Taxi Regulator

Commission For Taxi Regulation
An Coimisiún Um Rialáil Tacsaithe

VEHICLES

National review of taxi, hackney and limousine vehicle standards

Dublin Institute of Technology
Department of Transport Engineering

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National review of vehicle standards in taxis, hackneys and limousines

The views expressed in this report, including the recommendations made, are those of the consultants. The Commission for Taxi Regulation has had regard to the findings of the report and its recommendations in formulating its proposals which are contained in a document published separately. The document, entitled *'Roadmap towards a new national code of regulations for taxis, hackneys and limousines in Ireland'* is available from the Commission.

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1 Introduction

1.1 Background

The Department of Transport Engineering of the Dublin Institute of Technology (DIT) has undertaken a national review of vehicle standards in taxis, hackneys and limousines on behalf of the Commission for Taxi Regulation.

The principal aim of the review was to investigate and analyse vehicle quality and safety issues and the current status in relation to vehicle standards in the taxi, hackney and limousine industry in Ireland.

The review was carried out in close collaboration with Goodbody Economic Consultants, who were engaged in a parallel review relating mainly to service aspects within the sector. DIT liaised closely with Goodbody Economic Consultants and with the Commission for Taxi Regulation throughout the review.

The findings from the Goodbody Economic Consultants review are presented in a separate report.

1.2 Objectives of the review

The key objectives of the review were:

- To examine existing quality and safety Regulations as they related to small public service vehicles (SPSVs) and assess the quality of the existing livery along a number of dimensions, including vehicle size, vehicle body type, passenger capacity, boot space, age and manoeuvrability; and,
- To make recommendations that would inform the development of quality Regulations providing for the safety, security and comfort of passengers, drivers and other road users that would strike a balance between consumer protection, customer comfort and service, and costs incurred in satisfying the requirements.

1.3 Methodology of the review

A coordinating team from the School of Mechanical and Transport Engineering managed the review of vehicle standards. The coordinating team was made up of three senior consultants and a full-time researcher: Dr. Jim McGovern (chairman), Head of the School of Mechanical and Transport Engineering; Mr. Tom Corrigan, Head of the Department of Transport Engineering; Mr. Declan Allen, Assistant Head in the Department of Transport Engineering and Ms. Roisín Byrne, researcher. The full project team also included a technical expert panel and secretarial support from the School of Mechanical and Transport Engineering. Mr. Jim Brunton and Mr. Michael Hall of the technical expert panel made some significant inputs to the final report.

Members of the project team performed research, visits, investigations surveys and vehicle inspections. The members of the coordinating team attended meetings with interested parties and attended public forums, which took place in Clonmel, Cork, Dublin and Sligo. A list of the meetings with interested parties is included in Appendix B.

1.4 Structure of the report

Section 2 is a review of existing small public service vehicles. The suitability and adequacy of small public service vehicles for people with disability is addressed in Section 3. This includes information and data regarding the proportion of wheelchair accessible taxis in the existing Irish fleet. Submissions from people with disability and from their representative bodies are summarised.

Section 4 deals with vehicle standardisation and identification, use of taximeters and other electronic aids, driver security, and health and safety. An analysis of costs is included. An overview of taxi ranks and a best practice design guide formulated by DIT are presented in Section 5.

Section 6 contains the considered recommendations of the DIT team and commentary on various options relating to standards in small public service vehicles in the Irish context.

2 Review of existing small public service vehicles

2.1 Introduction

The existing fleets of SPSVs (taxis, wheelchair accessible taxis, hackneys and limousines) have been reviewed and analysed to develop a profile of the fleets in rural and urban areas. All areas of Ireland have been surveyed including the representative cities of Dublin and Cork and the representative provincial towns of Clonmel and Sligo. Data have been sourced from National Car Testing Service Limited (NCTS) and the Vehicle Registration Unit (VRU) in Shannon with respect to age profiles, fuel types, mean annual mileage, engine capacity and National Car Test (NCT) pass and failure rates.

Procedures for compliance in relation to standards, taximeters and testing of small public service vehicles are considered, as well as the impact of the current Regulations on standardisation, suitability, comfort, safety and costs.

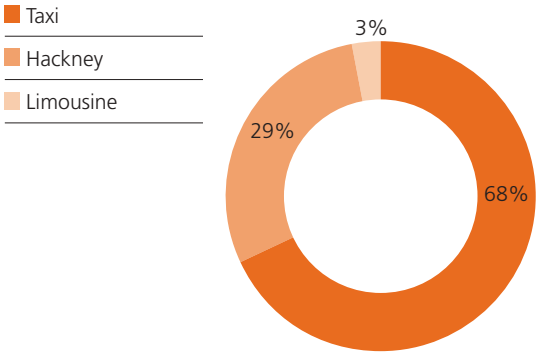
2.2 Review of existing fleets

A review of the data from NCTS and the Vehicle Registration Unit is presented here with information about general categories of small public service vehicles (SPSVs), age profiles, fuel-type, mean annual mileage and engine capacity. Data are also presented according to geographic areas.

2.2.1 General categories of SPSVs

All taxis, hackneys and limousines are classified as SPSVs. Based on data recorded by the Vehicle Registration Unit at Shannon, the current fleet of SPSVs comprises a total of 20,744 vehicles, of which 68.3 per cent (14,171) are taxis, 29.2 per cent (6,057) are hackneys, and 2.5 per cent (516) are limousines. Figure 2.1 indicates the relative proportions of each classification of small public service vehicle.

Figure 2.1 Relative proportions of SPSV classifications



Source: VRU.

Figure 2.2 Age profile of the SPSV fleet as of 2005

Source: VRU.

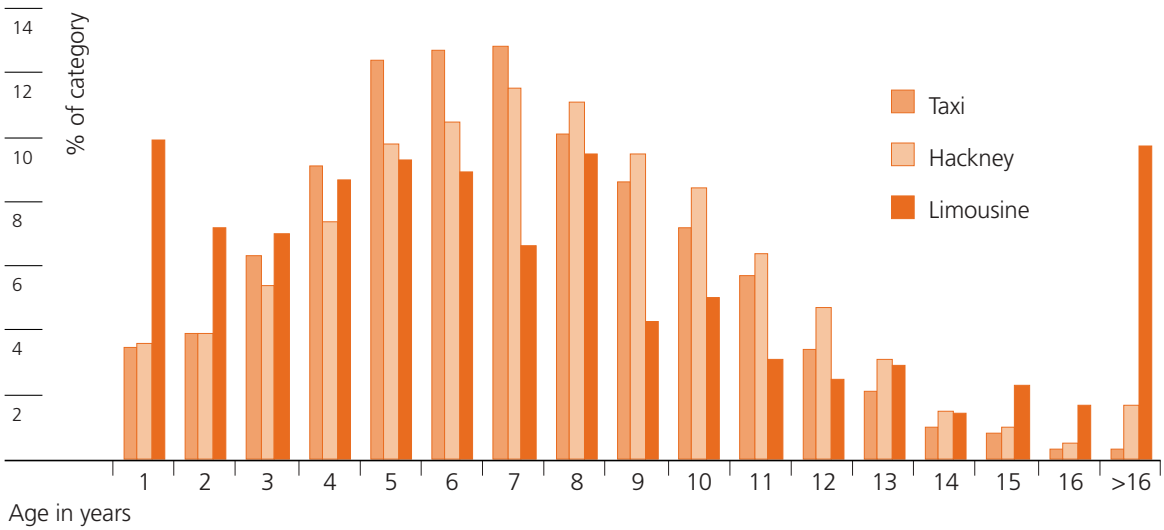
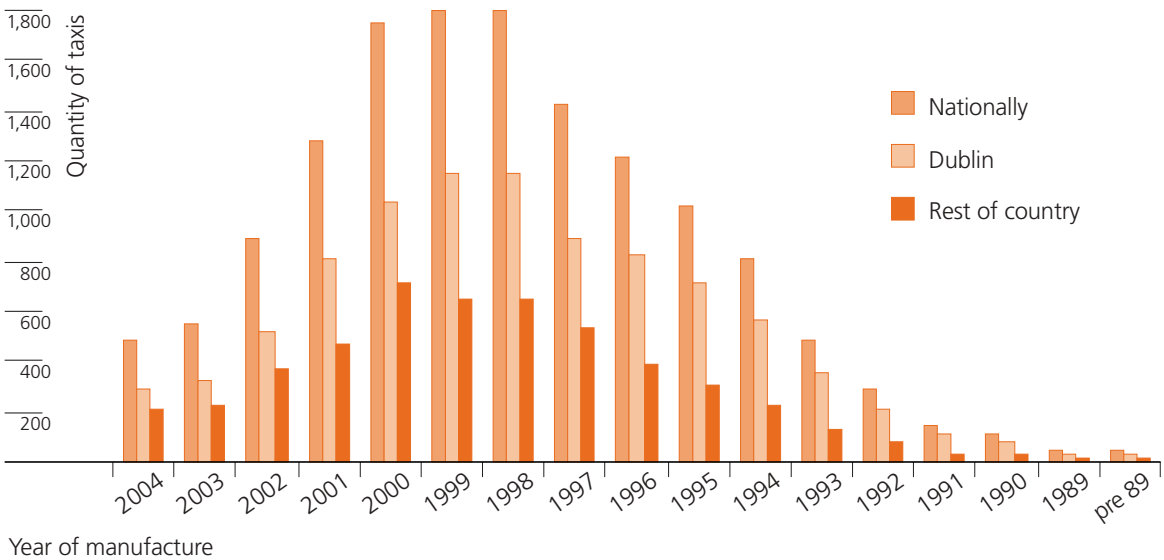


Figure 2.3 Age profile of taxis by geographic area

Source: VRU.



2.2.2 Age profiles of SPSVs

Figure 2.2 presents the age profile of the fleet, recorded by the Vehicle Registration Unit, as of 2005 for each category of SPSV. Those vehicles indicated as being '>16' are 17 years of age or older, hence the large number of limousines in this category.

The average ages of each category of small public service vehicle in Ireland are:

- Average age of a taxi 6.9 years
- Average age of a hackney 7.5 years
- Average age of a limousine 7.4 years

In comparison, the average age of the taxi fleet in London, England, is approximately 7.6 years.[1]

1 Public Carriage Office. Cost, Fares and Earnings Impact of Alternative Vehicle Taxis. 17 March 2005. URL: *http:www.tfl.gov.uk/pco/taxi-_conditionsoffitness.shtml* (accessed 25 May 2005).

Figure 2.4 Age profile of hackneys by geographic area

Source: VRU.

