



Forth Replacement Crossing

Noise Liaison Working Group Feedback Report

September 2017



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Chairman's Foreword

It has been a privilege to Chair the FRC Noise Liaison Group from the first meeting in June 2011, before the site works commenced, to the latest and final meetings in the Autumn of 2017.

It is clear from the comments received from participants in preparing this feedback report that the Group has completed its functions in a diligent, thorough and professional manner. This is entirely due to the open participation and co-operation of the members from the various organisations involved throughout the project and the trust which has developed between all group members. These included local authority representatives from City of Edinburgh, Fife and West Lothian, Scottish Natural Heritage, Marine Scotland and all of the Contractors for the various contracts which combine to form the Forth Replacement Crossing project.

I would like to personally thank all the organisations and representatives who took part in the working group for their dedication, professionalism, expertise and full engagement in this process over more than six years.

I would also like to thank my Depute Chair, Steven Brown, and Andy Mackay and Andy Butler for their diligent advice and Secretariat support throughout the project.

Regards
David

David Climie
Chairman
Employer's Representative
Transport Scotland
September 2017

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Summary

1.1 Key Issues

A survey of the attendees for the Forth Replacement Crossing Noise Liaison Group was undertaken.

The feedback received was overwhelmingly positive.

2.1 Background

The Forth Replacement Crossing Noise Liaison Working Group was established as a joint initiative by the Scottish Ministers and relevant parties to facilitate a collaborative and inclusive approach to the requirements of the planning and implementation of the control of noise and vibration monitoring for the project. The Code of Construction Practice and the Contract for the project set out the requirement for the Contractor “To use best practicable means during construction works to minimise noise (including vibration) at neighbouring residential properties and other sensitive receptors arising from construction activities”.

The Employer (Transport Scotland) may consider implementing similar groups on future Projects and therefore sought the views of the Noise Liaison Group members on the effectiveness of the FRC group and the processes which were utilised to co-ordinate, assess and assure the planning of temporary traffic management schemes.

In order to provide a basis for the assessment of the effectiveness of this forum a questionnaire was issued to the participants in the Group to gauge their opinions in a structured form. In order to provide the fullest opportunity for open feedback the questionnaire was divided into two parts. The first part allowed for a formal scoring against individual questions with the opportunity to clarify via comments if desired. The second open section was included to offer respondents the opportunity to provide any comments or opinions they wished to express. A copy of the questionnaire is included in Appendix A.

2.2 This Report

A total of 9 responses were received from the members of the Noise Liaison Group which is representative of the regular attendance for the Group.

The following sections provide assessment of the feedback received. Section 3 provides an assessment of the formal part of the questionnaire with a breakdown of the responses received, graphical presentation of the results and commentary on the results as appropriate. Section 4 reviews the open section of the questionnaire again with commentary as appropriate while Section 5 provides conclusions.

3

Feedback Questionnaire Results – Part A

3.1 General

Responses received to each of the set questions described in Part A of the Feedback Questionnaire are discussed below. Where appropriate basic themes are noted and where any comment or clarification has been provided this has been included.

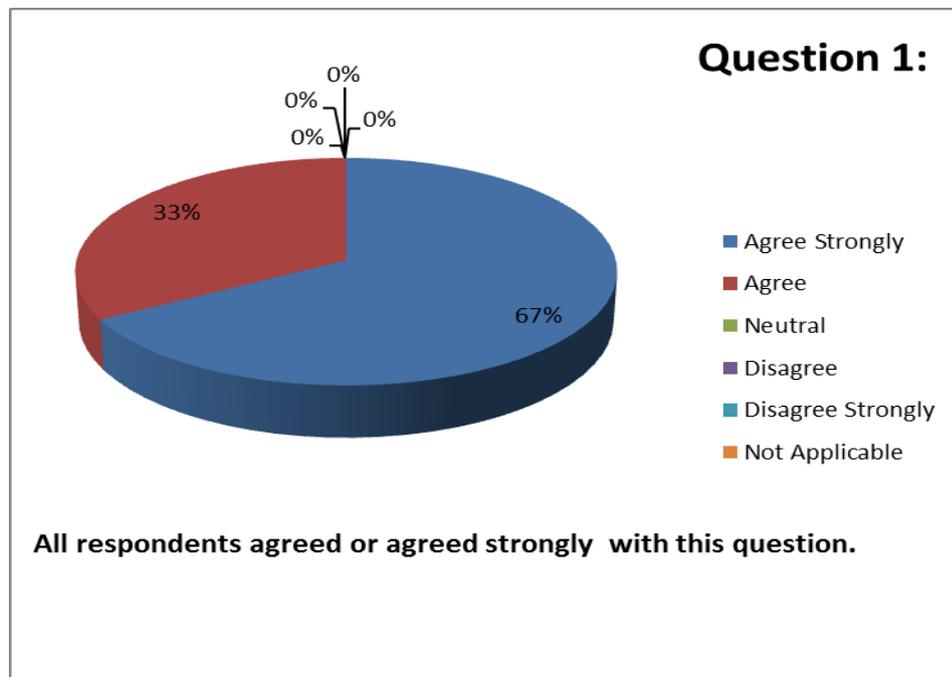
A summary chart of the responses received is provided below.

3.1.1 Question 1: The NLG encouraged a collaborative approach to assure and assess the planning and implementation of the contractor’s proposals for the project

The responses received to the above were:

	Agree Strongly	Agree	Neutral	Disagree	Disagree Strongly	Not Applicable	Total
No. of Responses	6	3	0	0	0	0	9

All of the responses provided to this were positive (either ‘Agree Strongly’ or ‘Agree’).

