



South Essex Rapid Transit Major Scheme Business Case

Appendix 5G Monitoring and Evaluation Report

April 2010



A partnership project between Essex County Council, Southend-on-Sea Borough Council and Thurrock Council

1 Monitoring and Evaluation

Overview

- 1.1 Evaluation of the success of the *sert* schemes as they are delivered has been considered as an integral part of scheme development, and has been a part of their planning from the earliest stages. This is because it is clearly important in determining if, how and why the objectives of *sert* schemes are being achieved or not. Continuous monitoring of the project to ensure that key objectives are being met and the projected benefits are being delivered will also be a key component in the successful implementation of the scheme, and is a requirement of the DfT Guidance on Value for Money. This process and subsequent lessons learned will also feed into future work undertaken to develop the wider *sert* network.
- 1.2 In this section, the outline proposals for impact evaluation of *sert* are set out, describing the measures that will be used to enable the effectiveness of the schemes to be understood. The *sert* objectives that will form the basis for the evaluation have already been identified in **Section [reference here]**. The analytic approach to monitoring and the evaluation methodology are described here in more detail. For each objective, the indicators that will be measured are identified, together with how the data will be collected.
- 1.3 The specific arrangements for management and reporting on the evaluation and the timescales for this will be elucidated after programme entry to enable the relevant approvals for funding to be provided.
- 1.4 In developing the proposed monitoring and evaluation arrangements for the *sert* schemes, the promoters have been particularly mindful that much of the relevant data required is already routinely collected by the local authorities in the Thames Gateway South Essex in relation to the monitoring of planning, regeneration and transport policies more generally. In this way, it will be possible to monitor and evaluate the effects of *sert* in the most cost-effective and efficient way.
- 1.5 Monitoring the performance of the *sert* schemes therefore will involve a combination of existing procedures currently undertaken by local authorities in Thames Gateway South Essex, supplemented where appropriate by specific additional monitoring, designed especially in relation to *sert*.
- 1.6 The starting point for the approach to evaluation of *sert* was to consider the extent to which data and indicators already being collected by local authorities in the area. Information collated for the single set of national indicators under the performance framework for local authorities and partnerships, and under the Best Value evaluation regime. In particular, where indicators from these frameworks are already being used for the evaluation of local transport plans and local development frameworks was identified, and the gaps to be filled by scheme-specific monitoring are considered.

Transport Indicators

- 1.7 Clearly, much information on traffic and travel is already monitored across the three local authority areas. For example, in relation to LTP's the DfT has until this year expected highway authorities to monitor most of the current transport best value performance indicator (BVPI) set and a few other key indicators¹. Measurement and reporting of progress of LTPs against targets for the key outcome indicators relating to the transport shared priority (or part of the Best Value regime) until this year has been mandatory.
- 1.8 The current LTPs covering the areas that will be served by *sert* contain focussed and locally relevant indicators and targets for the Thames Gateway South Essex that have been through a robust consultation process to ensure they tackle key issues. The relevant indicators presently being monitored are indicated in **Table 1.1** on the following pages.
- 1.9 Although *sert* will not become operational until beyond the lifetime of the current LTPs, a number of the key indicators currently in place have relevance for the *sert* project as they, or their successor indicators, will be used for evaluation of the project once routes become operational. Current indicators include:
- Public transport patronage;
 - Passenger transport user satisfaction;
 - Changes in area wide traffic mileage;
 - Changes in peak period traffic flows;
 - Highway congestion; and
 - Changes in area wide traffic mileage.
- 1.10 The single set of national indicators (NI) published as part of the New Performance Framework for Local Authorities has also been reviewed to establish which of these are most appropriate to act as potential proxy measures against the scheme objectives. These NIs will be utilised within the next Local Transport Plans (LTP3) presently being developed by the promoters; as such, this work will be undertaken once Programme Entry for the project is granted to ensure the timely identification of appropriate indicators.

¹ i.e. an accessibility target , change in area wide road traffic mileage, cycling trips (annualised index), mode share of journeys to school, a bus punctuality indicator , changes in peak period traffic flows to urban centres, congestion (vehicle delay), and an air quality target.