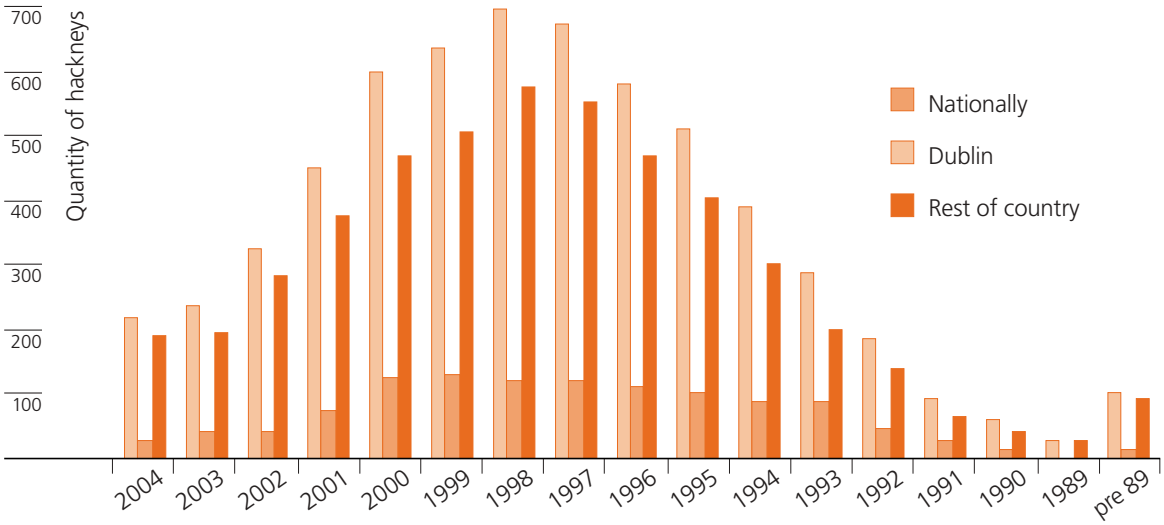
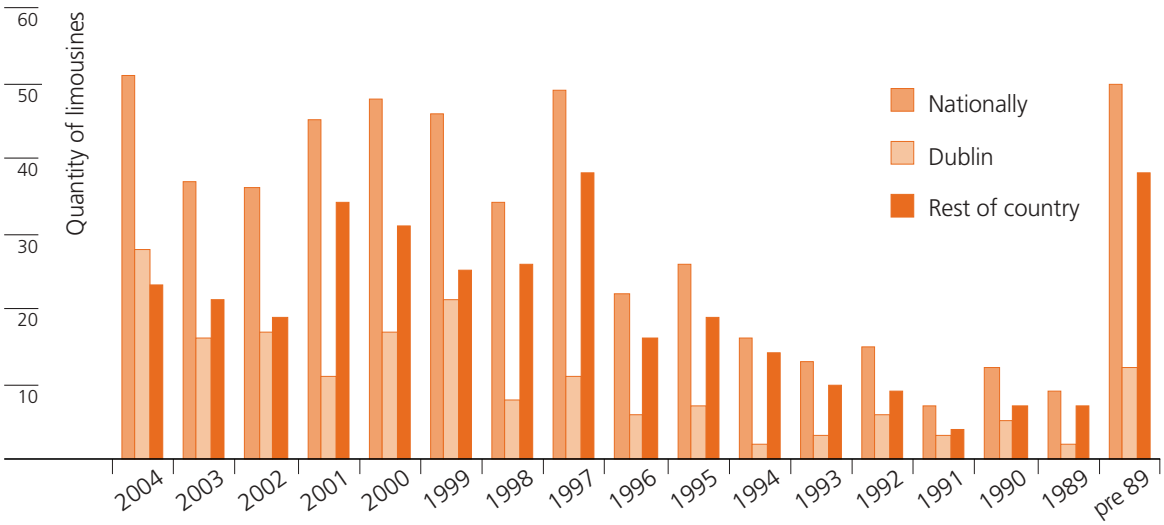


Figure 2.5 Age profile of limousines by geographic area

Source: VRU.

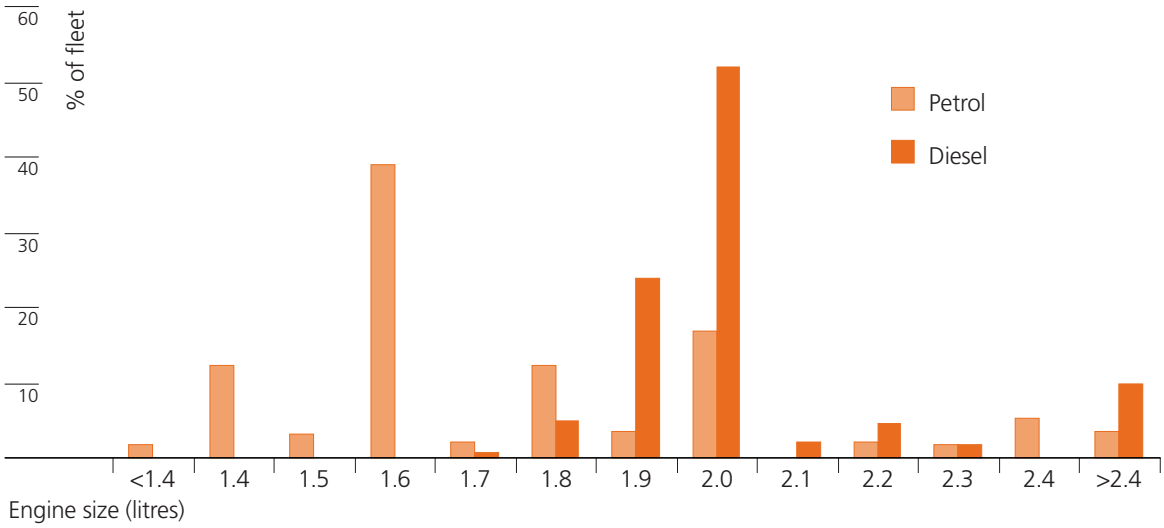


Limousines are not directly comparable to taxis or hackneys in terms of average age as their age profile is skewed by the numbers of very old or 'classic' vehicles among their number, that is, vehicles older than 1989. There has also been a relatively recent boom in limousine services in Ireland and limousines have only been licensed as a separate category since 2000. This is reflected in the numbers of vehicles registered since 2000.

A review of data from the Vehicle Registration Unit in Shannon resulted in the series of graphs above, Figures 2.3, 2.4 and 2.5, which detail the age profiles of SPSVs together with their geographical variations.

Figure 2.6 Distribution of engine sizes for SPSVs

Source: NCTS.



Note: Multiplying the engine size as given in litres by 1000 converts it to 'cubic centimetres'; for example, a 1.6 litre engine is equivalent to 1,600 cubic centimetres.

2.2.3 Petrol versus diesel-powered SPSVs

Based on data sourced from NCTS, an estimate has been generated regarding the proportions of engine capacities for petrol and diesel-fuelled vehicles of the current SPSV fleet. The figures have been determined from the testing of 6,622 vehicles, a sizeable sample (32 per cent) of the fleet. Of this sample, 66 per cent were powered by petrol engines and the remaining 34 per cent by diesel engines. The distribution of engine sizes from the analysis for petrol- and diesel-powered vehicles is illustrated in Figure 2.6.

Figure 2.6 clearly illustrates that the majority of petrol-powered SPSVs have engine capacities in the range 1.4 litres (1,400 cc) to 2 litres (2,000 cc). It can also be implied that 89 per cent of all petrol-powered SPSVs are in this range. The range of diesel engine sizes is less broad in comparison to petrol-powered vehicles, with 90 per cent in the range 1.8 litres to 2.3 litres.

It is not sufficient to compare petrol and diesel engines on the basis of their cubic capacity or engine size alone. Diesel engines possess greater torque or pulling ability at lower engine speeds than petrol engines but usually produce less maximum engine power for a given cubic capacity. Traditionally, diesel engines have been more fuel efficient. However, recent advanced petrol and diesel engines exhibit less difference in performance and economy.

Studies of motor vehicle accidents have shown that the extent of injuries and the number of fatalities experienced by vehicle occupants decreases with an increase in vehicle mass. These studies show that the occupants of heavier vehicles are safer in a crash than those in lighter vehicles. It is not just a matter of considering the mass of the vehicle. One study highlighted the importance of vehicle size in reducing injuries and deaths.[2]

For example, passengers are safer in accidents involving front or rear impacts due to the protection associated with front and rear crumple zones of the vehicle. In other words, the engine and boot compartments are designed to absorb much, if not most, of the kinetic energy involved in the crash. However, passengers are especially at risk from side impacts, particularly in vehicles with low sill heights such as exist generally in small vehicles.

2 Thomas, P. & Frampton, R. Large and Small Cars in Real-world Crashes – Collision Types and Injury Outcomes; Vehicle Safety Research Centre, Loughborough University, UK. 1999.

2.2.4 Mean annual mileage

The average annual mileage on a national basis was determined using data supplied by NCTS from 6,439 vehicles that were tested in 2004 and 2005. The data were generated by comparing the mileage figures for March 2004 to those of March 2005, see Table 2.1. There was an obvious differentiation with respect to the mean annual mileages of small public service vehicles in Dublin and those in the remainder of Ireland: 58.5 per cent of the 6,439 SPSVs that were surveyed nationally operated in the Dublin area but only accounted for 45 per cent of the total national mileage.

These figures clearly reflect the varying demographic and geographical factors that affect SPSV operators in Ireland. In Dublin, journey distances of SPSVs are shorter, on average, compared to those of SPSVs operating in more remote rural areas as outlined in Table 2.2.

Table 2.1 Mean annual mileages of SPSVs, March 2004–March 2005

National average	38,535 miles per annum
Dublin	29,590 miles per annum
Rest of the country	51,162 miles per annum

Source: NCTS.

Journeys may well be longer in duration in Dublin due to traffic congestion in the metropolis. This has implications for service providers in the different regions. The wear and tear on rural vehicles, due to their greater mileage, may be offset by the fact that city vehicles also operate in quite a severe environment (e.g. speed ramps, greater number of right-angled turns, etc.), although the condition of certain rural roads can also have a detrimental effect. Anecdotal evidence regarding the maintenance and service of taxis suggests that they suffer more than other vehicles from high rates of wear on their bearings and bushings – the most common problems encountered being oil leaks and free play in suspension components.

Table 2.2 Mean annual mileages of SPSVs by geographic areas March 2004–March 2005

NCT test centre group	Mean annual mileage (per vehicle)	Number of vehicles surveyed
Dublin (four centres)	29,590	3,769
Athlone	35,764	31
Cork	35,821	386
Galway	35,446	363
Limerick	33,178	278
Waterford	35,844	101
Castlerea	49,309	20
Charleville	48,274	17
Donegal town	47,871	49
Letterkenny	47,770	57
Youghal	47,552	17

Source: NCTS.
Note: Test centres are grouped into geographic areas for this table.

2.3 Analysis of SPSV data

Vehicle data sourced from NCTS and the Vehicle Registration Unit allowed the DIT to analyse the existing fleet in terms of age profile, makes and models, estimated mileages for cabs in rural and urban areas and other technical parameters. Pass and failure rates from the NCTS for full tests and re-tests of cab vehicles were also analysed. DIT has also reviewed the results of a household survey across Ireland and a survey for cab drivers in Dublin, which was commissioned by Goodbody Economic Consultants for the purpose of the overall national review.

NCTS information indicates that the make and model that constituted the largest proportion of taxis tested and passed in 2004 was the Toyota Avensis. The cab driver survey revealed that 23 per cent of respondents utilised Toyota vehicles.

With regard to wheelchair accessible taxis, a large proportion of the vehicles tested and passed by NCTS were of the Fiat Scudo model. This make and model accounted for about 38.8 per cent of the wheelchair accessible taxis that were tested and passed.

The national average pass rate for 'full tests' of small public service vehicles was 38 per cent in 2004. This figure indicates that the failure rate for the cab fleet in undergoing 'full tests' was 62 per cent. Common reasons for failure include inadequate lighting, lamps and/or reflectors. The pass rate for 'full tests' of small public service vehicles can be compared to the national average pass rate of 52 per cent for 'full tests' of private vehicles. A national average of 82 per cent of small public service vehicles and 90 per cent of private vehicles passed the NCTS 're-test'. NCTS data also indicate that approximately 22,099 full tests were performed on the existing cab fleet in 2004. An estimated 30.6 per cent of full tests performed involved vehicles that were either new or changed. Respondents to the cab driver survey indicated that they replaced their vehicles every 3.5 years, on average.

The results from the 2005 household survey indicated that 84.9 per cent of the adult respondents agreed or strongly agreed that taxi and hackney vehicles were of good quality. Trips of five miles or less accounted for 52.0 per cent of journeys by users in the Dublin area and journeys of up to seven miles accounted for 78.2 per cent of journeys (from the household survey).

2.4 Procedures for compliance

Procedures for compliance with the Regulations for small public service vehicle standards are currently the responsibility of a number of key stakeholders. These include An Garda Síochána, Local Authorities, the Legal Metrology Service and the National Car Testing Service Limited (NCTS).

2.4.1 Licensing

The PSV Inspectorate of an Garda Síochána is concerned with all types of vehicles utilised for the carriage of passengers (public service vehicles). In Dublin, the PSV Inspectorate is located in the Carriage Office. Its principle responsibilities[3] include:

- Law enforcement with respect to small public service vehicles;
- Supervision, examination and licensing of all public service vehicles and drivers in Ireland;
- Inspection of all public service vehicles;
- Technical examinations of small public service vehicles that are the subject of Garda investigations and of defective public service vehicles that have been involved in road traffic accidents; and,
- Responsibility for lost property with respect to small public service vehicles.

