Air Noise Environment
Environmental Monitoring and Assessment

Air Quality Assessment - Proposed Mixed Use Development, Bowen Hills

Mewing Planning Consultants

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Prepared by:
Air Noise Environment

ABN: 13 081 834 513



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Brisbane Office
A: Unit 3, 4 Tombo Street,
Capalaba, QLD 4157
T: +61 7 3245 7808
E: qld@ane.com.au

Sydney Office
A: Level 6, 69 Reservoir Street
Surry Hills, NSW 2010
T: +61 2 8217 0706
E: nsw@ane.com.au

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Where site inspections, testing or fieldwork have taken place, the report is based on the information made available by the client or their nominees during the visit, visual observations and any subsequent discussions with regulatory authorities. It is further assumed that normal activities were being undertaken at the site on the day of the site visit(s).

The validity and comprehensiveness of supplied information has not been independently verified and, for the purposes of this report, it is assumed that the information provided to Air Noise Environment Pty Ltd for the purposes of this project is both complete and accurate.

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1 Introduction

1.1 Scope of Study

Mewing Planning Consultants commissioned Air Noise Environment to undertake an air quality assessment for a proposed multi-level mixed use development at 12-16 Thompson Street, Bowen Hills.

The assessment has been undertaken to determine the potential air quality impacts of the surrounding uses on potential sensitive uses at the development site. The assessment has been undertaken in accordance with the Bowen Hills Priority Development Area Development Scheme. As required by the development scheme, the air quality assessment has followed the guidelines of the Air Quality Planning Scheme Policy (AQPSP).

1.2 Information Requests

The Department of State Development, Tourism, and Innovation identified further issues for the proposed mixed use development in a letter dated 22 December 2020 under application number DEV2020/1124. The project is responsible for addressing these issues through the justification, design, and operation of the mixed use development. A list of the issues identified as relevant to the air quality assessment are provided in Table 1.1. The second column in the table identifies the report section where the requirement is addressed.

Table 1.1: Further Issues Information Request - Air Quality Requirements

Further Issues Information Requests	Response
We note that the amended proposal includes accessible balconies at level 9 and level 12 and an accessible roof top terrace. As such, please provide an amended Air Quality Assessment Report that clearly considers the impact of potential Air Quality Impacts to all publicly accessible areas, including the balconies at level 9 and level 12 and the roof top terrace.	Our initial Air Quality Assessment Letter is expanded into a full report addressing emission sources, meteorological conditions, modelling using CALPUFF, and modelling results.

1.3 Proposed Development

The subject site is located at 12-16 Thompson Street, Bowen Hills, specified as Lot 1 on RP121293 and Lot 4 on SP312302. A two-storey building current sits on part of the site; a parking lot sits on the remainder.

The proposed development is zoned as Emerging Community (EC) under the Brisbane City Council (BCC) City Plan 2014. The area around the site contains a mix of commercial and light industrial uses. The site is bordered to the north by a mining exploration business (Rio Tinto) and Vietnamese restaurant. A town planning consultancy borders the site to the east, a medical specialist to the west, and coffee roaster to the south on the adjacent property. The Inner City Bypass is approximately 100

m away to the west and the Mayne Rail Complex is approximately 200 m to the west, on the opposite side of the Inner City Bypass. Based on these surrounding land uses and separation distances, the main concern for air quality impacts is the adjacent coffee roasting facility. Air dispersion modelling of the coffee roasting site has been undertaken. A description of the operations is provided in Section 4.

The proposed site and surrounding land uses are shown in Figures 1.1 and 1.2.

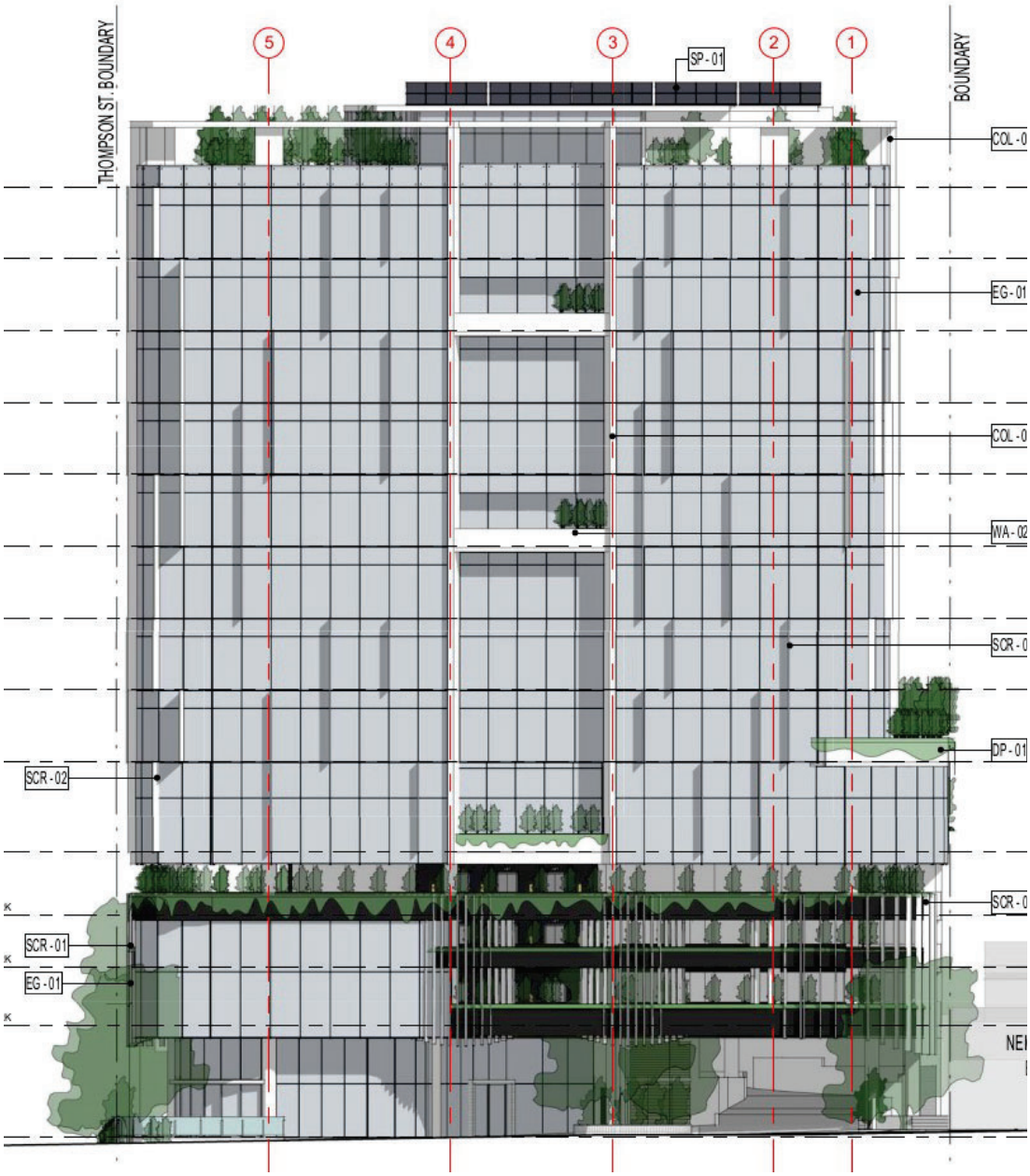
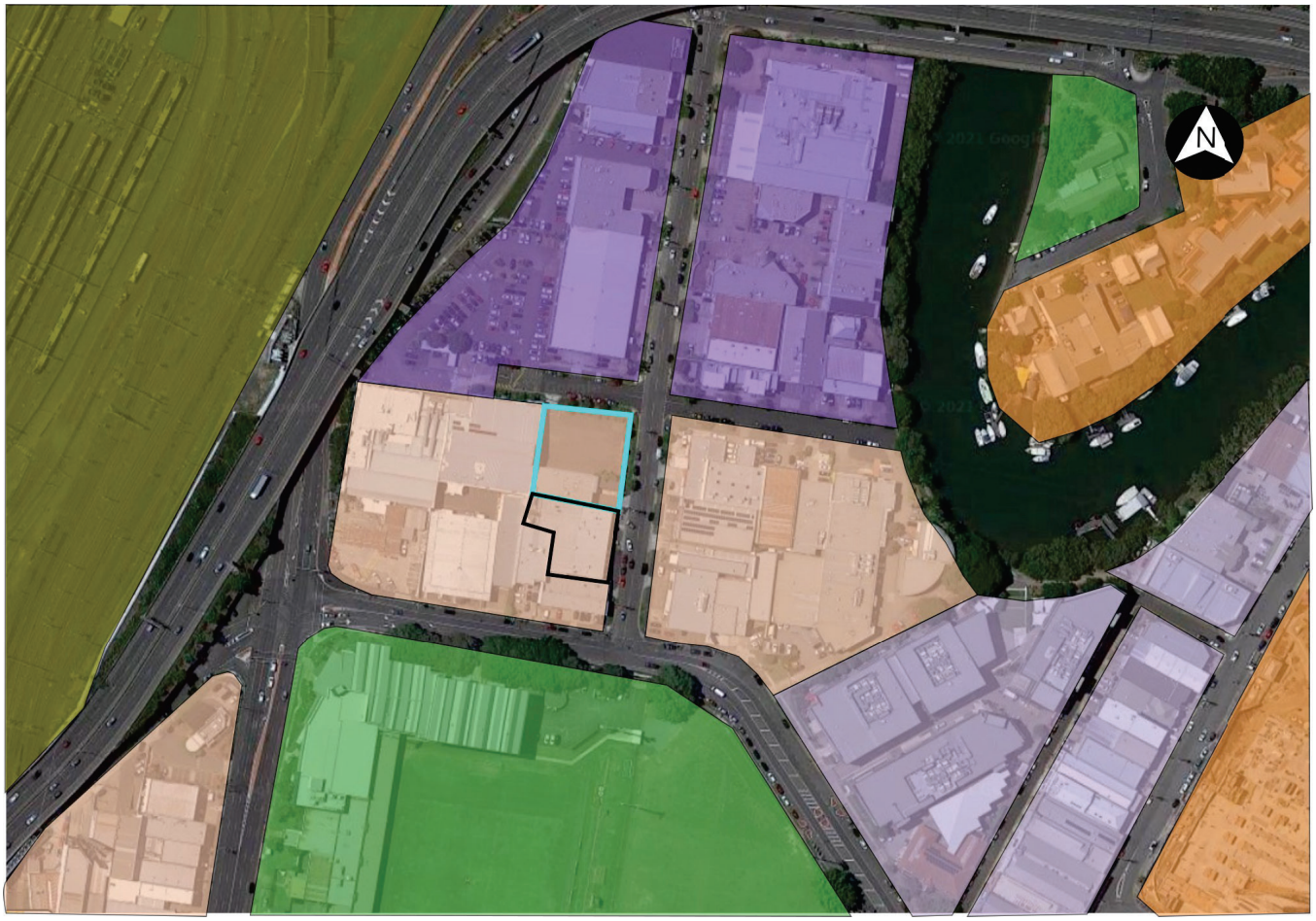


Figure 1.1 - External Facade (North) of Proposed Development



Industry Investigation

Low Impact Industry

Emerging Community

Open Space

Mixed Use

Special Purpose

Proposed Site

Site of Nearest Emissions

Figure 1.2 - Site Location and Surrounding Uses

1.4 This Report

This report summarises the methodologies, results, and conclusions of the air quality and noise assessments. A glossary of terms is available in Appendix A to assist the reader.

2 Proposed Operations

The proposal is to construct a multi-storey mixed-use development which will comprise medical facilities, retail, and a parking deck. The tower will have the following structure:

- Ground (Level 1) – retail, toilets, bicycle storage
- Level 2 - 41 car parks
- Level 3 – 42 car parks
- Level 4 – 42 car parks
- Levels 5 to 13 – tenancy
- Level 14 – outdoor terrace and tenancy

Specific tenancies for the upper floors have not been finalised, but will include medical facilities. It is understood that the plans for the development, as filed under application number DEV2020/1124, have changed and the development will no longer include a child care facility. The design of the proposed structure has been changed to reflect that and will no longer include an outdoor space on Level 6.

Small (approximately 1.5 × 3 m) balconies are planned for the northern and eastern sides of the development on levels 9 and 12. In addition, there is a roof top terrace that is accessible to building tenants and can be used intermittently, e.g. for staff eating lunch or limited tenant functions.

It should also be noted that the site plans include an ambulance bay, which is intended for emergency use only. That is, any person who would need to be transported to hospital would not spend more than a few minutes there.

3 Assessment Criteria

Section 2.5.9.5 of the Bowen Hills PDA requires that 'development must limit exposure and risk associated with pollutants that could have an adverse effect on human health'. To demonstrate this, the PDA makes reference to the air quality criteria defined in the BCC Industrial Amenity Overlay Code and the assessment methodologies found in the BCC Air Quality Planning Scheme Policy.

The key air quality indicators for the assessment impacts from the coffee roasting facility are carbon monoxide (CO), particulates ($PM_{2.5}$, PM_{10}, TSP), nitrogen dioxide (NO_2), and odour. Table 3.1 summarises the criteria adopted for the target compounds considered in this assessment, as presented in the BCC Industrial Amenity Overlay Code.

Table 3.1: Air Quality Criteria

Pollutant	Criteria (µg/m³)	Averaging Time	Health Outcome Protected
CO	11,000	8 hour	Health and wellbeing
$PM_{2.5}$	25	24 Hour	Health and wellbeing
	8	Annual	
PM_{10}	50	24 Hour	Health and wellbeing
	25	Annual	
Particulates (TSP)	90	Annual	Health and wellbeing
NO_2	250	1 hour	Health and wellbeing
	62	Annual	
Odour	0.5 OU for tall stacks	1 hour, 99.5th percentile	Odour
	2.5 OU for ground level and wake-affected plumes		

The relevant odour criterion is 2.5 OU as odour emissions will occur from a stack directly above a building and the proposed development is a multi-storey building (associated with wake-affected plumes).

4 Air Emission Data

4.1 Potential Air Emission Sources

The most significant air emissions in the area that could impact on the development site come from a coffee roasting facility that is currently operating adjacent to the proposed development to the south. The primary compounds of concern from that source are CO, NO_2, and particulates (TSP, PM_{10} and $PM_{2.5}$), which pose a concern for health and wellbeing, and odour, which poses a concern for nuisance impacts.

Based on discussions with the owners of the coffee roasting business on 26 August, 2020, it is understood that the business is in the process of establishing a second roasting facility (at an alternative location), which will reduce the current roaster's operation to 20% of normal load. However, the 20% operation is likely to be a reduction in time used, rather than a reduction in per-load operation (i.e. roasting 1 day per week at 100% capacity, rather than 5 days per week at 20% capacity). This assessment considers roaster operation at 100% capacity, both to provide a conservative assessment and to remain consistent with the roaster's permitted capacity.

In addition to the coffee roasting facility, the ICB and Mayne Rail Yard is located approximately 225 m to the north-west, which would potentially be a source for dust, particulate matter, and combustion products. However, the rail yard is separated from the site by an acoustic barrier, an above-ground portion of the Inner City Bypass (ICB), and several buildings. To account for background contribution from these sources, background air quality data from the South Brisbane monitoring station has been used in this assessment. The South Brisbane station is located next to the Pacific Highway and represents high traffic flow conditions.

4.2 Coffee Roasting Process

Green coffee beans are loaded into a hopper where they move into the first stage of the roaster, which dries the beans. This process requires 4-8 minutes to complete. From there, they proceed to the roasting process, which includes a browning phase, where the drying process completes and the beans begin to smell like coffee. The time spent in the browning phase is variable, depending on the particular flavour profile the roaster wishes to develop. The final phase is the development phase, which is where the flavour profile is finalised. This process is exothermic in nature; the beans will begin to crack due to the accumulated heat from the previous two phases.

When the roasting process has been completed, the batch is dumped onto a cooling tray where the temperature of the beans is dropped until no further chemical changes occur. The cooler usually consists of a bin where the beans can be agitated while a draft of cool air is drawn through them.

From an emissions perspective, emissions from the roaster stack are continuous during roaster operation. The stack adjacent to the subject site is fitted with an afterburner, which removes smoke and odour prior to release of emissions to the atmosphere. There is also a stack for the cooling tray, which vents for 2-3 minutes every 20 minutes.

4.3 Calculated Emission Rates

Odour emissions data for these stacks have been based on previous odour sampling completed by ANE at another coffee roasting facility in south-east Queensland. Table 4.1 presents a summary of the sampling results, which was for a roaster capable of handling 23 kg/batch. These measurements were linearly scaled to the size of the Merlo roaster, which is capable of handling 120 kg/batch. Table4.2 presents the modelled odour emission rates for the roaster. It is assumed that emissions are continuous during operating hours, from 5:00 am to 4:00 pm, Monday - Friday.

Table 4.1: Odour Sampling Results (Coffee Roaster)

Parameter	Results	Units
Stack Parameters		
Measured Exit Velocity	9.6	m/s
Temperature	771.15	K
Actual Flow Rate	28	m^3/min
Stack Diameter	0.250	m
Emission Rates		
CO Concentration	400	mg/Nm^3
CO Emission Rate	0.062	g/s
Particulate Concentration	12	mg/Nm^3
Particulate Emission Rate	0.0019	g/s
NO_x Concentration (expressed as NO_2)	32	mg/Nm^3
NO_x Emission Rate	0.0049	g/s
Measured Odour Concentrations	10,000	OU
Measured Odour Emission Rate (OUV/s)	99,669	OU.m^3/min

Table 4.2: Modelled Roaster Emission Rates (Factored Linearly from 23 kg to 120 kg Capacity)

Compound	Modelled Stack Emissions (g/s)
CO	0.323
TSP[a]	9.91×10^{-3}
NO_x	2.71×10^{-2}
Odour	8,666 (OUV/s)

a Particulates were sampled as TSP. For the purpose of the modelling and as a conservative approach, it is assumed that PM_{10} and $PM_{2.5}$ emissions are equivalent to TSP.

5 Air Dispersion Modelling

5.1 Overview

Air dispersion modelling has been undertaken to assess the potential for air quality impacts on the nearest receptors. The following sections present the modelling methodology, input data, and an assessment of the meteorological input.

5.2 Modelling Methodology

5.2.1 Introduction

Atmospheric dispersion modelling involves the mathematical simulation of the dispersion of air contaminants int he environment. The modelling utilises a range of information to estimate the dispersion of pollutants released from a source, including:

- meteorological data for surface and upper air winds, temperature, and pressure profiles, as well as humidity, rainfall, cloud cover, and ceiling height information;
- emissions parameters including source location and height, source dimensions and physical parameters (e.g, exit velocity and temperature) along with pollutant mass emission rates;
- terrain elevations and land use both at the source and the surrounding region;
- the location, height, and width of any obstructions (such as buildings or other structures) that could significantly impact on the dispersion of the plume; and
- sensitive receptor locations and heights.

For the purpose of the assessment, meteorological modelling has been undertaken using The Air Pollution Model (TAPM) and CALMET to predict localised meteorological conditions. The meteorological data derived from these models has been used as an input to CALPUFF for dispersion modelling.

5.2.2 TAPM

A site-specific meteorological data set has been determined using the prognostic model TAPM. Prognostic models permit the development of localised meteorological data sets based on synoptic weather conditions. The model predicts the regional flows important to dispersion, such as sea breezes and terrain-induced flows, against a background of larger-scale meteorology provided by synoptic analyses. The output of the model provides a data set suitable for introduction into a diagnostic meteorological model, such as CALMET[1]

1 TRC Environmental Corporation (March 2011) 'Generic Guidance and Optimum Model Settings for the CALPUFF Modelling System for Inclusion into the 'Approved Methods for the Modelling and Assessments of Air Pollutants in NSW, Australia,' prepared on behalf of the NSW Office of Environment and Heritage.

