HM Government of Gibraltar

Sustainable Traffic, Transport and Parking Plan (STTPP)

Implementation Concepts

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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 that minimise adverse impacts on the environment and promote healthier lifestyles.'

The STTPP sets out the overarching vision and objectives for traffic and transport in Gibraltar over the next 10 years. It sets out the framework and contains clear policies aimed at tackling the many traffic and transport related issues being faced today and those that are expected to surface in the near future. The Plan sets out both specific proposals and others, which are more generic in nature. It then describes how and when recommended schemes and initiatives should be introduced and most importantly, how they should be monitored and reviewed. Most schemes implemented will initially be pilot in nature, and as the very term implies, during this period these concepts are being assessed and tested to see whether they can, or even need to be improved or perhaps even discontinued. Public feedback is an essential part of the process but sufficient time is required to allow the concepts to set and find their place within the overall Plan. Until the jigsaw puzzle in complete, the real value of the plan will not become evident. Schemes should therefore not be seen independently but as part of a bigger picture.

Even though every proposal has been accompanied by an element of engineering judgement, many of the concepts described within this document will require further development before they are ready to be tested as pilot schemes. Some are straightforward and inexpensive whilst others are more complex and will need funding sought. Many of these concepts still require further work, technical assessments, value for money analysis and detailed engineering study including digital modelling where necessary in order to assess their feasibility status before seeking funding approval.

There are also external influences that could and will most probably affect Gibraltar in some way. **Brexit** for one, may bring about a need to tackle traffic and transport related issues in a different manner. Furthermore, there are other factors, whose effects on traffic & transport are yet unknown, such as the future, final arrangements for the current airport runway crossing with regards to the Gibraltar Airport and Access Road, including the runway tunnel (GAFAR). Nevertheless, the main objectives, key recommendations and the policies are not expected to change in any significant way.

This document has been prepared with the view of demonstrating more detailed concepts based on the underlying principles of the STTPP, which can be summarised by the vision statement. Some of these concepts are already pilot schemes and others have already been fully adopted. The intention is

that the STTPP will be a 'living' document, one that will need to be reviewed and updated in the future to keep it fresh and current.

The STTPP report covers a broad range of topic areas ranging from parking, public transport, sustainable travel, environmental enhancements, traffic management and road safety. The report focuses its content on the main objectives of the Plan, which is supported by the central STTPP "Vision Statement".

This document is closely linked to the Objectives Table found in Chapter 10 of the STTPP Main Document also reproduced at the end of this document. The Objectives Tables underline the key initiatives and projects that are either under consideration, in progress or that have been completed providing a structure for those whose responsibility is of implementing these principles.

Proposed Key STTPP Target Areas

The main areas to tackle to bring about significant change are summarised below and elaborated upon further later on.

01. Public Transport Systems

Bus Information Systems Improvements

The bus information systems currently available are limited and dated. Much work research has already been carried out to establish new ways in which the public can gain easy access to valuable information on the bus network that will in turn lead to increased confidence and acceptability of the bus service.

Taxi Service Enhancements

As highlighted in STTPP Chapter 5 "Public Transport", the taxi service in Gibraltar does not meet public nor stakeholder expectations. A thorough audit and complete review of the service is critical if any serious and meaningful inroads are to be made. Following this, a serious attempt must be made to bring this, what should be considered an essential public service and not a luxury, in line with public and user expectations.

02. Pedestrian Route Upgrades and Proposed Cycling Route

There are numerous pedestrian routes/areas that require upgrading and improvement in order to attract more sustainable travel such as walking and/or cycling. Many pedestrian routes and potential cycling routes throughout Gibraltar have already been identified with a view of carrying out improvements. Some of these schemes are ready to be implemented whilst others have already been completed.

03. Alternative Forms of Sustainable Private Transport

It is crucial that other forms of sustainable private transport are encouraged, well promoted and their use incentivised in Gibraltar in order to keep in line with the central environmental aims of the STTPP.

04. Traffic Management, Road Infrastructure and Safety

Many traffic management and road improvement schemes are constantly being explored with a view of enhancing the fluidity of traffic and improving road safety.

05. Parking Management and Planning

Parking management and planning is another crucial element of the STTPP as it targets one of the core problems that have been constantly raised throughout the study. It is therefore important to regulate parking restrictions, reduce indiscriminate parking, zone and prioritise residential parking areas, and ensure that logical well-defined parking plans are established where required.

06. Car Culture and Ownership

The inherent car culture in Gibraltar has contributed to a staggering increase in car ownership that directly affects traffic fluidity and parking space availability. Both soft and hard measures may be required in the future in order to stabilise and improve the existing problems and allow other initiatives such as Residential Parking Schemes to be implemented successfully. This will no doubt be one of the most difficult targets to achieve. One of the most important tools available to tackle this societal phenomenon will be that of education, especially of the younger generations who will perhaps be more amenable to change.

01. Public Transport System Improvements

1.1 Bus Information System Improvements

It is only through the development of improved and clear bus information, that the potential bus user can understand the bus service being offered. A greater user understanding leads to increased user confidence, in turn leading to an increased take-up of the service.

Real-time information systems allow users to make timesaving choices and open up more route options. It allows bus users to be able to “meet the bus” instead of having to “wait for the bus”. Other existing bus network information systems throughout the world have been analysed so that tried and tested schemes elsewhere may then be considered and adapted to suit Gibraltar’s needs.

The following ideas should be considered, some of which are already on-going:

- New Gibraltar Bus Company Logo and Branding;
- Bus Route Maps with Improved Spatial Awareness;
- Introduction of Real-Time Information Systems;
- Face-lift and Enhancement of Bus Stop Signage;
- Accurate timetabling for most key bus stops;
- Audio Visual on-board Information.

In order to effectively increase the quality of the information systems that are currently present throughout the bus network, it is necessary for the existing layout of signage and bus route representations to be completely reviewed and redesigned if necessary in order to make them more user friendly. There are still many potential users who do not use the bus as a direct result of not knowing how the service works and not having sufficient information regarding the bus routes available, time of departure and frequency. By providing more information that is easily interpretable, confidence in the bus service will increase and this will result in increased in user take-up.

It is also important to consider the needs of other bus user groups other than the local population. Visitors, who are unfamiliar with Gibraltar, will also use the bus service when visiting Gibraltar and are often found struggling as a result of poor information. It is this user group that, in fact contributes directly to the bus service through the payment of bus fares.

1.1.1 New Gibraltar Bus Company Logo & Branding

At present the Bus Company presently does not have a logo or branding. Having a logo design and branding will also help users, especially non-locals identify the bus service and its associated bus stops clearly. The new logo is illustrated below in Figure 1.1

Figure 1.1 - New Gibraltar Bus Company Logo

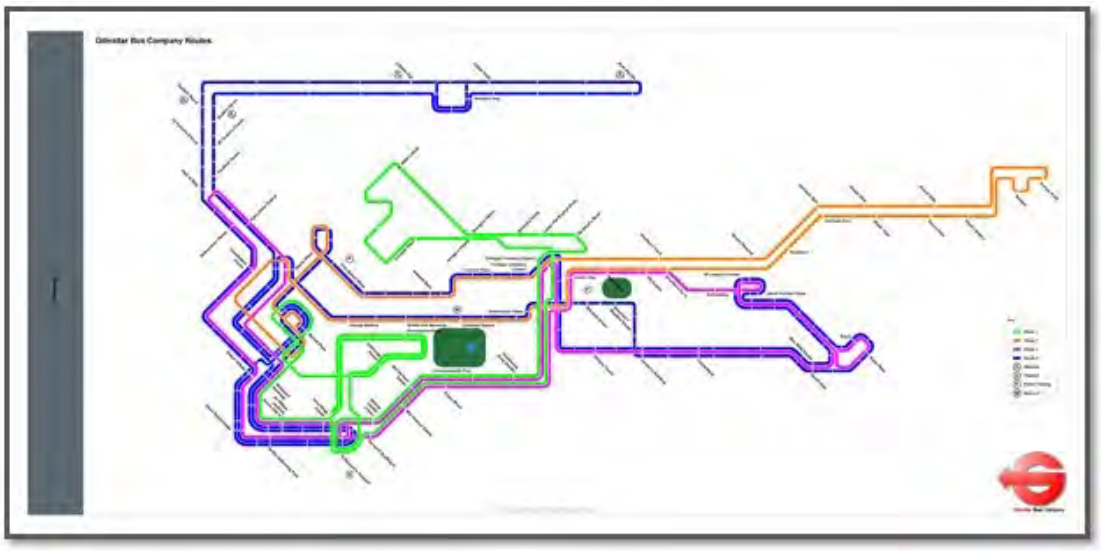
1.1.2 Bus Route Maps with Improved Spatial Awareness

One of the most important concepts related to bus route information displays is the element of spatial awareness. By providing a sense of orientation to the user relative to their position on a map and by displaying landmarks and/or tourist attractions as necessary, the public can better learn to understand the bus route network and make informed decisions as to which buses they can catch in each particular direction.

Figure 1.2 shows an example of a new bus route network map currently being developed, providing spatial awareness to the user. At present the bus routes are displayed independently in either linear or circular type format. They provide no notion whatsoever where shared bus stops (hubs) can be found. This makes it very difficult to change easily from one route to the other.

The comparison between this new design and the existing bus route representation format clearly illustrates the effectiveness of having bus routes modelled in a logical and diagrammatic fashion. The full map can be viewed in Appendix 1.

Figure 1.2 - New Bus Route Network Map (Concept)



1.1.3 Real Time Information Systems

To further increase the quality of the existing bus service, consideration must be given to provide the public with real-time information so that the present "wait for the bus" custom can slowly evolve into one of "meeting the bus". This will not only eliminate the inconvenience to the public of having to wait for the bus, but it will also minimise complaints derived from buses arriving late or being out of service. Real-time information can effectively show the precise location of the bus and provide estimated arrival times to allow for sensible decision-making.

Web and Mobile App technology is discussed in greater detail at the end of this chapter.

1.1.4 Enhancement of Bus Stop Signage

- **Flagpole Signage**

The existing signposts do not provide clear information regarding the routes served by the bus stop. On some bus stops, the privately operated Route 5 is not referred to. It is essential that bus stop signs display all the bus routes available regardless of who operates the route. Bus stop "flagpole" signage should be upgraded to reflect clear well-presented information. Figure 1.3 shows an example, for illustrative purposes, of how a bus stop signpost can be used to display useful information. The sign should show the name of the bus stop location, the bus routes served at this stop and the buses direction of travel referring these to a point or place of interest as necessary.

Full and further details are found in Appendix 1.

Figure 1.3 – Proposed Bus Stop Signage

- **Location Maps**

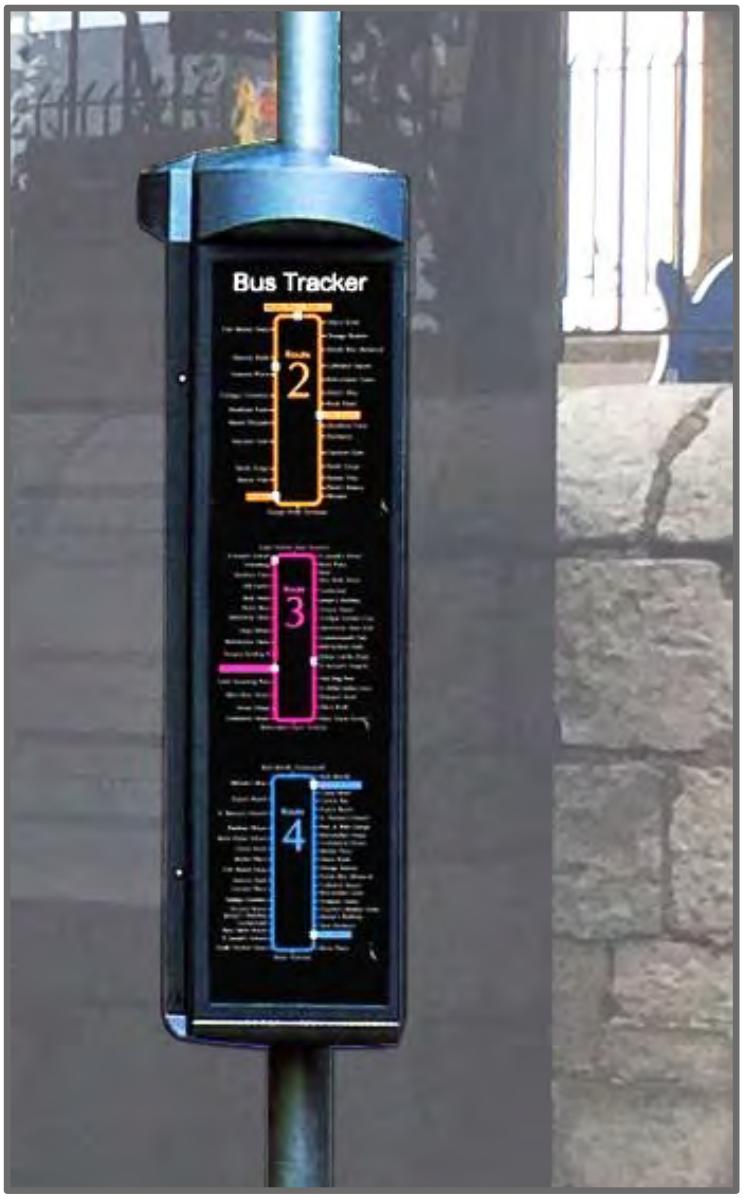
Location maps are normally displayed at bus stops and these give the user, mainly those unfamiliar with the surrounding area, their actual relative to a map, but most importantly it will point out the position of other bus stops in the area. A key on the map will give the user the exact location of the bus stop required to reach their destination. This is particularly useful in areas where there are multiple bus stops each served by different route buses heading in distinct locations.

- **Real-Time Information Signage (Concept)**

This concept of Real-time Information signage consists of displaying on the bus stop, the same real-time information as displayed on the Bus Tracker Web App. This gives users without a smart phone the ability to see where the bus is and can therefore track its arrival. An example in shown in Figure 1.4.

There are other methods of displaying this information within the bus stop itself by way of an information AV screen. Alternatively there are systems that give the user an estimated time of arrival in minutes digitally.

