Working Paper: STAG Part 1 appraisal

A. STAG Part 1 appraisal

A.1 Introduction

The Scottish Transport Appraisal Guidance (STAG)

A.1.1 The Scottish Government recommends that all new transport proposals are assessed according to the Scottish Transport Appraisal Guidance. This guidance provides a comprehensive source of advice on all aspects of the planning process from the earliest stages of planning, through appraisal and implementation to ex-post evaluation and can be used for all types and sizes of transport planning exercises.

A.1.2 The STAG process calls for:

- an assessment of the strategy against planning objectives;
- an assessment of the strategy implementability; and,
- an assessment of the strategy against the Scottish Government's five objectives for transport.

A.1.3 As the strategy is split into short, medium and long terms steps and the later stages are dependent on the successful operation of the earlier stages the three strategy stages have been assessed separately.

A.2 "Do minimum" and reference cases

A.2.1 For the purposes of providing a base point for assessment the following "Do minimum and references cases are assumed.

Do mimimum

A.2.2 The "Do minimum" situation in this case is considered to consist of opening the site at Kildean, northwest of Stirling and the expansion to the site at Broxden, west of Perth. Both of these are currently under construction. In addition the planned, fairly minor, new car park proposals for Perth should be included.

Reference case

A.2.3 Without additional Park & Ride, and the proposals from the RTS in general, it is likely that there will be a need to provide more parking space in central Perth. The situation in Stirling is less certain but it is likely that the Council would wish to consider relocating parking so that it is spread more evenly around the city.

A.2.4 In Dundee there is existing space available in the city centre although this is not necessarily available at the most attractive destination locations. Proposals to redevelop existing car parking are being pursued as are proposals to extend the coverage of the controlled parking zone area. Parking charges will also increase above inflation in April 2008.

A.2.5 Thus a reference case may be taken to consist of:

- a new multi-storey car park in Perth,
- a relocated multi-storey car park in Stirling and
- an increase in parking charges in Dundee

A.2.6 While the latter has a negligible direct cost it would necessitate an increase in walking time, particularly for those using long stay parking.

A.3 Assessment against strategy objectives

A.3.1 Obviously Park & Ride will not have a role to play in the achievement of all of the RTS objectives and so a sub-set of objectives specific to Park & Ride has been agreed with TACTRAN. Table A.1 shows the assessment of the strategy against these sub-objectives.

A.3.2 Park & Ride is a benefit for all of the objectives over all time frames and benefits tend to increase over time as more sites open.

Table A.1: Appraisal of strategy against objectives

RTS overarching objectives	Park & Ride objectives	High priority	Medium priority	Low priority
Economy: To ensure transport helps to deliver regional prosperity	To ensure that Park & Ride improves access to town / city centres, and areas of employment, helping to ensure economic growth	moderate benefit	major benefit	major benefit
	To improve the efficiency and reliability of the transport system through reduced town and city centre traffic levels and associated economic costs	minor benefit	minor benefit	minor benefit
Accessibility, Equity and Social Inclusion: To improve accessibility for all, particularly for those suffering from social exclusion	To improve access to health, leisure and retail facilities by Park & Ride	moderate benefit	major benefit	major benefit
	To improve the physical accessibility of the transport system through the provision of increased Park & Ride	moderate benefit	major benefit	major benefit
The Environment: To ensure that the transport system contributes to safeguarding the environment and promotes opportunities for improvement	To respect the built environment through reducing the need to build new town and city centre car parks	minor benefit	moderate benefit	moderate benefit
Health and Well-Being: To promote the health and well-being of communities	To help limit / manage travel by private car in urban areas to help meet statutory air quality requirements in the TACTRAN area	minor benefit	minor benefit	minor benefit
Safety & Security: To improve the real and perceived safety and security of the transport network	To provide the highest levels of safety and security of passengers and vehicles when using Park & Ride	major benefit	major benefit	major benefit
Integration: To improve integration, both within transport and between transport and other policy areas	To ensure Park & Ride facilitates integration and is accessible by all modes of transport	moderate benefit	moderate benefit	major benefit
	To ensure integration between land-use planning and provision of public transport	moderate benefit	major benefit	major benefit
Note: the benefits of the high, medium and low priority measures are cumulative				

A.4 Strategy implementability

A.4.1 An assessment of implementability has several strands. A strategy may be wholly implementable in technical and operational terms while being impossible for financial reasons or wholly publically unacceptable. This implementability assessment therefore has four strands covering technical, operational, financial and public accessibility issues.