The 3D prognostic data was derived using TAPM (version 4.05). The model was configured with a series of nested grids chosen to provide an appropriate communication and transfer of information from the broad synoptic to the local scale. The model was configured to use a domain consisting of 25x25x25 grid points with nesting spacings of 30 km, 10 km, 3 km, and 1 km. Table 5.1 presents a summary of the TAPM settings.

Table 5.1: TAPM Settings

Setting/Input	Value
Latitude, Longitude	-27° 26.5' S, 153° 2.5' E
Easting (X), Northing (Y)	503983, 6964603
Date	2019
Grid Points	25x25
Outer Grid Spacing	30 km x 30 km
Vertical Grid Levels	25 grid levels 10, 25, 50, 100, 150, 200, 250, 300, 400, 500, 600, 750, 1000, 1250, 1500, 1750, 2000, 2500, 3000, 3500, 4000, 5000, 6000, 7000, 8000 All levels stored in output
Number of Grid Domains	4 (30 km, 10 km, 3 km, 1 km)

5.2.3 CALMET

5.2.3.1 Overview

As discussed in the previous section, a three-dimensional prognostic data set derived from the TAPM model was input to CALMET to predict meteorological conditions at the development and surrounding area. The following sections provide an overview of the data utilised in the CALMET modelling, along with details of some of the key parameters selected to establish calculations limits within CALMET.

5.2.3.2 Vertical Stations

For the purposes of the modelling, CALMET was initialised with a total of 10 vertical layers with layer boundaries at 20 m, 40 m, 80 m, 160 m, 320 m, 640 m, 1,200 m, 2,000 m, 3,000 m, and 4,000 m, respectively. The vertical levels used in the modelling were selected to provide the model with the ability to predict atmospheric conditions at a range of heights. A greater resolution of vertical heights has been adopted nearer to the ground, given the ground level sources considered in the assessment.

5.2.3.3 Terrain And Land Use

Terrain data for the area surrounding the development was obtained from the Digital Elevation Model

(DEM) 5 Metre Grid of Australia derived from a LiDAR model, which represents a national 5 metre (bare earth) DEM that has been derived from some 236 individual LiDAR surveys between 2001 and 2015. Data for a 10 by 10 km area (0.1 km spacing) has been extracted for use in the dispersion model.

The TERRAD value in CALMET is used to determine the radius of influence for terrain features within the model domain. The TERRAD value has been calculated based on the rule 'ridge-to-ridge divided by 2, rounded up,' recommended by the NSW Office of Environment and Heritage. Figure 5.1 presents the terrain of the site and surrounding area. A TERRAD value of 2 km has been adopted for this assessment.

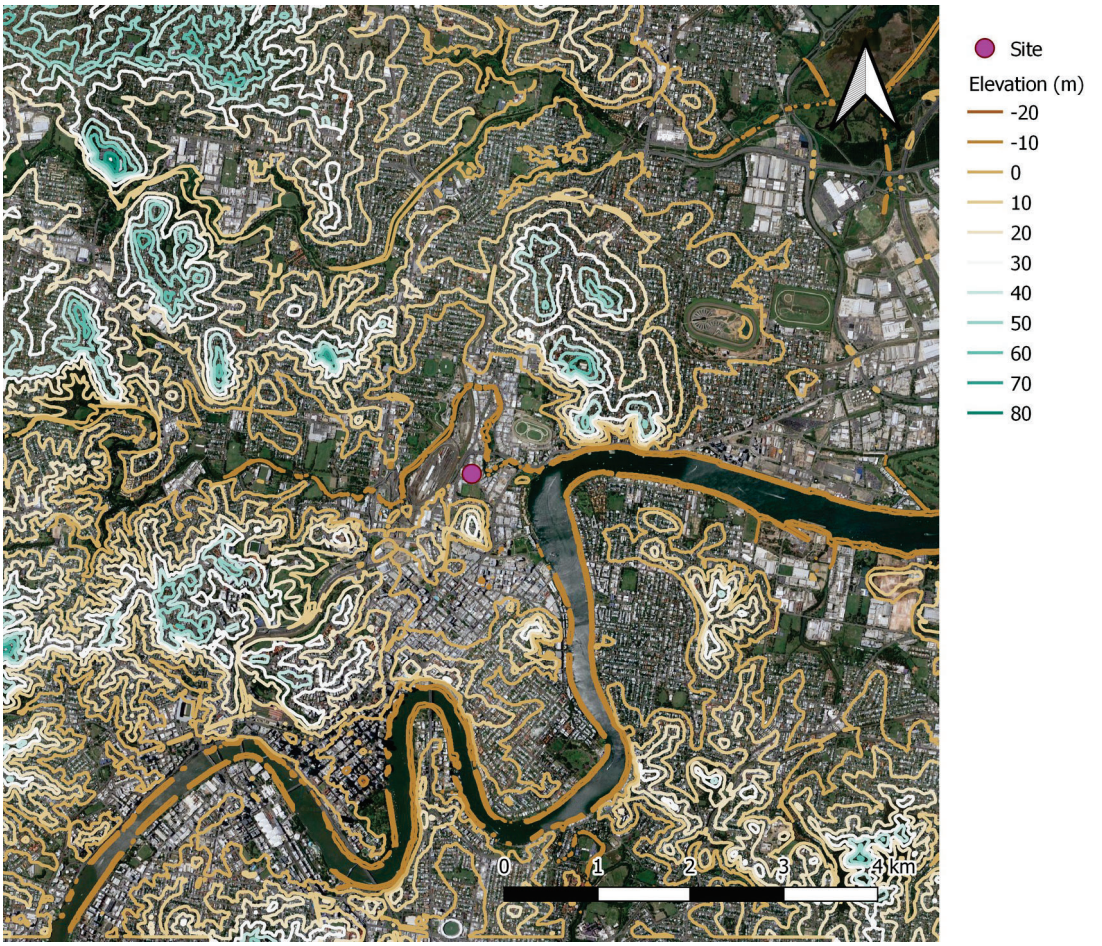


Figure 5.1 - Modelled Terrain

Land use data was also created based on the Queensland Land Use Mapping Program (QLUMP), the United States Geologic Survey (USGS), and satellite imagery and incorporated into the CALMET model. Where land use categories do not correspond with the CALMET land use input file categories, satellite imagery has been reviewed to determine the most appropriate land use classification. Figure 5.2 presents the modelled land use in CALMET.

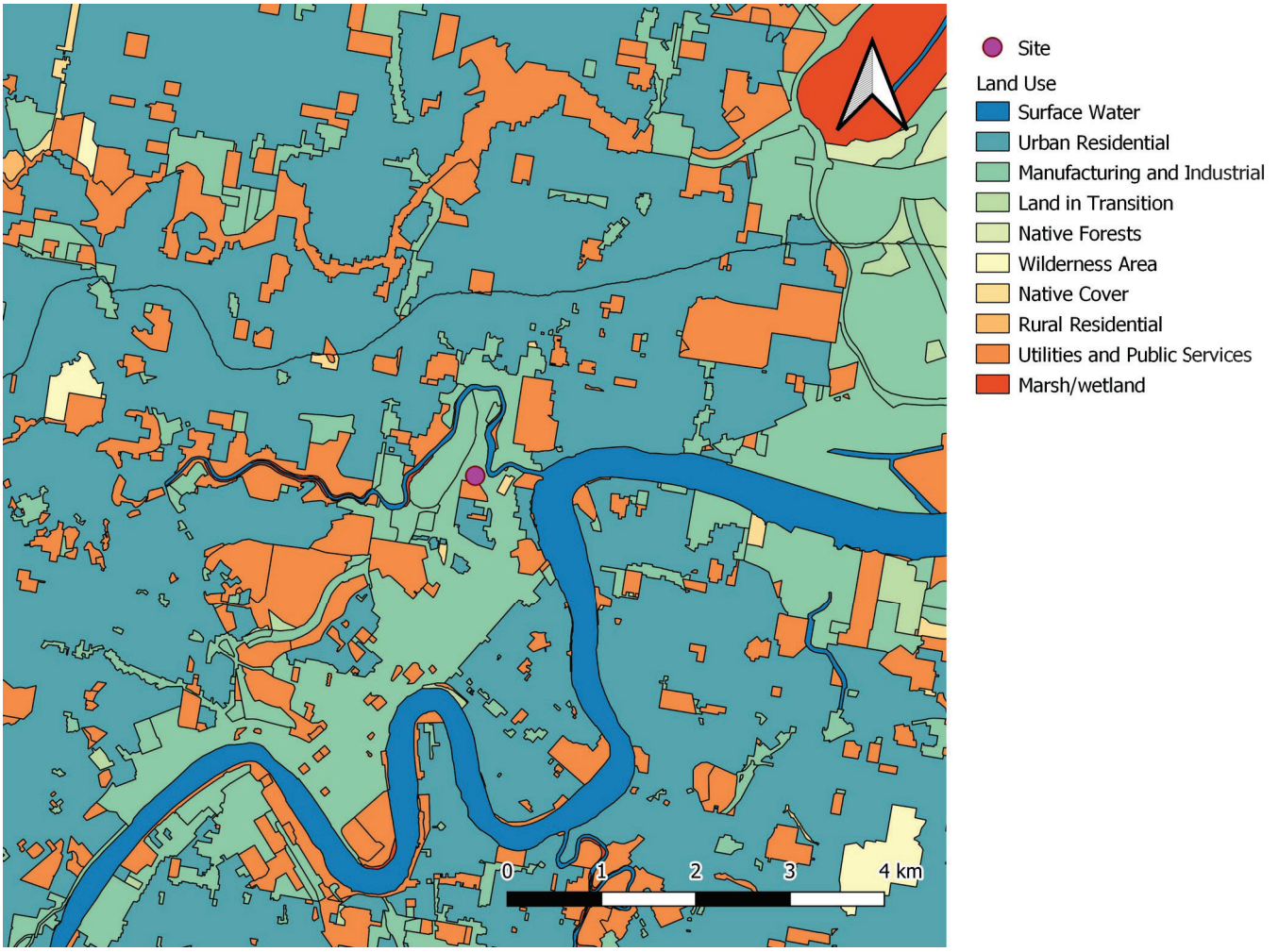


Figure 5.2 - Modelled Land Use

5.2.4 Observational Data

Meteorological data from the nearby Brisbane station (located 4 km south of the site), operated by the Bureau of Meteorology, has been incorporated into the CALMET modelling. The Brisbane station data set is noted to be 100.0% complete for all modelled parameters. Figure 5.3 shows the location of the Brisbane BOM station relative to the site location.

To incorporate both TAPM prognostic data and measured data, CALMET was run in a hybrid mode (NOOBS = 1), which combines both datasets to produce a site-specific wind field. The NOOBS = 1 setting also utilises TAPM outputs for upper air data. This setting was adopted as the nearest station to monitor upper air data (Brisbane Airport) is no considered appropriate for inclusion due to gaps greater than 14 hours between soundings. An R1 and RMAX1 of 5 km and 6 km, respectively, have been adopted for the surface station.

Figure 5.3 - CALMET Modelled Observation Surface Station Location

5.2.5 CALPUFF Dispersion Modelling

The CALPUFF modelling system treats emissions as a series of puffs. These puffs are then dispersed throughout the modelling area and allowed to grow and bend with spatial variations in meteorology.

In doing so, the model is able to retain a memory of the plume's movement through a single hour and from one hour to the next while continuing to better approximate the effects of complex air flows.

CALPUFF utilises the meteorological processing and prediction model CALMET to provide three-dimensional wind field predictions for the area of interest. The final wind field developed by the model (for consideration by CALPUFF) includes an approximation of the effects of local topography, the effects of varying surface temperatures (as is observed in land and sea bodies) and surface roughness (resulting from varied land uses and vegetation cover in an area). The CALPUFF model is able to resolve complex terrain influences on local wind fields, including consideration of katabatic flows and terrain blocking.

5.2.6 CALPOST

Post processing of modelled emissions is undertaken using the CALPOST package. This allows for the rigorous analysis of pollutant predictions generated by the CALPUFF system. In particular, CALPOST is able to provide an analysis of predicted pollutant concentrations for a range of averaging periods from 1 hour to 1 year.

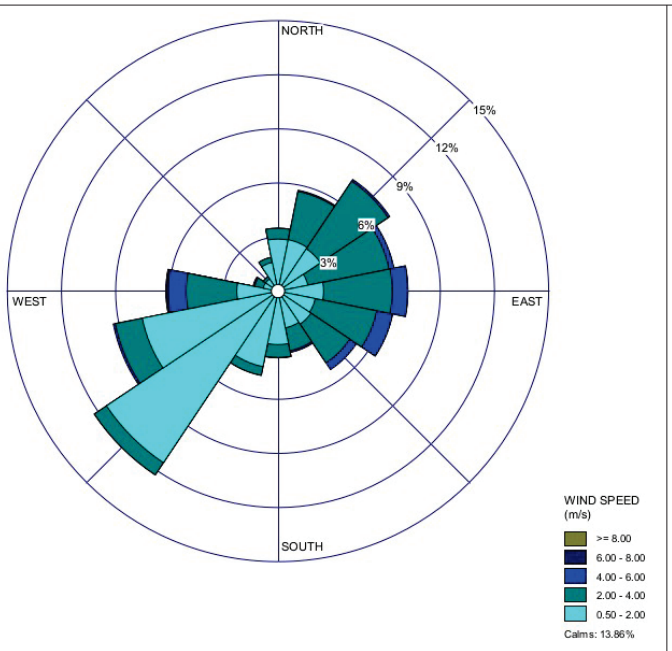
5.3 Meteorological Predictions

5.3.1 Wind Predictions

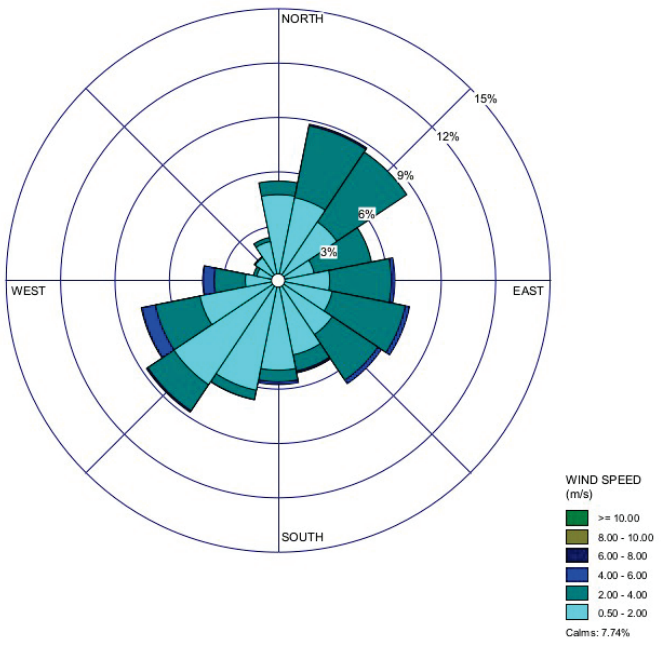
Predicted 2019 wind conditions have been compared to 5 years of measured wind data from the Bureau of Meteorology (BOM) Brisbane station (ID: 040913), located 4 km to the south of the proposed development. The wind roses for the measured and predicted winds at the Brisbane BOM station and the proposed development are shown in Figure 5.4.

In terms of wind speeds, the model does well with replicating the observed wind speeds. For wind speeds >2.0 m/s, the observations differ from the model by less than 2% in any category. Calms, which are associated with poor dispersion outcomes, are similar though slightly under-predicted in the model (13.8% observed vs 9.9% predicted). However, this difference in percentage only represents a difference of 1 hour in real time (2 vs 3 hours of calm conditions per day). It is noted that CALMET predicts a higher proportion of low wind speeds between 0.5 and 2.00 m/s (58.1% predicted vs 51.1% observed).

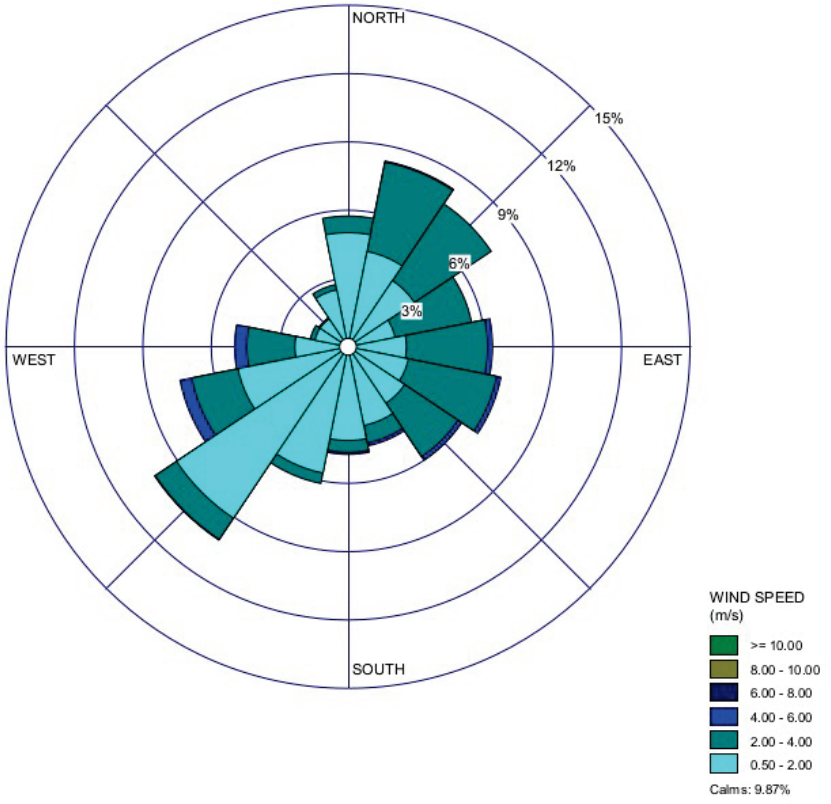
In terms of wind direction, there is a dominant south-west to north-east flow to the observations. This flow shows a dominance of low wind speeds from the south-west and west-south-west, with a returning flow at higher wind speeds broadly from the north-east to east. There are few winds from the north-west quadrant. This pattern is well-replicated at the proposed site, differing by no more than 2% in any direction.



Measured Winds, 2015 – 2019
Brisbane BOM station, QLD



CALMET Modelled Winds, 2019
Brisbane BOM Station, QLD



CALMET Modelled Winds, 2019
Proposed Development, Bowen Hills, QLD

Figure 5.4 - Wind Rose for Predicted and Measured Winds

5.3.2 Predicted Atmospheric Stability

The amount of turbulence in the ambient air has a major effect on the rise and dispersion of emissions. The amount of turbulence in the atmosphere is often described using a series of six Pasquill stability classes—A, B, C, D, E, and F. Of these, Class A denotes the most unstable or turbulent conditions and Class F denotes the most stable or least turbulent conditions for the model domain. Figure 5.5 provides a summary of the predicted atmospheric stability conditions for the area, as derived by CALMET. According to CALMET predictions, Class F occurs most frequently, with 48.4% of the predictions.

