

Acoustic Assessment

for

32 Proposed Residential Townhouses

at

Lot 211 DP 1044292 and Lot 1 DP 262300 Moonee Beach Coffs Harbour

Date: March 2009

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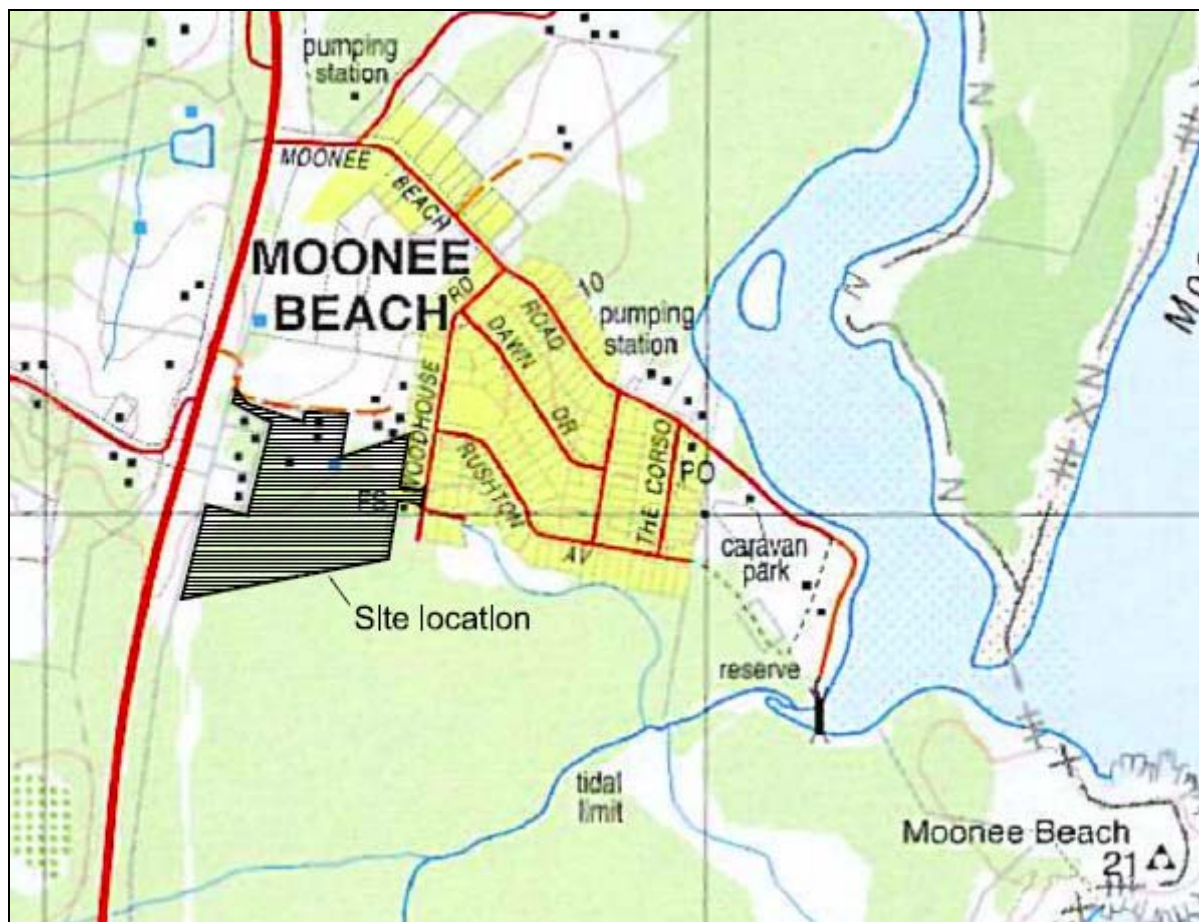
1 Introduction

Black EARTH Environmental has been requested by *Geoff Smyth Consulting* to prepare an acoustic assessment in relation to a proposed development on land described in real property terms as Lot 211 DP 1044292 and Lot 1 DP 262300, Moonee Beach, Coffs Harbour. In accordance with instructions provided by Coffs Harbour Council, this report has been prepared to assess the potential impact the Pacific Highway may impose on the site development. This report has therefore been prepared in accordance with the *Environmental Criteria for Road Traffic Noise* (NSW EPA, 1999) by principal Environmental Engineer *Cameron Black*. It is anticipated that the results of this assessment will inform the design and development process and assist Council in their assessment of the proposed development.

1.1 The Site

The site is located between the Pacific Highway and the developed residential village of Moonee Beach, south of the village centre. A site locality diagram is provided in **Exhibit 1.1**.

Exhibit 1.1 Site Locality



Source: Google Maps, 2009

The site has a total area of 5.749 hectares of which 2.1 hectares is zoned for residential use. Part of the subject property is leased to an animal boarding establishment which exists on the northern, level section of the land. The animal boarding facility will be removed as part of the proposed development. The central section of the site, the location of the proposed residential lots, is generally cleared with grassland and some remnant trees. The lower part of the site, contains a small watercourse and is well vegetated.

Whilst the subject property adjoins the Pacific Highway boundary in two separate locations, the closest proposed dwelling boundary will be located some 110m east of the Pacific Highway.

The site topography varies and, generally speaking, can be described as straddling a small ridge running roughly east west. The site falls to the south with moderate slopes draining into Sugar Mill Creek and to the north with mild slopes draining behind the Moonee Creek Shopping complex. The northern section of the land is sited on top of the ridge line and is relatively level. There are areas of slope over 20% in the centre of the site. The southerly slopes are the location of the proposed Stage 1 residential subdivision. Elevation ranges from 20m (AHD) in the north to 4m (AHD) in the south of the land.

The greater part of the proposed residential area is open grassland with scattered trees and lantana (James Warren and Associates, 2008). The fauna study recorded no reptiles or amphibians. However, it was concluded that the site presents a moderate quality habitat for reptiles. Twenty bird species were recorded, none of these threatened species. Eastern grey kangaroo and dogs were seen on the site (James Warren and Associates, 2008). Much of the site has been identified as secondary koala habitat by Coffs Harbour City Council. No sign of koala activity was evident during the survey (James Warren and Associates, 2008).

1.2 The Proposal

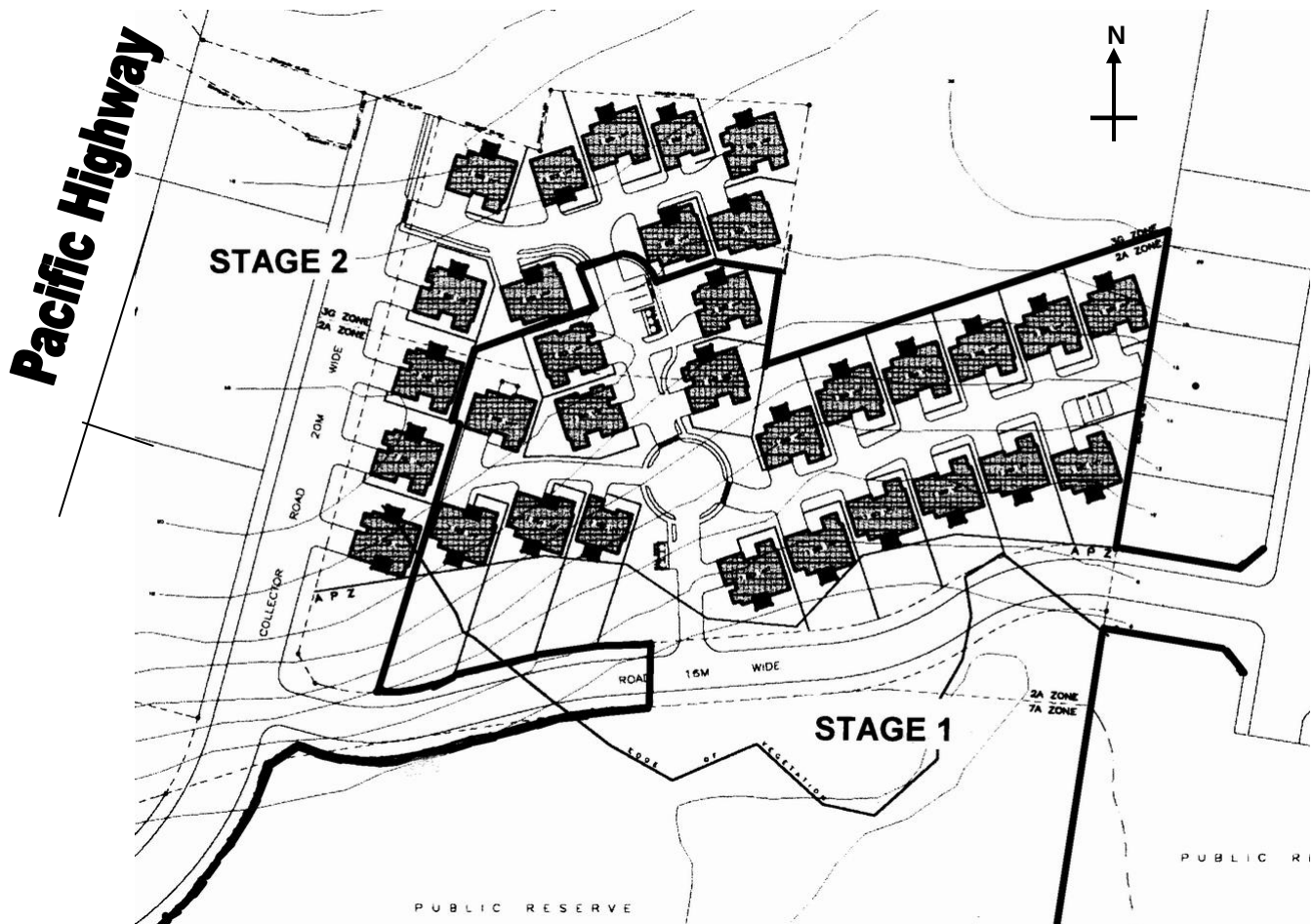
It is proposed to construct a total of 32 residential dwellings at the subject site. Development will occur in two distinct stages.

Stage 1 provides 20 residential lots with dwellings and a public reserve. The residue will be controlled by the community association. Access will be provided by way of a short street from Woodhouse Road to the east of the site. The closest proposed dwelling to the Pacific Highway in stage 1 will be approximately 150m to the east.

Stage 2 will provide a further 12 residential lots and dwellings part of a future proposed collector road for access. The second stage of development will occur closer to the Pacific Highway with the closest dwelling approximately 110m to the east. A plan of the proposed development is shown below in **Exhibit 1.2**.

It has been proposed that all dwellings will be constructed of coated brick veneer with roof and wall insulation. Stage two dwellings will be provided with concrete floor while stage 1 dwellings have a suspended timber floor. The majority of dwellings will be 3 bedrooms and all dwellings will be well insulated. Orientation of the buildings provides maximum solar access and provide garages and utility areas on the highway side where possible to minimise any noise transmission from the adjacent Pacific Highway.

Exhibit 1.2 Proposed Subdivision Layouts and Staged Development Plan



Source: Geoff Smyth Consulting (July 2008)

1.3 Purpose

The purpose of this acoustic assessment is to:

- establish current background noise levels at the site
- examine the impact of existing highway noise on the proposed development in accordance with the NSW EPA Environmental Criteria for Road Traffic Noise (1999)
- examine the impact of proposed highway upgrades within the vicinity on the proposed development in accordance with the NSW EPA Environmental Criteria for Road Traffic Noise (1999)
- provide recommendations to be incorporated into the proposed development that will ensure the criteria for appropriate noise amenity is achieved under existing and future road conditions.

2 Instrumentation

2.1 Equipment

A Rion NL-21 Type 2 data logging sound level meter was used to obtain sound pressure level readings at 15 minute intervals during the 15 hour day period and 9 hour night period. The Rion NL-21 holds a current NATA certification and was factory calibrated prior to use. The logger was set up at a single location (OB2) on the site considered to represent the most adverse noise conditions for the proposed site development. The Rion NL-21 Type 2 data logger was programmed to record A-weighted statistical noise levels, including the equivalent continuous (L_{eq}) noise level, over 15-minute intervals.

The Rion NL-21 Type 2 meter was also used to obtain instantaneous sound pressure levels and equivalent noise levels over four 15 minute periods at the road side location (OB4), at the existing Pettina Park pet care centre currently located on part of the site (OB3) and at the southern end of Woodhouse road (OB1). All monitoring locations are shown in **Exhibit 2.1**.

Calibration of the noise monitoring equipment was undertaken prior to use. To ensure no significant tonal drift occurred over the monitoring period, the calibration was checked before and after each measurement period. No significant drift between the calibration tones before and after each measurement was reported for either machine.

2.2 Monitoring Methodology

To ensure the most accurate representation of noise pressure levels across the site was obtained, both long term and short term monitoring was undertaken over a one week period from Friday 21st November to Wednesday 3rd December 2008. All noise levels were measured in accordance with the NSW Environment Protection Authority's (EPA) guidelines and NSW Government's *Environmental Criteria for Road Traffic Noise* (1999). Two photographs of the noise logger in the long term monitoring location OB2 are provided below.

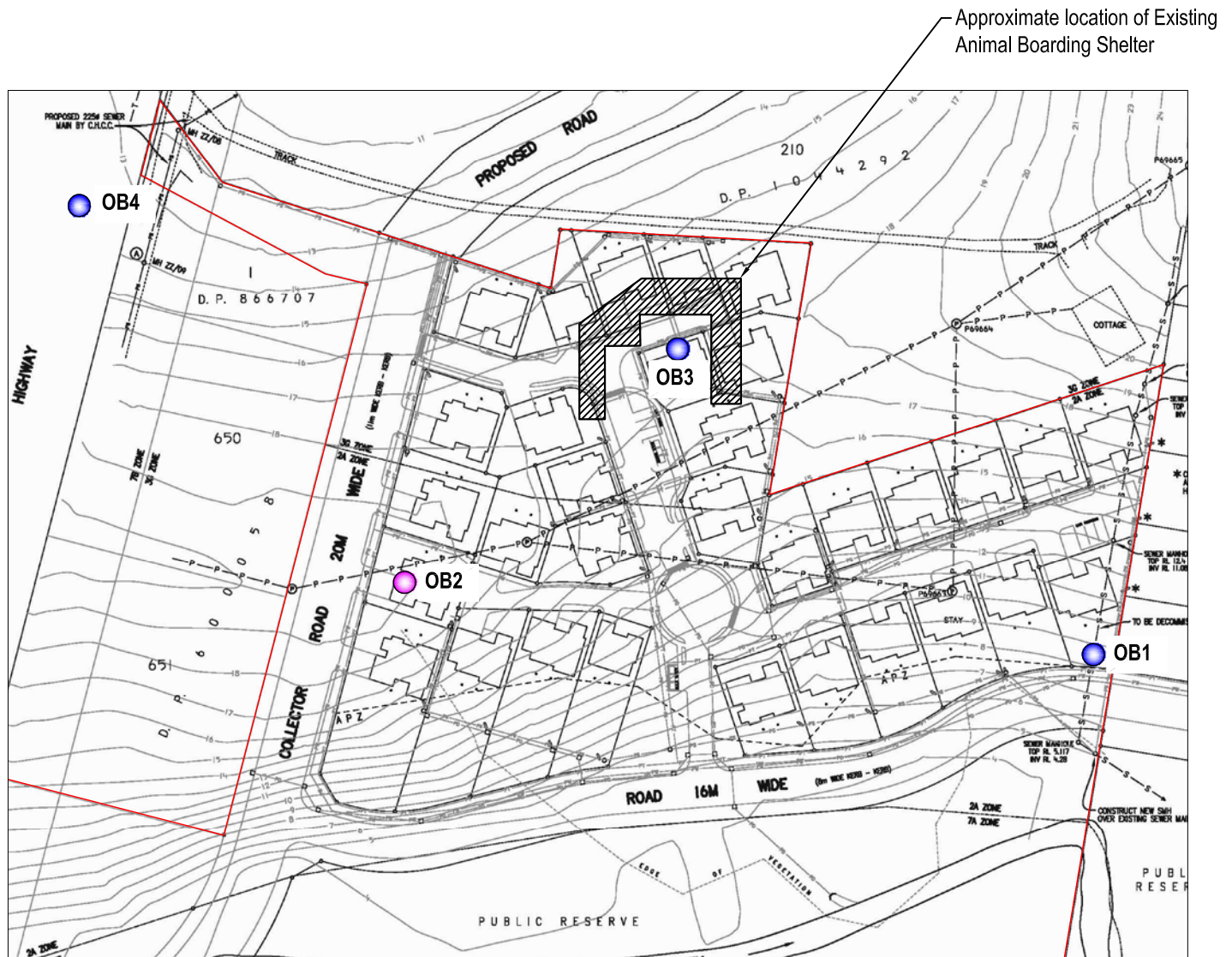


Looking west. Microphone in foreground. Dwelling seen in background is located on Lot 651 DP 600058



Looking east. Subject site, stage 1 development area seen in background.

