



## Meeting Notes

### Noise Liaison Group Meeting No. 13

28 June 2012, 10:00 to 13:00



**Venue: FRC Project Office, Rosyth**

#### Attendees:

David Climie	FRC Employer's Delivery Team (EDT) (Chair)
Steven Brown	FRC Employer's Delivery Team (EDT)
Andrew Mackay	FRC Employer's Delivery Team (EDT)
Martin Butterfield	FRC Employer's Delivery Team (EDT)
David Condie	FRC Employer's Delivery Team (EDT)
Lewis Hutchison	FRC Employer's Delivery Team (EDT)
Steve Williamson	City of Edinburgh Council (CEC)
Dermot Connolly	City of Edinburgh Council (CEC)
Tracy Wylie	Fife Council (FC)
Brian Carmichael	West Lothian Council (WLC)
Neil Abraham	Forth Crossing Bridge Constructors (FCBC)
Ross Glendinning	Forth Crossing Bridge Constructors (FCBC)
Ali Amiri	Forth Crossing Bridge Constructors (FCBC)
Micheal O'Connell	SRB Civil Engineering Ltd (SRB)
Barry O'Riordan	SRB Civil Engineering Ltd (SRB)
Rory McFadden	John Graham (Dromore) Ltd (JG)

#### Apologies for Absence:

Richard Greer	FRC Employer's Delivery Team (EDT)
David Redden	Fife Council (FC)
David Brewster	West Lothian Council (WLC)
Niall Corbet	Scottish Natural Heritage (SNH)
Carolyn Clark	Scottish Natural Heritage (SNH)
Colin Megginson	Marine Scotland (MS)
Mike Bland	Marine Scotland (MS)

Item	Subject	Description	Action
1	Introductions and Apologies	EDT welcomed all parties to the meeting. Apologies were received from those parties listed above.	
2	Safety Procedures	EDT advised regarding safety and evacuation procedures.	
3	Minutes and Actions from Previous Meeting	The minutes of Meeting No. 12 held on 31 May 2012 were agreed. Actions from the previous meeting are as noted in items 4(a) to 4(c) below.	
4(a)	Principal Contract	<u>Actions from Previous Meeting No. 12</u>	
	(i)	FCBC confirmed that a tracked change version of the NVMP had been issued to the EDT for review. EDT to issue to NLG for comment.	EDT
	(ii)	EDT confirmed that the PCNV covering night works at Society Road had been approved. FCBC to confirm date for carrying out the works.	FCBC
	(iii)	FCBC confirmed that the mobile hydrophone was now on site and was currently subject to testing.	

