

Human Health Assessment



# Mount Pleasant Optimisation Project - Human Health Assessment

Prepared for: MACH Energy Australia Pty Ltd





#### **Document History and Status**

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#### Limitations

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## **Glossary of Terms and Abbreviations**

Term	Definition				
AAQ	Ambient air quality.				
ABS	Australian Bureau of Statistics.				
Acute exposure	Contact with a substance that occurs once or for only a short time (up to 14 days).				
Absorption	The process of taking in. For a person or an animal, absorption is the process of a				
7 lbcorption	substance getting into the body through the eyes, skin, stomach, intestines, or lungs.				
Adverse health	A change in body function or cell structure that might lead to disease or health				
effect	problems.				
Aerodynamic	Airborne particles have irregular shapes, their aerodynamic behaviour is expressed				
diameter	in terms of the diameter of an idealised spherical particle.				
AIHW	Australian Institute of Health and Welfare.				
ANZECC	Australia and New Zealand Environment and Conservation Council.				
AQGGA	Air Quality and Greenhouse Gas Assessment.				
ATSDR	Agency for Toxic Substances and Disease Register.				
Background level	An average or expected amount of a substance or material in a specific environment,				
Background lovel	or typical amounts of substances that occur naturally in an environment.				
Biodegradation	Decomposition or breakdown of a substance through the action of micro-organisms				
g	(such as bacteria or fungi) or other natural physical processes (such as sunlight).				
Body burden	The total amount of a substance in the body. Some substances build up in the body				
,	because they are stored in fat or bone or because they leave the body very slowly.				
Carcinogen	A substance that causes cancer.				
CCC	Community Consultative Committee.				
CCME	Canadian Council of Ministers of the Environment.				
CHPP	Coal handling and preparation plant.				
Chronic exposure	Contact with a substance or stressor that occurs over a long time (more than one				
·	year) [compare with acute exposure and intermediate duration exposure].				
CL	Coal Lease.				
COMEAP	Committee on the Medical Effects of Air Pollutants.				
dBA	Decibels (A-weighted).				
DEC	NSW Department of Environment and Conservation.				
DECC	NSW Department of Environment and Climate Change.				
DECCW	NSW Department of Environment, Climate Change and Water.				
DEFRA	Department for Environment, Food & Rural Affairs.				
DEH	Australian Department of Environment and Heritage.				
Detection limit	The lowest concentration of a substance that can reliably be distinguished from a				
	zero concentration.				
Dose	The amount of a substance to which a person is exposed over some time period.				
	Dose is a measurement of exposure. Dose is often expressed as milligram (amount)				
	per kilogram (a measure of body weight) per day (a measure of time) when people				
	eat or drink contaminated water, food, or soil. In general, the greater the dose, the				
	greater the likelihood of an effect. An 'exposure dose' is how much of a substance is				
	encountered in the environment. An 'absorbed dose' is the amount of a substance				
	that actually got into the body through the eyes, skin, stomach, intestines, or lungs.				
EIS	Environmental Impact Statement.				
EL	Exploration Licence.				
ENM	Environmental Noise Model.				
EPHC	Environment Protection and Heritage Council.				
_EU	European Union.				
Exposure	Contact with a substance by swallowing, breathing, or touching the skin or eyes. Also				
	includes contact with a stressor such as noise or vibration. Exposure may be short				
	term [acute exposure], of intermediate duration, or long term [chronic exposure].				



Term	Definition
Exposure	The process of finding out how people come into contact with a hazardous
assessment	substance, how often and for how long they are in contact with the substance, and
assessment	how much of the substance they are in contact with.
Exposure pathway	The route a substance takes from its source (where it began) to its endpoint (where it
Exposure patriway	ends), and how people can come into contact with (or get exposed) to it. An
	exposure pathway has five parts: a source of contamination (such as chemical
	substance leakage into the subsurface); an environmental media and transport
	mechanism (such as movement through groundwater); a point of exposure (such as
	a private well); a route of exposure (eating, drinking, breathing, or touching), and a
	receptor population (people potentially or actually exposed). When all five parts are
	present, the exposure pathway is termed a completed exposure pathway.
Genotoxic	These are carcinogens that have the potential to result in genetic (DNA) damage
carcinogen	(gene mutation, gene amplification, chromosomal rearrangement). Where this
-	occurs, the damage may be sufficient to result in the initiation of cancer at some time
	during a lifetime.
Guideline value	Guideline value is a concentration in soil, sediment, water, biota or air (established
	by relevant regulatory authorities such as the NSW Department of Environment and
	Conservation (DEC) or institutions such as the National Health and Medical
	Research Council (NHMRC), Australia and New Zealand Environment and
	Conservation Council (ANZECC) and World Health Organization (WHO)), that is
	used to identify conditions below which no adverse effects, nuisance or indirect
	health effects are expected. The derivation of a guideline value utilises relevant
	studies on animals or humans and relevant factors to account for inter and intra-
	species variations and uncertainty factors. Separate guidelines may be identified for
	protection of human health and the environment. Dependent on the source,
	guidelines would have different names, such as investigation level, trigger value and ambient guideline.
HHRA	Human health risk assessment.
HI	Hazard Index.
IARC	International Agency for Research on Cancer.
ICNG	Interim Construction Noise Guideline.
I-INCE	International Institute of Noise Control Engineering.
Inhalation	The act of breathing.
Intermediate	Contact with a substance that occurs for more than 14 days and less than a year
exposure	[compared with acute exposure and chronic exposure].
LGA	Local Government Area.
LOAEL	Lowest-observed-adverse-effect level.
LOR	Limit of Reporting.
Metabolism	The conversion or breakdown of a substance from one form to another by a living
	organism.
ML	Mining Lease.
Morbidity	This is the condition of being ill, diseased or unhealthy. This can include acute illness
	(which has a sudden onset and may improve or worsen over a short period of time)
	as well as chronic illness (which can present and progress slowly over a long period
<b>1.4</b>	of time).
Mortality	This is the condition of being dead. It may be presented as the number of deaths in a
NCAs	population over time, either in general or due to a specific cause.  Noise catchment areas.
NCG	
NEPC	Noise Criteria Guideline (various, as referenced in the report).  National Environment Protection Council.
NEPM	National Environment Protection Measure.
NHMRC	National Health and Medical Research Council.
NO <sub>2</sub>	Nitrogen dioxide.
1102	THILLOGOTI GIONIUG.



Term	Definition	
NOx	Nitrogen oxides.	
NSW	New South Wales.	
NSW EPA	NSW Environment Protection Authority.	
OEH	NSW Office of Environment and Heritage.	
OEHHA	Office of Environmental Health Hazard Assessment, California Environment	
ОЕППА		
PM	Protection Agency (Cal EPA).  Particulate matter.	
PM <sub>0.1</sub>	Particulate matter of aerodynamic diameter 0.1 micrometre (µm) and less (termed ultrafine particles).	
PM <sub>1</sub>	Particulate matter of aerodynamic diameter 1 micrometre (µm) and less (termed ultrafine particles).	
PM <sub>2.5</sub>	Particulate matter of aerodynamic diameter 2.5 micrometres (µm) and less.	
PM <sub>10</sub>	Particulate matter of aerodynamic diameter 10 micrometres (µm) and less.	
Point of exposure	The place where someone can come into contact with a substance present in the environment [see exposure pathway].	
Population	A group or number of people living within a specified area or sharing similar	
	characteristics (such as occupation or age).	
RBL	Rating Background Level.	
Receptor	An assessed location for potential air, noise or blasting impacts. Typically, receptors	
	are residences, however can include commercial and industrial premises, places of	
	worship, schools, etc. Also known as receivers.	
Receptor	People who could come into contact with hazardous substances [see exposure	
population	pathway].	
Risk	The probability that something would cause injury or harm.	
ROM	Run-of-mine.	
Route of exposure	The way people come into contact with a hazardous substance. Three routes of	
reduce of expectate	exposure are breathing [inhalation], eating or drinking [ingestion], or contact with the	
	skin [dermal contact].	
SEARs	Secretary's Environmental Assessment Requirements.	
SEIFA	Socio-Economic Index for Areas.	
SIA	Social Impact Assessment.	
TCEQ	Texas Commission on Environmental Quality.	
Toxicity	The degree of danger posed by a substance to human, animal or plant life.	
Toxicity data	Characterisation or quantitative value estimated (by recognised authorities) for each	
Toxiony data	individual chemical substance for relevant exposure pathway (inhalation, oral or	
	dermal), with special emphasis on dose-response characteristics. The data are	
	based on available toxicity studies relevant to humans and/or animals and relevant	
	safety factors.	
Toxicological profile	An assessment that examines, summarises, and interprets information about a	
Toxioological promo	hazardous substance to determine harmful levels of exposure and associated health	
	effects. A toxicological profile also identifies significant gaps in knowledge on the	
	substance and describes areas where further research is needed.	
Toxicology	The study of the harmful effects of substances on humans or animals.	
TSP	Total suspended particulates.	
UK	United Kingdom.	
US	United States of America.	
USEPA	United States of America.  United States Environmental Protection Agency.	
WHO	World Health Organization.	
µg/m <sup>3</sup>	Micrograms per cubic metre.	
	Micrometre.	
μm	MINIONICIE.	



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#### **Section 1. Introduction**

#### 1.1 Background

Environmental Risk Sciences Pty Ltd (enRiskS) has been commissioned by MACH Energy Australia Pty Ltd (MACH Energy) to undertake a human health risk assessment (HHRA) for the Mount Pleasant Optimisation Project (the Project), which is a State Significant Development (SSD) in New South Wales (NSW).

The Mount Pleasant Operation Development Consent DA 92/97 was granted on 22 December 1999. The Mount Pleasant Operation was also approved under the *Environment Protection and Biodiversity Conservation Act*, 1999 (EPBC Act) in 2012 (EPBC 2011/5795).

MACH Energy acquired the Mount Pleasant Operation from Coal & Allied Operations Pty Ltd on 4 August 2016. MACH Energy commenced construction activities at the Mount Pleasant Operation in November 2016 and commenced mining operations in October 2017, in accordance with Development Consent DA 92/97 and EPBC 2011/5795.

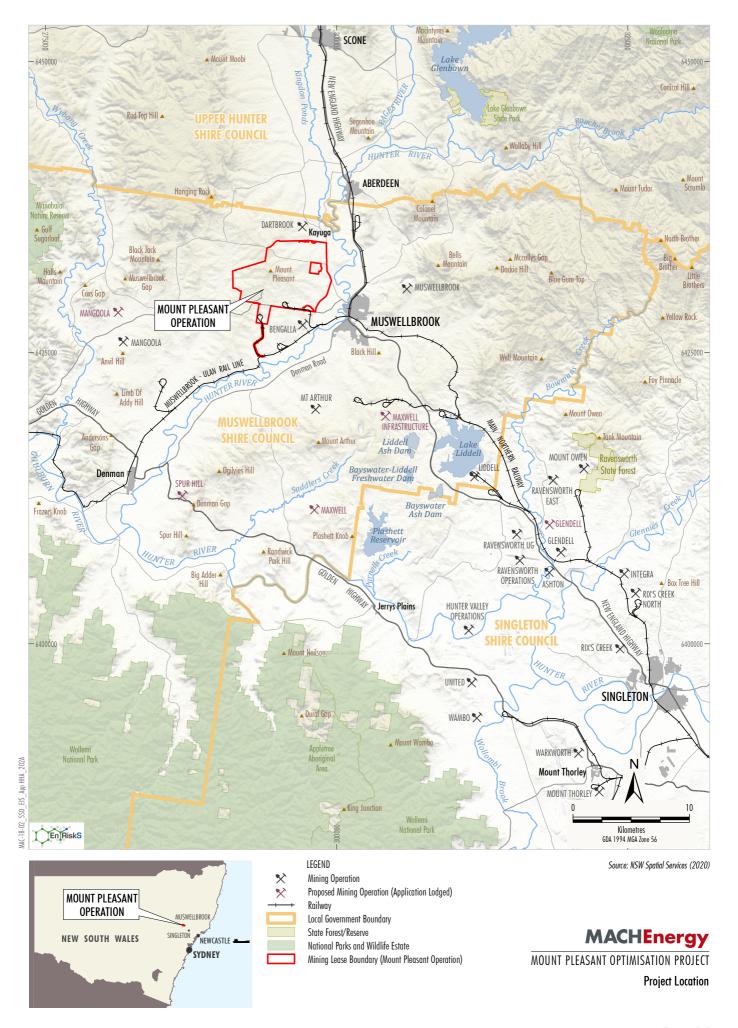
MACH Mount Pleasant Operations Pty Ltd manages the Mount Pleasant Operation as agent for and on behalf of the unincorporated Mount Pleasant Joint Venture between MACH Energy (95 per cent [%] owner) and J. C. D. Australia Pty Ltd (5% owner)<sup>1</sup>.

The approved Mount Pleasant Operation includes the construction and operation of an open cut coal mine and associated rail spur and product coal loading infrastructure located approximately 3 kilometres (km) north-west of Muswellbrook in the Upper Hunter Valley of NSW (refer to **Figure 1.1**). The Mining Leases are wholly located in the Muswellbrook Local Government Area (LGA), with the town of Muswellbrook, village of Aberdeen and locality of Kayuga surrounding the site (refer to **Figure 1.1**).

The mine is approved to produce up to 10.5 million tonnes per annum (Mtpa) of run-of-mine (ROM) coal. Up to approximately nine trains per day of thermal coal products from the Mount Pleasant Operation are transported by rail to the Port of Newcastle for export, or to domestic customers for use in electricity generation.

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<sup>&</sup>lt;sup>1</sup> Throughout this report, MACH Mount Pleasant Operations Pty Ltd and the unincorporated Mount Pleasant Join Venture will be referred to as MACH.





#### 1.2 Secretary's Environmental Assessment Requirements

The Secretary's Environmental Assessment Requirements (SEARs) for this SSD requires that a health risk assessment be prepared as part of the Environmental Impact Statement (EIS):

"a health risk assessment that considers the adverse effects from human exposure to acute and cumulative project related environmental hazards, in accordance with *Environmental Health Risk Assessment: Guidelines for assessing human health risk* [sic] *from environmental hazards*:"

On the basis of the above, the HHRA presented in this report has considered impacts to the surrounding community related to: air quality, noise and blasting and water.

#### 1.3 Objectives

The overall objective of the HHRA is to provide an assessment of potential impacts to human health in relation to the Project, to specifically address the SEARs.

This report addresses impacts relevant to community health, specifically in relation to impacts on air quality, noise and blasting and water (surface water and groundwater).

No assessment of impacts to on-site workers is presented. Workplace health and safety is expected to be managed separately through application of the NSW *Work Health and Safety Act 2011* and NSW *Work Health and Safety (Mines and Petroleum Sites) Act 2013*, and associated regulations.

#### 1.4 Methodology

The HHRA has been undertaken in accordance with the following guidance (and associated references as relevant):

- enHealth Environmental Health Risk Assessment, Guidelines for assessing human health risks from environmental hazards (enHealth 2012) (as required in the SEARs).
- State Environmental Planning Policy No. 33 Hazardous and Offensive Development (NSW Government 2014).
- National Environment Protection Council (NEPC) National Environment Protection (Ambient Air Quality) Measure (NEPM) (NEPC 2016).
- National Environmental Protection Measure Assessment of Site Contamination including:
  - Schedule B1 Guideline on Investigation Levels for Soil and Groundwater (NEPC 1999 amended 2013a).
  - Schedule B4 Guideline on Site-Specific Health Risk Assessment Methodology (NEPC 1999 amended 2013b).
  - Schedule B6 Guideline on the Framework for Risk-Based Assessment of Groundwater Contamination (NEPC 1999 amended 2013c).
  - Schedule B7 Guideline on derivation of health-based investigation levels (NEPC 1999 amended 2013d).
  - Schedule B8 Guideline on Community Consultation and Risk Communication (NEPC 1999 amended 2013e).
- NSW Environment Protection Authority (EPA) Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales (NSW EPA 2016).



- NSW Noise Policy for Industry (NPfI) (NSW EPA 2017).
- National Health and Medical Research Council (NHMRC) Australian Drinking Water Guidelines (NHMRC 2011 updated 2018).
- Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZG 2018).

Where relevant, additional guidance has been obtained from relevant Australian and International guidance, such as that available from the United States Environmental Protection Agency (USEPA) and the World Health Organization (WHO), consistent with current industry best practice.

#### 1.5 Available information

The HHRA has been prepared on the basis of information available for the Project, including information and data provided by other technical specialists, as detailed below:

- Todoroski Air Sciences Pty Ltd, 2020. Mount Pleasant Optimisation Project, Air Quality Impact Assessment (AQIA).
- Wilkinson Murray Pty Limited (Wilkinson Murray), 2020. Mount Pleasant Optimisation Project, Noise and Blasting Assessment.
- Australasian Groundwater and Environmental Consultants Pty Ltd, 2020. Mount Pleasant Optimisation Project Groundwater Assessment.
- Hydro Engineering & Consulting Pty Ltd, 2020. Mount Pleasant Optimisation Project Surface Water Assessment.
- Just Add Lime Ltd, 2020. Mount Pleasant Optimisation Project Social Impact Assessment.

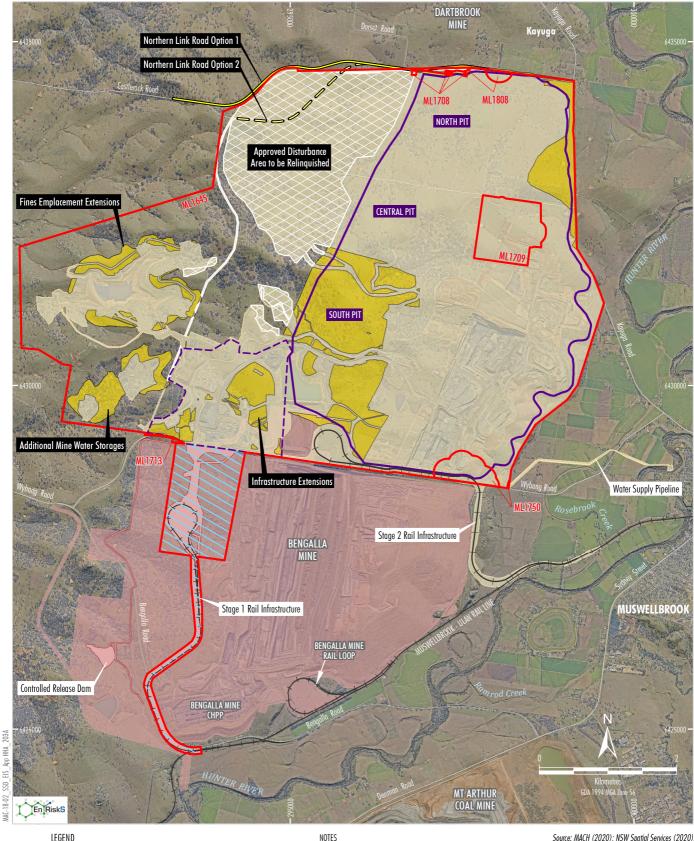


### Section 2. Project description

#### 2.1 Overview of the Project

The Project would include the following (refer to **Figure 2.1**):

- increased open cut coal extraction within Mount Pleasant Operation Mining Leases by mining of additional coal reserves, including lower coal seams in North Pit;
- staged increase in extraction, handling and processing of ROM coal up to 21 Mtpa
   (i.e. progressive increase in ROM coal mining rate from 10.5 Mtpa over the Project life);
- staged upgrades to the existing Coal Handling and Preparation Plant (CHPP) and coal handling infrastructure to facilitate the handling and processing of additional coal;
- rail transport of up to approximately 17 Mtpa of product coal to domestic and export customers;
- upgrades to workshops, electricity distribution and other ancillary infrastructure;
- existing infrastructure relocations to facilitate mining extensions (e.g. local roads, powerlines and water pipelines);
- construction and operation of new water management and water storage infrastructure in support of the mine;
- additional reject dewatering facilities to allow co-disposal of fine rejects with waste rock as part of ROM waste rock operations;
- development of an integrated waste rock emplacement landform that incorporates geomorphic drainage design principles for hydrological stability, and varying topographic relief to be more natural in exterior appearance;
- construction and operation of new ancillary infrastructure in support of mining;
- extension to the time limit on mining operations to 22 December 2048;
- an average Project workforce of approximately 600 people, with a peak of approximately 830 people;
- ongoing exploration activities; and
- other associated infrastructure, plant, equipment and activities.



LEGEND

**Existing Mine Elements** 

Mining Lease Boundary (Mount Pleasant Operation)

Approximate Extent of Existing/Approved Surface Development (DA92/97) Infrastructure to be removed under the Terms of Condition 37, Schedule 3 (DA92/97)

Bengalla Mine Approved Disturbance Boundary (SSD-5170)
Existing/Approved Mount Pleasant Operation Infrastructure

within Bengalla Mine Approved Disturbance Boundary (SSD-5170) 1

Additional/Revised Project Elements

Approved Disturbance Area to be Relinquished 2

Approximate Additional Disturbance of Project Extensions <sup>1</sup>

Northern Link Road Option 1 Centreline <sup>3</sup>

Northern Link Road Option 2 Centreline

Approximate Extent of Project Open Cut and Waste Rock Emplacement Landforms Revised Infrastructure Area Envelope

- 1. Excludes some incidental Project components such as water management infrastructure, access tracks, topsoil stockpiles, power supply, temporary offices, other ancillary works and construction disturbance.
- Subject to detailed design of Northern Link Road alignment.
   Preferred alignment subject to landholder access.

Source: MACH (2020); NSW Spatial Services (2020); Department of Planning and Environment (2016) Orthophoto: MACH (2020)



MOUNT PLEASANT OPTIMISATION PROJECT

**Project General Arrangement** 



#### 2.2 Local setting

The Project site sits in the Upper Hunter Valley, with the area surrounding the site comprising various open cut coal mining operations, agricultural land, rural residential areas, the township of Muswellbrook to the south-east and the village of Aberdeen to the north-east.

The topography in the area of the Project includes the mountainous terrain of the Barrington Tops to the west and the open Hunter Valley region to the south-east. The Hunter River and associated flood plain separates the Project from Muswellbrook to the east. Steep escarpments and defined valleys are characteristic features of the topography to the west and south.

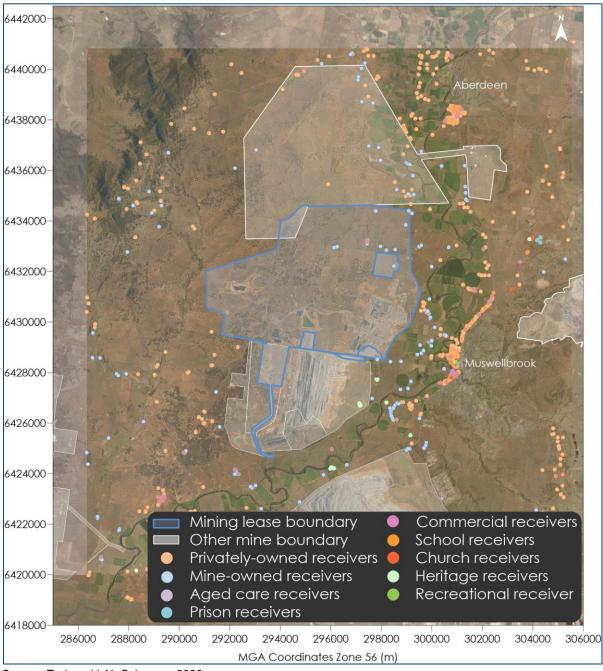
The assessment of potential Project-related impacts associated with air quality and noise has considered the properties surrounding the Project. A comprehensive receiver/receptor identification and verification study was conducted in early 2020 by a Muswellbrook-based surveying company. Light Detection and Ranging (LiDAR) data was used to identify all structures in an area of approximately 440 square kilometres centred on the Mount Pleasant Operation. For practical reasons, only the western outskirts of Muswellbrook and southern outskirts of Aberdeen were included in the search area.

Over 4,400 structures were identified and characterised (e.g. as a residence, church, etc.) using remote sensing, aerial imagery and ground survey. Given the large number of structures identified, only those considered to be sensitive to air quality or noise impacts were subsequently modelled.

The sensitive receptors identified included privately-owned dwellings, mine-owned dwellings, Council/State-owned dwellings, aged care facilities, commercial accommodation, other commercial buildings, schools, churches, recreational facilities and heritage structures, and the St Heliers Correctional Centre.

These receptors, located in the area surrounding the Project, are illustrated in **Figure 2.2**. It is noted that, for practical reasons, a subset of the identified receptors was not modelled (including some of the more remote receptors to the north, and MACH-owned receivers within the Mount Pleasant Operation Mining Leases). Notwithstanding, more than 900 receptors have been modelled in each of the air quality and noise assessments.





Source: Todoroski Air Sciences, 2020

Figure 2.2: Local setting and identified receptor locations surrounding the Project



## **Section 3. Community profile**

This section provides an overview of the community potentially impacted by the Project. It is noted that the key focus of this assessment is the local community surrounding the site.

The Project is situated in an area that includes existing agricultural and rural residential properties, with residential properties associated with the township of Muswellbrook and village of Aberdeen also present. Properties close to the Project include privately-owned and mine-owned properties.

The boundary of the community evaluated in this assessment has been determined based on modelling completed to evaluate key potential health impacts, specifically air quality and noise.

These assessments have focused on properties (individual community receptors with receptor IDs) located within an area of approximately 20.5 km x 24.2 km, refer to **Figure 2.2** and the figures in **Sections 5 and 6**.

The Project and all relevant community receptors are located within the Muswellbrook and Upper Hunter LGAs.

**Table 3.1** presents a summary of the populations within the Muswellbrook and Upper Hunter LGAs (based on 2016 Census and 2016 Socio-Economic data from the Australian Bureau of Statistics [ABS]) with comparison to NSW and Australia.

Table 3.1: Summary of populations surrounding the Project

Indicator	LGA		NSW	Australia
	Muswellbrook	Upper Hunter		
Total population	16,086	14,112	7,480,228	23,401,892
Population 0 - 4 years	7.7% (1,242)	6.1% (858)	6.2% (465,135)	6.3% (1,464,779)
Population 5 - 19 years	20.9% (3,369)	20.3% (2,585)	18.3% (1,369,618)	18.5% (4,321,427)
Population 20 - 64 years	58.4% (9,397)	55.1% (7,778)	59.2% (4,427,843)	59.6% (13,938,918)
Population 65 years and over	12.9% (2,073)	18.6% (2,620)	16.3% (1,217,646)	15.7% (3,676,758)
Median age	35	41	38	38
Average household size	2.5	2.4	2.6	2.6
Unemployment (in March 2020)	5.9%	3.0%	6.9% (June)	7.4% (June)
Tertiary or technical institution	11.4%	9.8%	22.4%	22%
SEIFA IRSAD	917	958		
SEIFA IRSAD rank	3	5		
SEIFA IRSD	930	976		
SEIFA IRSD rank	3	5		
Indigenous	8.3%	5.1%	2.9%	2.8%
Born overseas	15.3%	18%	34.5%	26.3%

Most data presented in the table derived from the ABS 2016 Census (ABS 2016).

SEIFA IRSAD = index of socioeconomic advantage and disadvantage, rank relates to rank in Australia that ranges from

SEIFA IRSD = index of socioeconomic disadvantage, rank relates to rank in Australia that ranges from

statistics/data suggestive of a potential higher vulnerability within the population to health stressors.

statistics/data suggestive of a potential lower vulnerability within the population to health stressors.

statistics/data materially different to that of NSW and Australia, however this indicator is not a clear determinant of higher or lower vulnerability to health stressors.

<sup>\*</sup> Data presented for unemployment is based on available data (Australian Government 2018) to March 2020: https://docs.employment.gov.au/documents/lga-data-tables-small-area-labour-markets-march-quarter-2020

<sup>1 =</sup> most disadvantaged to 10 = least disadvantaged. Ranks lower than 5 are more disadvantaged than Australia on average.

<sup>1 =</sup> most disadvantaged to 10 = least disadvantaged. Ranks lower than 5 are more disadvantaged than Australia on average. Shading relates to comparison against NSW:



Based on the population data available and presented in **Table 3.1**, the communities of Muswellbrook and the Upper Hunter have a similar age distribution as NSW and Australia, noting that the Upper Hunter has a slightly older population, lower levels of tertiary and technical institution education and a lower percentage of people born overseas. These areas have lower rates of unemployment but a higher proportion of indigenous population. Muswellbrook has a slightly lower ranking on the indices of socioeconomic disadvantage, (IRSAD and IRSD) (i.e. more disadvantaged), when compared with the Upper Hunter or NSW.

The indicators outlined in **Table 3.1** reflect the vulnerability of the population and its ability to adapt to environmental stresses. While it is not possible to provide more refined data for smaller pockets of these LGAs (in particular, the properties evaluated in this assessment), in general the Muswellbrook and Upper Hunter populations have aspects that may indicate the populations may be more vulnerable relative to the rest of NSW.

The health of the community is influenced by a complex range of interactive factors including age, socio-economic status, social capital, behaviours, beliefs and lifestyle, life experiences, country of origin, genetic predisposition and access to health and social care. The health indicators available and reviewed in this report (**Table 3.2**) generally reflect a wide range of these factors.

The population adjacent to the proposed site is relatively small and health data is not available that specifically relates to this population.

The Project is located within the Hunter New England Health District. This district covers a region of 131,785 square kilometres from Newcastle in the south to Tenterfield in the north, and past Narrabri in the west. There are approximately 920,000 people residing in the district, including residents of a major metropolitan centre (Newcastle) and regional communities. The populations of Muswellbrook and Upper Hunter LGAs represent approximately 3% of the total population in the Hunter New England Health District.

**Table 3.2** presents a summary of the general population health relevant to the area, based on currently available data. The table presents available information on health-related behaviours (i.e. key lifestyle and behaviour factors known to be important to health) and indicators for the burden of disease within the relevant LGAs (where available), the Hunter New England Health District and NSW. The values noted in **blue bold** are those utilised in this assessment.

Table 3.2: Summary of health indicators/data

Health indicator/data	Hunter New England	NSW
Health behaviours		
Adults - compliance with fruit consumption guidelines (2019) <sup>1</sup>	38.7%	40.6%
Adults - compliance with vegetable consumption guidelines (2019) <sup>1</sup>	7.0%	6.3%
Children - compliance with fruit consumption guidelines (2018-2019) <sup>1</sup>	65.3%	62.7%
Children - compliance with vegetable consumption guidelines (2018-2019) <sup>1</sup>	4.5%	5.5%
Adults - increased lifetime risk of alcohol-related harm (2019) <sup>1</sup>	39.7%	32.8%
Adults - body weight (overweight) (2019) 1	29.8%	32.8%
Adults - body weight (obese) (2019) <sup>1</sup>	29.6%	22.4%



Health indicator/data	Hunter New England	NSW
Adults – sufficient physical activity (2019) 1	59.5%	61.5%
Children – adequate physical activity (2018-2019) 1	35.9%	23.0%
Current smoker (2019) 1	13.5%	11.2%
Burden of disease		
Morbidity - cardiovascular disease hospitalisations (all ages, 2018-2019) <sup>1</sup>	1676.8*	1672.4*
Cardiovascular disease hospitalisations (ages 65 years and older) <sup>2</sup>		Sydney = 9,235*
Morbidity – respiratory disease hospitalisations (all ages, 2018-2019) <sup>1</sup>	1630.8*	1675.2
Respiratory disease hospitalisations (ages 65 years and older) <sup>2</sup>		Sydney = 4,168*
Mortality – all causes, all ages (2018) <sup>1</sup>	577.3*  Muswellbrook LGA = 610.5*  Upper Hunter LGA = 555.4*	506.4*
Mortality (all causes, ages 30 years and older) <sup>2</sup>		Sydney = 1,026*
Mortality – respiratory (all ages) (2017-2018) <sup>1</sup>	55.9*	49.6*
Adults – prevalence of high blood pressure (2018) <sup>1</sup>	29.9%	24.8%
Adult asthma – prevalence (2019) <sup>1</sup>	11.0%	11.5%
Adolescent (2 to15 years) – prevalence of current asthma (2017 – 2019) <sup>1</sup>	16.4%	13.1%

<sup>\*</sup> Rate per 100,000 population.

Shading relates to comparison against NSW:

statistic/data suggestive of a potential higher vulnerability within the population to health stressors.
statistic/data suggestive of a potential lower vulnerability within the population to health stressors.

As described above, the Hunter New England Health District covers a large area.

A detailed review of respiratory and cardiovascular disease relevant to the Upper Hunter<sup>2</sup> (and other) areas was completed in 2010 (Health 2010) to provide a more detailed review of health impacts that may be attributable to mining in the area. While this report is dated, it is provided as background information on work that has been undertaken to better understand potential sources of health issues in the area. The report concluded that the data could not establish that differences observed in some health statistics could be attributable to air pollution or any other specific cause (including lifestyle factors). **Table 3.3** provides a summary of the localised data available in the 2010 report in relation to selected cardiovascular and respiratory health indicators relevant to the area. Where available, these data have been compared with currently available data.

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<sup>1</sup> Data from NSW Health Statistics: <a href="http://www.healthstats.nsw.gov.au/">http://www.healthstats.nsw.gov.au/</a>.

Data for Sydney Metropolitan area for 2010 based on hospital statistics as reported for 2010 and population data from the ABS for 2011 (relevant to each age group considered) used in review of exposure and risks to inform recommendations for updating the NEPM (Golder 2013).

<sup>&</sup>lt;sup>2</sup> The Upper Hunter cluster, as defined by NSW Health is the region defined by Merriwa, Murrurundi, Muswellbrook, Denman and Scone and includes the LGAs of Muswellbrook, Upper Hunter Shire and Liverpool Plains. It is noted that the region defined as Upper Hunter by the NSW EPA also includes Singleton.



Table 3.3: Summary of older health data for cardiovascular and respiratory health in more localised areas (NSW Health Statistics and Health 2010)

Health indicator	Upper Hunter LGA	Muswellbrook LGA	Hunter New England	NSW
Cardiovascular disease (rate per 100,000)				
Hospitalisations (2004-2009) (Health 2010)	2,329.6	2,869.6	2,096.3	2,102.5
Hospitalisations (2017/18 to 2018/19)*	1,858.6	1,926.7	1,714.2**	1,666.3
Respiratory disease (rate per 100,000)				
Hospitalisations (2004-2009)	1,967.4	1,923.6	1,424.9	1,597.9
Hospitalisations (2018-2019)*	NA	NA	1,630.8	1,675.2
Asthma hospitalisations (2004-2009)	309.1	237.8	161.2	190.4
Asthma hospitalisations (2017/18 to 2018/19)*	135.3	149.8	168.0	142.1
Asthma hospitalisations (children aged under 15 years) (2004-2009)	887.1	715.1	467.8	591.3
Asthma (0-14 years) emergency department admissions (2007)		2,284		
Current asthma (children ≤15 years, 2006-2008)	18.2% - Upp	er Hunter	17.5%	13.4%
Current asthma (children 2-15 years, 2017-2019)*	NA	NA	16.4%	13.1%
Mortality all causes (all ages) (2002-2009)	555.96 - Upp	oer Hunter	677.32	624.01
Mortality all causes (all ages) (2018) (Table 3.2)*	610.5	555.4	577.3	506.4

<sup>\*</sup> Current data available from NSW HealthStats http://www.healthstats.nsw.gov.au/

statistic/data suggestive of a potential higher vulnerability within the population to health stressors.

statistic/data suggestive of a potential lower vulnerability within the population to health stressors.

In general, the 2010 NSW Health report identified that Muswellbrook and Upper Hunter LGAs had higher levels of cardiovascular and respiratory hospitalisations, as well as asthma hospitalisations (adults and children), when compared with the rest of NSW.

It is noted that the data considered in the NSW Health 2010 report is now relatively dated. Not all the health statistics included in the report are publicly available as updated information, hence it is difficult to provide a more current detailed review and comparison of these specific health indicators (and age groups) for these LGAs.

Where possible, **Table 3.3** includes the current statistics. In most cases the observations from 2010 remain unchanged in 2017-2019, with the exception of respiratory hospitalisations and asthma hospitalisations. It is notable that where 2018/2019 data are available for the Upper Hunter and Muswellbrook LGAs, cardiovascular and asthma hospitalisations have fallen significantly since 2004-2009, and at a higher rate of decline than in NSW generally.

Data presented in **Table 3.3**, along with data presented in **Table 3.1**, suggest some of the population in the areas surrounding the site may be more vulnerable to health-related impacts associated with the Project, than the general population of NSW. The underlying reasons for this increased vulnerability are expected to be complex, and may include a broad range of lifestyle, behaviour and environmental factors.

The data presented in **Table 3.3** is for information and understanding the general vulnerability of the population. The health statistics used in this assessment are presented (and highlighted) in **Table 3.2**.

<sup>\*\*</sup> Data for Hunter New England and Central Coast Local Health District due to a consolidation of these areas. Shading relates to comparison against NSW:



## Section 4. Community engagement

Community consultation has been undertaken for the Project during the preparation of the EIS and Social Impact Assessment (SIA) (Just Add Lime Ltd 2020). Health and wellbeing have been raised during stakeholder engagement activities with the following key impacts identified:

- Physical health (see additional comments below)
- Mental health stress, uncertainty, solastalgia<sup>3</sup> and eritalgia<sup>4</sup>
- Health and wellbeing benefits of being employed
- Health and wellbeing impacts of working on rosters and 12 hour shifts
- Road safety.

Consultation activities also included a Community Survey, and while the survey did not include a question about health, a number of respondents provided comments relating to health. These comments included the following issues that primarily relate to physical health:

- Health impacts from air, specifically dust and respiratory effects including asthma and cancer. Impacts on individuals undertaking exercise including sporting teams. Impacts of diesel fumes.
- Health impacts from noise, including trains and trucks.
- Cumulative impacts of mining on health and ongoing health impacts in the area.
- Mental health impacts of living in a mining area no longer a rural area.

Impacts of the Project on physical health, specifically in relation to changes in air quality (including health effects such as asthma), noise and water quality are addressed in this report. Impacts of the other aspects such as mental health, benefits of employment and impacts of work shifts are addressed in more detail in the SIA (Just Add Lime Ltd 2020).

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<sup>&</sup>lt;sup>3</sup> Solastalgia is the distress that is produced by environmental change impacting on people while they are directly connected to their home environment and include: loss of ecosystem health and corresponding sense of place; threats to personal health and wellbeing; and sense of injustice and powerlessness.

<sup>&</sup>lt;sup>4</sup> Eritalgia is a concept describing the experiences of place-based distress in response to lived experiences of significant environmental change that distorts, disrupts or displaces individual's sense of future self (in place). It is constructed as a sister-concept to nostalgia and solastalgia, adding the future as a temporal reality of place-based distress.



## Section 5. Health impact assessment: Air emissions

#### 5.1 Approach

This section presents a review of impacts on health associated with predicted air emissions, relevant to the operation of the Project. The assessment presented has relied on the following:

■ Todoroski Air Sciences, 2020. Mount Pleasant Optimisation Project, Air Quality Impact Assessment. This report is referred to as the AQIA.

The estimation of risk follows the general principles outlined in the enHealth document Environmental Health Risk Assessment: Guidelines for assessing human health risks from environmental hazards (enHealth 2012).

#### 5.2 Background on particulate matter

The focus of the AQIA and this assessment of potential health impacts is the emissions to air of dust or particulate matter.

Dust or Particulate Matter (PM) is a widespread air pollutant (that has and will always be present in air) with a mixture of physical and chemical characteristics that vary by location (and source). Unlike many other pollutants, particulates comprise a broad class of diverse materials and substances, with varying morphological, chemical, physical and thermodynamic properties, with sizes that vary from <0.005 micrometres (µm) to >100 µm. Particulates can be derived from natural sources such as crustal dust (soil), pollen and moulds, and other sources that include combustion and industrial processes. Secondary particulate matter is formed via atmospheric reactions of primary gaseous emissions. The gases that are the most significant contributors to formation of secondary particulates include: nitrogen oxides, ammonia, sulfur oxides, and certain organic gases (derived from vehicle exhaust; combustion sources; and agricultural, industrial and biogenic emissions).

The potential for particulate matter to result in adverse health effects is dependent on the size and composition of the particulate matter.