Photo Plate A Long term noise logger in place on site at location OB2.



Key:

- Site boundary
- Attended short term noise survey locations
- Long term noise monitoring location



0 40m

Source: Geoff Smyth Consulting
 Date: November 2008
 Ref: BEE0055.dwg

3 Noise Assessment

3.1 Assessment Methodology

To ensure the most accurate assessment of acoustical properties within the subject area were made, existing ambient and background noise levels were recorded using both long term and short term monitoring methodologies. The background or ambient noise level can be defined as 'the underlying level of ambient noise when all unusual extraneous noise is removed'. It is noted that ambient noise levels at the site include noise generated by the adjacent animal boarding facility. It is understood however that the animal boarding facility will be decommissioned to allow for the development of the subject site, the noise output from the facility was therefore considered and eliminated from the background or ambient noise readings obtained.

Long term noise monitoring records were also adjusted to account for free field measurement in accordance with the ECRTN methodology through the addition of a 2.5 dBA façade correction.

Existing data on canine noise output, attended noise survey, short term noise survey and discussions with the animal shelter operators were used to determine the effect the animal shelter had on the recorded noise results.

Adjusted noise levels were then compared with the nominated criteria from Environmental Criteria for Road Traffic Noise (NSW EPA, 1999) for new residential development adjacent existing arterial roads or freeways. Proposed future highway upgrades were considered and results of noise monitoring and noise modelling undertaken for the Highway upgrades were also considered. Where it was evident that exceedance of criterion were likely, mitigation measures were assessed and recommendation have been provided.

3.2 Meteorological Conditions During Monitoring

Atmospheric conditions during the monitoring period were variable. Significant rainfall was experienced between the 21st and 26th November and as such all data from that period was excluded. Monitoring was extended into a second week due to the adverse weather conditions experienced between the 21st and 26th November 2008. Meteorological conditions during the second week of monitoring between the 26th November 2008 and the 3rd December 2008 were more favourable with some minor rain periods during the night period on the 26th and the 28th November. Observed onsite weather conditions were recorded and correlated with the recordings from the closest Bureau of Meteorology weather station. Observed weather conditions experienced at the site are summarised below in **Table 3.1**.

Table 3.1 Observed Meteorological Conditions during Long Term Monitoring

Date	Time	Wind Speed at Microphone	Wind Direction at Microphone	Temperature °C	Cloud Cover %
21.11.2008	8:30am	calm	None	20	25
21.11.2008	1:00pm	2 km/hr	East	26	15
26.11.2008	9:00am	2-4 km/hr	South West	20	70
03.12.2008	6:00am	calm	None	22	5
03.12.2008	1:30pm	2-4 km/hr	North East	28	5

Temperature inversions were not observed or were likely to occur during the noise monitoring period. The dominate weather patterns during the second week of monitoring were fine sunny days with the development of a North-Easterly sea breeze during the day time hours. Wind speeds at the microphone were noted to be in the upper range of 4-5 km/hr during the afternoon period on the 3rd December. The presence of slight wind speeds at microphone level was not considered to impact significantly on the recorded noise levels.

The closest available Bureau of Meteorology weather station is located at Coffs Harbour. Records have been compiled as it represents the closest likely meteorological conditions with that of the subject site. Wind roses from Coffs Harbour indicate that:

- o 9am predominate wind is from the SW direction 30% of the time at speeds typically between 10 and 20 km/hr.
- o 3pm predominate winds are from the NE direction 28% of the time at speeds typically between 20 and 30 km/hr

Rainfall and wind direction data indicate that a south easterly arrived at the subject site on Friday evening (21/11/08) with heavy falls of rain extending through to the following Wednesday (26/11/08). Accordingly data from that period was considered unviable and monitoring was extended through to Wednesday (3/12/2008). As previously noted north easterly breezes and clear skies dominated the final week of monitoring providing good conditions for the collection of credible noise data.

3.3 Proposed Highway Upgrades

Planning is currently underway for the proposed upgrade of the Sapphire Beach to Woolgoolga section of the Pacific Highway. The planed upgrades will impact on the proposed development. It is understood that construction of the highway upgrade is planned to begin in 2010 subject to funding approval (*pers. Comm. Chris Clark, NSW RTA 2008*).

The proposed highway upgrade will provide a dual carriageway freeway. The road surface will be constructed of stone mastic asphalt (a low noise pavement) as an overall noise control measure. An interchange planned for the Moonee Beach Road intersection will be provided as shown in **Exhibit 3.1**. Exhibit 3.1 also provides an indication of the planned future highway upgrade adjacent to the subject site.

The proposed highway upgrades and the provision of an interchange at Moonee Rd will allow for the modification of speed limits along the section of highway adjacent the proposed development. Currently traffic limits enforce a reduction of 100km/hr to 80km/hr either side of the Moonee Rd intersection. The noise created by trucks braking is distinct and easily distinguished while on the site contributing significantly to the overall noise environment. The upgrade of the highway to allow for a constant 100km/hr speed limit past the site, the use of low noise stone mastic asphalt and the construction of an interchange at Moonee Rd is likely to reduce current noise levels at the subject site in the order of 2-3dBA (*Wilkinson and Murray, 2007*).

The Noise and Vibration Impact Assessment report for the Sapphire to Woolgoolga section of the Pacific Highway Upgrade also indicated that the dwelling located immediately adjacent to the subject site closer to the highway on Lot 1 DP 866707 will require architectural treatments to mitigate against noise as it is expected to be exposed to noise conditions in excess of 60 dBA (ECRTN day time criteria for highway re-development).

3.4 Road Noise Assessment Criteria

The Environmental Criteria for Road Traffic Noise (NSW EPA 1999) provides a framework that guides the consideration and management of traffic noise issues associated with new building developments near existing roads. The framework embodies a non-mandatory performance-based approach. The criteria are applied as targets, but recognize that there will be situations where planning strategies are not feasible in order to comply with the nominated criteria.

The Environmental Criteria for Road Traffic Noise (NSW EPA 1999) provides a number of criteria for assessment of noise amenity for existing and future residence near existing or proposed roads. The noise criteria are dependant on the road type and the receiver type and are split into a day and night period from 7am to 10pm and 10pm to 7am respectively. The values presented as criteria levels are intended to preserve amenity appropriate to the land use.

The Environmental Criteria for Road Traffic Noise (NSW EPA 1999) provides criteria for a range of land uses including metropolitan, rural, residential and sensitive land use. The proposed development is classified as 'residential' and the Pacific Highway as a freeway/arterial road in accordance with the criteria (NSW EPA 1999).

It should be noted that alternative criteria are also provided for the re-development of an existing freeway/arterial road which provides an additional 5 dBA allowance over the criteria adopted for the proposed development.

3.4.1 New residential development adjacent existing freeway criteria

The noise criteria set out in the Environmental Criteria for Road Traffic Noise (NSW EPA 1999) for 'new residential land use developments affected by freeway/arterial road traffic noise', as applicable to the subject development, is presented below in **Table 3.2**.

Table 3.2 Noise Criteria

	Day (7am – 10pm)	Night (10pm – 7am)
'New residential land use developments affected by freeway/arterial traffic noise'	$L_{Aeq(15hr)}$ 55	$L_{Aeq(9hr)}$ 50

3.4.2 Sensitive land use development and recreational area criteria

The *Environmental Criteria for Road Traffic Noise* (i.e. ECRTN (1999)) outlines criteria to limit the internal noise environment within sensitive land use buildings such as school classrooms, hospital wards and places of worship to less than L_{Aeq1hr} 40 dBA.

Active recreational areas such as a golf course, etc should have a $L_{Aeq(15hr)}$ limit of less than 60 dBA while passive recreational areas such as school playgrounds and parks should have a $L_{Aeq(15hr)}$ limit of less than 55 dBA.

As there are no significant areas for passive or active recreation and sensitive land use buildings proposed within the development, the application of these criteria will not apply.

3.4.3 Sleep disturbance

The ECRTN (1999) recommends that an assessment of sleep disturbance be undertaken where impacts may occur during the night. Whilst there is no specific criteria for sleep disturbance, ECRTN (1999) recommends that any assessment include a consideration of

the maximum noise level exceedances occurring during the night-time period and the emergence of these exceedances above the ambient noise level. Where maximum noise levels exceed the ambient noise environment by 15 dBA or greater there is possibility of sleep disturbance. It is recommended that the number of exceedances and the time of occurrence should also be considered.

A maximum noise event can be deemed to occur where the emergence of L_{Amax} noise levels over the ambient L_{Aeq} noise level is greater than 15 dBA. This relationship can be simply described below:-

A "maximum noise event" can be defined as any pass for which:

$$L_{Amax} - L_{Aeq, 1hr} \geq 15dBA$$



0 40m

Source: NSW RTA

Date: May 2008

Ref: BEE0055.dwg

Subject site

4 Monitoring Results

4.1 Short Term Noise Surveys

Short term noise surveys were undertaken at three separate locations:

- OB1: Behind no. 34 Woodhouse Rd
- OB3: Within the existing animal boarding facility
- OB4: Approximately 10m from pavement edge of Pacific Highway.

Noise surveys were conducted over a 15 minute period, with the exception of OB4 where four 15minute readings were taken.

Results from the short term noise surveys are presented in **Table 4.1** below.

Table 4.1 Results from the Short Term Noise Meter

Site	Date	Time	$L_{Aeq(15min)}$	L_{Amax}	L_{A10}	L_{A90}	Observations
OB1 Woodhouse Rd	21 st Nov.	7:30am	52.2	78.1	52.1	45.2	Noise environment generally quite dominated by cicada, insect and bird noise. Distant Rd noise heard.
OB3 kennels	28 th Nov.	11:00am	62.6	86.5	61.2	46.3	Reading was taken at centre of facility. Readings are not truly representative given that canine barking was suppressed by operators during observation period.
OB4 Road side 10m from pavement	3rd Dec.	1pm to 2pm	64.3	91.4	65	56.7	Traffic composition ~10% heavy, 90% cars

Other noise observations made whilst onsite:

- Dog barking increases instantaneous Sound Pressure Levels (SPL) by ~ 2 dBA at OB2,
- Passing trucks increase instantaneous SPL by ~ 4 dBA at OB2,
- Attended noise measurement indicate the general noise environment without the observed influence of road traffic or canine barking noise produces an instantaneous SPL of approximately 50 dBA at OB2,
- Dog barking and truck passing produces SPL ~ 55 dBA at OB2,
- South bound trucks use compression braking to slow down from the 100km/hr zone into the 80 km/hr zone at Moonee intersection resulting in a rise in SPL of ~5 dBA,
- Whip Bird calls produce a maximum SPL of 70 dBA,
- Cicada calls dominating noise environment at OB2 at 1pm on the 3rd December producing a consistent SPL of approximately 60 dBA

- Discussion with the animal shelter operators indicate that canine noise is most prevalent during morning hours between 6am and 8am, 10am and 11am during bathing times and in the evenings between 4 and 5 pm.

From the attended noise surveys the following conclusions have been drawn:

1. Using a noise output of 62.6 dBA and a distance of 50 meters, the impact of the animal boarding facility at the monitoring location OB2 would be minimal. However, given that dog barking was suppressed during monitoring at OB3 and distinct increases in the noise environment at OB2 were observed resulting from dog barking, the natural noise environment is likely to be increased by ~2 dBA_{15 minute} at monitoring location OB2 due to dog barking.
2. The expected impact of traffic noise will be in the order of L_{Aeq15 minute} of 52.5 dBA with a maximum of 79 dBA for Stage 1 development
3. The expected impact of traffic noise will be in the order of L_{Aeq15 minute} of 54 dBA with a maximum of 81 dBA for Stage 2 development
4. Maximum noise levels recorded at OB2 range from 54.7 to 89.3 dBA over the 7 day period. Given that maximum traffic noise impact on the site would be limited to sound power levels of 81 dBA or less, noise levels above 81 dBA are unlikely to be due to traffic impact. Given that OB2 is some 100 metres east of the Pacific Highway and the nature of vegetation in the locale, combined with the elevated maximum levels consistently occurring around 7am and around 11am it is highly likely that the elevated SPL is attributable to canine barking, frog noise or a crescendo of cicadas calls.

4.2 Long-term Monitoring Results

Noise levels were recorded over a 7 day period at the location OB2 as seen in **Exhibit 2.1**. Raw data results were corrected in accordance with ECRTN (1999) adjusted to account for the animal boarding facility and were divided into day and night periods. Copies of the raw data are provided in *Appendix A*.

4.2.1 Comparison to ECRTN Criteria

In accordance with the ECRTN (1999) for open field measurement by adding 2.5 dBA to the raw L_{Aeq} result the L_{Aeq(15hr)} and the L_{Aeq(9hr)} levels were estimated for each individual day and night period and compared with the criteria as specified in Table 3.2 for 'new residential developments affected by freeway/arterial road traffic noise'. Long term L_{Aeq(period)} monitoring results are summarised in **Table 4.2** below.

Table 4.2 Results of Long Term Noise Logger Location OB2

Period	Day and Date	Measured L _{Aeq(period)}	Noise Criteria for 'new residential land use developments affected by freeway/arterial road traffic noise'
Day (7am to 10 pm)			
	Wednesday 26 th Nov.	57.9 dBA	55 dBA
	Thursday 27 th Nov.	57.7 dBA	
	Friday 28 th Nov.	58.0 dBA	
	Saturday 29 th Nov.	55.2 dBA	
	Sunday 30 th Nov.	55.9 dBA	
	Monday 1 st Dec.	56.9 dBA	
	Tuesday 2 nd Dec.	57.7 dBA	
MEDIAN		57.7 dBA	

Period	Day and Date	Measured $L_{Aeq(1hr)}$	Noise Criteria for 'new residential land use developments affected by freeway/arterial road traffic noise'
Night (10pm to 7am)			
	Wednesday 26 th Nov.	54.4 dBA	50 dBA
	Thursday 27 th Nov.	54.1 dBA	
	Friday 28 th Nov.	55.2 dBA	
	Saturday 29 th Nov.	53.8 dBA	
	Sunday 30 th Nov.	55.4 dBA	
	Monday 1 st Dec.	56.2 dBA	
	Tuesday 2 nd Dec.	55.3 dBA	
MEDIAN		55.2 dBA	

It can be seen from Table 4.1 above that day time $L_{Aeq(15hr)}$ levels range between 55.2 and 58 dBA with the median value of 57.7 dBA which is above the nominated criteria of 55 dBA. Night time $L_{Aeq(9hr)}$ levels range between 53.8 and 56.2 dBA with a median of 55.2 dBA which exceeds the ECRTN criteria of 50 dBA by 5.2 dBA. The night time recordings have been noted however to be affected by erroneous noises other than highway traffic. Short term monitoring indicates that highway traffic noise is likely to decrease to a $L_{Aeq15min}$ in the order of 54 dBA.