Figure 1.4 – Real-time Information Signs



1.1.5 Accurate Timetabling

Currently, the only bus stops that accurately provide their users with accurate departure times are those at the terminus where buses and their respective drivers normally wait after completing the previous service to start their next trip. These end-of-route stops are important in order to keep buses running to a given timed schedule.

For users currently waiting a bus the signage simply states at what time the service left the terminus but does not give any indication of the time the bus is expected to arrive at the next stop and so forth.

A real-time application display at bus stops will somewhat do away with the need for accurate timetabling at each bus stop but is still useful to have.

There are many factors that can upset the accuracy of set timetabling e.g. the incidence of traffic delays, road works, diversions and bus breakdowns.

1.1.6 Audio Visual on-board Information

A further future consideration could include audio announcements on board buses that tell users that they have arrived at a given stop, tourist site or place of interest. On board visual displays can also let passengers know how many stops remain before their intended destination.

1.1.7 On-Street Bus Ticket Machines

On-street bus ticket machines are used in many cities in order to speed up boarding times at very busy bus stops. At these locations bus tickets can be bought in advance of boarding. Alternatively, e-tickets could be purchased by means of a Bus App. It would be very useful to introduce bus ticket machines displaying similar information to that of the smart phone App.

Figures 1.5 and 1.6 shows typical examples of how a bus ticket machine would look in one of the main bus stop locations in Gibraltar for illustrative purposes. Market Place bus terminal is known for having long queues of tourists waiting to purchase tickets before boarding the bus. This development would be ideal in order to streamline the problems experienced due to the lack of "pre-purchasing capabilities". Appendix 3 shows further details of the proposed scheme.

Figure 1.5 – Proposed "On-Street" Bus Ticket Machine (Market Place)

Figure 1.6 – Proposed "On-Street" Bus Ticket Machine (Alternative location)

1.2 Taxi Service Improvements

In order to improve the taxi service currently being provided, it is crucial that a complete review of the current system (both internally/externally) be carried out in order to identify the main problems that exist although these are generally very well known. Potential solutions are also well known but difficult to tackle without a will to do so.

Some of the studies already undertaken have revealed that a number of issues are continuously being raised by both the taxi user, members of the general public and other interested parties such as the Chamber of Commerce and the Gibraltar Federation of Small Business alike.

These include:

- The lack of taxis on City Service for the general public not least the local resident, especially but not limited to; when there is a large influx of tourist's arriving from cruise ships, across the land frontier and during other touristic events.
- The unavailability of taxis during the late evening / night and the very poor service being reportedly provided at the Gibraltar International Airport at flight arrival times and the unavailability of taxis for hotel pickups when requested, thus contributing to a very negative perception to tourists, business people and Gibraltar residents alike.
- A pre-booking service with a considerably high pre-charge of £5 is often seen by many as unfair for a service considered generally, at best, extremely unreliable.
- The public perception that ***some*** taxi drivers provide a poor image with regards to their attire, their attitude and lack of local knowledge generally, but particularly when conducting

Rock Tours. Taxi drivers and their vehicles are often the first impression that visitors to Gibraltar receive upon arrival making this factor extremely important.

- A refusal to accept city fares, especially when there are large numbers of tourists in town, in the hope that they will be able to conduct a much more lucrative Rock Tour. This is more common in certain taxi ranks.

- Fees are generally considered high by many and do not reflect value for money for the service being provided.

For this reason, it is proposed that the following measures be considered and explored further:

1. The development of a GPS linked taxi App for iOS and Android platforms like many others that already exist in the wider market.

    - This would allow users to book a taxi instantly in real-time via their GPS enabled devices as well as pre-book a service in advance.
    - This would give rise to other options such as cashless payments, registered members and direct pre-payment options to secure both the user and the taxi driver.
    - See example of taxi App illustrated details in Appendix 2)

2. Government should liaise closely with the Gibraltar Taxi Association (GTA) in order to set minimum requirements for taxi operations, including City Service roster numbers, suitable dress codes and other requirements including tour guide training. These set conditions can indirectly boost the service and the image of taxis by their users and the community in general. This will help increase the acceptability and hence take-up of taxis as an alternative and more sustainable form of transport.

    - Large visible signs showing licence numbers in order to enhance transparency and accountability in the event a user needs to file a complaint.
    - A clear visible fare table with suitably sized Photo ID displayed both at the front and rear of the passenger cabins to increase transparency of service and provide users the means to identify drivers should a complaint need to be made.

3. In support of point '2' above, the numbers of 'Transport Inspectors' (TI) should be constantly under review to ensure adequate policing of the Transport Act, and monitoring of the service being provided. Efficient policing would ensure taxi drivers adhere to legislation and follow the guidelines of the Taxi Citizen's Charter as agreed between Government and the GTA. The real possibility of actually receiving fines, written warnings or even licence revocations would go a long way in seeing tenable and tangible improvements to the current taxi service.

4. Consideration needs to be given to hotels and other important facilities to find real solutions so that they can guarantee a transport service for their clients who logically expect a certain level of service from a hotel. A more reliable and professional local taxi service would be the preferred first option, failing which, other solutions that look outside of the present taxi service may need to be considered and sought.

5. The lack of competition to the local taxi service means that the GTA have no pressure of having to improve their offering for fear of losing their market share. Competition is healthy and it creates a framework to improve the service being provided to the customer. At present, many would agree that there is no real and serious taxi service in Gibraltar. Other alternative modes of public transport have surfaced in other cities of the world purely because of issues such as lack of service or high cost of service. Uber is one of these, marketed as a car-sharing scheme and is growing rapidly worldwide. Allowing the licencing of alternatives may need to be considered in future should there be a lack of will from the service provider to improve.

6. Government needs to liaise with the GTA on the main underlying problems relating to the roster duties of taxis. 112 taxi licences for a population size such as Gibraltar with the numbers of visitors received on a daily basis is deemed sufficient. It is felt that there is no need to increase the number of taxi licences, only enforce that an equitable number of taxis are available to carry out City Service by ensuring that a City Service Roster is designed and adhered to. Should this not be possible, then granting more licences exclusively for City Service may need to be considered sometime in the future, although this is not seen as either necessary nor advisable. It is recommended that:

   - The number of taxi licences, which are currently held by Government, are maintained but that the roster schedule and framework be adjusted in order to balance out the needs of the taxi drivers with their users.
   - The numbers of taxis available for City Service are adjusted by increasing the number of taxis available in each given shift, reducing the number of shifts if necessary.
   - A stricter timetable be imposed for City Service Shifts to guarantee the availability of taxis at given, specific peak times, during the week and weekends and to coincide with the arrival of flights at the Gibraltar International Airport.
   - Consideration is given as to who should own and hence control taximeters. Taximeters provide huge amounts of useful statistics and data, which are essential to monitor the service and propose improvements to it. The taximeters' GPS software also provides crucial data to help monitor compliance of drivers on City Service. At present this data is held by the GTA alone, although a small amount of data is shared with Government. Consideration should also be given for Government to purchase taximeters from the drivers and hence own the rights to the data themselves.

7. The Government should continue to work closely with the GTA in every possible way in order to review changes and monitor progress regarding any new initiatives or schemes that may be introduced. Public consultation and other stakeholder contributions should be examined and taken on-board as a mechanism to improve the service.

8. The trade should see the Transport Commission as the authoritative agency capable of effectively dealing with public complaints and transposing these into real punitive measures if necessary, in order to ensure that there is respect for legislation.

It would be totally unfair to end this section without stating that the feedback received and the comments made does not truly reflect every taxi driver, the majority of which are hard working individuals, many who themselves strive to improve the service presently being provided. It falls on the policy makers to make these changes.

1.3 Public Transport Apps

1.3.1 Gibraltar Bus App

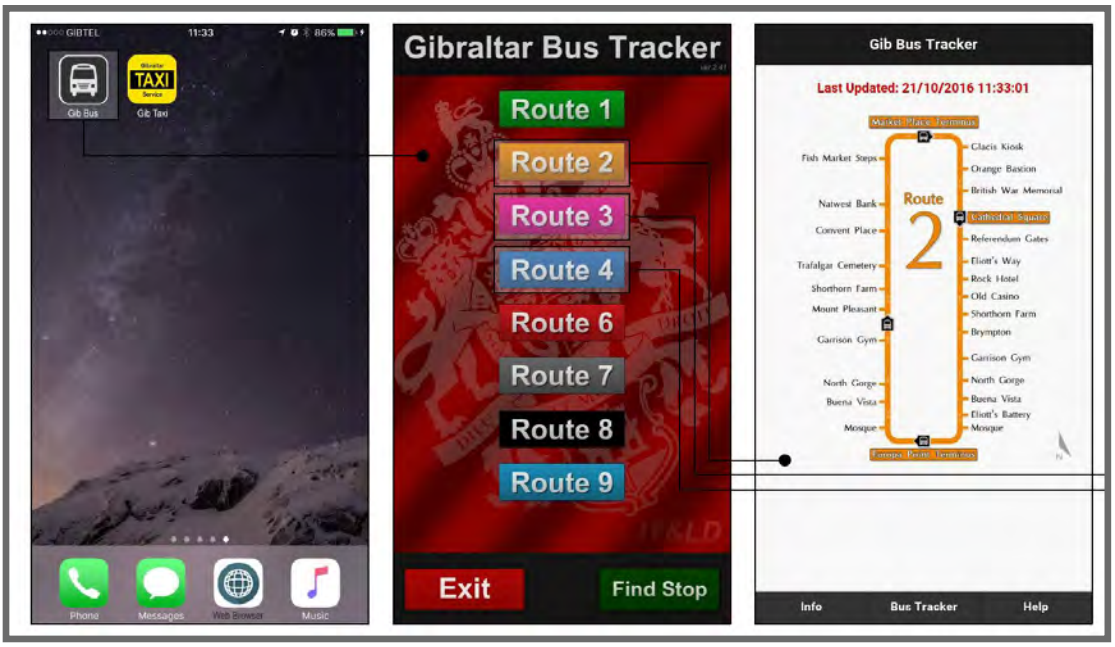
Gibraltar must consider improving its public transport system capitalising on advances in technology and the availability of smartphone Apps. The use of smartphone Apps nowadays, is on the increase. Many public transport services develop free Apps which can be used to view information, purchase tickets and carry out day-to-day operations that were once cumbersome, time consuming and unreliable.

The Gibraltar Bus Company is a prime example where the development of a smartphone App would lead to an improvement in the service provided. The App would provide an easy access portal to view real-time bus information. This would allow users to make sensible decisions based on the estimated arrival times of buses as displayed on their smartphones. Queues formed by the public trying to purchase tickets on the bus can be minimised drastically by allowing tickets to be purchased via the App. This will then provide App users with an “e-ticket”, as used by other transport providers elsewhere. A simple scan of the e-ticket on the phone can then allow users to enter the bus without any further delays.

Figures 1.7 and 1.8 shows examples of what future Apps could offer in terms of delivered service, in a very easy to follow user-friendly design. A bus tracker App both in iOS and Android platform has already been launched in part. This is only the first version of the App and therefore endless opportunities to expand and improve the App still exist. Full details of currently designed apps and proposals are attached in Appendix 3.

Figure 1.7 – New Gibraltar Web-Based Bus App

Figure 1.8 – New Gibraltar Mobile Bus App



Gibraltar Taxi App

It is proposed that a GPS linked taxi App for iOS and Android platforms is developed similar to those that already exist within the wider market. This would allow users to book taxis instantly in real-time or book taxis in advance via their GPS enabled devices. This would give rise to other options such as cashless payments, registered members and direct pre-payment options to secure both the user and the taxi driver.

Figure 1.9 shows a mobile App for illustrative purposes, which would lead to a live map showing taxis as icons moving throughout Gibraltar in real-time. From here it would be possible to request a taxi or book a taxi. The App would also manage your account, which could be linked to a debit or credit card or even use a system like PayPal to charge for fares and tips if indicated. The App would also set out the users exact location for the taxi to be able to find the fare. The App would also inform the user of the estimated time the taxi would take to reach the person requesting the fare should the request be confirmed.

Full illustration details can be found in Appendix 2

Figure 1.9 – Sample Mobile Phone App Icon.

02. Pedestrian Route Upgrades & Cycling Facilities

Introduction

The improvement of pedestrian and cycling facilities is another important aspect of the STTPP. Consideration should be given to the improvement of existing pavements and zones in order to increase their level of safety where practically possible. It is important to note that Gibraltar's topography is extremely restricted in many areas and therefore poses a huge challenge regarding space and access limitations. Nevertheless, it is important to study areas where minor improvements can be carried out, so that better facilities for both the pedestrian and the cyclist can be delivered.

A number of pedestrian improvement projects, although not by any means finite, has been listed below, many of which are directly linked to the objectives table in the implementation plan. Some of the projects listed below have been completed, others are being considered in further detail:

- ✔ Trafalgar Interchange Pedestrian Crossing (Zebra Crossing);
- ✔ Pedestrian Crossing Countdown Timers;
- ✔ Wellington Front Restoration Works Governors Lane Pavement Upgrade Proposal;
- ✔ Ragged Staff Road Pedestrian Crossing (Pelican Crossing);
- ✔ Catalan Bay Access Bridge from Car Park to Village;
- ✔ Europa Road Pedestrian Route (Buena Vista to Trafalgar Heights);
- Governor's Street Pavement Development;
- Governor's Lane Pavement Development;
- Keightley Way Tunnel Pavement Development;
- Alameda Estate / Saluting Battery Bicycle Lane Proposal;
- Rosia Road (North) Access to Alameda Estate Promenade;
- Winston Churchill Avenue/Sundial Pedestrian Crossing (Zebra Crossing);
- Other Pedestrian Crossings;
- Coaling Island Pedestrian Route Improvements;
- Winston Churchill Avenue Pedestrian Bridge Upgrade Proposal;
- Rosia Road Pedestrian Bridge Proposal;
- Market Place Pedestrianisation & Bus Terminal Relocation.

2.1 Trafalgar Interchange

A small crossing at the Trafalgar Interchange was introduced due to the high demand of pedestrians crossing at this location. The small island crossing was constructed together with the introduction of new road markings to improve the overall safety of the road crossing. This pedestrian route is part of a well-transited path towards the cable car and botanical gardens used by a high number of tourists on a daily basis. Figures 2.1 and 2.2 show before and after photographs of this road junction and the improvement to the pedestrian route that has now been established between Southport Gates and Grand Parade.