(iv)	FCBC to circulate revised PCNV register with the updated 'traffic light system' being used to identify potential disturbance.	FCBC
(v)	FCBC advised that a trial blast in the vicinity of St Margaret's Hope Lodge was successfully carried out. (For further details of discussions relating to blasting at St Margaret's Hope see item x)	
(vi)	FCBC advised that a modified PCNV had been submitted for blasting at Whinny Hill. (For further details of discussions relating to blasting at Whinny Hill see item xi).	
	<u>Noise and Vibration Management Plan</u>	
(vii)	Refer to item (i) above.	
	<u>Plans for Control of Noise and Vibration</u>	
(viii)	FCBC provided a summary of submitted and upcoming PCNVs. In particular FCBC advised that a PCNV covering works at the south abutment was currently with the EDT for review and that a revised PCNV covering marine foundation works would be submitted on 28/06/12. PCNVs under preparation include works at pier S6 (near Port Edgar Barracks) and updates to land base works PCNVs.	FCBC
(ix)	PCNV covering blasting was discussed in detail (see items x and xi).	
(x)	<p><u>St Margaret's Hope</u></p> <p>FCBC provided an update on the blasting carried out at St Margaret's Hope on 27/06/12 (Blast No. 7). FCBC advised that following a trial blast in the vicinity of St Margaret's Hope Lodge, the results of the blast were used to inform a revision to PCNV 15, incorporating an increase in the PPV threshold at Admiralty House to 15 mm/s. FCBC then provided a summary of the measured PPV levels in relation to the predicted PPV levels at the main receptors in the vicinity of the blast, highlighting that PPV levels were within the required limits. FCBC advised that the regression line had been updated following the blast at both the Lodge and House. FCBC also confirmed to CEC that the maximum instantaneous charge currently proposed at St Margaret's Hope is 7.5 kg, and that it was the proximity of the blast to the receptors that was the critical factor and not the charge weight. It was noted that the permitted threshold had been exceeded at the radar station. FCBC advised that they considered this to be due to difficulties positioning the transducer and as a result artificially high levels were recorded.</p> <p>EDT advised that they carried out independent monitoring at the main receptors during blast No. 7 and that the raw data would be provided to the NLG and FCBC for information and analysis, respectively. The monitoring equipment used by the EDT was able to record the range of vibration frequencies generated by the blast, thus allowing any low frequency components to be identified. Early indications were that the blast frequencies appeared to be at higher levels.</p> <p>FCBC confirmed that previous blasts at St Margaret's Hope had caused no cosmetic damage to receptors.</p> <p>FCBC confirmed that they intend in to increase the PPV limit at the Lodge to 25 mm/s for the next blast at St Margaret's Hope (Blast No. 8) and that it is likely that a further four blasts would be required. EDT advised that a revised PVNV would be required in advance of the next blast in order to support the requested increase in the PPV threshold. FCBC advised an updated PCNV and blast design proposal would be issued w/c 02/07/12 with the blast taking place w/c 11/07/12.</p> <p>The degree of certainty that a higher threshold would not be exceeded was questioned by the NLG at length. FCBC provided an explanation</p>	<p>EDT/FCBC</p> <p>FCBC</p>

		of the blasts and measured data obtained and explained why this gave them a high degree of confidence. NLG accepted these explanations.	
	(xi)	<p><u>Whinny Hill</u></p> <p>FCBC advised that a blast was programmed to take place at Whinny Hill on 01/07/12 with a maximum instantaneous charge of 36kg. FCBC confirmed that resultant PPVs from the blast would be within the 10 mm/s limit at structures and it would be compliant with the requirements of SGN and Scottish Water (both 40 mm/s). FCBC advised that the next blast was programmed to take place on 06/07/12 and that blasting would then revert back to fortnightly intervals.</p> <p>FCBC confirmed that consultation and notification with all interested parties would continue in the usual manner.</p> <p>FCBC advised that it was anticipated that a further 15 blasts will be required at Whinny Hill and that the intention is to leave the 'side walls' of the hill until near the end of the blasting programme in order to provide a screening effect during blasting.</p> <p>CEC queried what monitoring was in place in relation to public utilities. FCBC confirmed that pre/post condition surveys would be carried out and that a vibrograph was positioned at the utilities.</p> <p>FCBC advised that a revised PCNV covering the blast at Whinny Hill would be issued to the EDT on 28/06/12 addressing their comments.</p>	FCBC
		<u>Monitoring</u>	
	(xii)	<p>FCBC provided an update on monitoring activities. FCBC advised attended monitoring had been carried out in June at the both the north and south shore of the estuary. FCBC explained that traffic noise was a dominant noise source. CEC enquired what the noise levels were before construction started and then after construction started i.e. what is the effect of the traffic noise on the ambient noise levels when construction works are ongoing. FCBC to produce an updated graph with this information.</p>	FCBC
	(xiii)	<p>FCBC advised that five construction related exceedances of maximum noise level thresholds occurred in June, four of which were attributed to marine works. The exceedances were due to the following:</p> <ul style="list-style-type: none"> <li>• 1 No - Plant operating close proximity to the noise monitor</li> <li>• 3 No - Dredging works</li> <li>• 1 No - Caisson works</li> </ul> <p>FCBC advised that the exceedance relating to the caisson works was caused by the excavator bucket making contact with the inner side wall of the caisson resulting in a clanging noise. The exceedance relating to the dredging works was likely to be caused by excavated rocks making contact with the excavator bucket.</p> <p>The NLG questioned whether there was additional mitigation that could be put in place to remove or reduce the effect of the excavator bucket striking the side of the caisson. It was accepted that due to the nature of the excavations, some noise incidents such as those occurred would be likely to occur and it was noted that due to the critical nature of the caisson excavations for the stability and positioning of the foundations, the work would need to continue during and outside normal working hours. The NLG sought reassurance from FCBC that everything that could reasonably be done to prevent or mitigate such incidents would be done. The NLG noted that further caissons were to be installed and excavations undertaken and asked</p>	

