

Southern Sydney Freight Line Environmental Protection Licence Monthly Report

Rev 0

August 2009



Document Details

Document Status	
Project:	ARTC
	Southern Sydney Freight Line
Document:	EPL 12971 Monthly Report – August 2009

Revision History

The following table records the revision history of this document.

Revision Schedule			
Rev. No	Date	Description	Prepared By
0	August 09	Draft Report	Ajenta Vijayanayagam

Document Review and Approval

The following people reviewed this document:

Reviewer	Position	Date
Fiona Christiansen	SSFL Environmental Manager	
Signature:		

The following person approved this document:

Approver	Position	Date
Ray Miles	Project Director	
Signature:		

Paper copies are not controlled documents

TABLE OF CONTENTS

1. INTRODUCTION	5
2. PURPOSE OF THE REPORT	5
3. SUMMARY OF ACTIVITY IN AUGUST 2009.....	5
4. NOISE AND VIBRATION MONITORING RESULTS	9
4.1 Noise Monitoring.....	9
4.2 Vibration Monitoring.....	12
4.3 Complaint Noise and Vibration Monitoring	12
5. DUST MONITORING RESULTS	13
5.1 Description and evaluation of on site dust monitoring	14
5.2 Dust management measures	14
5.3 Wind Monitoring.....	14
6. RE-USE OF SUITABLE EXCAVATED MATERIAL WITHIN THE PREMISES	14
7. COMMUNITY CONSULTATION AND COMPLAINTS MANAGEMENT	15
7.1 Complaints Summary.....	15
7.2 Community Consultation.....	15

APPENDICES:

APPENDIX A- Noise Monitoring Locations

APPENDIX B– Assessment of noise from Arenco’s construction site 12-14 Wellington Road (August 2009)

APPENDIX C– Assessment of noise from Arenco’s construction site 126 Hector Street (August 2009)

APPENDIX D– Assessment of noise from Arenco’s construction site 195 Wellington Road (August 2009)

APPENDIX E- Assessment of noise from Arenco’s construction site Sefton Dive (August 2009)

APPENDIX F- Noise monitoring report for John Holland Group (August 2009)

APPENDIX G– Heggies Construction Noise Monitoring (August 2009)

APPENDIX H- Air Pollution (Deposited Matter)

APPENDIX I – Ambient Air Quality Monitoring Report (August 2009)

APPENDIX J – Warwick Farm Meteorological Report (August 2009)

APPENDIX K- Villawood Meteorological Report (August 2009)

APPENDIX L- Materials Register

APPENDIX M – ARTC Complaints Summary

1. INTRODUCTION

The Australian Rail Track Corporation (the ARTC) is a Commonwealth Government-owned company responsible for operating the interstate rail freight network that links Australia's major mainland capital cities, including Perth, Brisbane, Adelaide, Melbourne and Sydney.

The ARTC is presently undertaking a program of works to improve the efficiency and cost-effectiveness of rail freight services along the North-South Rail Corridor between Melbourne, Sydney and Brisbane. A major bottleneck in the rail freight network currently exists in southern Sydney, where freight trains share existing rail lines with the Sydney metropolitan passenger services operated by RailCorp. During morning and afternoon peak periods, freight services are not permitted to run due to passenger priority. As a result, freight services cannot arrive or depart Sydney at the optimum times.

To alleviate this bottleneck, the ARTC is constructing the Southern Sydney Freight Line (the SSFL), which will provide a dedicated freight line for a distance of 30 kilometres between Macarthur and Sefton in southern Sydney. The SSFL will provide a third track in the rail corridor specifically for freight services, allowing passenger and freight services to operate independently.

The SSFL will be constructed under a number of discrete contracts which have now been awarded to various contractors. The works that occurred during the period of August 2009 were by Arenco predominantly on the northern end of the project with the majority of the central and southern works carried out by Reed. Gartner Rose has continued its work on a number of stations and service relocations were carried out by O'Donnell Griffin (ODG), John Holland Rail and, to a lesser extent, Lang O'Rourke.

