



Meeting Notes

Noise Liaison Group Meeting No. 18

6 December 2012, 10:00 to 12:00

Venue: FRC Project Office, Rosyth



Attendees:

David Climie	FRC Employer's Delivery Team (EDT) (Chair)
David Condie	FRC Employer's Delivery Team (EDT)
Martin Butterfield	FRC Employer's Delivery Team (EDT)
Rebecca Long	FRC Employer's Delivery Team (EDT)
Dermot Connolly	City of Edinburgh Council (CEC)
David Redden	Fife Council (FC)
Brian Carmichael	West Lothian Council (WLC)
Thomas Nilsson	Forth Crossing Bridge Constructors (FCBC)
Christian Niemietz	Forth Crossing Bridge Constructors (FCBC)
Colin Goodsir	Forth Crossing Bridge Constructors (FCBC)
Neil Abraham	Forth Crossing Bridge Constructors (FCBC)
Martin Wilson	Forth Crossing Bridge Constructors (FCBC)
Ali Amiri	Forth Crossing Bridge Constructors (FCBC)
Micheal O'Connell	SRB Civil Engineering Ltd (SRB)

Apologies for Absence:

Steven Brown	FRC Employer's Delivery Team (EDT)
Andrew Mackay	FRC Employer's Delivery Team (EDT)
Richard Greer	FRC Employer's Delivery Team (EDT)
Tracy Wyllie	Fife Council (FC)
Steven Williamson	City of Edinburgh Council (CEC)
David Brewster	West Lothian Council (WLC)
Niall Corbet	Scottish Natural Heritage (SNH)
Carolyn Clark	Scottish Natural Heritage (SNH)
Mike Bland	Marine Scotland (MS)
Colin Megginson	Marine Scotland (MS)
Roland Tarrant	SRB Civil Engineering Ltd (SRB)

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. 17 held on 1 November 2012 were agreed. Actions from the previous meeting are as noted in items 4(a) to 4(c) below.	
4(a)	Fife ITS	<u>Actions from Previous Meeting No. 17</u>	
	(i)	None	

		<u>Fife ITS Update</u>	
	(ii)	EDT provided a brief update on the status of the Fife ITS project to the NLG. EDT advised that Fife ITS came into operation on 4th December 2012 and that early indications were that the new system was working well. EDT advised that the ITS system will continue to be monitored for potential teething problems going forward. As discussed at the last NLG meeting, no further Fife ITS input to the NLG is envisaged.	
4(b)	M9 Junction 1A	<u>Actions from Previous Meeting No. 17</u>	
	(i)	SRB confirmed that they had been keeping CEC up to date with any notifications of forthcoming works being issued to local residents.	
	(ii)	EDT confirmed that SRB's noise monitoring information had been received and that it had now been uploaded to the project website.	
	(iii)	CEC confirmed that they had received notification from SRB in relation to when the southbound merge pavement works would be carried out.	
		<u>Plans for Control of Noise and Vibration</u>	
	(iv)	SRB advised that they do not anticipate requiring to submit any further PCNVs.	
		<u>Monitoring</u>	
	(v)	SRB advised that the November Noise Monitoring data was currently being prepared and would be submitted to the Employer for review in the next 5 to 10 days.	SRB
	(vi)	SRB to forward CEEQUAL question in relation to noise and vibration monitoring to EDT for input.	SRB/EDT
		<u>Community Engagement</u>	
	(vii)	<p>SRB advised that there have been a number of noise complaints relating to work on the M9 eastbound merge on the night of the 7th November 2012. SRB confirmed there was a total of 8 complaints for noise that week in the Buie Rigg area. These 8 complaints were received over a 7 day period and all relate to the Buie Rigg area.</p> <p>SRB confirmed that no triggers were received by SRB from their noise monitoring system and that there were no exceedances in relation to the complaints.</p> <p>SRB confirmed they are currently reviewing the data for this period and will report fully in their November noise monitoring report. SRB also confirmed that their Community Liaison Officer and Project Manager have been in contact with the complainants.</p> <p>SRB also advised that pre works briefings with all evening and night works teams following the incident were held to re iterate the importance of carrying out work in a considerate manner and with the minimum of noise.</p> <p>SRB also advised that any future complaints received in relation to noise and vibration would now be managed by Seamus O'Brien.</p> <p>EDT advised that the Employer would be responding to correspondence received from residents of Buie Rigg in due course and that CEC would be issued with a copy of the letter.</p>	<p>SRB</p> <p>EDT</p>