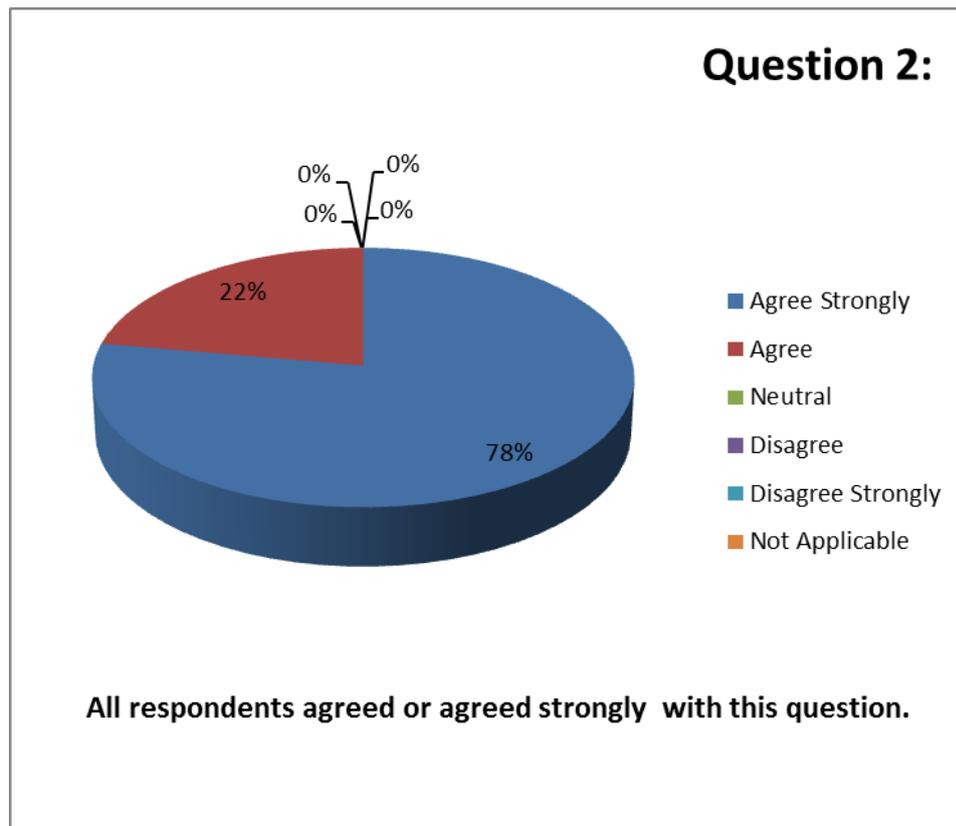


3.1.2 Question 2: The NLG was of benefit to relevant stakeholders.

The responses received to the above were:

	Agree Strongly	Agree	Neutral	Disagree	Disagree Strongly	Not Applicable	Total
No. of Responses	7	2	0	0	0	0	9

All of the responses provided to this were positive (either 'Agree Strongly' or 'Agree').

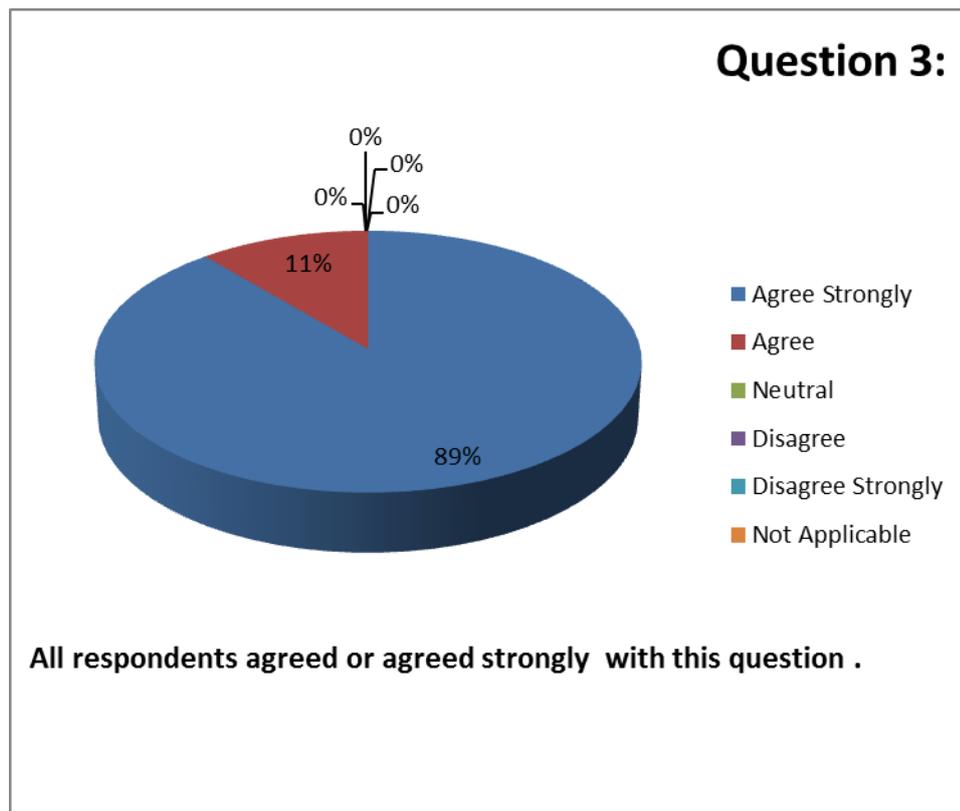


3.1.3 Question 3: The NLG was comprised of members that are appropriate to the needs of the group.

The responses received to the above were:

	Agree Strongly	Agree	Neutral	Disagree	Disagree Strongly	Not Applicable	Total
No. of Responses	8	1	0	0	0	0	9

All responses provided to this were positive (either 'Agree Strongly' or Agree').

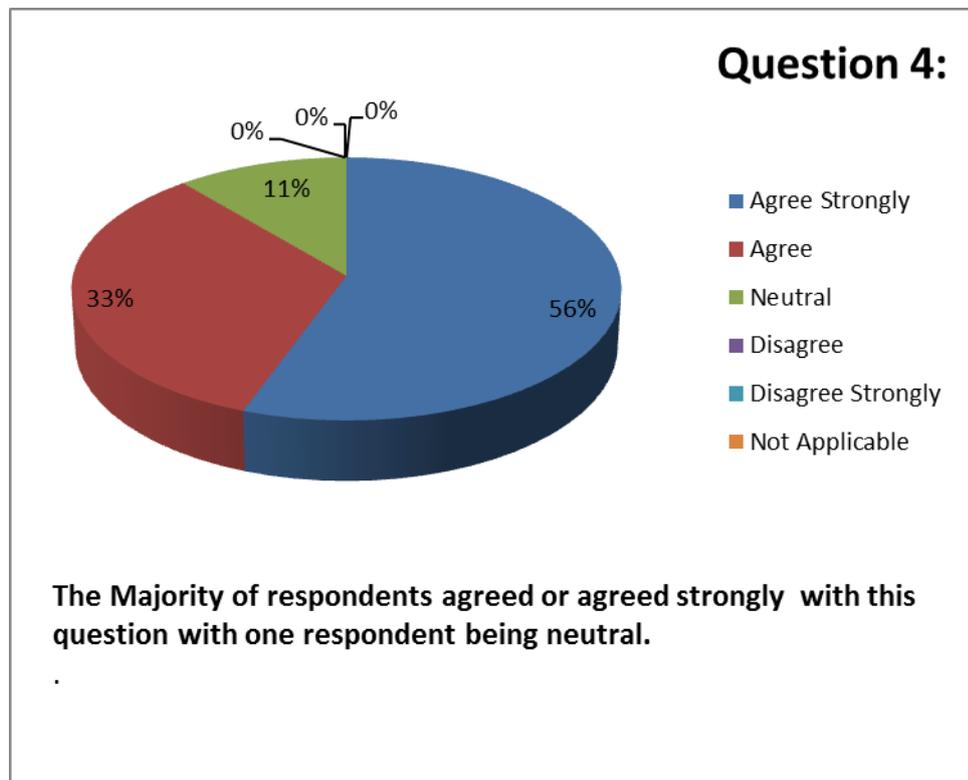


3.1.4 Question 4: The NLG provided assurance that noise and vibration measures were being developed and carried out in accordance with the Code of Construction Practice and the construction contracts.

The responses received to the above were:

	Agree Strongly	Agree	Neutral	Disagree	Disagree Strongly	Not Applicable	Total
No. of Responses	5	3	1	0	0	0	9

The majority of the responses provided to this were positive (either 'Agree Strongly' or 'Agree') with one neutral response.