Technical implementability

A.4.2 Techical implementability covers such issues as the availability of land, the need for the approval of new infrastructure and engineering constraints.

A.4.3 The sites identified as potential Park & Ride sites have been identified in consultation with council planning and transport officers. Some are already zoned for Park & Ride, others are zoned for other development and others are unzoned but considered available. Though there might be considerable costs associated with land acquisition there do not seem to be major barriers directly deriving from the availability of land. The exception to this is site S2, south of Stirling which is on land designated as green belt which might be more difficult to progress.

A.4.4 Some sites might require new junctions on the trunk road network and this would require approval. Transport Scotland have indicated that they would be happy to give consideration to new junctions provided that:

- applications are of merit
- schemes will result in measurable levels of benefit; and,
- schemes will not impact detrimentally on the operation of the trunk road.

A.4.5 Park & Ride sites do not call for any untested technology and structures like car parks and bus stops are generally straightforward in engineering terms. Flat sites have been selected as far as was possible. Thus, there should be no major engineering challenges to implementability.

Operational implementability

A.4.6 Park & Ride site operation has two strands, car park operation and bus operation. In the absence of parking charges car park management is straightforward requiring little more than basic maintenance.

A.4.7 The strategy does not recommend finalised bus routes as these should be set as sites are developed on the basis of the major demands at that time. The study has designed bus routes and stop patterns for testing purposes and these have been created on the basis of discussions with local bus operators to link Park & Ride sites directly to major demand points without causing abstraction from the local network. There should, therefore, be no problem with implementing the routes themselves. However, for bus routes to operate efficiently and allow the Park & Ride site to compete effectively there is likely to be a need for bus priority. The potential for bus priority is limited in most of the study area and this may well prove to be an issue.

A.4.8 Additionally, there will be a need for buses to maintain at least a minimum service frequency of one bus every 15 minutes. If site usage or other sources of patronage do not develop as anticipated then this might require ongoing council subsidy.

Financial implementability

A.4.9 Short, medium and long term measures have been fully costed. Detailed Economic Assessments for each element and funding sources will be identified as the strategy is implemented.

Public acceptability

A.4.10 Extensive public consultation was carried out as part of the RTS process and it was concluded that Park & Ride had a role to play in TACTRAN's future transport networks. Consultation at this stage has also been thorough and the reaction to Park & Ride has been positive. In addition, TACTRAN's existing larger Park & Ride sites are well used and there is no reason to anticipate high levels of public objection to the strategy as presented.

A.5 The Scottish Government's five objectives for transport

A.5.1 The Scottish Government sets five overarching objectives for transport projects as follows:

- environment,
- safety,
- economy,
- integration, and,
- accessibility & social inclusion.

A.5.2 The ability of the strategy to meet these five objectives is discussed in the appraisal summary tables (Table A.2 to D.4).