		<u>Forward Programme</u>	
	(viii)	SRB advised that their works are approaching practical completion with 90% of the works programmed to be complete by Friday 21 st December 2012.	
	(ix)	SRB gave an update on work progress and advised that the major works will be completed in advance of the Christmas break (21/12/12). There will be works in January but these are only likely to be fencing works, reinstatement, landscaping, snagging and demobilisation. SRB advised that the M9J1a site would be closed between 21 st December and 7 th January for the Christmas break. SRB advised that the provisional opening date for the scheme was currently 1 st February 2012 subject to programme.	
	(x)	SRB provided the following information regarding planned works for December: <ul style="list-style-type: none"> • Complete riprap at Swine Burn • Landscaping works • Fencing at area 9 and SUDS ponds • Completion of safety barrier in all areas • All pavement works to be completed • All road markings to be completed • M9 Spur to be opened to traffic. • All snagging works on structures to be completed • M906E painting works to continue • 2 no. in-situ headwalls to be completed 	
4(c)	Principal Contract	<u>Actions form Previous Meeting No.17</u>	
	(i)	FCBC advised that the revision to PCNV0021 had been submitted to the Employer for review.	EDT
	(ii)	EDT advised that vibration monitoring reports covering the period up to the end of October 2012 had been uploaded to the project website.	
	(iii)	FCBC stated at the previous NLG meeting (01/11/2012) that the revised underwater noise report was being finalised and would be submitted by the end of that week. EDT advised that they were still awaiting this submission and was extremely concerned that it had, once again, not been received. EDT drew attention to FCBC's poor performance in this area and noted that numerous commitments to provide the information had not been met. EDT requested a definitive commitment from FCBC to provide the information urgently. FCBC committed to submit the report by close of play Friday the 7 th of December and a report for the next period by 21 st December 2012.	FCBC
	(iv)	FCBC advised that the PCNV for works at the Port of Rosyth would be submitted in December.	FCBC
	(v)	FCBC confirmed that a NLG site visit to the marine works took place on the 13 th November 2012.	
	(vi)	EDT confirmed that PCNV 11 (Mod 3) covering the earth bund at Pier S6 had been approved.	
	(vii)	FCBC advised that a PCNV covering the sheet piling operation at Pier S6 would be submitted before the Christmas break (21 st December 2012).	FCBC

	(viii)	FCBC advised they were currently assessing whether a permanent monitor at Linn Mill would be beneficial to the noise monitoring regime.	FCBC
	(ix)	FCBC advised that the crane supplier had advised that an alternative directive grating should not be fitted to the plant. FCBC advised that alternative noise mitigation measures were currently being investigated.	FCBC
	(x)	FCBC to update vibration monitoring locations in NVMP and submit to the Employer for review.	FCBC
		<u>Plans for Control of Noise and Vibration</u>	
	(xi)	<p>FCBC stated that the following PCNV's have been submitted in the last month:</p> <ul style="list-style-type: none"> • 00015 Mod 8 – Whinny Hill blasts • 00011 Mod 3 - Pier S6 Earthbund • 00020 Rev 09 – Marine works • 00021 – South Earthworks • 00010 Rev 03 – North Works • 00011 Mod 02A – N2 Concrete Pour 	
	(xii)	<p>The following PCNV's are to be submitted to be submitted for review in the next month:</p> <ul style="list-style-type: none"> • 00022 – S6 Piling • 00011 Rev 03 – Land Based Piers • 00027 Mod 01 – Piling in Building 973 of Marine Yard • 00020 Rev 10 – Marine Works • 00008 Mod 06 – BP Specialist Work 	
	(xiii)	<p><u>Jet Grouting</u></p> <p>FCBC provided the NLG with a presentation outlining the design and construction sequence of the jet grouting operation at the north and south towers in order to support their request for permission from the NLG to carry out the jet grouting on a 24/7 basis.</p> <p>A summary of the information provided by FCBC is as follows:</p> <ul style="list-style-type: none"> • The process of jetting and grouting individual columns takes 8-12 hrs. • In order for 3 adjacent columns (outer, intermediate & inner) to interlock properly they must be completed sequentially & cannot be allowed to set for a prolonged period. • It is important to keep a certain sequence of coordination between the drilling/grouting and the platform re-setting/placing of guided casings to achieve a reasonable work flow. In order to achieve this most effectively 24 hour working is required. • Weather conditions dictate working times, it is therefore difficult, if not impossible, to commit to specific periods of downtime, however nature of the activity dictates that there will be prolonged periods of downtime each day. • This work process is a critical activity which means that any enforced downtime has significant programme impacts. 	