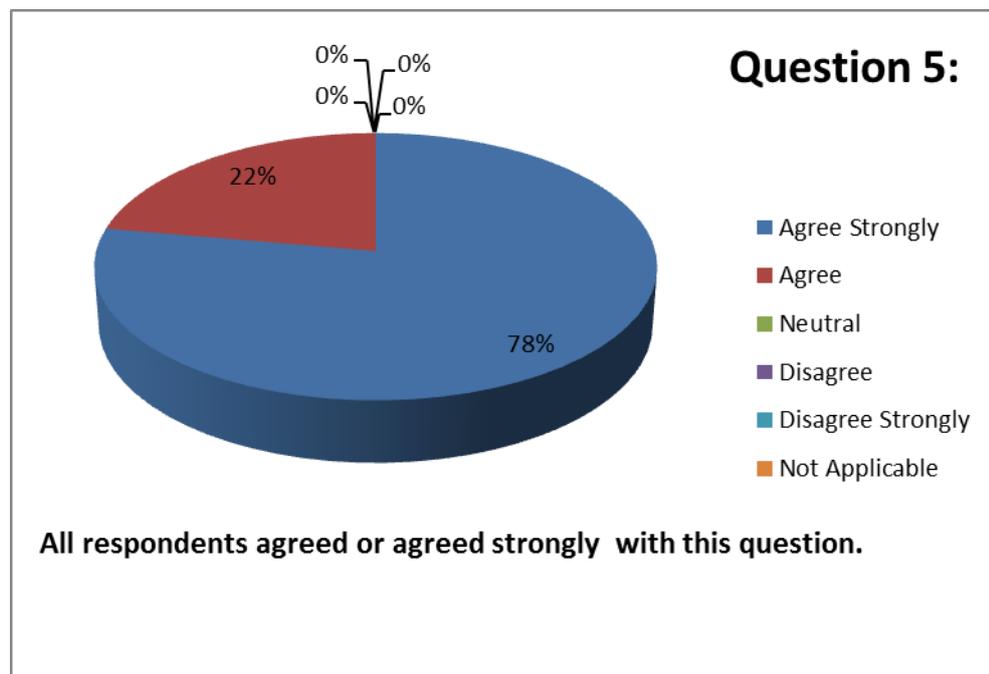


3.1.5 Question 5: The NLG facilitated consultation between the contractor and those organisations with which there is a consult and comply requirement in relation to noise and vibration.

The responses received to the above were:

	Agree Strongly	Agree	Neutral	Disagree	Disagree Strongly	Not Applicable	Total
No. of Responses	7	2	0	0	0	0	9

All of the responses provided to this were positive (either 'Agree Strongly' or 'Agree').



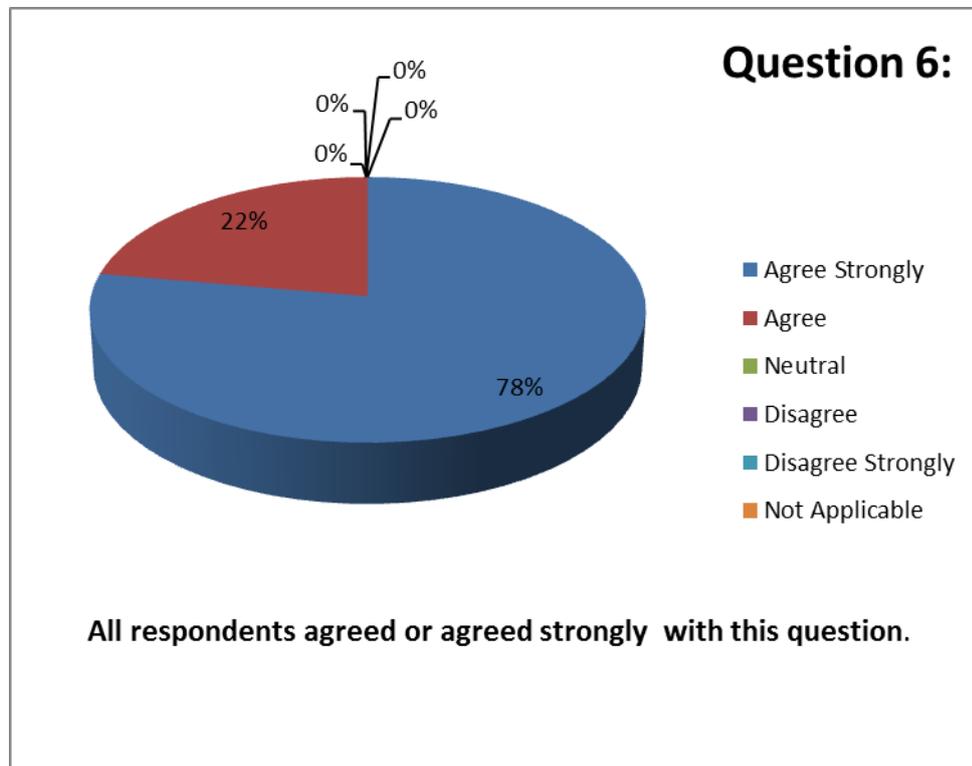
3.1.6 Question 6: NLG meetings were held at appropriate intervals.

The responses received to the above were:

	Agree Strongly	Agree	Neutral	Disagree	Disagree Strongly	Not Applicable	Total
No. of Responses	7	2	0	0	0	0	9

All of the responses provided to this were positive (either 'Agree Strongly' or 'Agree').

These comments indicate that the meetings are regarded as having been scheduled at suitable intervals.



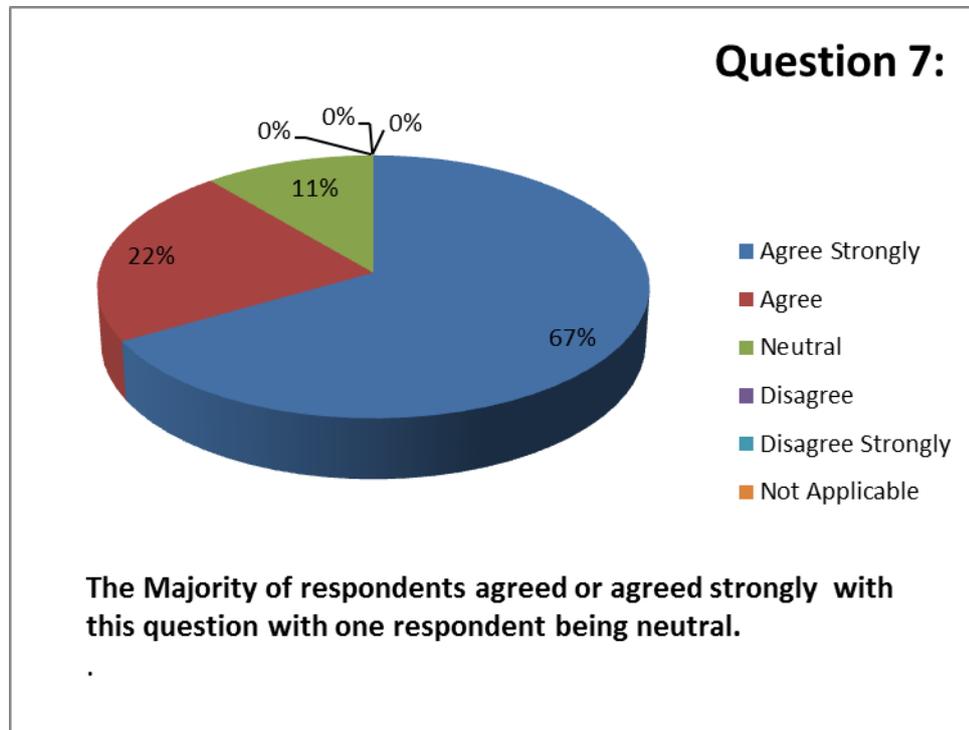
3.1.7 Question 7: NLG agendas and agreed minutes were uploaded to the project website in a timely manner.