TABLE 1.1 PERFORMANCE INDICATORS CURRENTLY MONITORED

Theme	Essex LTP Performance Indicators	Thurrock LTP and Transport Strategy 2008-2021 Indicators	Southend-on-Sea LTP Performance Indicators
Tackling Congestion	3. Journey time reliability (inter-urban)	NI 167 Congestion - average journey time per mile during the morning peak	TC1 Reduce Vehicle Delay
	4. Journey time reliability (radial routes)	NI 167 Congestion - average journey time per mile during the morning peak	TC1 Reduce Vehicle Delay
	12a. Changes in peak period traffic in Chelmsford	LTP6 Changes in peak period traffic flows to urban centres	TC4 AM Peak Traffic Flows
		LPI 15 Change in vehicle journey time	TC2 Reduce Single Vehicle Occupancy throughout day
	13. School journey % travelling by car	NI 198 Children travelling to school by - mode of travel usually used	TC8 Mode share for travel to School
		LTP4 Reduce car journeys to schools.	
	15. Bus service satisfaction	BV 103 Increase bus users satisfied with public transport information	TC10 - % of households satisfied with bus services
	BV 104 Increase all respondents satisfied with public transport information	TC12 % of households satisfied with local public transport information	
	LPI 14 - % bus stops displaying accurate information		
17. Bus passenger journeys - selected routes in Chelmsford and Colchester (PSA)	NI 177 Bus patronage - Local bus journeys originating in Thurrock (also under 'Delivering Accessibility')	TC5 Maintain Bus Trips TC15 Bus passenger numbers on A13	

Theme	Essex LTP Performance Indicators	Thurrock LTP and Transport Strategy 2008-2021 Indicators	Southend-on-Sea LTP Performance Indicators
	<p>14a. % of scheduled bus services one minute early to 5 minutes late at start of journey</p> <p>14b. % of scheduled bus services one minute early to 5 minutes late at timing points</p> <p>14c. % of scheduled bus services one minute early to 5 minutes late at non-timing points</p>	<p>BV 102 increase bus patronage</p> <p>NI 178 Bus journeys running on time</p> <p>NI 178 Bus journeys running on time</p> <p>NI 178 Bus journeys running on time</p> <p>LTP5 Increase bus punctuality.</p>	<p>TC9 Increase % of trips to the town centre by bus</p> <p>TC11a(i) - % of scheduled bus services one minute early to 5 minutes late at start of route</p> <p>TC11a (ii) - % of scheduled bus services one minute early to 5 minutes late at intermediate turning points</p> <p>TC11a(iii) - % of scheduled bus services one minute early to 5 minutes late at non-timing points</p> <p>TC11b: Average excess waiting time on frequent service routes</p>
Safer Roads	<p>1. Essex Road safety index</p> <p>7. Killed or seriously injured casualties (BV99x)</p> <p>8. Child killed or seriously injured casualties (BV99y)</p> <p>9. Slight injuries (BV99z)</p>	<p>N1 47 People KSI in road traffic accidents (BV99x)</p> <p>NI 48 Children KSI in road traffic accidents (BV99y)</p> <p>BV99z Reduce the number of slight accidents on Thurrock roads</p>	<p>SR1 Reduction in KSI casualties</p> <p>SR2 Reduction in Children KSI casualties</p> <p>SR3 Number of slight casualties</p>

Theme	Essex LTP Performance Indicators	Thurrock LTP and Transport Strategy 2008-2021 Indicators	Southend-on-Sea LTP Performance Indicators
	<p>23. Footpaths/Public Rights of Way which are accessible</p> <p>24. Pedestrian crossings with facilities for disabled</p>	<p>NI 176 Access to employment</p> <p>LPI 3 Increase in rail passengers</p>	<p>AC8 - % of bus fleet complying with Disabled Persons' Transport Advisory Committee (UK) levels</p> <p>AC4 - % of employable population living within 30 minutes of the Northern fringe & Shoeburyness Industrial Estates</p> <p>TC6 Rail Passenger Journeys</p> <p>TC16 - % of trips to town centre by train</p> <p>TC17 - % of walking trips to town centre</p> <p>AC6 Crime incidents on public transport</p> <p>AC7 Proportion of people who feel unsafe walking</p>