Members of An Garda Síochána at the Carriage Office estimate that there were 18,500 SPSV drivers' licences in force in the Dublin area in 2004. At a national level, there were approximately 50,000 drivers' licences in force for small public service vehicles for this time period.

An Garda Síochána have indicated that there are no accurate data available regarding the number of technical examinations of SPSVs in comparison to private vehicles. This is due to the lack of distinction between SPSVs and private vehicles for the purposes of technical examinations.

3 An Garda Síochána. The Carriage Office, 2005. URL: *http://www.garda.ie/angarda/trafdiv/caroff.html* (accessed 10 March 2005).

Local Authorities currently have the responsibility for the processing and issuing of small public service vehicle licences on an annual basis. Vehicles must comply with technical requirements as specified in current Road Traffic Regulations.[4] An application for a renewal of a small public service vehicle licence requires a technical description of the vehicle including the make and model, chassis number, colour, vehicle registration number and details with regard to passenger accommodation.[5]

2.4.2 Taximeters

Taxis are required to have taximeters fitted according to the Road Traffic (Public Service Vehicles) (Amendment) (No. 3) Regulations 2000 (S.I. 367 of 2000). The same Regulations also require that such a taximeter fitted to a taxi or wheelchair accessible taxi shall:

A Be securely attached to the vehicle so that the taximeter cannot be detached or be caused to become inaccurate by vibration of the engine or by the motion of the vehicle, and

B Be in such a position on the vehicle as to enable a person inside the vehicle easily to see and read the taximeter, and

C Have the transmitter cable connecting the taximeter with the wheels or the driving mechanism of the vehicle so situated and so protected by an outer cover as to render damage to the cable unlikely, and

D With effect from 1 September, 2002, be fitted with a device capable of printing automatically a receipt showing the fare charged for a hire, and

E Be in good order, repair and condition, and subject to the terms of the Metrology Act, 1996, have affixed the mark(s) signifying conformity with that Act.[6]

The enforcement of the provisions of the 2000 Regulations lies initially with the NCTS as part of the suitability test and thereafter with An Garda Síochána.

The verification, sealing and inspection of taximeters in public service vehicles is governed by the Metrology Act and enforced by the Legal Metrology Service, a statutory body within the National Standards Authority of Ireland (NSAI) responsible for weights and measures in Ireland.[7]

The design of a taximeter is assessed and certified as suitable for use under a system called 'type approval'. At present, many taximeters utilised in Ireland are similar to those used throughout Europe and systems are in place to recognise certifications granted in other EU states. When a taximeter is initially used or after it has been repaired or adjusted, its owner must request that an inspector verify that it is operating correctly. An inspector can inspect a taximeter in use at any time; sometimes this is by arrangement with the taxi owner, or inspection may be carried out on a random basis or following a complaint by a service user.[8] A Certificate of Conformity is issued to the applicant upon the verification of a taximeter by the Legal Metrology Service.

An Garda Síochána is responsible for the investigation of overcharging of passengers of small public service vehicles with respect to the taximeter.

2.4.3 Testing of small public service vehicles

National Car Testing Service Limited (NCTS) is responsible for the implementation and operation of vehicle testing in Ireland. NCTS operations are governed by the Road Traffic (National Car Test) Regulations, 2003. Small public service vehicles must pass the tests of this independent body in order to operate within the cab industry. NCTS exercises its testing functions under a framework of guidelines drafted by the Department of Transport. These guidelines, which are based directly on the Regulations, are intended to ensure compliance and conformity of cab vehicles with the Regulations. The specific guidelines for SPSVs are part of a broader framework that serves as a reference with regard to the performance of roadworthiness tests on vehicles with accommodation for up to eight passengers, including taxi and hackney vehicles, covered by the Road Traffic (National Car Test) Regulations, 2003.[9, 10]

A Suitability Test must be performed by NCTS when a new applicant for a licence is required to have a vehicle passed as being suitable for public or private hire or in the case where an existing licence holder wishes to change their licence to a different vehicle. On successful completion of the Suitability Test, the owner of the vehicle will be issued with an NCT Certificate and a Suitability Certificate.

4 Road Traffic (Public Service Vehicles) (Amendment) Regulations, 1963–2002 and Road Traffic (Construction, Equipment and Use of Vehicles) Regulations 1963–2002.

5 Dublin City Council. Application for renewal of licence, 2005. URL: *http://www.dublincity.ie/Images/Public Service Vehicle Renewal (apf279)_tcm35-6736.pdf* (Accessed 10 March 2005).

6 Metrology Act, 1996 (No. 27 of 1996).

7 Legal Metrology Service. Legal Measure – Fair Measure, 2005.

8 Legal Metrology Service. Legal Measure – Fair Measure, 2005.

9 Road Traffic (National Car Test) Regulations, 2003 (S.I. No. 405 of 2003).

10 NCT (National Car Testing Service) Taxi, Hackney and Limousine, TC 11, Rev 3, 2004.

The maximum number of passengers that the vehicle is licensed to carry is specified on the Suitability Certificate and the certificate is signed by the inspector who conducted the test.

A renewal test is a standard NCT test conducted annually on all existing public or private hire vehicles. The NCT Certificate issued will have validity in line with the licence issued by the relevant Licensing Authority. Suitability items are not checked as part of a standard NCT test; therefore, even if infractions of suitability requirements are noticed, they must not result in a failure being recorded for the NCT test.

It is also noted that procedures for certifying non-standard or modified vehicles such as vans converted to multi-seater taxis, vans converted to wheelchair accessible taxis or vehicles 'stretched' after manufacture to become limousines are not tightly defined.

2.4.4 Engineer's certificates

In order for a vehicle to be given a Certificate of Suitability by NCTS a certificate from a motor engineer must be provided stating that the work in converting the vehicle to a wheelchair accessible taxi was carried out to the standard set down in S.I. 47, Road Traffic (Public Service Vehicle) (Amendment) Regulations, 1998. This certificate must contain the vehicle registration and be dated not more than three months prior to the date of the NCTS Test for Suitability as a wheelchair accessible taxi.

2.5 Impact of Regulations

The purpose of this section is to assess the impact of the existing Regulations on the quality, suitability, safety and cost of small public service vehicles in rural and urban areas of Ireland.

2.5.1 Types of vehicles in use

In order to be licensed as a wheelchair accessible taxi, a vehicle must comply with the additional requirements of the Road Traffic (Public Service Vehicles) (Amendment) Regulations 1998 (S.I No. 47 of 1998). The Regulations have permitted a wide variety of vehicles to be utilised as taxis or hackneys. Wheelchair accessible taxis are mainly of the converted-van type, the conversion having been carried out in Ireland or in the UK.

The Road Traffic (Construction, Equipment and Use of Vehicles) Regulations, S.I. 190 of 1963, state that every licensed taxi must have at least four doors (or where there is a doorless opening such as a window to the left of the driver, at least three doors) with each door capable of being readily opened to a reasonable extent. There must also be a permanent top and seating that is properly upholstered with leather or good quality artificial leather. In regard to the seats of a vehicle, the Regulations require:

- The supports of such seats shall be firmly fixed in position;
- At least 16 inches measured in a straight line along the front of each seat shall be allowed for each passenger; and
- Any cross or transverse seats shall be so fitted that, when facing each other, there shall be a clear space of at least 16 inches between any part of the front of a seat and any part of any seat which faces it.

According to the current Regulations,[11] a limousine is a vehicle which is evidently suited by its style and condition for the provision of hire services for ceremonial occasions, or for corporate or other prestige purposes. It is also a vehicle which has an engine capacity of at least 1,900 cubic centimetres, save in the case of a vehicle which was constructed more than thirty years prior to the date of the application for a limousine licence.

The main impact of the Regulations with regard to the specifications of the existing fleet of limousines is on the engine size and general nature of the vehicle. No maximum length, maximum wall-to-wall turning circle or maximum kerb-to-kerb turning circle is specified for limousines in the Regulations.

2.5.2 Overall suitability

For testing purposes the Irish Regulations have been condensed down to a checklist of technical requirements by National Car Testing Service Limited (NCTS). Compliance of vehicle specifications with the Regulations is verified by trained NCTS testers with the aid of this checklist. This process has ensured that the existing fleet of cab vehicles, inspected and tested by NCTS, complies to a very high degree with the current Regulations, both in terms of general roadworthiness and in terms of suitability.

11 Road Traffic (Public Service Vehicles) (Amendment) (No. 2) Regulations, 2000 (S.I. No. 255 of 2000).

Luggage

The current Regulations applicable to public hire vehicles require that provision shall be made for the carrying of a reasonable quantity of luggage and efficient means provided for securely packing the luggage in or on the vehicle. Information gathered at consultation meetings with key stakeholders and at forums suggests that in some cases efficient means are not being provided for the securing of luggage in cab vehicles. There is also a level of ambiguity with respect to the understanding and definition of 'a reasonable quantity of luggage'.

Taxi roof-sign

With regard to the current taxi roof-sign, the current Regulations require that a vehicle that is being operated as a taxi or as a wheelchair accessible taxi must display a sign on the roof of the vehicle. The requirements in relation to the design and dimensions of the taxi roof-sign are outlined in Statutory Instrument 136 of 1995,[12] as amended by S.I No. 157 of 2004.

An additional provision requires that the roof-sign, when lit, shall emit a diffused light and shall be designed to emit a light of a brightness not exceeding 400 candela per square metre of the illuminated area of the sign. Information gathered at consultation meetings suggests that the Regulations on roof-signs may not meet the expectations of all service users owing to difficulties experienced regarding the visual indication of 'availability for hire'[12,13] and difficulties of some people with visual disability in distinguishing taxis from other vehicles.

Hackney sign

The Regulations require that on the granting of a hackney licence the owner of the vehicle shall, while such vehicle is being operated as a hackney, display signs on the front and rear of the vehicle. The signs shall be constructed of a durable material, be securely mounted in appropriate positions (one at the front of the vehicle and one at the rear, on surfaces that are, as near as is practicable, vertical) and be positioned where they could not obstruct the driver's view of the road. The dimensions and design of the hackney sign are specified. Some service users have requested that hackney signs should be more visible and identifiable. If hackney vehicles were to be permitted to use bus lanes the visibility of the sign would assume greater importance.

Limousine sign

On the granting of a limousine licence, the licensing authority is obliged by the Regulations to issue a sign to the owner of a limousine. It is specified that a limousine sign be in the form of an ellipse, be either white, grey or silver in colour and shall display the letters 'LM', the number of the limousine licence and the name of the licensing authority or a letter(s) identification for that name in black letters. It is also required that the limousine sign be securely affixed, at all times, to the rear of the limousine on the outside, in respect of which it was issued, in such a manner that it does not obscure the view of the driver, the vehicle licence number or the vehicle lights. The absence of a limousine sign on a vehicle is not treated as grounds for failing a suitability test by NCTS.[14,15]

Taximeter

Regulatory requirements[16, 17, 18,19] for a taximeter and a receipt printer are monitored by the Legal Metrology Service, through the NCTS Suitability Test and an Garda Síochána. The very significant increase in the number of taxis nationally has put considerable pressure on the resources of the Legal Metrology Service in carrying out verifications. In particular, the recent fare change in the Dublin taximeter area required a verification of up to 11,000 taxis in a very short timeframe. This can lead to situations where unsealed taximeters continue in use until verified by the Legal Metrology Service. Notwithstanding this, taxi drivers are compliant with legal provisions provided they make arrangements to have their taximeter verified – this is evidenced by the appointment letter issued with details of the verification date and time.

Exclusion of certain types of wheelchair accessible taxis (WATs)

A number of internationally designed vehicles do not comply with the specifications outlined in the Irish Regulations for wheelchair accessible taxis and, therefore, are not permitted for use as wheelchair accessible taxis in the Irish market. The reasons for unsuitability may relate mainly to the number of doors for wheelchair access and/or dimensional constraints.