The responses received to the above were:

	Agree Strongly	Agree	Neutral	Disagree	Disagree Strongly	Not Applicable	Total
No. of Responses	6	2	1	0	0	0	9

The majority of the responses provided to this were positive (either 'Agree Strongly' or 'Agree') with one neutral response.

The above seems to indicate that this process has been executed in the background without the need to be concerned about it.



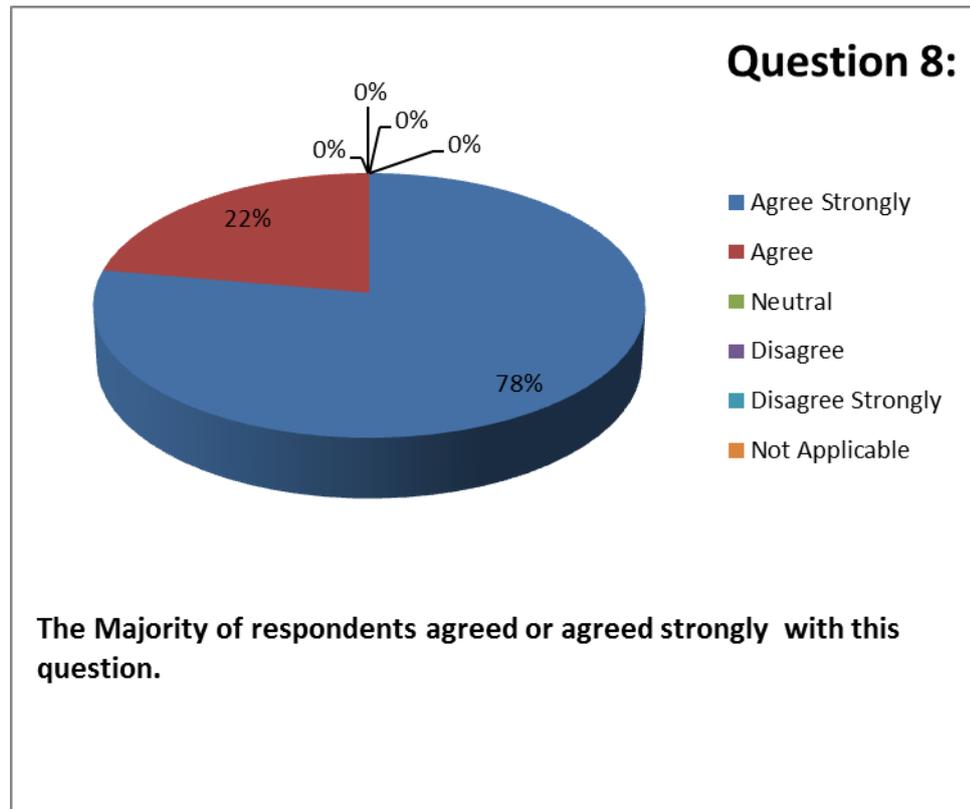
3.1.8 Question 8: The Employer’s Representative considered all advice he received from the NLG in determining whether it was necessary to take any action to improve the contractor’s performance in accordance with the contract.

The responses received to the above were:

	Agree Strongly	Agree	Neutral	Disagree	Disagree Strongly	Not Applicable	Total
No. of Responses	7	2	0	0	0	0	9

The majority of the responses provided to this were positive (either ‘Agree Strongly’ or ‘Agree’).

The feedback received above indicate that the respondents are happy with the performance of the forum in this respect.



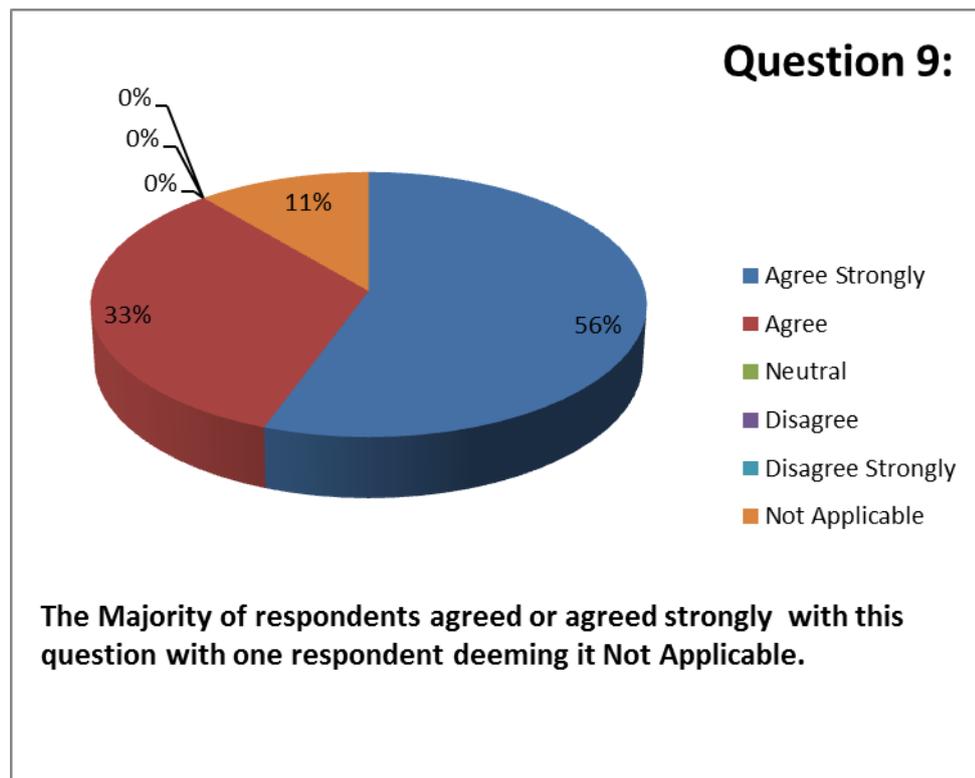
3.1.9 Question 9: The NLG took evidence from the contractor on matters relating to new and current schemes to support the purpose of the group.

The responses received to the above were:

	Agree Strongly	Agree	Neutral	Disagree	Disagree Strongly	Not Applicable	Total
No. of Responses	5	3	0	0	0	1	9

The majority of the responses provided to this were positive (either 'Agree Strongly' or Agree') with one response of "Not applicable".

