



## **Quantifying the Need for Transport Planners**

### **Report on Initial and Planned Surveys**

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## Summary

It is evident from three surveys conducted by the Institute of Logistics and Transport (ILT), the Employers Forum of the National Master Training Package in Transport (the NMTP EF) and the Institution of Civil Engineers (ICE) that there is a serious shortage of trained transport planners, and that this threatens the delivery of the Ten Year Transport Plan, and the complementary Local Transport Plans.

The ILT survey indicated that transport planners consider staff shortages to be a major barrier to the delivery of the new transport agenda. This view is supported by the problems encountered in recruiting transport planners, reported in the EF and ICE surveys. 81% of consultants and 68% of Local Authorities have experienced "significant" or "serious" difficulty in recruiting professional transport planners over the past year.

The number of transport planners employed by consultants increased by 22% over the last year, and they expect an increase of 17% over the current year and a total increase of 61% over the next three years. While Local Authorities only expect their staff numbers to grow by 5% over the next three years, English Local Authorities report that they would like to employ 25% more on LTPs than they do at present. Perhaps their expectations of growth reflect their difficulties in recruiting and retaining their transport planning staff.

From these surveys and information from the NCE 2002 Consultants File, a reasonable estimate of the total number of professional transport planners employed across all sectors is of the order of 3,500. This is expected to increase by 1,800, 50%, over the three years to 2004.

Traditionally, transport planning has been taught at universities at the Masters level. The 2001/2 output of UK residents on all the Masters courses in transport will be some 120. Although the existing Masters courses could probably accommodate up to 200 full time equivalent students a year, that remains far short of the forecast growth in need over the next two years, leaving the vast majority of new entrants with little or no formal training in transport planning. There is, thus, a need for a carefully focused training programme to provide these staff with the basic skills, so they can begin to make a material contribution to delivering the new transport agenda from early in their careers.

However, the responses of the training community to increasing capacity must depend on a view as to whether there is a only a relatively short lived surge in new entrants which will lead to plateau within the next 3 or 4 years, returning to recent annual new entrant rates of the order of 200, or whether there is likely to be a sustained growth in demand for new entrants.

Although increased use of technicians could alleviate the shortage of professional transport planners (ie those with at least a first degree), there are few current training opportunities. Thus expanding the number of technicians is not a solution for the shorter term.

The issues quantified in the initial surveys confirm the need for the Transport Planning Skills Initiative, which will include further surveys designed to identify skills, and thus training, needs.

## **1 Introduction**

- 1.1 Quantifying the need for transport planners, and determining the skills they should have to deliver the Government's Ten Year Plan for Transport is an essential element of the Transport Planning Skills Initiative, TPSI. It helps to establish the case for the Initiative, and provides information central to the definition of future training requirements. It also informs a number of other elements of the Initiative.
- 1.2 This report describes the initial surveys undertaken, and their findings, and provides an overview of the surveys in progress and planned.

## **2 The Initial Surveys**

- 2.1 Two major surveys of "need" have been undertaken thus far. One was among the consultant members of the NMTP in Transport Employers' Forum<sup>1</sup>, and was undertaken by the Employers' Forum (EF). The second was among Local Authorities, and was undertaken by the Institution of Civil Engineers (ICE).
- 2.2 The EF survey focussed on 4 questions. The same 4 questions were included in the ICE survey, which addressed a wide range of transport issues. The questions asked are given in Appendix 1.
- 2.3 The EF survey was conducted in December 2001, with some additional responses in the spring of 2002. The ICE survey was conducted in January and February 2002.
- 2.4 Initially, the EF survey obtained responses from each of its 20 consultant members. Subsequently, a further 6 consultants participated. The ICE survey obtained responses from Local Authorities representing 30% of the population of England Scotland and Wales.
- 2.5 The EF consultants survey has been supplemented by the NCE 2002 Consultants File. The NCE is the weekly magazine for members of the ICE, and provides, annually, a certified survey of UK consultants, with information on the fees earned by responding consultants. One list provides fees for the top 50 fee earners in transport planning.
- 2.6 22 of the 26 EF respondents are also in the NCE File of the top 50 fee earners. The 22 respondents common to both sources represent 84% of the fee income of the top 50 firms. Since those consultants with annual fee income of £1 million or more represent 94% of the total fees for the top 50 fee earners, the EF sample clearly represents a very high proportion of all UK transport planning consultants.

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<sup>1</sup> The NMTP in Transport Employers' Forum has been established by Leeds, London (Imperial College and University College Joint Centre), Napier, Newcastle, Southampton and Westminster Universities. These universities are members of the EPSRC funded National Masters Training Package in Transport, which provides bursaries for about 30 Masters students each year, until 2003/4. The Employers' Forum is intended to provide a link between these universities and the market for their students.