The Weekend 09 RailCorp rail possession was held on the 29th and 31st of August. Contractors Arenco, Gartner Rose, ODG and John Holland Rail all worked during this possession. Arenco used the possession to remove and reinstate the Bankstown line at Sefton Dive and undertook work at the Hector Street underbridge, the Chester Hill Road overbridge and the Llewellyn Avenue Culvert Bridge. Gartner Rose worked on Sefton and Warwick Farm stations. ODG used the possession to relocate services and commissioned a new optic fibre cable route. JHR removed redundant over head wiring and overhead wiring structures and performed rail adjustments at various locations.

2. PURPOSE OF THE REPORT

The purpose of this report is to provide environmental monitoring, compliance and complaints management information to meet the requirements of condition R4 of Environmental Protection Licence No. 12971.

3. SUMMARY OF ACTIVITY IN AUGUST 2009

A breakdown of the on-site activities during August has been provided in Table 1.

Table 1: Summary of Activity in August 2009

Location	Description of Works	Contractor
20.77km to 27.68km	Delineation fencing inside the corridor	Arenco

Location	Description of Works	Contractor
(21.202km to 22.38km)	Bankstown line underbridge deck installation, formwork erection, reinforcement fixing and concreting	Arenco
(20.77km to 27.68km)	<p>Woods Road to Sefton Station Pile wall- drilling pile hole, lowering reinforcement, concrete capping beam construction including formwork, reinforcement fixing and concreting.</p> <p>Sefton Station to Hector Street- clearing and grubbing completed, stripping of top soil completed</p> <p>Hector Street to Chester Hill Road- clearing and grubbing completed, stripping of top soil completed, crib wall footing</p> <p>Chester Hill Road to Woodville Road- excavation works</p> <p>Villawood Station to Prospect Creek- earthworks, rocknail construction, shotcreting work, piling works</p> <p>Prospect Creek to Bareena Street Cabramatta- construction of piles and earthworks</p>	Arenco
Chester Hill Road Overbridge (22.150km to 22.250km)	Permanent pavement resurfacing works completed, line marking completed	Arenco
Miller Road Overbridge (22.830km to 22.930km)	Road works for access to site and earthworks	Arenco
Hector Street Underbridge (21.62km)	Electromagnetic bearing strips were installed on pier and abutments, crash beam installed on the steel headstocks, walkway and hand railing installed, installation of precast girders	Arenco
Bareena Street Overbridge (27,6km to 27.75km)	Piling work- involves drilling pile hole, lowering reinforcement and concreting	Arenco
Llewellyn Culvert (23.80km)	Precast slab installation, crown culvert installation, installed hand railing for kerb walls on both sides of the bridges	Arenco
Leightonfield Culvert (24.14km)	Installed hand railing for the kerb walls on both sides of the bridges	Arenco
Woodville Road Deflection Wall (23.100km to 24.500km)	Remove Leightonfield track works, sleepers, ballast and concrete footings. Complete remaining bored piles- involves drilling of pile hole, lower reinforcement and concreting, excavation works.	Arenco
Prospect Creek Bridge (26.20km)	Erection of pretensioned precast girders	Arenco