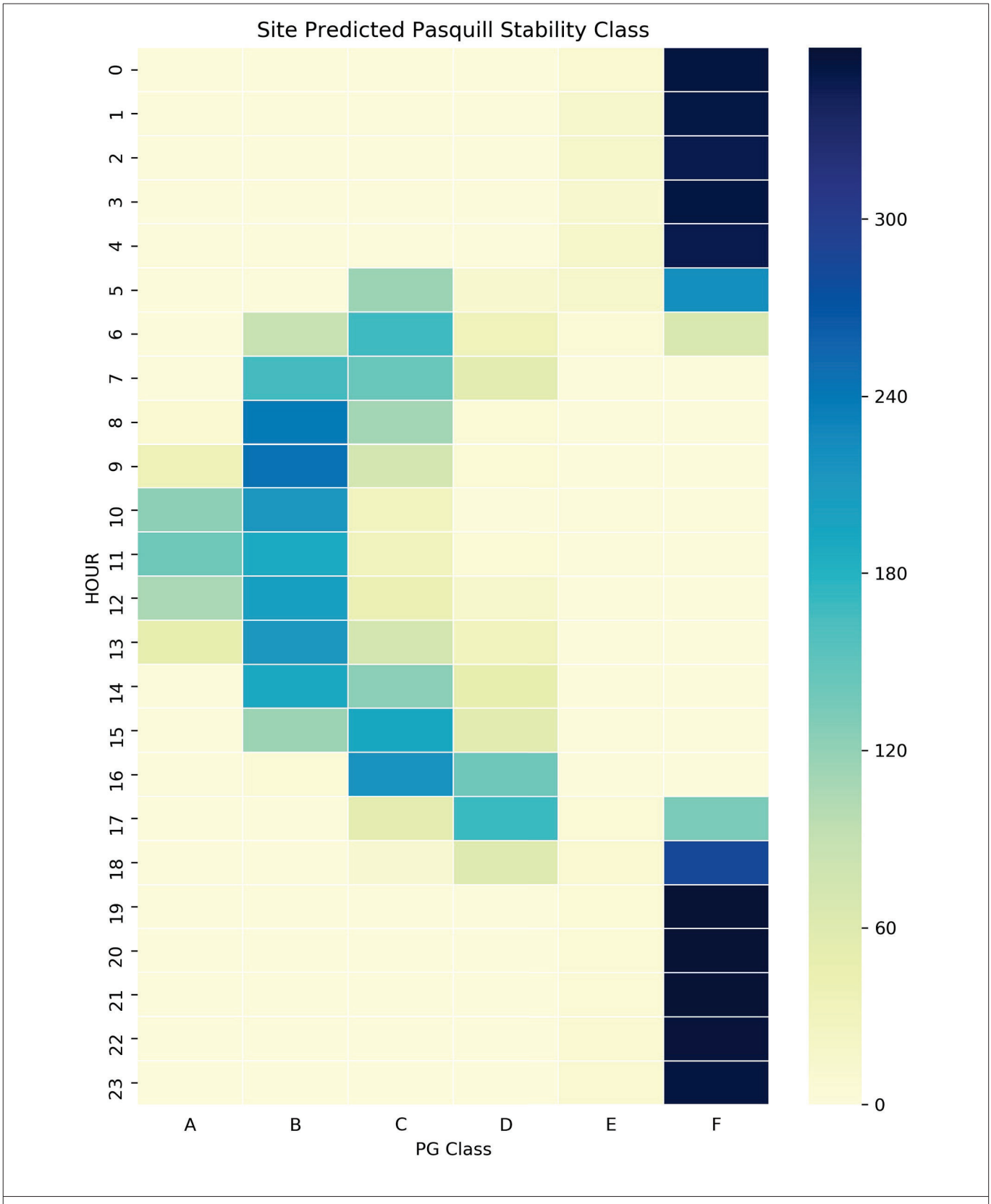


Figure 5.5 - Predicted Pasquill Stability Classes

5.3.3 Predicted Mixing Heights

The mixing height is an essential meteorological component used the determine air quality. For the purposes of atmospheric modelling, it can be defined as the height of the layer of air adjacent to the ground in which emitted pollutants will be mixed by turbulence within a time scale of approximately one hour or less. During times of inversions (typically clear nights), the mixing height will be near zero and dispersion will not take place. It is impractical to measure mixing height routinely, but it can be calculated from prognostic or operational upper air data.

Figure 5.6 presents a plot showing the predicted mixing heights for each hour of the day.

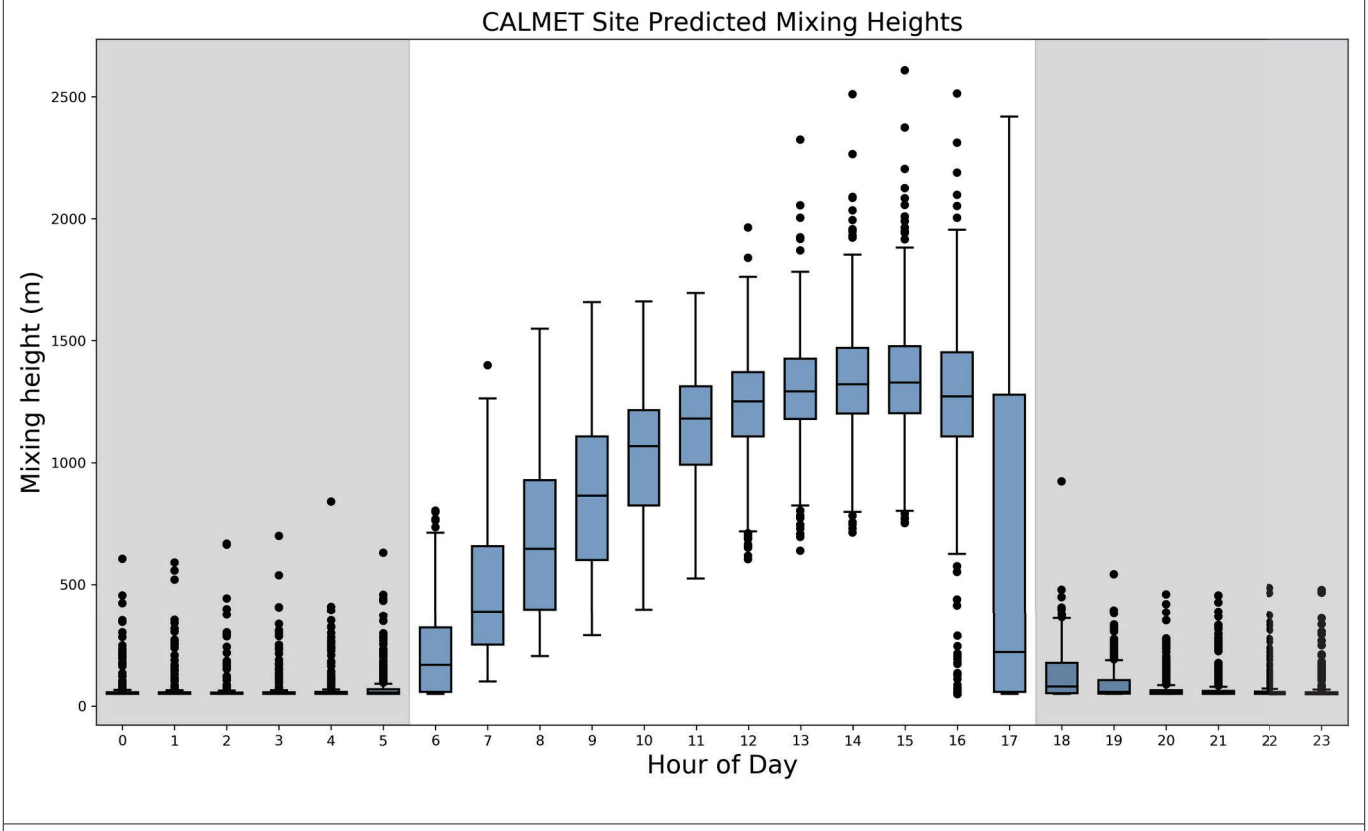


Figure 5.6 - Predicted Mixing Heights

5.3.4 Predicted Temperatures

Ambient temperature is used in dispersion modelling to calculate mixing height, plume rise of stack emissions, and other surface-layer parameters. Figure 5.7 presents a plot showing the predicted temperatures for each hour of the day. The range and pattern of the predicted temperatures are considered typical for the airshed. As expected, higher temperatures are predicted in the day time and lower temperatures are predicted at night, when there is no incoming solar radiation. The average predicted temperature at the site is 21.0°C.

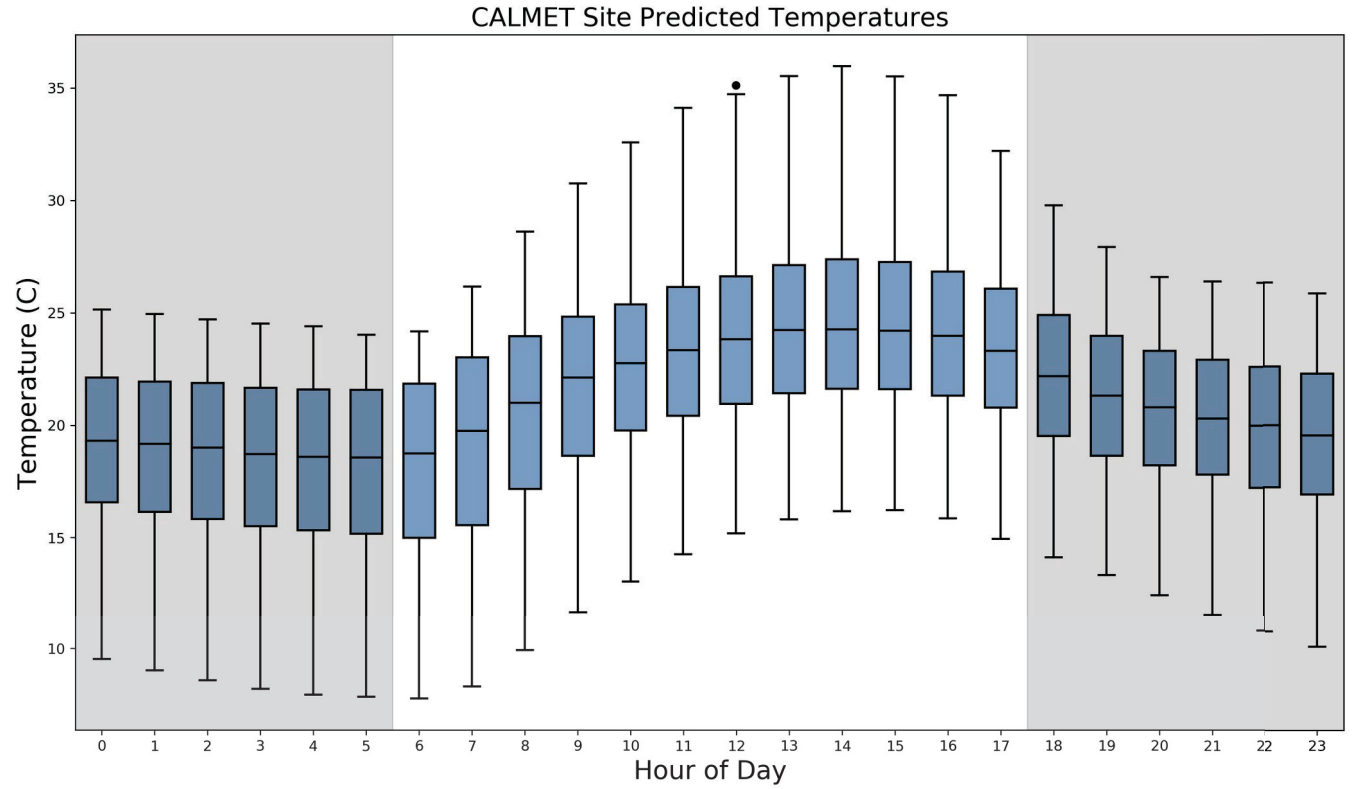


Figure 5.7 - Predicted Temperatures

5.3.5 Summary of Meteorological Predictions

A review of the predicted data sets for the year 2019 indicates that the outcomes from the CALMET model are suitable for predicted potential air quality impacts from the proposed development. Key meteorological parameters including wind field, stability class, and temperature are considered to be representative of the subject site and surrounding area based on a comparison to measured data.

5.4 Source Locations

Figure 5.8 presents the locations of the CALPUFF modelled air emission sources.

Figure 5.8 - Modelled Source Locations

The parameters used for the source are presented in Table 5.2. As a conservative approach, the source is modelled to emit continuously between 5:00 am and 4:00 pm, Monday to Friday.

Table 5.2: Stack Properties

Source	Easting (X), Northing (Y)	Height Above Ground (m)	Diameter (m)	Base Elevation (m)	Exit Velocity (m/s)	Exit Temperature (K)
Roaster	503954, 6964607	5.96	0.25	5.96	9.6	771.15

5.5 Discrete Receptors

In order to assess the impact of the neighbouring coffee roaster on the potential sensitive receptors, 686 total discrete receptors were modelled around the development. Of those, 1 was placed in each balcony (north and east facades), at a height of 30 and 39 metres to represent the 9th and 12th floors, respectively. An additional 6 were scattered along the roof outdoor area. The balance (676) were arranged in a grid in the area at ground level (1.5 metres).

The locations of the modelled discrete receptors on the balconies and rooftop access areas only are shown in Figure 5.9.

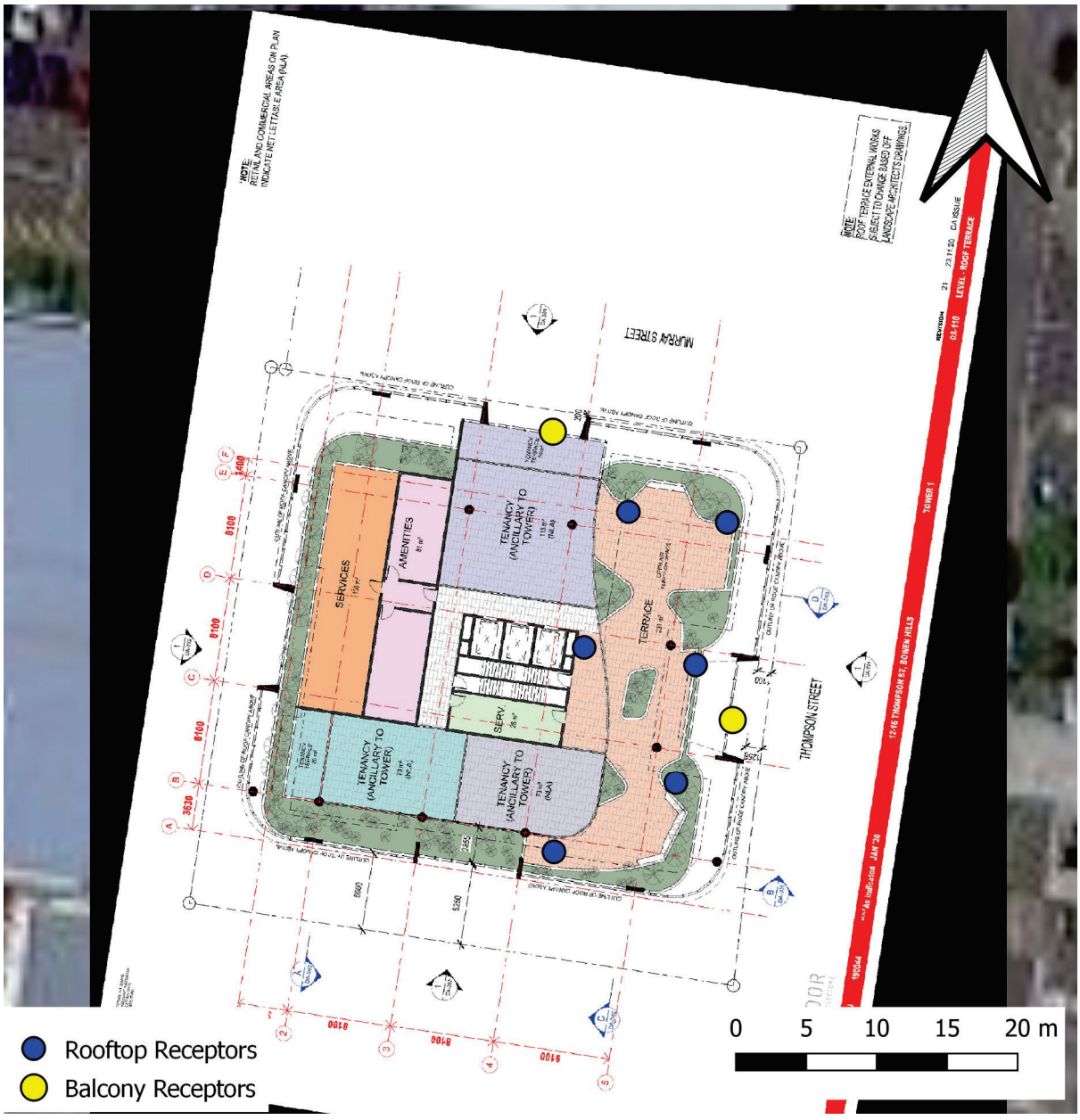


Figure 5.9 - Discrete Receptors (Balconies and Rooftop)

5.6 Building Downwash

The criteria for a building to act as downwash for a particular source is that it must be greater than the stack height divided by a factor of 2.5 and within a radius of 5 times the lesser of the building height or projected building width. The surrounding structures shown in Figure 5.10 were included in the computation of building downwash in this assessment. Building heights in metres are shown in the figure and the location of the stack is indicated by a star.

Figure 5.10 - Modelled Building Downwash

5.7 Background Air Quality

To allow for the assessment of cumulative pollutant concentrations, background concentrations have been considered for CO, NO_x, and particulate matter. Air quality data from the Queensland Government Air Quality Monitoring Network has been utilised in this air quality assessment. Data was utilised from the South Brisbane and Cannon Hill air quality monitoring stations, which were accessed from the Queensland Government Data website.

It should be noted that particulate data was unusually high across all stations in Southeast Queensland in 2019 due to bushfires. Therefore 2016-2018 data has been used for these compounds. Table 5.3 presents the ambient air quality data used in the dispersion modelling.

Table 5.3: Ambient Pollutant Concentrations

Pollutant	Ambient Pollutant Concentration ($\mu g/m^3$)	Averaging Period	Averaging Years	Monitoring Station
CO	234.17	8 hour average, 70th percentile	2017-2019	South Brisbane
$PM_{2.5}$	8.9	24 hour average, 70th percentile	2016-2018	South Brisbane
	7.9	Annual Maximum		
PM_{10}	18.33	24 hour average, 70th percentile	2016-2018	South Brisbane
	16.48	Annual Maximum		
TSP	27.51	Annual Maximum	2016-2018	Cannon Hill
NO_2	36.92	1 hour average, 70th Percentile	2017-2019	South Brisbane
	30.4	Annual Maximum		

5.8 Summary of Assumptions

Below is a list of key assumptions considered in the modelling:

- The coffee roaster is operating at 100% capacity during their operating hours
- The roaster emits continuously during hours of operation (Monday to Friday, 5 am to 4 pm)
- TSP is either all $PM_{2.5}$ or PM_{10}
- NO_x converts to NO_2 at a rate of 100%, regardless of distance to the receptor or atmospheric conditions.

5.9 Modelling Results

Table 5.4 presents the predicted maximum concentrations at the modelled discrete receptors. The results of the modelling show compliance with all air quality goals except $PM_{2.5}$ and odour.

With regard to $PM_{2.5}$, it should be noted that the existing annual background level of $PM_{2.5}$ (adopted

from the South Brisbane station) is already above the 8 µg/m^3. In addition, this assessment makes the conservative assumption that the measured TSP is comprised of 100% $PM_{2.5}$, due to a lack of speciated particulate measurements. As such, this assessment represents a worst case scenario and it is expected that the actual $PM_{2.5}$ is lower in practice.

