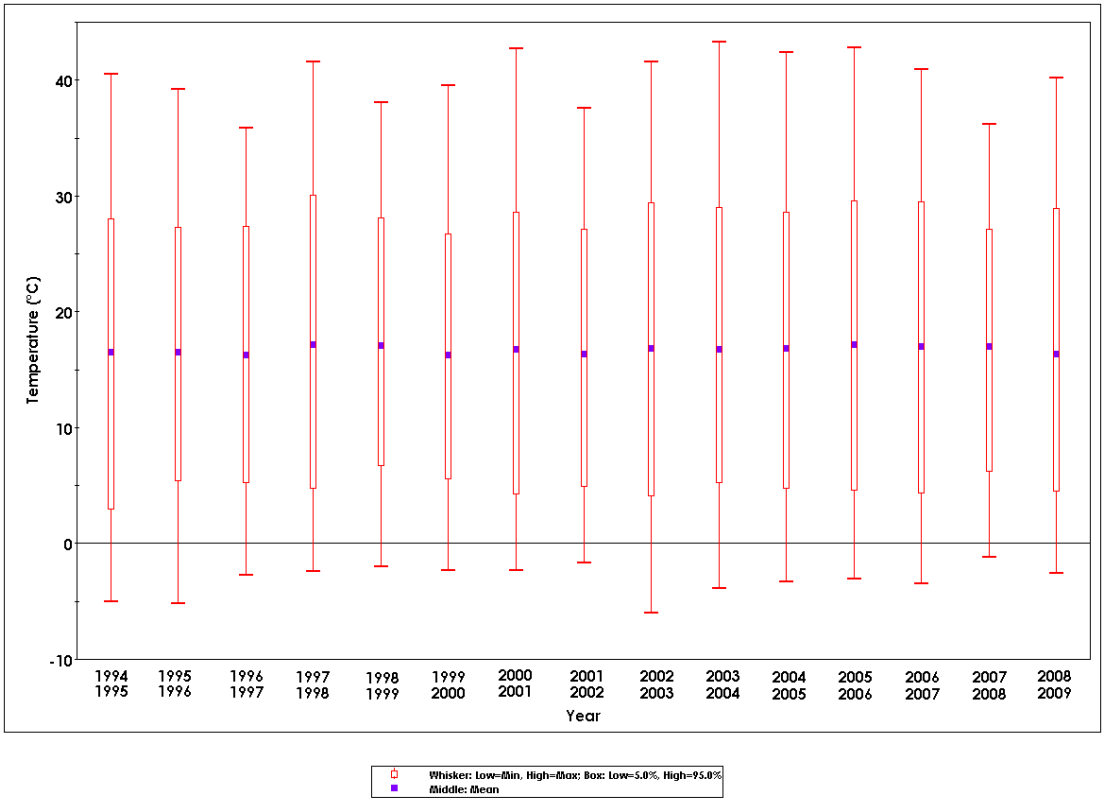

Figure 10 Annual temperature summary for Cessnock for each March to February period during 1994 to 2009

Location: Cessnock	**Period:** 1994 - 2009	**Data source:** BoM	**Units:** Degrees Celsius
Type: Box and whisker		**Prepared by:** Sarah Menzel	**Date:** July 2009

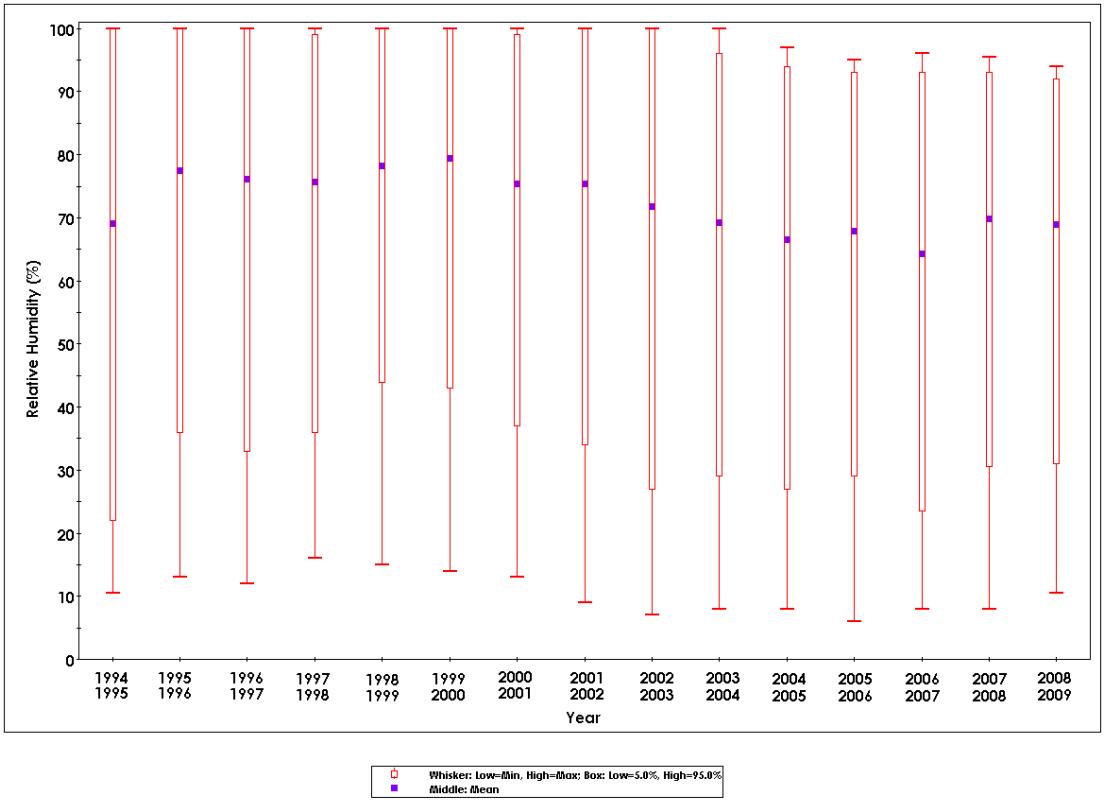

Figure 11 Annual relative humidity summary for Cessnock for each March to February period during 1994 to 2009

Location: Cessnock	**Period:** 1994 - 2009	**Data source:** BoM	**Units:** %
Type: Box and whisker		**Prepared by:** Sarah Menzel	**Date:** July 2009

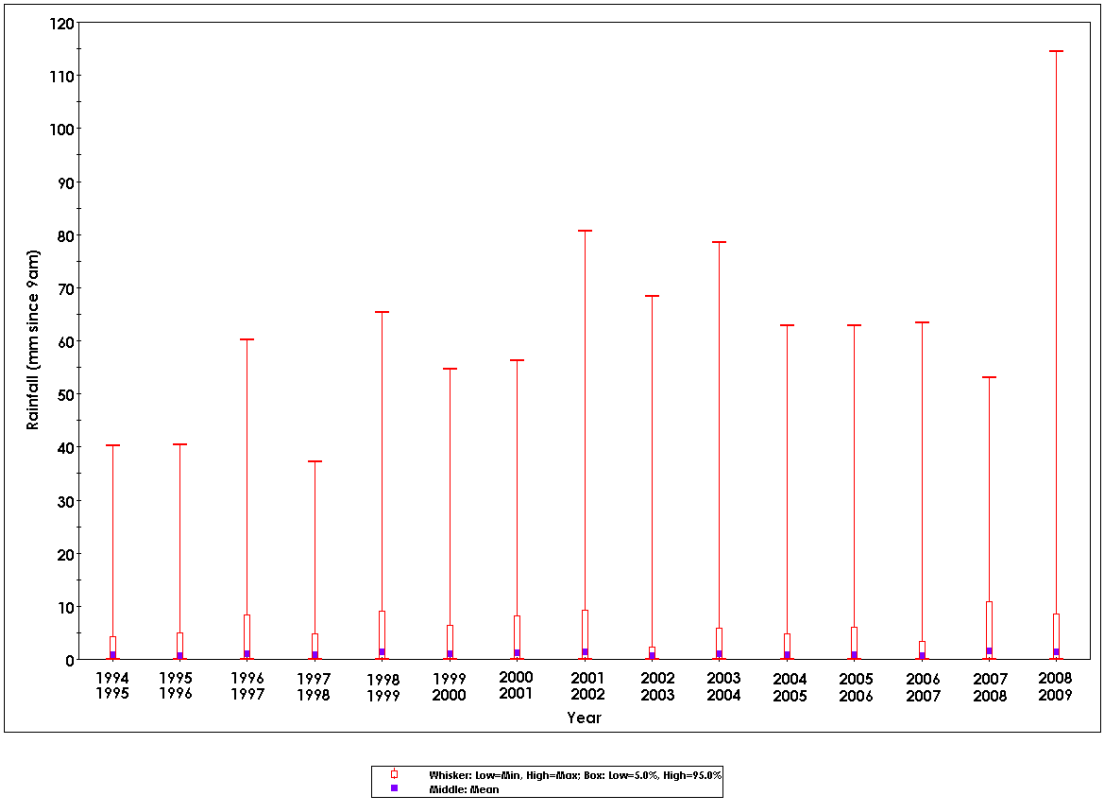

Figure 12 Annual rainfall summary for Cessnock for each March to February period during 1994 to 2009

Location: Cessnock	**Period:** 1994 - 2009	**Data source:** BoM	**Units:** mm since 9am
Type: Box and whisker		**Prepared by:** Sarah Menzel	**Date:** July 2009

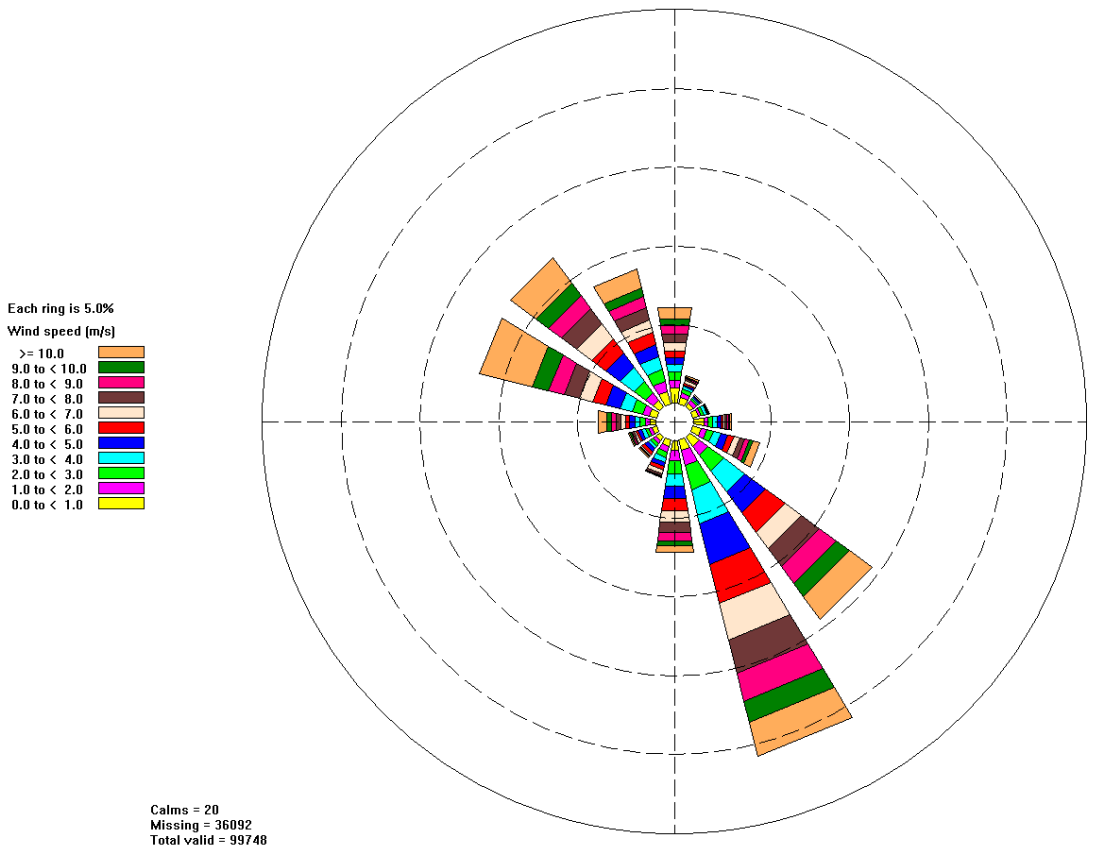

Figure 13 Annual wind rose for the monitoring sites at Mount Arthur North

Location: Mount Arthur North	**Period:** Jan 1994 – May 2009	**Data source:** Macquarie Generation	**Units:** m/s and °
Type: Wind rose		**Prepared by:** Sarah Menzel	**Date:** July 2009

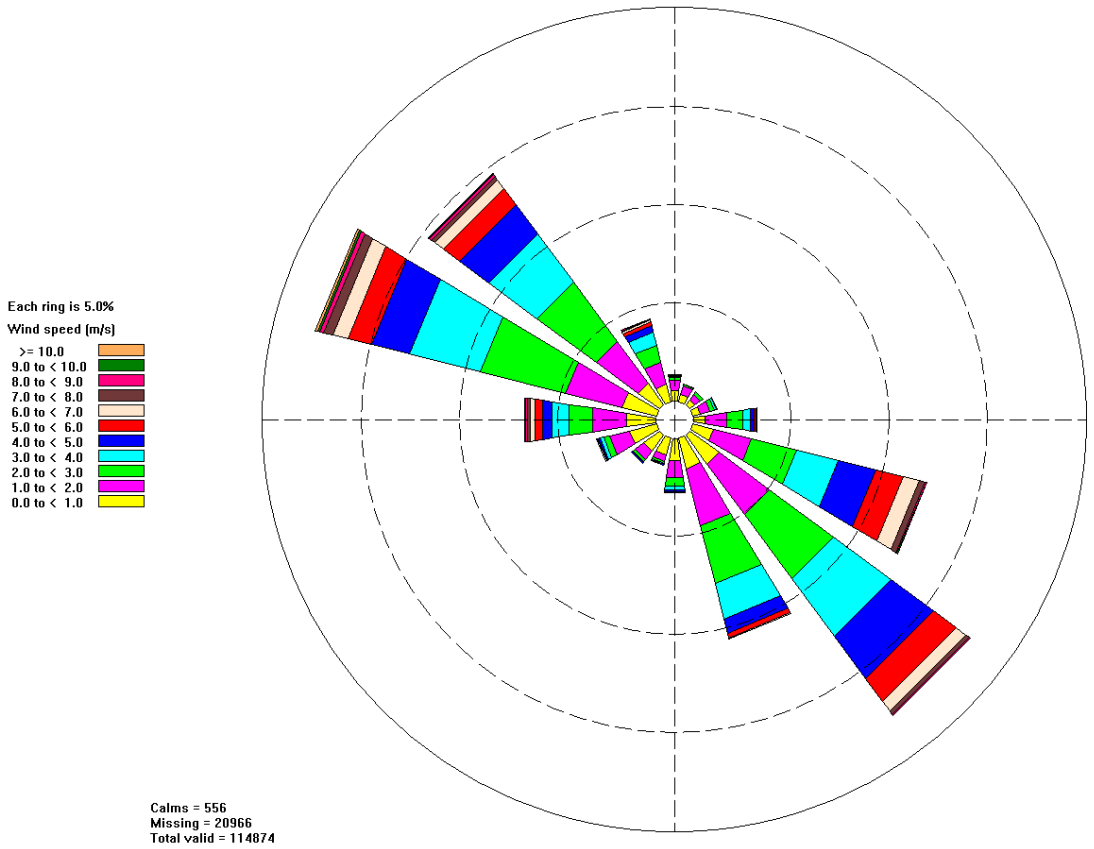

Figure 14 Annual wind rose for the monitoring sites at Lake Liddell

Location: Lake Liddell	**Period:** Jan 1994 – May 2009	**Data source:** Macquarie Generation	**Units:** m/s and °
Type: Wind rose		**Prepared by:** Sarah Menzel	**Date:** July 2009

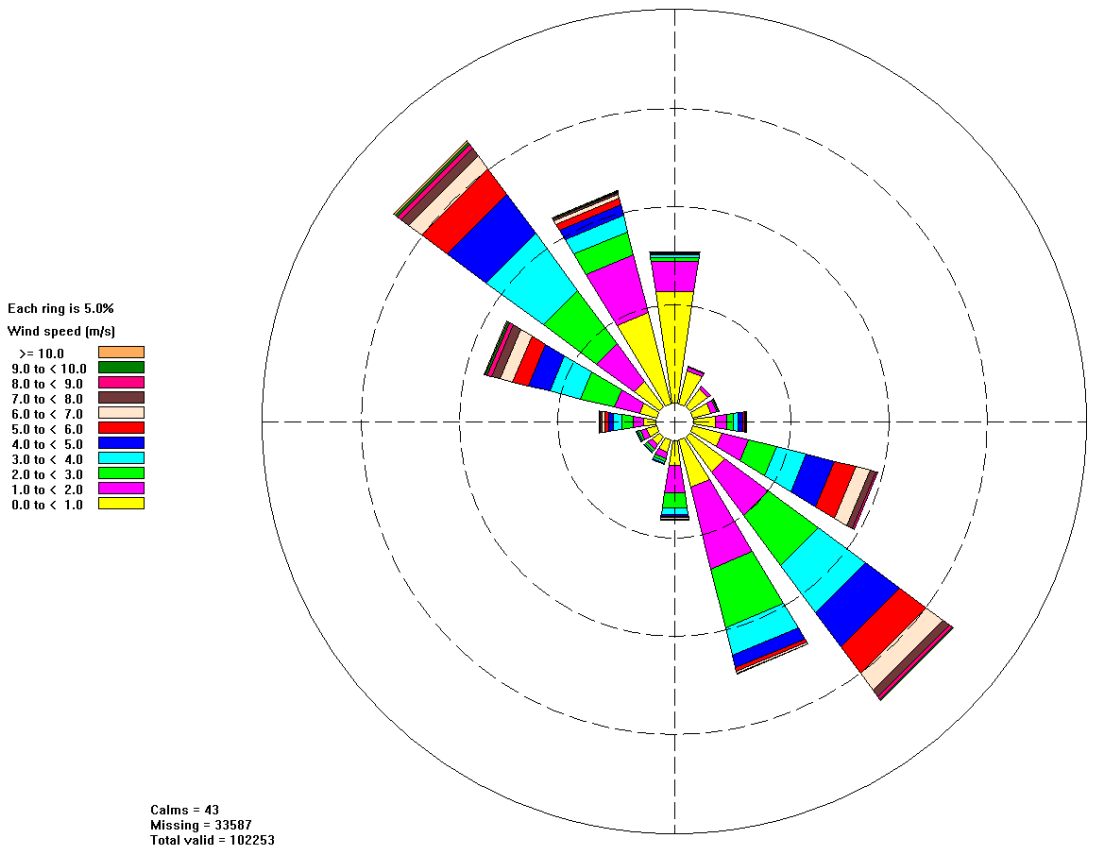

Figure 15 Annual wind rose for the monitoring sites at Ravensworth

Location: Ravensworth	**Period:** Jan 1994 – May 2009	**Data source:** Macquarie Generation	**Units:** m/s and °
Type: Wind rose		**Prepared by:** Sarah Menzel	**Date:** July 2009

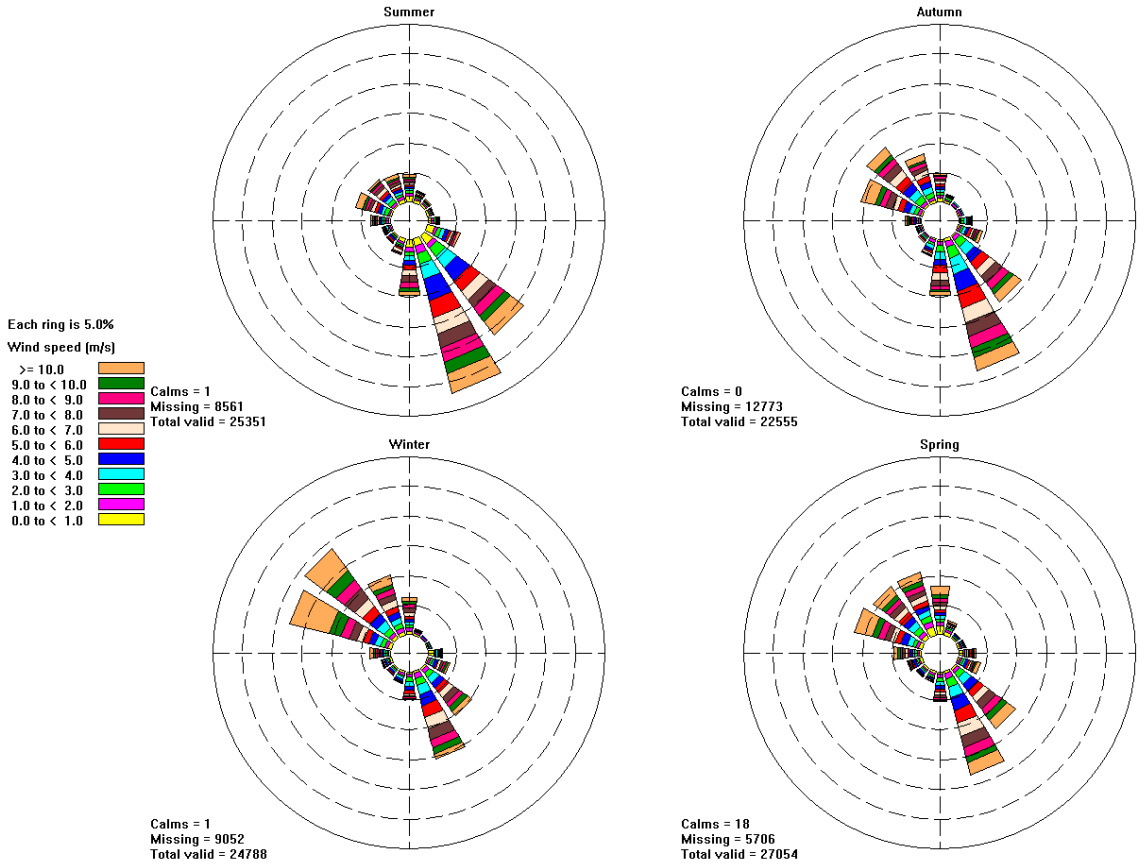

Figure 16 Seasonal wind roses for the Mount Arthur North monitoring site

Location: Mount Arthur North	**Period:** Jan 1994 – May 2009	**Data source:** Macquarie Generation	**Units:** m/s and °
Type: Wind rose		**Prepared by:** Sarah Menzel	**Date:** July 2009

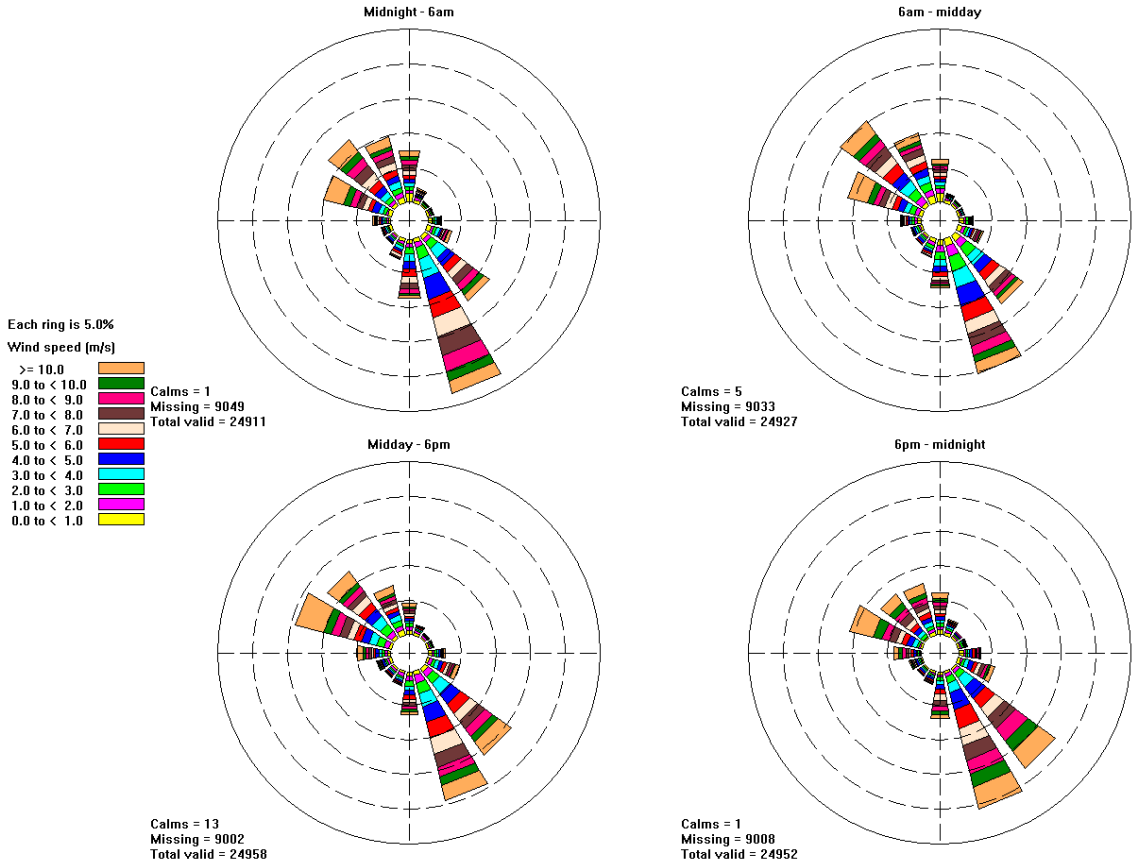

Figure 17 Diurnal wind roses for the Mount Arthur North monitoring site

Location: Mount Arthur North	**Period:** Jan 1994 – May 2009	**Data source:** Macquarie Generation	**Units:** m/s and °
Type: Wind rose		**Prepared by:** Sarah Menzel	**Date:** July 2009