Planning and Regeneration Indicators

- 1.11 §35 of the Planning and Compulsory Purchase Act 2004 requires local planning authorities to make an annual report to the Secretary of State (in December of each year) containing information on the extent to which the policies in the Local Development Framework (LDF) are being achieved. Consequently, the local planning authorities in the areas that will be served by *sert* services² each publish an Annual Monitoring Report (AMR) that indicates how they have been implementing adopted planning policies and reports on local performance against national, regional and local targets.
- 1.12 The indicators that are presently monitored in each local planning authority area are indicated in **Table 1.2** following:

TABLE 1.2 INDICATORS USED IN THE MONITORING OF LDFS IN THAMES GATEWAY SOUTH ESSEX

Category	Basildon	Thurrock	Southend
Housing	H2 Net additional dwellings	H2 Net additional dwellings	H2 Net additional dwellings LH2: Density of New Dwelling Completions Indicator LH5: Residential Development Completion by Ward
Business Development	BD1: Total amount of additional employment floorspace - by type.	BD1: Total amount of additional employment floorspace - by type.	BD1: Total amount of additional employment floorspace - by type.
	BD2: Total amount of employment floorspace on previously developed land - by type	BD2: Total amount of employment floorspace on previously developed land - by type	BD2: Total amount of employment floorspace on previously developed land - by type
	BD3: Employment land available - by type.	BD3: Employment land available - by type.	BD3: Employment land available - by type.

² i.e. Thurrock and Southend-on-Sea Councils as Unitary Authorities, and Basildon District Council.

Category	Basildon	Thurrock	Southend
Business Development (cont.)	BD4: Total amount of floorspace for 'town centre uses'	BD4: Total amount of floorspace for 'town centre uses'	BD4: Total amount of floorspace for 'town centre uses' LBD1: Employee Jobs, based on the Inter-Departmental Business Register (IDBR) produced by the Office for National Statistics LB6: amount of floorspace developed for employment by type, in employment or regeneration areas.
Environment	E2: Change in areas of biodiversity importance	E2: Change in areas of biodiversity importance	E2: Changes in areas of Biodiversity importance.

Scheme Specific Monitoring

- 1.13 Because of the timescales involved in the implementation of the *sert* programme, it is inappropriate to identify a fully detailed management plan at this stage. For the purposes of the MSBC an outline proposed management methodology is identified, and a detailed Monitoring and Evaluation Plan will be developed during subsequent stages of project implementation. This will include an assessment of what the project has added against what might have happened if it had not been implemented. The base case parameters, against which the scheme will be assessed, will be determined prior to construction and operation so that the validity of the before and after case is ensured.
- 1.14 An amount equivalent to 0.5% of the capital cost estimate has been set aside to ensure the scheme can be monitored effectively. Use of existing data from operators and local authorities, as part of the regular data gathering process, will be utilised where possible to ensure the best use of resources. It is likely that the baseline data will comprise the following:
- environmental data;
 - existing patronage on routes that are likely to be affected by the introduction of the scheme;
 - traffic levels on key highways;
 - junction performance including queues at critical junctions;

- mode choice surveys; and
- safety and accident records.

Outline Evaluation Plan

1.15 The Evaluation Plan will present the key stages and timescales covering the range of monitoring and evaluation processes. The Evaluation Plan will follow the guidance contained in “The Evaluation of Major Local Transport Schemes (December 2006)” in terms of the purpose and scope of the evaluation process. The Evaluation Plan will represent the framework for monitoring and evaluation of the Rapid Transit Scheme and, as part of the process, seeks to:

- identify the elements of the Rapid Transit Scheme to be evaluated;
- clearly set out the methodology for evaluation including inter-relationships with existing monitoring activities and contribution to JLTP targets;
- ensure a timely and cost effective process; and
- ensure a process consistent with existing and developing requirements, i.e. taking into account development of emerging assessment frameworks and targets (such as the further development of targets for the delivery of Towards a Sustainable Transport System (TaSTS).

1.16 Table 1.3 below summarises the key stages of the Evaluation Plan.

TABLE 1.3 KEY STAGES IN THE *sert* EVALUATION PLAN

Stage	Description
Identify Scheme Objectives	As set out in Section [Reference here].
Evaluation Scoping	Process/methodology, programme and funding identified.
Identify and Appraise Baseline Data Baseline data identified.	Gap analysis undertaken to ensure that scheme objectives and indicators are fully represented by the available data.
Collect Required data	Timescales and data sources identified.
Analysis and Reporting	Timescales for analysis and evaluation.