Location	Description of Works	Contractor
Liverpool Deck Bridge (35.12km to 35.32km)	Piling works, permanent anchors have been installed, formwork and steel fixing.	Arenco
Generally throughout site	Potholing works to investigate underground services.	Reed
Casula Retaining Walls 35.00km to 37.8km	Continue piling works for retaining wall structures RW 250, RW 280 and RW 290	Reed
Cabramatta Creek Bridge (32.9km to 33.05km)	Installation of precast girders	Reed
Sussex Street Bridge (36.29km)	Piling works, pile caps, columns and headstocks. Installation of precast girders	Reed
Shepherd Street Bridge (36.29km)	Pile caps, columns, headstocks. Installation of precast girders.	Reed
Woodbrook rd Bridges (27.36km to 37.3km)	Installation of precast girders.	Reed
Glenfield Creek Bridges (37.6km to 37.7km)	Pile caps, columns, headstocks.	Reed
Bunbury Curran Bridge (47.100km to 47.30km)	Pile caps, columns and headstocks.	Reed
Minto Viaduct Bridges (48.2km to 48.7km)	Piling works	Reed
Bow Bowing Creek Bridge (56.978km to 57.138km)	Piling works	Reed
Sefton Station (Ch21.10km)	All lift shafts installed on site as per Weekend possession 9. Existing footbridge was successfully replaced, including porch, transfloor slabs and hand rails installed.	Gartner Rose
Leightonfield (23.490km)	Final concrete pour finished.	Gartner Rose
Carramar Station (25.9km to 26.0km)	Culverts and in fill panels installed in Weekend 9 possession.	Gartner Rose
Warwick Farm Station (34.000km)	Up side service has been cleared. Down side excavation has commenced for lift pit and sheet piling in place.	Gartner Rose

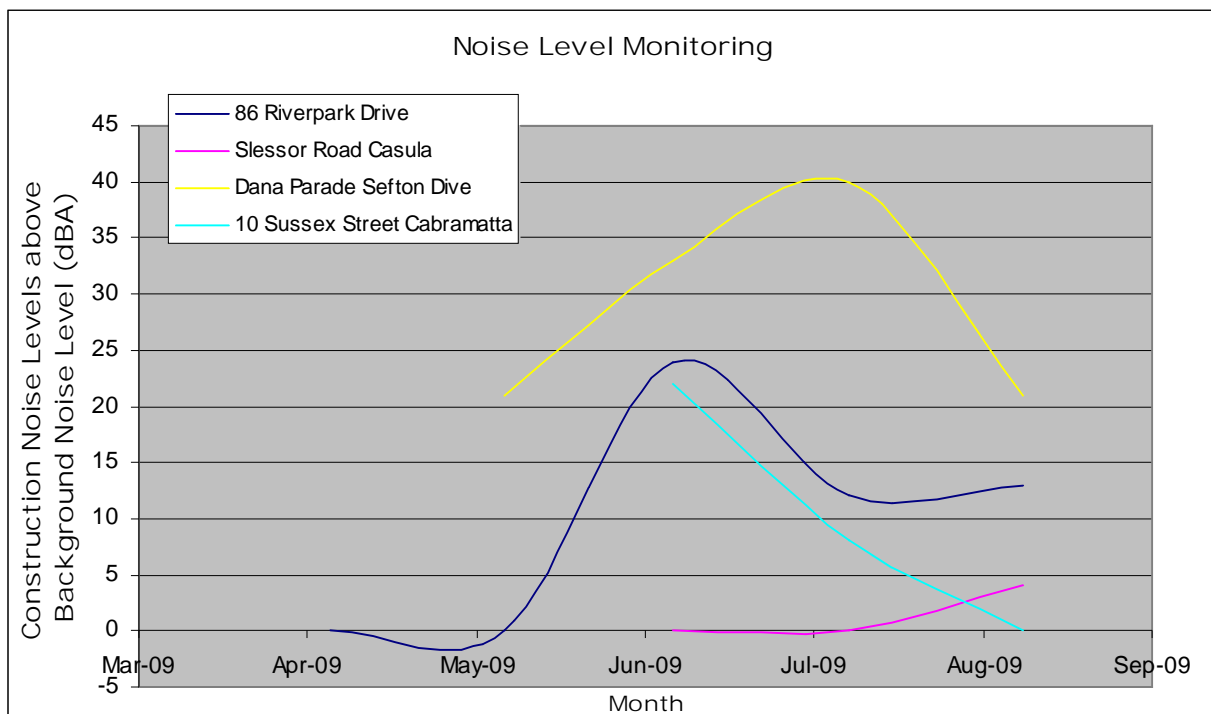
Location	Description of Works	Contractor
Casula Station (38.710 km to 38.835km)	Work on retaining wall on the up and down as well as lift shaft pit.	Gartner Rose
Minto (54.700km to 54.900km)	Work on car park and earthwork drainage.	
Leumeah Station (52.5km to 52.6km)	Work on car park and earthwork drainage.	Gartner Rose
Campbelltown (54.700km to 54.900km)	Stair piling.	Gartner Rose
MacArthur Station (56.00km)	Completion of car park earthworks.	Gartner Rose
(21.4km to 36.8km)	Relocation of cable route	ODG
Bankstown Line, Sefton Station (20.800km to 22.200km)	Disconnect overhead wiring to allow for bridge to be removed and new bridge to be placed and overhead wiring to reattach.	John Holland Rail
Chullora Goods Line, Amy Street- Regents Park (20.209km to 20.509)	Tamping of crossover.	John Holland Rail
Chullora Goods Line, Hope Street- Sefton/Birrong (21.00km to 21.700km)	Prebuild (receive and assembly) of turnout and catchpoints. Installation of turnouts and catchpoints	John Holland Rail
Bankstown Line, Sefton Station (20.800km to 22.200km)	Disconnect overhead wiring to allow for bridge to be removed and redundant and new bridge to be placed and overhead wiring to reattach.	John Holland Rail
Bankstown Line, Sefton Park Junction (Dive) (22.666km)	Move overhead wiring anchor onto up line portal.	John Holland Rail
Liverpool Section Hut (36.360km to 36.550km)	Pouring bond slab, construction of block work building and provisions of alternative service route.	Lang O'Rourke