The feedback received and responses indicate that the respondents are happy with the performance of the forum in this respect.



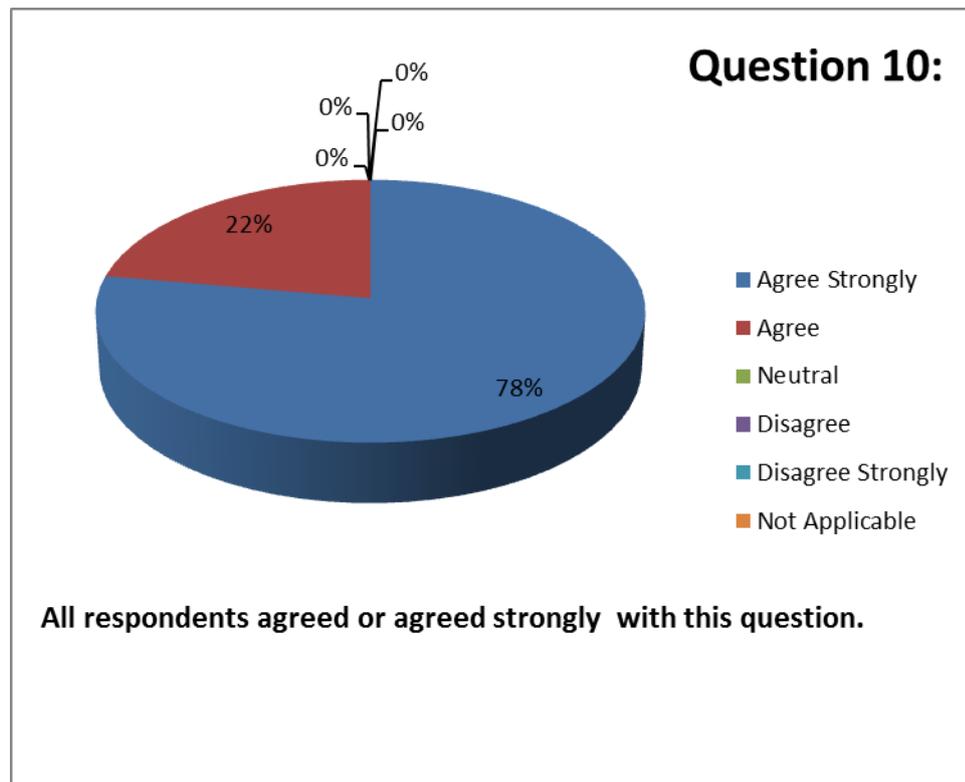
3.1.10 Question 10: The NLG allowed potential issue associated with the contractor’s proposals to be identified and mitigation measures and suitable alternative to be developed by the contractor where necessary.

The responses received to the above were:

	Agree Strongly	Agree	Neutral	Disagree	Disagree Strongly	Not Applicable	Total
No. of Responses	7	2	0	0	0	0	9

All of the responses provided to this were positive (either ‘Agree Strongly’ or ‘Agree’).

The responses would appear to indicate that the Group had sufficient influence on consultation and co-ordination.

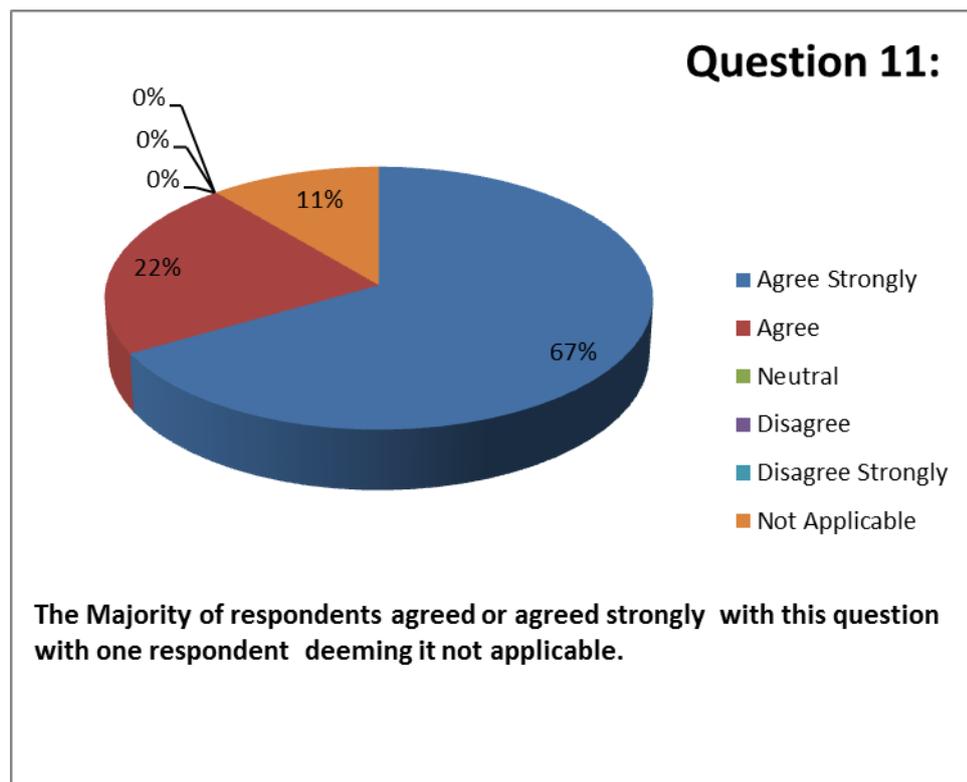


3.1.11 Question 11: The NLG gave appropriate consideration to the interaction between the contractors' proposals and adjacent properties and whether the contractor's proposals adequately accommodated those issues.

The responses received to the above were:

	Agree Strongly	Agree	Neutral	Disagree	Disagree Strongly	Not Applicable	Total
No. of Responses	6	2	0	0	0	1	9

The majority of the responses provided to this were positive (either 'Agree Strongly' or 'Agree') with one response of "not applicable".

