Detailed Appraisal	**E18: Suburban Rail Services Across Aberdeen**
Estimated total Public Sector Funding Requirement:	***Capital Costs/grant*** £250m - £500m ***Annual Revenue Support Present*** - ***Value of Cost to Gvt*** £100m - £250m ***BCR/PVB*** <0.75 / £50m - £100m

Summary Impact on STAG Criteria	- - -	- -	-	*0*	+	++	+++
Environment							
Safety							
Economy							
Integration							
Accessibility and Social Inclusion							

(Judgement based on available information against a 7pt. scale.)

Intervention Description:

This intervention targets the objective to improve accessibility along the corridor linking the areas of economic activity at Dyce (including Aberdeen Airport), Aberdeen City Centre and South East Aberdeen.

It would consist of:

- A regular cross-Aberdeen service, generally at half-hourly frequency, between Inverurie and Stonehaven, which would require additional rolling stock and track layout changes;
- New stations on the route (e.g. Cove, Kittybrewster and Kintore); and
- Provision at each station on the route for Park-&-Ride car park facilities, bus stops and access for cyclists and pedestrians.

Summary: Rationale for Not Recommending

This intervention would provide local and regional benefits through more frequent and direct cross-city rail services. However, a combination of Intervention D17 (Rail Service Enhancements between Aberdeen and Inverness) and D18 (Rail Service Enhancements between Aberdeen and the Central Belt) would greater enhance cross-city services, as well as providing significant additional benefits at the national level in terms of improving better connections between the cities.

Table E18.1.1 STPR Objectives

STPR Objectives	
STPR Objective A1: To improve accessibility, primarily by public transport, to and between the City Centre, Dyce, the airport and South East Aberdeen.	**A1: Strongly Positive –** The new station at Cove would provide direct rail access to employment opportunities at Altens, whilst the new station at Kittybrewster would improve residents' accessibility to employment opportunities at Dyce and Altens, including the technology park at Stoneywood and the business park at Dyce Drive. The improvements would reduce journey times significantly between stations north and south of Aberdeen by eliminating the need to change trains in Aberdeen. However, stopping at additional stations along the route would offset this reduction to some degree. The 30-minute frequency would be an attractive service to commuters on the key travel to work routes. Improved services to Dyce would improve travel efficiency for passengers travelling to and from the airport. As a result of the provision of Park-&-Ride car park facilities, bus stops and pedestrian and cyclist access at each station and on the route, accessibility to the suburban and national rail networks would be improved.
STPR Objective A2: To promote continuing reduction in accident rates and severity rates across the strategic transport network.	**A2: Neutral –** Although the intervention is expected to result in a slight transfer of trips from car to rail this is not expected to significantly impact on accident rates in the area.
STPR Objective A3: To promote journey time reductions, particularly by public transport, between Aberdeen and the Central Belt primarily to allow business to achieve an effective working day when travelling between these centres.	**A3: Slightly Positive –** This intervention would provide a frequent cross-city rail service, which would increase the options for passengers arriving in Aberdeen wishing to connect to local rail services. Interchange times would therefore be reduced through the implementation of the intervention, resulting in efficiency gains for business travellers using the route and allowing them to achieve a more effective working day. Park-&-Ride facilities and improved accessibility for cyclists, pedestrians and bus passengers could have a slightly positive impact by improving the integration of travel modes.

Table E18.1.2 STAG Criteria

STAG Criteria		
Criteria:	**Assessment Summary:**	**Supporting Information:**
Environment:	**Minor Benefit/ Minor Negative Impact**	There is potential for this intervention to encourage a degree of modal shift from the car to rail, helping to reduce traffic levels and emissions within Aberdeen City. Counteracting these potential benefits, are the potential adverse effects on local biodiversity, cultural heritage and landscape that could result from implementation of new physical infrastructure. These effects are highly dependent on the location of the final works, and mitigation may well be possible, during the design stage.
Safety:	**Neutral**	Although the intervention is expected to result in a degree of transfer of trips from car to rail this is not expected to significantly impact on accident rates in the area.
Economy:	**Moderate Benefit**	**Transport Economic Efficiency (TEE):** The measures proposed in this intervention would remove the need for rail passengers travelling between stations north (Dyce, Inverurie and Kintore) and south (Portlethen, Stonehaven) of Aberdeen to interchange in the city. This would result in significant time savings for passengers travelling between these stations.