Table A.2: AST for stage 1 Park & Ride strategy – high priority measures

Proposal details			
Name and address of authority or organisation promoting the proposal: (Also provide name of any subsidiary organisations also involved in promoting the proposal)		TACTRAN Bordeaux House, 31 Kinnoull Street, Perth, PH1 5EN	
Proposal name:	Park & Ride strategy – high priority measures	**Name of planner:**	Colin Buchanan
Proposal description:	NPR 1: Liaise with Planning Authorities to ensure that land identified as having potential for Park & Ride development is safeguarded within the appropriate Development Plan. NPR 2: Develop and implement proposals for a new Park & Ride site at D9 south of the Tay Bridge NPR 3: Develop and Implement proposals, including bus services, for the planned new Park & Ride site at D3, on the A90, in the Dundee Western Gateway area. NPR 4: Investigate the possibility of joining the above D9 and D3 sites with a bus service running between the two calling (provisionally) at Dundee Technology Park, Ninewells hospital, University of Dundee and the City Centre. NPR 8: Develop and implement proposals for a site east of Perth (P4) NPR 10: Support the development of new rail stations at Dundee West and Bannockburn through the Tay Estuary Rail Study and ensure the provision of parking space is sufficient to match the anticipated parking demand. NPR 11: Support the development of new rail stations at Bridge of Earn and ensure the provision of parking space is sufficient to match the anticipated parking demand. NPR 13: Ensure multi modal facilities and other best practices are incorporated into any new Park & Ride site and corridor. EPR 1: Provide a staffed waiting area at existing Broxden Park & Ride, Perth EPR 2: Provide improved waiting facilities at Springkerse, Stirling EPR 5: Support the provision of additional car parking at Dunblane and / or Bridge of Allan and at other station locations where demand warrants. All car parking issues at stations to be taken forward in consultation with Network Rail. EPR 6: Ensure multi modal facilities and other best practices are incorporated into any upgrade of existing Park & Ride sites and corridors.	**Estimated total public sector funding requirement:**	TBC
Funding sought from: (if applicable)	Funding is not being sought for this proposal at the present time	**Amount of application:**	N/A

Background information

Geographic context:	The TACTRAN area covers Stirling, Perth & Kinross, Angus and Dundee City. Much of the area is rural but there are substantial urban centres at Perth, Stirling and Dundee. These are historic, high density settlements which are suffering from increasing levels of traffic and traffic related problems. All are surrounded, or partially surrounded by large rural hinterlands which are difficult to serve effectively with public transport. In the rural areas journey to work distances tend to be long.
Social context:	Perth and Stirling are expanding and the social situation is generally good though there are pockets of deprivation. Dundee has been suffering from population decline in recent years following a decline in traditional industry and there are significant areas with social problems. All of the study area lies within a region where projects are able to apply for grants under the "Competitiveness Objective" of the European 2007-2013 Structural Funds Operational Programme. Under the Community regeneration programme eight areas are identified in Stirlingshire as in most need of assistance with those in Cultenhove and Plean most likely to be affected. In Perth there are three areas identified with the relevant ones in Muirton and Fairfield in northern Perth. In Dundee such areas cover most of the outer and northern central parts of the city and in Angus there are deprived areas in Arbroath and in Brechin. Outside of the urban centres almost all of the TACTRAN area falls into the most deprived 20% for geographic access as calculated by the Scottish Index of Multiple Deprivation.
Economic context:	Much of the TACTRAN region is very rural with a high level of dependence on agriculture and forestry. Dundee and Perth suffer from a high level of both perceived and actual peripherality making economic development harder to encourage that it would otherwise be. Despite this Perth and Stirling are performing well economically with increasing service sector employment. Dundee has suffered from economic declines in recent years following the loss of traditional industry but considerable efforts are now being made to reverse this with considerable investment in regeneration and the provision of new employment and business opportunities, particularly in the service, technological and general industrial sectors.

Planning objectives

Objectives	**Performance against planning objective**
PO1 - To ensure that Park & Ride improves access to town / city centres, and areas of employment, helping to ensure economic growth	PO 1 – moderate benefit
PO2 - To improve the efficiency and reliability of the transport system through reduced town and city centre traffic levels and associated economic costs	PO 2 – minor benefit
PO3 - To improve access to health, leisure and retail facilities by Park & Ride	PO 3 – moderate benefit
PO4 - To improve the physical accessibility of the transport system through the provision of increased Park & Ride	PO 4 – moderate benefit
PO5 - To respect the built environment through reducing the need to build new town and city centre car parks	PO 5 – minor benefit
PO6 - To help limit / manage travel by private car in urban areas to help meet statutory air quality requirements in the TACTRAN area	PO 6 – minor benefit
PO7 - To provide the highest levels of safety and security of passengers and vehicles when using Park & Ride	PO 7 – major benefit
PO8 - To ensure Park & Ride facilitates integration and is accessible by all modes of transport	PO 8 – moderate benefit
PO9 - To ensure integration between land-use planning and provision of public transport	PO 9 – moderate benefit
Rationale for selection or rejection of proposal:	It is recommended that the proposal is taken forward for further assessment