Some examples are London cabs and cabs licenced in other parts of the UK, which fail to comply with the requirement to 'have at least two doors giving access to the area in the vehicle where the wheelchair and

12 Road Traffic (Public Service Vehicles) (Amendment) Regulations, 1995 (S.I. No. 136 of 1995).

13 Road Traffic (Public Service Vehicles) (Amendment) Regulations, 2004 (S.I. No. 157 of 2004).

14 Road Traffic (Public Service Vehicles) (Amendment) (No. 2) Regulations, 1999 (S.I. No. 316 of 1999).

15 Road Traffic (Public Service Vehicles) (Amendment) (No. 2) Regulations, 2000 (S.I. No. 255 of 2000).

16 Metrology Act, 1996 (No. 27 of 1996).

17 Road Traffic (Public Service Vehicles) (Amendment) (No. 3) Regulations, 2000 (S.I. No. 367 of 2000).

18 Road Traffic (Public Service Vehicles) (Amendment) Regulations 2002 (S.I. No. 411 of 2002)

19 Road Traffic (Public Service Vehicles) (Amendment) (No. 2) Regulations 2001 (S.I. No. 534 of 2001).

its occupant is to be accommodated' and with the specified dimensions of these door openings. While wheelchair access from both sides of a vehicle is desirable, the mandatory requirement for two wheelchair access doors in wheelchair accessible taxis appears to relate mainly to the existence of taxi ranks that cause passengers to enter the taxi on the right hand side and the boarding or alighting of passengers on the right hand side in one way streets.

2.6 Conclusions

- Procedures for the compliance of small public service vehicles with Regulations are currently the responsibility of An Garda Síochána (for licensing, law enforcement, inspection, technical examinations and lost property), Local Authorities (for licensing), Legal Metrology (for verification and inspection of taximeters) and National Car Testing Services Limited (for testing of SPSVs).
- The impact of the current Regulations is significant and has generally been very positive with regard to the types of vehicles in use, the testing of small public service vehicles and the overall suitability of the fleets (in terms of standardisation, comfort, safety and reliability). It is the opinion of the DIT team that the existing Regulations are effective overall, but they require consolidation so that they are readily accessible to members of the industry and members of the public.
- Checklists of technical requirements based on the current Regulations are used by NCTS in testing and examining vehicles and in certifying the suitability of taxis, wheelchair accessible taxis, hackney vehicles and limousines. The testing procedures provide a high level of certainty that vehicles that pass the tests conform to the Regulations. The importance and efficacy of the testing process is underlined by the fact that the vast majority of SPSVs do not pass the annual NCT first time.
- A number of internationally designed wheelchair accessible taxis do not comply with the specifications set out in the Irish Regulations and, therefore, are not permitted for use as wheelchair accessible taxis in the Irish market.
- Some service providers have stated that London type taxis have not been found satisfactory in Irish conditions: reasons mentioned included poor suspension, ground clearance and cost – all of these are specific to particular vehicle models rather than being necessarily associated with the specification of the London type cab.
- Procedures for certifying non-standard or modified vehicles such as vans converted to multi-seater taxis, vans converted to wheelchair accessible taxis or vehicles 'stretched' after manufacture to become limousines are not tightly defined.

3 Suitability and adequacy of SPSVs for people with disabilities

3.1 Introduction

The suitability and adequacy of small public service vehicles has been investigated and analysed by gathering data and information through consultation meetings with disability representatives and bodies, and by means of public consultation meetings in rural and urban areas. The research and data collection was also complemented by a review and analysis of submissions and results from survey questionnaires. Information regarding the existing fleet of cab vehicles was investigated and scrutinised in order to assess the suitability and adequacy of cab vehicles for individuals with sensory and/or mobility impairments.

3.2 Proportion of accessible taxis

A census carried out by the Central Statistics Office in 2002[20] informs that 8.3 per cent of the total population of Ireland are recorded as having a disability or combination of disabilities. The census also shows that there is a steady increase in the number of people with disabilities in the older age groups.

In view of statistics with respect to people with disabilities and the ratio of wheelchair accessible taxi vehicles to other taxi vehicles, the Accessible Taxi Group[21] proposed a minimum availability of wheelchair accessible taxis based on a combination of area size and population. They recommended a ratio of wheelchair accessible to standard taxis of 1:5. It is estimated[22] from vehicle licences in operation that the ratio of WATs to all taxis is currently just under 1:10.

Approximately 7.4 per cent of the fleet of cab vehicles (taxis, wheelchair accessible taxis, hackneys and limousines) tested and passed by NCTS in the annual period of May 2004 to May 2005 were of the wheelchair accessible type. This figure is very close to the proportion of the total population of Ireland recorded as having a disability or combination of disabilities. The challenge, of course, is to ensure that suitable SPSVs are available to people with disabilities when and where they are required and at an affordable cost.

Another indication of the ratio of wheelchair accessible taxis to other taxis is available in the report published by the Accessible Taxi Group in 2004, 'Towards an accessible taxi service for all'.[21] This states that there were approximately 1,188 wheelchair accessible taxis in Ireland as of March 2003, representing 10.2 per cent of the total fleet of taxis plus wheelchair accessible taxis (11,692). The report notes that at the time of liberalisation of the market in 2000 there were 840 wheelchair accessible licences, representing over 21 per cent of the total taxi licences issued.

20 Central Statistics Office Ireland. Principal statistics. Technical report, Central Statistics Office Ireland, URL: *http://www.cso.ie/statistics,* 2002.

21 Accessible Taxi Group. 'Towards an accessible taxi service for all'. Technical report, Accessible Taxi Group, 2004.

22 By Goodbody Economic Consultants as part of the current national review.

3.3 Existing Regulations for wheelchair accessible taxis

The requirements regarding a wheelchair accessible taxi are stated in 1998 public service vehicles Regulations.[23] The vehicle must be constructed or adapted so as to be capable of accommodating a person seated in a wheelchair. The vehicle must also possess seating accommodation for at least three passengers in addition to the person seated in the wheelchair. There must be at least two doors giving access to the area in the vehicle where the wheelchair and its occupant are to be accommodated. A ramp or other mechanism to permit the safe entry and egress of a passenger seated in a wheelchair must be provided. Additional requirements are specified in relation to restraints. The current designs and configurations of wheelchair accessible cabs in use in Ireland are strongly influenced by the existing Irish Regulations.

DIT is aware that the current Regulations date back to 1998, and will be reviewed by the Commission in the development of a consolidated code of Regulations for taxis, hackneys and limousines. It is timely therefore to consider what revisions might be made to the existing Regulations to reflect evolving international best practice.

Issues for consideration

In order to identify issues that the Commission should consider with regard to future Regulations, DIT carried out an assessment of a converted-van-type wheelchair accessible taxi vehicle. The issues identified were:

- Wheelchair access might be hindered owing to inadequate door widths and the configuration of the seating within the vehicle;
- There were shortcomings in the vehicle design for passengers with certain types of disability and not in a wheelchair. For instance, access and egress would have been very difficult for people with stiff joints or other mobility disabilities;
- There was inadequate provision for luggage and for the proper restraining of luggage;
- The height of the interior of the vehicle was insufficient to accommodate a moderately tall person sitting in a wheelchair;
- The height of the vehicle floor from the road surface was inconvenient both in relation to the height(s) of typical kerbing and in relation to the road surface itself;
- It was considered that a permanent step at the main passenger-side door could touch some roadway bumps such as speed ramps;
- It was considered that there were insufficient safety features including restraining mechanisms for all passengers;
- The seat backs of fold-down seats were inadequately padded;
- There were protrusions close to and behind the position of a passenger's head when seated on one of the rear-facing fold-down seats;
- The level of lighting in the interior of the vehicle was considered marginal;
- The level of heating in the main passenger compartment was considered insufficient for some common wintertime weather conditions;
- Outward visibility through the windows for a passenger in a wheelchair was poor;

23 Road Traffic (Public Service Vehicles) (Amendment) Regulations, 1998 (S.I. No. 47 of 1998).

- There was no adjustment of the height of the driver's seat to ensure a satisfactory driving position for a range of drivers of different sizes – it seemed that the positioning and adaptability of the driver's seat had been compromised by the installation of a partition between the driver's seat and the main passenger compartment;
- The ramps provided were sufficient only for use where there was a suitable kerb available. They were not suitable for use from the road surface directly; and,
- The seat belt shoulder strap mounting point for the fold-down seat in the front passenger compartment was too low.

As part of the review, a survey was carried out by Goodbody Economic Consultants to investigate the level of service including driver and vehicle standards offered by the cab industry to wheelchair users across Ireland. The response from people with physical disability was that 35.7 per cent stated that safety equipment was 'usually' present in cab vehicles and 38.2 per cent said it was 'usually' in proper working order. These figures suggest that the provision of safety equipment is unsatisfactory. A somewhat more positive finding is that 61.4 per cent of people who use wheelchairs agreed or strongly agreed that WATs are suitable to their needs, while 52.4 per cent agreed or strongly agreed that the physical layout of WATs is satisfactory.

3.4 Submissions from people with disabilities

People with disability and representative bodies for people with disability have provided information regarding the common disability types amongst public service vehicle users. One significant point they made was that it is misleading to assume the term people with disabilities applies only to people who use wheelchairs. The majority of people with a disability have mobility difficulties, or impaired sight, or hearing difficulties, or a learning difficulty or any combination of these.[24]

As part of the European Year of People with Disabilities in 2003, a consortium of disability representative organisations, named the Accessible Taxi Group, carried out a review to identify the most suitable taxi and hackney service for users in rural and urban areas of Ireland. Their published report, 'Towards an Accessible Taxi Service for All'[24] in 2004, gave a number of recommendations with regard to technical issues including:

- Design of taxi ranks;
- Vehicle requirements, including minimal accessibility features for all taxis and additional features for wheelchair accessible taxis; and,
- The ratio of wheelchair accessible taxis in relation to other vehicle types.

It was proposed by the Accessible Taxi Group that a Best Practice Design Guide for accessible taxi ranks should be developed. Improved signage at ranks by increasing colour contrast and letter size was also proposed. It was also stated that there needed to be appropriate positioning of signs, particularly from the pedestrian perspective. This proposal was in tune with recommendations outlined by the National Disability Authority in its submission to the Review and in a formal response to the Department of Environment and Local Government with respect to the Department's deliberations regarding a framework for the promotion of qualitative improvements in the taxi service and the future Regulation of those services. It was proposed that in order to create an integrated accessible transportation system, taxi ranks, in their location and in their design should be made accessible to people with disabilities. It was stated that this approach to enhancing accessibility should include adequate space for embarking and disembarking and shelters at taxi ranks.

24 National Disability Authority. Towards best practice in the provision of transport services for people with disabilities in Ireland. Technical report, National Disability Authority, 2003.

3.5 Accessible taxis

In order to meet the varying needs of people with physical and sensory disabilities, a standard accessible taxi and a wheelchair accessible taxi were proposed by the Accessible Taxi Group.[25] They proposed that the minimum accessibility features for all taxis should include:

- Minimum internal and boot size.
- Induction loop.
- Microphone between the driver and passenger(s), where there is a screen partition.
- Talking meter.
- Global Positioning Satellite (GPS) system.
- Floor colour contrasting with seat colour.
- Non-slip floor covering.
- Bright yellow grab handles and clearly marked seat edges.
- Contrasting delineation of any gap for passing money through a screen.
- Mandatory national bright yellow livery.
- Strong illumination of the roof-sign with a clear indication of wheelchair accessibility.

Their proposal for additional features for wheelchair accessible taxis included:

- Maximum step height.
- Ramps with minimum slope.
- Wheelchair anchor points and seat belts.

A survey was commissioned by Goodbody Economic Consultants for the overall national review, which involved people with visual impairment(s). When questioned regarding changes that could be made to cab vehicles, 33.3 per cent of visually impaired respondents stated that clearly marked door handles, seat edges and grab handles, would make cabs easier for them to use.

The findings of both the Accessible Taxi Group and Goodbody Economic Consultants were considered in developing subsequent recommendations.

3.5.1 Swivel seats

It has been suggested by service providers, service users and key stakeholders including disability representatives that there would be support for the installation of a swivel seat in saloon-type vehicles.

Swivel seats are available which can be installed in the front of a saloon-type vehicle. Typical models are capable of rotating to make an angle of approximately 80° with reference to the front windscreen of the vehicle. A passenger with mobility disability can position themselves on the seat or be assisted onto the seat, which can then be rotated back 80° in order to be aligned parallel to the front windscreen of the vehicle. Such a swivel seat may be suited to service users with a range of disabilities.

