

1 *Introduction*

- 1.1 The scope of this study is to serve as the transport document of the Structure Plan review, which will set the land-use transport strategy for the Maltese Islands up to the year 2020, and act as the basis of proposals for its implementation. It is also acting as a supporting technical document for the forthcoming White Paper on Sustainable Land Transport.
- 1.2 For the purposes of this Study, transport is defined as a service that is essential to social and economic activity, providing access to goods and services, and opportunities for individual mobility. It is a service rarely used as an end in itself, but as a means by which other activities occur. As a land-use, transport infrastructure (roads, bus termini etc) takes up about 10% of land in developed areas, and there is a strong relationship between the location of land-uses and the provision of transport facilities. Therefore transport planning should not be considered in isolation, but as another element within the wider perspective of land-use planning.
- 1.3 The objectives of this study are to analyse Malta's travel demands to the year 2020, consider the projected trends in travelling and examine the implications of those trends on the highway network and the environment.
- 1.4 An assumption made at the outset of this study is that Government sustainability policies will be reflected through the eventual introduction of an integrated transport policy for Malta. Such policy should encompass all transport issues, and include those that can be resolved through land-use planning. It is within this context that the Transport Topic Paper has been researched and a new transport strategy proposed.
- 1.5 The planning, implementation and regulation of transport is the remit of several organisations, and many of these contributed their views as well as important background information prior to the drafting of this paper. The consultees included the Ministry for Transport and Communications, the Malta Transport Authority and its predecessors, Enemalta, the Malta Maritime Authority, Malta International Airport, the Department of Civil Aviation, Sea Malta, the Malta Freeport, and Malta Air Charter.

2 Transport in the Maltese Islands

- 2.1 Travel in Malta and Gozo is dominated by the private car. Car ownership has been rising rapidly since 1960 when there were 12,000 vehicles on the islands. By the end of 2000 there were 247,000 licensed vehicles (including 182,000 private cars and 44,000 commercial vehicles) using over 2000 km of road. Even since the introduction of the Structure Plan in 1990 an average increase of 7000 new cars per annum has resulted in a car ownership level of 1.36 cars per household in 1998, whilst the Structure Plan had forecast the highest level to be 1.27 cars per household.
- 2.2 In parallel with this increase, the use of public transport has been declining. Whilst the selection and cost of private cars has improved and household disposable income has increased, there has been no corresponding investment and modernisation in the public transport system, and hence no incentive for those who have a choice, to use it. The annual number of tickets sold between 1989 and 1998 dropped by nearly 9 million, resulting in a 21% decline in patronage over the same period. Up to 2001 this sale of tickets had fallen by a further 2.8 million.
- 2.3 Whilst improving individuals' mobility, the increasing number of cars has had many negative impacts, including those on road safety, congestion, pollution, damage to the road surface, and abuse of traffic regulations including parking. When these are considered in relation to other trends in population, household size, and development in general, the impacts are even more apparent.
- 2.4 There *are* alternatives to the car other than public transport, and these were identified through the results of the 1998 Household Travel Survey. In fact the trends show that walking has retained a basic level of trip making – implying that it has mainly been bus users who have transferred to car use over the past 10 years. Cycling and motorbikes are both popular for sport and leisure but they constitute a very low proportion of total daily trips. Considering Malta's topography and climate for most of the year, this low usage probably reflects the evolving car culture, the poor condition of many roads, and the nature of the driving.
- 2.5 Other information available through the Household Travel Survey identified the reasons for travelling, and showed that nearly 37% of all trips are related to work, with the next most popular purpose being journeys related to education, which amounts to 13% of all trips.

- 2.6 Inter-island transport was identified as a small (just 0.2% of trips) but essential element of daily travel particularly for Gozo residents working in Malta. Two new locally built ferries are now in operation and have significantly increased the capacity and crossing time of the journey. The helicopter service between Malta and Gozo has come into operation since the introduction of the Structure Plan and it is of particular benefit to international travellers living on or visiting Gozo, for whom it provides a fast, convenient service to and from Malta International Airport.
- 2.7 International maritime movements have also increased, with the most flourishing sectors being the containers activity in the Freeport and cruise passengers in the Grand Harbour. However, there is concern about how to manage this growth and not cause a negative impact on the coastal characteristics of the areas concerned.
- 2.8 The impact of aviation on land-use relates mainly to Malta International Airport, which acts as the main gateway for visitors entering the country. Aviation trends indicate a moderate growth in international air transport to and from Malta since the early 1990s. Similar to maritime transport, international aviation is capacity driven, and land availability translates into sectoral growth more directly than in other sectors.