The size of particulates is important as it determines how far from an emission source the particulates may be present in air (with larger particulates settling out close to the source and smaller particles remaining airborne for greater distances) and also the potential for adverse effects to occur as a result of exposure (how far the particles can infiltrate into the human respiratory system).



The common measures of particulate matter that are considered in the assessment of air quality and health risks are:

- Total Suspended Particulates (TSP): This refers to all particulates with an equivalent aerodynamic particle<sup>5</sup> size below 50 µm in diameter<sup>6</sup>. It is a gross indicator of the presence of dust with a wide range of sizes. The larger particles included in TSP (termed "inspirable", comprise particles around 10 µm and larger) are more of a nuisance as they will deposit out of the air (measured as deposited dust) close to the source and, if inhaled, are mostly trapped in the upper respiratory tract<sup>7</sup> and do not reach the lungs, hence, there is no potential for adverse health effects. Finer particles included in TSP (smaller than 10 µm, termed "respirable", as described below) tend to be transported further from the source and are of more concern with respect to human health as these particles can penetrate into the lungs. Not all of the dust characterised as TSP is relevant for the assessment of health impacts, and hence TSP as a measure of dust impact in the community, is difficult to directly include in this assessment. TSP can be used as a measure of dust that may give rise to nuisance impacts close to the source, where the heavier particles readily deposit out of the air causing dust to deposit onto surfaces (including vegetation and within homes). The deposition of dust is more often directly measured using dust deposition gauges. However, these data relate to an assessment of nuisance effects only. The assessment of potential health impacts relates to particles of a size where significant associations have been identified between exposure and adverse health effects.
- PM<sub>10</sub>, particulate matter below 10 μm in diameter, PM<sub>2.5</sub>, particulate matter below 2.5 μm in diameter, PM<sub>1</sub>, particulate matter below 1 μm in diameter and PM<sub>0.1</sub>, particulate matter below 0.1 μm in diameter (PM<sub>1</sub> and PM<sub>0.1</sub> are termed ultrafine particles): These particles are small and have the potential to penetrate beyond the body's natural filter mechanisms of cilia and mucous in the nose and upper respiratory system, with the smaller particles able to further penetrate into the lower respiratory tract<sup>8</sup> and lungs. Once in the lungs, adverse health effects may occur that include mortality and morbidity, which may be associated with a range of adverse cardiovascular and respiratory effects (OEHHA 2002)<sup>9</sup>.

**Figure 5.1** provides a general illustration to provide some context in relation to the size of different particles (discussed above) and relevance/importance for the assessment of inhalation exposures.

<sup>&</sup>lt;sup>5</sup> The term equivalent aerodynamic particle is used to reference the particle to a particle of spherical shape and density 1 gram per cubic centimetre (g/cm<sup>3</sup>).

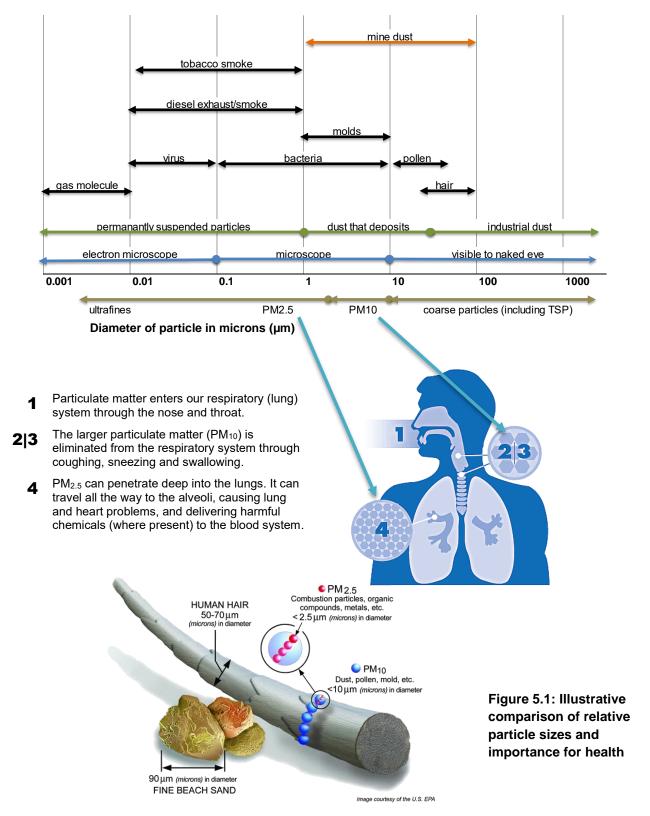
<sup>&</sup>lt;sup>6</sup> The size, diameter, of dust particles is measured in micrometres.

<sup>&</sup>lt;sup>7</sup> The upper respiratory tract comprises the mouth, nose, throat and trachea. Larger particles are mostly trapped by the cilia and mucosa and swept to the back of the throat and swallowed.

<sup>&</sup>lt;sup>8</sup> The lower respiratory tract comprises the smaller bronchioles and alveoli, the area of the lungs where gaseous exchange takes place. The alveoli have a very large surface area and absorption of gases occurs rapidly with subsequent transport to the blood and the rest of the body. Small particles can reach these areas, be dissolved by fluids and absorbed.

<sup>&</sup>lt;sup>9</sup> OEHHA – Office of Environmental Health Hazard Assessment.







It is well accepted nationally and internationally that monitoring for PM<sub>10</sub> is a good method of determining the community's exposure to potentially harmful dust (regardless of the source) and is most commonly measured in local and regional air quality monitoring programs. Reliable methods for the monitoring of PM<sub>10</sub> concentrations have been available for a long time and hence these data are most widely available in urban and rural areas.

Smaller particles such as  $PM_{2.5}$ , however, are seen as more significant with respect to evaluating health effects, as a higher proportion of these particles penetrate into the lungs. Very fine particles, specifically ultrafine particles ( $PM_1$  or  $PM_{0.1}$ ), are also considered to be of importance for the assessment of health effects as these particles penetrate the deepest into the respiratory system.

#### 5.3 Summary of air modelling

#### 5.3.1 Existing air quality

The main sources of particulate matter in the area surrounding the Project include active mining, agriculture, and emissions from local anthropogenic activities such as motor vehicle exhaust, domestic wood heaters, urban activity and various other commercial and industrial activities which include power generation associated with the Liddell, Bayswater and Redbank power stations.

Data in relation to the existing air quality has been evaluated based on data from 39 stations that encompass the Project area, surrounding mining operations air quality monitoring networks as well as the Upper Hunter Air Quality Monitoring Network.

Data from these monitoring stations indicate the following:

#### In relation to dust:

- Reported dust deposition levels are generally below the relevant guideline at all locations off the Project site. Higher levels, including levels that exceed the relevant guideline, have been reported on the Project site with the highest levels closest to mining activity.
- TSP monitoring, which includes all the large particulates which cannot be inhaled, reports levels below the relevant criteria.
- O PM<sub>10</sub> data shows similar variability and likely influences as per TSP. The PM<sub>10</sub> data in the local area has some exceedances of the relevant 24-hour average guidelines. In general, the annual average concentration is below the relevant guideline, however dust levels in 2018 and 2019 were higher (and exceeded the guideline) due to a combination of the intensifying drought conditions and severe bushfire season. The contribution of mining-related emissions to PM<sub>10</sub> concentrations in areas surrounding the Project is variable, with the Mount Pleasant Operation and other mines contributing the least in areas to the north of the Project, and more (but around 1/3 total emissions) to the east and south-east.
- o PM<sub>2.5</sub> data for monitoring stations near the Project show a clear diurnal (i.e. higher at night) and seasonal (i.e. higher in winter) trends, likely associated with the use of domestic wood heaters. This seasonal variability is less obvious closer to the Project site (i.e. away from the urban areas where significant numbers of wood heaters are used). PM<sub>2.5</sub> concentrations are reported in Muswellbrook in excess of the relevant guidelines over a 24-hour averaging period and annual average.



#### 5.3.2 Modelling impacts from the Project

Modelling of air quality impacts requires consideration of the local area, specifically the local terrain and meteorological conditions, as well as emissions to air from the various activities relevant to the Project.

The local meteorological conditions have been evaluated on the basis of data collected from the Mount Pleasant Operation, along with data from seven other local and regional meteorological stations. The influence of the local terrain of the Project areas and surrounding environments on meteorological conditions have also been taken into account.

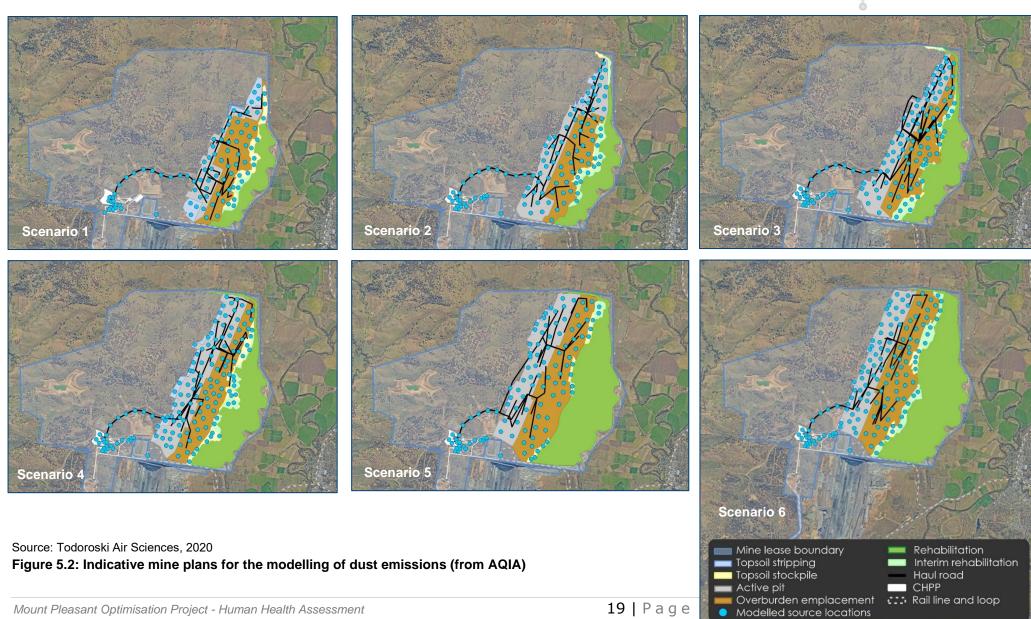
Dust emissions from the Project have been estimated on the basis of emission factors for all the relevant activities, volumes to be handled and equipment proposed to be used. The emission factors have been locally developed and also derived from the USEPA.

Mining operations would consist of a drill-and-blast, truck-and-shovel operation to remove overburden material and extract the coal resources. Dragline operations may also be implemented, consistent with the approved Mount Pleasant Operation, subject to further feasibility studies. Mining activity is currently at its closest to Muswellbrook and would continue its progression to the north and west, away from Muswellbrook. The ROM coal mining rate would increase as mining progresses west. Overburden emplacement would typically occur behind the progression of the mine extraction with rehabilitation of emplacement areas progressing as they are completed. The active mining areas and exposed areas are to be kept to a minimum for the efficiency of the operation and to minimise visual impacts. This also has a positive effect in minimising the potential amount of dust levels generated from the operations.

Modelling was undertaken using CALPUFF for six scenarios which represent the potential worst-case impacts in consideration of the quantities of material extracted and handled and the location of activities relative to the community (refer to **Figure 5.2** for these scenarios):

- Scenario 1 (nominally 2026) this scenario represents Project mining activity occurring closest to Muswellbrook, with a ROM coal extraction rate of 10.5 Mtpa as per the approved operations.
- Scenario 2 (nominally 2028) the ROM coal extraction rate has increased to a rate of 15.75 Mtpa for the Project. The Stage 2a CHPP is operational in this scenario to process the additional ROM coal.
- Scenario 3 (nominally 2031) the Project has reached the full extent to the north for the Project with ROM coal extracted at a rate of 15.75 Mtpa.
- Scenario 4 (nominally 2034) the ROM coal extraction rate reaches the peak of 21 Mtpa for the Project.
- Scenario 5 (nominally 2041) the mining activity (amount of waste rock material handled) reaches a peak for the life of Project.
- Scenario 6 (nominally 2044) the mining activity for the Project is at a peak for the western extent for the Project. Following this period, mining activity progressively decreases as it continues to progress west.







The modelling has also considered emissions to air from other nearby approved and proposed mining operations (Bengalla Mine, Mt Arthur Coal Mine, Mangoola Coal, Maxwell Underground Project, Muswellbrook Coal Mine and Dartbrook Mine), and background (i.e. non-modelled) dust levels. It has been conservatively assumed that all these other mines, and the Project, would operate at the same time.

The modelling of dust emissions has also considered the implementation of mitigation measures that would be adopted for the Project, including the continued use of water for dust suppression for a range of activities and on unsealed haul roads and conveyors, and minimising fall heights for materials. These measures have been incorporated into the modelling. In addition to these measures, reactive dust mitigation strategies and management measures would continue to be implemented, along with a predictive system to forecast conditions where the potential for dust generation is high (and where proactive operational adjustments can be made).

Impacts related to the Project have been evaluated at a number of receptors, representing privately-owned and mine-owned properties as shown in **Figure 2-2**.

#### 5.4 Assessment of health impacts – particulates

#### 5.4.1 Health effects

Evaluation of size alone as a single factor in determining the potential for particulate toxicity is difficult since the potential health effects are not independent of chemical composition. There are certain particle size fractions that tend to contain certain chemical components, such as metals or other organic compounds.

There is strong evidence to conclude (USEPA 2012; WHO 2003, 2013) that fine particles ( $<2.5~\mu m$ , PM<sub>2.5</sub>) are more hazardous than larger ones (coarse particles), primarily on the basis of studies conducted in urban air environments where there is a higher proportion (as a percentage of all particulates) of fine particles and other gaseous pollutants present from fuel combustion sources, as compared to particles derived from crustal origins. It should be noted that recent detailed review of the available studies in relation to the health effects of particulates (Hime, Marks & Cowie 2018) concluded that, while there is some evidence that particulate matter from traffic and coal-fired power station emissions may elicit greater health effects compared to particulate matter from other sources (diesel exhaust, domestic wood combustion heaters and crustal materials), overall the evidence to date does not indicate a clear 'hierarchy' of harmfulness for particulate matter from different emission sources. Hime et al (2018) identified that making such conclusions is limited by studies, many of which are not comparable. For this assessment, the health effects of exposure to particulate matter has been evaluated as being the same from all sources.



When undertaking any quantitative assessment of health impacts, it is important that the assessment considers health effects where there is sufficient evidence to demonstrate a causal link between exposure to particulates and the health outcome identified. There are numerous studies where statistical associations have been identified. Association does not mean causation; hence it is important that robust reviews are considered where the strength of the available data is fully evaluated and only health effects where there is strong causal evidence is evaluated. Such robust reviews are undertaken by key organisations such as the USEPA, WHO and Australian authorities (as noted below). Assessing health impacts based on associations only (not causation) would be misleading and inappropriate.

A significant amount of research, primarily from large epidemiology studies, has been conducted on the health effects of particulates with causal effects relationships identified for exposure to PM<sub>2.5</sub> (acting alone or in conjunction with other pollutants) (USEPA 2012, 2019). A more limited body of evidence suggests an association between exposure to larger particles, PM<sub>10</sub> and adverse health effects (USEPA 2009, 2019; WHO 2003).

Adverse health effects associated with exposure to particulate matter have been well studied and reviewed by Australian and International agencies. Most of the studies and reviews have focused on population-based epidemiological studies in large urban areas in North America, Europe and Australia, where there have been clear associations determined between health effects and exposure to PM<sub>2.5</sub> and, to a lesser extent, PM<sub>10</sub>. These studies are complemented by findings from other key investigations conducted in relation to the characteristics of inhaled particles; deposition and clearance of particles in the respiratory tract; animal and cellular toxicity studies; and studies on inhalation toxicity by human volunteers (NEPC 2010).

Particulate matter has been strongly linked to adverse health effects after both short term exposure (days to weeks) and long term exposure (months to years). The health effects vary widely (with the respiratory and cardiovascular systems most affected) and include mortality and morbidity effects.

In relation to mortality, for short term exposures in a population, this relates to the increase in the number of deaths due to pre-existing (underlying) respiratory or cardiovascular disease. For long term exposures in a population, this relates to mortality rates over a lifetime (i.e. shortening the lifespan), where long term exposure is considered to accelerate the progression of disease or even initiate disease.

In relation to morbidity effects, this refers to a wide range of health indicators used to define illness that have been associated with (or caused by) exposure to particulate matter. In relation to exposure to particulate matter, effects are primarily related to the respiratory and cardiovascular system and include (Morawska, Moore & Ristovski 2004; USEPA 2009, 2019):

- Aggravation of existing respiratory and cardiovascular disease (as indicated by increased hospital admissions and emergency room visits).
- Changes in cardiovascular risk factors such as blood pressure.
- Changes in lung function and increased respiratory symptoms (including asthma).
- Changes to lung tissues and structure.
- Altered respiratory defence mechanisms.



These effects are commonly used as measures of population exposure to particulate matter in community epidemiological studies (from which most of the available data in relation to health effects is derived) and are more often grouped (through the use of hospital codes) into the general categories of cardiovascular morbidity/effects and respiratory morbidity/effects. The available studies provide evidence for increased susceptibility for various populations, particularly older populations, children and those with underlying health conditions (USEPA 2009, 2019).

There is consensus in the available studies and detailed reviews that exposure to fine particulates,  $PM_{2.5}$ , is associated with, and causal to, cardiovascular and respiratory effects and mortality (all causes) (USEPA 2012). Similar relationships have also been determined for  $PM_{10}$ , however, the supporting studies do not show causal relationships as clear as those shown with  $PM_{2.5}$  (USEPA 2012).

There are a number of studies that have been undertaken where other health effects have been evaluated. These studies have a large degree of uncertainty or a limited examination of the relationship and are generally only considered to be suggestive or inadequate (in some cases) of an association with exposure to PM<sub>2.5</sub> (USEPA 2018). A causal relationship has not been established for these health effects. This includes long term exposures and metabolic effects, male and female reproduction and fertility, pregnancy and birth outcomes; and short term exposures and nervous system effects (USEPA 2018).

In relation to the key health endpoints relevant to evaluating exposures to PM<sub>2.5</sub>, there are some associated health measures or endpoints where the exposure-response relationships are not as strong or robust as those for the key health endpoints and are considered to be a subset of the key health endpoints. This includes mortality (for different age groups), chronic bronchitis, medication use by adults and children with asthma, respiratory symptoms (including cough), restricted work days, work days lost, school absence and restricted activity days (Anderson et al. 2004; EC 2011; Ostro 2004; WHO 2006). While these relationships/associations have identified exposure-response relationships, these relationships are not as strong or as robust as those discussed above and use of these in quantitative assessments is problematic. In addition, the baseline population health data is not available for theses health endpoints, limiting the ability of any assessment to utilise these relationships.

#### 5.4.2 Assessment of cumulative exposures to particulates

The assessment of cumulative exposures to  $PM_{2.5}$  and  $PM_{10}$  is based on a comparison of the predicted cumulative concentrations to the current air quality standards and goals presented in the NEPM (NEPC 2016).

In relation to the current NEPM PM<sub>10</sub> standard, the following is noted (NEPC 1998, 2010, 2014, 2016):

- The standard was derived through a review of appropriate health studies by a technical review panel of the NEPC where short term exposure-response relationships for PM₁₀ and mortality and morbidity health endpoints were considered.
- Mortality health impacts were identified as the most significant and were the primary basis for the development of the standard.



- On the basis of the available data for key air sheds in Australia, the criterion of 50 micrograms per cubic metre (μg/m³) was based on analysis of the number of premature deaths that would be avoided and associated cost savings to the health system (using data from the US). The development of the standard is not based on any acceptable level of risk and hence simply meeting the standard does not cover all aspects that need to be considered in terms of health impacts.
- The assessment undertaken considered exposures and issues relevant to urban air environments that are expected to also be managed through the PM<sub>10</sub> standard. These issues included emissions from vehicles and wood heaters.

A similar approach has been adopted by NEPC (Burgers & Walsh 2002; NEPC 2002, 2014) in relation to the derivation of the  $PM_{2.5}$  air quality standards, with specific studies related to  $PM_{2.5}$  and mortality and morbidity indicators considered. Goals for lower  $PM_{2.5}$  standards to be met by 2025 are also outlined by NEPC (NEPC 2016).

**Table 5.1** presents a comparison of the current NEPC standards and goals with those established by the WHO (WHO 2005), the European Union (EU) (2015) and the USEPA (2012). The 2025 goals established by the NEPM for  $PM_{2.5}$  (and adopted in this assessment) are similar to, but slightly more conservative (health protective) than, those provided by the WHO, EU and the USEPA. The NEPM  $PM_{10}$  guidelines are also similar to those established by the WHO and EU, however the 24-hour average guideline is significantly lower than the 24-hour average guideline of the USEPA.

Table 5.1: Comparison of particulate matter air quality goals

Pollutant	Averaging	Criteria/guidelines/goals				
	period	NEPC	WHO (2005)*	EU#	USEPA (2012)	
PM <sub>10</sub>	24-hour	50 μg/m <sup>3</sup>	50 μg/m <sup>3</sup>	50 µg/m³ as limit value to be met, with 35 exceedances permitted each year	150 µg/m³ (not to be exceeded more than once per year on average over 3 years)	
	Annual	25 μg/m <sup>3</sup>	20* μg/m <sup>3</sup>	40 μg/m³ as limit value to be met	NA	
PM <sub>2.5</sub>	24-hour	25 µg/m <sup>3</sup> 20 µg/m <sup>3</sup> (goal for 2025)	25 μg/m <sup>3</sup>	NA	35 µg/m³ (98th percentile, averaged over 3 years)	
	Annual	8 μg/m <sup>3</sup> 7 μg/m <sup>3</sup> (goal for 2025)	10* μg/m <sup>3</sup>	25 μg/m³ as target value to be met from 2010 and limit value to be met from 2015  20 μg/m³ as a 3-year average (average exposure indicator) from 2015 with requirements for ongoing percentage reduction and target of 18 μg/m³ as 3-year average to be attained by 2020	12 µg/m³ (annual mean averaged over 3 years)	

<sup>#</sup> Current EU Air Quality Standards (EU 2015) available from http://ec.europa.eu/environment/air/quality/standards.htm

<sup>\*</sup> The WHO Air Quality guidelines are based on the lowest levels at which total, cardiopulmonary and lung cancer mortality have been shown to increase with more than 95% confidence in response to PM<sub>2.5</sub> in the American Cancer Society study (Pope et al. 2002). The use of a PM<sub>2.5</sub> guideline is preferred by the WHO (WHO 2005).



The air quality standards and goals for PM<sub>2.5</sub> and PM<sub>10</sub> relate to total concentrations in the air (from all sources including the Project). This has been modelled and evaluated in detail within the AQIA. The AQIA also included a contemporaneous assessment of PM<sub>2.5</sub> and PM<sub>10</sub> impacts, as well as the inclusion of proactive/reactive mitigation measures (over and above the mitigation measures already incorporated into the modelling).

The modelling undertaken identified that total dust impacts, which exceed the adopted standards for PM<sub>2.5</sub> and PM<sub>10</sub>, may occur at a number of off-site privately-owned locations surrounding the Project.

In relation to annual average concentrations, exceedances were predicted at four receptors (on three properties), with the Project estimated to contribute approximately 1% to 2% to the predicted cumulative levels at these locations. Given the predicted exceedances would occur with or without the Project at each receptor, it is considered the Project would not contribute to an exceedance of the relevant cumulative criteria at any of the receptors.

Cumulative 24-hour average PM<sub>2.5</sub> and PM<sub>10</sub> levels exceeding the NEPM standards were predicted to occur in the surrounding environment in the absence of the implementation of reactive measures. With the application of a reactive dust mitigation strategy and incorporation of real-time/ predicted management systems, no privately-owned receptors are predicted to exceed the cumulative 24-hour average PM<sub>10</sub> criterion and five privately-owned receptors are predicted to experience exceedances (on one additional day in one or two modelled scenarios) of the cumulative 24-hour average PM<sub>2.5</sub> criterion. It is noted that the five receptors, namely Receptors 112, 118, 120, 120c and 121, currently have acquisition upon request rights in Development Consent DA 92/97 for potential noise impacts.

The AQIA also considered impacts from the Project alone, where additional exceedances of adopted criteria were identified. Overall, the AQIA identified 13 receptors (receptors 112, 118, 120, 120c, 121, 143b, 147, 153a, 154, 154b, 156a, 157a and 159) and one land parcel (parcel 143e) would be afforded acquisition upon request rights for potential air quality impacts. Of these, only receptors 154 and 154b do not currently have acquisition upon request rights in Development Consent DA 92/97 (note, however, receiver 154 has mitigation upon request rights for potential noise impacts).

Assessment of potential dust impacts from the movement of coal trains presented in the AQIA concluded that the potential for any adverse air quality impacts associated with coal dust generated during rail transport would be low and would not make any appreciable difference to air quality.

The AQIA also addressed potential emissions related to blasting, specifically nitrogen dioxide in fumes or dust from blasting. The modelling undertaken did not identify any impacts during the middle of the day, however potential impacts were identified in the late afternoon (i.e. after 3pm). The timing of blasting, in combination with meteorological conditions, can address these impacts, with a Trigger Action Response Plan recommended to address blast management.



#### 5.4.3 Assessing incremental impacts associated with particulates

In relation to the assessment of exposures to particulate matter, there is sufficient evidence to demonstrate that there is causal link between exposure to  $PM_{2.5}$  (and, to a lesser extent,  $PM_{10}$ ) and particular health effects. These health effects relate to exposures to  $PM_{2.5}$  (or  $PM_{10}$ ) alone (i.e. without co-exposures).

The available evidence does not suggest that there is a threshold below which health effects do not occur. Hence there are likely to be health effects associated with background levels of PM<sub>2.5</sub> and PM<sub>10</sub>, even where the concentrations are below the current guidelines. Guidelines are currently available for the assessment of PM<sub>2.5</sub> and PM<sub>10</sub> in Australia (NEPC 1998 amended 2016, 2002, 2016). These guidelines are not based on any acceptable level of risk, rather they are based on levels that are desirable in the community to balance background/urban sources with lowering impacts on health and cost savings in the health system.

A detailed assessment of potential health effects associated with exposure to a specific source, or a change in air quality as a result of a specific source, has been undertaken. The assessment of impacts on health has utilised robust, published, quantitative relationships (exposure-response relationships) that correlate a change in PM<sub>2.5</sub> or PM<sub>10</sub> concentration with a change in a health indicator (i.e. causal relationships only). **Appendix A** presents an overview of the methodology adopted for using exposure-response relationships for the assessment of health impacts in a community.

This report presents an assessment of changes in individual risk associated with predicted changes in air quality, as well as changes in population health impacts (as would be measured by changes in mortality statistics or hospital admissions) related to changes in exposures to particulates in the surrounding community.

The specific/key health effects (or endpoints) evaluated in this assessment (based on strong causal relationships) have been identified and include the following<sup>10</sup>:

- Long term exposure to PM<sub>2.5</sub> and PM<sub>10</sub> and changes in all-cause mortality. This effect relates to exposures that may occur over all ages, however the most robust quantitative study used to calculate health risks and impacts relates to people aged 30 years and older.
- Short term exposure and changes to the rate of hospitalisations with cardiovascular and respiratory disease (equal or greater than 65 years of age). These effects have also been reported in other age groups, however the relationships between PM<sub>2.5</sub> and these effects are poor for younger age groups. The most robust relationships established are for people aged 65 years and older.

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<sup>&</sup>lt;sup>10</sup> Relationships identified following detailed evaluation of the available reviews and studies and discussions with NSW Health.



The above endpoints are robust (and causal) and generally relate to  $PM_{2.5}$ . Exposure-response relationships are not as robust for  $PM_{10}$ , however, an assessment of  $PM_{10}$  has also been included for the key health endpoint (all-cause mortality), as particulate emissions derived from coal mining activities also include a significant proportion of particulates that are classified as  $PM_{10}$  but not  $PM_{2.5}$ .

The above endpoints are considered to be primary health indicators addressing the most significant health risks/impacts. Other effects and indicators reported in the literature are subsets of these and as a result have not been specifically presented. Notwithstanding, it is noted that in any community, asthma in children is typically of key concern and hence the following additional endpoint has also been considered:

Short term exposure to PM<sub>2.5</sub> and changes in emergency department admissions for asthma in children aged 1–14 years. These effects have also been reported in other age groups. However, it should be noted that the relationships between exposure to PM<sub>2.5</sub> and asthma effects are not as strong or robust for adults. The impact of air pollution on asthma has been the subject of a review by the Australian Institute of Health and Welfare (AIHW) (AIHW 2010). This review makes it clear there are multiple contributors to the exacerbation of asthma in any individual (including respiratory infections, weather, seasonal allergens, indoor allergens, household chemicals, dietary factors and presence of smoking) so that isolating any one single factor is very difficult. Regardless of these many other factors, the presence of air pollution and its impacts on children with asthma are a common key concern in communities.

**Table 5.2** presents a summary of the health endpoints considered in this assessment, the relevant health impact functions (from the referenced published studies) and the associated  $\beta$  coefficient relevant to the calculation of the relative risk (refer to **Appendix A** for details on the calculation of a  $\beta$  coefficient from published studies).

The health impact functions presented in this table are considered to be the most current and robust values and are appropriate for the quantification of potential health effects for the health endpoints considered in this assessment.

It should be noted that the approach adopted for assessing health impacts associated with  $PM_{2.5}$  and  $PM_{10}$  relates to  $PM_{2.5}$  and  $PM_{10}$  from any source. All sources of  $PM_{2.5}$  and  $PM_{10}$  have the potential to impact on the health of individuals and the community. In rural and urban areas these sources include wood smoke, industrial emissions, vehicle emissions and sea salt. For example, Upper Hunter Valley Particle Characterisation Study (Hibberd et al. 2013) identified woodsmoke as the largest contributor to annual  $PM_{2.5}$  at 30% in Muswellbrook, with the contribution of woodsmoke to  $PM_{2.5}$  increasing to 62% in winter.



Table 5.2: Adopted health impact functions and exposure-responses relationships - PM<sub>2.5</sub> and PM<sub>10</sub>

Health endpoint	Exposure period	Age group	Published relative risk [95 confidence interval] per 10 μg/m <sup>3</sup>	Adopted β coefficient (as per cent) for 1 μg/m³ increase in PM	Reference
PM <sub>2.5</sub> : Mortality, all causes	Long term	≥30 years	1.06 [1.04-1.08]	0.0058 (0.58)	Relationship derived for all follow-up time periods to the year 2000 (for approx. 500,000 participants in the US) with adjustment for seven ecologic (neighbourhood level) covariates (Krewski et al. 2009). This study is an extension (additional follow-up and exposure data) of the work undertaken by Pope et al. (Pope et al. 2002), is consistent with the findings from California (1999–2002) (Ostro et al. 2006) and is more conservative than the relationships identified in a more recent Australian and New Zealand study (EPHC 2010) <sup>11</sup>
PM <sub>10</sub> : Mortality, all causes	Short term	All ages	1.006 [1.004-1.008]	0.0006 (0.06)	Based on analysis of data from European studies from 33 cities and includes panel studies of symptomatic children (asthmatics, chronic respiratory conditions) (Anderson et al. 2004)
PM <sub>2.5</sub> : Cardiovascular hospital admissions	Short term	≥65 years	1.008 [1.0059–1.011]	0.0008 (0.08)	Relationship established for all data and all seasons from US data for 1999 to 2005 for lag 0 (exposure on same day) (strongest effect identified) (Bell 2012; Bell et al. 2008)
PM <sub>2.5</sub> : Respiratory hospital admissions	Short term	≥65 years	1.0041 [1.0009–1.0074]	0.00041 (0.041)	Relationship established for all data and all seasons from US data for 1999 to 2005 for lag 2 (exposure 2 days previous) (strongest effect identified) (Bell 2012; Bell et al. 2008)
PM <sub>2.5</sub> : Asthma (emergency department admissions)	Short term	1–14 years	_	0.00148 (0.148)	Relationship established from review conducted on Australian children (Sydney) for the period 1997 to 2001 (Jalaludin et al. 2008)

The assessment of health impacts for a population associated with exposure to particulate matter has been undertaken utilising the methodology presented by the WHO (Ostro 2004) (also outlined in **Appendix A**) where the exposure-response relationships (presented in **Table 5.2**) have been directly considered.

<sup>&</sup>lt;sup>11</sup> EPHC – Environmental Protection and Heritage Council.



A change in relative risk has then been calculated on the basis of the following:

- Estimates of the changes in PM<sub>2.5</sub> and PM<sub>10</sub> exposure levels or concentrations due to emissions from the Project.
- Baseline incidence of the key health endpoints that are relevant to the population exposed. This is specific to populations in the Upper Hunter Valley.
- Exposure-response relationships expressed as a percentage change in health endpoint per micrograms per cubic metre change in particulate matter exposure (see **Table 5.2**).

The change in incidence of each health endpoint relevant to changes in population exposure to  $PM_{2.5}$  and  $PM_{10}$  has been calculated on the following basis:

- The average change in PM<sub>2.5</sub> and PM<sub>10</sub> concentration over all residential receptors (privately-owned, mine-owned and prison receptors) has been determined.
- A change in the number of cases associated with the change in PM<sub>2.5</sub> and PM<sub>10</sub> impact evaluated in the population within the study area has been calculated (refer to **Appendix A** for details on the methodology). The calculation is undertaken utilising the baseline incidence data relevant for the endpoint considered and the population (for the relevant age groups) present in the area assuming each receptor has the average persons per household relevant to the LGAs evaluated. For this assessment data for Muswellbrook LGA has been adopted as most of the population assessed is located within this LGA, and the remaining population is in close vicinity where the population profile is expected to be similar.

Based on the above modelling and assumptions, health impacts associated with the Project for all six scenarios have been evaluated.

**Table 5.3** presents a summary of the calculated impact of exposure to PM<sub>2.5</sub> and PM<sub>10</sub> from the Project for the scenarios considered. The calculated incremental risks presented relate to the maximum risk for all receptors where buildings may be inhabited for work or residential occupation. It is noted that there are a number of heritage receptors present in the area surrounding the Project. Where these buildings are not inhabited, they have not been included in this evaluation. Calculations of incremental risk for each individual receptor are included in **Appendix B**.

The incremental risk relates to the maximum individual risk within the community or area evaluated and does not consider the size of the population. The calculated population incidence reflects the increased risks for all members of the population in terms of the number of cases.

Assessment of what constitutes an acceptable risk level (as an individual risk for members of the community) for changes in exposure to PM<sub>2.5</sub> and PM<sub>10</sub> within a community is a complex issue. For new and expanding developments in NSW, NSW EPA (NSW EPA 2016) states that the following should be considered in relation to carcinogenic risks, which is inferred to also apply to other non-threshold risks:

- Unacceptable risks are  $\ge 1 \times 10^{-4}$ , or 1 in 10,000 and where risk management measures are required to be implemented.
- Acceptable risks are in the range <1x10<sup>-4</sup> (1 in 10,000) and >1x10<sup>-6</sup> (1 in 1,000,000) and where best practice is required.
- Negligible risks are  $\leq 1 \times 10^{-6}$  or 1 in 1,000,000.



Table 5.3: Population health impacts associated with exposure to PM<sub>2.5</sub> and PM<sub>10</sub>

Location	Population i	Population incidence (increase in number of cases in population per year)						
		ed incremental		• •				
		Р	M <sub>2.5</sub>		PM <sub>10</sub>			
	Mortality (all	Cardiovascular	Respiratory	Asthma ED	Mortality (all			
	causes, ≥30	hospitalisations	hospitalisations	admissions (1-	causes, all ages)			
	years)	(≥65 years)	(≥65 years)	14 years)				
Population incidence	- population in	study area						
Scenario 1	0.026	0.0087	0.0020	0.0069	0.016			
Scenario 2	0.032	0.011	0.0024	0.0084	0.019			
Scenario 3	0.031	0.010	0.0024	0.0081	0.020			
Scenario 4	0.039	0.013	0.0030	0.010	0.024			
Scenario 5	0.044	0.015	0.0034	0.012	0.026			
Scenario 6	0.036	0.012	0.0028	0.010	0.022			
Incremental risk - ma	aximum from all	receptors (exclud	ding mine-owned	and uninhabited	heritage			
receptors)								
Scenario 1	9 x 10 <sup>-5</sup>	1 x 10 <sup>-4</sup>	3 x 10 <sup>-5</sup>	3 x 10 <sup>-5</sup>	9 x 10 <sup>-9</sup>			
Scenario 2	1 x 10 <sup>-4</sup>	1 x 10 <sup>-4</sup>	3 x 10 <sup>-5</sup>	3 x 10 <sup>-5</sup>	1 x 10 <sup>-5</sup>			
Scenario 3	1 x 10 <sup>-4</sup>	1 x 10 <sup>-4</sup>	3 x 10 <sup>-5</sup>	3 x 10 <sup>-5</sup>	1 x 10 <sup>-5</sup>			
Scenario 4	2 x 10 <sup>-4</sup>	2 x 10 <sup>-4</sup>	5 x 10 <sup>-5</sup>	5 x 10 <sup>-5</sup>	2 x 10 <sup>-5</sup>			
Scenario 5	1 x 10 <sup>-4</sup>	2 x 10 <sup>-4</sup>	4 x 10 <sup>-5</sup>	4 x 10 <sup>-5</sup>	2 x 10 <sup>-5</sup>			
Scenario 6	1 x 10 <sup>-4</sup>	2 x 10 <sup>-4</sup>	4 x 10 <sup>-5</sup>	4 x 10 <sup>-5</sup>	1 x 10 <sup>-5</sup>			
Maximum ir	ndividual risks co	nsidered unaccepta	able					

Review of **Table 5.3** and **Appendix B** indicates the following:

- The calculated population health incidence values are very low and would never be measurable within the population surrounding the Project.
- For Project scenarios 1, 2 and 3, the maximum individual risk is  $\leq 1 \times 10^{-4}$  and would be considered to be low and acceptable.
- For Project scenarios 4, 5 and 6, the maximum individual risk for some health endpoints, specifically mortality all causes and cardiovascular hospitalisations (ages 65 and over) for exposure to PM<sub>2.5</sub> indicates the potential for elevated exposures at some receptor locations. Hence, further review of the calculated individual risks is required to better inform the assessment of health impacts.

**Table 5.4** presents further analysis of the maximum calculated risks relevant to the health endpoints where risks have been identified to be elevated, specifically mortality (all causes,  $\geq$ 30 years) and cardiovascular hospitalisations ( $\geq$ 65 years) from exposure to changes in PM<sub>2.5</sub> for different types of receptors in the off-site community.

**Table 5.5** presents a summary of the individual receptors where the calculated risks, related to increased levels of exposure to  $PM_{2.5}$ , are considered to be unacceptable.

It is noted that all the calculations presented in **Tables 5.3 to 5.5** relate to predicted impacts from the Project without the inclusion of proactive/reactive dust mitigation measures and are therefore conservative.