1.17 The objectives of the Evaluation Plan will be a combination of the scheme objectives (set out in this document) and key relevant policy objectives at national and regional level. Other impacts of significance which will be included in the Evaluation Plan are less suited to quantitative assessment and will therefore be considered qualitatively.

1.18 Wherever possible information already available from bus and rail operators and local authorities as part of the regular data gathering process will be used in order to avoid incurring additional costs and inconvenience for the travelling public. It may also be necessary in certain instances to obtain some baseline data prior to the

start of construction to ensure that construction activities do not impact on the validity of the baseline data.

- 1.19 Following implementation of the scheme, *sert* will introduce a monitoring and evaluation regime. The purpose of this regime will be to monitor performance of the system so as to ensure:
- The scheme is performing as intended;
 - Any problems and/or possible improvements are identified;
 - Key performance indicators are monitored;
 - Established objectives are being achieved; and
 - The scheme continues to represent value for money.
- 1.20 The evaluation will enable the performance of the system to be continually optimised.
- 1.21 It will also provide key data that will be applied to the development and implementation of future extensions to the *sert* network and enable lessons to be learnt which can be disseminated to other transport projects.
- 1.22 As noted above, it is premature to define the parameters that will be monitored and the precise evaluation methodology at this stage. Before the monitoring regime is introduced, consideration will be given to the availability of data, the practicality of obtaining it, whether it will properly reflect the indicators and the cost of obtaining it.

Key indicators

- 1.23 The main monitoring of the *sert* schemes will focus on the achievement of the specific objectives identified for the scheme. This will involve identification of indicators to measure performance of the *sert* schemes in terms of achieving these objectives

TABLE 1.4 VISION, OBJECTIVES AND SPECIFIC INDICATORS FOR *sert*

<i>sert</i> Vision and Objectives	How Achieved	Indicator	Source
<i>sert</i> will help deliver the objectives of the Thames Gateway South Essex 'Sustainable Communities' Plan.	By providing high quality public transport to get people where they want to go reliably, quickly and without delay.	Patronage on <i>sert</i> routes, checking that forecast levels of demand are realised.	Operator returns.
Contribute to meeting targets for the reduction of carbon dioxide emissions from transport.	By providing a less carbon-intensive alternative to travel by car.	CO ₂ emissions from road traffic	NI 186: Per capita CO ₂ emissions in the local authority areas served by <i>sert</i>
Help deliver regeneration and economic development.	By getting people to jobs and unlocking land for development.	Homes and Jobs delivered	NI 154 Net additional homes provided BD1: Total amount of additional employment floorspace - by type. BD2: Total amount of employment floorspace on previously developed land - by type BD3: Employment land available - by type. BD4: Total amount of floorspace for 'town centre uses'
Integrate communities with new development sites and key public transport interchanges.	By serving and integrating existing and proposed communities with new development sites and key public transport interchanges.	Accessibility by public transport	NI 175 Access to services and facilities by public transport, walking and cycling NI 176 Working age people with access to employment by public transport (and other specified modes)

<i>sert</i> Vision and Objectives	How Achieved	Indicator	Source
Improve connections between homes, jobs and other destinations.	By supporting and promoting sustainable new development by providing high quality public transport links.	Accessibility by public transport	NI 175 Access to services and facilities by public transport, walking and cycling NI 176 Working age people with access to employment by public transport (and other specified modes)
Be reliable, and designed to beat congestion.	By having a high degree of segregation from general traffic leading to reliable journey times throughout the day.	Reliability of the <i>sert</i> services in terms of the published timetable.	NI 167 Congestion - average journey time per mile during the morning peak NI 177 Local bus passenger journeys originating in the local authority areas served by <i>sert</i> NI 178 Bus services running on time
Minimise the impact of travel on the environment.	By Providing a safer and less polluting alternative to travel by car, and reducing the overall impact of new infrastructure in terms of loss of, or damage to, environmental resources.	NOx and PM10 emissions AQ in AQMAs Complaints about traffic noise	Air quality monitoring by local authorities under the Environment Act 1995. Noise complaints about traffic to Environmental Health Officers
Improve the ‘image’ of South Essex.	By providing a high quality public transport system that offers a step change in the quality and quantity of local public transport services in South Essex and so assist in helping attract inward investment.	Rates of inward investment and outcomes from perception surveys	Regeneration agencies (?)