3 Transport Policy

- 3.1 The current Structure Plan sets the scene for the integration of transport policy in Malta. The strategy broadly emphasises the need for promoting sustainable modes of transport, such as public transport and walking, whilst generally discouraging the use of the private car. However it does stop short of providing implementable policies in this regard, and the most effective policies in the strategy have been car orientated, such as those related to parking requirements and traffic impacts.
- 3.2 The transport strategy is an integral part of the overall development strategy, and this has two transport related aims. It seeks to ensure genuine choice between public and private transport, and to reduce the overall needs for travel and transport resources through the better matching of homes and jobs.
- 3.3 Independently of the Structure Plan an overall strategy on transportation in Malta has been slow to develop over the past decade. There are several organisations with responsibilities for legislation, planning or implementation of transport services and infrastructure and there has been little coordination between them or in relation to the Structure Plan strategy. It is apparent that until recently there has been a lack of vision in the country concerning transport. The inter-relationship between sectors has not been acknowledged, and less strategic issues have been

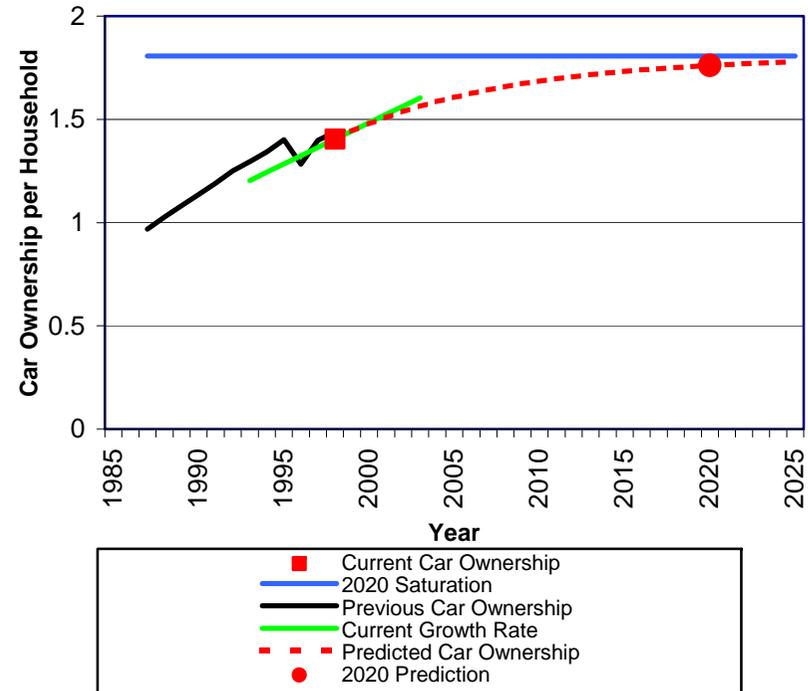
addressed first and given too much priority, with no overall aims established. This is changing and the setting up of the Transport Authority in June 2001, together with the forthcoming White Paper on Sustainable Land Transport, presents an excellent opportunity to focus on the long-term future of transport and establish an integrated transport strategy.

4 Future Transport Demand

4.1 The information gathered from the 1998 Household Travel Survey was combined with socio-economic data, and input into a computer Transport Model that has been developed for the Maltese islands. This was used to predict changes in vehicle ownership and number of journeys undertaken to beyond the year 2020. The forecasts assume that there will be no significant changes to current transport policy.

4.2 In 2020 the number of vehicles per household is expected to come close to saturation by rising to 1.77 cars per household (Figure 1). This translates into a total of 290,000 private vehicles, or an increase of over 100,000 vehicles in 20 years. When commercial vehicles are added to this figure the total comes to around 370,000 vehicles.