		<p>that FCBC ensure that lessons learned from the excavations carried out to date were consistently applied to the excavations at other caissons.</p> <p>FCBC advised that mitigation measures have now been put in place, including amending working practices and providing additional information at toolbox talks and that they were ensuring that adequate briefings on working practices and noise control were being provided..</p>	
	(xiv)	CEC queried whether additional attended monitoring could be carried out at Linn Mill during the marine works. FCBC advised that they would investigate a suitable location and make the necessary arrangements.	FCBC
	(xv)	CEC queried whether additional attended monitoring could be carried out to capture the excavation works within the caissons. FCBC advised that they would make the necessary arrangements.	FCBC
		<u>Community Engagement</u>	
	(xvi)	<p>FCBC advised that two complaints had been received, both of which were from the south side of the Forth. Details of the complaints were as follows:</p> <ul style="list-style-type: none"> <li>• 1 No in relation to daytime working hours near Linn Mill</li> <li>• 1 No. in relation to general dredging noise and specific banging noise during the night</li> </ul> <p>The NLG sought further information regarding the works that caused the complaints. FCBC explained that excavations to break rock in the excavation for Pier S5 had been undertaken early in the morning and this had led to the complaint. As a result, FCBC explained that they had also had an enquiry regarding why dredging works were ongoing at night. FCBC explained that they had taken immediate action to cease the rock breaking works and that the noise team had engaged with the construction management team to ensure that the works would not be undertaken at that time in future. FCBC also explained that and that the works should not have been undertaken at that time. The NLG expressed concern that such works were permitted to be undertaken and that FCBC should ensure that adequate management of the works was in place to comply with the requirements of approved PCNVs in this regard. The NLG did note the positive action taken to deal with the incident.</p> <p>The NLG noted that as a result of the complaint, a concern was expressed by a resident regarding dredging. The NLG sought further information regarding the dredging works and nature of noise levels occurring. FCBC explained that they would undertake additional monitoring (see item xiv above) but that based on monitoring to date, noise levels at Linn Mill were within the thresholds set out in the Code of Construction Practice. CEC noted that they had previously visited Linn Mill during day time and were only able to distinguish the engine noise of the dredger as it rotated to the barge. The NLG discussed the nature of dredging noise with FCBC and the potential for different types of noise to cause disturbance. The NLG noted that the noise levels were unlikely to be at a level that would cause significant disturbance but that it could be particular noise incidents such as the excavation issue that could lead to concerns and awareness of dredging noise. The NLG asked that the results of the attended monitoring at Linn Mill be circulated as soon as possible and agreed to review the concern further at the next meeting.</p>	FCBC
		<u>Forward Programme</u>	
	(xvii)	FCBC provided an overview of their forward programme and indicated	

