

Kent and Medway Structure Plan
mapping out the future

Working Paper 4
Strategic Transport Schemes:
Evaluation Criteria

September 2003



Kent and Medway Structure Plan 2003

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Strategic Transport Schemes: Evaluation Criteria

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Kent & Medway Structure Plan:

Working Paper 4 Strategic Transport Schemes : Evaluation Criteria

Summary:

The Deposit Kent & Medway Structure Plan 2003 includes a series of assessment criteria for major transport proposals which will provide a framework for the consideration of schemes in the context of social, transport, economic and environmental impacts. This paper discusses the criteria provided within Policy TP1 and explores their relevance in the wider policy and legislative context.

Introduction

1. Transport authorities are responsible for the identification, development and implementation of strategic transport schemes through the Local Transport Plan (LTP) process, which also provides the bidding mechanism for Government funding. Transport and accessibility are increasingly high profile issues which are extensively debated across the political spectrum and representations are regularly made highlighting perceived shortcomings of the infrastructure within a given area.
2. Whilst the transport authorities compile schedules of potential schemes for future consideration, inevitably only a proportion will be completed due to funding and other constraints. It is therefore imperative that criteria are used which encompass a range of considerations to ensure that schemes can be evaluated objectively in the context of their contribution to the wider transport infrastructure and that a balanced approach be taken to cost/benefit analysis. A well defined framework of criteria should also refer to Government objectives and guidelines to ensure that schemes being promoted represent a good use of public funding.
3. Under Policy TP1, the Deposit Kent & Medway Structure Plan identifies the assessment criteria for transport proposals which will underpin the Councils' development of strategic transport schemes and their assessment of other major proposals promoted by other bodies such as the Highways Agency (the body responsible for the national motorway and trunk road network) and the SRA. This paper provides background to the criteria adopted by discussing the relevant issues and considering potential conflicts between objectives. The criteria will also be considered in a wider sense by demonstrating the development of the Structure Plan approach in the context of the Government's evolving policies and appraisal framework.

Policy TP1: Assessment Criteria for Transport Proposals

All major proposals for enhancing the transport network in Kent and Medway will be assessed according to the balance between social, transport, economic and environmental effects with specific regard to:

- The relationship to the overall strategy of this Plan;
- The contribution towards achieving a more sustainable pattern of development and regeneration;
- The likely impact on the environment including areas of special environmental quality;
- The likely effects on air quality;
- Reducing Carbon Dioxide emissions
- Reducing dependence on the private car
- The economic and operational benefits likely to be achieved relative to the cost of the proposal;
- The contribution to the movement of passengers and freight by rail;
- The need to concentrate traffic on the most suitable routes;
- The impact on road casualty reductions;
- The need to maintain or improve town centre accessibility by sustainable means;
- The need to accommodate improvements for bus services, pedestrians and cyclists; and
- The ability to enhance the environment for local communities.

Source: Kent and Medway Structure Plan: Deposit Plan: September 2003

Policy context

4. Structure Plans provide a strategic planning framework for a given sub region and, in consequence, the policies adopted are shaped by specific local needs or circumstances. However, the evolution of scheme criteria is also strongly influenced by wider policy and legislative developments and a brief overview of key examples will be given to illustrate the linkages.

5. Since the 1990s, Planning Policy Guidance (PPG) notes have been issued by Government to provide direction on specific planning areas from which key themes have been incorporated into the scheme criteria. For example, PPG 12 (Development Plans) emphasises that policies in development plans should implement the land use planning aspects of sustainable development and give regard to the wider economic and social implications. Similarly, PPG 13 (Transport) highlights the relationship between transport and planning and the need to integrate the disciplines in order encourage more sustainable transport choices, promote accessibility and reduce the need to travel.

6. Greater emphasis is now given to planning for transport on a regional scale. The draft Regional Transport Strategy (RTS)¹ advocates a 'regional frame' approach which seeks to redress the region's spatial balance through a polycentric, multi-centred structure. The draft RTS promotes the concentration of transport

¹ SEERA : From Crisis to Cutting Edge : Draft Regional Transport Strategy 2003

investment and development at transport hubs which are linked by a network of strategic 'spokes'. The need to improve access to major transport facilities, such as the Port of Dover is highlighted as is Kent's 'Gateway' function. In addition to the policy framework under development in the draft RTS, the Government has also carried out a series of multi-modal transport studies to direct future transport needs on a regional basis. Ultimately, the outputs of the multi-modal studies may impact upon the Councils' own priorities for transport improvements but currently the Government has not allocated funding for all the schemes recommended.

7. A regional approach to transportation planning offers the potential to plan and prioritise investment on a strategic level and focus on key growth areas such as the Thames Gateway and Ashford. However, it must be recognised there is likely to be a significant disparity between regional and local aspirations for transport investment for which a balance must be sought.

New Approach to Appraisal (NATA)

8. Whilst planning policy changes are an important influence, consideration must also be given to the Government's appraisal process for transport schemes, particularly since it is used to determine which schemes are approved for funding through the Local Transport Plan. The development and promotion of major schemes is a lengthy and costly process for highway authorities and, in the interests of avoiding abortive work, the standing of the scheme in question relative to wider Government objectives must be determined from the outset. The following section considers the Government's appraisal process and its impact upon local authority scheme development.