4. NOISE AND VIBRATION MONITORING RESULTS

Noise and vibration monitoring continued throughout August 2009, undertaken periodically in accordance with Condition M7 of the Environmental Protection Licence.

4.1 NOISE MONITORING

Condition R4.1 (c) of the EPL requires that ARTC provide graphical representations of noise monitoring results obtained over the life the project. Noise monitoring locations vary from month to month. Sufficient data has now been gathered at: 86 Riverpark Drive, Slessor Road Casula, Dana Parade Sefton Dive and 10 Sussex Street Cabramatta for trends to be observed. The results of noise variations at these sites over the last 5 months are displayed graphically below. Appendix A includes a comprehensive list of locations where noise monitoring has been undertaken.



During the month of August noise monitoring was undertaken at fifteen (15) locations along the length of the project. The results of the monitoring are provided in Table 2.

Table 2: Summary of Noise Monitoring – August 2009

Location	Date	Background Noise (Noise Goal) dB(A)	Equipment/Activities	Result dB(A)
10 Sussex Street, Cabramatta	18 August 2009	68	Crane	77
Jacqui Osmond Softball Centre	18 August 2009	55	Truck Tipping	57
86 Riverpark Drive, Liverpool	18 August 2009	63	Excavator Loading Truck	76
13 Slessor Road, Casula	18 August 2009	43	General Construction	47
16 Somerset Street, Minto	18 August 2009	61	Truck Loading	78
15 O'Sullivan Street Leumea	18 August 2009	61	Loading site container	62
12-14 Wellington Road, Chester Hill	28 August 2009	45	Excavator	69
126 Hector Road, Chester Hill	29 August 2009	46	Crane	72
195 Wellington Road, Chester Hill	18 August 2009	43	Piling rig, excavator, sucker truck	68.5
161 Waldron Road, Chester Hill	18 August 2009	45	Piling rig, excavator, diesel generator, loading Double Bay truck.	60
Unit 7 Dana Parade, Regents Park	29 August 2009	44	300 tonne crane, two excavators, trucks and cherry pickers, and a jack hammer and grinding	70
Hope Street, Sefton Dive	29-30 August	61	Tamping and regulating	74
Morris Street, Sefton Dive	29-30 August	61	Tamping and regulating	64