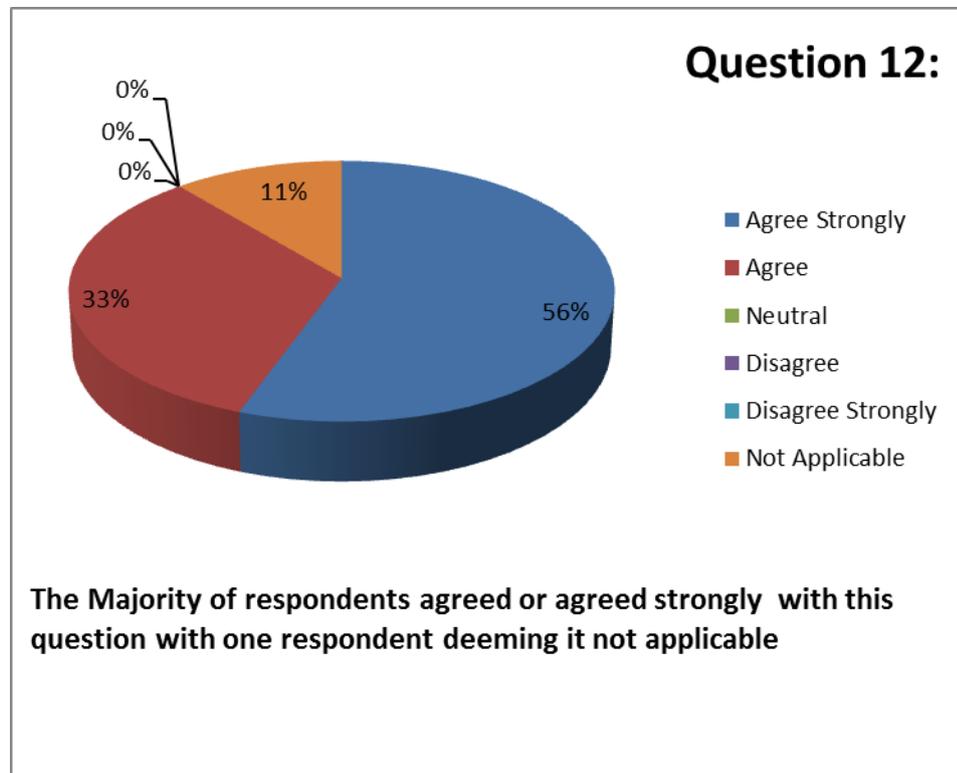


3.1.12 Question 12 -The NLG facilitated the contractors' demonstration that its noise and vibration proposals were developed such that they included all necessary measures to minimise disturbance and disruption to adjacent properties.

The responses received to the above were:

	Agree Strongly	Agree	Neutral	Disagree	Disagree Strongly	Not Applicable	Total
No. of Responses	5	3	0	0	0	1	9

The majority of the responses provided to this were positive (either 'Agree Strongly' or Agree') with one response of "Not applicable".

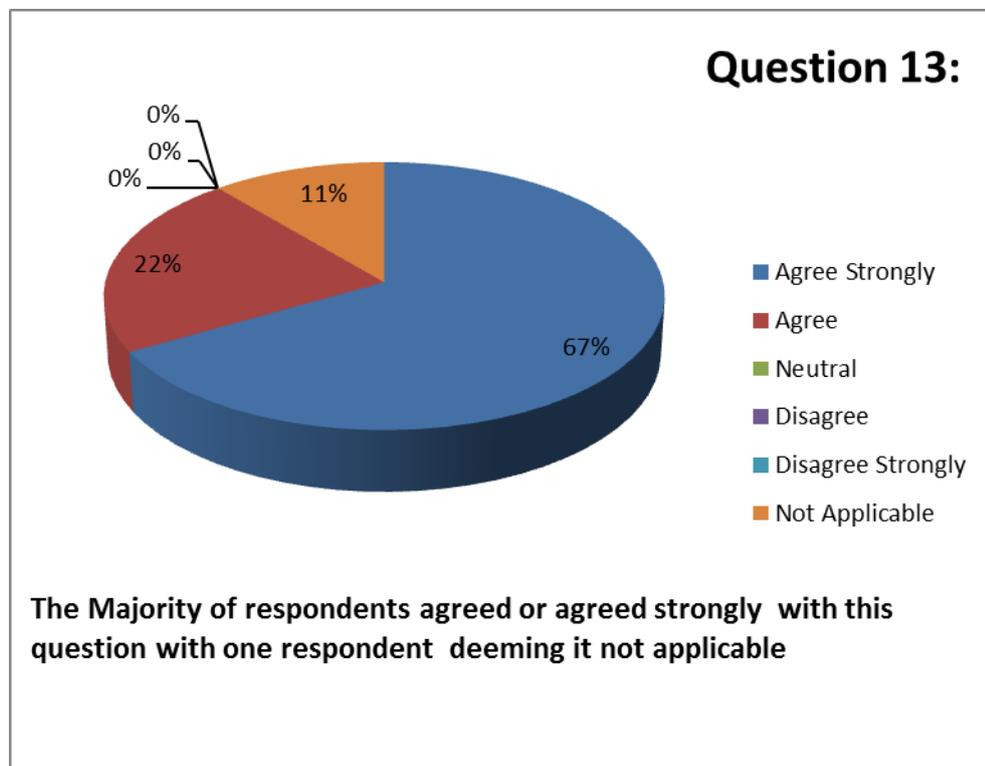


3.1.13 Question 13: The NLG gave appropriate consideration to the timing and effect that the contractor’s proposals would have on adjacent properties.

The responses received to the above were:

	Agree Strongly	Agree	Neutral	Disagree	Disagree Strongly	Not Applicable	Total
No. of Responses	6	2	0	0	0	1	9

The majority of the responses provided to this were positive (either ‘Agree Strongly’ or Agree’)” with one response of “Not applicable”.



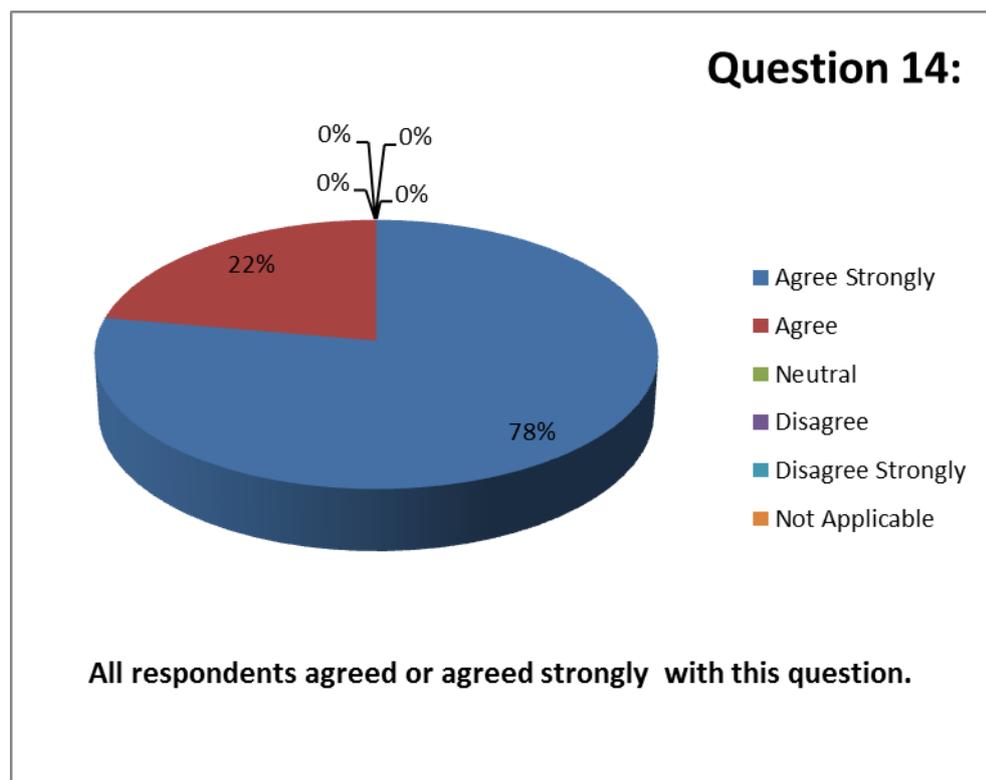
3.1.14 Question 14: The NLG worked together to ensure that all members were content with the contractor’s proposals in line with the purpose of the group.

