving public spaces and streets; and
- Improve the 'liveability' of Gibraltar.

***Objective T3: To maintain and improve accessibility to facilities and services for all – including pedestrians, cyclists and bus users, and particularly for disadvantaged people***

This objective recognises the importance of improving accessibility for people who do not have the use of a car and for disadvantaged groups in relation to access to essential services. Through this objective, the principal aim is to:

- Improve access to jobs and key services such as education, health, and food shopping so that all members of the community have the same chances to take up the full range of opportunities;
- Improve integration within and between all forms of travel;
- Provide and promote real choice in how people choose to travel;
- Improve physical accessibility and remove barriers to mobility;
- Improve the quality of information on the different transport options that are available; and
- Support well-located and designed development that reduces the need to travel and facilitates trips by more sustainable modes.

***Objective T4: To promote and encourage healthier, more sustainable travel choices and improved 'quality of life'***

This objective recognises the importance of encouraging people to make more sustainable travel choices, such as walking and cycling to achieve sustainable development as well as wider social, environmental and health priorities. Through this objective, it is aimed to:

- Raise people's awareness of the different travel choices that are available;
- Maximise the overall benefits of transport schemes, infrastructure or related development to the local community;
- Promote healthier lifestyles through increased levels of physical activity and by encouraging more walking and cycling;
- Improve the quality and attractiveness of alternatives to the car; and
- Spread the message of sustainable transport to the next generation through school travel plans.

***Objective T5: To reduce road accidents, particularly for vulnerable road users***

This objective recognises the negative impact that road accidents, and the fear of them, has on the quality of people's lives, particularly amongst vulnerable road users. Through this objective, it is aimed to:

- Reduce the number of people killed or seriously injured in road accidents;
- Deliver education and awareness campaigns to encourage safer attitudes and behaviour from all road users;

- Make sure that we keep the road network in good condition to reduce and prevent traffic accidents and improve overall safety for all road users;
- Develop effective speed management programmes to reduce the problem of speeding that contributes to traffic accidents;
- Meet the specific road safety needs of vulnerable road users, such as children, pedestrians, cyclists and those in disadvantaged communities; and
- Ensure road safety improvements are designed into all transport development schemes.

***Objective T6: To maintain and improve transport and community safety and security, including reducing perceived danger***

This objective recognises the importance of improving safety and security around transport to achieve wider social priorities. Through this objective, it is aimed to:

- Make people feel safe whatever form of transport they use and whenever they use it; and
- Ensure that safety is taken into account at the design stage of new developments so that any potential problems are dealt with then, rather than after construction.

***Objective T7: To maintain and improve the transport infrastructure***

This objective highlights the importance of providing well-maintained infrastructure. Through this objective, it is aimed to:

- Maintain, improve and make more efficient use of the existing transport network;
- Maximise the benefits of the existing infrastructure;
- Provide the best value solutions to what the local maintenance priorities should be; and
- Carry out improvements to the existing infrastructure where they will deliver improved outcomes.

### **3.4 How Will This Be Achieved?**

The STTPP provides both a long term strategy and a more detailed programme for the delivery of short term measures. The plan sets out ambitious objectives over the long term but is realistic in what is achievable over the next few years. There are a number of core elements of the strategy including:

***Development of an Integrated Transport Network***

The integration of different transport modes to provide a seamless journey, to deliver a transport system that does not rely on the private car and which meets local air quality objectives. There is a greater emphasis on promoting sustainable alternatives to the private car that are both convenient and reliable through use of public transport, walking and cycling, as well as smaller, fuel efficient and alternative fuel vehicles.

### ***Public Transport Provision and Promotion***

The development of an integrated public transport system lies at the heart of the strategy, aimed at improving accessibility across Gibraltar, improving connectivity between key destinations in partnership with public transport providers.

### ***Demand Management and Network Management***

It is important to manage the flow of traffic around Gibraltar to maximise capacity and effectively manage and maintain Gibraltar's assets. A particular emphasis will be placed on demand restraint measures such as effective parking control mechanisms. The approach will also accelerate the use of hard measures such as reallocation of road space to more sustainable modes of travel. This would include priority access for sustainable transport modes such as bus stops, cycle lanes and widened footways.

### ***Improved Forward Planning***

Through the emerging new Gibraltar Development Plan, it is important to ensure that future policies and land-use decisions minimise the need to travel, encourage the use of non-car modes and are consistent with wider economic, social and environmental objectives.

### ***Demonstrating Value for Money***

It is important to ensure that solutions identified are realistic, practical and can be delivered with the level of resources available.

A summary of the core STTPP elements and measures is set out in 'Table 3.1'.

Table 3.1: *Proposed Core STTPP Elements*

STTPP Elements	Measures
<b>Parking and Demand Management</b>	<ul style="list-style-type: none"> <li>▪ Cross-border transport enhancements;</li> <li>▪ Introduction of new parking controls – including on-street charges and residents' parking zones;</li> <li>▪ Better enforcement of Traffic (Parking and Waiting Regulations);</li> <li>▪ Well maintained and managed strategic transport network;</li> <li>▪ Enhancements to the existing road network to increase capacity and improve safety.</li> </ul>
<b>Public Transport</b>	<ul style="list-style-type: none"> <li>▪ Better quality, high frequency bus services including new interchange points; and</li> <li>▪ Introduction of new Park &amp; Ride facilities</li> </ul>
<b>Sustainable Transport Modes (walking &amp; cycling and Mobility Management measures)</b>	<ul style="list-style-type: none"> <li>▪ Introduction of new cycling and walking route networks;</li> <li>▪ Greater awareness of options available for sustainable modes of travel (travel plans);</li> <li>▪ Increased levels of sustainable travel to all key destinations (education, employment, leisure and retail);</li> <li>▪ Improved road safety awareness; and</li> <li>▪ Encouraging people to be healthier and promote active lifestyles.</li> </ul>

STTPP Elements	Measures
<b>Environmental Enhancements</b>	<ul style="list-style-type: none"> <li>Measures to reduce vehicle emissions and improve air quality; and</li> <li>Measures that reduce level of noise from transport.</li> </ul>
<b>Traffic Management &amp; Road Safety</b>	<ul style="list-style-type: none"> <li>Introducing road network improvements to improve the flow of traffic at congestion hotspots;</li> <li>Greater focus on measures to improve road safety adjacent to schools; and</li> <li>Measures to control and manage vehicle speeds more effectively.</li> </ul>
<b>Forward Planning and Urban Design</b>	<ul style="list-style-type: none"> <li>Sustainable transport development plan principles;</li> <li>Developments integrated into and enhancing the sustainable transport network;</li> <li>Enhanced and safer walking and cycling access in public spaces, streets and developments;</li> <li>Fewer vehicles travelling through and around Gibraltar centre; and</li> <li>Safer roads with fewer casualties.</li> </ul>

The strategic approach and actions proposed within the STTPP will be delivered by an STTPP Implementation Plan which is discussed in more detail in Chapter 10.



## 4 Parking & Demand Management

### 4.1 Introduction

The parking strategy for Gibraltar forms part of the demand management approach for the STTPP as part of an integrated transport strategy. To be effective, it needs to be complemented by other policies which provide good quality alternatives to private vehicles.

**The principal aims of the parking strategy are as follows:**

- *To help maintain and promote the economic and commercial viability of Gibraltar's economy and tourism sector; and*
- *To contribute to a balanced and sustainable integrated transport system including helping to achieve modal split and traffic reduction targets.*

**These aims will be met through the following objectives:**

- *Using the pricing controls in the town centre to control the demand for parking for both on and off-street parking;*
- *Improving the efficiency of parking spaces through designation of use;*
- *Enforcing parking regulations effectively;*
- *Providing residents' priority parking schemes;*
- *Using the development plan framework to control the number and type of new off street car parks provided in and around the town centre for public use.*

The parking strategy embraces a number of different parking elements as part of a complementary approach to discourage the unnecessary use of private cars in urban areas such as:

- Off-street parking;
- On-street parking (including Residents' Parking Zones and enforcement);
- Private Non-Residential Parking (PNR);
- Motorcycle/cycle parking and disabled parking requirements.

### 4.2 Parking Context in Gibraltar

The approach taken within the parking strategy is to maximise opportunities from the existing transport network and managing existing assets more effectively to try and reduce impacts of vehicle congestion on the network. Effective demand management plays a key role in this approach to help manage the continued growth in traffic and to encourage people to consider other alternatives and thereby supporting more sustainable travel options, complementing other aspects of the Plan.



Car ownership levels and the demand for car parking, particularly in residential areas, are higher than would be expected for an area and population density comparable with Gibraltar<sup>1</sup>. Car ownership levels in 2016 are considered to be at a high level of approximately 1 registered vehicle per person; levels of around 0.3 to 0.6 would be expected<sup>2</sup>. It is expected that with a continual growth in both population and GDP, both significant attributes that influence car ownership, Gibraltar's car ownership ratios if remained unchecked are expected to rise.

In 2014 there were approximately 19,000 registered 4 wheeled vehicles and 11,000 registered motorcycles in Gibraltar with additional daily vehicle demand crossing the frontier. The demand for car parking is therefore significant in areas such as the centre of town and other highly populated residential areas. Parking demand was observed to be greater for on-street spaces than for off-street car parks, where no time limits are in place. Many off-street and on-street car parks attract long duration stays and operate at capacity for much of the day.

Parking demand increases significantly at certain times of the year and during inclement weather, particularly across the frontier. In parallel, general traffic flows and congestion also increase and this ultimately impedes public transport service frequency and efficiency.

Car parking is predominantly free in Gibraltar with only a small number of public spaces imposing a charge. Much of the parking is not time restricted, most notably for on-street locations in the core retail centre such as Fish Market Road. Conversely, immediately north of the frontier in La Linea, parking charges currently operate for on and off-street parking. At the recently opened Santa Barbara Parking adjacent to the border the cost is approximately £12 for a 24-hour period. Similar charges also operate for on-street parking. These parking areas are busy, filling up early in the day and therefore generating revenue to support the enforcement operation, maintenance and operational management. As a result of the generated income, these parking areas are regularly enforced.

### **4.3 Parking Provision (Up until July 2016)**

Responding to these pressures the Government has commenced a programme of measures to alleviate the problems experienced on a daily basis. Due to associated issues of congestion and public complaints that have risen from the increasing levels of cars and motorcycles, several initiatives have been taken in order to improve parking provisions, management and control.

Initiatives to address these concerns have so far included the following:

- The creation of a new parking enforcement operation. Previously parking enforcement was managed by the Government-owned Gibraltar Car Parks Ltd in 2011 and later seconded to the RGP (Royal Gibraltar Police) in 2012. The new parking enforcement operation was set up in July 2016 and officers are now known as Parking Management Officers (PMO's);
- Parking charges operated through Pay and Display (P&D) machines in a small number of strategic locations; and
- The demarcation of separate parking areas for motorcycles.

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<sup>1</sup>Proceedings of the Eastern Asian Society on Transport Studies; Exploring the Impacts of the Built Environment on Vehicle Ownership (2005)

<sup>2</sup>Neighbourhood and Socio-Economic Characteristics to Determine Auto Ownership and Use (2002)

In addition, this has been supported by the implementation of private rented residential off-street parking garages and parking spaces that includes most recently Willis Road, South Pavilion, Engineer Lane, Theatre Royal, Arengos Car Park's and Ragged Staff. The allocation policy within these car parks has been aimed at renting to residents within the relevant catchment area of the car park on a strictly one per household basis, thus reducing on street car parking demand. Finally, the Government of Gibraltar has recently opened the new Midtown Car Park which has provided 423 free day parking spaces with a minimal charge in the evenings.

However, the challenges of parking demand issues persist. Moreover, an approach that aims to increase parking provision to accommodate an ever increasing demand is limited in scope and is likely to exacerbate other concerns such as congestion. As more land is used up to accommodate an increased parking capacity (at the expense of other development opportunities such as housing, public open spaces and urban realm improvements) an environment is created that promotes car ownership growth. In the longer term this is likely to intensify parking demand and traffic congestion.

A key component of any strategic sustainable traffic, transport and parking plan is the provision, management and control of parking that will complement other transport initiatives such as encouraging walking and public transport use. However, the considerable provision of additional parking capacity can also contribute to increased dependency in private motorised travel. Hence, parking demand in Gibraltar can often outstrip capacity at certain times and in particular locations. Notwithstanding this, parking management initiatives have been welcomed, particularly from residents of Laguna and Glacis Estate.

Car parking is demarcated using white lines whilst parking areas provided specifically for motorcycles are demarcated with yellow lines. A programme of allocating and increasing the numbers of spaces available for both has alleviated many of the parking demand issues in recent years. This has been supported by restricting motorcycle parking in car spaces and between parked cars. Traffic Regulations are enacted by the Government of Gibraltar to facilitate enforcement and issuing penalties for parking infringements.

Residential permit schemes currently operate in several areas of Gibraltar as shown below:

- The Laguna Estate Residents' Parking Scheme (North Zone 1) was introduced in April 2011 and provides permit only parking areas in the area. Only residents are able to be provided with a permit applicable to the area. Proof of residence and car ownership registration details must be provided at the time of application. There is no limit on the number of permits that can be issued per household.
- The Glacis Estate Residents' Parking Scheme was introduced soon after and operates as a separate zone and more recently incorporates 1-hour visitor permit areas.

In parallel, and to complement these permit-only parking areas, some designated P&D parking spaces were introduced. Charging for parking was considered to be an effective control tool to protect limited waiting parking areas (maximum five hours) for visitors, residents and commercial businesses in the area. Areas designated as limited waiting with charging includes Romney Huts, Peter Isola Promenade, Watergardens, Airport Terminal, Line Wall Road,

Portland House, 44 spaces within Landport Ditch car park and other locations being considered. Free unrestricted parking is limited in these areas.

More recently, other areas of protected residents' permit parking has been provided in specific off-street locations and in purpose built car parks. Examples of these include Arengos (71 spaces), Willis's Road (138 spaces) and most recently, Engineer Lane (191 spaces) and Theatre Royal Car Park (92 spaces). Covered spaces are let on a monthly rental basis set at £65 per month<sup>3</sup> and are only available to residents within a close proximity to the car park. New parking for uncovered spaces has also recently been implemented in South Pavilion (52 spaces), and Ragged Staff (62 spaces of which 24 are rental). These are let on a monthly rental basis set at £50 per month.

## **4.4 Gibraltar Car Parks Limited**

Gibraltar Car Parks Limited (GCPL) is a Government of Gibraltar-owned Company that operates and administers the parking enforcement process. The back office system used is ICES (Imperial Civil Enforcement Solutions) that processes all Fixed Penalty Notices (FPN) for parking offences. In the past, Highway Enforcement Officers (HEOs) issued FPNs in-situ using Casio hand held computers (HHC) and these were docked at the end of each shift and automatically uploaded details of all FPNs issued onto the ICES system. There were 33 HEOs operating in Gibraltar up to August 2012. A large majority of HEOs used mopeds while on duty between 8am and 10pm, which was spread over three shifts. Requests for Cancellation (appeals against the issuing of a FPN) were considered by the Royal Gibraltar Police (RGP) and if it was decided to cancel the penalty the GCPL were instructed to do so. This process was provided with support from the Gibraltar Courts. To address the issue of illegal parking activity by vehicles registered outside Gibraltar these were either towed away or clamped, and both require payment of a recovery fee.

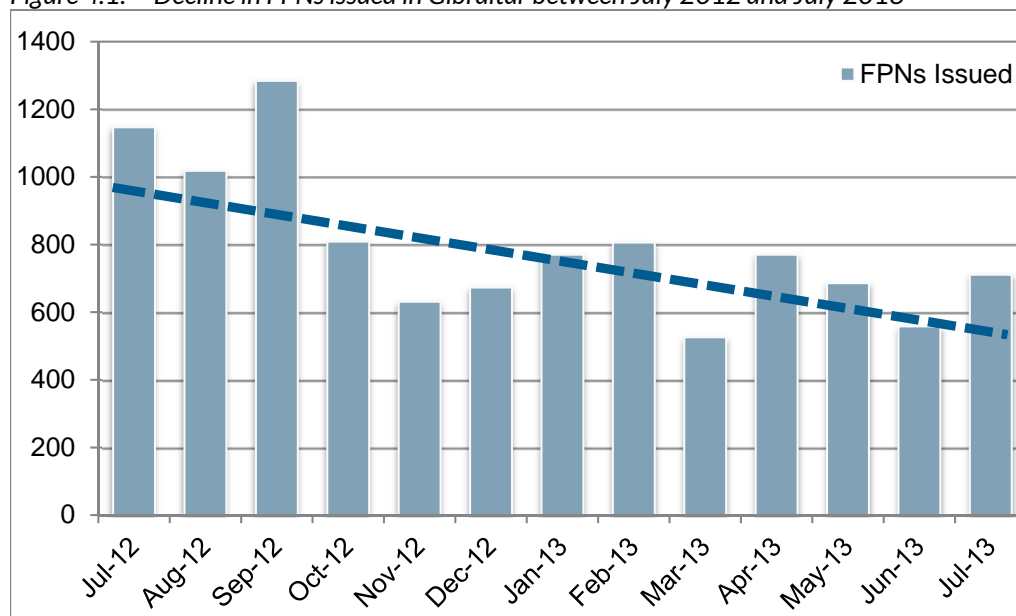
When initially created HEO's were an independent body employed under a Government owned Company, Gibraltar Car Parks Ltd (GCPL). They were specifically set-up for the enforcement of parking in Gibraltar as part of the 2010 Integrated Traffic, Parking and Transport Plan and were responsible for residential zones, loading bays, disabled bays and red zones and general on and off street parking restrictions, some of which affect traffic flows along main arterial roads. Initially they were under direct control of the Minister responsible for Traffic but in August 2012 the responsibility and direct control of HEOs was transferred to the Royal Gibraltar Police (RGP).

At this point there was an increase in complaints to the Traffic Commission and to the RGP highlighting the lack of enforcement of illegally parked vehicles in restricted parking zones, abuse of the disabled blue badge permit scheme and abuse of loading bays etc. The rise in complaints is mirrored by a slight declining trend in FPNs as illustrated in Figure 4.1 from Autumn 2012 through into 2013.

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<sup>3</sup> Monthly parking fees have been set and are to commence on 1<sup>st</sup> February

Figure 4.1: Decline in FPNs issued in Gibraltar between July 2012 and July 2013



(Source: Mott MacDonald)

As a result, it appears that the effectiveness of the enforcement operation diminished over this period. The decline in the effective number of HEOs operating in Gibraltar had reduced the effectiveness of parking controls, the number of FPNs issued and the associated income stream.

For example, the residents in the Laguna and Glacis Estate Residents' Parking Zones at the time had noticed this decline and were voicing their concerns, complaining that enforcement had diminished resulting in an increase in illegal parking in their areas. This ultimately undermines the effectiveness and credibility of these parking schemes and continues to highlight the importance and value of enforcement.

## 4.5 Current Parking Enforcement

The HEO organisation was not considered a sufficiently cost effective means of providing parking enforcement and hence the workforce was absorbed into various departments of the Civil Service. The decision was taken to adopt a similar policy to that present today in the UK where the function of Parking Enforcement is outsourced to private companies making this service more economically viable.

It is due to this reason that the old HEO's were replaced by Parking Management Officers (PMO's) in August 2016. Since their introduction there has been a sharp increase in FPN's issued (Figure 4.1) clearly demonstrating the effectiveness of a focused approach and dedicated resources.

The PMO's have the same general powers as their predecessors, and include the following: -

- Appointed as authorised persons under the Traffic (Parking and Waiting) Regulations, 2011 following publication in the Gazette;

- Designated under Regulation 84(1) of the Traffic Act 2005, to discharge in aid of the police, functions normally undertaken by the police in connection with the control and regulation of, or the enforcement of, the law relating to traffic or vehicles and persons.

## 4.6 The Gibraltar Disabled Blue Badge Scheme

A number of complaints have been submitted reporting inappropriate use of Disabled Persons' Badges (DPB). The misuse of DPB has a detrimental effect on the credibility of the scheme in general but also, directly impedes less mobile DPB holders. Hostility between DPB holders is also becoming apparent. It is our understanding that there are three key areas where a review is considered necessary.

### ▪ The application and issue process

These findings indicate that improvements to application forms should be considered by the Issuing Authority. It is essential that a greater level of information is obtained from respective applicants, as this greater level of detail and medical evidence shall assist the independent assessment panel to consider and ensure that only genuine deserving cases are issued with DPB in accordance with the legislative provisions. The policy on the frequency required for renewing applications may also be considered with the issue of short period DPB for transient disability and mobility issues.

### ▪ Location of disabled bays and the use of DPB permits:

It is essential that DPB holders understand the rules governing acceptable and responsible use, ensuring that opportunities to park close to destinations and places of residence are realistically maximised to ensure real benefits are afforded to those who are most in need of assistance. DPB holders should always opt for a regular parking, leaving Blue Bays free for other users. Blue Bays should not be utilised as private parking spaces for individual DPB holders as per popular belief.

### ▪ Enforcement and prosecution

Arguably, enforcement and prosecution is most important for a successful Disabled Blue Badge Scheme and to ensure that credibility and effectiveness is maintained. It is essential that an effective enforcement operation is established and that a prosecution process is operated with clear responsibilities that are transparent, fair and reasonable. Current powers of enforcement sit with the RGP and Gibraltar Parking Management Services Ltd. At present the pursuance of penalties and cases appears limited.

Blue badge schemes commonly experience issues of misuse. However, there are measures that when introduced can mitigate problems that cover the three key areas of

- (i) The application and assessment process, issue and revocation of permits
- (ii) Adequate provision of Disabled Bays via the introduction of Disabled Bay parking restrictions by introducing Parking Clocks and the responsible use of those holders of the Disabled Persons Badges
- (iii) Effective enforcement

Reference will also be made to recent legislative changes in the UK<sup>4</sup>. For example, this gives parking enforcement officers the power to inspect and retain a badge if they believe it is a fake, has been cancelled by the issuing authority or is being misused after having first established 'reasonable grounds' for retaining the badge on analysis of parking data.

## 4.7 Summary of Key Findings

Research undertaken on parking in Gibraltar reveals the following key issues to be addressed:

- Demand for parking space in Gibraltar is very high in specific areas and expected to increase in future with new development and regeneration opportunities. Notwithstanding this, there is sufficient capacity in the total supply to cater for existing demand;
- New estates provide one space per household. The latest 2 “affordable home” and pensioner housing developments have provided approximately 1000 new spaces;
- The need for effective enforcement is essential to control existing parking regulations and residents parking zones as well as to manage car parks;
- It is important to tackle the non-essential demand for parking spaces, particularly where there are alternative travel options (i.e. walking, cycling or use of the bus);
- The numerous surveys carried out have shown that of the total number of trips being made in Gibraltar, 61% of responses came from single occupancy vehicles and 90% with one passenger other than the driver;
- The surveys also revealed that 54% of car parking trips start from home and 80% of household respondents stated their primary reason for parking was for the convenience of location;
- In terms of the opportunities that exist to improve the overall management and operation of car parks (on and off-street) these are as follows: -
  - Developing a better co-ordinated system of car park designation will help establish a better use of existing space, particularly in the town centre where demand for parking is high amongst local residents, businesses and also tourists to Gibraltar;
  - It is important that parking policies are seen as complementary to other transport and planning policies including those that aim to reduce the level of unnecessary car trips and minimise the need to travel by car;
  - Whilst the road network is limited in size, introducing improved strategic signing to car parks will help reduce the number of circuitous movements and make it easier for drivers to efficiently locate available parking spaces at both on and off-street locations;

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<sup>4</sup> The Disabled Persons' Parking Badges Act 2013

- There is an opportunity to manage demand for car parking more effectively through the introduction of new charges, particularly for those on-street and off-street parking spaces within the town centre;
- It is believed that there is considerable scope to increase premium parking capacity through the relocation of long term rental spaces such as those located in Devil's Tower Road car park;
- A team of Parking Management Officers (PMOs) are in place to enforce new regulations and charges at both on-street and off-street locations. The team is currently equipped with good technology to support this and which can be further enhanced through the introduction of new technologies such as ANPR (Automatic Number Plate Recognition), phone payments, route guidance and VMS (Variable Message Signing).

## **4.8 Parking Proposals and Recommendations**

The overall aim of the parking proposals is the adoption of a coordinated and consistent long term strategy for parking in Gibraltar. The rationale being to establish a strategy that supports the economic vitality of Gibraltar through providing and protecting adequate and suitable parking for residents, ensuring non-essential parking activity is controlled to facilitate access to services and importantly, that these measures are adequately enforced.

There are opportunities to include a trial for the expansion of limited waiting parking areas in and around the core retail centre and the re-designation of particular areas of parking to address the prevalence of non-essential demand. Opportunities will be presented for the development of a controlled parking zone that prioritises visitor parking (commuter and shopper), areas for servicing and loading, taxi areas and limited waiting for DPB holders and will include suggestions for management and control. As a result, Pay & Display parking has now been implemented at Line Wall Road, Waterport Road and Glacis Road with other P & D proposals currently being considered.

The key aspects that the STTPP parking proposals aim to realise can be summarised as follows:

- Encourage the efficient utilisation of existing parking capacity in Gibraltar;
- The re-establishment of effective parking enforcement and operational management in Gibraltar;
- Manage non-essential parking demand and encourage parking turnover in defined areas thereby, rebalancing the supply and demand principle and generating capacity;
- Promote accessibility for all modes in support of other transport initiatives. These include public transport, walking and cycling; and
- Stimulate and promote economic growth.



### 4.8.1 Parking Supply and Pricing

The provision and pricing of car parking has a major impact on car use, and inconsiderate parking provision can cause delays to other road traffic. Increasing car ownership within communities can also place additional demands on available parking.

In relation to parking management the overarching aim is to support the local economy and facilitate sustainable development growth through:

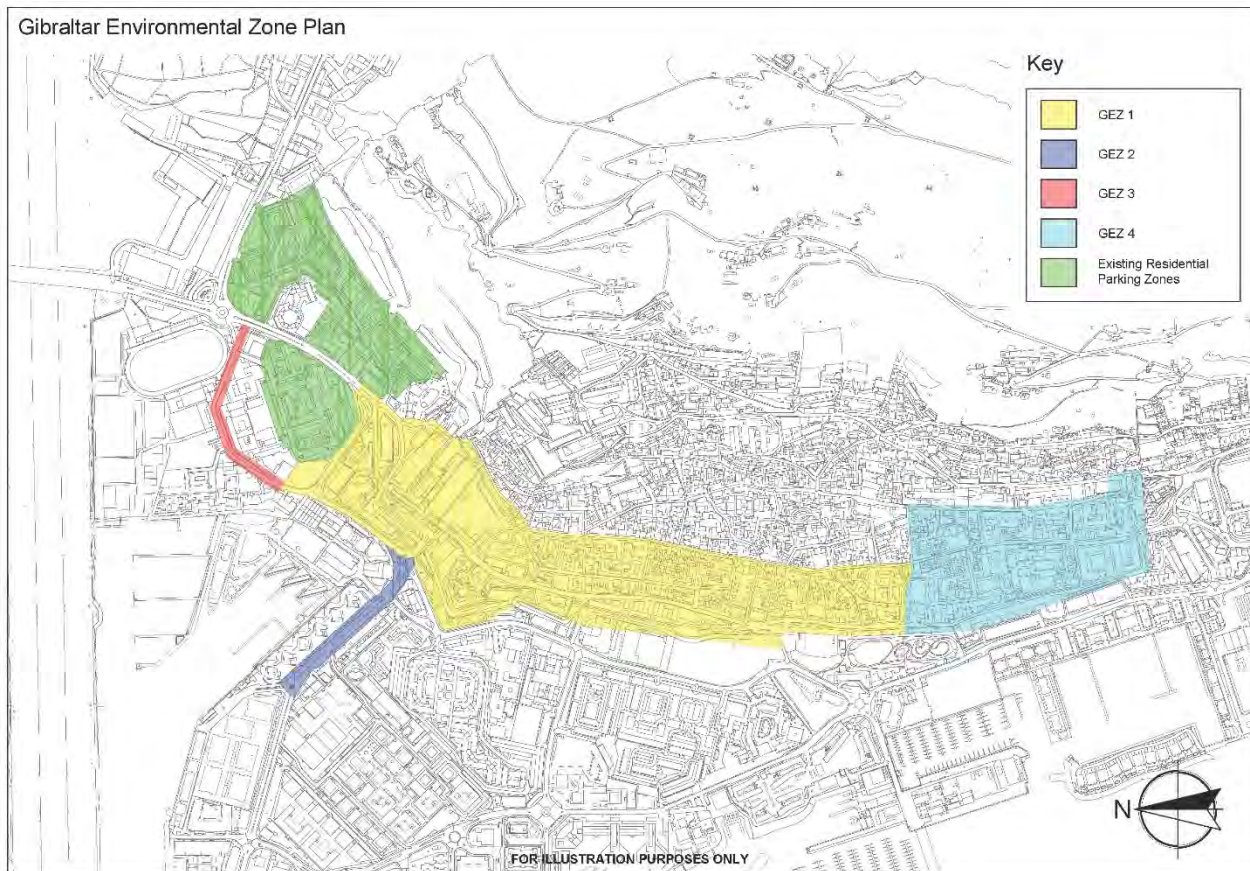
- Meeting residents' needs for car parking near their homes, thereby giving residents a fair opportunity to park on the streets where they live;
- Managing future on-street parking controls to reduce traffic conflicts, obstructions and delays;
- Support businesses, especially in the town centre, to thrive and prosper through appropriate parking provision and management;
- Ensuring that a suitable enforcement regime is in place to manage the parking supply and regulations effectively.