		<p>EDT asked if there was likely to be down time due to adverse weather conditions. FCBC advised that this package of work was relatively weather tolerant and so far has had no down time as a result of adverse weather conditions.</p> <p>NLG advised that more information was required to justify working 24/7 working without planned respite and advised that jet grouting operations at the south tower should continue to be closely monitored in order to learn any lessons before moving to the north tower, as the north tower is significantly closer to sensitive receptors than the south tower.</p> <p>EDT requested that FCBC investigate the programming of the jet grouting activity in order to ascertain whether there was any way to build in some planned respite in addition to scheduling quieter works sequences to take place at night.</p> <p>NLG advised that 24/7 working without planned respite may continue on a trial basis given the limited impact that the activity is currently causing. However, NLG advised that there may be a need to provide at least one full night respite going forward depending on the outcomes of ongoing monitoring.</p> <p>FCBC suggested that the NLG attend another site visit to the south tower early in the New Year to observe the jet grouting barge in order to see the improvements that have been made regarding the reduction to noise since their last visit. The NLG agreed a provisional date of 10th January 2013 for the visit. (Post meeting note: site visit rescheduled to 15th January 2013)</p> <p>FCBC advised that planned respite from jet grouting would be provided from 22nd December 2012 until 7th January 2013 and advised that site mobilisation would commence on 3rd January 2013.</p>	<p>FCBC</p> <p>FCBC</p> <p>All</p>
		<u>Enquiries/Complaints</u>	
	(xiv)	<p>FCBC confirmed that there have been four complaints in the previous month relating to noise and vibration:</p> <ul style="list-style-type: none"> • Complaint 1: Night noise from generator • Complaint 2: North tower caisson excavation • Complaints 3 & 4: South estuary night works 	
	(xv)	<p>In relation to Complaint 1 – Night time Noise from Generator, FCBC advised as follows:</p> <p>CLO received complaint on 11th November 2012 in relation to generator noise from the security lighting in field near Echline Corner. Lights and generator had been installed as response to security issues regarding attempted diesel theft.</p> <p>On investigation FCBC's initial response was to place screening round generator which significantly reduced the noise in the direction of the receptor. The lights and generator were later replaced with motion sensor lights and security camera. FCBC advised that complainant was content with action taken and the complaint was now considered closed.</p>	
	(xvi)	<p>In relation to Complaint 2 – North Tower caisson excavation, FCBC advised as follows:</p> <p>Complaint received on 20th November 2012 in relation to night-time</p>	

noise from engine of crane used to excavate inside of the North Tower caisson. The complainant stated that characteristic of noise was 'steady but loud' and levels measured personally appeared to be above threshold levels.

Initial investigations by FCBC consisted of examining data from the permanent monitor at Tigh-Na-Grian and visiting works at the north tower.

The results from the permanent monitor showed the LAeq level to be within the relevant threshold. However 8 LMax threshold exceedances, spread throughout particular night had occurred which were likely to be the result of loose rocks falling from the excavator bucket into the split barge and the excavator bucket hitting the edge of the caisson.

The number of exceedances was considered by FCBC to be attributed to wind speed and directions and the fact that the operatives were excavating hard rock at the time. Despite operatives best attempt these incidents are nearly impossible to fully eradicate. Resident has advised FCBC that such instantaneous exceedances do not generally cause disturbance.

FCBC advised that the following actions were taken in response to the complaint:

- Investigated placing an acoustic screen at the edge of barge as mitigation, however the effectiveness of this is limited by the permissible thickness and height of the screen. Spatial constraints on barge and health and safety risk posed from high winds, make it impossible to significantly extend either parameter.
- Discussions with the supplier re implementing various mitigation measures on the crane – all proved unsuccessful.
- Implementation of an 'ad-hoc' solution in the form of directive grating positioned over crane engine grill, however this has been found to yield limited noise reduction.- also, refer to item (ix).
- Investigation into possibility of re-programming works - not practical, as detailed in PCNV, caisson lowering works must continue once started.
- Night shift operatives given refresher tool box talks.
- Barges repositioned in order to employ caisson as barrier between 'noisier' crane and nearest receptors where possible.
- An FCBC representative visited resident in person to discuss issues.
- Explained measurement criteria, various thresholds and how levels are calculated (Leq, LAFmax, worst hour etc).
- Compared like-for-like levels and established around 15dB overshoot on residents meter.
- Explained that mitigation had been extensively explored and implemented where possible and discussed associated difficulties and limitations.