4.2.2 Potential for Sleep Disturbance

Whilst there are no specific criteria relating to sleep disturbance in the ECRTN (1999), the document recommends that an assessment of such levels be undertaken where impacts may occur during the night. It is therefore recommended that the assessment of sleep disturbance should include a consideration of the maximum noise level exceedances occurring during the night-time period and the emergence of these exceedances above the ambient noise level.

Guidance on this assessment is provided which suggest that a maximum noise event can be deemed to occur where the emergence of L_{Amax} noise levels over the ambient L_{Aeq} noise level is greater than 15 dBA. This relationship can be simply described below:-

$$L_{Amax} - L_{Aeq, 1hr} \geq 15dBA$$

$L_{Aeq, 1hr}$ measurements for the night period have therefore been calculated from the raw data. The comparison of the $L_{Aeq, 1hr}$ levels, $L_{Aeq, 1hr} + 15$ dB levels, and L_{Amax} levels indicates that:

- median night time $L_{Aeq, 1hr}$ noise environment at OB2 is 54.2 dBA;
- the median $L_{Aeq, 1hr}$ noise environment + 15 dBA at OB2 is 69.2 dBA;
- the maximum noise level recorded was 88 dBA occurring just before 7am on Friday morning during attended noise survey and is likely due to operator noise and will be discounted;
- the second maximum noise level recorded was 84 dBA occurring at 6am on Friday morning which was during attended noise survey and will be discarded;
- the third highest noise maximum recorded at OB2 was 74 dBA occurring on Friday, Sunday, Monday and Tuesday nights all between the hours of 2am and 3am. The overall noise environment within these hours was found to 3 dBA higher than the overall median indicating a continual noise environment consistent with insect or

amphibian activity. The regular occurrence further indicates the impact of insect or amphibian noise.

Given these attributes, ie. time of occurrence and consistency, an environmental noise source such as amphibians (i.e frogs) or insects (i.e. cicadas) are likely attributed to the increase noise environment and maximum noise levels.

It has been noted that the maximum noise output from the highway would likely decay sufficiently such it would be unlikely to result in maximum noise levels at the proposed stage two dwelling façade more than 80 dBA. Experience with residential construction, demonstrates that typical sound transmission loss characteristics for the proposed masonry insulated construction with standard 4mm windows is ~30 dBA.

Hence, the potential for sleep disturbance to occur, based on the available information, is not considered sufficient to warrant additional mitigation measures other than those already proposed.

5 Discussion

It is evident that development of the subject site needs to consider the impact of road traffic noise in accordance with the ECRTN (1999). As the development will be staged, discussion of impacts has been broken into two sections representing the two stages of development.

5.1 Stage 1 Noise Impacts

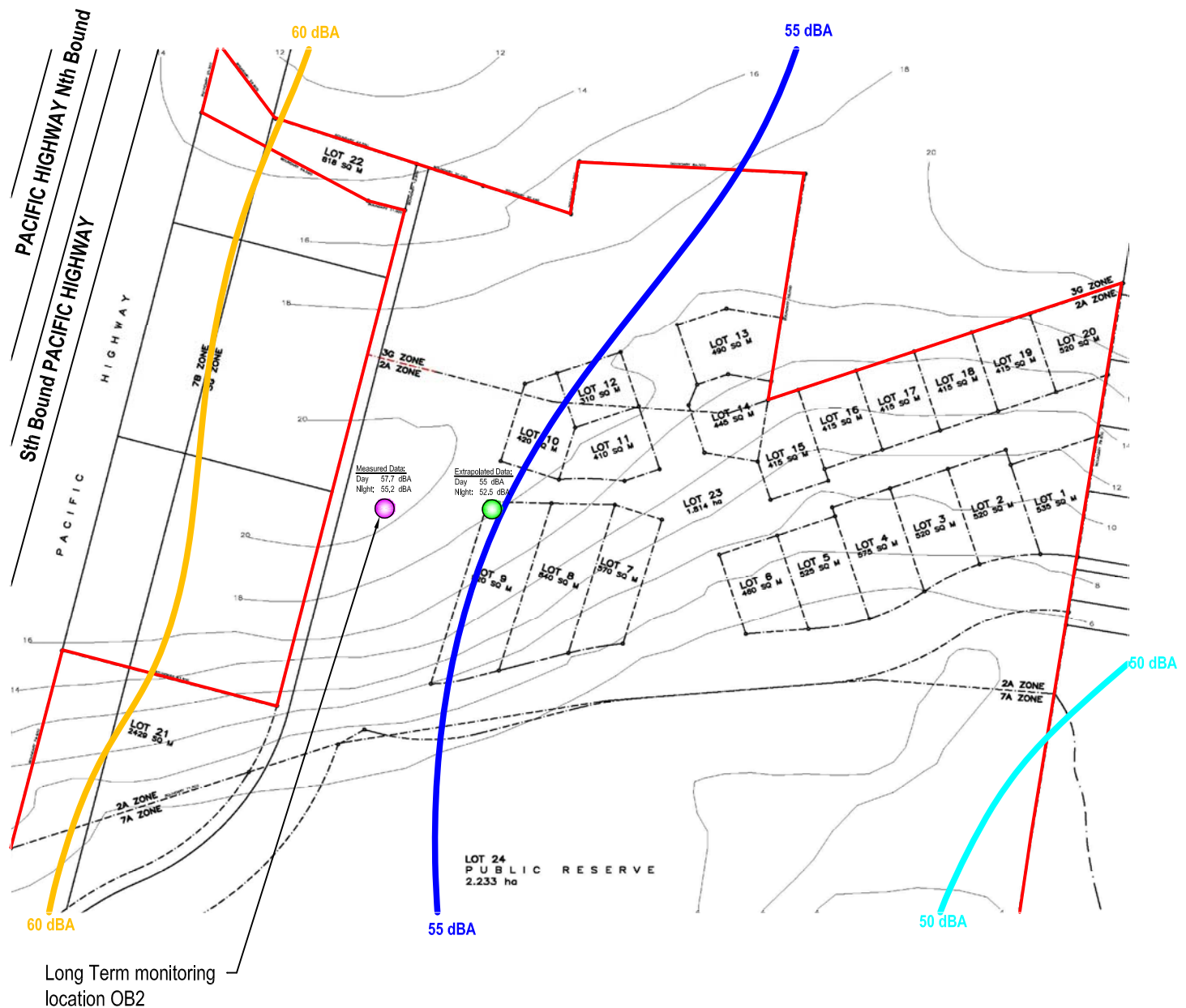
The closest dwelling proposed within the first stage of development is approximately 150m from the highway pavement. Highway noise over the distance and terrain to the stage one development is likely to be reduced to approximately 52.5 dBA. Results from the long term monitoring have also been extrapolated and indicate that the noise impact from Highway Noise alone is likely to be in the order of 55 dBA and 52.5 dBA for the day and night periods respectively. Review of the Noise and Vibration Assessment undertaken by Wilkinson and Murray (2007) also indicate a close correlation with the results obtained from this assessment. Both sets of results are shown graphically in **Exhibit 5.1**.

While it has been shown that there is potential for a slight (2.5 dBA) exceedance of the night time criteria for stage 1 of the development, the future upgrade of the highway will likely result in a reduction in the noise environment in the same order. Furthermore, once stage two of the proposed development has been constructed, the shielding effect offered by the additional dwellings will result in a reduced noise environment for the stage one dwellings which will ensure that noise levels are within the nominated criteria for both day and night periods.

5.2 Stage 2 Noise Impacts

The results of the long term monitoring indicated that existing noise environment during the night period are above the nominated ECRTN criteria for road traffic noise impact. It has been noted that night time noise at the site is likely to comprise of highway noise and environmental noise. The short term monitoring adjacent to the highway indicated that highway noise alone would be reduced to the order of 54 dBA at OB2. When combined with environmental noise the total noise environment at OB2 has been recorded as 57.7 dBA and 55.2 dBA for the day and night period respectively. It is therefore evident that some of the Stage 2 dwellings are likely to experience noise impact from the Pacific Highway above the recommended criteria. While the day time noise impact from the Pacific Highway is marginal at ~2.5 dBA, the night time noise impact from the Pacific Highway increases the total noise environment above the ECRTN (1999) criteria for new residential developments adjacent to freeways/arterial roads by ~5 dBA.

To place the exceedance of ECRTN criteria in context, generally any change less than 3 dBA is not perceivable, a 5 dBA change in the noise environment is noticeable and a 10 dBA change equates to a doubling (or halving) of noise. Given that the day time noise impacts from the Pacific Highway are marginal, noise mitigation measures should concentrate on minimising impact of Pacific Highway noise during the night period only.



LEGEND:

- 60dBA Modelled Noise Contour (Wilkinson and Murray, 2007)
- 55dBA Modelled Noise Contour (Wilkinson and Murray, 2007)
- 50dBA Modelled Noise Contour (Wilkinson and Murray, 2007)
- Long Term Monitoring Site and monitoring results
- Extrapolated monitoring results



0 40m

Source: Geoff Smyth Consultants
 Date: November 2008
 Ref: BEE0055.dwg

5.3 Potential Mitigation Measures

The Environmental Criteria for Road Traffic Noise (NSW RTA, 1999) sets out a hierarchy of ameliorative measures when the measured and/or calculated noise levels exceed the noise level criteria for any receiver. In order to mitigate against intrusive traffic noise at the proposed residential allotments, it may be possible to use a number of ameliorative measures. Ameliorative measures may include one or more of the following:

- **At Source Measures** Reduction of speed limit along the existing and proposed roadways can result in reduced noise emissions. Similarly, resurfacing the road with a low noise pavement type can reduce noise output by 1-2 dBA. The proposed change in speed limit either side of the Moonee road intersection on the completion of the highway upgrade has been acknowledged to potentially decrease the road noise impact at the subject site by 1-3 dBA). Heavy vehicle braking noise when travelling south along the Pacific Highway at the Moonee interchange, into the 80km/hr zone impacts on the overall noise environment. The upgrade of the Pacific Highway will provide for an interchange at the current Moonee Road intersection and will also allow for a consistent speed limit along the highway adjacent the subject development. The planned highway upgrades at Moonee will have the effect of reducing road noise output in the order of 1-3 dBA (Wilkinson and Murray, 2007).

Given that the timing of the subject development does not necessarily accord with the future Moonee Pacific Highway upgrade, the predicted 1-2 dBA reduction in road noise expected when the highway is upgraded has not been included when considering noise mitigation measures. This approach is conservative and will ensure that ECRTN criteria can be achieved into the long term.

- **Building Design and Treatments** Appropriate building design to minimise or eliminate the noise emission to noise-sensitive areas within the building is effective in reducing internal noise levels. This may include the provision of noise control treatments to the building fabric, particularly glazing (where required), and the provision of mechanical ventilation such that windows can be closed to limit internal noise levels.

The building orientation such that noise sensitive areas such as bedrooms are placed shielded from the dominate noise source will also assist to keep internal noise levels below acceptable standards. A reduction of 30 dBA can be expected with the standard masonry building construction. Further reductions in the order of 40 dBA can be achieved if double glazed windows and render are provided.

A review of the proposed building layouts, design and orientation has been undertaken and the proposed buildings provide a reasonable response to limit internal noise environment.

Other measures that were considered but are not suitable for the subject development include the provision of a noise mound or a noise wall. Noise mounds require a significant footprint to be effective. The available land area and configuration of the site render the use of noise mounds as ineffective. The use of noise walls may be effective if placed close to the proposed dwellings however the provision of a large wall contradicts Councils 'safer by design' DCP and prior discussion with Council staff indicate that Council would prefer other mitigation measures adopted in lieu of a noise wall.

Given that the day time noise impact from the highway is marginal, recommended noise mitigation measures should primarily address likely night time noise impact. The most efficient way to address night time noise impact is through the use of appropriate building design and construction to limit the internal noise environment.

5.4 Limiting the Internal Noise Environment

In addressing internal noise levels and amenity, consideration of traffic noise impact upon residential dwellings is best assessed using the design internal noise levels prescribed by Australian Standard AS2107:2000 "Acoustics – recommended design sound levels and reverberation times for building interiors". Given the local of the proposed subdivision, the criteria, extracted from Table 1 of AS2107:2000, provided in Table 4.1 below, are relevant;

Table 5.1 Internal Noise Level Criteria

Type of occupancy/activity	Recommended design sound level, L _{Aeq} , dB(A)	
	Satisfactory*	Maximum**
RESIDENTIAL BUILDINGS		
Living areas	30 dB(A)	40 dB(A)
Sleeping areas	30 dB(A)	35 dB(A)
Work areas	35 dB(A)	40 dB(A)
Apartment common areas(e.g. foyer, lift, lobby)	45 dB(A)	55 dB(A)

*The satisfactory design sound level is the level of noise that has been found to be acceptable by most people for the environment in question and also not to be intrusive.

**The maximum design sound level is the level of noise above which most people occupying the space start to become dissatisfied with the level of noise.

Experience with residential construction, demonstrates that typical sound transmission loss characteristics for standard type construction will achieve the following:

- Rendered masonry with laminated or double glazed windows ~40 dB(A)
- Masonry or lightweight insulated external walls with 6mm glazing ~30 dB(A)
- Standard un-insulated domestic grade framing with 4mm glass ~18 dB(A)

Review of the proposed dwelling types indicates that dwellings have generally been designed with garages and service areas on highway side to minimise noise penetration into living and sleeping areas. Sound transmission loss above those indicated above is therefore likely for living and sleeping areas.

The predicted night time L_{Aeq} highway noise impact at the exterior façade of Stage two dwellings is likely to be in the order of 55.2 dBA with maximums in the order of 81 dBA. Review of the building specifications indicate that coated brick veneer building construction, insulated ceilings, concrete slab construction and 5.38mm glass windows is proposed. While the proposed building materials and orientation would allow for a significant reduction in noise transmission, upgrading the windows within the sleeping areas to a 6mm laminated or double glazed type with the provision of mechanical ventilation to allow windows to remain closed would ensure internal noise impacts from highway traffic are not intrusive in accordance with AS2107:2000. The additional provision of a noise laminate or the provision of double glazing on all bedroom windows within stage 2 development would reduce highway impact by an additional 10 dBA.