Location	Date	Background Noise (Noise Goal) dB(A)	Equipment/Activities	Result dB(A)
Lewis Street, Sefton Dive	29-30 August	57	Tamping and regulating	55
Nottingham Road, Sefton Dive	29-30 August	65	Tamping and regulating	64
* Measurements carried out at close distance to works and projected to sensitive receptor				

The results for a number of the activities exceeded the background noise level (noise goal) by more than 10 dB(A) and according to the EPA New South Wales Construction Noise Guideline. ARTC's contractors have undertaken all reasonable and feasible mitigation measures to minimise construction noise and have adopted measures outlined in Section 04 of the EPL and in accordance with the recommendations contained within the Construction Noise & Vibration Impact Statements prepared for the SSFL Project.

ARTC will continue to provide additional mitigation measures for 'moderately intrusive noise levels' in accordance with the CEMP. Details of mitigation measures to be applied in each case where the noise level of construction activities exceeded the background noise level (noise goal) by more than 10 dB(A) are listed below in Table 3.

Table 3: Summary of Additional Noise Mitigation Measures – August 2009

Location	Date	Equipment/Activities	Level above Background Noise dB(A)	Mitigation Measures to be applied
86 Riverpark Drive	18 August 2009	Excavator loading truck	13	Investigations into respite periods will be undertaken for work of a similar nature. Work will be undertaken during approved hours and if necessary monitoring will take place.
16 Somerset Street, Minto	18 August 2009	Truck loading	17	Investigations into respite periods will be undertaken for work of a similar nature. Work will be undertaken during approved hours and if necessary monitoring will take place.
12-14 Wellington Road, Chester Hill	28 August 2009	Excavator	24	The Contractor advises that future noisy work in this area will take place during normal construction hours rather than during a RailCorp track possession i.e construction work will be more appropriately timed. Monitoring will be in place if necessary and respite periods will be factored into construction hours.

126 Hector Road, Chester Hill	29 August 2009	Crane activity	26	This activity was required for bridge overpass construction. It is now complete and will not need to be undertaken again.
195 Wellington Road, Chester Hill	18 August 2009	Piling rig, excavator, sucker truck	25.5	Where possible the Contractor will aim to stage activities separate to one another. Monitoring will be in place if necessary.
161 Waldron Road, Chester Hill	18 August 2009	Piling rig, excavator, diesel generator, loading Double Bay truck	15	Noise levels at this location oscillated. Noise exceedance occurred intermittently. In future the Contractor will limit multiple equipment operating at the same time and will stage construction such that activities are not undertaken so close to one another.
Unit 7 Dana Parade, Regents Park	29 August 2009	300 tonne crane, two excavators, trucks and cherry pickers and a jack hammer and grinding	26	This work was required for the weekend track possession and is now complete. It is unlikely that noise exceedance of this level will occur at this location again. Monitoring will be in place if necessary.
Hope Street, Sefton Dive	29-30 August 2009	Tamping and regulating	13	Noise exceedance created by the tamping machine occurred intermittently. Respite periods are factored into construction.

It is noted that there were two (2) complaints regarding construction noise received from residents in this area during August 2009.

For full details of the noise monitoring undertaken in August 2009, please refer to Appendices B, C, D, E, F and G.

4.2 VIBRATION MONITORING

Vibration monitoring was undertaken in accordance with condition M7 during August 2009. The results of the monitoring undertaken are provided in Table 4. For details of the vibration monitoring that was undertaken in August 2009, please refer to Appendix G.