9. In 1997, the Government introduced the New Approach to Appraisal (NATA) which was originally developed to address issues identified in the Roads Review although subsequently its scope has been broadened to embrace the Highways Agency, local authorities and others. NATA was specifically developed to promote the consideration of different solutions to a given problem and prioritisation between proposals. The methodology includes the identification and assessment of problems, the development of options and the assessment of those options. NATA is underpinned by the Government's five key objectives of accessibility, safety, economy, environment and integration and provides decision makers with a clear and transparent basis on which to make judgements. The detailed requirements within the key objectives can be summarised as follows:

- **Environment**

Noise and vibration, air quality, landscape, biodiversity, heritage and water.

- **Safety**

Change in the number of fatal, serious and slight road traffic accidents and casualties and the monetary value of the change.

- **Economy**

Reduction of motorised users' journey times and operating costs, minimise costs of construction, land, preparation, supervision and maintenance, improve motorists' journey time reliability and support the Government's regeneration objectives.

- **Accessibility**

Improve conditions for pedestrians and others, improve access to public transport and reduce community severance by roads.

- Integration

Integration of investment proposals with land use policies, consideration of all travel modes in the context of overarching objectives and relevance to wider issues of Government policy such as environmental sustainability or health.

10. NATA is promoted by the Government as a versatile approach which provides consistency in the appraisal of major highway schemes, motorway and trunk road schemes or passenger and freight railway proposals. The interface between the Kent & Medway Structure Plan assessment criteria and NATA enables the Councils to consider transport proposals from outside bodies (e.g. Highways Agency) within the same framework as its own schemes and draw considered conclusions.

11. There will inevitably be tensions between the NATA objectives such that a proposed scheme may contribute towards the achievement of one objective but counter the achievement of others. Therefore, NATA is not intended as a mechanistic means of making a judgement but enables the decision taker to determine the appropriate balance between the five objectives. Similarly, it is not intended that the Structure Plan assessment criteria provide a definitive means by which schemes are progressed or rejected, rather that they guide the decision maker in undertaking a considered appraisal.

Other Considerations

12. In addition to legislative or policy changes within the planning arena and the impact of the Government's appraisal process, reference must also be made to other developments which have also shaped the assessment criteria to some extent and will continue to exert influence. For example:

- Air Quality

13. Under the requirements of Part IV of the Environment Act 1995, district councils and unitary authorities have a statutory responsibility to periodically review and assess the current, and likely future air quality, in their administrative area.

14. In January 2000 the Government produced the Air Quality Strategy for England Scotland, Wales and Northern Ireland which set out a framework for air quality, which included a series of standards and objectives.

15. The aim of the review and assessment process is to identify areas where it is likely that these air quality objectives will not be achieved and where there is public exposure to poor air quality. These locations are designated as Air Quality Management Areas (AQMAs), an Action Plan is then produced setting out (often traffic management) measures to improve air quality. This is a long term rolling process and following the first round, 10 of the 12 AQMAs designated in Kent and Medway are adjacent to major roads due to the emissions from road transport.

- CO2 Emissions and Climate Change

16. An International agreement was reached at the 1997 Kyoto Summit to reduce CO₂ emissions. The UK government made a domestic commitment to reduce CO₂ emissions to 20% below 1990 levels by the year 2010.

17. The transport sector is the only sector of the UK economy not experiencing a reduction of CO₂ emissions. Growth in traffic means that carbon dioxide emissions from transport are increasing year by year. Further provision of public transport and more cycle and pedestrian routes can assist in encouraging the dependence on the car.

- Social Inclusion/Accessibility

18. The Disability Discrimination Act (1995) is intended to reduce the discrimination faced by disabled people and gives particular rights in employment, access to goods, facilities and services and buying or renting land or property. This legislation has far reaching implications and in the context of transport planning has necessitated greater emphasis on improving accessibility.

19. In 2003 the Government's Social Exclusion Unit published its final report on the links between transport and social inclusion. Amongst the findings of the report, key recommendations include new approaches to accessibility planning, improved transport services and better access to work, learning, healthcare and facilities. Arguably these principles are already encompassed within the NATA 'accessibility' criterion although the Government's commitment to tackling social inclusion suggests that it will receive greater emphasis in future.

- Local Public Service Agreement (PSA) for Kent

20. In February 2001 Kent County Council entered into a PSA with the Government which includes a target to achieve a 50% reduction in child road casualties. Although the contribution of schemes to road safety is considered within NATA, the higher profile given to child road safety through the PSA is likely to be sustained.

- Area Investment Frameworks (AIFs)

21. The formation of Area and Local Strategic Partnerships has led to the creation of AIFs in several areas of Kent and Medway. AIFs have been created to assist in promoting growth in Priority Regeneration Areas and re-enforce the role of transport improvements in fostering economic and social regeneration.

Development of the Policy TP1 assessment criteria

22. Whilst the key influences on the development of the assessment criteria have been demonstrated, a brief discussion of the way in which the current approach has evolved is useful in terms of understanding the linkages in more detail.