Implementability appraisal

Technical:	The proposal does not involve any novel, untried or leading edge technologies and so the only substantial technical issues are likely to relate to the availability of land, any problems with the land itself and the need for new junction access points.
Operational:	If usage of the sites do not develop as expected then the Park & Ride bus service might need ongoing subsidy. A failure to implement bus priority would be a problem.
Financial:	It is considered likely that capital costs can be met from government sources. It is hoped that bus services should be able to operate on a commercial basis. However, if patronage does not develop as is hoped then there might be a need for ongoing subsidy of the bus service from local authority sources.
Public:	The proposals have not been made generally pubic. The consultees have been generally supportive but it is to be anticipated that there will be objections from those living the immediate areas of the proposed sites.

Government's objectives for transport

Objective	Assessment summary	Supporting information
Environment:	no benefit or impact	The increased Park & Ride provision proposed should help to limit traffic growth on the routes from the sites into the urban centres. This will help to meet local air quality targets and will help to limit noise pollution and contribute to an attractive local environment and streetscape with particular benefits for those living along these main routes or living and working in the urban centres. Where detailed studies have been undertaken it has been found that a proportion of those using a Park & Ride site would previously not have travelled or would have made the whole trip by bus. Therefore, Park & Ride sites generally do not result in a net decrease in passenger car miles as the sections of trips moved from car to bus are short while those moved from bus to car or generated are longer. Thus Park & Ride sites are generally not expected to result in an overall reduction in vehicle related emissions of CO_2 or other pollutants.
Safety:	minor benefit	The increased Park & Ride provision proposed should help to limit traffic growth on the routes from the sites into the urban centres. This will help in the achievement of targets for reductions in the numbers of road traffic accidents and related casualties. Natural surveillance, CCTV and/ or staffing at the sites as well as high quality bus service provision should contribute to feelings of personal safety and security while travelling.
Economy:	moderate benefit	The strategy would be expected to extract some 150 – 300 passenger car trips from the peak time traffic flow along the route from the sites into the town / city centres. This will help to stabilise congestion related delays and increase the reliability of travel times, particularly for buses. It is anticipated that this will increase the attractiveness of the general urban area as a place to live, work and invest. Additionally increased transport choices will increase the attractiveness of the destination with positive impacts on local businesses.
Integration:	moderate benefit,	The strategy will increase the opportunities for interchange bringing benefits for integration and coordination of local Park & Ride bus services with existing provision will increase the integration of service provision. The strategy is in line with the objectives of Scotland's National Transport Strategy and the Regional Transport Strategy and has been developed with reference to local development plans and aspirations.
Accessibility & social inclusion:	minor benefit	The strategy will increase the options for access to a number of destinations and should result in an overall increase in levels of local bus service provision and an overall increase in accessibility. Stabilisation of congestion related delays is expected to increase overall accessibility. Park & Ride can provide a low cost travel option for some socially excluded groups, particularly those in rural areas who maintain a high level of car ownership and enhanced interchange facilities increase options for all users helping to increase the accessibility of jobs and services to the more disadvantaged sections of communities. Additionally enhanced bus journey time reliability on the routes from the sites into urban centres is of benefit to urban socially excluded groups, particularly those who do not have access to a private vehicle.