**FIGURE 1:
FORECASTED VEHICLE OWNERSHIP**



4.3 The Model also forecasts that the number of trips by private car is set to increase by an average of nearly 2% per annum to 2020. Therefore whilst in 1998 there were 109,000 trips undertaken during a weekday morning peak, this will increase to around 146,000 trips in 2020. Corresponding to this, the equivalent number of public transport trips is expected to decrease by around 29% to 2020, from 27,000 trips in 1998 to 19,000 trips in 2020.

4.4 International maritime transport is likely to continue its strong growth, within the constraints of available land and indeed, new land allocation is being sought by the Freeport. International aviation is also likely to increase due to the new 'hub' concept. Inter-island transport is steady, with marine ferries experiencing slow but rising numbers while the helicopter service is more stable.

5 **Consequences of Traffic Growth**

5.1 Clearly the main transport problems currently affecting Malta and Gozo are the number of vehicles on the roads and their impacts on society, health and the environment. Increasing levels of disposable income, corresponding relative reduction in the cost of cars, increasing number of households, increasing number of young people holding a driving licence, and the lack of

any alternative, as well as wider social and cultural reasons - have all fostered a Maltese society that embraces and aspires to **car ownership**.

5.2 It has been shown that **traffic growth** is set to continue, and although there is currently peak hour congestion, there is still a lot of road capacity available at other times of the day. So the threat of saturation will not yet start to have a deterrent effect on car usage. Fortunately this means there is an opportunity for transport policy to move towards better management of the existing road network. In fact most of the **new road space** being added to the network is that planned within the temporary provision schemes. Major road provision during the plan period is envisaged only in relation to the new major developments such as those at Manoel Island and Cottonera.

5.2 The reasons that car owners then use their cars are varied and often personal, but a number of reasons are probably common to all. The main reason for high **car usage** levels must be convenience. The availability, flexibility, comfort and running costs of cars give drivers an immense feeling of freedom of movement. However the direct effects of this freedom on society in general include:

Congestion, which poses extra costs on industry and road users through wasted time and fuel, delayed deliveries, and reduced reliability. It also increases air pollution and the use of scarce resources. It puts stress on the strategic road network and encourages traffic to use unsuitable residential roads to bypass the congestion thereby endangering the quality of life of those residents. Corresponding to this demand is the use of public land for more roads and parking, thus using up a further scarce resource and further ruining the streetscape.

Noise pollution from vehicles, which disturbs sleep, impairs job performance, impedes learning, hinders social activity and verbal communication, and affects health through stress generated by frustration from lack of sleep and a general deterioration in the quality of life.

Air pollution emissions from motor vehicles are carbon dioxide, carbon monoxide, nitrogen oxides, oxides of sulphur, hydrocarbons and lead and other particulate matter. The two major concerns regarding vehicle emissions are their impact on human health and on global warming.

Road accidents. Increasing levels of traffic have corresponded to an increase in the number and severity of **road accidents** are directly related to the number of vehicles on the road. Whilst there have been some efforts to increase road safety, there is no coordinated funded strategy for accident investigation and prevention.

In addition to the impacts on health and the environment there are the **social impacts** of further traffic growth. School children will rely more and more on their parents for their mobility, missing out on the social interaction and independence that walking or public transport allows them to experience.

Another sector that is likely to be significantly affected is **tourism**. Congestion, high pollution levels, high accident rates, noise, and poor public transport provision will all act to discourage tourists from returning to Malta.

- 5.3 Sadly, the state of the bus system is probably the single biggest incentive to car ownership and use. The decline in **bus patronage** is a direct consequence of the lack of significant investment in the service. Whilst this is true for transport as a whole, it is most apparent for public transport, which relies on it so much. This combined with minimal improvements to the bus service, and continued

increases in fares over the past years, has further encouraged a switch to the use of private cars. Such a situation inevitably reduces the level of service and seriously affects the independence of those who cannot hold a driving licence including the young, the elderly and the mobility impaired.

5.4 The contribution that **walking** makes was identified in the current strategy, but with a few exceptions, only cosmetic changes have actually been implemented. Improvements to traffic flow have taken priority over a well-maintained integrated network of pedestrian facilities. Whilst the data shows that at present **cycling** is not a popular activity in Malta, a latent demand could exist for it to become a significant mode of transport considering the popularity of competitive cycling and the recreational cycling that goes on in quiet safe areas such as Ta' Qali. **Motorbiking** too could be encouraged, but there now appears to be a "vicious circle" of more cars on the roads making them unsafe for other more vulnerable modes of transport which forces those who would have preferred to purchase a motorbike to buy a car instead.