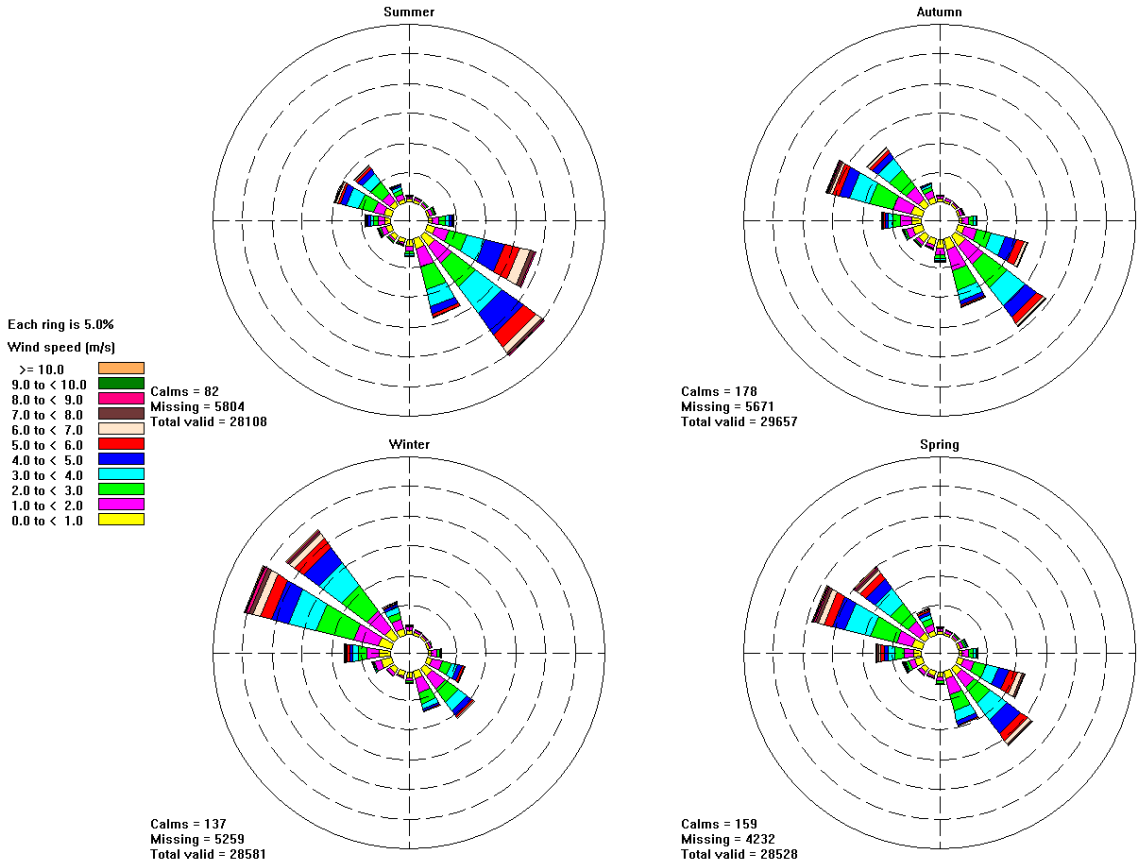

Figure 18 Seasonal wind roses for the Lake Liddell monitoring site

Location: Lake Liddell	**Period:** Jan 1994 – May 2009	**Data source:** Macquarie Generation	**Units:** m/s and °
Type: Wind rose		**Prepared by:** Sarah Menzel	**Date:** July 2009

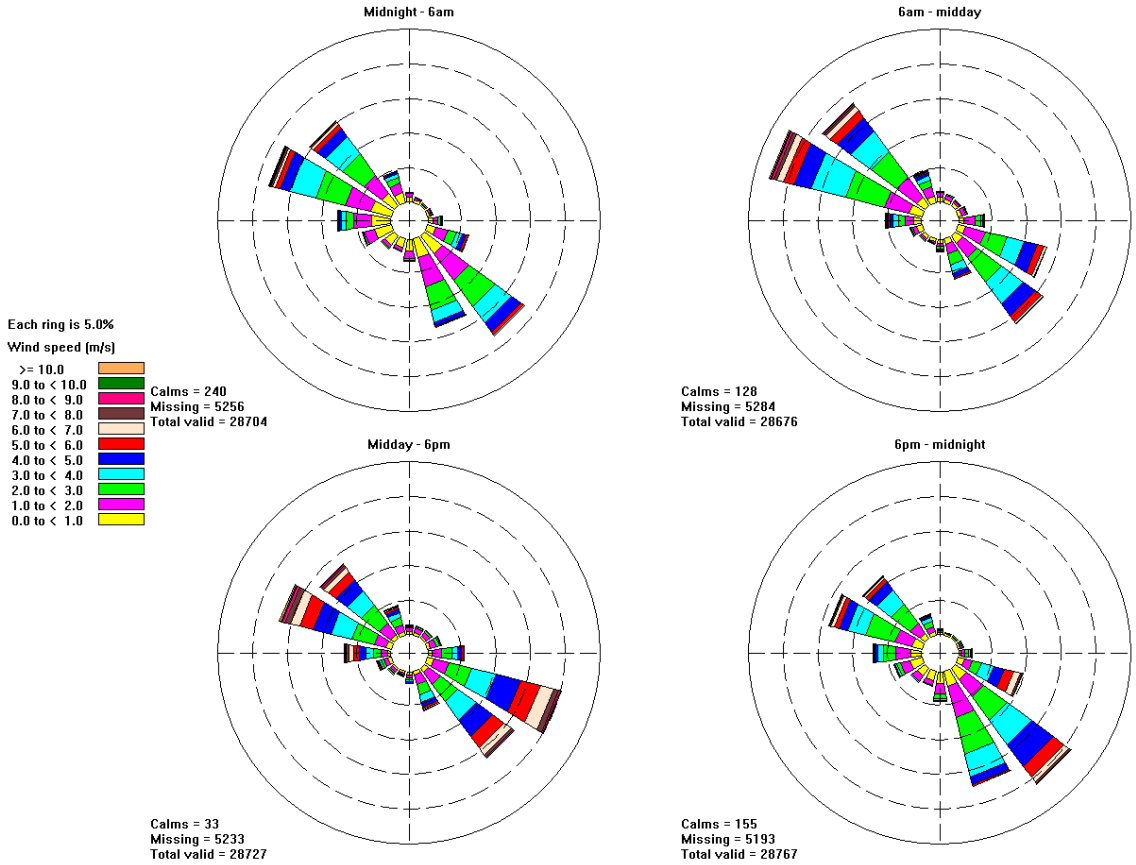

Figure 19 Diurnal wind roses for the Lake Liddell monitoring site

Location: Lake Liddell	**Period:** Jan 1994 – May 2009	**Data source:** Macquarie Generation	**Units:** m/s and °
Type: Wind rose		**Prepared by:** Sarah Menzel	**Date:** July 2009

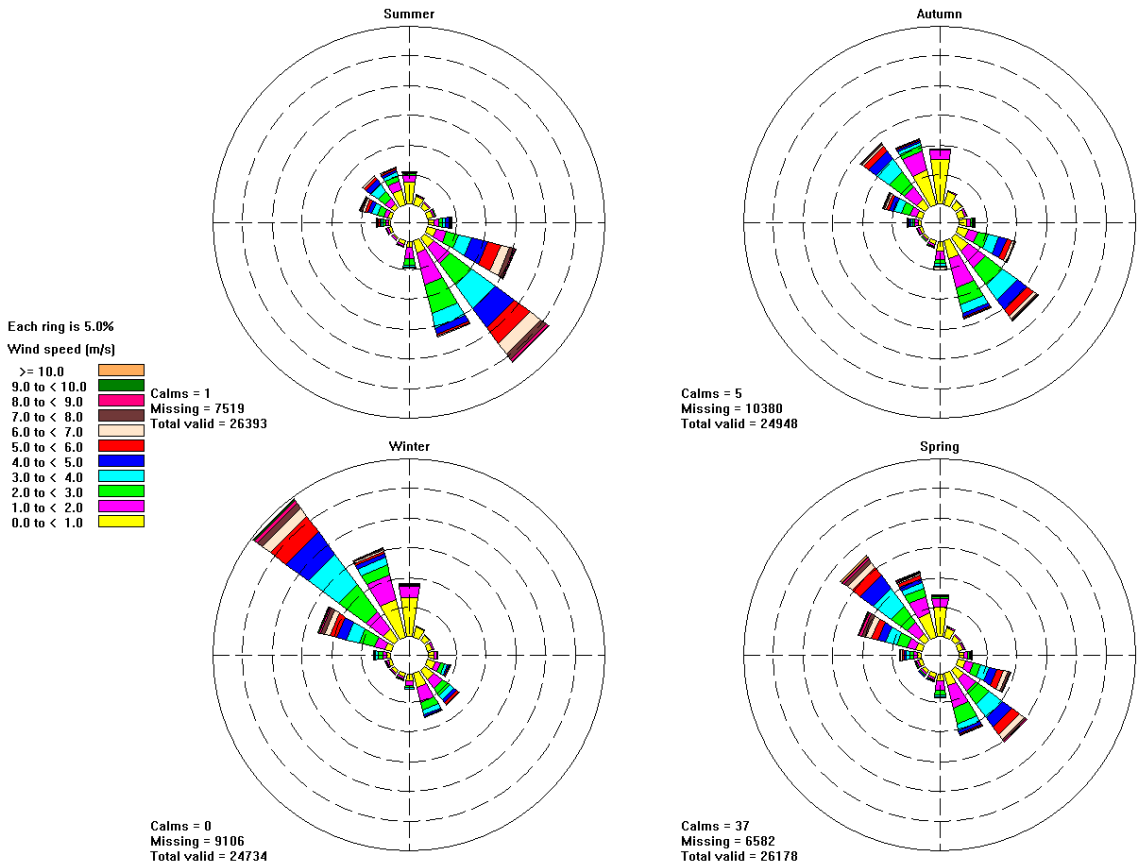

Figure 20 Seasonal wind roses for the Ravensworth monitoring site

Location: Ravensworth	**Period:** Jan 1994 – May 2009	**Data source:** Macquarie Generation	**Units:** m/s and °
Type: Wind rose		**Prepared by:** Sarah Menzel	**Date:** July 2009

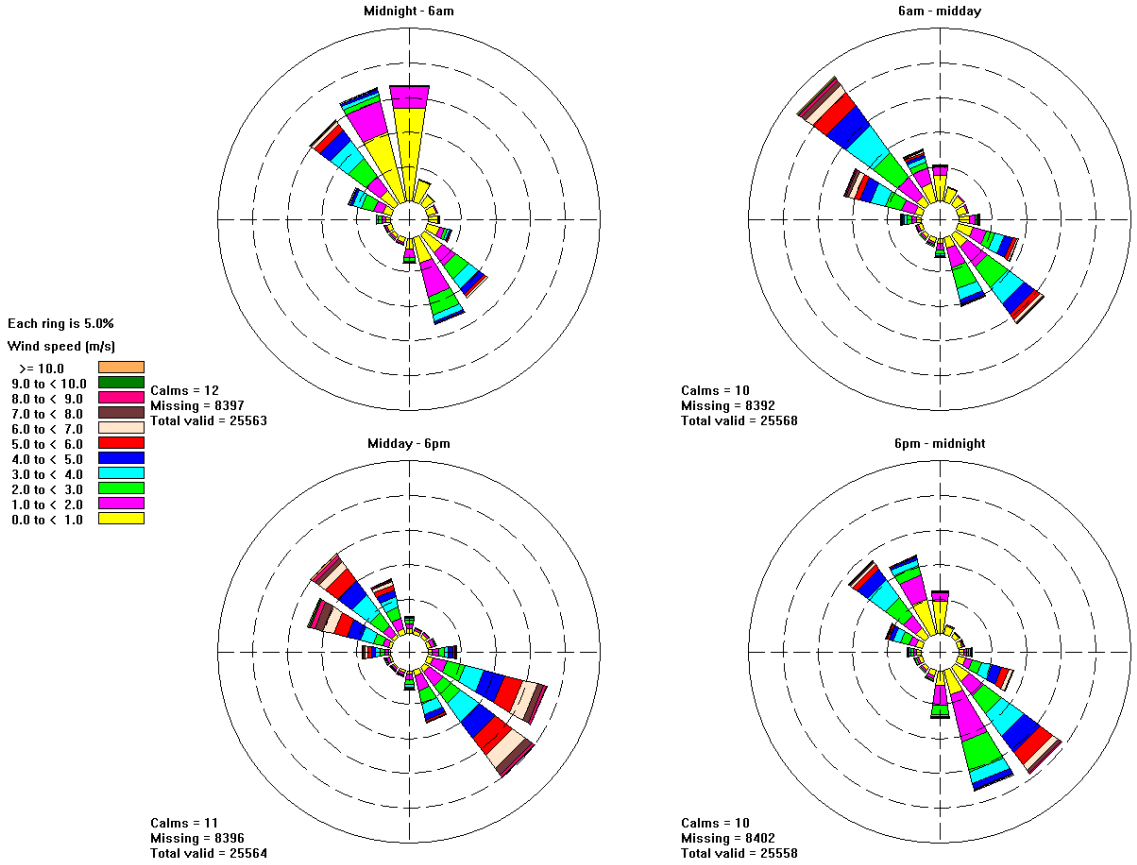

Figure 21 Diurnal wind roses for the Ravensworth monitoring site

Location: Ravensworth	**Period:** Jan 1994 – May 2009	**Data source:** Macquarie Generation	**Units:** m/s and °
Type: Wind rose		**Prepared by:** Sarah Menzel	**Date:** July 2009

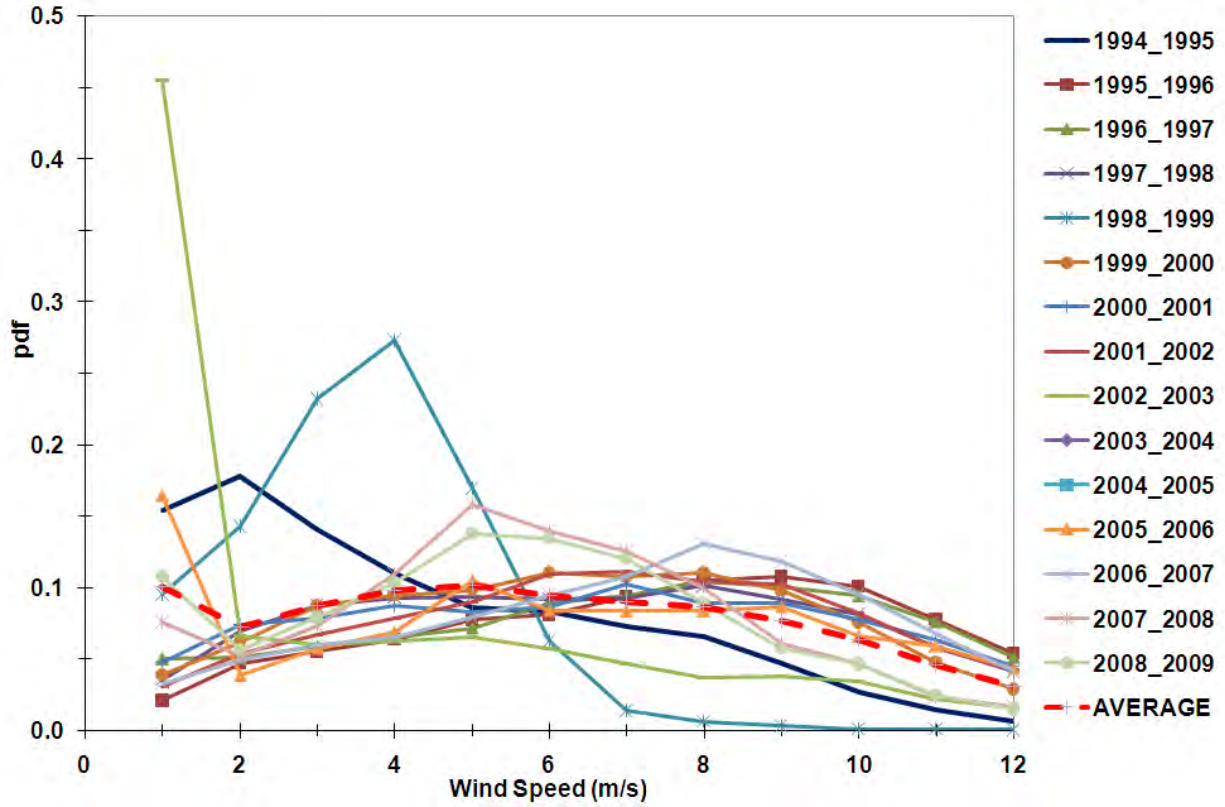

Figure 22 Annual probability density function for wind speed at the Mount Arthur North monitoring site

Location: Mount Arthur North	**Period:** 1994 - 2009	**Data source:** Macquarie Generation	**Units:** m/s and %
Type: Probability density function (PDF)		**Prepared by:** Sarah Menzel	**Date:** July 2009

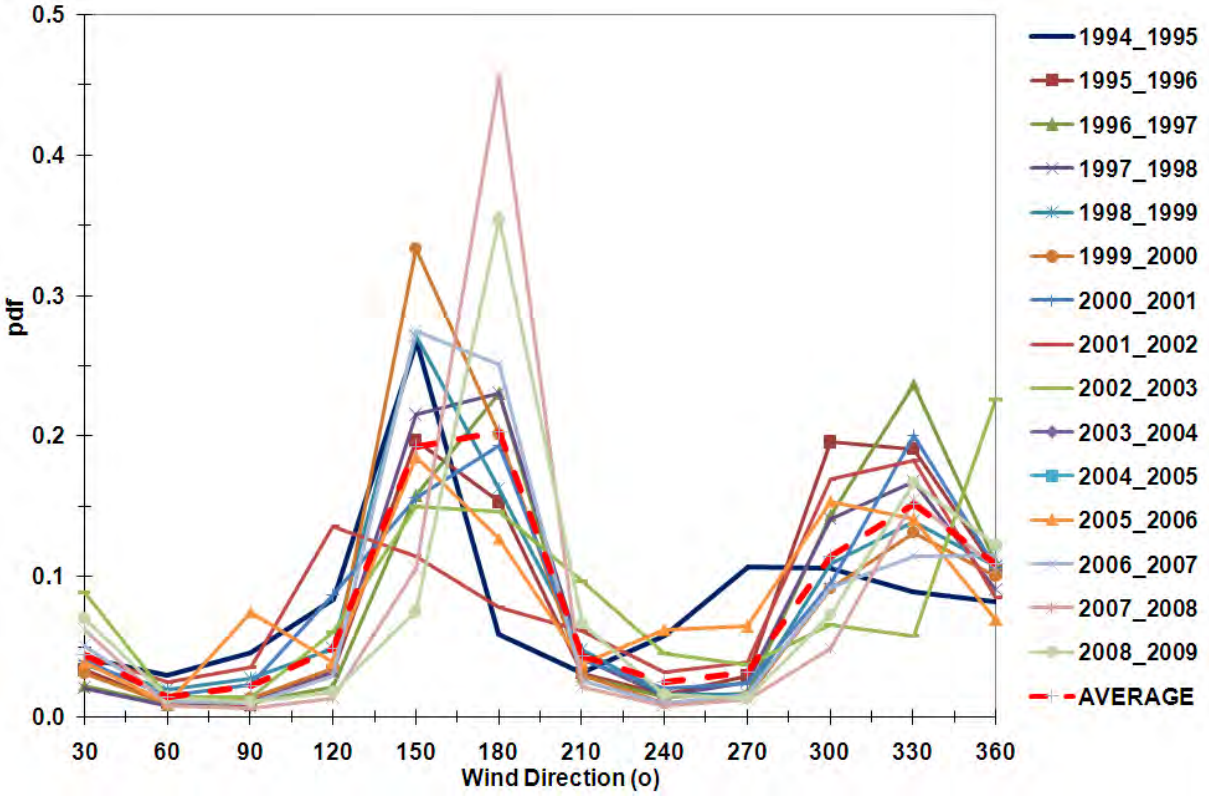

Figure 23 Annual probability density function for wind direction at the Mount Arthur North monitoring site

Location: Mount Arthur North	**Period:** 1994 - 2009	**Data source:** Macquarie Generation	**Units:** ° and %
Type: Probability density function (PDF)		**Prepared by:** Sarah Menzel	**Date:** July 2009

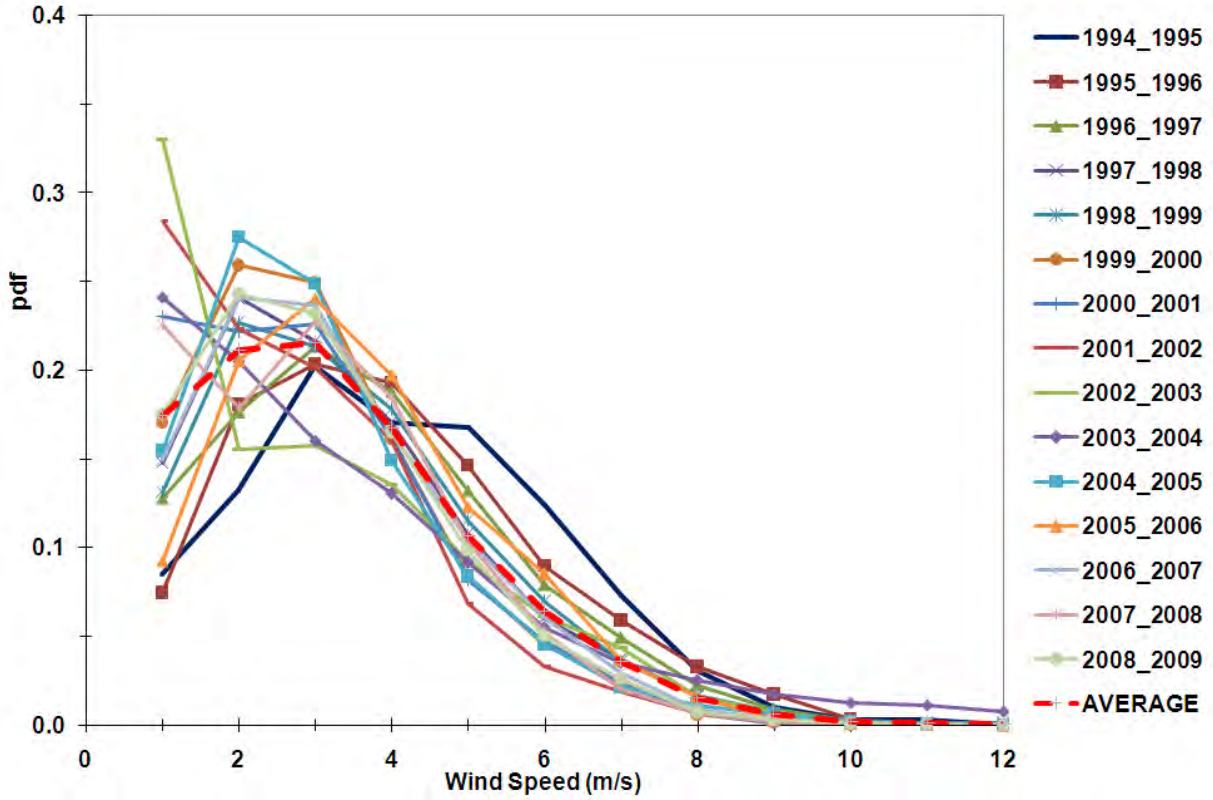

Figure 24 Annual probability density function for wind speed at the Lake Liddell monitoring site

Location: Lake Liddell	**Period:** 1994 - 2009	**Data source:** Macquarie Generation	**Units:** m/s and %
Type: Probability density function (PDF)		**Prepared by:** Sarah Menzel	**Date:** July 2009

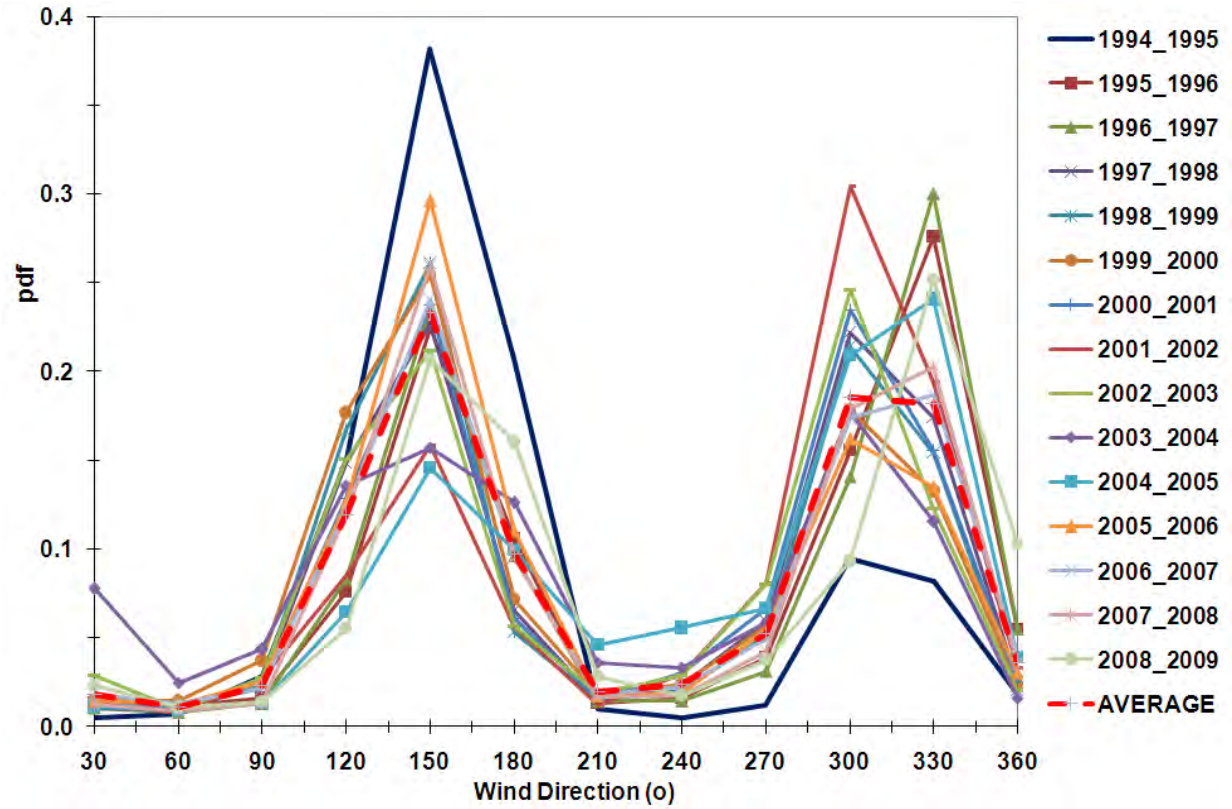

Figure 25 Annual probability density function for wind direction at the Lake Liddell monitoring site

Location: Lake Liddell	**Period:** 1994 - 2009	**Data source:** Macquarie Generation	**Units:** ° and %
Type: Probability density function (PDF)		**Prepared by:** Sarah Menzel	**Date:** July 2009

