

### Appendix 1 – Issues and Investigation Matrix

<b>Objective 1: What progress has the Edinburgh trams project made to date?</b>				
<i>Issues</i>	<i>Sub-issues</i>	<i>Methodology</i>	<i>Lead responsibility</i>	<i>Potential PIs</i>
1.1 What was the project's original budget and delivery date?	<ul style="list-style-type: none"> <li>• What was the project's original budget?</li> <li>• When were trams originally expected to be operational?</li> <li>• What route was the trams originally expected to follow</li> </ul>	<ul style="list-style-type: none"> <li>• Review of final business case</li> </ul>	<ul style="list-style-type: none"> <li>• PAG</li> </ul>	<ul style="list-style-type: none"> <li>• Cost and operational date for original project</li> </ul>
1.2 How much has been spent on the project against the original budget to date?	<ul style="list-style-type: none"> <li>• How much has been spent against budget to date for:               <ul style="list-style-type: none"> <li>- Planning and design work</li> <li>- Utilities diversion works</li> <li>- Infrastructure construction (tracks, trams depot etc)</li> <li>- Vehicle supply</li> <li>- Other costs</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Interviews with tie</li> <li>• Analysis of tie's financial and progress monitoring reports</li> </ul>	<ul style="list-style-type: none"> <li>• PAG</li> </ul>	<ul style="list-style-type: none"> <li>• Spend to date compared to forecast and original budget</li> </ul>
1.3 Where has the funding come from to finance the project	<ul style="list-style-type: none"> <li>• How much has Transport Scotland provided towards the project to date against budget?</li> <li>• How much has CEC provided towards the project to date against budget?</li> </ul>	<ul style="list-style-type: none"> <li>• Interviews with Transport Scotland and CEC</li> <li>• Analysis of Transport Scotland payments to CEC/tie</li> </ul>	<ul style="list-style-type: none"> <li>• PAG, auditors</li> </ul>	<ul style="list-style-type: none"> <li>• Funding provided to date compared to forecasts and budget</li> </ul>
1.4 What is the most recent estimated cost to deliver the project as currently-scoped?	<ul style="list-style-type: none"> <li>• How much does tie now expect the project to cost as originally scoped for:               <ul style="list-style-type: none"> <li>- Planning and design work</li> <li>- Utilities diversion works</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Interviews with tie</li> <li>• Analysis of tie's financial and progress monitoring reports</li> </ul>	<ul style="list-style-type: none"> <li>• PAG</li> </ul>	<ul style="list-style-type: none"> <li>• Additional spending required to deliver original project</li> </ul>

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	<ul style="list-style-type: none"> <li>- Infrastructure construction (tracks, trams depot etc)</li> <li>- Vehicle supply</li> <li>- Other costs</li> </ul>			
1.5 How much progress has been made in delivering the key elements of the project against the original plan?	<ul style="list-style-type: none"> <li>• How much of the following elements of the project have been delivered to date against plan               <ul style="list-style-type: none"> <li>- Utilities diversion works</li> <li>- Infrastructure construction (tracks, trams depot etc)</li> <li>- Vehicle supply</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Interviews with tie</li> <li>• Analysis of tie's financial and progress monitoring reports</li> </ul>	<ul style="list-style-type: none"> <li>• PAG</li> </ul>	<ul style="list-style-type: none"> <li>• Delivery to date against planned schedules</li> </ul>
1.6 What is the most recent estimated date that trams will be operational as per the original project?		<ul style="list-style-type: none"> <li>• Interviews with tie</li> <li>• Analysis of tie's financial and progress monitoring reports</li> </ul>	<ul style="list-style-type: none"> <li>• PAG</li> </ul>	<ul style="list-style-type: none"> <li>• Current operational date for original project</li> </ul>
1.7 What are the main reasons for any cost over-runs and delivery delays?		<ul style="list-style-type: none"> <li>• Interviews with tie</li> <li>• Analysis of tie's financial and progress monitoring reports</li> <li>• Review of other briefing reports to CEC etc</li> </ul>	<ul style="list-style-type: none"> <li>• PAG</li> </ul>	<ul style="list-style-type: none"> <li>• Analysis of cost and delivery against plans</li> </ul>