		Passengers travelling from northwest or south of Aberdeen would benefit from more frequent services into the city centre. However, due to the relatively low volume of modal transfer the cost to benefit ratio is forecast to be <0.75. The benefits of higher service frequency and journey time savings on cross-city trips would be offset by the addition of stops at Kintore, Kittybrewster and Cove. Overall usage at existing stations is forecast to increase from approximately 3.4m passengers per annum in the reference case to 4.6m passengers per annum. Passengers using the new stations at Kintore, Kittybrewster and Cove would add to these figures. Based on these figures, increased service frequency and better cross-city connections would benefit a large number of passengers. The most significant growth would be expected at Stonehaven where passenger numbers are forecast to quadruple in comparison with the reference case scenario. However, the majority of rail passengers are forecast to transfer from bus rather than car. **Wider Economic Benefits (WEBs):** The measures promoted in this intervention would improve rail connectivity from Aberdeen to key areas of economic activity in Dyce and Altens. Reduced congestion on the A90 arising from increased modal shift to public transport would bring benefits to freight traffic and other remaining road users in the form of improved journey times and journey time reliability. Improvements to public transport efficiency and capacity could improve the comfort and ease of commuter travel to Aberdeen, so helping to maintain the labour catchment area for local employers. **Economic Activity and Location Impacts (EALIs):** A new station at Cove would provide a direct rail connection from stations between Stonehaven and Inverurie to key economic opportunities in Altens. Similarly, service enhancements would improve rail accessibility to Dyce, particularly from the south of Aberdeen, with beneficial impacts on employment and productivity in these locations. The cross-city rail services would therefore act as a "building block" in the continuing competitiveness of Aberdeen and the surrounding area as strategic investment locations.
Integration:	**Moderate Benefit**	**Transport Integration:** The provision of Park-&-Ride and additional facilities for bus interchange and cyclists and pedestrians could have a minor benefit to integration. **Transport and Land-Use Integration:** This intervention includes the construction of a new rail station at Cove with direct access to key economic opportunities at Altens. This would provide efficient rail links to support employment development at the site with significant benefits to transport and land-use integration. **Policy Integration:** This intervention would promote modal shift from car to rail, resulting in some benefit to health from environmental improvements. The intervention proposes rail enhancements that include new stations at Cove, Kittybrewster and Kintore. The station at Kittybrewster would improve public transport accessibility for residents at Woodside, tying in with local priorities for community regeneration. The intervention would therefore generate benefits to existing policies for social inclusion. The intervention should not have an impact on policies relating to rural affairs. It is expected that the new stations would be fully compliant with the Disability Discrimination Act (DDA), thus having a positive effect on disabled access.
Accessibility and Social Inclusion:	**Major Benefit**	**Community Accessibility:** The proposed construction of new stations at Cove and Kittybrewster represents improvements in rail network coverage. Residents would benefit from significantly enhanced accessibility to employment opportunities and services in Dyce, Altens and Central Aberdeen. Similarly, the intervention comprises a new direct half-hourly service linking stations across Aberdeen. This service would improve the accessibility of employment opportunities in Altens to areas north of Aberdeen and improve the accessibility of employment opportunities in Dyce to areas south of Aberdeen. Additional rail seating capacity of up to 4,300 seats, assuming six-carriage trains, would be expected to arrive in Aberdeen

		during a three-hour peak. **Comparative Accessibility:** The new station at Kittybrewster would open accessibility to employment opportunities for residents at Woodside and would therefore tie in with existing priorities for community regeneration.