23. In July 1997, Kent County Council completed the '*Fundamental Review of the Transport Capital Programme*' to reduce the number of proposed schemes under development. Whilst the review was largely undertaken for budgetary reasons, the overarching methodology adopted to evaluate the feasibility of schemes considered integration, environment, safety, accessibility/regeneration and economy. These

reflect the NATA criteria. Beyond the principal objectives, four operational objectives were also used for assessing transport capital works:

- Improving the primary route network to encourage through traffic away from monitor routes and to increase the accessibility of those areas needing economic regeneration;
- Managing the volume of car travel on routes, other than primary routes, and in urban area, particularly through promoting strategies, packages and public transport schemes, and taking any special measures necessary to preserve the environment;
- Cost effective maintenance of the existing network; and
- Reducing deaths and injuries on the road network, including through local safety schemes.

24. The 'Fundamental Review' resulted in the deletion of a number of strategic transport schemes that had been included in the planned strategic improvements to the County's primary and secondary routes included in the 1996 Kent Structure Plan (Policy T2).

Individual Evaluation Criteria (Policy TP1)

25. The following section provides a detailed examination of the individual Policy TP1 criteria. In addition to consolidating key issues from earlier discussions, the practical application of the criteria will be discussed in the context of local issues and potential conflicts will also be considered.

- The relationship to the overall development strategy

26. This criterion is closely linked to the 'Integration' objectives of NATA and emphasises the importance of linking transport proposals with wider planning policies and objectives on a local or regional level with a view to creating an improved, more efficient transport system. For example, East Kent is promoted as an area requiring economic regeneration although poor transport links and slow public transport journey times have hindered growth. Proposals to enhance local rail services to Thanet and significantly reduce journey times to London are supported by the Structure Plan since the improvements would make a major contribution in achieving economic and social objectives for the area.

- The contribution towards achieving a more sustainable pattern of development and regeneration

27. Although it is recognised that transport improvements are a key factor in fostering economic growth, the principles of sustainable development embracing environmental and social aspects as well as economic must not be overlooked. Regional Planning Guidance and Structure Plan policies emphasise concentration of development at the principal urban areas, optimisation of the use of previously developed (brownfield) sites and the opportunity to concentrate higher density development in accessible locations adjacent to good quality public transport corridors. The potential of transport proposals to support sustainable development

should be considered Ambitions for the scale of housing delivery in areas such as Thames Gateway emphasises the importance of this relationship.

28. In the case of the Thames Gateway, Kent County Council's major transport scheme ('Fastrack') will provide a frequent, high quality public transport corridor linking the existing town centres to existing and proposed large scale mixed use developments, interchanges at local railway stations and the emerging transport hub at Ebbsfleet. The scheme will provide an attractive alternative to private car travel within Kent Thameside and will enable housing densities to be maximised.

- The likely impact on the environment including areas of special environmental quality

29. Kent's natural environment and countryside are valued and distinctive assets. Large parts of the county are subject to international and/or national designations for their nature conservation or landscape value. Additional areas are designated at county level as strategically important for their landscape value (Special Landscape Areas). Considering the transport and economic needs of Kent in the context of preserving environmentally sensitive areas presents a challenge to highway and planning authorities. Within Environmental Impact Assessments, a number of impacts are considered including noise, landscape, biodiversity, heritage and the water environment which provide a comprehensive analysis of the effects of a given transport scheme. The criteria within Policy TP1 should guide the scoping of environmental impact assessments of transport schemes.

30. However, it must be recognised that conflicts can arise when attempting to gauge the environmental impacts of transport schemes. For example whilst a new by-pass might be deemed to have a detrimental impact on one part of the landscape, the scheme may also improve the environment on an existing part of the network which was previously subject to heavy traffic flows. Similarly, enhancements to the trunk highway network may be seen as damaging to the local environment although the improvements will concentrate traffic flows on the main route and limit the impact on the adjacent secondary network. Finally, environmental enhancements for local communities do not necessarily align with wider environmental considerations.

- The likely effects on air quality

31. Whilst air quality is generally considered as part of the wider environmental impact criterion, for the purposes of the Structure Plan it is presented as a separate heading. This is in part due to the requirement of Part IV of the Environment Act for District Councils and Unitary Authorities to undertake review and assessments.

32. Detailed air quality assessments of the transport scheme would be undertaken as part of the Environmental Statement taking account of the impact of the road scheme.

- Reducing Carbon Dioxide Emissions

33. Carbon Dioxide emissions have been attributed in part to ozone depletion/climate change. There are three main contributors to CO2 emissions, that is domestic, commercial and transport activity. While vehicle design is likely to lead to a gradual reduction in CO2 emissions this only relates to new vehicles and is only likely to have a marginal impact in the short term. Congestion can contribute to CO2

emissions and one of the aims of the plan is to reduce congestion but without inducing car travel.

34 In order to meet government targets on CO2 emissions it is important to ensure that emissions in Kent associated with car travel are reduced. This can only be achieved by investing in attractive and convenient alternatives to the private car. Air travel is also associated with CO2 emissions (5% of UK CO2) and in order to minimise overall impacts any proposed airport expansion, for example at Manston will need to be coupled with appropriate mitigation measures such as a substantive commitment to access by public transport.

- Reducing dependency on the private car

35. Car travel can be influenced by traffic management and transport provision. Road construction, for example, can induce traffic flows by making it easier for people to travel by car. This in turn reduces the likelihood of people travelling by public transport, undermining its viability. Car dependency can be reduced by providing efficient and attractive public transport systems. It can also be reduced by bringing land uses closer together, such as providing services and employment opportunities close to where people live. Providing safe, convenient and attractive walking and cycling facilities can also reduce dependence on car travel. In order to effect real change such provision will need to be made to serve existing and new developments. Major developments will have a particular role to play in demonstrating best practice and providing innovative responses.