Figure 2.1 –Trafalgar Interchange (Pedestrian Crossing with Centre Island) – Before

Figure 2.2 –Trafalgar Interchange (Pedestrian Crossing with Centre Island) – After

2.2 Pedestrian Crossing Countdown Timers

As part of the overall pedestrian route improvement scheme, there have been a series of countdown timers installed throughout various pedestrian crossings in Gibraltar. These devices form part of a useful 'add-on' for pelican crossings as they provide very valuable time related information to users.

At pelican crossings, pedestrians tend to cross until the very last moment when the pedestrian display displayed turns red causing a sense of insecurity that at times becomes dangerous for less able-bodied pedestrians. At the same time, motorists tend to start driving off during the flashing amber light phase causing additional conflict at the crossing. The introduction of countdown timers provides the exact time that is left to cross so that both the pedestrian and the motorist are kept well informed.

Figure 2.3 shows several countdown timers that have already been installed across Gibraltar.

Figure 2.3 – New Pedestrian Crossing Countdown Timers

2.3 Wellington Front Restoration Works

The Government has now completed the Wellington Front restoration project. This project will provide the link to a number of the specific STTPP objectives as it will not only provide an alternative pedestrian route via the city walls but also a cycling route. This will be part of a wider scheme in which a longer pedestrian route is being developed allowing users to walk safely from Orange Bastion to the area of New Harbours. The whole area is being looked at with a view of providing a safe bicycle route.

Figures 2.4, 2.5 and 2.6 show some of the Wellington Front features that are now completed as well as an artist's impression of how city wall upgrades can be developed.

Please refer to Appendix 4 for full details regarding the proposed pedestrian route map.

Figure 2.4 – Wellington Front Project/Proposal for Greater Use of City Walls (View to the South)

Figure 2.5 – Wellington Front Project (View to the North)

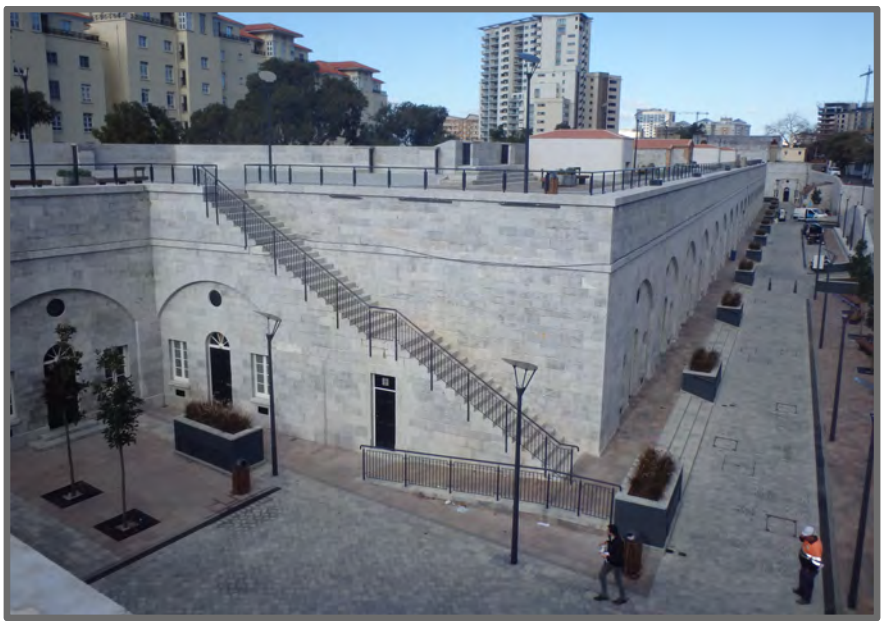


Figure 2.6 – Wellington Front Project (Artist's Impression)

2.4 Ragged Staff Road Pedestrian Crossing

Studies carried out as part of the STTPP identified that there was a high demand for a pedestrian crossing at Ragged Staff Road as most pedestrians were crossing at the road junction where no official crossing was present. This practice was extremely dangerous, posing risks to both the motorist and pedestrians alike. A pedestrian crossing was designed with the installation of herding barriers so that pedestrians would be channelled to the crossing in a safe manner. This has provided a much-improved layout balancing the needs of pedestrians and motorists alike. This was considered an important project given the difficulties faced by pedestrians and following consultation; the project was initiated and completed back in March 2016. Figures 2.7 and 2.8 show photographs before and after the project.

Figure 2.7 – Ragged Staff Pedestrian Crossing (Before)

Figure 2.8 – Ragged Staff Pedestrian Crossing (After)

2.5 Catalan Bay Accessibility Footbridge

The design and construction of this footbridge created a means of accessing the beach and its facilities from the adjoining car park. This project conforms to the principles of the STTPP by providing better means to encourage walking.

2.6 Europa Road Pedestrian Route (Buena Vista - Trafalgar Heights)

A notoriously dangerous stretch of Europa Road was modified making way for a segregated footpath protected by a low wall.

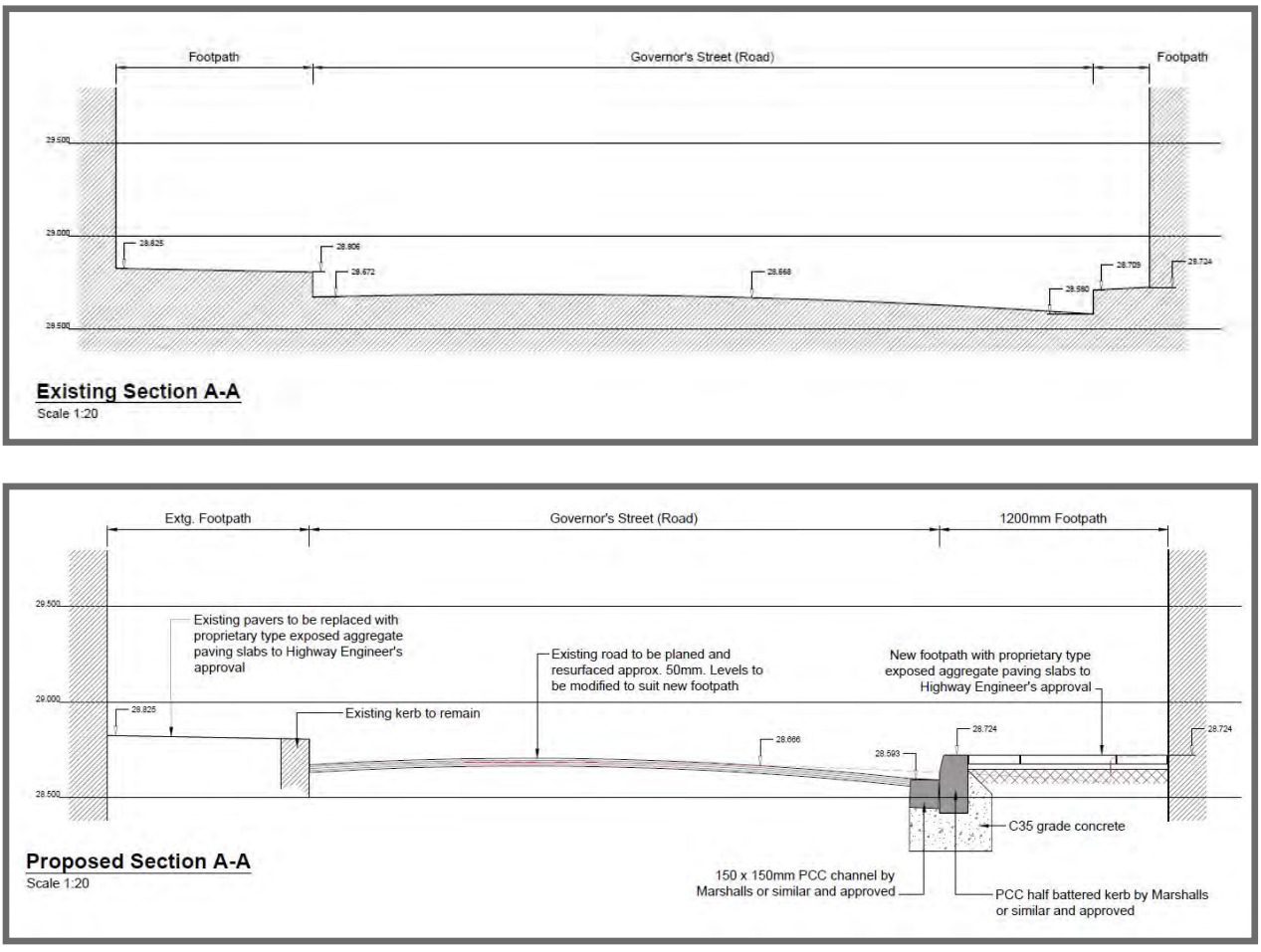
2.7 Governor's Street

Governor's Street is another very narrow stretch of road that has very poor pedestrian facilities. Furthermore, it has also become one of the main routes taken into the City Centre from the Upper Rock by tour buses, taxis and private vehicles. The current pavement on the eastern side of the street is in a poor condition whilst there is no pavement on the western side of the road. There is only a small kerbstone as edge protection to the buildings on the eastside and to further exacerbate the problem, there is an existing parking area which has been almost completely taken over by motorbikes which cause further difficulties as a result of protruding rear storage boxes restricting the width of the road and hence traffic flow even further.

Part of a potential solution is shown below in Figure 2.9 with further details in Appendix 4.

Works have already been approved and are scheduled to commence in 2017.

Figure 2.9 – Governor's Street Pavement Upgrade

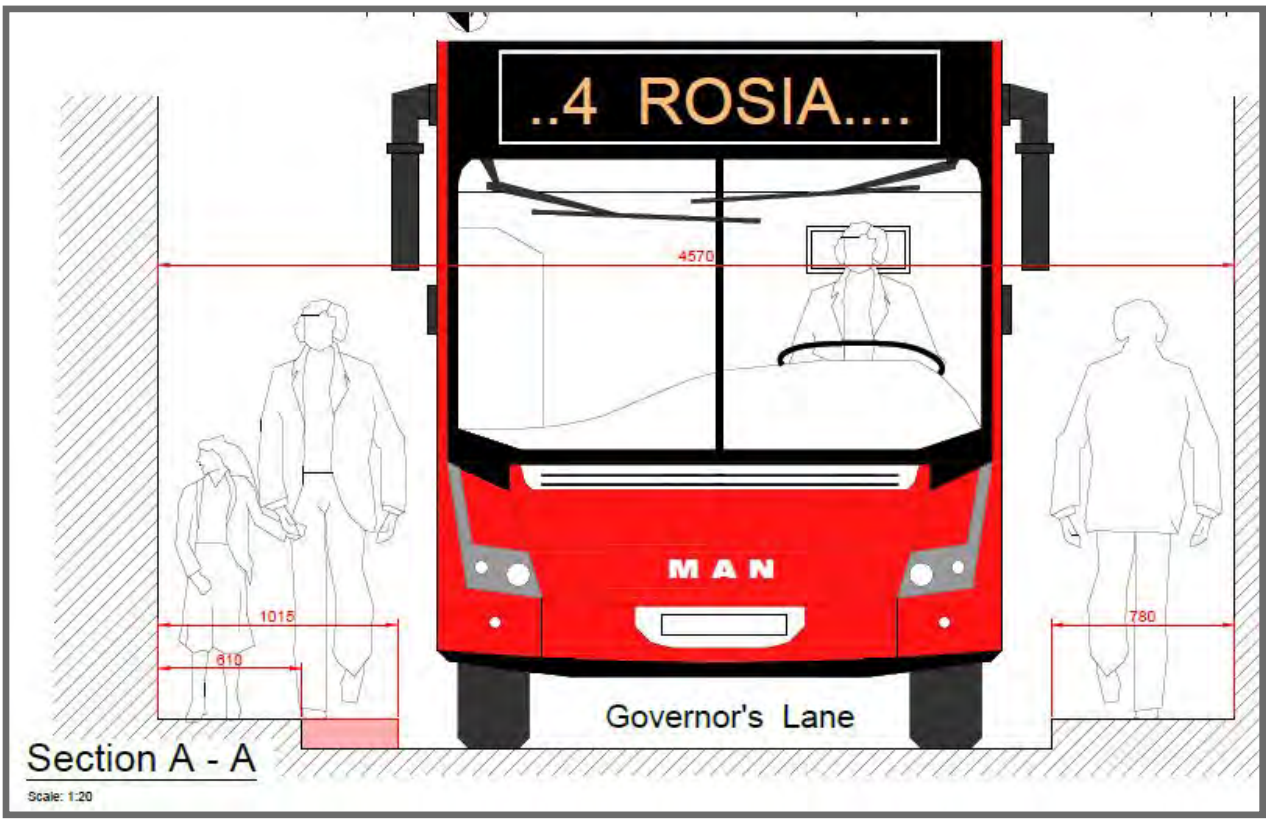


2.8 Governors Lane

An example of another possible pedestrian route upgrade is at Governors Lane where there is presently a narrow 610mm and 780mm wide pavement respectively, on either side. This road is the main thoroughfare into town and to the north. Although strictly not part of Main Street, this pavement is heavily used on a daily basis by many pedestrians and residents alike, travelling through Main Street as it connects them to Secretary's Lane, Duke of Kent House, Wellington Front and the Commonwealth Park / Queensway area. Whilst extremely limited by existing buildings on both sides of the road, a possible scheme to enhance safety on both sides would also act as a traffic calming measure and pavement enhancement has been proposed.

Figure 2.10 shows part of the scheme with a full technical "draft" document attached in Appendix 4.

Figure 2.10 – Governor's Lane Proposed Pavement Improvements



2.9 Keightley Way Tunnel

Gibraltar's tunnels are also a crucial element of the road infrastructure that allows vehicular and pedestrian access from one key district to another. Keightley Way tunnel is a popular pedestrian route heavily used by the public, especially tourists in order to access Europa Point (touristic landmark) from Rosia Bay and Little Bay and back. It is also a popular path for many locals carrying out exercise and leisure walking activities. Unfortunately, Keightley Way Tunnel currently has a pavement at road level with segregated kerbstones to demarcate the pedestrian route section. This offers poor safety for pedestrians creating a sense of insecurity for many using the route. There would be merit in introducing a raised pavement of adequate width with possible lighting and containment kerbs in order to further safeguard the pedestrian walkway.