It is recommended that the introduction of new parking controls is delivered in a phased programme. The initial phase should focus on establishing the introduction of a new Gibraltar Environmental Zone (GEZ). The recommended approach is to accommodate essential demand through the re-designation of parking and increase capacity by reallocating rental spaces to other suitable locations. The introduction of charges for parking (P&D, cash/credit card and telephone payment) is considered the most effective mechanism for ensuring parking turnover is achieved in key areas such as in the town centre, to support the local economy.

Possible Gibraltar Environmental Zones related to parking management are illustrated in Figure 4.2 overleaf.



Figure 4.2: Gibraltar Environmental Zones



## 4.8.2 On-street Parking Charges

It is recommended that a gradual introduction of on-street parking controls is undertaken which will include the following key features:

- **Removal of limited numbers of spaces:** This will help to expand bus stop capacity at particular locations and also improve pedestrian access on the key access routes into the town centre.
- **Introduction of charges for on-street parking:** Rates to be determined should be higher than any off-street charges, with a maximum stay of between 2 and 4 hours during the day which might revert to residential use overnight and at weekends in some locations. It may be considered appropriate to reduce the duration of stay to 1 hour or even 30 minutes in certain locations. A charging structure should be considered, where rates increase significantly in relation to parking duration and location.

A pilot scheme has been introduced at Line Wall Road aimed at improving daytime and evening access to the commercial and retail sector in Main Street as well as Irish Town.

Later stages of the on-street parking review should consider extending the charged on-street parking in the central area to incorporate additional roads as follows:

- Waterport Road;
- Bayside Road and Corral Road;
- Main Street South.

It is also recommended to introduce new residents parking zones to cater for residents living in Irish Town/Main Street and allow use of some spaces on Line Wall Road and Orange Bastion free of charge at defined periods.

### **4.8.3 Off-Street Parking Controls**

It is also recommended to introduce parking controls at a limited number of off-street car parks, to try and improve turnover at key locations in the town centre to benefit local businesses by encouraging more retail activity. It is also suggested to increase the number of spaces dedicated to disabled drivers and commercial deliveries where appropriate.

It is also suggested that there is considerable scope to increase premium parking capacity in the town centre area through the relocation of long term rental spaces at an out of town location thereby providing premium parking stock back to meet essential demand.

Further options to provide additional off-street parking facilities should be explored as part of the STTPP programme. If introduced, these projects must be regularly monitored to assess the overall impacts. Possible locations could include the following:

- Devil's Tower Road (953 spaces) – residents/long stay/all day;
- Romney Huts (74 spaces) – long stay;
- Grand Parade (403 spaces) – long stay;
- Eastern Beach (436 spaces) – long stay.

Other locations where off-street parking charges may be considered include Fish Market Road and Orange Bastion.

It must be noted that the Midtown Coach and Car Park has now opened providing the following:

- Parking facilities for just over 1000 cars of which:
  - 423 spaces for free parking (charge evenings);
  - 31 spaces leased;
  - 102 spaces for future rentals;
  - 458 spaces privately owned.
- Space for 40 large coaches
- Space for 44 mini-coaches

Examples of pilot schemes related to Parking and Demand Management that have been successfully implemented include the following:

#### PILOT SCHEME: Line Wall Road Parking Management Scheme

##### **Summary of Key Issues**

There was significant pressure for parking spaces along Line Wall Road, directly affecting the local economy given the proximity of the town centre to shops/commercial premises on Main Street and Irish Town.

Within the STTPP strategy it is recommended to introduce a Gibraltar Environmental Zone (GEZ) for the town centre area which seeks to accommodate essential demand through the re-designation of parking facilities and to encourage greater turnover through the introduction of Pay & Display parking (including charges that can be paid through cash, credit card or telephone payment).

Within the initial phase of this programme it was recommended to introduce on-street parking controls on Line Wall Road, with limited stay parking, loading/unloading areas and time limited DPB parking bays. This has now been completed to include a charging structure as follows: 1hr = £1.00, 2hrs = £3.00 and 3hrs = £5.00. These changes will be reviewed in future.

Further to this, motorcycle parking has been removed and re-allocated within an area at Zoca Flank.

##### **Additional proposals:**

- The scheme will also form part of an overall new residents parking zone for the catchment area to help improve their access to local parking facilities;
- Along Line Wall Road it is recommended that parking spaces are available free of charge at night;
- In parallel to the introduction of on-street parking investigate options for additional off-street parking;
- Regular monitoring to assess impacts is important to be able to review and amend controls/charges as appropriate; and
- Essential access to be provided only in and around Main Street (bus, taxi, residents, deliveries etc.), with designated loading periods throughout the day.

#### PILOT SCHEME: Waterport Road Parking Management Scheme

##### **Summary of Key Issues**

At present Waterport Road dual-carriageway route linking the Commercial Port to the town centre is one of the most heavily trafficked routes within Gibraltar. It also provides a direct pedestrian route link from the Cruise Terminal to the town centre, via Market Place and Casemates Square. There are many small retail and commercial businesses along Waterport Road with free parking provided adjacent to these.

Key problems/issues experienced along Waterport Road include the following:

- Persistent use of the inner lane on the west-bound carriageway as a parking/drop area which impedes the general traffic flow and creates safety problems along this section of highway in terms of potential conflicts between pedestrians and motorists;
- Enforcement focused around most sensitive areas (pelican crossings) and of the surrounding area; and
- Watergardens residents permanently occupying on-street space.

##### **Summary of Recommended Proposals**

Proposed measures that have been implemented are listed below:

- The conversion of a total of 12 proposed parking spaces that were previously free parking to a Pay & Display parking zone with charges applied and a maximum stay of 8 hours introduced between 10.00-22.00 during weekdays, 10.00–14.00 on Saturdays and free parking on Sundays. As part of this scheme, 2 disabled bays (max. stay 3 hours) and three distinct loading/unloading areas have also been provided. It is proposed that this should be reviewed potentially considering further P&D in the future;
- There is potential to convert this section of Waterport Road (adjacent to the shops/local commercial premises) as a 'red' zone with more stringent traffic regulations and increased levels of enforcement to avoid vehicles causing an obstruction on the dual carriageway;
- Two Pay and Display ticket machines have been installed;
- Adequate signage to notify motorists of the extent of charged parking, times of operation and penalty charges have been installed;
- A press release prior to the implementation of the scheme was published; and
- In the longer term the Pay and Display parking spaces could be monitored through a centralised CCTV monitoring system.

## 4.9 Residents Parking Zones

Residential Parking Schemes were introduced in both Laguna Estate and Glacis Estate in early 2011. As part of a new parking strategy it is recommended to consult more widely with local communities and estate representatives to determine the level of desirability for introducing new parking zones elsewhere in Gibraltar as there was much concern regarding the lack of consideration to visitors, carers and commercial entities for deliveries of goods. The Residential Parking Scheme as implemented in early 2011 was put on hold by the present

Government post-election, in order to study the inherited scheme in detail and carry out a substantive and authoritative Plan.

Engagement with stakeholders as part of the development of the STTPP has revealed support for the principle of new residents parking schemes as part of an overall parking strategy. As a result, it is proposed to undertake more detailed studies to implement further residential parking schemes around Gibraltar. At present Policies are being determined.

A phased approach is proposed for the introduction of these controlled parking areas. Any new scheme will take on board several key design considerations including:

- The possibility of limiting the number of permits per household, or otherwise, with permits renewable on an annual basis;
- Clearly defining the boundaries of the zone to reduce any local problems/anomalies;
- Allocation of disabled parking spaces within the zone;
- Allocation of short stay visitor parking spaces to cover personal/social care visits;
- Allow permit holders of other zones to park in certain 'defined' and perhaps time managed areas within other zones.

It is recommended that as part of developing a zonal structure for the control of parking in the central area of Gibraltar, a residents' permit scheme should be developed for the town centre area to ensure that as improved parking controls are successfully introduced, residents in this area are not disadvantaged.

The town centre area should also consider parking space allocation in the off-street car parks to accommodate the residential demand in this area and opportunities should also be explored for the Upper Town area including Moorish Castle, Engineers Lane and Willis's Road areas. In addition, as part of this process, a review of residents' permit allocation criteria should be undertaken and include the following considerations:

- Maximum one permit per household, or otherwise;
- Alternatively, the first permit issued at an agreed price and subsequent permits charged at rising premium rates;
- No permits allocated to households with off-street parking available, or otherwise;
- This framework can be rolled out in a phased approach targeting priority areas first; and
- Permits allocated relative to the number of parking spaces within a given area.

## **4.10 School Parking**

Recognising the parking issues that are experienced during the school run, it is intended to develop a programme of school travel plans to address issues of traffic congestion in and around schools during morning and late afternoon periods.

The principles of this approach include identifying drop-off and short-term waiting areas adjacent to schools and removing inappropriate parking for this purpose. As well as managing parking more effectively, measures will also be introduced to improve bus services including segregating bus movements where possible to improve access during busy periods. Such measures will require strong enforcement to prevent further problems taking place.



A pilot scheme has been introduced at St. Joseph's School where significant problems were experienced outside the school with indiscriminate parking often creating unsafe conditions for pedestrians and causing obstructions to bus services. The scheme included a new bus stop facility adjacent to the school and improvements to parking arrangements outside the school entrance. These improvements addressed concerns raised by local residents and members of the public. Elsewhere in Gibraltar a new school drop-off zone has recently been completed at St. Bernard's School which was opened in September 2015. This scheme has improved access and safety for children being dropped-off/picked-up from school.

These 'pilot' schemes could provide a catalyst for other similar measures being developed and implemented at other schools in Gibraltar.

#### PILOT SCHEME: St. Josephs School (Parking) Measures

##### Summary of Key Issues

Parents taking their children to school by car make a significant contribution to peak time congestion through Gibraltar and as part of the STTPP stakeholder engagement process discussions were held with head teachers and school representatives to understand issues and potential solutions as to how to encourage more sustainable travel for journeys to school. The RGP, Traffic Consultants and Parking Management Officers (PMO's) have been monitoring the situation outside St Joseph's School to get a better perspective of the key issues particularly during the morning peak school run, when cars are observed parking indiscriminately on the pavement, at the bus stop, double-parked or even stopped in the middle of the road causing obstruction to the flow of traffic.

##### Summary of Recommended Proposals

Proposed measures included the following elements:

- The conversion of up to 21 parking spaces to establish a dedicated pick-up/drop-off point for parents bringing their children to school by car;
- An improved drop-off facility should also provide access for bus services that serve the school with bus stops re-designed to cater for future routes outlined within the STTPP; and
- The new drop off facility operates with a maximum stay of 10 min between 0830-0930hrs & 1430-1630hrs on school days, and outside these times the area is available for general parking at other times of the day (evenings/overnight).

The introduction of the new measures was supported by pre-publicity marketing to inform parents and local residents of the plans and reasons for implementation as well as details of the hours of operation. The scheme will require regular monitoring post-implementation to review overall levels of compliance and safety outside the school.

## 4.11 Parking Enforcement

It is recognised that enforcement of parking controls and regulations is a key element of the STTPP. It is proposed that the current approach to enforcement is continuously monitored and reviewed to ensure that adequate resources are devoted to enforcing parking and traffic management measures. In the past stakeholders had identified the lack of credible enforcement as being a key issue to be addressed within the STTPP and the effectiveness of

the Plans' proposals is highly dependent on having a successful enforcement body to control parking areas throughout Gibraltar.

Existing technology within the Government is capable of being expanded to cover the pilot on/off-street parking schemes as well as residential parking scheme(s). Longer-term options exist for upgrading the system to accommodate more automated systems including space allocation and payment mechanisms such as cashless systems. Parking enforcement can also be enhanced with the introduction of a new traffic control centre with CCTV and co-ordinated control in conjunction with the Royal Gibraltar Police (RGP). The benefits of introducing a new parking organisation in Gibraltar responsible for parking operational management and control include the following:

- Ensuring that parking policies are effectively implemented and enforced, with associated benefits in terms of improved traffic and public transport flow, road safety, use of parking spaces and environmental benefits
- Integration of all enforcement and parking policy provides opportunities for better monitoring and use of enforcement, enabling it to become more responsive to public needs and the Government's requirements in terms of community engagement.

Table 4.1: Key Tasks Required for a New Parking Enforcement Regime

Element	Description
<b>Legislation:</b>	<ul style="list-style-type: none"> <li>▪ Review the legislation and regulations that are currently in place and determine whether there is a need to update, introduce or undertake any changes.</li> </ul>
<b>Strategic Vision:</b>	<ul style="list-style-type: none"> <li>▪ Identify the Government vision and policy on how to proceed with the management and control of parking in Gibraltar. This will determine the size of the organisation, enforcement team and organisational set-up.</li> <li>▪ It is envisaged that the enforcement team would initially be relatively small as the programme of on-street regulation emerging from the STTPP is proposed to be implemented in phases based on the successful introduction of pilot schemes.</li> <li>▪ Technology and equipment required to support the enforcement team is already in place.</li> </ul>
<b>Decriminalisation of Parking-related Offences:</b>	<ul style="list-style-type: none"> <li>▪ In line with the transfer of responsibility for parking enforcement from the Police to the Ministry of Traffic and the review of legislation, it is recommended that the Government consider the 'decriminalisation' of parking related offences.</li> <li>▪ This would require establishing an independent adjudicator to deal with appeals rather than the Courts. Any unpaid enforcement notices would be treated as an unpaid debt rather than a fine and if necessary collected through the bailiff system rather than criminal courts.</li> <li>▪ This arrangement is mandatory in London and has been adopted by most local authorities in the UK, where it is generally recognised by police forces and transport authorities as a more efficient use of resources and appropriate level of offence as well as offering a transparent and rapid right of appeal to motorists.</li> </ul>
<b>Management:</b>	<ul style="list-style-type: none"> <li>▪ Identify a suitable management structure for how this new organisation would operate and be supervised.</li> </ul>

Element	Description
<b>Publicity Campaign/Marketing:</b>	<ul style="list-style-type: none"> <li>It is important to develop a publicity campaign aimed at delivering clear and consistent messages that the Government is introducing and operating a new enforcement approach to support its sustainable transport policies and to derive a range of benefits that better enforcement can achieve, including reduced traffic congestion and better local neighbourhoods (in relation to enforcing residents' parking zones).</li> </ul>

The Government has established a new team of Parking Management Officers (PMOs) to enforce Traffic (Parking & Waiting) Regulations throughout Gibraltar. There are currently two shifts of eight officers but this will be continuously monitored to provide the most effective manning levels. The new arrangements will significantly support the RGP in dealing with indiscriminate parking across Gibraltar, especially in many of the Government Estates. The new set-up will not only ensure the proper policing of cleaning campaigns and thus the re-circulation of vehicles, but will also assist with the towing away of derelict and obstructing vehicles thereby freeing up much needed on-street parking. The introduction of Residential Parking Schemes rely on proper enforcement to guarantee that they are effective. The policing of street cleaning campaigns would help circulate vehicles from prolonged parking and potentially becoming derelict.

## 4.12 Disabled Blue Badge Scheme Recommendations

It is recommended that an assessment of the Gibraltar Blue Badge Scheme is undertaken to bring the scheme more up to date with recent practices adopted within other EU jurisdictions; particularly, those in the UK. This should include a review of the statutory eligibility criteria with the collaboration of an independent adjudication panel.

As part of this process, a survey of demand should be undertaken in residential areas and in the town centre to assess the current level of provision.

Whilst a scheme currently exists in Gibraltar, enforcement appears less stringent than elsewhere and there is frequent misuse of permits and disabled parking bays. It is therefore recommended that the following measures be considered:

- Review and refresh the current policy and existing legislation for the allocation of Disabled Persons Badges;
- The application criterion should be reviewed and updated, including the assessment of applications and period of issue for permits;
- The permit system should consider the introduction of national driver disabled badge model that makes provision exclusively for *disabled drivers* waiving parking time restrictions applicable at specific disabled persons parking locations. Any changes to the system will need to be supported by an appropriate marketing campaign to promote the changes to all disabled drivers as well as visitors to Gibraltar;



- The introduction of time parking restrictions at specific disabled parking bay locations with use of Parking Clocks;
- The overall supply of disabled parking bays should ensure that there are suitable dedicated spaces throughout Gibraltar based on the number of disabled drivers that qualify for the scheme, including on and off-street spaces some with time restrictions defined by location;
- Review the demand for disabled parking spaces within the residential and main areas of attraction to determine an appropriate level of provision. It is important to avoid the continued use of disabled parking spaces by specific individuals to ensure that spaces are widely available to any disabled drivers who may need access to them;
- A survey of the current use of non-local Blue Badge-holders to establish the scale of problems experienced and also location of any issues;
- Strengthening the Government's enforcement powers, including the RGP and PMO's so that there is clarity on enforcement roles and responsibilities, with adequate powers given to pursue cases and prosecute offenders accordingly;
- Introduce a monitoring framework that annually reassesses the need for particular disabled parking bays to be maintained based on the level of local demand; and
- Consideration given to an online app to show the location of blue bays and whether these are time restricted or not.

An initial review of the Disabled Blue Badge Scheme has taken place with a number of schemes considered.

A new Disabled Blue Badge Scheme is being considered. The proposals consist of a national badge (see Figure 4.3) for Gibraltarians who are driver disabled. These badges will be time exempt. All blue badge holders including non-Gibraltarians nationals who have an EU badge will have to use a time-clock system in parking bays assigned for this purpose that is, short stay. Disabled parking spaces in commercial areas where high turnover is required, would be time limited. In residential areas where high turnover is not required disabled parking spaces could be unrestricted or long stay spaces.

Figure 4.3: Proposed DPB for the Disabled Blue Badge Scheme



## 4.13 Marketing and Promotion Approach

The introduction of new parking controls, regulations and on-street charges will require a strong marketing and communication strategy in advance to ensure that residents, businesses and visitors are fully aware of the changes and schemes that are being implemented. The marketing approach should aim to place in context the above recommendations to improve parking management, control and availability, including explaining the rationale and principles regarding on-street and off-street parking charges and expansion plans where appropriate. This should clearly demonstrate links with the overall visionary strategy and broader principles of the STTPP.

A summary of key recommendations that should be considered are as follows:

- Prepare a communication strategy for parking;
- Develop the website to include a parking section dedicated to disseminating information, informing residents' and businesses of the parking principles and plan, and answering frequently asked questions (FAQs);
- Production of newsletter informing the local community;
- Issue of press releases; and
- Adopt the use of social media.

## 4.14 Introduction of Parking Technology

Whilst existing Pay and Display technology and PMO equipment is suitable for current on/off-street parking controls and residential zones, it is recommended that the following upgrades are considered in future:

- Development of a new equipment specification that is capable of up-grading to cashless payment options;
- Undertaking a longer term review of the need for more automated enforcement, space allocation and payment processes;
- Further consideration of the development of a control centre with CCTV and coordinated control, in conjunction with the RGP;
- Introduce strategically placed smart signs for off-street car parks and on-street parking facilities aimed at reducing circuitous traffic movement and encouraging a more efficient use of existing parking capacity;
- Consider the adoption of Automatic Number Plate Recognition (ANPR) technology to improve the monitoring and enforcement of both on and off-street parking zones as part of a package of improvements aimed at strengthening the enforcement function; and

- Build on existing parking technology to link the car parking permit system to the proposed Gibraltar ID card scheme.

## 4.15 Proposed Timeframes for Initiatives

Table 4.2 provides an indicative short, medium and longer term action plan for the measures, interventions and initiatives for managing parking activity more effectively.

Table 4.2: Recommended STTPP Parking Measures

Short Term	Medium Term	Longer Term
<ul style="list-style-type: none"> <li>▪ Introduce Gibraltar Environmental Zones.</li> <li>▪ New charges for on-street (Waterport Road, Linewall Road).</li> <li>▪ New charges for off-street (Landport Ditch, Fish Market Road, Orange Bastion and Reclamation Road).</li> <li>▪ Review residents' parking permit scheme criteria.</li> <li>▪ Commence a review and update of the Disabled Blue Badge scheme.</li> <li>▪ Commence review of Gibraltar's parking legislation.</li> <li>▪ In parallel, consider the merits of decriminalisation of parking enforcement.</li> <li>▪ Prepare a marketing strategy and action plan (ongoing).</li> <li>▪ Review of South Pavilion Car Park in conjunction with Rosia Lane.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Review designation and charging for other car parks including Devil's Tower Road, Romney Huts and Grand Parade.</li> <li>▪ Review central area residents' parking area.</li> <li>▪ Introduce Phase 3 - Bayside Road and Corral Road parking measures.</li> <li>▪ Depending on outcomes, action findings from the parking legislation review.</li> <li>▪ Implement Disabled Blue Badge Scheme review.</li> <li>▪ If supported, progress with decriminalisation of parking enforcement legislative changes.</li> <li>▪ Explore the adoption of new technology including ANPR enforcement at car parks and links to the Gibraltar ID cards.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Review existing residential parking areas.</li> <li>▪ Explore the introduction of new residents' parking zones.</li> <li>▪ Adopt Automatic Number Plate Recognition (ANPR) car park technology with strategic signing to car parks.</li> <li>▪ Link car parking permits/ payments to Gibraltar ID cards initiative.</li> <li>▪ Depending on outcomes, finalise parking legislation review.</li> </ul>

## 5 Public Transport in Gibraltar

### 5.1 Introduction

A good public transport system is of fundamental importance to support people's quality of life and economic well-being, in particular connecting people to schools and the college as well as employment and training opportunities. The primary objective is to encourage greater use of public transport in preference to car use through providing a high quality customer 'offer', through the provision of a reliable, stable and well-maintained network which provides good journey times and high levels of punctuality. Good connectivity to key services and destinations is particularly important for the economic prosperity of Gibraltar. The emphasis in the strategy is to support cross-border movement, integration of local bus services and better walking and cycling routes to encourage more trips by these modes, whilst recognising that car travel will still be important for certain trips.

### 5.2 Summary of Key Issues

#### ***Lack of Integrated Bus Services***

In terms of public transport, it is important to ensure that the local bus network continues to cater for local travel demand, reflecting changes in land use development. Many bus users arriving at the Frontier have a destination beyond the scope of Route 5 which terminates in the town centre. Currently local bus services are not coordinated in terms of fares or timetabling and users requiring onward destinations pay more, incur additional travel time and/or walk for part of their journey. A more cohesive system would bring benefits to both operators if undertaken systematically.

#### ***Reliability of Bus and Taxi Services***

Increasing levels of traffic congestion, particularly during the morning and evening peak travel periods is creating problems for bus services in terms of the ability to run on time according to the scheduled timetable. This uncertainty makes it difficult for passengers to plan their journeys to school, work or shopping and at times people waiting at bus stops are uncertain when their next bus is due to arrive. During peak travel periods there is often little space on buses due to school trips.

Furthermore, whilst a new system for monitoring taxi services has been implemented in Gibraltar, there is still the perception amongst the travelling public that few taxis are operating during the evenings and peak times, especially during the busy summer months or when a cruise liner is in port. Furthermore, a lack of advance booking service limits travel options by this mode for some people.

#### ***Need for Better Information on Bus Services***

For many local residents, employees and visitors to Gibraltar it is difficult to understand the current bus network, with many different services and destinations served and the problems of understanding timetables for these. Similarly, people waiting at bus stops are unsure when their

next bus service is likely to arrive due to irregularities in traffic conditions which reduces their confidence when using this mode of transport.

### ***Lack of Evening/Night Bus Services***

Previously, the limited evening bus services detracted from the attractiveness of this mode of transport, with this considered by many stakeholders as being a problem in terms of providing travel choice outside peak travel times. Continued monitoring and review of the night bus service is essential to continue to improve the system. This would further enable the elderly and younger age groups in particular to engage in evening activities whilst having efficient means of transport and thus not having to resort to private forms of transport. Observations so far confirm that the night bus is underutilised at best of times apart from when events take place and take-up is poor due to a lack of demand during the off-season and winter months especially.

## **5.3 Proposed Bus Network Improvements**

Improvements to bus services in Gibraltar will be a critical element of ensuring that as many people as possible can travel by more sustainable means. The aim is to enhance, improve and if possible in the longer term re-structure bus services to establish a new core network serving key destinations throughout Gibraltar. These core bus services would be supported by a complementary network of social bus services that will improve access to public transport for elderly and mobility impaired passengers. Surveys and feedback has shown that there is significant resistance to changing buses especially by elderly users. This results in routes becoming convoluted and inefficient. Improvements in information systems would help to bring the bus service into the 21<sup>st</sup> century and would then provide a platform to be able to consider further changes in the future.

### **5.3.1 The Current Gibraltar Bus Company Network**

The current bus network is comprehensive and adapted to suit the constraints of the road network. In the longer term there are opportunities to simplify the network of routes so that more people feel confident in using buses and are fully aware of the bus as a travel option available to them. In the shorter term, some changes could be introduced that support these aims, bearing in mind that operating buses in a reliable fashion is to a large extent dependent on general traffic conditions which may be unpredictable and disruptive. Hence, dealing with congestion hotspots is essential for buses to provide an effective service, particularly given the fact that many journeys are relatively short and that walking may be the preferred option for some people.

Significantly, any changes to bus services need to be seen in the context of the wider strategy. Buses offer an alternative to car use for some journeys and hence forms part of a strategy to reduce the impact of car traffic. The measures indicated below help to promote buses as a meaningful option, particularly for people who are habitual car users.

The current arrangements minimize the need to transfer from one bus to another. This perpetuates a complex network but over time, some changes could be introduced that can help to simplify routes. Although some users would then be required to change buses which in turn

is dependent on reliable service information/operation, the identification of appropriate transfer locations with stops close together would need to be studied further.

Here follows a brief commentary on the existing bus routes and possible improvements for consideration:

#### **Route 1**

Willis's Road to Market Place is now operated by new, smaller vehicles. The buses currently serving Route 1 are 6.65m in length, 2.7m in height and 2.0m wide. They are fitted with automatic electric doors, are fully air-conditioned and three of these vehicles have provision to carry wheelchair passengers. These buses are suited for the unique Upper Town which requires buses that are small enough for narrow roads, yet powerful enough for the steep gradients, while at the same time being able to provide a cool temperature within.