With regard to odour, several items should be noted. First, the model inputs are conservative. The coffee roasters have indicated an intention of opening a second facility in mid-2021 and moving the bulk of their operations to the new location, which is expected to reduce this roaster's usage to 20% of its current load. However, this site was modelled at 100% capacity due to reflect the worst case potential emissions. Even after the new location opens, the roaster in question will remain on this site and the owners will still have the ability to use it to its full permitted capacity. Hence, a conservative approach was used. Second, the balconies represent an amenity space, which are not required for the successful operation of the proposed development. They are intended for short-term usage (<1 hour at a time) and will only be used sporadically, not as a primary work space. Their size also makes them unsuitable for use as a large gathering space. Finally, The rooftop area is accessible to tenants for lunch or other short term uses. While it is also available for functions, those would typically occur in the evenings, outside of the operating hours of the roaster.

Furthermore, as per the recommendations of the initial air quality review letter, it is recommended that odour and dust-removing filters be installed in the air conditioning intake vents. This will assist in minimising any air quality impacts from the coffee roasting facility and other industrial uses in the area.

Table 5.4: Predicted Modelling Results

Pollutant	Highest Predicted Concentration at Sensitive Receptors (µg/m^3)			Location of Max Concentration	Criteria (µg/m^3)	Averaging Time
	Source Only	Background	Cumulative			
CO	332.8	234.2	567.0	Level 9 East	11,000	8 hour
$PM_{2.5}$	3.5	8.9	12.4	Level 9 East	25	24 Hour
	0.4	7.9	8.3	Level 9 North	8	Annual
PM_{10}	3.5	18.3	21.8	Level 9 East	50	24 Hour
	0.4	16.5	16.9	Level 9 North	25	Annual
Particulates (TSP)	0.4	27.5	27.9	Level 9 North	90	Annual
NO_2	120.0	36.9	156.9	Level 9 East	250	1 hour
	1.1	30.4	31.5	Level 9 North	62	Annual
Odour	5.3	-	5.3	Level 9 North	2.5 OU	1 hour, 99.5th percentile

Figures 5.11 and 5.12 present the predicted concentrations of CO and NO_2 at ground level. Full results for the modelled discrete receptors are presented in Appendix B.

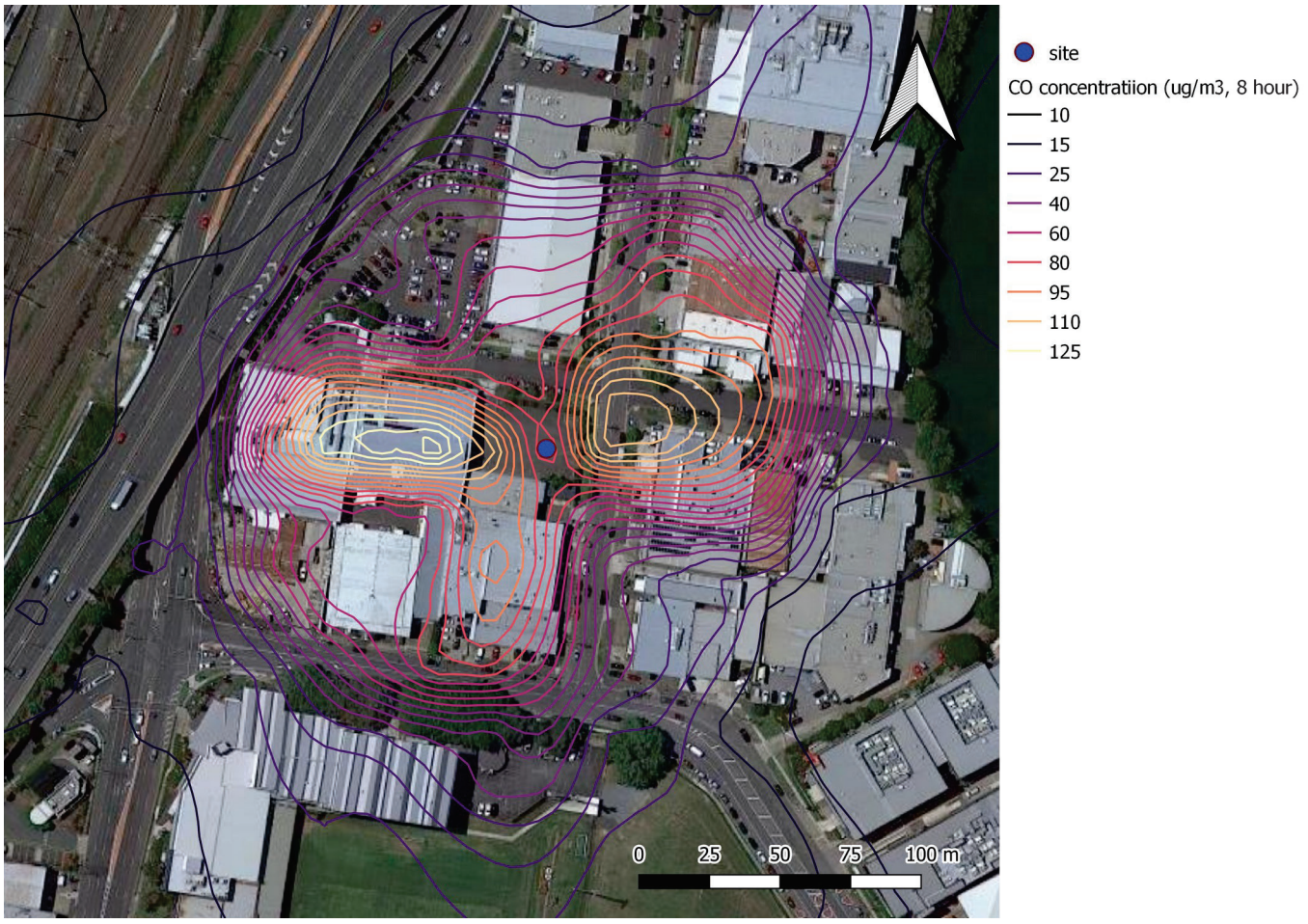


Figure 5.11 - Predicted CO Concentrations - Ground Level

Height: 1.5 m above ground	**Averaging Time:** 8 hours
Location: Bowen Hills	**Units:** µg/m^3
Pollutant: Carbon Monoxide	**Criteria:** 11,000

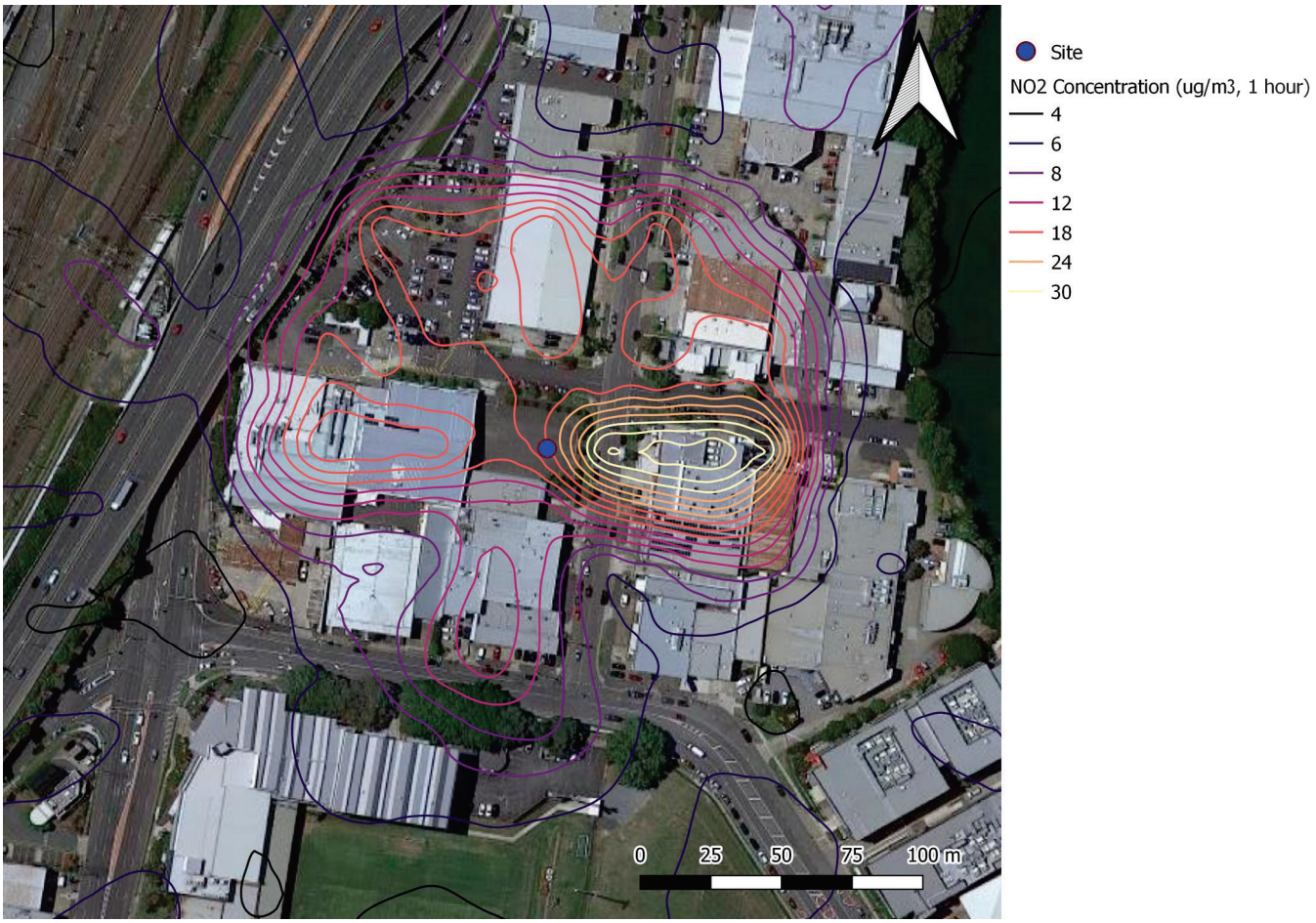


Figure 5.12 - Predicted NO_2 Concentrations - Ground Level

Height: 1.5 m above ground	**Averaging time:** 1 hour
Location: Bowen Hills	**Units:** µg/m^3
Pollutant: Nitrogen Dioxide	**Criteria:** 250

6 Conclusion

Air dispersion modelling of the effects of the neighbouring coffee roaster on a proposed mixed use development at 12-16 Thompson Street, Bowen Hills, has been completed. Predicted pollutant concentrations have been compared to the criteria specified in the Brisbane City Plan 2014.

The results of the dispersion model indicates that pollutant concentrations associated with the coffee roaster operations are within acceptable levels at the balconies and rooftop area of the proposed development for all compounds except for $PM_{2.5}$ and odour. However, the intended uses of the outdoor spaces and the conservatism of the model inputs should be taken into account. Given the expected reduction in usage of the coffee roaster and the amenity nature, short-term use of balconies and after-hours usage of the rooftop area, it is expected that the modelled exceedances will not pose a health or nuisance risk to the tenants of the proposed development.

With regards to maintaining air quality for indoor areas, it is recommended that odour and dust-removing filters be installed in the air conditioning intake vents. This will assist in minimising any air quality impacts from the coffee roasting facility and other industrial uses in the area.

Appendix A - Air Quality Glossary

APPENDIX A: GLOSSARY OF AIR QUALITY TERMINOLOGY	
Conversion of ppm to mg/m^3	Where R is the ideal gas constant; T, the temperature in kelvin (273.16 + T°C); and P, the pressure in mm Hg, the conversion is as follows: $mg/m^{-3} = (P/RT) \times \text{Molecular weight} \times (\text{concentration in ppm})$ $= \frac{P \times \text{Molecular weight} \times (\text{concentration in ppm})}{62.4 \times (273.2 + T°C)}$
g/s	Grams per second
mg/m^3	Milligrams (10^{-3}) per cubic metre.
$\mu g/m^3$	Micrograms (10^{-6}) per cubic metre.
ppb	Parts per billion.
ppm	Parts per million.
PM_{10}, $PM_{2.5}$, PM_1	Fine particulate matter with an equivalent aerodynamic diameter of less than 10, 2.5 or 1 micrometres respectively. Fine particulates are predominantly sourced from combustion processes. Vehicle emissions are a key source in urban environments.
50th percentile	The value exceeded for 50 % of the time.
NO_x	Oxides of nitrogen – a suite of gaseous contaminants that are emitted from road vehicles and other sources. Some of the compounds can react in the atmosphere and, in the presence of other contaminants, convert to different compounds (eg, NO to NO_2).
VOC	Volatile Organic Compounds. These compounds can be both toxic and odorous.

Appendix B - Model Results

Description	X Coordinate (m)	Y Coordinate (m)	Height (m)	CO	$PM_{2.5}$		PM_{10}		TSP	NO_2		Odour
				8 Hour	24 hour	Annual	24 hour	Annual	Annual	1 hour	Annual	1 hour, 99.5th percentile
Balc N9	503972	6964653	30	204.060	2.143	0.387	2.143	0.387	0.387	74.639	1.059	5.303
Balc N12	503969	6964653	39	85.475	1.297	0.342	1.297	0.342	0.342	23.421	0.935	3.420
Balc E9	503985	6964641	30	332.800	3.486	0.360	3.486	0.360	0.360	119.950	0.984	5.209
Balc E12	503984	6964638	39	112.730	1.595	0.310	1.595	0.310	0.310	30.827	0.848	3.472
Roof 1	503981	6964641	45	102.790	1.437	0.323	1.437	0.323	0.323	27.046	0.883	3.381
Roof 2	503970	6964632	45	74.247	1.062	0.356	1.062	0.356	0.356	20.362	0.974	2.630
Roof 3	503973	6964641	45	85.253	1.165	0.357	1.165	0.357	0.357	21.590	0.975	3.107
Roof 4	503978	6964630	45	92.391	1.342	0.311	1.342	0.311	0.311	26.340	0.851	2.641
Roof 5	503977	6964622	45	72.731	1.075	0.276	1.075	0.276	0.276	21.238	0.755	2.481
Roof 6	503968	6964617	45	94.145	1.120	0.285	1.120	0.285	0.285	15.799	0.780	3.150
Grid	503733	6964354	1.5	12.645	0.159	0.011	0.159	0.011	0.011	4.909	0.031	0.368
Grid	503753	6964354	1.5	10.740	0.151	0.012	0.151	0.012	0.012	5.639	0.032	0.389
Grid	503773	6964354	1.5	11.655	0.161	0.012	0.161	0.012	0.012	6.197	0.033	0.417
Grid	503793	6964354	1.5	12.909	0.166	0.013	0.166	0.013	0.013	6.770	0.035	0.465
Grid	503813	6964354	1.5	15.110	0.191	0.014	0.191	0.014	0.014	6.682	0.037	0.485
Grid	503833	6964354	1.5	16.884	0.206	0.015	0.206	0.015	0.015	5.707	0.040	0.545
Grid	503853	6964354	1.5	17.810	0.203	0.016	0.203	0.016	0.016	5.906	0.043	0.610
Grid	503873	6964354	1.5	17.756	0.245	0.017	0.245	0.017	0.017	5.598	0.047	0.732
Grid	503893	6964354	1.5	19.448	0.244	0.018	0.244	0.018	0.018	5.722	0.050	0.784
Grid	503913	6964354	1.5	22.201	0.238	0.018	0.238	0.018	0.018	5.517	0.050	0.837
Grid	503933	6964354	1.5	19.145	0.223	0.018	0.223	0.018	0.018	6.824	0.049	0.797
Grid	503953	6964354	1.5	16.978	0.208	0.017	0.208	0.017	0.017	7.642	0.047	0.791
Grid	503973	6964354	1.5	15.799	0.232	0.016	0.232	0.016	0.016	5.444	0.044	0.754
Grid	503993	6964354	1.5	15.211	0.262	0.015	0.262	0.015	0.015	5.607	0.041	0.694

Grid	504013	6964354	1.5	14.103	0.279	0.014	0.279	0.014	0.014	6.393	0.038	0.663
Grid	504033	6964354	1.5	18.726	0.272	0.013	0.272	0.013	0.013	7.582	0.036	0.612
Grid	504053	6964354	1.5	24.472	0.269	0.013	0.269	0.013	0.013	6.461	0.034	0.608
Grid	504073	6964354	1.5	27.141	0.280	0.012	0.280	0.012	0.012	7.500	0.032	0.582
Grid	504093	6964354	1.5	24.997	0.257	0.010	0.257	0.010	0.010	6.420	0.029	0.521
Grid	504113	6964354	1.5	20.510	0.210	0.009	0.210	0.009	0.009	5.368	0.026	0.459
Grid	504133	6964354	1.5	15.667	0.160	0.009	0.160	0.009	0.009	4.897	0.024	0.446
Grid	504153	6964354	1.5	12.217	0.161	0.008	0.161	0.008	0.008	4.591	0.022	0.415
Grid	504173	6964354	1.5	12.937	0.176	0.008	0.176	0.008	0.008	4.504	0.021	0.425
Grid	504193	6964354	1.5	13.387	0.178	0.007	0.178	0.007	0.007	5.194	0.020	0.439
Grid	504213	6964354	1.5	12.805	0.171	0.007	0.171	0.007	0.007	5.451	0.019	0.406
Grid	504233	6964354	1.5	11.857	0.158	0.007	0.158	0.007	0.007	5.752	0.018	0.391
Grid	503733	6964374	1.5	14.755	0.190	0.012	0.190	0.012	0.012	5.713	0.034	0.406
Grid	503753	6964374	1.5	13.619	0.173	0.013	0.173	0.013	0.013	7.082	0.036	0.421
Grid	503773	6964374	1.5	12.062	0.169	0.014	0.169	0.014	0.014	7.806	0.037	0.436
Grid	503793	6964374	1.5	13.714	0.185	0.014	0.185	0.014	0.014	7.264	0.039	0.487
Grid	503813	6964374	1.5	15.677	0.200	0.015	0.200	0.015	0.015	7.761	0.041	0.535
Grid	503833	6964374	1.5	17.900	0.226	0.016	0.226	0.016	0.016	7.236	0.044	0.588
Grid	503853	6964374	1.5	19.190	0.233	0.018	0.233	0.018	0.018	6.751	0.048	0.643
Grid	503873	6964374	1.5	19.510	0.251	0.019	0.251	0.019	0.019	6.592	0.052	0.777
Grid	503893	6964374	1.5	19.272	0.266	0.020	0.266	0.020	0.020	5.740	0.055	0.859
Grid	503913	6964374	1.5	21.798	0.270	0.021	0.270	0.021	0.021	5.195	0.056	0.908
Grid	503933	6964374	1.5	19.769	0.259	0.020	0.259	0.020	0.020	6.355	0.056	0.895
Grid	503953	6964374	1.5	18.785	0.235	0.019	0.235	0.019	0.019	7.118	0.053	0.885
Grid	503973	6964374	1.5	18.085	0.275	0.018	0.275	0.018	0.018	5.853	0.049	0.851