36. Some road building is necessary to support regeneration and to ensure that through traffic is kept off local roads and away from local settlements but it must be carefully designed to avoid inducing car trips. It must also be complemented by investment in public transport infrastructure. This means making provision for public transport for cross county travel, such as the Channel Tunnel rail link. The scale of road building proposed is considered to be the minimum necessary to support the overall strategy of the plan.

- The economic and operational benefits likely to be achieved relative to the cost of the proposal

37. The economic worth of transport proposals relative to the level of capital investment required is a key criterion in determining whether individual schemes should be progressed. The earlier examination of NATA highlighted the subsidiary objectives which are used in evaluating economic benefits. These need to be considered in a local context.

38. Within Kent, the impact of transport proposals in supporting regeneration is of significance, particularly as a result of the challenges currently faced in stimulating economic development in East Kent due to its relative geographic isolation. This objective is closely linked to those for reducing motorised road users' journey times and vehicle operating costs or the improvement of journey time reliability, all of which will contribute towards enhancing accessibility, improving communication and stimulating economic growth. The consideration of benefits in direct comparison with the investment made by the highways and transport authorities warrants full consideration in order that financial resources are deployed in an efficient and appropriate manner to accrue maximum benefit.

- The contribution to the movement of passengers and freight by rail

39. The promotion and development of rail services is a key priority for the Councils which to an extent reflects the Government's Ten Year Plan target to increase rail freight by 80% and passenger journeys by 50%.

40. The Councils recognise the potential of passenger rail services to stimulate economic growth, promote sustainable development and encourage modal shift. A key problem in the current network is the length of passenger rail journey times between east Kent and London and the County Council would consider the contribution made by transport proposals in resolving this shortcoming as part of the evaluation process.

41. In terms of rail freight, a variety of services are currently run within Kent to and from the Channel Tunnel but minerals sites in the County are also served. However, the potential to increase the long distance rail freight movements between Kent and northern England is considerably limited by the 'blocking' influence of London. In consequence, much primary distribution through Kent is carried out by road with the result that the motorway and trunk road network is subject to increasing lorry movements which is of concern to the Councils. As a result, proposals to increase the proportion of freight transported by rail such as interchanges warrant proper consideration and the existence of a separate criterion ensures that the potential benefits of such schemes are not overlooked.

- The need to concentrate traffic on the most suitable routes

42. As discussed above, the Councils are promoting the transfer of movements to rail although it is accepted that a significant proportion of passenger and freight transport will continue to rely on the highway network. However, it is also recognised that unfettered use of the network will lead to the degradation of the secondary road network with associated environmental implications.

43 In its 1997 *'Fundamental Review of the Transport Capital Programme'*, amongst other priorities, Kent County Council identified the need to concentrate major and long distance traffic flows on the existing motorway and trunk road network and promote appropriate enhancements to provide sufficient capacity. This criterion is important in that it directs major investment towards the strategic highway network which improves the County's accessibility as a whole and delivers wider economic and social benefits whilst tempering pressure on secondary roads.

44. Nevertheless, as with NATA, it must again be recognised that whilst the Structure Plan appraisal criteria form a framework through which the Councils can develop and evaluate schemes, conflicts between criteria will inevitably arise. For instance, the authorities may be lobbied to enhance a section of highway, which does not form part of the strategic network, yet the proposals offer benefits in terms of improving the environment for local residents and reducing road casualties. In such a case, the appraisal framework will not provide a definitive solution but should assist in balancing the relevant issues.

- The impact on road casualty reductions

45. Whilst transport proposals are considered in terms of direct benefits such as journey time and accessibility improvements or economic issues, potential for schemes to reduce road casualties should also be explored. In one sense this may be achieved through a package of engineering measures specifically designed to reduce road casualties although enhancements to major routes may abstract long distance traffic from the local highway network with consequent road safety benefits.

46. Road casualty reduction is a key objective within the NATA process although recent Government initiatives such as the Public Service Agreement for Kent have provided a greater focus on the issue.

- The need to maintain or improve town centre accessibility by sustainable means

47. Many towns in Kent are subject to significant traffic congestion, particularly during the peak periods, which is to the detriment of the local environment and economy. Whilst the Councils wish to preserve and enhance town centre vitality, the future success of many urban centres will depend on the management of transport demand and the promotion of public transport, walking and cycling.

48. To achieve a balanced and sustainable approach, urban transport strategies have been created for the main towns and cities in Kent which provide a framework for meeting current and future transportation needs. Therefore, whilst the Councils will selectively promote highway schemes to alleviate congestion and improve access to key urban centres, sustainable transport will be incorporated in the process and consideration given to measures such as bus lanes, cycle lanes or improved walking routes. In the next Local Transport Plan consideration will be given to refining transport strategies and including hierarchies to promote sustainable transport modes.

49. In addition to highway based schemes, wider influences on town centre access must also be considered including proposals for Park and Ride schemes, pedestrianisation and policies on car parking.