25 Accessible Taxi Group. 'Towards an accessible taxi service for all'. Technical report, Accessible Taxi Group, 2004.

3.6 Conclusions

People with disability and their representative bodies have indicated that issues of significance in relation to small public service vehicles include the design of taxi ranks, vehicle requirements (including minimal accessibility features for all taxis and additional features for wheelchair accessible taxis) and the ratio of wheelchair accessible taxis to other vehicle types.

The installation of a swivel seat in saloon-type vehicles would make them more suitable for people with a range of disabilities including mobility impairment(s).

There is scope for improving the specification of the Irish wheelchair accessible taxi or hackney and for enhancing the accessibility of standard taxis or hackneys to people with a wide range of disabilities.

There is also scope for encouraging better use of communications technology to ensure that wheelchair accessible taxis can be obtained by those who need them.

It is the view of the DIT team that in the long term a much better technical solution can be found for wheelchair accessible cabs. If a basic European specification of requirements for a wheelchair accessible cab vehicle that would also have a wide range of features to meet the needs of people with different disabilities could be established, the size of the European marketplace would easily support its implementation as the standard cab vehicle specification of requirements throughout Europe for all users. Economies of scale and diversity of supply would be achieved – the specification of requirements would not dictate how the requirements were to be met. Unfortunately this challenge seems to have been too daunting thus far for any significant progress to have been made. It is recommended that the Irish Government should use its voice to encourage such a development.

4 Vehicle standardisation and identification

4.1 Introduction

Information pertaining to the standardisation and identification of cab vehicles was gathered by means of consultation meetings with key stakeholders, through attending public forums in provincial towns (Clonmel and Sligo) and cities (Dublin and Cork) in Ireland, by reviewing submissions received and other research. The different perspectives of service providers and users are presented and considered in this Section.

The research has also been complemented by the use of surveys commissioned by Goodbody Economic Consultants in collaboration with the Commission for Taxi Regulation. International practices with regard to requirements and methods for cab vehicle identification have been sourced for analysis and consideration.

For the purposes of the review, it was necessary to investigate and assess costs in order to understand and quantify the financial implications associated with the standardisation and identification of small public service vehicles. The details are presented.

4.2 Vehicle standardisation

As a general principle, vehicle standards should be the same for hackneys and taxis. This is particularly so in relation to safety issues. It is recognised that, in the context of a clear distinction being made between the categories of private hire and public hire vehicles, there is less of a need for vehicle standardisation with regard to private hire than with regard to public hire vehicles.

Amongst cab service operators and owners, some strong opposition to the possible introduction of a standard type of vehicle has been voiced. The reasons given include a lack of financial viability for the investment in vehicles in the industry.

Many service providers have suggested that cost implications and viability would have to be fully taken into account as part of any proposal for a standardised type of small public service vehicle.

It has been stated by service providers, disability representatives and service users that the current technical specifications of wheelchair accessible taxis are unsuitable. Some have suggested that there should be a balance between wheelchair accessible and standard cabs. Another suggestion has been that the emphasis should be on providing small public service vehicles that are ‘disability friendly’. This would involve provisions for a wider range of disabilities.

In contrast to the general consensus of service providers in opposition to a standard type of cab vehicle, disability representatives have stated that they would strongly support a universal design concept. They envisaged that a standardised cab vehicle would meet the needs and requirements for people with a range of disabilities. In the report, ‘An Accessible Taxi Service for All’, the Accessible Taxi Group of Ireland has proposed two models of accessible taxi vehicles. A ‘standard accessible vehicle’ is recommended with specific accessibility features for all users, except those who need to remain in a wheelchair. A ‘wheelchair accessible taxi’ would incorporate similar accessibility features as the

'standard accessible vehicle' as well as being specifically designed to permit a passenger to travel in a wheelchair.[26] The National Disability Authority also suggested that there should be an effective system for data collection in relation to the roll-out of accessible mainstream vehicles.[27]

Internationally, standardisation of small public service vehicles has been introduced by some countries and cities, for example Germany and London, England. In particular, a mandatory livery scheme is required for cab vehicles operating in Victoria, Australia.[28]

4.3 Vehicle identification

The current means of identification of a taxi vehicle is a roof-sign. The public service vehicles Regulations, 1995, require that a taxi sign shall be lit during lighting-up hours except when the vehicle is on hire or standing for hire at an appointed stand. It is also required that a taxi sign shall not be defaced, obscured or altered in such a manner that the word '*Taxi*' or *'Tacsai'* or licence number are rendered illegible or partly illegible.

In the case of a hackney vehicle, identification is by means of an identification plate on the exterior of the vehicle. It is also required in the public service vehicles Regulations, 1999, that no sign or advertisement other than the hackney sign shall be displayed on the vehicle.

An identification plate is the method of identification on the exterior of a limousine vehicle. As mentioned previously in Section 2.5.2, the limousine sign must be in the form of an ellipse, be white, grey or silver in colour and shall display the letters 'LM', the number of the limousine licence and the name of the licensing authority or the letter(s) identification for that name in black letters. It would appear that the Regulations regarding the format of the vehicle identification are not always strictly adhered to or enforced. This issue and the size and visibility of the identification would assume much greater importance if limousines were to be permitted to use bus lanes.

With reference to current identification of taxis, most service providers in the industry are strongly opposed to the concept of colour coding of vehicles. They are of the view that this would reduce the re-sale value of a vehicle. There is a strongly held view amongst service providers that the current roof-sign for taxi vehicles is a sufficient means of identification. In a survey carried out for the review, which was commissioned by Goodbody Economic Consultants in 2005, it was revealed that 61.6 per cent of taxi drivers were against the idea of more visibly identifiable cabs. The results of a household survey, also commissioned by Goodbody Economic Consultants in 2005 for the review, resulted in 93 per cent of the adult respondents agreeing or strongly agreeing that a taxi was distinguishable from other vehicles due to the presence of a roof sign. A survey of cab usage by tourists revealed that 77 per cent of those tourists surveyed agreed or strongly agreed that taxis in Ireland are easily distinguishable from other vehicles.

There was a view that colour coding of taxis would increase the professionalism of the service. A survey of people who had a visual impairment was commissioned by Goodbody Economic Consultants for the review. The results of the survey indicated that 61.9 per cent of the respondents felt that if cabs were colour coded, they would be more identifiable.

Representatives of service users with disability and other service users also expressed a view that the current hackney identification sign was inadequate with respect to identification.

Vehicle identification requirements for small public service vehicles in Ireland can be compared to practices elsewhere in Europe or on other continents such as Australia and America. In some European countries, including Italy, cab vehicles are required to possess a uniform colour with a luminous sign, attached to the roof, on which *'Taxi'* is printed. Taxis have to be of the colour yellow in Turkey. The identification plate also has to include the letter 'T' in addition to other information. In most principalities in Spain, taxi vehicles have to comply with a particular colour scheme as specified by relevant licensing authorities.

A mandatory colour scheme for the fleet of cab vehicles is required in certain regions of Australia. Comparing cab vehicle identification requirements in Ireland to those on the continent of America: Regulations in Canada require that a double-faced sign be attached to the roof of the cab. A sign has also to be painted or permanently affixed to each side of the vehicle and above or below the rear window.[29]

26 Accessible Taxi Group. 'Towards an accessible taxi service for all'. Technical report, Accessible Taxi Group, 2004.

27 National Disability Authority. 'Towards best practice in the provision of transport services for people with disabilities in Ireland'. Technical report, National Disability Authority, 2003.

28 Organisation for Economic Co-Operation and Development. Competition Issues in Road Transport. 2001. URL: *http://www.oecd.org/daf/clp* (accessed May, 2005).

29 Canadian Legal Information Institute. TaxiCab Manitoba Regulation 209/91, 1991, URL: *http://www.canlii.org* (accessed 1 May 2005).

4.4 Use of taximeters and other electronic aids

There are a range of taximeters commercially available from distributors for small public service vehicles in Ireland. Makes and models of taximeters must be type approved prior to being presented for verification and sealing to the Legal Metrology Service.

The principle of operation of the electronic taximeter involves an instrument that calculates and indicates the fare to be charged on the basis of the distance travelled and the duration of the specified journey. A sensor device provides distance pulses while an internal clock provides information relating to time periods.[30]

A Global Positioning Satellite (GPS) system can be utilised in the cab industry for the detection of vehicles in a specified area of operation. The first GPS satellite was launched in 1978. This technology is capable of being the key constituent of almost all in-vehicle navigation and tracking systems. The system may also be operated as a base technology with regard to traffic management.

The taxi industry in Finland invested $25 million in the year 2004 in a new satellite positioning-based taxi-ordering system. Taxis entered the satellite age with a series of improvements including security cameras, a GPS system and map displays. The aim of implementing this system in Finland was to improve customer service and increase rates of vehicle dispatch. It was estimated that by the end of 2004, 50 per cent of the existing fleet of taxi vehicles in Finland would have begun to utilise the new system. With the assistance of this technology, taxi dispatch centres would receive clear information regarding the location of taxis. The system also gathered traffic information from different areas of a city. This data could be used in predicting journey requests and composing shift lists. Similar systems that were based on satellite positioning were currently being operated in parts of France and Sweden. To relieve congestion at dispatch centres, the new system would also introduce 'virtual taxi stands' or virtual taxi ranks. If a customer called the number of the nearest taxi rank and there was no vehicle waiting, the call would automatically be directed to the nearest taxi within the area.[31]

A survey of cab drivers conducted by Goodbody Economic Consultants established that 49.2 per cent of respondents, affiliated to radio companies, believed that more than half of all trips were obtained by means of a radio system. Information gathered at the consultation meetings with members of the taxi industry suggested that at least 40 per cent of cab operators in the Dublin area were non-radio operators. It was suggested by members of the cab industry that the service could be greatly enhanced if this figure were significantly reduced.

4.5 Driver safety and security

Information regarding driver safety and security was gathered through consultation meeting with key stakeholders, public consultation meetings, submissions and surveys. Additional information-gathering research was also undertaken. The issues that impinge upon driver safety and security can be broadly categorised as in Table 4.1 overleaf.

A survey of cab drivers was conducted by Goodbody Economic Consultants for the purpose of the review. The results indicated that 71.7 per cent of respondents claimed that they did not possess any form of security device in their vehicle. Of this group, 48.4 per cent stated that they felt that the presence of a security device was unnecessary.

4.5.1 Vehicle design features

Partitioned driver compartment

The issue of personal assaults on a driver is an obvious concern that was voiced repeatedly at consultations with various key stakeholders. Service providers also stated that many drivers did not operate at night because of the bad behaviour of some passengers.

One frequent suggestion that emerged during consultations was to provide a partition of some kind between the cab-driver and the passengers in the vehicle. Virtually all those service providers who ventured an opinion on this matter were in favour of a partition, as it was envisaged that this would increase driver safety and security. A survey of cab drivers carried out by Goodbody Economic Consultants for the review established that only 1.6 per cent of respondents had screen partitions in their vehicle.

30 Gleike and ATA. Taximeters – Solutions to Combat Fraud, 1999. URL: *http://www.oiml.org/bulletin/2000/04/taximeters.pdf* (accessed 26 April 2005).

31 STAT-USA, Market Research Reports, 2004. URL: *http://strategis.ic.gc.ca/epic/internet/inimr-ri2.nsf/en/gr-01000e.html* (accessed 26 April 2005).

Table 4.1 Issues impinging on driver safety and security

Vehicle design features
Partitioned driver compartment
Panic button
Closed circuit television (CCTV)
Two-way radio
Seatbelts
Operational and working practices
Driver's identity display
Driver training and testing
Wheelchair and equipment handling

If a partition was to be a feature of a small public service vehicle, the specifications for condition of fitness applied to London Taxis might be used as a guide. These specifications[32] stipulate that a London taxi driver's compartment must be large enough:

- To allow unrestricted operation of the vehicle controls by the driver;
- To facilitate hand-signalling by the driver on the vehicle's off-side; and,
- To allow communication between driver and passenger through the partition via a hatch with a sliding door of maximum width 11.5 cm (4 inches).