#### **Route 2**

Market Place to Europa Point provides the core service, currently with a 15 minute frequency. To increase this to a bus every 12 minutes, one extra bus is required (five instead of four) which would increase capacity to avoid overcrowding. While it would be possible to increase this further to a ten-minute frequency, this would be successful only if the operation was entirely reliable without incurring delays caused by traffic. This avoids buses running together and the associated problem of inadequate space for more than one bus at most stops. The increase in frequency needs to be balanced against the cost of additional buses as often frequency is affected by matters outside the bus company's control.

#### **Route 3**

Referendum House to South Pavilion Steps operates satisfactorily but must be monitored.

#### **Route 4**

Rosia to Black Strap Cove has been simplified to remove the loop to the hospital. This has reduced the end-to-end journey time and improved reliability.

#### **Route 7**

Mount Alvernia circular uses low capacity buses with space for wheelchair users. This serves a discrete market although the 10am start time could be made earlier as well as reducing the lunch break.

#### **Route 8**

Black Strap Cove to Reclamation Road operates satisfactorily but encounters delays due to traffic in several locations, particularly at Sir Herbert Miles Road during the summer months. At times up to 12 minutes can be lost on one trip. This matter is difficult to resolve but the new tunnel to the Airport and Frontier will relieve congestion problems at the Sundial Roundabout improving the reliability of the service.

#### **Route 9**

Rosia to Eurotowers covers the withdrawn Route 6 (introduced for an experimental period) but could be curtailed at the hospital to avoid additional delays incurred on its current route.

#### **Night bus**

One of the key issues raised by stakeholders in Gibraltar is the limited bus services at night. It may be possible for daytime routes to be extended into the evenings beyond the current end of

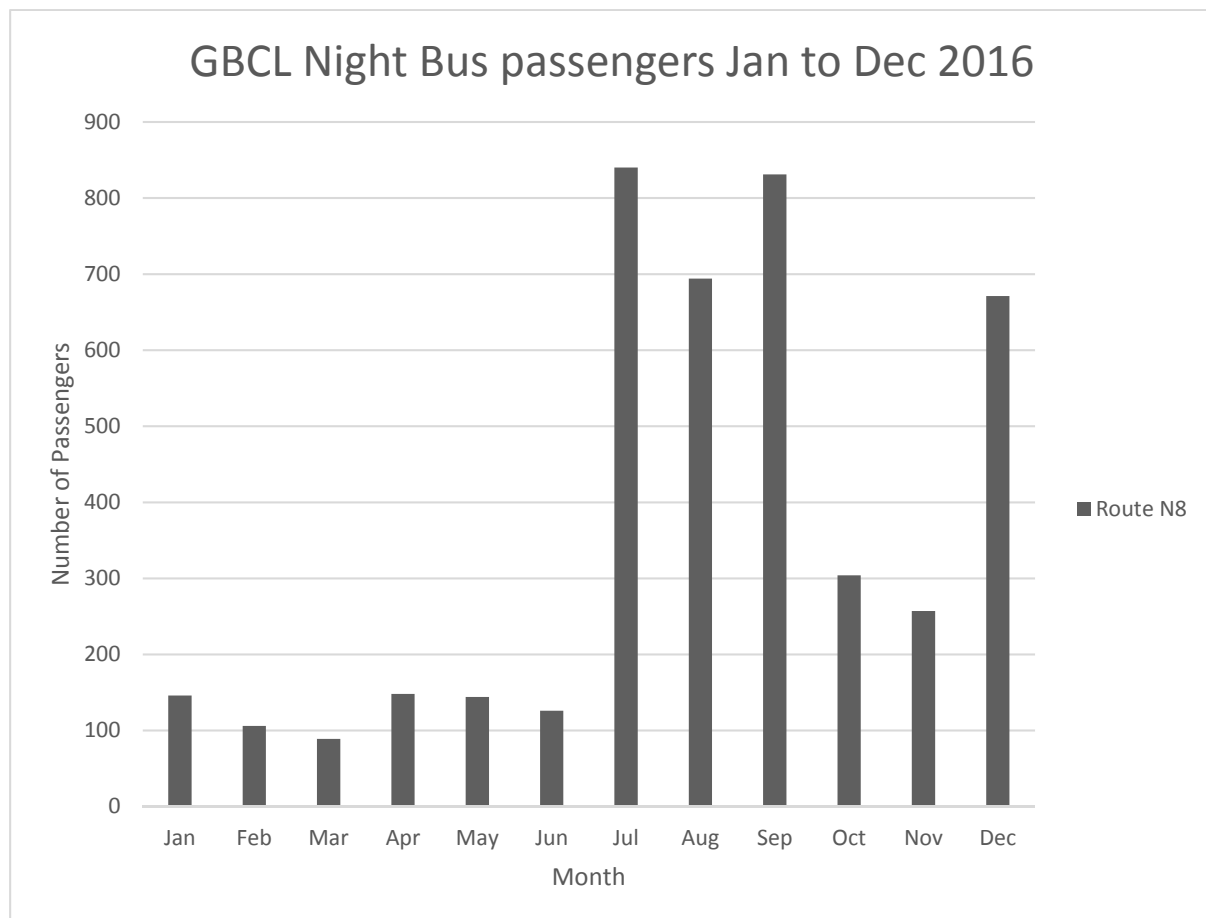
service at 2100hrs until 2300hrs on weekdays with a reduced service frequency on the busiest routes. The introduction of evening bus services and a new night bus service was identified as one of the STTPP pilot projects and on 28<sup>th</sup> August 2015 an extended service was introduced by Gibraltar Bus Company covering Friday and Saturday evenings between 2100hrs and 0115hrs. Two circular routes were operating, the N8A and N8B which together provided route coverage for the East Side, South District and central areas of Gibraltar. A fare was introduced of £2.00 for adults, with children under eight years of age entitled to travel for free.

This night bus service has now been successfully updated whereby the previous two routes have been merged into one route called the N8. This service covers Friday and Saturday evenings between the hours of 2115hrs and 0145hrs. Continued review of the night bus service is still underway in order to pick up any further adjustments/upgrades that may need to be considered in the future.

From data provided by GBCL, Figure 5.1 shows the total number of bus users per month for between January and September 2016. The figures show a steady increase in use towards the summer, particularly on Routes 2, 3 and 8.

Figure 5.1: GBCL passengers by route January to December 2016



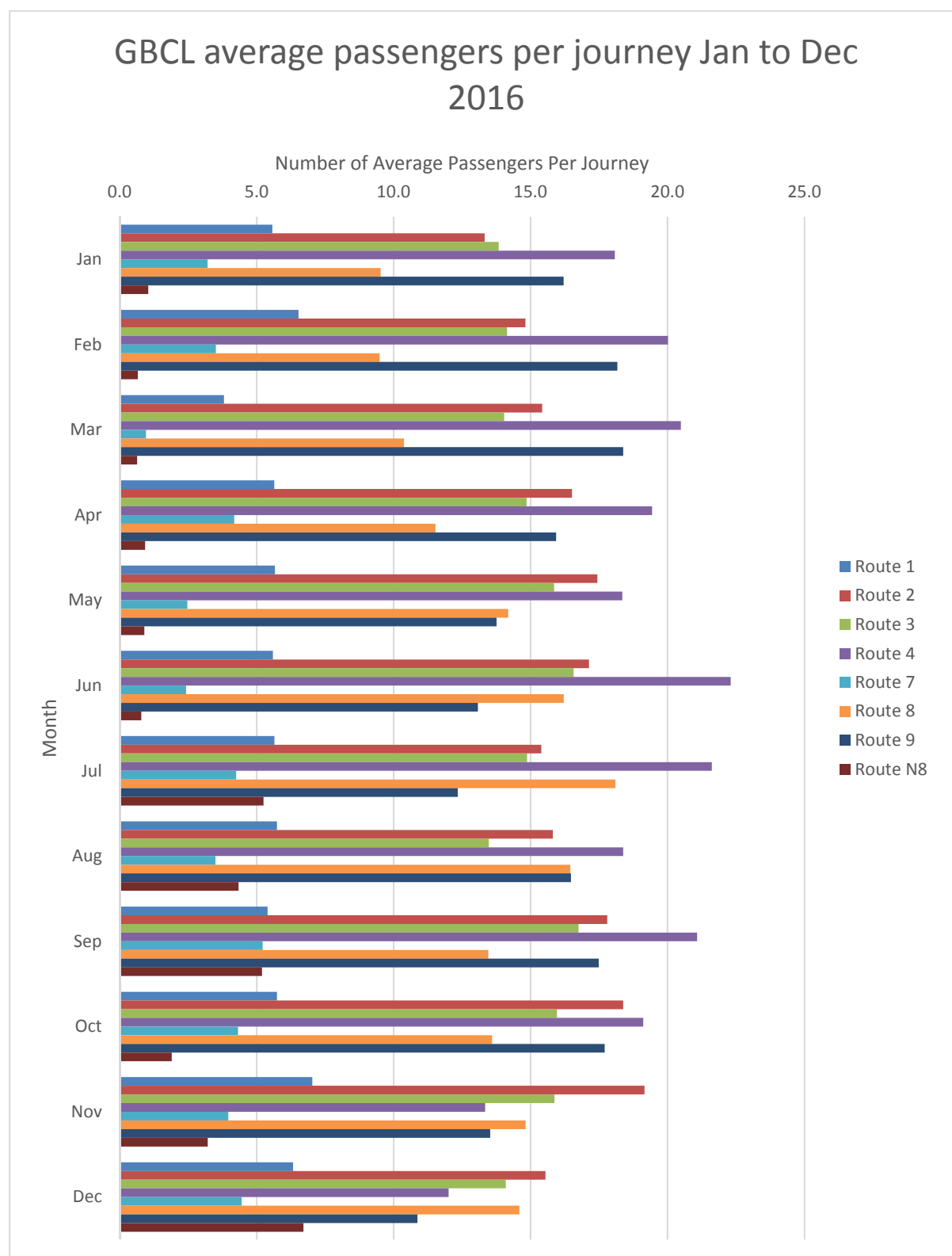


(Source: GBCL data)

These figures have been translated into the number of passengers per journey to take account of the fact that some services operate more intensively than others, Route 7 is a circular route and that the night bus operates on two nights per week only, as shown in Figure 5.2. Routes 2, 3 and 4 have the highest average loadings.



Figure 5.2: GBCL average passengers per journey by route January to December 2016



(Source: GBCL data)

### **Calypso Transport Route 5**

Route 5, operated by Calypso Transport, is the only privately managed route which serves the Frontier and links to Market Place, Waterport Road and Reclamation Road. Calypso uses some conventional 12 metre buses which are unable to use the constrained roads used by GBCL's smaller buses elsewhere.

A number of issues are affecting the use of Route 5 including traffic delays related to Frontier fluidity and additional flights requiring the closure of Winston Churchill Avenue. In addition, the introduction of transport services by some employers and other courtesy buses for specific purposes are undermining this route.

## PILOT SCHEME - Introduction of Evening/Night Bus Services

### *Summary of Key Issues*

The lack of buses after 2100hrs in the evening was cited as a problem by stakeholders as part of the consultation approach on the development of the new STTPP. A night bus service has now been introduced (the N8) to alleviate this issue. The service covers Friday and Saturday evenings between 2115hrs and 0145hrs and enables people such as the elderly or younger age groups to engage in evening activities while having the means to get home without having to resort to private transport. A fare was introduced of £2.00 for adults, with children under eight years of age entitled to travel for free. Continued monitoring and evaluation of the service will give a better indication of public demand and level of usage, to be able to modify and provide a more efficient system with time. From this it may be possible to look at other future schemes such as extending other daytime routes into the evenings beyond the current end of service at 2100hrs on weekdays, with a reduced service frequency (e.g. to every 30 minutes on Services 2 and 4 until 2300hrs).

Monitoring of this service at present has shown that take-up is poor outside the summer season but has shown to be very good for organised events such as the Gibraltar Music Festival.

### *Summary of Recommended Proposals*

Proposed measures include the following recommendations:

- A strong support of local marketing/publicity campaign for the evening/night time services so that potential passengers know nearest bus stops and timetable;
- Consider supporting these services with real time information systems (this is proposed as part of the wider short-medium term bus service enhancements within the STTPP);
- Over the first six months of any new scheme it is important that the services are strictly monitored and usage advertised to illustrate the level of demand. Passenger satisfaction surveys will also prove useful to get public feedback on the service and any suggested changes they wish to see; and
- Continue regular monitoring of all night bus services to ensure any required adjustments or changes are picked up.



### 5.3.2 Short-Medium Term Improvements

Other than a review of the bus routes themselves, there are a number of areas for which short-medium term improvements would be beneficial and effective if implemented. These are as follows:

- **Bus service information systems**
- **Bus service frequency and capacity**
- **Bus ticketing and payment arrangements**
- **Bus stop arrangements**
- **Priority access measures**
- **Mobility impaired bus users**
- **Bus stop enhancements**

#### 5.3.2.1 Bus Service Information Systems

Service information for GBCL routes is displayed at bus stops in a standard format, replicating the information found on the Company's website ([www.gibraltarbuscompany.gi](http://www.gibraltarbuscompany.gi)). While this is straightforward in setting out routes and times, there is no map of the network which would help people less familiar with the area to plan journeys. The GBCL web site only includes route diagrams with no further information. There is a need to include route maps so that potential users can better relate to the bus routes and have clear information presented in an "all routes map". Timetables need to show when services operate i.e. start and finish times and frequency operated; a detailed timetable for each route could be supplementary information showing estimated times of arrival at significant stops. The current diagrams could be enhanced to include journey times i.e. minutes to travel from the start of the route. This type of information is essential for people who will consider the bus as an alternative travel option. It will also ensure that they are confident of being at the right place at the right time.

No information is available for users of Calypso Route 5, a significant deficiency at the Frontier where many visitors could make use of the service if they knew how. Such additional information could be displayed on the existing shelters without difficulty. Enabling people to understand the services available before they reach the point of sale is important and efforts could be made to further disseminate information for people at the Frontier and key stops, particularly Market Place.

Once the decision to use the bus has been made, users need better information at the stops. This could include the service information described above plus suitable labelling of stops with the location and routes marked clearly. In addition, real time service information provides confidence to users in the event of any delays. This can involve the use of electronic displays linked to a bus location system or replicating the display available through other media. The BusTracker app for mobile phones needs to be fully reliable, must display information for all bus routes and be readily available in both iOS/Android format for smartphone use.

A further level of information is helpful during the journey. This can be in the form of in-vehicle real time displays advising on the next stop location and can be supplemented by audio information for people with visual difficulties. This is also helpful to visitors who are not regular users.

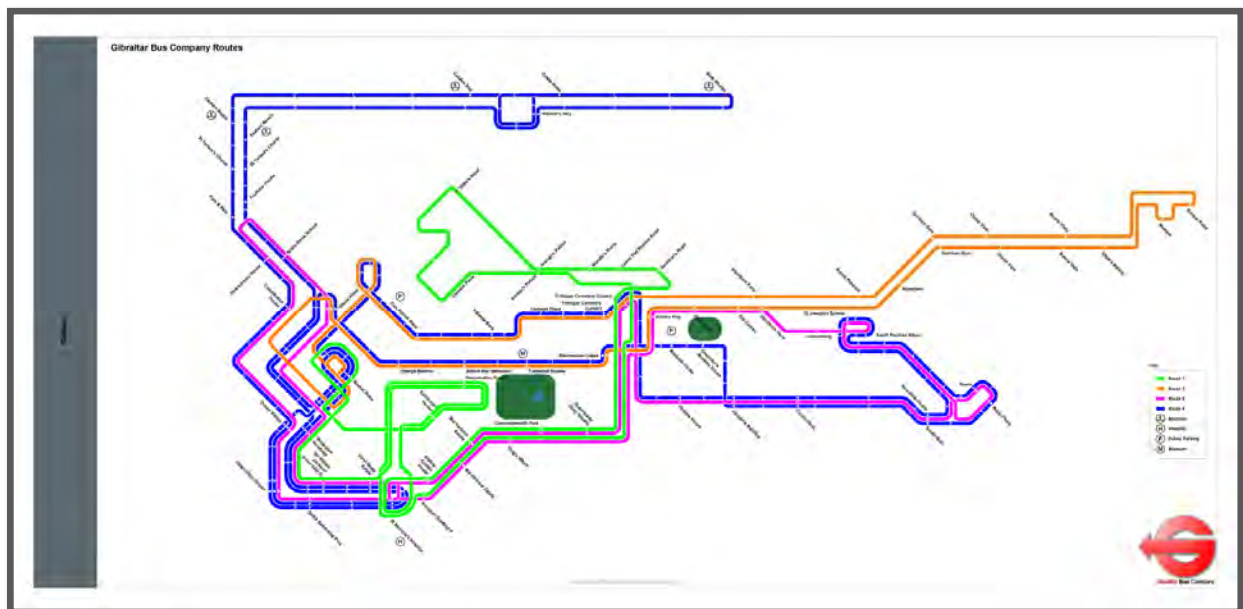
There is no information on payment methods and fares whilst presenting this information in a clear and concise format would speed up transactions on buses.

In summary, users need to know where the bus goes and when, how long the journey will take and how much it will cost. These simple messages need to be apparent before and during the journey. A co-ordinated approach to identity and marketing of the network will help as shown in Figure 5.3 and Figure 5.4 shows how a network plan could help inform potential users.

Figure 5.3 – New Bus Branding Logo



Figure 5.4 – Proposed New Bus Route Representation Map



An enlarged version of this figure can be found in Appendix 1.

### *5.3.2.2 Bus Service Frequency and Capacity*

Some of the services operate frequently, others less so. If services are regular, then users can be confident that they will not have to wait for extended periods and that space will be available on the bus. Enhancing frequencies relies on traffic delays being minimal and requires more resources which may be a constraint given the limited fleet size. More buses on Route 2 in particular would relieve overcrowding and provide a stronger core route. The size of the buses cannot be increased because of the physical constraints of the routes so the only way of increasing capacity is by increasing service frequency. Although purchasing and introducing more vehicles may be a costly option in general, this can be categorized as a short term measure as little or no modifications are required in terms of the service structure. The acquisition of extra buses in a phased approach that is directly linked to HMGoG funding arrangements can be planned. These new vehicles can then be immediately introduced into service as soon as they are available.

### *5.3.2.3 Bus Ticketing and Payment Arrangements*

Delays occur because ticketing transactions take up a disproportionate amount of the journey time. If payment is faster, then services can be speeded up. This can be addressed through information about pricing, how the payment system works and through the streamlining of the transaction process. Pre-payment before boarding the bus can help significantly and this can therefore be introduced at the most frequently used bus stops.

The existing payment structure has been described below. Local residents do not pay for bus use and these include holders of the following:

- Gibraltar ID Card;
- Gibraltar issued Senior Citizens Cards;
- Gibraltar issued E1-11 Cards;
- Royal Gibraltar Police Warrant Cards;
- MoD ID Cards; and
- Club Cards (issued to non-residents working in Gibraltar under the Gibraltar employment laws).

This represents a substantial cost to the Government but encourages all local users to consider bus use in preference to car use. For other users, the pricing structure is simple and is as follows:

- Adult one way £1.50(€2.00)
- Adult day pass £2.25(€3.00)
- Child one way £1.20(€1.60)
- Child day pass £1.80(€2.50)

These fares are good value and while prices could be increased, it would be unlikely to generate much more revenue to offset the costs of running the bus network given that approximately 85% of users travel free.

A new bus payment mechanism is currently being investigated that will make it easier and quicker to use local services and reduce boarding times that will improve bus journey times. The

current development of the Gibraltar ID card provides a good opportunity to integrate this scheme with the bus smart card technology that can be used for concessionary travel and for the payment of bus journeys. The potential for this to also include taxi fares and car parking payments can also be explored. The choice of travel becomes more evident and can be easily managed using one back office for all transactions. This also enables people to compare directly the cost and convenience of parking against the cost of bus use. An electronic payment system would enable faster transactions and also facilitate more efficient administration of the various concession schemes. Ultimately a cash-free system offers a number of advantages although a suitable arrangement would be needed in order to incorporate visitors and one-off users. Pay-as-you-go arrangements can be considered and bus ticket dispensing machines can thus be introduced and strategically positioned throughout Gibraltar.

There may be merit in considering the gradual introduction of a bus fare scheme in place of the current free travel regime should the subsidy become unsustainable in the future. Old age pensioners (OAPs) and children under 16 could continue to be exempt from fares but new fares could be introduced on stages, for example working towards a £1.00 charge for a return trip, £0.50 for a single trip (with its equivalent in euros).

The adoption of smart cards can also help to overcome the ongoing problems of subsidy for local people using buses. While of benefit to some, the cost is borne by everyone through taxation – this is inequitable and does not attribute a user value to the use of buses. This enables the subsidy per journey to continue (and potentially increase) as operating costs rise bringing into question its affordability. This could be managed differently with smart cards ascribing a value in relation to taxation. It could be a way of reducing subsidy while maintaining the benefits of subsidised bus travel. Users could continue to travel but in doing so enable a transaction that reduces the amount they pay in tax; people who do not use the bus have a different taxation arrangement that reflects their use of other modes, particularly car.

#### ***5.3.2.4 Bus Stopping Arrangements***

The arrangements for stopping are being reviewed to remove the need for buses to stop where there are no passengers to board. This would also help speed up services where timetables can be adhered to thus avoiding a situation in which potential users arrive at a stop with much uncertainty and in anticipation of a bus arriving where in fact the bus may have already gone. Request bus stops increase efficiency and this arrangement supports a service that runs on time. It must also be noted that some intermediate timing points may still need to be retained to allow service regularity.

#### ***5.3.2.5 Priority Access Measures***

While the road network is severely constrained, it is possible to introduce a range of improvements to help bus movements, particularly within the town centre as part of other 'gateway' improvement schemes. In addition to improvements at stops (including extensions to accommodate more than one bus if possible), short lengths of bus lanes may be worthwhile as a medium/longer-term option. However, this would need to be introduced at the expense of losing on-street car parking to enable a reallocation of road space in favour of buses. There may be scope to introduce bus lanes of reduced width that would accommodate smaller GBCL buses rather than adhering strictly to conventional design criteria. Key locations where it is



recommended that priority measures are introduced, if possible, after studying their viability, are as follows:

- At Queensway, Waterport Road and Europort Road where there is sufficient space to provide priority to buses at traffic signal junctions especially where the current arrangements have been superseded to improve traffic flow at the junction of Glacis Road/Waterport Road; and
- Bus (and access only) roads at Corral Road, Reclamation Road and Main Street (South) where it is proposed that priority access to the town centre will be provided for buses, cyclists and pedestrians as well as local access for residents and businesses in these areas.

*Figure 5.5 – Indicative layout of a new bus lane on Waterport Road*



#### *5.3.2.6 Mobility Impaired Bus Users*

The terrain and streetscape of Gibraltar is challenging for people with mobility impairments. Buses should be fully accessible and accommodate the needs of people with all types of impairment – visual, aural and mobility. Most of the GBCL fleet is equipped with leaning front steps but bus stops are poorly designed to enable level boarding and alighting. Alterations to stops to provide raised kerbing (i.e. Kassel kerbs) will help in most locations (provided that lay-bys are designed so that the raised kerb does not conflict with bus manoeuvres). In future, on-board announcements and visual aids at stops will help users.

As part of the STTPP, a programme of bus stop enhancements will be studied to improve accessibility to bus services and conditions for buses serving particular stops throughout Gibraltar. Figure 5.6 shows an example of a bus stop improvement with improved facilities such as real-time information and clear bus route maps.

A modern bus stop shelter with a black frame and glass panels. A red bicycle is parked on the left. The shelter has a digital display showing bus routes and times. The background shows a street with trees and a building.

- Making modifications to bus stops to be more accessible to people with mobility problems;
- Improving the location of the bus stops; and
- Other bus stop enhancements.

In addition to these modifications described above, a new bus fleet has already been implemented in Gibraltar to incorporate new bus vehicles that are modern, comfortable and fully accessible, as shown in Figures 5.7 and 5.8.



Figure 5.7 – An existing modern bus within the Gibraltar Bus Company Fleet



Figure 5.8 – The new bus fleet has many additional features



(Source: GBCL)

## **5.4 Other Improvements**

Other than the improvements already listed, other options which may wish to be considered are described below:

### **5.4.1 Market Place**

The current arrangements for buses at Market Place are unsatisfactory. There are many conflicts between turning buses, taxis, the Port Shuttle Service, other vehicles and many pedestrians. Any bus that is unable to access its stop creates a blockage for all incoming vehicles which adds to delays. The location is a prime gateway to Casemates Square and offers significant potential for an urban realm scheme to create a seamless pedestrian access point to the centre.

It is proposed that the bus stops are removed from Market Place to the Glacis Road/Waterport Road/Queensway Road roundabout. This junction would need to be redesigned to accommodate sufficient bus stop arrangements in both directions and for some buses on Route 5 to turn, Calypso requiring two stops inbound. The changes would require the closure to through vehicle movements from Fish Market Lane and Corral Road as well as new arrangements at the main junction and emergency access to Market Place would need to be maintained.

### **5.4.2 The Gibraltar Airport and Frontier Access Road**

The planned creation of a tunnel at the eastern end of the runway presents challenges and opportunities for buses. The tunnel will divert all traffic from Winston Churchill Avenue to Devil's Tower Road although it is unclear whether or not any access for pedestrians/cyclists and vehicles would be retained on the current route across the runway. Assuming that buses can no longer use the current route to the Frontier, the distance and journey time via the tunnel is greater than the current route. Enabling some form of priority for buses on the approach to the tunnel would be important to retain an advantage for bus users such as a bus lane to the tunnel portal. The bus stop and taxi pick-up at the Airport also need to be re-orientated to buses coming from the east rather than from the south so that there is easy transfer from the airport and the Frontier. In the event that pedestrian access ceases on the current route, then buses could provide a means of access to convey all pedestrians but this would need to be of considerable capacity, frequency and operate at all times. The current road arrangement for GAFAR and approach roads is included in Appendix 10.

### **5.4.3 Additional Routes**

There is scope for additional routes to be introduced in the future. As well as the diverted Route 5 to the Airport and Frontier, an airport shuttle for hotels could be appropriate, serving the most popular establishments.

Another possibility is a circular route around Gibraltar via Europa Point and Dudley Ward Tunnel. This would link the residential areas with the beaches on the eastside.

In the longer term, with the possibility of fewer or simplified routes, the introduction of core routes with main transfer hubs could be considered.

## 5.5 Proposed “Long Term” Bus Network Improvements

The recommended approach for a new bus service in Gibraltar is to simplify the network and make it easy for the travelling public to understand. It is proposed that this can be achieved through the introduction of a new ‘core’ bus network that has been developed to provide a faster, more frequent service. This will in turn attract greater numbers of customers, accompanied with a new design approach for the main interchange locations (‘hubs’) to create additional capacity and ease of movement for passengers with minimum delay between services. Over and above the core services that are proposed, another level of service is recommended, termed ‘ribbon’ services to help address the travel needs of elderly and mobility impaired people. These ribbon routes are proposed to operate at a lower frequency but will serve a number of key locations such as the hospital, local retail outlets (e.g., Morrison’s Supermarket) and other key destinations. Within the new network other areas such as Elliot’s Battery and the Shrine will also be served.

In addition to the above, additional dedicated services could be considered to serve the Windmill Hill area (Prison and Retreat Centre) as well as Catalan Bay Village to provide a bus service for the needs of the elderly and mobility impaired passengers. This will require additional civil works to be introduced to facilitate access for a bus service to this area. This service will also provide a means for beach users to access this area particularly during peak periods during the summer season.

A number of new destinations and route alignments along with the peak vehicle requirement (PVR) have been shown in Figure 5.9 and Table 5.1 respectively. This identifies a PVR of 28 for GBCL routes (fleet = 32) and 4 for Calypso (Green Route = existing Route 5) (fleet = 5).