- The need to accommodate improvements for bus services, pedestrians and cyclists

50. Although sustainable transport is an important element in maintaining and enhancing town centre access, the role of bus services, pedestrians and cyclists must also be considered in the context of improvements to the wider transport infrastructure. This is particularly relevant in developing areas of the County where the promotion and provision of sustainable transport from an early stage is important in order to minimise dependence on car based travel. Similarly, the scale of housing and economic development planned for the Thames Gateway and Ashford will create sizeable new communities for which effective connections into the existing transport infrastructure must be created. Therefore, whilst road links into the highway network are a necessity, pedestrian and cycle links, local bus services and interchange facilities at local rail stations will promote sustainable transport and enable the development potential of growth areas to be maximised.

51. Reducing dependence on private car travel will also deliver environmental benefits and reduce road casualties whilst improvements to local bus services or

pedestrian and cycling facilities are effective means to tackling social inclusion by enhancing access to facilities and services.

- The ability to enhance the environment for local communities.

52 The need to evaluate the environmental effects of transport proposals was discussed earlier with regard to preserving the natural landscape, heritage or biodiversity and ensuring that the impact of schemes is mitigated. However, consideration must also be given to the effectiveness of transport proposals in improving the environmental conditions of local communities in terms of better air quality, reduced traffic levels or less noise and vibration.

53. This can create conflict between the separate elements of the NATA environment objective. Although a transport proposal may improve conditions for a given community and built environments, significant environmental impacts may arise for an area's natural heritage despite endeavours in mitigation. Kent is characterised by a series of medium sized towns interspersed with smaller settlements which are linked by a comprehensive highway network. It is therefore often the case that transport proposals designed to enhance the environment in one location may impact negatively elsewhere and achieving an acceptable balance is a key task of the highway and planning authorities.

Strategic Road and Rail Schemes

54. The assessment criteria described in this paper have been applied to the schemes contained in Table TP7, which are those strategic transport schemes to be promoted through Local Transport Plans. The results of this assessment are contained in the matrix in Appendix 1. Other strategic transport schemes will require assessment by the Councils but will be reliant on other agencies for their provision e.g. the Highways Agency in relation to schemes on the motorway and trunk road network. Tables TP4 and TP5 of the Structure Plan Deposit Draft contain a large number of prospective schemes or transport corridors in the County, which require improvement to ensure that levels of congestion on the strategic road and rail networks are addressed alongside the growth in transport use envisaged over the next 20 years. This growth will be caused primarily by indigenous growth in travel by existing communities, additional pressures caused by the growth areas of Thames Gateway and Ashford, and the increase in movement between and UK and mainland Europe. The Department of Transport in its document managing Our Roads (July 2003) considers that traffic growth over the decade to 2010 will be 20 - 25%.

55. There are several uncertainties in determining which schemes will actually come forward within the Plan period. Firstly, there is the level of expenditure that Government will grant the Highways Agency, Strategic Rail Authority and the loan sanction given to local highway authorities for major schemes over the next two decades. Levels for public and private sector investment in road and rail transport for 2001/02 to 2010/11 were set out in the Government's 10 Year Plan for Transport. However, it is clear that the assumptions on rail costs were significantly underestimated in the Plan and that more finance is actually required to maintain and renew the railway. Additionally, the amount of private sector money assumed in the Plan was overestimated. This will be significantly reduced with the demise of Railtrack and the reduction in the lengths of franchises awarded to train operating companies. The finance remaining to enhance the rail network with additional capacity has been severely cut. The "Case for Rail" will be made by the Strategic Rail Authority to Government in 2004. It remains to be seen whether the

Government increases the amount of expenditure on rail in the future, or whether it switches money from to roads. Investment levels for transport post 2010 will not be known for some years.

56. An additional factor to consider is the possibility of road charging being introduced within the Structure Plan period. The Secretary of State for Transport announced in July 2003 that a feasibility study into road charging is to be set up. The uncertainties are whether or not road charging will be introduced; if so, when will it be introduced; and if so, will the charge be cash-neutral to motorists as a whole, or additional revenue be hypothecated to public transport, or used as an additional tax? If road pricing is to be introduced, it should be preceded by increased and sustained investment in public transport, primarily rail, so that the likely switch of motorists to rail can be accommodated.

Conclusions

57. This paper has considered the transport scheme criteria proposed in the Deposit Kent & Medway Structure Plan to demonstrate the complexity of the issues under consideration and to illustrate the development of criteria relative to wider policies and legislation. The importance of a comprehensive and robust series of criteria in providing a framework through which schemes can be objectively appraised and in aligning individual schemes to planning objectives has been explored. In addition, several important issues have been identified which can be summarised as follows:

58. Whilst scheme criteria should adhere to key principles and should reflect the wider policy arena sufficient flexibility is needed to enable adaptation to changes in national or regional policies and legislation. However, it must also be noted that conflict will inevitably arise between national, regional and local objectives and goals and authorities must endeavour to reconcile issues arising.

59. The Structure Plan criteria are closely related to NATA objectives which provides a synergy between the appraisal techniques of the Government and local authorities. However, it must be emphasised that although both the NATA objectives and Structure Plan criteria provide a framework for evaluating transport proposals, neither provides a definitive means by which schemes can be approved or rejected outright. Therefore, whilst the evaluation of transport proposals is often complicated by matters such as conflicting environmental demands or public lobbying, a comprehensive set of criteria facilitates a considered analysis of the relevant issues.