6 Recommendations

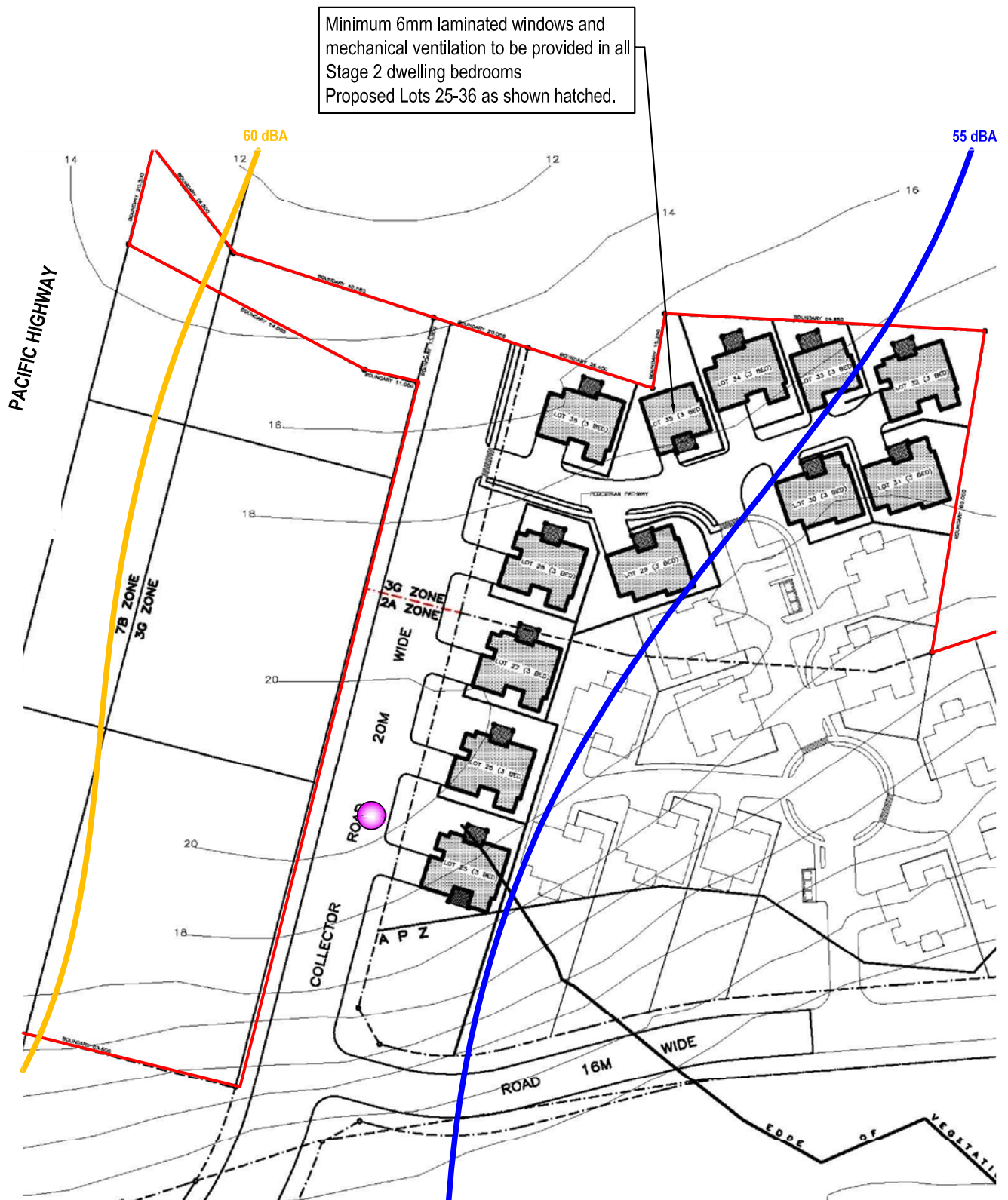
Through this assessment of the acoustical impacts of the Pacific Highway on the subject site it has been found that:

- No significant highway noise impacts are expected to occur for Stage 1 of the development. The combination of distance attenuation and topographical shielding effects ensure that stage 1 of the proposed development will comply with ECRTN (1999) criteria.
- Night time noise impacts from the Pacific Highway are likely to occur for Stage 2 of the proposed development. However, day time impacts are only marginal. Mitigation measures for Stage 2 of the development should therefore concentrate on limiting intrusive night time noise impact.
- The potential for sleep disturbance is not considered sufficient to warrant additional mitigation measures other than those proposed to address the issue raised in the above dot point.

The most effective measure to limit night time noise impact is through the provision of appropriate building orientation and construction materials. Review of the proposed building orientation for stage two dwellings indicates that all stage two dwellings have been designed with the garage and service areas on the highway side to limit noise migration into the more noise sensitive living and sleeping areas of the dwelling.

To ensure that internal noise goals are achieved during the night time period, it is recommended that:

- All stage two dwelling are upgraded to include minimum 6mm laminated windows on all bedrooms with mechanical ventilation to allow adequate ventilation when all bedroom windows are closed.



0 40m

Source: Geoff Smyth Consultants

Date: November 2008

Ref: BEE0055.dwg

7 Conclusions

Following an assessment of the current noise environment at the subject site and consideration of future upgrades to the Pacific Highway, it is our view that noise impacts on the future residences can be satisfactorily addressed provided that the recommendations proposed within this report are adhered to.

Stage 1 of the proposed development is unlikely to experience highway noise impact above the recommended criteria as set out in the ECRTN (1999). No mitigation measures are therefore proposed for Stage 1 of the development.

Stage 2 of the development is likely to be impacted by Highway Traffic noise above the criteria set out in ECRTN (1999). While day period impacts are likely to be marginal, night time impacts are considered acute enough to warrant the application of noise mitigation measures. Review of appropriate noise mitigation measures indicate that most suitable measure to address night time noise impact for stage two is through the appropriate building design and architectural treatment. The additional provision of 6mm laminated or double glazed windows on all stage two bedrooms combined with the use of mechanical ventilation, such that windows can remain closed, is considered to offer the most appropriate measure to limit internal night time highway noise impacts.

This report has been prepared by Cameron Black of *Black Earth Environmental*.



Cameron Black
Principal Engineer. *B.Eng (civil) honours*

References

- Australian Standard AS2107:2000 *“Acoustics – recommended design sound levels and reverberation times for building interiors”.*
- NSW EPA, 1999 *Environmental Criteria for Road Traffic Noise*, May 1999.
Environmental Protection Authority, Sydney
- State Pollution and Control Commission, 1991 *A Guide for Homeowners, Designers and Builders*, August 1991. State Pollution and Control Commission.
- Wilkinson and Murray, 2007 *Sapphire to Woolgoolga Highway Upgrade – Noise and Vibration Impact Assessment*, Version G August 2007. Prepared for Connell Wagner.

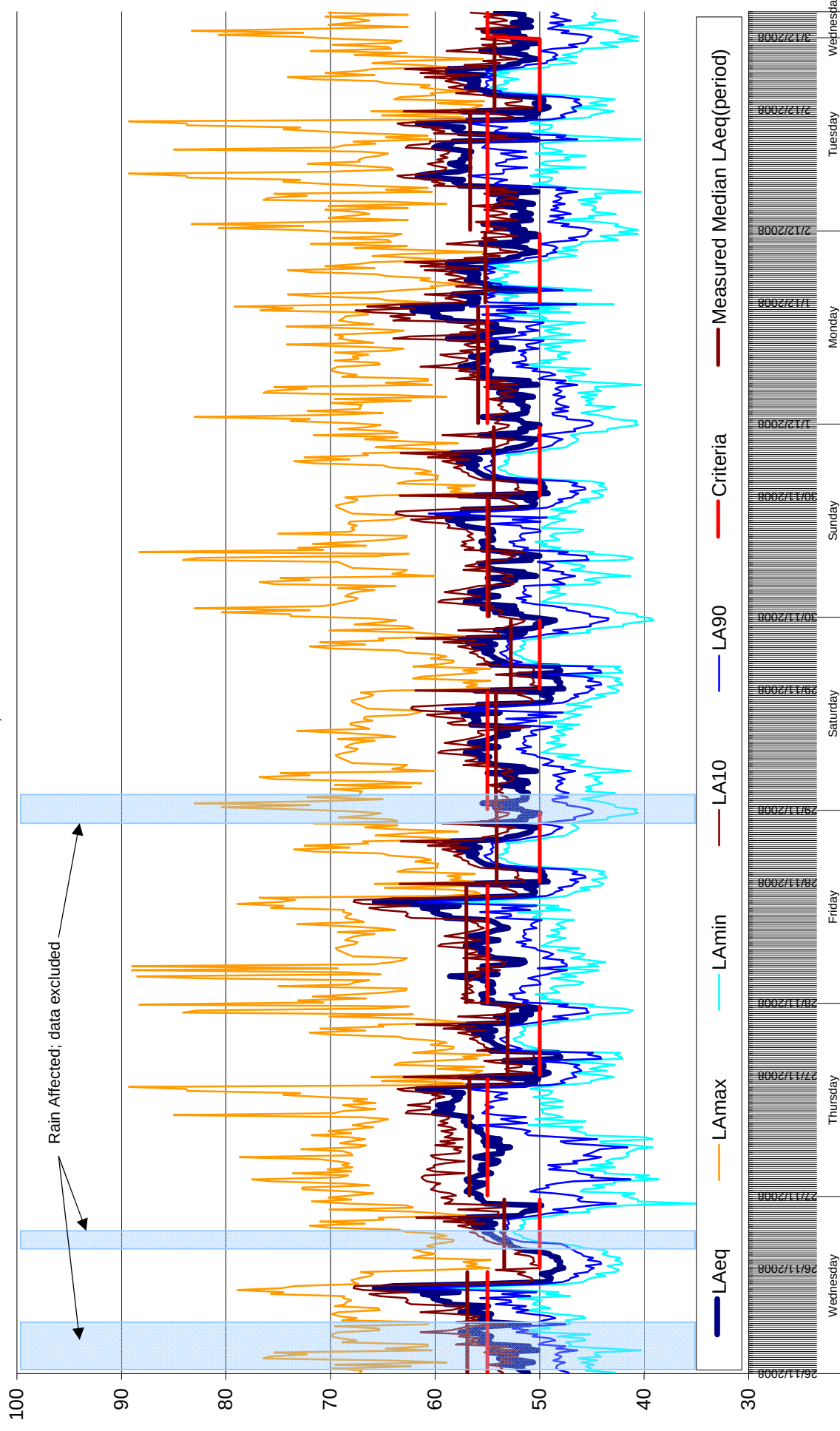
Usage Note

Black EARTH Environmental declares that it does not have, nor expects to have, a beneficial interest in the subject project.

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Appendix A

Measured Site Noise Data



SITE OB2 READING

Address	Day	Date	Time	Duration	LAeq	LAmx	LAmn	LA01	LA10	LA50	LA90	LA95
1	Wednesday	26/11/2008	9:08:38	0:15:00	51.1	67.2	42.8	56.8	53.5	49.9	47.2	46.5
2			9:23:38	0:15:00	51.7	67	45.6	58.8	54	50.6	48	47.4
3			9:38:38	0:15:00	52.1	69.9	45	58.1	53.6	51	48.4	47.7
4			9:53:38	0:15:00	51.6	62.3	45.6	57.4	53.8	50.7	48.4	47.9
5			10:08:38	0:15:00	53.7	69.6	44.8	65.7	54.9	51.2	48.2	47.6
6			10:23:38	0:15:00	50.6	58.9	46	54.5	52.5	49.8	47.6	46.7
7			10:38:38	0:15:00	51.6	64.2	44.5	58.3	53.5	51.1	48.7	48
8			10:53:38	0:15:00	53.9	76.4	46.3	60	53.8	50.9	48.1	47.3
9			11:08:38	0:15:00	53	75.9	44.1	63.9	52.1	49.9	47.9	47.45
10			11:23:38	0:15:00	52.2	72.3	44.7	58.8	52.9	50.5	48.5	48.05
11			11:38:38	0:15:00	54.8	75.4	44.7	70.4	55.3	51.5	48.1	47.5
12			11:53:38	0:15:00	50.2	60.3	40.3	54.6	52.1	49.5	46.4	45.65
13			12:08:38	0:15:00	51.9	64.7	43.7	61.7	55	51.1	48.4	47.7
14			12:23:38	0:15:00	51	60.7	47.2	56.4	53.1	49.8	47.5	47.3
15			12:38:38	0:15:00	54.6	60.7	47	62.2	58	53.2	50.1	49.4
16			12:53:38	0:15:00	55.8	68.9	47.5	68.8	55.9	52.3	49.6	48.8
17			13:08:38	0:15:00	54.8	67.5	45.6	65.8	56.7	50.7	48.5	47.85
18			13:23:38	0:15:00	55.6	69.1	45.9	66.7	55.7	51.4	49	48.75
19			13:38:38	0:15:00	54.6	69.9	48.3	68.1	57.7	53.8	50.7	50.2
20			13:53:38	0:15:00	55.4	69.8	45.2	66.5	56.6	52.5	50.2	49.55
21			14:08:38	0:15:00	57.6	69.3	49.8	68.9	61.4	55	52.2	51.7
22			14:23:38	0:15:00	56.5	65.3	51.4	64.6	58.5	53.9	51.1	50.9
23			14:38:38	0:15:00	55.8	65.4	49	65.3	57.6	54.8	52.6	51.8
24			14:53:38	0:15:00	54.9	69.6	49.8	63	56.9	54	51.3	50.6
25			15:08:38	0:15:00	51	60.7	47.2	56.4	53.1	49.8	47.5	47.3
26			15:23:38	0:15:00	54.6	60.7	47	62.2	58	53.2	50.1	49.4
27			15:38:38	0:15:00	55.8	68.9	47.5	68.8	55.9	52.3	49.6	48.8
28			15:53:38	0:15:00	54.8	67.5	45.6	65.8	56.7	50.7	48.5	47.85
29			16:08:38	0:15:00	55.6	69.1	45.9	66.7	55.7	51.4	49	48.75
30			16:23:38	0:15:00	54.6	69.9	48.3	68.1	57.7	53.8	50.7	50.2
31			16:38:38	0:15:00	57.6	69.3	49.8	68.9	61.4	55	52.2	51.7
32			16:53:38	0:15:00	56.5	65.3	51.4	64.6	58.5	53.9	51.1	50.9
33			17:08:38	0:15:00	55.8	65.4	49	65.3	57.6	54.8	52.6	51.8
34			17:23:38	0:15:00	54.9	69.6	49.8	63	56.9	54	51.3	50.6
35			17:38:38	0:15:00	59	68.6	50.7	67.5	62.3	56.4	54.2	53.1
36			17:53:38	0:15:00	58.6	68.5	50.3	67.5	62.8	55.2	52.7	52.3
37			18:08:38	0:15:00	59.7	68	49.8	66.7	62.6	59.2	52.8	52.3
38			18:23:38	0:15:00	60.2	68.8	52.1	68	62.8	58.2	55.7	55.2
39			18:38:38	0:15:00	59.8	68.7	47.1	67.5	65.3	54.2	50.9	49.9
40			18:53:38	0:15:00	61.2	75.7	49.4	67.5	66.3	57.2	53.6	52.7
41			19:08:38	0:15:00	57.7	74.5	48.2	65.8	62.4	53.5	50.3	49.8
42			19:23:38	0:15:00	63.2	78.9	52.4	67.9	66.9	59.9	56.9	56.3
43			19:38:38	0:15:00	65.8	74.6	58.8	70.6	67.8	65.4	61.6	61
44			19:53:38	0:15:00	64	73.4	53.5	69.4	67.7	61.7	56	55.3
45			20:08:38	0:15:00	55.9	67.3	47.4	60.3	58.1	55	49.9	49.3
46			20:23:38	0:15:00	49.6	67.8	45.9	54.1	51.1	49.1	47.8	47.5
47			20:38:38	0:15:00	49	68	45.5	52.7	50.6	48.5	47.2	46.9
48			20:53:38	0:15:00	48.9	67.2	45.1	52.6	50.8	48.4	47	46.6
49			21:08:38	0:15:00	49.2	66.2	43.7	54.5	51.4	48.6	46.3	45.9
50			21:23:38	0:15:00	49.8	65.9	44.6	54.1	52.1	49.1	46.7	46.2
51			21:38:38	0:15:00	48.8	67.1	42.7	53.2	51.4	48.1	45.4	44.9
52			21:53:38	0:15:00	48.5	59.8	42.4	53.3	54.2	48.7	45.2	44.7
53		26/11/2008	22:08:38	0:15:00	47.7	54.8	42.9	52.9	50	46.7	44.8	44.4
54			22:23:38	0:15:00	48.1	57	43.5	53.1	50	47.4	45.6	45.2
55			22:38:38	0:15:00	48.1	56	42.1	53.4	50.9	46.8	44.1	43.7
56			22:53:38	0:15:00	48	57.3	42.2	54.7	50.5	46.7	44.2	43.9
57			23:08:38	0:15:00	48.4	54.7	42.8	53.1	50.6	47.7	45.4	44.9
58			23:23:38	0:15:00	48.2	62.1	42.3	54.5	50.6	47	44.9	44.4
59			23:38:38	0:15:00	48.9	61.3	43.5	54.2	51	48.1	45.8	45.3
60			23:53:38	0:15:00	49.1	60	44	54.7	52.4	48.7	46	45.5
61			0:08:38	0:15:00	50	61.2	43.5	54.2	51.8	46.9	46.5	45.7
62			0:23:38	0:15:00	51.7	62	44	54.7	52	47.2	46.8	45.8
63			0:38:38	0:15:00	52.3	60	45.8	55.2	53	47.7	47.2	46.3
64			0:53:38	0:15:00	52.8	60.8	46.5	55.8	52.7	48.5	47.5	46.6
65			1:08:38	0:15:00	52.8	59.9	48	56.4	54.1	49.8	48	47.1
66			1:23:38	0:15:00	53	58.3	50.1	57.1	54.8	52.7	51.7	51.5
67			1:38:38	0:15:00	53.8	58.2	50.9	57.1	55.3	53.5	52.4	52.1
68			1:53:38	0:15:00	54.2	60.4	51.6	57.1	55.3	53.9	53.1	52.9
69			2:08:38	0:15:00	54.5	58.9	51.7	57.4	55.9	54.1	53.2	53
70			2:23:38	0:15:00	54.7	59.9	52.4	57.6	56	54.4	53.6	53.4
71			2:38:38	0:15:00	55.3	62.8	52.5	60.1	56.7	54.7	53.8	53.7
72			2:53:38	0:15:00	54.5	63.5	51.9	59	55.8	54	53.1	52.9
73			3:08:38	0:15:00	55.6	70	51.5	65.7	56.8	53.8	53	52.8
74			3:23:38	0:15:00	56.3	72	51.9	64.6	57.8	54.1	53.2	53
75			3:38:38	0:15:00	54.2	66.7	51.4	58.9	55.2	53.7	52.9	52.7
76			3:53:38	0:15:00	56.9	71	51.4	63.8	59.2	55.4	53	52.7
77			4:08:38	0:15:00	54.7	64.9	51.7	57.9	56.1	54.2	53.1	52.8
78			4:23:38	0:15:00	57.6	65.4	49.9	63	61.8	55.4	51.9	51.5
79			4:38:38	0:15:00	51.9	57.1	48.6	55.6	53.8	51.3	50.3	50
80			4:53:38	0:15:00	51.7	59.3	47.6	56.1	54	50.8	49.3	49
81			5:08:38	0:15:00	51.4	62.1	45.2	57.5	53.9	49.8	47.3	47
82			5:23:38	0:15:00	50.2	70.1	45.5	61	57.8	52.4	48.7	48.1
83			5:38:38	0:15:00	50.8	62.1	44.5	57.2	53.6	49.1	46.8	46.3
84			5:53:38	0:15:00	49.8	62.7	42	56.6	53	48.2	45.1	44.4
85			6:08:38	0:15:00	55.2	68.2	34.8	64.8	59.1	50.1	42.7	36.4
86			6:23:38	0:15:00	55.4	71.8	40.6	64.1	58.5	52.5	46.1	42.9
87			6:38:38	0:15:00	55.5	68	40.6	64.6	58.3	53.5	46.4	42.8
88			6:53:38	0:15:00	56	70.2	41.4	64.6	59.4	53.6	45.9	42.7
89	Thursday	27/11/2008	7:08:38	0:15:00	55.6	68	42.1	64.1	58	54.2	46.7	43.7
90			7:23:38	0:15:00	56.1	65.9	40.9	63.2	58.5	55.4	48.5	42.3
91			7:38:38	0:15:00	57	67.9	46.1	64	59.7	56.2	50.9	47.6
92			7:53:38	0:15:00	56.8	72.7	45.8	66.9	60.4	52.8	50.2	42.2
93			8:08:38	0:15:00	56.2	72.7	43.8	66	60.1	51.2	49.1	40.1
94			8:23:38	0:15:00	55.6	66.3	44.9	64.3	60	51.6	49.4	41.1
95			8:38:38	0:15:00	55.2	68.7	42.8	64.5	59.5	50.2	48.4	40
96			8:53:38	0:15:00	56.9	75.6	42.9	66.2	60.8	51.5	46.8	39.4
97			9:08:38	0:15:00	57	77.5	38.6	66.1	61.1	50.7	41.3	34.3
98			9:23:38	0:15:00	56.3	69.1	40.8	65.5	61.3	51	45.1	36.7
99			9:38:38	0:15:00	55.9	68.3	39.5	65.4	61	49.7	44.9	36.4
100			9:53:38	0:15:00	54.6	73.6	43.8	64.9	57.2	46.8	46.3	39.9
101			10:08:38	0:15:00	55.1	68	43.7	65.1	60.1	47.4	46.5	39.7
102			10:23:38	0:15:00	55.7	70.3	46.3	64.7	60.8	49.6	49.1	42.4
103			10:38:38	0:15:00	55.2	67.9	42.8	64.5	60.1	48.7	48	40.6
104			10:53:38	0:15:00	55.6	68.9	45.1	64.7	60.1	50.7	49.2	41.1
105			11:08:38	0:15:00	54.2	68.2	43	64	59.1	47.1	46.4	39
106			11:23:38	0:15:00	53.9	69.4	43.7	65.2	57.2	46.5	46.8	40
107			11:38:38	0:15:00	54.6	71	43.2	64.2	59.4	47	45.2	38.8