- 2.7 In addition, the Institute of Logistics and Transport (ILT) has undertaken a survey of its members with an interest in transport planning as well as members of the Transport Planning Society, "Achieving the New Transport Agenda: the Professionals' Viewpoint". 387 responses were received

### **3 Staffing Levels**

#### **Consultants**

- 3.1 The EF respondents recorded a 22% growth in professional transport planners<sup>2</sup> employed over the past year. For those recording both 2001 and 2002 fee incomes in the NCE File and participating in the EF survey, the NCE File reports a 19% growth in fee income. The difference between 22% in numbers and 19% in fee income is reasonably plausible; new staff are younger, and thus below average lower fee rates, the NCE fees include world wide earnings while the EF staff numbers are those based in the UK, and the continuing effects of fees competition.
- 3.2 Allowing an additional 5% for firms not included in either the EF survey or the NCE file, gives a total current employment of professional transport planners by consultants of 2,300. If the average growth rate over the past year was the same as that reported in the EF survey, then, consultants increased their staffing levels of professional transport planners by 415 over 2001.
- 3.3 The EF respondents are forecasting a further growth of 17%, in professional staff numbers, over the current year, and they expect to be 61% larger in three years time. These expectations are reasonably consistent across the 26 respondents. Splitting the sample in two equal parts gives a variation of some +/-15%, with a similar variation in growth over the past year.
- 3.4 Although these forecasts appear to be ambitious, much of the new transport agenda, with its emphasis on achieving behavioural change, including a switch from the use of cars, requires planning skills. There is also a major increase in consultation work. However, the reality of the growth forecasts will be tested in the second survey of employers to be undertaken as part of the Initiative, described in Section 6.
- 3.5 Applying the growth plans of the EF respondents, and allowing an extra 3% for natural wastage, gives a need for an additional 470 professional transport planners over the current year, and an average of 620 a year in each of the two years thereafter.

#### **Local Authorities**

- 3.6 The ICE survey of Local Authorities indicates that they employ a total of 646 professional transport planners. However, the ICE survey respondents did not include Transport for London. It is therefore likely to be an underestimate of the total actually employed by Local Authorities.

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<sup>2</sup> "Professional" transport planners are defined simply as transport planners with at least a first degree. Given the complexities of defining "transport planner", it was decided to leave interpretation to the respondents.

- 3.7 The 646 represents a growth of 3% over the previous year. While they expect a decline of 1% over the current year, they are expecting an increase of 5% over the three years to 2005.
- 3.8 However, in another part of the ICE survey, the English respondents report that while they currently employ a total of 451 transport planners in implementing Local Transport Plans, they would like to employ 559, 108 (25%) more. This implies a shortage which Local authorities do not expect to be able to overcome through direct recruitment.

### **Other Employers**

- 3.9 Thus far, the TPSI work has focussed on the two major groups of employers of professional transport planners. However, there are a number of others, most notably:
- the Passenger Transport Executives.
  - Transport for London.
  - Government, including DTLR, the Scottish Executive and the Welsh Assembly.
  - Government agencies, including the Highways Agency and the Strategic Rail Authority.
  - transport operators.
  - universities.
- 3.10 Anecdotal evidence suggests that most of these rely primarily on consultants for transport planning skills, with only relatively small in-house numbers of professional transport planners. The total number of professional transport planners they employ is unlikely to be in excess of 500.

### **Total Numbers and Needs for Professional Transport Planners**

- 3.11 Based on the EF and ICE surveys, a reasonable estimate of the total number of professional transport planners employed by UK organisations in 2002 is about 3,500.
- 3.12 Over the next three years, this number is expected to increase by 1,650 for consultants and, given the potentially modest growth expected by local authorities, some 150 for other employers, giving a total of the order of 1,800, 50% up on present numbers.
- 3.13 It is relevant to note that the ILT survey found staff shortages represent the fourth most important challenge Local Authorities are likely to face in delivering the new transport agenda. The ILT survey also found that its respondents considered that obtaining "more staff with broader skills" is the most important action Local Authorities should be taking to enable them to deliver the new transport agenda; "more specialist staff" was ranked third and "staff training" was ranked fourth.

## **4 Recruiting and Training Transport Planners**

- 4.1 81% of the EF (consultant) respondents have experienced "significant" or "serious" difficulty in recruiting professional transport planners over the past year, with 25% experiencing "serious" difficulty, and none experiencing "no difficulty".