The responses received to the above were:

	Agree Strongly	Agree	Neutral	Disagree	Disagree Strongly	Not Applicable	Total
No. of Responses	7	2	0	0	0	0	9

All of the responses provided to this were positive (either ‘Agree Strongly’ or ‘Agree’)

The above responses above are regarded as being supportive of the Group’s performance in this manner as far as is practicable.

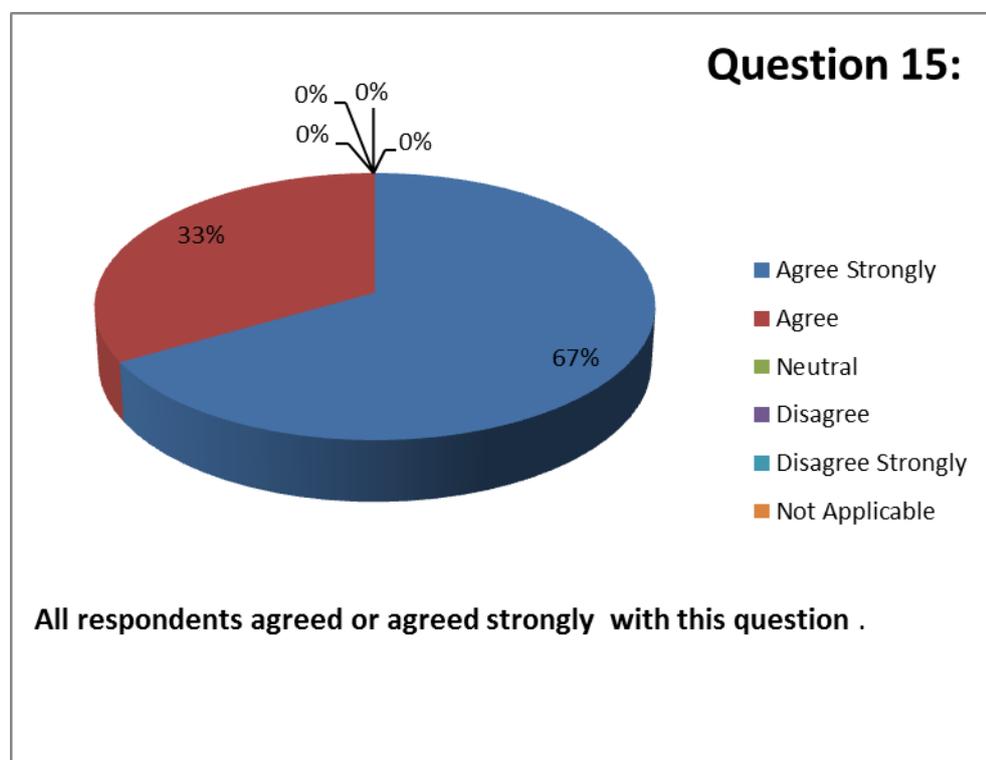


3.1.15 Question 15: Any differences in opinion between NLG members regarding the acceptability of the contractor's proposals were resolved in an appropriate manner.

The responses received to the above were:

	Agree Strongly	Agree	Neutral	Disagree	Disagree Strongly	Not Applicable	Total
No. of Responses	6	3	0	0	0	0	9

All of the responses provided to this were positive (either 'Agree Strongly' or 'Agree').

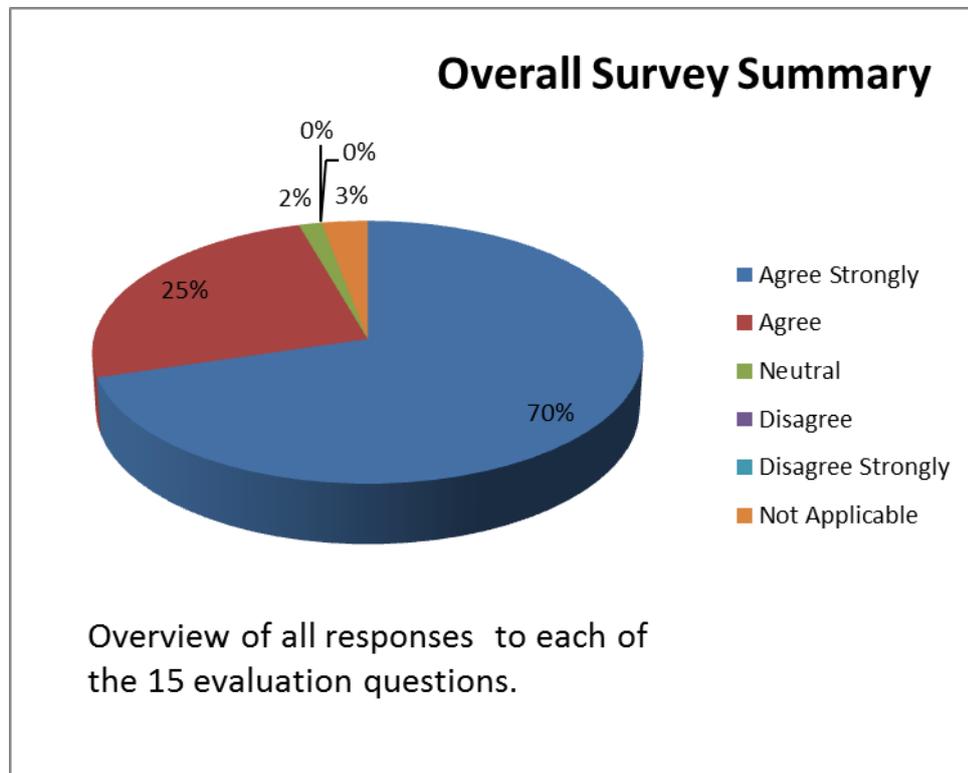


3.1.16 Overall Responses Provided to the Complete Questionnaire.

The total responses received to the questionnaire were:

	Agree Strongly	Agree	Neutral	Disagree	Disagree Strongly	Not Applicable	Total
No. of Responses	95	34	2	0	0	4	135

It can be seen from the above that the overall majority of the responses provided (96%) were positive about the impact of the NLG with no negative opinions expressed.



4.1 Further Respondent Views

4.1.1 Introduction

Within the feedback questionnaire issued to the members of the NLG was a section inviting any further potentially wider ranging opinions.

In order to kick start this discussion prompts were included as to items the members might wish to consider such as:

- Anything that went particularly well;
- Anything that went particularly badly;
- For a similar (or smaller) project would you repeat this exercise;
- Should the constitution of any future NLG be altered to include other organisations?

While the above prompts were provided responses were not restricted to these topics and respondents were free to raise issues as they deemed appropriate. Responses to Part B were not mandatory.

Below are the various views provided within Part B of the Questionnaire. These are given in no particular order.

4.1.2 Open Comments Received

“I would consider that the planning and management of noise in the FRC project should be considered as a benchmark of good practice in the management of noise and vibration on large scale projects.”