Table 5.4: Further review of incremental risks associated with exposure to PM<sub>2.5</sub> (in the absence of proactive/reactive dust mitigation measures)

Community	Maximum calc	Maximum calculated incremental risk – Mortality (all causes, ≥30 years)							
receptors	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6			
Private residences									
- Close to Project	9 x 10 <sup>-5</sup>	1 x 10 <sup>-4</sup>	1 x 10 <sup>-4</sup>	2 x 10 <sup>-4</sup>	1 x 10 <sup>-4</sup>	1 x 10 <sup>-4</sup>			
- Edge of	7 x 10 <sup>-5</sup>	8 x 10 <sup>-5</sup>	7 x 10 <sup>-5</sup>	9 x 10 <sup>-5</sup>	9 x 10 <sup>-5</sup>	8 x 10 <sup>-5</sup>			
Muswellbrook									
Aged care	3 x 10 <sup>-5</sup>	4 x 10 <sup>-5</sup>	4 x 10 <sup>-5</sup>	5 x 10 <sup>-5</sup>	6 x 10 <sup>-5</sup>	5 x 10 <sup>-5</sup>			
Schools	4 x 10 <sup>-5</sup>	4 x 10 <sup>-5</sup>	4 x 10 <sup>-5</sup>	5 x 10 <sup>-5</sup>	6 x 10 <sup>-5</sup>	5 x 10 <sup>-5</sup>			
Prison	2 x 10 <sup>-5</sup>	6 x 10 <sup>-6</sup>	6 x 10 <sup>-6</sup>	8 x 10 <sup>-6</sup>	9 x 10 <sup>-6</sup>	8 x 10 <sup>-6</sup>			
Commercial	4 x 10 <sup>-5</sup>	4 x 10 <sup>-5</sup>	4 x 10 <sup>-5</sup>	5 x 10 <sup>-5</sup>	6 x 10 <sup>-5</sup>	5 x 10 <sup>-5</sup>			
accommodation									
Commercial/	7 x 10 <sup>-5</sup>	8 x 10 <sup>-5</sup>	8 x 10 <sup>-5</sup>	8 x 10 <sup>-5</sup>	9 x 10 <sup>-5</sup>	7 x 10 <sup>-5</sup>			
industrial									
Church	4 x 10 <sup>-5</sup>	4 x 10 <sup>-5</sup>	4 x 10 <sup>-5</sup>	5 x 10 <sup>-5</sup>	6 x 10 <sup>-5</sup>	5 x 10 <sup>-5</sup>			
Community	Maximum calc								
Community	Maximum calc	Scenario 2	ental risk – Ca Scenario 3	Scenario 4	hospitalisatio Scenario 5	ns (≥65 years) Scenario 6			
Community receptors	Maximum calc	ulated increm	ental risk – Ca	rdiovascular	hospitalisatio	ns (≥65 years)			
Community receptors Private residences	Maximum calc Scenario 1	Scenario 2	ental risk – Ca Scenario 3	Scenario 4	hospitalisatio Scenario 5	ns (≥65 years) Scenario 6			
Community receptors Private residences - Close to Project	Maximum calc Scenario 1 1 x 10 <sup>-4</sup> 9 x 10 <sup>-5</sup>	Scenario 2	ental risk – Ca Scenario 3 1 x 10 <sup>-4</sup> 9 x 10 <sup>-5</sup>	Scenario 4  2 x 10 <sup>-4</sup> 1 x 10 <sup>-4</sup>	Scenario 5  2 x 10 <sup>-4</sup> 1 x 10 <sup>-4</sup>	ns (≥65 years) Scenario 6  2 x 10 <sup>-4</sup> 9 x 10 <sup>-5</sup>			
Community receptors Private residences - Close to Project - Edge of	Maximum calc Scenario 1 1 x 10 <sup>-4</sup>	Scenario 2	ental risk – Ca Scenario 3 1 x 10 <sup>-4</sup>	Scenario 4  2 x 10 <sup>-4</sup>	Scenario 5  2 x 10 <sup>-4</sup>	ns (≥65 years) Scenario 6  2 x 10 <sup>-4</sup>			
Community receptors Private residences - Close to Project - Edge of Muswellbrook	Maximum calc Scenario 1 1 x 10 <sup>-4</sup> 9 x 10 <sup>-5</sup> 4 x 10 <sup>-5</sup> NA	1 x 10 <sup>-4</sup> 1 x 10 <sup>-4</sup> 5 x 10 <sup>-5</sup> NA	1 x 10 <sup>-4</sup> 9 x 10 <sup>-5</sup> 5 x 10 <sup>-5</sup>	2 x 10 <sup>-4</sup> 1 x 10 <sup>-5</sup> NA	Scenario 5  2 x 10 <sup>-4</sup> 1 x 10 <sup>-4</sup> 7 x 10 <sup>-5</sup> NA	ns (≥65 years) Scenario 6  2 x 10 <sup>-4</sup> 9 x 10 <sup>-5</sup> 6 x 10 <sup>-5</sup> NA			
Community receptors Private residences - Close to Project - Edge of Muswellbrook Aged care	Maximum calc Scenario 1 1 x 10 <sup>-4</sup> 9 x 10 <sup>-5</sup> 4 x 10 <sup>-5</sup>	1 x 10 <sup>-4</sup> 1 x 10 <sup>-4</sup> 5 x 10 <sup>-5</sup>	1 x 10 <sup>-4</sup> 9 x 10 <sup>-5</sup> 5 x 10 <sup>-5</sup>	2 x 10 <sup>-4</sup> 1 x 10 <sup>-5</sup>	Scenario 5  2 x 10 <sup>-4</sup> 1 x 10 <sup>-4</sup> 7 x 10 <sup>-5</sup>	ns (≥65 years) Scenario 6  2 x 10 <sup>-4</sup> 9 x 10 <sup>-5</sup> 6 x 10 <sup>-5</sup> NA 1 x 10 <sup>-5</sup>			
Community receptors Private residences - Close to Project - Edge of Muswellbrook Aged care Schools	Maximum calc Scenario 1 1 x 10 <sup>-4</sup> 9 x 10 <sup>-5</sup> 4 x 10 <sup>-5</sup> NA	1 x 10 <sup>-4</sup> 1 x 10 <sup>-4</sup> 5 x 10 <sup>-5</sup> NA	1 x 10 <sup>-4</sup> 9 x 10 <sup>-5</sup> 5 x 10 <sup>-5</sup>	2 x 10 <sup>-4</sup> 1 x 10 <sup>-5</sup> NA	Scenario 5  2 x 10 <sup>-4</sup> 1 x 10 <sup>-4</sup> 7 x 10 <sup>-5</sup> NA	ns (≥65 years) Scenario 6  2 x 10 <sup>-4</sup> 9 x 10 <sup>-5</sup> 6 x 10 <sup>-5</sup> NA			
Community receptors Private residences - Close to Project - Edge of Muswellbrook Aged care Schools Prison	Maximum calc Scenario 1 1 x 10 <sup>-4</sup> 9 x 10 <sup>-5</sup> 4 x 10 <sup>-5</sup> NA 5 x 10 <sup>-6</sup> 5 x 10 <sup>-5</sup>	1 x 10 <sup>-4</sup> 1 x 10 <sup>-4</sup> 5 x 10 <sup>-5</sup> NA 7 x 10 <sup>-6</sup> 5 x 10 <sup>-5</sup>	9 x 10 <sup>-5</sup> 5 x 10 <sup>-6</sup> 5 x 10 <sup>-5</sup>	2 x 10 <sup>-4</sup> 1 x 10 <sup>-5</sup> NA 9 x 10 <sup>-6</sup> 6 x 10 <sup>-5</sup>	2 x 10 <sup>-4</sup> 1 x 10 <sup>-5</sup> NA 1 x 10 <sup>-5</sup> 7 x 10 <sup>-5</sup>	ns (≥65 years) Scenario 6  2 x 10 <sup>-4</sup> 9 x 10 <sup>-5</sup> 6 x 10 <sup>-5</sup> NA 1 x 10 <sup>-5</sup> 6 x 10 <sup>-5</sup>			
Community receptors Private residences - Close to Project - Edge of Muswellbrook Aged care Schools Prison Commercial	Maximum calc Scenario 1 1 x 10 <sup>-4</sup> 9 x 10 <sup>-5</sup> 4 x 10 <sup>-5</sup> NA 5 x 10 <sup>-6</sup>	1 x 10 <sup>-4</sup> 1 x 10 <sup>-4</sup> 5 x 10 <sup>-5</sup> NA 7 x 10 <sup>-6</sup>	9 x 10 <sup>-5</sup> 5 x 10 <sup>-6</sup> NA  7 x 10 <sup>-6</sup>	2 x 10 <sup>-4</sup> 1 x 10 <sup>-5</sup> NA 9 x 10 <sup>-6</sup>	2 x 10 <sup>-4</sup> 1 x 10 <sup>-5</sup> NA 1 x 10 <sup>-5</sup>	ns (≥65 years) Scenario 6  2 x 10 <sup>-4</sup> 9 x 10 <sup>-5</sup> 6 x 10 <sup>-5</sup> NA 1 x 10 <sup>-5</sup>			
Community receptors Private residences - Close to Project - Edge of Muswellbrook Aged care Schools Prison Commercial accommodation	Maximum calc Scenario 1 1 x 10 <sup>-4</sup> 9 x 10 <sup>-5</sup> 4 x 10 <sup>-5</sup> NA 5 x 10 <sup>-6</sup> 5 x 10 <sup>-5</sup>	1 x 10 <sup>-4</sup> 1 x 10 <sup>-4</sup> 5 x 10 <sup>-5</sup> NA 7 x 10 <sup>-6</sup> 5 x 10 <sup>-5</sup>	9 x 10 <sup>-5</sup> 5 x 10 <sup>-6</sup> 5 x 10 <sup>-5</sup>	2 x 10 <sup>-4</sup> 1 x 10 <sup>-5</sup> NA 9 x 10 <sup>-6</sup> 6 x 10 <sup>-5</sup>	2 x 10 <sup>-4</sup> 1 x 10 <sup>-5</sup> NA 1 x 10 <sup>-5</sup> 7 x 10 <sup>-5</sup>	ns (≥65 years) Scenario 6  2 x 10 <sup>-4</sup> 9 x 10 <sup>-5</sup> 6 x 10 <sup>-5</sup> NA 1 x 10 <sup>-5</sup> 6 x 10 <sup>-5</sup>			

Maximum individual risks considered elevated and potentially unacceptable

Table 5.5: Summary of receptors where elevated risks identified (in the absence of proactive/reactive dust mitigation measures)

Property	Properties	Properties where unacceptable health impacts identified							
type	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6			
Private	No	No	No	8 receptors	8 receptors	1 receptor			
residences	receptors	receptors	receptors	(112, 118, 120, 120c,	(108, 112, 118, 120,	(153a)			
	•			121, <b>154</b> , 154b, 156a)	120c, 121, 154, 154b)	` ′			

**Bold** = locations of maximum incremental risk for any private residence during all scenarios evaluated

In relation to the additional analysis presented in **Tables 5.4 and 5.5**, the following is of note:

#### Private residences:

- For private residences located on the edges of Muswellbrook, the calculated incremental risks are low and acceptable.
- o In some areas surrounding and close to the Project, there are a number of individual receptors where incremental risks associated with dust (PM<sub>2.5</sub>) impacts are elevated and considered potentially unacceptable in the absence of proactive/reactive dust mitigation measures.



The assessment as presented above is considered to be conservative as reactive/proactive dust mitigation measures have not been incorporated.

The AQIA has undertaken further analysis of dust impacts at selected receptors (which include the receptors noted in **Table 5.5**) with the implementation of proactive/reactive dust mitigation measures. Where these measures are implemented and the potential change in annual average PM<sub>2.5</sub> is considered, the calculated incremental risks would be lower.

**Table 5.6** presents a summary of the individual receptors where the calculated risks, related to increased levels of exposure to PM<sub>2.5</sub>, are considered to be unacceptable following the implementation of proactive/reactive mitigation as assessed in the AQIA.

Table 5.6: Summary of receptors where elevated risks identified (with the implementation of proactive/reactive dust mitigation measures)

Property	Properties where unacceptable health impacts identified								
type	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6			
Private	No receptors	No receptors	No receptors	2 receptors	3 receptors	1 receptor			
residences	-			( <b>154</b> , 154b)	(112, 154, 154b)	(153a)			

**Bold** = locations of maximum incremental risk for any private residence during all scenarios evaluated

In relation to the additional analysis presented in **Table 5.6**, the following is of note:

- The receptors where incremental risks have been identified as elevated and potentially unacceptable are a subset of those identified in the AQIA where there are exceedances of relevant air quality criteria (i.e. no additional health risks have been identified).
- It is noted that receptors 154 and 154b currently have mitigation upon request rights in Development Consent DA 92/97 for potential noise impacts, and receptors 112 and 153a currently have acquisition upon request rights in Development Consent DA 92/97 for potential noise impacts.

# 5.5 Uncertainties

It is considered that the assessment of health impacts in relation to changes in air quality, associated with the Project, is conservative. This is due to the incorporation of a number of conservative assumptions in the modelling of air quality impacts, particularly in relation to the assessment of cumulative impacts as the Project and surrounding mines are assumed to operate at the same time.

In addition, the assessment of potential health impacts has assumed that the off-site community remains at home (or on their property) all day, every day for a lifetime. This approach overestimates actual exposures where residents spend time away from the home, and the changes in air quality evaluated in this assessment remain the same for a lifetime.

As a result of the above, the risk calculations presented are considered to be conservative.



## 5.6 Outcomes of health risk assessment

**Table 5.7** presents a summary of the outcomes of the assessment undertaken in relation to the impacts of changes in air quality, associated with the Project, on community health.

Table 5.7: Summary of health risks - air quality

Air emission	ons
Impacts	Where all proposed dust mitigation measures are implemented including reactive/proactive dust mitigation measures, there are no risk issues of concern in relation to community exposure to PM <sub>2.5</sub> or PM <sub>10</sub> generated from the Project, with the exception of impacts that may occur at the following locations located close to the Project:  - Receptors 154 and 154b (Scenarios 4 and 5), which currently have mitigation upon request rights in Development Consent DA 92/97 for potential noise impacts;  - Receptor 112 (Scenario 5), which currently has acquisition upon request rights in Development Consent DA 92/97 for potential noise impacts; and  - Receptor 153a (Scenario 6), which currently has acquisition upon request rights in Development Consent DA 92/97 for potential noise impacts.
Mitigation	All mitigation measures as detailed in the AQIA, including reactive/proactive measures, as detailed in: - any Construction Management Plans prepared for specific Project construction activities, as relevant; - Mount Pleasant Operation Air Quality and Greenhouse Gas Management Plan; and - Mount Pleasant Operation Blast Management Plan.



# Section 6. Health impact assessment: Noise and Blasting

# 6.1 Background

This section presents a review and further assessment of impacts on health associated with noise, relevant to the Project. The assessment presented has relied on the information provided in the following report:

Wilkinson Murray Pty Limited (Wilkinson Murray), 2020. Mount Pleasant Optimisation Project, Noise and Blasting Assessment.

The noise impact assessment has considered impacts that may occur in the off-site community, with two Noise Assessment Groups (NAGs) defined, which include the private residences and other noise sensitive receptors within the community surrounding the Project. These NAGs and receptors are illustrated in **Figure 6.1**. It is noted that these receptors are generally consistent with those evaluated in the AQIA (refer to **Section 5**).

# 6.2 Health impacts associated with noise

Environmental noise has been identified (I-INCE 2011; WHO 2011, 2018)<sup>12</sup> as a growing concern because it has negative effects on quality of life and wellbeing and has the potential for causing harmful physiological health effects. With increasingly urbanised or developed societies, impacts of noise on communities have the potential to increase over time.

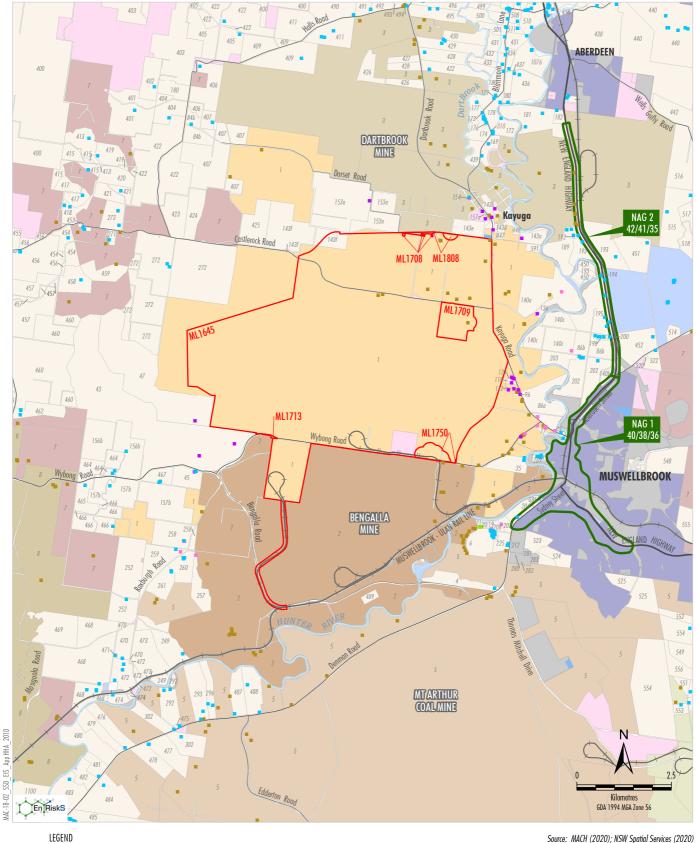
Sound is a natural phenomenon that only becomes noise when it has some undesirable effect on people or animals. Unlike chemical pollution, noise energy does not accumulate either in the body or in the environment, but it can have both short-term and long-term adverse effects on people. These health effects include (WHO 1999, 2011, 2018):

- Sleep disturbance (sleep fragmentation that can affect psychomotor performance, memory consolidation, creativity, promote risk-taking behaviour and increase risk of accidents).
- Annoyance.
- Cardiovascular health.
- Hearing impairment and tinnitus.
- Cognitive impairment (effects on reading and oral comprehension, short and long-term memory deficits, attention deficit).

Other effects for which evidence of health impacts exists, and are considered to be important, but for which the evidence is weaker, include:

- Effects on quality of life, well-being and mental health (usually in the form of exacerbation of existing issues for vulnerable populations rather than direct effects).
- Adverse birth outcomes (pre-term delivery, low birth weight and congenital abnormalities).
- Metabolic outcomes (type 2 diabetes and obesity).

<sup>&</sup>lt;sup>12</sup> I-INCE – International Institute of Noise Control Engineering.



Mining Lease Boundary (Mount Pleasant Operation) Mount Pleasant-controlled Bengalla-controlled Dartbrook-controlled Mangoola-controlled Muswellbrook Coal-controlled Mt Arthur-controlled Other Mining/Resource-controlled Crown The State of NSW Muswellbrook Shire Council Upper Hunter Shire Council Privately-owned Land Muswellbrook and Upper Hunter LEP Zones B2, B5, R1, R5

Muswellbrook and Upper Hunter LEP Zones IN1, SP2, RE1, RE2, W1

Category of Rural Residence under DA92/97

Mine-owned

40/38/36

Privately-owned - Acquisition on Request

Privately-owned - Mitigation on Request

Privately-owned - Mitigation/Acquisition on Request\*

Other Privately-owned

Noise Assessment Group (NAG)

Default NAG Noise Criteria for Day/Evening/Night

 $^{\star}$  Mitigation on Request - rail noise/Aquisition on Request - air quality. MACH is only required to acquire and/or install air quality mitigation measures at this property if not reasonably achievable under a separate approval for the Bengalla Mine.

Source: MACH (2020); NSW Spatial Services (2020)

# **MACHEnergy**

MOUNT PLEASANT OPTIMISATION PROJECT

**Relevant Noise Sensitive Receivers** and Project Noise Assessment Groups

Figure 6.1



Within a community the severity of the health effects of exposure to noise and the number of people who may be affected are schematically illustrated in **Figure 6.2**.

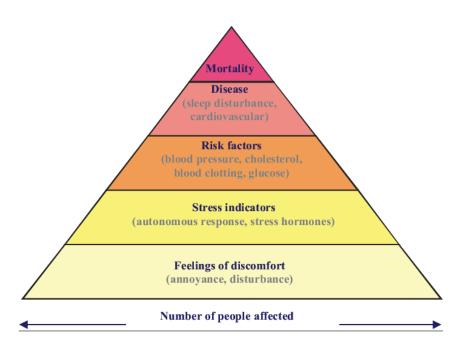


Figure 6.2: Schematic of severity of health effects of exposure to noise and the number of people affected (WHO 2011)

Often, annoyance is the major consideration because it reflects the community's dislike of noise and their concerns about the full range of potential negative effects, and it affects the greatest number of people in the population (I-INCE 2011; WHO 2011, 2018).

There are many possible reasons for noise annoyance in different situations. Noise can interfere with speech communication or other desired activities. Noise can contribute to sleep disturbance, which has the potential to lead to other long-term health effects. Sometimes noise is just perceived as being inappropriate in a particular setting without there being any objectively measurable effect at all. In this respect, the context in which sound becomes noise can be more important than the sound level itself (I-INCE 2011; WHO 2011, 2018).

Different individuals have different sensitivities to types of noise and this reflects differences in expectations and attitudes more than it reflects any differences in underlying auditory physiology. A noise level that is perceived as reasonable by one person in one context (e.g. in their kitchen when preparing a meal) may be considered completely unacceptable by that same person in another context (e.g. in their bedroom when they are trying to sleep). In this case the annoyance relates, in part, to the intrusion from the noise. Similarly, a noise level considered to be completely unacceptable by one person, may be of little consequence to another even if they are in the same room. In this case, the annoyance depends almost entirely on the personal preferences, lifestyles and attitudes of the listeners concerned (I-INCE 2011; WHO 2011, 2018).



Perceptible vibration (e.g. from construction activities) also has the potential to cause annoyance or sleep disturbance and adverse health outcomes in the same way as airborne noise. However, the health evidence available relates to occupational exposures or the use of vibration in medical treatments. No data is available to evaluate health effects associated with community exposures to perceptible vibrations (I-INCE 2011; WHO 2011, 2018).

It is against this background that an assessment of potential noise impacts of the Project on health was undertaken.

In relation to the available noise guidelines, the most recent review of noise by the WHO (WHO 2018) provided an update in relation to environmental noise guidelines (and targets) that more specifically relate to transportation (road, rail and air), wind turbines and leisure noise sources. The more comprehensive guideline levels for noise (related to all sources) remain the older WHO guidelines (WHO 1999) and night noise guidelines (WHO 2009).

# 6.3 Review of the noise guidelines adopted

# **6.3.1** Noise and blasting criteria

For the Mount Pleasant Operation, Development Consent DA 92/97 established noise criteria for the community, in accordance with the NSW Industrial Noise Policy. In general, the criteria set the following noise limits:

- Day: 35 dBA as L<sub>Aeq,15min</sub> for privately-owned land, with the exception of a number of receptors listed (including those in the existing Mount Pleasant Operation NAGs) where day time levels may be in the range 36 to 43 dBA as L<sub>Aeq,15min</sub>.
- Evening: 35 dBA as L<sub>Aeq,15min</sub> for privately-owned land, with the exception of a number of receptors listed (including those in the existing Mount Pleasant Operation NAGs) where evening levels may be in the range 36 to 42 dBA as L<sub>Aeq,15min</sub>.
- Night: 35 dBA as L<sub>Aeq,15min</sub> for privately-owned land, with the exception of a number of receptors listed (including those in the existing Mount Pleasant Operation NAGs) where evening levels may be in the range 36 to 42 dBA as L<sub>Aeq,15min</sub>. A peak night-time noise criterion of 45 dBA as L<sub>A1,1min</sub> has been set for all locations.

These noise criteria do not apply to noise-affected land subject to acquisition upon request or if there is written agreement with the relevant landowner to exceed the criteria and the Department of Planning, Industry and Environment has been advised of the terms of the agreement.

Land subject to acquisition upon request in Development Consent DA 92/97 includes the following receptor properties: 23, 45, 47, 67, 96, 102, 108, 112, 118, 120, 120c, 121, 136, 143a, 143b, 143c, 143d, 143e, 147, 153a, 153b, 156a, 157a, 158, 159, 447, 448, 449 on the basis of noise; receptors 43 and 43b on the basis of noise and air; and receptors 20 and 21 on the basis of air. It is noted MACH has since purchased receptors 23 and 158.

Properties where noise mitigation is available upon request as per Development Consent DA 92/97 includes: 19, 20, 21, 68, 74, 77, 79, 80a, 84a, 86a, 139, 140a, 140c, 154, 203, 207, 257, 258, 259, 526 on the basis of noise. It is noted that MACH has since purchased receptors 68, 80a and 139.



For the assessment of potential Project noise impacts, rating background levels (RBLs) have been established on the basis of contemporary background noise monitoring, with Project-specific noise criteria established in accordance with relevant guidance in the NSW Noise Policy for Industry (NPfI) (which supersedes the NSW Industrial Noise Policy).

Project noise trigger levels have been established as the lower of the criteria relevant to addressing intrusive noise and noise amenity and are as follows (all as  $L_{Aeq,15min}$ ):

- Day: 40 dBA in Muswellbrook (NAG 1), 42 dBA along New England Highway between Muswellbrook and Aberdeen (NAG 2) and 40 dBA outside these areas.
- Evening: 38 dBA in NAG 1, 41 dBA in NAG 2 and 35 dBA outside these areas.
- Night: 36 dBA in NAG 1, 35 dBA in NAG 2 and 35 dBA outside these areas.

Maximum noise criteria, that related to protecting sleep disturbance, adopted are as follows (applicable to night time noise):

- L<sub>Aeq,15min</sub> 40 dBA; and/or
- L<sub>AFmax</sub> 52 dBA.

Blasting has been assessed on the basis of criteria for the minimisation of human annoyance, which apply to impacts at privately-owned and other sensitive receptors. These criteria are:

- maximum overpressure due to blasting should not exceed 115 dB for more than 5% of blasts in any year, and should not exceed 120 dB for any blast; and
- maximum peak particle ground velocity should not exceed 5 millimetres per second (mm/s) for more than 5% of blasts in any year, and should not exceed 10 mm/s for any blast.

Criteria have also been adopted to address cosmetic and structural damage to buildings and structures.

#### 6.3.2 Review of criteria

Noise criteria adopted in the Noise Impact Assessment are consistent with those outlined in the NPfl (NSW EPA 2017), which indicate that intrusive noise from a specific industrial source should not exceed the rating background levels by more than 5 dBA. In addition, consideration has also been made to noise amenity, with the project noise trigger levels adopted based on the lower noise criteria relevant to intrusiveness and amenity.

The noise criteria adopted (**Section 6.3.1**) are sufficiently low to be protective of health, based on available guidance from the WHO (WHO 1999, 2011). The NPfI provides guidance on the interpretation of noise impacts in relation to these trigger levels, particularly in relation to predicted/estimated changes in noise levels.

The maximum noise criteria are set to protect residence from sleep disturbance and for this Project, an  $L_{AFmax}$  of 52 dBA is relevant to the night-time period. This maximum noise level is sufficiently low to be protective of health, based on available guidance from the WHO (WHO 1999).



Road traffic noise was assessed on the basis of the NSW Road Noise Policy (NSW DECCW 2011)<sup>13</sup>, as it applies to existing residences on local roads affected by additional traffic. This provides a guideline of 55 dBA as L<sub>Aeq,1 hour</sub> (day and evening) and 50 dBA as L<sub>Aeq,1 hour</sub> (night). In addition, the NSW Road Noise Policy also indicates that "an increase of up to 2 dB represents a minor impact that is considered barely perceptible to the average person" and "For existing residences and other sensitive land uses affected by additional traffic on existing roads generated by land use developments, any increase in the total traffic noise level should be limited to 2 dB above the corresponding 'no build option'". These guidelines are higher than the health based goals relevant to road noise traffic from the WHO (WHO 2018) but consistent with the upper end of noise criteria established in previous WHO guidelines for outdoor noise predictions (WHO 1999, 2009).

Rail noise was assessed on the basis of guidelines from the Australian Rail Track Corporation (ARTC), which operates the Muswellbrook-Ulan Rail Line and Main Northern Railway in accordance with an Environment Protection Licence (EPL) and the Rail Infrastructure Noise Guideline (NSW EPA 2013). The following guidelines were adopted for the Project: 60 dBA L<sub>Aeq,9 hour</sub> for the night time period, 65 dBA L<sub>Aeq,15 hour</sub> for the day and evening period and L<sub>Amax</sub> of 85 dBA. These guidelines are higher than the health based goals relevant to rail noise from the WHO (WHO 2018), but consistent with the requirements of the ARTC EPL. Assessment of rail noise from non-network rail lines have been assessed on the basis of the NPfl (NSW EPA 2017), where the following guidelines are adopted: 40 dBA L<sub>Aeq,9 hour</sub> for the night time period, 50 dBA L<sub>Aeq,11 hour</sub> for the day and 45 dBA L<sub>Aeq,4 hour</sub> for the evening. These criteria, for non-network rail noise, are protective of health.

Blasting impacts have been evaluated in accordance with criteria established to protect human annoyance and structural damage (NSW DEC 2006)<sup>14</sup>. Provided the human comfort criteria are met, there would be no concern in relation to health impacts.

# 6.4 Review and assessment of health impacts from noise

#### **6.4.1** Operational noise

#### Approach

The operational noise assessment has considered noise impacts from the Project operations as well as road and rail noise impacts. The noise assessment has utilised the ENM (Environmental Noise Model) that provides predictions of noise impacts at each modelled receptor as an outdoor noise level. Noise modelling considered operations during:

- **2026**;
- 2028;
- **2031**;
- 2034;
- **2041**;
- 2044: and
- **2047**.

<sup>&</sup>lt;sup>13</sup> DECCW – NSW Department of Environment, Climate Change and Water.

<sup>&</sup>lt;sup>14</sup> DEC – NSW Department of Environment and Conservation.



Activities that are proposed to be undertaken during these Project years, including the time and location of operation, and sound power levels generated by these equipment/activities, have been considered in the noise model, along with terrain and meteorological conditions.

The noise modelling undertaken has been conducted in an iterative manner, incorporating and evaluating various combinations of noise management and mitigation measures, including the comprehensive suite of noise mitigation and management measures already implemented on-site. As a result, a range of specific mitigation measures have been identified in the noise impact assessment to reduce noise emissions from the Project. This includes:

- Design of the mine plan to increase the ROM coal extraction rate in stages, as the mine progresses west away from the majority of receptors.
- Design of the integrated eastern waste rock landform to maximise potential shielding opportunities.
- Continued implementation of noise suppression and acoustic design to all new major mobile equipment and fixed plant where reasonable and feasible.
- Continued use of the proactive and reactive noise management system, which comprises a real-time monitoring and forecasting system to assist in the management of operational noise.

Assessment of blasting impacts has utilised relationships between scaled distance and overpressure or vibration derived from over 7,600 records of blasts undertaken in the Hunter Valley.

#### Noise impacts during operations

The modelling of noise impacts, with consideration of reasonable and feasible mitigation measures, predicted exceedances of the Project noise trigger level at a total of 84 privately-owned receptors and one privately-owned vacant lot for periods of time during the Project. The majority of the predicted exceedances (56 receptors) are deemed to be "negligible" (between 1 and 2 dB), which would not be discernible by the average person.

In accordance with the Voluntary Land Acquisition and Mitigation Policy (*VLAMP*) (NSW Government 2018), the owners of 12 properties would receive mitigation upon request rights as a result of the Project based on exceedances of the criteria deemed "moderate" (between 3 and 5 dB). Of these properties, all but one (property 35) currently have mitigation or acquisition upon request rights in Development Consent DA 92/97 based on potential noise and/or air impacts.

In accordance with the *VLAMP*, 11 landowners of 13 properties would receive acquisition upon request rights as a result of the Project based on exceedances of the criteria deemed "significant" (greater than 5 dB), or potential impacts on vacant land. Of these properties, all but one (property 154) currently have acquisition upon request rights in Development Consent DA 92/97 based on potential noise and/or air impacts. Property 154 currently has mitigation upon request in Development Consent DA 92/97.



The assessment of cumulative noise (from the Project, Mt Arthur Coal Mine, Bengalla Mine, Mangoola Coal and Dartbrook Mine) indicates that noise levels resulting from the concurrent operation of these projects would exceed the night time recommended amenity noise level for a total of 11 properties where "moderate" and "negligible" exceedances are predicted. Most of the receptors predicted to be exposed to "moderate" exceedances are already subject to acquisition or mitigation upon request rights in Development Consent DA 92/97 for predicted noise or noise/air impacts associated with the approved Mount Pleasant Operation. Most of the predicted exceedances relate to activities at the Bengalla Mine, and at times the combination of the Bengalla Mine and Mt Arthur Coal Mine. Receptors impacted by the Project alone are already subject to mitigation or acquisition rights. No additional receptors (relative to the assessment of intrusive operational noise) are identified for mitigation or acquisition rights.

In relation to the assessment of maximum noise levels at night, the following is concluded:

- The night time LAeq.15min noise levels are predicted to exceed the noise trigger at 14 privately-owned residential receptors. All impacted receptors are already subject to acquisition or additional mitigation upon request rights in Development Consent DA 92/97 for predicted noise impacts associated with the approved mine, with the exception of receiver 154b. In accordance with the *VLAMP*, receiver 154b would be afforded mitigation rights as a result of the Project, noting that it would be afforded acquisition rights in accordance with the predicted operational noise levels.
- The predicted L<sub>AFmax</sub> noise levels would comply with the relevant maximum noise trigger level at all the identified receptors except receptor 156a, where one "negligible" exceedance (between 1-2 dB according to the *VLAMP* and NPfI) is predicted in 2041.

As the noise criteria adopted are protective of health, and the receptors where exceedances that are deemed "moderate" or "significant" have been identified are already subject to acquisition or mitigation upon request rights in Development Consent DA 92/97 based on predicted noise and/or air impacts, there would be no health impacts of concern in relation to the operation of the Project (including consideration of cumulative and maximum night time noise).

#### Blasting impacts

The assessment undertaken identified that without blast Maximum Instantaneous Charge (MIC) control, there is the potential for exceedance of the human comfort criteria at receptors within 2,260 m of the blast. These impacts can be mitigated using a reduced MIC, which would inform an appropriate blast design.

#### Road and rail noise

Projected traffic volumes in 2026 and 2036 associated with the Mount Pleasant Operation are expected to have potential implications for noise on Wybong Road (between Bengalla Road and Kayuga Road) and Kayuga Road (north of Wybong Road).



Up to five receptors (43, 121, 156a, 159 and 526) are expected to experience "negligible" exceedances (between 1 and 2 dB) due to additional traffic associated with the Project. Those exceedances would not be discernible by the average person according to the *VLAMP* and NPfl. Furthermore, the five receptors are already subject to acquisition or mitigation upon request rights in the Development Consent DA 92/97.

Along the Project rail spur, compliance with the relevant noise criteria for non-network rail lines would be achieved at most surrounding noise sensitive receptors, except for two privately-owned receptors where 2 dB exceedances are predicted. Such exceedances are considered "negligible" (between 1 and 2 dB) and would not be discernible by the average person. Both receptors are already subject to acquisition or mitigation upon request rights in Development Consent DA 92/97 for predicted noise/air impacts associated with the approved mine.

Two sections of railway on the ARTC's network were assessed for potential increases in rail noise associated with product coal train movements. Project rail movements would increase the offset distance from the railway where the relevant noise criteria are met. However, the predicted noise level increase in all cases is less than 2 dB. Notwithstanding, overall rail noise levels are anticipated to reduce over time as a number of mining projects in the region cease operation.

#### Overall

Based on the available information, the potential for noise impacts to result in adverse health impacts within the community is considered to be negligible.

#### 6.5 Uncertainties

The assessment presented in relation to potential noise impacts, and the potential for impacts on community health as a result of changes in noise as a result of the Project, is considered to be conservative. There are a number of areas within the noise impact assessment where conservative assumptions and approaches have been adopted. This includes the selection of RBLs relevant to the off-site areas, consideration of the worst-case meteorological conditions and assumption that these occur on a regular basis, use of the upper end of noise impacts for comparison with relevant guidelines and the approach adopted for the assessment of rail noise.

On the basis of the above, conclusions in relation to potential impacts on community health are expected to be conservative.

#### 6.6 Outcomes of health risk assessment: noise

**Table 6.1** presents a summary of the outcomes of the assessment undertaken in relation to the impacts of changes in noise, associated with the Project, on community health.



Table 6.1: Summary of health risks – noise and blasting

Impacts	Based on the predicted noise levels and potential mitigation measures, the potential for adverse health impacts within the off-site community associated with blasting or noise generated as a result of the
	Project is considered to be negligible.
Mitigation	The Noise and Blasting Assessment describes a range of mitigation measures that would be adopted for the Project, including continued use of sound attenuation on all major mobile plant where reasonable and feasible, acoustic design of fixed plant, the Project's staged increase to ROM coal extraction and the continued use of proactive/reactive mitigation measures (Wilkinson Murray 2020). The Mount Pleasant Operation Noise Management Plan would be updated for the Project, including implementation of the requirements of the <i>VLAMP</i> and NPfl for properties subject to acquisition or mitigation upon request rights due to the Project. The management plan would outline the measures to manage noise, including real-time and attended noise monitoring, use of meteorological forecasting and other noise mitigation measures.



# Section 7. Health impact assessment: Water

# 7.1 Approach

Health impacts associated with potential impacts of the Project on water access and quality relevant to the local community have been evaluated on the basis of information provided in the following reports:

- Australasian Groundwater and Environmental Consultants Pty Ltd, 2020. Mount Pleasant Optimisation Project Groundwater Assessment.
- Hydro Engineering & Consulting Pty Ltd, 2020. Mount Pleasant Optimisation Project Surface Water Assessment.

The assessment undertaken in relation to water has involved a qualitative review of the available information to determine if there is the potential for the Project to result in changes to surface water or groundwater quality or quantity, and where such changes may occur, if these may adversely affect the health of the community who may access and use these water resources.

# 7.2 Existing surface water and groundwater

The Project is located in the Hunter River catchment. The Hunter River catchment has an overall size of 21,500 square kilometres, and includes the city of Newcastle and the major towns of Singleton and Muswellbrook. The Hunter River is the main drainage feature within the catchment, rising on the northern side of the Barrington Tops (Mount Royal Range) and flowing south and then east through Muswellbrook and Singleton, before draining to the Pacific Ocean at Newcastle. The Hunter River contains a number of significant tributaries upstream of Muswellbrook, including the Pages and Isis Rivers, as well as the Middle, Dart, Stewarts, Moonan and Rouchel Brooks (MACH 2017).

The Hunter River is defined as a 'Major Regulated River', meaning that it contains a number of water storages along its length which supplement its flow. These water storages include the Glenbawn Dam and the Glennies Creek Dam. The local drainage network is generally characterised by steep gullies that drain from the surrounding hills into the flat alluvial plains adjacent the Hunter River.

In the vicinity of the Mount Pleasant Operation, the Hunter River flows in a southerly direction. There are a number of ephemeral drainage lines that traverse the Mount Pleasant Operation area and drain into the Hunter River.

Consistent with the relevant water sharing plans, the two key groundwater systems in the vicinity of the Mount Pleasant Operation are (Australasian Groundwater and Environmental Consultants Pty Ltd 2020):

- Alluvial groundwater system associated with the alluvial plains of the Hunter River and its tributaries.
- Hard (fractured and porous) rock groundwater system including the Permian-aged Wittingham Coal measures.



The Mount Pleasant Operation coal resource is located in the Permian Wittingham Coal measures of the Singleton Supergroup. Lithologies comprise mostly sandstones, siltstones and coal measures with minor conglomerates and tuffs. The coal seams are recognised as the main aquifer zones within the hard rock groundwater system, providing storage and transmission within cleats and joints. The interburden is mainly comprised of sandstones and siltstones with very low permeabilities and porosities, which limit the rate of groundwater transmission. The interburden zones often act as aquitards, effectively impeding or constraining the vertical exchange of groundwaters (Australasian Groundwater and Environmental Consultants Pty Ltd 2020).

Higher aquifer pressures within the coal measures and a regional gradient towards the alluvium result in pressure driving groundwater movement towards the Hunter River. It is likely groundwater seeps naturally from the hard (fractured and porous) rock groundwater system into the alluvial groundwater system. The hard (fractured and porous) rock groundwater system is considered 'less productive' under the NSW Aquifer Interference Policy (AIP). The exception to this is the 'highly productive' Liverpool Ranges Basalt, which is about 8 km from the Mount Pleasant Operation (MACH 2017).

# 7.3 Management and use of water for the Project

Water management at the Mount Pleasant Operation is currently undertaken in accordance with the Water Management Plan, which includes the following sub-plans:

- Site Water Balance;
- Erosion and Sediment Control Plan;
- Surface Water Management Plan;
- Groundwater Management Plan; and
- Surface and Ground Water Response Plan.

The main water sources for the existing Mount Pleasant Operation, which would continue for the Project, are:

- open cut dewatering;
- internal runoff collection at the mine site;
- return water from the Fines Emplacement Area; and
- Hunter River supply.

In addition, in order to reduce make-up water demand from the Hunter River over the life of the Mount Pleasant Operation, MACH may also source water from other external sources, such as excess mine water from the adjoining mines (i.e. Dartbrook Mine and Bengalla Mine) (subject to relevant secondary approvals).