Grid	503993	6964374	1.5	17.882	0.308	0.016	0.308	0.016	0.016	6.264	0.045	0.797
Grid	504013	6964374	1.5	16.002	0.316	0.015	0.316	0.015	0.015	7.014	0.042	0.714
Grid	504033	6964374	1.5	23.065	0.302	0.015	0.302	0.015	0.015	7.579	0.040	0.685
Grid	504053	6964374	1.5	27.907	0.289	0.014	0.289	0.014	0.014	7.230	0.037	0.670
Grid	504073	6964374	1.5	28.308	0.291	0.012	0.291	0.012	0.012	7.421	0.034	0.615
Grid	504093	6964374	1.5	24.295	0.249	0.011	0.249	0.011	0.011	6.216	0.030	0.537
Grid	504113	6964374	1.5	18.850	0.193	0.010	0.193	0.010	0.010	5.725	0.028	0.497
Grid	504133	6964374	1.5	14.059	0.172	0.009	0.172	0.009	0.009	5.287	0.026	0.481
Grid	504153	6964374	1.5	14.034	0.191	0.009	0.191	0.009	0.009	4.776	0.024	0.474
Grid	504173	6964374	1.5	14.397	0.194	0.008	0.194	0.008	0.008	5.355	0.023	0.482
Grid	504193	6964374	1.5	13.483	0.184	0.008	0.184	0.008	0.008	5.547	0.021	0.460
Grid	504213	6964374	1.5	12.951	0.169	0.007	0.169	0.007	0.007	6.061	0.020	0.429
Grid	504233	6964374	1.5	13.834	0.152	0.007	0.152	0.007	0.007	6.080	0.019	0.378
Grid	503733	6964394	1.5	15.763	0.213	0.014	0.213	0.014	0.014	6.091	0.037	0.437
Grid	503753	6964394	1.5	16.249	0.213	0.015	0.213	0.015	0.015	8.180	0.040	0.458
Grid	503773	6964394	1.5	15.044	0.192	0.015	0.192	0.015	0.015	9.745	0.042	0.485
Grid	503793	6964394	1.5	15.062	0.192	0.016	0.192	0.016	0.016	9.881	0.044	0.512
Grid	503813	6964394	1.5	16.091	0.211	0.017	0.211	0.017	0.017	7.840	0.046	0.574
Grid	503833	6964394	1.5	18.800	0.239	0.018	0.239	0.018	0.018	7.908	0.049	0.597
Grid	503853	6964394	1.5	20.370	0.259	0.019	0.259	0.019	0.019	7.387	0.052	0.694
Grid	503873	6964394	1.5	20.821	0.249	0.021	0.249	0.021	0.021	7.753	0.057	0.799
Grid	503893	6964394	1.5	20.328	0.269	0.022	0.269	0.022	0.022	6.151	0.060	0.891
Grid	503913	6964394	1.5	21.388	0.289	0.022	0.289	0.022	0.022	5.077	0.061	0.944
Grid	503933	6964394	1.5	21.678	0.280	0.022	0.280	0.022	0.022	5.726	0.060	0.970
Grid	503953	6964394	1.5	20.679	0.270	0.021	0.270	0.021	0.021	6.575	0.057	0.940
Grid	503973	6964394	1.5	21.034	0.316	0.019	0.316	0.019	0.019	6.293	0.053	0.924
Grid	503993	6964394	1.5	20.111	0.342	0.018	0.342	0.018	0.018	6.669	0.049	0.841
Grid	504013	6964394	1.5	19.427	0.339	0.017	0.339	0.017	0.017	7.220	0.046	0.770
Grid	504033	6964394	1.5	27.029	0.319	0.016	0.319	0.016	0.016	6.646	0.043	0.755

Grid	504053	6964394	1.5	30.272	0.311	0.014	0.311	0.014	0.014	7.488	0.039	0.728
Grid	504073	6964394	1.5	27.947	0.287	0.013	0.287	0.013	0.013	6.754	0.036	0.643
Grid	504093	6964394	1.5	21.732	0.223	0.012	0.223	0.012	0.012	6.281	0.032	0.576
Grid	504113	6964394	1.5	16.343	0.181	0.011	0.181	0.011	0.011	6.006	0.029	0.538
Grid	504133	6964394	1.5	15.248	0.205	0.010	0.205	0.010	0.010	5.196	0.027	0.516
Grid	504153	6964394	1.5	15.892	0.210	0.009	0.210	0.009	0.009	5.663	0.026	0.553
Grid	504173	6964394	1.5	15.207	0.200	0.009	0.200	0.009	0.009	5.954	0.024	0.535
Grid	504193	6964394	1.5	14.565	0.182	0.008	0.182	0.008	0.008	6.138	0.022	0.488
Grid	504213	6964394	1.5	14.461	0.163	0.007	0.163	0.007	0.007	6.762	0.020	0.433
Grid	504233	6964394	1.5	15.687	0.160	0.007	0.160	0.007	0.007	7.264	0.018	0.364
Grid	503733	6964414	1.5	17.317	0.257	0.015	0.257	0.015	0.015	5.659	0.041	0.459
Grid	503753	6964414	1.5	17.832	0.245	0.016	0.245	0.016	0.016	8.170	0.044	0.507
Grid	503773	6964414	1.5	18.109	0.242	0.017	0.242	0.017	0.017	11.011	0.047	0.533
Grid	503793	6964414	1.5	18.845	0.204	0.018	0.204	0.018	0.018	12.364	0.049	0.556
Grid	503813	6964414	1.5	16.824	0.219	0.019	0.219	0.019	0.019	10.488	0.051	0.588
Grid	503833	6964414	1.5	18.802	0.242	0.020	0.242	0.020	0.020	7.798	0.054	0.655
Grid	503853	6964414	1.5	21.766	0.278	0.021	0.278	0.021	0.021	7.770	0.057	0.711
Grid	503873	6964414	1.5	21.771	0.282	0.022	0.282	0.022	0.022	8.431	0.061	0.805
Grid	503893	6964414	1.5	21.147	0.264	0.024	0.264	0.024	0.024	6.772	0.065	0.898
Grid	503913	6964414	1.5	22.278	0.298	0.024	0.298	0.024	0.024	5.168	0.066	0.944
Grid	503933	6964414	1.5	23.048	0.298	0.023	0.298	0.023	0.023	5.763	0.064	0.999
Grid	503953	6964414	1.5	22.457	0.309	0.022	0.309	0.022	0.022	5.844	0.061	0.993
Grid	503973	6964414	1.5	23.255	0.352	0.021	0.352	0.021	0.021	6.168	0.057	0.983
Grid	503993	6964414	1.5	21.316	0.366	0.019	0.366	0.019	0.019	6.715	0.053	0.888
Grid	504013	6964414	1.5	22.841	0.342	0.018	0.342	0.018	0.018	6.633	0.049	0.806
Grid	504033	6964414	1.5	29.913	0.313	0.017	0.313	0.017	0.017	7.488	0.046	0.806
Grid	504053	6964414	1.5	30.675	0.315	0.015	0.315	0.015	0.015	8.023	0.041	0.733
Grid	504073	6964414	1.5	25.296	0.259	0.013	0.259	0.013	0.013	7.082	0.037	0.668
Grid	504093	6964414	1.5	19.004	0.194	0.012	0.194	0.012	0.012	6.346	0.033	0.585

Grid	504113	6964414	1.5	17.650	0.215	0.011	0.215	0.011	0.011	5.558	0.031	0.593
Grid	504133	6964414	1.5	16.790	0.223	0.011	0.223	0.011	0.011	5.753	0.029	0.581
Grid	504153	6964414	1.5	16.528	0.212	0.010	0.212	0.010	0.010	6.310	0.027	0.601
Grid	504173	6964414	1.5	16.495	0.198	0.009	0.198	0.009	0.009	7.017	0.025	0.559
Grid	504193	6964414	1.5	15.626	0.173	0.008	0.173	0.008	0.008	7.568	0.023	0.491
Grid	504213	6964414	1.5	16.307	0.167	0.007	0.167	0.007	0.007	7.477	0.020	0.400
Grid	504233	6964414	1.5	16.172	0.165	0.006	0.165	0.006	0.006	7.108	0.018	0.370
Grid	503733	6964434	1.5	21.058	0.309	0.017	0.309	0.017	0.017	6.032	0.045	0.510
Grid	503753	6964434	1.5	18.741	0.290	0.018	0.290	0.018	0.018	6.821	0.049	0.531
Grid	503773	6964434	1.5	19.466	0.276	0.019	0.276	0.019	0.019	10.120	0.052	0.582
Grid	503793	6964434	1.5	19.439	0.258	0.020	0.258	0.020	0.020	12.730	0.055	0.602
Grid	503813	6964434	1.5	18.165	0.207	0.021	0.207	0.021	0.021	11.988	0.057	0.623
Grid	503833	6964434	1.5	19.592	0.248	0.022	0.248	0.022	0.022	8.383	0.059	0.695
Grid	503853	6964434	1.5	22.231	0.287	0.023	0.287	0.023	0.023	7.630	0.063	0.732
Grid	503873	6964434	1.5	24.308	0.314	0.025	0.314	0.025	0.025	8.207	0.067	0.834
Grid	503893	6964434	1.5	22.283	0.286	0.026	0.286	0.026	0.026	7.018	0.071	0.919
Grid	503913	6964434	1.5	23.460	0.313	0.026	0.313	0.026	0.026	5.153	0.072	0.979
Grid	503933	6964434	1.5	23.437	0.323	0.026	0.323	0.026	0.026	5.372	0.070	1.042
Grid	503953	6964434	1.5	25.434	0.353	0.025	0.353	0.025	0.025	5.648	0.068	1.082
Grid	503973	6964434	1.5	25.445	0.391	0.023	0.391	0.023	0.023	6.207	0.063	1.059
Grid	503993	6964434	1.5	22.466	0.390	0.021	0.390	0.021	0.021	6.822	0.058	0.933
Grid	504013	6964434	1.5	25.962	0.356	0.020	0.356	0.020	0.020	6.608	0.053	0.881
Grid	504033	6964434	1.5	30.970	0.320	0.018	0.320	0.018	0.018	8.846	0.048	0.848
Grid	504053	6964434	1.5	28.732	0.294	0.016	0.294	0.016	0.016	9.025	0.043	0.751
Grid	504073	6964434	1.5	22.258	0.228	0.014	0.228	0.014	0.014	7.324	0.038	0.662
Grid	504093	6964434	1.5	20.617	0.222	0.013	0.222	0.013	0.013	5.852	0.035	0.638
Grid	504113	6964434	1.5	18.062	0.235	0.012	0.235	0.012	0.012	5.683	0.032	0.638
Grid	504133	6964434	1.5	17.432	0.224	0.011	0.224	0.011	0.011	6.346	0.030	0.672
Grid	504153	6964434	1.5	17.456	0.209	0.010	0.209	0.010	0.010	7.718	0.028	0.615

Grid	504173	6964434	1.5	17.311	0.183	0.009	0.183	0.009	0.009	8.219	0.025	0.539
Grid	504193	6964434	1.5	17.440	0.178	0.008	0.178	0.008	0.008	7.703	0.022	0.453
Grid	504213	6964434	1.5	16.941	0.173	0.007	0.173	0.007	0.007	6.692	0.019	0.406
Grid	504233	6964434	1.5	15.187	0.155	0.006	0.155	0.006	0.006	5.676	0.017	0.354
Grid	503733	6964454	1.5	22.691	0.337	0.018	0.337	0.018	0.018	6.934	0.049	0.546
Grid	503753	6964454	1.5	22.699	0.347	0.019	0.347	0.019	0.019	6.281	0.053	0.594
Grid	503773	6964454	1.5	20.293	0.327	0.021	0.327	0.021	0.021	6.953	0.057	0.610
Grid	503793	6964454	1.5	20.107	0.299	0.022	0.299	0.022	0.022	9.815	0.060	0.645
Grid	503813	6964454	1.5	18.849	0.272	0.023	0.272	0.023	0.023	11.336	0.064	0.670
Grid	503833	6964454	1.5	20.825	0.239	0.025	0.239	0.025	0.025	9.849	0.067	0.731
Grid	503853	6964454	1.5	23.004	0.287	0.026	0.287	0.026	0.026	6.016	0.072	0.806
Grid	503873	6964454	1.5	26.084	0.339	0.028	0.339	0.028	0.028	6.749	0.076	0.888
Grid	503893	6964454	1.5	25.203	0.335	0.029	0.335	0.029	0.029	6.856	0.080	0.989
Grid	503913	6964454	1.5	24.944	0.331	0.030	0.331	0.030	0.030	5.030	0.081	1.043
Grid	503933	6964454	1.5	25.970	0.353	0.029	0.353	0.029	0.029	5.431	0.079	1.139
Grid	503953	6964454	1.5	28.985	0.406	0.028	0.406	0.028	0.028	5.339	0.076	1.194
Grid	503973	6964454	1.5	28.811	0.436	0.026	0.436	0.026	0.026	6.184	0.070	1.128
Grid	503993	6964454	1.5	24.893	0.413	0.023	0.413	0.023	0.023	6.841	0.064	1.046
Grid	504013	6964454	1.5	27.970	0.368	0.021	0.368	0.021	0.021	7.413	0.058	0.932
Grid	504033	6964454	1.5	29.626	0.315	0.019	0.315	0.019	0.019	9.372	0.051	0.875
Grid	504053	6964454	1.5	25.152	0.267	0.017	0.267	0.017	0.017	8.851	0.045	0.786
Grid	504073	6964454	1.5	24.326	0.249	0.015	0.249	0.015	0.015	6.669	0.040	0.690
Grid	504093	6964454	1.5	21.289	0.243	0.013	0.243	0.013	0.013	5.990	0.036	0.726
Grid	504113	6964454	1.5	18.630	0.237	0.012	0.237	0.012	0.012	6.677	0.033	0.734
Grid	504133	6964454	1.5	18.676	0.223	0.011	0.223	0.011	0.011	7.992	0.031	0.661
Grid	504153	6964454	1.5	17.654	0.191	0.010	0.191	0.010	0.010	8.008	0.027	0.579
Grid	504173	6964454	1.5	18.605	0.190	0.009	0.190	0.009	0.009	7.257	0.024	0.492
Grid	504193	6964454	1.5	18.280	0.187	0.008	0.187	0.008	0.008	6.162	0.021	0.440
Grid	504213	6964454	1.5	16.040	0.164	0.007	0.164	0.007	0.007	5.739	0.018	0.399

Grid	504233	6964454	1.5	13.156	0.147	0.006	0.147	0.006	0.006	5.280	0.016	0.356
Grid	503733	6964474	1.5	20.806	0.324	0.019	0.324	0.019	0.019	6.579	0.053	0.564
Grid	503753	6964474	1.5	23.901	0.370	0.021	0.370	0.021	0.021	6.925	0.057	0.604
Grid	503773	6964474	1.5	24.268	0.384	0.023	0.384	0.023	0.023	6.258	0.062	0.654
Grid	503793	6964474	1.5	21.248	0.359	0.024	0.359	0.024	0.024	6.095	0.067	0.690
Grid	503813	6964474	1.5	20.852	0.326	0.026	0.326	0.026	0.026	8.180	0.072	0.725
Grid	503833	6964474	1.5	21.676	0.287	0.028	0.287	0.028	0.028	9.218	0.078	0.774
Grid	503853	6964474	1.5	24.710	0.291	0.030	0.291	0.030	0.030	6.801	0.083	0.861
Grid	503873	6964474	1.5	27.037	0.358	0.032	0.358	0.032	0.032	5.690	0.089	0.953
Grid	503893	6964474	1.5	28.644	0.384	0.034	0.384	0.034	0.034	6.457	0.093	1.010
Grid	503913	6964474	1.5	26.274	0.359	0.034	0.359	0.034	0.034	6.116	0.093	1.132
Grid	503933	6964474	1.5	29.321	0.385	0.033	0.385	0.033	0.033	5.749	0.091	1.250
Grid	503953	6964474	1.5	32.673	0.461	0.031	0.461	0.031	0.031	6.301	0.085	1.324
Grid	503973	6964474	1.5	32.346	0.481	0.029	0.481	0.029	0.029	6.520	0.078	1.195
Grid	503993	6964474	1.5	27.217	0.442	0.026	0.442	0.026	0.026	6.494	0.070	1.159
Grid	504013	6964474	1.5	27.042	0.371	0.023	0.371	0.023	0.023	7.876	0.062	1.032
Grid	504033	6964474	1.5	27.562	0.343	0.020	0.343	0.020	0.020	8.904	0.054	0.937
Grid	504053	6964474	1.5	27.446	0.281	0.017	0.281	0.017	0.017	8.585	0.047	0.820
Grid	504073	6964474	1.5	24.871	0.254	0.015	0.254	0.015	0.015	8.086	0.042	0.807
Grid	504093	6964474	1.5	20.443	0.244	0.014	0.244	0.014	0.014	6.588	0.037	0.799
Grid	504113	6964474	1.5	19.592	0.234	0.012	0.234	0.012	0.012	7.459	0.034	0.704
Grid	504133	6964474	1.5	16.965	0.200	0.011	0.200	0.011	0.011	7.092	0.030	0.621
Grid	504153	6964474	1.5	18.808	0.197	0.010	0.197	0.010	0.010	6.349	0.026	0.541
Grid	504173	6964474	1.5	18.730	0.193	0.008	0.193	0.008	0.008	6.627	0.023	0.501
Grid	504193	6964474	1.5	16.791	0.180	0.007	0.180	0.007	0.007	6.600	0.020	0.431
Grid	504213	6964474	1.5	14.201	0.160	0.006	0.160	0.006	0.006	5.987	0.018	0.381
Grid	504233	6964474	1.5	13.844	0.152	0.006	0.152	0.006	0.006	5.114	0.016	0.349
Grid	503733	6964494	1.5	18.369	0.318	0.020	0.318	0.020	0.020	7.564	0.055	0.595
Grid	503753	6964494	1.5	20.509	0.337	0.022	0.337	0.022	0.022	7.800	0.061	0.648

Grid	503773	6964494	1.5	24.171	0.393	0.024	0.393	0.024	0.024	7.386	0.067	0.681
Grid	503793	6964494	1.5	24.607	0.413	0.027	0.413	0.027	0.027	6.614	0.074	0.733
Grid	503813	6964494	1.5	21.731	0.399	0.030	0.399	0.030	0.030	6.537	0.082	0.798
Grid	503833	6964494	1.5	21.837	0.362	0.033	0.362	0.033	0.033	7.051	0.090	0.839
Grid	503853	6964494	1.5	25.544	0.306	0.036	0.306	0.036	0.036	6.493	0.097	0.925
Grid	503873	6964494	1.5	27.708	0.359	0.037	0.359	0.037	0.037	6.010	0.102	0.997
Grid	503893	6964494	1.5	29.998	0.412	0.039	0.412	0.039	0.039	7.364	0.106	1.090
Grid	503913	6964494	1.5	28.357	0.388	0.039	0.388	0.039	0.039	7.627	0.107	1.196
Grid	503933	6964494	1.5	32.468	0.434	0.038	0.434	0.038	0.038	6.809	0.105	1.360
Grid	503953	6964494	1.5	36.795	0.518	0.036	0.518	0.036	0.036	7.627	0.097	1.478
Grid	503973	6964494	1.5	36.757	0.532	0.032	0.532	0.032	0.032	7.200	0.087	1.348
Grid	503993	6964494	1.5	29.724	0.468	0.028	0.468	0.028	0.028	7.021	0.075	1.204
Grid	504013	6964494	1.5	28.960	0.400	0.023	0.400	0.023	0.023	7.367	0.064	1.061
Grid	504033	6964494	1.5	29.801	0.347	0.020	0.347	0.020	0.020	8.719	0.054	0.931
Grid	504053	6964494	1.5	27.705	0.283	0.017	0.283	0.017	0.017	9.711	0.047	0.870
Grid	504073	6964494	1.5	23.284	0.246	0.015	0.246	0.015	0.015	8.318	0.042	0.892
Grid	504093	6964494	1.5	18.951	0.230	0.014	0.230	0.014	0.014	6.275	0.037	0.788
Grid	504113	6964494	1.5	16.796	0.214	0.012	0.214	0.012	0.012	6.639	0.032	0.684
Grid	504133	6964494	1.5	18.933	0.222	0.010	0.222	0.010	0.010	6.822	0.028	0.609
Grid	504153	6964494	1.5	18.296	0.212	0.009	0.212	0.009	0.009	7.198	0.025	0.528
Grid	504173	6964494	1.5	16.274	0.192	0.008	0.192	0.008	0.008	7.064	0.022	0.461
Grid	504193	6964494	1.5	15.851	0.175	0.007	0.175	0.007	0.007	6.580	0.020	0.424
Grid	504213	6964494	1.5	15.293	0.167	0.006	0.167	0.006	0.006	5.619	0.018	0.386
Grid	504233	6964494	1.5	14.093	0.152	0.006	0.152	0.006	0.006	4.510	0.016	0.329
Grid	503733	6964514	1.5	24.111	0.377	0.021	0.377	0.021	0.021	7.314	0.057	0.606
Grid	503753	6964514	1.5	22.135	0.368	0.023	0.368	0.023	0.023	7.934	0.063	0.649
Grid	503773	6964514	1.5	19.922	0.356	0.026	0.356	0.026	0.026	8.343	0.071	0.694
Grid	503793	6964514	1.5	22.543	0.400	0.029	0.400	0.029	0.029	8.530	0.081	0.768
Grid	503813	6964514	1.5	24.299	0.449	0.033	0.449	0.033	0.033	7.746	0.091	0.843