Figure 2.11 shows the existing tunnel pedestrian route along with the proposed pavement improvements that has been designed for further consultation including a possible cycle lane. Figures 2.12 and 2.13 show before and after images of the access road to the tunnel itself.

Full details illustrated in Appendix 4. A similar scheme can also be explored at Dudley Ward Tunnel in order to introduce, if possible, a safe and suitable pedestrian access route.

Figure 2.11 – Keightley Way Tunnel (Pedestrian Route Enhancement) – Before and after

Figure 2.12 – Approach Road to Keightley Way Tunnel (before)

Figure 2.13 – Approach road to Keightley Way Tunnel (after)

2.10 Alameda Estate/Saluting Battery Bicycle Lane Proposal

It is also recommended that the Saluting Battery be further studied in order to demarcate and introduce a segregated bicycle lane. This scheme would complement further pedestrian alterations proposed at Rosia Road on the approach to the Trafalgar Interchange. This involves a series of ramps and other modifications to enable pedestrians to commute from the Saluting Battery towards Grand Parade through the Alameda Estate. The aim is to reduce jay walking at the mini roundabout opposite the Piccadilly Restaurant that is a common occurrence fraught with danger at a very busy junction.

Parts of the proposed scheme have been shown in Figures 2.14 and 2.15 with full technical documentation in Appendix 4.

Figure 2.14 – Proposed Scheme at Saluting Battery/Mini Roundabout Approach Road

Figure 2.15 – Proposed Pedestrian and Highway Improvement at Rosia Road (North)

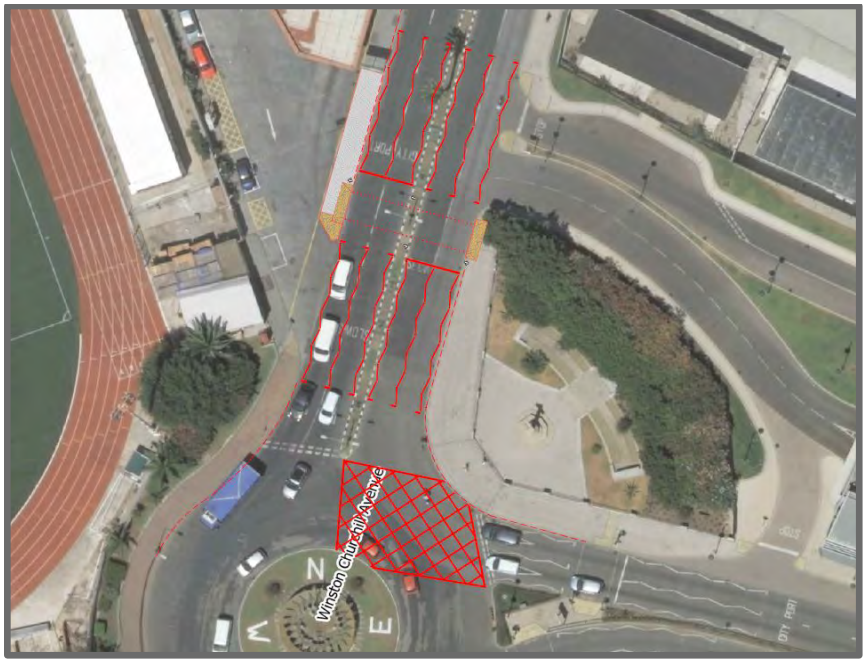
2.11 Winston Churchill Avenue / Sundial

The area of the Sundial roundabout has also been identified as an area that requires a safe and easy pedestrian route from the "Park and Ride" car park towards Victoria Stadium. At present, there are no pedestrian crossings in the area and pedestrians tend to utilise the narrow centre reservation as a stopping point to cross the dual carriageway road. It is therefore necessary to further examine this area with the aim of introducing a new crossing that will allow pedestrians to cross safely. Although this proposal needs to be seen in the light of the changes expected in this area as a result of the completion of the new airport tunnel, it may be categorised as a short-term measure for the overall improvement of this existing pedestrian route.

Figures 2.16 and 2.17 illustrate the proposed scheme. Full details in Appendix 4.

Figure 2.16 –Existing "Crossing" at the Sundial (Winston Churchill Avenue)

Figure 2.17 – Proposed Pedestrian Crossing at the Sundial (Winston Churchill Avenue)



2.12 Other Proposed Pedestrian Crossings

As a result of continuous studies together with feedback received by members of the public channelled through the Traffic Commission, further pedestrian crossings are constantly being considered and new projects explored.

Below are other recent locations where different types of pedestrian crossings have been or are being considered for further study and possible implementation. Further details regarding the locations of these schemes have been included in Appendix 4:

- ✔ St Bernard's Hospital Entrance - Zebra Crossing
- Shorthorn Estate - Zebra Crossing
- Rosia Road (Cumberland Terraces Estate)

2.13 Coaling Island / Small Boats Marina

The completion of the new 'Small Boats Marina' project has created the need for a new safe and suitable pedestrian route along the area of Coaling Island. There are currently no set provisions for pedestrians to walk along the side of the road in a segregated manner until they reach the new Peter Isola Promenade where a pavement is provided. A series of minor adjustments have been studied in order to provide a safe walkway in the most practical manner possible.

Figures 2.18 and 2.19 and illustrate the present situation and a possible solution. Further details can be found in Appendix 4.

Figure 2.18 – Existing Pedestrian Route Leading Towards the Small Boats Marina (Present)

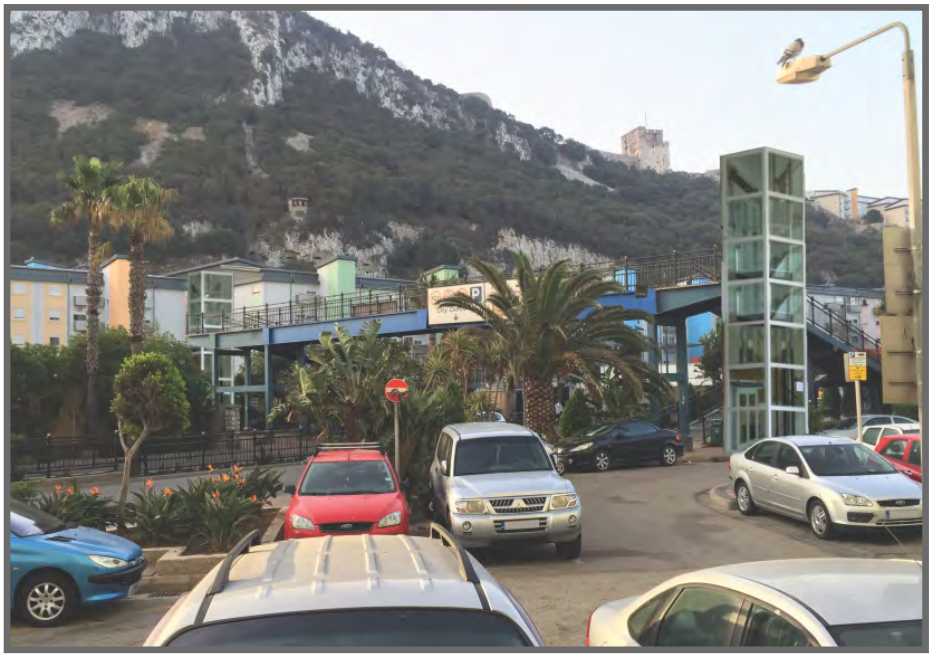
Figure 2.19 – Proposed Pedestrian Route Leading Towards the Small Boats Marina (Proposal)

2.14 Winston Churchill Avenue Pedestrian Bridge

Consideration should also be given to the improvement and development of pedestrian overpasses and bridges in Gibraltar. The Winston Churchill Avenue pedestrian bridge requires some improvements so that it can become more accessible to all. This might be possible by the introduction of lift facilities in order to enable both disabled and elderly pedestrians to access and utilise the bridge.

Figure 2.20 below illustrates an example of a lift shaft that can be implemented to the existing bridge structure. Full details are attached in Appendix 4.

Figure 2.20 – Winston Churchill Avenue Proposed Lift Shafts



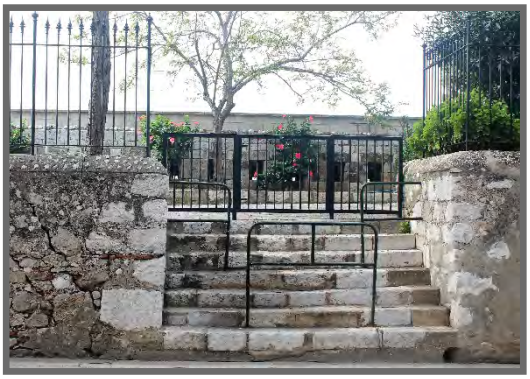
2.15 Rosia Road Pedestrian Bridge Proposal

Another popular area where a pedestrian bridge would enhance both traffic fluidity and most importantly the safety of pedestrians is Rosia Road. Due to the fact that the Saluting Battery is a very popular pedestrian route and leisure area, it is common for many people to cross Rosia Road via small openings through the existing retaining wall. These crossings are dangerous as they are concealed exits leading on to the major arterial road. This area has seen its share of accidents and near misses in the past. For this reason, consideration should be given to providing a pedestrian bridge to link the saluting battery with Alameda Estate Promenade.

Figure 2.21 below shows an artistic impression of a pedestrian footbridge and the existing crossing that is currently utilised by pedestrians below it. Although gated barriers have been installed to improve safety, especially that of young children, there is a need to fully safeguard the area by providing a better alternative as discussed above.

Full details attached in Appendix 4.

Figure 2.21 – Rosia Road Proposed Pedestrian Bridge



2.16 Market Place Pedestrianisation & Bus Terminal Relocation

As discussed in previous chapters of the report, the possible pedestrianisation of Market Place bus terminal should be explored. Market Place is currently the main bus hub and serves as an interchange junction between Fish Market Lane, Corral Road and Waterport Road. A number of overview studies have already been carried out in order to draft schematic layouts of how the bus terminal could be relocated in order to allow this scheme to be implemented and in turn rectify the issues of traffic congestion and pedestrian safety at this location.

Figures 2.22, 2.23 and 2.24 illustrate the above proposal.
Full detailed technical documentation is included in Appendix 4.

Figure 2.22 –Market Place As Existing/Proposed

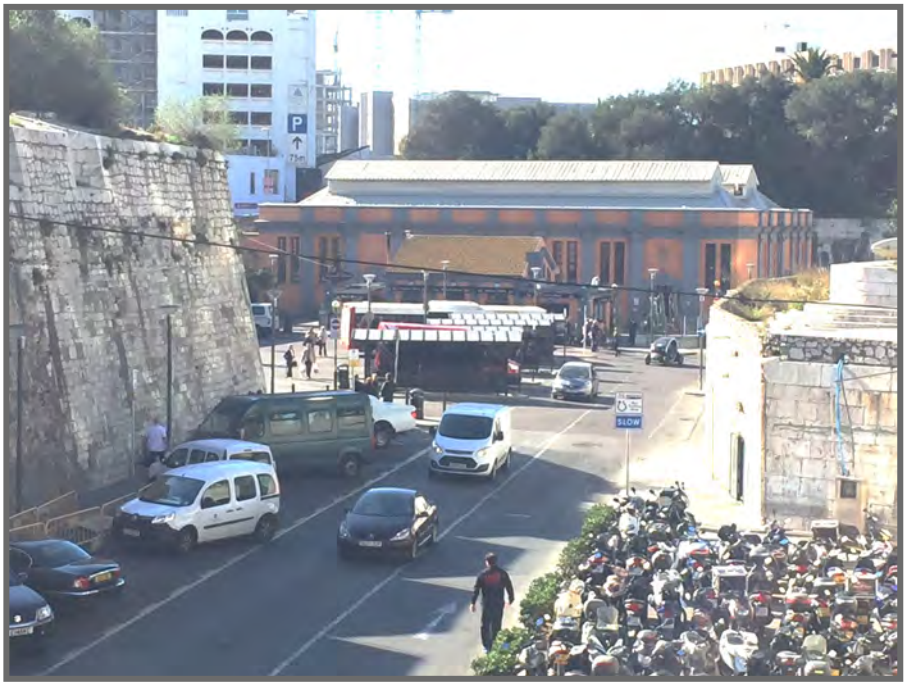
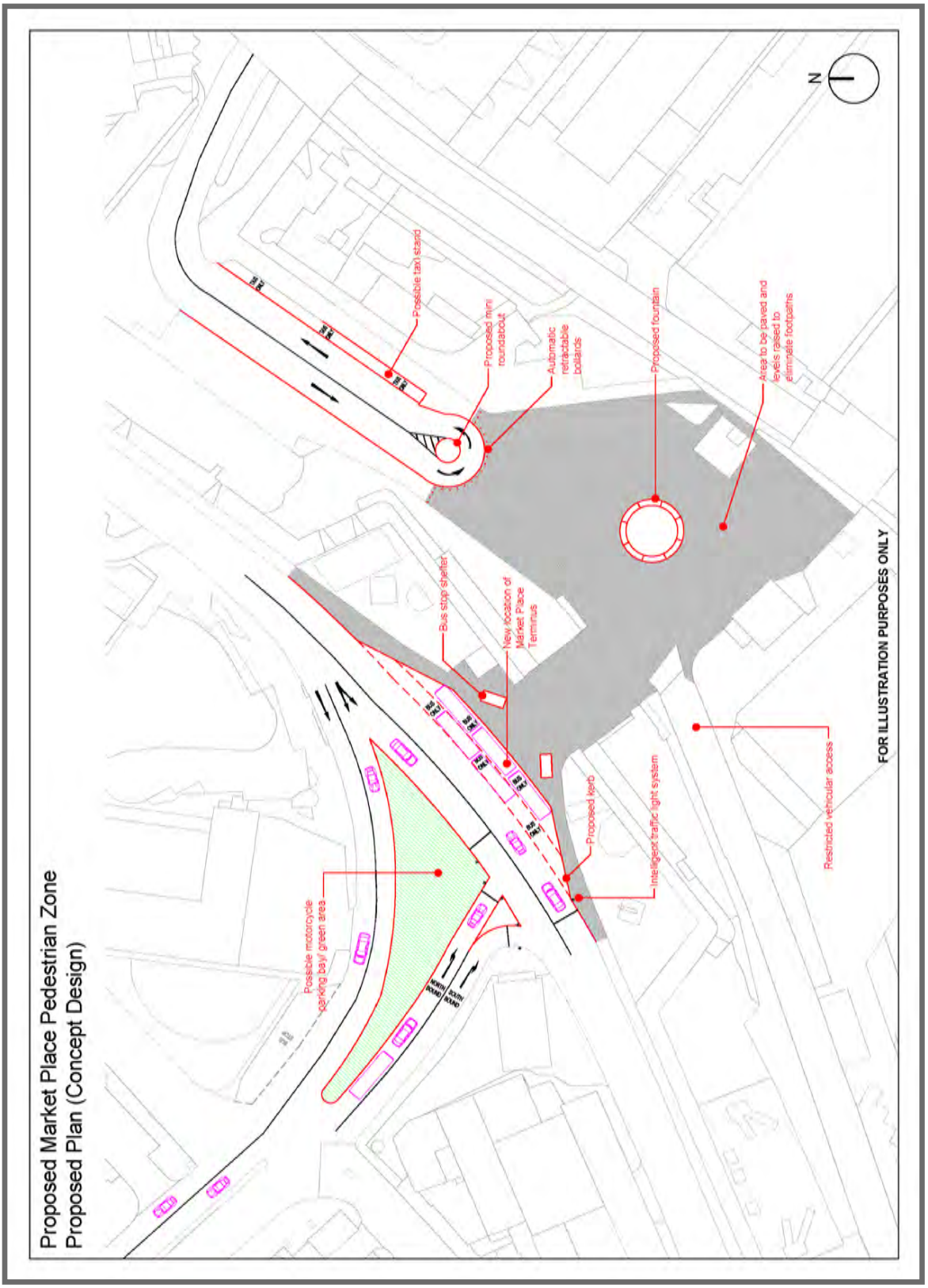