## 7.4 Review of Project impacts on surface water and groundwater

#### 7.4.1 Surface water

The proposed operational water management system would comprise a combination of existing storages and additional storages as necessary to manage runoff from mine disturbed areas and divert runoff away from the open cut areas.

Surface water quality in the drainage network in the area of the Project is not accessed for potable water. However, it may be accessed and used for irrigation and stock watering.

Assessment of potential surface water impacts involved the use of a water balance model. The model has been developed to simulate the storages and linkages, including rainfall runoff and catchment areas, evaporation from storage areas and capacity, CHPP demand and fine rejects disposal as well as on-site demands such as dust suppression, washdown and construction water, groundwater inflows and water derived from the Hunter River (Hydro Engineering & Consulting Pty Ltd 2020).

Overall, the assessment concluded that contaminants (derived from the Project) in surface runoff and seepage from most non-acid forming (NAF) mining waste materials at the Mount Pleasant Operation are unlikely to present a significant risk to surface and groundwater resources. Material classified as potentially acid forming (PAF) would be appropriately managed in order to reduce the potential for further weathering and oxidation of these materials.

Potential for contaminants (principally sediments and soluble salts) in mine catchment area runoff, controlled releases and overflow from containment storages (principally sediments, soluble salts, oils and greases) to impact on the Hunter River is considered to be negligible (Hydro Engineering & Consulting Pty Ltd 2020).

#### 7.4.2 Groundwater

Salinity is the key restriction on the beneficial use of hard (fractured and porous) rock groundwater at and surrounding the Project area. Hard (fractured and porous) rock groundwater is considered to be brackish to moderately saline, which means that groundwater is unsuitable for potable or irrigation uses. However, some groundwater may be used for stock watering or the irrigation of salt tolerant crops.

Groundwater within the alluvial deposits along the Hunter River to the east and Sandy Creek to the west of the Project, however, is of better quality and may be used for a range of purposes including potable water.

Seven groundwater wells are located within the Project boundary (used for monitoring purposes only) with 39 bores, wells and springs identified in the area surrounding the Project. Landholders preferentially extract groundwater from the alluvial aquifers in the region.



The key ways in which the Project may impact on groundwater (quality and quantity), as evaluated in the Groundwater Assessment (Australasian Groundwater and Environmental Consultants Pty Ltd 2020) include:

- subsurface depressurisation and dewatering, which occurs incidentally as open cut mining operations progress; and
- potential impacts to groundwater quality (e.g. due to seepage).

Modelling of groundwater impacts was conducted by Australasian Groundwater and Environmental Consultants Pty Ltd (2020). In relation to impacts that may be of relevance to community health, namely groundwater quality and quantity, the following was concluded from the impact assessment:

- A total of six bores on private property were predicted to experience drawdown exceeding 2 m due to cumulative impacts from the Project and neighbouring mines, of which only one bore is active and not dry.
- The Project has very limited potential to give rise to groundwater contamination, and is not expected to significantly impact on groundwater quality.
- Following completion of mining, the Project final void would remain a strong groundwater sink, and there would be no significant outflow to bedrock from the mining area. Any water quality changes would therefore remain within the mining footprint.

The currently approved Mount Pleasant Operation Groundwater Management Plan (GWMP), which includes requirements for monitoring groundwater levels and quality, be updated to incorporate the Project.

#### 7.5 Uncertainties

The assessment presented in relation to potential surface water and groundwater impacts, and the potential for impacts on community health as a result of surface water and groundwater impacts as a result of the Project, is considered to be conservative. There are a number of areas within the surface water and groundwater assessments where conservative assumptions and approaches have been adopted. The conclusions of these assessments have also been informed by sensitivity and uncertainty analysis.

On the basis of the above, conclusions in relation to potential impacts on community health are expected to be conservative.

## 7.6 Outcomes of health risk assessment: water

**Table 7.1** presents a summary of the outcomes of the assessment undertaken in relation to the impacts of changes in surface water and groundwater, associated with the Project, on community health.

Table 7.1: Summary of health risks - water

Water	
Impacts	Based on the assessments undertaken, the potential for adverse health impacts within the off-site community associated with impacts to surface water and groundwater as a result of the Project is considered to be negligible.
Mitigation	Implementation of the proposed updated Water Management Plan.



# **Section 8. Conclusions**

The HHRA presented in this report has considered potential impacts on community health in relation to air quality, noise, blasting and water.

Based on the available information, and with consideration of the uncertainties identified, no health risk issues of concern have been identified for the off-site community. More specifically, **Table 8.1** presents a summary of the health impact assessment and mitigation measures relevant to ensuring impacts are minimised or mitigated.

Table 8.1: Summary of health risks

Air emission	ons
Impacts	Where all proposed dust mitigation measures are implemented including reactive/proactive dust mitigation measures, there are no risk issues of concern in relation to community exposure to PM <sub>2.5</sub> or PM <sub>10</sub> generated from the Project, with the exception of impacts that may occur at the following locations located close to the Project:  - Receptors 154 and 154b (Scenarios 4 and 5), which currently have mitigation upon request rights in Development Consent DA 92/97 for potential noise impacts;  - Receptor 112 (Scenario 5), which currently has acquisition upon request rights in Development Consent DA 92/97 for potential noise impacts; and  - Receptor 153a (Scenario 6), which currently has acquisition upon request rights in Development Consent DA 92/97 for potential noise impacts.
Mitigation	All mitigation measures as detailed in the AQIA, including reactive/proactive measures, as detailed in: - any Construction Management Plans prepared for specific Project construction activities, as relevant; - Mount Pleasant Operation Air Quality and Greenhouse Gas Management Plan; and - Mount Pleasant Operation Blast Management Plan.
Noise and	blasting emissions
Impacts	Based on the predicted noise levels and potential mitigation measures, the potential for adverse health impacts within the off-site community associated with blasting or noise generated as a result of the Project is considered to be negligible.
Mitigation	The Noise and Blasting Assessment describes a range of mitigation measures that would be adopted for the Project, including continued use of sound attenuation on all major mobile plan where reasonable and feasible, acoustic design of fixed plant, the Project's staged increase to ROM coal extraction and the continued use of proactive/reactive mitigation measures (Wilkinson Murray 2020). The Mount Pleasant Operation Noise Management Plan would be updated for the Project, including implementation of the requirements of the <i>VLAMP</i> and NPfl for properties subject to acquisition or mitigation upon request rights due to the Project. The management plan would outline the measures to manage noise, including real-time and attended noise monitoring, use of meteorological forecasting and other noise mitigation measures.
Water	
Impacts	Based on the assessments undertaken, the potential for adverse health impacts within the off-site community associated with impacts to surface water and groundwater as a result of the Project is considered to be negligible.
Mitigation	Implementation of the proposed updated Water Management Plan.



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# **Appendix A Calculation of risks from particulates**



# A1 Mortality and morbidity health endpoints

Quantitative assessment of risk for mortality and morbidity health endpoints uses a mathematical relationship between an exposure concentration (i.e. concentration in air) and a response (namely a health effect). This relationship is termed an exposure-response relationship and is relevant to the range of health effects (or endpoints) identified as relevant (to the nature of the emissions assessed) and robust (as identified in **Section 5.4.1**). An exposure-response relationship can have a threshold, where there is a safe level of exposure, below which there are no adverse effects; or the relationship can have no threshold (and is regarded as linear) where there is some potential for adverse effects at any level of exposure.

In relation to the health effects associated with exposure to particulate matter, no threshold has been identified. Non-threshold exposure-response relationships have been identified for the health endpoints considered in this assessment.

# A2 Quantification of impact and risk

The assessment of health impacts for a particular population associated with exposure to particulate matter has been undertaken utilising the methodology presented by the WHO (Ostro 2004)<sup>15</sup> where the exposure-response relationships identified have been directly considered on the basis of the approach outlined below.

The calculation of changes in health endpoints associated with exposure to particulate matter as outlined by the WHO (Ostro 2004) has considered the following four elements:

- Estimates of the changes in particulate matter exposure levels (i.e. incremental impacts) due to the Project for the relevant modelled scenarios.
- Estimates of the number of people exposed to particulate matter at a given location.
- Baseline incidence of the key health endpoints that are relevant to the population exposed.
- Exposure-response relationships expressed as a percentage change in health endpoint per μg/m³ change in particulate matter exposure, where a relative risk (RR) is determined.

From the above, the increased incidence of a health endpoint corresponding to a particular change in exposure has been calculated using the approach outlined below.

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<sup>15</sup> For regional guidance, such as that provided for Europe by the WHO (2006), regional background incidence data for relevant health endpoints are combined with exposure-response functions to present an impact function, which is expressed as the number/change in incidence/new cases per 100,000 population exposed per microgram per cubic metre change in particulate matter exposure. These impact functions are simpler to use than the approach adopted in this assessment, however in utilising this approach it is assumed that the baseline incidence of the health effects is consistent throughout the whole population (as used in the studies) and is specifically applicable to the sub-population group being evaluated. For the assessment of exposures in the areas evaluated surrounding the Project it is more relevant to utilise local data in relation to baseline incidence rather than assume that the population is similar to that in Europe (where these relationships are derived).



The attributable fraction/portion (AF) of health effects from air pollution can be calculated from the RR as:

Equation 1 
$$AF_{air} = \frac{RR-1}{RR}$$

The assessment of potential risks associated with these exposures involves the calculation of a RR. For the purpose of this assessment, the shape of the exposure-response function used to calculate the RR is assumed to be linear<sup>16</sup>. The calculation of a RR based on the change in relative risk exposure concentration from baseline/existing (i.e. based on incremental impacts from the project) can be calculated on the basis of the following equation (Ostro 2004):

Equation 2 RR = 
$$\exp[\beta(X-X0)]$$

Where:

X-X0 = the change in particulate matter concentration to which the population is exposed (µg/m³)  $\beta$  = regression/slope coefficient, or the slope of the exposure-response function which can also be expressed as the per cent change in response per 1 μg/m³ increase in particulate matter exposure

Based on this equation, where the published studies have derived RR values that are associated with a 10 μg/m<sup>3</sup> increase in exposure, the β coefficient can be calculated using the following equation:

Equation 3 
$$\beta = \frac{\ln(RR)}{10}$$

Where:

RR = relative risk for the relevant health endpoint as published (µg/m<sup>3</sup>)

10 = increase in particulate matter concentration or noise level associated with the RR (where the RR is associated with a 10 μg/m³ increase in concentration

The total number of cases attributable to the change in exposure (where a linear dose-response is assumed) can be calculated as:

**Equation 4**  $E=AF \times B \times P$ 

Where:

B = baseline incidence of a given health effect (e.g. mortality rate per person per year)

P = relevant exposed population

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<sup>16</sup> Some reviews have identified that a log-linear exposure response function may be more relevant for some of the health endpoints considered in this assessment. Review of outcomes where a log-linear exposure-response function has been adopted (Ostro 2004) for PM<sub>2.5</sub> identified that the log-linear relationship calculated slightly higher RRs compared with the linear relationship within the range 10-30 micrograms per cubic metre (relevant for evaluating potential impacts associated with air quality goals or guidelines), but lower relative risks below and above this range. For this assessment (where impacts from a particular project are being evaluated) the impacts assessed relate to concentrations of PM<sub>2.5</sub> that are well below 10 micrograms per cubic metre and hence use of the linear relationship is expected to provide a more conservative estimate of relative risk.



The above approach (while presented slightly differently) is consistent with that presented in Australia (Burgers & Walsh 2002), the USA (OEHHA 2002; USEPA 2005, 2010) and Europe (Martuzzi et al. 2002; Sjoberg et al. 2009).

The calculation of an increased incidence (i.e. number of cases) of a particular health endpoint is not relevant to a specific individual. Rather, this is relevant to a statistically relevant population. This calculation has been undertaken for populations within the areas surrounding the Project.

When considering the potential impact of the Project on the population for changes in air quality, the calculation has been undertaken using the following:

- The relative risk has been calculated for a population weighted annual average incremental increase in concentrations. The population weighted average has been calculated on the basis of an average concentration relevant to the study area.
- The attributable fraction has then been calculated.
- Equation 4 has been used to calculate the increased number of cases associated with the incremental impact evaluated. The calculation is undertaken utilising the baseline incidence data relevant for the endpoint considered and the population (for the relevant age groups) present the area evaluated.

The above approach can be simplified (mathematically, where the incremental change in particulate concentration is low, in the order of one microgram per cubic metre or less) as follows:

Equation 5 E= $\beta$  x B x  $\sum_{mesh} (\Delta X_{mesh} \times P_{mesh})$ 

Where:

 $\beta$  = slope coefficient relevant to the per cent change in response to a 1  $\mu$ g/m³ change in exposure concentration

B = baseline incidence of a given health effect per person (e.g. annual mortality rate)  $\Delta X_{mesh}$  = change (increment) in exposure concentration in  $\mu g/m^3$  as an average within a small area defined as a mesh block (from the ABS – where many mesh blocks make up a suburb)  $P_{mesh}$  = population (residential – based on data from the ABS) within each small mesh block

An additional risk is calculated as:

Equation 6 Risk= $\beta$  x  $\Delta$ X x B

Where:

 $\beta$  = slope coefficient relevant to the per cent change in response to a 1  $\mu$ g/m³ change in exposure  $\Delta X$  = change (increment) in exposure concentration in  $\mu$ g/m³ relevant to the project at the point of exposure

B = baseline incidence of a given health effect per person (eg annual mortality rate)

This calculation provides an annual risk for individuals exposed to changes in air quality from the Project at specific locations (such as the maximum, or at specific sensitive receiver locations). The calculated risk does not take into account the duration of exposure at any one location and so is considered to be representative of a population risk.

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# A3 Quantification of short-and long-term effects

The concentration-response functions adopted for the assessment of exposure are derived from long and short-term studies and relate to short or long-term effects endpoints (e.g. change in incidence from daily changes in particulate matter, or chronic incidence from long-term exposures to particulate matter).

Long-term or chronic effects are assessed on the basis of the identified exposure-response function and annual average concentrations. These then allow the calculation of a chronic incidence of the assessed health endpoint.

Short-term effects are also assessed on the basis of an exposure-response function that is expressed as a percentage change in endpoint per microgram per cubic metre change in concentration. For short-term effects, daily changes in particulate matter exposures are used to calculate changes in daily effects endpoints. While it may be possible to measure daily incidence of the evaluated health endpoints in a large population study specifically designed to include such data, it is not common to collect such data in hospitals nor are effects measurable in smaller communities. Instead these calculations relate to a parameter that is measurable, such as annual incidence of hospitalisations, mortality or lung cancer risks. The calculation of an annual incidence or additional risk can be undertaken using two approaches (Ostro 2004; USEPA 2010):

- Calculate the daily incidence or risk at each receiver location over every 24-hour period of the year (based on the modelled incremental 24-hour average concentration for each day of the year and daily baseline incidence data) and then sum the daily incidence/risk to get the annual risk.
- Calculate the annual incidence/risk based on the incremental annual average concentration at each receiver (and using annual baseline incidence data).

In the absence of a threshold, and assuming a linear concentration-response function (as is the case in this assessment), these two approaches result in the same outcome mathematically (calculated incidence or risk). Given that it is much simpler computationally to calculate the incidence (for each receiver) based on the incremental annual average, compared with calculating effects on each day of the year and then summing, this is the preferred calculation method. It is the recommended method outlined by the WHO (Ostro 2004).

The use of the simpler approach, based on annual average concentrations, should not be taken as implying or suggesting that the calculation is quantifying the effects of long-term exposure.

For the calculations presented in this assessment - for long-term and short-term effects - annual average concentrations of particulate matter have thus been utilised.



# Appendix B Risk calculations - PM<sub>2.5</sub> and PM<sub>10</sub>

# Quantification of Effects - $PM_{2.5}$ and $PM_{10}$ Mount Pleasant - Scenario 1 (without proactive/reactive mitigation measures)

Air quality indicator:	PM <sub>2.5</sub>	PM <sub>2.5</sub>	PM <sub>2.5</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Endpoint:	Mortality - All	Hospitalisations -	Hospitalisations -	Mortality - All	Morbidity -
	Causes	Cardiovascular	Respiratory	Causes	Asthma ED
					Admissions
Effect Exposure Duration:	Long-term	Short-term	Short-term	Short-Term	Short-Term
Age Group:	≥ 30 years	≥ 65 years	≥ 65 years	All ages	1-14 years
β (change in effect per 1 μg/m³) (as per Table 5.2)	0.0058	0.0008	0.00041	0.0006	0.00148
Annual baseline incidence (per 100,000)	1026	9235	4168	610.5	2284
Baseline Incidence (per person per year)	0.01026	0.09235	0.04168	0.006105	0.02284

Sensitive Receptors	Change in Annual Average PM10 Concentration (μg/m³)	Change in Annual Average PM2.5 Concentration (µg/m³)	Risk (PM <sub>2.5</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> CV Hospitalisations, >65 years)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)	Risk (PM <sub>10</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> Asthma ED admissions, 1-14 years)
Privately owned receptors							
19	3.34 5.84	0.7032 1.2182	4E-05 7E-05	5E-05 9E-05	1E-05 2E-05	1E-05 2E-05	2E-05 4E-05
20	6.75	1.3997	8E-05	9E-05 1E-04	2E-05	2E-05	5E-05
21	6.94	1.4391	9E-05	1E-04	2E-05	3E-05	5E-05
35 35	4.59	0.9712	6E-05	7E-05	2E-05	2E-05	3E-05
35b 43	4.59 0.78	0.9719 0.1562	6E-05 9E-06	7E-05 1E-05	2E-05 3E-06	2E-05 3E-06	3E-05 5E-06
43b	0.43	0.0907	5E-06	7E-06	2E-06	2E-06	3E-06
45	0.41	0.0882	5E-06	7E-06	2E-06	1E-06	3E-06
45b 45c	0.41 0.42	0.0888 0.0899	5E-06	7E-06	2E-06 2E-06	2E-06	3E-06
47	0.42	0.0842	5E-06 5E-06	7E-06 6E-06	1E-06	2E-06 1E-06	3E-06 3E-06
67	5.02	1.0681	6E-05	8E-05	2E-05	2E-05	4E-05
74	4.72	1.0049	6E-05	7E-05	2E-05	2E-05	3E-05
77 79	3.89 3.35	0.8300 0.7129	5E-05 4E-05	6E-05 5E-05	1E-05 1E-05	1E-05 1E-05	3E-05 2E-05
82	2.61	0.5525	3E-05	4E-05	9E-06	1E-05	2E-05
83	2.69	0.5695	3E-05	4E-05	1E-05	1E-05	2E-05
84a	2.94	0.6230	4E-05	5E-05	1E-05	1E-05	2E-05
84b	0.75	0.1395	8E-06	1E-05	2E-06	3E-06	5E-06
86a 86b	3.88 1.14	0.8317 0.2475	5E-05 1E-05	6E-05 2E-05	1E-05 4E-06	1E-05 4E-06	3E-05 8E-06
96	5.32	1.1687	7E-05	9E-05	2E-05	2E-05	4E-05
102	5.56	1.2270	7E-05	9E-05	2E-05	2E-05	4E-05
108	6.11	1.3536	8E-05	1E-04	2E-05	2E-05	5E-05
112 118	6.95 6.53	1.5457 1.4578	9E-05 9E-05	1E-04 1E-04	3E-05 2E-05	3E-05 2E-05	5E-05 5E-05
120	6.19	1.3869	9E-05 8E-05	1E-04 1E-04	2E-05 2E-05	2E-05 2E-05	5E-05 5E-05
120c	6.35	1.4241	8E-05	1E-04	2E-05	2E-05	5E-05
121	6.60	1.4825	9E-05	1E-04	3E-05	2E-05	5E-05
136 140a	2.45	0.5544	3E-05	4E-05	9E-06	9E-06	2E-05
140a 140c	1.27 1.75	0.2892 0.3805	2E-05 2E-05	2E-05 3E-05	5E-06 7E-06	5E-06 6E-06	1E-05 1E-05
143a	1.70	0.3938	2E-05	3E-05	7E-06	6E-06	1E-05
143b	2.84	0.6545	4E-05	5E-05	1E-05	1E-05	2E-05
147	3.30	0.7641	5E-05	6E-05	1E-05	1E-05	3E-05
153a 154	3.26 4.23	0.6367 0.9416	4E-05 6E-05	5E-05 7E-05	1E-05 2E-05	1E-05 2E-05	2E-05 3E-05
154b	4.20	0.9339	6E-05	7E-05	2E-05	2E-05	3E-05
156a	3.98	0.9089	5E-05	7E-05	2E-05	1E-05	3E-05
156b	0.19	0.0409	2E-06	3E-06	7E-07	7E-07	1E-06
157a	3.84	0.8821	5E-05	7E-05	2E-05	1E-05	3E-05
157b 159	0.17 3.24	0.0370 0.7486	2E-06 4E-05	3E-06 6E-05	6E-07 1E-05	6E-07 1E-05	1E-06 3E-05
169	1.91	0.4260	3E-05	3E-05	7E-06	7E-06	1E-05
171	1.48	0.3324	2E-05	2E-05	6E-06	5E-06	1E-05
172	1.21	0.2728	2E-05	2E-05	5E-06	4E-06	9E-06
172b 172c	1.18 0.86	0.2651 0.1942	2E-05 1E-05	2E-05 1E-05	5E-06 3E-06	4E-06 3E-06	9E-06 7E-06
310	1.20	0.2702	2E-05	2E-05	5E-06	4E-06	9E-06
173	1.16	0.2584	2E-05	2E-05	4E-06	4E-06	9E-06
174 175	1.19 1.21	0.2653	2E-05 2E-05	2E-05	5E-06	4E-06	9E-06
175b	1.22	0.2689 0.2719	2E-05	2E-05 2E-05	5E-06 5E-06	4E-06 4E-06	9E-06 9E-06
175c	1.20	0.2680	2E-05	2E-05	5E-06	4E-06	9E-06
176	1.22	0.2716	2E-05	2E-05	5E-06	4E-06	9E-06
177 178	1.11 0.74	0.2475 0.1670	1E-05 1E-05	2E-05 1E-05	4E-06 3E-06	4E-06 3E-06	8E-06 6E-06
179	0.74	0.1780	1E-05	1E-05	3E-06	3E-06	6E-06
180	0.74	0.1675	1E-05	1E-05	3E-06	3E-06	6E-06
180b	0.64	0.1449	9E-06	1E-05	2E-06	2E-06	5E-06
180c 181	0.49 0.44	0.1125 0.1012	7E-06 6E-06	8E-06 7E-06	2E-06 2E-06	2E-06 2E-06	4E-06 3E-06
181 181c	0.44	0.1012	8E-06	1E-05	2E-06 2E-06	2E-06 2E-06	5E-06
182	0.37	0.0850	5E-06	6E-06	1E-06	1E-06	3E-06
189	0.76	0.1755	1E-05	1E-05	3E-06	3E-06	6E-06
190 191	0.82 0.71	0.1879 0.1627	1E-05 1E-05	1E-05 1E-05	3E-06 3E-06	3E-06 3E-06	6E-06 6E-06
192	0.76	0.1742	1E-05	1E-05	3E-06	3E-06	6E-06
193	0.68	0.1550	9E-06	1E-05	3E-06	2E-06	5E-06
193c	0.52	0.1181	7E-06	9E-06	2E-06	2E-06	4E-06
194 195	0.68 0.74	0.1529 0.1647	9E-06 1E-05	1E-05 1E-05	3E-06 3E-06	2E-06 3E-06	5E-06 6E-06
197	0.74	0.1916	1E-05	1E-05	3E-06	3E-06	6E-06
196	0.86	0.1877	1E-05	1E-05	3E-06	3E-06	6E-06
195d	0.91	0.1993	1E-05	1E-05	3E-06	3E-06	7E-06
198 198b	1.07 1.10	0.2336 0.2390	1E-05 1E-05	2E-05 2E-05	4E-06 4E-06	4E-06 4E-06	8E-06 8E-06
199	1.02	0.2390	1E-05	2E-05	4E-06 4E-06	4E-06 4E-06	8E-06
200	0.95	0.2054	1E-05	2E-05	4E-06	3E-06	7E-06
202	1.53	0.3304	2E-05	2E-05	6E-06	6E-06	1E-05
202b 203	1.27 1.61	0.2732 0.3486	2E-05 2E-05	2E-05 3E-05	5E-06 6E-06	5E-06 6E-06	9E-06 1E-05
203 203b	1.59	0.3432	2E-05	3E-05	6E-06	6E-06	1E-05
203c	1.61	0.3473	2E-05	3E-05	6E-06	6E-06	1E-05
206	4.31	0.9099	5E-05	7E-05	2E-05	2E-05	3E-05
207	5.16	1.0816	6E-05	8E-05	2E-05	2E-05	4E-05
212 212b	4.22 4.23	0.8855 0.8866	5E-05 5E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
213	5.32	1.1103	7E-05	8E-05	2E-05	2E-05	4E-05
214	5.33	1.1126	7E-05	8E-05	2E-05	2E-05	4E-05
215	5.39	1.1249	7E-05	8E-05	2E-05	2E-05	4E-05
216 216b	5.43 5.34	1.1319 1.1136	7E-05 7E-05	8E-05 8E-05	2E-05 2E-05	2E-05 2E-05	4E-05 4E-05
216b 217	5.45	1.1136	7E-05 7E-05	8E-05 8E-05	2E-05 2E-05	2E-05 2E-05	4E-05 4E-05
218	5.48	1.1431	7E-05	8E-05	2E-05	2E-05	4E-05
219	5.52	1.1498	7E-05	8E-05	2E-05	2E-05	4E-05
220 221	5.55 5.61	1.1562 1.1687	7E-05 7E-05	9E-05 9E-05	2E-05 2E-05	2E-05 2E-05	4E-05 4E-05
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Sensitive Receptors	Change in Annual Average PM10 Concentration (µg/m³)	Change in Annual Average PM2.5 Concentration (µg/m³)	Risk (PM <sub>2.5</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> CV Hospitalisations, >65 years)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)	Risk (PM <sub>10</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> Asthma ED admissions, 1-14 years)
222	5.65	1.1783	7E-05	9E-05	2E-05	2E-05	4E-05
223	5.74	1.1957	7E-05	9E-05	2E-05	2E-05	4E-05
223b	5.74	1.1964	7E-05	9E-05	2E-05	2E-05	4E-05
224	5.83	1.2153	7E-05	9E-05	2E-05	2E-05	4E-05
225	5.47	1.1408	7E-05	8E-05	2E-05	2E-05	4E-05
249	0.32	0.0736	4E-06	5E-06	1E-06	1E-06	2E-06
252	0.22	0.0500	3E-06	4E-06	9E-07	8E-07	2E-06
257	0.47	0.1038	6E-06	8E-06	2E-06	2E-06	4E-06
258a	0.41	0.0895	5E-06	7E-06	2E-06	1E-06	3E-06
258c	0.40	0.0886	5E-06	7E-06	2E-06	1E-06	3E-06
259	0.39	0.0858	5E-06	6E-06	1E-06	1E-06	3E-06
259b	0.37	0.0811	5E-06	6E-06	1E-06	1E-06	3E-06
260	0.41	0.0902	5E-06	7E-06	2E-06	1E-06	3E-06
260a	0.40	0.0891	5E-06	7E-06	2E-06	1E-06	3E-06
260b	0.40	0.0888	5E-06	7E-06	2E-06	1E-06	3E-06
261	0.35	0.0774	5E-06	6E-06	1E-06	1E-06	3E-06
261b	0.35	0.0776	5E-06	6E-06	1E-06	1E-06	3E-06
271	0.37	0.0688	4E-06	5E-06	1E-06	1E-06	2E-06
272b	0.62	0.1129	7E-06	8E-06	2E-06	2E-06	4E-06
272	0.63	0.1139	7E-06	8E-06	2E-06	2E-06	4E-06
273	0.45	0.0833	5E-06	6E-06	1E-06	2E-06	3E-06
273b	0.44	0.0801	5E-06	6E-06	1E-06	2E-06	3E-06
288	3.25	0.6878	4E-05	5E-05	1E-05	1E-05	2E-05
288b	3.24	0.6844	4E-05	5E-05	1E-05	1E-05	2E-05
289	3.76	0.7941	5E-05	6E-05	1E-05	1E-05	3E-05
292	0.25	0.0579	3E-06	4E-06	1E-06	9E-07	2E-06
292b	0.24	0.0555	3E-06	4E-06	9E-07	9E-07	2E-06
300	0.29	0.0661	4E-06	5E-06	1E-06	1E-06	2E-06
298	0.30	0.0690	4E-06	5E-06	1E-06	1E-06	2E-06
296a	0.34	0.0757	5E-06	6E-06	1E-06	1E-06	3E-06
296b	0.33	0.0735	4E-06	5E-06	1E-06	1E-06	2E-06
302a	0.24	0.0554	3E-06	4E-06	9E-07	9E-07	2E-06
302c	0.23	0.0537	3E-06	4E-06	9E-07	9E-07	2E-06
401	0.58	0.1050	6E-06	8E-06	2E-06	2E-06	4E-06
402	0.63	0.1154	7E-06	9E-06	2E-06	2E-06	4E-06
404	0.68	0.1248	7E-06	9E-06	2E-06	2E-06	4E-06
407	0.85	0.1584	9E-06	1E-05	3E-06	3E-06	5E-06
413b	0.42	0.0770	5E-06	6E-06	1E-06	2E-06	3E-06
415	0.40	0.0735	4E-06	5E-06	1E-06	1E-06	2E-06
417	0.36	0.0656	4E-06	5E-06	1E-06	1E-06	2E-06
418	0.30	0.0548	3E-06	4E-06	9E-07	1E-06	2E-06
418b	0.31	0.0569	3E-06	4E-06	1E-06	1E-06	2E-06
419	0.44	0.0805	5E-06	6E-06	1E-06	2E-06	3E-06
421	0.50	0.0908	5E-06	7E-06	2E-06	2E-06	3E-06
422a	1.41	0.2972	2E-05	2E-05	5E-06	5E-06	1E-05
436	0.41	0.0936	6E-06	7E-06	2E-06	1E-06	3E-06
437 441	0.43	0.0985	6E-06	7E-06	2E-06	2E-06	3E-06
442	0.30	0.0690	4E-06	5E-06	1E-06	1E-06	2E-06
	0.12	0.0272	2E-06	2E-06	5E-07	4E-07	9E-07
443 451	0.31 0.35	0.0708 0.0780	4E-06 5E-06	5E-06 6E-06	1E-06	1E-06 1E-06	2E-06
452	0.61	0.0780	8E-06	1E-05	1E-06 2E-06	2E-06	3E-06 4E-06
453a	0.31	0.0577	3E-06	4E-06	1E-06	1E-06	2E-06
453b	0.31	0.0576	3E-06	4E-06	1E-06	1E-06	2E-06
454	0.25	0.0475	3E-06	4E-06	8E-07	9E-07	2E-06
455	0.15	0.0284	2E-06	2E-06	5E-07	5E-07	1E-06
456	0.15	0.0299	2E-06	2E-06	5E-07	6E-07	1E-06
456b	0.15	0.0298	2E-06	2E-06	5E-07	6E-07	1E-06
458	0.21	0.0412	2E-06	3E-06	7E-07	8E-07	1E-06
460	0.10	0.0205	1E-06	2E-06	3E-07	3E-07	7E-07
460b	0.10	0.0203	1E-06	2E-06	3E-07	3E-07	7E-07
461	0.09	0.0202	1E-06	1E-06	3E-07	3E-07	7E-07
462a	0.10	0.0214	1E-06	2E-06	4E-07	4E-07	7E-07
462b	0.10	0.0214	1E-06	2E-06	4E-07	4E-07	7E-07
462c		0.0214	1E-06	2E-06	4E-07	4E-07	7E-07
464	0.10 0.17	0.0374	2E-06	3E-06	6E-07	6E-07	1E-06
464b	0.17	0.0380	2E-06	3E-06	6E-07	6E-07	1E-06
465	0.14	0.0319	2E-06	2E-06	5E-07	5E-07	1E-06
466	0.18	0.0412	2E-06	3E-06	7E-07	7E-07	1E-06
467	0.27	0.0591	4E-06	4E-06	1E-06	1E-06	2E-06
467b	0.26	0.0586	3E-06	4E-06	1E-06	1E-06	2E-06
468a	0.15	0.0366	2E-06	3E-06	6E-07	6E-07	1E-06
468b	0.15	0.0349	2E-06	3E-06	6E-07	5E-07	1E-06
468c	0.16	0.0378	2E-06	3E-06	6E-07	6E-07	1E-06
468d	0.16	0.0367	2E-06	3E-06	6E-07	6E-07	1E-06
470	0.20	0.0466	3E-06	3E-06	8E-07	7E-07	2E-06
471	0.19	0.0447	3E-06	3E-06	8E-07	7E-07	2E-06
472a	0.20	0.0457	3E-06	3E-06	8E-07	7E-07	2E-06
472b	0.20	0.0466	3E-06	3E-06	8E-07	7E-07	2E-06
472c	0.18	0.0423	3E-06	3E-06	7E-07	7E-07	1E-06
474	0.17	0.0397	2E-06	3E-06	7E-07	6E-07	1E-06
475	0.25	0.0564	3E-06	4E-06	1E-06	9E-07	2E-06
475b	0.25	0.0565	3E-06	4E-06	1E-06	9E-07	2E-06
476	0.16	0.0384	2E-06	3E-06	7E-07	6E-07	1E-06
477a	0.19	0.0443	3E-06	3E-06	8E-07	7E-07	1E-06
477b	0.19	0.0441	3E-06	3E-06	8E-07	7E-07	1E-06
481	0.13	0.0315	2E-06	2E-06	5E-07	5E-07	1E-06
483	0.11	0.0274	2E-06	2E-06	5E-07	4E-07	9E-07
484	0.13	0.0317	2E-06	2E-06	5E-07	5E-07	1E-06
485a	0.10	0.0250	1E-06	2E-06	4E-07	4E-07	8E-07
485b	0.10	0.0251	1E-06	2E-06	4E-07	4E-07	8E-07
485c	0.10	0.0249	1E-06	2E-06	4E-07	4E-07	8E-07
485d	0.10	0.0247	1E-06	2E-06	4E-07	4E-07	8E-07
485e 485f	0.10	0.0248	1E-06	2E-06	4E-07	4E-07	8E-07
487	0.10	0.0251	1E-06	2E-06	4E-07	4E-07	9E-07
	0.38	0.0854	5E-06	6E-06	1E-06	1E-06	3E-06
488a	0.46	0.1020	6E-06	8E-06	2E-06	2E-06	3E-06
488b	0.49	0.1079	6E-06	8E-06	2E-06	2E-06	4E-06
515a	0.24	0.0543	3E-06	4E-06	9E-07	9E-07	2E-06
515b	0.18	0.0416	2E-06	3E-06	7E-07	7E-07	1E-06
516	0.16	0.0359	2E-06	3E-06	6E-07	6E-07	1E-06
517	0.19	0.0439	3E-06	3E-06	8E-07	7E-07	1E-06
518	0.21	0.0477	3E-06	4E-06	8E-07	8E-07	2E-06
519	0.18	0.0403	2E-06	3E-06	7E-07	7E-07	1E-06
522a	0.66	0.1418	8E-06	1E-05	2E-06	2E-06	5E-06
522b	2.30	0.4876	3E-05	4E-05	8E-06	8E-06	2E-05
522c	2.30	0.4882	3E-05	4E-05	8E-06	8E-06	2E-05
522d	2.29	0.4856	3E-05	4E-05	8E-06	8E-06	2E-05
526	3.43	0.7306	4E-05	5E-05	1E-05	1E-05	2E-05
527	3.19	0.6739	4E-05	5E-05	1E-05	1E-05	2E-05
528	3.15	0.6663	4E-05	5E-05	1E-05	1E-05	2E-05
529	3.12	0.6591	4E-05	5E-05	1E-05	1E-05	2E-05
530	3.06	0.6464	4E-05	5E-05	1E-05	1E-05	2E-05
531	3.05	0.6460	4E-05	5E-05	1E-05	1E-05	2E-05
531b	3.09	0.6525	4E-05	5E-05	1E-05	1E-05	2E-05
532	3.05	0.6460	4E-05	5E-05	1E-05	1E-05	2E-05
533	3.06	0.6471	4E-05	5E-05	1E-05	1E-05	2E-05