A technical evaluation by the Dublin Institute of Technology of a van-conversion-type wheelchair accessible cab used in Ireland revealed that the positioning of the partition created somewhat cramped conditions for the driver, yet if it had been positioned further back the rear door aperture on the driver's side would not have complied with the required width for wheelchair accessibility.

Panic button

In Norway a silent alarm system is utilised for small public service vehicles. Such systems can prove very effective. Some of the parties consulted suggested the inclusion of a panic button in small public service vehicles. However, two contrary opinions were expressed. One was that of service providers who stated that they would be in favour of such a feature only if it did not interfere with the operation of other on-board equipment. The other opinion was that panic buttons were not considered effective. In the cab driver survey by Goodbody Economic Consultants only 1.6 per cent of the respondents reported having a personal alarm or panic button.

CCTV

The use of closed circuit television (CCTV) was proposed by some interest groups consulted. CCTV has advantages for passenger as well as for driver security and safety but is an expensive option.

Two-way radio

It was stated at public consultation meetings that an estimated 60 per cent of all small public service vehicles had two-way radio equipment on-board. In the cab driver survey carried out by Goodbody Economic Consultants 51.2 per cent of respondents indicated that they were affiliated to a radio dispatch company.

Seatbelts

In the public consultation process, some service providers expressed concerns regarding the mandatory wearing of seatbelts by small public service vehicle drivers. They stated that seatbelts could restrict the driver's ability to escape from the vehicle and therefore could be a security risk.

4.5.2 Operational and working practices

Health and safety at work have been the focus of much public attention and government legislation in recent decades. Therefore, greater safety consciousness, improved training and the implementation of good working practices are coming to the fore for drivers of small public service vehicles.

Driver training and testing

DIT in its meeting with the Advisory Council to the Commission for Taxi Regulation ascertained that its Training Programme Sub-committee has considered the implementation of a programme for the training

32 Public Carriage Office of London. Construction and Licensing of Motor Taxicabs in London – Conditions of Fitness, 2000.

of service providers within the taxi industry. The sub-committee envisaged that the curriculum would be implemented with a partnership approach and could be accredited by an independent body with the involvement of relevant government department(s).

Most of the parties consulted in the course of the present review were in favour of the introduction of a practical aspect to the training and testing of prospective public service vehicle drivers.

Safety statements

The Training Programme Sub-committee has identified a possible need for a reference to safety statements to be included in the Regulations for small public service vehicles. This could take the form of a requirement for a safety statement to be carried by each SPSV. In the safety statement the possible risks to the driver, service users and other road users could be identified and the steps to be taken to minimise the risks could be stated. Such a safety statement could be based on a generic template and adapted for any specific features of a particular vehicle.

Wheelchair manoeuvring

Aside from the general matters concerning health and safety mentioned above, most of the interest groups consulted were concerned about the specifics of wheelchair manoeuvring and the provision of assistance to people with disability in entering or leaving a cab vehicle and in securing the wheelchair while the passenger is seated in it. Concerns were expressed equally by those who represented the drivers and those who represented passengers with disabilities. Most expressed the opinion that specialist training should be given to service providers who would be handling wheelchairs and providing assistance to passengers using wheelchairs.

The NCTS Suitability Test requires that a wheelchair ramp must have a minimum of 3.6 units of length for each unit of height. This represents a maximum slope on the ramp of 15.5°. If a cab driver wishes to push a passenger in a wheelchair up such a ramp unassisted (i.e. by force of the driver's strength alone) he must overcome a resistance equal to approximately one quarter the weight of the passenger and wheelchair while controlling and manoeuvring the wheelchair. Depending on the driver and the passenger, this may not be practicable without additional assistance. Naturally, it is important that passengers in wheelchairs are confident that the driver is able to provide the required assistance, both physically and in terms of training.

4.6 Analysis of costs

This section considers some of the costs of acquisition and conversion of standard vehicles for use as SPSVs. According to NCTS data, Toyota models made up the largest proportion from a single manufacturer of saloon-type cabs tested and passed in 2004. Volkswagen models also comprised a large proportion of saloon-type cabs tested and passed in that year.

Table 4.2 Estimated book values of some small public service vehicles

Make and model	Engine size (litres)	Estimated book value* (€)			
		2001	2002	2003	2004
Toyota Avensis	1.6 Petrol	10,000	12,500	15,000	20,500†
Toyota Corolla	1.4 Petrol	8,000	13,000‡	15,000	17,500
VW Passat	1.6 Petrol	12,000	15,000	18,000	22,000
VW Bora	1.6 Petrol	10,500	12,500	15,000	18,000
Fiat Scudo	2.0 Diesel	8,500	10,500	12,500	15,500
Ford Transit	2.0 Diesel	10,500	13,000	15,500	18,000

* Estimated book values are rounded to the nearest €500 and are dependent upon factors including mileage and condition of the vehicle.

† The estimated book value is based upon the new model of Toyota Avensis introduced in 2004.

‡ The estimated book value is based upon the new model of Toyota Corolla introduced in 2002.

Table 4.3 Estimated retail prices of standard saloon-type vehicles*

Make and model	Engine size (litres)	Fuel type	Number of doors	Estimated retail price (€)
Toyota Avensis Aura	1.6	Petrol	4	24,645
Toyota Corolla Luna	1.4	Petrol	4	22,835
VW Passat	1.6	Petrol	4	26,485
VW Bora	1.6	Petrol	4	24,945

* SIMI. Recommended passenger vehicles price list. Technical report, SIMI, February 2005.

Table 4.4 Estimated retail prices of standard van-type vehicles

Make and model	Engine size (litres)	Fuel type	Number of doors	Estimated retail price (€)
Fiat Scudo Combi	2.0	Diesel	3	27,445
Ford Transit MWB	2.0	Diesel	3	24,565

Table 4.5 Estimated conversion costs for standard van-type vehicles

Make and model	Engine size (litres)	Fuel type	Number of doors	Estimated retail price* (€)
Fiat Scudo Combi	2.0	Diesel	3	5,400
Fiat Scudo (Van)	2.0	Diesel	3	8,200
Ford Transit MWB	2.0	Diesel	3	5,400–8,200†

* Estimated conversion cost includes VAT calculated at 21%.

† Estimated costs are dependent upon conversion features.

A survey was carried out across Ireland in April 2005 by DIT to establish and assess book values of saloon and van-type vehicles. It took the form of a telephone interview and involved participation from 21 motor dealers. The estimated book values of saloon-type and van-type vehicles (prior to conversion) from 2001 to 2004 are presented in Table 4.2.

The book value of a vehicle is the economic value of the asset (i.e. the vehicle), calculated as the actual cost minus the accumulated depreciation. Depreciation is a decline in the value of the vehicle due to general wear and tear or obsolescence.

Estimated retail prices (excluding extra features) for a number of the named Toyota and Volkswagen models as of 2005 are presented in Table 4.3.

In terms of wheelchair accessible cab vehicles, the NCTS reported that a significant proportion of the vehicles tested and passed in 2004 consisted of converted-van-type Fiat Scudo and Ford Transit models. The estimated retail prices prior to conversion are presented in Table 4.4.

It must be stated that resale values are dependent upon the year of manufacture, mileage and technical condition of the vehicle. With reference to van-type vehicles, estimated costs for standard vehicle conversions are given in Table 4.5

Table 4.6 Estimated costs of colour coding

Make and model	Details of re-spray	Estimated cost* (€)
Toyota Avensis	Complete re-spray of exterior in yellow colouring.	2,792
Toyota Avensis	Repaint of bonnet, boot-lid and roof in yellow colouring.	1,371
Toyota Avensis	Supply and fit of body transfers in yellow colouring. Strips (12 inches wide) on both sides of the vehicle.	170
Fiat Scudo	Repaint of bonnet, rear-doors and roof in yellow colouring.	1,371
Fiat Scudo	Supply and fit of body transfers in yellow colouring. Strips (12 inches wide) on both sides of the vehicle.	170
Toyota Avensis/ Fiat Scudo	Supplying of 3 black circular transfers with relevant licence number.	57

* Estimated cost includes VAT calculated at 21%.

Table 4.7 Estimated costs of a roof-sign and electronic aids

Electronic aid	Estimated cost* (€)
Roof-sign	200
Taximeter	**350–900
Receipt printer	300
GPS System	750

* Estimated cost includes VAT calculated at 21%.
** Prices reflect functionality, including printing and fitting.

Vehicle identification could be enhanced for small public service vehicles. Estimated costs have been obtained regarding the colour coding of a saloon-type and a wheelchair accessible vehicle. Estimated costs are presented in Table 4.6.

The estimated costs for the colour coding of a vehicle indicate that the most expensive method of colour coding is a full re-spray of the vehicle. A more moderate cost is associated with the purchase of transfers that would indicate relevant information including the taxi licence number.

Estimated costs for taxi roof-signs and electronic aids for small public service vehicles are presented in Table 4.7.

Services are also available to supply and install a taximeter, taximeter printer and roof-sign. The estimated cost of this is €800 including VAT.

It has been stated by service providers within the cab industry that the estimated cost of rental for a two-way radio system is €70 per week.

4.7 Conclusions

There are many advantages in having a diversity of supply of SPSV vehicles. Nonetheless a degree of standardisation can readily be achieved by specifying reasonable requirements to be met by cab vehicles.

The costs associated with modifications including vehicle conversions and colour coding have been researched, as have vehicle purchase prices and the values of used vehicles.

It was found that the most expensive method of colour coding is a full re-spray and the least expensive method is the installation of transfers onto the body of the vehicle.

The information presented in this section has been taken into account by the DIT team in coming up with its recommendations, which are given in Section 6.

5 Taxi ranks

5.1 Overview of taxi ranks

Some service users have expressed dissatisfaction with the identification of taxi ranks and with the facilities and information provided at ranks. In many cases existing taxi rank signs face towards the road and are not visible to pedestrians approaching along the footpath on the side of the rank.

Service providers within the taxi industry have expressed concerns with respect to the current provisions for the maximum numbers of vehicles at appointed stands (taxi ranks). Providers have also stated that some current taxi rank configurations and the locations of some ranks are unsuitable for the existing traffic systems (e.g. one-way systems).

As part of the overall national review of small public service vehicles, a household survey was carried out across Ireland in 2005 by Goodbody Economic Consultants in collaboration with the DIT. The aim of the survey was to establish cab usage levels by private individuals and to assess consumer opinions. This survey provided an indication of the methods by which a trip was arranged. The results indicated that 9.7 per cent of adult respondents in the Dublin area and 18.8 per cent in the rest of Ireland arranged trips by queuing at a taxi rank. This information is an indication of the relative importance of taxi ranks for service users as a means of accessing taxi services.

5.2 Best practice design guide for accessible taxi ranks

As part of this review, DIT has prepared the following best practice guidelines for appointed stands in rural and urban areas:

- All signs must be positioned appropriately for ease of visibility by pedestrians or users in wheelchairs;
- All signs should make use of high contrast colours and letter sizes to facilitate people with visual disability;
- There should be a sign that displays the fare card for taxis and provides details of how to make a complaint or enquire about lost property;
- An accessible taxi rank should have a public telephone or an assistance intercom, accessible to a user in a wheelchair, from which an accessible taxi can be called if there is not one available on the rank. An adjacent notice should include an official call centre number for ordering accessible taxis or a list of numbers for accessible taxi providers;

- As far as possible the rank should be configured so that the footpath is to the left of the vehicle when the vehicle is facing forwards. If this is not possible then strong consideration should be given to providing a traffic island at each boarding position from which passengers could also enter the taxi from the left hand side;
- There should be a rain/wind shelter capable of accommodating people in wheelchairs and this should include bench seating for passengers who may be elderly, have a disability or just be tired;
- A boarding area for wheelchair accessible taxis should be indicated by appropriate high contrast markings on the ground for the taxi and on the ground for passengers with disabilities;
- The kerb at the wheelchair accessible taxi boarding area should be of good quality, straight, and at a height of 200 mm to facilitate entry or exit of wheelchairs to or from wheelchair accessible taxis. This boarding kerb should be appropriately blended with the general pedestrian area to facilitate wheelchair access and to avoid the creation of tripping hazards;
- There should also be a separate boarding area with a kerb that is flush with the roadway and which has a level surface adjacent to the edge of the roadway of the rank to enable a wheelchair to approach the taxi closely. This area would facilitate passengers who wish to make use of a swivel seat or passengers who have mobility difficulty in settling down onto the low seats in saloon-type taxi vehicles;
- At a taxi rank where sizeable queues are expected to form there should be a suitable railing to contain the queue on the footpath;
- Adequate street lighting should be provided at the taxi rank to provide security for those queuing and to facilitate boarding, including boarding of passengers using wheelchairs;
- At the taxi position for wheelchair accessible taxis there should be additional space available in front of and/or behind the vehicle:
  - To accommodate wheelchair accessible taxis, which may be longer and wider than standard taxis, and
  - To ensure that access is enhanced not only for passengers with disabilities, but also for those who may be involved in helping them to board or exit the taxi.