60. Whilst the criteria are principally intended as a means to evaluate transport proposals being developed by the local highways and transport authorities, schemes developed by other agencies such as the Strategic Rail Authority or Highways Agency should be similarly treated. This comprehensive approach will ensure that proposals for Kent's transport infrastructure are considered in a consistent and strategic manner.

Cumulative impacts

61. The scale of new road building is considered to be the minimum necessary to support the overall strategy of the plan. It will bring economic benefits in terms of improving access to regeneration areas in north Kent and East Kent. It will also help to take forward the growth areas proposed in the Government's Sustainable Communities Plan (Thames Gateway and Ashford). There will be significant social and environmental benefits for settlements which will be relieved of traffic through bypass schemes, for example in the case of Leeds/ Langley and Borough Green.

62. Inevitably the overall package of transport proposals put forward in the plan will have environmental impacts although in the main areas of special environmental interest such as Areas of Outstanding Natural Beauty are avoided. A number of schemes are associated with widening of existing routes where impacts will be less significant than new routes. Similarly in other cases the scale of improvement is modest level e.g. single lane scheme rather than dual carriageway. Where the environment is adversely affected provision should be made for appropriate mitigation or compensatory measures.

63. There is a risk that car travel may be induced by some schemes if sufficient investment is not made in alternatives forms of transport but the plan has sought to address this through explicit support for public transport, such as Fastrack in Kent Thameside and Transport for Medway, walking and cycling provision.

64. The appraisal of the list of proposed schemes set out in Appendix 1 is a preliminary one only. It is recognised that a more detailed appraisal of each scheme should be carried out before schemes are progressed. Views are sought on the initial appraisal and what further work might be appropriate as they are taken forward into Local Development Documents/ Local Transport Plans.

Criteria	Schemes to be Promoted through Local Transport Plans			
	A228 Colts Hill Strategic Link	A228 Ropers Lane to Grain	East Kent Access Phase II	B2163(A274) Leeds and Langley Bypass
Relationship to the overall strategy of the Plan	Beneficial, Scheme serves current and future transport needs whilst sustaining the vitality of Kent's rural communities	Beneficial, Maximising the growth potential of the Thames Gateway and improving access to employment with better transport links	Beneficial, Increasing economic opportunity in the East Kent coastal towns and helping existing businesses to grow and provide new jobs	Beneficial, Promoting and investing in an efficient transport system to serve future needs and conserving Kent's natural habitats
Contribution towards achieving a more sustainable pattern of development and regeneration	Neutral	Neutral	Slight beneficial. Scheme will safeguard local employment sources	Neutral
Likely impact on the environment including areas of special environmental quality	Adverse. The proposed scheme lies within an AONB and SLA	Adverse. The proposed scheme lies within a SSSI and RAMSAR	Neutral	Slight adverse. Proposed scheme near to conservation areas
The likely effects on air quality	Slight beneficial. Improved air quality for Colts Hill residents	Neutral	Neutral	Beneficial. Improved air quality in both villages
Reducing Carbon Dioxide emissions	Neutral	Neutral	Slight adverse. Potential for increased traffic movement	Slight adverse. Scheme may increase traffic levels

Criteria	Schemes to be Promoted through Local Transport Plans			
	A228 Colts Hill Strategic Link	A228 Ropers Lane to Grain	East Kent Access Phase II	B2163 (A274) Leeds & Langley bypass
Reducing dependence on the private car	Slight adverse. Improved highway may generate additional movements	Slight adverse. Improved highway may generate additional movements	Slight adverse. Improved highway may generate additional movements	Slight adverse. Scheme may generate additional movements
Economic and operational benefits likely to be achieved relative to the cost of the proposal	Beneficial. Improved cross county links and better access to the A21	Beneficial. Scheme contributes to regeneration objectives at Grain and improved accessibility to deep water port of Thamesport	Beneficial. Scheme contributes to regeneration objectives for "East Kent Triangle"	Beneficial. Scheme improves movement between A20/M20 and A274
Contribution to the movement of passengers and freight by rail	Neutral	Slight adverse. Thamesport freight traffic may move from rail to road	Slight adverse. Better journey times may abstract passengers from local rail services	Neutral
The need to concentrate traffic on the most suitable routes	Beneficial. The A228 becomes a primary route and absorbs traffic from local roads	Beneficial. Scheme will abstract traffic from the secondary network	Beneficial. Scheme will concentrate movements on the primary route network	Beneficial. Scheme will create a suitable route for local traffic

Criteria	Schemes to be Promoted Through Local Transport Plans			
	A228 Colts Hill Strategic Link	A228 Ropers Lane to Grain	East Kent Access Phase II	B2163 (A274) Leeds & Langley bypass
The impact on road casualty reductions	Slight beneficial. New alignment better suited to high traffic flows	Beneficial. Improved safety for all road users	Slight beneficial. Secondary route movements reduced	Beneficial. Traffic reductions in local villages
The need to maintain or improve town centre accessibility by sustainable means	Neutral	Neutral	Neutral	Neutral
The need to accommodate improvements for bus services, pedestrians and cyclists	Slight beneficial. Colts Hill section improved for pedestrians and cyclists	Slight beneficial. Improved conditions for pedestrians and cyclists	Slight beneficial. Improved conditions For pedestrians and cyclists	Slight beneficial. Safer conditions for pedestrians and cyclists in villages
Ability to enhance the environment for local communities	Beneficial. Improved environment for Colts Hill residents	Neutral	Beneficial. Improved environment for local communities	Beneficial. Villages benefit from reduced traffic