Sensitive Receptors	Change in Annual Average PM10 Concentration (µg/m³)	Change in Annual Average PM2.5 Concentration (μg/m³)	Risk (PM <sub>2.5</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> CV Hospitalisations, >65 years)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)	Risk (PM <sub>10</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> Asthma ED admissions, 1-14 years)
534	3.06	0.6479	4E-05	5E-05	1E-05	1E-05	2E-05
535	3.08	0.6507	4E-05	5E-05	1E-05	1E-05	2E-05
536 537	3.07	0.6492	4E-05	5E-05	1E-05	1E-05	2E-05
538	3.07	0.6497	4E-05	5E-05	1E-05	1E-05	2E-05
	3.22	0.6802	4E-05	5E-05	1E-05	1E-05	2E-05
539	3.17	0.6697	4E-05	5E-05	1E-05	1E-05	2E-05
541	3.13	0.6627	4E-05	5E-05	1E-05	1E-05	2E-05
542	3.15	0.6660	4E-05	5E-05	1E-05	1E-05	2E-05
543	3.17	0.6707	4E-05	5E-05	1E-05	1E-05	2E-05
543b	3.21	0.6789	4E-05	5E-05	1E-05	1E-05	2E-05
544	3.19	0.6750	4E-05	5E-05	1E-05	1E-05	2E-05
545	3.21	0.6791	4E-05	5E-05	1E-05	1E-05	2E-05
547	0.67	0.1502	9E-06	1E-05	3E-06	2E-06	5E-06
549	0.40	0.0831	5E-06	6E-06	1E-06	1E-06	3E-06
550 552	0.45 0.44	0.0952 0.0926	6E-06 6E-06	7E-06	2E-06	2E-06	3E-06
553	0.46	0.0969	6E-06	7E-06 7E-06	2E-06 2E-06	2E-06 2E-06	3E-06 3E-06
554	0.50	0.1055	6E-06	8E-06	2E-06	2E-06	4E-06
557	0.45	0.0935	6E-06	7E-06	2E-06	2E-06	3E-06
559	0.39	0.0825	5E-06	6E-06	1E-06	1E-06	3E-06
560	0.41	0.0852	5E-06	6E-06	1E-06	1E-06	3E-06
561	0.42	0.0878	5E-06	6E-06	1E-06	2E-06	3E-06
562	0.39	0.0825	5E-06	6E-06	1E-06	1E-06	3E-06
563	0.36	0.0746	4E-06	6E-06	1E-06	1E-06	3E-06
564	0.38	0.0806	5E-06	6E-06	1E-06	1E-06	3E-06
565	0.41	0.0867	5E-06	6E-06	1E-06	2E-06	3E-06
566	0.39	0.0827	5E-06	6E-06	1E-06	1E-06	3E-06
569	0.42	0.0898	5E-06	7E-06	2E-06	2E-06	3E-06
570	0.43	0.0921	5E-06	7E-06	2E-06	2E-06	3E-06
571	0.49	0.1024	6E-06	8E-06	2E-06	2E-06	3E-06
572	0.44	0.0930	6E-06	7E-06	2E-06	2E-06	3E-06
573	0.47	0.0990	6E-06	7E-06	2E-06	2E-06	3E-06
574	0.48	0.1017	6E-06	8E-06	2E-06	2E-06	3E-06
575	0.50	0.1054	6E-06	8E-06	2E-06	2E-06	4E-06
576	0.51	0.1079	6E-06	8E-06	2E-06	2E-06	4E-06
577a	0.55	0.1163	7E-06	9E-06	2E-06	2E-06	4E-06
577b	0.55	0.1145	7E-06	8E-06	2E-06	2E-06	4E-06
578	0.56	0.1180	7E-06	9E-06	2E-06	2E-06	4E-06
583	0.23	0.0506	3E-06	4E-06	9E-07	8E-07	2E-06
586	0.15	0.0333	2E-06	2E-06	6E-07	5E-07	1E-06
587a	0.12	0.0281	2E-06	2E-06	5E-07	4E-07	9E-07
587b	0.12	0.0281	2E-06	2E-06	5E-07	4E-07	9E-07
588	0.14	0.0321	2E-06	2E-06	5E-07	5E-07	1E-06
600a	3.09	0.6528	4E-05	5E-05	1E-05	1E-05	2E-05
600b	3.11	0.6577	4E-05	5E-05	1E-05	1E-05	2E-05
601	3.07	0.6491	4E-05	5E-05	1E-05	1E-05	2E-05
602	3.06	0.6461	4E-05	5E-05	1E-05	1E-05	2E-05
603	3.04	0.6426	4E-05	5E-05	1E-05	1E-05	2E-05
604	3.03	0.6399	4E-05	5E-05	1E-05	1E-05	2E-05
605	3.01	0.6371	4E-05	5E-05	1E-05	1E-05	2E-05
606	3.00	0.6335	4E-05	5E-05	1E-05	1E-05	2E-05
607	2.98	0.6300	4E-05	5E-05	1E-05	1E-05	2E-05
608	2.98	0.6292	4E-05	5E-05	1E-05	1E-05	2E-05
609	2.96	0.6265	4E-05	5E-05	1E-05	1E-05	2E-05
610	2.94	0.6217	4E-05	5E-05	1E-05	1E-05	2E-05
611	2.93	0.6186	4E-05	5E-05	1E-05	1E-05	2E-05
612	2.96	0.6258	4E-05	5E-05	1E-05	1E-05	2E-05
613	2.94	0.6208	4E-05	5E-05	1E-05	1E-05	2E-05
614	2.93	0.6186	4E-05	5E-05	1E-05	1E-05	2E-05
615	2.90	0.6133	4E-05	5E-05	1E-05	1E-05	2E-05
616a	2.65	0.5606	3E-05	4E-05	1E-05	1E-05	2E-05
616b	2.90	0.6139	4E-05	5E-05	1E-05	1E-05	2E-05
617a	2.82	0.5957	4E-05	4E-05	1E-05	1E-05	2E-05
618a	2.80	0.5909	4E-05	4E-05	1E-05	1E-05	2E-05
618b	2.82	0.5960	4E-05	4E-05	1E-05	1E-05	2E-05
619	2.79	0.5892	4E-05	4E-05	1E-05	1E-05	2E-05
621	2.77	0.5851	3E-05	4E-05	1E-05	1E-05	2E-05
622a	2.79	0.5890	4E-05	4E-05	1E-05	1E-05	2E-05
623a	0.31	0.0728	4E-06	5E-06	1E-06	1E-06	2E-06
623b	2.75	0.5802	3E-05	4E-05	1E-05	1E-05	2E-05
630a	2.52	0.5328	3E-05	4E-05	9E-06	9E-06	2E-05
631	2.50	0.5289	3E-05	4E-05	9E-06	9E-06	2E-05
632	2.52	0.5326	3E-05	4E-05	9E-06	9E-06	2E-05
648	2.62	0.5542	3E-05	4E-05	9E-06	1E-05	2E-05
649	2.65	0.5596	3E-05	4E-05	1E-05	1E-05	2E-05
650	2.67	0.5637	3E-05	4E-05	1E-05	1E-05	2E-05
651	2.63	0.5560	3E-05	4E-05	1E-05	1E-05	2E-05
652	2.71	0.5730	3E-05	4E-05	1E-05	1E-05	2E-05
653	2.72	0.5754	3E-05	4E-05	1E-05	1E-05	2E-05
654a	2.74	0.5807	3E-05	4E-05	1E-05	1E-05	2E-05
654b	2.72	0.5742	3E-05	4E-05	1E-05	1E-05	2E-05
655	2.72	0.5743	3E-05	4E-05	1E-05	1E-05	2E-05
658a	2.77	0.5854	3E-05	4E-05	1E-05	1E-05	2E-05
659	2.78	0.5880	3E-05	4E-05	1E-05	1E-05	2E-05
660a	2.77	0.5859	3E-05	4E-05	1E-05	1E-05	2E-05
660b	2.78	0.5875	3E-05	4E-05	1E-05	1E-05	2E-05
661	2.81	0.5933	4E-05	4E-05	1E-05	1E-05	2E-05
662	2.82	0.5965	4E-05	4E-05	1E-05	1E-05	2E-05
663	2.85	0.6021	4E-05	4E-05	1E-05	1E-05	2E-05
664	2.87	0.6064	4E-05	4E-05	1E-05	1E-05	2E-05
665a	2.95	0.6231	4E-05	5E-05	1E-05	1E-05	2E-05
665b	2.95	0.6233	4E-05	5E-05	1E-05	1E-05	2E-05
667a	3.56	0.7519	4E-05	6E-05	1E-05	1E-05	3E-05
667b	3.50	0.7404	4E-05	5E-05	1E-05	1E-05	3E-05
667c	3.55	0.7512	4E-05	6E-05	1E-05	1E-05	3E-05
667d	3.56	0.7521	4E-05	6E-05	1E-05	1E-05	3E-05
667e	3.53	0.7462	4E-05	6E-05	1E-05	1E-05	3E-05
667f	2.18	0.4626	3E-05	3E-05	8E-06	8E-06	2E-05
669 671	2.99 2.99	0.6327	4E-05 4E-05	5E-05 5E-05	1E-05	1E-05 1E-05	2E-05 2E-05
672	2.99	0.6311 0.6312	4E-05	5E-05	1E-05 1E-05	1E-05	2E-05
673	2.98	0.6303	4E-05	5E-05	1E-05	1E-05	2E-05
675	2.96	0.6259	4E-05	5E-05	1E-05	1E-05	2E-05
676	2.97	0.6282	4E-05	5E-05	1E-05	1E-05	2E-05
677	2.94	0.6220	4E-05	5E-05	1E-05	1E-05	2E-05
678	2.92	0.6170	4E-05	5E-05	1E-05	1E-05	2E-05
679	2.89	0.6115	4E-05	5E-05	1E-05	1E-05	2E-05
680	2.87	0.6069	4E-05	4E-05	1E-05	1E-05	2E-05
681	2.84	0.6008	4E-05	4E-05	1E-05	1E-05	2E-05
682a	2.78	0.5891	4E-05	4E-05	1E-05	1E-05	2E-05
682b	2.78	0.5889	4E-05	4E-05	1E-05	1E-05	2E-05
683	2.77	0.5854	3E-05	4E-05	1E-05	1E-05	2E-05
684	2.73	0.5773	3E-05	4E-05	1E-05	1E-05	2E-05
685	2.72	0.5757	3E-05	4E-05	1E-05	1E-05	2E-05
686	2.72	0.5766	3E-05	4E-05	1E-05	1E-05	2E-05
687	2.73	0.5771	3E-05	4E-05	1E-05	1E-05	2E-05
688	2.74	0.5792	3E-05	4E-05	1E-05	1E-05	2E-05

Sensitive Receptors	Change in Annual Average PM10 Concentration (µg/m³)	Change in Annual Average PM2.5 Concentration (µg/m³)	Risk (PM <sub>2.5</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> CV Hospitalisations, >65 years)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)	Risk (PM <sub>10</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> Asthma ED admissions, 1-14 years)
689	2.84	0.6014	4E-05	4E-05	1E-05	1E-05	2E-05
690	2.80	0.5923	4E-05	4E-05	1E-05	1E-05	2E-05
691	2.75	0.5821	3E-05	4E-05	1E-05	1E-05	2E-05
692	2.75	0.5817	3E-05	4E-05	1E-05	1E-05	2E-05
693	2.67	0.5649	3E-05	4E-05	1E-05	1E-05	2E-05
694a	2.66	0.5635	3E-05	4E-05	1E-05	1E-05	2E-05
694b	2.63	0.5565	3E-05	4E-05	1E-05	1E-05	2E-05
695	2.66	0.5640	3E-05	4E-05	1E-05	1E-05	2E-05
697	2.65	0.5613	3E-05	4E-05	1E-05	1E-05	2E-05
698	2.60	0.5510	3E-05	4E-05	9E-06	1E-05	2E-05
715	0.33	0.0772	5E-06	6E-06	1E-06	1E-06	3E-06
728	2.59	0.5497	3E-05	4E-05	9E-06	1E-05	2E-05
729	2.62	0.5541	3E-05	4E-05	9E-06	1E-05	2E-05
730	2.64	0.5593	3E-05	4E-05	1E-05	1E-05	2E-05
731	2.65	0.5622	3E-05	4E-05	1E-05	1E-05	2E-05
732	2.65	0.5614	3E-05	4E-05	1E-05	1E-05	2E-05
733	2.64	0.5590	3E-05	4E-05	1E-05	1E-05	2E-05
735a	2.63	0.5573	3E-05	4E-05	1E-05	1E-05	2E-05
735b	2.65	0.5604	3E-05	4E-05	1E-05	1E-05	2E-05
736	2.59	0.5488	3E-05	4E-05	9E-06	9E-06	2E-05
737	2.64	0.5587	3E-05	4E-05	1E-05	1E-05	2E-05
738	2.63	0.5576	3E-05	4E-05	1E-05	1E-05	2E-05
739	2.64	0.5592	3E-05	4E-05	1E-05	1E-05	2E-05
740a	2.56	0.5425	3E-05	4E-05	9E-06	9E-06	2E-05
740b	2.59	0.5477	3E-05	4E-05	9E-06	9E-06	2E-05
740c	2.61	0.5526	3E-05	4E-05	9E-06	1E-05	2E-05
740d	2.61	0.5530	3E-05	4E-05	9E-06	1E-05	2E-05
740e	2.59	0.5488	3E-05	4E-05	9E-06	9E-06	2E-05
740f	2.57	0.5437	3E-05	4E-05	9E-06	9E-06	2E-05
741	2.66	0.5632	3E-05	4E-05	1E-05	1E-05	2E-05
742	2.67	0.5658	3E-05	4E-05	1E-05	1E-05	2E-05
743	2.68	0.5672	3E-05	4E-05	1E-05	1E-05	2E-05
744	2.63	0.5561	3E-05	4E-05	1E-05	1E-05	2E-05
745	2.61	0.5521	3E-05	4E-05	9E-06	1E-05	2E-05
746	2.58	0.5473	3E-05	4E-05	9E-06	9E-06	2E-05
747	2.56	0.5426	3E-05	4E-05	9E-06	9E-06	2E-05
748a	2.54	0.5380	3E-05	4E-05	9E-06	9E-06	2E-05
748b	1.26	0.2672	2E-05	2E-05	5E-06	5E-06	9E-06
749a	2.72	0.5765	3E-05	4E-05	1E-05	1E-05	2E-05
749b	2.71	0.5743	3E-05	4E-05	1E-05	1E-05	2E-05
750	2.72	0.5754	3E-05	4E-05	1E-05	1E-05	2E-05
751	2.71	0.5738	3E-05	4E-05	1E-05	1E-05	2E-05
752a	2.75	0.5816	3E-05	4E-05	1E-05	1E-05	2E-05
752b	2.74	0.5800	3E-05	4E-05	1E-05	1E-05	2E-05
753 754	2.76 2.78	0.5850 0.5885	3E-05	4E-05	1E-05	1E-05	2E-05
755	2.80	0.5931	4E-05 4E-05	4E-05 4E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
756	2.83	0.5979	4E-05	4E-05	1E-05	1E-05	2E-05
757	2.84	0.6018	4E-05	4E-05	1E-05	1E-05	2E-05
758	2.86	0.6055	4E-05	4E-05	1E-05	1E-05	2E-05 2E-05
759a	2.89	0.6109	4E-05	5E-05	1E-05	1E-05	2E-05
759b	2.89	0.6111	4E-05	5E-05	1E-05	1E-05	2E-05
760	2.90	0.6146	4E-05	5E-05	1E-05	1E-05	2E-05
761	2.93	0.6190	4E-05	5E-05	1E-05	1E-05	2E-05
762	2.96	0.6262	4E-05	5E-05	1E-05	1E-05	2E-05
763	2.95	0.6248	4E-05	5E-05	1E-05	1E-05	2E-05
764	2.96	0.6265	4E-05	5E-05	1E-05	1E-05	2E-05
765a	2.95	0.6236	4E-05	5E-05	1E-05	1E-05	2E-05
765b	2.96	0.6265	4E-05	5E-05	1E-05	1E-05	2E-05
766	2.95	0.6240	4E-05	5E-05	1E-05	1E-05	2E-05
767	2.94	0.6230	4E-05	5E-05	1E-05	1E-05	2E-05
768	2.94	0.6228	4E-05	5E-05	1E-05	1E-05	2E-05
769	2.86	0.6061	4E-05	4E-05	1E-05	1E-05	2E-05
770	2.94	0.6224	4E-05	5E-05	1E-05	1E-05	2E-05
771	2.94	0.6222	4E-05	5E-05	1E-05	1E-05	2E-05
772	2.94	0.6229	4E-05	5E-05	1E-05	1E-05	2E-05
773	2.94	0.6228	4E-05	5E-05	1E-05	1E-05	2E-05
774	2.89	0.6111	4E-05	5E-05	1E-05	1E-05	2E-05
775	2.89	0.6120	4E-05	5E-05	1E-05	1E-05	2E-05
776 777	2.94 2.92	0.6223 0.6179	4E-05	5E-05	1E-05	1E-05	2E-05
778a	2.91	0.6152	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
778b	2.93	0.6201	4E-05	5E-05	1E-05	1E-05	2E-05
779a	2.90	0.6131	4E-05	5E-05	1E-05	1E-05	2E-05
779b	2.86	0.6058	4E-05	4E-05	1E-05	1E-05	2E-05
780	2.91	0.6163	4E-05	5E-05	1E-05	1E-05	2E-05
781	2.93	0.6204	4E-05	5E-05	1E-05	1E-05	2E-05
782	2.92	0.6174	4E-05	5E-05	1E-05	1E-05	2E-05
783	2.92	0.6186	4E-05	5E-05	1E-05	1E-05	2E-05
784	2.71	0.5740	3E-05	4E-05	1E-05	1E-05	2E-05
785	2.71	0.5738	3E-05	4E-05	1E-05	1E-05	2E-05
786	2.73	0.5786	3E-05	4E-05	1E-05	1E-05	2E-05
787a	2.71	0.5740	3E-05	4E-05	1E-05	1E-05	2E-05
787b	2.76	0.5852	3E-05	4E-05	1E-05	1E-05	2E-05
788	2.72	0.5753	3E-05	4E-05	1E-05	1E-05	2E-05
789	2.72	0.5767	3E-05	4E-05	1E-05	1E-05	2E-05
790a	2.71	0.5729	3E-05	4E-05	1E-05	1E-05	2E-05
790b	2.73	0.5775	3E-05	4E-05	1E-05	1E-05	2E-05
791a	2.71	0.5735	3E-05	4E-05	1E-05	1E-05	2E-05
791b	2.73	0.5781	3E-05	4E-05	1E-05	1E-05	2E-05
792a	2.78	0.5880	3E-05	4E-05	1E-05	1E-05	2E-05
792b	2.72	0.5759	3E-05	4E-05	1E-05	1E-05	2E-05
793	2.71	0.5742	3E-05	4E-05	1E-05	1E-05	2E-05
794	2.72	0.5765	3E-05	4E-05	1E-05	1E-05	2E-05
795	2.74	0.5803	3E-05	4E-05	1E-05	1E-05	2E-05
796	2.75	0.5829	3E-05	4E-05	1E-05	1E-05	2E-05
797a	2.76	0.5841	3E-05	4E-05	1E-05	1E-05	2E-05
797b	2.79	0.5896	4E-05	4E-05	1E-05	1E-05	2E-05
798	2.78	0.5877	3E-05	4E-05	1E-05	1E-05	2E-05
801	2.82	0.5960	4E-05	4E-05	1E-05	1E-05	2E-05
802	2.83	0.5982	4E-05	4E-05	1E-05	1E-05	2E-05
803a	2.73	0.5771	3E-05	4E-05	1E-05	1E-05	2E-05
803b	2.72	0.5754	3E-05	4E-05	1E-05	1E-05	2E-05
804	2.72	0.5750	3E-05	4E-05	1E-05	1E-05	2E-05
805	2.70	0.5721	3E-05	4E-05	1E-05	1E-05	2E-05
806	2.41	0.5106	3E-05	4E-05	9E-06	9E-06	2E-05
807	2.41	0.5097	3E-05	4E-05	9E-06	9E-06	2E-05
808	2.40	0.5088	3E-05	4E-05	9E-06	9E-06	2E-05
809	2.41	0.5095	3E-05	4E-05	9E-06	9E-06	2E-05
810	2.40	0.5084	3E-05	4E-05	9E-06	9E-06	2E-05
811	2.39	0.5061	3E-05	4E-05	9E-06	9E-06	2E-05
812	2.39	0.5056	3E-05	4E-05	9E-06	9E-06	2E-05
813	2.38	0.5036	3E-05	4E-05	9E-06	9E-06	2E-05
814	2.37	0.5021	3E-05	4E-05	9E-06	9E-06	2E-05
815a	2.36	0.4995	3E-05	4E-05	9E-06	9E-06	2E-05
815b	2.36	0.5013	3E-05	4E-05	9E-06	9E-06	2E-05

Sensitive Receptors	Change in Annual Average PM10 Concentration (µg/m³)	Change in Annual Average PM2.5 Concentration (µg/m³)	Risk (PM <sub>2.5</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> CV Hospitalisations, >65 years)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)	Risk (PM <sub>10</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> Asthma ED admissions, 1-14 years)
817	2.31	0.4905	3E-05	4E-05	8E-06	8E-06	2E-05
819	2.15	0.4564	3E-05	3E-05	8E-06	8E-06	2E-05
820a	2.12	0.4501	3E-05	3E-05	8E-06	8E-06	2E-05
820b	2.14	0.4544	3E-05	3E-05	8E-06	8E-06	2E-05
821	2.10	0.4466	3E-05	3E-05	8E-06	8E-06	2E-05
822	2.09	0.4438	3E-05	3E-05	8E-06	8E-06	2E-05
823a	2.07	0.4408	3E-05	3E-05	8E-06	8E-06	1E-05
823b	2.09	0.4453	3E-05	3E-05	8E-06	8E-06	2E-05
824	2.04	0.4339	3E-05	3E-05	7E-06	7E-06	1E-05
825	2.02	0.4304	3E-05	3E-05	7E-06	7E-06	1E-05
826	2.02	0.4288	3E-05	3E-05	7E-06	7E-06	1E-05
827	2.00	0.4263	3E-05	3E-05	7E-06	7E-06	1E-05
828	1.96	0.4178	2E-05	3E-05	7E-06	7E-06	1E-05
829a	1.93	0.4118	2E-05	3E-05	7E-06	7E-06	1E-05
829b	1.93	0.4115	2E-05	3E-05	7E-06	7E-06	1E-05
830	1.92	0.4078	2E-05	3E-05	7E-06	7E-06	1E-05
831	1.91	0.4065	2E-05	3E-05	7E-06	7E-06	1E-05
832	1.90	0.4039	2E-05	3E-05	7E-06	7E-06	1E-05
833	1.88	0.4002	2E-05	3E-05	7E-06	7E-06	1E-05
834	1.86	0.3954	2E-05	3E-05	7E-06	7E-06	1E-05
835	1.84	0.3915	2E-05	3E-05	7E-06	7E-06	1E-05
836	1.82	0.3882	2E-05	3E-05	7E-06	7E-06	1E-05
837	1.81	0.3859	2E-05	3E-05	7E-06	7E-06	1E-05
838	1.79	0.3810	2E-05	3E-05	7E-06	7E-06	1E-05
839	1.77	0.3768	2E-05	3E-05	6E-06	6E-06	1E-05
840	1.76	0.3739	2E-05	3E-05	6E-06	6E-06	1E-05
841	1.74	0.3710	2E-05	3E-05	6E-06	6E-06	1E-05
843a	1.68	0.3576	2E-05	3E-05	6E-06	6E-06	1E-05
843b	1.69	0.3606	2E-05	3E-05	6E-06	6E-06	1E-05
844a	1.58	0.3367	2E-05	2E-05	6E-06	6E-06	1E-05
845	1.48	0.3138	2E-05	2E-05	5E-06	5E-06	1E-05
846	1.46	0.3104	2E-05	2E-05	5E-06	5E-06	1E-05
847	1.45	0.3091	2E-05	2E-05	5E-06	5E-06	1E-05
848	1.44	0.3059	2E-05	2E-05	5E-06	5E-06	1E-05
849	1.43	0.3037	2E-05	2E-05	5E-06	5E-06	1E-05
850	1.41	0.3008	2E-05	2E-05	5E-06	5E-06	1E-05
853	1.37	0.2919	2E-05	2E-05	5E-06	5E-06	1E-05
854	1.36	0.2891	2E-05	2E-05	5E-06	5E-06	1E-05
855	1.35	0.2866	2E-05	2E-05	5E-06	5E-06	1E-05
856	1.34	0.2842	2E-05	2E-05	5E-06	5E-06	1E-05
857	1.33	0.2820	2E-05	2E-05	5E-06	5E-06	1E-05
858		0.2796	2E-05	2E-05	5E-06	5E-06	9E-06
859	1.30	0.2771	2E-05	2E-05	5E-06	5E-06	9E-06
860	1.30	0.2755	2E-05	2E-05	5E-06	5E-06	9E-06
861	1.28	0.2730	2E-05	2E-05	5E-06	5E-06	9E-06
862	1.27	0.2704	2E-05	2E-05	5E-06	5E-06	9E-06
863	1.24	0.2643	2E-05	2E-05	5E-06	5E-06	9E-06
864	1.23	0.2615	2E-05	2E-05	4E-06	5E-06	9E-06
865	1.22	0.2598	2E-05	2E-05	4E-06	4E-06	9E-06
866	1.14	0.2421	1E-05	2E-05	4E-06	4E-06	8E-06
867	1.13	0.2406	1E-05	2E-05	4E-06	4E-06	8E-06
868	1.12	0.2386	1E-05	2E-05	4E-06	4E-06	8E-06
870	1.11	0.2358	1E-05	2E-05	4E-06	4E-06	8E-06
871	1.10	0.2334	1E-05	2E-05	4E-06	4E-06	8E-06
872a	1.09	0.2320	1E-05	2E-05	4E-06	4E-06	8E-06
900a	0.30	0.0704	4E-06	5E-06	1E-06	1E-06	2E-06
900b	0.38	0.0879	5E-06	6E-06	2E-06	1E-06	3E-06
901	0.40	0.0918	5E-06	7E-06	2E-06	1E-06	3E-06
902	0.40	0.0913	5E-06	7E-06	2E-06	1E-06	3E-06
903	0.39	0.0906	5E-06	7E-06	2E-06	1E-06	3E-06
904	0.39	0.0899	5E-06	7E-06	2E-06	1E-06	3E-06
905	0.39	0.0893	5E-06	7E-06	2E-06	1E-06	3E-06
906		0.0886	5E-06	7E-06	2E-06	1E-06	3E-06
907	0.38	0.0881	5E-06	7E-06	2E-06	1E-06	3E-06
908	0.38	0.0874	5E-06	6E-06	1E-06	1E-06	3E-06
909	0.37	0.0863	5E-06	6E-06	1E-06	1E-06	3E-06
911	0.37	0.0847	5E-06	6E-06	1E-06	1E-06	3E-06
912	0.37	0.0863	5E-06	6E-06	1E-06	1E-06	3E-06
913	0.36	0.0836	5E-06	6E-06	1E-06	1E-06	3E-06
914	0.36	0.0830	5E-06	6E-06	1E-06	1E-06	3E-06
915	0.36	0.0826	5E-06	6E-06	1E-06	1E-06	3E-06
916	0.35	0.0818	5E-06	6E-06	1E-06	1E-06	3E-06
917	0.35	0.0810	5E-06	6E-06	1E-06	1E-06	3E-06
918	0.36	0.0823	5E-06	6E-06	1E-06	1E-06	3E-06
919	0.36	0.0829	5E-06	6E-06	1E-06	1E-06	3E-06
920	0.36	0.0835	5E-06	6E-06	1E-06	1E-06	3E-06
921	0.36	0.0840	5E-06	6E-06	1E-06	1E-06	3E-06
922	0.37	0.0846	5E-06	6E-06	1E-06	1E-06	3E-06
924	0.38	0.0869	5E-06	6E-06	1E-06	1E-06	3E-06
925	0.38	0.0875	5E-06	6E-06	1E-06	1E-06	3E-06
926	0.38	0.0882	5E-06	7E-06	2E-06	1E-06	3E-06
927	0.38	0.0889	5E-06	7E-06	2E-06	1E-06	3E-06
928	0.39	0.0896	5E-06	7E-06	2E-06	1E-06	3E-06
929	0.39	0.0905	5E-06	7E-06	2E-06	1E-06	3E-06
930	0.39	0.0895	5E-06	7E-06	2E-06	1E-06	3E-06
931	0.38	0.0889	5E-06	7E-06	2E-06	1E-06	3E-06
932a	0.38	0.0870	5E-06	6E-06	1E-06	1E-06	3E-06
932b	0.37	0.0865	5E-06	6E-06	1E-06	1E-06	3E-06
933	0.37	0.0866	5E-06	6E-06	1E-06	1E-06	3E-06
934	0.37	0.0858	5E-06	6E-06	1E-06	1E-06	3E-06
935a	0.37	0.0849	5E-06	6E-06	1E-06	1E-06	3E-06
935b	0.37	0.0854	5E-06	6E-06	1E-06	1E-06	3E-06
936	0.36	0.0839	5E-06	6E-06	1E-06	1E-06	3E-06
937 938	0.37	0.0847	5E-06 5E-06	6E-06 6E-06	1E-06	1E-06	3E-06
939	0.37 0.37	0.0853 0.0858	5E-06	6E-06	1E-06 1E-06	1E-06 1E-06	3E-06 3E-06
940	0.37	0.0865	5E-06	6E-06	1E-06	1E-06	3E-06
941	0.38	0.0869	5E-06	6E-06	1E-06	1E-06	3E-06
942	0.37	0.0853	5E-06	6E-06	1E-06	1E-06	3E-06
943	0.37	0.0845	5E-06	6E-06	1E-06	1E-06	3E-06
944	0.36	0.0840	5E-06	6E-06	1E-06	1E-06	3E-06
945a	0.36	0.0833	5E-06	6E-06	1E-06	1E-06	3E-06
945b	0.36	0.0829	5E-06	6E-06	1E-06	1E-06	3E-06
946	0.36	0.0827	5E-06	6E-06	1E-06	1E-06	3E-06
947	0.36	0.0822	5E-06	6E-06	1E-06	1E-06	3E-06
948	0.35	0.0803	5E-06	6E-06	1E-06	1E-06	3E-06
949	0.35	0.0815	5E-06	6E-06	1E-06	1E-06	3E-06
950	0.35	0.0810	5E-06	6E-06	1E-06	1E-06	3E-06
951	0.35	0.0800	5E-06	6E-06	1E-06	1E-06	3E-06
952	0.34	0.0794	5E-06	6E-06	1E-06	1E-06	3E-06
953	0.34	0.0787	5E-06	6E-06	1E-06	1E-06	3E-06
954	0.34	0.0781	5E-06	6E-06	1E-06	1E-06	3E-06
955	0.34	0.0794	5E-06	6E-06	1E-06	1E-06	3E-06
956	0.33	0.0771	5E-06	6E-06	1E-06	1E-06	3E-06
957a	0.31	0.0720	4E-06	5E-06	1E-06	1E-06	2E-06
957b	0.34	0.0777	5E-06	6E-06	1E-06	1E-06	3E-06

Sensitive Receptors	Change in Annual Average PM10 Concentration (µg/m³)	Change in Annual Average PM2.5 Concentration (µg/m³)	Risk (PM <sub>2.5</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> CV Hospitalisations, >65 years)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)	Risk (PM <sub>10</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> Asthma ED admissions, 1-14 years)
959	0.34	0.0786	5E-06	6E-06	1E-06	1E-06	3E-06
960	0.34	0.0791	5E-06	6E-06	1E-06	1E-06	3E-06
961	0.34	0.0798	5E-06	6E-06	1E-06	1E-06	3E-06
962	0.35	0.0804	5E-06	6E-06	1E-06	1E-06	3E-06
963	0.35	0.0811	5E-06	6E-06	1E-06	1E-06	3E-06
964	0.35	0.0819	5E-06	6E-06	1E-06	1E-06	3E-06
965	0.35	0.0810	5E-06	6E-06	1E-06	1E-06	3E-06
966	0.35	0.0799	5E-06	6E-06	1E-06	1E-06	3E-06
967a	0.34	0.0794	5E-06	6E-06	1E-06	1E-06	3E-06
967b	0.34	0.0789	5E-06	6E-06	1E-06	1E-06	3E-06
968	0.34	0.0789	5E-06	6E-06		1E-06	3E-06
969	0.34	0.0782	5E-06	6E-06	1E-06 1E-06	1E-06	3E-06
970	0.34	0.0778	5E-06	6E-06	1E-06	1E-06	3E-06
971	0.33	0.0774	5E-06	6E-06	1E-06	1E-06	3E-06
972	0.33	0.0769	5E-06	6E-06	1E-06	1E-06	3E-06
973	0.33	0.0765	5E-06	6E-06	1E-06	1E-06	3E-06
974	0.33	0.0760	5E-06	6E-06	1E-06	1E-06	3E-06
976	0.32	0.0731	4E-06	5E-06	1E-06	1E-06	2E-06
977a	0.32	0.0733	4E-06	5E-06	1E-06	1E-06	2E-06
977b	0.33	0.0754	4E-06	6E-06	1E-06	1E-06	3E-06
978	0.31	0.0724	4E-06	5E-06	1E-06	1E-06	2E-06
979a 979b	0.29 0.31	0.0679 0.0719	4E-06	5E-06	1E-06	1E-06	2E-06
980	0.30	0.0706	4E-06 4E-06	5E-06 5E-06	1E-06 1E-06	1E-06 1E-06	2E-06 2E-06
981a	0.31	0.0708	4E-06	5E-06	1E-06	1E-06	2E-06
981b	0.31	0.0713	4E-06	5E-06	1E-06	1E-06	2E-06
982 983	0.31	0.0712	4E-06	5E-06	1E-06	1E-06	2E-06
984	0.31	0.0717	4E-06	5E-06	1E-06	1E-06	2E-06
	0.31	0.0726	4E-06	5E-06	1E-06	1E-06	2E-06
985	0.32	0.0734	4E-06	5E-06	1E-06	1E-06	2E-06
986	0.31	0.0726	4E-06	5E-06	1E-06	1E-06	2E-06
987 988a	0.32 0.32	0.0733 0.0736	4E-06	5E-06	1E-06	1E-06	2E-06
988b	0.32	0.0740	4E-06 4E-06	5E-06 5E-06	1E-06 1E-06	1E-06 1E-06	2E-06 3E-06
989a	0.32	0.0740	4E-06	5E-06	1E-06	1E-06	3E-06
989b	0.32	0.0743	4E-06	5E-06	1E-06	1E-06	3E-06
990	0.32	0.0748	4E-06	6E-06	1E-06	1E-06	3E-06
991	0.32	0.0753	4E-06	6E-06	1E-06	1E-06	3E-06
992	0.33	0.0757	5E-06	6E-06	1E-06	1E-06	3E-06
993a	0.33	0.0762	5E-06	6E-06	1E-06	1E-06	3E-06
993b	0.33	0.0760	5E-06	6E-06	1E-06	1E-06	3E-06
994a	0.33	0.0762	5E-06	6E-06	1E-06	1E-06	3E-06
994b	0.33	0.0760	5E-06	6E-06	1E-06	1E-06	3E-06
995	0.33	0.0765	5E-06	6E-06	1E-06	1E-06	3E-06
997	0.34	0.0778	5E-06	6E-06	1E-06	1E-06	3E-06
998	0.34	0.0782	5E-06	6E-06	1E-06	1E-06	3E-06
999	0.33	0.0761	5E-06	6E-06	1E-06	1E-06	3E-06
1000	0.32	0.0750	4E-06	6E-06	1E-06	1E-06	3E-06
1001	0.32	0.0743	4E-06	5E-06	1E-06	1E-06	3E-06
1002	0.32	0.0738	4E-06	5E-06	1E-06	1E-06	2E-06
1003	0.32	0.0733	4E-06	5E-06	1E-06	1E-06	2E-06
1004	0.31	0.0728	4E-06	5E-06	1E-06	1E-06	2E-06
1005	0.31	0.0723	4E-06	5E-06	1E-06	1E-06	2E-06
1006	0.31	0.0719	4E-06	5E-06	1E-06	1E-06	2E-06
1007	0.31	0.0715	4E-06	5E-06	1E-06	1E-06	2E-06
1008	0.31	0.0710	4E-06	5E-06	1E-06	1E-06	2E-06
1009	0.30	0.0703	4E-06	5E-06	1E-06	1E-06	2E-06
1010	0.31	0.0712	4E-06	5E-06	1E-06	1E-06	2E-06
1011	0.31	0.0720	4E-06	5E-06	1E-06	1E-06	2E-06
1012	0.31	0.0727	4E-06	5E-06	1E-06	1E-06	2E-06
1014	0.32	0.0739	4E-06	5E-06	1E-06	1E-06	2E-06
1015	0.32	0.0744	4E-06	5E-06	1E-06	1E-06	3E-06
1016	0.32	0.0731	4E-06		1E-06	1E-06	2E-06
1017	0.31	0.0724	4E-06	5E-06 5E-06	1E-06	1E-06	2E-06
1018	0.31	0.0715	4E-06	5E-06	1E-06	1E-06	2E-06
1019	0.31	0.0712	4E-06	5E-06	1E-06	1E-06	2E-06
1020	0.30	0.0706	4E-06	5E-06	1E-06	1E-06	2E-06
1021	0.30	0.0702	4E-06	5E-06	1E-06	1E-06	2E-06
1022	0.30	0.0697	4E-06	5E-06	1E-06	1E-06	2E-06
1023	0.30	0.0693	4E-06	5E-06	1E-06	1E-06	2E-06
1024	0.30	0.0688	4E-06	5E-06	1E-06	1E-06	2E-06
1025	0.31	0.0716	4E-06	5E-06	1E-06	1E-06	2E-06
1026	0.31	0.0724	4E-06	5E-06	1E-06	1E-06	2E-06
1027	0.31	0.0719	4E-06	5E-06	1E-06	1E-06	2E-06
1028	0.31	0.0711	4E-06	5E-06	1E-06	1E-06	2E-06
1029	0.30	0.0700	4E-06	5E-06	1E-06	1E-06	2E-06
1030	0.30	0.0697	4E-06	5E-06	1E-06	1E-06	2E-06
1031	0.30	0.0686	4E-06	5E-06	1E-06	1E-06	2E-06
1032	0.29	0.0680	4E-06	5E-06	1E-06	1E-06	2E-06
1033	0.29	0.0678	4E-06	5E-06	1E-06	1E-06	2E-06
1034	0.29	0.0671	4E-06	5E-06	1E-06	1E-06	2E-06
1035	0.29	0.0665	4E-06	5E-06	1E-06	1E-06	2E-06
1036a	0.28	0.0660	4E-06	5E-06	1E-06	1E-06	2E-06
1036b 1037	0.29	0.0667	4E-06	5E-06	1E-06	1E-06	2E-06
1038	0.29	0.0670	4E-06	5E-06	1E-06	1E-06	2E-06
	0.29	0.0675	4E-06	5E-06	1E-06	1E-06	2E-06
1039	0.29	0.0683	4E-06	5E-06	1E-06	1E-06	2E-06
1040	0.30	0.0688	4E-06	5E-06	1E-06	1E-06	2E-06
1041 1042	0.30	0.0691 0.0694	4E-06 4E-06	5E-06 5E-06	1E-06	1E-06 1E-06	2E-06 2E-06
1043	0.30 0.30	0.0703	4E-06	5E-06	1E-06 1E-06	1E-06	2E-06
1044	0.30	0.0698	4E-06	5E-06	1E-06	1E-06	2E-06
1045	0.29	0.0664	4E-06	5E-06	1E-06	1E-06	2E-06
1046	0.28	0.0652	4E-06	5E-06	1E-06	1E-06	2E-06
1077	0.30	0.0686	4E-06	5E-06	1E-06	1E-06	2E-06
1078	0.29	0.0669	4E-06	5E-06	1E-06	1E-06	2E-06
1079	0.28	0.0655	4E-06	5E-06	1E-06	1E-06	2E-06
1080	0.28	0.0645	4E-06	5E-06	1E-06	1E-06	2E-06
1081	0.28	0.0658	4E-06	5E-06	1E-06	1E-06	2E-06
1082a	0.29	0.0668	4E-06	5E-06	1E-06	1E-06	2E-06
1082b	0.29	0.0676	4E-06	5E-06	1E-06	1E-06	2E-06
1100a	0.09	0.0220	1E-06	2E-06	4E-07	3E-07	7E-07
1100b	0.09	0.0217	1E-06	2E-06	4E-07	3E-07	7E-07
Council/State-owned receptors	0.42	0.0897	5E-06	7E-06	2E-06	2E-06	3E-06
286f	0.40	0.0844	5E-06	6E-06	1E-06	1E-06	3E-06
N1	0.29	0.0683	4E-06	5E-06	1E-06	1E-06	2E-06
N2	0.29	0.0680	4E-06	5E-06	1E-06	1E-06	2E-06
N3	0.29	0.0676	4E-06	5E-06	1E-06	1E-06	2E-06
N4	0.29	0.0673	4E-06	5E-06	1E-06	1E-06	2E-06
N5	0.30	0.0693	4E-06	5E-06	1E-06	1E-06	2E-06
N6	0.30	0.0696	4E-06	5E-06	1E-06	1E-06	2E-06
N7	0.30	0.0700	4E-06	5E-06	1E-06	1E-06	2E-06
N8	0.30	0.0704	4E-06	5E-06	1E-06	1E-06	2E-06
N9	0.30	0.0707	4E-06	5E-06	1E-06	1E-06	2E-06
N10	0.31	0.0713	4E-06	5E-06	1E-06	1E-06	2E-06
N11	0.31	0.0716	4E-06	5E-06	1E-06	1E-06	2E-06