Figure 2.23 – Proposed Pedestrian Scheme

Figure 2.24 –Market Place As Proposed



03. Alternative Forms of Sustainable Private Transport

Introduction

One of the key underlying principles of the STTPP is to encourage the population to use alternative and more sustainable forms of transport. When it comes to personal transport, other methods of propulsion other than those that use fossil fuels, especially diesel fuel are beneficial for the environment and result in a decrease in harmful emissions. For these alternative forms of transport to become successful it is paramount that the necessary support systems are well established and that priority is also given to these vehicles to promote their use, which must also be seen by the user as truly advantageous. A good example is the present Government initiative of waiving import duty and providing a £1,000 cash back incentive to purchasers of hybrid and electric vehicles.

Alternative forms of sustainable transport that are considered viable include the following:

- Electric and Hybrid Cars;
- "Micro" cars;
- Car Clubs & Car Sharing Schemes;
- Bicycle Hire & Sharing System – i.e. the RediBike Scheme;
- Bicycle and Cycling Facilities;
- Electric Commercial Vehicles.

3.1 Electric Cars, Hybrid Cars & 'Micro Cars'

As existing technology develops it is possible that electric cars will become more competitively priced. Government can also actively encourage the purchase of these vehicles by incentivising purchasers.

Initiatives for the adoption of electric car vehicles can also be explored:

- Incentivise the use of electric cars by facilitating their use and implementing suitable car charging stations at strategic on-street locations throughout Gibraltar. It is Government policy to provide electric charging points within any new car park built. Charging points already exist within Devil's Tower Road, Engineer's Lane, Theatre Royal and Mid-Town Car Parks.
- Consider lower costs of other charges for electric and/or hybrid vehicles. Zero import duties for these vehicles and £1000 cash back initiatives have already been implemented in Gibraltar.
- Allocate priority parking's for electric vehicles throughout different parking zones.
- Consider the possibility of providing free electrical charging points within the city centre

Hybrid vehicles are now becoming more popular and manufacturers are now successfully combining both petrol and diesel technology with electric.

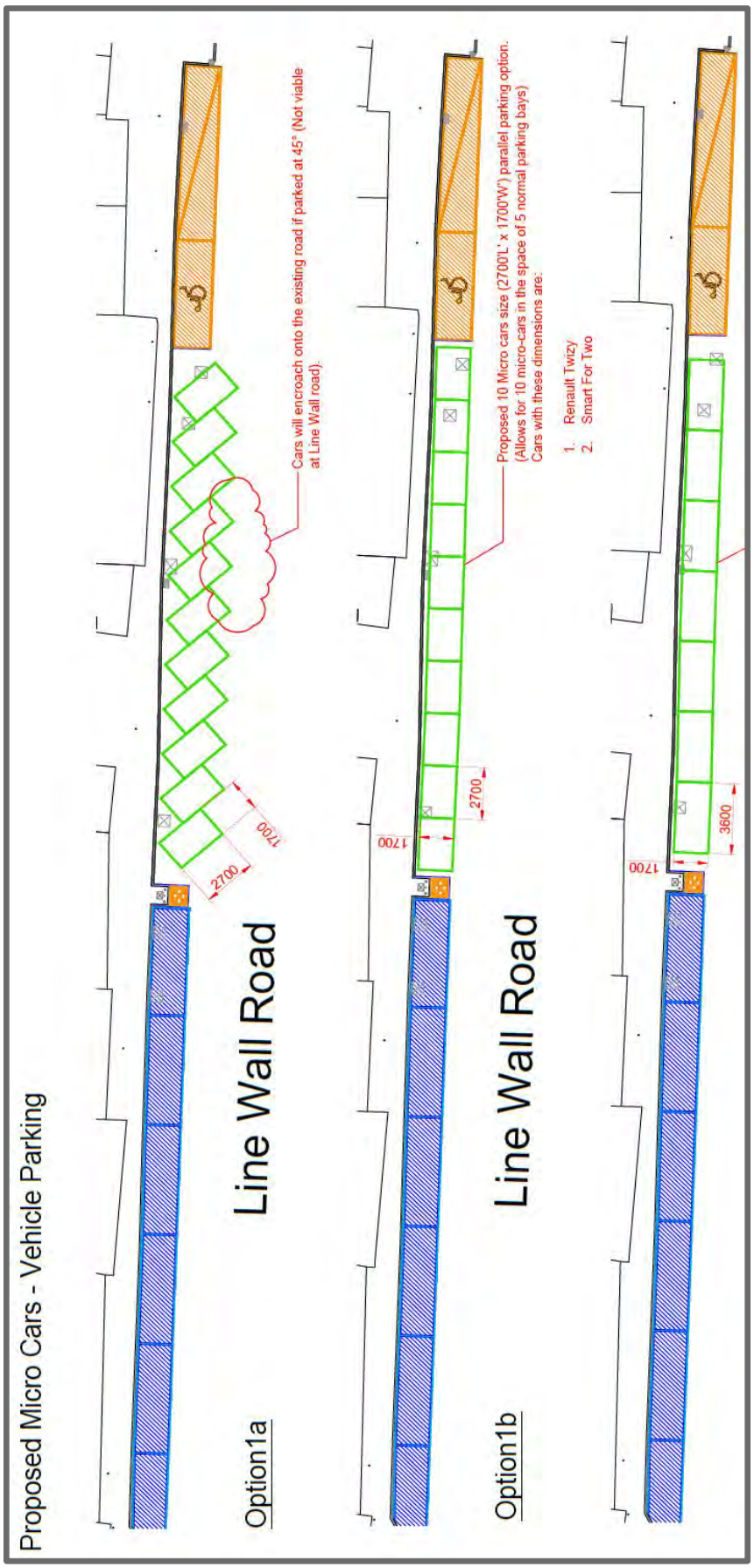
It is also recognised that smaller cars with less powerful engines consume less fuel and are therefore considered better for the environment, apart from taking up less space on the road. Encouraging the purchase and use of 'micro cars' in order to make better use of the limited parking spaces throughout Gibraltar would also be worth considering.

With this in mind, it would be beneficial to explore the incentivisation of 'micro car' usage via several proposed initiatives:

- Establish a criterion to allow the categorization of a 'micro car' vehicle based on a maximum permitted length. These dimensions would be dictated by policy.
- Investigate areas where car parking spaces are restricted in space and study the possibility of adding 'micro-car' parking spaces at these locations so as to utilise this limited space available profitably.
- Provide priority parking spaces for 'micro car' vehicles within existing parking zones. Perhaps allow 'micro cars' to be able to park within certain zones of a residential parking scheme not there own.
- Considering lowering the cost of import duties and other charges.

Figure 3.1 illustrates a proposed 'micro car' parking arrangement with some further examples included in Appendix 5.

Figure 3.1 – Line Wall Road 'Micro Cars' Parking Arrangement – Viability



3.2 Car Clubs and Car Sharing Schemes

A car club offers members/residents the convenience of being able to use a clean, modern and reliable vehicle for those trips that cannot be conducted by means of public transport, cycling or walking.

They provide a convenient alternative to using a privately owned vehicle because car club members only pay for what they use and therefore do not have to worry about tax, insurance, parking permits, servicing or repairs. Therefore, there are none of the troubles associated with owning and maintaining a car when utilising car club facilities.

Although car clubs may at times be better suited for daily commutes in larger countries that entail longer destination trips it may still be a good opportunity to consider these in Gibraltar and provide an element of service for it. Car clubs can also provide larger vans for the transportation of big/heavy items (e.g. when moving home). At present, many cross-border workers run an unofficial variation of the system by driving into Gibraltar in the same car in which they all contribute towards fuel costs. This arrangement could be further explored via the introduction of Web-Based Apps and subscription groups in order to promote the use of more car sharing opportunities in Gibraltar. Reducing the number of single driver or single-passenger trips would have a significant positive impact in reducing car traffic in Gibraltar especially in peak hours throughout the day.

Figure 3.2 shows a typical example of a car-sharing bay in which the user would only need to subscribe online, reserve its use and via its membership zip card the car can be unlocked and locked after its use. These opportunities can also tackle the parking problems in Gibraltar by reducing and discouraging the need for second car ownership.

Figure 3.2 –Example of Car Club Parking Bay

3.3 Bicycle Hire & Sharing System

A bicycle sharing system is soon to be launched in Gibraltar under the name “RediBikes”. This scheme will provide Gibraltar with a reliable and efficient bicycle sharing service where users can pick up a bicycle at any “RediBike” docking station and cycle them throughout Gibraltar before dropping the bike off at any of the other docking stations provided.

Figure 3.3 shows bicycles for the RediBike scheme. The program is still in its final planning stages with many potential upgrades for subscription, “pay-as-you-go” features, smart phone integration, online registration/payment and other cashless payment functions available. More details regarding the location of the proposed docking stations are shown in Appendix 5.

Figure 3.3 –Bicycle Sharing Scheme (RediBikes)

3.4 Bicycle and Cycling Facilities

In order to promote the use of cycling in Gibraltar and support the STTPP objectives under ‘Sustainable Travel – Cycling’, there have been several bicycle parking racks installed throughout Gibraltar. A current review of other potential areas for bicycle parking are being investigated and consideration will be given to locations in which bicycle parking bays would be valuable for users.

Figure 3.4 below shows some of the locations where new bicycle parking racks have been installed and are now successfully in use as well as areas where high demand of bicycle parking have been identified. A lack of bicycle parking facilities is evident throughout Gibraltar especially near workplace/commercial centres.

Location plan and photographs have been attached in Appendix 5.

Figure 3.4 –Examples of Bicycle Racks Installed Throughout

3.5 Electric Commercial Vehicles

Commercial deliveries in Gibraltar add to traffic congestion problems especially within the city centre and the more constricted road networks. When deliveries are carried out in Main Street, a huge influx of large open tray vehicles cause conflict within the pedestrianised zones of Main Street and Irish Town which is especially problematic when cruise ships are in Port and during Spanish holidays which see large numbers of visitors in town. An element of safety within the zone is often compromised, as large numbers of pedestrians and vehicles are restricted within the narrow streets whilst deliveries are being made within restricted timeframes. Furthermore, most of the delivery trucks being used are diesel powered with no economical or modern sustainable dynamic features hence contributing to the overall problem of unacceptable emissions on a daily basis.

A review of the amount of commercial deliveries around congested public areas such as Main Street and Irish Town is recommended, as there is often conflict between pedestrians and vehicles in the pedestrianised areas. Apart from reducing delivery times and increasing loading bays at key locations, consideration should also be given to promoting the use of electric commercial vehicles as this would also help reduce the environmental impact in residential and leisure areas.

At peak times, especially when cruise liners are in port, Main Street is a hive of activity and on health and safety grounds the loading and unloading of commercial goods is incompatible with pedestrian use. Consideration needs to be given to try to ensure delivery times are outside of the current allowable timeframe, which is presently from 0700hrs to 1030hrs.

Figures 3.5 and 3.6 below illustrate the existing scenarios at both Main Street and Irish town during peak delivery times.

In order to promote the use of such electric vehicles, the Government should consider devising several initiatives that will encourage businesses to adopt this mode of sustainable transport of goods. These could include extended delivery times and priority loading/unloading bays for electrical vehicles. The use of modern electric delivery vehicles with the latest safety standards including stop sensors, warning lights/sounds along with the benefits of zero emissions could well result in these becoming a common standard in the future. Figure 3.7 shows scenarios of typical examples of electric vehicles that may very well be implemented in the future.

Further details can be found in Appendix 6.

Figure 3.5 – Existing Main Street & Irish Town Commercial Deliveries

Figure 3.6 – Existing Main Street & Irish Town Commercial Deliveries (cont….)

Figure 3.7 –Artist Impression of Commercial Delivery Vehicles

04. Traffic Management, Road Infrastructure & Safety

Introduction

Improvements to traffic are an important part of the STTPP although the principle and aim is to explore alternatives to the private motor vehicle adopting more sustainable modes of transport as a means to improving our health and the environment.

Many traffic management and road improvement schemes are constantly being explored with a view of enhancing the fluidity of traffic and improving road safety. By reducing barriers to traffic flow a reduction in journey time can be achieved leading to a decrease in emissions, making trips safer to all road users regardless of their means of transport and allow public services to circulate unhindered and on time. By providing more driver options a reduction in journey times can also be achieved.

Making roads in Gibraltar safer is paramount to increasing public confidence and encouraging persons to walk and cycle. Maintaining road surfaces reduces the risk of injury from accidents related to uneven road and pavement surfaces and helps decrease noise pollution.