Grid	503833	6964514	1.5	23.356	0.451	0.037	0.451	0.037	0.037	6.360	0.101	0.914
Grid	503853	6964514	1.5	25.905	0.399	0.040	0.399	0.040	0.040	6.944	0.110	0.959
Grid	503873	6964514	1.5	29.008	0.356	0.042	0.356	0.042	0.042	6.954	0.116	1.050
Grid	503893	6964514	1.5	31.587	0.424	0.044	0.424	0.044	0.044	8.500	0.122	1.140
Grid	503913	6964514	1.5	32.011	0.453	0.046	0.453	0.046	0.046	8.772	0.126	1.326
Grid	503933	6964514	1.5	39.458	0.540	0.045	0.540	0.045	0.045	9.336	0.122	1.582
Grid	503953	6964514	1.5	47.194	0.664	0.041	0.664	0.041	0.041	9.453	0.111	1.793
Grid	503973	6964514	1.5	46.399	0.639	0.036	0.639	0.036	0.036	9.350	0.098	1.601
Grid	503993	6964514	1.5	33.609	0.509	0.029	0.509	0.029	0.029	8.302	0.080	1.367
Grid	504013	6964514	1.5	30.361	0.422	0.023	0.422	0.023	0.023	6.832	0.063	1.122
Grid	504033	6964514	1.5	29.171	0.329	0.019	0.329	0.019	0.019	8.482	0.052	0.961
Grid	504053	6964514	1.5	24.924	0.255	0.016	0.255	0.016	0.016	8.229	0.045	0.858
Grid	504073	6964514	1.5	19.499	0.234	0.015	0.234	0.015	0.015	6.476	0.040	0.801
Grid	504093	6964514	1.5	16.026	0.240	0.013	0.240	0.013	0.013	6.753	0.035	0.723
Grid	504113	6964514	1.5	18.357	0.240	0.011	0.240	0.011	0.011	7.688	0.031	0.654
Grid	504133	6964514	1.5	17.687	0.225	0.010	0.225	0.010	0.010	8.186	0.027	0.553
Grid	504153	6964514	1.5	17.793	0.200	0.009	0.200	0.009	0.009	7.628	0.024	0.541
Grid	504173	6964514	1.5	16.841	0.186	0.008	0.186	0.008	0.008	6.635	0.022	0.490
Grid	504193	6964514	1.5	15.474	0.169	0.007	0.169	0.007	0.007	5.640	0.020	0.425
Grid	504213	6964514	1.5	14.095	0.156	0.007	0.156	0.007	0.007	4.613	0.018	0.378
Grid	504233	6964514	1.5	12.585	0.146	0.006	0.146	0.006	0.006	4.146	0.017	0.327
Grid	503733	6964534	1.5	30.110	0.430	0.021	0.430	0.021	0.021	7.530	0.057	0.635
Grid	503753	6964534	1.5	28.565	0.430	0.024	0.430	0.024	0.024	6.598	0.064	0.675
Grid	503773	6964534	1.5	26.276	0.423	0.027	0.423	0.027	0.027	7.484	0.074	0.717
Grid	503793	6964534	1.5	24.172	0.417	0.031	0.417	0.031	0.031	8.371	0.085	0.789
Grid	503813	6964534	1.5	23.905	0.409	0.036	0.409	0.036	0.036	8.453	0.098	0.890
Grid	503833	6964534	1.5	25.809	0.463	0.040	0.463	0.040	0.040	7.792	0.110	0.950
Grid	503853	6964534	1.5	26.100	0.462	0.044	0.462	0.044	0.044	6.368	0.120	1.000
Grid	503873	6964534	1.5	30.009	0.417	0.047	0.417	0.047	0.047	6.988	0.130	1.063

Grid	503893	6964534	1.5	37.532	0.437	0.052	0.437	0.052	0.052	9.099	0.143	1.268
Grid	503913	6964534	1.5	40.378	0.527	0.054	0.527	0.054	0.054	8.268	0.147	1.539
Grid	503933	6964534	1.5	48.211	0.625	0.053	0.625	0.053	0.053	9.864	0.145	1.872
Grid	503953	6964534	1.5	48.588	0.696	0.044	0.696	0.044	0.044	12.307	0.120	1.808
Grid	503973	6964534	1.5	56.842	0.775	0.038	0.775	0.038	0.038	12.539	0.104	1.860
Grid	503993	6964534	1.5	35.412	0.516	0.029	0.516	0.029	0.029	9.880	0.078	1.552
Grid	504013	6964534	1.5	34.856	0.469	0.021	0.469	0.021	0.021	7.184	0.058	1.159
Grid	504033	6964534	1.5	24.729	0.314	0.017	0.314	0.017	0.017	6.437	0.047	0.961
Grid	504053	6964534	1.5	21.039	0.268	0.015	0.268	0.015	0.015	5.715	0.042	0.820
Grid	504073	6964534	1.5	18.037	0.255	0.014	0.255	0.014	0.014	6.324	0.038	0.764
Grid	504093	6964534	1.5	17.987	0.253	0.013	0.253	0.013	0.013	7.879	0.034	0.740
Grid	504113	6964534	1.5	18.884	0.231	0.011	0.231	0.011	0.011	8.375	0.031	0.677
Grid	504133	6964534	1.5	18.314	0.212	0.010	0.212	0.010	0.010	8.012	0.028	0.608
Grid	504153	6964534	1.5	16.743	0.203	0.009	0.203	0.009	0.009	6.746	0.025	0.524
Grid	504173	6964534	1.5	14.864	0.191	0.008	0.191	0.008	0.008	5.353	0.023	0.470
Grid	504193	6964534	1.5	13.064	0.175	0.008	0.175	0.008	0.008	5.140	0.021	0.417
Grid	504213	6964534	1.5	11.788	0.160	0.007	0.160	0.007	0.007	5.234	0.020	0.383
Grid	504233	6964534	1.5	11.024	0.145	0.007	0.145	0.007	0.007	5.230	0.018	0.354
Grid	503733	6964554	1.5	29.946	0.413	0.021	0.413	0.021	0.021	8.264	0.057	0.629
Grid	503753	6964554	1.5	30.053	0.431	0.024	0.431	0.024	0.024	8.029	0.065	0.685
Grid	503773	6964554	1.5	29.543	0.445	0.027	0.445	0.027	0.027	7.469	0.075	0.735
Grid	503793	6964554	1.5	27.732	0.446	0.032	0.446	0.032	0.032	6.522	0.087	0.817
Grid	503813	6964554	1.5	24.447	0.448	0.037	0.448	0.037	0.037	6.558	0.101	0.895
Grid	503833	6964554	1.5	25.745	0.423	0.042	0.423	0.042	0.042	6.698	0.114	0.945
Grid	503853	6964554	1.5	27.742	0.451	0.046	0.451	0.046	0.046	6.171	0.127	1.011
Grid	503873	6964554	1.5	31.218	0.477	0.050	0.477	0.050	0.050	7.683	0.138	1.120
Grid	503893	6964554	1.5	49.551	0.595	0.068	0.595	0.068	0.068	7.872	0.186	1.704
Grid	503913	6964554	1.5	70.821	0.845	0.084	0.845	0.084	0.084	10.115	0.230	2.531
Grid	503933	6964554	1.5	88.311	0.904	0.084	0.904	0.084	0.084	14.600	0.230	2.993

Grid	503953	6964554	1.5	89.181	1.027	0.074	1.027	0.074	0.074	16.594	0.204	3.003
Grid	503973	6964554	1.5	72.674	0.921	0.053	0.921	0.053	0.053	13.211	0.144	2.665
Grid	503993	6964554	1.5	50.304	0.709	0.031	0.709	0.031	0.031	9.159	0.084	1.708
Grid	504013	6964554	1.5	41.470	0.523	0.021	0.523	0.021	0.021	8.056	0.057	1.311
Grid	504033	6964554	1.5	30.649	0.334	0.016	0.334	0.016	0.016	6.817	0.044	0.926
Grid	504053	6964554	1.5	22.499	0.243	0.013	0.243	0.013	0.013	5.915	0.036	0.798
Grid	504073	6964554	1.5	18.775	0.268	0.014	0.268	0.014	0.014	7.143	0.037	0.792
Grid	504093	6964554	1.5	18.139	0.270	0.013	0.270	0.013	0.013	7.569	0.036	0.746
Grid	504113	6964554	1.5	17.092	0.253	0.013	0.253	0.013	0.013	6.935	0.034	0.609
Grid	504133	6964554	1.5	15.265	0.231	0.012	0.231	0.012	0.012	6.624	0.031	0.603
Grid	504153	6964554	1.5	13.918	0.209	0.011	0.209	0.011	0.011	6.912	0.029	0.543
Grid	504173	6964554	1.5	13.163	0.185	0.010	0.185	0.010	0.010	6.670	0.026	0.512
Grid	504193	6964554	1.5	12.216	0.164	0.009	0.164	0.009	0.009	6.268	0.024	0.465
Grid	504213	6964554	1.5	11.009	0.146	0.008	0.146	0.008	0.008	6.009	0.022	0.428
Grid	504233	6964554	1.5	10.075	0.131	0.008	0.131	0.008	0.008	5.823	0.021	0.380
Grid	503733	6964574	1.5	23.249	0.331	0.021	0.331	0.021	0.021	6.889	0.056	0.660
Grid	503753	6964574	1.5	24.431	0.366	0.024	0.366	0.024	0.024	6.629	0.064	0.708
Grid	503773	6964574	1.5	24.976	0.401	0.027	0.401	0.027	0.027	6.121	0.075	0.780
Grid	503793	6964574	1.5	24.439	0.429	0.032	0.429	0.032	0.032	5.862	0.087	0.854
Grid	503813	6964574	1.5	26.373	0.449	0.037	0.449	0.037	0.037	5.972	0.101	0.927
Grid	503833	6964574	1.5	27.043	0.440	0.042	0.440	0.042	0.042	5.933	0.114	0.964
Grid	503853	6964574	1.5	29.165	0.423	0.047	0.423	0.047	0.047	5.297	0.127	0.982
Grid	503873	6964574	1.5	44.672	0.629	0.063	0.629	0.063	0.063	6.309	0.172	1.534
Grid	503893	6964574	1.5	72.336	0.882	0.094	0.882	0.094	0.094	9.870	0.256	2.567
Grid	503913	6964574	1.5	77.573	0.910	0.104	0.910	0.104	0.104	11.075	0.285	2.675
Grid	503933	6964574	1.5	84.798	0.933	0.112	0.933	0.112	0.112	13.959	0.307	2.975
Grid	503953	6964574	1.5	102.260	1.124	0.107	1.124	0.107	0.107	18.076	0.292	3.280
Grid	503973	6964574	1.5	82.202	1.014	0.070	1.014	0.070	0.070	13.204	0.192	2.873
Grid	503993	6964574	1.5	50.939	0.711	0.033	0.711	0.033	0.033	8.487	0.089	1.685

Grid	504013	6964574	1.5	41.094	0.445	0.021	0.445	0.021	0.021	8.152	0.058	1.306
Grid	504033	6964574	1.5	38.313	0.447	0.018	0.447	0.018	0.018	9.082	0.050	0.949
Grid	504053	6964574	1.5	22.760	0.316	0.016	0.316	0.016	0.016	7.583	0.043	0.859
Grid	504073	6964574	1.5	20.516	0.286	0.015	0.286	0.015	0.015	6.396	0.041	0.815
Grid	504093	6964574	1.5	18.935	0.269	0.015	0.269	0.015	0.015	7.151	0.042	0.750
Grid	504113	6964574	1.5	17.806	0.239	0.015	0.239	0.015	0.015	7.730	0.041	0.707
Grid	504133	6964574	1.5	16.238	0.212	0.014	0.212	0.014	0.014	7.819	0.038	0.643
Grid	504153	6964574	1.5	14.811	0.191	0.013	0.191	0.013	0.013	7.734	0.035	0.588
Grid	504173	6964574	1.5	13.640	0.174	0.011	0.174	0.011	0.011	7.139	0.031	0.545
Grid	504193	6964574	1.5	12.446	0.157	0.011	0.157	0.011	0.011	6.423	0.029	0.498
Grid	504213	6964574	1.5	12.584	0.140	0.010	0.140	0.010	0.010	5.919	0.026	0.457
Grid	504233	6964574	1.5	12.629	0.132	0.009	0.132	0.009	0.009	5.622	0.024	0.424
Grid	503733	6964593	1.5	25.042	0.295	0.020	0.295	0.020	0.020	7.811	0.056	0.606
Grid	503753	6964593	1.5	25.572	0.311	0.023	0.311	0.023	0.023	7.424	0.064	0.670
Grid	503773	6964593	1.5	25.481	0.323	0.027	0.323	0.027	0.027	7.224	0.074	0.763
Grid	503793	6964593	1.5	26.263	0.351	0.032	0.351	0.032	0.032	6.930	0.087	0.839
Grid	503813	6964593	1.5	28.921	0.386	0.037	0.386	0.037	0.037	6.371	0.101	0.918
Grid	503833	6964593	1.5	31.238	0.412	0.042	0.412	0.042	0.042	5.765	0.114	0.957
Grid	503853	6964593	1.5	30.647	0.433	0.047	0.433	0.047	0.047	5.731	0.128	1.046
Grid	503873	6964593	1.5	63.463	0.882	0.074	0.882	0.074	0.074	8.250	0.203	2.015
Grid	503893	6964593	1.5	79.607	1.096	0.099	1.096	0.099	0.099	9.888	0.270	2.557
Grid	503913	6964593	1.5	76.420	0.962	0.119	0.962	0.119	0.119	9.812	0.325	2.679
Grid	503933	6964593	1.5	82.061	0.987	0.141	0.987	0.141	0.141	11.264	0.385	2.949
Grid	503953	6964593	1.5	110.200	1.263	0.153	1.263	0.153	0.153	17.011	0.418	3.407
Grid	503973	6964593	1.5	90.595	1.123	0.115	1.123	0.115	0.115	14.033	0.314	2.979
Grid	503993	6964593	1.5	49.032	0.744	0.046	0.744	0.046	0.046	7.965	0.127	1.765
Grid	504013	6964593	1.5	41.763	0.464	0.027	0.464	0.027	0.027	10.229	0.073	1.247
Grid	504033	6964593	1.5	36.057	0.500	0.025	0.500	0.025	0.025	14.078	0.068	1.106
Grid	504053	6964593	1.5	37.674	0.507	0.023	0.507	0.023	0.023	14.117	0.062	1.056

Grid	504073	6964593	1.5	22.687	0.298	0.019	0.298	0.019	0.019	8.033	0.051	0.797
Grid	504093	6964593	1.5	21.606	0.283	0.019	0.283	0.019	0.019	8.333	0.053	0.830
Grid	504113	6964593	1.5	19.750	0.258	0.019	0.258	0.019	0.019	7.670	0.053	0.762
Grid	504133	6964593	1.5	17.263	0.238	0.018	0.238	0.018	0.018	7.049	0.048	0.715
Grid	504153	6964593	1.5	15.048	0.218	0.016	0.218	0.016	0.016	6.590	0.043	0.669
Grid	504173	6964593	1.5	14.670	0.202	0.014	0.202	0.014	0.014	6.054	0.039	0.635
Grid	504193	6964593	1.5	15.110	0.188	0.013	0.188	0.013	0.013	5.436	0.035	0.553
Grid	504213	6964593	1.5	15.171	0.176	0.012	0.176	0.012	0.012	4.961	0.032	0.509
Grid	504233	6964593	1.5	15.075	0.163	0.011	0.163	0.011	0.011	4.662	0.029	0.463
Grid	503733	6964613	1.5	24.189	0.268	0.020	0.268	0.020	0.020	7.785	0.056	0.643
Grid	503753	6964613	1.5	24.734	0.300	0.023	0.300	0.023	0.023	8.094	0.064	0.712
Grid	503773	6964613	1.5	24.456	0.340	0.027	0.340	0.027	0.027	8.462	0.075	0.774
Grid	503793	6964613	1.5	24.653	0.376	0.032	0.376	0.032	0.032	8.487	0.088	0.873
Grid	503813	6964613	1.5	26.960	0.418	0.038	0.418	0.038	0.038	8.310	0.103	0.973
Grid	503833	6964613	1.5	28.901	0.445	0.042	0.445	0.042	0.042	7.186	0.115	1.071
Grid	503853	6964613	1.5	33.827	0.473	0.049	0.473	0.049	0.049	6.356	0.134	1.210
Grid	503873	6964613	1.5	58.089	0.783	0.083	0.783	0.083	0.083	11.932	0.226	2.272
Grid	503893	6964613	1.5	74.504	0.937	0.114	0.937	0.114	0.114	15.685	0.313	2.684
Grid	503913	6964613	1.5	78.533	1.085	0.147	1.085	0.147	0.147	14.753	0.401	2.750
Grid	503933	6964613	1.5	80.090	1.102	0.209	1.102	0.209	0.209	14.332	0.572	2.844
Grid	503953	6964613	1.5	104.730	1.260	0.265	1.260	0.265	0.265	15.406	0.725	3.323
Grid	503973	6964613	1.5	92.015	1.127	0.233	1.127	0.233	0.233	15.076	0.637	3.068
Grid	503993	6964613	1.5	70.362	1.010	0.125	1.010	0.125	0.125	22.534	0.343	1.991
Grid	504013	6964613	1.5	77.033	1.009	0.060	1.009	0.060	0.060	26.850	0.165	1.670
Grid	504033	6964613	1.5	82.197	1.071	0.046	1.071	0.046	0.046	29.391	0.126	1.541
Grid	504053	6964613	1.5	67.767	0.861	0.041	0.861	0.041	0.041	22.141	0.112	1.606
Grid	504073	6964613	1.5	25.100	0.391	0.028	0.391	0.028	0.028	7.242	0.075	1.048
Grid	504093	6964613	1.5	23.954	0.380	0.026	0.380	0.026	0.026	7.160	0.070	0.945
Grid	504113	6964613	1.5	22.538	0.328	0.025	0.328	0.025	0.025	6.638	0.069	0.806