Sensitive Receptors	Change in Annual Average PM10 Concentration (μg/m³)	Change in Annual Average PM2.5 Concentration (µg/m³)	Risk (PM <sub>2.5</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> CV Hospitalisations, >65 years)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)	Risk (PM <sub>10</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> Asthma ED admissions, 1-14 years)
N12 N13	0.28 0.28	0.0656 0.0660	4E-06 4E-06	5E-06 5E-06	1E-06 1E-06	1E-06 1E-06	2E-06 2E-06
N14	0.29	0.0668	4E-06 4E-06	5E-06 5E-06	1E-06 1E-06	1E-06	2E-06
N15 N16	0.29 0.29	0.0671 0.0675	4E-06	5E-06	1E-06	1E-06 1E-06	2E-06 2E-06
N17 N18	0.29 0.29	0.0679 0.0684	4E-06 4E-06	5E-06 5E-06	1E-06 1E-06	1E-06 1E-06	2E-06 2E-06
N19	0.30	0.0688	4E-06	5E-06	1E-06	1E-06	2E-06
N20 N21	0.30 0.31	0.0692 0.0713	4E-06 4E-06	5E-06 5E-06	1E-06 1E-06	1E-06 1E-06	2E-06 2E-06
N22 N23	0.42 0.41	0.0911 0.0905	5E-06 5E-06	7E-06 7E-06	2E-06 2E-06	2E-06 2E-06	3E-06 3E-06
N24	0.41	0.0899	5E-06	7E-06	2E-06	2E-06	3E-06
N25 N26	0.35 0.34	0.0768 0.0765	5E-06 5E-06	6E-06 6E-06	1E-06 1E-06	1E-06 1E-06	3E-06 3E-06
N27 N28	0.34 1.03	0.0755 0.2193	4E-06 1E-05	6E-06 2E-05	1E-06 4E-06	1E-06 4E-06	3E-06 7E-06
Aged care receptors							
658a 658b	2.77 2.65	0.5854 0.5600	3E-05 3E-05	4E-05 4E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
658c	2.64	0.5586	3E-05	4E-05	1E-05	1E-05	2E-05
658d 658e	2.65 2.67	0.5601 0.5653	3E-05 3E-05	4E-05 4E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
Prison receptors MP1	0.07	0.3261	0E+00 2E-05	0E+00 2E-05	0E+00 6E-06	0E+00 3E-07	0E+00 1E-05
MP42	0.07	0.3134	2E-05	2E-05	5E-06	3E-07	1E-05
MP80 Commercial accomodation receptors	0.06	0.2842	2E-05	2E-05 4E-05	5E-06 1E-05	2E-07	1E-05
622b 622c	2.84	0.5991	4E-05 4E-05	4E-05 4E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
622d 622e	2.82 2.81	0.5958 0.5940	4E-05 4E-05	4E-05 4E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
622f	2.81	0.5925	4E-05	4E-05	1E-05	1E-05	2E-05
622g 622h	2.80 2.83	0.5914 0.5971	4E-05 4E-05	4E-05 4E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
622i	2.83	0.5980	4E-05	4E-05	1E-05	1E-05	2E-05
622j 622k	2.84 2.83	0.5997 0.5987	4E-05 4E-05	4E-05 4E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
622I 622m	2.85 2.85	0.6009 0.6013	4E-05 4E-05	4E-05 4E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
622n	2.85	0.6012	4E-05	4E-05	1E-05	1E-05	2E-05
622p	2.84	0.5992 0.5986	4E-05 4E-05	4E-05 4E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
622q	2.82	0.5967	4E-05	4E-05	1E-05	1E-05	2E-05
622r 622s	2.81 2.80	0.5939 0.5905	4E-05 4E-05	4E-05 4E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
622t 622u	2.79 2.89	0.5890 0.6097	4E-05 4E-05	4E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
622v	2.88	0.6092	4E-05	5E-05	1E-05	1E-05	2E-05
622w 622x	2.77 2.87	0.5862 0.6056	3E-05 4E-05	4E-05 4E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
622y	2.84	0.5995	4E-05	4E-05	1E-05	1E-05	2E-05
622z 622aa	2.81 2.80	0.5947 0.5921	4E-05 4E-05	4E-05 4E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
622ab 622ac	2.79 2.88	0.5903 0.6087	4E-05 4E-05	4E-05 4E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
622ad	2.88	0.6078	4E-05	4E-05	1E-05	1E-05	2E-05
622ae 622af	2.87 2.87	0.6068 0.6059	4E-05 4E-05	4E-05 4E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
622ag	2.86	0.6051	4E-05	4E-05	1E-05	1E-05	2E-05
975 Commercial receptors	0.32	0.0744	4E-06 0E+00	5E-06 0E+00	1E-06 0E+00	1E-06 0E+00	3E-06 0E+00
6 195e	5.88 0.78	1.2170 0.1732	7E-05 1E-05	9E-05 1E-05	2E-05 3E-06	2E-05 3E-06	4E-05 6E-06
140b-1	1.21	0.2570	2E-05	2E-05	4E-06	4E-06	9E-06
140b-2 140b-3	1.21 1.18	0.2565 0.2507	2E-05 1E-05	2E-05 2E-05	4E-06 4E-06	4E-06 4E-06	9E-06 8E-06
140b-4	1.20	0.2561	2E-05	2E-05	4E-06	4E-06	9E-06
202c 202d	1.43 1.47	0.3068 0.3158	2E-05 2E-05	2E-05 2E-05	5E-06 5E-06	5E-06 5E-06	1E-05 1E-05
202e 202f	1.44 1.42	0.3105 0.3052	2E-05 2E-05	2E-05 2E-05	5E-06 5E-06	5E-06 5E-06	1E-05 1E-05
202g	1.43	0.3073	2E-05	2E-05	5E-06	5E-06	1E-05
472d 472e	0.19 0.19	0.0437 0.0433	3E-06 3E-06	3E-06 3E-06	7E-07 7E-07	7E-07 7E-07	1E-06 1E-06
472f	0.19	0.0449	3E-06	3E-06	8E-07	7E-07	2E-06
472g 472h	0.19 0.19	0.0453 0.0451	3E-06 3E-06	3E-06 3E-06	8E-07 8E-07	7E-07 7E-07	2E-06 2E-06
472i 472j	0.19 0.19	0.0448 0.0441	3E-06 3E-06	3E-06 3E-06	8E-07 8E-07	7E-07 7E-07	2E-06 1E-06
472k	0.19	0.0434	3E-06	3E-06	7E-07	7E-07	1E-06
472l 472m	0.20 0.20	0.0465 0.0460	3E-06 3E-06	3E-06 3E-06	8E-07 8E-07	7E-07 7E-07	2E-06 2E-06
489	3.25	0.6776	4E-05	5E-05	1E-05	1E-05	2E-05
546a	3.12 3.59	0.6607 0.7591	4E-05 5E-05	5E-05 6E-05	1E-05 1E-05	1E-05 1E-05	2E-05 3E-05
546b 546c	3.51 3.50	0.7425 0.7403	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	3E-05 3E-05
617b	2.84	0.6004	4E-05	4E-05	1E-05	1E-05	2E-05
617c 617d	2.92 2.92	0.6168 0.6170	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
617e	2.94	0.6208	4E-05	5E-05	1E-05	1E-05	2E-05
617f 617g	2.93 2.84	0.6185 0.5999	4E-05 4E-05	5E-05 4E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
617h 617i	2.88 2.87	0.6083 0.6059	4E-05 4E-05	4E-05 4E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
620	2.74	0.5797	3E-05	4E-05	1E-05	1E-05	2E-05
622ah 622ai	2.84 2.83	0.5992 0.5987	4E-05 4E-05	4E-05 4E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
611aj 622ak	2.78 2.76	0.5878 0.5837	3E-05	4E-05 4E-05	1E-05	1E-05	2E-05
625	2.71	0.5717	3E-05 3E-05	4E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
629 626	2.68 2.71	0.5656 0.5719	3E-05 3E-05	4E-05 4E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
627	2.69	0.5693	3E-05	4E-05	1E-05	1E-05	2E-05
628 630a	2.68 2.52	0.5674 0.5328	3E-05 3E-05	4E-05 4E-05	1E-05 9E-06	1E-05 9E-06	2E-05 2E-05
630b	2.65	0.5592	3E-05	4E-05	1E-05	1E-05	2E-05
630c 630d	2.64 2.59	0.5584 0.5470	3E-05 3E-05	4E-05 4E-05	1E-05 9E-06	1E-05 9E-06	2E-05 2E-05
656	2.71	0.5728	3E-05	4E-05	1E-05	1E-05	2E-05
674a 674b	2.92 2.97	0.6166 0.6271	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
	2.21	0.4688	3E-05	3E-05	8E-06	8E-06	2E-05
818a 818b	2.22	0.4707	3E-05	3E-05	8E-06	8E-06	2E-05

Sensitive Receptors	Change in Annual Average PM10 Concentration (µg/m³)	Change in Annual Average PM2.5 Concentration (µg/m³)	Risk (PM <sub>2.5</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> CV Hospitalisations, >65 years)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)	Risk (PM <sub>10</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> Asthma ED admissions, 1-14 years)
872b	1.09	0.2318	1E-05	2E-05	4E-06	4E-06	8E-06
1085	0.28	0.0649	4E-06	5E-06	1E-06	1E-06	2E-06
2ap	0.62	0.1359	8E-06	1E-05	2E-06	2E-06	5E-06
2aq	0.62	0.1354	8E-06	1E-05	2E-06	2E-06	5E-06
2ar	0.62	0.1349	8E-06	1E-05	2E-06	2E-06	5E-06
5h	0.19	0.0436	3E-06	3E-06	7E-07	7E-07	1E-06
5w	0.28	0.0637	4E-06	5E-06	1E-06	1E-06	2E-06
5an	0.19	0.0440	3E-06	3E-06	8E-07	7E-07	1E-06
Sao	0.19	0.0436	3E-06	3E-06	7E-07	7E-07	1E-06
5ap	0.28	0.0640	4E-06	5E-06	1E-06	1E-06	2E-06
8q	0.10	0.0243	1E-06	2E-06	4E-07	4E-07	8E-07
Mal4	0.41	0.0861	5E-06	6E-06	1E-06	2E-06	3E-06
Mal5	0.41	0.0864	5E-06	6E-06	1E-06	2E-06	3E-06
Mal6	0.42	0.0871	5E-06	6E-06	1E-06	2E-06	3E-06
UHSC2	0.41	0.0944	6E-06	7E-06	2E-06	1E-06	3E-06
UHSC3	0.40	0.0924	5E-06	7E-06	2E-06	1E-06	3E-06
UHSC4	0.41	0.0935	6E-06	7E-06	2E-06	1E-06	3E-06
N29	0.51	0.1110	7E-06	8E-06	2E-06	2E-06	4E-06
School receptors							
N30	2.94	0.6211	4E-05	5E-05	1E-05	1E-05	2E-05
N31	2.90	0.6130	4E-05	5E-05	1E-05	1E-05	2E-05
N32	2.89	0.6116	4E-05	5E-05	1E-05	1E-05	2E-05
N33	2.92	0.6179	4E-05	5E-05	1E-05	1E-05	2E-05
Church receptors							
520	0.77	0.1654	1E-05	1E-05	3E-06	3E-06	6E-06
658b	2.65	0.5600	3E-05	4E-05	1E-05	1E-05	2E-05
658c	2.64	0.5586	3E-05	4E-05	1E-05	1E-05	2E-05
616c	2.87	0.6076	4E-05	4E-05	1E-05	1E-05	2E-05
N34	0.34	0.0760	5E-06	6E-06	1E-06	1E-06	3E-06
Heritage receptors*							

<sup>\*</sup>No inhabited heritage receptors with elevated health risks identified.

# Quantification of Effects - $PM_{2.5}$ Mount Pleasant - Scenario 1 (incorporating proactive/reactive mitigation measures)

Air quality indicator:	PM <sub>2.5</sub>	PM <sub>2.5</sub>	PM <sub>2.5</sub>	PM <sub>2.5</sub>
Endpoint:	Mortality - All	Hospitalisation -	Hospitalisations -	Morbidity - Asthma
	Causes	Cardiovascular	Respiratory	ED Admissions
Effect Exposure Duration:	Long-term	Short-term	Short-term	Short-term
Age Group:	≥ 30 years	≥ 65 years	≥ 65 years	1-14 years
β (change in effect per 1 μg/m³) (as per Table 5.2)	0.0058	0.0008	0.00041	0.00148
Annual baseline incidence (per 100,000)	1026	9235	4168	2284
Baseline Incidence (per person per year)	0.01026	0.09235	0.04168	0.02284

Sensitive Receptors	Change in Annual Average PM <sub>2.5</sub> Concentration (µg/m³)	Risk (PM <sub>2.5</sub> Mortality all causes)	Risk( PM <sub>2.5</sub> CV Hospitalisations, > 65 years)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)	Risk (PM <sub>2.5</sub> Asthma ED admissions, 1- 14 years)
Privately owned receptors					
20	1.3523	8E-05	1E-04	2E-05	5E-05
21	1.3802	8E-05	1E-04	2E-05	5E-05
23	1.3947	8E-05	1E-04	2E-05	5E-05
102	1.1937	7E-05	9E-05	2E-05	4E-05
108	1.3159	8E-05	1E-04	2E-05	4E-05
112	1.4610	9E-05	1E-04	2E-05	5E-05
118	1.3831	8E-05	1E-04	2E-05	5E-05
120	1.3240	8E-05	1E-04	2E-05	4E-05
120c	1.3497	8E-05	1E-04	2E-05	5E-05
121	1.3972	8E-05	1E-04	2E-05	5E-05
153a	0.6289	4E-05	5E-05	1E-05	2E-05
154	0.9056	5E-05	7E-05	2E-05	3E-05
154b	0.8982	5E-05	7E-05	2E-05	3E-05
156a	0.8619	5E-05	6E-05	1E-05	3E-05
157a	0.8355	5E-05	6E-05	1E-05	3E-05
158	0.7543	4E-05	6E-05	1E-05	3E-05

## Quantification of Effects - $PM_{2.5}$ and $PM_{10}$ Mount Pleasant - Scenario 2 (without proactive/reactive mitigation measures)

Air quality indicator:	PM <sub>2.5</sub>	PM <sub>2.5</sub>	PM <sub>2.5</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Endpoint:	Mortality - All	Hospitalisations -	Hospitalisations -	Mortality - All	Morbidity -
	Causes	Cardiovascular	Respiratory	Causes	Asthma ED
					Admissions
Effect Exposure Duration:	Long-term	Short-term	Short-term	Short-Term	Short-Term
Age Group:	≥ 30 years	≥ 65 years	≥ 65 years	All ages	1-14 years
β (change in effect per 1 μg/m³) (as per Table 5.2)	0.0058	0.0008	0.00041	0.0006	0.00148
Annual baseline incidence (per 100,000)	1026	9235	4168	610.5	2284
Baseline Incidence (per person per year)	0.01026	0.09235	0.04168	0.006105	0.02284

Privately owned receptors  4 19 20 21 35 35 35 43 43 43b 445 455 456 457	Change in Annual Average PM10 Concentration (µg/m³) 3.51 6.05 6.85 7.02	Change in Annual Average PM2.5 Concentration (µg/m³) 0.7550 1.2894	Risk (PM <sub>2.5</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> CV Hospitalisations, >65 years)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)	Risk (PM <sub>10</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> Asthma ED admissions, 1-14 years)
4 19 20 21 35 355 43 43 43 45 45 455 455 45 5	6.05 6.85 7.02						years)
20 21 35 355 35b 43 43 45 45 45	6.05 6.85 7.02						•
20 21 35 355 35b 43 43 45 45 45	6.85 7.02		4E-05 8E-05	6E-05 1E-04	1E-05 2E-05	1E-05 2E-05	3E-05 4E-05
35 35b 43 43b 45b 45c	7.02	1.4562	9E-05	1E-04 1E-04	2E-05	3E-05	4E-05 5E-05
35b 43 43b 45 45 45c		1.4916	9E-05	1E-04	3E-05	3E-05	5E-05
43 43b 45 45c	5.22	1.1078	7E-05	8E-05	2E-05	2E-05	4E-05
43b 45 45b 45c	5.24 0.93	1.1116 0.1849	7E-05 1E-05	8E-05 1E-05	2E-05 3E-06	2E-05 3E-06	4E-05 6E-06
45b 45c	0.50	0.1052	6E-06	8E-06	2E-06	2E-06	4E-06
45c	0.47	0.1016	6E-06	8E-06	2E-06	2E-06	3E-06
	0.48 0.48	0.1024 0.1036	6E-06 6E-06	8E-06 8E-06	2E-06 2E-06	2E-06 2E-06	3E-06 4E-06
	0.48	0.0982	6E-06	7E-06	2E-06	2E-06	3E-06
67	5.80	1.2285	7E-05	9E-05	2E-05	2E-05	4E-05
74 77	5.54 4.77	1.1699	7E-05	9E-05 7E-05	2E-05 2E-05	2E-05	4E-05 3E-05
79	4.17	1.0031 0.8723	6E-05 5E-05	6E-05	1E-05	2E-05 2E-05	3E-05
82	3.24	0.6821	4E-05	5E-05	1E-05	1E-05	2E-05
83	3.36	0.7055	4E-05	5E-05	1E-05	1E-05	2E-05
84a 84b	3.66 0.89	0.7677 0.1692	5E-05 1E-05	6E-05 1E-05	1E-05 3E-06	1E-05 3E-06	3E-05 6E-06
86a	4.89	1.0263	6E-05	8E-05	2E-05	2E-05	3E-05
86b	1.65	0.3496	2E-05	3E-05	6E-06	6E-06	1E-05
96	6.96	1.4596	9E-05	1E-04	2E-05	3E-05	5E-05
102 108	7.33 7.89	1.5356 1.6569	9E-05 1E-04	1E-04 1E-04	3E-05 3E-05	3E-05 3E-05	5E-05 6E-05
112	8.61	1.8198	1E-04	1E-04	3E-05	3E-05	6E-05
118	8.47	1.7776	1E-04	1E-04	3E-05	3E-05	6E-05
120 120c	8.32 8.48	1.7361 1.7711	1E-04 1E-04	1E-04 1E-04	3E-05 3E-05	3E-05 3E-05	6E-05 6E-05
121	8.48	1.8268	1E-04 1E-04	1E-04 1E-04	3E-05 3E-05	3E-05 3E-05	6E-05
136	4.87	1.0136	6E-05	7E-05	2E-05	2E-05	3E-05
140a	2.00	0.4313	3E-05	3E-05	7E-06	7E-06	1E-05
140c 143a	2.71 2.28	0.5670 0.5014	3E-05 3E-05	4E-05 4E-05	1E-05 9E-06	1E-05 8E-06	2E-05 2E-05
143b	4.98	1.0480	6E-05	8E-05	2E-05	2E-05	4E-05
147	4.96	1.0562	6E-05	8E-05	2E-05	2E-05	4E-05
153a	3.96	0.7938	5E-05	6E-05	1E-05	1E-05	3E-05
154 154b	7.33 7.24	1.5259 1.5087	9E-05 9E-05	1E-04 1E-04	3E-05 3E-05	3E-05 3E-05	5E-05 5E-05
156a	7.64	1.5850	9E-05	1E-04	3E-05	3E-05	5E-05
156b	0.21	0.0471	3E-06	3E-06	8E-07	8E-07	2E-06
157a 157b	6.85 0.19	1.4269 0.0425	8E-05 3E-06	1E-04 3E-06	2E-05 7E-07	3E-05	5E-05
159	5.48	1.1525	7E-05	9E-05	2E-05	7E-07 2E-05	1E-06 4E-05
169	3.10	0.6530	4E-05	5E-05	1E-05	1E-05	2E-05
171	2.38	0.5046	3E-05	4E-05	9E-06	9E-06	2E-05
172 172b	1.90 1.83	0.4051 0.3919	2E-05 2E-05	3E-05 3E-05	7E-06 7E-06	7E-06 7E-06	1E-05 1E-05
172c	1.25	0.2719	2E-05	2E-05	5E-06	5E-06	9E-06
310	1.87	0.4000	2E-05	3E-05	7E-06	7E-06	1E-05
173 174	1.75 1.80	0.3729 0.3848	2E-05	3E-05	6E-06	6E-06	1E-05
175	1.83	0.3912	2E-05 2E-05	3E-05 3E-05	7E-06 7E-06	7E-06 7E-06	1E-05 1E-05
175b	1.86	0.3958	2E-05	3E-05	7E-06	7E-06	1E-05
175c	1.83	0.3906	2E-05	3E-05	7E-06	7E-06	1E-05
176 177	1.87 1.64	0.3978 0.3516	2E-05 2E-05	3E-05 3E-05	7E-06 6E-06	7E-06 6E-06	1E-05 1E-05
178	1.04	0.2295	1E-05	2E-05	4E-06	4E-06	8E-06
179	1.14	0.2481	1E-05	2E-05	4E-06	4E-06	8E-06
180	1.06	0.2317	1E-05	2E-05	4E-06	4E-06	8E-06
180b 180c	0.87 0.65	0.1937 0.1474	9E-06	1E-05 1E-05	3E-06 3E-06	3E-06 2E-06	7E-06 5E-06
181	0.57	0.1303	8E-06	1E-05	2E-06	2E-06	4E-06
181c	0.83	0.1876	1E-05	1E-05	3E-06	3E-06	6E-06
182 189	0.47 1.05	0.1079 0.2343	6E-06 1E-05	8E-06 2E-05	2E-06 4E-06	2E-06 4E-06	4E-06 8E-06
190	1.12	0.2505	1E-05	2E-05 2E-05	4E-06	4E-06	8E-06
191	0.96	0.2154	1E-05	2E-05	4E-06	4E-06	7E-06
192 193	1.03 0.91	0.2308 0.2031	1E-05 1E-05	2E-05 2E-05	4E-06 3E-06	4E-06 3E-06	8E-06 7E-06
193 193c	0.91	0.2031	1E-05 9E-06	2E-05 1E-05	3E-06 3E-06	3E-06 3E-06	7E-06 5E-06
194	0.94	0.2054	1E-05	2E-05	4E-06	3E-06	7E-06
195	1.03	0.2248	1E-05	2E-05	4E-06	4E-06	8E-06
197 196	1.23 1.20	0.2653 0.2579	2E-05 2E-05	2E-05 2E-05	5E-06 4E-06	5E-06 4E-06	9E-06 9E-06
195d	1.28	0.2753	2E-05	2E-05 2E-05	5E-06	5E-06	9E-06
198	1.54	0.3268	2E-05	2E-05	6E-06	6E-06	1E-05
198b	1.58	0.3354	2E-05	2E-05	6E-06	6E-06	1E-05
199 200	1.45 1.32	0.3092 0.2827	2E-05 2E-05	2E-05 2E-05	5E-06 5E-06	5E-06 5E-06	1E-05 1E-05
202	2.27	0.4768	3E-05	4E-05	8E-06	8E-06	2E-05
202b	1.81	0.3822	2E-05	3E-05	7E-06	7E-06	1E-05
203 203b	2.43	0.5082	3E-05	4E-05	9E-06	9E-06	2E-05
203b 203c	2.38 2.42	0.4981 0.5064	3E-05 3E-05	4E-05 4E-05	9E-06 9E-06	9E-06 9E-06	2E-05 2E-05
206	4.70	1.0051	6E-05	7E-05	2E-05	2E-05	3E-05
207	5.47	1.1667	7E-05	9E-05	2E-05	2E-05	4E-05
212 212b	4.49 4.49	0.9624 0.9619	6E-05 6E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
2120	5.53	1.1798	7E-05	7E-05 9E-05	2E-05 2E-05	2E-05 2E-05	3E-05 4E-05
214	5.54	1.1826	7E-05	9E-05	2E-05	2E-05	4E-05
215	5.61	1.1960	7E-05	9E-05	2E-05	2E-05	4E-05
216 216b	5.64 5.56	1.2037 1.1860	7E-05 7E-05	9E-05 9E-05	2E-05 2E-05	2E-05 2E-05	4E-05 4E-05
217	5.67	1.2103	7E-05	9E-05	2E-05	2E-05	4E-05
218	5.68	1.2117	7E-05	9E-05	2E-05	2E-05	4E-05
219	5.71 5.75	1.2184 1.2259	7E-05	9E-05	2E-05	2E-05	4E-05
220	5.75 5.81	1.2259 1.2393	7E-05 7E-05	9E-05 9E-05	2E-05 2E-05	2E-05	4E-05

Sensitive Receptors	Change in Annual Average PM10 Concentration (µg/m³)	Change in Annual Average PM2.5 Concentration (µg/m³)	Risk (PM <sub>2.5</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> CV Hospitalisations, >65 years)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)	Risk (PM <sub>10</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> Asthma ED admissions, 1-14 years)
222	5.86	1.2498	7E-05	9E-05	2E-05	2E-05	4E-05
223	5.94	1.2661	8E-05	9E-05	2E-05	2E-05	4E-05
223b	5.94	1.2658	8E-05	9E-05	2E-05	2E-05	4E-05
224	6.03	1.2844	8E-05	9E-05	2E-05	2E-05	4E-05
225	5.69	1.2146	7E-05	9E-05	2E-05	2E-05	4E-05
249	0.37	0.0833	5E-06	6E-06	1E-06	1E-06	3E-06
252	0.25	0.0570	3E-06	4E-06	1E-06	9E-07	2E-06
257	0.54	0.1172	7E-06	9E-06	2E-06	2E-06	4E-06
258a	0.47	0.1016	6E-06	8E-06	2E-06	2E-06	3E-06
258c	0.46	0.1005	6E-06	7E-06	2E-06	2E-06	3E-06
259	0.44	0.0973	6E-06	7E-06	2E-06	2E-06	3E-06
259b	0.42	0.0921	5E-06	7E-06	2E-06	2E-06	3E-06
260	0.47	0.1019	6E-06	8E-06	2E-06	2E-06	3E-06
260a	0.46	0.1007	6E-06	7E-06	2E-06	2E-06	3E-06
260b	0.46	0.1004	6E-06	7E-06	2E-06	2E-06	3E-06
261	0.40	0.0878	5E-06	6E-06	2E-06	1E-06	3E-06
261b	0.40	0.0879	5E-06	6E-06	2E-06	1E-06	3E-06
271	0.43	0.0798	5E-06	6E-06	1E-06	2E-06	3E-06
272b	0.71	0.1286	8E-06	9E-06	2E-06	3E-06	4E-06
272	0.72	0.1298	8E-06	1E-05	2E-06	3E-06	4E-06
273	0.52	0.0965	6E-06	7E-06	2E-06	2E-06	3E-06
273b 288	0.50	0.0926	6E-06	7E-06	2E-06	2E-06	3E-06
288b	3.71	0.7918	5E-05	6E-05	1E-05	1E-05	3E-05
	3.70	0.7886	5E-05	6E-05	1E-05	1E-05	3E-05
289	4.40	0.9302	6E-05	7E-05	2E-05	2E-05	3E-05
292	0.29	0.0666	4E-06	5E-06	1E-06	1E-06	2E-06
292b	0.28	0.0638	4E-06	5E-06	1E-06	1E-06	2E-06
300	0.33	0.0762	5E-06	6E-06	1E-06	1E-06	3E-06
298	0.35	0.0795	5E-06	6E-06	1E-06	1E-06	3E-06
296a	0.39	0.0871	5E-06	6E-06	1E-06	1E-06	3E-06
296b	0.37	0.0845	5E-06	6E-06	1E-06	1E-06	3E-06
302a	0.28	0.0640	4E-06	5E-06	1E-06	1E-06	2E-06
302c	0.27	0.0621	4E-06	5E-06	1E-06	1E-06	2E-06
401	0.68	0.1259	7E-06	9E-06	2E-06	2E-06	4E-06
402	0.74	0.1395	8E-06	1E-05	2E-06	3E-06	5E-06
404	0.80	0.1510	9E-06	1E-05	3E-06	3E-06	5E-06
407	1.00	0.1916	1E-05	1E-05	3E-06	4E-06	6E-06
413b	0.49	0.0906	5E-06	7E-06	2E-06	2E-06	3E-06
415	0.46	0.0860	5E-06	6E-06	1E-06	2E-06	3E-06
417	0.41	0.0763	5E-06	6E-06	1E-06	1E-06	3E-06
418	0.34	0.0639	4E-06	5E-06	1E-06	1E-06	2E-06
418b	0.35	0.0662	4E-06	5E-06	1E-06	1E-06	2E-06
419	0.51	0.0945	6E-06	7E-06	2E-06	2E-06	3E-06
421	0.57	0.1058	6E-06	8E-06	2E-06	2E-06	4E-06
422a	1.94	0.4075	2E-05	3E-05	7E-06	7E-06	1E-05
436	0.52	0.1192	7E-06	9E-06	2E-06	2E-06	4E-06
437	0.55	0.1263	8E-06	9E-06	2E-06	2E-06	4E-06
441	0.37	0.0874	5E-06	6E-06	1E-06	1E-06	3E-06
442	0.14	0.0342	2E-06	3E-06	6E-07	5E-07	1E-06
443	0.38	0.0897	5E-06	7E-06	2E-06	1E-06	3E-06
451	0.45	0.1002	6E-06	7E-06	2E-06	2E-06	3E-06
452	0.81	0.1751	1E-05	1E-05	3E-06	3E-06	6E-06
453a	0.36	0.0673	4E-06	5E-06	1E-06	1E-06	2E-06
453b	0.36	0.0671	4E-06	5E-06	1E-06	1E-06	2E-06
454	0.29	0.0559	3E-06	4E-06	1E-06	1E-06	2E-06
455	0.17	0.0336	2E-06	2E-06	6E-07	6E-07	1E-06
456	0.18	0.0353	2E-06	3E-06	6E-07	7E-07	1E-06
456b	0.18	0.0353	2E-06	3E-06	6E-07	7E-07	1E-06
458	0.25	0.0485	3E-06	4E-06	8E-07	9E-07	2E-06
460 460b	0.11 0.11	0.0243 0.0241	1E-06 1E-06	2E-06	4E-07	4E-07 4E-07	8E-07 8E-07
461	0.11	0.0239	1E-06	2E-06 2E-06	4E-07 4E-07	4E-07	8E-07
462a	0.11	0.0253	2E-06	2E-06	4E-07	4E-07	9E-07
462b	0.11	0.0253	2E-06	2E-06	4E-07	4E-07	9E-07
462c	0.11	0.0253	2E-06	2E-06	4E-07	4E-07	9E-07
464	0.19	0.0431	3E-06	3E-06	7E-07	7E-07	1E-06
464b	0.20	0.0437	3E-06	3E-06	7E-07	7E-07	1E-06
465	0.16	0.0370	2E-06	3E-06	6E-07	6E-07	1E-06
466	0.21	0.0471	3E-06	3E-06	8E-07	8E-07	2E-06
467	0.30	0.0671	4E-06	5E-06	1E-06	1E-06	2E-06
467b	0.30	0.0664	4E-06	5E-06	1E-06	1E-06	2E-06
468a	0.18	0.0423	3E-06	3E-06	7E-07	6E-07	1E-06
468b	0.17	0.0403	2E-06	3E-06	7E-07	6E-07	1E-06
468c	0.18	0.0436	3E-06	3E-06	7E-07	7E-07	1E-06
468d	0.18	0.0424	3E-06	3E-06	7E-07	6E-07	1E-06
470	0.23	0.0534	3E-06	4E-06	9E-07	8E-07	2E-06
471	0.22	0.0512	3E-06	4E-06	9E-07	8E-07	2E-06
472a	0.22	0.0524	3E-06	4E-06	9E-07	8E-07	2E-06
472b	0.23	0.0534	3E-06	4E-06	9E-07	8E-07	2E-06
472c	0.21	0.0486	3E-06	4E-06	8E-07	8E-07	2E-06
474	0.19	0.0459	3E-06	3E-06	8E-07	7E-07	2E-06
475	0.28	0.0652	4E-06	5E-06	1E-06	1E-06	2E-06
475b	0.28	0.0652	4E-06	5E-06	1E-06	1E-06	2E-06
476	0.19	0.0446	3E-06	3E-06	8E-07	7E-07	2E-06
477a	0.22	0.0513	3E-06	4E-06	9E-07	8E-07	2E-06
477b	0.22	0.0512	3E-06	4E-06	9E-07	8E-07	2E-06
481	0.15	0.0368	2E-06	3E-06	6E-07	6E-07	1E-06
483	0.13	0.0320	2E-06	2E-06	5E-07	5E-07	1E-06
484	0.15	0.0370	2E-06	3E-06	6E-07	6E-07	1E-06
485a	0.12	0.0292	2E-06	2E-06	5E-07	4E-07	1E-06
485b	0.12	0.0293	2E-06	2E-06	5E-07	4E-07	1E-06
485c	0.12	0.0291	2E-06	2E-06	5E-07	4E-07	1E-06
485d	0.12	0.0289	2E-06	2E-06	5E-07	4E-07	1E-06
485e	0.12	0.0290	2E-06	2E-06	5E-07	4E-07	1E-06
485f 487	0.12 0.44	0.0294 0.0981	2E-06	2E-06	5E-07	4E-07 2E-06	1E-06 3E-06
488a	0.53	0.1170	6E-06 7E-06	7E-06 9E-06	2E-06 2E-06	2E-06	4E-06
488b	0.56	0.1235	7E-06	9E-06	2E-06	2E-06	4E-06
515a	0.30	0.0688	4E-06	5E-06	1E-06	1E-06	2E-06
515b	0.23	0.0523	3E-06	4E-06	9E-07	8E-07	2E-06
516	0.19	0.0452	3E-06	3E-06	8E-07	7E-07	2E-06
517	0.25	0.0562	3E-06	4E-06	1E-06	9E-07	2E-06
518	0.27	0.0618	4E-06	5E-06	1E-06	1E-06	2E-06
519	0.22	0.0510	3E-06	4E-06	9E-07	8E-07	2E-06
522a	0.89	0.1911	1E-05	1E-05	3E-06	3E-06	6E-06
522b	3.01	0.6299	4E-05	5E-05	1E-05	1E-05	2E-05
522c	3.00	0.6286	4E-05	5E-05	1E-05	1E-05	2E-05
522d	2.99	0.6263	4E-05	5E-05	1E-05	1E-05	2E-05
526	4.26	0.8938	5E-05	7E-05	2E-05	2E-05	3E-05
527	3.79	0.8018	5E-05	6E-05	1E-05	1E-05	3E-05
528	3.76	0.7937	5E-05	6E-05	1E-05	1E-05	3E-05
529 530	3.72	0.7860	5E-05	6E-05	1E-05	1E-05	3E-05
530	3.65	0.7722	5E-05	6E-05	1E-05	1E-05	3E-05
531	3.65	0.7714	5E-05	6E-05	1E-05	1E-05	3E-05
531b	3.68	0.7781	5E-05	6E-05	1E-05	1E-05	3E-05
532	3.65	0.7708	5E-05	6E-05	1E-05	1E-05	3E-05

Sensitive Receptors	Change in Annual Average PM10 Concentration (μg/m³)	Change in Annual Average PM2.5 Concentration (µg/m³)	Risk (PM <sub>2.5</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> CV Hospitalisations, >65 years)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)	Risk (PM <sub>10</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> Asthma ED admissions, 1-14 years)
534	3.65	0.7719	5E-05	6E-05	1E-05	1E-05	3E-05
535	3.66	0.7745	5E-05	6E-05	1E-05	1E-05	3E-05
536	3.65	0.7723	5E-05	6E-05	1E-05	1E-05	3E-05
537	3.65	0.7724	5E-05	6E-05	1E-05	1E-05	3E-05
538	3.69	0.7858	5E-05	6E-05	1E-05	1E-05	3E-05
539	3.64	0.7748	5E-05	6E-05	1E-05	1E-05	3E-05
541	3.60	0.7670	5E-05	6E-05	1E-05	1E-05	3E-05
542	3.61	0.7702	5E-05	6E-05	1E-05	1E-05	3E-05
543	3.64	0.7750	5E-05	6E-05	1E-05	1E-05	3E-05
543b	3.68	0.7838	5E-05	6E-05	1E-05	1E-05	3E-05
544	3.66	0.7793	5E-05	6E-05	1E-05	1E-05	3E-05
545	3.67	0.7833	5E-05	6E-05	1E-05	1E-05	3E-05
547	0.92	0.2019	1E-05	1E-05	3E-06	3E-06	7E-06
549	0.46	0.0991	6E-06	7E-06	2E-06	2E-06	3E-06
550	0.52	0.1123	7E-06	8E-06	2E-06	2E-06	4E-06
552	0.51	0.1108	7E-06	8E-06	2E-06	2E-06	4E-06
553	0.53	0.1140	7E-06	8E-06	2E-06	2E-06	4E-06
554	0.58	0.1263	8E-06	9E-06	2E-06	2E-06	4E-06
557	0.51	0.1101	7E-06	8E-06	2E-06	2E-06	4E-06
559	0.45	0.0974	6E-06	7E-06	2E-06	2E-06	3E-06
560	0.47	0.1007	6E-06	7E-06	2E-06	2E-06	3E-06
561 562	0.48 0.45	0.1040 0.0977	6E-06	8E-06	2E-06	2E-06	4E-06
563	0.41	0.0887	6E-06 5E-06	7E-06 7E-06	2E-06 2E-06	2E-06 2E-06	3E-06 3E-06
564	0.45	0.0960	6E-06	7E-06	2E-06	2E-06	3E-06
565	0.48	0.1034	6E-06	8E-06	2E-06	2E-06	3E-06
566 569	0.46 0.49	0.0987 0.1076	6E-06	7E-06	2E-06	2E-06	3E-06
570	0.51	0.1104	6E-06 7E-06	8E-06 8E-06	2E-06 2E-06	2E-06 2E-06	4E-06 4E-06
571	0.57	0.1227	7E-06	9E-06	2E-06	2E-06	4E-06
572	0.51	0.1115	7E-06	8E-06	2E-06	2E-06	4E-06
573 574	0.55 0.56	0.1188 0.1220	7E-06	9E-06	2E-06 2E-06	2E-06 2E-06	4E-06 4E-06
575	0.58	0.1264	7E-06 8E-06	9E-06 9E-06	2E-06	2E-06	4E-06
576	0.60	0.1293	8E-06	1E-05	2E-06	2E-06	4E-06
577a	0.65	0.1397	8E-06	1E-05	2E-06	2E-06	5E-06
577b	0.64	0.1375	8E-06	1E-05	2E-06	2E-06	5E-06
578	0.66	0.1418	8E-06	1E-05	2E-06	2E-06	5E-06
583	0.29	0.0656	4E-06	5E-06	1E-06	1E-06	2E-06
586	0.18	0.0420	3E-06	3E-06	7E-07	7E-07	1E-06
587a	0.15	0.0354	2E-06	3E-06	6E-07	6E-07	1E-06
587b 588	0.15 0.17	0.0353 0.0404	2E-06	3E-06	6E-07 7E-07	6E-07 6E-07	1E-06 1E-06
600a	3.56	0.7573	2E-06 5E-05	3E-06 6E-05	1E-05	1E-05	3E-05
600b	3.58	0.7627	5E-05	6E-05	1E-05	1E-05	3E-05
601	3.54	0.7536	4E-05	6E-05	1E-05	1E-05	3E-05
602	3.52	0.7505	4E-05	6E-05	1E-05	1E-05	3E-05
603	3.51	0.7470	4E-05	6E-05	1E-05	1E-05	3E-05
604	3.50	0.7444	4E-05	5E-05	1E-05	1E-05	3E-05
605	3.48	0.7416	4E-05	5E-05	1E-05	1E-05	3E-05
606	3.47	0.7379	4E-05	5E-05	1E-05	1E-05	2E-05
607	3.45	0.7344	4E-05	5E-05	1E-05	1E-05	2E-05
608	3.45	0.7337	4E-05	5E-05	1E-05	1E-05	2E-05
609	3.43	0.7309	4E-05	5E-05	1E-05	1E-05	2E-05
610	3.41	0.7260	4E-05	5E-05	1E-05	1E-05	2E-05
611	3.40	0.7228	4E-05	5E-05	1E-05	1E-05	2E-05
612	3.44	0.7314	4E-05	5E-05	1E-05	1E-05	2E-05
613	3.41	0.7260	4E-05	5E-05	1E-05	1E-05	2E-05
614	3.40	0.7234	4E-05	5E-05	1E-05	1E-05	2E-05
615	3.37	0.7175	4E-05	5E-05	1E-05	1E-05	2E-05
616a	3.25	0.6863	4E-05	5E-05	1E-05	1E-05	2E-05
616b	3.38	0.7191	4E-05	5E-05	1E-05	1E-05	2E-05
617a	3.29	0.6995	4E-05	5E-05	1E-05	1E-05	2E-05
618a	3.26	0.6944	4E-05	5E-05	1E-05	1E-05	2E-05
618b	3.29	0.7000	4E-05	5E-05	1E-05	1E-05	2E-05
619	3.26	0.6928	4E-05	5E-05	1E-05	1E-05	2E-05
621	3.24	0.6891	4E-05	5E-05	1E-05	1E-05	2E-05
622a	3.26	0.6936	4E-05	5E-05	1E-05	1E-05	2E-05
623a	0.40	0.0925	6E-06	7E-06	2E-06	1E-06	3E-06
623b	3.22	0.6845	4E-05	5E-05	1E-05	1E-05	2E-05
630a	2.98	0.6336	4E-05	5E-05	1E-05	1E-05	2E-05
631	2.96	0.6295	4E-05	5E-05	1E-05	1E-05	2E-05
632	2.98	0.6341	4E-05	5E-05	1E-05	1E-05	2E-05
648	3.12	0.6623	4E-05	5E-05	1E-05	1E-05	2E-05
649	3.15	0.6682	4E-05	5E-05	1E-05	1E-05	2E-05
650	3.17	0.6726	4E-05	5E-05	1E-05	1E-05	2E-05
651	3.13	0.6655	4E-05	5E-05	1E-05	1E-05	2E-05
652	3.22	0.6826	4E-05	5E-05	1E-05	1E-05	2E-05
653	3.23	0.6857	4E-05	5E-05	1E-05	1E-05	2E-05
654a	3.29	0.6976	4E-05	5E-05	1E-05	1E-05	2E-05
654b	3.23	0.6849	4E-05	5E-05	1E-05	1E-05	2E-05
655	3.23	0.6853	4E-05	5E-05	1E-05	1E-05	2E-05
658a	3.30	0.6995	4E-05	5E-05	1E-05	1E-05	2E-05
659	3.30 3.29	0.6997	4E-05	5E-05	1E-05	1E-05	2E-05
660a	3.31	0.6987	4E-05	5E-05	1E-05	1E-05	2E-05
660b		0.7012	4E-05	5E-05	1E-05	1E-05	2E-05
661	3.34	0.7084	4E-05	5E-05	1E-05	1E-05	2E-05
662	3.36	0.7124	4E-05	5E-05	1E-05	1E-05	2E-05
663	3.39	0.7186	4E-05	5E-05	1E-05	1E-05	2E-05
664	3.41	0.7231	4E-05	5E-05	1E-05		2E-05
665a	3.50	0.7412	4E-05	5E-05	1E-05	1E-05 1E-05	3E-05
665b	3.50	0.7405	4E-05	5E-05	1E-05	1E-05	3E-05
667a	4.19	0.8851	5E-05	7E-05	2E-05	2E-05	3E-05
667b	4.14	0.8737	5E-05	6E-05	1E-05	2E-05	3E-05
667c	4.18	0.8841	5E-05	7E-05	2E-05	2E-05	3E-05
667d	4.18	0.8846	5E-05	7E-05	2E-05	2E-05	3E-05
667e	4.16	0.8785	5E-05	6E-05	2E-05	2E-05	3E-05
667f	2.90	0.6068	4E-05	4E-05	1E-05	1E-05	2E-05
669	3.56	0.7537	4E-05	6E-05	1E-05	1E-05	3E-05
671	3.56	0.7526	4E-05	6E-05	1E-05	1E-05	3E-05
672	3.56	0.7529	4E-05	6E-05	1E-05	1E-05	3E-05
673	3.56	0.7523	4E-05	6E-05	1E-05	1E-05	3E-05
675	3.54	0.7490	4E-05	6E-05	1E-05	1E-05	3E-05
676 677	3.56 3.53	0.7524 0.7455	4E-05 4E-05	6E-05 6E-05	1E-05 1E-05	1E-05	3E-05
678	3.50	0.7399	4E-05	5E-05	1E-05	1E-05 1E-05	3E-05 3E-05
679	3.47	0.7341	4E-05	5E-05	1E-05	1E-05	2E-05
680	3.45	0.7289	4E-05	5E-05	1E-05	1E-05	2E-05
681	3.42	0.7224	4E-05	5E-05	1E-05	1E-05	2E-05
682a	3.36	0.7095	4E-05	5E-05	1E-05		2E-05
682b	3.35	0.7089	4E-05	5E-05	1E-05	1E-05 1E-05	2E-05
683	3.34	0.7056	4E-05	5E-05	1E-05	1E-05	2E-05
684	3.29	0.6969	4E-05	5E-05	1E-05	1E-05	2E-05
685	3.28	0.6947	4E-05	5E-05	1E-05	1E-05	2E-05
686	3.28	0.6952	4E-05	5E-05	1E-05	1E-05	2E-05
687	3.28	0.6952	4E-05	5E-05	1E-05	1E-05	2E-05
688	3.29	0.6971	4E-05	5E-05	1E-05	1E-05	2E-05