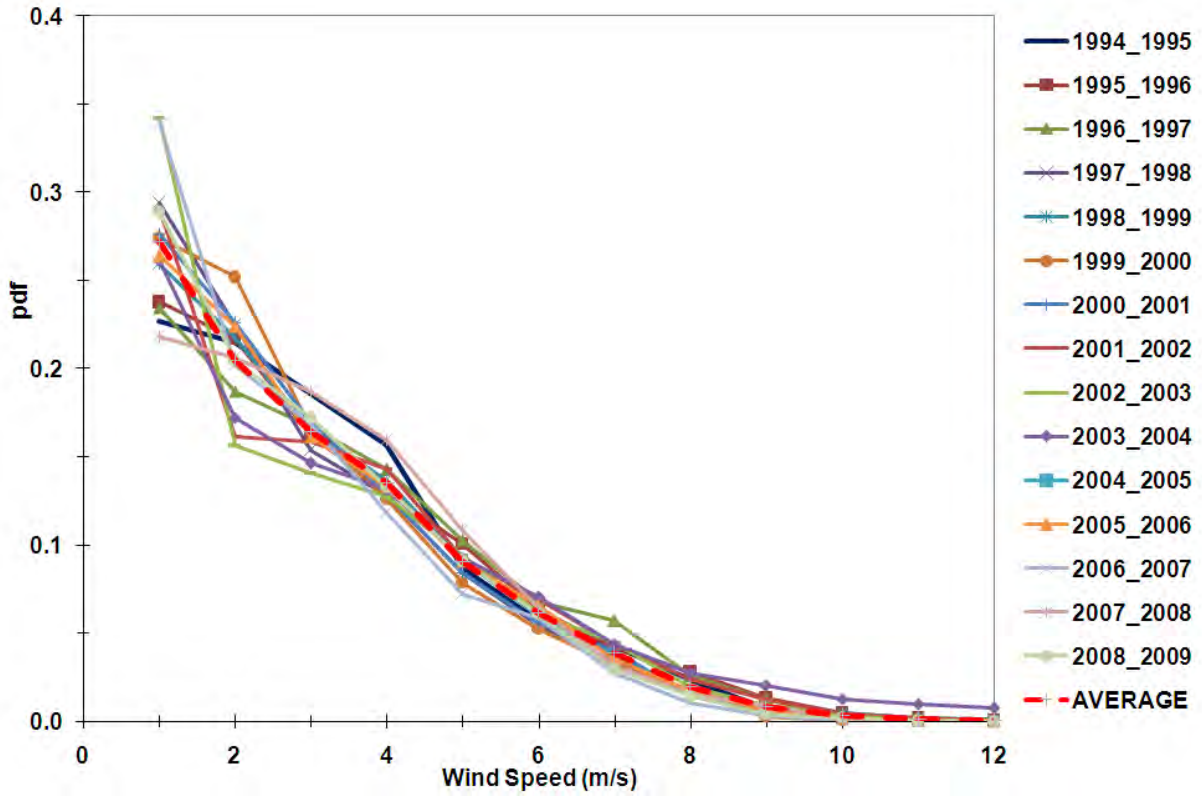

Figure 26 Annual probability density function for wind speed at the Ravensworth monitoring site

Location: Ravensworth	**Period:** 1994 - 2009	**Data source:** Macquarie Generation	**Units:** m/s and %
Type: Probability density function (PDF)		**Prepared by:** Sarah Menzel	**Date:** July 2009

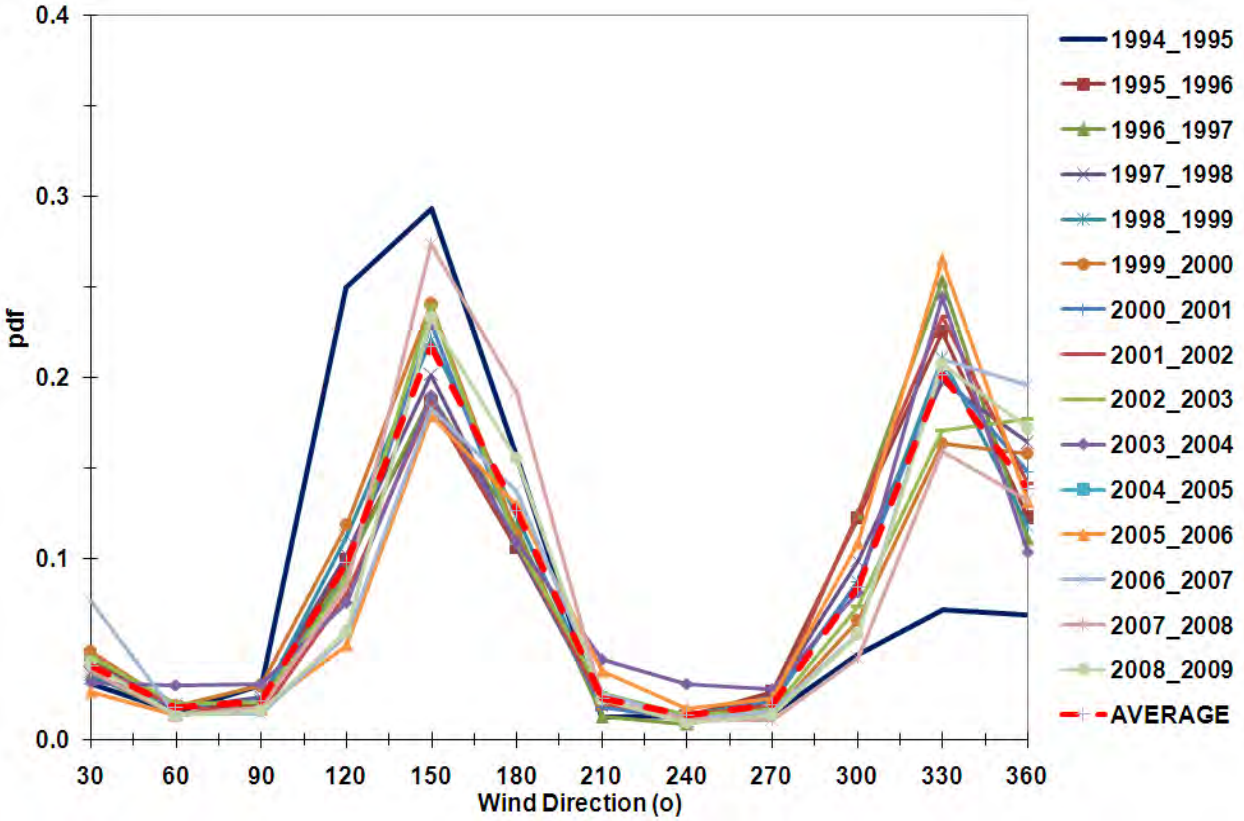

Figure 27 Annual probability density function for wind direction at the Ravensworth monitoring site

Location: Ravensworth	**Period:** 1994 - 2009	**Data source:** Macquarie Generation	**Units:** ° and %
Type: Probability density function (PDF)		**Prepared by:** Sarah Menzel	**Date:** July 2009

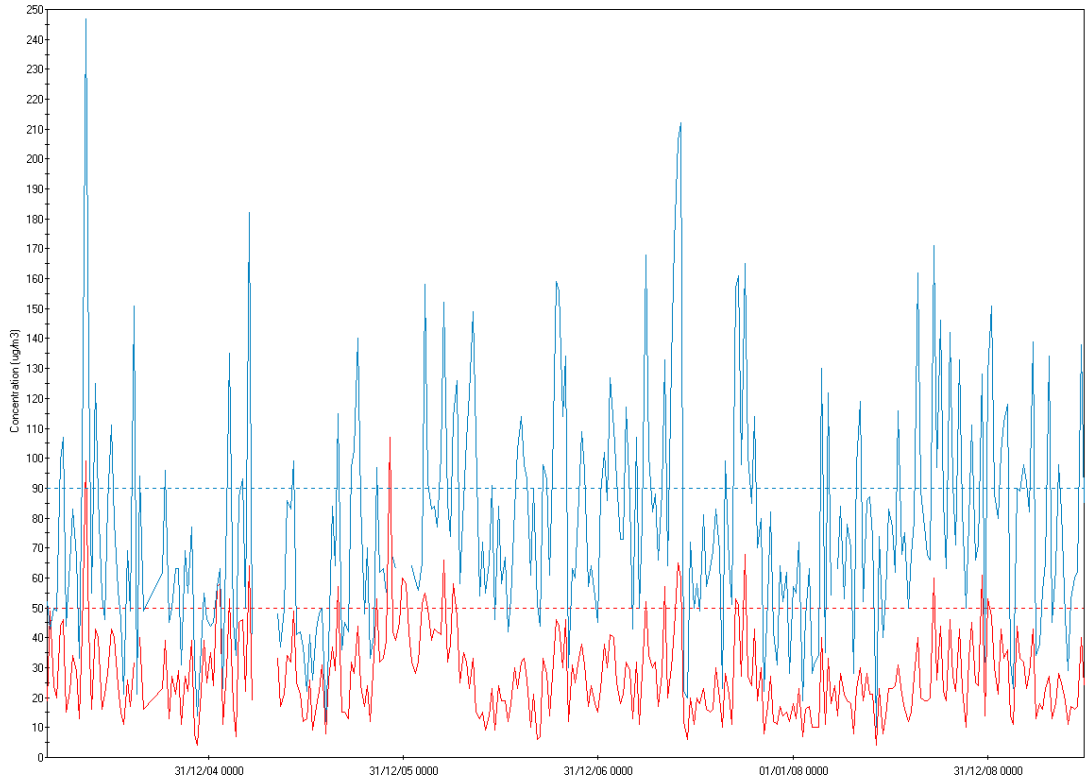

Figure 28 PM_{10} (red) and TSP (blue) concentrations measured at Ravensworth monitoring station

Location:	**Averaging period:**	**Data source:**	**Units:**
Ravensworth monitoring station	24 hr (1 day in 6 method)	Macquarie Generation	µg/m³
Type:	**Objective:**	**Prepared by:**	**Date:**
Time series	PM_{10} = 50 µg/m³ (24-hour average) TSP = 90 µg/m³ (annual average)	Andrew Vernon	August 2009

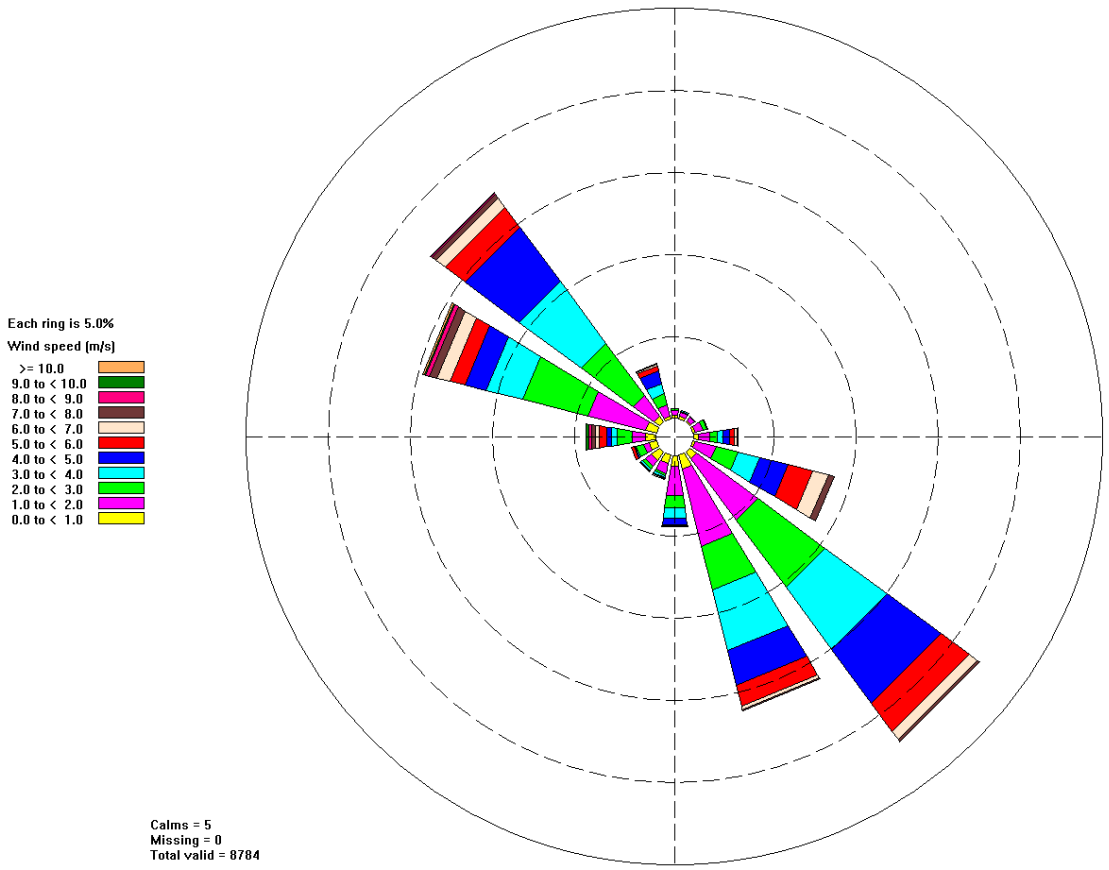

Figure 29 Predicted annual distribution of winds at the proposed Bayswater B Power Station site for March 1999 to February 2000

Location: Bayswater B site	**Period:** March 1999 – February 2000	**Data source:** TAPM	**Units:** m/s and °
Type: Annual wind rose		**Prepared by:** Sarah Menzel	**Date:** July 2009

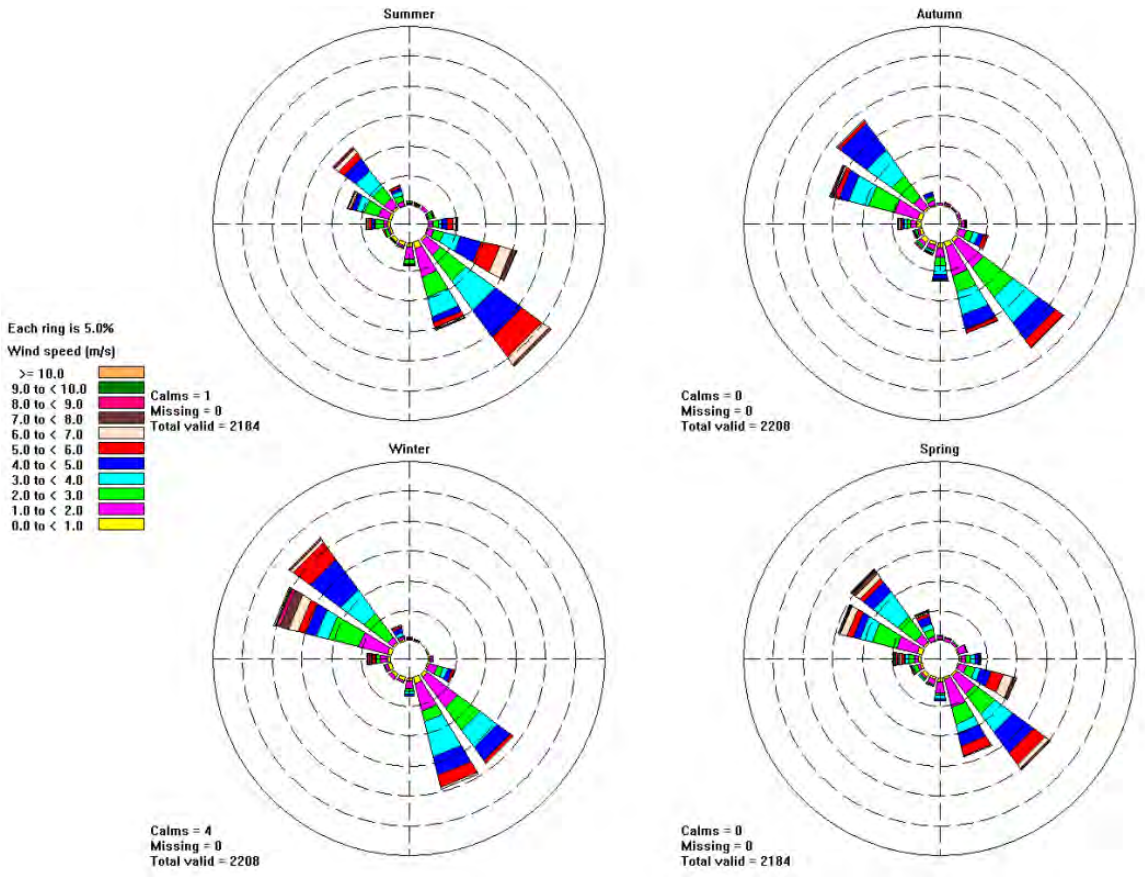

Figure 30 Predicted seasonal distribution of winds at the proposed Bayswater B Power Station site for March 1999 to February 2000

Location: Bayswater B site	**Period:** March 1999 – February 2000	**Data source:** TAPM	**Units:** m/s and °
Type: Seasonal wind rose		**Prepared by:** Sarah Menzel	**Date:** July 2009

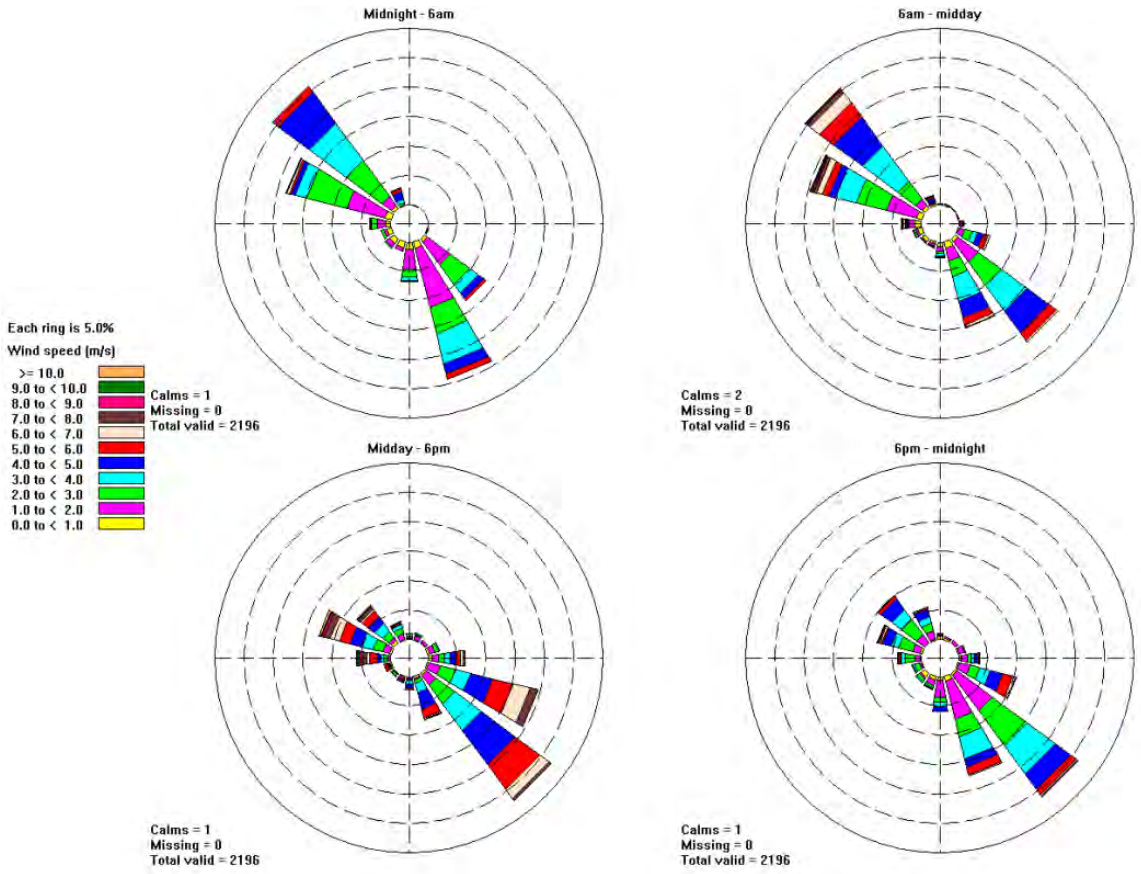

Figure 31 Predicted diurnal distribution of winds at the proposed Bayswater B Power Station site for March 1999 to February 2000

Location: Bayswater B site	**Period:** March 1999 – February 2000	**Data source:** TAPM	**Units:** m/s and °
Type: Diurnal wind rose		**Prepared by:** Sarah Menzel	**Date:** July 2009

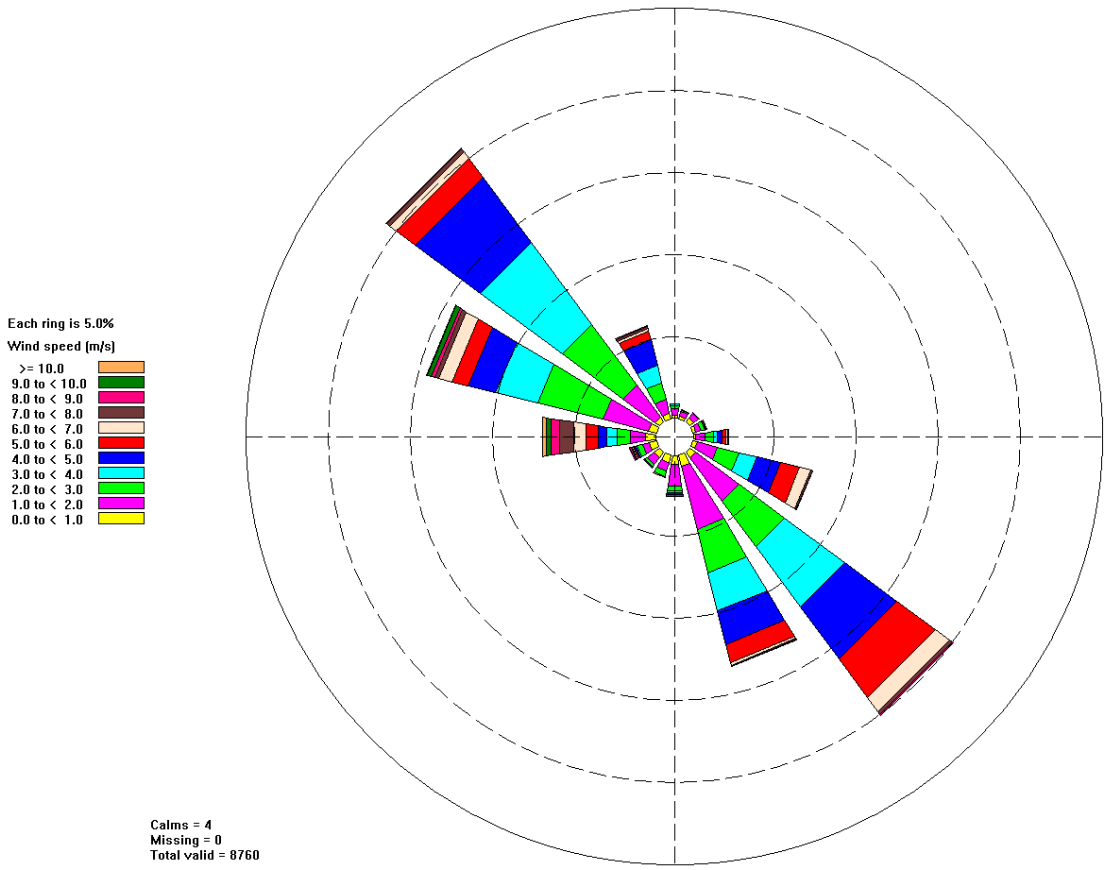

Figure 32 Predicted annual distribution of winds at the proposed Bayswater B Power Station site for March 2000 to February 2001

Location: Bayswater B site	**Period:** March 2000 – February 2001	**Data source:** TAPM	**Units:** m/s and °
Type: Annual wind rose		**Prepared by:** Sarah Menzel	**Date:** July 2009

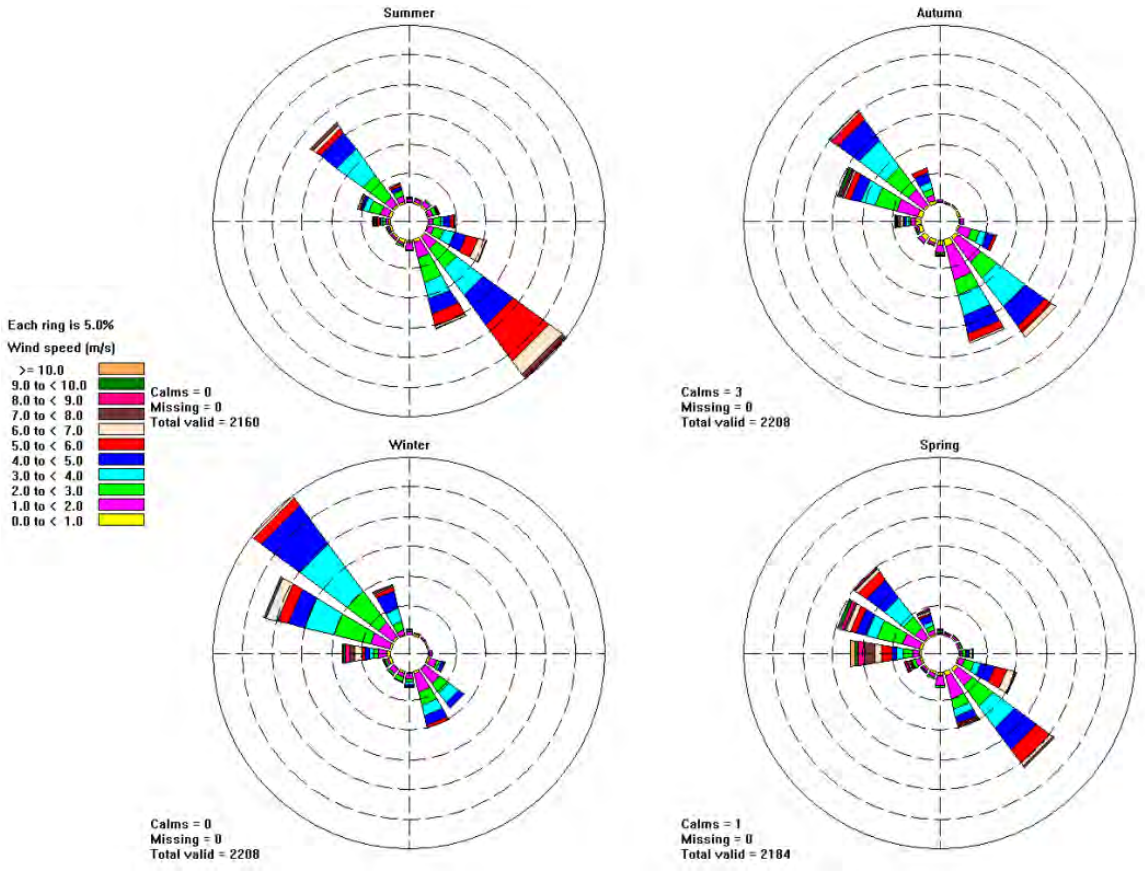

Figure 33 Predicted seasonal distribution of winds at the proposed Bayswater B Power Station site for March 2000 to February 2001