5.5 The effect and the effectiveness of the innovative and controversial measure of the requirement for **parking provision for** all new development, was unexpected.

Whilst many developers oppose the fact that they have to provide parking in relation to their development, the general public sees the parking problem increasing and generally supports the creation of more parking spaces. Parking policy can be an effective tool in controlling traffic. However the Structure Plan policy requiring minimum parking standards for all development goes against the intended thrust of the Structure Plan, since the provision of parking in every development actually encourages and caters for more car use.

5.6 It is difficult to say whether the lack of **co-ordination** between the transport sectors has been a cause or a consequence of the transport situation. Much of the approved Structure Plan transport strategy has not been implemented because there is no overseeing organisation responsible for promoting and maintaining it. Therefore, the most important change in recent years in relation to transport was probably the publication of an Act in August 2000 to change the Public Transport Act in such a way as to set up a **Transport Authority**, which commenced its duties in June 2001. However there are still obstacles to be overcome such as the limited local expertise in the road transport disciplines as well as related financial constraints.

6 Integrated Transport Strategy

6.1 The proposed land-use transport strategy, therefore seeks to complement and facilitate a wider vision for transport in Malta. Considering the long history and growth of traffic-related problems, poor investment, and lack of coordination within the transport sector the time is ripe to develop a comprehensive and integrated transport strategy.

An Integrated Transport Strategy (ITS) can be defined as **a comprehensive package of measures to extend choice in transport and secure mobility in a way that supports sustainable development.**

6.2 The main planning objectives of the strategy are consistent with those stated in the current Structure Plan, being:

- to contribute towards ensuring that genuine choices in transport are available, and
- to reduce the overall needs for travel and transport resources.

6.3 Further to this the following seven key objectives for transport are being proposed:

- Reduce the need to travel
- Ensure essential facilities are accessible to all
- Ensure a range of mobility options
- Give priority to people over traffic flow
- Encourage non-polluting vehicles and systems
- Provide quality transport networks that are safe and reliable
- Keep people informed and involved

5.4 To assist implementation, it is recommended that targets related to the objectives are set and the forthcoming policies reflect the need to meet them. there will need to be a well-funded rolling programme of transport schemes with those that best contribute to the objectives (using established criteria) being given priority. Future decisions can be taken in the context of this framework, and in this way the strategy will actively support and contribute to many of Government's long-term objectives and help promote more sustainable development.

7 Issues for Structure Plan Review

7.1 Through the consideration of trends and policies in transport since 1989, a number of issues have become apparent. Those specifically related to land use planning are summarised below and can be subdivided into the following headings:

- Co-ordination of Transport and Land-use
- Infrastructure
- Public Transport
- Maritime Transport and Aviation

7.2 The land-use strategy is normally developed around the locations for growth in employment and housing. Therefore co-ordination of transport and land-use could be achieved through locating high traffic generating uses in locations where public transport could be used as an alternative to the car ie, in primary town centres and along established public transport corridors. This would help to enhance existing transport services and reduce the need for parking provision. Parking management to ease parking for residents and restrain the over provision of parking for commercial developments will be promoted.

7.3 With the exception of planned projects, it is suggested that road construction should be limited to those which

would result in significant environmental benefit. Infrastructure projects could change their emphasis and seek to integrate public transport priority measures, on better-managed highways, with supporting transport interchanges.

7.4 Public transport requires major reorganisation, and the priority changes needed in this sector are not related to land-use planning. However, bus priority measures should be promoted to assist with progression of the issues identified for co-ordination of transport and land-use. Park and Ride schemes if well planned would complement a reorganised public transport system.

7.5 The issues relating to the maritime sector are mainly related to the more efficient use of land in the redevelopment of the Cirkewwa and Mgarr ferry harbours. MMA believes that proper management techniques are likely to minimise the take up of land, especially where there are physical restraints such as in the ports of Mgarr and Valletta. With regard to the aviation sector, apart from the possible need for a new taxiway in the medium-term, Luqa terminal and the area within the airport perimeter can accommodate future growth.