114		13:23:38	0:15:00	55.2	66.6	40.9	64.7	60	48.8	44.3	36.6
115		13:38:38	0:15:00	53.8	69.1	44.1	63.8	58.1	47.8	47.5	39.9
116		13:53:38	0:15:00	55.4	68.1	44.2	65.2	59.5	50.5	48	40.3
117		14:08:38	0:15:00	53.8	66.7	39.2	64.4	57.3	48.5	44.5	35.2
118		14:23:38	0:15:00	55.2	68.2	39.8	64.8	59.1	50.1	47.7	36.4
119		14:38:38	0:15:00	55.4	71.8	45.6	64.1	58.5	52.5	51.1	42.9
120		14:53:38	0:15:00	55.5	68	45.6	64.6	58.3	53.5	51.4	42.8
121		15:08:38	0:15:00	56	70.2	46.4	64.6	59.4	53.6	50.9	42.7
122		15:23:38	0:15:00	55.6	68	47.1	64.1	58	54.2	51.7	43.7
123		15:38:38	0:15:00	56.1	65.9	45.9	63.2	58.5	55.4	53.5	42.3
124		15:53:38	0:15:00	57	67.9	51.1	64	59.7	56.2	55.9	47.6
125		16:08:38	0:15:00	56.7	66.7	47.6	62.8	58.8	56.2	51.2	48.4
126		16:23:38	0:15:00	57.3	65.3	45.6	62.5	59.5	56.9	52.7	47.8
127		16:38:38	0:15:00	57	64.5	50.4	62.1	58.8	56.6	53.7	51.4
128		16:53:38	0:15:00	56.5	67	47.8	63	58.6	56.1	51.3	48.9
129		17:08:38	0:15:00	58.2	85	48.5	62.8	59.4	56.8	54	50.9
130		17:23:38	0:15:00	60.1	69.7	49.7	66.2	62.8	58.8	55.5	51.7
131		17:38:38	0:15:00	59.7	68.8	49.7	65.9	62.6	58.5	55.2	50.9
132		17:53:38	0:15:00	58.4	65.7	49.9	63.7	60.5	57.8	55	51.3
133		18:08:38	0:15:00	58.3	67.8	47.8	64.1	60.5	57.6	54.4	49.5
134		18:23:38	0:15:00	59.7	68.8	49.7	65.9	62.6	58.5	55.2	50.9
135		18:38:38	0:15:00	58.4	65.7	49.9	63.7	60.5	57.8	55	51.3
136		18:53:38	0:15:00	58.3	67.8	47.8	64.1	60.5	57.6	54.4	49.5
137		19:08:38	0:15:00	57.7	66.5	48.6	64.3	60.1	56.9	53.1	49.8
138		19:23:38	0:15:00	57.6	70.7	50.6	64.5	59.1	56.8	54.3	51.6
139		19:38:38	0:15:00	58.2	74.5	49.2	65	60.3	57	53.9	50.4
140		19:53:38	0:15:00	57.3	72.9	48.9	63	59.3	56.6	53.1	50.4
141		20:08:38	0:15:00	61	83.7	48.8	66.7	63	58.3	55.3	51.2
142		20:23:38	0:15:00	61.7	83.8	50.9	66.6	63.6	60.3	56.8	52.3
143		20:38:38	0:15:00	60.5	89.3	49.8	64.3	60.8	57.6	53.5	51.1
144		20:53:38	0:15:00	51.4	57.1	48.1	56.1	53.6	50.8	49	48.4
145		21:08:38	0:15:00	50.4	57.4	45.1	55.5	52.5	49.8	47.6	47.35
146		21:23:38	0:15:00	51.2	65.1	45.1	54.9	53.2	50.3	48	47.65
147		21:38:38	0:15:00	50.1	57.5	44.2	56.7	54.6	50.6	47.4	46.9
148		21:53:38	0:15:00	57.6	66.1	42.9	64.1	63	49.9	46.5	46.15
149	27/11/2008	22:08:38	0:15:00	49.7	56.9	44.4	56.4	53.2	49.2	46.8	46.4
150		22:23:38	0:15:00	49.1	56.1	47	52.9	50.6	48.4	46.9	46.7
151		22:38:38	0:15:00	50	55.5	43.6	55.9	53.1	48.9	46	45.4
152		22:53:38	0:15:00	50.5	59.8	45.2	58.2	53.3	49.1	46.2	45.7
153		23:08:38	0:15:00	49.6	55.3	44.2	54.1	51.7	48.9	46.7	46.35
154		23:23:38	0:15:00	49.6	63.9	42.8	55.3	51.7	48.2	46.2	45.85
155		23:38:38	0:15:00	50.2	63.4	45	57.7	54.2	50.6	47.8	47.3
156		23:53:38	0:15:00	53.4	60.1	47.7	57.3	55.3	52.5	50.4	50.15
157		0:08:38	0:15:00	48.1	56	42.1	53.4	50.9	46.8	44.1	43.7
158		0:23:38	0:15:00	48	57.3	42.2	54.7	50.5	46.7	44.2	43.9
159		0:38:38	0:15:00	48.4	54.7	42.8	53.1	50.6	47.7	45.4	44.9
160		0:53:38	0:15:00	48.2	62.1	42.3	54.5	50.6	47	44.9	44.4
161		1:08:38	0:15:00	54.7	59.9	52.4	57.6	56	54.4	53.6	53.4
162		1:23:38	0:15:00	53.2	58.3	50.1	57.1	54.8	52.7	51.7	51.5
163		1:38:38	0:15:00	53.8	58.2	50.9	57.1	55.3	53.5	52.4	52.1
164		1:53:38	0:15:00	54.2	60.4	51.6	57.1	55.3	53.9	53.1	52.9
165		2:08:38	0:15:00	54.5	58.9	51.7	57.4	55.9	54.1	53.2	53
166		2:23:38	0:15:00	54.7	59.9	52.4	57.6	56	54.4	53.6	53.4
167		2:38:38	0:15:00	55.3	62.8	52.5	60.1	56.7	54.7	53.8	53.7
168		2:53:38	0:15:00	54.5	63.5	51.9	59	55.8	54	53.1	52.9
169		3:08:38	0:15:00	55.6	70	51.5	65.7	56.8	53.8	53	52.8
170		3:23:38	0:15:00	56.3	72	51.9	64.6	57.8	54.1	53.2	53
171		3:38:38	0:15:00	54.2	66.7	51.4	58.9	55.2	53.7	52.9	52.7
172		3:53:38	0:15:00	56.9	71	51.4	63.8	59.2	55.4	53	52.7
173		4:08:38	0:15:00	54.7	64.9	51.7	57.9	56.1	54.2	53.1	52.8
174		4:23:38	0:15:00	57.6	65.4	49.9	63	61.8	55.4	51.9	51.5
175		4:38:38	0:15:00	51.9	57.1	48.6	55.6	53.8	51.3	50.3	50
176		4:53:38	0:15:00	51.7	59.3	47.6	56.1	54	50.8	49.3	49
177		5:08:38	0:15:00	51.4	62.1	45.2	57.5	53.9	49.8	47.3	47
178		5:23:38	0:15:00	54.2	70.1	45.5	61	57.8	52.4	48.7	48.1
179		5:38:38	0:15:00	50.8	62.1	44.5	57.2	53.6	49.1	46.8	46.3
180		5:53:38	0:15:00	50.8	84.1	41.6	61.5	53.2	48.9	45.3	44.3
181		6:08:38	0:15:00	51.7	82.7	41.1	59.4	52.9	48.2	45.5	44.7
182		6:23:38	0:15:00	50	65.6	42	55.9	52.3	48.7	45.5	44.8
183		6:38:38	0:15:00	51.3	62.5	45.3	56.5	53.7	50.4	48.2	47.7
184		6:53:38	0:15:00	52.9	88.3	44.8	56.1	51.4	48.5	47.3	47.2
185	Friday	7:08:38	0:15:00	55.5	70.7	49.2	63.8	57.2	53.8	51.6	51.2
186		7:23:38	0:15:00	54.5	73.1	48	61	56.3	53.5	51.1	50.6
187		7:38:38	0:15:00	55.4	66.6	49.9	61.4	57.5	54.6	52.5	51.9
188		7:53:38	0:15:00	55.4	71.7	49.3	61.9	57	54.4	52.4	52
189		8:08:38	0:15:00	55.6	67.7	50.4	60.4	57.4	55.1	52.9	52.3
190		8:23:38	0:15:00	54.4	64.8	48.1	60.3	56.3	53.7	51.4	50.8
191		8:38:38	0:15:00	54.5	62.8	48.5	59.3	56.5	54	51.8	51.3
192		8:53:38	0:15:00	54.8	62.7	49	59.6	56.9	54.2	51.9	51.4
193		9:08:38	0:15:00	55	75	48.6	62.5	56.4	53.8	51.7	51
194		9:23:38	0:15:00	54.4	68.2	46.2	62.3	56.8	53	49.9	49.1
195		9:38:38	0:15:00	54.5	67.7	45.8	63.6	57	52.6	50	49.4
196		9:53:38	0:15:00	55.5	66.3	47.2	65.3	56.5	53.4	50.2	49.2
197		10:08:38	0:15:00	55.7	82.6	48.9	64.5	56.7	53.6	51.1	50.6
198		10:23:38	0:15:00	58.6	88.5	46.5	60.5	55.7	53.1	50.3	49.6
199		10:38:38	0:15:00	54	65.2	47.9	64.3	55.7	52.6	49.2	48.8
200		10:53:38	0:15:00	55.1	68.4	45.7	66.3	57.1	51	48.7	47.9
201		11:08:38	0:15:00	55.5	89	44.4	61.8	53.8	50	47.4	46.7
202		11:23:38	0:15:00	54.8	69.3	48.3	66.1	56	52.8	50.2	49.7
203		11:38:38	0:15:00	55.5	89	44.4	61.8	53.8	50	47.4	46.7
204		11:53:38	0:15:00	52	65.9	45.4	63	53.3	50.1	47.4	46.9
205		12:08:38	0:15:00	51.4	64.1	43.7	59.7	53.3	50.1	47.9	47.2
206		12:23:38	0:15:00	51.5	63.1	45.2	58.1	54	50.3	47.7	47.3
207		12:38:38	0:15:00	54.2	62.7	47	61.2	57.3	52.6	49.7	49.2
208		12:53:38	0:15:00	54.8	67.9	46	66.8	54.6	51.4	49.1	48.5
209		13:08:38	0:15:00	55.1	68.4	45.7	66.3	57.1	51	48.7	47.9
210		13:23:38	0:15:00	55.7	68.8	46.9	67.4	56.1	51.7	49.2	48.8
211		13:38:38	0:15:00	54.8	69.3	48.3	66.1	56	52.8	50.2	49.7
212		13:53:38	0:15:00	55.5	69.5	46.2	67.2	57	52.8	50.4	49.6
213		14:08:38	0:15:00	57.1	68.7	49.8	66.9	59.7	54	51.7	51.2
214		14:23:38	0:15:00	57	67.7	49.4	66.3	59.4	54.4	51.3	50.9
215		14:38:38	0:15:00	55.4	67.4	49	64.3	56.9	54.2	52.2	51.6
216		14:53:38	0:15:00	53.9	68.6	48.3	61	55.6	53.1	50.8	50.3
217		15:08:38	0:15:00	55.7	68.2	47.5	66.9	57.3	53.5	51.5	50.9
218		15:23:38	0:15:00	56.7	67.6	49.3	65.2	59.1	54.3	51.6	51.1
219		15:38:38	0:15:00	55.3	65.8	48.2	62	57.8	53.9	51.3	50.6
220		15:53:38	0:15:00	54.8	69.3	48.1	61	56.8	53.5	51.5	51
221		16:08:38	0:15:00	54.1	63.8	48.9	59.6	55.9	53.4	51.5	51
222		16:23:38	0:15:00	53	65.4	47.5	57.9	55.3	52.2	50.3	49.7
223		16:38:38	0:15:00	53.8	69.1	48	59.3	55.9	52.9	50.8	50.3
224</											