Location: Bayswater B site	**Period:** March 2000 – February 2001	**Data source:** TAPM	**Units:** m/s and °
Type: Seasonal wind rose		**Prepared by:** Sarah Menzel	**Date:** July 2009

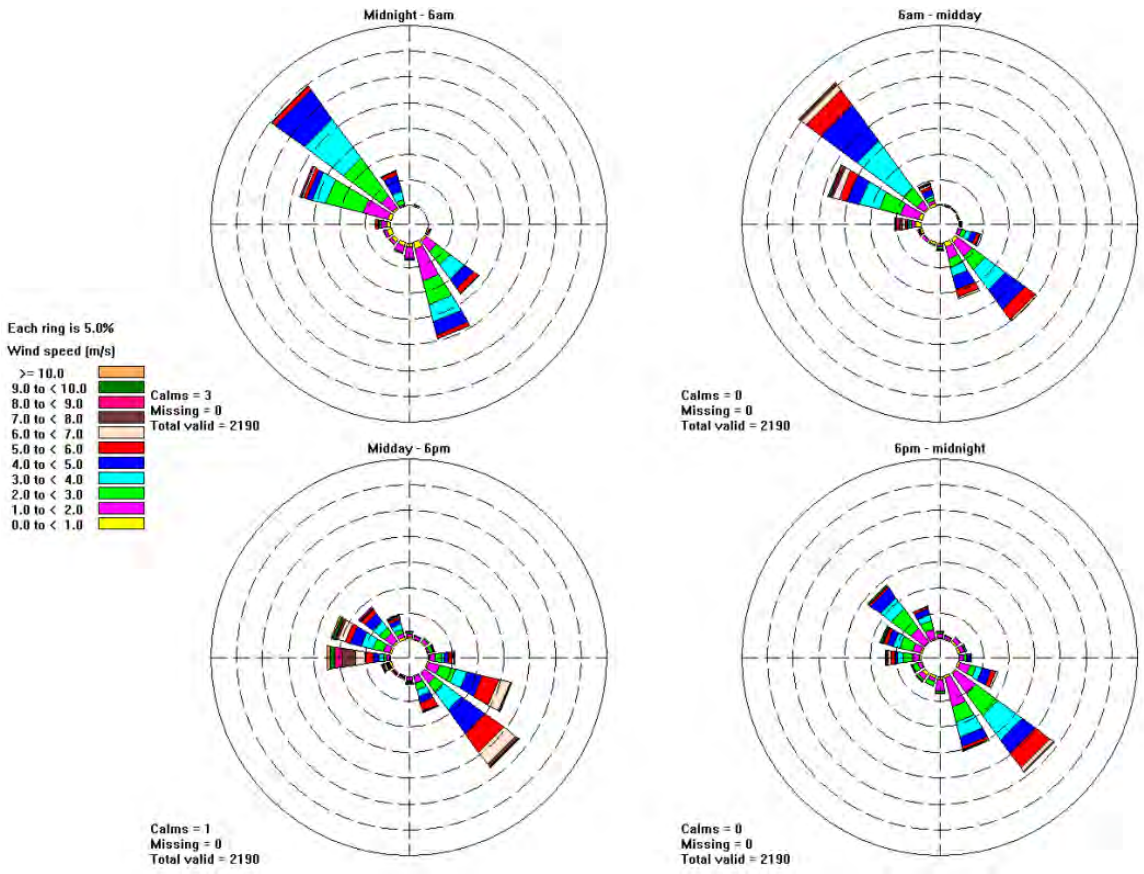

Figure 34 Predicted diurnal distribution of winds at the proposed Bayswater B Power Station site for March 2000 to February 2001

Location:	**Period:**	**Data source:**	**Units:**
Bayswater B site	March 2000 – February 2001	TAPM	m/s and °
Type:		**Prepared by:**	**Date:**
Diurnal wind rose		Sarah Menzel	July 2009

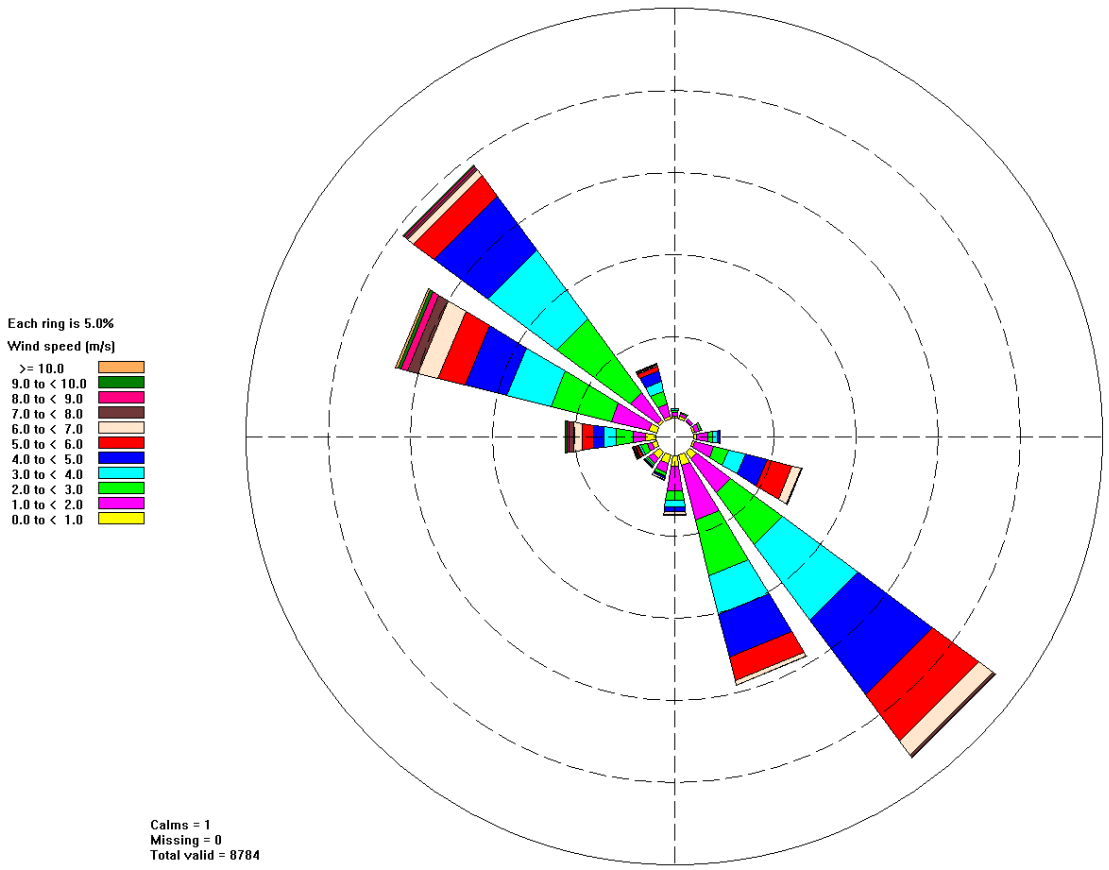

Figure 35 Predicted annual distribution of winds at the proposed Bayswater B Power Station site for March 2007 to February 2008

Location: Bayswater B site	**Period:** March 2007 – February 2008	**Data source:** TAPM	**Units:** m/s and °
Type: Annual wind rose		**Prepared by:** Sarah Menzel	**Date:** July 2009

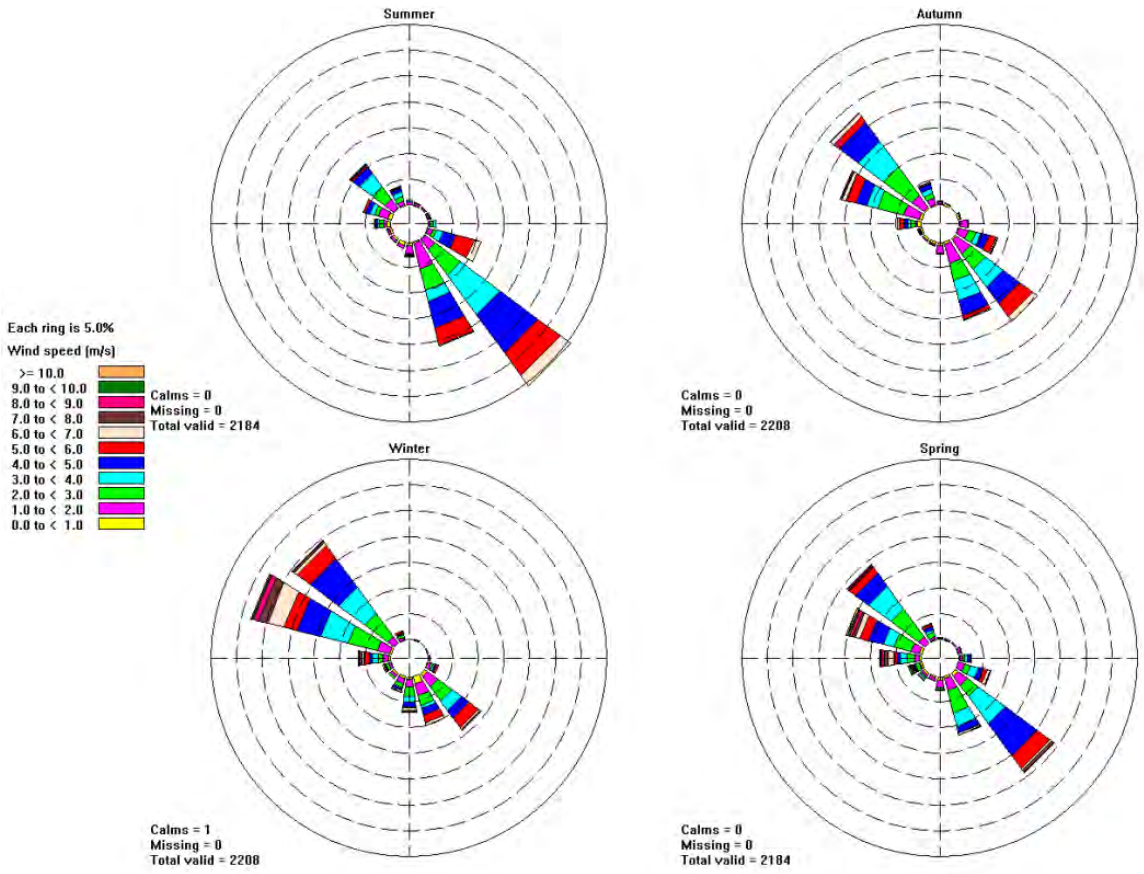

Figure 36 Predicted seasonal distribution of winds at the proposed Bayswater B Power Station site for March 2007 to February 2008

Location: Bayswater B site	**Period:** March 2007 – February 2008	**Data source:** TAPM	**Units:** m/s and °
Type: Seasonal wind rose		**Prepared by:** Sarah Menzel	**Date:** July 2009

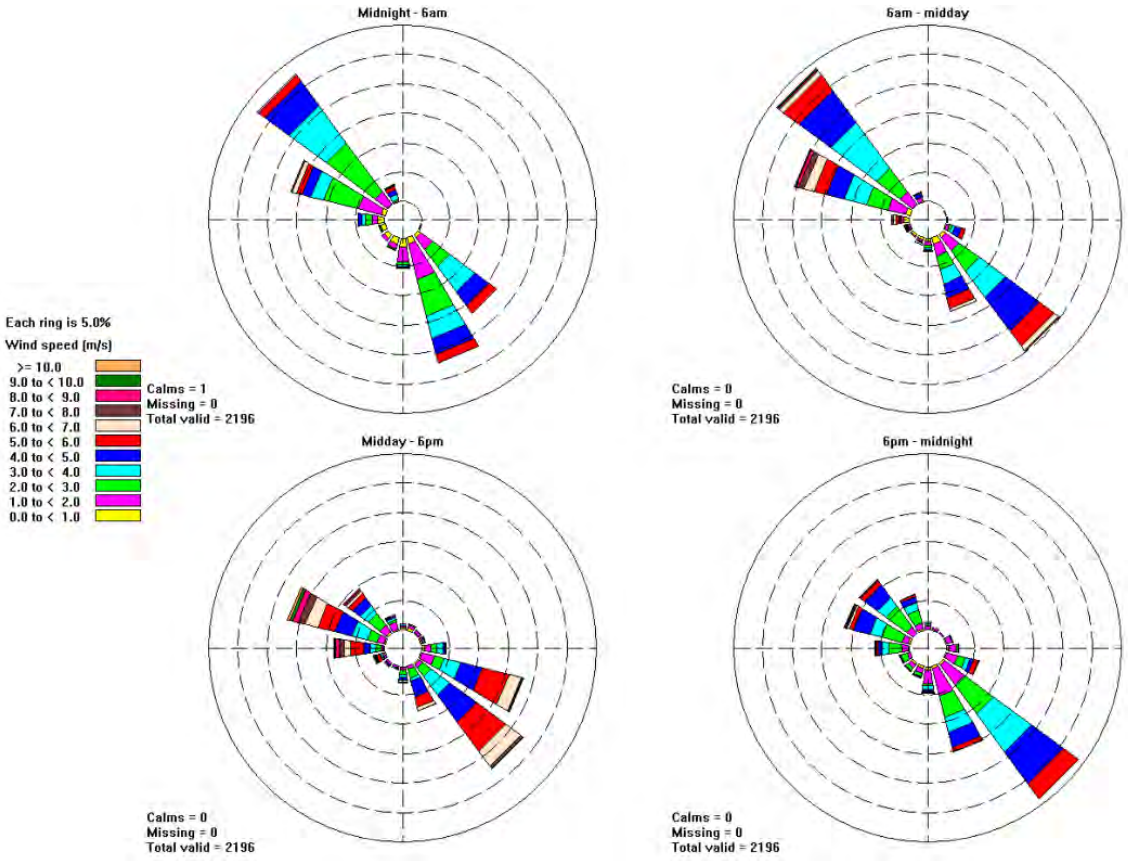

Figure 37 Predicted diurnal distribution of winds at the proposed Bayswater B Power Station site for March 2007 to February 2008

Location: Bayswater B site	**Period:** March 2007 – February 2008	**Data source:** TAPM	**Units:** m/s and °
Type: Diurnal wind rose		**Prepared by:** Sarah Menzel	**Date:** July 2009

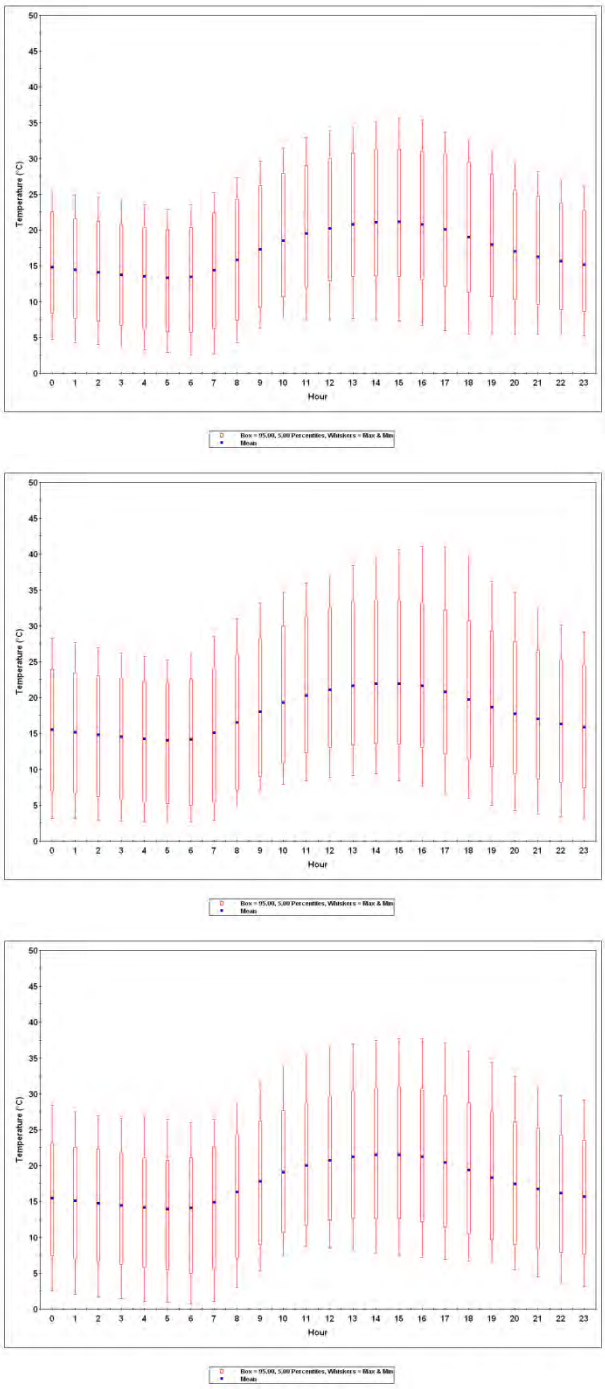

Figure 38 Hourly distribution of temperature (°C at 10m) at the proposed Bayswater B Power Station site for March 1999 to February 2000, March 2000 to February 2001 and March 2007 to February 2008

Location: Bayswater B site	**Period:** 1999-2000, 2000-2001 and 2007–2008 (March to February inclusive)	**Data source:** TAPM	**Units:** °C
Type: Box and whisker	1-hour average data	**Prepared by:** Sarah Menzel	**Date:** July 2009

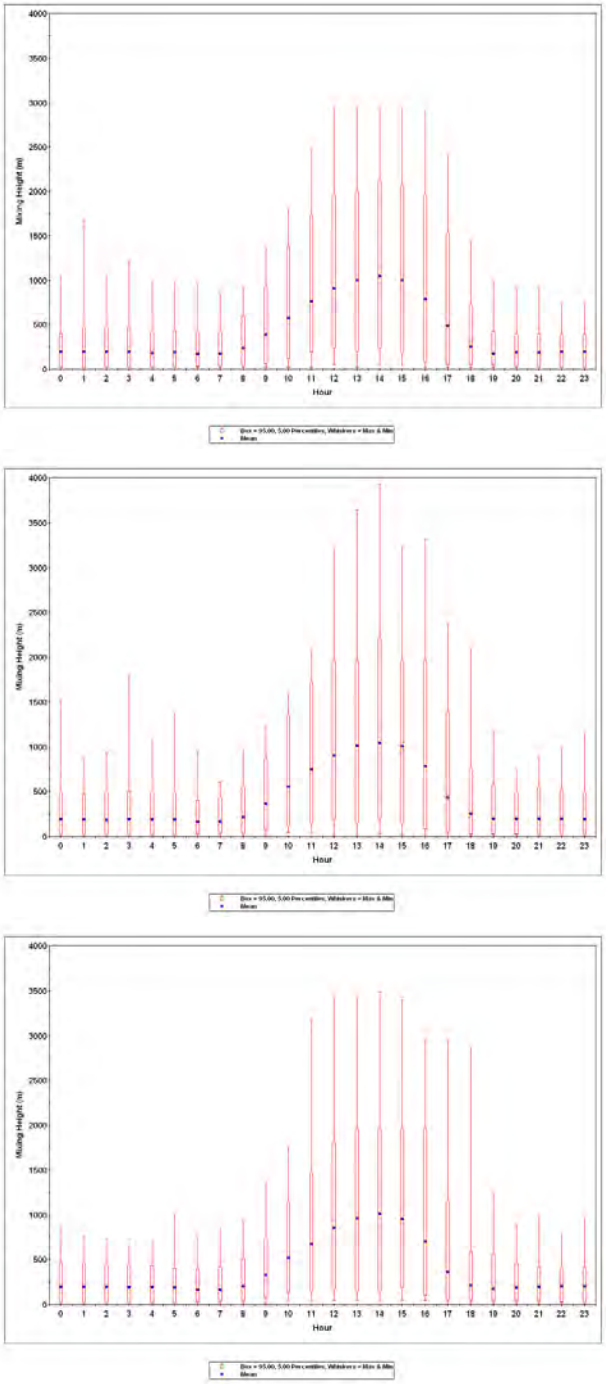

Figure 39 Hourly distribution of mixing heights (m) at the proposed Bayswater B Power Station site for March 1999 to February 2000, March 2000 to February 2001 and March 2007 to February 2008

Location: Bayswater B	**Period:** 1999-2000, 2000-2001 and 2007–2008 (March to February inclusive)	**Data source:** TAPM	**Units:** m/s and °
Type: Box and whisker	1-hour average data	**Prepared by:** Sarah Menzel	**Date:** July 2009

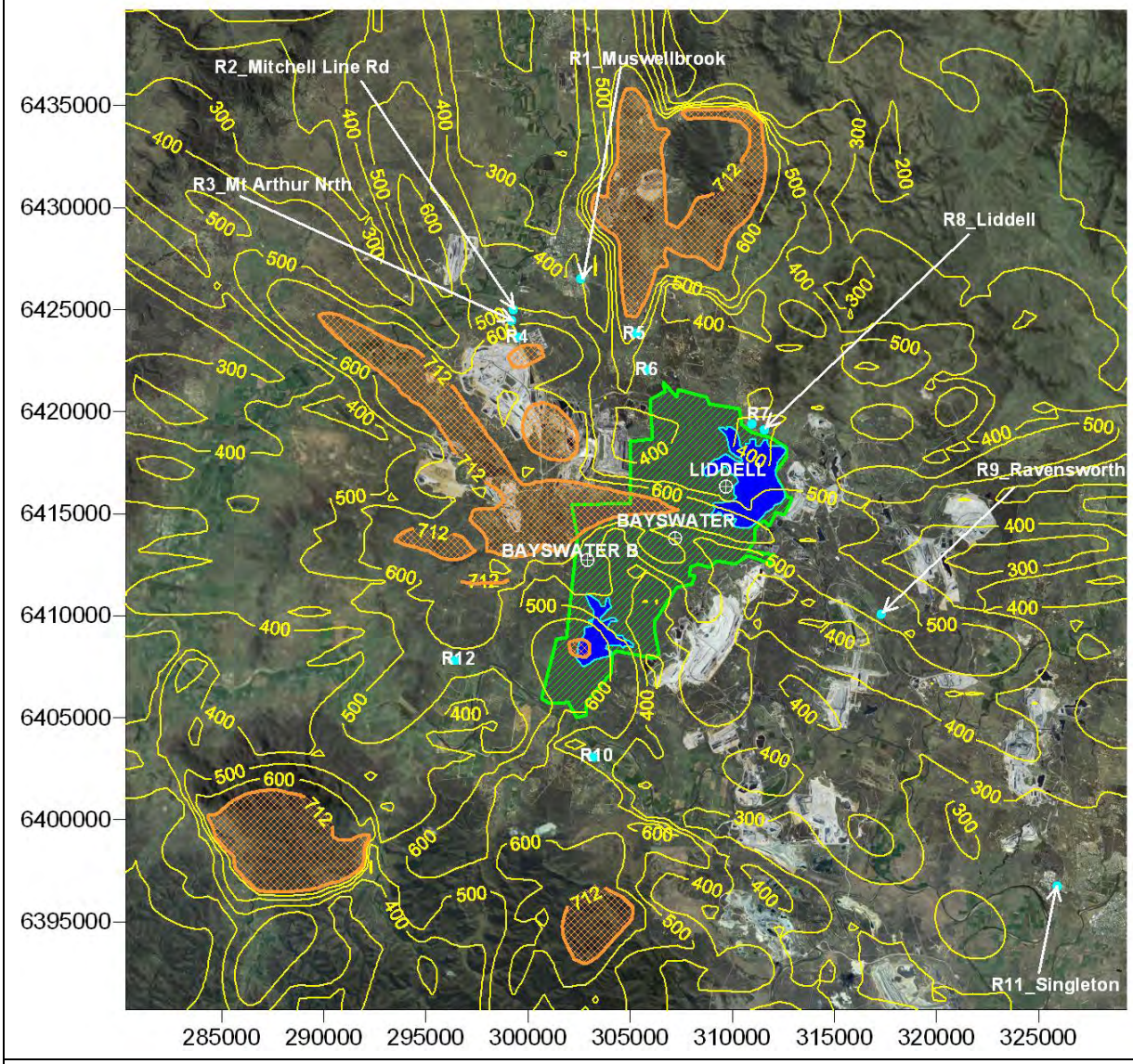

Figure 40 Predicted maximum 10-minute average ground-level concentrations of sulfur dioxide from the proposed Bayswater B coal-fired Power Station in isolation (mean coal sulfur content) for 1999 to 2001 and 2007 to 2008

Location: Bayswater B, 300m coal fired stack	**Averaging period:** 10-minute, March 1999 to February 2001 and March 2007 to February 2008	**Data source:** TAPM	**Units:** µg/m³
Type: Maximum contour plot	**Impact assessment criterion:** 712 µg/m³	**Prepared by:** Sarah Menzel, Alex Schloss	**Date:** August 2009