Table A.3: AST for stage 1 Park & Ride strategy – medium priority measures

Proposal details			
Name and address of authority or organisation promoting the proposal: (Also provide name of any subsidiary organisations also involved in promoting the proposal)		TACTRAN Bordeaux House, 31 Kinnoull Street, Perth, PH1 5EN	
Proposal name:	Park & Ride strategy – medium priority measures	**Name of planner:**	Colin Buchanan
Proposal description:	NPR 5: Subject to the successful implementation and operation of the D9 and D3, develop and implement proposals for a site on the A92 (E) near Monifieth (D7) NPR 7: Develop and implement proposals for a new site on the A9, north of Perth (P3) NPR 9: Subject to the successful implementation and operation of Kildean Park & Ride, develop and implement proposals for a new site to the south of Stirling	**Estimated total public sector funding requirement:**	TBC
Funding sought from: (if applicable)	Funding is not being sought for this proposal at the present time	**Amount of application:**	N/A
Background information			
Geographic context:	The TACTRAN area covers Stirling, Perth & Kinross, Angus and Dundee City. Much of the area is rural but there are substantial urban centres at Perth, Stirling and Dundee. These are historic, high density settlements which are suffering from increasing levels of traffic and traffic related problems. All are surrounded, or partially surrounded by large rural hinterlands which are difficult to serve effectively with public transport. In the rural areas journey to work distances tend to be long.		
Social context:	Perth and Stirling are expanding and the social situation is generally good though there are pockets of deprivation. Dundee has been suffering from population decline in recent years following a decline in traditional industry and there are significant areas with social problems. All of the study area lies within a region where projects are able to apply for grants under the “Competitiveness Objective” of the European 2007-2013 Structural Funds Operational Programme. Under the Community regeneration programme eight areas are identified in Stirlingshire as in most need of assistance with those in Cultenhove and Plean most likely to be affected. In Perth there are three areas identified with the relevant ones in Muirton and Fairfield in northern Perth. In Dundee such areas cover most of the outer and northern central parts of the city and in Angus there are deprived areas in Arbroath and in Brechin. Outside of the urban centres almost all of the TACTRAN area falls into the most deprived 20% for geographic access as calculated by the Scottish Index of Multiple Deprivation.		
Economic context:	Much of the TACTRAN region is very rural with a high level of dependence on agriculture and forestry. Dundee and Perth suffer from a high level of both perceived and actual peripherality making economic development harder to encourage that it would otherwise be. Despite this Perth and Stirling are performing well economically with increasing service sector employment. Dundee has suffered from economic declines in recent years following the loss of traditional industry but considerable efforts are now being made to reverse this with considerable investment in regeneration and the provision of new employment and business opportunities, particularly in the service, technological and general industrial sectors.		

Planning objectives	
Objectives	**Performance against planning objective**
PO1 - To ensure that Park & Ride improves access to town / city centres, and areas of employment, helping to ensure economic growth PO2 - To improve the efficiency and reliability of the transport system through reduced town and city centre traffic levels and associated economic costs PO3 - To improve access to health, leisure and retail facilities by Park & Ride PO4 - To improve the physical accessibility of the transport system through the provision of increased Park & Ride PO5 - To respect the built environment through reducing the need to build new town and city centre car parks PO6 - To help limit / manage travel by private car in urban areas to help meet statutory air quality requirements in the TACTRAN area PO7 - To provide the highest levels of safety and security of passengers and vehicles when using Park & Ride PO8 - To ensure Park & Ride facilitates integration and is accessible by all modes of transport PO9 - To ensure integration between land-use planning and provision of public transport	PO 1 – major benefit PO 2 – minor benefit PO 3 – major benefit PO 4 – major benefit PO 5 – moderate benefit PO 6 – minor benefit PO 7 – major benefit PO 8 – moderate benefit PO 9 – major benefit
Rationale for selection or rejection of proposal:	It is recommended that the proposal is taken forward for further assessment

Implementability appraisal	
Technical:	The proposal does not involve any novel, untried or leading edge technologies and so the only substantial technical issues are likely to relate to the availability of land, any problems with the land itself and the need for new junction access points.
Operational:	If usage of the sites do not develop as expected then the Park & Ride bus service might need ongoing subsidy. A failure to implement bus priority would be a problem.
Financial:	It is considered likely that capital costs can be met from government sources. It is hoped that bus services should be able to operate on a commercial basis. However, if patronage does not develop as is hoped then there might be a need for ongoing subsidy of the bus service from local authority sources.
Public:	The proposals have not been made generally pubic. The consultees have been generally supportive but it is to be anticipated that there will be objections from those living the immediate areas of the proposed sites.