230		18:23:38	0:15:00	60.2	68.8	52.1	68	62.8	58.2	55.7	55.2
231		18:38:38	0:15:00	59.8	68.7	47.1	67.5	65.3	54.2	50.9	49.9
232		18:53:38	0:15:00	61.2	75.7	49.4	67.5	66.3	57.2	53.6	52.7
233		19:08:38	0:15:00	57.7	74.5	48.2	65.8	62.4	53.5	50.3	49.8
234		19:23:38	0:15:00	63.2	78.9	52.4	67.9	66.9	59.9	56.9	56.3
235		19:38:38	0:15:00	65.8	74.6	58.8	70.6	67.8	65.4	61.6	61
236		19:53:38	0:15:00	64	73.4	53.5	69.4	67.7	61.7	56	55.3
237		20:08:38	0:15:00	57.4	76.8	48.9	61.8	59.6	56.5	51.4	50.8
238		20:23:38	0:15:00	51.1	59.1	47.4	55.6	52.6	50.6	49.3	49
239		20:38:38	0:15:00	50.5	55.7	47	54.2	52.1	50	48.7	48.4
240		20:53:38	0:15:00	50.4	56.1	46.6	54.1	52.3	49.9	48.5	48.1
241		21:08:38	0:15:00	50.7	58.3	45.2	56	52.9	50.1	47.8	47.4
242		21:23:38	0:15:00	51.3	64.8	46.1	55.6	53.6	50.6	48.2	47.7
243		21:38:38	0:15:00	50.3	56.9	44.2	54.7	52.9	49.6	46.9	46.4
244		21:53:38	0:15:00	57.7	65.8	43.9	64.8	63.4	50.2	46.7	46.2
245	28/11/2008	22:08:38	0:15:00	49.2	56.3	44.4	54.4	51.5	48.2	46.3	45.9
246		22:23:38	0:15:00	49.6	58.5	45	54.6	51.5	48.9	47.1	46.7
247		22:38:38	0:15:00	49.6	57.5	43.6	54.9	52.4	48.3	45.6	45.2
248		22:53:38	0:15:00	49.5	58.8	43.7	56.2	52	48.2	45.7	45.4
249		23:08:38	0:15:00	49.9	56.2	44.3	54.6	52.1	49.2	46.9	46.4
250		23:23:38	0:15:00	49.7	63.6	43.8	56	52.1	48.5	46.4	45.9
251		23:38:38	0:15:00	50.4	62.8	45	55.7	52.5	49.6	47.3	46.8
252		23:53:38	0:15:00	53.5	59.8	48.7	58	55.7	52.8	50.6	50.2
253		0:08:38	0:15:00	54.7	59.8	51.6	58.6	56.3	54.2	53.2	53
254		0:23:38	0:15:00	55.3	59.7	52.4	58.6	56.8	55	53.9	53.6
255		0:38:38	0:15:00	55.7	61.9	53.1	58.6	56.8	55.4	54.6	54.4
256		0:53:38	0:15:00	56	60.4	53.2	58.9	57.4	55.6	54.7	54.5
257		1:08:38	0:15:00	56.2	61.4	53.9	59.1	57.5	55.9	55.1	54.9
258		1:23:38	0:15:00	56.8	64.3	54	61.6	58.2	56.2	55.3	55.2
259		1:38:38	0:15:00	56	65	53.4	60.5	57.3	55.5	54.6	54.4
260		1:53:38	0:15:00	57.1	71.5	53	67.2	58.3	55.3	54.5	54.3
261		2:08:38	0:15:00	57.8	73.5	53.4	66.1	59.3	55.6	54.7	54.5
262		2:23:38	0:15:00	55.7	68.2	52.9	60.4	56.7	55.2	54.4	54.2
263		2:38:38	0:15:00	58.4	72.5	52.9	65.3	60.7	56.9	54.5	54.2
264		2:53:38	0:15:00	56.2	66.4	53.2	59.4	57.6	55.7	54.6	54.3
265		3:08:38	0:15:00	59.1	66.9	51.4	64.5	63.3	56.9	53.4	53
266		3:23:38	0:15:00	53.4	58.6	50.1	57.1	55.3	52.8	51.8	51.5
267		3:38:38	0:15:00	53.2	60.8	49.1	57.6	55.5	52.3	50.8	50.5
268		3:53:38	0:15:00	52.1	65.7	47.5	59.2	54.2	50.7	49.5	49.3
269		4:08:38	0:15:00	51.3	62.6	47.2	57.8	53.7	50.1	48.8	48.6
270		4:23:38	0:15:00	50.8	57.8	46.9	55.4	53	50	48.6	48.3
271		4:38:38	0:15:00	50.8	63.3	46.4	56.5	53.1	49.7	48.3	48
272		4:53:38	0:15:00	50.3	66.7	46.3	55.7	52.4	49.2	47.8	47.6
273		5:08:38	0:15:00	52.9	63.6	46.7	59	55.4	51.3	48.8	48.5
274		5:23:38	0:15:00	55.7	71.6	47	62.5	59.3	53.9	50.2	49.6
275		5:38:38	0:15:00	52.3	63.6	46	58.7	55.1	50.6	48.3	47.8
276		5:53:38	0:15:00	51.3	64.2	43.5	58.1	54.5	49.7	46.6	45.9
277		6:08:38	0:15:00	51.9	69.2	43.5	62	53.8	49.4	46.7	46
278		6:23:38	0:15:00	50.6	66.5	42.2	57.1	53.1	49	45.9	45.1
279		6:38:38	0:15:00	50	65.2	40.6	57.5	52.9	48.2	45	44.2
280		6:53:38	0:15:00	51.6	68	40.9	59.6	54.3	49.6	44.9	44
281 Saturday	29/11/2008	7:08:38	0:15:00	51.7	73.8	40.7	61.5	53.9	49	45.2	44.1
282		7:23:38	0:15:00	54.3	80.4	42.7	64.3	53.5	49.1	46	45.3
283		7:38:38	0:15:00	52.2	72	42.8	61.9	53.7	50	47.4	46.8
284		7:53:38	0:15:00	55.5	83	43.5	66.2	55.1	50.3	47.4	46.6
285		8:08:38	0:15:00	52.4	70.8	44.5	59.9	54.4	51.2	48.7	47.9
286		8:23:38	0:15:00	51.3	65	46	56.3	53	50.8	48.8	48.3
287		8:38:38	0:15:00	51.2	72.2	44.8	58	53.1	50	47.3	46.6
288		8:53:38	0:15:00	51.6	67.2	43.8	56.6	53.7	50.9	48.5	47.7
289		9:08:38	0:15:00	51.1	67.2	42.8	56.8	53.5	49.9	47.2	46.5
290		9:23:38	0:15:00	51.7	67	45.6	58.8	54	50.6	48	47.4
291		9:38:38	0:15:00	52.1	69.9	45	58.1	53.6	51	48.4	47.7
292		9:53:38	0:15:00	51.6	62.3	45.6	57.4	53.8	50.7	48.4	47.9
293		10:08:38	0:15:00	53.7	69.6	44.8	65.7	54.9	51.2	48.2	47.6
294		10:23:38	0:15:00	51.1	61.3	44	56.2	53.4	50.3	47.8	46.7
295		10:38:38	0:15:00	51.2	66.2	44.5	57.3	52.8	50.5	48.3	47.8
296		10:53:38	0:15:00	52.9	75.4	44.8	58	52.5	50	47.6	47
297		11:08:38	0:15:00	53.3	76.8	44.2	64.4	52.5	50.2	48.1	47.5
298		11:23:38	0:15:00	52.3	72	45.7	59.5	53.3	50.8	48.7	48.1
299		11:38:38	0:15:00	55	74.8	44.7	68.4	53.6	50.5	47.6	47
300		11:53:38	0:15:00	50.3	60	41.3	55.3	52.5	49.8	46.6	45.7
301		12:08:38	0:15:00	51.4	64.1	43.7	59.7	53.3	50.1	47.9	47.2
302		12:23:38	0:15:00	51.5	63.1	45.2	58.1	54	50.3	47.7	47.3
303		12:38:38	0:15:00	54.2	62.7	47	61.2	57.3	52.6	49.7	49.2
304		12:53:38	0:15:00	54.8	67.9	46	66.8	54.6	51.4	49.1	48.5
305		13:08:38	0:15:00	55.1	68.4	45.7	66.3	57.1	51	48.7	47.9
306		13:23:38	0:15:00	55.7	68.8	46.9	67.4	56.1	51.7	49.2	48.8
307		13:38:38	0:15:00	54.8	69.3	48.3	66.1	56	52.8	50.2	49.7
308		13:53:38	0:15:00	55.5	69.5	46.2	67.2	57	52.8	50.4	49.6
309		14:08:38	0:15:00	57.1	68.7	49.8	66.9	59.7	54	51.7	51.2
310		14:23:38	0:15:00	57	67.7	49.4	66.3	59.4	54.4	51.3	50.9
311		14:38:38	0:15:00	55.4	67.4	49	64.3	56.9	54.2	52.2	51.6
312		14:53:38	0:15:00	53.9	68.6	48.3	61	55.6	53.1	50.8	50.3
313		15:08:38	0:15:00	55.7	68.2	47.5	66.9	57.3	53.5	51.5	50.9
314		15:23:38	0:15:00	56.7	67.6	49.3	65.2	59.1	54.3	51.6	51.1
315		15:38:38	0:15:00	55.3	65.8	48.2	62	57.8	53.9	51.3	50.6
316		15:53:38	0:15:00	54.8	69.3	48.1	61	56.8	53.5	51.5	51
317		16:08:38	0:15:00	54.1	63.8	48.9	59.6	55.9	53.4	51.5	51
318		16:23:38	0:15:00	53	65.4	47.5	57.9	55.3	52.2	50.3	49.7
319		16:38:38	0:15:00	53.8	69.1	48	59.3	55.9	52.9	50.8	50.3
320		16:53:38	0:15:00	54	73.2	48.4	60.9	55.9	52.8	50.8	50.2
321		17:08:38	0:15:00	52	66.3	46.9	60.4	52.5	50.6	49.4	49
322		17:23:38	0:15:00	52.5	67	48.3	61	50.9	49.8	48.8	48.2
323		17:38:38	0:15:00	56.6	68.1	46.2	62.5	58.3	54.4	53.2	48.8
324		17:53:38	0:15:00	56.2	68	49.8	62.5	58.8	53.2	51.7	49.7
325		18:08:38	0:15:00	55.8	66	47.9	60.2	57.1	55.7	50.3	48.1
326		18:23:38	0:15:00	56.3	66.8	47.5	61.5	57.3	54.7	53.2	49.7
327		18:38:38	0:15:00	55.9	66.7	46.8	61	59.8	50.7	48.4	49.4
328		18:53:38	0:15:00	57.3	62.6	46	61	60.8	53.7	51.1	50.1
329		19:08:38	0:15:00	53.8	61.6	47.8	59.3	56.9	50	47.8	48.8
330		19:23:38	0:15:00	58.3	61.2	46.7	61.4	61.4	56.4	54.4	49.4
331		19:38:38	0:15:00	55.7	66.4	46.6	64.1	62.3	61.9	59.1	49.6
332		19:53:38	0:15:00	55.3	66.9	45	62.9	62.2	58.2	53.5	49.1
333		20:08:38	0:15:00	55.9	67.3	47.4	60.3	58.1	55	49.9	49.3
334		20:23:38	0:15:00	49.6	67.8	45.9	54.1	51.1	49.1	47.8	47.5
335		20:38:38	0:15:00	49	68	45.5	52.7	50.6	48.5	47.2	46.9
336		20:53:38	0:15:00	48.9	67.2	45.1	52.6	50.8	48.4	47	46.6
337		21:08:38	0:15:00	49.2	66.2	43.7	54.5	51.4	48.6	46.3	45.9
338		21:23:38	0:15:00	49.8	65.9	44.6	54.1	52.1	49.1	46.7	46.2
339		21:38:38	0:15:00	48.8	67.1	42.7	53.2	51.4	48.1	45.4	44.9
340											