Table 5.1 – Proposed Pilot Bus Routes (including timings and vehicle numbers)

Route	Direction	Journey Time (mins)	Total Round Time + Layover (mins)	Frequency (mins)	Buses Required (including spares)
Purple	Willis's Road to Rosia	30	75	15	5
	Rosia to Willis's Road	30			
Blue	Frontier to Europa Point	30	72	12	6
	Europa Point to Frontier	30			
Red	Both Worlds to Rosia	45	108	12	9
	Rosia to Both Worlds	45			
Green	Frontier to Reclamation Road	19	40	10	4
	Reclamation Road to Frontier	16			
Orange	Line Wall Road to Windmill Hill Road	30	80	20	4
	Windmill Hill Road to Line Wall Road	30			
Ribbon 1	Both Worlds to Queensway Road	45	120	60	2
	Queensway Road to Both Worlds	45			
Ribbon 2	Line Wall Road to Rosia	20	60	60	1
	Rosia to Line Wall Road	20			
Ribbon 3	Europort Road to Europa	25	60	60	1
	Europa to Europort Road	25			



Figure 5.9 – Proposed Draft STTP Bus Network Plan



(Source: Mott MacDonald). Note that colours are indicative only and routes will be numbered.



### 5.5.1 Bus Interchange ‘Hub’ Improvements

As well as improving the quality of bus vehicles throughout Gibraltar, enhancing local bus stops and interchange points is also important to create a better environment for passengers. This is in part related to the ‘short term’ improvement described previously although some enhancement will be required if the new bus interchange hub network is introduced. As part of the development of the new bus network, the accessibility and quality of bus stops will be reviewed and upgraded as necessary such as the following:

- Wider pedestrian footways;
- Introduction of shelters (if not provided already); and
- Introduction of higher bus stop capacity (to accommodate more buses and passengers) and information on services.

The **Market Place** bus stops are considered inappropriate for a modern bus interchange and there are safety concerns resulting from the mix of pedestrians, taxis and bus movements in a constrained space. Facilities for bus users are restrictive and all require passengers to cross the carriageway without suitable pedestrian crossings. Both operators are of the view that the current Market Place setup is becoming increasingly unsuitable as a bus interchange. This implies the need for a modification or replacement facility (for which options are limited). Multiple recommendations to resolve the issue are stated below:

- Market Place bus station to be removed and the primary function of a bus station (interchange between different bus services) would be devolved to a series of new interchanges. These locations have been identified in key sites throughout Gibraltar, designed to maximise access to the local bus network.
- Pedestrianise Market Place area between certain hours of the day, (allowing bus and taxi services to continue operating under one large terminus relocated away from Market Place.)
- Introducing one large shelter that encompasses a spacious and easy access design. Better waiting facilities for users with centralised pay-as-you-go bus ticket dispensers and other required amenities. This would improve the existing setup of individual shelters which often become overcrowded, congested and problematic.

If the preferred option is to pedestrianise the area of Market Place, this location could be redesigned as an urban space scheme, ideally set as the gateway to Casemates Square. Taxi drop off facilities can then be considered at this site which could allow the full pedestrianisation of this section of the town centre.

### 5.5.2 Development of New Series of Interchange ‘Hubs’

As part of the proposed longer term bus network a series of interchange points or hubs is proposed. These would create more travel opportunities for the travelling public, aimed at co-ordinating bus timetables to minimise waiting times between services.

Every journey that is made, be it a commute, a business trip, a visit to family and friends, or a long distance flight, passes through a transport hub of some kind. Hubs provide entry and exit points to the various transport networks within an area and also provide points of interchange between modes. At their simplest, they can be places where a walking journey becomes a journey by a different mode of transport (e.g. cycling). However, at their most complex, they can handle millions of passengers per year interchanging between many different modes such as a major airport.

Hubs do not necessarily have to contain large scale infrastructure, indeed the vast majority are small in scale and play host to simple mode transfers where users can access the means for their onward journey in an informed and comfortable manner. One of the best understood types of hub is a bus stop at which multiple services call and at which cycle parking, or in some cases nearby car parking, may be provided.

***Definition: “Transport hubs are locations at which a journey may either begin, end, or at which a pause is undertaken either for the purpose of changing modes, gathering information, or completion of other tasks or objectives.”***

By definition, transport hubs must be multi-modal, even if this is simply between walking and bus. Enhancing the multi-modal offer at hubs extends the range of accessible destinations and increases the use and importance of the hub in question, however even the smallest transport hub should have some concession to multi-modality be it pedestrian and cycle signing, cycle parking, and/or interchange information. Each hub location will be characterised by a number of facilities which are more geared towards a multi-modal transport provision.

Typically, this will include a range of features that are found at interchange points including the following:

- A branded flag and pole;
- A quality bus shelter with lighting and seating facilities;
- Bus boarder kerbs to aid improved accessibility to bus vehicles;
- Up-to-date timetable information as well as Real-Time Passenger Information (RTPI) screens;
- Network bus maps as well as local area maps;
- Cycle parking / cycle hire point;
- Kiosk or news-stand or refreshment stand; and
- Interactive information point.

If not already carried out in the short term bus improvement scheme, some of the proposed hub locations would require bus stop improvements/enhancements to provide additional capacity for services and also more capacity for passengers (in terms of footway capacity and width). These interchange points have been proposed at the following locations:

- **Frontier/Airport:** With the re-development of the old air terminal an option also exists for introducing a stop outside the new air terminal through a dedicated access from Winston Churchill Avenue through the old air terminal site with priority given to both buses and taxis on this approach.
- **Waterport Road/Glaxis Road Junction:** It is proposed that there will need to be an enhanced bus stop facility and a new pedestrian crossing facility to accommodate additional bus services if the Market Place stops are removed. It is proposed that the enhanced bus stop facility is able to accommodate at least two buses at any one time in each direction which allows for removal of stops from Market Place. As part of the junction reconfiguration, bus gate facilities will be provided together with improved pedestrian access to Market Place etc.
- **Reclamation Road:** Following the establishment of the new Midtown Coach Park, new bus stop facilities are recommended at this location to allow for interchange between different bus services and also improved accessibility into Main Street and Irish Town. Given that additional bus services will be proposed along this road; enhanced bus stop facilities will be required (to accommodate a total of four buses at any one time. This would require:
  - Several adjustments through Reclamation Road and improved pedestrian facilities including wider footways;
  - Removal of the existing bus layby which will be paved; and
  - Introduction of saw-tooth design for bus stops enabling level boarding and alighting.

The additional footway capacity is required to minimise conflicts with pedestrian movement from the adjacent coach park providing good access to the town centre for tourists and day visitors;

- **Trafalgar Junction:** an improved junction arrangement is proposed here that will improve access not only to Grand Parade/Cable Car but also to Main Street (South) with an altered junction layout and bus bays allowing good interchange between multiple services;
- **South Barrack Parade:** new bus stop facilities to create a high quality interchange between roads, and providing good access to the local school; and
- **Europa Point:** enhanced bus stop facilities at the Europa Point terminus.

Further refinement and testing of the individual bus routes would be required to ensure that timings/frequencies are robust and that additional views of passengers, as well as local residents and businesses are taken on board.

As part of the STTPP plan programme, further work would be required to develop specific plans and design layouts for each bus interchange hub that has been proposed throughout Gibraltar. Similarly, more study will be required on each bus route to assess and determine any other specific improvements required for each bus stop.

On the priority pedestrian routes improved directional signing to local facilities (shops/tourist attractions and places of interest) should be introduced including the introduction of way-finding devices (such as the RNIB's 'Talking Signs' equipment) to assist blind and partially sighted people on those routes linked into the bus interchange points.

## **5.6 Taxi Services**

The Gibraltar Taxi Service has evolved to cater for some unique local circumstances in particular the regular border disruption and the cruise ship market. As such, it is more geared towards the daily cross-border commuter and tourist market than it is to local residents' needs and that of the airport. These factors permeate everything from the type of vehicles operated through to the shift patterns and driver preference for particular taxi ranks. Based on the size of the resident population and the number of taxis, there should be a comprehensive and competitive all day service. However, the tour guide operation offering higher fares and tips is much more attractive than standard around town pick-ups and unsocial hour shifts. The border-town service is also inefficient because of the large number of single or two person groups which often means a long wait time (especially when there are cruise ships docking during the morning peak), when shared use would offer a better customer service.

The introduction of a new control system has improved response times somewhat although there is still a perceived poor level of availability at certain times in terms of responding to demand from cruise ships and in the evenings. There is also an issue with the advance booking service as it limits travel options out of peak periods of demand. There are also instances when taxis are observed parked in taxi ranks and are not available for hire. The establishment of new priority access points to the town centre (via Corral Road, Reclamation Road and Main Street) provide opportunities to establish dedicated access for both bus and taxi services as well as new taxi drop off points (e.g. at Market Place where it is proposed to remove the existing bus interchange facility). It is recommended that the new control system introduced by the Taxi Association is utilised more fully to monitor availability of City Service and evening provision and that in addition, a new advance booking system is similarly introduced.

There are currently 112 taxis in Gibraltar and 8 private hire licences of which six are operated by the Gibraltar Taxi Association (GTA). These licences are issued by HMGoG and licence holders renew this licence (Road Service Licence) on a yearly basis. Regardless of whether taxi drivers are members of the GTA or not, they are required by law to carry out a minimum number of City Service days where they are prohibited to undertake Rock Tours. City Service is worked according to a roster. At the time of the latest update, there were six shifts of 18-19 taxis each, which apart from the Radio shift, provide the city service on those days. According to vox populi, it is widely felt that the number of taxis available are considered insufficient for the community's needs in Gibraltar. To add to this problem, the closure of the Upper Rock to non-residents as an environmental initiative by Government has increased the demand for Rock Tours from persons who would have otherwise entered the Nature Reserve using their own vehicles. Furthermore, the large influx of tourists arriving from cruise ships and other tourism events further diminishes the availability of city service taxis for local and other users alike.

To further compound the situation, traffic problems close to the frontier with Spain which at the time of publication were much improved compared to the traffic problems encountered over a

year ago, and the success at encouraging more flights into Gibraltar International Airport have seen further hold ups at Winston Churchill Avenue, which bisects the runway.

Several proposed solutions to tackle the issues and upgrade the current service are discussed in a separate document - 'STTPP Implementation Concepts'. Many of these concepts have been adopted from other tried and tested systems already implemented in other countries. Some of the proposals are very specific to the local taxi service which is unique in many ways.

## 5.7 Proposed Timeframes for Initiatives

A summary of the key actions and interventions in the short, medium and long term are presented in Table 5.2 below.

Table 5.2 – Proposed Draft STTPP Bus and Taxi Network Plan

Short Term	Medium Term	Longer Term
<ul style="list-style-type: none"> <li>▪ Improvements of bus service information systems on bus shelters.</li> <li>▪ Implement Bus Tracker iOS/Android app.</li> <li>▪ Redesign the existing bus route maps with improved graphical illustrations for better spatial awareness.</li> <li>▪ Consider implementation of improved bus payment systems and better ticketing facilities.</li> <li>▪ Address deficiencies in taxi availability by increasing the number of taxis in each City Service shift.</li> <li>▪ Increase transparency by providing Taxi User Charter, adequate taxi signage and having tariffs displayed.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Introduce Real time passenger information and bus stop access improvements.</li> <li>▪ Study and develop scheme to introduce bus priority routes throughout Gibraltar.</li> <li>▪ Enhance mobility impairment access at existing bus stop locations.</li> <li>▪ Implement features that streamline the existing bus stopping arrangements.</li> <li>▪ Investigate further use of Bus App.</li> <li>▪ Development of transport system from Frontier to town area (post-Airport and Frontier Tunnel opening).</li> </ul>	<ul style="list-style-type: none"> <li>▪ Electric vehicle fleet replacement on core routes.</li> <li>▪ Consideration of schemes i.e. Personalised Rapid Transit (PRT) system linking airport to Sun Dial junction (longer-term post-GAFAR scheme).</li> <li>▪ Improve taxi advance booking system.</li> <li>▪ Introduce enhanced Frontier taxi facilities (pick-up point) including shelter and waiting facilities.</li> <li>▪ Implement other taxi enhancement measures.</li> <li>▪ Implementation of new bus network and hubs: <ul style="list-style-type: none"> <li>○ Five core services, starting with service from Europa Point to Frontier; and</li> <li>○ Introduction of additional 'social' ribbon services.</li> </ul> </li> </ul>

(Source: Mott MacDonald)

## 6 Sustainable Travel (Walking/Cycling) and Mobility Management

### 6.1 Introduction

This section principally focuses on how to encourage active travel and develop high quality cycling and walking networks. This will contribute to the improvement of health and address social inclusion by improving physical access to employment and services for people who have no other alternative. If taken up on a significant scale, active travel can help reduce congestion and carbon emissions as well as improve the health of individuals through exercise. The principle comprises of key local cycling and walking schemes to improve access to key facilities, schools, public transport hubs, areas of high employment density, green and recreational spaces. The aim is to bring about:

- Substantial increases in walking and cycling to and from key facilities, schools, public transport hubs, areas of high employment density, green spaces, and recreational spaces;
- Improved awareness of cycling and walking routes and services; and
- Cycle infrastructure improvements, including the provision of cycle parking and quality cycle route improvements.

### 6.2 Promoting Walking in Gibraltar

Walking is the most environmentally and socially sustainable form of transport. It is an integral part of living in urban areas as it is ideal for undertaking most short journeys, particularly in a place like Gibraltar where key services are located within relatively short distances from local residencies. Walking also provides the link between other forms of transport for longer journeys. It is also a good form of exercise for improving health and fitness and is an inexpensive leisure activity. The approach for walking differs from that of cycling because the nature of walking is distinct. An example of a safety pedestrian route project was the new constructed pavement linking Buena Vista to Trafalgar Heights in order to promote walking in the area.

### 6.3 Summary of Key Issues

#### *Poor quality pedestrian routes*

There are a large proportion of trips in Gibraltar made on foot, particularly from the Frontier which sees a significant number of trips to work across the border with Spain. In addition, the significant tourism sector in Gibraltar generates large volumes of pedestrians entering the Town/Upper Rock, from both air and cruise terminals as well as via coaches and private cars entering from Spain.

The state of some of the main pedestrian routes into the town centre show signs of poor condition as well as a lack of facilities in terms of footway width to cater for large pedestrian volumes, accessible kerbs, directional signing and crossing points. Particular problems are experienced when crossing the runway during scheduled flights and at key approaches to the

town centre. These include routes via Corral Road/Landport Ditch Tunnel, from the Cruise Terminal along Waterport Road, and the approach from the Southern end of Main Street from the Cable Car (Grand Parade).

Paving stones along Main Street also make walking in this area problematic especially for the elderly and the mobility impaired.

### ***Safety issues for pedestrians in the town centre***

The success of the centralised pedestrianised zone in Gibraltar, with Main Street as the primary route, continues to cater for the majority of pedestrian activity in the town centre. However, conflict between vehicles and pedestrians continues to pose safety problems, as well as barriers to accessibility in some locations, particularly at crossing points which are heavily trafficked (e.g. the junction between John Mackintosh Square and City Mill Lane). During the morning peak period, congestion is evident in the town centre due to the large amount of commercial and delivery vehicles that are servicing local shops and businesses during the morning between 0700-1030hrs. The STTPP recommends that this arrangement is reviewed to increase pedestrian safety in the area at these times.

Establishing good links to public transport facilities, car parks, taxis and cycle parking facilities are essential in terms of improving overall accessibility for people and the development of 'seamless travel' between modes. Pedestrian routes to taxi ranks need to be identified and developed. Furthermore, pedestrian access to car parks with a view of improving their attractiveness and safety also need to be explored.

Table 6.1, Figure 6.1, and Figure 6.2 below, show statistics from the STTPP household travel surveys in relation to the average trip length by different modes of transport and also journey purpose. It is evident that the average distance of trips by foot or by bike are under half of those by motorised transport. However, when examining the data in more detail it is apparent that if all motorised trips under 1km were replaced by walking, there would be an 8% reduction in motorised trips which would be beneficial in terms of contribution towards traffic congestion and associated uptake in more walking and cycling activity.

*Table 6.1 – STTPP Household Travel Surveys: average trip distance in km per day (all trips)*

Mode	Work Trips	Education Trips	Leisure Trips	AVERAGE
Walk/Cycle	1.20	0.90	1.30	<b>1.13</b>
Car	2.30	2.20	2.30	<b>2.27</b>
Bus	2.40	2.55	2.20	<b>2.38</b>
Motorcycle	2.30	1.90	2.20	<b>2.13</b>
<b>AVERAGE</b>	<b>2.05</b>	<b>1.89</b>	<b>2.00</b>	

*(Source: Mott MacDonald)*

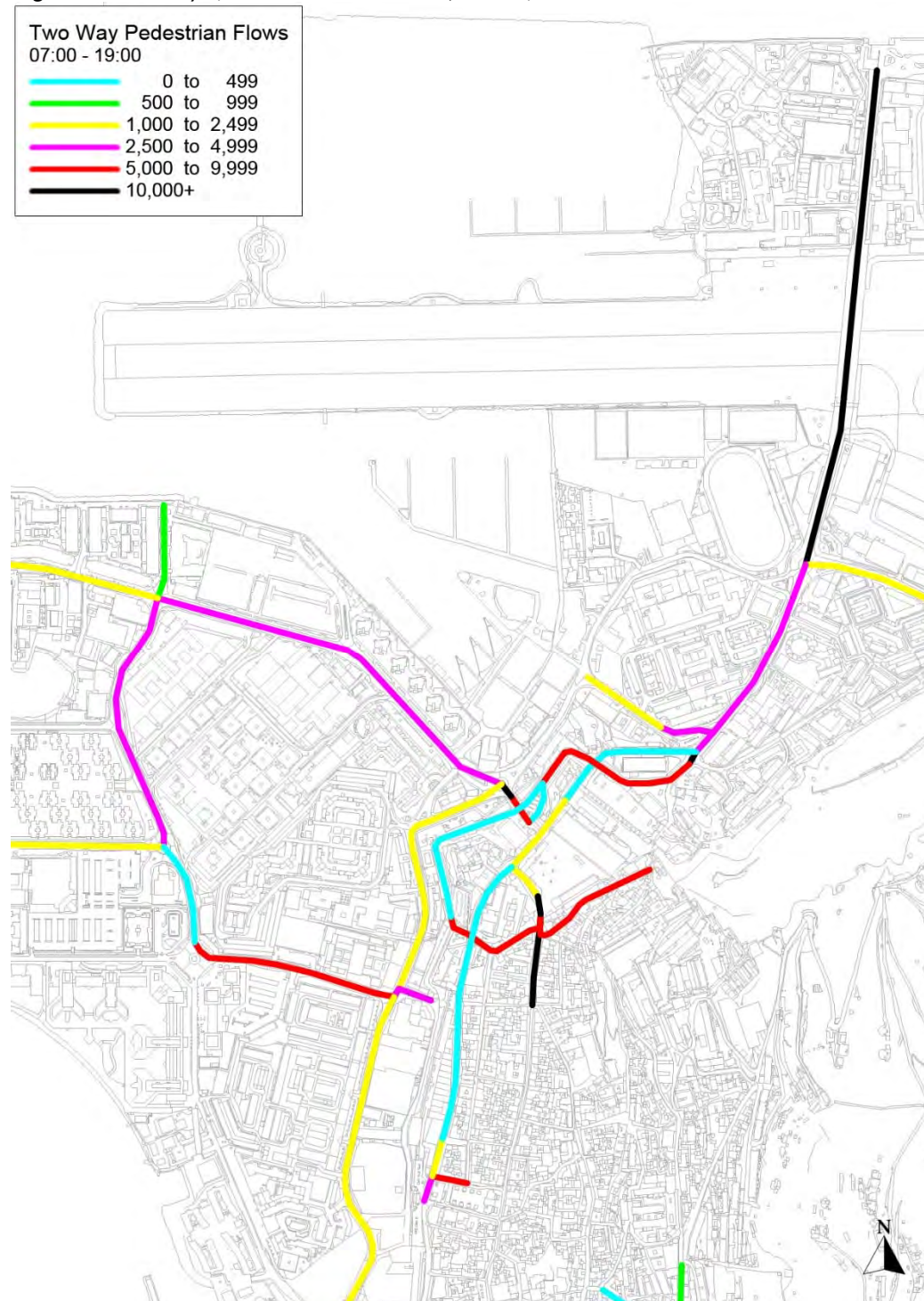


Figure 6.1 – Survey of Pedestrian Movement (Central & South Town Centre)



(Source: Mott MacDonald)

Figure 6.2 – Survey of Pedestrian Movement (North of Town Centre – around Market Place and Frontier)



(Source: Mott MacDonald)

## 6.4 Proposed Approach – Walking

In considering pedestrian provision in Gibraltar, the key aims include ensuring that the pedestrian environment is friendly, safe and accessible to use, that more people are able to walk (and more frequently), and all pedestrians are able to move about with ease and confidence. In order to maximise the attractiveness of walking to users, it is important to improve the overall quality of pedestrian routes at key destinations identified as the town centre, employment areas, bus interchange points and district centres. Therefore, a 'network' of high quality pedestrian routes (as part of a Pedestrian Route Network), should be developed and implemented which will offer high quality facilities for pedestrians. These should include routes to schools, the college, places of employment, retail centres, Government offices and public transport facilities.

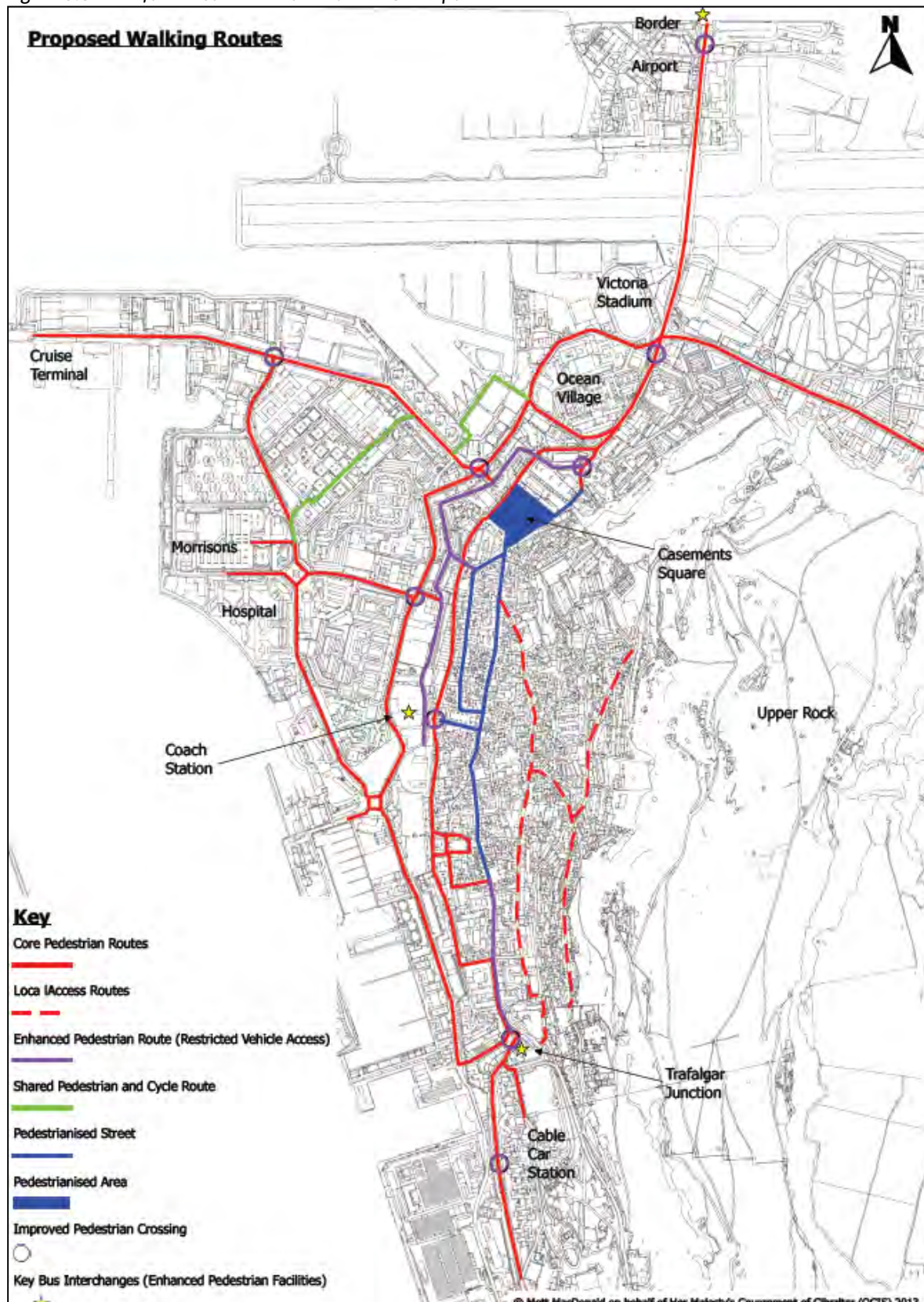
Analysis of the main pedestrian movements as illustrated in Figure 6.3 identified that the primary focus of pedestrian activity remains on the following key routes:

- Winston Churchill Avenue (from Frontier/Airport);
- Waterport Road (from Cruise Terminal & Coach Park); and
- Main Street (to Grand Parade/Cable Car).

Based on extensive survey work, information on pedestrian flows has been used to form the development of a pedestrian priority route concept that identifies priority routes where enhanced infrastructure and facilities should be provided to improve accessibility, safety and journey quality. It is important to develop high quality pedestrian routes that link into public transport interchange points and new developments, together with improved accessibility to town centre's pedestrian priority zone (Main Street and adjoining streets) and providing shaded paths by means of planting deciduous trees.



Figure 6.3 – Draft Pedestrian Route Network Concept



(Source: Mott Macdonald)

## 6.4.1 Hierarchy of Pedestrian Routes

It is recommended that the network concept be further developed into a hierarchy of route types that is based on functionality and scale of use. The network is one where routes are most used by pedestrians, and because of this they are targeted for quality improvements. In identifying particular routes and standards for the different route types, the following issues would need to be taken into consideration:

- Pedestrian volume;
- Current usage and proposed usage;
- Accident and other risk assessment results;
- Age and type of footway (e.g. old flagged footways may require more frequent inspection than newly laid); and
- Character and traffic use of adjoining carriageway.

Options for a draft STTP Pedestrian Route Network Classification are set out below in Table 6.2. An important principle of developing the Route Network concept would be improving links with existing municipality initiatives already in place including local road safety work to ensure consistency of approach across the city. The Pedestrian Network concept is formed of pedestrian routes which act as links joining people with key destinations. This network will feature quality elements such as dropped kerbs, priority crossings, lack of street clutter and good signage.

Table 6.2 – Draft Pedestrian Network Classification

Category	Category Name	Description
1	Prestige Walking Zones	Town centre/Frontier high quality pedestrian routes with high footfall and serving prime employment, shopping and public transport centres.
2	Primary Walking Routes	Pedestrian routes with high footfall and serving primary employment, schools, shopping, public transport hubs.
3	Secondary Walking Routes	Medium usage routes through local areas feeding into Primary Routes, Neighbourhood Centres etc.
4	Link Footways	Linking higher category footways through urban areas and busy rural footways.
5	Local Access Footways	Footways associated with low usage, short estate roads to the main routes and cul-de-sacs.