Ensuring that vehicles travel at the prescribed speed limit is also paramount to help ensure safety, reduce noise and pollution levels.

Various different schemes have so far either been implemented or are being investigated. These are listed below:

- ✔ Glacis Road/Bayside Road Pilot Mini-Roundabout;
- ✔ Speed Limit Review Program;
- ✔ Traffic Speed Indicators;
- Speed Cameras;
- Line Painting Program;
- Devils Tower Road Proposed Roundabout;
- Europa Road Widening Scheme;
- Europa Road (Brympton – The Mount) Parking Adjustments.

Tools such as those adopted as part of the STTPP, such as digital modelling provide the means of analysing what-if scenarios before major works are carried out. These tools also allow the manipulation of different traffic flow scenarios to see whether reversing traffic flows can improve traffic itself.

Traffic counters also provide the data necessary to analyse both numbers and types of vehicles and their respective speeds.

4.1 Glacis Roundabout

In order to alleviate traffic congestion along Glacis Road and Winston Churchill Avenue a pilot scheme was setup to gauge the viability of a mini roundabout at the Glacis Road/Bayside Road junction. The scheme was implemented as a part of a pilot project and is now awaiting completion of the new 'Ocean Spa Plaza' development for its final implementation, which also includes extensive road resurfacing of the area. This roundabout has proven successful and extremely useful especially when Winston Churchill Avenue is gridlocked as a result of flight movements and border restrictions and provides increased driver options.

Figures 4.1 and 4.2 show the before and after stages of the current pilot roundabout setup.
Figure 4.3 shows the scheme's artists impression for illustration purposes.

More details can be seen in Appendix 7.

Figure 4.1 – Glacis Road Mini Roundabout Pilot Scheme (Before)

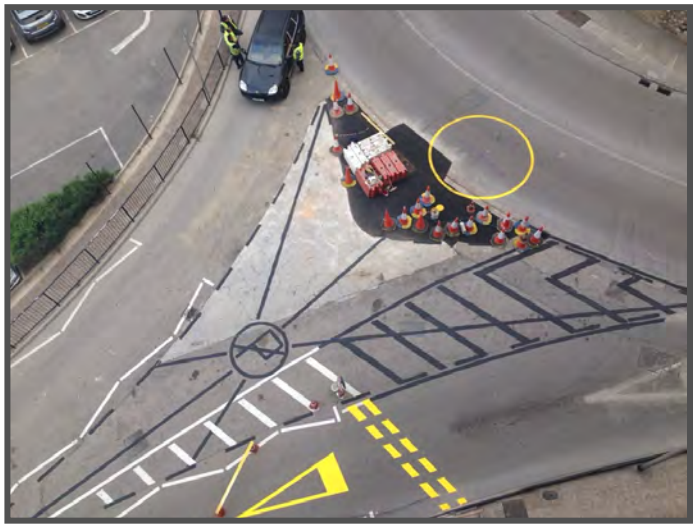
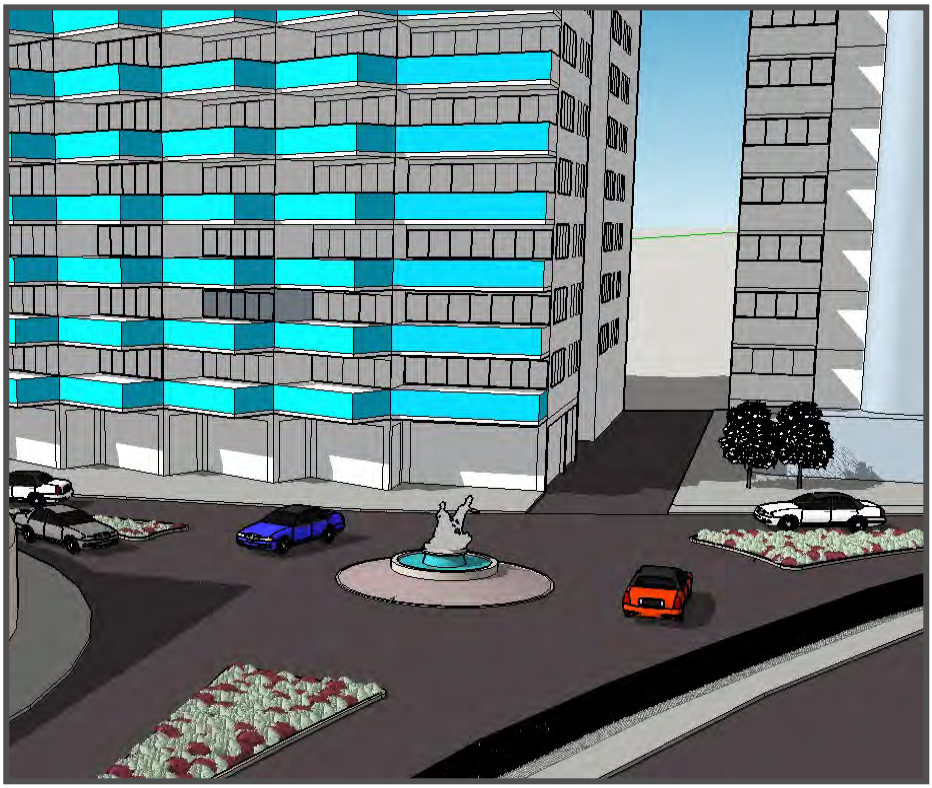


Figure 4.2 – Glacis Road Mini Roundabout Pilot Scheme (After)

Figure 4.3 – Glacis Road Mini Roundabout Scheme (Artist's Impression)



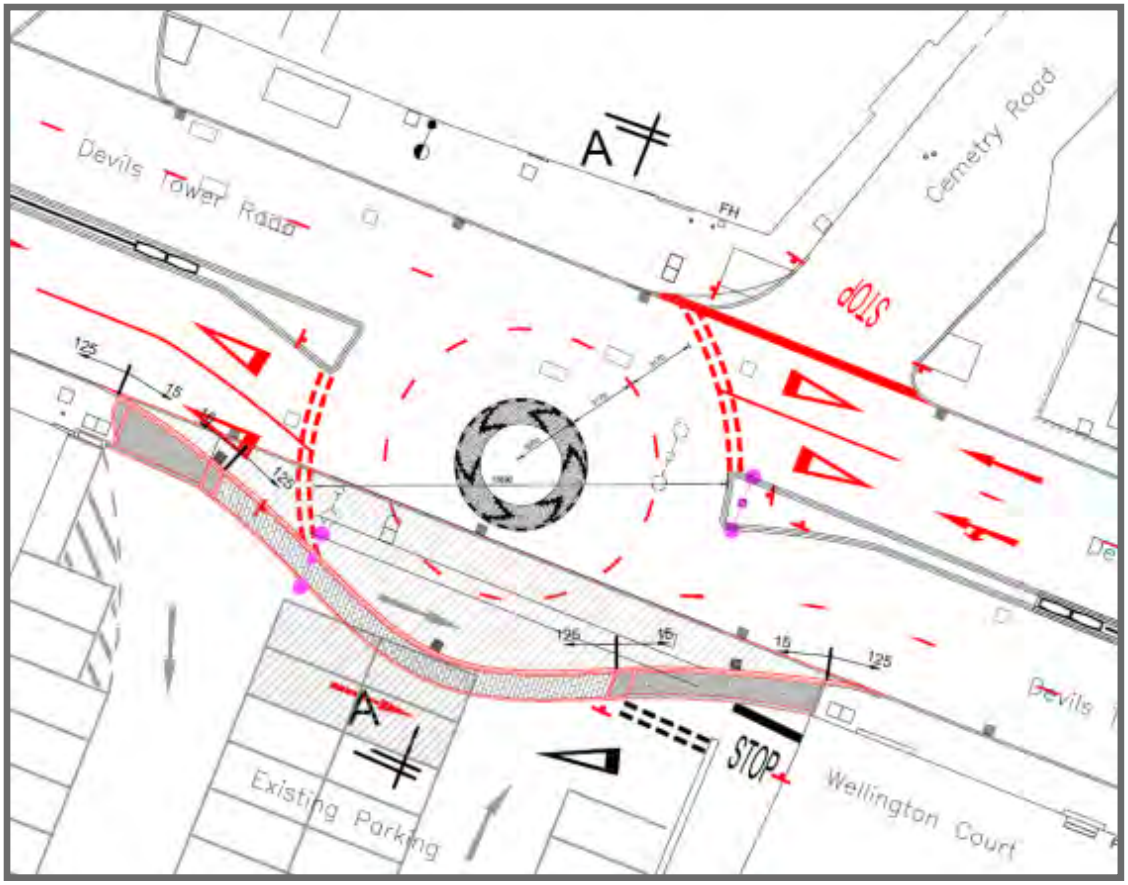
4.2 Devil's Tower Road Roundabout

Another location where a proposed roundabout study has been conducted is Devils Tower Road. This roundabout would provide more driver options and reduce the need for travel either to the Sundial Roundabout or Eastern Beach before being able to turn around. In addition, the introduction of the roundabout is expected to also serve as a road calming measure to reduce the occurrence of speeding along this stretch of road.

Figure 4.4 shows a plan layout of the proposed roundabout location. Figure 4.5 shows a more detailed plan drawing. More details can be seen in Appendix 7.

Figure 4.4 –Proposed Devils Tower Road Roundabout

Figure 4.5 – Plan drawings of Proposed DTR Roundabout



4.3 Europa Road Widening

Certain stretches of Europa Road are void of any pedestrian walkways due to the very nature of the road itself. Following the successful creation of a new segregated pavement between Buena Vista and Trafalgar Heights (Appendix 4), it is recommended that this stretch of road be studied with a view of widening, primarily, and if at all possible, creating a footpath.

This section of road poses many problems to both traffic and pedestrians because of its reduced width. The widening of said road would help to accommodate the increased vehicle sizes and support the long-term objective of improving road safety throughout Gibraltar.

Figures 4.6 and 4.7 show the section of road to be widened.
The proposed scheme can be found in Appendix 7.

Figure 4.6 – Europa Road (Section considered for Widening)

Figure 4.7 – Europa Road (Showing conflict when vehicles meet)

4.4 Speed Limit Review Program

A comprehensive study of vehicle speed behaviour was conducted along many of Gibraltar's roads using specialist-monitoring equipment. This has led to a review of the existing speed limits and recommendations for modifications of the same. To date, changes have already been carried out at Waterport Road, Europort Avenue and Bishop Caruana Road with more changes being considered for 2017. Driving at the recommended speed for the given road helps reduce risk of accident, reduces noise pollution and also helps reduce emissions.

A full detailed report can be seen in Appendix 12.

4.5 Line Painting Program

It is recommended that the road line-painting program be reviewed in line with the road safety measures identified within this report. It is recommended that road markings be reviewed and monitored on a regular basis to ensure that they remain clearly visible.

Figure 4.8 below shows an example of a line-painting project that has been recently completed with many more planned schemes to be rolled out as part of an ongoing long-term plan.

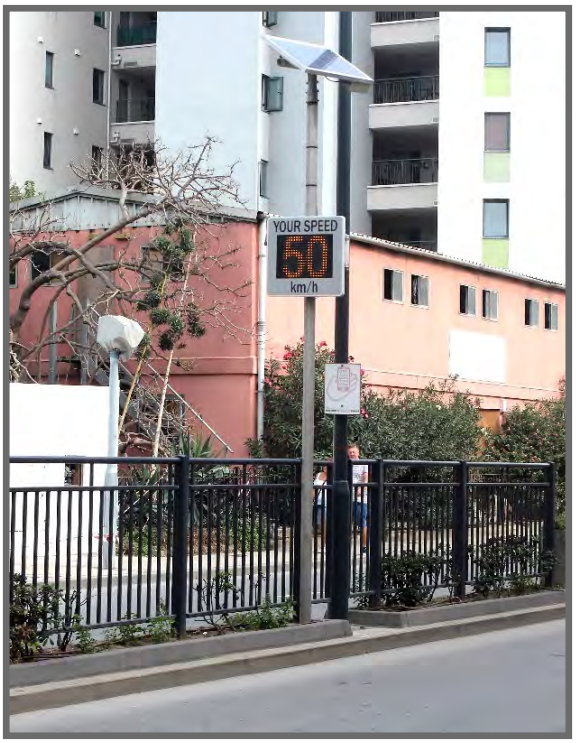
Figure 4.8 –Example of Line Painting Program

4.6 Traffic Speed Indicators

A study was carried out in conjunction with the Royal Gibraltar Police (RGP) in order to establish suitable locations for the installation of 'Traffic Speed Indicator' signs. These road signs provide illuminated LED digital displays that have integrated sensors to capture the speed of oncoming vehicles/motorbikes. The speed captured is then displayed on the LED road sign and all speed data is recorded for analysis. Warning messages inform drivers when the speed limit for that specific road is superseded and a 'slow down' message is displayed. This is considered an excellent road calming measure that conforms to the general road safety initiative of the STTPP. The speed radars are also a valuable key feature for the commissioning of the 'Speed Cameras' that are planned during 2017.

Figure 4.9 shows some photographs of existing traffic speed indicators with a full detailed location plan attached in Appendix 7.

Figure 4.9 – Locations of Traffic Speed Indicators



4.7 Speed Cameras

Roadside 'Speed Cameras' are a cornerstone of 'Road Safety'. Following consultation with the RGP and other key stakeholders, a program was developed for the implementation of speed cameras at a number of speeding "hot spots" throughout Gibraltar. The initial phase identified three different locations, Devils Tower Road, Rosia Road and Europa Advance Road. Traffic accident statistics and RGP data collection will be used to monitor the effectiveness of these speed cameras at these specific locations and identify other possible locations in the future.

Figure 4.10 below shows one of the existing speed cameras that has been installed with further added documentation in Appendix 7.

Figure 4.10 – Speed Cameras

05. Parking Management and Planning

Introduction

Parking can be considered one of the most contentious traffic related issues in Gibraltar. With the numbers of vehicles on a steady incline and with a very slow disposal rate, vehicle numbers can only continue to rise. Creating more parking spaces or car parks is not considered a truly effective means of tackling the parking situation as it often leads to an increase in car purchase. Building new covered parking often leads to an increase in vehicle purchase.