		<p>FCBC advised that the resident explained that levels had improved in the nights following complaint and that this was likely as a result of weather conditions, reduction of plant in operation, measures discussed above, including the caisson being adopted as screen and type of material being excavated.</p> <p>NLG asked FCBC if the larger crane would be utilised in future construction activities and to continue to investigate possible noise mitigation measure and other alternatives which would reduce engine noise. FCBC agreed to investigate.</p>	FCBC
	(xvii)	<p>In relation to Complaints 3 & 4 – South estuary night works, FCBC advised as follows:</p> <p>Complaint received 26th November 2012 in relation to noise from night works. The complainant enquired as to the need for night time working, complaining about noise over the weekend commencing 23rd November 2012 and citing low level engine drone in particular.</p> <p>Exceedances of the LA_{max} thresholds were recorded over the weekend in question at Butlaw and Clufflat monitors (3 exceedances between 05:30 & 06:00am, LA_{Fmax}=67.1dB & 69.1dB respectively). Assessment by FCBC indicated that a source level of around 105dB(A) @ 10m would be required to generate such levels at monitoring location.</p> <p>FCBC advised that the following actions were taken in response to the complaint:</p> <p>All plant at the south tower has been measured and was found to be well below the level necessary to cause the threshold exceedances.</p> <p>FCBC conducted attended monitoring at south shore and at the south tower and reported as follows:</p> <ul style="list-style-type: none"> • Works from south tower barely audible from shore during attended monitoring. • Various activities conducted involving various different plant • Developed further understanding of associated noise issues along with possible mitigation measures • Continuous generators relatively quiet and in line with BPM (max cumulative LA_{eq}~70dB @ 10m) <p>FCBC developed tool box talks specifically addressing all issues encountered whilst at the south tower, including:</p> <ul style="list-style-type: none"> • avoid use of sledge hammer at all times, • ensure all panels & doors are secured, • place all equipment down gently after use, • secure barge side railing to avoid rattle caused by pump tubes <p>No further complaints or exceedances have been received since mitigation measures have been employed.</p> <p>CLO spoke with complaints, explained particular night works currently being conducted and gave a detailed schedule of night works to be expected in vicinity of south shore in coming months, including significant periods of downtime.</p> <p>CLO explained mitigation measures investigated/employed.</p> <p>FCBC advised that they had received positive feedback from both</p>	

		<p>complainants and the complaints were now considered to be closed.</p> <p>NLG asked if any other complaints had been received in the period from residents living in the Linn Mill area as a result of the marine works. FCBC advised that there had not.</p>	
	(xviii)	<p>FCBC provided an update on the installation of noise insulation at properties to the north of the Forth.</p> <p>FCBC confirmed that noise insulation should be in place by mid-December/early January.</p> <p>FCBC also advised that there would be no works at the north after completion of current excavation until the commencement of jet grouting in mid to late January 2013, by which time both residents should have improved glazing solutions.</p>	FCBC
		<u>Monitoring</u>	
	(xix)	<p>FCBC advised that there had been construction noise related exceedences at Tigh-Na-Grain, Clufflat Brae, Linn Mill, Butlaw Fisheries in November.</p> <p>FCBC advised that there had been 10 night-time exceedences of the maximum noise level threshold at Tigh-Na-Grain due works at the north caisson Works. The exceedences were found to be due to rocks hitting the split barge and crane bucket hitting against the caisson.</p> <p>FCBC advised that there had been 6 exceedences of the maximum noise level threshold at Clufflat Brae and that the exceedences were attributed to vehicle horns and engine drone and caisson works at the south tower.</p> <p>FCBC advised that 3 day-time exceedences were reported at Linn Mill and were attributed to plant movements at Echline.</p> <p>FCBC advised that 4 exceedences were recorded at Butlaw Fisheries and were attributed to engine drone, caisson works at the south tower and plant movements at S6.</p>	
	(xx)	<p>FCBC provided an update on the status of the Underwater Noise Report.</p> <p>FCBC stated that there was a large population of seals in the estuary which could be viewed on a daily basis. FCBC advised that they had been in correspondence with SNH and confirmed that seals are considered as being less sensitive to construction noise than porpoises and other cetaceans. FCBC advised that they have agreed the following relating to seals:</p> <ul style="list-style-type: none"> • Works may proceed if seals are spotted in the vicinity of the works • Maintain the soft start • Maintain Marine Mammal Observers • Provide log of behaviour. <p>FCBC have agreed to correlate the observed behaviour with any simultaneous underwater noise recordings. This will help feedback to JNCC to fine tune their guidance in the future.</p> <p>FCBC advised that the next underwater noise monitoring report would be submitted to the Employer for review before the Christmas break.</p>	FCBC FCBC

	(xxi)	<p>FCBC advised that the relocation of Vibrock equipment to more suitable locations is on-going and confirmed that the new locations appear to be more appropriate. FCBC also confirmed that they would inform NLG of updated locations and update the NVMP accordingly.</p> <p>FCBC advised that the latest Vibration Monitoring report covering the period from August 2012 to October 2012 has been submitted and is now approved. FCBC confirmed that future vibration monitoring reports will be submitted on a monthly basis.</p>	<p>FCBC</p> <p>FCBC</p>
		<u>Forward Programme</u>	
	(xxii)	FCBC provided an overview of their forward programme and indicated that marine operations continued to be their main priority.	
5	Next Meeting	The next meeting (No. 19) will be held on 31 st January 2013, 10am, Ferrytoll site office.	
6	Any Other Business	FCBC will be shutting down over the Christmas period from 22 nd December 2012 to 2 nd January 2013 inclusive.	