Table E18.1.3 Key Strategic Outcomes

Key Strategic Outcomes (KSO's)		
Objective:	**Assessment Summary:**	**Supporting Information:**
Improve Journey Times and Connections:	**Major Benefit**	The measures proposed in this intervention would remove the need to interchange when travelling between railway stations north and south of Aberdeen, resulting in significant cross-city journey time improvements. These journey time improvements would be offset to a degree by the construction of new stops at Kintore, Kittybrewster and Cove which would give rise to slight increases in journey times for passengers travelling into Aberdeen. Implementation of the intervention would enhance service frequencies between Stonehaven, Aberdeen and Dyce, improving onward connections to these destinations for passengers connecting from national rail services. Dyce is the nearest station to Aberdeen Airport and improved services to Dyce would therefore improve travel efficiency for airport passengers.
Reduce Emissions:	**Minor Benefit**	It is envisaged that the improved rail services could encourage some modal shift from road to rail within Aberdeen, and that this could contribute to a reduction of core emissions and an improvement in air quality, resulting in a beneficial effect to the Aberdeen Air Quality Management Area.
Improve Quality, Accessibility and Affordability:	**Moderate Benefit**	This intervention would enhance service coverage through the construction of new stations at Kintore, Kittybrewster and Cove. This would result in significantly improved access to employment opportunities in these areas. More generally the intervention would improve cross-city access, allowing residents in the south of the city to access employment opportunities in the north east (particularly at Dyce) and vice versa. The new station at Kittybrewster, in particular, would generate accessibility improvements for community regeneration in the Woodside area. The quality and accessibility of the rail network would improve as a result of Park-&-Ride provision and the improvements for bus passengers, cyclists and pedestrians. Additional rail seating capacity of up to 4,300 seats would be expected to arrive during a three-hour peak at Aberdeen if the service were to be operated by six-carriage trains. This intervention will not impact on affordability.

Table E18.1.4 Scottish Government's Strategic Objectives

Scottish Government's Strategic Objectives		
Objective:	**Assessment Summary:**	**Supporting Information:**
Safer and Stronger:	**Moderate Benefit**	New stations at Cove, Kittybrewster and Kintore would result in significantly improved access to employment opportunities particularly near Cove. Residents of Aberdeen's Woodside area would benefit from improved public transport quality and accessibility supporting existing aspirations for community regeneration in that area. The intervention would also improve cross-city access, allowing residents in the south of the city to access employment opportunities in the north east (particularly at Dyce) and vice versa. It would not affect public transport affordability.
Smarter:	**Minor Benefit**	This intervention would improve accessibility to key education facilities in Aberdeen such as the University of Aberdeen.
Wealthier and Fairer:	**Moderate Benefit**	By removing the need to interchange in Aberdeen, the intervention would reduce rail journey times significantly between stations north and south of Aberdeen. A more intensive service frequency along the route would improve interchange times for passengers connecting from regional and national rail services. This intervention would support growth at key areas of economic development in Dyce and Altens, through service enhancements to Dyce and the new station at Cove. The improvements would provide more efficient links to the national rail network and to Aberdeen Airport (via Dyce) and improve access to employment opportunities at these sites.
Greener:	**Moderate Benefit**	Rail enhancements promote public transport use and have the potential to result in modal shift to rail. This could reduce reliance on the car and subsequently improve air quality.
Healthier:	**Minor Benefit**	This intervention would encourage modal shift from car to public transport and improve accessibility to health services in Aberdeen.

Table E18.1.5 Implementability Appraisal

Implementability Appraisal	
Technical:	It is not considered that any untried techniques would be required when implementing any aspects of this intervention. Localised issues could arise as the design stages progressed, which could require increased technical capabilities to overcome. Construction of some aspects of this intervention may have an impact on operating existing services, however much of this work could be carried out at times when the disruption would be minimised.
Operational:	Running additional rail services places extra pressure on the rail network and can increase the risk of delays. However, it is expected that these issues would be mitigated by ensuring that the works included within the intervention have sufficient capacity for the proposed service levels. No significant operational impacts are anticipated from this intervention.
Public:	This intervention has been the subject of a previous study and public consultation. It is expected that any measure which promotes modal shift to more sustainable transport would achieve public support.