Criteria	Schemes in Sustainable Communities Plan Growth Areas (Thames Gateway and Ashford) to be funded partially or fully by development.				
	Kent Thameside: Fastrack future phases	Transport for Medway	Ashford: Orbital and radial bus priority schemes	Ashford: A28 Chart Road dualling and A28-A2070 link	Rushenden: Link to the A249: Queenborough.
Relationship to the overall strategy of the Plan	Beneficial, Providing for sustainable growth, addressing pockets of deprivation and concentrating growth on previously developed land	Beneficial. Delivering transport improvements to all sections of the community whilst maximising development opportunities	Slight beneficial. Promoting Ashford as a regional growth point whilst providing for sustainable development	Slight Beneficial. Promoting Ashford as a regional growth point and ensuring that residents can access local services and jobs	Beneficial. Securing employment led growth and development in North Kent and improving urban locations
Contribution towards achieving a more sustainable pattern of development and regeneration	Beneficial. Public transport links between employment and residential areas	Beneficial. Promotes public transport orientated development	Slight beneficial. More reliable bus services will encourage sustainable development	Neutral	Neutral
Likely impact on the environment including areas of special environmental quality	Neutral	Neutral	Neutral	Neutral	Neutral
The likely effects on air quality	Slight Beneficial. Scheme will lower the number of car based journeys	Slight Beneficial. Scheme will lower the number of car based journeys	Slight beneficial. Higher public transport usage should reduce car journeys	Slight beneficial. Reduced traffic flows in residential roads in South Ashford	Slight beneficial. Improved air quality in Queen Borough
Reducing Carbon Dioxide emissions	Slight beneficial. Reduced private car journeys	Slight beneficial. Reduced private car journeys	Slight beneficial. Reduced private car journeys	Slight beneficial. Reduced traffic flows on residential streets	Neutral

Criteria	Schemes in Sustainable Communities Plan Growth Areas (Thames Gateway and Ashford) to be funded partially or fully by development.				
	Kent Thameside: Fastrack future phases	Transport for Medway	Ashford: Orbital and radial bus priority schemes	Ashford: A28 Chart Road dualling and A28-A2070 link	Rushenden: Link to the A249: Queenborough.
Reducing dependence on the private car	Beneficial. Increase in local journeys undertaken by public transport	Beneficial. Increase in local journeys undertaken by public transport	Slight beneficial. Some increase in local public transport journeys	Slight adverse, Increased capacity may encourage additional car based journeys	Slight adverse. Improved link to A249 may stimulate additional car based journeys
Economic and operational benefits likely to be achieved relative to the cost of the proposal	Beneficial. Development potential of Kent Thameside can be maximised. Reduced congestion	Beneficial. Scheme will assist in the achieving regional development objectives	Slight beneficial. Improved reliability for local bus services	Slight beneficial, Few economic benefits but journey time savings	Beneficial. Improved access will enable the re development of local industrial sites
Contribution to the movement of passengers and freight by rail	Slight beneficial. Scheme will improve public transport links to local stations	Beneficial. Scheme will promote interchange with local rail services	Neutral	Neutral	Slight adverse. May reduce rail passenger numbers and encourage road based freight
The need to concentrate traffic on the most suitable routes	Neutral	Beneficial. Associated traffic management of local roads	Neutral	Beneficial. Local movements diverted away from residential streets	Beneficial. Traffic flows diverted away from residential areas

Criteria	Schemes in Sustainable Communities Plan (Thames Gateway and Ashford) to be funded partially or fully by development.				
	Kent Thameside: Fastrack: future phases	Transport for Medway	Ashford: Orbital and radial bus priority schemes	Ashford: A28 Chart Road dualling and A28-A2070 link	Rushenden: Link to the A249: Queen-borough.
The impact on road casualty reductions	Beneficial. Lower traffic levels will reduce road casualties	Beneficial, Lower traffic levels will reduce road casualties	Slight beneficial. Lower traffic levels will reduce road casualties	Slight beneficial. Lower traffic levels on residential streets will reduce casualties	Slight beneficial. Reduced traffic levels in residential areas
The need to maintain or improve town centre accessibility by sustainable means	Beneficial. Public transport links between development areas and town centres	Beneficial. Scheme provides public transport links to the main centres in the Medway Towns	Beneficial. Scheme will improve bus services between Ashford town centre and surrounding housing areas	Neutral	Neutral
The need to accommodate improvements for bus services, pedestrians and cyclists	Beneficial. Improved bus services. Lower traffic levels improved conditions for pedestrians and cyclists	Beneficial. Improved bus services. Improved conditions for pedestrians and cyclists due to lower traffic levels. Improved interchange	Slight beneficial. Safer conditions for pedestrians and cyclists due to lower traffic levels	Slight beneficial. Safer conditions for pedestrians and cyclists due to lower traffic levels on residential streets	Slight beneficial. Safer conditions for pedestrians and cyclists due to lower traffic levels
Ability to enhance the environment for local communities	Slight beneficial. Lower traffic levels within individual communities	Slight beneficial. Improved environment due to lower traffic levels	Slight beneficial. Improved environment due to lower traffic levels	Beneficial, Lower traffic levels will improve the local environment in residential areas	Beneficial. Lower traffic levels will improve the local environment