(Source: Mott Macdonald)

There are numerous junctions within the town centre which can be improved for the benefit of pedestrians and cyclists. These include the main approaches to the town centre which currently experience heavy volumes of vehicular traffic and so create problems of accessibility and safe crossing points. Key pedestrian routes that require consideration for improvement include the following: -

- **Frontier to Town Centre:** including wider footways, shelters at the barriers and advance information on flight arrivals/departures. This would need to be considered when the final arrangements are known regarding the GAFAR and the access routes to pedestrians and cyclists are confirmed;
- **Winston Churchill Avenue/ Corral Road:** improved crossing facilities at Sun Dial Roundabout (Bayside Road) and new pedestrian crossing to replace footbridge. Alternatively, improvements to the existing footbridge in order to upgrade its usability and facilitate its use can be studied and implemented. On Corral Road, vehicle access restrictions can create 'shared space' and better pedestrian amenity for access into Market Place and onwards into Casemates Square and Main Street;
- **Developing school walking initiatives** including safer routes to school, pedestrian and road safety training on the basis that the average length of education trips is 1.9km. This distance highlights the potential to encourage walking/cycling to school.

### 6.4.2 Pedestrianisation of Market Place

Figure 6.4 shows the conflict which exists between pedestrians and vehicles at Market Place. Figure 6.5 illustrates an artistic impression of how Market Place could appear in the future with the introduction of a pedestrianised area. This scheme would provide an attractive 'gateway' to the town centre and Casemates Square for people arriving from either the Frontier or from the cruise terminal. Attractive facilities could be provided for pedestrians/cyclists and traffic management measures introduced such as retractable bollards to restrict traffic on Fish Market Road and Corral Road. This would enable access to be provided to emergency vehicles if required and servicing vehicles when required. Additional taxi parking facilities could be provided in both Fish Market Road and Corral Road as part of the scheme.



Figure 6.4 – Pedestrian and vehicle conflict in Market Place



Figure 6.5 – Proposed New Pedestrianised Market Place with Improved Facilities for Pedestrians and Cyclists





### 6.4.3 Pedestrian Route Enhancements

Consideration should also be given to the enhancement of various pedestrian routes that can be established throughout Gibraltar. In support of this network approach, it is recommended that design guide principles for walking are developed and adopted which will contain a set of minimum standards for pedestrian routes (covering signing, width and surfacing, safety and security). It is also recommended that such guidelines consider the inclusion of pedestrian audits to help assess walking conditions along a route and identify the problems and locations that require the most attention, as well as the measures that seem most feasible and beneficial for implementation. It is also recommended that there is a continued assessment of pedestrian routes on key routes to/from the town centre and between district centres to identify programmes of improvement, taking into account the needs of different groups of users. This includes commuters, shoppers, leisure walkers, disabled people and children, which will help develop a programme of improvement measures according to user need.

Examples of the types of enhancements that can be easily introduced to improve accessibility are shown in Figures 6.6, 6.7 and 6.8.

*Figure 6.6 – Prince Edward's Road as Existing*



*(Source: H.M. Government of Gibraltar)*

Figure 6.7 – Example Pedestrian Route Improvement – Prince Edward's Road



(Source: H.M. Government of Gibraltar)

During the consultation work on the STTPP, comments were received on the need to improve crossing facilities on key pedestrian routes. In response to this, a number of new pedestrian crossing schemes have recently been introduced including a new pelican crossing on Ragged Staff to provide a safe crossing point for pedestrians wishing to access Grand Parade and the Cable Car from the town centre. Similarly, a new pilot pedestrian crossing has also been installed on Trafalgar Road to improve facilities for pedestrians at this busy junction. These have been further explained in a separate document – 'STTPP Implementation Concepts'.

It is also possible to make use of the city walls to provide good connections throughout Gibraltar for both pedestrians and cyclists. Construction at Wellington Front, to implement improvements to the City Walls, is now completed. The beautification project has included:

- Re-construction of the walls; and
- Establishment of new pedestrian routes as part of a larger scheme to implement a pedestrian and cycle route along the historical City Walls. Further information can be found in the separate document – 'STTPP Implementation Concepts'.

Figure 6.8 – Current Wellington Front Project –Potential for greater use of city walls



(Source: H.M. Government of Gibraltar)

## 6.5 Proposed Timeframes for Initiatives - Walking

A summary of the key actions and interventions in the short, medium and long term are presented in Table 6.3 below.

Table 6.3 – Recommended STTPP Pedestrian Improvements

Short Term	Medium Term	Longer Term
<ul style="list-style-type: none"> <li>▪ Consider enhanced pedestrian facilities at the Frontier and across the runway.</li> <li>▪ Governor's Street pedestrianisation project is underway. This will include: <ul style="list-style-type: none"> <li>○ Re-allocation of motor vehicles to Governor's Parade; and</li> <li>○ Pavement extension along Governor's Street.</li> </ul> </li> <li>▪ Continued assessment of pedestrian routes.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Consider extension and enhancement of central pedestrian priority zone. including: <ul style="list-style-type: none"> <li>○ Better signage including local area maps highlighting key destinations, routes and distances etc.</li> </ul> </li> <li>▪ Consider pavement improvements in Governors Lane.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Consider pedestrian access route under the runway such as a traveller.</li> <li>▪ Further extensions to the pedestrian priority zone.</li> <li>▪ Limit and control the traffic through Governors Street.</li> <li>▪ Consider extension and enhancement of central pedestrian priority zone including: <ul style="list-style-type: none"> <li>○ Pedestrianisation of Market Place and restriction on through-traffic (except in emergencies).</li> </ul> </li> <li>▪ Consider Keightley Way and Dudley Ward Pedestrian Route Enhancements (new footway through tunnel to improve safety (to be inserted into Pedestrian schemes).</li> <li>▪ Consider development and adoption of prioritised pedestrian route network including: <ul style="list-style-type: none"> <li>○ Shared space routes i.e. Corral Road, Fish Market Road, Reclamation Road and Main Street (South).</li> </ul> </li> <li>▪ Investigate and develop better pedestrian and cycle facilities utilising the city walls.</li> <li>▪ Consider Winston Churchill Avenue Pedestrian Bridge Enhancements.</li> <li>▪ Consider Rosia Road foot bridge.</li> </ul>

(Source: Mott Macdonald)



## 6.6 Promoting Cycling in Gibraltar

Encouraging more people to cycle is increasingly being seen as an essential part of any plan to address congestion problems, improve air quality, promote physical activity and improve accessibility. Cycling is often convenient and practical for many journeys and encouraging more people to take up cycling can help deliver a broad range of transport outcomes and wider environment and health goals. Cycling is a sustainable form of transport, with considerable health benefits for users. It is the most efficient form of transport and unlike car use it has no impact on the environment, consumes virtually no energy, is inexpensive for the user and does not impose external costs on other road users. Cycling has many benefits both for those who cycle and other road users including:

- Reducing traffic congestion with car drivers switching to cycling especially for short distance trips;
- No atmospheric pollution and low noise levels;
- Promotes active lifestyles, improving people's health and fitness;
- Time efficient, especially when roads are congested;
- Inexpensive to purchase, operate and maintain compared to the private car;
- Parking is easier and requires less space; and
- Flexible and convenient.

## 6.7 Summary of Key Issues – Cycling

A summary of the key issues relating to cycling includes the following:

### ***Safety issues for cyclists***

Cycling is not currently seen as a viable means of transport in Gibraltar, primarily due to concerns about safety due to the volume of motorised traffic and also the topography of the peninsular means that parts of Gibraltar are relatively inaccessible by most. There is limited road and footway capacity to introduce segregated cycle lanes to allay safety concerns and whilst there are cycle parking facilities provided, these are not secure/covered nor provided at all major destinations. Consultation with local residents revealed that 25% of respondents would cycle more if there were more and better cycle facilities (including cycle lanes). A similar proportion also wish to see better conditions of roads to make it easier to cycle.

### ***Lack of dedicated cycle facilities (including cycle parking)***

There are few dedicated cycle lanes or other priority measures to improve safety for cyclists (such as advanced cycle stop lines and toucan crossings) in Gibraltar, with the exception of the cycle lane that extends across the runway on the approach to Sun Dial Roundabout. The construction of off-road routes will remove the potential of cycle/vehicle conflicts especially for new cyclists and children.

### ***Cycle infrastructure can enhance accessibility***

Accessibility can be improved by better cycling links being provided to work, school, healthcare, retail and leisure trips. Integration between cycling/buses should be addressed with new links and better cycle parking at interchanges, plus cycle carrying facilities on buses.

***Limited provision for cyclists in planning requirements of new developments***

Cycling/walking will be addressed with better cycle parking throughout the city. Careful planning of new mixed-use development sites and linking these into the cycle route network will help reduce the need to travel and help promote travel by sustainable modes.

***Cycling can enhance quality of life opportunities and also the local economy***

Quality of life will be increased by improvements to health levels as a result of increased physical activity. Better cycling access to new developments will give residents or employees better travel options from the outset allowing them realistic alternatives to the car. The local economy will also be enhanced by providing cycle routes and cycle parking at key destinations such as employment sites, retail sites and leisure sites, which also reduces demand for valuable space, particularly car parking requirements.

## **6.8 Proposed Measures to Promote Cycling**

The Government is keen to promote and encourage more cycling activity as part of its integrated transport planning and has begun to develop a cycle route network as part of the wider STTPP process. However, a comprehensive Cycle Strategy has yet to be developed for the City. A number of recommended aims and objectives are proposed to ensure cycling is a viable form of transport capable of contributing significantly to the development of sustainable transport solutions for the city. Key aims of the strategy are to increase the absolute number of cycle trips and increase the modal share of cycling.

A number of key objectives are recommended:

- Integrate policies that encourage cycling into all appropriate Gibraltar-wide strategies and plans;
- Improve the connectivity and ease of use of cycling including better integration with other modes of travel – through provision of cycle parking at bus stops and interchange hubs;
- Develop and implement cycle schemes as an integral part of area and corridor strategies and where possible reallocate road space to cyclists;
- Provide or enhance cycle facilities when undertaking carriageway construction and maintenance;
- Provide for increased cycle use within all local highway and traffic management schemes, addressing hazards confronting cyclists when designing safety schemes to improve the actual and perceived safety and security of cycling;
- Implement a comprehensive programme of cycle parking facilities;
- Ensure high-quality maintenance of cycle routes, cycle parking, signing and other infrastructure; and

- Promote and publicise cycling and cycle schemes across the city, raising awareness amongst potential cyclists and other road users.

All these objectives are important and complementary. Improving facilities and conditions for travel by cycle are not, on their own, likely to generate significant numbers of new cycle trips. Promotional activities are likely to have a significant influence on actual levels of cycle use, however to successfully encourage greater uptake of this mode requires good quality facilities to be introduced as a starting point.

### **6.8.1 Development of Core Cycle Network**

In terms of the strategic aims to encourage a greater emphasis on cycling, it is important to consider how best to improve the attractiveness and convenience of cycling as a realistic alternative to the private car for all types of trips. This requires the development and implementation of cycle schemes that create dedicated routes for cyclists, including reallocation of road space to cyclists, as well as shared space opportunities. It is important to address the hazards confronting cyclists when designing safety schemes to improve the actual and perceived safety and security of cycling.

Recognising the current low level of cycling activity in Gibraltar, the emphasis is on achieving a gradual increase in the share of journeys to work and school on bicycle. It is important to quickly demonstrate the benefits of cycling to improve public acceptance and highlight that safe, convenient routes and facilities are being introduced. This requires the incremental delivery of a series of cycle routes, building on a 'pilot' phase of investment to clearly demonstrate the advantages of the strategy and approach.

In the short-term, the aim is to establish a core cycle route extending from the Frontier through the town centre to the southern end of town via the Saluting Battery, Rosia and Camp Bay to Europa Point. This will form the 'spine' of the cycle route network, with key sections established as 'shared space' routes such as Corral Road, Market Place and Fish Market Road. This will be delivered through reducing the level of vehicular traffic and speeds on these routes and reallocation of road space to create a more attractive environment for cyclists. Other routes have been identified that seek to link key parts of Gibraltar including potential waterfront development opportunities. The outline commuter cycle network is shown overleaf in Figure 6.9.



Figure 6.9: Proposed Commuter Cycle Route Network



(Source: Mott MacDonald)

## 6.8.2 Core Design Principles for Cycle Infrastructure

It is recommended that the following core design principles are considered more fully in relation to the ongoing development and implementation of the cycle route network (the list also applies to the pedestrian route network concept too):

- **Convenience:** the network should serve all the main destinations, and new facilities should offer an advantage in terms of directness and/or reduced delay compared with existing trip patterns;
- **Coherence:** cycling networks should link trip origins and key destinations, including public transport access points, with routes being continuous with an identified cycle network character. The needs of people with various types and degrees of disability should also be taken into account through consultation and design;
- **Safety:** not only must cycle infrastructure be safe, but it should also be perceived to be safe by potential users. It is important to minimise danger for cyclists, pedestrians and other users, and provide a feeling of security. Traffic volumes and speeds should be reduced where possible to create safer conditions for cycling and walking;
- **Comfort:** the implementation of cycle infrastructure should aim to meet specific design standards for width, gradient, road surface quality (where practically possible given Gibraltar's restrictive topography) and providing access for all types of user. It is important to provide a comfortable flow of cycle traffic and facilities that are easy to use; and
- **Attractiveness:** improving the aesthetics, reducing levels of noise and integrating facilities with surrounding areas is important to create an attractive environment. Complementing and enhancing the environment and provide attractive options for cyclists and encourage greater use of cycle routes and facilities.

These design principles are useful when considering design for the differing priorities assigned to various aspects of a route (for example, perceived safety versus directness) for users with different requirements resulting from their journey purpose, level of experience or ability. The design of the most appropriate infrastructure needs to take account of the type(s) of cyclist expected to use it.

Improving the actual and perceived safety and security of cycling will encourage more cycling activity, as well as improving the level of integration of cycling with other modes of travel. Similarly, increasing the opportunities to cycle by provision of infrastructure and better promotion of cycling and improving the connectivity and ease of use of the city's cycle network will encourage more people to cycle in the future.

### 6.8.3 Cycle Parking

In addition, the absence of convenient, secure cycle parking facilities deters potential cyclists from making trips and so a comprehensive programme of cycle parking facilities is to be provided at key destinations across Gibraltar, including interchange points with bus services and other key destinations such as Market Place, Main Street (South), and the Hospital among others. The revitalisation of the bicycle scheme with new cycle parking facilities will help promote cycling and provide those without access to a bicycle the opportunity to take up cycling.

#### PILOT SCHEME: New Cycle Parking Facilities

##### Summary of Key Issues

Whilst the numbers of those people cycling in Gibraltar is relatively low, there are significant numbers of cyclists coming into the town centre and to Europort from across the Border. The provision of convenient, safe and secure cycle parking facilities is important as without this, it will be difficult to encourage more cycling activity, even with investment in new cycle lanes and other infrastructure. Problems experienced with the bicycle scheme have meant that local residents, employees and visitors are not able to take advantage of the bikes and parking facilities provided.

##### Summary of Key Recommendations

In addition to re-vamping the bicycle scheme with new bicycle and parking facilities it is also recommended to introduce other new secure cycle parking facilities at a number of key locations in Gibraltar including Europort Road, Waterport Road, Fish Market Road and at Trafalgar Junction.

##### Summary of Actions

- The new Redibike scheme is currently being developed for introduction over the coming months and promotion of this to the wider public (including tourists); and
- Assessment and implementation of suitable locations for the introduction of new secure, covered cycle parking.

## 6.9 Proposed Timeframes for Initiatives - Cycling

A summary of the key actions and interventions in the short, medium and long term are presented in Table 6.4 below.

Table 6.4: Recommended STTPP Cycling Measures

Short Term	Medium Term	Longer Term
<ul style="list-style-type: none"> <li>▪ Re-launch of Gibraltar Bicycle Scheme.</li> <li>▪ Development of new secure cycle parking including the following locations: <ul style="list-style-type: none"> <li>○ new cycle parking facilities provided at key locations such as Europort Road, Waterport Road, Fish Market Lane and Trafalgar junction.</li> </ul> </li> <li>▪ Continue to investigate the use of Walls and Tunnels for cycle routes.</li> <li>▪ Development of cycle training programmes for schools, workplaces and adults.</li> <li>▪ The introduction of Advanced Cycle Stops.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Delivery of new cycle routes including on and off-road routes.</li> <li>▪ Implementation of cycle training initiatives in schools (as part of school travel plans).</li> <li>▪ Implementation of cycle training in workplaces (as part of employer travel plans).</li> <li>▪ Implementation of adult cycle training programme.</li> <li>▪ Engage with Town Planning to review existing planning conditions to include: cycle parking, shower facilities etc.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Continued implementation of cycle routes.</li> <li>▪ Continued roll-out of cycle training initiatives: <ul style="list-style-type: none"> <li>○ in schools (as part of school travel plans);</li> <li>○ in businesses as part of workplace travel plans; and</li> <li>○ adult cycle training.</li> </ul> </li> </ul>

## 6.10 Developing Mobility Management Initiatives

Mobility Management aims to increase sustainable travel by influencing individual travel behaviour and making alternatives to car use more attractive. Initiatives include those that encourage people to reduce their travel where possible and to use more sustainable modes of travel, thereby helping to ease congestion and the harmful impacts this has on the environment. Measures can also help to improve people's health by encouraging more active travel and enhance social inclusion such as through car sharing networks.

There are a variety of different 'Mobility Management' measures including sustainable travel information, promotional campaigns, development of car clubs and car sharing initiatives, as well as travel planning. Travel plans are a particularly useful tool for setting out options for changing travel behaviour by exploring ways to minimise travel and become less dependent on car use, particularly in relation to businesses and schools.

Evidence from other mobility management projects successfully implemented in the UK has revealed that schemes can help improve travel conditions and deliver sustainability benefits including:

- Reducing the number of car driver trips per person;
- Increasing the proportion of bus trips; and
- Increasing the proportion of walking and cycling trips.

In order for these types of measures to have the greatest impact, it is important that the benefits are 'locked in' with other sustainable transport initiatives, such as improved pedestrian routes, cycling facilities, bus priority measures and parking controls.

## **6.11 Summary of Key Issues**

### ***A Car Culture in Gibraltar***

Gibraltar has one of the highest levels of vehicle ownership in Europe with a ratio of approximately 1 vehicle for each person living in the Peninsular, with a high proportion of multiple car owners.

### ***Poor Perception of Alternatives to the Car***

From the consultation feedback with stakeholders the perception of alternatives to the car is relatively poor, including bus services (in terms of reliability and frequency of service), and cycling which is considered by most people to be dangerous due to the heavy levels of traffic and vehicle speeds on particular roads (Devil's Tower Road, Waterport Road and Queensway among others).

### ***Inclusion & Accessibility***

Mobility Management initiatives must adopt an inclusive approach to be successful, as whilst there is a heavy emphasis on encouraging modal shift, it is important to focus on improving the dissemination, availability and accessibility of travel information to the public.

### ***Importance of an Integrated Approach***

Success in changing travel behaviour can only be achieved through integration of initiatives with transport infrastructure improvements, as well as integration with different stakeholders to enhance information and best practice sharing. This includes local businesses and companies, schools and local communities in general.

### ***Resources to Develop Mobility Management Plan (MMP) Initiatives***

It is important to ensure that adequate resources are devoted to the promotion of travel plans within businesses and schools, to ensure that employees and children understand the need to change travel behaviour and the types of initiatives that are available to achieve this.

### ***Marketing and Promotion of Sustainable Travel Options***

An important part of the STTPP strategy is to increase the use of cycling, walking, smarter travel and public transport use as an alternative to single occupancy car use. It is recommended that promotional/marketing activities are strengthened as part of the STTPP programme so that

people's opportunities are genuinely realised in terms of understanding and awareness of available sustainable travel options.

Central to this is encouraging active travel and developing high-quality cycling and walking networks, as well as providing information and travel advice for users of all modes of transport so that they can make informed travel choices. Such Mobility Management programmes contribute to reducing congestion and improving reliability on the network (in that walking and cycling times can often be more predictable than car journey times during peak travel periods) and to reducing carbon emissions and improved air quality.

More specifically, it is recommended that the following be developed more fully:

- Consideration of a marketing programme including a range of travel behaviour change initiatives to improve the provision of travel planning and travel information throughout Gibraltar;
- Development of a Mobility Management (Travel Behaviour Change) Campaign working with other agencies (including businesses and schools) to influence more people to travel by safer sustainable travel. Examples of typical measures include:
  - encouraging organisations to adopt facilities for homeworking, teleworking and teleconferencing to minimise unnecessary commuting;
  - encouraging more organisations to introduce flexible working hours, where they don't have them already, so enabling employees to 'adapt' to quieter periods on the road network; and
  - facilitating and encouraging more people to car share and to join car clubs to reduce the number of single occupant car journeys.

### ***Promotion of 'Novel' Vehicles (including Mobility Scooters)***

It is important to ensure that mobility impaired people have a variety of travel options, including transport provision within the town centre. Further consideration should be paid to the promotion and provision for mobility scooters within the town centre including the licensing requirements for these. In considering such a scheme, it is important to consider the impact on other users, such as pedestrians within the main pedestrianised area of the town centre.

Consideration should be given to other forms of novel vehicles which could include:

- Electric and push scooters;
- Electric hover boards;
- Electric skateboards; and
- Other alternative 'mobile' electric vehicles.

## **6.12 Proposed Timeframes for Initiatives – Mobility Management Measures**

A summary of the key actions and interventions in the short, medium and long term are presented in Table 6.5 below.



Table 6.5: Recommended Mobility Management Measures

Short Term	Medium Term	Longer Term
<ul style="list-style-type: none"> <li>▪ Use existing resources to undertake Pilot Mobility Management Plans (MMP) with engaged workplaces.</li> <li>▪ Appoint Mobility Management officers with responsibility of developing MMPs or both Workplaces and Schools.</li> <li>▪ Mobility Management officer to facilitate MMP with Secondary Schools.</li> <li>▪ Facilitate engagement with Health &amp; Transport Sectors.</li> <li>▪ Determine and establish a Mobility Management accreditation scheme designed to recognise and encourage workplaces / schools achievements toward sustainable travel.</li> <li>▪ Assign budget and resources to deliver cycle training at schools.</li> <li>▪ Establish mode-share monitoring procedures to use to evaluate impacts of programme.</li> <li>▪ Investigate options to commit developers to develop MMP and implement measures through the planning process.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Develop MMP best practice guidelines (with Gibraltar examples) and update regularly.</li> <li>▪ Develop MMPs for: <ul style="list-style-type: none"> <li>○ all organisations within Public Administration &amp; Defence Sector;</li> <li>○ Primary schools, nurseries and colleges;</li> <li>○ Health Sector including hospital and GP surgeries;</li> <li>○ Transport operators;</li> <li>○ Hotels, restaurants and tourism sector; and</li> <li>○ large scale businesses (employers over 50).</li> </ul> </li> <li>▪ Organise and host Workplace Mobility Management Forum.</li> <li>▪ Undertake means-tested grant application process for small-scale transport measures linked to MMP.</li> <li>▪ Undertake mode-share monitoring on annual basis.</li> <li>▪ Appoint Mobility Management Assistant with responsibility of supporting MMPs for Workplaces &amp; Schools.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Undertake MMP with remaining employers and sectors including: <ul style="list-style-type: none"> <li>○ Manufacturing &amp; Construction sectors;</li> <li>○ Wholesale and retail trade sectors; and</li> <li>○ Financial sector.</li> </ul> </li> <li>▪ Develop carbon emissions reporting for work-related travel with engaged organisations.</li> <li>▪ Update MMPs with inclusion of reducing carbon emissions.</li> <li>▪ Facilitate mode-share and carbon emissions monitoring on annual basis.</li> <li>▪ Provide training and knowledge exchange programme for employers to update and implement their individual MMPs.</li> </ul>



## 7 Environmental Enhancements

### 7.1 Introduction

It is critical that the STTPP is fully integrated with the Gibraltar's Air Quality Action Plan (AQAP, July 2010) which sets out how the Government will meet national and EC air quality standards, particularly relating to PM<sub>10</sub> and NO<sub>2</sub> levels. A number of key sustainable transport initiatives have been identified in the AQAP that seek to directly or indirectly help reduce emissions of PM<sub>10</sub> and NO<sub>2</sub>. These measures form part of the Government's integrated approach to managing traffic, transport and parking in Gibraltar.

### 7.2 Summary of Key Issues

#### ***Promotion of Walking and Cycling Will Contribute Significantly to Air Quality Improvements***

Air quality will be improved by removing motorised trips from the network which will help the remaining traffic move more freely thus producing less emissions.

#### ***Environmental Capacity Issues***

Transport is a major contributor to pollutants affecting the air quality and the Government is currently seeking to ensure that it meets EU air quality standards through implementation of this Plan. Gibraltar's current AQAP highlights that emissions from traffic contribute to just under 8.5% of Gibraltar's overall PM<sub>10</sub> level, half of which is estimated to come from scooters and mopeds. A significant proportion being derived from 2-stroke engines. Road dust re-suspension accounts for approximately 8% of total PM<sub>10</sub> levels recorded, with an exceedance area having been identified in the area around Rosia Road.

#### ***Increased Requirement to Use Renewable Resources***

Legislative requirements to address local air quality, and the longer-term depletion of natural resources, will require the need for more travel by non-motorised means and alternative fuel or electric vehicles.

#### ***Climate Change Issues***

Climate change is a global issue that will impact every aspect of life and it is now widely accepted that carbon dioxide (CO<sub>2</sub>) emissions are a contributor to the causes of climate change, of which road transport is a key source throughout Gibraltar. The UK alone accounts for 28% of global greenhouse gases of which 21% is caused by the transport sector. For transport, the challenges related to climate change lie in addressing the cause – contributed to in no small part by our dependence on the private car – and planning for and dealing with the effects of climate change on our transport networks.

### *Transport and Noise*

Noise is a common irritant arising from transport, and studies have shown it to have negative direct and indirect effects on health, well-being, quality of life and wildlife. There is scope for transport's noise emissions to be reduced, by cutting the number of cars on the road, low-noise road surfacing, noise barriers, and many other measures.

## **7.3 Proposed Approach – Environmental Measures**

A key objective of the STTPP is to reduce the environmental impacts from vehicles and supporting transport infrastructure, in terms of air pollution, climate change as well as noise and the health problems that these issues bring. It is important to encourage an approach to land use planning which reduces the need to travel and ensure schemes are developed in a manner that maximises environmental benefits and minimises environmental impacts. It is recommended that a greater priority is afforded to taking action to make more efficient use of energy, which can be achieved through educating drivers how to be more fuel-efficient and encouraging the use of less polluting vehicles. Many of the STTPP policies seek to make Gibraltar less car-dependent and the recommended approach seeks to combine the provision of better sustainable travel alternatives with taking complementary planning and enforcement action.

#### **Working to improve the efficiency of all vehicles and reduce their carbon emissions:**

- Investing in low carbon vehicles and develop low carbon transport infrastructure;
- Incentivise low carbon vehicle use (e.g. preferential parking for low carbon vehicles particular in the town centre); and
- Promoting eco-driving initiatives (for example, the ECO-stars scheme).

#### **To provide information and travel advice for the users of all modes of transport, so that they can make informed travel choices:**

- Tackling barriers to the use of public transport and encouraging a step-change quality of bus travel;
- Improved marketing and promotion through targeted travel behavioural change campaigns.
- Information, travel advice and personalised travel planning covering the whole journey experience; and
- Travel planning schemes with employers and service organisations.

#### **To support the generation of energy from renewable sources and use energy in an effective way:**

- Consider how alternative energy sources (such as solar power) can be incorporated into the design of bus stops and interchange locations, road signs, bus shelters etc. The Government is currently implementing a programme of bus shelter improvements including the introduction of solar powered lighting which has now been completed.

## 7.4 Vehicles and Fuels

The aim of this element is to reverse the growth in carbon emissions from transport, including working to improve the efficiency of all vehicles and reduce their carbon emissions and to improve air quality especially in the AQMA exceedance area. There are different types of measures that are important here, such as investment in low carbon vehicles (e.g. through new fleet replacement of bus company vehicles as well as Government vehicle fleet), investment in low carbon infrastructure and promoting the more efficient use of vehicles to other users (such as the business/commercial sector). Promoting the more efficient use of vehicles has been demonstrated to be effective in improving fuel efficiency by between 5-10% following the introduction of a variety of eco-driving approaches.