Grid	504133	6964613	1.5	20.340	0.292	0.022	0.292	0.022	0.022	6.037	0.062	0.760
Grid	504153	6964613	1.5	18.154	0.260	0.020	0.260	0.020	0.020	5.427	0.054	0.681
Grid	504173	6964613	1.5	16.444	0.236	0.017	0.236	0.017	0.017	5.021	0.047	0.628
Grid	504193	6964613	1.5	15.240	0.225	0.016	0.225	0.016	0.016	5.089	0.042	0.578
Grid	504213	6964613	1.5	13.993	0.211	0.014	0.211	0.014	0.014	4.866	0.038	0.539
Grid	504233	6964613	1.5	14.118	0.198	0.012	0.198	0.012	0.012	4.565	0.034	0.495
Grid	503733	6964633	1.5	18.897	0.262	0.021	0.262	0.021	0.021	6.320	0.056	0.648
Grid	503753	6964633	1.5	20.401	0.298	0.024	0.298	0.024	0.024	6.780	0.065	0.709
Grid	503773	6964633	1.5	21.858	0.336	0.028	0.336	0.028	0.028	6.992	0.076	0.798
Grid	503793	6964633	1.5	23.122	0.372	0.033	0.372	0.033	0.033	6.868	0.091	0.882
Grid	503813	6964633	1.5	24.473	0.411	0.039	0.411	0.039	0.039	6.714	0.107	1.017
Grid	503833	6964633	1.5	27.004	0.421	0.044	0.421	0.044	0.044	7.177	0.120	1.109
Grid	503853	6964633	1.5	30.828	0.425	0.048	0.425	0.048	0.048	7.537	0.130	1.239
Grid	503873	6964633	1.5	91.857	0.940	0.092	0.940	0.092	0.092	17.579	0.252	2.442
Grid	503893	6964633	1.5	134.160	1.374	0.142	1.374	0.142	0.142	26.044	0.387	3.877
Grid	503913	6964633	1.5	139.770	1.517	0.183	1.517	0.183	0.183	25.946	0.500	3.938
Grid	503933	6964633	1.5	146.820	1.718	0.272	1.718	0.272	0.272	25.923	0.744	4.039
Grid	503953	6964633	1.5	125.100	1.474	0.361	1.474	0.361	0.361	20.961	0.988	3.378
Grid	503973	6964633	1.5	83.960	1.194	0.346	1.194	0.346	0.346	23.634	0.947	2.740
Grid	503993	6964633	1.5	126.800	1.835	0.221	1.835	0.221	0.221	37.203	0.603	3.073
Grid	504013	6964633	1.5	124.310	1.800	0.128	1.800	0.128	0.128	37.663	0.350	2.795
Grid	504033	6964633	1.5	112.350	1.660	0.087	1.660	0.087	0.087	38.100	0.238	2.498
Grid	504053	6964633	1.5	93.126	1.412	0.069	1.412	0.069	0.069	33.937	0.188	2.145
Grid	504073	6964633	1.5	46.033	0.569	0.043	0.569	0.043	0.043	9.690	0.119	1.392
Grid	504093	6964633	1.5	29.530	0.406	0.033	0.406	0.033	0.033	6.737	0.089	1.037
Grid	504113	6964633	1.5	27.463	0.372	0.032	0.372	0.032	0.032	6.811	0.087	0.980
Grid	504133	6964633	1.5	24.912	0.329	0.028	0.329	0.028	0.028	6.682	0.076	0.841
Grid	504153	6964633	1.5	22.232	0.290	0.024	0.290	0.024	0.024	6.466	0.066	0.758
Grid	504173	6964633	1.5	19.913	0.262	0.021	0.262	0.021	0.021	6.315	0.057	0.717

Grid	504193	6964633	1.5	18.217	0.240	0.018	0.240	0.018	0.018	6.188	0.050	0.668
Grid	504213	6964633	1.5	16.344	0.229	0.016	0.229	0.016	0.016	5.703	0.045	0.631
Grid	504233	6964633	1.5	14.540	0.217	0.015	0.217	0.015	0.015	5.178	0.040	0.572
Grid	503733	6964653	1.5	19.220	0.256	0.021	0.256	0.021	0.021	5.491	0.058	0.635
Grid	503753	6964653	1.5	19.499	0.285	0.024	0.285	0.024	0.024	5.266	0.066	0.666
Grid	503773	6964653	1.5	19.282	0.317	0.028	0.317	0.028	0.028	6.592	0.077	0.747
Grid	503793	6964653	1.5	21.568	0.352	0.034	0.352	0.034	0.034	7.584	0.093	0.835
Grid	503813	6964653	1.5	24.008	0.388	0.040	0.388	0.040	0.040	8.137	0.110	0.952
Grid	503833	6964653	1.5	27.082	0.433	0.046	0.433	0.046	0.046	8.300	0.125	1.059
Grid	503853	6964653	1.5	29.786	0.504	0.053	0.504	0.053	0.053	8.260	0.144	1.212
Grid	503873	6964653	1.5	63.364	0.749	0.088	0.749	0.088	0.088	13.021	0.241	2.014
Grid	503893	6964653	1.5	111.920	1.350	0.143	1.350	0.143	0.143	22.552	0.391	3.461
Grid	503913	6964653	1.5	110.770	1.347	0.172	1.347	0.172	0.172	20.433	0.471	3.510
Grid	503933	6964653	1.5	103.910	1.293	0.234	1.293	0.234	0.234	19.748	0.639	3.362
Grid	503953	6964653	1.5	87.389	1.199	0.314	1.199	0.314	0.314	21.153	0.857	3.084
Grid	503973	6964653	1.5	82.815	1.313	0.325	1.313	0.325	0.325	22.749	0.889	3.571
Grid	503993	6964653	1.5	123.950	1.404	0.253	1.404	0.253	0.253	23.203	0.692	3.994
Grid	504013	6964653	1.5	123.510	1.452	0.168	1.452	0.168	0.168	23.579	0.459	3.150
Grid	504033	6964653	1.5	113.530	1.438	0.123	1.438	0.123	0.123	23.947	0.336	2.585
Grid	504053	6964653	1.5	102.010	1.320	0.096	1.320	0.096	0.096	22.337	0.263	2.318
Grid	504073	6964653	1.5	59.068	0.731	0.061	0.731	0.061	0.061	11.058	0.168	1.580
Grid	504093	6964653	1.5	29.393	0.401	0.042	0.401	0.042	0.042	7.121	0.115	1.163
Grid	504113	6964653	1.5	28.047	0.389	0.039	0.389	0.039	0.039	7.095	0.106	1.065
Grid	504133	6964653	1.5	26.594	0.346	0.033	0.346	0.033	0.033	6.963	0.090	0.956
Grid	504153	6964653	1.5	24.125	0.302	0.028	0.302	0.028	0.028	6.681	0.077	0.834
Grid	504173	6964653	1.5	21.736	0.266	0.024	0.266	0.024	0.024	6.403	0.066	0.748
Grid	504193	6964653	1.5	19.837	0.245	0.021	0.245	0.021	0.021	6.195	0.058	0.658
Grid	504213	6964653	1.5	17.948	0.223	0.019	0.223	0.019	0.019	5.657	0.051	0.629
Grid	504233	6964653	1.5	16.497	0.201	0.017	0.201	0.017	0.017	5.083	0.045	0.578

Grid	503733	6964673	1.5	15.674	0.245	0.021	0.245	0.021	0.021	5.737	0.059	0.585
Grid	503753	6964673	1.5	16.769	0.267	0.024	0.267	0.024	0.024	6.535	0.067	0.605
Grid	503773	6964673	1.5	18.895	0.293	0.028	0.293	0.028	0.028	7.639	0.078	0.672
Grid	503793	6964673	1.5	21.233	0.323	0.034	0.323	0.034	0.034	7.915	0.092	0.776
Grid	503813	6964673	1.5	23.994	0.378	0.040	0.378	0.040	0.040	9.695	0.110	0.901
Grid	503833	6964673	1.5	26.333	0.436	0.046	0.436	0.046	0.046	10.510	0.126	1.036
Grid	503853	6964673	1.5	30.930	0.488	0.051	0.488	0.051	0.051	8.410	0.139	1.150
Grid	503873	6964673	1.5	44.310	0.588	0.078	0.588	0.078	0.078	13.930	0.213	1.826
Grid	503893	6964673	1.5	69.433	0.848	0.118	0.848	0.118	0.118	20.292	0.322	2.856
Grid	503913	6964673	1.5	64.057	0.744	0.126	0.744	0.126	0.126	18.330	0.344	2.829
Grid	503933	6964673	1.5	59.085	0.885	0.132	0.885	0.132	0.132	22.637	0.360	2.581
Grid	503953	6964673	1.5	82.239	0.991	0.183	0.991	0.183	0.183	22.206	0.502	2.800
Grid	503973	6964673	1.5	84.918	1.273	0.215	1.273	0.215	0.215	25.393	0.588	3.397
Grid	503993	6964673	1.5	98.637	1.253	0.203	1.253	0.203	0.203	22.948	0.554	3.560
Grid	504013	6964673	1.5	98.141	1.226	0.172	1.226	0.172	0.172	20.320	0.471	3.564
Grid	504033	6964673	1.5	98.620	1.257	0.143	1.257	0.143	0.143	23.147	0.391	3.087
Grid	504053	6964673	1.5	97.581	1.180	0.118	1.180	0.118	0.118	22.440	0.323	2.848
Grid	504073	6964673	1.5	51.049	0.694	0.071	0.694	0.071	0.071	11.577	0.194	1.653
Grid	504093	6964673	1.5	28.511	0.421	0.049	0.421	0.049	0.049	6.605	0.135	1.156
Grid	504113	6964673	1.5	25.957	0.413	0.044	0.413	0.044	0.044	5.634	0.119	1.046
Grid	504133	6964673	1.5	24.601	0.383	0.037	0.383	0.037	0.037	5.496	0.101	0.953
Grid	504153	6964673	1.5	23.011	0.347	0.031	0.347	0.031	0.031	5.713	0.085	0.878
Grid	504173	6964673	1.5	21.332	0.311	0.027	0.311	0.027	0.027	5.911	0.073	0.816
Grid	504193	6964673	1.5	19.835	0.277	0.023	0.277	0.023	0.023	5.749	0.064	0.734
Grid	504213	6964673	1.5	18.138	0.247	0.021	0.247	0.021	0.021	5.504	0.057	0.675
Grid	504233	6964673	1.5	17.139	0.218	0.018	0.218	0.018	0.018	5.098	0.050	0.591
Grid	503733	6964693	1.5	15.856	0.230	0.022	0.230	0.022	0.022	6.088	0.059	0.536
Grid	503753	6964693	1.5	17.406	0.245	0.024	0.245	0.024	0.024	6.649	0.067	0.594
Grid	503773	6964693	1.5	18.874	0.263	0.028	0.263	0.028	0.028	7.490	0.077	0.653

Grid	503793	6964693	1.5	20.283	0.299	0.033	0.299	0.033	0.033	9.625	0.090	0.724
Grid	503813	6964693	1.5	22.530	0.343	0.038	0.343	0.038	0.038	10.408	0.105	0.839
Grid	503833	6964693	1.5	25.385	0.380	0.044	0.380	0.044	0.044	9.194	0.121	0.933
Grid	503853	6964693	1.5	27.296	0.394	0.047	0.394	0.047	0.047	6.346	0.130	1.017
Grid	503873	6964693	1.5	30.330	0.384	0.059	0.384	0.059	0.059	9.954	0.160	1.435
Grid	503893	6964693	1.5	55.287	0.565	0.091	0.565	0.091	0.091	15.792	0.248	2.369
Grid	503913	6964693	1.5	52.963	0.683	0.093	0.683	0.093	0.093	20.162	0.255	2.399
Grid	503933	6964693	1.5	58.533	0.758	0.090	0.758	0.090	0.090	24.140	0.245	2.404
Grid	503953	6964693	1.5	71.548	0.976	0.098	0.976	0.098	0.098	21.278	0.269	2.712
Grid	503973	6964693	1.5	70.648	0.936	0.130	0.936	0.130	0.130	25.775	0.355	3.020
Grid	503993	6964693	1.5	74.642	0.957	0.148	0.957	0.148	0.148	21.983	0.405	3.384
Grid	504013	6964693	1.5	92.816	1.272	0.153	1.272	0.153	0.153	22.808	0.419	3.299
Grid	504033	6964693	1.5	90.243	1.183	0.147	1.183	0.147	0.147	19.583	0.401	3.341
Grid	504053	6964693	1.5	61.546	0.940	0.111	0.940	0.111	0.111	16.193	0.302	2.446
Grid	504073	6964693	1.5	31.350	0.487	0.061	0.487	0.061	0.061	8.046	0.167	1.247
Grid	504093	6964693	1.5	28.099	0.452	0.054	0.452	0.054	0.054	6.603	0.148	1.127
Grid	504113	6964693	1.5	25.962	0.390	0.046	0.390	0.046	0.046	6.189	0.127	1.018
Grid	504133	6964693	1.5	23.150	0.349	0.039	0.349	0.039	0.039	5.495	0.106	0.914
Grid	504153	6964693	1.5	20.032	0.336	0.033	0.336	0.033	0.033	5.431	0.090	0.817
Grid	504173	6964693	1.5	19.156	0.317	0.029	0.317	0.029	0.029	6.301	0.078	0.781
Grid	504193	6964693	1.5	18.373	0.297	0.025	0.297	0.025	0.025	6.742	0.069	0.741
Grid	504213	6964693	1.5	17.012	0.276	0.022	0.276	0.022	0.022	6.956	0.061	0.686
Grid	504233	6964693	1.5	15.519	0.249	0.020	0.249	0.020	0.020	6.718	0.054	0.630
Grid	503733	6964713	1.5	15.169	0.210	0.021	0.210	0.021	0.021	6.000	0.058	0.528
Grid	503753	6964713	1.5	16.049	0.222	0.024	0.222	0.024	0.024	6.837	0.065	0.595
Grid	503773	6964713	1.5	16.804	0.242	0.027	0.242	0.027	0.027	8.534	0.074	0.633
Grid	503793	6964713	1.5	17.908	0.263	0.031	0.263	0.031	0.031	9.581	0.084	0.699
Grid	503813	6964713	1.5	20.327	0.285	0.036	0.285	0.036	0.036	8.979	0.097	0.781
Grid	503833	6964713	1.5	22.213	0.299	0.041	0.299	0.041	0.041	6.571	0.111	0.865

Grid	503853	6964713	1.5	22.574	0.292	0.045	0.292	0.045	0.045	7.570	0.122	0.971
Grid	503873	6964713	1.5	23.824	0.256	0.046	0.256	0.046	0.046	8.783	0.126	1.040
Grid	503893	6964713	1.5	34.153	0.408	0.061	0.408	0.061	0.061	12.618	0.167	1.623
Grid	503913	6964713	1.5	51.425	0.638	0.072	0.638	0.072	0.072	23.450	0.198	2.153
Grid	503933	6964713	1.5	61.893	0.735	0.071	0.735	0.071	0.071	21.214	0.193	2.410
Grid	503953	6964713	1.5	62.335	0.941	0.075	0.941	0.075	0.075	22.210	0.204	2.658
Grid	503973	6964713	1.5	62.914	0.796	0.089	0.796	0.089	0.089	26.378	0.244	2.661
Grid	503993	6964713	1.5	64.699	0.768	0.107	0.768	0.107	0.107	17.277	0.294	3.043
Grid	504013	6964713	1.5	72.835	1.026	0.122	1.026	0.122	0.122	22.683	0.335	3.059
Grid	504033	6964713	1.5	67.489	0.953	0.112	0.953	0.112	0.112	16.276	0.307	2.536
Grid	504053	6964713	1.5	35.649	0.534	0.072	0.534	0.072	0.072	9.147	0.196	1.548
Grid	504073	6964713	1.5	31.580	0.463	0.062	0.463	0.062	0.062	8.477	0.170	1.183
Grid	504093	6964713	1.5	25.728	0.431	0.055	0.431	0.055	0.055	7.751	0.149	1.066
Grid	504113	6964713	1.5	24.694	0.393	0.046	0.393	0.046	0.046	6.591	0.127	0.976
Grid	504133	6964713	1.5	23.048	0.344	0.039	0.344	0.039	0.039	5.219	0.107	0.883
Grid	504153	6964713	1.5	20.961	0.296	0.034	0.296	0.034	0.034	4.904	0.092	0.811
Grid	504173	6964713	1.5	18.779	0.278	0.029	0.278	0.029	0.029	5.128	0.080	0.744
Grid	504193	6964713	1.5	16.888	0.276	0.026	0.276	0.026	0.026	5.355	0.071	0.698
Grid	504213	6964713	1.5	15.101	0.270	0.023	0.270	0.023	0.023	6.103	0.063	0.662
Grid	504233	6964713	1.5	14.167	0.253	0.020	0.253	0.020	0.020	6.378	0.056	0.611
Grid	503733	6964733	1.5	14.006	0.189	0.021	0.189	0.021	0.021	6.443	0.056	0.512
Grid	503753	6964733	1.5	14.971	0.203	0.023	0.203	0.023	0.023	7.580	0.063	0.546
Grid	503773	6964733	1.5	15.783	0.213	0.026	0.213	0.026	0.026	8.289	0.070	0.592
Grid	503793	6964733	1.5	16.795	0.219	0.029	0.219	0.029	0.029	8.122	0.078	0.659
Grid	503813	6964733	1.5	17.538	0.222	0.032	0.222	0.032	0.032	6.671	0.088	0.713
Grid	503833	6964733	1.5	17.867	0.218	0.036	0.218	0.036	0.036	7.382	0.099	0.825
Grid	503853	6964733	1.5	18.463	0.226	0.040	0.226	0.040	0.040	8.047	0.109	0.925
Grid	503873	6964733	1.5	19.798	0.247	0.042	0.247	0.042	0.042	9.779	0.115	0.972
Grid	503893	6964733	1.5	21.808	0.275	0.041	0.275	0.041	0.041	8.154	0.113	0.980

Grid	503913	6964733	1.5	32.378	0.405	0.047	0.405	0.047	0.047	11.160	0.130	1.326
Grid	503933	6964733	1.5	43.510	0.620	0.053	0.620	0.053	0.053	12.629	0.145	1.759
Grid	503953	6964733	1.5	42.104	0.649	0.054	0.649	0.054	0.054	12.078	0.148	1.842
Grid	503973	6964733	1.5	33.219	0.499	0.053	0.499	0.053	0.053	10.628	0.145	1.566
Grid	503993	6964733	1.5	35.333	0.463	0.062	0.463	0.062	0.062	10.309	0.170	1.696
Grid	504013	6964733	1.5	33.502	0.485	0.067	0.485	0.067	0.067	10.487	0.184	1.637
Grid	504033	6964733	1.5	35.443	0.445	0.066	0.445	0.066	0.066	8.136	0.181	1.417
Grid	504053	6964733	1.5	39.244	0.490	0.063	0.490	0.063	0.063	9.755	0.172	1.249
Grid	504073	6964733	1.5	36.109	0.463	0.059	0.463	0.059	0.059	9.009	0.162	1.184
Grid	504093	6964733	1.5	30.180	0.404	0.052	0.404	0.052	0.052	7.917	0.141	1.046
Grid	504113	6964733	1.5	23.680	0.350	0.044	0.350	0.044	0.044	7.185	0.121	0.903
Grid	504133	6964733	1.5	20.767	0.326	0.038	0.326	0.038	0.038	6.576	0.104	0.838
Grid	504153	6964733	1.5	19.863	0.299	0.033	0.299	0.033	0.033	5.457	0.091	0.777
Grid	504173	6964733	1.5	18.911	0.270	0.029	0.270	0.029	0.029	4.352	0.080	0.722
Grid	504193	6964733	1.5	17.734	0.240	0.026	0.240	0.026	0.026	4.498	0.072	0.681
Grid	504213	6964733	1.5	16.033	0.233	0.023	0.233	0.023	0.023	4.370	0.064	0.632
Grid	504233	6964733	1.5	14.123	0.229	0.021	0.229	0.021	0.021	4.494	0.057	0.583
Grid	503733	6964753	1.5	13.846	0.170	0.020	0.170	0.020	0.020	7.007	0.054	0.477
Grid	503753	6964753	1.5	14.204	0.178	0.022	0.178	0.022	0.022	7.636	0.059	0.528
Grid	503773	6964753	1.5	14.928	0.182	0.024	0.182	0.024	0.024	7.365	0.065	0.575
Grid	503793	6964753	1.5	14.904	0.180	0.026	0.180	0.026	0.026	6.377	0.071	0.615
Grid	503813	6964753	1.5	14.395	0.176	0.029	0.176	0.029	0.029	6.912	0.079	0.687
Grid	503833	6964753	1.5	16.807	0.194	0.032	0.194	0.032	0.032	7.624	0.087	0.772
Grid	503853	6964753	1.5	16.995	0.209	0.034	0.209	0.034	0.034	8.983	0.094	0.802
Grid	503873	6964753	1.5	18.321	0.220	0.036	0.220	0.036	0.036	9.512	0.100	0.867
Grid	503893	6964753	1.5	21.202	0.282	0.038	0.282	0.038	0.038	7.809	0.104	0.939
Grid	503913	6964753	1.5	24.543	0.393	0.038	0.393	0.038	0.038	7.022	0.105	1.013
Grid	503933	6964753	1.5	28.720	0.478	0.040	0.478	0.040	0.040	8.918	0.109	1.147
Grid	503953	6964753	1.5	29.421	0.510	0.044	0.510	0.044	0.044	10.103	0.120	1.280