Government's objectives for transport		
Objective	Assessment summary	Supporting information
Environment:	no benefit or impact	The increased Park & Ride provision proposed should help to limit traffic growth on the routes from the sites into the urban centres. This will help to meet local air quality targets and will help to limit noise pollution and contribute to an attractive local environment and streetscape with particular benefits for those living along these main routes or living and working in the urban centres. Where detailed studies have been undertaken it has been found that a proportion of those using a Park & Ride site would previously not have travelled or would have made the whole trip by bus. Therefore, Park & Ride sites generally do not result in a net decrease in passenger car miles as the sections of trips moved from car to bus are short while those moved from bus to car or generated are longer. Thus Park & Ride sites are generally not expected to result in an overall reduction in vehicle related emissions of CO_2 or other pollutants.
Safety:	minor benefit	The increased Park & Ride provision proposed should help to limit traffic growth on the routes from the sites into the urban centres. This will help in the achievement of targets for reductions in the numbers of road traffic accidents and related casualties. Natural surveillance, CCTV and/ or staffing at the sites as well as high quality bus service provision should contribute to feelings of personal safety and security while travelling.
Economy:	moderate benefit	The strategy would be expected to extract some 150 – 300 passenger car trips from the peak time traffic flow along the route from the sites into the town / city centres. This will help to stabilise congestion related delays and increase the reliability of travel times, particularly for buses. It is anticipated that this will increase the attractiveness of the general urban area as a place to live, work and invest. Additionally increased transport choices will increase the attractiveness of the destination with positive impacts on local businesses.
Integration:	moderate benefit,	The strategy will increase the opportunities for interchange bringing benefits for integration and coordination of local Park & Ride bus services with existing provision will increase the integration of service provision. The strategy is in line with the objectives of Scotland's National Transport Strategy and the Regional Transport Strategy and has been developed with reference to local development plans and aspirations.
Accessibility & social inclusion:	minor benefit	The strategy will increase the options for access to a number of destinations and should result in an overall increase in levels of local bus service provision and an overall increase in accessibility. Stabilisation of congestion related delays is expected to increase overall accessibility. Park & Ride can provide a low cost travel option for some socially excluded groups, particularly those in rural areas who maintain a high level of car ownership and enhanced interchange facilities increase options for all users helping to increase the accessibility of jobs and services to the more disadvantaged sections of communities. Additionally enhanced bus journey time reliability on the routes from the sites into urban centres is of benefit to urban socially excluded groups, particularly those who do not have access to a private vehicle.

Table A.4: AST for stage 1 Park & Ride strategy – low priority measures

Proposal details			
Name and address of authority or organisation promoting the proposal: (Also provide name of any subsidiary organisations also involved in promoting the proposal)		TACTRAN Bordeaux House, 31 Kinnoull Street, Perth, PH1 5EN	
Proposal name:	Park & Ride strategy – low priority measures	**Name of planner:**	Colin Buchanan
Proposal description:	NPR 6: Subject to a revised estimate of demand, for a site at A90 (N) Fintry (D6). NPR 12: Monitor car parking near to long distance bus stops in order to facilitate essential rural interchange by providing formal small car parks next to these bus stops where provision can be supported. EPR 3: Review Park & Ride demand at existing sites and where there is demand and land is available, expand existing sites. EPR 4: Review Park & Ride demand at existing sites and, where deemed successful, provide enhanced facilities including staffing and waiting facilities.	**Estimated total public sector funding requirement:**	TBC
Funding sought from: (if applicable)	Funding is not being sought for this proposal at the present time	**Amount of application:**	N/A
Background information			
Geographic context:	The TACTRAN area covers Stirling, Perth & Kinross, Angus and Dundee City. Much of the area is rural but there are substantial urban centres at Perth, Stirling and Dundee. These are historic, high density settlements which are suffering from increasing levels of traffic and traffic related problems. All are surrounded, or partially surrounded by large rural hinterlands which are difficult to serve effectively with public transport. In the rural areas journey to work distances tend to be long.		
Social context:	Perth and Stirling are expanding and the social situation is generally good though there are pockets of deprivation. Dundee has been suffering from population decline in recent years following a decline in traditional industry and there are significant areas with social problems. All of the study area lies within a region where projects are able to apply for grants under the “Competitiveness Objective” of the European 2007-2013 Structural Funds Operational Programme. Under the Community regeneration programme eight areas are identified in Stirlingshire as in most need of assistance with those in Cultenhove and Plean most likely to be affected. In Perth there are three areas identified with the relevant ones in Muirton and Fairfield in northern Perth. In Dundee such areas cover most of the outer and northern central parts of the city and in Angus there are deprived areas in Arbroath and in Brechin. Outside of the urban centres almost all of the TACTRAN area falls into the most deprived 20% for geographic access as calculated by the Scottish Index of Multiple Deprivation.		
Economic context:	Much of the TACTRAN region is very rural with a high level of dependence on agriculture and forestry. Dundee and Perth suffer from a high level of both perceived and actual peripherality making economic development harder to encourage that it would otherwise be. Despite this Perth and Stirling are performing well economically with increasing service sector employment. Dundee has suffered from economic declines in recent years following the loss of traditional industry but considerable efforts are now being made to reverse this with considerable investment in regeneration and the provision of new employment and business opportunities, particularly in the service, technological and general industrial sectors.		