## 7.5 Other Environmental Improvements

A variety of different initiatives are included within the STTPP which contribute towards reducing the impacts of air and noise pollution, many of which are seeking to establish a shift in travel mode towards greener, more sustainable travel options. More specifically, the following measures will be considered:

- Working in partnership with the bus operators to bring about a 'step change' in the quality of services including the regular introduction of modern, low emission vehicles;
- Measures to improve air quality in the urban town centre through the introduction of on-street parking controls with priority for electronic/ low emission vehicles;
- Development of non-motorised travel such as walking and cycling including investment in improvements on priority pedestrian and cycle routes linking residential districts and facilities with the town centre to reduce the level of unnecessary car use. Our proposals include greater priority for pedestrians and cyclists on key 'gateways' into the town centre and also restrictions on through-traffic to create a safer, more attractive environment to walk and cycle;
- Introduction of new traffic management measures to improve the flow of traffic and reduce the level of congestion 'hotspots', including expanding the capacity of the network where possible. This includes improving the flow of traffic at known congestion points;
- Developing sustainable travel plans with local businesses, schools and communities to enable people to understand how their own travel patterns can contribute towards achieving a more sustainable, cleaner and attractive environment through promoting sustainable travel options more fully such as car clubs and car sharing (as part of an overall Mobility Management strategy);
- Development of a sustainable freight option which seeks to reduce the impact of commercial and delivery vehicles on the town centre, through establishing a freight consolidation centre on the outskirts of the town centre and use of low emission vehicles to deliver goods/services to the commercial/retail centre;

- Improving public spaces through better maintenance of physical and cultural assets, such as footpaths, cycle routes, and public transport infrastructure;
- Reducing the impact of new developments on the existing transport infrastructure, by improving transport links and public transport around areas with significant amounts of new development; and
- Reducing the adverse impacts of transport schemes, such as noise levels, through considerate planning and design.

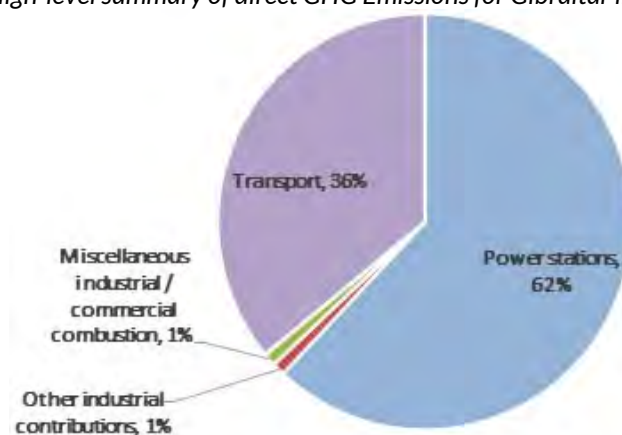
### 7.5.1 Greenhouse Gas emissions (GHG)

Greenhouse gas emissions from transport are a key contributor to global climate change accounting for 14% of global annual GHG emissions.<sup>1</sup> Transport makes up a significant proportion (36%) of Gibraltar's total direct GHG emissions (Figure 7.1), significantly greater than the EU average of around 25%. Within the transport sector, domestic shipping results in the greatest emissions at 14% (this figure excludes international shipping, which has a significantly greater carbon footprint), followed by Road Transport and Aviation at 11% each.

Compared to aggregate EU figures, Gibraltar emits a greater proportion of GHGs from transport. This however partially reflects the fact that Gibraltar emits much lower amounts of GHG's from other sources such as agriculture, and direct emissions from industrial processes and manufacturing. While emissions from other sectors are generally reducing across the EU, emissions from transport are increasing,<sup>2</sup> despite a progressive tightening of vehicle emissions standards. In Gibraltar, GHG emissions broadly follow this trend. Emissions from road transport increased 20% from 1990-2011, maritime emissions increased by 50%, although aviation emissions decreased by 20%.

Public transport emissions are often lower than other travel modes due to greater passenger numbers per vehicle, particularly for larger vehicles such as buses. Taxis, though, have a similar carbon footprint per mile to private vehicles. Public transport can form an important part of linked journeys using more sustainable travel modes such as walking.

Figure 7.1: High-level summary of direct GHG Emissions for Gibraltar in 2011, by source



(Source: Government of Gibraltar / UK National Atmospheric Emissions Inventory)

<sup>1</sup> IPCC (2014) AR5 WGIII Mitigation of Climate Change

<sup>2</sup> [http://ec.europa.eu/clima/policies/transport/index\\_en.htm](http://ec.europa.eu/clima/policies/transport/index_en.htm)



The STTPP contains a number of planning measures which support climate change mitigation. The Government of Gibraltar's Environmental Action and Management Plan includes the goal to *'Implement at least one new permanent measure each year which contributes to modal transfer from the private car to an environmentally sound means of transport.'* There are a number of transport sector specific measures that are recommended within the STTPP for implementation as part of a comprehensive and integrated package of climate change adaptation actions. These include the following:

#### Road Transport Measures

Climate Change Action	Responsibility
Integration of green infrastructure measures into new and existing road infrastructure, including: <ul style="list-style-type: none"> <li>• Green spaces, planting, shading and buffering; and</li> <li>• The use of building materials with a low thermal mass and green walls (climbing plants on trellises or pergolas).</li> </ul>	STTPP Implementation and Monitoring Officer/ Town Planner/ Energy Officer.
Financial climate change risk management tools, such as indemnity insurance, can cap losses against impacts, damage and spreading out the cost of damage over time. The implementation of climate change adaptation may also provide the opportunity to renegotiate lower insurance premiums.	STTPP Implementation and Monitoring Officer.
Proposed (STTPP) traffic management improvements will also improve accessibility and emergency access, building climate resilience.	STTPP Implementation and Monitoring Officer.
Review and update of road operation, design and maintenance guidance to support building climate resilience.	STTPP Implementation and Monitoring Officer.
Measures (STTPP) to improve accessibility will improve climate resilience and emergency access.	STTPP Implementation and Monitoring Officer.
Consider the siting of parking (STTPP parking proposal) in areas with low vulnerability to climate risks and areas that are unlikely to impede emergency access.	STTPP Implementation and Monitoring Officer.
The adoption of best practice design for highways, cycle-ways and pedestrian facilities that consider long term climate resilience, such as: <ul style="list-style-type: none"> <li>• Shading of footpaths and cycle routes;</li> <li>• Integration with green infrastructure (green spaces planting and shading);</li> <li>• Sustainable watering and general maintenance of landscape features;</li> <li>• Regular unblocking of drains and ensuring the drainage systems are properly connected; and</li> <li>• The use of building materials with a low thermal mass and green walls (climbing plants on trellises or pergolas).</li> </ul>	STTPP Implementation and Monitoring Officer/ Town Planner.

### Public Transport Measures

Action	Responsibility
Develop and provide information and advice on adapting behaviour while using public transport during extreme weather. This could include encouraging bus riders to bring water to avoid heat illness in case of extreme heat or sharing information about different evacuation options in case of emergency.	Bus Operator.
As part of the STTPP bus network proposals, new buses to be fitted with: <ul style="list-style-type: none"> <li>• White roofs to reduce solar heat gain;</li> <li>• Tinted windows; and</li> <li>• Ventilation or air-conditioning.</li> </ul>	Bus Operator.
Consideration of climate resilience in measures to improve public transport accessibility (STTPP), particularly for vulnerable groups.	Bus Operator.
Provide shading at shelters and interchange facilities as part of bus network proposals (STTPP).	Bus Operator.

## 7.6 Proposed Timeframes for Initiatives – Environmental Improvements

A summary of the key actions and interventions in the short, medium and long term are presented in Table 7.1 below.

Table 7.1: Recommended Environmental Measures

Short Term	Medium Term	Longer Term
<ul style="list-style-type: none"> <li>▪ Reduce carbon dioxide emissions through a programme of Mobility Management measures, improvements to sustainable travel options and the management of car use.</li> <li>▪ Future-proofing our maintenance strategy and new transport infrastructure to cope with the effects of climate change of sustainable modes of transport.</li> <li>▪ Considering environmental issues such as biodiversity, noise and impacts on the landscape at the design stage of transport projects.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Investigate the use of new technologies as they become available including use of electric vehicles where possible.</li> <li>▪ Establishing a low emission zone within the town centre – with access restrictions and priority access to low emission vehicles during peak travel periods.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Keep abreast of the use of new technologies as they become available.</li> </ul>

## 8 Traffic Management & Road Safety

### 8.1 Introduction

Making Gibraltar a safer place to live and work remains one of the priority themes for the Government, with an emphasis on speed management to reduce the occurrence and severity of traffic accidents on Gibraltar's road network. There are clear benefits of limiting vehicle speeds to 'appropriate' levels including:

- Reducing 'intimidation' of more vulnerable road users – cyclists, mobility scooters and pedestrians;
- Contributing towards other environmental objectives, such as reducing noise levels and improving air quality;
- Minimising the impacts of severance and anti-social effects in sensitive areas – such as schools, residential districts and shared public spaces; and
- Reducing the likelihood of accidents with operatives/equipment at temporary roadworks.

### 8.2 Summary of Key Issues

#### *Speeding Issues in Gibraltar*

Data obtained as part of the STTPP has identified stretches of the road network where speed limits are consistently exceeded and are of a concern to the Police including Devil's Tower Road, Waterport Road, Bishop Caruana Road and Rosia Road (see Figure 8.1). Interestingly the number of recorded accidents where speed has been identified as a causation factor is not considered to be exceptionally high. Feedback from the various consultation workshops and surveys suggests that concerns about excessive speeds are influencing travel habits:

- Deterring cycling because of high speed overtaking on narrow roads;
- Children not being allowed to walk to school because of speeding traffic;
- Tourists accessing the town centre because of high vehicle speeds on intermediate roads;
- Shoppers in the pedestrian priority zone are unsettled by 'permitted' fast moving vehicles (including mobility scooters); and
- Residents complaining about night time noise from rapidly accelerating and braking cars and motorbikes.

Further information has been obtained from the RGP in terms of their views on speeding 'hotspots' which in addition to Waterport Road and Bishop Caruana Road also include Rosia Road and Devil's Tower Road. These roads were subjected to further investigation to determine whether a review of existing speed limits is warranted. As a result of this speed limit review, some speed limits have been altered at Waterport Road and Bishop Caruana Road (see STTPP Implementation Concepts).

In addition, consideration should be given to developing appropriate speed management measures including the use of dynamic speed display signs to inform drivers that they are

exceeding the speed limit and warning them to slow down. Traffic Speed Indicators were installed at several main arterial roads in May 2015.

### ***Safety of Vulnerable Road Users***

Vulnerable road users including pedestrians, cyclists and motorcycle users are more likely to be killed or seriously injured than other road users when involved in an accident. Figure 8.2 shows the number of road casualties on the road network in Gibraltar between 2012 and 2013. Walking is an important mode of transport in Gibraltar that is influenced by common factors such as distance, ease of access via pedestrian routes, safety and availability of private vehicles. In the right environment walking activity is seen to increase, but where conflict with other vehicles exists (e.g. around schools) this deters people from walking and encourages greater use of the car. Motorcycle use in Gibraltar is one of the highest in Europe with nearly one in three vehicles being either a motorcycle/scooter or moped. Road safety will be improved by provision of more cycle skills training to children and adults. Filling gaps in the network, especially at junctions, will help improve awareness of cyclists by motorists and reduce levels of danger.

### ***Perceptions of Road Safety and Personal Security***

Perceptions of the level of threat posed by traffic volumes and speed increasingly play a part in the reason for choosing motorised modes, particularly the car. In some cases, residents and stakeholders do not understand why some physical road safety measures are required and therefore it is important that a clear and effective communication process forms part of the overall approach.

### ***Concerns over Personal Security***

This can be a major factor why people use personal transport, as opposed to public transport, particularly during the evenings. The impact of these perceptions is responsible for a vicious circle as car use increases further.

### ***Compulsory Basic Training for Motorcycle Use***

Road incidents associated with inexperienced motorcyclists is a perceived road safety issue in Gibraltar. Compulsory Basic Training (CBT) for motorcycle use in Gibraltar was introduced in 2013 to improve road safety and reduce accidents on the roads caused by inexperienced drivers. The preliminary course introduces motorcycle users to the potential hazards that may be encountered on and off the road. Once all three modules are complete, the learner licence is valid for 15 months.

Figure 8.1: STTP Review of Vehicle Speeds

**% of Vehicles Exceeding the Speed Limit**

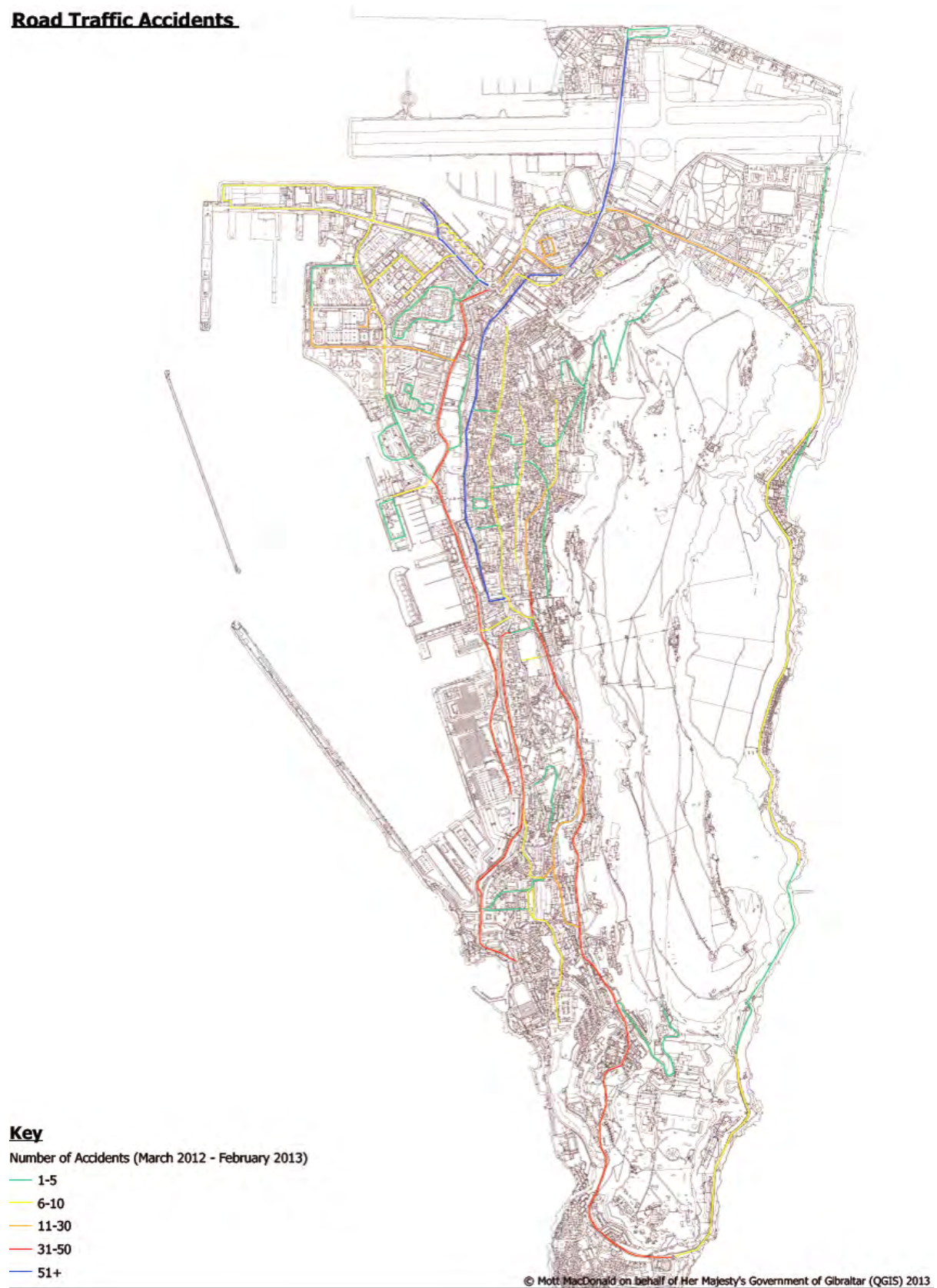


(Source: Mott MacDonald)



Figure 8.2: Summary of Road Casualties on Gibraltar's Highway Network (Data from 2012 - 2013)

**Road Traffic Accidents**



(Source: Mott MacDonald)



## 8.3 Proposed Road Safety Measures

### 8.3.1 Road Safety Approach

A further goal is to make transport increasingly safe and secure, especially to those who are currently at a higher risk. This will have both direct impacts on people's wellbeing and wider, indirect impacts to the image of our area.

#### **To encourage safer road use and reduce accidents on Gibraltar's roads:**

- Delivering training, education and campaign activities and driver/rider behaviour programmes;
- Implementing safer road programmes, engaging local people through neighbourhood/estate forums, community engagement etc;
- Deliver programme of local safety scheme interventions at identified sites and routes of recurrent casualties; and
- Improving the monitoring, analysis and evaluation of road traffic injuries/collisions to improve targeting of remedial action.

#### **Working in conjunction with the RGP Police to enforce traffic law more fully:**

- Analysing offending and casualty information more fully to determine enforcement priorities and identifying accident 'hotspots';
- Developing a Safety Camera Partnership with the RGP, with the introduction of speed cameras and process for operating and site selection policy to determine camera deployment and usage;
- Enhancing parking and bus stop enforcement and other moving traffic offences.

#### **To focus safety actions on 'vulnerable road users':**

- Delivering effective speed management in residential areas, including exploring further use of 30km/h zones, Home Zones, Shared Spaces etc:
  - Proposals recommended in the STTPP include speed management measures on the key approaches to the town centre – on Corral Road, Fish Market, Reclamation Road and access to Main Street from the south, with all of these approaches having a 30km/h speed limit.
- Developing programmes targeting children and young people, including education and training, school travel plans, safe routes to school, walking buses etc.

#### **To improve safety and the perception of safety of public transport which can be achieved through the following:**

- Using Closed Circuit Television (CCTV) on-board bus vehicles to monitor safety and potential incidents of crime (these have now been installed);
- Improving levels of lighting at bus stops and interchange points out of daylight hours (this has now been completed).

### 8.3.2 Speed Management Approach

It is recommended that the STTPP includes a speed management strategy as part of a package of measures to influence travel behaviour and ameliorate environmental problems. It is envisaged that the overall approach to speed management/enforcement will be delivered through a safety 'partnership' between the Government's Traffic Team and the Police. As part of the Government's commitment to improving safety of vulnerable road users it is recommended that engineering, enforcement, and training and education initiatives should be developed to improve the safety of those walking, cycling and riding motorcycles.

Work has been undertaken to review existing speed limits in Gibraltar and to assess whether there is any reason for these to be upgraded or left to remain as at present. This follows a similar exercise completed in 2006 and is based on the outcome of feedback and complaints directed to the Government's Traffic Commission and Highways Section complaining that some speed limits were too low and where excess speeds were seen to occur on many roads.

The assessment of speeds was undertaken using specialist speed recording equipment, with each corresponding road being surveyed over minimum periods of 2 weeks. In Gibraltar the maximum national speed limit is currently established at 50km/h. The survey examined every road to establish the correct speed limit that is required.

As a result of this survey work there are a number of recommendations:

- The outcome from the survey of existing speed limits concluded that for many of the roads across Gibraltar there is a need to review existing speed limits, with some of these requiring a slight increase. However, it is not intended to increase the national maximum speed limit of 50km/h.
- The speed limits for all housing estates across Gibraltar should be taken as 30km/h, including Varyl Begg, Laguna, Moorish Castle, Alameda and Glacis Estates.
- All Upper Town and Inner Town Roads should be restricted to 30km/h, including Main Street south, Town Range, Kings Yard Lane, and Governor's Street.
- There are specific locations where specific consideration might be given to lowering the speed limit to 20km/h, but this would only relate to a particular location where special road conditions would apply, such as proximity to a school or where it is appropriate to do so.
- Some roads in Gibraltar were found to demonstrate an inconsistency of application of speed limits along their length, such as Sir Herbert Miles Road, where a range of speed limits apply which are confusing for drivers. Further consideration should be paid to regulating speeds as far as possible along the length of these roads. For these roads speed limits will only be lowered if there is a particular reason to do so.

A phased approach is to be applied to introducing new speed limits, with old signs removed and replaced with new speed limit signs that will be placed at locations which are more visible to drivers. Speed limit changes have already been carried out at the following locations: -

- Waterport Road, Europort Avenue, Europort Road and Bishop Caruana Road were increased from 30km/h to 40km/h; and
- The northern end of Queensway from the junction at Regal House to Waterport Fountain was reduced from 50km/h to 40km/h.

An ongoing programme of focused speed enforcement and results monitoring supported by the introduction of speed cameras may be beneficial. An initial programme of speed camera enforcement is proposed for a number of locations, including Devil's Tower Road, Europa Road and Rosia Road, with this due to commence in 2017.

In line with the above, a review has been undertaken of the current legislation together with penalties or other sanctions and in parallel the need for education and training.

It is important that enforcement should not be seen as a revenue raising mechanism, but as a means to ensure that Gibraltar's transport system promotes and supports strategic road safety and improved health and well-being objectives.

### 8.3.3 Accident Reduction and Monitoring

In relation to road casualties and accidents it is recommended that a number of initiatives should be progressed with including:

- **Development of a new road accident data and analysis system:** is essential as part of road safety activity especially relating to the diagnosis of road crash problems and for monitoring road safety efforts. It is important to identify what categories of road users are involved in crashes, what manoeuvres and behaviour patterns lead to crashes and under what conditions crashes occur, in order to focus on safety activities;
- **Development of speed management guidelines to improve road safety (Safety Engineering):** with an emphasis on the use of self-enforcing techniques in road design and speed management. Particular attention will be paid to addressing the school run as well as providing safer routes to schools;
- **Development of local safety schemes:** to improve safety at locations where there are clusters of crashes that have resulted in personal injury; and
- **Initiating road safety awareness campaigns and training:** Road user education and raising awareness forms an important part of any road safety strategy. This will include promotion of pedestrian and cyclist training within schools to improve confidence in children when using these modes for journeys to school.

### 8.3.4 Delivering Safer Roads

Enforcing road traffic law is critical in relation to improving road safety. Enforcement data logs will allow the system to analyse patterns of offending behaviour and also the number and severity of injuries. This data will help determine a number of enforcement priorities through the following:

- Safety cameras and local policing;
- Campaigns to reduce the number of vehicle defects/unroadworthy vehicles;
- Campaigns on drink/drug driving, motorcycle/scooter safety, dangerous driving etc;
- Speed enforcement on primary routes;
- Referral of drivers to Speed Awareness Courses and other driver improvement schemes; and
- Parking and bus stop enforcement and other moving traffic offences.

It is recommended that key emphasis is placed on educating drivers to improve standards rather than penalising them. It is envisaged that improved enforcement will make a major contribution to maximising safety, in particular encouraging safer road use and reducing casualties on our roads, working with the RGP to enforce local traffic laws and focusing safety efforts on vulnerable groups such as young drivers/riders and the elderly.

Whilst there will be a strong emphasis on non-physical approaches to safer roads, such as enforcement and education, it is acknowledged that there will still be a need for a number of targeted physical safety schemes. It is recommended that integrated approaches to the design of new traffic schemes is undertaken so that road safety considerations are built in as an integral part of scheme design from the start. Other key measures proposed include:

- Carrying out regular inspections of the road network to identify defects that are likely to cause road safety problems to pedestrians, cyclists and all other road users; and
- Combining junction improvements and other engineering work, and also ensuring high quality lining, signing, lighting and traffic signals.

### 8.3.5 Safer Roads for Children and Young People

Within the STTPP it is recommended that a range of initiatives aimed at improving safety of children and young people are developed and delivered over the lifespan of the STTPP which include the following:

- Undertaking child pedestrian and cycling training and road safety education;
- Engaging with school travel plans and school gate parking problems (using St. Joseph's School as a primary example), as well as progressing other measures such as encouraging walking buses;
- Promoting seat belt wearing and child restraints;
- Effective speed management particularly in residential areas, particularly in the vicinity of schools; and
- Targeting safety education programmes aimed at young drivers and riders.

The emphasis of these initiatives is primarily educational and encouraging a greater awareness of safety issues when travelling on the transport network.

## **8.4 Traffic Management Measures**

Within the STTPP there are a number of traffic management measures aimed at improving the flow of traffic and improving access to key destinations as well as facilitating access by sustainable modes such as buses, taxis and non-motorised modes.

Winston Churchill Avenue (WCA) is currently the primary route into Gibraltar from Spain and so carries significant numbers of vehicles and pedestrians/cyclists, with long delays often experienced in both morning and evening peak periods. Since the opening of the frontier and exacerbation of vehicular frontier queues, a third lane scheme was introduced in order to allow vehicles to avoid cross-border queues and gain access to the Air Terminal, British Lines Road and Four Corners. During periods of peak traffic congestion, a temporary third lane is created using one of the in-bound lanes from the Frontier. This system is no longer operational as it presented a number of problems/issues when in operation including:

- Potential safety issues when operational due to confusion amongst motorists (in both north and southbound directions) with the two-way section only separated;
- Traffic cones were often blown over. Foreign drivers were not familiar with the contra-flow operation of the lane and are confused by the arrangement and present a safety hazard when they failed to comply to the signing directions;
- The operation of the temporary arrangement was manpower intensive in terms of setting up/taking down the temporary diversion signs/coning and also enforcing the alternative flow of traffic (RGP);
- During the evening peak period only a single lane was available for southbound (inbound) traffic which created delays to both cars and public transport heading into Gibraltar, including buses (service 5) and taxis picking up passengers at either the airport or from the taxi rank at the Frontier; and
- With the current GAFAR project underway, there is little incentive in implementing a third lane setup as a long term solution as traffic congestion issues caused by the current road infrastructure should be resolved. In addition, the improved frontier fluidity and the GAFAR project have both re-prioritised the idea of introducing a new third lane on the runway approach.

### **8.4.1 Junction Improvements & Town Centre Access Restrictions**

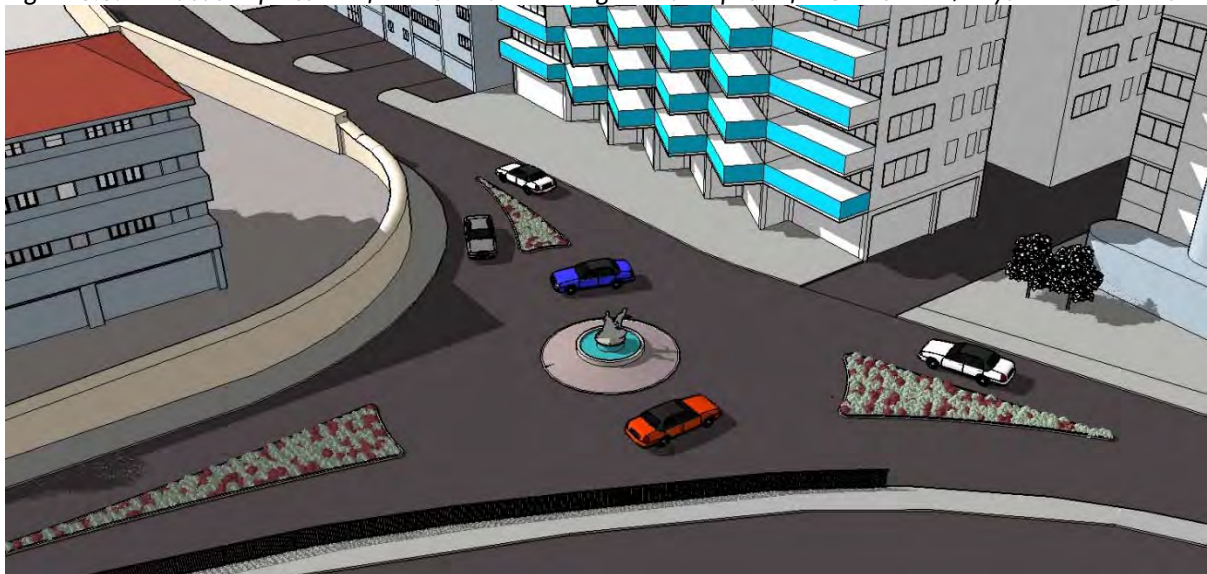
Within the range of topics and suggestions discussed with stakeholders there were a number of recommendations to improve traffic flow at key junctions on the highway network as well as to enhance access points to the town centre. These included the following:

- **Glacis Road/Bayside Road roundabout:** to improve traffic flow and local access;
- **Glacis Road/Waterport Road/Queensway:** introduction of signalised junction to improve pedestrian access into the town centre and also establish new bus stop facilities;
- **Reversal of flow on Line Wall Road (southern end):** This is a long term future proposal to consider and would require detailed modelling to assess potential effects;
- **Main Street (South) access restrictions:** with access only, as well as priority for buses/taxis as well as pedestrians and cyclists;
- **Trafalgar Junction improvements:** to facilitate better pedestrian and bus access (as part of interchange improvements), have now been completed;
- **Revised Upper Town one-way circulatory system:** (including modifications to Prince Edward's Road); and
- **Europa Road/Gardiner's Road junction improvement scheme.**

These network improvements have been built into two micro-simulation models to assess their overall impact on the wider network and to enable stakeholders to view the changes proposed visually.