The introduction of residential parking schemes along with restricted Pay & Display and Loading/Unloading zones will alleviate many of the problems derived from long-term parking but hard measures will most probably be necessary in the near future.

Below is a list of several schemes that have already been initiated and others that are in the planning stages subject to further review:

- ✔ Line Wall Road Pay and Display Parking;
- ✔ Duke of Kent House Planter;
- ✔ Zoca-Flank Motorcycle Parking Enhancements;
- ✔ Peter Isola Promenade Pay and Display Parking;

- John Mackintosh Square / Irish Town / Cloister Ramp.

- Pay and Display Parking Schemes
  - ✔ Portland House;
  - ✔ Waterport Road;
  - Orange Bastion;
  - Grand Parade;
  - Bayside Road.

- Increased Parking at Waterport Terraces
- Residential Parking Scheme

A number of parking schemes are already in operation. These are described in more detail below: -

5.1 Line Wall Road Pay and Display Parking Scheme

Part of Line Wall Road on-street parking has recently been converted into a 'Pay and Display' (P&D) Zone. This scheme allows for better circulation of parked vehicles and helps tackle indiscriminate parking within this area. The P&D demarcation also prevents motorcycles from parking in between parked cars and ensures that no long stay vehicles remain. The P&D zone allows both locals and tourists to park for a limited amount of time in the centre of town to carry out errands quickly and comfortably. This also helps to bolster the economy within this predominantly commercial area.

Figure 5.1-5.3 shows the before and after representations of the scheme.

Figure 5.1 – Line Wall Road (Before Implementation of P&D zones)

Figure 5.2 – Line Wall Road (Before Implementation of P&D zones)

Figure 5.3 – Line Wall Road As Existing – New P&D Zones

5.2 Zoca Flank Parking Enhancements, Pay and Display Parking

As part of the Line Wall Road P&D parking scheme, Zoca Flank was converted into a motorcycle parking area with only a very limited amount of parking for cars remaining available to the north. This area was extremely problematic and was once a free, no-limits zone where both cars and motorcycles parked in a very indiscriminate manner with very little parking control. As a result, derelict vehicles were prevalent in this area and long-stay parking was the norm. Motorbike parking lost at Line Wall Road as a result of the Line Wall Road P&D Scheme was compensated for, within this area together with Reclamation Road. The area is now well kept and provides easy access for motorbikes to park in a convenient location in the centre of town whilst allowing unrestricted access for commercial deliveries accessing the Community Centre and other private commercial storage facilities.

Figures 5.4 and 5.5 show the before and after stage of the above-mentioned scheme.

Figure 5.4 Zoca Flank Before P&D Implementation

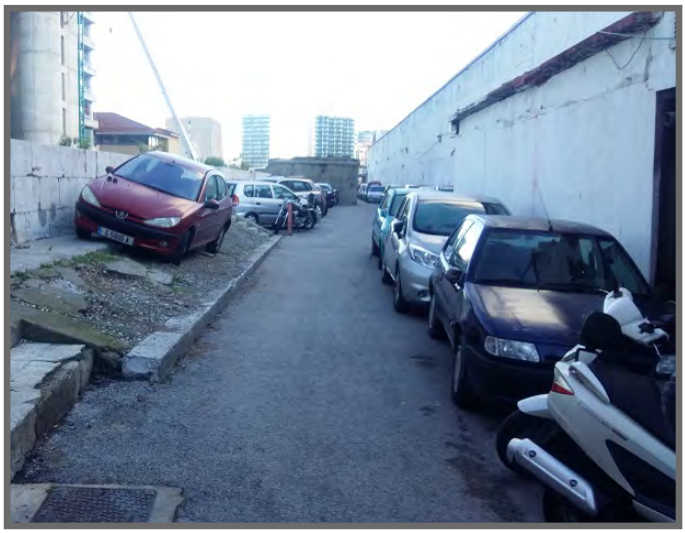
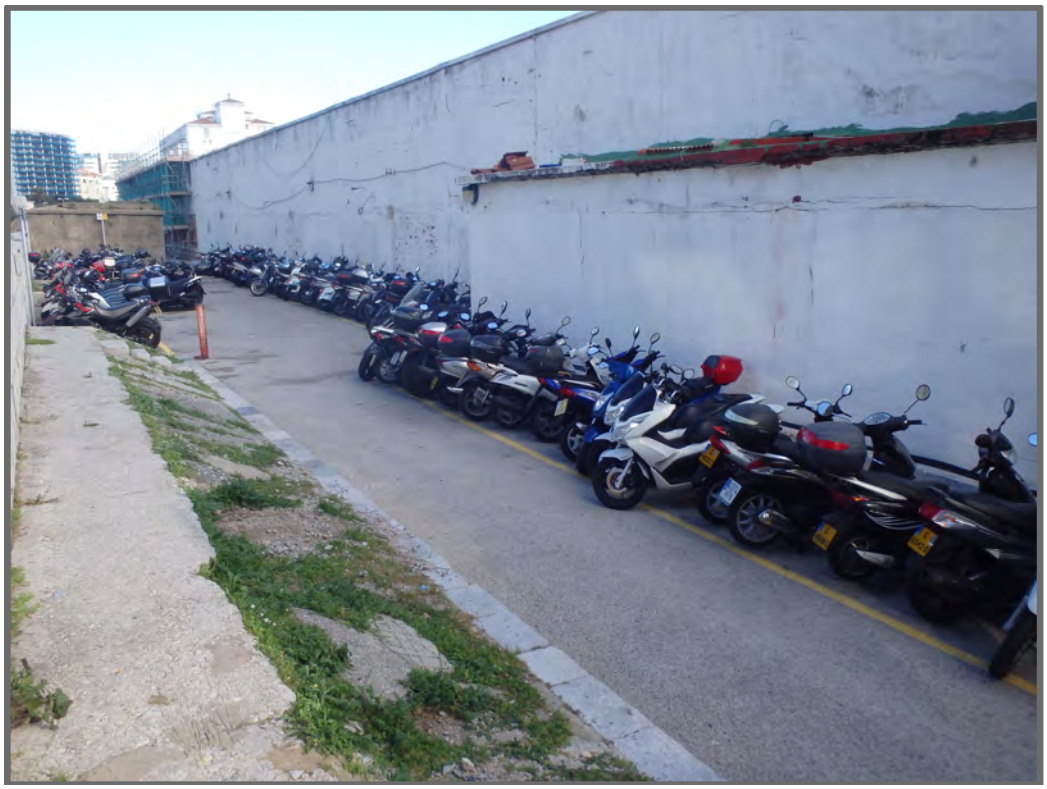


Figure 5.5 – Zoca Flank After Implementation of Motorbike Parking Area



5.3 Duke of Kent House Centre Reservation

The construction of a planter outside Duke of Kent House was also a discreet parking management initiative. Vehicles often parked on the centre reservation causing restricted traffic flow. As an alternative to installing standard bollards, a new plantar was constructed. This effectively serves the same purpose as bollards while at the same time beautifying this section of road and providing a more environmental.

Figures 5.6 and 5.7 shows the before and after photographs of the scheme.

Figure 5.6 – Duke of Kent House Planter – (Before)

Figure 5.7 – Duke of Kent House Planter – (After)

5.4 John Mackintosh Square

The area of John Mackintosh Square could be considered with a view of creating a limited access zone. The idea behind this scheme would be to reduce the traffic flow within this area and increase the overall level of pedestrian safety at the City Mill Lane / Main Street junction. The introduction of retractable bollards could control the flow of traffic and only allow emergency services, commercial and public transport vehicles to drive though.

Furthermore, permit holder residents would also require access to City Mill Lane in order to reach both Engineer's Lane and Theatre Royal Car Parks.

The proposed scheme would provide the following benefits:

- Restrict access towards City Mill Lane in order to improve the level of safety for pedestrians at its intersection with Main Street;
- The possibility of providing additional taxi ranks outside the City Hall in order to improve the Taxi City Service;
- Create a suitable and safe delivery/commercial vehicle route via the introduction of sufficient loading/unloading bays and possible road calming measures;
- Provision for a free disability access parking bay at Cloister Ramp;
- Possible relocation of recycling bins from Cloister Ramp to Line Wall above Fountain Ramp to allow for additional loading/unloading bays.

This concept would need further consideration and stakeholder input would be recommended.

Figure 5.8 shows the proposed scheme with the full diagrammatic representations illustrated in Appendix 7.

Figure 5.8 – John Mackintosh Square / Irish Town / Cloister Ramp Modifications

5.5 Pay and Display Parking Schemes

There are currently several other P&D schemes proposed throughout Gibraltar. Many of these schemes tackle the parking issues that have been described throughout the report. They also incentivise the use of alternative forms of sustainable transport as well as making use of the public transport system. P&D zones can limit cars from parking for very long periods of time preventing other users from utilising the available parking for short stay visits. This indirectly also contributes to limiting long stay on-street free parking therefore promoting the reduction of second car ownership as a means of reducing overall vehicle ownerships in Gibraltar

Below are three P&D schemes that are either proposed, in the final stages of implementation or have already been completed.

- Waterport Road
- Orange Bastion
- Waterport Terraces
- Peter Isola Promenade
- Portland House
- Atlantic Suites

There are also several other areas throughout Gibraltar that are subject to further study/review in order to potentially implement or further expand P&D zones. These have been listed below:

- Romney Huts: Potential - conversion of all parking spaces into P&D
- South Pavilion Car Park - Introduce further P&D parking spaces
- Landport Ditch - Possibility of converting all parking spaces into P&D

An element of P&D Parking will also be necessary in all of the Residential Parking Scheme areas. This is the only way that visitors can be assured of finding parking when visiting family and friends. This is expected to eliminate indiscriminate long stay parking.

5.5.1 Watergardens Pay & Display (Waterport Road)

This pilot P&D Parking Scheme was recently completed. This area was notorious for cars being left parked for months on end. Circulation of vehicles was poor and the businesses in the area were difficult to visit. As a result cars simply park on the dual carriageway causing a serious obstruction.

This road is a busy thoroughfare when cruise ships are in Port. A shuttle service operates during these times. This road is also a very busy road leading from the north to the Westside area where one of Gibraltar's largest supermarkets is located.

This road is a policing challenge, as drivers will still insist on parking on the dual carriageway even when there are free parking spaces available and when the P&D zone is free of charge.

It is recommended that a bus and taxi lane is considered along this road and that red lines are considered along this route to prohibit this precarious parking trend. Furthermore, cameras could be considered as a policing measure for this area in the future if necessary.

Figure 5.9 - Waterport Road P&D Zone (Before)

Figure 5.10 - Waterport Road P&D Zone (After)

5.5.2 Orange Bastion Pay & Display (Waterport Road)

Orange Bastion P&D will supplement Line Wall Road's parking scheme. This scheme is in its final stages and will be launched as part of the overall Resident's Parking scheme for the centre of town.

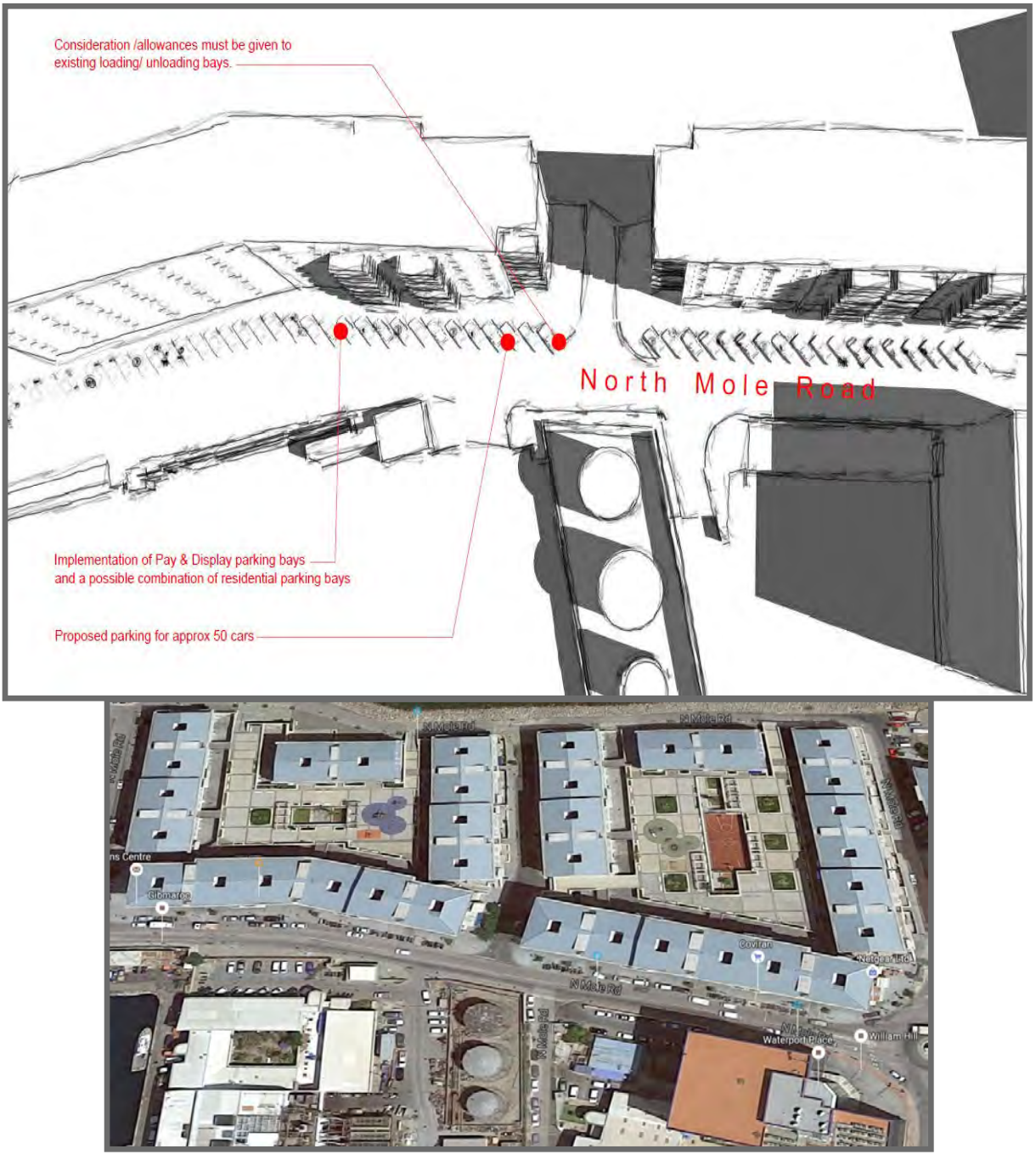
Figure 5.11 - Orange Bastion P&D Zone

5.6 Increased Parking at Waterport Terraces

There is a proposed scheme at North Mole Road for the introduction of additional parking bays in a staggered configuration adjacent to the pavement in order to improve parking opportunities for visitors/residents of the area. The pavement in question is considered wide enough to cater for the pedestrian movements in the area from visiting cruise liners and for the parking of Figure 5.12 illustrates this proposal with consideration given to the existing loading / unloading bays, the introduction of P&D and possible 'residential parking' zones for residents of the catchment area. The project is currently at a feasibility stage and further study and review is necessary before implementation is considered.