Sensitive Receptors	Change in Annual Average PM10 Concentration (µg/m³)	Change in Annual Average PM2.5 Concentration (µg/m³)	Risk (PM <sub>2.5</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> CV Hospitalisations, >65 years)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)	Risk (PM <sub>10</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> Asthma ED admissions, 1-14 years)
689	3.40	0.7192	4E-05	5E-05	1E-05	1E-05	2E-05
690	3.35	0.7093	4E-05	5E-05	1E-05	1E-05	2E-05
691	3.29	0.6981	4E-05	5E-05	1E-05	1E-05	2E-05
692	3.29	0.6980	4E-05	5E-05	1E-05	1E-05	2E-05
693	3.22	0.6819	4E-05	5E-05	1E-05	1E-05	2E-05
694a	3.21	0.6810	4E-05	5E-05	1E-05	1E-05	2E-05
694b	3.18	0.6734	4E-05	5E-05	1E-05	1E-05	2E-05
695	3.22	0.6819	4E-05	5E-05	1E-05	1E-05	2E-05
697	3.21	0.6801	4E-05	5E-05	1E-05	1E-05	2E-05
698	3.16	0.6689	4E-05	5E-05	1E-05	1E-05	2E-05
715	0.42	0.0981	6E-06	7E-06	2E-06	2E-06	3E-06
728	3.16	0.6688	4E-05	5E-05	1E-05	1E-05	2E-05
729	3.18	0.6735	4E-05	5E-05	1E-05	1E-05	2E-05
730	3.21	0.6791	4E-05	5E-05	1E-05	1E-05	2E-05
731	3.22	0.6824	4E-05	5E-05	1E-05	1E-05	2E-05
732	3.22	0.6823	4E-05	5E-05	1E-05	1E-05	2E-05
733	3.21	0.6800	4E-05	5E-05	1E-05	1E-05	2E-05
735a	3.22	0.6800	4E-05	5E-05	1E-05	1E-05	2E-05
735b	3.23	0.6833	4E-05	5E-05	1E-05	1E-05	2E-05
736	3.18	0.6713	4E-05	5E-05	1E-05	1E-05	2E-05
737	3.23	0.6821	4E-05	5E-05	1E-05	1E-05	2E-05
738	3.22	0.6814	4E-05	5E-05	1E-05	1E-05	2E-05
739	3.24	0.6836	4E-05	5E-05	1E-05	1E-05	2E-05
740a	3.15	0.6658	4E-05	5E-05	1E-05	1E-05	2E-05
740b	3.18	0.6715	4E-05	5E-05	1E-05	1E-05	2E-05
740c	3.20	0.6770	4E-05	5E-05	1E-05	1E-05	2E-05
740d	3.20	0.6769	4E-05	5E-05	1E-05	1E-05	2E-05
740e	3.18	0.6723	4E-05	5E-05	1E-05	1E-05	2E-05
740f	3.15	0.6667	4E-05	5E-05	1E-05	1E-05	2E-05
741	3.26	0.6885	4E-05	5E-05	1E-05	1E-05	2E-05
742	3.28	0.6918	4E-05	5E-05	1E-05	1E-05	2E-05
743	3.29	0.6935	4E-05	5E-05	1E-05	1E-05	2E-05
744	3.23	0.6815	4E-05	5E-05	1E-05	1E-05	2E-05
745	3.21	0.6772	4E-05	5E-05	1E-05	1E-05	2E-05
746	3.18	0.6720	4E-05	5E-05	1E-05	1E-05	2E-05
747	3.16	0.6669	4E-05	5E-05	1E-05	1E-05	2E-05
748a	3.13	0.6620	4E-05	5E-05	1E-05	1E-05	2E-05
748b	1.73	0.3648	2E-05	3E-05	6E-06	6E-06	1E-05
749a	3.30	0.6974	4E-05	5E-05	1E-05	1E-05	2E-05
749b	3.29	0.6950	4E-05	5E-05	1E-05	1E-05	2E-05
750	3.29	0.6967	4E-05	5E-05	1E-05	1E-05	2E-05
751	3.29	0.6953	4E-05	5E-05	1E-05	1E-05	2E-05
752a	3.32	0.7031	4E-05	5E-05	1E-05	1E-05	2E-05
752b	3.32	0.7019	4E-05	5E-05	1E-05	1E-05	2E-05
753 754	3.34 3.36	0.7066	4E-05	5E-05	1E-05	1E-05	2E-05
755	3.38	0.7103 0.7153	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
756	3.41	0.7205	4E-05	5E-05	1E-05	1E-05	2E-05
757	3.43	0.7249	4E-05	5E-05	1E-05	1E-05	2E-05
758	3.45	0.7290	4E-05	5E-05	1E-05	1E-05	2E-05 2E-05
759a	3.48	0.7348	4E-05	5E-05	1E-05	1E-05	2E-05
759b	3.48	0.7356	4E-05	5E-05	1E-05	1E-05	2E-05
760	3.50	0.7389	4E-05	5E-05	1E-05	1E-05	2E-05
761	3.52	0.7437	4E-05	5E-05	1E-05	1E-05	3E-05
762	3.56	0.7515	4E-05	6E-05	1E-05	1E-05	3E-05
763	3.55	0.7503	4E-05	6E-05	1E-05	1E-05	3E-05
764	3.56	0.7525	4E-05	6E-05	1E-05	1E-05	3E-05
765a	3.55	0.7497	4E-05	6E-05	1E-05	1E-05	3E-05
765b	3.57	0.7530	4E-05	6E-05	1E-05	1E-05	3E-05
766	3.55	0.7505	4E-05	6E-05	1E-05	1E-05	3E-05
767	3.55	0.7499	4E-05	6E-05	1E-05	1E-05	3E-05
768 769	3.55	0.7504	4E-05	6E-05	1E-05	1E-05	3E-05
770	3.47	0.7325	4E-05	5E-05	1E-05	1E-05	2E-05
	3.56	0.7506	4E-05	6E-05	1E-05	1E-05	3E-05
771	3.56	0.7509	4E-05	6E-05	1E-05	1E-05	3E-05
772	3.56	0.7521	4E-05		1E-05	1E-05	3E-05
773	3.57	0.7524	4E-05	6E-05 6E-05	1E-05	1E-05	3E-05
774	3.51	0.7400	4E-05	5E-05	1E-05	1E-05	3E-05
775	3.52	0.7414	4E-05	5E-05	1E-05	1E-05	3E-05
776	3.57	0.7533	4E-05	6E-05	1E-05	1E-05	3E-05
777	3.55	0.7488	4E-05	6E-05	1E-05	1E-05	3E-05
778a	3.54	0.7463	4E-05	6E-05	1E-05	1E-05	3E-05
778b	3.57	0.7516	4E-05	6E-05	1E-05	1E-05	3E-05
779a	3.53	0.7442	4E-05	5E-05	1E-05	1E-05	3E-05
779b	3.49	0.7360	4E-05	5E-05	1E-05	1E-05	2E-05
780	3.55	0.7481	4E-05	6E-05	1E-05	1E-05	3E-05
781	3.58	0.7530	4E-05	6E-05	1E-05	1E-05	3E-05
782	3.56	0.7500	4E-05	6E-05	1E-05	1E-05	3E-05
783	3.57	0.7517	4E-05	6E-05	1E-05	1E-05	3E-05
784	3.29	0.6960	4E-05	5E-05	1E-05	1E-05	2E-05
785	3.29	0.6962	4E-05	5E-05	1E-05	1E-05	2E-05
786	3.32	0.7018	4E-05	5E-05	1E-05	1E-05	2E-05
787a	3.30	0.6972	4E-05	5E-05	1E-05	1E-05	2E-05
787b 788	3.36	0.7091	4E-05 4E-05	5E-05	1E-05	1E-05	2E-05
789	3.31 3.32	0.6990 0.7009	4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
790a	3.30	0.6972	4E-05	5E-05	1E-05	1E-05	2E-05
790b	3.33	0.7024	4E-05	5E-05	1E-05	1E-05	2E-05
791a	3.31	0.6983	4E-05	5E-05	1E-05	1E-05	2E-05
791b	3.33	0.7034	4E-05	5E-05	1E-05	1E-05	2E-05
792a	3.39	0.7144	4E-05	5E-05	1E-05	1E-05	2E-05
792b	3.32	0.7014	4E-05	5E-05	1E-05	1E-05	2E-05
793	3.32	0.6999	4E-05	5E-05	1E-05	1E-05	2E-05
794	3.33	0.7027	4E-05	5E-05	1E-05	1E-05	2E-05
795	3.35	0.7074	4E-05	5E-05	1E-05	1E-05	2E-05
796	3.37	0.7103	4E-05	5E-05	1E-05	1E-05	2E-05
797a	3.38	0.7119	4E-05	5E-05	1E-05	1E-05	2E-05
797b 798	3.41	0.7180	4E-05	5E-05	1E-05	1E-05	2E-05
801	3.40	0.7163	4E-05	5E-05	1E-05	1E-05	2E-05
	3.45	0.7264	4E-05	5E-05	1E-05	1E-05	2E-05
802 803a	3.46 3.35	0.7292 0.7055	4E-05	5E-05	1E-05	1E-05	2E-05 2E-05
803b	3.34	0.7039	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05
804	3.33	0.7029	4E-05	5E-05	1E-05	1E-05	2E-05
805	3.32	0.6995	4E-05	5E-05	1E-05	1E-05	2E-05
806	3.04	0.6390	4E-05	5E-05	1E-05	1E-05	2E-05
807	3.04	0.6390	4E-05	5E-05	1E-05	1E-05	2E-05
808	3.04	0.6389	4E-05	5E-05	1E-05	1E-05	2E-05
809	3.04	0.6401	4E-05	5E-05	1E-05	1E-05	2E-05
810	3.04	0.6398	4E-05	5E-05	1E-05	1E-05	2E-05
811	3.04	0.6394	4E-05	5E-05	1E-05	1E-05	2E-05
812	3.05	0.6397	4E-05	5E-05	1E-05	1E-05	2E-05
813	3.04	0.6384	4E-05	5E-05	1E-05	1E-05	2E-05
	3.04	0.6376	4E-05	5E-05	1E-05	1E-05	2E-05
814							
814 815a 815b	3.03 3.04	0.6366 0.6375	4E-05 4E-05 4E-05	5E-05 5E-05	1E-05 1E-05 1E-05	1E-05 1E-05	2E-05 2E-05

Sensitive Receptors	Change in Annual Average PM10 Concentration (µg/m³)	Change in Annual Average PM2.5 Concentration (μg/m³)	Risk (PM <sub>2.5</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> CV Hospitalisations, >65 years)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)	Risk (PM <sub>10</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> Asthma ED admissions, 1-14 years)
817	3.01	0.6302	4E-05	5E-05	1E-05	1E-05	2E-05
819	2.86	0.5995	4E-05	4E-05	1E-05	1E-05	2E-05
820a	2.83	0.5934	4E-05	4E-05	1E-05	1E-05	2E-05
820b	2.86	0.5990	4E-05	4E-05	1E-05	1E-05	2E-05
821	2.82	0.5899	4E-05	4E-05	1E-05	1E-05	2E-05
822	2.80	0.5869	3E-05	4E-05	1E-05	1E-05	2E-05
823a	2.79	0.5841	3E-05	4E-05	1E-05	1E-05	2E-05
823b	2.83	0.5912	4E-05	4E-05	1E-05	1E-05	2E-05
824	2.75	0.5767	3E-05	4E-05	1E-05	1E-05	2E-05
825	2.74	0.5733	3E-05	4E-05	1E-05	1E-05	2E-05
826	2.73	0.5719	3E-05	4E-05	1E-05	1E-05	2E-05
827	2.72	0.5692	3E-05	4E-05	1E-05	1E-05	2E-05
828	2.68	0.5605	3E-05	4E-05	1E-05	1E-05	2E-05
829a	2.65	0.5542	3E-05	4E-05	9E-06	1E-05	2E-05
829b	2.65	0.5543	3E-05	4E-05	9E-06	1E-05	2E-05
830	2.62	0.5495	3E-05	4E-05	9E-06	1E-05	2E-05
831	2.62	0.5482	3E-05	4E-05	9E-06	1E-05	2E-05
832	2.60	0.5452	3E-05	4E-05	9E-06	1E-05	2E-05
833	2.59	0.5411	3E-05	4E-05	9E-06	9E-06	2E-05
834	2.56	0.5355	3E-05	4E-05	9E-06	9E-06	2E-05
835	2.54	0.5308	3E-05	4E-05	9E-06	9E-06	2E-05
836	2.52	0.5268	3E-05	4E-05	9E-06	9E-06	2E-05
837	2.50	0.5238	3E-05	4E-05	9E-06	9E-06	2E-05
838	2.47	0.5179	3E-05	4E-05	9E-06	9E-06	2E-05
839	2.45	0.5125	3E-05	4E-05	9E-06	9E-06	2E-05
840	2.43	0.5088	3E-05	4E-05	9E-06	9E-06	2E-05
841	2.41	0.5051	3E-05	4E-05	9E-06	9E-06	2E-05
843a	2.33	0.4882	3E-05	4E-05	8E-06	9E-06	2E-05
843b	2.35	0.4927	3E-05	4E-05	8E-06	9E-06	2E-05
844a	2.20	0.4610	3E-05	3E-05	8E-06	8E-06	2E-05
845	2.05	0.4299	3E-05	3E-05	7E-06	8E-06	1E-05
846	2.03	0.4252	3E-05	3E-05	7E-06	7E-06	1E-05
847	2.02	0.4233	3E-05	3E-05	7E-06	7E-06	1E-05
848	1.99	0.4189	2E-05	3E-05	7E-06	7E-06	1E-05
849	1.98	0.4159	2E-05	3E-05	7E-06	7E-06	1E-05
850 853	1.96	0.4122	2E-05	3E-05	7E-06	7E-06	1E-05
853	1.90	0.3994	2E-05	3E-05	7E-06	7E-06	1E-05
854	1.88	0.3955	2E-05	3E-05	7E-06	7E-06	1E-05
855	1.86	0.3920	2E-05	3E-05	7E-06	7E-06	1E-05
856	1.85	0.3885	2E-05	3E-05	7E-06	7E-06	1E-05
857	1.83	0.3856	2E-05	3E-05	7E-06	7E-06	1E-05
858	1.81	0.3823	2E-05	3E-05	7E-06	7E-06	1E-05
859	1.80	0.3786	2E-05	3E-05	6E-06	7E-06	1E-05
860	1.79	0.3765	2E-05	3E-05	6E-06	7E-06	1E-05
861	1.77	0.3729	2E-05	3E-05	6E-06	6E-06	1E-05
862	1.75	0.3693	2E-05	3E-05	6E-06	6E-06	1E-05
863	1.71	0.3608	2E-05	3E-05	6E-06	6E-06	1E-05
864	1.69	0.3568	2E-05	3E-05	6E-06	6E-06	1E-05
865	1.68	0.3544	2E-05	3E-05	6E-06	6E-06	1E-05
866	1.56	0.3301	2E-05	2E-05	6E-06	6E-06	1E-05
867	1.55	0.3280	2E-05	2E-05	6E-06	6E-06	1E-05
868	1.54	0.3254	2E-05	2E-05	6E-06	6E-06	1E-05
870	1.52	0.3216	2E-05	2E-05	5E-06	6E-06	1E-05
871	1.50	0.3183	2E-05	2E-05	5E-06	6E-06	1E-05
872a	1.49	0.3164	2E-05	2E-05	5E-06	5E-06	1E-05
900a	0.38	0.0892	5E-06	7E-06	2E-06	1E-06	3E-06
900b	0.48	0.1122	7E-06	8E-06	2E-06	2E-06	4E-06
901	0.51	0.1178	7E-06	9E-06	2E-06	2E-06	4E-06
902	0.51	0.1171	7E-06	9E-06	2E-06	2E-06	4E-06
903	0.50	0.1162	7E-06	9E-06	2E-06	2E-06	4E-06
904	0.50	0.1151	7E-06	9E-06	2E-06	2E-06	4E-06
905	0.49	0.1142	7E-06	8E-06	2E-06	2E-06	4E-06
906	0.49	0.1132	7E-06	8E-06	2E-06	2E-06	4E-06
907	0.49	0.1124	7E-06	8E-06	2E-06	2E-06	4E-06
908	0.48	0.1115	7E-06	8E-06	2E-06	2E-06	4E-06
909	0.47	0.1099	7E-06	8E-06	2E-06	2E-06	4E-06
911	0.46	0.1077	6E-06	8E-06	2E-06	2E-06	4E-06
912	0.47	0.1100	7E-06	8E-06	2E-06	2E-06	4E-06
913	0.46	0.1063	6E-06	8E-06	2E-06	2E-06	4E-06
914	0.45	0.1055	6E-06	8E-06	2E-06	2E-06	4E-06
915	0.45	0.1050	6E-06	8E-06	2E-06	2E-06	4E-06
916	0.45	0.1040	6E-06	8E-06	2E-06	2E-06	4E-06
917	0.44	0.1030	6E-06	8E-06	2E-06	2E-06	3E-06
918	0.45	0.1046	6E-06	8E-06	2E-06	2E-06	4E-06
919	0.45	0.1054	6E-06	8E-06	2E-06	2E-06	4E-06
920	0.46	0.1062	6E-06	8E-06	2E-06	2E-06	
921	0.46	0.1069	6E-06	8E-06	2E-06	2E-06	4E-06 4E-06
922	0.46	0.1078	6E-06	8E-06	2E-06	2E-06	4E-06
924	0.48	0.1109	7E-06	8E-06	2E-06	2E-06	4E-06
925 926	0.48 0.49	0.1118 0.1128	7E-06 7E-06	8E-06	2E-06	2E-06	4E-06
927	0.49	0.1138	7E-06	8E-06 8E-06	2E-06 2E-06	2E-06 2E-06	4E-06 4E-06
928	0.50	0.1147	7E-06	8E-06	2E-06	2E-06	4E-06
929	0.50	0.1160	7E-06	9E-06	2E-06	2E-06	4E-06
930 931	0.50 0.49	0.1146 0.1137	7E-06	8E-06	2E-06 2E-06	2E-06	4E-06
932a	0.48	0.1110	7E-06 7E-06	8E-06 8E-06	2E-06	2E-06 2E-06	4E-06 4E-06
932b	0.48	0.1103	7E-06	8E-06	2E-06	2E-06	4E-06
933	0.48	0.1104	7E-06	8E-06	2E-06	2E-06	4E-06
934	0.47	0.1094	7E-06	8E-06	2E-06	2E-06	4E-06
935a	0.47	0.1081	6E-06	8E-06	2E-06	2E-06	4E-06
935b	0.47	0.1088	6E-06	8E-06	2E-06	2E-06	4E-06
936	0.46	0.1067	6E-06	8E-06	2E-06	2E-06	4E-06
937	0.46	0.1078	6E-06	8E-06	2E-06	2E-06	4E-06
938	0.47	0.1087	6E-06	8E-06	2E-06	2E-06	4E-06
939	0.47	0.1093	7E-06	8E-06	2E-06	2E-06	4E-06
940	0.48	0.1102	7E-06	8E-06	2E-06	2E-06	4E-06
941 942	0.48 0.47	0.1108 0.1084	7E-06	8E-06	2E-06	2E-06 2E-06	4E-06 4E-06
943	0.46	0.1074	6E-06 6E-06	8E-06 8E-06	2E-06 2E-06	2E-06	4E-06
944	0.46	0.1068	6E-06	8E-06	2E-06	2E-06	4E-06
945a	0.46	0.1057	6E-06	8E-06	2E-06	2E-06	4E-06
945b	0.45	0.1052	6E-06	8E-06	2E-06	2E-06	4E-06
946	0.45	0.1050	6E-06	8E-06	2E-06	2E-06	4E-06
947	0.45	0.1043	6E-06	8E-06	2E-06	2E-06	4E-06
948 949	0.44 0.45	0.1019 0.1035	6E-06	8E-06 8E-06	2E-06	2E-06	3E-06
950	0.44	0.1029	6E-06 6E-06	8E-06	2E-06 2E-06	2E-06 2E-06	3E-06 3E-06
951	0.44	0.1016	6E-06	8E-06	2E-06	2E-06	3E-06
952	0.43	0.1009	6E-06	7E-06	2E-06	2E-06	3E-06
953	0.43	0.0999	6E-06	7E-06	2E-06	2E-06	3E-06
954	0.43	0.0992	6E-06	7E-06	2E-06	2E-06	3E-06
955	0.43	0.1008	6E-06	7E-06	2E-06	2E-06	3E-06
956	0.42	0.0979	6E-06	7E-06	2E-06	2E-06	3E-06
957a	0.39	0.0910	5E-06	7E-06	2E-06	1E-06	3E-06
957b	0.42	0.0985	6E-06	7E-06	2E-06	2E-06	3E-06
958	0.43	0.0991	6E-06	7E-06	2E-06	2E-06	3E-06

Sensitive Receptors	Change in Annual Average PM10 Concentration (µg/m³)	Change in Annual Average PM2.5 Concentration (µg/m³)	Risk (PM <sub>2.5</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> CV Hospitalisations, >65 years)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)	Risk (PM <sub>10</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> Asthma ED admissions, 1-14 years)
959	0.43	0.0997	6E-06	7E-06	2E-06	2E-06	3E-06
960	0.43	0.1004	6E-06	7E-06	2E-06	2E-06	3E-06
961	0.44	0.1011	6E-06	7E-06	2E-06	2E-06	3E-06
962	0.44	0.1020	6E-06	8E-06	2E-06	2E-06	3E-06
963	0.44	0.1029	6E-06	8E-06	2E-06	2E-06	3E-06
964	0.45	0.1039	6E-06	8E-06	2E-06	2E-06	4E-06
965	0.44	0.1028	6E-06	8E-06	2E-06	2E-06	3E-06
966	0.44	0.1014	6E-06	7E-06	2E-06	2E-06	3E-06
967a	0.43	0.1006	6E-06	7E-06	2E-06	2E-06	3E-06
967b	0.43	0.1000	6E-06	7E-06	2E-06	2E-06	3E-06
968	0.43	0.1000	6E-06	7E-06	2E-06	2E-06	3E-06
969	0.43	0.0991	6E-06	7E-06	2E-06	2E-06	3E-06
970	0.42	0.0986	6E-06	7E-06	2E-06	2E-06	3E-06
971	0.42	0.0981	6E-06	7E-06	2E-06	2E-06	3E-06
972	0.42	0.0975	6E-06	7E-06	2E-06	2E-06	3E-06
973	0.42	0.0970	6E-06	7E-06	2E-06	2E-06	3E-06
974	0.41	0.0964	6E-06	7E-06	2E-06	2E-06	3E-06
976	0.40	0.0927	6E-06	7E-06	2E-06	1E-06	3E-06
977a	0.40	0.0926	6E-06	7E-06	2E-06	1E-06	3E-06
977b	0.41	0.0957	6E-06	7E-06	2E-06	2E-06	3E-06
978	0.39	0.0918	5E-06	7E-06	2E-06	1E-06	3E-06
979a	0.37	0.0859	5E-06	6E-06	1E-06	1E-06	3E-06
979b	0.39	0.0912	5E-06	7E-06	2E-06	1E-06	3E-06
980	0.38	0.0896	5E-06	7E-06	2E-06	1E-06	3E-06
981a	0.38	0.0898	5E-06	7E-06	2E-06	1E-06	3E-06
981b	0.39	0.0905	5E-06	7E-06	2E-06	1E-06	3E-06
982	0.39	0.0904	5E-06	7E-06	2E-06	1E-06	3E-06
983	0.39	0.0910	5E-06	7E-06	2E-06	1E-06	3E-06
984	0.40	0.0922	5E-06	7E-06	2E-06	1E-06	3E-06
985	0.40	0.0922	6E-06	7E-06 7E-06	2E-06 2E-06	1E-06	3E-06
986	0.39	0.0921	5E-06	7E-06	2E-06	1E-06	3E-06
987	0.40	0.0930	6E-06	7E-06	2E-06	1E-06	3E-06
988a	0.40	0.0934	6E-06	7E-06	2E-06	1E-06	3E-06
988b	0.40	0.0940	6E-06	7E-06	2E-06	1E-06	3E-06
989a	0.40	0.0940	6E-06	7E-06	2E-06	1E-06	3E-06
989b	0.40	0.0944	6E-06	7E-06	2E-06	1E-06	3E-06
990	0.41	0.0950	6E-06	7E-06	2E-06	1E-06	3E-06
991	0.41	0.0958	6E-06	7E-06	2E-06	2E-06	3E-06
992	0.41	0.0963	6E-06	7E-06	2E-06	2E-06	3E-06
993a	0.42	0.0968	6E-06	7E-06	2E-06	2E-06	3E-06
993b	0.41	0.0966	6E-06	7E-06	2E-06	2E-06	3E-06
994a	0.42	0.0969	6E-06	7E-06	2E-06	2E-06	3E-06
994b	0.41	0.0966	6E-06	7E-06	2E-06	2E-06	3E-06
995	0.42	0.0972	6E-06	7E-06	2E-06	2E-06	3E-06
997	0.43	0.0989	6E-06	7E-06	2E-06	2E-06	3E-06
998	0.43	0.0994	6E-06	7E-06	2E-06	2E-06	3E-06
999	0.41	0.0957	6E-06	7E-06	2E-06	2E-06	3E-06
1000	0.41	0.0946	6E-06	7E-06	2E-06	1E-06	3E-06
	0.40	0.0937	6E-06	7E-06	2E-06	1E-06	3E-06
1002	0.40	0.0930	6E-06	7E-06	2E-06	1E-06	3E-06
1003	0.40	0.0923	5E-06	7E-06	2E-06	1E-06	3E-06
1004	0.39	0.0916	5E-06	7E-06	2E-06	1E-06	3E-06
1005	0.39	0.0910	5E-06	7E-06	2E-06	1E-06	3E-06
1006	0.39	0.0904	5E-06	7E-06	2E-06	1E-06	3E-06
1007	0.38	0.0899	5E-06	7E-06	2E-06	1E-06	3E-06
1008	0.38	0.0892	5E-06	7E-06	2E-06	1E-06	3E-06
1009	0.38	0.0885	5E-06	7E-06	2E-06	1E-06	3E-06
1010	0.38	0.0897	5E-06	7E-06	2E-06	1E-06	3E-06
1011	0.39	0.0908	5E-06	7E-06	2E-06	1E-06	3E-06
1012	0.39	0.0917	5E-06	7E-06	2E-06	1E-06	3E-06
1014	0.40	0.0933	6E-06	7E-06	2E-06	1E-06	3E-06
1015	0.40	0.0941	6E-06	7E-06	2E-06	1E-06	3E-06
1016		0.0926	6E-06	7E-06	2E-06	1E-06	3E-06
1017	0.39	0.0916	5E-06	7E-06	2E-06	1E-06	3E-06
1018	0.39	0.0903	5E-06	7E-06	2E-06	1E-06	3E-06
1019	0.38	0.0899	5E-06	7E-06	2E-06	1E-06	3E-06
1020	0.38	0.0891	5E-06	7E-06	2E-06	1E-06	3E-06
1021	0.38	0.0885	5E-06	7E-06	2E-06	1E-06	3E-06
1022	0.38	0.0879	5E-06	6E-06	2E-06	1E-06	3E-06
1023	0.37	0.0873	5E-06	6E-06	1E-06	1E-06	3E-06
1024	0.37	0.0869	5E-06	6E-06	1E-06	1E-06	3E-06
1025	0.39	0.0906	5E-06	7E-06	2E-06	1E-06	3E-06
1026	0.39	0.0918	5E-06	7E-06	2E-06	1E-06	3E-06
1027	0.39	0.0911	5E-06	7E-06	2E-06	1E-06	3E-06
1028	0.39	0.0901	5E-06	7E-06	2E-06	1E-06	3E-06
1029	0.38	0.0886	5E-06	7E-06	2E-06	1E-06	3E-06
1030	0.38	0.0882	5E-06	7E-06	2E-06	1E-06	3E-06
1031 1032	0.37 0.37	0.0866 0.0860	5E-06 5E-06	6E-06 6E-06	1E-06	1E-06 1E-06	3E-06
1033	0.37	0.0856	5E-06	6E-06	1E-06 1E-06	1E-06	3E-06 3E-06
1034	0.36	0.0847	5E-06	6E-06	1E-06	1E-06	3E-06
1035	0.36	0.0839	5E-06	6E-06	1E-06	1E-06	3E-06
1036a	0.36	0.0833	5E-06	6E-06	1E-06	1E-06	3E-06
1036b	0.36	0.0842	5E-06	6E-06	1E-06	1E-06	3E-06
1037	0.36	0.0847	5E-06	6E-06	1E-06	1E-06	3E-06
1038 1039	0.36	0.0853	5E-06	6E-06	1E-06	1E-06	3E-06
1040	0.37	0.0863	5E-06	6E-06	1E-06	1E-06	3E-06
	0.37	0.0870	5E-06	6E-06	1E-06	1E-06	3E-06
1041	0.37	0.0874	5E-06	6E-06	1E-06	1E-06	3E-06
1042	0.38	0.0879	5E-06	6E-06	2E-06	1E-06	3E-06
1043	0.38	0.0891	5E-06	7E-06	2E-06	1E-06	3E-06
1044	0.38	0.0885	5E-06	7E-06	2E-06	1E-06	3E-06
1045	0.36	0.0839	5E-06	6E-06	1E-06	1E-06	3E-06
1046	0.35	0.0823	5E-06	6E-06	1E-06	1E-06	3E-06
1077	0.37	0.0869	5E-06	6E-06	1E-06	1E-06	3E-06
1078	0.36	0.0845	5E-06	6E-06	1E-06	1E-06	3E-06
1079	0.35	0.0827	5E-06	6E-06	1E-06	1E-06	3E-06
1080	0.35	0.0814	5E-06	6E-06	1E-06	1E-06	3E-06
1081	0.36	0.0832	5E-06	6E-06	1E-06	1E-06	3E-06
1082a	0.36	0.0845	5E-06	6E-06	1E-06	1E-06	3E-06
1082b	0.37	0.0856	5E-06	6E-06	1E-06	1E-06	3E-06
1100a	0.10	0.0257	2E-06	2E-06	4E-07	4E-07	9E-07
1100b	0.10	0.0253	2E-06	2E-06	4E-07	4E-07	9E-07
Council/State-owned receptors 286e	0.49	0.1073	6E-06	8E-06	2E-06	2E-06	4E-06
286f N1	0.46 0.37	0.1009 0.0862	6E-06	7E-06	2E-06 1E-06	2E-06 1E-06	3E-06 3E-06
N2	0.37	0.0858	5E-06 5E-06	6E-06 6E-06	1E-06	1E-06	3E-06
N3	0.36	0.0853	5E-06	6E-06	1E-06	1E-06	3E-06
N4	0.36	0.0849	5E-06	6E-06	1E-06	1E-06	3E-06
N5	0.37	0.0875	5E-06	6E-06	1E-06	1E-06	3E-06
N6	0.38	0.0879	5E-06	6E-06	2E-06	1E-06	3E-06
N7	0.38	0.0884	5E-06	7E-06	2E-06	1E-06	3E-06
N8	0.38	0.0890	5E-06	7E-06	2E-06	1E-06	3E-06
N9	0.38	0.0895	5E-06	7E-06	2E-06	1E-06	3E-06
N10	0.39	0.0902	5E-06	7E-06	2E-06	1E-06	3E-06
	. 0.00	0.0002	JL-00	, L-00	4L-00	1 L-00	JL-00