Figure 8.3 shows an example of how a new junction arrangement at Bayside Road/Glacis Road might look with the introduction of a permanent roundabout scheme. A pilot scheme has now been introduced at this location aimed at improving the flow of traffic and address congestion problems, especially during peak periods.

Figure 8.3: Artist's Impression of New Junction Arrangement Proposed for Glacis Road/Bayside Road Junction



In terms of the commercial activity in the town centre, options exist for the development of a freight consolidation centre which will help manage sustainable deliveries within the



pedestrianised zone. Specific issues will need to be considered more fully including time of operation, vehicle access and vehicle type for such a scheme.

Within the proposed town centre controlled parking zone it is recommended that additional loading and delivery bays are provided with enhanced enforcement to minimise abuse and facilitate sufficient turnover of delivery vehicles to support the retail economy along Main Street and Irish Town. Furthermore, measures to incentivise the use of commercial electric vehicles may be considered in order to streamline/safeguard the town area and ensure that Main Street heads towards a more sustainable and environmentally friendly zone. Certain initiatives as listed below can be further studied:

- Limits on loading bays with priority for electric vehicles;
- Agreed costs for business permits in order to deliver goods in Main Street;
- Review of delivery time limits.

In conjunction with the junction improvements and town centre access alterations a review and upgrading of wayfinding and signage is also recommended.

It is important to examine traffic signing in Gibraltar to achieve the following objectives:-

- Reduce unnecessary journeys occurring through misdirection;
- Minimise pollution and reduce greenhouse gas emissions, noise and disturbance by reducing journeys on inappropriate (e.g. residential) parts of the network;
- Reduce accidents by giving drivers clear directions, avoiding late changes;
- Promote economic development through the efficient distribution of goods and people;
- Reduce on-street clutter due to the proliferation of signs; and
- Improve the road network efficiency.

The approach to this will be to explore how traffic and information signs can improve mobility and movement throughout Gibraltar. This includes:

- Developing a hierarchy of importance together with standard layouts for different uses – regulatory, direction, points of interest, commercial enterprises;
- Improving pedestrian and cycle routes between off-street car parks and key destinations throughout Gibraltar supported by good signing and wayfinding;
- Improving signing to car parks to make it easier for people to access these facilities especially links to the town centre, including variable message signs to indicate space availability;
- Providing clear signs to tourist destinations, to guide visitors to a tourist destination along the most appropriate route; and
- Considering heavy goods vehicle and commercial direction signing to direct these vehicles to destinations where the most appropriate route for larger vehicles is different to that for normal traffic. The appropriate routes may not always reflect the most direct route, but that which is most appropriate for larger vehicles.

For safety purposes, it is important that individual signs are not overloaded with information and that that signing is provided at the key 'decision points' on a traveller's journey to facilitate access to destinations.

## 8.4.2 Use of Gibraltar's Tunnels

The tunnels within the Rock provide a useful asset primarily to support the Gibraltar tourism and leisure industries. Access to many of these tunnels is constrained by military use and ventilation and safety issues also limit use of the tunnel system for motorised vehicles. However, opportunities exist to utilise small electric public transit vehicles to provide transit connections between key tourist destinations and linking.

It is recommended that a number of opportunities are explored more fully including:

- **Great North Road/Fosse Way:** which offers the potential to develop a better Upper Rock tour circulation system (this is currently being examined as part of a parallel study examining transport and access solutions on the Upper Rock Nature Reserve);
- **Admiralty East/West:** development of new walking and cycling routes that link into the proposed wider pedestrian and cycle route networks; and
- **Admiralty North/South:** the possibility of creating a town centre 'bypass' route.

Dudley Ward Tunnel carries bi-directional traffic through the south-eastern part of the Rock of Gibraltar. The 720m long tunnel currently has no mechanical ventilation system and there are concerns about air quality during normal traffic operations and safety in the event of a vehicle fire in the tunnel. Assessment work has been undertaken to:

- Review the tunnel and its current operating conditions from a ventilation perspective;
- Determine the ventilation requirements; and
- Identify possible options for installing a ventilation system.

The Government of Gibraltar is currently investigating tunnel ventilation requirements in order to draft a tender package for the Design and Build of a tunnel ventilation system at Dudley Ward Tunnel

## 8.5 Proposed Timeframes for Initiatives – Road Safety & Traffic Management

A summary of the key actions and interventions are presented in Table 8.1 and 8.2 below.

Table 8.1: Recommended Road Safety Measures

Short Term	Medium Term	Longer Term
<ul style="list-style-type: none"> <li>• Speed management review of the following roads has now been completed: <ul style="list-style-type: none"> <li>– Waterport Road;</li> <li>– Bishop Caruana Road;</li> <li>– Devil’s Tower Road; and</li> <li>– Rosia Road.</li> </ul> </li> <li>▪ Establish Safety Partnership (currently ongoing): <ul style="list-style-type: none"> <li>– Consideration to the development of Penalty Points system; and</li> <li>– Speed Camera Scheme.</li> </ul> </li> <li>▪ Review access restrictions: <ul style="list-style-type: none"> <li>– Corral Road;</li> <li>– Fish Market Road; and</li> <li>– Reclamation Road.</li> </ul> </li> <li>▪ Enhance road safety training and campaigns (vulnerable road users).</li> <li>▪ Motorcycle safety training and campaign.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Review access restrictions at Main Street (South) to be considered/investigated.</li> <li>▪ Continued roll out of road safety training and campaigns (vulnerable road users).</li> </ul>	<ul style="list-style-type: none"> <li>▪ CCTV control room.</li> <li>▪ Continued roll out of road safety training and campaigns (vulnerable road users).</li> </ul>

Table 8.2: Proposed Traffic Management Measures

Short Term	Medium Term	Longer Term
<ul style="list-style-type: none"> <li>Waterport Road/Bayside/Queensway Junction Improvement Scheme.</li> <li>Consideration to access restrictions in the town centre area (Market Place/Corral Road/Fish Market/Reclamation Road).</li> </ul>	<p>Consideration will be given to the following measures:</p> <ul style="list-style-type: none"> <li>Glacis Road/Bayside Road Junction Improvement Scheme new roundabout to be considered/investigated.</li> <li>Trafalgar Junction Improvement – improved pedestrian safety/capacity and enhanced bus stop ‘hub’ to be considered/investigated.</li> <li>Europa Road/Gardiner’s Road junction improvement scheme to be considered/investigated.</li> <li>Review Devil’s Tower Road to encourage road safety through traffic calming measures to be considered/investigated.</li> <li>Comprehensive review of wayfinding and signage together with the development of a standard signage system to be applied across Gibraltar.</li> </ul>	<ul style="list-style-type: none"> <li>GAFAR scheme: <ul style="list-style-type: none"> <li>Devil’s Tower Road/Eastern Beach Junction Improvement Scheme.</li> </ul> </li> <li>Main Street (south) access restrictions – bus/taxi/access only and enhanced pedestrian and cycle access to be considered/investigated. A single day trial followed by a 1-week trial may be implemented to investigate the feasibility of this scheme.</li> </ul>

## 9 Forward Planning & Urban Design

### 9.1 Introduction

Gibraltar's unique cultural and heritage assets are vital to help support and develop a vibrant local economy and promote tourism. This theme covers how transport can help enable the local economy to thrive, making Gibraltar a more attractive place to visit and work in, and in particular demonstrate how a transport policy can contribute to improving the local street environment, urban design and public open spaces.

Transport can support this by way of having fewer vehicles in the town centre and providing better and higher quality conditions for pedestrians to access local shops and leisure facilities. This can be achieved via enhancements to the pedestrian priority zone and other public spaces.

### 9.2 Summary of Key Issues

#### *Accessibility of New Developments*

It is important that developments are fully accessible to all and that they embrace sustainable design principles when considering transport access and movement. The behavioural change and capacity enhancements proposed within the STTPP will facilitate the growth in employment and housing identified within the Development Plan and help minimise the impact of the projected increase in trips. In order to achieve the proposed level of growth without overwhelming the transport network, it will be important for all new developments to be designed to maximise sustainable transport options for residents, employees and users. Many developments will provide good opportunities to enhance and introduce new and better walking and cycling routes.

#### *Need to Reinvigorate the Town Centre*

The importance of the town centre as a location for employment, retail activity and tourism leads to heavy demand for access to the historic centre where there are narrow streets. The unique location as well as cultural and heritage assets are vital to the attractiveness of Gibraltar and to its economy. The development of more sustainable transport options can help enable the town centre to thrive as an attractive place to visit and work in through improving access for pedestrians and enhancing public streets and spaces. Transport can support this through having fewer vehicles in the city centre, having an appropriate sustainable distribution policy, and controlling vehicle speeds.

Conditions for many pedestrians will improve with enhancements to the pedestrian priority zone and other public spaces. Fewer vehicles in the town centre will encourage movement by foot and bicycle. This has been demonstrated by the pedestrianisation of Main Street and adjoining streets which has in turn proved successful in supporting the local retail and tourism sectors of the economy. The increase in the numbers of visitors to Gibraltar and rise in car use has created a situation where demand for space within the urban core is at a premium, particularly during the morning peak periods when large numbers of commercial vehicles and deliveries are servicing the town centre shops. This has resulted in indiscriminate parking and

indiscriminate unloading/deliveries which need to be addressed to maintain the town centre environment as a vibrant and open space for people to enjoy.

### **9.3 Proposed Approach to Forward Planning and Sustainable Urban Design**

The impact of traffic in the town centre will be reduced by the introduction of a series of improvements over the next 10 years. This includes reinvigorating Gibraltar's central pedestrian priority zone and establishing more accessible and safer streets – particularly to key destinations such as Ocean Village, Waterfront Developments and other retail areas.

Key elements of the overall approach include reinvigorating the town centre's pedestrian priority zone including reviewing/updating access arrangements for commercial and service vehicles. It is proposed that the pedestrian priority zone will be enlarged and the southern end of the town centre will become better integrated through greater pedestrian priority measures. This could be achieved with reduced vehicle volumes by limiting access to local vehicles only and by considering the development of shared spaces. A similar approach at Corral Road, Fish Market Road and Reclamation Road would create attractive locations and gateways to the town centre that local residents and tourists alike would wish to use.

Securing development-linked improvements to the bus network with improved access to bus services in areas where there is a large amount of new development such as Westside, Waterport and Eastern Beach will help to encourage a shift in travel behaviour towards sustainable options and establish good connections for new residents and employees at such sites. Gibraltar's future development plans will most certainly cause a demographic shift that will alter the traffic patterns and volumes in different parts of Gibraltar. It is thus crucial to plan in advance and ensure that infrastructure, public transport services and other amenities are well equipped or upgraded in order to cope with the shift.

Effective land-use planning is important to the delivery of long-term sustainable transport solutions. It is essential that new development makes proper provision for sustainable transport, including walking as well as good access by public transport.

It is important that pedestrian needs are included in new planned developments throughout Gibraltar, linking all new developments to strategic pedestrian routes. The design of new pedestrian links within and across proposed development sites should be accessible, convenient and safe. Wherever possible, funding should be secured from developers in order to encourage walking by introducing a range of pedestrian measures. Pedestrian routes throughout Gibraltar will continue to be assessed in order to identify potential improvements.

Managing and delivering the growth and development of sustainable communities will go some way to discourage the use of cars if alternatives exist that promote the use of sustainable means of transport such as walking, cycling and public transport. Influencing planning decisions to co-locate housing with jobs and services to reduce the need to travel will help reduce the number of car-based trips on the network. This will influence the design of new developments through the promotion of sustainable urban design guidelines based on best practice principles to improve road safety and encourage travel by foot and bike.



## 9.4 Proposed Timeframes for Initiatives – Forward Planning & Urban Design

A summary of the proposed key measures and interventions is set out below:

Table 9.1: Recommended Forward Planning & Urban Design Measures

Short Term	Medium Term	Longer Term
<ul style="list-style-type: none"> <li>▪ Development of sustainable transport design guidelines for developers aimed at encouraging inclusion of more sustainable transport options and access.</li> <li>▪ Management of deliveries within pedestrianised zones including: <ul style="list-style-type: none"> <li>○ New controls of the time of operation, vehicle access and vehicle type;</li> <li>○ Enhanced facilities and signing for loading and delivery bays; and</li> <li>○ Stronger enforcement to reduce the level of indiscriminate parking/loading by commercial vehicles and minimising conflicts with pedestrians and other road users in the town centre.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▪ Further measures to manage and control commercial vehicle access to the town centre including priority access for low emission/electric vehicles.</li> <li>▪ Encourage businesses to develop home delivery services to reduce the need for certain town centre trips.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Development of urban sustainable distribution consolidation centre at Frontier to co-ordinate deliveries to the town centre.</li> <li>▪ Urban design and development of Market Place Piazza to be considered as a new cultural area and focal point within the historic core.</li> </ul>



# 10 STTPP Implementation Planning

## 10.1 Introduction

It is recommended that progress on the overall delivery of the programme is reported regularly to the STTPP Policy Group, which will take key decisions on the progress and achievement of programme objectives. Each scheme should be assigned a lead contact who is responsible for the coordination and delivery of the measure/initiative with the individual responsible to identify any risks associated with the scheme in advance of implementation. It is recommended that all schemes have a named project manager who will be responsible for progressing and coordinating the scheme, reporting progress, keeping forecasts up to date over the lifetime of the scheme and arranging for the scheme to be evaluated.

The recommended schemes or initiatives to be implemented as part of the STTPP have been included below. Each scheme or initiative indicates how it contributes towards the objectives of the STTPP. The implementation of schemes listed in Table 10.1 will be subject to further investigation and detailed design, as well as being dependent on the level of funding that is available.

## 10.2 STTPP Project & Programme Management

It is important that an efficient programme management system is put in place that enables effective and consistent monitoring and reporting to be undertaken for all schemes contained within the STTPP programme. Schemes should be regularly reviewed to assess overall performance against relevant milestones and budget allocations. It is recommended that monitoring reports are prepared by a member of the STTPP implementation team, including summary of expenditure, scheme implementation and outputs achieved. This will allow any problems and delays to be identified at an early stage and facilitate remedial action to help modify the programme so that it is back on track. This can include re-scheduling schemes so that reserve schemes are brought forward where necessary to maximise expenditure and contribution towards policy objectives. Regular progress reports should be provided to both the STTPP Working and Policy Groups to discuss areas of divergence from the scheduled programme so that these can be addressed.

## 10.3 STTPP Implementation Plan Documentation

Whilst it is intended that the main STTPP will be updated when major external changes (such as Brexit) or key decisions (such as the future of the airport runway crossing) which significantly impact on transport matters occur, the main vision, objectives and key recommendations are not expected to be regularly altered. Instead a separate document, STTPP Implementation Concepts, has been drafted which contains more detailed implementation plans and specific scheme proposals. It is intended that this is a 'living' document and is regularly reviewed and updated. As well as looking forward with the proposals for interventions planned in the next phases of the STTPP roll out, it will also be the main platform for reporting on the monitoring of schemes previously commissioned and any learning that will assist with similar future projects. The document will also update the long list of potential schemes and initiatives as illustrated in Table 10.1 showing progress and introducing new projects as they are considered, approved and implemented.

**Key**

- meets STTPP objective
- strongly meets STTPP objective
- ^ includes schemes which have not yet progressed or may not be progressed at this time

Table 10.1 - Recommended schemes or initiatives to be implemented as part of the STTPP

PARKING AND DEMAND MANAGEMENT								
ID	Scheme/Initiative	Reduce Traffic Congestion	Improve air quality, noise and environment	Improve Accessibility and social inclusion	Improve Safety and Security	Under Consideration^	In Progress	Completed
PM1	Introduce Gibraltar Environmental Zone	●	●	●●	●	✓		
PM2	New charges including on-street (Waterport Road, Linewall Road) and Off-street (Landport Ditch, Fish Market Road Etc.)	●	●	●●			✓	
PM3	Enhance Government parking enforcement operation including structure and control of team	●	●	●	●			✓
PM4	Review residents' parking permit scheme criteria			●			✓	
PM5	Introduce school parking scheme at St Joseph's School	●		●	●●			✓
PM6	Commence the review of the Disabled Blue Badge (DBB) scheme, then develop and implement it			●●	●●		✓	
PM7	Commence review of Gibraltar's parking legislation and depending on outcomes, action findings from the parking legislation review	●	●	●	●		✓	
PM8	In parallel, consider the merits of decriminalisation of parking enforcement	●	●	●	●	✓		
PM9	Prepare a marketing strategy and action plan (ongoing)	●	●	●	●	✓		
PM10	Review of South Pavilion Car Park in conjunction with Rosia Lane	●		●	●●	✓		
PM11	Extend Gibraltar Environmental Zone in Waterport Road	●●	●	●●		✓		
PM12	Review designation and charging for other car parks including Devil's Tower Road, Queensway, Romney Huts and Grand Parade	●		●		✓		
PM13	Review central area residents' parking area	●	●	●●	●	✓		
PM14	Introduce Bayside Road and Corral Road parking measures	●●	●	●	●	✓		
PM15	Extend Environmental Zone southwards towards Grand Parade and Upper town area including Moorish Castle, Engineers Lane, Willis's Road area	●●	●	●	●	✓		

PARKING AND DEMAND MANAGEMENT								
ID	Scheme/Initiative	Reduce Traffic Congestion	Improve air quality, noise and environment	Improve Accessibility and social inclusion	Improve Safety and Security	Under Consideration^	In Progress	Completed
PM16	If supported, progress decriminalisation of parking enforcement legislative changes			•	•	✓		
PM17	Explore the adoption of new technology including ANPR enforcement at car parks and links To the Gibraltar ID cards	••	••			✓		
PM18	Review existing residential parking areas	•	•	••	•		✓	
PM19	Adopt Automatic Number Plate Recognition (ANPR) car park technology with strategic signing to car parks	••	••			✓		
PM20	Link car parking permits/payments to Gibraltar ID cards initiative	•	•		•	✓		

Key

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Table 10.1 - Recommended schemes or initiatives to be implemented as part of the STTPP

PUBLIC TRANSPORT								
ID	Scheme/Initiative	Reduce Traffic Congestion	Improve air quality, noise and environment	Improve Accessibility and social inclusion	Improve Safety and Security	Under Consideration^	In Progress	Completed
PT1	Design and Implement a Pilot evening/night bus scheme	●●	●●	●●	●			✓
PT2	Real time passenger information and bus stop access improvements	●	●	●●		✓		
PT3	Support and promote for an Improved taxi advance booking system	●	●	●●	●	✓		
PT4	Introduce enhanced frontier taxi facilities (Including shelter and waiting facilities)	●			●●	✓		
PT5	Introduction of multi-functional smartcard ticketing (bus service, parking, shops etc.)	●	●	●		✓		
PT6	Utilise new traffic control system to monitor availability of City Taxi Service and evening provision	●	●	●	●	✓		
PT7	Long term strategy to resolve priorities for 'tourist taxis' and standard city taxi services	●	●	●●		✓		
PT8	Electric vehicle fleet replacement on core routes		●●			✓		
PT9	Development of transport system from frontier to town area (post-GAFAR opening)	●●	●●	●		✓		
PT10	Consideration of schemes i.e. PRT transit system linking airport to Sun Dial junction (longer-term post-GAFAR scheme)	●●	●●	●		✓		
PT11	Implementation of new bus network: - Five core services, starting with service from Europa Point to Frontier - Introduction of additional 'social' ribbon services	●●	●●	●●	●	✓		



Key

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Table 10.1 - Recommended schemes or initiatives to be implemented as part of the STTPP

SUSTAINABLE TRAVEL - WALKING								
ID	Scheme/Initiative	Reduce Traffic Congestion	Improve air quality, noise and environment	Improve Accessibility and social inclusion	Improve Safety and Security	Under Consideration^	In Progress	Completed
SW1	Extension of pedestrianised zone to include Governor's Street and re-allocation of motor vehicles to Elliott's Square	●		●●	●●	✓		
SW2	Study, review and design a scheme for the extending of the pavement along Governors Lane			●●	●●	✓		
SW3	Investigate and develop better pedestrian and cycle facilities utilising the city walls	●		●●	●●	✓		
SW4	Consider development and adoption of prioritised pedestrian route network including: Shared space routes i.e. Corral Road, Fish Market Road, Reclamation Road and Main Street (south)	●	●	●		✓		
SW5	Review other potential areas to enhance, introduce or revamp pedestrian routes that can link major destinations and hot spots in Gibraltar	●	●	●	●	✓		
SW6	Development of safe routes to school (linked to Mobility Management Plans) with emphasis on encouraging more walking to school	●●	●●	●		✓		
SW7	Consider extension and enhancement of central pedestrian priority zone: - Pedestrianisation of Market Place and restriction on through-traffic (except in emergencies)	●	●	●	●	✓		
SW8	Implement better signage including local area maps highlighting key destinations, routes and distances etc.			●	●	✓		
SW9	Consider Keightley Way Pedestrian Route Enhancements (new footway through tunnel to improve safety (to be inserted into Pedestrian schemes)	●		●	●●	✓		
SW10	Consider further extensions to pedestrian routes throughout Gibraltar	●	●	●	●	✓		

Key

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Table 10.1 - Recommended schemes or initiatives to be implemented as part of the STTPP

SUSTAINABLE TRAVEL - CYCLING								
ID	Scheme/Initiative	Reduce Traffic Congestion	Improve air quality, noise and environment	Improve Accessibility and social inclusion	Improve Safety and Security	Under Consideration <sup>^</sup>	In Progress	Completed
SC1	Re-launch of Gibraltar Bicycle Scheme	●●	●●	●●	●		✓	
SC2	Development of new secure cycle parking including the following locations: - new cycle parking facilities provided at key locations such as Europort Road, Waterport Road, Fish Market Road and Trafalgar junction	●	●	●●	●●		✓	
SC3	Investigate the use of Walls and Tunnels for cycle routes and implement schemes where viable	●●	●●	●●	●	✓		
SC4	Development of cycle training programmes for schools, workplaces and adults	●	●	●	●●	✓		
SC5	Delivery of new cycle routes including on and off-road routes	●●	●●	●●	●	✓		
SC6	Implementation of cycle training initiatives in schools (as part of school travel plans)	●	●	●	●●	✓		
SC7	Implementation of cycle training in workplaces (as part of employer travel plans)	●	●	●	●●	✓		
SC8	Implementation of adult cycle training programme	●	●	●	●●	✓		
SC9	Engage with Town Planning to review existing planning conditions to include: cycle parking, shower facilities	●	●		●	✓		

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Table 10.1 - Recommended schemes or initiatives to be implemented as part of the STTPP

SUSTAINABLE TRAVEL – MOBILITY MANAGEMENT								
ID	Scheme/Initiative	Reduce Traffic Congestion	Improve air quality, noise and environment	Improve Accessibility and social inclusion	Improve Safety and Security	Under Consideration^	In Progress	Completed
SM1	Use existing resources to undertake Pilot Mobility Management Plans with engaged workplaces	●●	●	●		✓		
SM2	Appoint Mobility Management officers with responsibility of developing Mobility Management Plans (MMPs) for both Workplaces and Schools	●	●	●		✓		
SM3	Mobility Management officer to facilitate MMP with Secondary Schools	●●	●	●	●	✓		
SM4	Facilitate engagement with Health & Transport Sectors	●●	●	●		✓		
SM5	Determine and establish a Mobility Management accreditation scheme designed to recognise and encourage workplaces / schools achievements toward sustainable travel	●	●	●		✓		
SM6	Assign capital budget to offer small-scale infrastructure grants to workplaces and schools	●	●	●	●	✓		
SM7	Assign budget and resources to deliver cycle & scooter training at schools	●	●	●	●●		✓	
SM8	Establish mode-share monitoring procedures to use to evaluate impacts of programme	●	●	●		✓		
SM9	Investigate options to commit developers to develop MMP and implement measures through the planning process	●●	●	●	●●	✓		
SM10	Develop MMP best practice guidelines and update annually	●		●	●	✓		
SM11	Develop Mobility Management Plans for: - all organisations within Public Administration & Defence Sector - Primary schools, nurseries and colleges - Health Sector including hospital and surgeries - Transport operators - Hotels, restaurants and tourism sector - large scale businesses (employers over 50)	●●	●	●	●●	✓		
SM12	Organise and host workplace mobility management forum on annual basis	●	●	●		✓		

SUSTAINABLE TRAVEL – MOBILITY MANAGEMENT								
ID	Scheme/Initiative	Reduce Traffic Congestion	Improve air quality, noise and environment	Improve Accessibility and social inclusion	Improve Safety and Security	Under Consideration^	In Progress	Completed
SM13	Undertake means-tested grant application process for small-scale transport measures linked to MMP	•	•	•	•	✓		
SM14	Undertake mode-share monitoring on annual basis	•	•			✓		
SM15	Appoint Mobility Management Assistant with responsibility of supporting MMPs for Workplaces & Schools	••	•	•	••	✓		
SM16	Undertake MMP with remaining employers and sectors including: - Manufacturing & Construction sectors - Wholesale and retail trade sectors - Financial sector	••	•	•	••	✓		
SM17	Develop carbon emissions reporting for work-related travel with engaged organisations		••			✓		
SM18	Update MMPs with inclusion of reducing carbon emissions		••			✓		
SM19	Facilitate mode-share and carbon emissions monitoring on annual basis	•	••			✓		
SM20	Provide training and knowledge exchange programme for employers to update and implement their individual MMPs	•	•	•		✓		

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Table 10.1 - Recommended schemes or initiatives to be implemented as part of the STTPP

ENVIRONMENTAL ENHANCEMENTS								
ID	Scheme/Initiative	Reduce Traffic Congestion	Improve air quality, noise and environment	Improve Accessibility and social inclusion	Improve Safety and Security	Under Consideration ^	In Progress	Completed
SC1	Reduce carbon dioxide emissions through a programme of Mobility Management measures, improvements to sustainable travel options and the management of car use	●	●●			✓		
SC2	Future-proofing maintenance strategy and new transport infrastructure to cope with the effects of climate change of sustainable modes of transport	●	●●		●	✓		
SC3	Considering environmental issues such as biodiversity, noise and impacts on the landscape at the design stage of transport projects		●●		●	✓		
SC4	Investigate the use of new technologies as they become available including use of electric vehicles where possible	●●	●●	●		✓		
SC5	Establishing a low emission zone within the town centre – with access restrictions and priority access to low emission vehicles during peak travel periods		●●	●	●	✓		
SC6	Investigate the use of new technologies as they become available		●●			✓		