Planning objectives	
Objectives	**Performance against planning objective**
PO1 - To ensure that Park & Ride improves access to town / city centres, and areas of employment, helping to ensure economic growth PO2 - To improve the efficiency and reliability of the transport system through reduced town and city centre traffic levels and associated economic costs PO3 - To improve access to health, leisure and retail facilities by Park & Ride PO4 - To improve the physical accessibility of the transport system through the provision of increased Park & Ride PO5 - To respect the built environment through reducing the need to build new town and city centre car parks PO6 - To help limit / manage travel by private car in urban areas to help meet statutory air quality requirements in the TACTRAN area PO7 - To provide the highest levels of safety and security of passengers and vehicles when using Park & Ride PO8 - To ensure Park & Ride facilitates integration and is accessible by all modes of transport PO9 - To ensure integration between land-use planning and provision of public transport	PO 1 – major benefit PO 2 – minor benefit PO 3 – major benefit PO 4 – major benefit PO 5 – moderate benefit PO 6 – minor benefit PO 7 – major benefit PO 8 – major benefit PO 9 – major benefit
Rationale for selection or rejection of proposal:	It is recommended that the proposal is taken forward for further assessment

Implementability appraisal	
Technical:	The proposal does not involve any novel, untried or leading edge technologies and so the only substantial technical issues are likely to relate to the availability of land, any problems with the land itself and the need for new junction access points.
Operational:	If usage of the sites do not develop as expected then the Park & Ride bus service might need ongoing subsidy. A failure to implement bus priority would be a problem.
Financial:	It is considered likely that capital costs can be met from government sources. It is hoped that bus services should be able to operate on a commercial basis. However, if patronage does not develop as is hoped then there might be a need for ongoing subsidy of the bus service from local authority sources.
Public:	The proposals have not been made generally pubic. The consultees have been generally supportive but it is to be anticipated that there will be objections from those living the immediate areas of the proposed sites.