Criteria	Other schemes to be funded partially or fully by development			Other schemes		
	A260 Hawkinge Bypass (partially complete)	A227 (A25) Borough Green & Platt Bypass	A228 E Bank of the Medway/ Snodland Bypass dualling	A229 Maidstone: Upper Stone Street/All Saints Link Road	A26 Tonbridge: London Rd Hadlow Rd link	Improved links between Hempstead and Walderslade
Relationship to the overall strategy of the Plan	Beneficial. Providing communities which are safe, secure and convenient places in which to live whilst improving access to jobs and services	Slight beneficial. Protecting the countryside, maintaining the character of settlements and making the best use of existing road infrastructure	Slight beneficial. Balancing the provision of homes and transport infrastructure to ensure access to services and jobs	Beneficial, Improving access whilst avoiding undue impact on buildings of important heritage value. Concentrating growth in principal urban areas	Slight beneficial. Investing in efficient transport to serve future needs and mitigate environmental damage.	Slight beneficial. Increasing economic opportunity and improving access to jobs and services
Contribution towards achieving a more sustainable pattern of development and regeneration	Neutral	Neutral	Neutral	Neutral	Neutral	Slight beneficial. Encourages public transport route options
Likely impact on the environment, including areas of special environmental quality	Adverse. Scheme lies within Kent Downs Area of Outstanding Natural Beauty	Slight adverse. Alignment through old quarry workings within Metropolitan Green Belt	Neutral	Neutral	Neutral	Adverse. Scheme lies within Area of Local Landscape Importance
The likely effects on air quality	Neutral	Slight adverse. More direct route may increase traffic in adjacent communities	Neutral	Slight beneficial. No direct benefit for residential areas	Beneficial. Removal of traffic flows from central Tonbridge will improve air quality	Neutral. Improved local route may generate additional movements, but encourages public transport use.
Reducing Carbon Dioxide emissions	Neutral	Neutral	Neutral	Neutral	Beneficial. Reduced traffic flows in central Tonbridge.	Neutral

Criteria	Other schemes to be funded partially or fully by development			Other schemes		
	A260 Hawkinge Bypass (partially complete)	A227 (A25) Borough Green & Platt Bypass	A228 East Bank of the Medway/ Snodland Bypass dualling	A229 Maidstone: Upper Stone Street/All Saints Link Road.	A26 Tonbridge: London Rd Hadlow Rd link	Improved links between Hempstead and Walderslade
Reducing dependence on the private car	Neutral	Slight adverse. Improved highway may generate additional movements	Neutral	Beneficial. Scheme will deliver better reliability and journey time savings for local bus services.	Neutral	Neutral. Improved local route may generate additional movements, but opportunities for public transport improvement.
Economic and operational benefits likely to be achieved relative to the cost of the proposal	Beneficial. Improved link between M20 and A2 which will encourage inward investment.	Slight beneficial. More direct link between Sevenoaks and Maidstone	Slight beneficial. Improved access to east bank of River Medway	Neutral	Slight beneficial. Reduced traffic flows will improve central Tonbridge retail area	Neutral
Contribution to the movement of passengers and freight by rail	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral
The need to concentrate traffic on the most suitable routes	Beneficial. Scheme will concentrate long distance movements on the primary route	Slight beneficial. Traffic flows diverted away from central Borough Green	Neutral	Slight beneficial, HGV traffic will be routed away from All Saints	Beneficial. North-South movements routed away from town centre	Beneficial. Scheme will remove traffic from local lanes

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	A260 Hawkinge Bypass (partially complete)	A227 (A25) Borough Green & Platt Bypass	A228 East Bank of the Medway/ Snodland Bypass dualling	A229 Maidstone: Upper Stone Street/All Saints Link Road.	A26 Tonbridge: London Rd Hadlow Rd link	Improved links between Hempstead and Walderslade
The impact on road casualty reductions	Slight beneficial. Scheme will lower traffic levels in Hawkinge	Slight positive. Lower potential for road user conflict within the built up area	Neutral	Neutral	Slight beneficial. Reduced potential for conflict in Tonbridge town centre	Beneficial. Transfer of traffic from local lanes will reduce road casualties
The need to maintain or improve town centre accessibility by sustainable means	Neutral	Slight beneficial. Lower traffic flows would improve accessibility to Borough Green	Neutral	Beneficial. Improvements to bus services will stimulate modal shift	Slight beneficial. Scheme would enable partial pedestrianisation of central area	Neutral
The need to accommodate improvements for bus services, pedestrians and cyclists	Beneficial. Improved conditions for cyclists and pedestrians within Hawkinge	Slight beneficial. Diversion of traffic from urban area will provide safer conditions for pedestrians and cyclists	Neutral	Beneficial. Scheme will deliver improvements to bus services	Beneficial. Improved conditions for cyclists and pedestrians in Tonbridge town centre	Slight beneficial. Reliability of local bus services may improve. Improved conditions for pedestrians and cyclists
Ability to enhance the environment for local communities	Beneficial. Improved environment in Hawkinge due to lower traffic levels	Beneficial. Improved environment at Borough Green	Neutral	Slight beneficial. Some HGV movements removed from All Saints.	Beneficial. Improved environment in Tonbridge town centre	Beneficial. Traffic levels reduced, particularly in Bredhurst Village