Key

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Table 10.1 - Recommended schemes or initiatives to be implemented as part of the STTPP

TRAFFIC MANAGEMENT								
ID	Scheme/Initiative	Reduce Traffic Congestion	Improve air quality, noise and environment	Improve Accessibility and social inclusion	Improve Safety and Security	Under Consideration^	In Progress	Completed
TM1	Waterport Road/Queensway Junction Improvement Scheme	●●			●●	✓		
TM2	Consideration to access restrictions in the town centre area ( Market Place/Corral Road/Fish Market/Reclamation Road)	●		●●	●	✓		
TM3	Glacis Road/Bayside Road Junction Improvement Scheme – new roundabout			●	●●		✓	
TM4	Line Wall Road Traffic Management scheme (reversal of one-way system) to be considered/investigated	●	●	●	●	✓		
TM5	Revised Upper Town one-way circulatory system (including modifications to Prince Edward's Road etc.) to be considered/investigated	●	●	●	●	✓		
TM6	Main Street (south) access restrictions – bus/taxi/access only and enhanced pedestrian and cycle access to be considered/investigated	●	●	●	●	✓		
TM7	Trafalgar Junction pedestrian crossing and Ragged Staff Road pelican crossing – improved pedestrian safety/capacity	●	●	●	●			✓
TM8	Europa Road/Gardiner's Road junction improvement scheme to be considered/investigated	●	●	●	●		✓	
TM9	Review Devil's Tower Road to encourage road safety through traffic calming measures to be considered/investigated such as the introduction of Speed Cameras, Speed radar Signs etc.		●●		●●		✓	
TM10	GAFAR-linked schemes: Devil's Tower Road/Eastern Beach Junction Improvement Scheme to be considered/investigated	●	●	●	●		✓	
TM11	Proposed Devil's Tower Road Roundabout	●	●	●	●	✓		
TM12	Rosia Road (North-West of Alameda Estate) – Proposed Removal of Footpath and Proposed Ramp & Stairs	●		●●	●	✓		



**Key**

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Table 10.1 - Recommended schemes or initiatives to be implemented as part of the STTPP

ROAD SAFETY								
ID	Scheme/Initiative	Reduce Traffic Congestion	Improve air quality, noise and environment	Improve Accessibility and social inclusion	Improve Safety and Security	Under Consideration ^	In Progress	Completed
RS1	Speed management review: - Waterport Road - Bishop Caruana Road - Devil's Tower Road - Rosia Road	●	●	●	●●		✓	
RS2	Review Devil's Tower Road to encourage road safety through traffic calming measures to be considered/investigated such as the introduction of Speed Cameras, Speed radar Signs etc.		●●		●●		✓	
RS3	Establish Safety Partnership: - Consideration to the development of Penalty Points system - Speed Camera Scheme		●		●●		✓	
RS4	30 km/h zones (supporting access restrictions): - Corral Road - Fish Market Road - Reclamation Road	●	●	●	●●	✓		
RS5	Develop and implement road safety training and campaigns (vulnerable road users)	●			●●	✓		
RS6	Motorcycle safety training and campaign				●●	✓	✓	
RS7	Line Wall Road Traffic Management scheme (reversal of one-way system)	●●	●	●	●	✓		
RS8	30 km/h zones (supporting access restrictions) Main Street (South) to be considered/investigated	●	●	●	●●	✓		
RS9	Although this is directly linked to the RGP's existing framework, the expansion of CCTV instalment throughout Gibraltar to cover wider areas/assets could assist the overall STTPP framework, including: - Public hotspots, car parks, major landmarks, pedestrian locations./routes, city centre, bicycle hot spots/parking, public transport etc. - A Dedicated CCTV control room could be initialised in order to provide 24/7 control and respond to all aspects of traffic, parking and transport issues	●			●●	✓		

Key

- meets STTPP objective
- strongly meets STTPP objective
- ^ includes schemes which have not yet progressed or may not be progressed at this time

Table 10.1 - Recommended schemes or initiatives to be implemented as part of the STTPP

FORWARD PLANNING AND URBAN DESIGN								
ID	Scheme/Initiative	Reduce Traffic Congestion	Improve air quality, noise and environment	Improve Accessibility and social inclusion	Improve Safety and Security	Under Consideration ^	In Progress	Completed
FU1	Development of sustainable transport design guidelines for developers aimed at encouraging inclusion of more sustainable transport options and access	●●	●		●	✓		
FU2	Management of deliveries within pedestrianised zones including: - New controls of the time of operation, vehicle access and vehicle type - Enhanced facilities and signing for loading and delivery bays - Stronger enforcement to reduce the level of indiscriminate parking/loading by commercial vehicles and minimising conflicts with pedestrians and other road users in the town centre			●	●		✓	
FU3	Further measures to manage and control commercial vehicle access to the town centre including priority access for low emission/electric vehicles	●	●●		●	✓		
FU4	Encourage businesses to develop home delivery services to reduce the need for certain town centre trips	●	●		●	✓		
FU5	Urban design and development of Market Place pedestrianisation as a new cultural area and focal point within the historic core to be considered/investigated	●	●		●	✓		
FU6	Investigate the possibility of developing an urban sustainable distribution consolidation centre at the Frontier in order to co-ordinate deliveries to the town centre	●●	●		●	✓		

# 11 STTPP Monitoring

## 11.1 Introduction

To assess whether the STTPP is achieving its objectives, it is essential to set targets and monitor progress towards these targets. Monitoring of the STTPP programme is a vital and integral part of the plan, and will assess how successful measures are performing against the objectives and targets that have been set. It will also allow corrective action to be taken at appropriate milestones during the plan period if performance is not as good as expected. Adopting a comprehensive monitoring process will ensure there is a focus on delivery and that this is managed and maintained over the life of the plan.

Regular monitoring of conditions will help assess whether problems are being overcome or whether new problems are being seen to emerge. Monitoring should be based on an agreed set of performance indicators and consequently it is important that these can be readily measured and easily interpreted. It is recommended that STTPP Implementation Team carry out annual monitoring of the core indicators to review progress against objectives and targets.

## 11.2 Developing a Monitoring Framework for the STTPP

Effective and efficient monitoring programmes must reflect a simple process of aggregating readily available data sets. In the development of the STTPP and its targets, a crucial balance is necessary between the level of ambition in the targets being set and the necessary investment in these areas reflected in the financial programme. This balance must be correctly set and maintained, if the plan is to deliver the desired outcomes.

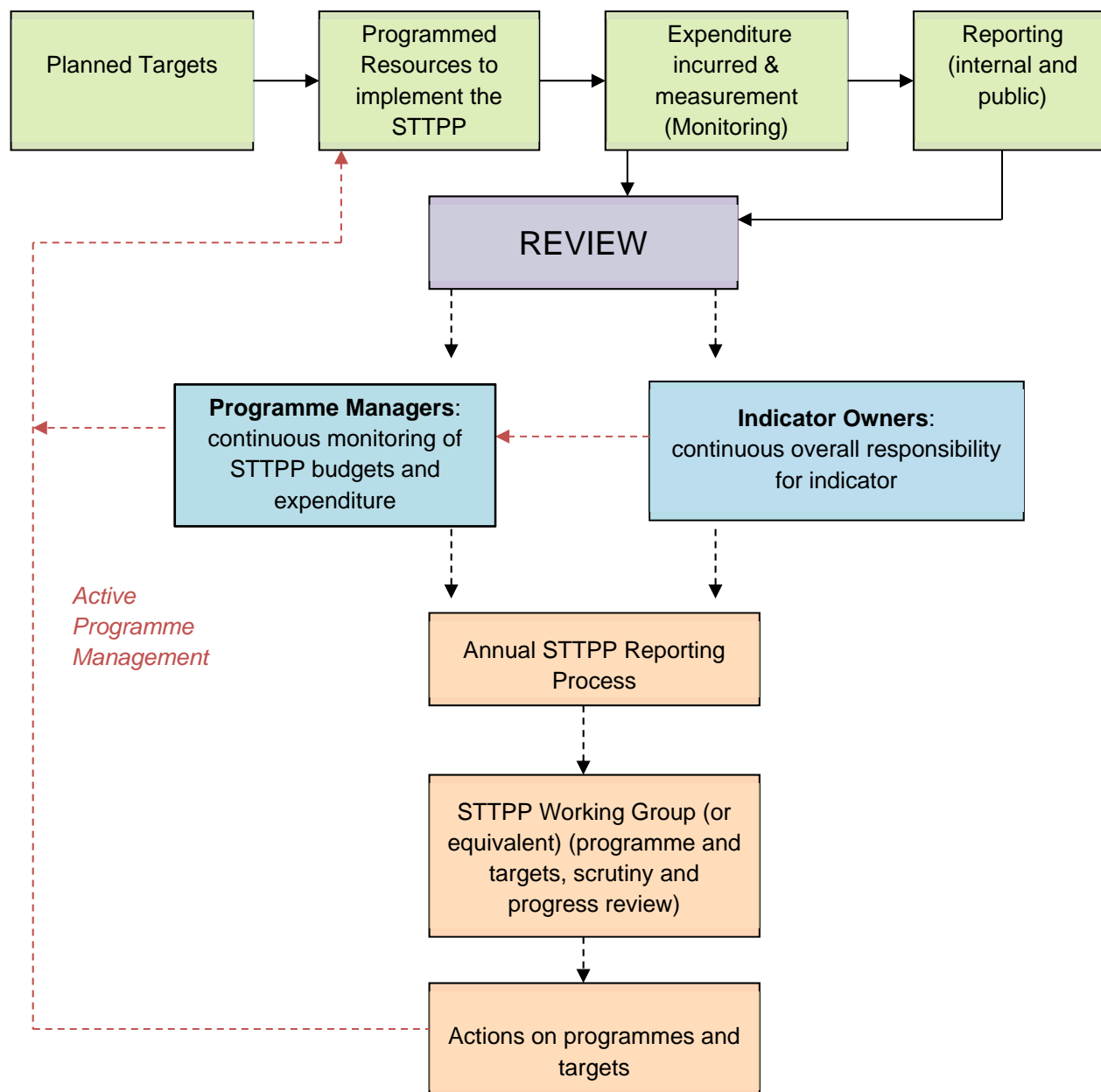
One option for the ongoing monitoring process is highlighted in Figure 11.1 which summarises how the monitoring of the STTPP could operate, with the overall process examining the evidence (programme spend, performance indicator outturn) as well as the performance against each indicator. This scrutiny and review process will help with corrective actions being used to amend programmes, or if appropriate adjustments to STTPP targets. The approach requires close involvement of indicator owners and programme managers who in the first instance need to work together to make any day to day adjustments to the programme that are necessary.

In addition, a comprehensive set of performance indicators have been identified to enable the impact of the STTPP measures to be assessed against the key outcomes. Regular monitoring of traffic and transport conditions will help assess whether problems set out within this Plan are being overcome or whether new problems are being seen to emerge. The STTPP monitoring framework is based on an agreed set of performance indicators that clearly link to the strategic objectives presented earlier in section one. It is important that these can be readily measured and easily interpreted.

The STTPP strategy is not fixed and will be regularly reviewed and adjusted to meet future challenges over the coming years as well as take on board changes in technology and best practice in the delivery of sustainable travel solutions. A mixture of qualitative and quantitative data is beneficial to help gain a greater understanding of the overall direction of the STTPP. In addition, the information is also used to assess the potential opportunities and impact of the STTPP. It is important to collect constant feedback via public consultation in order to refine any

implemented schemes and investigate the possibility of other initiatives. This public consultation process was carried out at the start of the data collection process for the STTPP and should continue throughout the duration of this 10-year Plan. The initial public consultation summary has been attached in Appendix 11.

Figure 11.1: Recommended STTPP Monitoring Framework



(Source: Mott MacDonald Limited)

## 11.3 Draft STTP Indicators

In developing the monitoring framework, a rolling programme of monitoring of key indicators should be undertaken based on the strategic objectives that have been set including modal split, levels of public transport usage, safety and security and environmental conditions. It is also proposed that Scheme Impact Reports (SIRs) are undertaken across a selection of the different transport projects to help understand where successful delivery is being achieved and reasons for the success factors associated with different types of schemes.

Consideration should be given to setting targets against these indicators once investment decisions have been taken as part of process to develop an annual delivery programme over the lifespan of the Plan.

### 11.3.1 STTP Performance Indicators

A number of potential STTP performance indicators (PIs) have been identified that support the new STTP vision statement and associated objectives/goals. These PIs will help to assess year by year progress with the way the transport interventions are impacting on STTP policy objectives. Quantifiable performance indicators have been identified to assess progress on particular transport policies which fall into a number of groups: -

1. **Transport system:** core transport statistics for Gibraltar including total number of road kilometres travelled and proportion of trips undertaken by public transport/walking/cycling.
2. **Travel times:** including average journey time per kilometre and proportion of bus services running to schedule.
3. **Road Safety:** including people killed or seriously injured (KSI), and accidents involving pedestrians and cyclists.
4. **Public Transport:** including patronage, reliability, and punctuality and user satisfaction.
5. **Accessibility and mobility:** including pedestrian and cycle monitoring.
6. **Parking:** including occupancy and behaviour (level of abuse of parking regulations and fines).
7. **Environment:** including nitrogen dioxide and other emissions as well as noise levels.
8. **Social:** satisfaction surveys in terms of public transport as well as quality of pedestrian/cycle environment and also car ownership.

The full list of draft STTPP indicators is set out below in Table 11.1.

Table 11.1: Recommended List of Proposed STTPP Key Indicators

Element	Ref. No.	Indicator Name	Contribution Towards STTPP Objectives				
			Network Efficiency	Accessibility	Safety	Environment	Quality of Life
Transport System	1	Road Traffic Kilometres	✓			✓	
	2	Road Traffic Flows into Gibraltar Centre	✓		✓	✓	
	3	Proportion of journeys to work by sustainable mode (walking/cycling/public transport etc.)		✓			
	4	Increase in total number of public transport trips		✓			
Travel Times	5	Average journey time per kilometre in the morning peak	✓			✓	
	6	Public transport services running on time	✓			✓	✓
Road Safety	7	Road Traffic Casualties (Fatalities and Injuries)			✓		✓
	8	Road Traffic Accidents involving Pedestrians and Cyclists			✓		✓
	9	Speed Monitoring Relative to Legal Limit			✓		✓
Accessibility & mobility	10	Cycling Monitoring: Modal split (proportion of trips by bicycle) and local cycling levels		✓		✓	✓
	11	Pedestrian Monitoring: Modal split (proportion of trips by foot) and local walking levels		✓		✓	✓
Parking	12	Parking Space Occupancy Rate	✓	✓			
	13	Parking Behaviour (According to Regulations)	✓		✓		
	14	Number of people using Park & Ride (when new/formal scheme is introduced)	✓	✓			
Environment	15	Air Quality Monitoring: Concentration of Nitrogen Dioxide (NO <sub>2</sub> ) and PM10				✓	✓
	16	Outdoor traffic related daytime noise levels				✓	✓
Social	17	Level of Public Satisfaction with Bus Services					✓

Element	Ref. No.	Indicator Name	Contribution Towards STTPP Objectives				
			Network Efficiency	Accessibility	Safety	Environment	Quality of Life
	18	Car ownership		✓			✓
	19	Satisfaction with the Quality of Pedestrian and Cycle Environment		✓		✓	✓

## 11.4 Before and After Scheme Monitoring

Every new scheme provides an opportunity for learning from experience and improving the level of understanding of the performance of policy instruments that have been used. This can only be achieved if there is an effective before and after survey which identified the impact of the scheme on the key performance indicators and against the primary strategic objectives. It is recommended that within the STTPP monitoring strategy representative scheme, monitoring is included to review the effectiveness of the proposed interventions in delivering the objectives of the strategy. This should include a representative sample of measures for which detailed monitoring information is available.

### 11.4.1 Post Scheme Evaluation

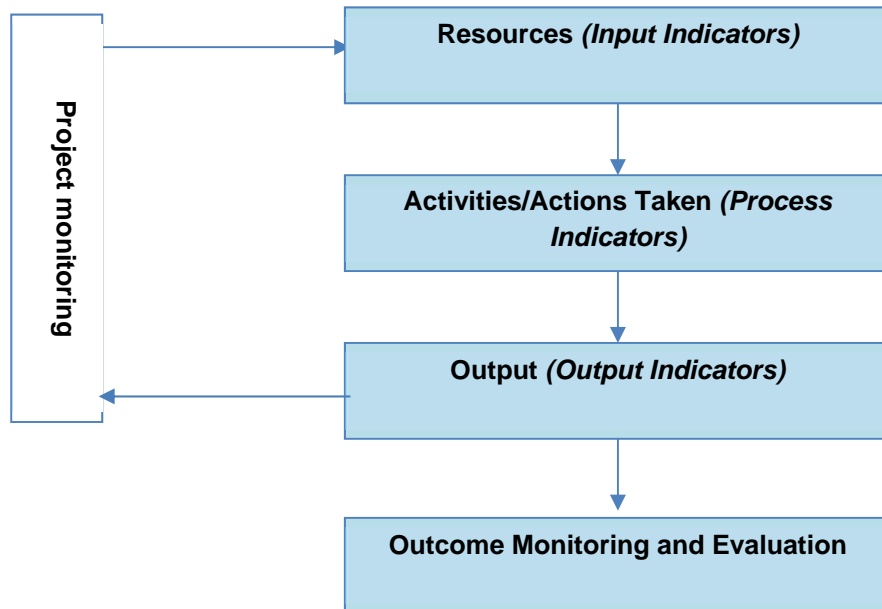
Post-scheme evaluation assesses the consequences of implementing a strategy or a scheme, and how these relate to the intended consequences that provided the justification for proceeding with the scheme. Outcome indicators provide crucial information about the performance of the project and in conjunction with data on resource inputs enable factors such as cost effectiveness to be assessed. Outcome indicators may need to be provided in the short, medium or longer term.

The timing of post-scheme evaluation (and the collection of outcome indicators) is important to consider, because if it is carried out too soon, the full impacts resulting from a project may not be evident (for example, build-up of patronage on new bus route). Conversely, if it is undertaken too late, resources will be wasted and similar projects will not benefit from the lessons learnt.



This will be used to review the effectiveness of the interventions introduced as part of the STTPP, as outlined in Figure 11.2.

Figure 11.2: Scheme/Project Monitoring Feedback Loop



(Source: Mott MacDonald Limited)

Post-implementation evaluation is the final stage in the completion of a transport project, and focuses on examining how well the project has performed against a range of objectives, drawing on both project and outcome indicators. It is the most important point at which to review the project planning and implementation stages and the overall results of the project decision-making. There are numerous benefits of this approach including:

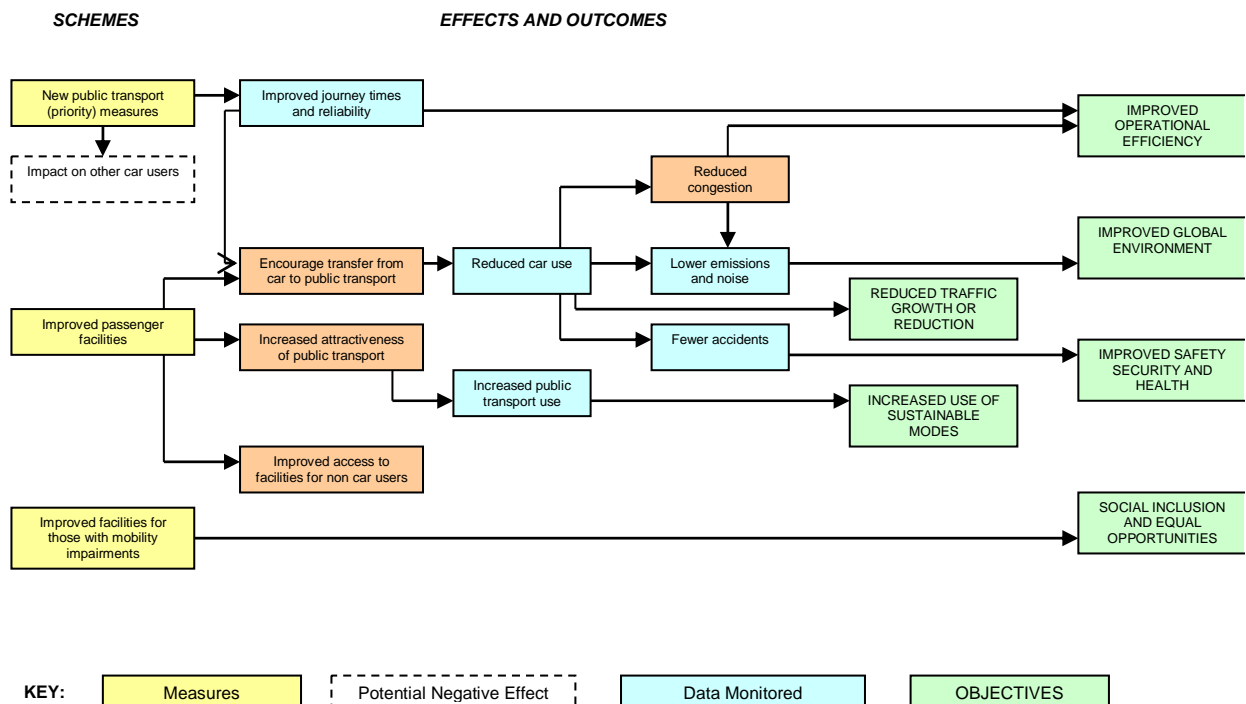
- Identifying any constraints or 'bottlenecks' that have impeded the project;
- Assessing the actual benefits and the number of people who have benefited;
- Providing guidance on the strengths and weaknesses of the project, for future replication; and
- Identifying the extent to which the intended objectives of the project has been realised.

The evaluation process usually involves the assessment of a project's performance, efficiency and effectiveness (including both expected and unexpected) in terms of the stated objectives. The evaluation process can provide tangible evidence that the resources that have been put into the project have benefited residents and other stakeholder groups. More importantly, it can also help to direct future resources to support the types of projects that deliver clear outcomes. It can also be useful in demonstrating benefits to funding sources and to local communities which can help gain political support for future implementation.

Scheme monitoring provides essential feedback to the proposed programme, allowing successful schemes to be identified. Post scheme evaluation (in the form of Scheme Impact Reports) can also help improve future processes, with findings used to improve future transport

decision-making processes and procedures. A Scheme Impact Report should contain detailed monitoring of a representative sample of schemes, showing how they have contributed to the strategy objectives through the use of 'causal chain' diagrams. A typical example of such report is set out in Figure 11.3, for a Public Transport Scheme. The detailed monitoring also provides essential feedback to the STTPP strategy development, and allows the most effective scheme to be chosen for particular circumstances.

Figure 11.3 Example Bus Service/Infrastructure Improvement – Causal Chain of Inputs and Outcomes



(Source: Mott MacDonald Limited)

It is recommended that additional 'causal chain' diagrams are produced to clearly understand the intended outcomes and links with STTPP objectives for other types of measures including:

- Area-wide parking management schemes;
- Road safety schemes;
- Bus interchange improvements; and
- Walking and cycling network improvement schemes.



## 12 STTPP Summary & Next Steps

The new Sustainable Traffic, Transport and Parking Plan (STTPP) has been developed based on a comprehensive assessment of travel and transport patterns in Gibraltar, as well as extensive consultation on key transport issues with residents, businesses and other interested parties. The end result is a new strategy vision and objectives that aims to provide a high quality transport system that people choose as an alternative to the car. The core policy objectives of the STTPP are to provide an efficient transport network, improve environmental conditions and encourage healthier, sustainable travel choices to residents and tourists alike. The plan also supports other wider quality of life objectives including improving accessibility to facilities and services and improving transport security and safety.

It is recognised that the ramifications of Brexit for Gibraltar are widespread ranging from the performance of the economy, which in turn effects the demand for travel, to the day-to-day movement of people and goods across the Frontier. At this time of on-going negotiations, strategizing and forecasting there is limited value in developing 'what if' scenarios or producing detailed plans. However, as more details of potential changes emerge the wider impacts can be modelled using the tools developed for STTPP and options for dealing with any specific Frontier changes produced which can be introduced into an updated STTPP.

At the heart of the plan is significant enhancement in the public transport system that will enable people to travel throughout Gibraltar on higher quality vehicles with minimal walking at the start and end of their journey. As a longer term approach a review of the bus routes will provide fast, frequent services to destinations throughout Gibraltar. Short term upgrades to provide up-to-date travel information will be available via displays at bus stops or even by smartphone apps. Consideration for new pedestrian and cycle routes will provide sustainable connections between local communities, and key destinations within the city centre such as Main Street and the Cable Car at Grand Parade, as well as the Frontier. New cycle parking provision is being considered to encourage more cycling activity and improved pedestrian routes between key destinations.

Recognising the high level of car ownership and use within Gibraltar it is essential that new parking controls are introduced to manage and control parking activity more effectively in the future. New proposals to introduce both on-street and off-street parking charges and controls are included in the plan and it is proposed to consult with local residents and communities on the introduction of new residents parking schemes aimed at improving local parking and access.

The Disabled Blue Badge Scheme will also be reviewed and updated. This will consider the criteria for permits, the possible introduction of photo ID cards, the use of a time-clock system and a full assessment of the number and location of disabled parking bays throughout Gibraltar.

The development of schemes and initiatives set out in the plan will be subject to further consultation with local residents and businesses. High quality, sustainable transport solutions will be developed that will enable Gibraltar to grow and prosper, with environmentally-friendly transport solutions creating a cleaner, healthier and safer environment for everyone to enjoy.

## Glossary

ANPR	Automatic Number Plate Recognition
AQAP	The Gibraltar Air Quality Action Plan
AQMA	Air Quality Management Area
CAA	Civil Aviation Authority
CCTV	Closed Circuit Television
DPB	Disabled Persons Badges
EC	European Commission
EU	European Union
FPN	Fixed Penalty Notices
GAFAR	Gibraltar Airport and Frontier Access Road (includes runway tunnel)
GBCL	Gibraltar Bus Company Limited
GCPL	Gibraltar Car Parks Limited
GDP	Gross Domestic Product
GEZ	Gibraltar Environmental Zone
GHG	Greenhouse Gas emissions
GPMSL	Gibraltar Parking Management Services Limited
GIS	Geographic Information System
GPS	Global Positioning System
GTA	Gibraltar Taxi Association
HEOs	Highway Enforcement Officers
HHC	Hand Held Computers
ICES	Imperial Civil Enforcement Solutions
KSI	Killed or seriously injured

MMP	Mobility Management Plan
MoD	Ministry of Defence
P&D	Pay & Display
PHV	Private Hire Vehicle
PMO	Parking Management Officer
PNR	Private Non Residential Parking
PO	Policy Objectives
PRT	Personal Rapid Transit
PSVs	Public Service Vehicles
PTW	Powered Two Wheeler
PVR	Peak Vehicle Requirement
RGP	Royal Gibraltar Police
RNIB	Royal National Institute of Blind People
RSIs	Roadside Interviews
RTPI	Real-Time Passenger Information
SIP	Stakeholder Involvement Plan
SIR	Scheme Impact Report
STTPP	Sustainable Traffic, Transport and Parking Plan
TSD	Technical Services Department
VisSim	Traffic Patterns Simulation Software
VMS	Variable Message Signing
WCA	Winston Churchill Avenue

# Definitions

## **Gibraltar Environmental Zone (GEZ)**

Considered as a low emission zone via the control of parking and the enhancement of traffic fluidity via the reduction of private car usage and the promotion/improvement of public transport

## **Transport Hubs**

In their simplest forms can be places such as a bus stop where a walking journey becomes a journey by a different mode of transport (e.g. cycling). However, at their most complex, they can handle millions of passengers per year interchanging between many different modes such as a major airport linking to rail and bus services.

## **Walking Buses**

Consists of a group of children being walked to school under the supervision of two trained adults. In principle, the main supervisor leads the group with the help of an aide who manages the group at the rear.