- 4.2 Of the Local Authorities responding to the ICE survey, 66% had experienced "significant" or "serious" difficulty in recruiting professional transport planners over the past year, with 27% experiencing "serious" difficulty. Although 18% reported having experienced "no difficulty", it seems likely that at least some of these had not been recruiting.
- 4.3 Traditionally, transport planning has been taught at universities at the Masters level. Although there are some first degree courses in transport, they are focussed on transport management and logistics. Transport is also taught as a part of other undergraduate programmes, such as economics, geography and civil engineering, but inevitably in limited detail.
- 4.4 The 2001/2 output of UK residents on all the Masters courses in transport will be some 120. In addition, some of those who are not UK residents may choose to remain in the UK (about 1/3 of those studying for a Masters in transport at UK universities are from outside the UK). However, some of the UK residents may choose to work outside the UK, and some may not join the profession. This output, 120, compares with an expected demand of some 500 for 2002.
- 4.5 In 2001, a number of major consultants chose to recruit directly from a variety of first degrees. However, the foregoing numbers imply that only about 25% of those entering the profession this year will have a Masters degrees in transport, and the vast majority of the balance will have little or no formal training in transport planning.
- 4.6 Although the existing Masters courses could probably accommodate up to 200 full time equivalent students a year, that remains far short of the forecast growth in need over the next two years, leaving the vast majority of new entrants with little or no formal training in transport planning. Yet, as with other aspects of transport planning, the availability of suitably skilled human resources will limit the rate at which teaching capacity can be extended.
- 4.7 This raises two issues. First, is the need in the short term to consider the balance in the use of skilled teachers and trainers between the production of a smaller number of comprehensively trained Masters in transport and providing a much larger number of graduates with focused training in key topics. Second, and related, is the need for employers to make a substantially greater commitment to staff training, through short courses and on-the-job training to obtain the skills they require, with significant cost consequences. It appears inevitable that there will be a delay before many of the new entrants attracted over the next few years are fully trained, and able to make a full contribution.
- 4.8 Yet, it is not at all clear whether the current skills shortage is relatively short term, as we gear up from a low level of activity to the higher level required to deliver the Ten Year Plan. It is quite possible that the "population" of transport planners could plateau at about 4,500 to 5,000.

- 4.9 If this were to be the case, the on-going requirement for new entrants would be of the order of 200 per year (on the basis of a 4% annual loss due to retirement and career changes<sup>3</sup>). Training that number is well within the capacity of the existing training providers, and makes the economic case for gearing up to meet a two to three year phenomenon difficult to justify.

## **5 Transport Planning Technicians**

- 5.1 62% of the EF (consultant) respondents and 48% of Local Authorities in the ICE survey considered that the employment of trained technicians could be a way of alleviating any shortage of professional transport planners, and a further 23% of the EF respondents saw this as a partial solution.
- 5.2 The difference between consultants and Local Authorities can be explained in part by the fact that whereas Local Authorities currently employ one technician for every two professional transport planners, the ratio for consultants is one for every five.
- 5.3 Yet formal training opportunities for technicians are sparse, due, to a great extent, to the transformation of many former technical colleges and the like to universities. While this is one of the training issues scheduled to be addressed by the Initiative, a substantial increase in the number of trained technicians is unlikely to be achieved in the short to medium term.

## **6 Skills**

- 6.1 Two recent pieces of research indicate that there is a real change in the skills which transport planners need. The ILT survey found that the primary areas of skill shortage are in:
- project management
  - funding and procurement
  - travel behaviour
  - consultation and involvement.
- 6.2 An exploratory survey of EF members and with delegates at the 2002 Nottingham Transport Conference also identified "management" type skills, such as project management, team working, report writing and public consultation, as currently being the most important for transport planners. Yet, traditionally, formal training has tended to focus on technical skills, such as transport modelling, economics and statistics.
- 6.3 To better understand needs, current abilities and future training requirements, the Initiative intends to conduct two further surveys (these might well be complemented by surveys to meet the specific needs of other elements of the Initiative).

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<sup>3</sup> Given that many transport planners entered the profession in the 1960s and 1970s, followed by a low period of new entrants in the 1980s, it is possible that this will prove to be a low estimate over the coming decade, as the older members of the profession retire.

- 6.4 The first of these surveys is of members of the Transport Planning Society. This will seek to compare the skills which the current transport planning community consider they have with those they consider they should have (ie need) and those for which they have formal training. This survey will also address career satisfaction and aspirations. Design has commenced, with fieldwork scheduled for May 2002.
- 6.5 The second survey is planned to be with a sample of employers, in all categories. This will also focus on skill requirements, from their perspective, as well as future staffing and training requirements. Depending on the availability of funding, it is hoped to complete this by the end of July 2002.
- 6.6 The management of these surveys is being funded by the NMTP in Transport Universities, and their design is being undertaken by Steer Davies Gleave, SDG, as part of their contribution to the Initiative. SDG are also undertaking the TPS member survey, as part of their contribution. Funding for the Employers Survey is yet to be secured.

## **7 In Conclusion**

- 7.1 The ILT survey has demonstrated the concerns of transport planners of the potential impact of the transport planning skills shortage on the delivery of the Ten Year Transport Plan and the complementary Local Transport Plans.
- 7.2 The EF and ICE surveys have served to quantify the scale of the need for transport planners, and the challenges to be addressed in attracting sufficient high quality new entrants, and in training them to either a Masters (NVQ Level 5) standard or to NVQ Levels 3 & 4.
- 7.3 This research demonstrates, very clearly, the need for the Transport Planning Skills Initiative.

## Appendix 1

### The Initial Survey

1 Has your organisation encountered difficulties in recruiting professional transport planners in the UK over the last year?	No difficulty	
	Some difficulty	
	Significant difficulty	
	Serious difficulty	
2 How many full time equivalent professional transport planners (ie with at least a first degree or equivalent) does your organisation employ in the UK?	1 year ago	
	Now	
	In 1 Year	
	In 3 years	
3 How many transport planning technicians do you employ in the UK?	Now	
4 Do you see the employment of trained technicians as a way of alleviating any shortage of "professional" transport planners in the UK?	Yes	
	No	