5.3 Taxi ranks at airports and other transport terminals[33]

The taxi rank at Dublin Airport is the largest and busiest in the country. Airports and other transport terminals generate high levels of taxi traffic generally.

Taxi drivers have complained about the facilities at some of these terminals. They state that poor conditions have implications for vehicle hygiene standards. It is also important that the holding areas for taxis have sufficient capacity. A high degree of attention to detail is required to ensure the smooth and efficient operation of such busy taxi ranks.

5.4 Conclusions

- Information gathered by DIT at consultation meetings has suggested that some service providers and users regard the identification of taxi ranks, facilities and information provided at ranks as being inadequate;
- Providers have stated that the configurations and locations of some taxi ranks in Ireland are unsuitable due to current traffic systems (e.g. one-way systems). It is important that such feedback from the service providers be taken into account; and,
- Insufficiency of places at taxi ranks, and of the overall number of ranks, is a common problem.

33 It might be noted that many taxi ranks at airports are regulated/ controlled through by-laws made by the Airport Authority.

6 Recommendations

Based on research, testing and consultations as summarised in this report, DIT puts forward the following recommendations and commentary for consideration by the Commission for Taxi Regulation.

6.1 Taxis and hackneys – general recommendations

- Certain accessibility features should be mandatory for all taxis and hackneys:
  - A swivel type front seat to facilitate entry and exit by people with reduced mobility, and
  - Bright yellow internal window and door controls for ease of identification for people with visual disability.
- Vehicles should be capable of comfortably seating no less than four passengers in order to be licensed as a taxi or hackney.
- The number of people for which a taxi or hackney vehicle is licensed should be clearly displayed in and on the vehicle and the driver should ensure that the number of passengers actually accepted takes account of the total loading of the vehicle and the requirement to properly secure luggage.
- Consideration should be given to using only saloon type cars for taxis that are licensed for four passengers on the basis that:
  - A degree of standardisation is desirable for the sake of presentation and consistency in the appearance of taxis;
  - Saloon vehicles offer a high degree of impact protection for all occupants;
  - Virtually all volume car manufacturers offer suitable saloon models; and,
  - Luggage is stored in a permanent, separate compartment.
- Saloon cars with LPG tanks fitted in the boot should not be permitted as taxis or hackneys.
- It is recommended that a minimum vehicle size category should be specified as the large family car category. This should meet the following specifications:
  - A minimum engine capacity of 1,600 cc, (with some degree of tolerance allowed) whether petrol or diesel powered;
  - The vehicle should be designed to seat four passengers comfortably in addition to the driver, one in the front and three in the rear;
  - There should be a door for the driver, a door for the front passenger and two doors, one on each side, for the rear passengers;
  - There should be a separate boot with a minimum capacity of 450 litres (measured by the VDA method with a standard spare wheel stowed);
  - The minimum shoulder room across the rear seats should be, at least, 1,385 mm; and,
  - There should be adequate head room and leg room for the rear passengers in line with the current expectations for large family saloon cars.
- Windows that would prevent visibility into taxis or hackneys in daylight conditions should not be permitted on the grounds of security for driver and passenger and to assist passengers in knowing whether the vehicle is occupied.
- For the same reason, advertising or any coating that would restrict visibility through glass should not be permitted on taxis or hackneys.

- Rear facing or side facing seats should not be permitted in taxi or hackney vehicles other than wheelchair accessible taxis.
- Fabric upholstery and synthetic material together with leather and leatherette should be permitted and all passenger seats and seat backs should be appropriately upholstered with padding.

Design of cars is constantly changing to include more safety and comfort features. Newer cars are also more environmentally friendly, fuel efficient and economical. Older cars require significantly more maintenance and are less reliable in use.

- For these reasons, it is recommended that the Commission should encourage a reduction in the age of cars in use as taxis and hackneys. The DIT team believes the desired situation would be that vehicles in use as taxis or hackneys should not be over seven years of age, i.e. not over six years of age at the time of vehicle licence renewal. Such a change would require a phasing in over a number of years.

6.2 Taxi or hackney vehicles for up to eight passengers

- Where the number of seats is from five to eight but the vehicle is not wheelchair accessible, an MPV type configuration or a small minibus type vehicle could be the permitted vehicle type. (Small MPVs would be excluded.) The vehicle should also have to meet specific requirements including:
  - A minimum engine capacity of 1,800 cc, (with some degree of tolerance allowed) whether petrol or diesel powered;
  - Minimum dimensions for each passenger seat – 406 mm measured horizontally across the front of each seat or seating position;
  - Minimum additional capacity for carriage of luggage (500 litres) where the entire volume can be secured, where the filling of the volume would not hinder or restrict visibility and where the stowed luggage would not cause luggage intrusion risks;
  - A minimum horizontal distance of 400 mm from the front face of the seatback of the rear most passenger to the interior trim of the rear panel or door of the vehicle measured at chest height (400 mm above the seat). Space behind the rearmost seats should normally be configured for the containment of luggage; and,
  - Rear facing or side facing seats should not be permitted.
- Alternatively, consideration should be given to making it a requirement that all taxis for the carriage of more than four passengers should be wheelchair accessible.

6.3 Wheelchair accessible taxi or hackney vehicles

- The requirements for a wheelchair accessible taxi or hackney vehicle should allow for the use of specifically adapted vehicles, customised vehicles or purpose designed vehicles.
  - It is recommended that rearward facing occasional seating should be permitted in a wheelchair accessible taxi, but that each seat should be provided with an inertia-reel-type lap and diagonal seatbelt. Each occasional seat would consist of a fixed and upholstered seat back, a headrest and a fold-down upholstered seat.
  - The seat back should be designed to give appropriate and comfortable support to the back and spine of a passenger;
  - The fold-down seat should be designed to remain in the closed position when not in use while the vehicle is being operated normally;
  - When the fold-down seat is in its closed position there should not be any protrusions that would obstruct the entry or exit of a wheelchair, or cause nuisance or injury;
  - In the case of vehicles which have been modified, a detailed checklist should be drafted for certification by an engineer who would sign a certificate of conformance; and,
  - The maximum kerb to kerb turning circle of a wheelchair accessible taxi should be 12.5 metres.

Existing Regulations state that wheelchair accessible taxis should have at least two doors giving access to the area in the vehicle where the wheelchair and its occupant are to be accommodated. This is required to accommodate a number of taxi ranks where passengers enter the vehicle on the driver's side. It also permits passengers to exit on the driver's side in situations (e.g. on one-way streets) where it is convenient or appropriate for the vehicle to pull-up at the kerb on the driver's side. As a consequence, a number of international purpose-built vehicles are not permitted for use in Ireland.

- DIT recommends that the Commission examine this issue further to establish the number of ranks and situations where driver's side boarding is the case and explore the possibility of locating all ranks throughout the country in a manner that would allow entry from the passenger side of the vehicle.
- In the absence of a resolution of the above, DIT recommends retaining the requirement for at least two doors giving access to the area of the vehicle in which the wheelchair and its occupant are accommodated. It is further recommended in relation to these doors (where they are on opposite sides of the vehicle) that a clear passageway should be maintained, with width and height equal to the door aperture dimensions between each door and the location of the wheelchair while travelling.
  - The specified minimum height of the aperture for wheelchair entry should be increased from 1,250 mm to 1,450 mm;
  - The specified minimum width of the aperture for wheelchair entry should be increased from 735 mm to 800 mm;
  - The specified minimum height within a wheelchair area of a wheelchair accessible taxi should be increased from 1,300 mm to 1,500 mm; and,
  - Where the floor of the vehicle is more than 406 mm above the ground an intermediate step with a minimum tread of 200 mm should be provided. Ideally, this step should extend automatically when the door is opened and retract when the door is closed.
- Ramps and locaters for two-track ramps should have enough versatility to accommodate a very wide range of wheelchair widths (up to 700 mm width measured across the wheels at a height of 50 mm from the ground) and should be able to accommodate three-wheeled wheelchairs.
- Ramps should be of a design that allows the person pushing or assisting a passenger in a wheelchair to mount the ramp.
- Bright yellow grab handles, clearly marked seat edges, clearly marked yellow door handles and window controls (winders or buttons) should be provided to assist persons with visual impairments. Any gap in a partition, e.g. for passing money through to the driver, should be clearly delineated in yellow colouring.
- Wheelchair anchorages in the floor should be as flush as possible when not in use and where they are not flush should be highlighted in yellow.
- An appropriate level of heating for Irish winter conditions should be provided in the passenger compartment.
- Adequate lighting in the passenger compartment and also adequate lighting of the wheelchair access aperture, ramp and step on both sides should be provided.
- A minimum luggage carrying volume of 450 litres (measured by the German Association of the Automotive Industry [VDA] method with a standard spare wheel stowed) should be provided in all wheelchair accessible taxis together with adequate restraints and a means of securing the luggage.
- Anchorages should be provided for a safe stowage of a wheelchair when not in use, whether folded or otherwise, if carried within the passenger compartment.
- Suitable means such as grab handles should be provided to assist people to rise from the rear seat with particular attention to the needs of the elderly and people with disability.
- Induction loops which are provided for users of hearing aids have proved problematic in some vehicles. It is therefore recommended that this matter should be kept under review until a suitable solution is found.

- There should be a standard recommended kerb height for the WAT boarding area at taxi ranks of 20 cm. Where possible, an intermediate step at the entrance to a wheelchair accessible taxi should be at this height. There should also be a boarding area flush with the roadway for the convenience of service users with certain disabilities.
- Adequate outward visibility through the side windows of the vehicle should be provided for a passenger in a wheelchair.
- Incentives should be put in place to encourage the provision of wheelchair accessible taxi and hackney vehicles.

6.4 Limousines

- A maximum wall-to-wall turning circle for limousines should be put in place. Some oversized limousines from the United States could be considered hazardous on Irish roads.
- It is recommended that limousine vehicles that do not carry M1 type approval (for instance vehicles that have been extended after the original manufacturing process) should require an engineer's report to certify that the vehicle is safe for use as a limousine and that this report should incorporate a standard checklist of items.
- It is recommended that side facing seats should not be permitted in limousines and that seatbelts should be provided for all passengers. An exception could be made for vehicles that were constructed before 1960.
- The Commission should consult with the An Garda Síochána, the Department of Transport and other appropriate bodies in relation to the need for additional limousine Regulations where the unusual nature of the particular vehicle might warrant restrictions in the interest of traffic management and safety. Limitations might include maximum speed limits or stipulations with regard to where vehicles could be used.

6.5 Vehicle identification

A requirement to have a standard colour for all taxis would have significant cost implications and would tend to increase the cost of providing a taxi service resulting in fare increases.