346		23:23:38	0:15:00	48.2	62.1	42.3	54.5	50.6	47	44.9	44.4
347		23:38:38	0:15:00	48.9	61.3	43.5	54.2	51	48.1	45.8	45.3
348		23:53:38	0:15:00	52	58.3	47.2	56.5	54.2	51.3	49.1	48.7
349		0:08:38	0:15:00	48.1	56	42.1	53.4	50.9	46.8	44.1	43.7
350		0:23:38	0:15:00	48	57.3	42.2	54.7	50.5	46.7	44.2	43.9
351		0:38:38	0:15:00	48.4	54.7	42.8	53.1	50.6	47.7	45.4	44.9
352		0:53:38	0:15:00	48.2	62.1	42.3	54.5	50.6	47	44.9	44.4
353		1:08:38	0:15:00	54.7	59.9	52.4	57.6	56	54.4	53.6	53.4
354		1:23:38	0:15:00	53.2	58.3	50.1	57.1	54.8	52.7	51.7	51.5
355		1:38:38	0:15:00	53.8	58.2	50.9	57.1	55.3	53.5	52.4	52.1
356		1:53:38	0:15:00	54.2	60.4	51.6	57.1	55.3	53.9	53.1	52.9
357		2:08:38	0:15:00	54.5	58.9	51.7	57.4	55.9	54.1	53.2	53
358		2:23:38	0:15:00	54.7	59.9	52.4	57.6	56	54.4	53.6	53.4
359		2:38:38	0:15:00	55.3	62.8	52.5	60.1	56.7	54.7	53.8	53.7
360		2:53:38	0:15:00	54.5	63.5	51.9	59	55.8	54	53.1	52.9
361		3:08:38	0:15:00	55.6	70	51.5	65.7	56.8	53.8	53	52.8
362		3:23:38	0:15:00	56.3	72	51.9	64.6	57.8	54.1	53.2	53
363		3:38:38	0:15:00	54.2	66.7	51.4	58.9	55.2	53.7	52.9	52.7
364		3:53:38	0:15:00	56.9	71	51.4	63.8	59.2	55.4	53	52.7
365		4:08:38	0:15:00	54.7	64.9	51.7	57.9	56.1	54.2	53.1	52.8
366		4:23:38	0:15:00	57.6	65.4	49.9	63	61.8	55.4	51.9	51.5
367		4:38:38	0:15:00	51.9	57.1	48.6	55.6	53.8	51.3	50.3	50
368		4:53:38	0:15:00	51.7	59.3	47.6	56.1	54	50.8	49.3	49
369		5:08:38	0:15:00	51.4	62.1	45.2	57.5	53.9	49.8	47.3	47
370		5:23:38	0:15:00	54.2	70.1	45.5	61	57.8	52.4	48.7	48.1
371		5:38:38	0:15:00	50.8	62.1	44.5	57.2	53.6	49.1	46.8	46.3
372		5:53:38	0:15:00	49.8	62.7	42	56.6	53	48.2	45.1	44.4
373		6:08:38	0:15:00	50.4	67.7	42	60.5	52.3	47.9	45.2	44.5
374		6:23:38	0:15:00	49.1	65	40.7	55.6	51.6	47.5	44.4	43.6
375		6:38:38	0:15:00	48.5	63.7	39.1	56	51.4	46.7	43.5	42.7
376		6:53:38	0:15:00	50.1	66.5	39.4	58.1	52.8	48.1	43.4	42.5
377 Sunday	30/11/2008	7:08:38	0:15:00	51.7	73.8	40.7	61.5	53.9	49	45.2	44.1
378		7:23:38	0:15:00	51.7	73.8	40.7	61.5	53.9	49	45.2	44.1
379		7:38:38	0:15:00	54.3	80.4	42.7	64.3	53.5	49.1	46	45.3
380		7:53:38	0:15:00	52.2	72	42.8	61.9	53.7	50	47.4	46.8
381		8:08:38	0:15:00	55.5	83	43.5	66.2	55.1	50.3	47.4	46.6
382		8:23:38	0:15:00	52.4	70.8	44.5	59.9	54.4	51.2	48.7	47.9
383		8:38:38	0:15:00	55.5	69.5	46.2	67.2	57	52.8	50.4	49.6
384		8:53:38	0:15:00	57.1	68.7	49.8	66.9	59.7	54	51.7	51.2
385		9:08:38	0:15:00	57	67.7	49.4	66.3	59.4	54.4	51.3	50.9
386		9:23:38	0:15:00	55.4	67.4	49	64.3	56.9	54.2	52.2	51.6
387		9:38:38	0:15:00	53.9	68.6	48.3	61	55.6	53.1	50.8	50.3
388		9:53:38	0:15:00	55.7	68.2	47.5	66.9	57.3	53.5	51.5	50.9
389		10:08:38	0:15:00	56.7	67.6	49.3	65.2	59.1	54.3	51.6	51.1
390		10:23:38	0:15:00	55.3	65.8	48.2	62	57.8	53.9	51.3	50.6
391		10:38:38	0:15:00	54.8	69.3	48.1	61	56.8	53.5	51.5	51
392		10:53:38	0:15:00	54.1	63.8	48.9	59.6	55.9	53.4	51.5	51
393		11:08:38	0:15:00	52.9	75.4	44.8	58	52.5	50	47.6	47
394		11:23:38	0:15:00	53.3	76.8	44.2	64.4	52.5	50.2	48.1	47.5
395		11:38:38	0:15:00	52.3	72	45.7	59.5	53.3	50.8	48.7	48.1
396		11:53:38	0:15:00	55	74.8	44.7	68.4	53.6	50.5	47.6	47
397		12:08:38	0:15:00	50.3	60	41.3	55.3	52.5	49.8	46.6	45.7
398		12:23:38	0:15:00	51.4	64.1	43.7	59.7	53.3	50.1	47.9	47.2
399		12:38:38	0:15:00	51.5	63.1	45.2	58.1	54	50.3	47.7	47.3
400		12:53:38	0:15:00	54.2	62.7	47	61.2	57.3	52.6	49.7	49.2
401		13:08:38	0:15:00	54.8	67.9	46	66.8	54.6	51.4	49.1	48.5
402		13:23:38	0:15:00	55.1	68.4	45.7	66.3	57.1	51	48.7	47.9
403		13:38:38	0:15:00	55.7	68.8	46.9	67.4	56.1	51.7	49.2	48.8
404		13:53:38	0:15:00	54.8	69.3	48.3	66.1	56	52.8	50.2	49.7
405		14:08:38	0:15:00	50.8	84.1	41.6	61.5	53.2	48.9	45.3	44.3
406		14:23:38	0:15:00	51.7	82.7	41.1	59.4	52.9	48.2	45.5	44.7
407		14:38:38	0:15:00	50	65.6	42	55.9	52.3	48.7	45.5	44.8
408		14:53:38	0:15:00	51.3	62.5	45.3	56.5	53.7	50.4	48.2	47.7
409		15:08:38	0:15:00	52.9	88.3	44.8	56.1	51.4	48.5	47.3	47.2
410		15:23:38	0:15:00	55.5	70.7	49.2	63.8	57.2	53.8	51.6	51.2
411		15:38:38	0:15:00	54.5	73.1	48	61	56.3	53.5	51.1	50.6
412		15:53:38	0:15:00	55.4	66.6	49.9	61.4	57.5	54.6	52.5	51.9
413		16:08:38	0:15:00	55.4	71.7	49.3	61.9	57	54.4	52.4	52
414		16:23:38	0:15:00	55.6	67.7	50.4	60.4	57.4	55.1	52.9	52.3
415		16:38:38	0:15:00	54.4	64.8	48.1	60.3	56.3	53.7	51.4	50.8
416		16:53:38	0:15:00	54.5	62.8	48.5	59.3	56.5	54	51.8	51.3
417		17:08:38	0:15:00	54.8	62.7	49	59.6	56.9	54.2	51.9	51.4
418		17:23:38	0:15:00	55	75	48.6	62.5	56.4	53.8	51.7	51
419		17:38:38	0:15:00	54.4	68.2	46.2	62.3	56.8	53	49.9	49.1
420		17:53:38	0:15:00	54.5	67.7	45.8	63.6	57	52.6	50	49.4
421		18:08:38	0:15:00	56.2	68	49.8	62.5	58.8	53.2	51.7	49.7
422		18:23:38	0:15:00	57.3	67.5	49.4	61.7	58.6	57.2	51.8	49.6
423		18:38:38	0:15:00	57.8	68.3	49	63	58.8	56.2	54.7	51.2
424		18:53:38	0:15:00	57.4	68.2	48.3	62.5	61.3	52.2	49.9	50.9
425		19:08:38	0:15:00	58.8	64.1	47.5	62.5	62.3	55.2	52.6	51.6
426		19:23:38	0:15:00	55.3	63.1	49.3	60.8	58.4	51.5	49.3	50.3
427		19:38:38	0:15:00	59.8	62.7	48.2	62.9	62.9	57.9	55.9	50.9
428		19:53:38	0:15:00	57.2	67.9	48.1	65.6	63.8	63.4	60.6	51.1
429		20:08:38	0:15:00	56.8	68.4	46.5	64.4	63.7	59.7	55	50.6
430		20:23:38	0:15:00	57.4	68.8	48.9	61.8	59.6	56.5	51.4	50.8
431		20:38:38	0:15:00	51.1	69.3	47.4	55.6	52.6	50.6	49.3	49
432		20:53:38	0:15:00	50.5	69.5	47	54.2	52.1	50	48.7	48.4
433		21:08:38	0:15:00	50.4	68.7	46.6	54.1	52.3	49.9	48.5	48.1
434		21:23:38	0:15:00	50.7	67.7	45.2	56	52.9	50.1	47.8	47.4
435		21:38:38	0:15:00	51.3	67.4	46.1	55.6	53.6	50.6	48.2	47.7
436		21:53:38	0:15:00	50.3	68.6	44.2	54.7	52.9	49.6	46.9	46.4
437	30/11/2008	22:08:38	0:15:00	57.7	65.8	43.9	64.8	63.4	50.2	46.7	46.2
438		22:23:38	0:15:00	49.2	56.3	44.4	54.4	51.5	48.2	46.3	45.9
439		22:38:38	0:15:00	49.6	58.5	45	54.6	51.5	48.9	47.1	46.7
440		22:53:38	0:15:00	49.6	57.5	43.6	54.9	52.4	48.3	45.6	45.2
441		23:08:38	0:15:00	49.5	58.8	43.7	56.2	52	48.2	45.7	45.4
442		23:23:38	0:15:00	49.9	56.2	44.3	54.6	52.1	49.2	46.9	46.4
443		23:38:38	0:15:00	49.7	63.6	43.8	56	52.1	48.5	46.4	45.9
444		23:53:38	0:15:00	50.4	62.8	45	55.7	52.5	49.6	47.3	46.8
445		0:08:38	0:15:00	53.5	59.8	48.7	58	55.7	52.8	50.6	50.2
446		0:23:38	0:15:00	54.7	59.8	51.6	58.6	56.3	54.2	53.2	53
447		0:38:38	0:15:00	55.3	59.7	52.4	58.6	56.8	55	53.9	53.6
448		0:53:38	0:15:00	55.7	61.9	53.1	58.6	56.8	55.4	54.6	54.4
449		1:08:38	0:15:00	56	60.4	53.2	58.9	57.4	55.6	54.7	54.5
450		1:23:38	0:15:00	56.2	61.4	53.9	59.1	57.5	55.9	55.1	54.9
451		1:38:38	0:15:00	56.8	64.3	54	61.6	58.2	56.2	55.3	55.2
452		1:53:38	0:15:00	56	65	53.4	60.5	57.3	55.5	54.6	54.4
453		2:08:38	0:15:00	57.1	71.5	53	67.2	58.3	55.3	54.5	54.3
454		2:23:38	0:15:00	57.8	73.5	53.4	66.1	59.3	55.6	54.7	54.5
455		2:38:38	0:15:00	55.7	68.2	52.9	60.4	56.7	55.2	54.4	54.2
456		2:53:									

462		4:23:38	0:15:00	51.3	62.6	47.2	57.8	53.7	50.1	48.8	48.6
463		4:38:38	0:15:00	50.8	57.8	46.9	55.4	53	50	48.6	48.3
464		4:53:38	0:15:00	50.8	63.3	46.4	56.5	53.1	49.7	48.3	48
465		5:08:38	0:15:00	50.3	66.7	46.3	55.7	52.4	49.2	47.8	47.6
466		5:23:38	0:15:00	52.9	63.6	46.7	59	55.4	51.3	48.8	48.5
467		5:38:38	0:15:00	55.7	71.6	47	62.5	59.3	53.9	50.2	49.6
468		5:53:38	0:15:00	52.3	63.6	46	58.7	55.1	50.6	48.3	47.8
469		6:08:38	0:15:00	51.3	64.2	43.5	58.1	54.5	49.7	46.6	45.9
470		6:23:38	0:15:00	51.9	69.2	43.5	62	53.8	49.4	46.7	46
471		6:38:38	0:15:00	50.6	66.5	42.2	57.1	53.1	49	45.9	45.1
472		6:53:38	0:15:00	50	65.2	40.6	57.5	52.9	48.2	45	44.2
473	Monday	7:08:38	0:15:00	51.6	68	40.9	59.6	54.3	49.6	44.9	44
474		7:23:38	0:15:00	51.7	73.8	40.7	61.5	53.9	49	45.2	44.1
475		7:38:38	0:15:00	52.2	72	42.8	61.9	53.7	50	47.4	46.8
476		7:53:38	0:15:00	55.5	83	43.5	66.2	55.1	50.3	47.4	46.6
477		8:08:38	0:15:00	52.4	70.8	44.5	59.9	54.4	51.2	48.7	47.9
478		8:23:38	0:15:00	51.3	65	46	56.3	53	50.8	48.8	48.3
479		8:38:38	0:15:00	51.2	72.2	44.8	58	53.1	50	47.3	46.6
480		8:53:38	0:15:00	51.6	67.2	43.8	56.6	53.7	50.9	48.5	47.7
481		9:08:38	0:15:00	51.1	67.2	42.8	56.8	53.5	49.9	47.2	46.5
482		9:23:38	0:15:00	51.7	67	45.6	58.8	54	50.6	48	47.4
483		9:38:38	0:15:00	52.1	69.9	45	58.1	53.6	51	48.4	47.7
484		9:53:38	0:15:00	51.6	62.3	45.6	57.4	53.8	50.7	48.4	47.9
485		10:08:38	0:15:00	53.7	69.6	44.8	65.7	54.9	51.2	48.2	47.6
486		10:23:38	0:15:00	50.6	58.9	46	54.5	52.5	49.8	47.6	46.7
487		10:38:38	0:15:00	51.6	64.2	44.5	58.3	53.5	51.1	48.7	48
488		10:53:38	0:15:00	53.9	76.4	46.3	60	53.8	50.9	48.1	47.3
489		11:08:38	0:15:00	53	75.9	44.1	63.9	52.1	49.9	47.9	47.45
490		11:23:38	0:15:00	52.2	72.3	44.7	58.8	52.9	50.5	48.5	48.05
491		11:38:38	0:15:00	54.8	75.4	44.7	70.4	55.3	51.5	48.1	47.5
492		11:53:38	0:15:00	50.2	60.3	40.3	54.6	52.1	49.5	46.4	45.65
493		12:08:38	0:15:00	51.9	64.7	43.7	61.7	55	51.1	48.4	47.7
494		12:23:38	0:15:00	51	60.7	47.2	56.4	53.1	49.8	47.5	47.3
495		12:38:38	0:15:00	54.6	60.7	47	62.2	58	53.2	50.1	49.4
496		12:53:38	0:15:00	55.8	68.9	47.5	68.8	55.9	52.3	49.6	48.8
497		13:08:38	0:15:00	54.8	67.5	45.6	65.8	56.7	50.7	48.5	47.85
498		13:23:38	0:15:00	55.6	69.1	45.9	66.7	55.7	51.4	49	48.75
499		13:38:38	0:15:00	54.6	69.9	48.3	68.1	57.7	53.8	50.7	50.2
500		13:53:38	0:15:00	55.4	69.8	45.2	66.5	56.6	52.5	50.2	49.55
501		14:08:38	0:15:00	57.6	69.3	49.8	68.9	61.4	55	52.2	51.7
502		14:23:38	0:15:00	56.5	65.3	51.4	64.6	58.5	53.9	51.1	50.9
503		14:38:38	0:15:00	55.8	65.4	49	65.3	57.6	54.8	52.6	51.8
504		14:53:38	0:15:00	54.9	69.6	49.8	63	56.9	54	51.3	50.6
505		15:08:38	0:15:00	55.4	67.3	47.4	66.4	56.9	53.2	51.3	50.85
506		15:23:38	0:15:00	56.6	67.9	48.3	64.5	58.7	54	51.4	51.05
507		15:38:38	0:15:00	55.1	66.4	48.2	64	59.5	54.9	51.8	51.1
508		15:53:38	0:15:00	54.7	69.6	47.1	60.3	56.4	53.2	51.3	50.95
509		16:08:38	0:15:00	54.6	64.4	48.9	61.6	57.6	54.4	52	51.5
510		16:23:38	0:15:00	52.5	63	49.5	56.2	54.4	51.7	50.1	49.7
511		16:38:38	0:15:00	54.2	67.1	48	60.3	56.6	53.5	51.2	50.5
512		16:53:38	0:15:00	55	74.2	49.9	62.9	57.2	53.7	51.3	50.5
513		17:08:38	0:15:00	54.1	65.9	47.7	64.9	56.1	52.3	50.2	49.75
514		17:23:38	0:15:00	54.8	67.8	45.7	65.3	54.5	51.5	49.6	48.95
515		17:38:38	0:15:00	58.8	69.2	50.7	69.5	64	57.4	54.7	53.6
516		17:53:38	0:15:00	58.5	68.8	49.3	66.8	62.4	54.9	52.5	52.25
517		18:08:38	0:15:00	54.7	69.6	47.1	60.3	56.4	53.2	51.3	50.95
518		18:23:38	0:15:00	54.6	64.4	48.9	61.6	57.6	54.4	52	51.5
519		18:38:38	0:15:00	52.5	63	49.5	56.2	54.4	51.7	50.1	49.7
520		18:53:38	0:15:00	54.2	67.1	48	60.3	56.6	53.5	51.2	50.5
521		19:08:38	0:15:00	55	74.2	49.9	62.9	57.2	53.7	51.3	50.5
522		19:23:38	0:15:00	54.1	65.9	47.7	64.9	56.1	52.3	50.2	49.75
523		19:38:38	0:15:00	54.8	67.8	45.7	65.3	54.5	51.5	49.6	48.95
524		19:53:38	0:15:00	58.8	69.2	50.7	69.5	64	57.4	54.7	53.6
525		20:08:38	0:15:00	58.5	68.8	49.3	66.8	62.4	54.9	52.5	52.25
526		20:23:38	0:15:00	60.2	68.6	49.8	68.7	64.3	60.2	53.3	52.8
527		20:38:38	0:15:00	59.7	66.4	54.1	66.3	61.9	57.7	55.5	55.2
528		20:53:38	0:15:00	60.2	66.7	47.1	68.5	66	54.8	51.3	50.1
529		21:08:38	0:15:00	62.2	76.7	50.9	69.5	67.6	58.1	54.1	53
530		21:23:38	0:15:00	57.4	73.6	48.1	65.3	62	53.2	50.1	49.75
531		21:38:38	0:15:00	63.1	79.2	51.4	67.2	66.5	59.6	56.7	56.25
532		21:53:38	0:15:00	57.6	66.1	42.9	64.1	63	49.9	46.5	46.15
533	1/12/2008	22:08:38	0:15:00	55.9	60.5	53.8	58.6	57.1	55.6	54.9	54.85
534		22:23:38	0:15:00	56.7	64.6	53	60.9	57.8	55.9	55.1	55.15
535		22:38:38	0:15:00	55.8	65.6	53.4	62.5	59	56.5	55.1	54.9
536		22:53:38	0:15:00	57	71.8	52	66.5	57.9	55	54.3	54.25
537		23:08:38	0:15:00	58.3	74.1	53.4	68.1	61	56.6	55.2	55
538		23:23:38	0:15:00	55.2	65.8	54.9	58.7	55.8	54.7	54.2	54.2
539		23:38:38	0:15:00	50.2	63.4	45	57.7	54.2	50.6	47.8	47.3
540		23:53:38	0:15:00	53.4	60.1	47.7	57.3	55.3	52.5	50.4	50.15
541		0:08:38	0:15:00	55.2	60.4	51.6	60.6	58	55.2	53.7	53.5
542		0:23:38	0:15:00	54.8	57.3	54.4	56.9	55.9	54.5	53.7	53.6
543		0:38:38	0:15:00	56.1	59.9	53.1	59.6	57.5	56	55	54.6
544		0:53:38	0:15:00	57	61.4	54.7	60.9	58.7	56.5	55.2	54.8
545		1:08:38	0:15:00	55.9	60.5	53.8	58.6	57.1	55.6	54.9	54.85
546		1:23:38	0:15:00	56.7	64.6	53	60.9	57.8	55.9	55.1	55.15
547		1:38:38	0:15:00	55.8	65.6	53.4	62.5	59	56.5	55.1	54.9
548		1:53:38	0:15:00	57	71.8	52	66.5	57.9	55	54.3	54.25
549		2:08:38	0:15:00	58.3	74.1	53.4	68.1	61	56.6	55.2	55
550		2:23:38	0:15:00	55.2	65.8	54.9	58.7	55.8	54.7	54.2	54.2
551		2:38:38	0:15:00	58.8	70.5	52.9	66.3	61.4	57.5	54.9	54.4
552		2:53:38	0:15:00	57.2	67.4	54.7	61.4	58.9	56.6	55.1	54.6
553		3:08:38	0:15:00	58.8	66	51.3	64	62.9	56.6	53.2	52.95
554		3:23:38	0:15:00	53.3	58.9	49.1	56.4	54.9	52.5	51.6	51.45
555		3:38:38	0:15:00	53	61.4	49.1	59.6	57.2	53.3	51.3	51
556		3:53:38	0:15:00	52	66	46.5	58.5	53.8	50.4	49.3	49.25
557		4:08:38	0:15:00	51.8	63.2	47.2	59.8	55.4	51.1	49.3	49.1
558		4:23:38	0:15:00	50.3	55.4	48.9	53.7	52.1	49.5	48.4	48.3
559		4:38:38	0:15:00	51.2	61.3	46.4	57.5	53.8	50.3	48.7	48.2
560		4:53:38	0:15:00	51.3	67.7	47.8	57.7	53.7	50.1	48.3	47.9
561		5:08:38	0:15:00	52.6	62.7	46.6	58.5	55	51	48.6	48.45
562		5:23:38	0:15:00	55.6	71.9	46	61.8	58.9	53.6	50	49.55
563		5:38:38	0:15:00	52.1	64.2	46	60.7	56.8	51.6	48.8	48.3
564		5:53:38	0:15:00	51.2	64.5	42.5	57.4	54.1	49.4	46.4	45.85
565		6:08:38	0:15:00	52.4	69.8	43.5	64	55.5	50.4	47.2	46.5
566		6:23:38	0:15:00	50.1	64.1	44.2	55.4	52.2	48.5	45.7	45.1
567		6:38:38	0:15:00	50.4	63.2	40.6	58.5	53.6	48.8	45.4	44.4
568		6:53:38	0:15:00	52.6	69	42.4	61.6	55.6	50.5	45.4	44.3
569	Tuesday	7:08:38	0:15:00	51.4	72.9	40.6	61	53.5	48.7	45	44.05
570		7:23:38	0:15:00	54.2	80.7	41.7	63.6	53.1	48.8	45.8	45.25
571		7:38:38	0:15:00	52	72.6	42.8	63.9	55.4	51	47.9	47.3
5											