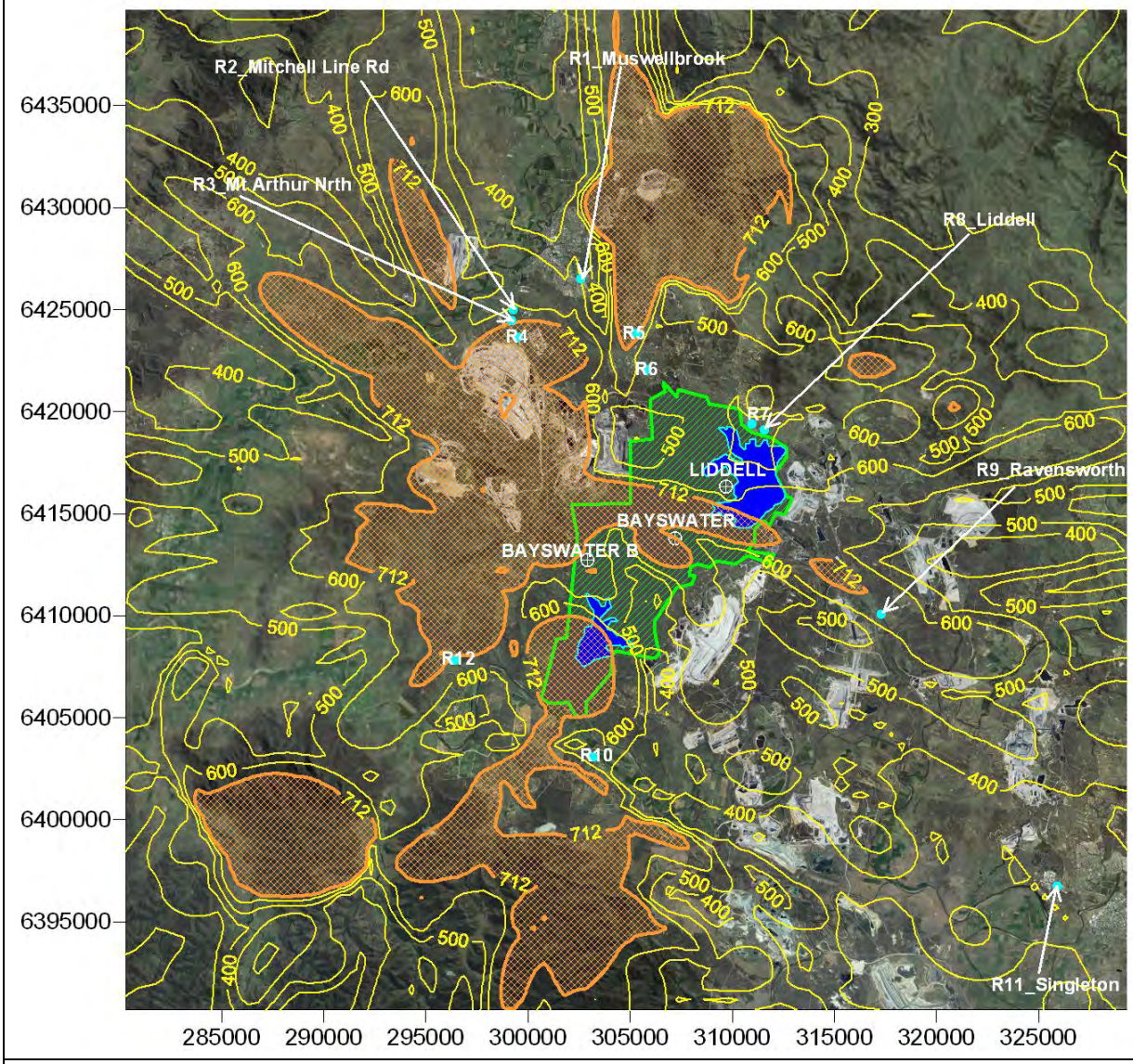

Figure 41 Predicted maximum 10-minute average ground-level concentrations of sulfur dioxide from the proposed Bayswater B coal-fired Power Station in isolation (maximum coal sulfur content) for 1999 to 2001 and 2007 to 2008

Location: Bayswater B, 300m coal fired stack	**Averaging period:** 10-minute, March 1999 to February 2001 and March 2007 to February 2008	**Data source:** TAPM	**Units:** µg/m³
Type: Maximum contour plot	**Impact assessment criterion:** 712 µg/m³	**Prepared by:** Sarah Menzel, Alex Schloss	**Date:** August 2009

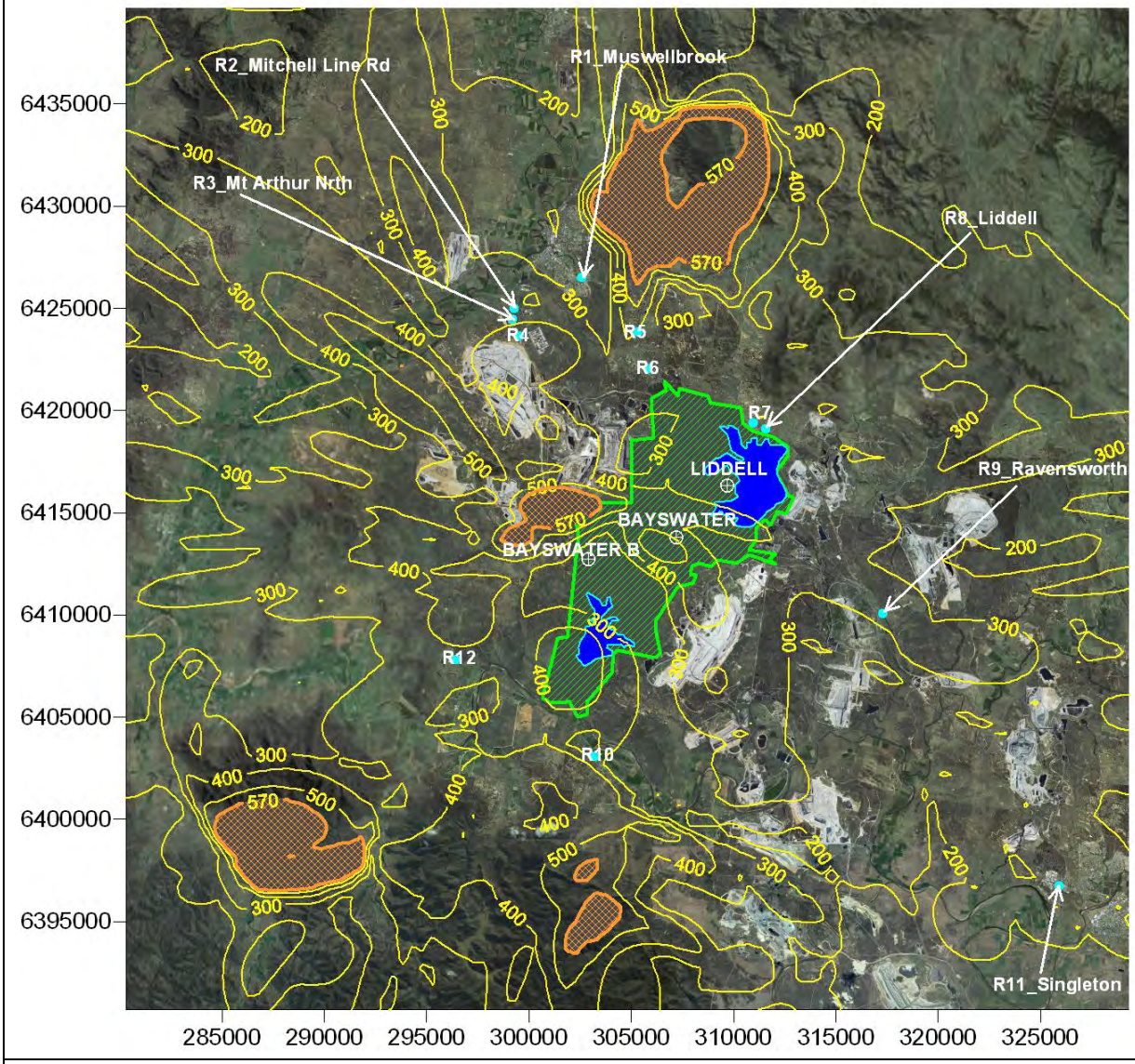

Figure 42 Predicted maximum 1-hour average ground-level concentrations of sulfur dioxide from the proposed Bayswater B coal-fired Power Station in isolation (mean coal sulfur content) for 1999 to 2001 and 2007 to 2008

Location: Bayswater B, 300m coal fired stack	**Averaging period:** 1-hour, March 1999 – February 2001 and March 2007 – February 2008	**Data source:** TAPM	**Units:** µg/m³
Type: Maximum contour plot	**Impact assessment criterion:** 570 µg/m³	**Prepared by:** Sarah Menzel, Alex Schloss	**Date:** August 2009

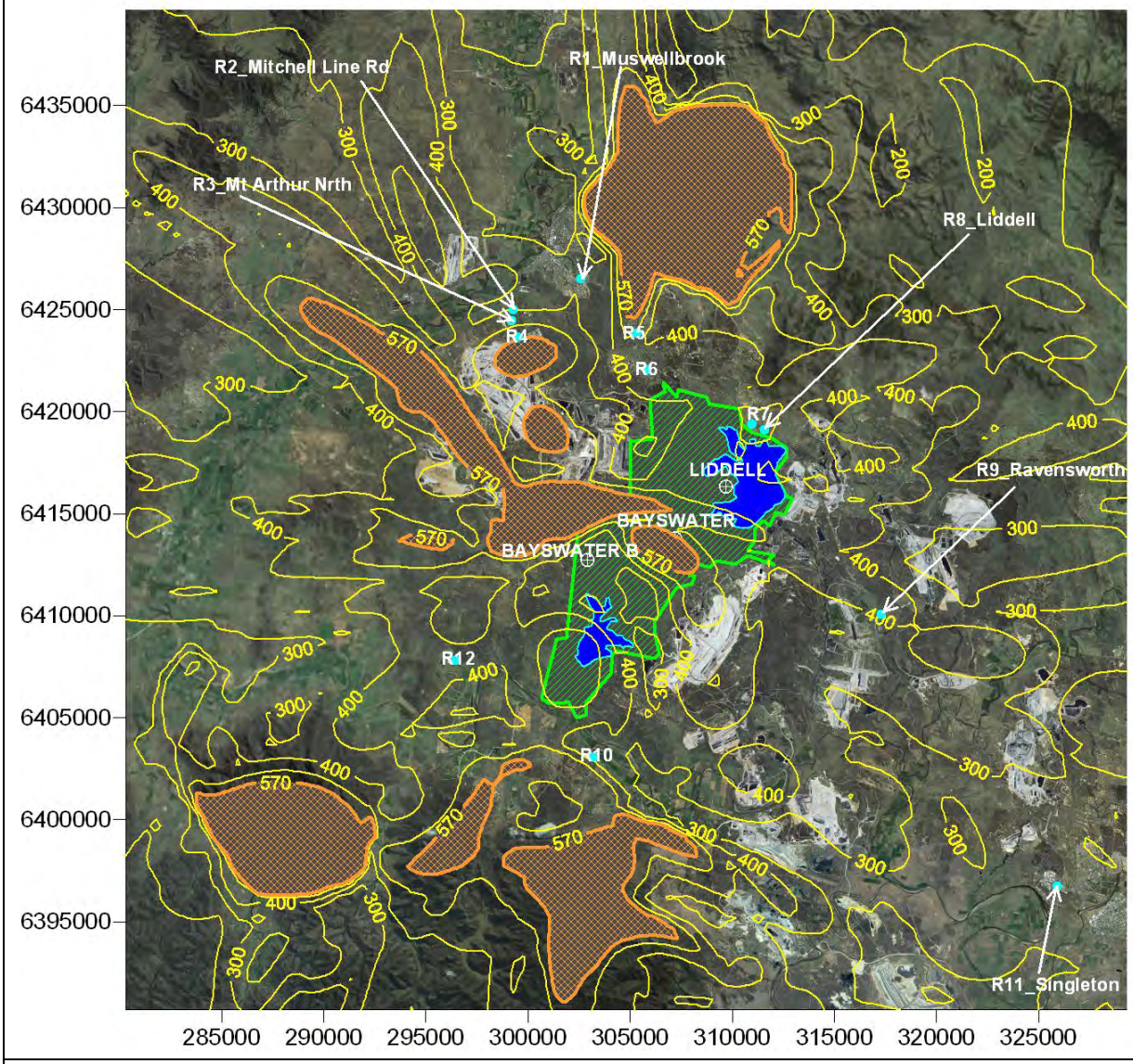

Figure 43 Predicted maximum 1-hour average ground-level concentrations of sulfur dioxide from the proposed Bayswater B coal-fired Power Station in isolation (maximum coal sulfur content) for 1999 to 2001 and 2007 to 2008

Location: Bayswater B, 300m coal fired stack	**Averaging period:** 1-hour, March 1999 – February 2001 and March 2007 – February 2008	**Data source:** TAPM	**Units:** µg/m³
Type: Maximum contour plot	**Impact assessment criterion:** 570 µg/m³	**Prepared by:** Sarah Menzel, Alex Schloss	**Date:** August 2009

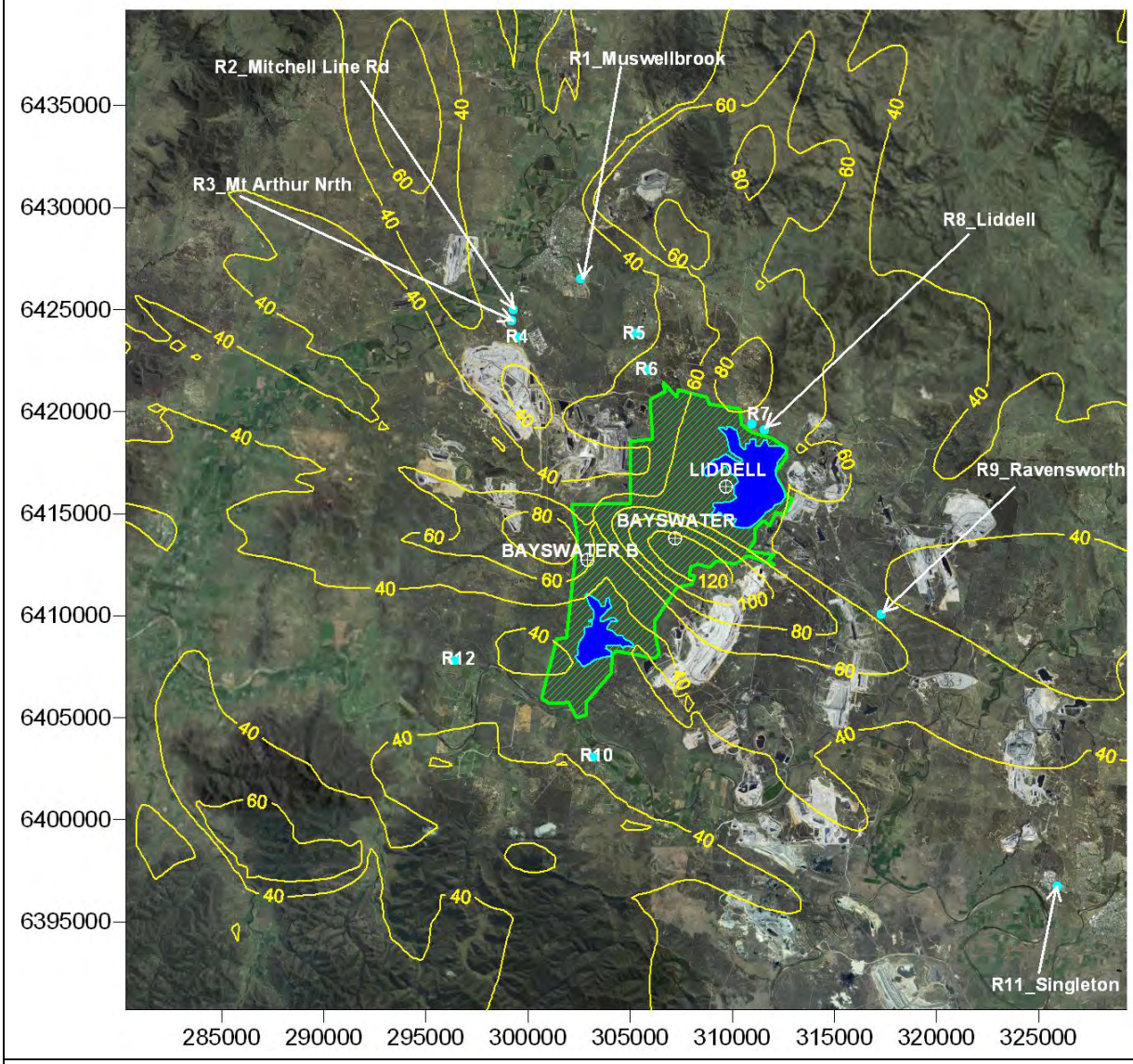

Figure 44 **Predicted maximum 24-hour average ground-level concentrations of sulfur dioxide from the proposed Bayswater B coal-fired Power Station in isolation (mean coal sulfur content) for 1999 to 2001 and 2007 to 2008**

Location: Bayswater B, 300m coal fired stack	**Averaging period: 24**-hour, March 1999 – February 2001 and March 2007 – February 2008	**Data source:** TAPM	**Units:** µg/m³
Type: Maximum contour plot	**Impact assessment criterion:** 228 µg/m³	**Prepared by:** Sarah Menzel, Alex Schloss	**Date:** August 2009

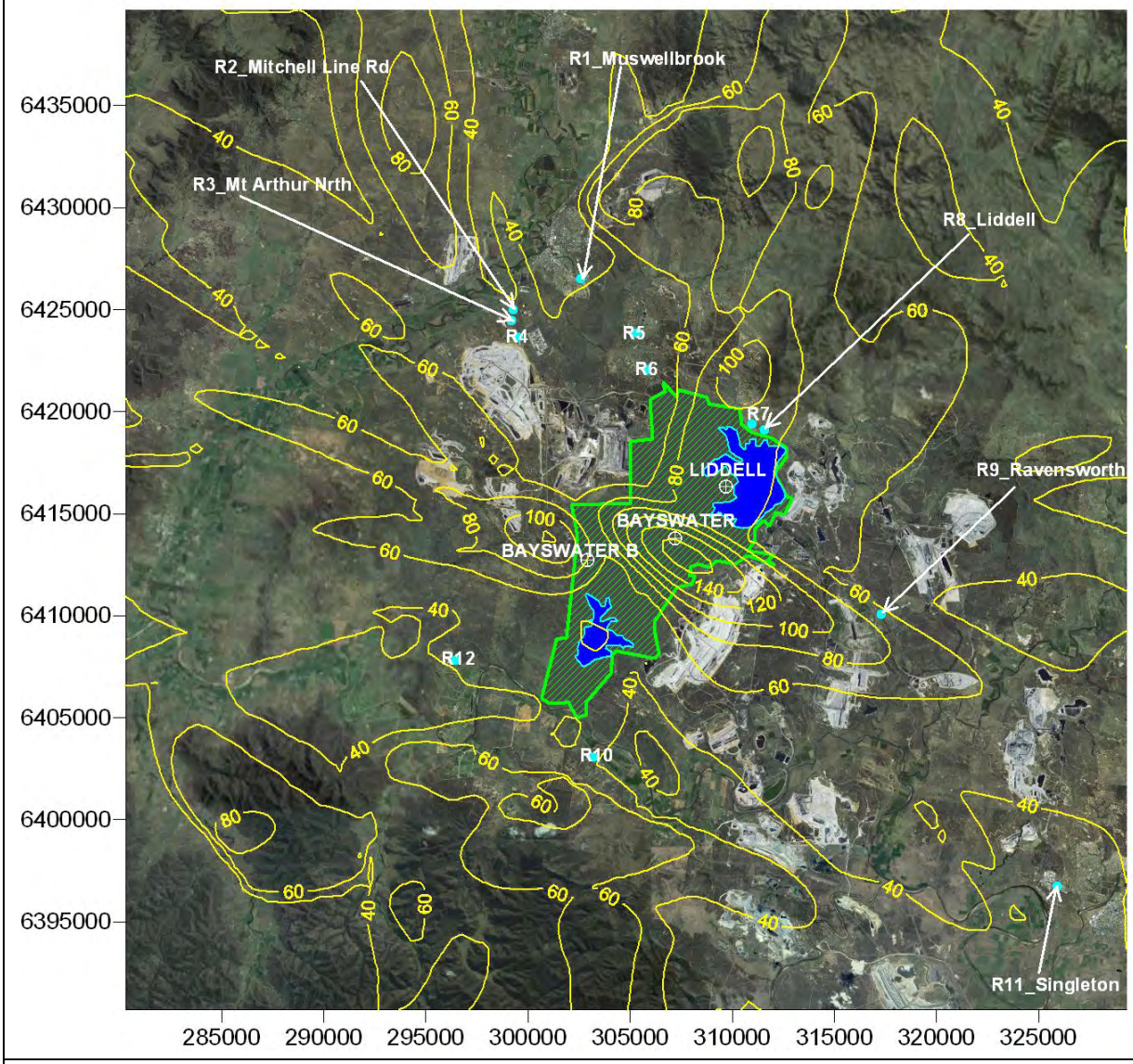

Figure 45 Predicted maximum 24-hour average ground-level concentrations of sulfur dioxide from the proposed Bayswater B coal-fired Power Station in isolation (maximum coal sulfur content) for 1999 to 2001 and 2007 to 2008

Location: Bayswater B, 300m coal fired stack	**Averaging period: 24**-hour, March 1999 – February 2001 and March 2007 – February 2008	**Data source:** TAPM	**Units:** µg/m³
Type: Maximum contour plot	**Impact assessment criterion:** 228 µg/m³	**Prepared by:** Sarah Menzel, Alex Schloss	**Date:** August 2009

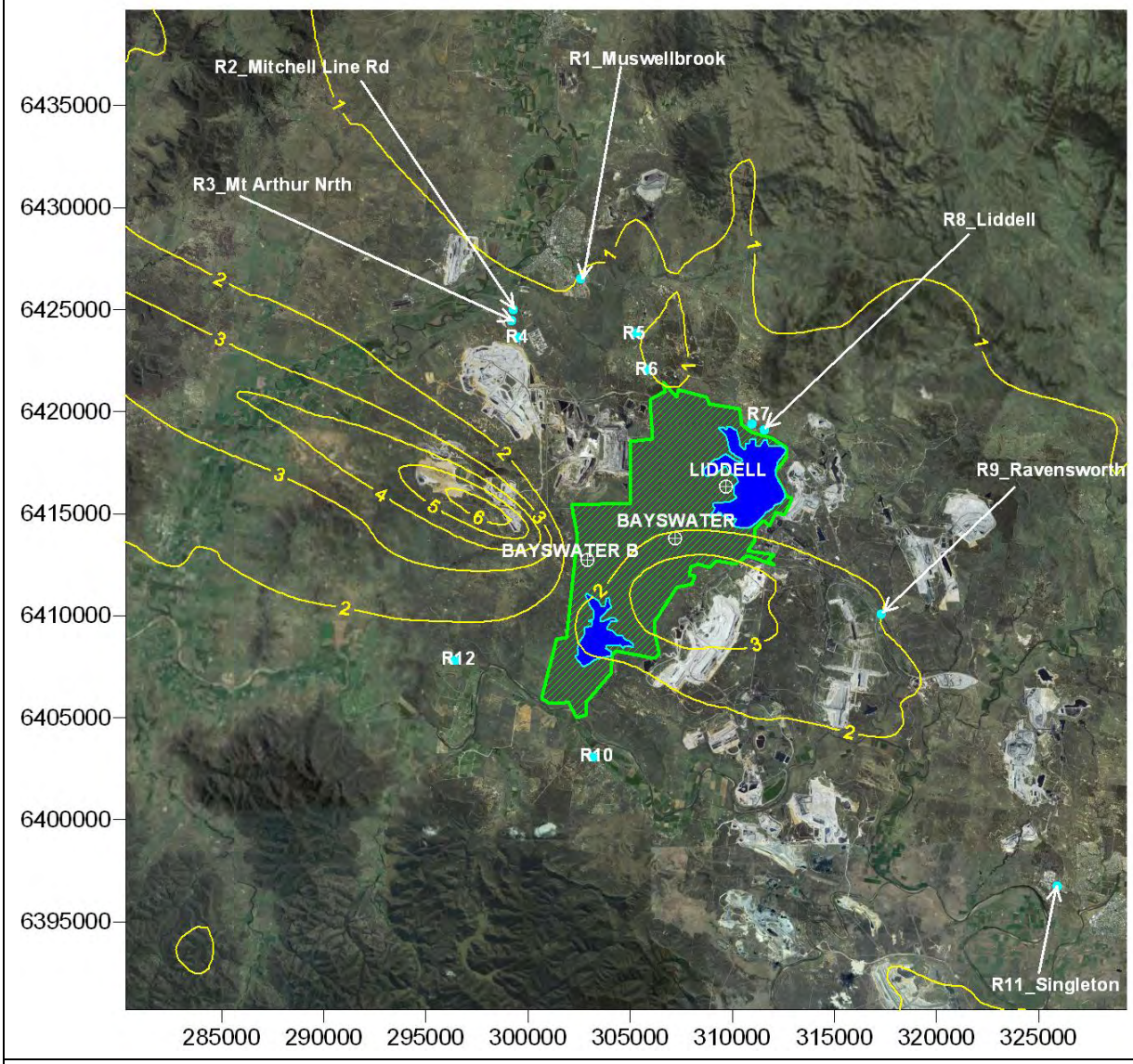

Figure 46 Predicted maximum annual average ground-level concentrations of sulfur dioxide from the proposed Bayswater B coal-fired Power Station in isolation (mean coal sulfur content) for 1999 to 2001 and 2007 to 2008

Location: Bayswater B, 300m coal fired stack	**Averaging period:** Annual, March 1999 – February 2001 and March 2007 – February 2008	**Data source:** TAPM	**Units:** µg/m³
Type: Maximum contour plot	**Impact assessment criterion:** 60 µg/m³	**Prepared by:** Sarah Menzel, Alex Schloss	**Date:** August 2009

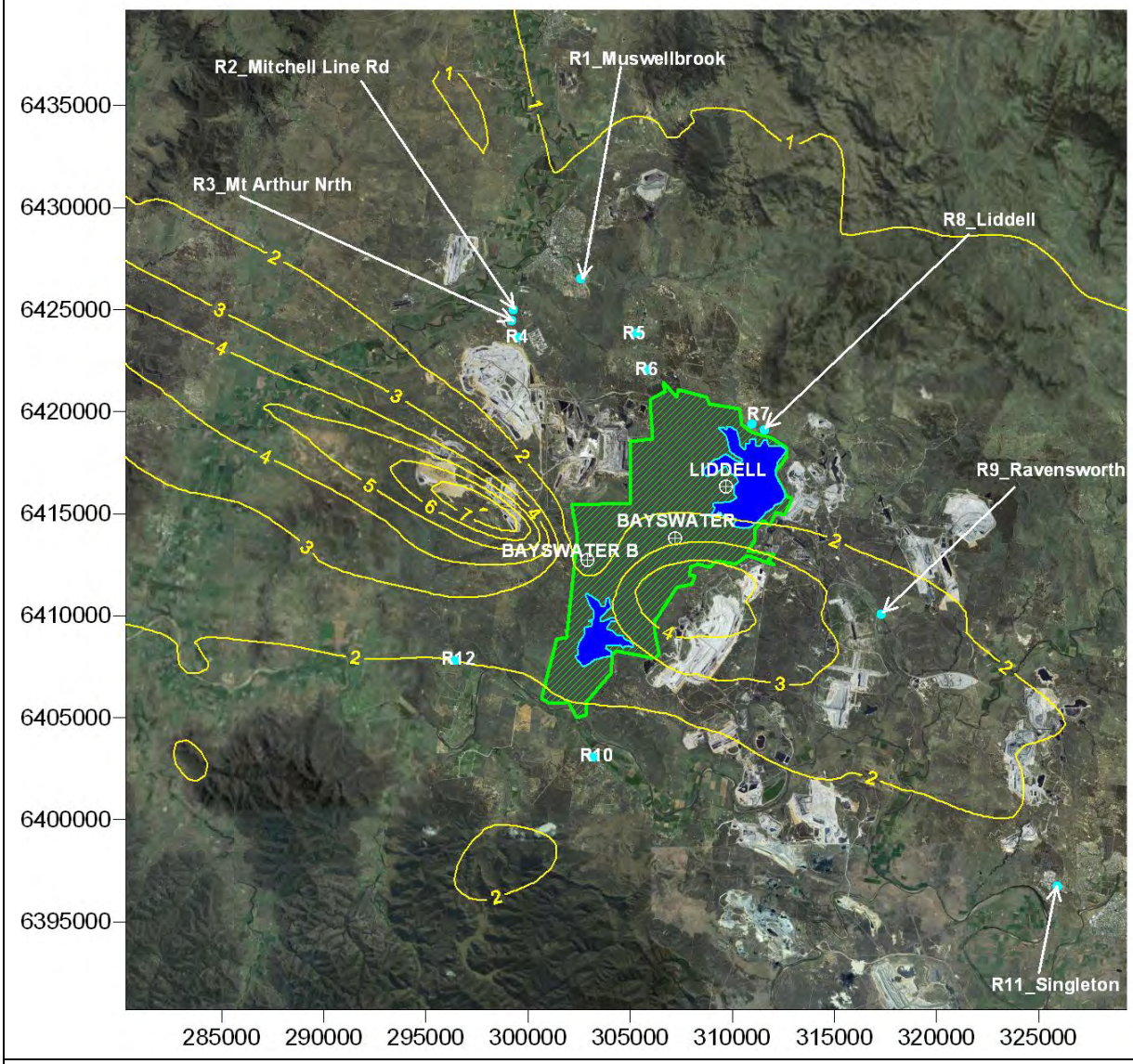

Figure 47 Predicted maximum annual average ground-level concentrations of sulfur dioxide from the proposed Bayswater B coal-fired Power Station in isolation (maximum coal sulfur content) for 1999 to 2001 and 2007 to 2008