Further details are attached in Appendix 8.

Figure 5.12 North Mole Road (Waterport Terraces) Proposed Parking Arrangements



5.7 Peter Isola Promenade Pay and Display Parking

The recently completed Small Boats Marina has also included an element of parking management and control within the scheme. A series of P&D parking bays have been provided to allow both boat owners and visitors alike to park their vehicles for a reasonable amount of time. The P&D also works as a parking control to avoid long stay vehicles and residents of the surrounding catchment area from taking advantage of the parking spaces provided.

The P&D parking zone is operational and enforced from Monday to Sunday (0900-1700hrs) after which it converts to 'free parking'. At present, cars can park freely after 1700hrs but the current arrangements are constantly under review.

Figure 5.13 shows the P&D parking bays arrangement in the recently completed scheme.

Figure 5.13 Peter Isola Promenade – P&D Zone

5.8 Residential Parking Scheme (RPS)

The overwhelming growth in vehicle ownership and the associated lack of parking has led for the requirement to consider establishing residential parking schemes throughout Gibraltar. This is seen by stakeholders and residents as the only way to tackle the parking problems, which are intrinsic to highly populated areas where private parking spaces are not commonly provided with dwellings.

This was one of the most salient points raised during the public consultation exercise by residents.

Enforcement is a vital element in ensuring that parking management and planning schemes are a success. The introduction of Parking Management Officers (PMO) has seen a reduction in indiscriminate parking and better controls in those areas where new parking schemes have been implemented.

Statistics show that the existing number of registered vehicles in Gibraltar is on a steady increase. The data has been summarised in Table 5.1 below and shows the total number of newly registered vehicles in Gibraltar on an annual basis. Figure 5.14 illustrates the general increase in registered cars and motorcycles and Table 5.2 shows that in a 10-year period vehicles registered during these years (2005-2015) there were a total number of 5300 vehicles disposed of. In contrast, approximately 14,961 vehicles were registered in a 5-year period between 2011 up until October 2016 thus showing a disproportionate difference between disposal rates and new car registration.

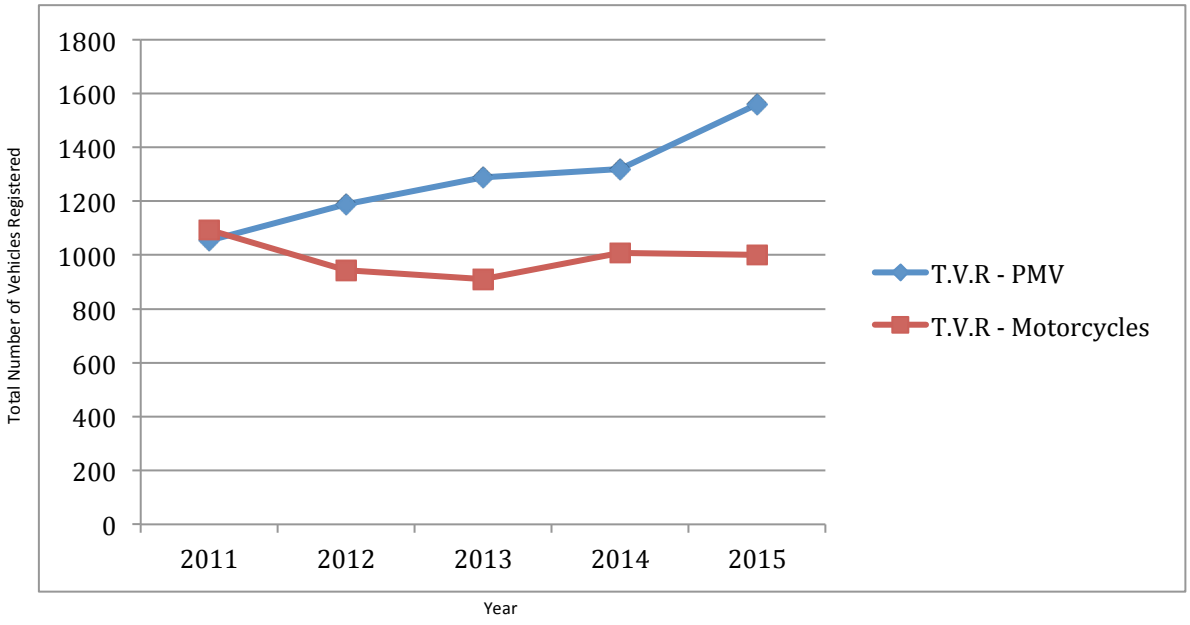
Table 5.1 – Total Vehicles Newly Registered (T.V.R)

	2011	2012	2013	2014	2015	2016	Total
T.V.R - Active	2365	2320	2379	2609	2908	2380	**14,961**

Table 5.2 –Disposed Vehicles in Respect to their Year of First Registration in Gibraltar

YEAR	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
T.V.R - Disposed	2161	490	382	1707	151	120	97	91	43	42	18	**5300**

Figure 5.14 – Total Vehicles/Motorcycles Registered from 2011-2015



The increase in vehicle ownership is the main contributor to the overall traffic congestion problem throughout Gibraltar during peak traffic times. The overwhelming vehicle ownership growth is rapidly superseding the amount of available public parking spaces available throughout most residential areas in Gibraltar. The problem is more acute in residential areas such as the Town and Upper Town where private parking areas are not commonly provided with dwellings and residents therefore compete for the limited on-street parking available.

This has led to consideration being given to the introduction of residential parking schemes that can assist local residents and improve their chances of locating a parking space within a reasonable distance to their home. Many tried and tested schemes are being modified and adjusted to suit Gibraltar's unique demography and space constraints. It is therefore crucial that car ownership levels do not continue to increase in order to enhance the effectiveness of any residential parking scheme that may be implemented.

The following points describe various options that have been under consideration so that a well-devised scheme may be implemented in the near future. Constant review will be necessary so that the set limits, details and dynamics of the scheme may be assessed in order to offer the most efficient strategy possible.

5.8.1 Residential Parking Schemes - Items for Consideration

1. Identify the need to control foreign vehicles from parking in 'free' parking bays throughout Gibraltar.
2. Identify the needs for visitor parking and loading/unloading bays within different residential catchment areas.
3. Review the residential catchment areas and decide on the level of zoning required in order to best manage the parking requirements and limitations.
4. Decide on 'Zoning' parameters and the need and/or possibility of introducing 'Micro Zones'.
5. Dictate the need of permits and the link between permits issued and zones identified.
6. Consider the costs to the user in obtaining permits (if any) and decide level of control, how it can be achieved and if any suitable links can be established between registered address and vehicles.
7. Study the possibilities of issuing permits in conjunction with other vehicle requirements such as MOT etc.
8. Review and analyse the costs of implementing the RPS and study the possibility of phased implementation to lower initial cost impact.

5.9 Other Methods for Tackling Parking Problems

5.9.1 Street Cleaning Campaigns

Street cleaning campaigns are useful means to tackle indiscriminate long-term parking. For this to succeed, it is imperative that there is a strong policing plan. Efforts must be sustained; otherwise progress gained can be easily lost.

It is recommended that cleaning campaigns are planned regularly with different areas included throughout Gibraltar in order to have far reaching effects. Although it is inconvenient to have to move vehicles regularly, the overall benefit is thought to far outweigh the perceived disadvantages.

5.9.2 Derelict Vehicles

It is also common for vehicle owners to leave old cars abandoned on the public highway. Although it may not be the intention of owners to allow their cars to become derelict, an unused vehicle slowly develops faults, their tyres lose their pressure and the elements take their toll. Eventually the MOT expires and the car, left there with the intention of being repaired or passed on to the son or daughter to use as a learner vehicle never occurs. The lack of punitive recourse simply means that an abandoned car will eventually become the victim of a cleaning campaign and will be removed and eventually disposed of, at no cost to the owner. In the meantime, that car remains on the highway for months, if not years taking up valuable space on the public highway.

It is recommended that the legislation pertaining to derelict vehicles be reviewed to make it an offence to leave a vehicle abandoned on the road although the vehicle could be classified as “litter” and dealt with under environmental legislation pertaining to the dumping of litter.

The level of fine should be set so that an abandoned vehicle deters car owners abandoning vehicles on the public highway.

An amnesty can be agreed so that persons can inform the authorities that they have a vehicle that they want to dispose of and this can be done at no charge to the owner. After a given period the campaign should commence.

06. Car Culture & Vehicle Ownership

6.1 Introduction

In light of all the measures that have been discussed in the STTPP, it is very important to note that the "Car Culture" in Gibraltar is one of the core problems that needs to be tackled in order to allow Gibraltar to flourish economically and environmentally.

It is evident that many locals turn to some form of motor vehicle transport when carrying out short trips within Gibraltar. Although many people walk on a daily basis, there is also a huge influx of traffic at peak hours of the day by commuters and as a result of school drop offs. Although motorbikes may be seen as less problematic in terms of creating traffic problems, they also contribute to the issue at some level. Motorcycle parking bays near the town centre are at times at saturation point leading to indiscriminate motorbike parking in other areas of town. Finding a car parking space near the town centre where people tend to travel for work is difficult after 0900hrs unless an alternative pay option is chosen, although this has improved somewhat with the construction of the Mid-Town Car Park. P&D bays are increasingly at full capacity as people are turning to pay parking options in order to park their cars close to work. Inclement weather further adds to the problem often causing complete gridlock to the system.

It is acknowledged that car travel might be necessary for several individuals and it should not be the intention to abolish all forms of private transport. On the other hand, the STTPP aims to encourage a modal shift to sustainable travel (cycling/walking) and enhance the existing public transport network in order to reduce the general traffic problems in Gibraltar.

Other traffic concerns relate to the levels of car ownership, where it is very common for locals to own more than one car. Many who own a private parking space tend to park their second car (often smaller and less valuable) in an off- or on-street free parking space. This trend goes back many years when many locals would purchase bigger cars for longer commutes throughout Spain with the smaller less valuable car used for short local trips, traditionally known as a "rock runner". High local incomes coupled with the relatively low cost of vehicle ownership are also seen as contributors to the high number of vehicles on Gibraltar's roads.

The fact that free parking availability without time restrictions is prevalent throughout Gibraltar, results in many still owning more than one vehicle thus parking their second car in a free parking space. The increase of vehicle ownership is also evident in Gibraltar with statistics showing that high numbers of private vehicles have been registered from 2005-2015. Further adding to the problem, a large number of commercial vehicles are also parked freely on the street, large vans are also used as mobile workshops and some vehicles are utilised as storage units. This is seen as a more economical alternative than renting a storage unit.

Other potential factors that contribute to vehicle ownership are as follows:

- Relatively low cost of fuel
- No Road Tax
- Free Parking availability
- Low penalties for parking fines
- Relatively low insurance costs

6.2 Potential Hard Measures

The situation has reached the point where consideration may need to be given to 'hard measures' in order to curb car ownership, car usage and in turn reduce the overall traffic problem in Gibraltar. A 'soft measure' can be seen as a scheme that may incentivise other uses of transport, promote less car ownership and deliver other options that are usually well received by the public. These should always be considered first.

On the other hand, a 'hard measure' is a direct initiative that openly tackles the issue of concern and is often unpopular. Although unpopular, the long-term benefits of hard measures should outweigh public concerns. A list of possible 'Hard Measures' has been included in Table 6.1 below describing the initiative and its positive contribution to reducing the problems of increased vehicle numbers.

Table 6.1 – Hard Measure Initiatives and Impacts

No	Hard Measure Initiative	Positive Impact
1	Considerer introducing a high tax for the registration of a second vehicle to the same residential address.	• Makes ownership and purchase of a second vehicle significantly more expensive than at present • Reduces additional cars from being purchased per registered address
2	Residential parking permits must be issued at a premium cost for second vehicles.	• Incentivises the ownership of one car per household • Due to the high expenses of permit requirements, second car ownership should be lowered in future
3	Reduce the amount of 'Free Parking' availability near residential estates where individuals each have their own parking space per household.	• Difficult to find second parking thus will have to opt for pay parking elsewhere • Motivates residents in owning a single car only
4	The restrictions of traffic through some of the main roads such as Line Wall Road. This could become a priority road only for service vehicles, taxis, public transport vehicles etc.	• Although the knock on effect on Queensway would cause total collapse, this would incentivise people from taking up alternative forms of transport (i.e. buses). • Faster travel times might be achieved via walking and/or public transport as Queensway would be highly congested. • Unnecessary car travel would be reduced drastically. • Improve the service being provided by commercial and public transport vehicles.
5	Establish/Introduce a system that restricts the use of certain vehicles on certain days of the week depending on whether number plates end in odd or even numbers. These schemes are in operation in some cities e.g. Mexico City's "Hoy no se Circula" scheme. Electric	• The available use of private vehicles during the week is lowered thus further lowering car ownership / second car ownership figures. • Reduces traffic congestion significantly by reducing the available number of vehicles

	vehicles could be exempted from the scheme.	that can drive on the same day • Incentivise the use of more electric cars
6	Research other traffic improvement schemes and initiatives adopted in other countries around the world. Investigate and explore tried and tested schemes implemented in order to reduce overall traffic congestion and car usage.	• Implement pilot schemes, monitor, study and review for further consultation. Re-implement pilot scheme with adjustments and review once again. • Finalise scheme and implement permanently. Continue to monitor and study the implemented scheme with collection of feedback, public consultation and stakeholder communication.