Table 4: Summary of Vibration Monitoring- August 2009

Location	Date	Equipment/Activities	Result
10 Sussex Street Cabramatta	18 August 2009	Vibration during construction work	Well below acceptable Vibration Dose Value for intermittent vibration at residences from the DECC Assessing Vibration: a technical guide. AND Lower than the structural damage vibration levels for residential dwelling from the German Standard: Structural vibration –Part 3: Effects of vibration on structures (DIN 4150-3)

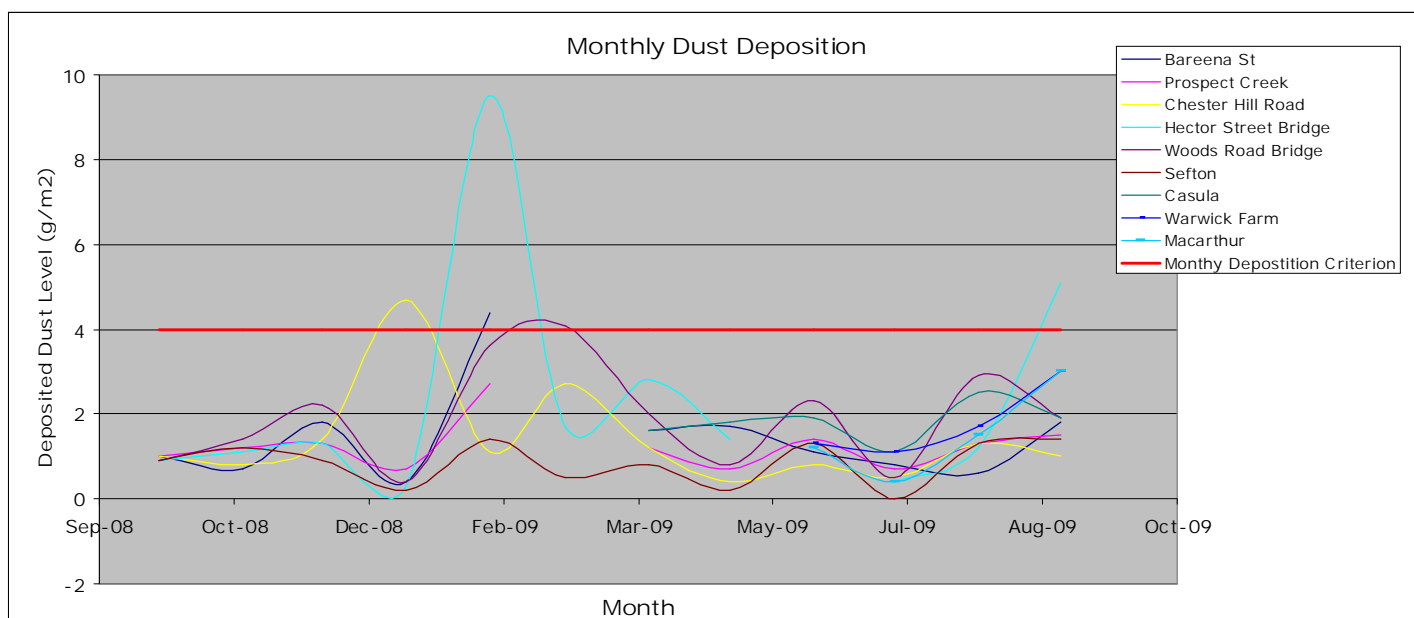
4.3 COMPLAINT NOISE AND VIBRATION MONITORING

There were two (2) complaints during August 2009 in relation to vibration. For details of complaints received in August 2009, please refer to **Section 7**.

5. DUST MONITORING RESULTS

Dust monitoring was carried out during August 2009 in accordance with Condition M8 of the EPL. The results of this analysis can be found in Appendix H and I. In accordance with requirements set out under R4.1(c) of the license, ARTC has prepared a graphical representation of monthly dust deposition results measured at the following project sites:

- Bareena Street
- Prospect Creek Bridge
- Chester Hill Road Bridge
- Hector Street Bridge
- Woods Road Bridge
- Sefton
- Sefton
- Casula Station
- Warwick Farm Station
- Macarthur Station



The results show that the level of deposited dust along the length of the SSFL Project, during the month of August was below the maximum total deposited dust level of $4\text{g/m}^2/\text{month}$, stipulated in the DECC's Approved Methods for Modelling and Assessment of Air Pollutants in NSW (2005), at all locations except at the Hector Street Bridge where the dust level was $5.1\text{g/m}^2/\text{month}$.