Location: Bayswater B, 300m coal fired stack	**Averaging period:** Annual, March 1999 – February 2001 and March 2007 – February 2008	**Data source:** TAPM	**Units:** µg/m³
Type: Maximum contour plot	**Impact assessment criterion:** 60 µg/m³	**Prepared by:** Sarah Menzel, Alex Schloss	**Date:** August 2009

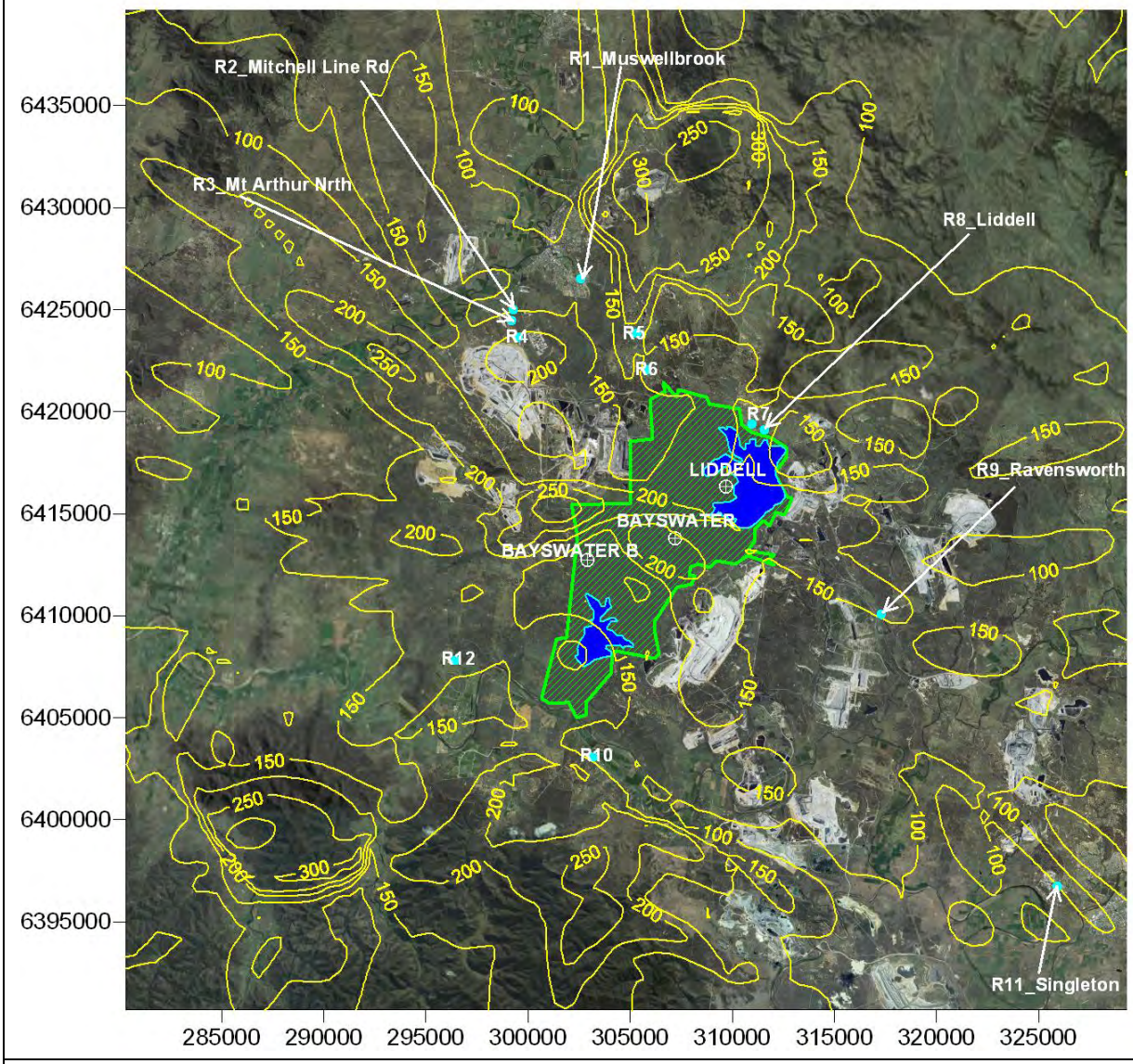

Figure 48 Predicted maximum 1-hour average ground-level concentrations of oxides of nitrogen from the proposed Bayswater B coal-fired Power Station in isolation for 1999 to 2001 and 2007 to 2008

Location: Bayswater B, 300m coal fired stack	**Averaging period:** 1-hour, March 1999 – February 2001 and March 2007 – February 2008	**Data source:** TAPM	**Units:** µg/m³
Type: Maximum contour plot	**Impact assessment criterion:** Not applicable	**Prepared by:** Sarah Menzel, Alex Schloss	**Date:** August 2009

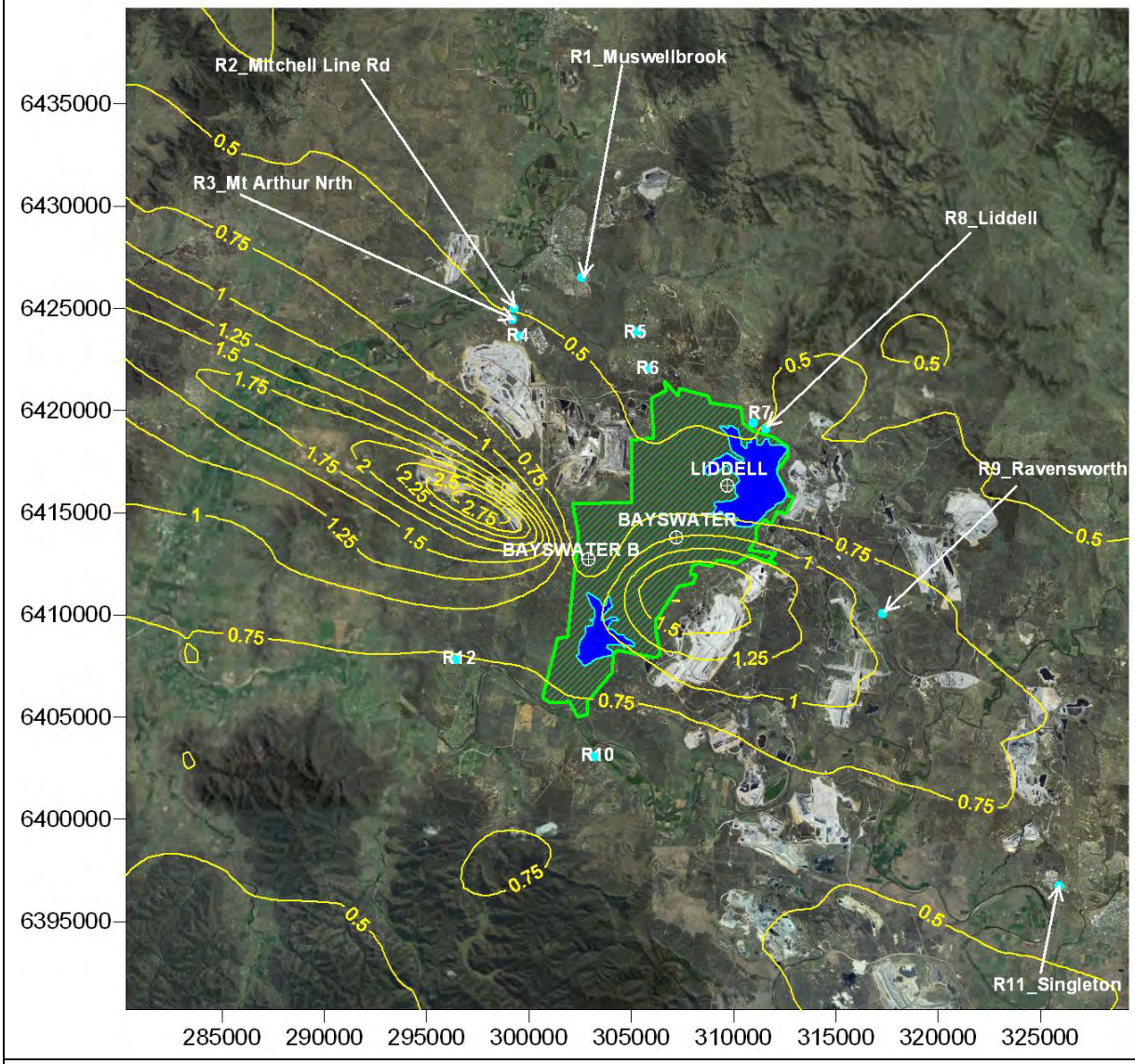

Figure 49 Predicted maximum annual average ground-level concentrations of oxides of nitrogen from the proposed Bayswater B coal-fired Power Station in isolation for 1999 to 2001 and 2007 to 2008

Location: Bayswater B, 300m coal fired stack	**Averaging period:** Annual, March 1999 – February 2001 and March 2007 – February 2008	**Data source:** TAPM	**Units:** µg/m³
Type: Maximum contour plot	**Impact assessment criterion:** Not applicable	**Prepared by:** Sarah Menzel, Alex Schloss	**Date:** August 2009

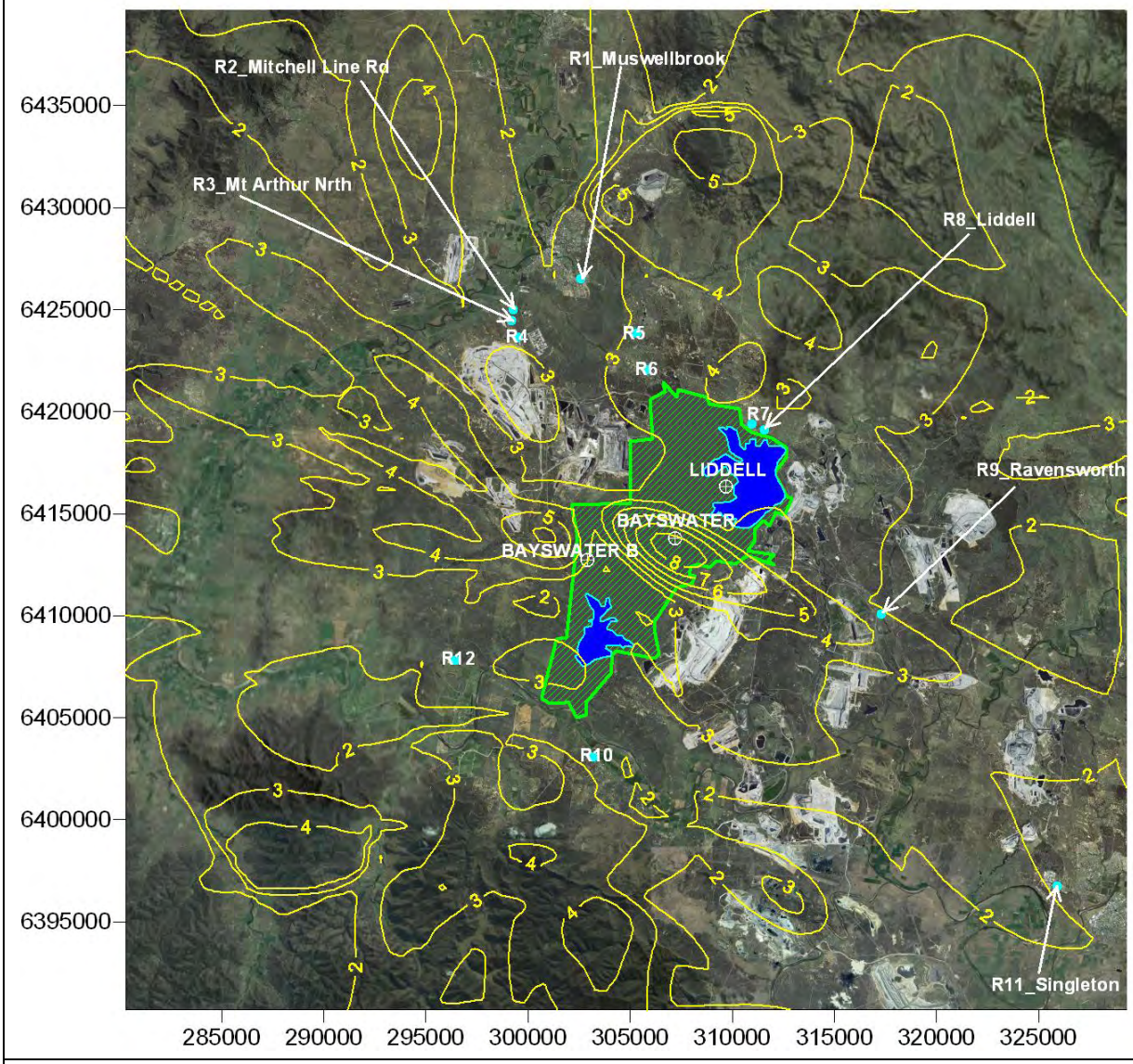

Figure 50 Predicted maximum 8-hour average ground-level concentrations of carbon monoxide from the proposed Bayswater B coal-fired Power Station in isolation for 1999 to 2001 and 2007 to 2008

Location: Bayswater B, 300m coal fired stack	**Averaging period:** 8-hour, March 1999 – February 2001 and March 2007 – February 2008	**Data source:** TAPM	**Units:** µg/m³
Type: Maximum contour plot	**Impact assessment criterion:** 10,000 µg/m³	**Prepared by:** Sarah Menzel, Alex Schloss	**Date:** August 2009

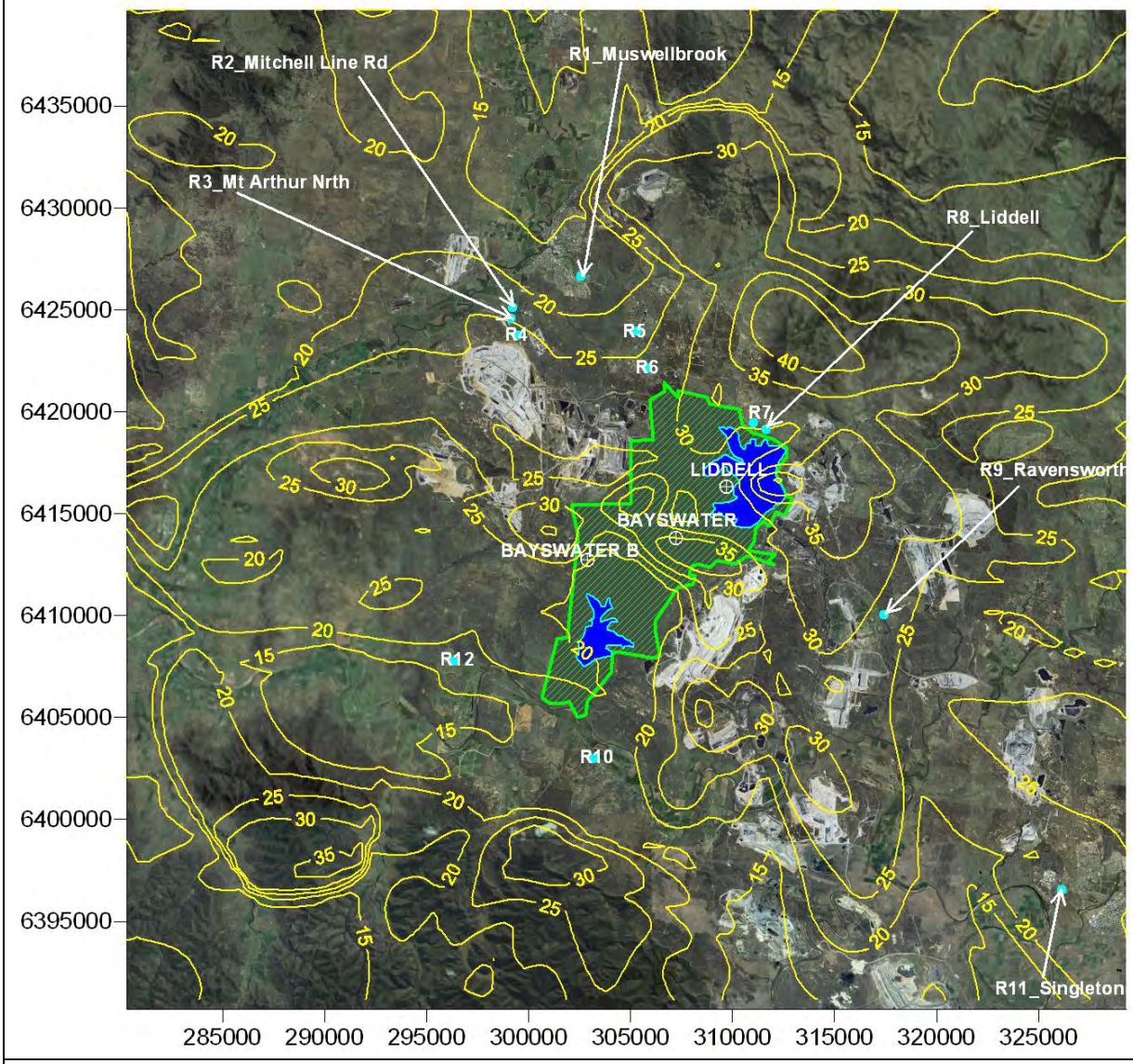

Figure 51 Predicted maximum 8-hour average ground-level concentrations of carbon monoxide from the proposed Bayswater B coal-fired Power Station with modelled background for 1999 to 2001 and 2007 to 2008

Location: Bayswater B, 300m coal fired stack	**Averaging period:** 8-hour, March 1999 – February 2001 and March 2007 – February 2008	**Data source:** TAPM	**Units:** µg/m³
Type: Maximum contour plot	**Impact assessment criterion:** 10,000 µg/m³	**Prepared by:** Sarah Menzel, Alex Schloss	**Date:** August 2009

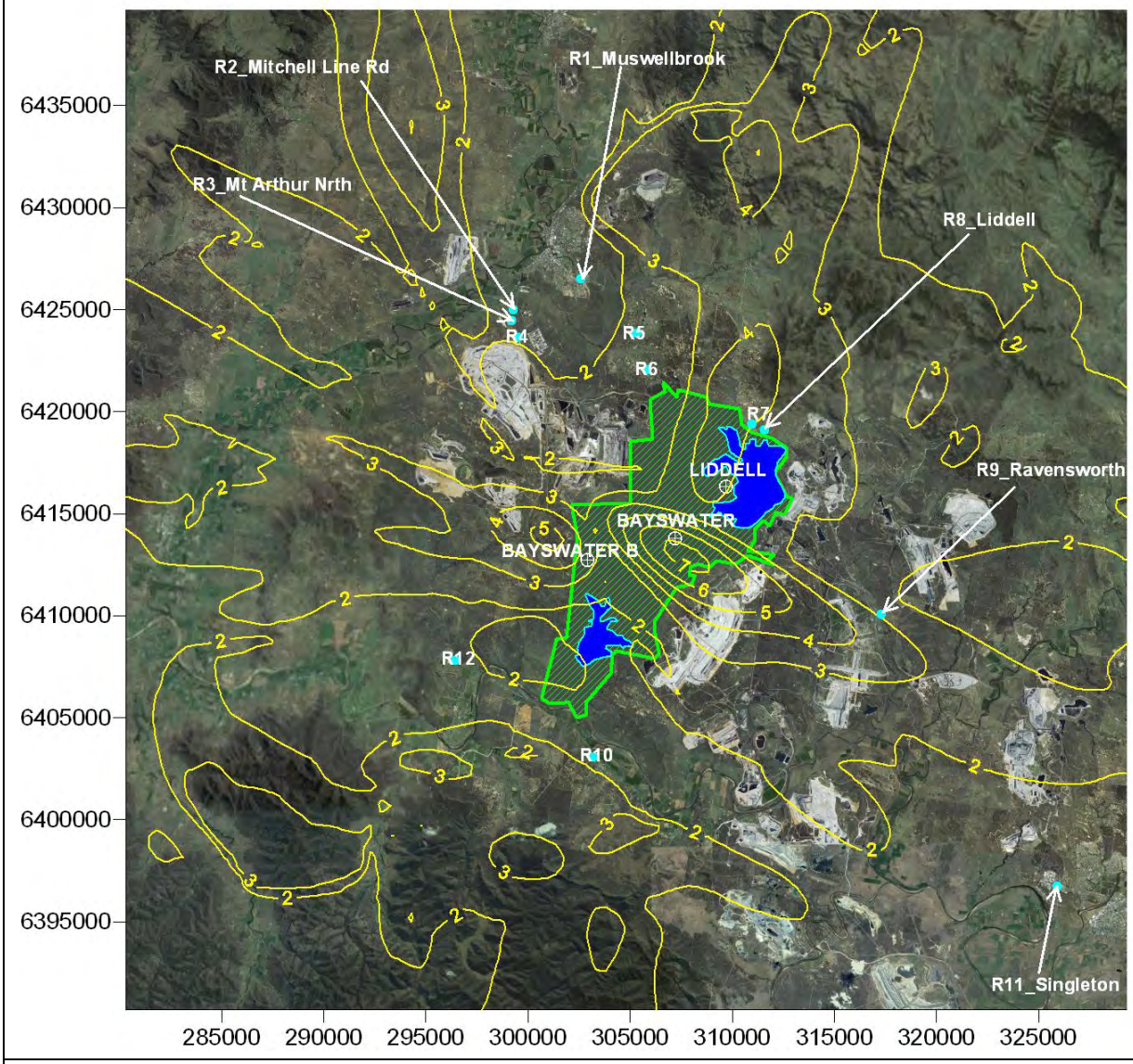

Figure 52 Predicted maximum 24-hour average ground-level concentrations of PM_{10} from the proposed Bayswater B coal-fired Power Station in isolation for 1999 to 2001 and 2007 to 2008

Location: Bayswater B, 300m coal fired stack	**Averaging period:** 24-hour, March 1999 – February 2001 and March 2007 – February 2008	**Data source:** TAPM	**Units:** µg/m³
Type: Maximum contour plot	**Impact assessment criterion:** 50 µg/m³	**Prepared by:** Sarah Menzel, Alex Schloss	**Date:** August 2009

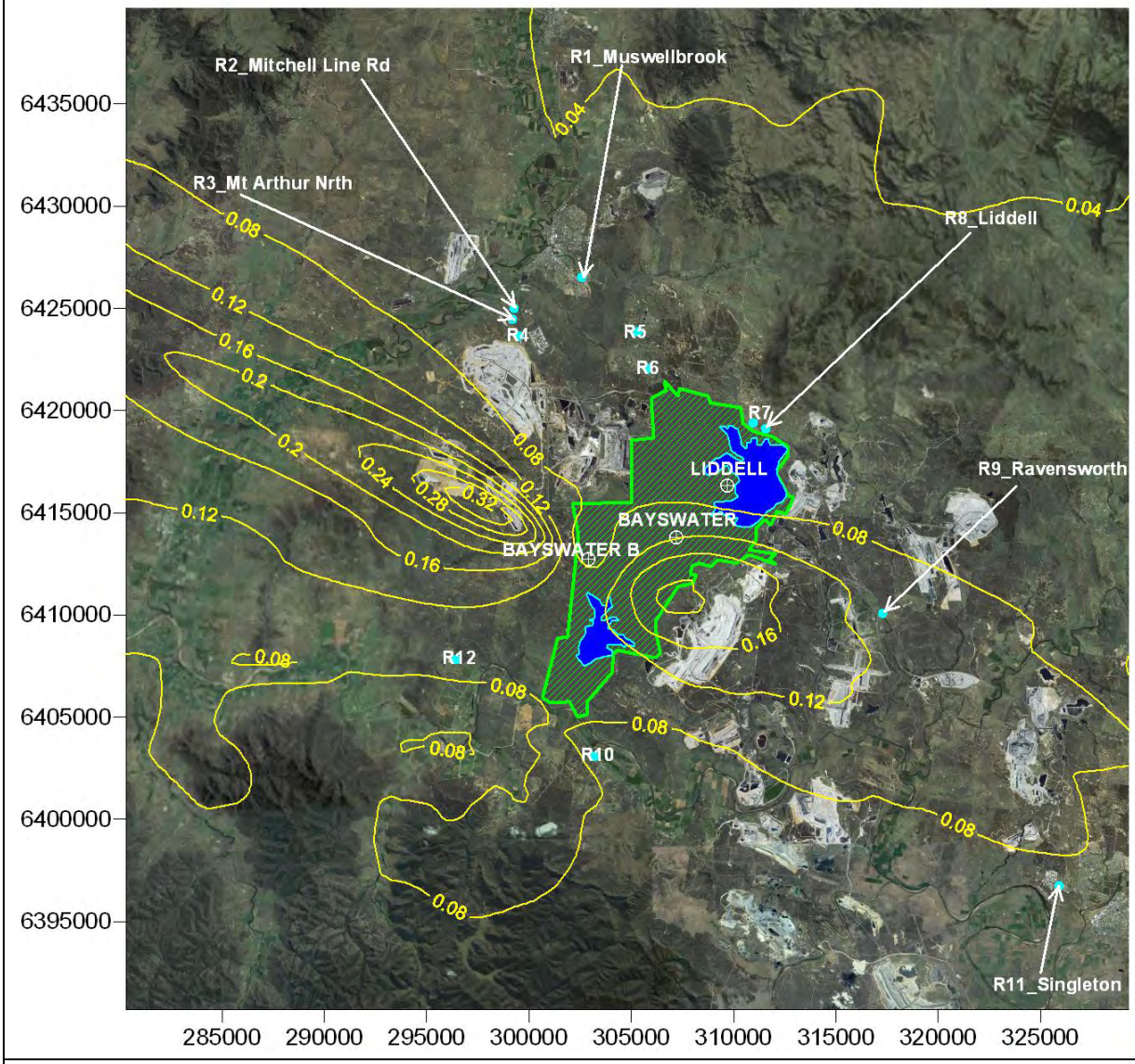

Figure 53 Predicted maximum annual average ground-level concentrations of PM_{10} from the proposed Bayswater B coal-fired Power Station in isolation for 1999 to 2001 and 2007 to 2008