- It is therefore recommended that a standard colour for taxi vehicles should only be considered as part of a wider process involving incentives for the provision of custom designed or standardised taxis.
- DIT recommends that a standard optional taxi marking scheme should be developed, consisting of the word *'Taxi'* or *'Tacsaí'* and the taxi number on each side of the vehicle. It is recommended that a suitable scheme of colours and lettering be commissioned from a graphic designer. The scheme should take account of different vehicles, colours and design variations and could form part of a quality assurance scheme. These markings would help to further distinguish taxis from other vehicles. Those taxi owners who adopt the scheme are likely to benefit from the enhanced visibility and image of their vehicles.
- Most interested parties regard the general design and dimensions of the current regulation taxi sign as satisfactory. Consideration should be given to the following issues:
  - In many cases one of the yellow panels of the taxi sign is left empty. It is recommended that this should always be filled either with a telephone number or the taxi number, which would then appear on both sides of the word *'Taxi'*;
  - In order to assist customers to identify whether a taxi is available for hire or not, a green light to indicate that the taxi is available for hire and a red light (linked to the taximeter) to indicate the taxi is on hire, should be attached to the existing sign;
  - The Regulations should be more specific in regard to the positioning of the taxi sign, as for certain vehicle types the curvature or height of the roof can make clear visibility difficult from some vantage points;
  - On saloon type vehicles the sign should be positioned half way along the roof, not at the front or the back to ensure maximum visibility; and,

  - Consideration should be given to modifying the Regulations to allow the use of signs that are more aerodynamic and lighting systems that utilise newer technologies (while still retaining the overall dimensions and features of the existing signs).
- It is recommended that all taxi numbers should be identifiable with a particular taximeter area by the use of a unique two or three letter prefix for each taxi meter area in the country.
- Service users have expressed some difficulties with regard to the visibility and legibility of hackney signs. It is therefore recommended that the size of the sign should be revised to specify a sign that is scaled up by a factor of 1.5.
- It is recommended that limousine signs should have the same shape and format as hackney signs but should be in white with black text. The requirement that a limousine sign is securely attached to the outside of the vehicle at all times should be revised to permit adhesive attachment of the sign to the vehicle.
- If limousines were to be allowed to use bus lanes they should have a sign at the front as well as at the rear.
- Internal licence, vehicle and fare details, where required, should be clearly displayed in the front and rear of the vehicle so as to be easily seen by a passenger.

6.6 Metering and electronic aids

- Procedures need to be tightened up to ensure that taxis do not operate without sealed taximeters.
  - Compliance would be greatly enhanced if the meter could be verified in conjunction with the suitability test.
  - Meter verification should be available at short notice in cases of demonstrated and unavoidable need.
- For the benefit of persons with certain types of disability and for the benefit of passengers generally, consideration should be given to an audible signal that would announce the meter had been activated at the beginning and stopped at the end of a journey.
- The requirement that the taximeter is visible to an occupant of a wheelchair should be relaxed on the grounds of impracticability in the case of rearward facing wheelchair users. It should be considered sufficient that such passengers can see the meter on entering and on leaving the taxi.
- It is not considered that it should be obligatory that taxis be fitted with satellite navigation at the present time. However, the use of satellite navigation systems should be encouraged.

6.7 Required minor equipment

- It is recommended that a first aid kit and a fire extinguisher should be carried on every small public service vehicle. A pen and a notebook should also be carried for the purpose of communicating with passengers who might have certain speech or auditory disabilities.

6.8 NCT testing

- It is recommended that a taxi suitability test should be carried out yearly in conjunction with the standard NCT test and that the suitability test should include checking and sealing of the taximeter.
- In the case of wheelchair accessible taxis or hackneys that have been converted from vans or otherwise modified from a volume-produced commercial vehicle it is recommended that in addition to the verification of an engineer's report for the modified vehicle, a checklist of safety issues should be verified. For example, the list should allow for verification that:
  - The driving position is suitable and unrestricted;
  - The driver has adequate visibility through the front windscreen, the side windows and the wing mirrors;
  - There are no fittings, features or defects that would endanger passengers, the driver or other road users; and,
  - There are sufficient anchorage points for a wheelchair and for the lap belt of a person in the wheelchair and all necessary fittings are present and properly stowed on board.

- The suitability test carried out for small public service vehicles should be repeated each year.
- It is recommended that where a new standard production car is to be licensed for the first time, an NCT certificate should not be necessary but there should be a suitability test with charges reduced correspondingly.
- It is recommended that presence of limousine signs should be verified as part of the limousine suitability test.
- It is recommended that the qualifications of an engineer who can sign a conformance certificate for low-volume or modified vehicles such as modified wheelchair accessible taxis or limousines should be defined in the Regulations.

6.9 Driver security and safety

One of the most effective forms of driver security is a silent alarm (normally foot operated) to a base radio station. The use of such systems is to be strongly encouraged.

- It is recommended that taxi drivers/owners are encouraged to subscribe to a global positioning base station service that would provide security monitoring and perhaps a range of other facilities.

A partition is not considered practicable in saloon type taxi or hackney vehicles. Neither is a partition considered practicable in MPV-type vehicles for carrying more than four passengers. The situation is different in wheelchair accessible vehicles with rear-facing occasional seats, which can also serve as vehicles for carrying more than four passengers – the installation of a partition is practicable and offers structural advantages as well as security advantages. The security partition allows rearward-facing occasional seating (and sometimes a forward-facing occasional seat for a passenger seated in the front of the vehicle) to be provided and simplifies the provision of seat belts for the occasional seating.

- Therefore it is recommended that a security partition should be a requirement for a wheelchair accessible taxi that has rear-facing occasional seats.
- It is recommended that consideration be given to requiring each taxi, hackney or limousine vehicle to carry a safety statement and to requiring that this be verified as part of the annual suitability test.

6.10 Driver training

- Training of drivers in customer service, disability awareness, health and safety, personal security, lifting and handling and the use of equipment and fittings is strongly recommended as part of the licensing process. The testing of the driver's local knowledge is also considered to be very desirable.

6.11 Accessible taxi ranks

DIT recognises that the provision and operation of taxi ranks is outside the scope of the Commission for Taxi Regulation. However, as taxi ranks are an integral part of the infrastructure of an efficient taxi service, the following recommendations have been made.

- Regulations and bye-laws should require additional signage to be introduced at appointed stands (taxi ranks). Taxi rank signs should be visible from the footpath on the side of the rank and also from the road and from the footpath on the far side of the road.
- It is recommended that for each taximeter area the provision of vehicle places at taxi ranks should be reviewed on an annual basis, taking account of observed usage levels. The purpose of the annual review would be to ensure that the taxi rank provision meets the requirements of service providers and users and supports the efficient operation of the taxi vehicle public service.
- Consideration should be given to making all taxi ranks in the country accessible from the left hand side of the vehicle.
- It is recommended that the numbers of vehicle places at taxi ranks, along with the overall number of ranks, should be reviewed periodically to take account of the levels of demand and the effective functioning of the ranks. This could take the form of a review report for ranks that would be submitted by the Local Authorities to the Commission for Taxi Regulation annually.

6.12 Taxi ranks at airports and other transport terminals

- It is recommended that an appropriate number of spaces should be reserved for wheelchair accessible taxis in the boarding areas of taxi ranks at airports and other transport terminals.
- Where taxi holding areas operate, it is recommended that an automated system be put in place to ensure an appropriate feed of taxis from the taxi holding area to the boarding area. This should allow taxis to advance one-by-one (rather than in batches) from the holding area and should also ensure that as far as possible there are always wheelchair accessible taxis at the WAT boarding area and standard taxis or WATs at all the other positions of the boarding area.

6.13 Measurement units

- It is recommended that measurements within the Regulations for small public service vehicles should all be in metric units.

6.14 Compliance with vehicle standards Regulations

- Unannounced random inspections are considered the most effective way of achieving a high level of compliance for some aspects of vehicle standards, such as:
  - Vehicle cleanliness;
  - The correct stowage of luggage;
  - The carrying of required equipment by wheelchair accessible taxis;
  - The presence and correct use of a taximeter; and,
  - The correct attachment and positioning of the taxi sign.
- It is recommended that there should be fines for non-compliance and that the frequency of inspections should be controlled to achieve and maintain target rates of compliance.

Appendices

Appendix A
Advisory Council to the Commission for Taxi Regulation

The Advisory Council to the Commission for Taxi Regulation was established under the Taxi Regulation Act 2003 with effect from 4 November 2003.[34]

The primary role of the Advisory Council is to advise the Commission for Taxi Regulation and the Minister for Transport, as appropriate, in relation to issues relevant to small public service vehicles and their drivers.

The Council consists of a chairperson and 17 ordinary members, appointed for a three year period, representing the taxi, hackney and limousine industry, local authorities, An Garda Síochána, consumer, disability, tourism and business interests and other relevant sectors, as required under the Act. Nominations from a range of interests were considered by the Minister for Transport when deciding on the Council's membership.

Members of the Advisory Council to the Commission for Taxi Regulation

Mr Pat Byrne, *former Garda Commissioner* (Chairperson)

Chief Supt. John Farrelly, *An Garda Síochána*

Ms. Noreen Mackey, *Competition Authority*

Ms. Sadie Doherty, *Consumer and Community Interests*

Mr. Jerry Brennan, *SIPTU*

Mr. John Ussher, *Irish Taxi Drivers Federation*

Ms. Deirdre Power, *Irish Hotels Federation*

Mr. Douglas Jordan, *Fáilte Ireland*

Mr. Michael Kilcoyne, *Consumers Association of Ireland*

Mr. Vincent Kearns, *National Taxi Drivers' Union*

Mr. Derek Dalrymple, *Taxi Company Owners Association*

Mr. Tom Fannin, *National Chauffeur Drive Association*

Mr. Brian Killeen, *Transport Logistics*

Ms. Mary Keogh, *National Disability Authority*

Mr. Vincent Thornton, *Irish Motor Industry*

Ms. Lucy O'Donoghue, *Chambers of Commerce Ireland*

Mr. Christopher Humphrey, *National Private Hire & Taxi Association*

Mr. Joe Gavin, *County and City Managers Association*

34 Taxi Regulation Act 2003 (Part 4) (Appointment Day) Order 2003 (S.I. No. 517 of 2003).

Appendix B
List of consultation meetings

The following key stakeholders and interested parties have been consulted for the purposes of the National Review of Vehicle Standards in Small Public Service Vehicles:

Accessible Taxi Group[35]

Advisory Council to the Commission for Taxi Regulation and Sub-committees[36]

An Garda Síochána

Department of Transport

Dublin Airport Authority

European Taxi Group Ireland

International Road Transport Union

Irish Taxi Drivers' Federation

Irish Wheelchair Association

Legal Metrology Service

National Chauffeur Drivers Association

National Disability Authority

National Private Hire and Taxi Association

National Taxi Drivers' Union

National Car Testing Service Limited (NCTS)

SIPTU

Taxi Company Owners Association

35 Disability Federation of Ireland, Irish Wheelchair Association, National Association for Deaf People, National Council for the Blind of Ireland and The Not for Profit Business Association.

36 Fare Structures Sub-Committee, Training Programme Sub-Committee, Vehicle Standards Sub-Committee, Wheelchair Accessible Taxis Sub-Committee.

Glossary

Cab An alternative term for a SPSV (see below) covering taxis, wheelchair accessible taxis, hackneys and limousines.

Dispatch company A company which takes telephone bookings for cabs and arranges with affiliated cab drivers to collect the booking passenger(s), sometimes referred to as a radio company.

Fare card A card which sets out how the fare in the relevant taximeter area is calculated. Fare cards must be displayed in all taxis.

GPS Global Positioning System

Hackney A SPSV which is used for private hire only and is not subject to fare control.

Livery Identifying appearance of a vehicle or driver

NCT National Car Test

NCTS National Car Testing Service

Public hire Public hire refers to the hire of a taxi or wheelchair accessible taxi in a public place, either at an appointed stand or on street.

Private hire Private hire refers to the hire of a vehicle other than a taxi i.e. a hackney or limousine. A hackney or limousine should be hired on a private hire basis by phone, but cannot be hailed down or ply for trade in a public place.

Small public service vehicles (SPSVs) vehicles with seating for up to eight passengers. These fall into the categories of taxi, wheelchair accessible taxi, hackney or limousine.

Taximeter A device used to measure and calculate and display a taxi fare based on duration and/or distance.

Taximeter area A taximeter area is a designated area within which taxis or wheelchair accessible taxis can operate. Taxis can ply for hire on street within the taximeter area, or stand at taxi ranks where available.

VRU Vehicle Registration Unit

WAT Wheelchair Accessible Taxi

Designed by BFK Strategic Design www.bfk.ie

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