Government's objectives for transport		
Objective	Assessment summary	Supporting information
Environment:	no benefit or impact	The increased Park & Ride provision proposed should help to limit traffic growth on the routes from the sites into the urban centres. This will help to meet local air quality targets and will help to limit noise pollution and contribute to an attractive local environment and streetscape with particular benefits for those living along these main routes or living and working in the urban centres. Where detailed studies have been undertaken it has been found that a proportion of those using a Park & Ride site would previously not have travelled or would have made the whole trip by bus. Therefore, Park & Ride sites generally do not result in a net decrease in passenger car miles as the sections of trips moved from car to bus are short while those moved from bus to car or generated are longer. Thus Park & Ride sites are generally not expected to result in an overall reduction in vehicle related emissions of CO_2 or other pollutants.
Safety:	minor benefit	The increased Park & Ride provision proposed should help to limit traffic growth on the routes from the sites into the urban centres. This will help in the achievement of targets for reductions in the numbers of road traffic accidents and related casualties. Natural surveillance, CCTV and/ or staffing at the sites as well as high quality bus service provision should contribute to feelings of personal safety and security while travelling.
Economy:	moderate benefit	The strategy would be expected to extract some 150 – 300 passenger car trips from the peak time traffic flow along the route from the sites into the town / city centres. This will help to stabilise congestion related delays and increase the reliability of travel times, particularly for buses. It is anticipated that this will increase the attractiveness of the general urban area as a place to live, work and invest. Additionally increased transport choices will increase the attractiveness of the destination with positive impacts on local businesses.
Integration:	moderate benefit,	The strategy will increase the opportunities for interchange bringing benefits for integration and coordination of local Park & Ride bus services with existing provision will increase the integration of service provision. The strategy is in line with the objectives of Scotland's National Transport Strategy and the Regional Transport Strategy and has been developed with reference to local development plans and aspirations.
Accessibility & social inclusion:	minor benefit	The strategy will increase the options for access to a number of destinations and should result in an overall increase in levels of local bus service provision and an overall increase in accessibility. Stabilisation of congestion related delays is expected to increase overall accessibility. Park & Ride can provide a low cost travel option for some socially excluded groups, particularly those in rural areas who maintain a high level of car ownership and enhanced interchange facilities increase options for all users helping to increase the accessibility of jobs and services to the more disadvantaged sections of communities. Additionally enhanced bus journey time reliability on the routes from the sites into urban centres is of benefit to urban socially excluded groups, particularly those who do not have access to a private vehicle.

A.6 Anticipated main impacts

A.6.1 The most likely potential adverse impacts of the strategy include:

- reductions in private vehicle trips from outside each town are offset by new trips taking up any spare capacity;
- abstraction from inter-urban bus services due to a shift to Park & Ride;
- abstraction from local bus services due to a shift to the new services, and
- abstraction from existing sites

A.6.2 Actions to limit these impacts are included within the strategy as are mode shift targets.

A.6.3 Traffic growth within each town / city centre should be reduced as a result of the proposals. Associated public transport improvements and bus priority measures should help to remove excess road capacity and improve the overall effectiveness of the public transport system.

A.6.4 There is a potential risk of abstraction from both local and inter-urban bus services. Abstraction from inter-urban services can be limited by setting Park & Ride fares at a level appropriate to long distance fares. Similarly, abstraction from local bus services can be minimised by selecting a route not previously served, by setting fares at a premium to existing services

A.6.5 There is a risk of abstraction from existing Park & Ride sites. The demand modelling process undertaken for this study has assessed the potential for a new site to abstract demand from an existing site. Generally, preferred sites minimise the potential for abstraction from existing locations.

A.7 Risk and uncertainty

Correction for optimism bias

A.7.1 The strategy has been developed based on robust demand and cost estimates. Cost estimates have been based on recent Park & Ride construction costs. Forecast demand has been calibrated against known demand at existing sites.

A.7.2 The strategy has been developed in order to identify short, medium and longer term measures. A more detailed assessment of each element of the strategy will be undertaken as part of the strategy's implementation.

Site failure due to insufficient usage and/or revenue

A.7.3 If patronage does not develop as anticipated then sites may not succeed in the longer term. Previous studies using PRIDE for demand modelling have proved to be robust and allowing non Park & Ride users to use Park & Ride buses should help to increase revenues. Similarly the staged approach to implementation will allow the operation of existing sites to be assessed before new sites are brought forward.

Sensitivity analysis

A.7.4 Sensitivity testing of forecast demands have been undertaken based on:

- increased town / city centre parking charges
- an increased CPZ are in Dundee, and
- improved bus priority measures in Dundee

A.7.5 These sensitivity tests are documented in the Demand Forecasting and Option Appraisal Report.

A.8 Monitoring and evaluation

A.8.1 The strategy sets mode shift targets and proposes an action plan for evaluation and monitoring of individual sites and the strategy as a whole, the operation of the site and the performance of the site against the study objectives.