Location: Bayswater B, 300m coal fired stack	**Averaging period:** Annual, March 1999 – February 2001 and March 2007 – February 2008	**Data source:** TAPM	**Units:** µg/m³
Type: Maximum contour plot	**Impact assessment criterion:** 30 µg/m³	**Prepared by:** Sarah Menzel, Alex Schloss	**Date:** August 2009

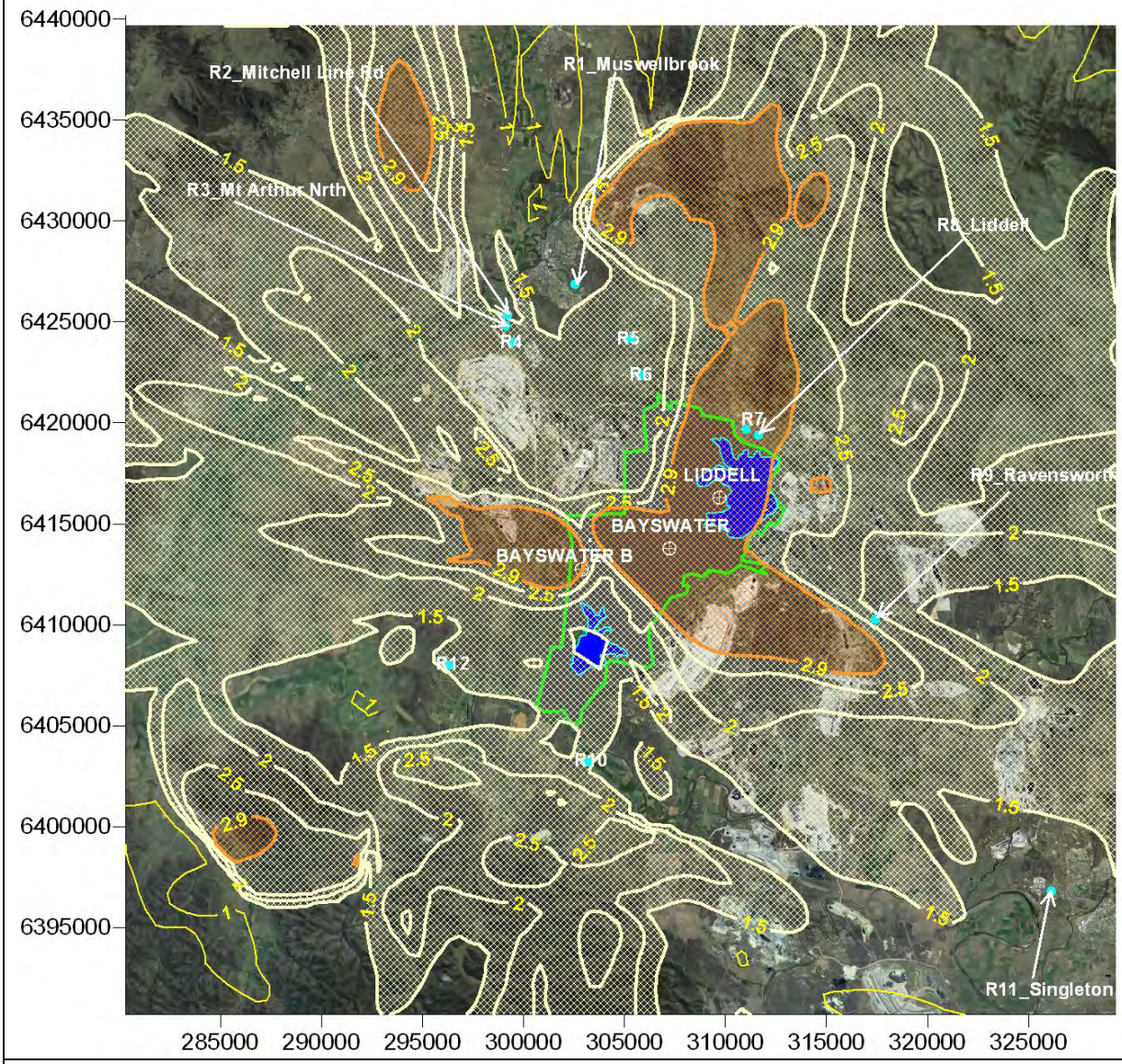

Figure 54 Predicted maximum 24-hour average ground-level concentrations of fluoride from the proposed Bayswater B coal-fired Power Station in isolation for 1999 to 2001 and 2007 to 2008

Location: Bayswater B, 300m coal fired stack	**Averaging period:** 24-hour, March 1999 – February 2001 and March 2007 – February 2008	**Data source:** TAPM	**Units:** µg/m³
Type: Maximum contour plot	**Impact assessment criterion:** 1.5 µg/m³ (vegetation) and 2.9 µg/m³ (general land use)	**Prepared by:** Sarah Menzel, Alex Schloss	**Date:** August 2009

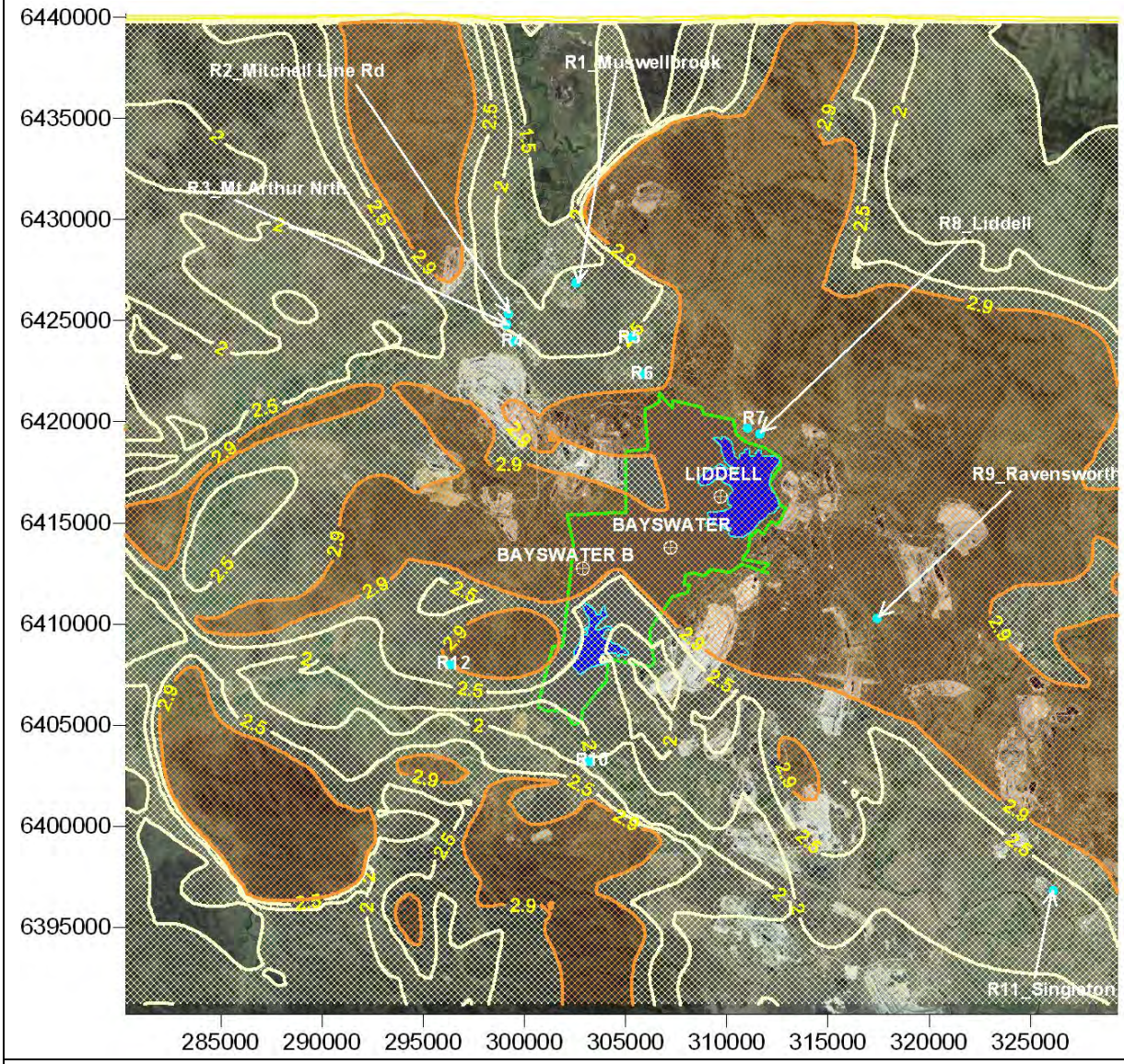

Figure 55 Predicted maximum 24-hour average ground-level concentrations of fluoride from the proposed Bayswater B coal-fired Power Station with modelled background for 1999 to 2001 and 2007 to 2008

Location: Bayswater B, 300m coal fired stack	**Averaging period:** 24-hour, March 1999 – February 2001 and March 2007 – February 2008	**Data source:** TAPM	**Units:** µg/m³
Type: Maximum contour plot	**Impact assessment criterion:** 1.5 µg/m³ (vegetation) and 2.9 µg/m³ (general land use)	**Prepared by:** Sarah Menzel, Alex Schloss	**Date:** August 2009

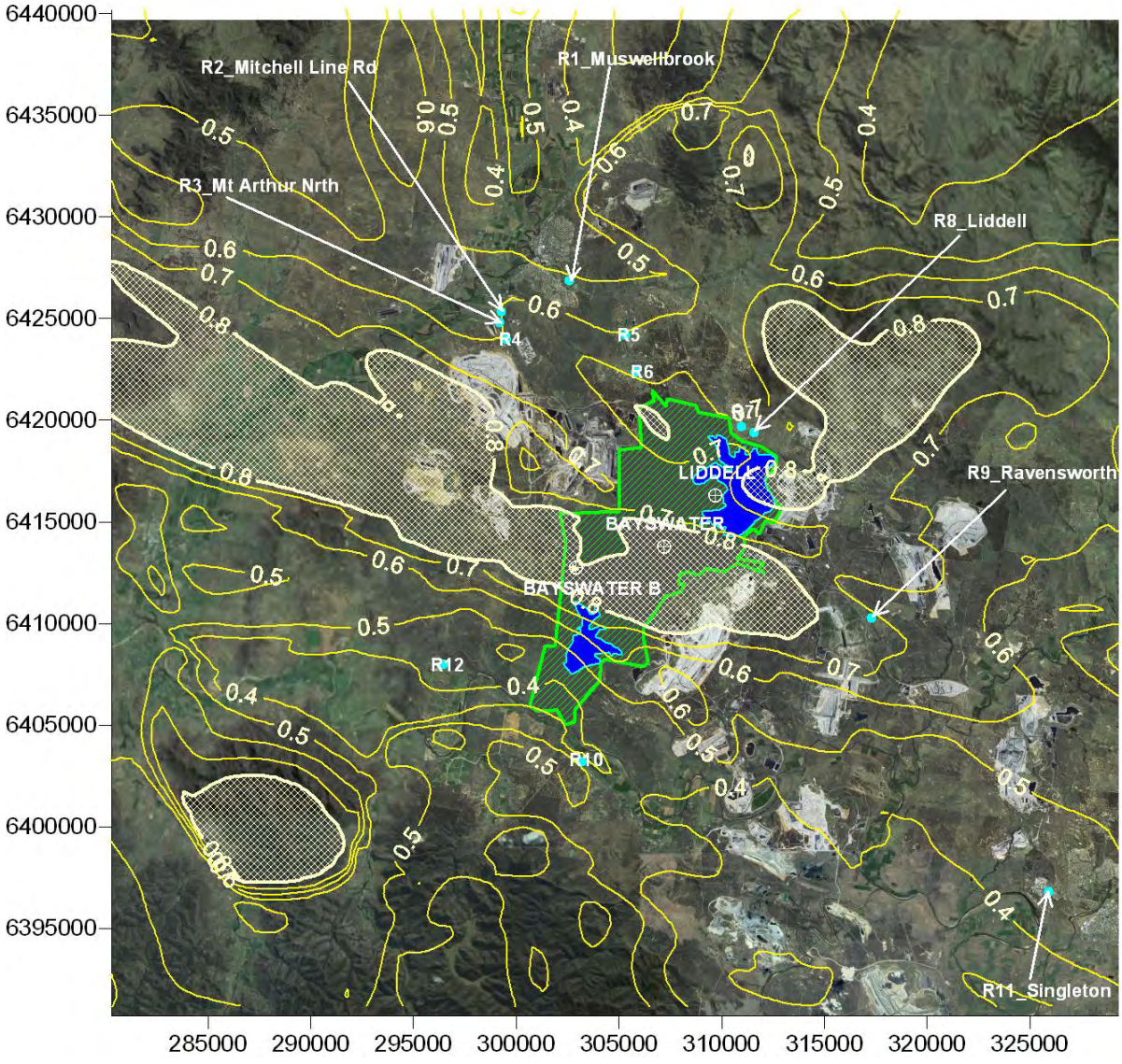

Figure 56 Predicted maximum 7-day average ground-level concentrations of fluoride from the proposed Bayswater B coal-fired Power Station with modelled background for 1999 to 2001 and 2007 to 2008

Location: Bayswater B, 300m coal fired stack	**Averaging period:** 7-day March 1999 – February 2001 and March 2007 – February 2008	**Data source:** TAPM	**Units:** µg/m³
Type: Maximum (100th percentile) contour plot	**Impact assessment criterion:** 1.7 µg/m³ (vegetation) and 0.8 µg/m³ (general land use)	**Prepared by:** Sarah Menzel, Alex Schloss	**Date:** August 2009

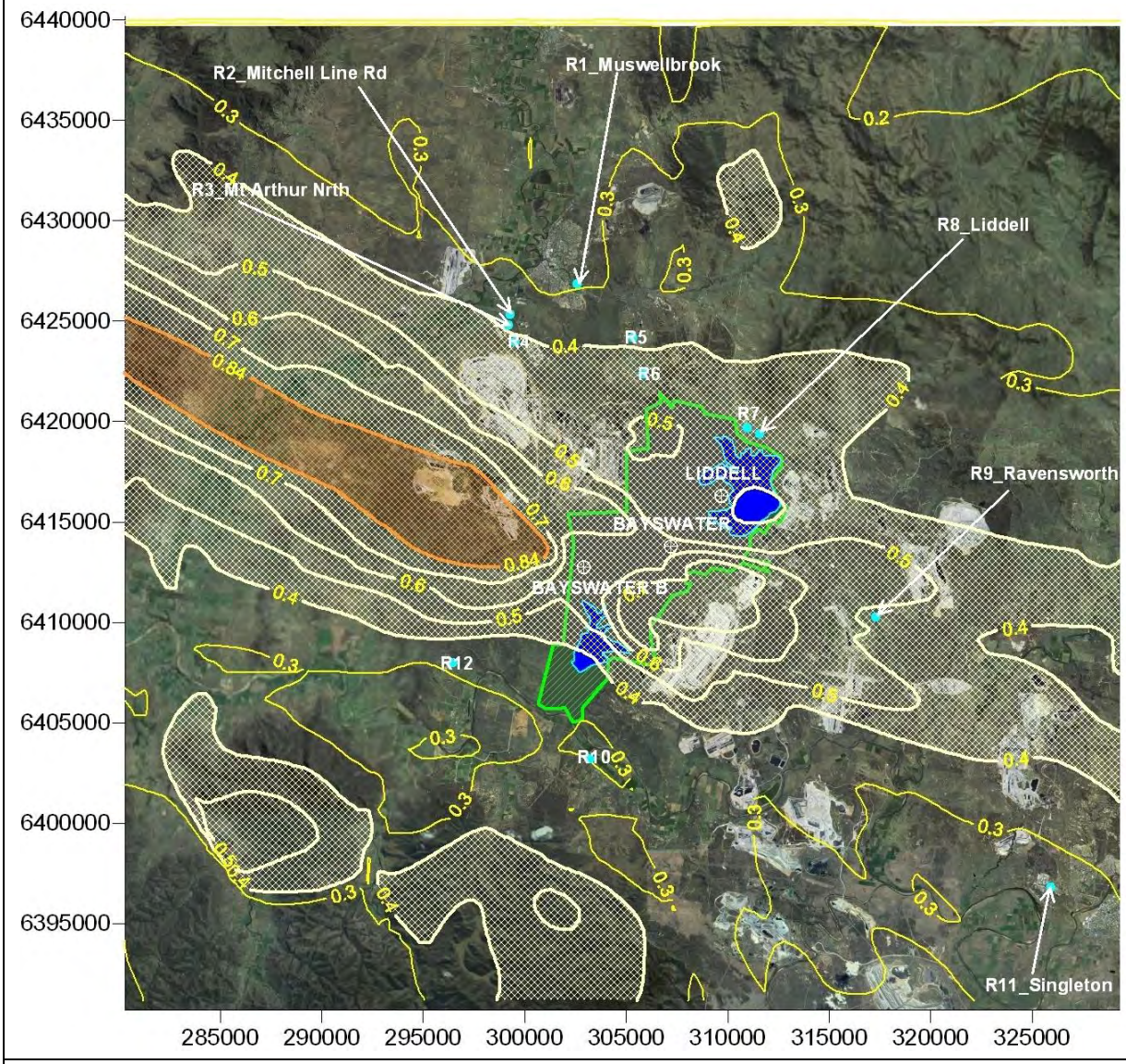

Figure 57 Predicted maximum 30-day average ground-level concentrations of fluoride from the proposed Bayswater B coal-fired Power Station with modelled background for 1999 to 2001 and 2007 to 2008

Location: Bayswater B, 300m coal fired stack	**Averaging period:** 7-day March 1999 – February 2001 and March 2007 – February 2008	**Data source:** TAPM	**Units:** µg/m³
Type: Maximum (100th percentile) contour plot	**Impact assessment criterion:** 1.7 µg/m³ (vegetation) and 0.8 µg/m³ (general land use)	**Prepared by:** Sarah Menzel, Alex Schloss	**Date:** August 2009

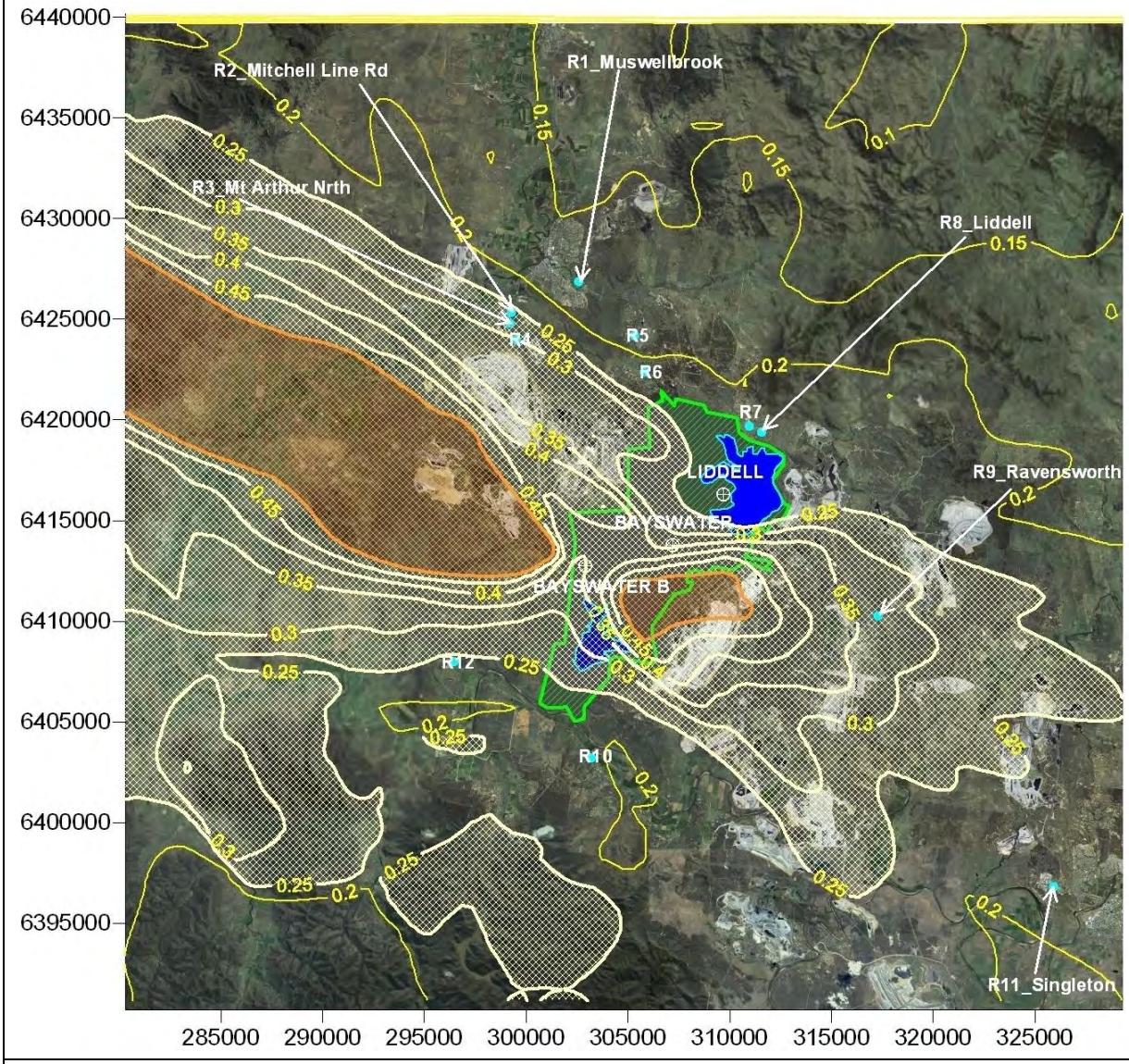

Figure 58 Predicted maximum 90-day average ground-level concentrations of fluoride from the proposed Bayswater B coal-fired Power Station with modelled background for 1999 to 2001 and 2007 to 2008

Location: Bayswater B, 300m coal fired stack	**Averaging period:** 7-day March 1999 – February 2001 and March 2007 – February 2008	**Data source:** TAPM	**Units:** µg/m³
Type: Maximum (100th percentile) contour plot	**Impact assessment criterion:** 1.7 µg/m³ (vegetation) and 0.8 µg/m³ (general land use)	**Prepared by:** Sarah Menzel, Alex Schloss	**Date:** August 2009

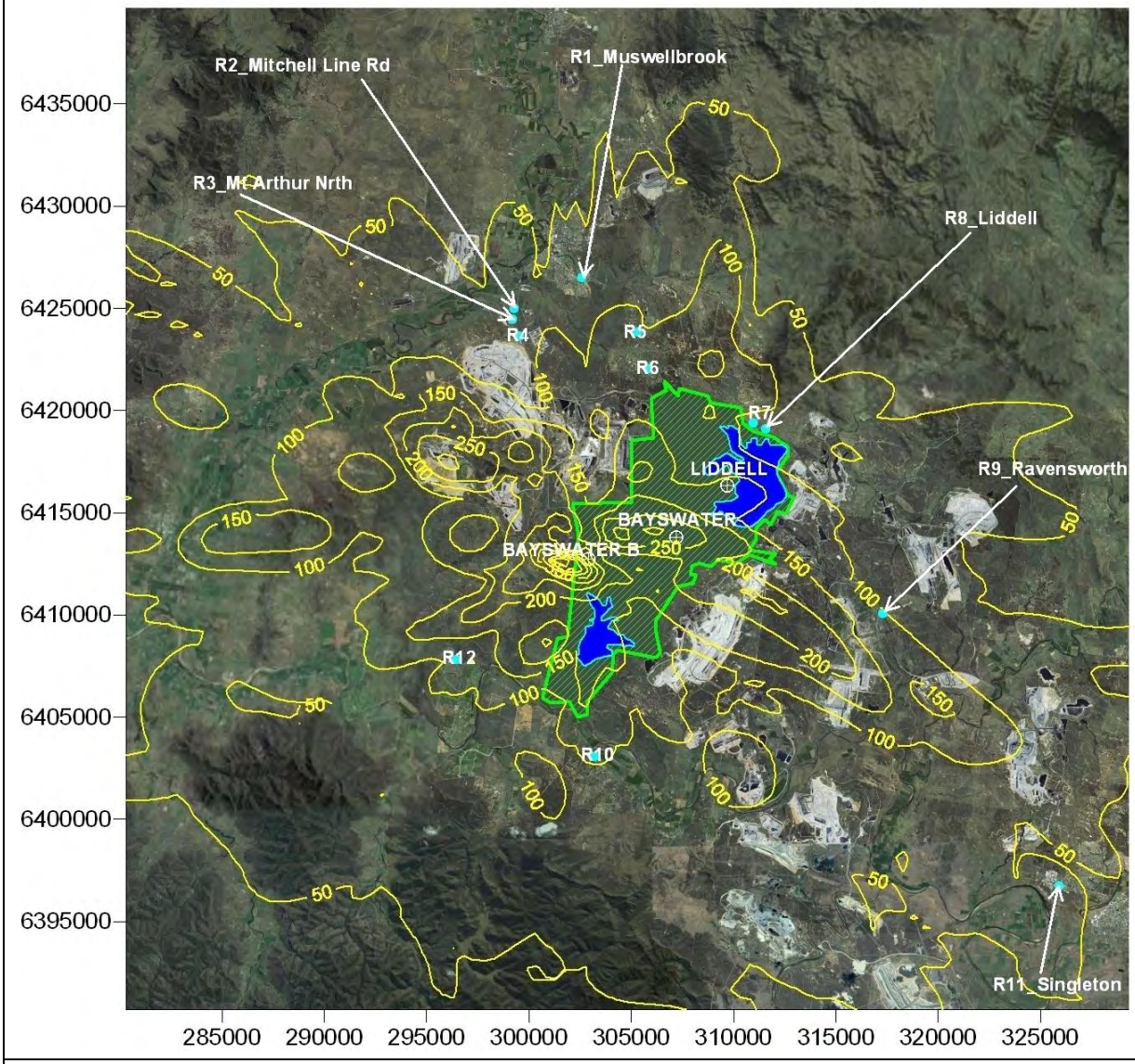

Figure 59 Predicted maximum 1-hour average ground-level concentrations of oxides of nitrogen from the proposed Bayswater B gas-fired Power Station in isolation for 1999 to 2001 and 2007 to 2008