ARTC notes that dust deposition monitoring includes pollution not only from construction sites, but also pollution from all other far and nearby sources (eg other industrial activities, domestic activities and public road traffic). In February 2009, dust levels at a smash repair shop close to dust deposit gauges were considered partially the cause of an elevated dust deposition at Woods Road Bridge.

The elevated reading of $5.1\text{g/m}^2/\text{month}$ at the Hector St site was probably caused by a high level of mechanised activity within the rail corridor in the vicinity of the Hector Street Bridge. Arecco has indicated that there was clearing and grubbing activity at this location as well as stripping of top soil. In this instance, the dust monitor was

positioned below road level and most likely captured dust emitted both from excavation work and substantial truck movements taking excavated material from the site.

In response to the elevated reading Arenco has issued work place inspection report on how to comply with the 4g/m²/month requirement in this area in future. In addition to dust mitigation measures already in place, Arenco is also purchasing 'Terrastop 204', a spun polymer weave to be stretched along 60m of the corridor as an alternative road base. It is anticipated this additional control will minimise dust generated by truck movements.

5.1 DESCRIPTION AND EVALUATION OF ON SITE DUST MONITORING

There were two (2) complaints relating to dust during this reporting period. For full details of complaints received in August, please refer to **Section 7**.

5.2 DUST MANAGEMENT MEASURES

A set of comprehensive controls were employed to minimise dust from on site activities. The range of controls is detailed in the Dust Management Sub Plan (ARTC CEMP).

Controls utilised during the reporting period included:

- Using water carts to control dust emissions during works and keeping exposed excavation surfaces dampened to control dust generation;
- Ensuring vehicle speeds within the worksite areas are kept to a minimum;
- Preventing and where necessary cleaning any dirt tracked onto public roadways from construction vehicles;
- Covering spoil loads and securing tailgates prior to trucks leaving the worksite;
- Being prepared to cease/ modify work practices if excessive dust generation from construction activities occurs (e.g. from high winds, surface dirt accumulation etc), until dust emissions can be controlled. This action was not required during the month; and
- Conducting regular visual inspections of worksites to assess effectiveness of dust control measures.

5.3 WIND MONITORING

Weather stations are in place at two (2) locations along the length of the project, one at Llewellyn Avenue, Villawood and the other at Manning Street, Warwick Farm. These weather stations monitor wind conditions, directional and velocity as well as temperature and humidity.

At the Llewellyn Avenue Site, the average wind speed for the period of August 2009 was 3.461 km/h, with the maximum wind gust recorded at 28.6 km/h on 30 August 2009.

At the Manning Street Site, the average wind speed for the period of August 2009 was 3.484 km/h, with the maximum wind gust recorded at 31.7m/h on 8 August 2009.

The Meteorological Monitoring Results, including wind roses, for August 2009 are included in Appendix J and K.

6. RE-USE OF SUITABLE EXCAVATED MATERIAL WITHIN THE PREMISES

Arenco have recorded the removal and placement of all excavated material in accordance with condition R8 of the Environmental Protection License. This information is provided in Appendix L.

7. COMMUNITY CONSULTATION AND COMPLAINTS MANAGEMENT

7.1 COMPLAINTS SUMMARY

There were fourteen (14) community complaints received by ARTC in association with SSFL project work during the month of August. Of these, two (2) were noise related and eight (8) were non-environmental. Graphical representations of the complaints received during August 2009 and the preceding months are provided in Appendix M.

7.2 COMMUNITY CONSULTATION

The following Community Liaison Group meetings have been held during August.

- Bankstown CLG 5th August 2009
- Fairfield CLG 27th August 2009
- Liverpool/Campbelltown CLG 13th August 2009

Agenda and meeting notes are available on the project website www.ssfl.artc.com.au.