“Once the Contractors’ had embraced and implemented the management processes there were substantial benefits in delivering the project. This was primarily due to better forward planning within the Contractors JV (in the case of the Principal contract and M9J1a) of upcoming activities”.

“The NLG continues to provide a forum to discuss thoughts and share ideas to manage works in advance of all planned works and support to the project throughout the construction phase of the nationally important scheme”.

“A collaborative working relationship has been established within the NLG that has facilitated relatively smooth project progress and ultimately benefitted the community”.

“Where there are complaints from the public, in the majority of cases, these occur where the agreed protocols and plans are not adhered to. This highlights the continued importance of forward planning and liaison with the community”.

“At the beginning of the project a ‘No Surprises’ ethos was established underpinning the delivery management process and the NLG has played a pivotal role in delivering this approach throughout the project”.

“It has been a pleasure to work as part of this Group to ensure the building of such an immense structure could take place without unreasonable disturbance to the local community. When issues/nuisances were identified during the construction, action was taken quickly and efficiently to resolve in a prompt manner. Thank You”.

“Predictive noise and vibration assessment was a new venture for our organisation. We would have had a lot of experience previously of noise and vibration monitoring and acting and adjusting to the feedback”.

“After the initial learning period, we found the exercise very productive and would be comfortable to use the process if required in future projects. In general, we found the NLG to be a very productive and positive group which was willing to listen to productive inputs to achieve progress for the project while always staying true to their briefs”.

“The matter of Noise and Vibration was considered to be the issue to need most management at the start of the project. The functioning of the group was exemplary in getting the most appropriate solutions for all potential impacts”.

“There were a lot of problems with the monitoring of underwater noise. The equipment wasn’t available on time and once available there were numerous technical issues in getting it to work properly. The monitoring was therefore absent in the early stages and took an unacceptably long time to reach a sufficient level. It never worked quite as planned and compromises were made. Whilst the NLG was essential in trying to resolve these issues there didn’t seem to be enough resource allocated to resolving the issues in a timely manner, it always felt like a secondary priority”.

“Frequent monthly meetings were very useful particularly in the early stages of the project. The requirement for this frequency declined as the project developed”.

“See above ref monitoring of underwater noise. At times there could have been greater urgency and stronger direction from the EDT in relation to resolving the problems in a timely manner”.

“This is by far and away one of the most complex projects we have had an involvement in, in terms of managing noise and vibration from construction in close proximity to dwellings and other sensitive receptors, often throughout continuous day and night time periods over a prolonged time span. As an independent Consultancy, we have been very impressed with the quality of staff working on the control and management of noise and vibration on the Constructor’s side and the importance that has been attached to it. In particular, the distribution of monitoring equipment and quick and personal response to complaints has been exemplary. It has been a pleasure to be involved and the lessons learned from this project should be applied elsewhere going forward”.

“Some of the answers above are influenced by the regular changes that took place to the contractor’s noise and vibration team throughout the contract and the different involvement of EDT staff over the period”

4.1.3 Review

The various responses provided above reflect a positive view of the way the NLG has been constituted and operated for the project.

The standard and quality of information provided to the Group for consideration is regarded as being very good and appropriate to giving due consideration to the various issues discussed.

The benefits of the collaborative approach adopted for the NLG are viewed as being some of the most significant successes of the Group.

The need to reflect local interests and diversity is highlighted as a requirement of any future groups.

Overall there has been positive support to the constitution of the Group and the way it has been managed.

5 Conclusions

- The Noise Liaison Group has been viewed as having a beneficial impact for the Project and the public.
- The prospect of future adoption of this type of forum was supported.
- The Group has been viewed as inclusive and collaborative.
- The format of information produced has been viewed as informative and suitable for discussions and debate.

6 Appendix A: Feedback Questionnaire

Introduction

The Code of Construction Practice sets out that the Contractor will comply with the Noise Liaison Group in relation to all noise and vibration measures to be implemented in relation to the Forth Replacement Crossing Scheme.

The Employer may implement a similar group on future Projects and is interested in the views of the Noise Liaison Group members on the effectiveness of the group and the processes which were in place to control Noise and Vibration.

Questionnaire

The attached questionnaire sets out a number of questions based on the operation of the Noise Liaison Group during the construction period.

The Employer's Delivery Team requests that the Noise Liaison Group members provide feedback and any supporting or additional comments they consider appropriate to the performance and improvement of the Noise Liaison Group and Employer's Delivery Team.

Please provide completed questionnaires by.

**Forth Replacement Crossing
Noise Liaison Group
Monitoring and Evaluation**

Part A – Noise Liaison Group Questionnaire

	Criteria	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Not Applicable	Comments
	Noise Liaison Group (NLG) - Context, Membership, Purpose, Working Principles, Functions and Dispute Resolution.							
1	The NLG encouraged a collaborative and inclusive approach to assure and assess the planning and implementation of contractors' proposals for the project.							
2	The NLG was of benefit to relevant stakeholders.							
3	The NLG was comprised of members that are appropriate to the needs of the group.							
4	The NLG provided assurance that noise and vibration measures were being developed and carried out in accordance with the Code of Construction Practice and the construction contracts.							
5	The NLG facilitated consultation between the contractor and those organisations with which there is a consult and comply requirement in relation to noise and vibration.							
6	NLG meetings were held at appropriate intervals.							
7	NLG agendas and agreed minutes were uploaded to the project website in a timely manner.							
8	The Employer's Representative considered all advice he received from the NLG in determining whether it was necessary to take any action to improve the contractors' performance in accordance with the contract.							
9	The NLG took evidence from the Contractors' on matters relating to new and current schemes to support the purpose of the Group.							

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Noise Liaison Group
Monitoring and Evaluation**

	Criteria	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Not Applicable	Comments
10	The NLG allowed potential issues associated with the contractors' proposals to be identified and mitigation measures and suitable alternative proposals to be developed by the contractors' where necessary.							
11	The NLG gave appropriate consideration to the interaction between the contractors' proposals and adjacent properties and whether the contractors' proposals adequately accommodated those issues.							
12	The NLG facilitated the contractors' demonstration that its noise and vibration proposals were developed such that they included all necessary measures to minimise disturbance and disruption to adjacent properties.							
13	The NLG gave appropriate consideration to the timing and effect that the Contractors' proposals would have on adjacent properties.							
14	The NLG worked together to ensure that all members were content with the contractors' proposals in line with the purpose of the Group.							
15	Any differences in opinion between NLG members regarding the acceptability of the Contractors' proposals were resolved in an appropriate manner.							

**Forth Replacement Crossing
Noise Liaison Group
Monitoring and Evaluation**

Part B – Respondent Details and Any Other Comments

Name	
Organisation	
Confidentiality	Do you agree to your response being made available to the public either in full or in part in a summary report? Yes/No *delete as appropriate
	Are you content for the Employer's Delivery Team to contact you again in relation to this consultation exercise or your responses? Yes/No *delete as appropriate
Any Other Comments	Please include below any other comments you consider appropriate regarding the Noise Liaison Group, the Employer's Delivery Team or the planning and management of noise and vibration matters on the FRC project.