578		9:23:38	0:15:00	51.6	67.3	44.6	58.1	53.6	50.3	47.8	47.35
579		9:38:38	0:15:00	51.9	70.5	45	60.1	55.3	52	48.9	48.2
580		9:53:38	0:15:00	51.5	62.6	44.6	56.7	53.4	50.4	48.2	47.85
581		10:08:38	0:15:00	54.2	70.2	44.8	67.7	56.6	52.2	48.7	48.1
582		10:23:38	0:15:00	50.6	58.9	46	54.5	52.5	49.8	47.6	46.7
583		10:38:38	0:15:00	51.6	64.2	44.5	58.3	53.5	51.1	48.7	48
584		10:53:38	0:15:00	53.9	76.4	46.3	60	53.8	50.9	48.1	47.3
585		11:08:38	0:15:00	53	75.9	44.1	63.9	52.1	49.9	47.9	47.45
586		11:23:38	0:15:00	52.2	72.3	44.7	58.8	52.9	50.5	48.5	48.05
587		11:38:38	0:15:00	54.8	75.4	44.7	70.4	55.3	51.5	48.1	47.5
588		11:53:38	0:15:00	50.2	60.3	40.3	54.6	52.1	49.5	46.4	45.65
589		12:08:38	0:15:00	51.9	64.7	43.7	61.7	55	51.1	48.4	47.7
590		12:23:38	0:15:00	51	60.7	47.2	56.4	53.1	49.8	47.5	47.3
591		12:38:38	0:15:00	57.7	66.5	48.6	64.3	60.1	56.9	53.1	49.8
592		12:53:38	0:15:00	57.6	70.7	50.6	64.5	59.1	56.8	54.3	51.6
593		13:08:38	0:15:00	58.2	74.5	49.2	65	60.3	57	53.9	50.4
594		13:23:38	0:15:00	57.3	72.9	48.9	63	59.3	56.6	53.1	50.4
595		13:38:38	0:15:00	61	83.7	48.8	66.7	63	58.3	55.3	51.2
596		13:53:38	0:15:00	61.7	83.8	50.9	66.6	63.6	60.3	56.8	52.3
597		14:08:38	0:15:00	60.5	89.3	49.8	64.3	60.8	57.6	53.5	51.1
598		14:23:38	0:15:00	57.8	70.2	48.2	63.4	59.8	57.4	53.4	49.1
599		14:38:38	0:15:00	56.9	64	50.4	61.7	59	56.6	53.5	51.3
600		14:53:38	0:15:00	56.7	64.3	45.6	62	58.9	56.4	51.2	47.3
601		15:08:38	0:15:00	58	67.7	49.2	64.1	60.1	57.3	54.1	51.1
602		15:23:38	0:15:00	58.6	72.2	49.9	64.1	60.7	57.8	54.2	51.1
603		15:38:38	0:15:00	57.3	67.2	49.5	64	59.2	56.7	53.2	50.6
604		15:53:38	0:15:00	57.6	67.3	47.1	64.3	59.8	56.6	53.2	49.3
605		16:08:38	0:15:00	56.7	66.7	47.6	62.8	58.8	56.2	51.2	48.4
606		16:23:38	0:15:00	57.3	65.3	45.6	62.5	59.5	56.9	52.7	47.8
607		16:38:38	0:15:00	57	64.5	50.4	62.1	58.8	56.6	53.7	51.4
608		16:53:38	0:15:00	56.5	67	47.8	63	58.6	56.1	51.3	48.9
609		17:08:38	0:15:00	58.2	85	48.5	62.8	59.4	56.8	54	50.9
610		17:23:38	0:15:00	60.1	69.7	49.7	66.2	62.8	58.8	55.5	51.7
611		17:38:38	0:15:00	59.7	68.8	49.7	65.9	62.6	58.5	55.2	50.9
612		17:53:38	0:15:00	58.4	65.7	49.9	63.7	60.5	57.8	55	51.3
613		18:08:38	0:15:00	58.3	67.8	47.8	64.1	60.5	57.6	54.4	49.5
614		18:23:38	0:15:00	50.2	60.3	40.3	54.6	52.1	49.5	46.4	45.65
615		18:38:38	0:15:00	51.9	64.7	43.7	61.7	55	51.1	48.4	47.7
616		18:53:38	0:15:00	51	60.7	47.2	56.4	53.1	49.8	47.5	47.3
617		19:08:38	0:15:00	57.7	66.5	48.6	64.3	60.1	56.9	53.1	49.8
618		19:23:38	0:15:00	57.6	70.7	50.6	64.5	59.1	56.8	54.3	51.6
619		19:38:38	0:15:00	58.2	74.5	49.2	65	60.3	57	53.9	50.4
620		19:53:38	0:15:00	57.3	72.9	48.9	63	59.3	56.6	53.1	50.4
621		20:08:38	0:15:00	61	83.7	48.8	66.7	63	58.3	55.3	51.2
622		20:23:38	0:15:00	61.7	83.8	50.9	66.6	63.6	60.3	56.8	52.3
623		20:38:38	0:15:00	60.5	89.3	49.8	64.3	60.8	57.6	53.5	51.1
624		20:53:38	0:15:00	51.4	57.1	48.1	56.1	53.6	50.8	49	48.4
625		21:08:38	0:15:00	50.4	57.4	45.1	55.5	52.5	49.8	47.6	47.35
626		21:23:38	0:15:00	51.2	65.1	45.1	54.9	53.2	50.3	48	47.65
627		21:38:38	0:15:00	50.1	57.5	44.2	56.7	54.6	50.6	47.4	46.9
628		21:53:38	0:15:00	57.6	66.1	42.9	64.1	63	49.9	46.5	46.15
629	2/12/2008	22:08:38	0:15:00	49.7	56.9	44.4	56.4	53.2	49.2	46.8	46.4
630		22:23:38	0:15:00	49.1	56.1	47	52.9	50.6	48.4	46.9	46.7
631		22:38:38	0:15:00	50	55.5	43.6	55.9	53.1	48.9	46	45.4
632		22:53:38	0:15:00	50.5	59.8	45.2	58.2	53.3	49.1	46.2	45.7
633		23:08:38	0:15:00	49.6	55.3	44.2	54.1	51.7	48.9	46.7	46.35
634		23:23:38	0:15:00	49.6	63.9	42.8	55.3	51.7	48.2	46.2	45.85
635		23:38:38	0:15:00	50.2	63.4	45	57.7	54.2	50.6	47.8	47.3
636		23:53:38	0:15:00	53.4	60.1	47.7	57.3	55.3	52.5	50.4	50.15
637		0:08:38	0:15:00	55.2	60.4	51.6	60.6	58	55.2	53.7	53.5
638		0:23:38	0:15:00	54.8	57.3	54.4	56.9	55.9	54.5	53.7	53.6
639		0:38:38	0:15:00	56.1	59.9	53.1	59.6	57.5	56	55	54.6
640		0:53:38	0:15:00	57	61.4	54.7	60.9	58.7	56.5	55.2	54.8
641		1:08:38	0:15:00	55.9	60.5	53.8	58.6	57.1	55.6	54.9	54.85
642		1:23:38	0:15:00	56.7	64.6	53	60.9	57.8	55.9	55.1	55.15
643		1:38:38	0:15:00	55.8	65.6	53.4	62.5	59	56.5	55.1	54.9
644		1:53:38	0:15:00	57	71.8	52	66.5	57.9	55	54.3	54.25
645		2:08:38	0:15:00	58.3	74.1	53.4	68.1	61	56.6	55.2	55
646		2:23:38	0:15:00	55.2	65.8	54.9	58.7	55.8	54.7	54.2	54.2
647		2:38:38	0:15:00	58.8	70.5	52.9	66.3	61.4	57.5	54.9	54.4
648		2:53:38	0:15:00	57.2	67.4	54.7	61.4	58.9	56.6	55.1	54.6
649		3:08:38	0:15:00	58.8	66	51.3	64	62.9	56.6	53.2	52.95
650		3:23:38	0:15:00	53.3	58.9	49.1	56.4	54.9	52.5	51.6	51.45
651		3:38:38	0:15:00	53	61.4	49.1	59.6	57.2	53.3	51.3	51
652		3:53:38	0:15:00	52	66	46.5	58.5	53.8	50.4	49.3	49.25
653		4:08:38	0:15:00	51.8	63.2	47.2	59.8	55.4	51.1	49.3	49.1
654		4:23:38	0:15:00	50.3	55.4	48.9	53.7	52.1	49.5	48.4	48.3
655		4:38:38	0:15:00	51.2	61.3	46.4	57.5	53.8	50.3	48.7	48.2
656		4:53:38	0:15:00	51.3	67.7	47.8	57.7	53.7	50.1	48.3	47.9
657		5:08:38	0:15:00	52.6	62.7	46.6	58.5	55	51	48.6	48.45
658		5:23:38	0:15:00	55.6	71.9	46	61.8	58.9	53.6	50	49.55
659		5:38:38	0:15:00	52.1	64.2	46	60.7	56.8	51.6	48.8	48.3
660		5:53:38	0:15:00	51.2	64.5	42.5	57.4	54.1	49.4	46.4	45.85
661		6:08:38	0:15:00	52.4	69.8	43.5	64	55.5	50.4	47.2	46.5
662		6:23:38	0:15:00	50.1	64.1	44.2	55.4	52.2	48.5	45.7	45.1
663		6:38:38	0:15:00	50.4	63.2	40.6	58.5	53.6	48.8	45.4	44.4
664		6:53:38	0:15:00	52.6	69	42.4	61.6	55.6	50.5	45.4	44.3
665	Wednesday	7:08:38	0:15:00	51.4	72.9	40.6	61	53.5	48.7	45	44.05
666		7:23:38	0:15:00	54.2	80.7	41.7	63.6	53.1	48.8	45.8	45.25
667		7:38:38	0:15:00	52	72.6	42.8	63.9	55.4	51	47.9	47.3
668		7:53:38	0:15:00	55.4	83.3	42.5	65.5	54.7	50	47.2	46.55
669		8:08:38	0:15:00	52.9	71.4	44.5	61.9	56.1	52.2	49.2	48.4
670		8:23:38	0:15:00	50.8	62.6	48	54.6	52.1	50.3	48.6	48.3
671		8:38:38	0:15:00	51.6	70.2	44.8	59	53.8	50.6	47.7	46.8
672		8:53:38	0:15:00	52.6	68.2	45.3	58.6	55	51.8	49	48
673		9:08:38	0:15:00	50.8	66.3	42.7	56.3	53.1	49.6	47	46.45
674		9:23:38	0:15:00	51.6	67.3	44.6	58.1	53.6	50.3	47.8	47.35
675		9:38:38	0:15:00	51.9	70.5	45	60.1	55.3	52	48.9	48.2
676		9:53:38	0:15:00	51.5	62.6	44.6	56.7	53.4	50.4	48.2	47.85
677		10:08:38	0:15:00	54.2	70.2	44.8	67.7	56.6	52.2	48.7	48.1

