Appendix 2 TPP Knowledge Requirements

Unit T1 The Policy Context

You need to demonstrate that you have obtained **Knowledge** of the relevant policy context within which transport policies, plans and schemes are developed, financed, assessed, monitored and reviewed, as well as the interrelationship between transport and wider land-use, economic, social and environmental policies, whether in their development or application. Your assessors will be looking for evidence that you clearly understand the key aspects of:

- the principal relevant national, regional and local policies, their key objectives and the way we influence how we plan for our communities

- the structure and responsibility of the different levels of government relating to the development and/or delivery of policies, plans and schemes, the management of transport systems and the delivery of transport services

- the development and/or assessment of transport policy at different spatial scales, and how transport supports the development and/or delivery of wider policy

- the use of policy and objectives in developing options and cases for investment, scheme appraisal, prioritisation, financing and programming, and in monitoring and reviewing the performance of transport policies and programmes

- how changes in policy may influence the development and use of transport, and how policy itself is influenced and can be influenced by key trends and/or emerging concepts, uncertainties, technologies and behaviours

- debate in the profession and the wider public about the key strengths and weaknesses of current policies and how they might be improved

- the impact of different approaches to finance, and the different funding sources in private and public sectors, and how to work within them

Unit T2 Laws and Regulations

You need to demonstrate that you have obtained **Knowledge** of the frameworks of laws, regulations and guidance within which transport planners work. Your assessors will be looking for evidence that you clearly understand the key aspects of:

- current statutory and regulatory requirements, guidance and good practice in all sectors relating to the development and delivery of transport policies, plans, schemes and services

- how transport projects and services are funded, the key factors pertaining to funding eligibility and differences in emphasis and approach required for different funding streams

- the framework of laws, regulations and guidance required for transport planning, including:

  - protection against discrimination

  - public health and safety

  - environmental impact, sustainable development and climate change

  - development planning

  - delivery and operation of land transport, and/or of transport by air or water

Unit T3 Data

You need to demonstrate that you have obtained **Knowledge** of the collection, retrieval, analysis and interpretation of data for use in the development and assessment of transport policies, plans, schemes and services. Your assessors will be looking for evidence that you clearly understand the key aspects of:

- the principal sources of transport statistics and data, and their key characteristics including any limitations
- the methods of data collection used for transport planning, and their relative strengths and weaknesses, including quality of the resulting data
- the principles and practise of transport data processing and analysis and their relative strengths and weaknesses
- emerging sources of data, particularly as a result of new technologies
- how to deal with uncertainty and socio-economic bias in the different types of data collection and analysis

Unit T4 Transport Models and Forecasting

You need to demonstrate that you have obtained **Knowledge** of transport and traffic models and related analysis techniques used in the development, design and assessment of transport policies, plans and schemes. Your assessors will be looking for evidence that you clearly understand the key aspects of:

- the different approaches to forecasting, including scenario planning, casual modelling and continuing current trends, their strengths and weaknesses and how they deal with uncertainty
- the ways in which transport interventions influence demand and thus the forecasts, and methods for comparing how different strategies will produce different futures
- the principles, key characteristics and use of the main types of single-mode and multi-modal transport models, including spreadsheet modelling, GIS, spatial analysis, accessibility models, behavioural models, cross-sectional and longitudinal models, and aggregate and disaggregate models
- why models are being used and which models are most appropriate in different contexts and for different purposes
- how choice of model influences future forecasts and how model outputs appropriate to the modelling task in hand should be specified, interpreted and communicated
- the principles of transport model system design, specification, calibration/estimation and validation, and forecasting, including the role of data in all stages of modelling
- the role and importance of transport forecasting and modelling, including considering any limitations and making them transparent, identifying and addressing uncertainty

Unit T5 Appraisal and Evaluation

You need to demonstrate that you have obtained **Knowledge** of assessment techniques in the appraisal and evaluation of transport policies, plans and schemes. Your assessors will be looking for evidence that you clearly understand the key aspects of:

- the principles and key characteristics of the full range of assessment techniques used in transport planning, including cost benefit and objectives led appraisal and their strengths

and weaknesses and how they related to economic, safety, environmental, sustainability, land use and financial impacts

- the principles of monitoring the performance and impacts of transport policies, plans and schemes, including important interactions between classes of impact, the distribution of impacts, and the key underlying economic and statistical principles

- the practical application of the different techniques including cost benefit analysis, multi-criteria assessment, and option assessment frameworks and their strengths and weaknesses

- how uncertainty is handled in the different appraisal techniques

Unit T6 Stakeholder Engagement

This unit covers the engagement of stakeholders in the development of transport policies, plans, schemes and services. Relevant stakeholders include local authority officers and members, regional and national government bodies, transport operators, statutory consultees, special interest groups, private sector businesses and organisations, the media, third sector organisations, community groups and members of the public. Effective engagement involves communicating ideas, obtaining knowledge, understanding perspectives and building consensus.