		that marine operations and blasting works were their main priority.	
4(b)	M9 Junction 1a	<u>Actions from Previous Meeting No. 12</u>	
	(i)	SRB confirmed that their pavement subcontractor is replacing tonal alarms on plant to non-tonal alarms and that they will be seeking to use plant that has been changed over for their surfacing works. SRB will provide a further update at the next NLG meeting.	SRB
	(ii)	SRB confirmed that a trial of extended working at Overton Bridge took place in June and explained that due to adverse weather and other restricted that the trial was restricted to 4 days. SRB advised that the works went well and no complaints were received. It was noted that for one of the periods work continued past 10pm which was the time agreed by the NLG for ceasing work. The NLG expressed concern regarding this and reiterated if works are continued, it is permitted up to 10pm.	
	(iii)	CEC asked that they be provided with advance notification of night time working for gantry and pavement works so that they may advise their night noise team of the detailed programme of works. SRB advised that the gantry erection programme would likely be timed to coincide with the pavement works to reduce disruption to road users.	SRB
	(iv)	SRB confirmed that the barrier at Kirklands was programmed to be installed at the end of July 2012.	SRB
		<u>Plans for Control of Noise and Vibration</u>	
	(v)	SRB issued a revised PCNV schedule which was reviewed. SRB advised that PCNVs currently under development covered erection of gantries, pavement works and night works on the central reserve. SRB advised that traffic management works would be ongoing at the weekend for the next few months associated with works in the central reserve. This would include traffic management to allow delivery of material at night with the construction works carried out during the day. This was noted by the NLG members.	
		<u>Monitoring</u>	
	(vi)	SRB advised that attended monitoring was carried out during the extended working hours at Overton Road and provided a summary of the monitoring. Activities that took place included steelfixing and powerwashing.	
	(vii)	SRB confirmed that noise and vibration monitoring data for May had been submitted to the EDT.	
		<u>Community Engagement</u>	
	(viii)	SRB confirmed that no noise related complaints were received in June.	
		<u>Forward Programme</u>	
	(ix)	SRB provided the following information regarding planned works for July and August: <ul style="list-style-type: none"> <li>• Completion of directional drilling at a number of locations</li> <li>• Completion of bulk earthworks by mid-July</li> <li>• Continue to progress drainage works</li> <li>• Erection of safety barriers</li> <li>• Work at Overton Bridge, Newmains Bridge and M9 Overbridge.</li> <li>• Delivery of gantries to site</li> </ul>	
	(x)	SRB confirmed that they would issue a gantry erection programme to the NLG for information.	
	(xi)	SRB confirmed that they would keep CEC up to date with any night	SRB

		time working and weekend working.	
4(c)	Fife ITS	<u>Actions from Previous Meeting No. 12</u>	
	(i)	JG confirmed that they had still to issue electronic copies of photographs of the fixed monitor locations. EDT reiterated that this action was carried over from previous meetings and asked for the information to be provided as soon as possible.	JG
	(ii)	JG to provide a detailed gantry erection programme to the NLG for review once finalised. JG indicated that they hoped to commence gantry erection week commencing 16 July 2012.	JG
		<u>Plans for Control of Noise and Vibration</u>	
	(iii)	JG advised that a modification to PCNV 10 would be submitted on 28/06/12 covering the installation of roadmarkings. This would include removal of roadmarkings using a thermal lance. The NLG asked that where possible this was done in the evenings and a temporary barrier be used to provide screening.	JG
	(iv)	JG advised that PCNV modification had been prepared to cover the work done at Masterton Bridge expansion joints and weekday resurfacing works.	
		<u>Monitoring</u>	
	(v)	JG advised that monitoring reports covering the compliance monitoring carried out in April and May had been submitted to the EDT for review.	
		<u>Community Engagement</u>	
	(vi)	JG advised that they received an enquiry from Fife Council regarding a noise complaint on 15 June 2012, however it was confirmed no works were being carried out on the Fife ITS Contract at the time of the incident.	
		<u>Forward Programme</u>	
	(vii)	SRB provided the following information regarding planned works for July and August: <ul style="list-style-type: none"> <li>• Completion of safety barriers</li> <li>• Completion of topsoil and seeding works</li> <li>• Snagging of ITS infrastructure</li> <li>• Installation of gantries</li> <li>• Commence removal of traffic management</li> </ul>	
5	Next Meeting	The next meeting (No. 14) will be held on 2 August 2012, 10am, Ferrytoll site office.	
6	Any Other Business	Nothing to report	