Location: Bayswater B, gas-fired option	**Averaging period:** 1-hour, March 1999 – February 2001 and March 2007 – February 2008	**Data source:** TAPM	**Units:** µg/m³
Type: Maximum contour plot	**Impact assessment criterion:** Not applicable	**Prepared by:** Sarah Menzel, Alex Schloss	**Date:** August 2009

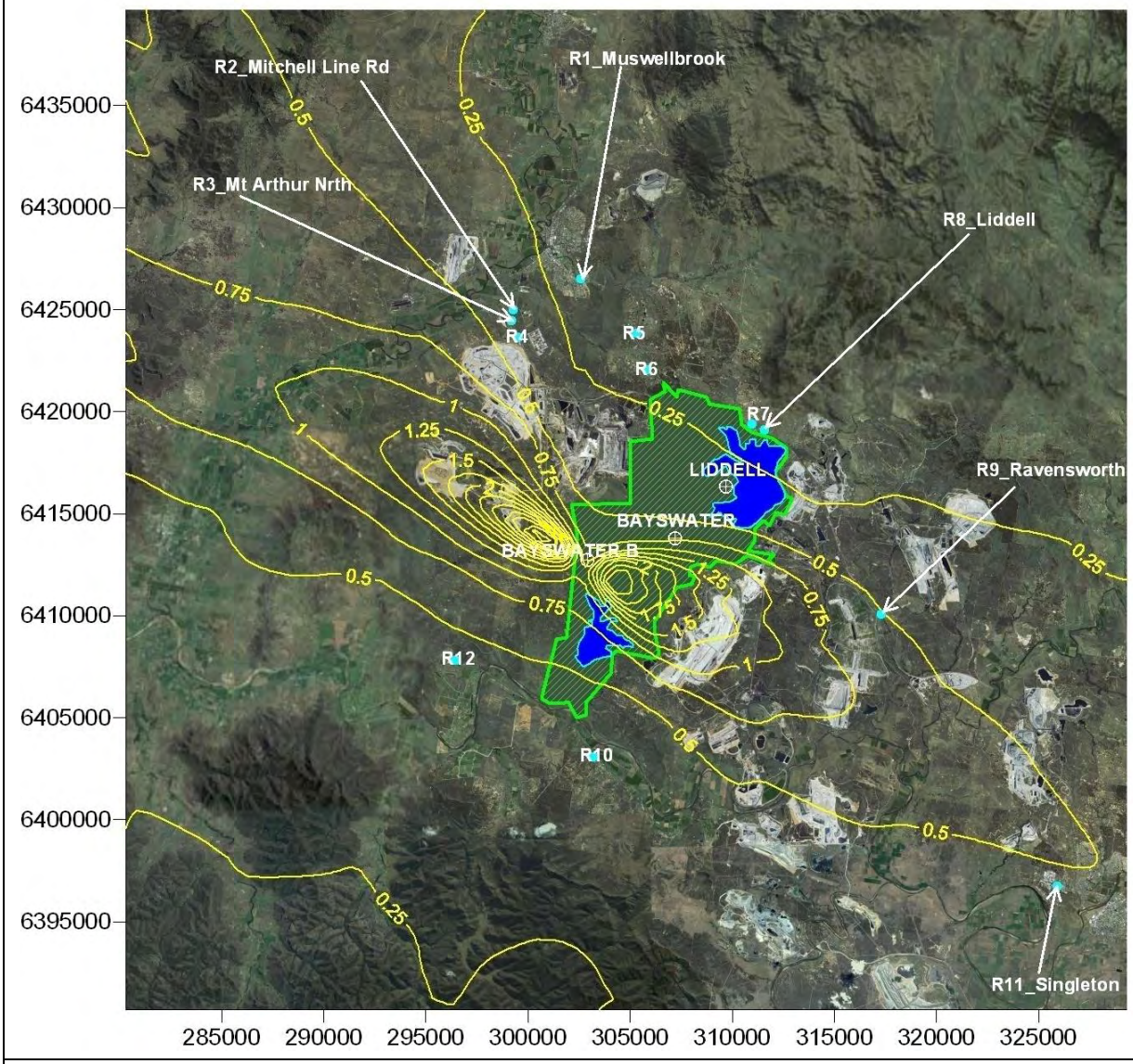

Figure 60 Predicted maximum annual average ground-level concentrations of oxides of nitrogen from the proposed Bayswater B gas-fired Power Station in isolation for 1999 to 2001 and 2007 to 2008

Location: Bayswater B, gas-fired option	**Averaging period:** annual, March 1999 – February 2001 and March 2007 – February 2008	**Data source:** TAPM	**Units:** µg/m³
Type: Contour plot	**Impact assessment criterion:** Not applicable	**Prepared by:** Sarah Menzel, Alex Schloss	**Date:** August 2009

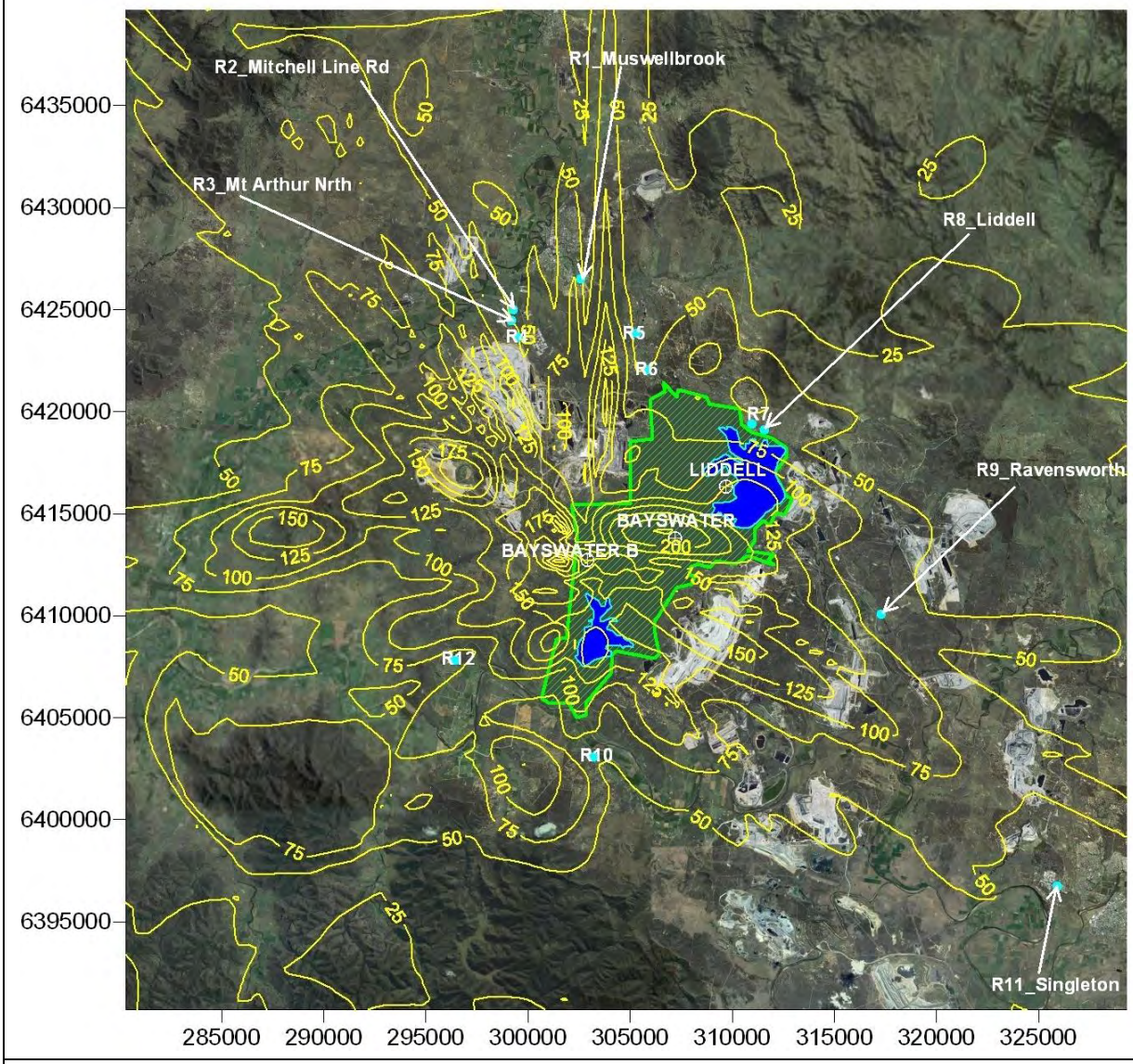

Figure 61 Predicted maximum 8-hour average ground-level concentrations of carbon monoxide from the proposed Bayswater B gas-fired Power Station in isolation for 1999 to 2001 and 2007 to 2008

Location: Bayswater B, gas-fired option	**Averaging period:** 8-hour, March 1999 – February 2001 and March 2007 – February 2008	**Data source:** TAPM	**Units:** µg/m³
Type: Maximum contour plot	**Impact assessment criterion:** 10,000 µg/m³	**Prepared by:** Sarah Menzel, Alex Schloss	**Date:** August 2009

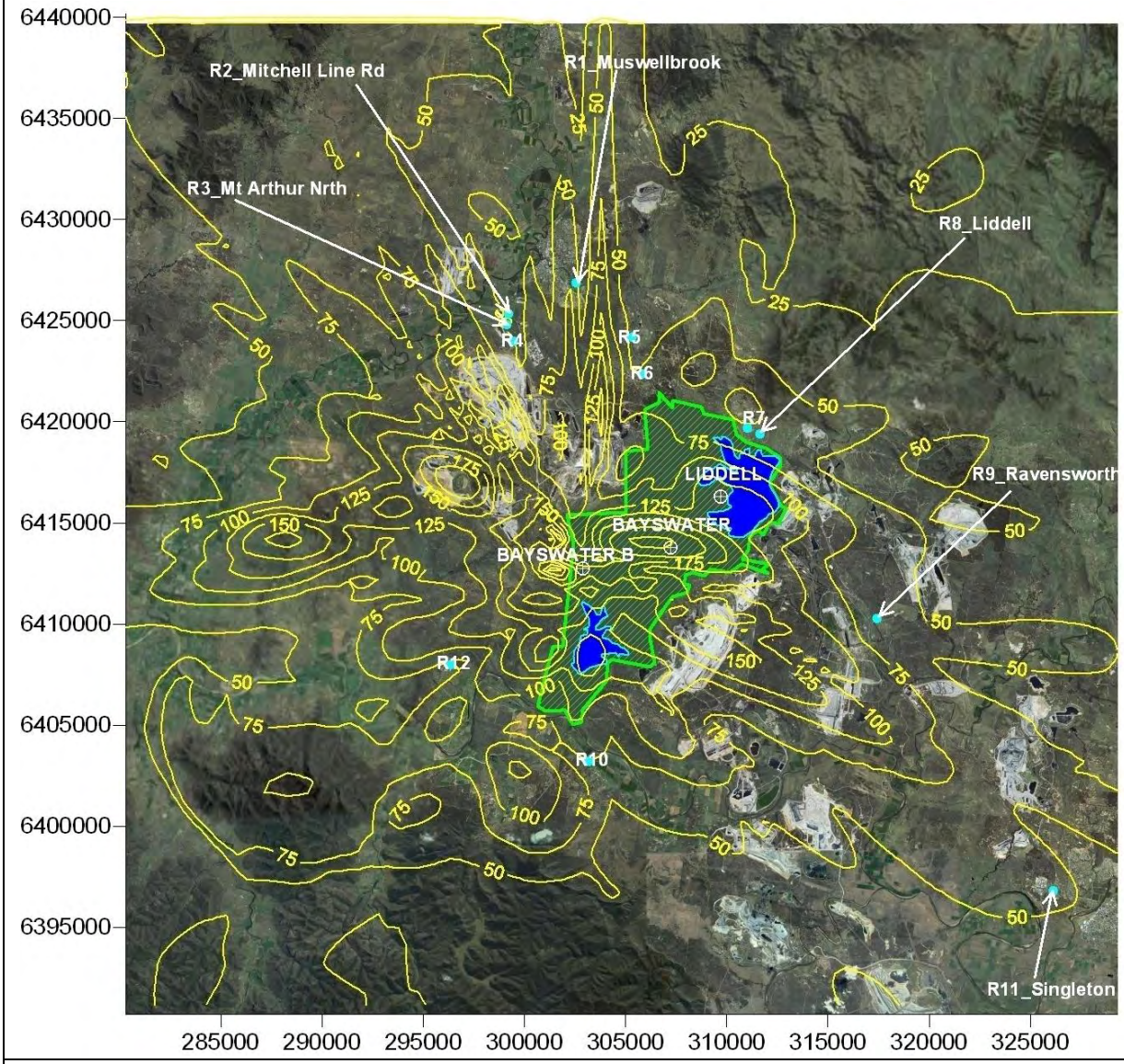

Figure 62 Predicted maximum 8-hour average ground-level concentrations of carbon monoxide from the proposed Bayswater B gas-fired Power Station with modelled background for 1999 to 2001 and 2007 to 2008

Location: Bayswater B, gas-fired option	**Averaging period:** 8-hour, March 1999 – February 2001 and March 2007 – February 2008	**Data source:** TAPM	**Units:** µg/m³
Type: Maximum contour plot	**Impact assessment criterion:** 10,000 µg/m³	**Prepared by:** Sarah Menzel, Alex Schloss	**Date:** August 2009

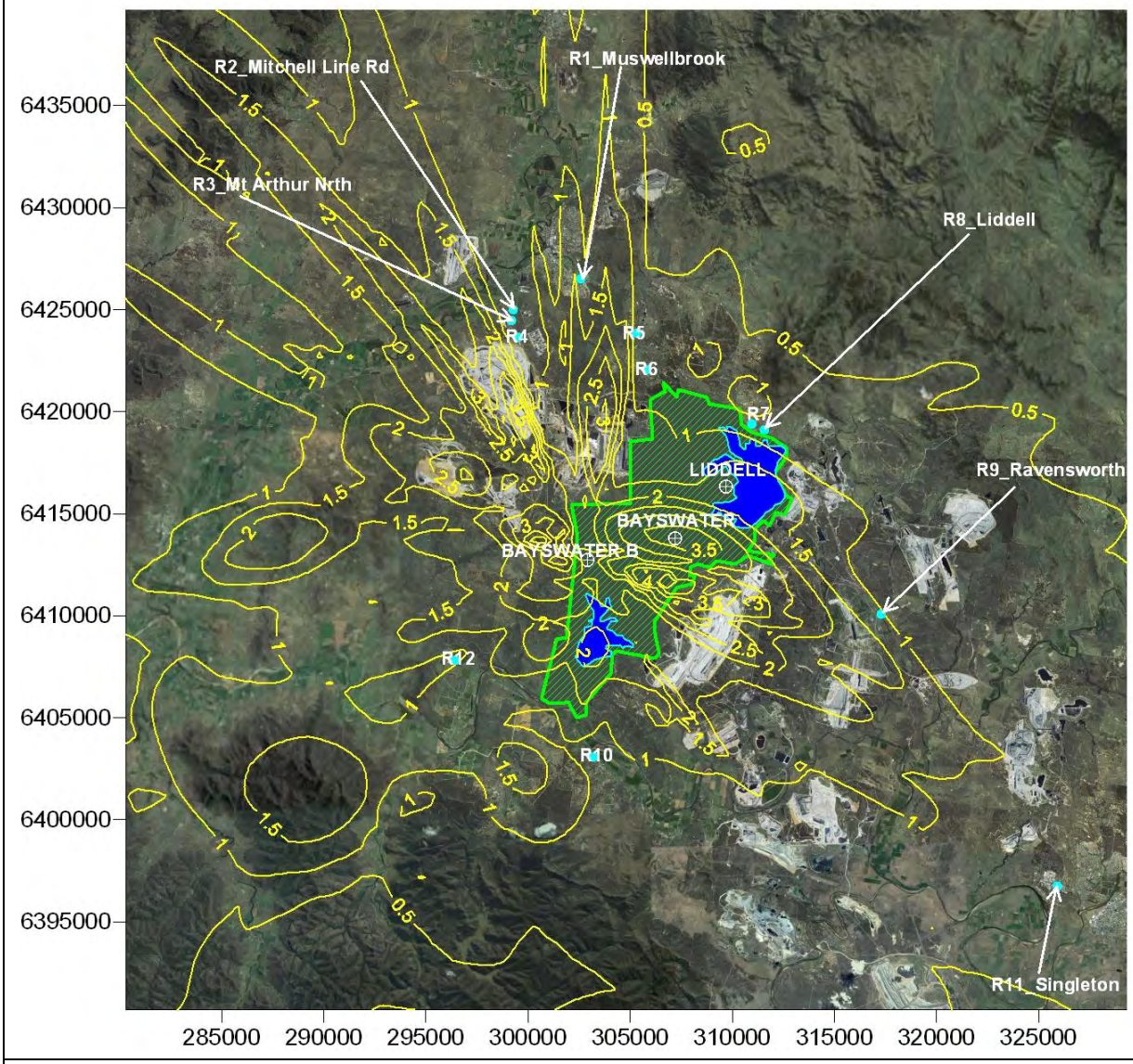

Figure 63 Predicted maximum 24-hour average ground-level concentrations of PM_{10} from the proposed Bayswater B gas-fired Power Station in isolation for 1999 to 2001 and 2007 to 2008

Location: Bayswater B, gas-fired option	**Averaging period:** 24-hour, March 1999 – February 2001 and March 2007 – February 2008	**Data source:** TAPM	**Units:** µg/m³
Type: Maximum contour plot	**Impact assessment criterion:** 50 µg/m³	**Prepared by:** Sarah Menzel, Alex Schloss	**Date:** August 2009

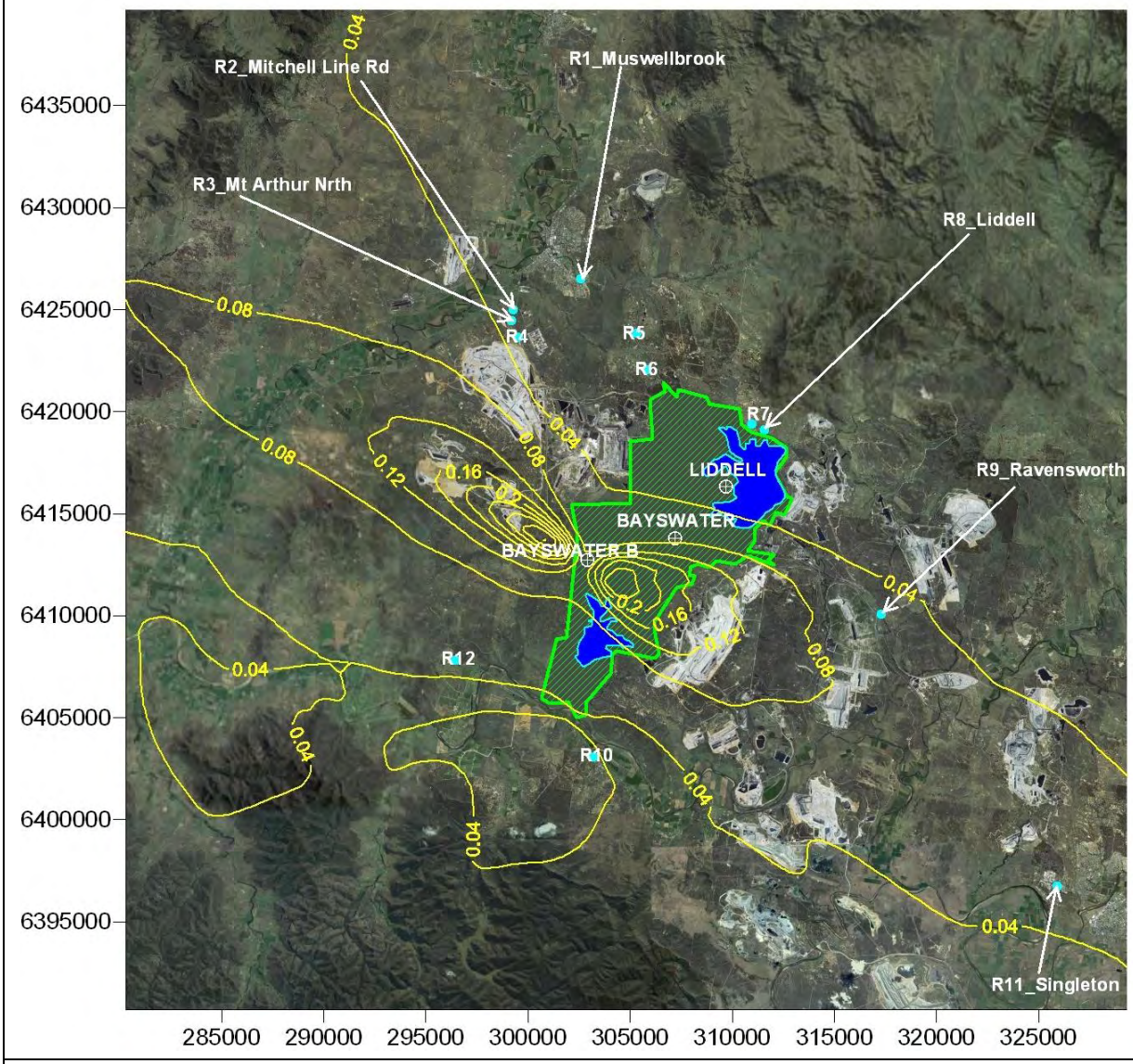

Figure 64 Predicted maximum annual average ground-level concentrations of PM_{10} from the proposed Bayswater B gas-fired Power Station in isolation for 1999 to 2001 and 2007 to 2008

Location: Bayswater B, gas-fired option	**Averaging period:** Annual, March 1999 – February 2001 and March 2007 – February 2008	**Data source:** TAPM	**Units:** µg/m³
Type: Contour plot	**Impact assessment criterion:** 30 µg/m³	**Prepared by:** Sarah Menzel, Alex Schloss	**Date:** August 2009

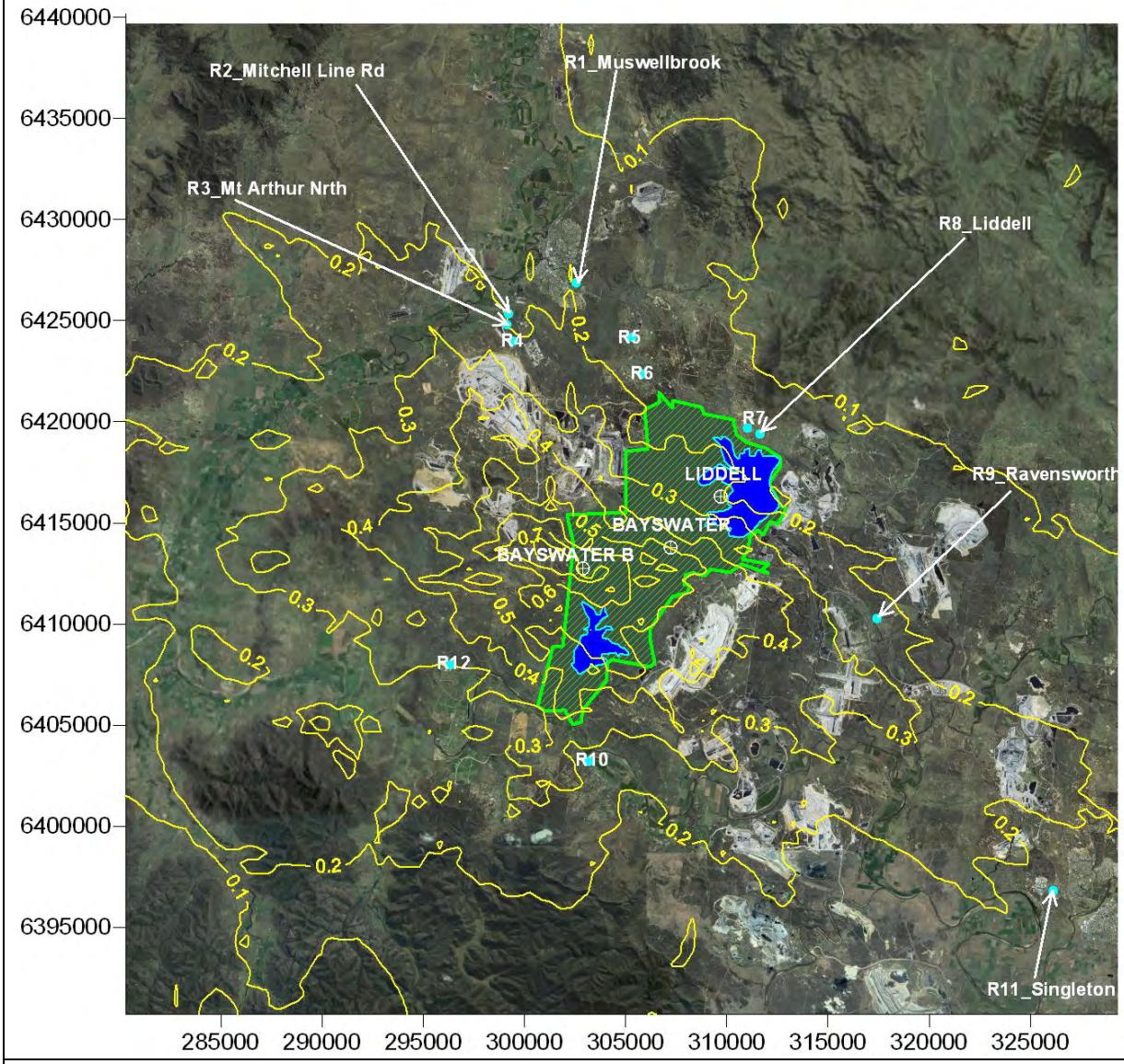

Figure 65 Predicted maximum 1-hour average ground-level concentrations of formaldehyde from the proposed Bayswater B gas-fired Power Station in isolation for 1999 to 2001 and 2007 to 2008

Location: Bayswater B, gas-fired option	**Averaging period:** 1-hour, March 1999 – February 2001 and March 2007 – February 2008	**Data source:** TAPM	**Units:** µg/m³
Type: Ninth highest concentration contour plot	**Impact assessment criterion:** 20 µg/m³	**Prepared by:** Sarah Menzel, Alex Schloss	**Date:** August 2009