**Objective 2: What options are now being considered to take the project forward?**

<i>Issues</i>	<i>Sub-issues</i>	<i>Methodology</i>	<i>Lead responsibility</i>	<i>Potential PIs</i>
2.1 What options are tie considering to redefine the scope and scale of the project?	<ul style="list-style-type: none"> <li>• What options are tie considering to restrict or reschedule the original tram network?</li> </ul>	<ul style="list-style-type: none"> <li>• Interviews with tie</li> <li>• Review of other briefing reports to CEC etc</li> </ul>	<ul style="list-style-type: none"> <li>• PAG</li> </ul>	
2.2 What are the costs and benefits of these options?	<ul style="list-style-type: none"> <li>• What are the costs of these options?</li> <li>• What benefits will they provide?</li> <li>• When will trams become operational under each option?</li> </ul>	<ul style="list-style-type: none"> <li>• Interviews with tie</li> <li>• Review of other briefing reports to CEC etc</li> </ul>	<ul style="list-style-type: none"> <li>• PAG</li> </ul>	<ul style="list-style-type: none"> <li>• Costs and benefits of options</li> <li>• Operational dates of options</li> </ul>
2.3 To what extent have these options been subject to robust testing?	<ul style="list-style-type: none"> <li>• What has tie done to gain assurance about the accuracy of the costs and delivery dates for each of the options?</li> </ul>	<ul style="list-style-type: none"> <li>• Interviews with tie</li> <li>• Review of any internal/external reports etc</li> </ul>	<ul style="list-style-type: none"> <li>• PAG</li> </ul>	
2.4 What processes are in place to consider and agree the preferred option?	<ul style="list-style-type: none"> <li>• How will CEC and Transport Scotland consider these options and when?</li> </ul>	<ul style="list-style-type: none"> <li>• Interviews with CEC/tie</li> </ul>	<ul style="list-style-type: none"> <li>• PAG</li> </ul>	
2.5 How will tie and/or CEC obtain any additional funding required to finance the remaining elements of the project?	<ul style="list-style-type: none"> <li>• How much extra funding is likely to be required?</li> <li>• How will this finding be obtained?</li> </ul>	<ul style="list-style-type: none"> <li>• Interviews with CEC/tie</li> <li>• Review of relevant briefing reports etc</li> </ul>	<ul style="list-style-type: none"> <li>• PAG, auditors</li> </ul>	<ul style="list-style-type: none"> <li>• Additional funding required by source</li> </ul>
2.6 What is tie doing to resolve the contractual disputes with Bilfinger Berger?	<ul style="list-style-type: none"> <li>• What is the nature of these disputes and why have they arisen?</li> <li>• What does the contract between tie and Bilfinger Berger for infrastructure construction say about dispute resolution?</li> <li>• What progress has been made to</li> </ul>	<ul style="list-style-type: none"> <li>• Interviews with tie</li> <li>• Analysis of reasons for disputes, how long outstanding</li> <li>• Review of contract</li> <li>• Review of relevant</li> </ul>	<ul style="list-style-type: none"> <li>• PAG</li> </ul>	<ul style="list-style-type: none"> <li>• Number or resolved and outstanding disputes</li> <li>• Amount of money at dispute</li> <li>• Cost of options</li> </ul>

	<p>date with dispute resolution?</p> <ul style="list-style-type: none"><li>• What options are tie considering to resolve the disputes (including contract cancellation)?</li><li>• What is the likely cost of each option?</li></ul>	briefing reports etc		to resolve dispute
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**Objective 3: Are governance arrangements for managing and monitoring the project robust ?**

<i>Issues</i>	<i>Sub-issues</i>	<i>Methodology</i>	<i>Lead responsibility</i>	<i>Potential PIs</i>
3.1 Are responsibilities for managing and monitoring the project clearly understood by each of the parties involved?	<ul style="list-style-type: none"> <li>• What is the respective roles of tie, CEC and Transport Scotland in the trams project</li> <li>• What is the role of the Trams Project Board?</li> <li>• Who is represented on the Trams Project Board?</li> </ul>	<ul style="list-style-type: none"> <li>• Interviews with tie, CEC and Transport Scotland</li> <li>• Review of Trams Project Board terms of reference</li> </ul>	<ul style="list-style-type: none"> <li>• auditors</li> </ul>	
3.1 Does tie have adequate arrangements for managing and monitoring the progress of the project?	<ul style="list-style-type: none"> <li>• To what extent does tie have:                             <ul style="list-style-type: none"> <li>- Clearly defined project management arrangements</li> <li>- Sound financial management and reporting arrangements</li> <li>- Active risk management procedures?</li> </ul> </li> <li>• How often does tie report to the Trams Project Board?</li> <li>• Do the reports provided give a full and accurate summary of the project's progress?</li> </ul>	<ul style="list-style-type: none"> <li>• Interviews with tie</li> <li>• Review of changes since first AGS report</li> <li>• Review of relevant briefing reports etc</li> </ul>	<ul style="list-style-type: none"> <li>• PAG, auditors</li> </ul>	<ul style="list-style-type: none"> <li>• Number and frequency of reports to Trams Project Board</li> </ul>
3.2. Does CEC exert sufficient oversight over tie for managing and monitoring the project?	<ul style="list-style-type: none"> <li>• What arrangements are in place to allow CEC to monitor progress of the project?</li> <li>• What information on the project's progress is provided at full council or relevant committee meetings?</li> <li>• Do the reports provided give a full and accurate summary of progress</li> </ul>	<ul style="list-style-type: none"> <li>• Interviews with CEC</li> <li>• Review of relevant briefing reports etc</li> </ul>	<ul style="list-style-type: none"> <li>• auditors</li> </ul>	<ul style="list-style-type: none"> <li>• Number and frequency of reports to council and relevant committees</li> </ul>

<p>3.3 Does Transport Scotland have robust arrangements for appraising requests for funding and for reporting the project's progress?</p>	<p>made?</p> <ul style="list-style-type: none"> <li>• How often are funding claims submitted?</li> <li>• What information is provided in support of claims?</li> <li>• How does Transport Scotland validate claims for funding?</li> <li>• What external support is sought to help in claim validation?</li> <li>• Have any concerns been raised about the quality of funding claims and their validation?</li> <li>• How does Transport Scotland report internally on progress with the project?</li> </ul>	<ul style="list-style-type: none"> <li>• Interviews with Transport Scotland</li> <li>• Review of funding claims and monitoring reports</li> <li>• Review of internal briefing papers etc</li> </ul>		<ul style="list-style-type: none"> <li>• Frequency of funding claims</li> </ul>
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