Grid	503973	6964753	1.5	29.794	0.424	0.047	0.424	0.047	0.047	7.510	0.128	1.354
Grid	503993	6964753	1.5	29.941	0.359	0.051	0.359	0.051	0.051	7.007	0.140	1.330
Grid	504013	6964753	1.5	30.333	0.363	0.055	0.363	0.055	0.055	7.757	0.149	1.339
Grid	504033	6964753	1.5	32.239	0.382	0.058	0.382	0.058	0.058	7.834	0.158	1.280
Grid	504053	6964753	1.5	39.239	0.467	0.058	0.467	0.058	0.058	9.808	0.157	1.203
Grid	504073	6964753	1.5	37.827	0.460	0.053	0.460	0.053	0.053	10.588	0.145	1.109
Grid	504093	6964753	1.5	32.946	0.412	0.047	0.412	0.047	0.047	7.923	0.128	0.978
Grid	504113	6964753	1.5	27.515	0.353	0.041	0.353	0.041	0.041	7.254	0.112	0.865
Grid	504133	6964753	1.5	22.177	0.294	0.036	0.294	0.036	0.036	6.866	0.099	0.790
Grid	504153	6964753	1.5	17.844	0.275	0.032	0.275	0.032	0.032	6.231	0.088	0.727
Grid	504173	6964753	1.5	17.711	0.264	0.029	0.264	0.029	0.029	5.181	0.079	0.687
Grid	504193	6964753	1.5	17.072	0.244	0.026	0.244	0.026	0.026	4.172	0.071	0.653
Grid	504213	6964753	1.5	15.933	0.220	0.023	0.220	0.023	0.023	3.846	0.063	0.606
Grid	504233	6964753	1.5	14.518	0.196	0.021	0.196	0.021	0.021	3.805	0.057	0.563
Grid	503733	6964773	1.5	12.436	0.153	0.018	0.153	0.018	0.018	6.754	0.050	0.468
Grid	503753	6964773	1.5	13.015	0.159	0.020	0.159	0.020	0.020	6.912	0.055	0.498
Grid	503773	6964773	1.5	13.063	0.158	0.022	0.158	0.022	0.022	6.234	0.060	0.550
Grid	503793	6964773	1.5	13.026	0.161	0.024	0.161	0.024	0.024	5.792	0.065	0.605
Grid	503813	6964773	1.5	15.463	0.182	0.026	0.182	0.026	0.026	6.807	0.070	0.633
Grid	503833	6964773	1.5	16.808	0.172	0.028	0.172	0.028	0.028	7.822	0.075	0.668
Grid	503853	6964773	1.5	16.708	0.192	0.029	0.192	0.029	0.029	9.246	0.080	0.705
Grid	503873	6964773	1.5	17.360	0.201	0.031	0.201	0.031	0.031	8.942	0.085	0.789
Grid	503893	6964773	1.5	19.511	0.281	0.033	0.281	0.033	0.033	7.056	0.090	0.874
Grid	503913	6964773	1.5	24.295	0.373	0.035	0.373	0.035	0.035	6.706	0.096	0.975
Grid	503933	6964773	1.5	27.208	0.434	0.038	0.434	0.038	0.038	9.910	0.105	1.084
Grid	503953	6964773	1.5	27.893	0.437	0.042	0.437	0.042	0.042	10.526	0.116	1.191
Grid	503973	6964773	1.5	26.276	0.376	0.046	0.376	0.046	0.046	7.919	0.126	1.267
Grid	503993	6964773	1.5	26.710	0.306	0.048	0.306	0.048	0.048	7.764	0.132	1.235
Grid	504013	6964773	1.5	28.440	0.323	0.050	0.323	0.050	0.050	8.050	0.137	1.204

Grid	504033	6964773	1.5	26.387	0.336	0.051	0.336	0.051	0.051	7.854	0.138	1.150
Grid	504053	6964773	1.5	35.874	0.411	0.049	0.411	0.049	0.049	9.556	0.135	1.128
Grid	504073	6964773	1.5	37.354	0.435	0.046	0.435	0.046	0.046	10.483	0.126	1.023
Grid	504093	6964773	1.5	34.012	0.405	0.042	0.405	0.042	0.042	10.131	0.114	0.924
Grid	504113	6964773	1.5	29.711	0.363	0.038	0.363	0.038	0.038	7.694	0.103	0.820
Grid	504133	6964773	1.5	25.304	0.318	0.034	0.318	0.034	0.034	6.434	0.092	0.765
Grid	504153	6964773	1.5	21.044	0.273	0.031	0.273	0.031	0.031	6.057	0.084	0.720
Grid	504173	6964773	1.5	17.145	0.237	0.028	0.237	0.028	0.028	5.563	0.076	0.666
Grid	504193	6964773	1.5	15.474	0.228	0.025	0.228	0.025	0.025	4.929	0.068	0.610
Grid	504213	6964773	1.5	14.874	0.214	0.022	0.214	0.022	0.022	4.218	0.061	0.565
Grid	504233	6964773	1.5	14.016	0.198	0.020	0.198	0.020	0.020	3.529	0.055	0.537
Grid	503733	6964793	1.5	11.327	0.138	0.017	0.138	0.017	0.017	5.975	0.047	0.442
Grid	503753	6964793	1.5	11.239	0.136	0.019	0.136	0.019	0.019	5.729	0.051	0.484
Grid	503773	6964793	1.5	11.976	0.145	0.020	0.145	0.020	0.020	4.988	0.055	0.533
Grid	503793	6964793	1.5	14.676	0.170	0.022	0.170	0.022	0.022	5.771	0.059	0.540
Grid	503813	6964793	1.5	15.430	0.171	0.023	0.171	0.023	0.023	6.730	0.062	0.568
Grid	503833	6964793	1.5	14.816	0.161	0.024	0.161	0.024	0.024	7.424	0.066	0.593
Grid	503853	6964793	1.5	15.567	0.173	0.025	0.173	0.025	0.025	8.554	0.069	0.653
Grid	503873	6964793	1.5	16.070	0.195	0.026	0.195	0.026	0.026	7.818	0.072	0.729
Grid	503893	6964793	1.5	17.887	0.268	0.028	0.268	0.028	0.028	6.109	0.076	0.801
Grid	503913	6964793	1.5	22.733	0.336	0.030	0.336	0.030	0.030	7.234	0.083	0.870
Grid	503933	6964793	1.5	24.326	0.376	0.034	0.376	0.034	0.034	9.782	0.092	0.974
Grid	503953	6964793	1.5	25.101	0.368	0.037	0.368	0.037	0.037	10.060	0.102	1.093
Grid	503973	6964793	1.5	23.675	0.312	0.040	0.312	0.040	0.040	7.743	0.111	1.143
Grid	503993	6964793	1.5	23.820	0.263	0.042	0.263	0.042	0.042	7.256	0.114	1.133
Grid	504013	6964793	1.5	25.389	0.274	0.042	0.274	0.042	0.042	8.621	0.115	1.054
Grid	504033	6964793	1.5	23.885	0.301	0.042	0.301	0.042	0.042	8.829	0.115	1.027
Grid	504053	6964793	1.5	30.585	0.341	0.041	0.341	0.041	0.041	10.180	0.113	1.020
Grid	504073	6964793	1.5	35.319	0.397	0.039	0.397	0.039	0.039	9.776	0.108	0.967

Grid	504093	6964793	1.5	34.086	0.390	0.037	0.390	0.037	0.037	10.634	0.101	0.889
Grid	504113	6964793	1.5	30.758	0.361	0.034	0.361	0.034	0.034	9.975	0.093	0.798
Grid	504133	6964793	1.5	27.271	0.328	0.031	0.328	0.031	0.031	7.468	0.086	0.726
Grid	504153	6964793	1.5	23.963	0.296	0.029	0.296	0.029	0.029	6.001	0.079	0.692
Grid	504173	6964793	1.5	20.035	0.255	0.026	0.255	0.026	0.026	5.503	0.072	0.644
Grid	504193	6964793	1.5	16.256	0.214	0.024	0.214	0.024	0.024	5.269	0.065	0.587
Grid	504213	6964793	1.5	14.121	0.195	0.021	0.195	0.021	0.021	4.747	0.059	0.545
Grid	504233	6964793	1.5	12.925	0.187	0.019	0.187	0.019	0.019	4.017	0.053	0.500
Grid	503733	6964813	1.5	9.848	0.119	0.016	0.119	0.016	0.016	5.033	0.043	0.413
Grid	503753	6964813	1.5	10.760	0.128	0.017	0.128	0.017	0.017	4.502	0.046	0.465
Grid	503773	6964813	1.5	13.465	0.154	0.018	0.154	0.018	0.018	5.252	0.050	0.465
Grid	503793	6964813	1.5	14.519	0.162	0.019	0.162	0.019	0.019	5.859	0.053	0.490
Grid	503813	6964813	1.5	14.291	0.146	0.020	0.146	0.020	0.020	6.412	0.055	0.516
Grid	503833	6964813	1.5	13.471	0.152	0.021	0.152	0.021	0.021	7.223	0.058	0.535
Grid	503853	6964813	1.5	14.275	0.152	0.022	0.152	0.022	0.022	7.667	0.060	0.608
Grid	503873	6964813	1.5	14.893	0.195	0.023	0.195	0.023	0.023	6.684	0.062	0.663
Grid	503893	6964813	1.5	17.392	0.251	0.024	0.251	0.024	0.024	5.023	0.065	0.728
Grid	503913	6964813	1.5	20.804	0.297	0.026	0.297	0.026	0.026	6.914	0.070	0.799
Grid	503933	6964813	1.5	21.264	0.318	0.029	0.318	0.029	0.029	8.572	0.078	0.876
Grid	503953	6964813	1.5	22.446	0.303	0.032	0.303	0.032	0.032	8.609	0.087	0.964
Grid	503973	6964813	1.5	21.054	0.253	0.034	0.253	0.034	0.034	6.857	0.094	1.042
Grid	503993	6964813	1.5	21.225	0.224	0.035	0.224	0.035	0.035	6.427	0.097	1.036
Grid	504013	6964813	1.5	24.631	0.252	0.035	0.252	0.035	0.035	9.121	0.097	0.943
Grid	504033	6964813	1.5	21.961	0.261	0.035	0.261	0.035	0.035	9.232	0.097	0.916
Grid	504053	6964813	1.5	25.064	0.274	0.035	0.274	0.035	0.035	9.562	0.096	0.916
Grid	504073	6964813	1.5	31.913	0.350	0.034	0.350	0.034	0.034	10.987	0.093	0.911
Grid	504093	6964813	1.5	32.877	0.365	0.033	0.365	0.033	0.033	9.129	0.090	0.862
Grid	504113	6964813	1.5	30.717	0.349	0.031	0.349	0.031	0.031	9.808	0.085	0.794
Grid	504133	6964813	1.5	27.995	0.326	0.029	0.326	0.029	0.029	8.199	0.079	0.714

Grid	504153	6964813	1.5	25.186	0.300	0.027	0.300	0.027	0.027	6.199	0.073	0.647
Grid	504173	6964813	1.5	21.786	0.266	0.024	0.266	0.024	0.024	5.492	0.067	0.614
Grid	504193	6964813	1.5	18.265	0.229	0.022	0.229	0.022	0.022	5.140	0.061	0.569
Grid	504213	6964813	1.5	15.052	0.195	0.020	0.195	0.020	0.020	4.809	0.056	0.523
Grid	504233	6964813	1.5	13.118	0.168	0.019	0.168	0.019	0.019	4.302	0.051	0.497
Grid	503733	6964833	1.5	9.571	0.112	0.014	0.112	0.014	0.014	4.160	0.040	0.388
Grid	503753	6964833	1.5	12.029	0.136	0.015	0.136	0.015	0.015	4.566	0.042	0.398
Grid	503773	6964833	1.5	13.624	0.151	0.016	0.151	0.016	0.016	5.378	0.045	0.417
Grid	503793	6964833	1.5	13.743	0.144	0.017	0.144	0.017	0.017	6.037	0.048	0.441
Grid	503813	6964833	1.5	12.370	0.133	0.018	0.133	0.018	0.018	6.667	0.049	0.472
Grid	503833	6964833	1.5	12.677	0.140	0.019	0.140	0.019	0.019	7.098	0.051	0.521
Grid	503853	6964833	1.5	13.481	0.147	0.019	0.147	0.019	0.019	7.063	0.053	0.581
Grid	503873	6964833	1.5	14.383	0.192	0.020	0.192	0.020	0.020	5.902	0.054	0.623
Grid	503893	6964833	1.5	16.750	0.235	0.021	0.235	0.021	0.021	4.789	0.057	0.656
Grid	503913	6964833	1.5	19.046	0.265	0.022	0.265	0.022	0.022	6.279	0.061	0.738
Grid	503933	6964833	1.5	19.146	0.273	0.025	0.273	0.025	0.025	7.192	0.068	0.794
Grid	503953	6964833	1.5	20.631	0.253	0.027	0.253	0.027	0.027	7.096	0.075	0.875
Grid	503973	6964833	1.5	20.074	0.215	0.030	0.215	0.030	0.030	7.273	0.081	0.969
Grid	503993	6964833	1.5	19.134	0.201	0.030	0.201	0.030	0.030	5.940	0.083	0.965
Grid	504013	6964833	1.5	24.451	0.250	0.031	0.250	0.031	0.031	9.003	0.084	0.874
Grid	504033	6964833	1.5	24.002	0.246	0.030	0.246	0.030	0.030	9.328	0.083	0.846
Grid	504053	6964833	1.5	20.164	0.246	0.030	0.246	0.030	0.030	8.420	0.083	0.832
Grid	504073	6964833	1.5	27.024	0.291	0.030	0.291	0.030	0.030	10.431	0.082	0.836
Grid	504093	6964833	1.5	29.335	0.320	0.029	0.320	0.029	0.029	9.535	0.080	0.830
Grid	504113	6964833	1.5	28.692	0.319	0.028	0.319	0.028	0.028	7.856	0.077	0.775
Grid	504133	6964833	1.5	26.945	0.305	0.026	0.305	0.026	0.026	7.315	0.072	0.704
Grid	504153	6964833	1.5	24.708	0.286	0.024	0.286	0.024	0.024	5.960	0.067	0.627
Grid	504173	6964833	1.5	22.147	0.262	0.023	0.262	0.023	0.023	5.590	0.062	0.574
Grid	504193	6964833	1.5	19.436	0.235	0.021	0.235	0.021	0.021	4.975	0.057	0.550

Grid	504213	6964833	1.5	16.670	0.207	0.019	0.207	0.019	0.019	4.495	0.052	0.504
Grid	504233	6964833	1.5	14.000	0.179	0.018	0.179	0.018	0.018	4.265	0.048	0.469
Grid	503733	6964854	1.5	10.757	0.121	0.013	0.121	0.013	0.013	3.838	0.036	0.346
Grid	503753	6964854	1.5	12.246	0.134	0.014	0.134	0.014	0.014	4.577	0.038	0.363
Grid	503773	6964854	1.5	12.469	0.135	0.015	0.135	0.015	0.015	5.487	0.041	0.382
Grid	503793	6964854	1.5	12.100	0.124	0.015	0.124	0.015	0.015	6.436	0.042	0.426
Grid	503813	6964854	1.5	11.321	0.126	0.016	0.126	0.016	0.016	6.105	0.044	0.450
Grid	503833	6964854	1.5	12.063	0.127	0.017	0.127	0.017	0.017	6.748	0.045	0.506
Grid	503853	6964854	1.5	12.959	0.148	0.017	0.148	0.017	0.017	6.518	0.047	0.545
Grid	503873	6964854	1.5	14.130	0.187	0.018	0.187	0.018	0.018	5.323	0.049	0.578
Grid	503893	6964854	1.5	16.242	0.221	0.019	0.221	0.019	0.019	4.622	0.051	0.610
Grid	503913	6964854	1.5	17.759	0.242	0.020	0.242	0.020	0.020	5.735	0.055	0.673
Grid	503933	6964854	1.5	18.289	0.241	0.022	0.241	0.022	0.022	6.302	0.060	0.742
Grid	503953	6964854	1.5	19.133	0.218	0.024	0.218	0.024	0.024	6.814	0.067	0.813
Grid	503973	6964854	1.5	20.306	0.208	0.026	0.208	0.026	0.026	7.484	0.071	0.897
Grid	503993	6964854	1.5	17.287	0.181	0.027	0.181	0.027	0.027	6.175	0.073	0.903
Grid	504013	6964854	1.5	22.878	0.234	0.027	0.234	0.027	0.027	8.316	0.074	0.831
Grid	504033	6964854	1.5	25.308	0.259	0.027	0.259	0.027	0.027	9.596	0.074	0.789
Grid	504053	6964854	1.5	19.726	0.224	0.027	0.224	0.027	0.027	9.284	0.074	0.756
Grid	504073	6964854	1.5	21.068	0.228	0.027	0.228	0.027	0.027	8.525	0.073	0.766
Grid	504093	6964854	1.5	24.070	0.260	0.026	0.260	0.026	0.026	8.439	0.071	0.773
Grid	504113	6964854	1.5	24.885	0.272	0.025	0.272	0.025	0.025	7.071	0.068	0.745
Grid	504133	6964854	1.5	24.321	0.270	0.024	0.270	0.024	0.024	5.848	0.065	0.677
Grid	504153	6964854	1.5	23.074	0.261	0.022	0.261	0.022	0.022	5.469	0.061	0.616
Grid	504173	6964854	1.5	21.485	0.247	0.021	0.247	0.021	0.021	5.534	0.056	0.539
Grid	504193	6964854	1.5	19.658	0.230	0.019	0.230	0.019	0.019	5.213	0.052	0.505
Grid	504213	6964854	1.5	17.503	0.210	0.018	0.210	0.018	0.018	4.594	0.049	0.483
Grid	504233	6964854	1.5	15.187	0.187	0.017	0.187	0.017	0.017	3.988	0.045	0.454