Your assessors will be looking for clear evidence that your **Knowledge** covers the key aspects of:

- the principles of stakeholder engagement in the development of transport policies, plans, projects and services

- how to understand and acknowledge the impacts of transport plans and projects on individuals as well as society as a whole

- how to make transparent the recognition of a wide range of views and demonstrate empathy and recognition of different points of view

- when it is appropriate to initiate stakeholder engagement at various stages of a project

- what engagement techniques are suitable for different types of stakeholders and circumstances (e.g. stakeholder meetings, workshops, interviews, surveys, focus groups, community and public consultation events and programmes) and their relative strengths and weaknesses

- potential for bias in the engagement process and how this can be managed / mitigated

- the role of digital technology and social media in stakeholder engagement

Unit T7 Developing Strategic and Masterplans for Transport

If this is one of your chosen units you need to demonstrate that you have obtained **Knowledge** of the process of developing local, regional or national transport plans covering multiple modes for the medium to longer term and the transport inputs to site or geographic area specific masterplans. Your assessors will be looking for evidence that you clearly understand the key aspects of:

- the principal interrelationships between all transport modes, and between transport and economic activity, land use and the environment in the development of such plans

- the principles of planning practice in the development of such plans

- the key components of such plans and the stages in their development

- determining priorities in the delivery or implementation of plans

- procedures for obtaining the participation of stakeholders in plan development

- the procedures for the formal adoption of transport plans prepared by local, regional or national authorities

- the procedures for the formal approval of masterplans for specific sites or areas and their environs

- the potential conflict of interests between local and strategic objectives and how to reconcile them

Unit T8 Applying the Principles of Transport Systems Design

If this is one of your chosen units, your assessors will be looking for evidence of **Knowledge** relating to application of systems design for all modes to the development of transport interventions, taking into account**:**

- the requirements and experience of end users

- the requirements of wider stakeholders, operators and transport authorities

- how transport systems contribute to achieving overall policy goals in particular a sustainable future for the economy, society and the environment

- the relationships within an integrated network including accessibility, security, and health and safety, and how this knowledge can be used to develop and implement innovative solutions to prevailing problems

- the main data sources relating to the principal performance and other key characteristics of transport systems for local, rural and inter-urban transport, including non-motorised travel

- the operating and practical constraints of the main transport modes and systems

- the principal interrelationships between transport, economic activity and land use

- emerging trends in technology in relation to vehicles, infrastructure, communication systems which do not directly involve travel, and user interfaces

- current transport statutory and regulatory requirements, guidance and procedures and best practice relating to development, planning, design and implementation of transport systems and to design for accessibility, safety and personal security.

Unit T9 Changing Travel Behaviour

If this is one of your chosen units, your assessors will be looking for evidence of **Knowledge** relating to the key aspects of changing travel behaviour, and how this can be influenced in order to improve economic, social and environmental sustainability, including:

- the most significant socio-economic, health and environmental consequences of travel by different modes

- the opportunities for, and barriers to, successfully changing travel behaviour

- the wide range of different approaches that can be taken to target a change in travel behaviour (whether, when, how and where people choose to travel), and the appropriateness of these approaches in different settings

- ways of identifying the existing travel patterns of those whose behaviour it is intended to try to change

- typical approaches that can be implemented to bring about changes in travel behaviour, and the ways in which they can be promoted

- methods of evaluation to determine the effectiveness of intervention, and their respective strengths and weaknesses

- the availability and nature of possible capital and revenue funding streams to support changes in travel behaviour, and how they can be used to support and complement large infrastructure schemes and other concurrent interventions

- the importance of monitoring trends, and understanding how travel behaviour is changing over time

Unit T10 Commercial and Operational Management of Transport Systems

If this is one of your Chosen Units, your assessors will be looking for evidence of **Knowledge** relating to the key aspects of:

- the operational and commercial management of transport systems and services, including specific elements of those systems and services

- how Mobility as a Service is changing the way in which transport systems are operated and managed

- current statutory and regulatory requirements, guidance, best practice and procedures relating to the operational and commercial management of transport systems and services

- how to assess the possible impacts of laws, regulations, staff agreements, trade union positions and similar constraints on implementing changes in transport system management

- the impact of new and emerging technologies on the operation and management of the transport network

- experience with cycle- and car-sharing

- the changing nature of the logistics industry, and how it is driven by retail and technological trends

- the nature of commercial risk in transport operations and how to manage it

- how to identify possible sources of, and bid for, funding for management schemes for transport

You can demonstrate that knowledge in the context of walking, cycling, public and private transport, domestic freight or international transport of goods or people:

• pedestrian and cycle routes and networks	• bus location and arrival time systems
• area-wide traffic and environmental management	• public transport fares and ticketing systems
• traffic control systems	• voluntary and community transport
• traffic and parking information systems	• rail operations
• transport safety	• transport information systems
• road user charging/user toll systems	• aviation operations
• area-wide on-street parking	• road freight distribution systems
	• inter modal freight systems

• off-street public parking • area-wide employee parking • vehicle sharing systems • on-demand services • shared mobility • bus network and service	• logistics systems • enforcement systems • maintenance and asset management systems