1.	/ all Astnma ED	Risk (PM <sub>10</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)	Risk (PM <sub>2.5</sub> CV Hospitalisations, >65 years)	Risk (PM <sub>2.5</sub> Mortality all causes)	Change in Annual Average PM2.5 Concentration (µg/m³)	Change in Annual Average PM10 Concentration (µg/m³)	Sensitive Receptors
111		1E-06 1F-06						
150   150	3E-06	1E-06	1E-06	6E-06	5E-06	0.0844	0.36	N14
1.50								
1979   0.577	3E-06	1E-06	1E-06	6E-06	5E-06	0.0860	0.37	N17
Description								
10.000   10.000	3E-06	1E-06	1E-06	6E-06	5E-06	0.0877	0.38	N20
Description								
Section   Sect		2E-06				0.1191		
1925		2E-06						
141   0.2923   25-05		2E-06						
Aged Cutter receptors		2E-06						
Section   Sect	6 1E-05	3E-06	3E-06	2E-05	2E-05	0.2993	1.41	
Size		1E-05						
Section   3.16								
Prison receptors	5 2E-05	1E-05	1E-05	5E-05	4E-05	0.6713	3.16	658d
Marca						0.6768	3.19	
Second   S		2E-06		7E-06	6E-06			
Commercial accomodation		1E-06						
1.00	3E-00	1E-06	1E-00	0E-U0	5E-06	0.0812	0.37	
1932   3.33	05.05	45.05	45.05	55.05	45.05	0.7074	0.00	receptors
1922   3.31								
1937   3,30	5 2E-05	1E-05	1E-05	5E-05	4E-05	0.7032	3.31	622d
1926		1E-05						
Sign		1E-05 1E-05						
123	5 2E-05	1E-05	1E-05	5E-05	4E-05	0.7044	3.32	622h
1528		1E-05 1E-05						
152m	5 2E-05	1E-05	1E-05	5E-05	4E-05	0.7060	3.32	622k
1922   3.33		1E-05						
1529	5 2E-05	1E-05	1E-05	5E-05	4E-05	0.7083	3.33	622n
1232   3.31		1E-05						
1222   3.28		1E-05 1E-05						
1821   3.27	5 2E-05	1E-05	1E-05	5E-05	4E-05	0.6998	3.29	622r
1920								
12.90	5 2E-05	1E-05	1E-05	5E-05	4E-05	0.7163	3.37	622u
1232   3.35		1E-05						
S221   3.29		1E-05						
		1E-05		5E-05	4E-05		3.32	
1828   3.27								
18-26   3.36   0.7145   4E-05   5E-05   1E-05   1E-0	5 2E-05	1E-05	1E-05	5E-05	4E-05	0.6953	3.27	622ab
18-20e   3.36								
		1E-05						
975         0.41         0.0945         6E-06         7E-06         2E-06         1E-06           Commercial receptors         0E+00         0E+00         0E+00         0E+00         0E+00         0E+00         0E+00         0E+00         0E+05         2E-05         2E-05         2E-05         2E-05         2E-05         2E-05         2E-05         4E-06         6E-06		1E-05						
Commercial receptors		1E-05 1E-06						
195e	0E+00	0E+00	0E+00	0E+00	0E+00			
140b-1								6 195e
140b-3	1E-05	6E-06	6E-06	3E-05	2E-05	0.3511	1.66	140b-1
1400-4		6E-06						
2026   2.08			6E-06					
202e   2.11	1E-05	8E-06	7E-06	3E-05	3E-05			
202f   2.07								
1.00	1E-05	8E-06	7E-06	3E-05	3E-05	0.4352	2.07	202f
472e         0.21         0.0497         3E-06         4E-06         9E-07         8E-07           472f         0.22         0.0515         3E-06         4E-06         9E-07         8E-07           472g         0.22         0.0517         3E-06         4E-06         9E-07         8E-07           472h         0.22         0.0517         3E-06         4E-06         9E-07         8E-07           472l         0.22         0.0514         3E-06         4E-06         9E-07         8E-07           472l         0.22         0.0514         3E-06         4E-06         9E-07         8E-07           472l         0.22         0.0506         3E-06         4E-06         9E-07         8E-07           472k         0.21         0.0499         3E-06         4E-06         9E-07         8E-07           472m         0.22         0.0527         3E-06         4E-06         9E-07         8E-07           489         3.59         0.7376         4E-05         5E-05         1E-05         1E-05           546a         4.06         0.8653         5E-05         6E-05         1E-05         1E-05           546a         4.06         0.8683								
472g         0.22         0.0520         3E-06         4E-06         9E-07         8E-07           472h         0.22         0.0517         3E-06         4E-06         9E-07         8E-07           472l         0.22         0.0514         3E-06         4E-06         9E-07         8E-07           472l         0.22         0.0506         3E-06         4E-06         9E-07         8E-07           472k         0.21         0.0499         3E-06         4E-06         9E-07         8E-07           472m         0.23         0.0533         3E-06         4E-06         9E-07         8E-07           472m         0.22         0.0527         3E-06         4E-06         9E-07         8E-07           472m         0.22         0.0527         3E-06         4E-06         9E-07         8E-07           489         3.59         0.7376         4E-05         5E-05         1E-05         1E-05           546a         3.59         0.7651         5E-05         6E-05         1E-05         1E-05           546b         3.98         0.8485         5E-05         6E-05         1E-05         1E-05           546c         3.97         0.8488	2E-06	8E-07	9E-07	4E-06	3E-06	0.0497	0.21	472e
472h         0.22         0.0517         3E-06         4E-06         9E-07         8E-07           472i         0.22         0.0514         3E-06         4E-06         9E-07         8E-07           472i         0.22         0.0506         3E-06         4E-06         9E-07         8E-07           472k         0.21         0.0499         3E-06         4E-06         9E-07         8E-07           472i         0.23         0.0533         3E-06         4E-06         9E-07         8E-07           472m         0.22         0.0527         3E-06         4E-06         9E-07         8E-07           489         3.59         0.7376         4E-05         5E-05         1E-05         1E-05           546a         4.06         0.8653         5E-05         6E-05         1E-05         1E-05           546b         3.98         0.8485         5E-05         6E-05         1E-05         1E-05           546c         3.97         0.8486         5E-05         6E-05         1E-05         1E-05           617b         3.31         0.7048         4E-05         5E-05         1E-05         1E-05           617c         3.40         0.7223		8E-07						
472i         0.22         0.0514         3E-06         4E-06         9E-07         8E-07           472j         0.22         0.0506         3E-06         4E-06         9E-07         8E-07           472k         0.21         0.0499         3E-06         4E-06         9E-07         8E-07           472l         0.23         0.0533         3E-06         4E-06         9E-07         8E-07           472m         0.22         0.0527         3E-06         4E-06         9E-07         8E-07           489         3.59         0.7376         4E-05         5E-05         1E-05         1E-05           540         3.59         0.7376         4E-05         5E-05         1E-05         1E-05           540         3.59         0.7651         5E-05         6E-05         1E-05         1E-05           540         3.59         0.7651         5E-05         6E-05         1E-05         1E-05           546         3.98         0.8485         5E-05         6E-05         1E-05         1E-05           546c         3.97         0.8468         5E-05         6E-05         1E-05         1E-05           617b         3.31         0.7048	2E-06							472h
472k         0.21         0.0499         3E-06         4E-06         9E-07         8E-07           472l         0.23         0.0533         3E-06         4E-06         9E-07         8E-07           472lm         0.22         0.0527         3E-06         4E-06         9E-07         8E-07           489         3.59         0.7376         4E-05         5E-05         1E-05         1E-05           540         3.59         0.7376         4E-05         5E-05         1E-05         1E-05           5469         4.06         0.8653         5E-05         6E-05         1E-05         1E-05           546b         3.98         0.8485         5E-05         6E-05         1E-05         1E-05           546c         3.97         0.8486         5E-05         6E-05         1E-05         1E-05           617b         3.31         0.7048         4E-05         5E-05         1E-05         1E-05           617c         3.40         0.7233         4E-05         5E-05         1E-05         1E-05           617e         3.42         0.7272         4E-05         5E-05         1E-05         1E-05           617e         3.41         0.7248	2E-06	8E-07	9E-07	4E-06	3E-06	0.0514	0.22	
472I         0.23         0.0533         3E-06         4E-06         9E-07         8E-07           472m         0.22         0.0527         3E-06         4E-06         9E-07         8E-07           489         3.59         0.7376         4E-05         5E-05         1E-05         1E-05           540         3.59         0.7651         5E-05         6E-05         1E-05         1E-05           546a         4.06         0.8653         5E-05         6E-05         1E-05         1E-05           546b         3.98         0.8485         5E-05         6E-05         1E-05         1E-05           546c         3.97         0.8468         5E-05         6E-05         1E-05         1E-05           617b         3.31         0.7048         4E-05         5E-05         1E-05         1E-05           617c         3.40         0.7233         4E-05         5E-05         1E-05         1E-05           617d         3.40         0.7229         4E-05         5E-05         1E-05         1E-05           617e         3.42         0.7272         4E-05         5E-05         1E-05         1E-05           617f         3.41         0.7248		8E-07 8E-07						
489         3.59         0.7376         4E-05         5E-05         1E-05           540         3.59         0.7651         5E-05         6E-05         1E-05         1E-05           546a         4.06         0.8653         5E-05         6E-05         1E-05         1E-05           546b         3.98         0.8485         5E-05         6E-05         1E-05         1E-05           546c         3.97         0.8468         5E-05         6E-05         1E-05         1E-05           617b         3.31         0.7048         4E-05         5E-05         1E-05         1E-05           617c         3.40         0.7233         4E-05         5E-05         1E-05         1E-05           617c         3.40         0.7229         4E-05         5E-05         1E-05         1E-05           617e         3.42         0.7272         4E-05         5E-05         1E-05         1E-05           617e         3.41         0.7248         4E-05         5E-05         1E-05         1E-05           617g         3.31         0.7039         4E-05         5E-05         1E-05         1E-05           617h         3.34         0.7111         4E-05	2E-06	8E-07	9E-07	4E-06	3E-06	0.0533	0.23	4721
540         3.59         0.7651         5E-05         6E-05         1E-05           5469         4.06         0.8653         5E-05         6E-05         1E-05           5460         3.98         0.8485         5E-05         6E-05         1E-05           546c         3.97         0.8468         5E-05         6E-05         1E-05           617b         3.31         0.7048         4E-05         5E-05         1E-05           617c         3.40         0.7233         4E-05         5E-05         1E-05           617d         3.40         0.7229         4E-05         5E-05         1E-05           617e         3.42         0.7272         4E-05         5E-05         1E-05           617e         3.41         0.7248         4E-05         5E-05         1E-05           617f         3.41         0.7248         4E-05         5E-05         1E-05           617e         3.41         0.7248         4E-05         5E-05         1E-05           617g         3.31         0.7039         4E-05         5E-05         1E-05           617e         3.31         0.7039         4E-05         5E-05         1E-05		8E-07 1E-05						
546b         3.98         0.8485         5E-05         6E-05         1E-05           546c         3.97         0.8468         5E-05         6E-05         1E-05           617b         3.31         0.7048         4E-05         5E-05         1E-05           617c         3.40         0.7233         4E-05         5E-05         1E-05           617d         3.40         0.7229         4E-05         5E-05         1E-05           617e         3.42         0.7272         4E-05         5E-05         1E-05           617f         3.41         0.7248         4E-05         5E-05         1E-05           617g         3.31         0.7039         4E-05         5E-05         1E-05           617g         3.31         0.7039         4E-05         5E-05         1E-05           617h         3.35         0.7131         4E-05         5E-05         1E-05           617h         3.35         0.7131         4E-05         5E-05         1E-05           617i         3.34         0.7110         4E-05         5E-05         1E-05           617i         3.34         0.7110         4E-05         5E-05         1E-05	3E-05	1E-05	1E-05	6E-05	5E-05	0.7651	3.59	540
546c         3.97         0.8468         5E-05         6E-05         1E-05           617b         3.31         0.7048         4E-05         5E-05         1E-05           617c         3.40         0.7233         4E-05         5E-05         1E-05           617d         3.40         0.7229         4E-05         5E-05         1E-05           617e         3.42         0.7272         4E-05         5E-05         1E-05         1E-05           617f         3.41         0.7248         4E-05         5E-05         1E-05         1E-05           617g         3.31         0.7039         4E-05         5E-05         1E-05         1E-05           617h         3.35         0.7131         4E-05         5E-05         1E-05         1E-05           617i         3.34         0.7110         4E-05         5E-05         1E-05         1E-05           620         3.21         0.6830         4E-05         5E-05         1E-05         1E-05		1E-05 1E-05						
617b         3.31         0.7048         4E-05         5E-05         1E-05           617c         3.40         0.7233         4E-05         5E-05         1E-05           617d         3.40         0.7223         4E-05         5E-05         1E-05           617e         3.42         0.7272         4E-05         5E-05         1E-05           617f         3.41         0.7248         4E-05         5E-05         1E-05           617g         3.31         0.7039         4E-05         5E-05         1E-05           617h         3.35         0.7131         4E-05         5E-05         1E-05           617l         3.34         0.7110         4E-05         5E-05         1E-05           620         3.21         0.6830         4E-05         5E-05         1E-05	3E-05	1E-05			5E-05	0.8468		546c
617d         3.40         0.7229         4E-05         5E-05         1E-05         1E-05           617e         3.42         0.7272         4E-05         5E-05         1E-05         1E-05           617f         3.41         0.7248         4E-05         5E-05         1E-05         1E-05           617g         3.31         0.7039         4E-05         5E-05         1E-05         1E-05           617h         3.35         0.7131         4E-05         5E-05         1E-05         1E-05           617i         3.34         0.7110         4E-05         5E-05         1E-05         1E-05           620         3.21         0.6830         4E-05         5E-05         1E-05         1E-05	5 2E-05	1E-05	1E-05	5E-05	4E-05	0.7048	3.31	617b
617e         3.42         0.7272         4E-05         5E-05         1E-05           617f         3.41         0.7248         4E-05         5E-05         1E-05           617g         3.31         0.7039         4E-05         5E-05         1E-05           617h         3.35         0.7131         4E-05         5E-05         1E-05           617i         3.34         0.7110         4E-05         5E-05         1E-05           620         3.21         0.6830         4E-05         5E-05         1E-05								
617g         3.31         0.7039         4E-05         5E-05         1E-05         617h         5E-05         1E-05         1	5 2E-05	1E-05	1E-05	5E-05	4E-05	0.7272	3.42	617e
617h         3.35         0.7131         4E-05         5E-05         1E-05         1E-05           617l         3.34         0.7110         4E-05         5E-05         1E-05         1E-05           620         3.21         0.6830         4E-05         5E-05         1E-05         1E-05		1E-05 1E-05						
617i         3.34         0.7110         4E-05         5E-05         1E-05         1E-05           620         3.21         0.6830         4E-05         5E-05         1E-05         1E-05		1E-05				0.7131	3.35	617h
		1E-05		5E-05	4E-05			
1 0.02   0.7001   4E-00   0E-00   1E-00   1E-00		1E-05 1E-05	1E-05 1E-05	5E-05 5E-05	4E-05 4E-05	0.6830 0.7051	3.21	620 622ah
622ai 3.32 0.7047 4E-05 5E-05 1E-05 1E-05	5 2E-05	1E-05	1E-05	5E-05	4E-05	0.7047	3.32	622ai
		1E-05 1E-05						
625 3.18 0.6755 4E-05 5E-05 1E-05 1E-05	5 2E-05	1E-05	1E-05	5E-05	4E-05	0.6755	3.18	625
629 3.14 0.6681 4E-05 5E-05 1E-05 1E-05		1E-05		5E-05			3.14	
		1E-05 1E-05						
628 3.15 0.6700 4E-05 5E-05 1E-05 1E-05	5 2E-05	1E-05	1E-05	5E-05	4E-05	0.6700	3.15	628
		1E-05 1E-05						
630c 3.11 0.6606 4E-05 5E-05 1E-05 1E-05	5 2E-05	1E-05	1E-05	5E-05	4E-05	0.6606	3.11	630c
		1E-05						
		1E-05 1E-05						
674b 3.54 0.7495 4E-05 6E-05 1E-05 1E-05	3E-05	1E-05	1E-05	6E-05	4E-05	0.7495	3.54	674b
		1E-05 1E-05						
		8E-06						

Sensitive Receptors	Change in Annual Average PM10 Concentration (μg/m³)	Change in Annual Average PM2.5 Concentration (µg/m³)	Risk (PM <sub>2.5</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> CV Hospitalisations, >65 years)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)	Risk (PM <sub>10</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> Asthma ED admissions, 1-14 years)
872b	1.49	0.3163	2E-05	2E-05	5E-06	5E-06	1E-05
1085	0.35	0.0820	5E-06	6E-06	1E-06	1E-06	3E-06
2ap	0.70	0.1524	9E-06	1E-05	3E-06	3E-06	5E-06
2aq	0.70	0.1518	9E-06	1E-05	3E-06	3E-06	5E-06
2ar	0.70	0.1512	9E-06	1E-05	3E-06	3E-06	5E-06
5h	0.22	0.0506	3E-06	4E-06	9E-07	8E-07	2E-06
5w	0.32	0.0722	4E-06	5E-06	1E-06	1E-06	2E-06
5an	0.22	0.0510	3E-06	4E-06	9E-07	8E-07	2E-06
5ao	0.22	0.0505	3E-06	4E-06	9E-07	8E-07	2E-06
5ap	0.32	0.0725	4E-06	5E-06	1E-06	1E-06	2E-06
8q	0.11	0.0284	2E-06	2E-06	5E-07	4E-07	1E-06
Mal4	0.48	0.1017	6E-06	8E-06	2E-06	2E-06	3E-06
Mal5	0.48	0.1021	6E-06	8E-06	2E-06	2E-06	3E-06
Mal6	0.48	0.1029	6E-06	8E-06	2E-06	2E-06	3E-06
UHSC2	0.53	0.1213	7E-06	9E-06	2E-06	2E-06	4E-06
UHSC3	0.51	0.1186	7E-06	9E-06	2E-06	2E-06	4E-06
UHSC4	0.52	0.1202	7E-06	9E-06	2E-06	2E-06	4E-06
N29	0.67	0.1464	9E-06	1E-05	3E-06	2E-06	5E-06
School receptors							
N30	3.49	0.7384	4E-05	5E-05	1E-05	1E-05	2E-05
N31	3.44	0.7296	4E-05	5E-05	1E-05	1E-05	2E-05
N32	3.44	0.7286	4E-05	5E-05	1E-05	1E-05	2E-05
N33	3.47	0.7356	4E-05	5E-05	1E-05	1E-05	2E-05
Church receptors							
520	1.05	0.2246	1E-05	2E-05	4E-06	4E-06	8E-06
658b	3.17	0.6729	4E-05	5E-05	1E-05	1E-05	2E-05
658c	3.16	0.6703	4E-05	5E-05	1E-05	1E-05	2E-05
616c	3.35	0.7122	4E-05	5E-05	1E-05	1E-05	2E-05
N34	0.45	0.1004	6E-06	7E-06	2E-06	2E-06	3E-06
Heritage receptors*							

<sup>\*</sup>No inhabited heritage receptors with elevated health risks identified.

# Quantification of Effects - $PM_{2.5}$ Mount Pleasant - Scenario 2 (incorporating proactive/reactive mitigation measures)

Air quality indicator:	PM <sub>2.5</sub>	PM <sub>2.5</sub>	PM <sub>2.5</sub>	PM <sub>2.5</sub>
Endpoint:	Mortality - All	Hospitalisation -	Hospitalisations -	Morbidity - Asthma
	Causes	Cardiovascular	Respiratory	ED Admissions
Effect Exposure Duration:	Long-term	Short-term	Short-term	Short-term
Age Group:	≥ 30 years	≥ 65 years	≥ 65 years	1-14 years
β (change in effect per 1 μg/m³) (as per Table 5.2)	0.0058	0.0008	0.00041	0.00148
Annual baseline incidence (per 100,000)	1026	9235	4168	2284
Baseline Incidence (per person per year)	0.01026	0.09235	0.04168	0.02284

Sensitive Receptors	Change in Annual Average PM <sub>2.5</sub> Concentration (µg/m³)	Risk (PM <sub>2.5</sub> Mortality all causes)	Risk( PM <sub>2.5</sub> CV Hospitalisations, > 65 years)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)	Risk (PM <sub>2.5</sub> Asthma ED admissions, 1- 14 years)
Privately-owned receptors					
20	1.3955	8E-05	1E-04	2E-05	5E-05
21	1.4295	9E-05	1E-04	2E-05	5E-05
23	1.4440	9E-05	1E-04	2E-05	5E-05
102	1.4574	9E-05	1E-04	2E-05	5E-05
108	1.5597	9E-05	1E-04	3E-05	5E-05
112	1.6982	1E-04	1E-04	3E-05	6E-05
118	1.6705	1E-04	1E-04	3E-05	6E-05
120	1.6310	1E-04	1E-04	3E-05	6E-05
120c	1.6633	1E-04	1E-04	3E-05	6E-05
121	1.7010	1E-04	1E-04	3E-05	6E-05
153a	0.7848	5E-05	6E-05	1E-05	3E-05
154	1.3906	8E-05	1E-04	2E-05	5E-05
154b	1.3750	8E-05	1E-04	2E-05	5E-05
156a	1.4178	8E-05	1E-04	2E-05	5E-05
157a	1.3066	8E-05	1E-04	2E-05	4E-05
158	1.1915	7E-05	9E-05	2E-05	4E-05

## Quantification of Effects - $PM_{2.5}$ and $PM_{10}$ Mount Pleasant - Scenario 3 (without proactive/reactive mitigation measures)

Air quality indicator:	PM <sub>2.5</sub>	PM <sub>2.5</sub>	PM <sub>2.5</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Endpoint:	Mortality - All	Hospitalisations -	Hospitalisations -	Mortality - All	Morbidity -
	Causes	Cardiovascular	Respiratory	Causes	Asthma ED
					Admissions
Effect Exposure Duration:	Long-term	Short-term	Short-term	Short-Term	Short-Term
Age Group:	≥ 30 years	≥ 65 years	≥ 65 years	All ages	1-14 years
β (change in effect per 1 μg/m³) (as per Table 5.2)	0.0058	0.0008	0.00041	0.0006	0.00148
Annual baseline incidence (per 100,000)	1026	9235	4168	610.5	2284
Baseline Incidence (per person per year)	0.01026	0.09235	0.04168	0.006105	0.02284

Sensitive Receptors	Change in Annual Average PM10 Concentration (μg/m³)	Change in Annual Average PM2.5 Concentration (µg/m³)	Risk (PM <sub>2.5</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> CV Hospitalisations, >65 years)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)	Risk (PM <sub>10</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> Asthma ED admissions, 1-14 years)
Privately owned receptors							
<u>4</u> 19	3.73 6.35	0.7414 1.2405	4E-05 7E-05	5E-05 9E-05	1E-05 2E-05	1E-05 2E-05	3E-05 4E-05
20	7.23	1.4099	8E-05	1E-04	2E-05	3E-05	5E-05
21	7.43	1.4484	9E-05	1E-04	2E-05	3E-05	5E-05
35 35	5.38	1.0459	6E-05	8E-05	2E-05	2E-05	4E-05
35b 43	5.40 1.08	1.0497 0.2051	6E-05 1E-05	8E-05 2E-05	2E-05 4E-06	2E-05 4E-06	4E-05 7E-06
43b	0.56	0.1131	7E-06	8E-06	2E-06	2E-06	4E-06
45	0.54	0.1096	7E-06	8E-06	2E-06	2E-06	4E-06
45b 45c	0.54 0.55	0.1104 0.1118	7E-06 7E-06	8E-06	2E-06 2E-06	2E-06	4E-06
47	0.54	0.116	6E-06	8E-06 8E-06	2E-06 2E-06	2E-06 2E-06	4E-06 4E-06
67	6.01	1.1663	7E-05	9E-05	2E-05	2E-05	4E-05
74	5.73	1.1109	7E-05	8E-05	2E-05	2E-05	4E-05
77 79	4.91 4.28	0.9513 0.8293	6E-05	7E-05 6E-05	2E-05 1E-05	2E-05 2E-05	3E-05 3E-05
82	3.33	0.6477	5E-05 4E-05	5E-05	1E-05	1E-05	2E-05
83	3.46	0.6719	4E-05	5E-05	1E-05	1E-05	2E-05
84a	3.77	0.7313	4E-05	5E-05	1E-05	1E-05	2E-05
84b	0.96	0.1721	1E-05	1E-05	3E-06	4E-06	6E-06
86a 86b	5.01 1.83	0.9684 0.3562	6E-05 2E-05	7E-05 3E-05	2E-05 6E-06	2E-05 7E-06	3E-05 1E-05
96	7.12	1.3743	8E-05	1E-04	2E-05	3E-05	5E-05
102	7.51	1.4496	9E-05	1E-04	2E-05	3E-05	5E-05
108	8.10	1.5652	9E-05	1E-04	3E-05	3E-05	5E-05
112 118	8.84 8.74	1.7101 1.6869	1E-04 1E-04	1E-04 1E-04	3E-05 3E-05	3E-05 3E-05	6E-05 6E-05
120	8.74	1.6550	1E-04 1E-04	1E-04 1E-04	3E-05 3E-05	3E-05 3E-05	6E-05
120c	8.77	1.6897	1E-04	1E-04	3E-05	3E-05	6E-05
121	9.05	1.7440	1E-04	1E-04	3E-05	3E-05	6E-05
136	5.35	1.0171	6E-05	8E-05	2E-05	2E-05	3E-05
140a 140c	2.35 3.06	0.4597 0.5861	3E-05 3E-05	3E-05 4E-05	8E-06 1E-05	9E-06 1E-05	2E-05 2E-05
143a	2.76	0.5441	3E-05	4E-05	9E-06	1E-05	2E-05
143b	5.57	1.0670	6E-05	8E-05	2E-05	2E-05	4E-05
147	6.03	1.1566	7E-05	9E-05	2E-05	2E-05	4E-05
153a 154	4.26 8.73	0.7892 1.6385	5E-05 1E-04	6E-05 1E-04	1E-05 3E-05	2E-05 3E-05	3E-05 6E-05
154 154b	8.61	1.6171	1E-04	1E-04	3E-05	3E-05	5E-05
156a	8.81	1.6549	1E-04	1E-04	3E-05	3E-05	6E-05
156b	0.24	0.0498	3E-06	4E-06	9E-07	9E-07	2E-06
157a	8.26	1.5549	9E-05	1E-04	3E-05	3E-05	5E-05
157b 159	0.21 6.37	0.0449 1.2159	3E-06 7E-05	3E-06 9E-05	8E-07 2E-05	8E-07 2E-05	2E-06 4E-05
169	3.64	0.6949	4E-05	5E-05	1E-05	1E-05	2E-05
171	2.70	0.5207	3E-05	4E-05	9E-06	1E-05	2E-05
172 172b	2.09	0.4076 0.3929	2E-05 2E-05	3E-05 3E-05	7E-06 7E-06	8E-06 7E-06	1E-05 1E-05
172c	1.35	0.3929	2E-05	2E-05	5E-06	5E-06	9E-06
310	2.06	0.4014	2E-05	3E-05	7E-06	8E-06	1E-05
173	1.90	0.3701	2E-05	3E-05	6E-06	7E-06	1E-05
174 175	1.97 2.01	0.3829 0.3899	2E-05 2E-05	3E-05 3E-05	7E-06 7E-06	7E-06 7E-06	1E-05 1E-05
175b	2.03	0.3947	2E-05	3E-05	7E-06	7E-06	1E-05
175c	2.00	0.3892	2E-05	3E-05	7E-06	7E-06	1E-05
176	2.04	0.3973	2E-05	3E-05	7E-06	7E-06	1E-05
177 178	1.79 1.12	0.3484 0.2242	2E-05 1E-05	3E-05 2E-05	6E-06 4E-06	7E-06 4E-06	1E-05 8E-06
179	1.21	0.2418	1E-05	2E-05	4E-06	4E-06	8E-06
180	1.13	0.2256	1E-05	2E-05	4E-06	4E-06	8E-06
180b	0.93	0.1898	1E-05	1E-05	3E-06	3E-06	6E-06
180c 181	0.70 0.60	0.1445 0.1263	9E-06 8E-06	1E-05 9E-06	2E-06 2E-06	3E-06 2E-06	5E-06 4E-06
181c	0.90	0.1203	1E-05	1E-05	3E-06	3E-06	6E-06
182	0.50	0.1049	6E-06	8E-06	2E-06	2E-06	4E-06
189 190	1.10	0.2240	1E-05	2E-05	4E-06	4E-06	8E-06
190 191	1.19 1.03	0.2414 0.2100	1E-05 1E-05	2E-05 2E-05	4E-06 4E-06	4E-06 4E-06	8E-06 7E-06
192	1.11	0.2257	1E-05	2E-05	4E-06	4E-06	8E-06
193	1.01	0.2039	1E-05	2E-05	3E-06	4E-06	7E-06
193c 194	0.75 1.04	0.1523 0.2082	9E-06	1E-05	3E-06 4E-06	3E-06	5E-06
194	1.04	0.2082	1E-05 1E-05	2E-05 2E-05	4E-06 4E-06	4E-06 4E-06	7E-06 8E-06
197	1.37	0.2696	2E-05	2E-05	5E-06	5E-06	9E-06
196	1.32	0.2613	2E-05	2E-05	4E-06	5E-06	9E-06
195d 198	1.42 1.70	0.2790	2E-05	2E-05	5E-06	5E-06	9E-06
198 198b	1.70	0.3317 0.3409	2E-05 2E-05	2E-05 3E-05	6E-06 6E-06	6E-06 6E-06	1E-05 1E-05
199	1.60	0.3129	2E-05	2E-05	5E-06	6E-06	1E-05
200	1.45	0.2850	2E-05	2E-05	5E-06	5E-06	1E-05
202	2.52	0.4851	3E-05	4E-05	8E-06	9E-06	2E-05
202b 203	1.98 2.70	0.3831 0.5185	2E-05 3E-05	3E-05 4E-05	7E-06 9E-06	7E-06 1E-05	1E-05 2E-05
203b	2.64	0.5073	3E-05	4E-05	9E-06	1E-05	2E-05
203c	2.69	0.5169	3E-05	4E-05	9E-06	1E-05	2E-05
206	4.90	0.9580	6E-05	7E-05	2E-05	2E-05	3E-05
207 212	5.72 4.72	1.1179 0.9282	7E-05	8E-05	2E-05	2E-05	4E-05
212 212b	4.72	0.9282	6E-05 6E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
213	5.84	1.1434	7E-05	8E-05	2E-05	2E-05	4E-05
214	5.85	1.1454	7E-05	8E-05	2E-05	2E-05	4E-05
215	5.91	1.1562	7E-05	9E-05	2E-05	2E-05	4E-05
216 216b	5.94 5.85	1.1623 1.1454	7E-05 7E-05	9E-05 8E-05	2E-05 2E-05	2E-05 2E-05	4E-05 4E-05
217	5.97	1.1674	7E-05	9E-05	2E-05	2E-05	4E-05
218	6.00	1.1741	7E-05	9E-05	2E-05	2E-05	4E-05
219	6.03	1.1801	7E-05	9E-05	2E-05	2E-05	4E-05
220	6.06	1.1854	7E-05	9E-05	2E-05	2E-05	4E-05
221	6.12	1.1962	7E-05	9E-05	2E-05	2E-05	4E-05

Sensitive Receptors	Change in Annual Average PM10 Concentration (µg/m³)	Change in Annual Average PM2.5 Concentration (µg/m³)	Risk (PM <sub>2.5</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> CV Hospitalisations, >65 years)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)	Risk (PM <sub>10</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> Asthma ED admissions, 1-14 years)
222	6.16	1.2046	7E-05	9E-05	2E-05	2E-05	4E-05
223	6.24	1.2207	7E-05	9E-05	2E-05	2E-05	4E-05
223b	6.25	1.2219	7E-05	9E-05	2E-05	2E-05	4E-05
224	6.34	1.2390	7E-05	9E-05	2E-05	2E-05	4E-05
225	5.98	1.1700	7E-05	9E-05	2E-05	2E-05	4E-05
249	0.42	0.0910	5E-06	7E-06	2E-06	2E-06	3E-06
252	0.28	0.0603	4E-06	4E-06	1E-06	1E-06	2E-06
257	0.63	0.1294	8E-06	1E-05	2E-06	2E-06	4E-06
258a	0.54	0.1109	7E-06	8E-06	2E-06	2E-06	4E-06
258c	0.53	0.1097	7E-06	8E-06	2E-06	2E-06	4E-06
259	0.51	0.1060	6E-06	8E-06	2E-06	2E-06	4E-06
259b	0.48	0.1000	6E-06	7E-06	2E-06	2E-06	3E-06
260	0.54	0.1114	7E-06	8E-06	2E-06	2E-06	4E-06
260a	0.53	0.1100	7E-06	8E-06	2E-06	2E-06	4E-06
260b	0.53	0.1096	7E-06	8E-06	2E-06	2E-06	4E-06
261	0.45	0.0951	6E-06	7E-06	2E-06	2E-06	3E-06
261b	0.45	0.0953	6E-06	7E-06	2E-06	2E-06	3E-06
271	0.49	0.0878	5E-06	6E-06	1E-06	2E-06	3E-06
272b	0.82	0.1450	9E-06	1E-05	2E-06	3E-06	5E-06
272	0.83	0.1465	9E-06	1E-05	3E-06	3E-06	5E-06
273	0.59	0.1059	6E-06	8E-06	2E-06	2E-06	4E-06
273b	0.57	0.1019	6E-06	8E-06	2E-06	2E-06	3E-06
288	3.84	0.7524	4E-05	6E-05	1E-05	1E-05	3E-05
288b	3.82	0.7495	4E-05	6E-05	1E-05	1E-05	3E-05
289	4.54	0.8830	5E-05	7E-05	2E-05	2E-05	3E-05
292	0.33	0.0725	4E-06	5E-06	1E-06	1E-06	2E-06
292b	0.32	0.0693	4E-06	5E-06	1E-06	1E-06	2E-06
300	0.38	0.0829	5E-06	6E-06	1E-06	1E-06	3E-06
298	0.40	0.0868	5E-06	6E-06	1E-06	1E-06	3E-06
296a	0.45	0.0955	6E-06	7E-06	2E-06	2E-06	3E-06
296b	0.43	0.0927	6E-06	7E-06	2E-06	2E-06	3E-06
302a	0.32	0.0688	4E-06	5E-06	1E-06	1E-06	2E-06
302c	0.31	0.0669	4E-06	5E-06	1E-06	1E-06	2E-06
401	0.74	0.1319	8E-06	1E-05	2E-06	3E-06	4E-06
402	0.80	0.1431	9E-06	1E-05	2E-06	3E-06	5E-06
404	0.87	0.1556	9E-06	1E-05	3E-06	3E-06	5E-06
407	1.06	0.1917	1E-05	1E-05	3E-06	4E-06	6E-06
413b	0.55	0.0977	6E-06	7E-06	2E-06	2E-06	3E-06
415	0.52	0.0933	6E-06	7E-06	2E-06	2E-06	3E-06
417	0.46	0.0828	5E-06	6E-06	1E-06	2E-06	3E-06
418	0.38	0.0691	4E-06	5E-06	1E-06	1E-06	2E-06
418b	0.40	0.0717	4E-06	5E-06	1E-06	1E-06	2E-06
419	0.58	0.1025	6E-06	8E-06	2E-06	2E-06	3E-06
421	0.65	0.1157	7E-06	9E-06	2E-06	2E-06	4E-06
422a	2.15	0.4111	2E-05	3E-05	7E-06	8E-06	1E-05
436	0.56	0.1173	7E-06	9E-06	2E-06	2E-06	4E-06
437 441	0.59	0.1242 0.0846	7E-06	9E-06	2E-06	2E-06	4E-06
442	0.40 0.16	0.0846	5E-06 2E-06	6E-06 2E-06	1E-06 6E-07	1E-06 6E-07	3E-06 1E-06
443 451	0.41 0.48	0.0868 0.0981	5E-06 6E-06	6E-06 7E-06	1E-06	1E-06 2E-06	3E-06
452	0.46	0.1722	1E-05	7E-06 1E-05	2E-06 3E-06	3E-06	3E-06 6E-06
453a	0.40	0.0734	4E-06	5E-06	1E-06	1E-06	2E-06
453b	0.40	0.0732	4E-06	5E-06	1E-06	1E-06	2E-06
454	0.33	0.0606	4E-06	4E-06	1E-06	1E-06	2E-06
455	0.19	0.0357	2E-06	3E-06	6E-07	7E-07	1E-06
456	0.20	0.0376	2E-06	3E-06	6E-07	7E-07	1E-06
456b	0.20	0.0375	2E-06	3E-06	6E-07	7E-07	1E-06
458	0.28	0.0521	3E-06	4E-06	9E-07	1E-06	2E-06
460	0.12	0.0252	1E-06	2E-06	4E-07	5E-07	9E-07
460b	0.12	0.0250	1E-06	2E-06	4E-07	4E-07	8E-07
461	0.12	0.0248	1E-06	2E-06	4E-07	4E-07	8E-07
462a	0.13	0.0262	2E-06	2E-06	4E-07	5E-07	9E-07
462b	0.13	0.0263	2E-06	2E-06	4E-07	5E-07	9E-07
462c	0.13	0.0263	2E-06	2E-06	4E-07	5E-07	9E-07
464	0.22	0.0455	3E-06	3E-06	8E-07	8E-07	2E-06
464b	0.22	0.0461	3E-06	3E-06	8E-07	8E-07	2E-06
465	0.18	0.0386	2E-06	3E-06	7E-07	7E-07	1E-06
466	0.23	0.0494	3E-06	4E-06	8E-07	8E-07	2E-06
467	0.34	0.0711	4E-06	5E-06	1E-06	1E-06	2E-06
467b	0.34	0.0704	4E-06	5E-06	1E-06	1E-06	2E-06
468a	0.20	0.0448	3E-06	3E-06	8E-07	7E-07	2E-06
468b	0.19	0.0426	3E-06	3E-06	7E-07	7E-07	1E-06
468c	0.21	0.0462	3E-06	3E-06	8E-07	8E-07	2E-06
468d 470	0.20	0.0449 0.0565	3E-06	3E-06 4E-06	8E-07	7E-07	2E-06
471	0.26 0.24	0.0541	3E-06 3E-06	4E-06	1E-06 9E-07	9E-07 9E-07	2E-06 2E-06
472a	0.25	0.0556	3E-06	4E-06	1E-06	9E-07	2E-06
472b	0.26	0.0566	3E-06	4E-06	1E-06	9E-07	2E-06
472c	0.23	0.0516	3E-06	4E-06	9E-07	8E-07	2E-06
474	0.22	0.0489	3E-06	4E-06	8E-07	8E-07	2E-06
475	0.32	0.0703	4E-06	5E-06	1E-06	1E-06	2E-06
475b	0.32	0.0703	4E-06	5E-06	1E-06	1E-06	2E-06
476	0.21	0.0474	3E-06	4E-06	8E-07	8E-07	2E-06
477a	0.25	0.0548	3E-06	4E-06	9E-07	9E-07	2E-06
477b	0.25	0.0546	3E-06	4E-06	9E-07	9E-07	2E-06
481	0.17	0.0387	2E-06	3E-06	7E-07	6E-07	1E-06
483	0.15	0.0336	2E-06	2E-06	6E-07	5E-07	1E-06
484	0.17	0.0389	2E-06	3E-06	7E-07	6E-07	1E-06
485a	0.13	0.0305	2E-06	2E-06	5E-07	5E-07	1E-06
485b	0.13	0.0307	2E-06	2E-06	5E-07	5E-07	1E-06
485c	0.13	0.0304	2E-06	2E-06	5E-07	5E-07	1E-06
485d	0.13	0.0302	2E-06	2E-06	5E-07	5E-07	1E-06
485e	0.13	0.0303	2E-06	2E-06	5E-07	5E-07	1E-06
485f	0.14	0.0308	2E-06	2E-06	5E-07	5E-07	1E-06
487	0.51	0.1077	6E-06	8E-06	2E-06	2E-06	4E-06
488a 488b	0.61	0.1290	8E-06	1E-05	2E-06	2E-06	4E-06
515a	0.66	0.1383	8E-06	1E-05	2E-06	2E-06	5E-06
	0.32	0.0669	4E-06	5E-06	1E-06	1E-06	2E-06
515b	0.24	0.0512	3E-06	4E-06	9E-07	9E-07	2E-06
516	0.21	0.0443	3E-06	3E-06	8E-07	8E-07	1E-06
517	0.26	0.0547	3E-06	4E-06	9E-07	1E-06	2E-06
518	0.30	0.0612	4E-06	5E-06	1E-06	1E-06	2E-06
519	0.24	0.0498	3E-06	4E-06	9E-07	9E-07	2E-06
522a	0.93	0.1849	1E-05	1E-05	3E-06	3E-06	6E-06
522b	3.09	0.5985	4E-05	4E-05	1E-05	1E-05	2E-05
522c	3.08	0.5964	4E-05	4E-05	1E-05	1E-05	2E-05
522d	3.06	0.5943	4E-05	4E-05	1E-05	1E-05	2E-05
526	4.38	0.8484	5E-05	6E-05	1E-05	2E-05	3E-05
527	3.93	0.7647	5E-05	6E-05	1E-05	1E-05	3E-05
528	3.89	0.7568	5E-05	6E-05	1E-05	1E-05	3E-05
529	3.85	0.7494	4E-05	6E-05	1E-05	1E-05	3E-05
530	3.78	0.7360	4E-05	5E-05	1E-05	1E-05	2E-05
531	3.77	0.7351	4E-05	5E-05	1E-05	1E-05	2E-05
531b	3.81	0.7417	4E-05	5E-05	1E-05	1E-05	3E-05
532	3.77	0.7345	4E-05	5E-05	1E-05	1E-05	2E-05
533	3.77	0.7351	4E-05	5E-05	1E-05	1E-05	2E-05

Sensitive Receptors	Change in Annual Average PM10 Concentration (µg/m³)	Change in Annual Average PM2.5 Concentration (µg/m³)	Risk (PM <sub>2.5</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> CV Hospitalisations, >65 years)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)	Risk (PM <sub>10</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> Asthma ED admissions, 1-14 years)
534 535	3.77 3.79	0.7355 0.7379	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
536	3.77	0.7357	4E-05	5E-05	1E-05	1E-05	2E-05
537 538	3.77 3.82	0.7358 0.7480	4E-05 4E-05	5E-05 6E-05	1E-05 1E-05	1E-05 1E-05	2E-05 3E-05
539	3.77	0.7376	4E-05	5E-05	1E-05	1E-05	2E-05
541 542	3.72 3.74	0.7297 0.7327	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
543 543b	3.76 3.81	0.7371 0.7456	4E-05 4E-05	5E-05 6E-05	1E-05 1E-05	1E-05 1E-05	2E-05 3E-05
544	3.78	0.7410	4E-05	5E-05	1E-05	1E-05	3E-05
545 547	3.80 1.02	0.7446 0.2038	4E-05 1E-05	6E-05 2E-05	1E-05 3E-06	1E-05 4E-06	3E-05 7E-06
549	0.49	0.0982	6E-06	7E-06	2E-06	2E-06	3E-06
550 552	0.56 0.54	0.1106 0.1087	7E-06 6E-06	8E-06 8E-06	2E-06 2E-06	2E-06 2E-06	4E-06 4E-06
553 554	0.57 0.62	0.1123 0.1241	7E-06 7E-06	8E-06 9E-06	2E-06 2E-06	2E-06 2E-06	4E-06 4E-06
557	0.55	0.1084	6E-06	8E-06	2E-06	2E-06	4E-06
559 560	0.48 0.50	0.0960 0.0993	6E-06 6E-06	7E-06 7E-06	2E-06 2E-06	2E-06 2E-06	3E-06 3E-06
561	0.52	0.1028	6E-06	8E-06	2E-06	2E-06	3E-06
562 563	0.48 0.44	0.0965 0.0880	6E-06 5E-06	7E-06 6E-06	2E-06 2E-06	2E-06 2E-06	3E-06 3E-06
564	0.48	0.0952	6E-06	7E-06	2E-06	2E-06	3E-06
565 566	0.51 0.49	0.1023 0.0975	6E-06 6E-06	8E-06 7E-06	2E-06 2E-06	2E-06 2E-06	3E-06 3E-06
569 570	0.52 0.54	0.1053 0.1078	6E-06 6E-06	8E-06 8E-06	2E-06 2E-06	2E-06 2E-06	4E-06 4E-06
571	0.60	0.1078	7E-06	9E-06	2E-06	2E-06	4E-06 4E-06
572 573	0.54 0.58	0.1088 0.1157	6E-06 7E-06	8E-06 9E-06	2E-06 2E-06	2E-06 2E-06	4E-06 4E-06
574	0.59	0.1187	7E-06	9E-06	2E-06	2E-06	4E-06
575 576	0.61 0.63	0.1228 0.1256	7E-06 7E-06	9E-06 9E-06	2E-06 2E-06	2E-06 2E-06	4E-06 4E-06
577a	0.68	0.1355	8E-06	1E-05	2E-06	2E-06	5E-06
577b 578	0.67 0.69	0.1334 0.1374	8E-06 8E-06	1E-05 1E-05	2E-06 2E-06	2E-06 3E-06	5E-06 5E-06
583	0.32	0.0650	4E-06	5E-06	1E-06	1E-06	2E-06
586 587a	0.19 0.16	0.0412 0.0349	2E-06 2E-06	3E-06 3E-06	7E-07 6E-07	7E-07 6E-07	1E-06 1E-06
587b	0.16	0.0349	2E-06	3E-06	6E-07	6E-07	1E-06
588 600a	0.19 3.68	0.0397 0.7204	2E-06 4E-05	3E-06 5E-05	7E-07 1E-05	7E-07 1E-05	1E-06 2E-05
600b 601	3.71 3.66	0.7262 0.7169	4E-05	5E-05	1E-05	1E-05	2E-05
602	3.64	0.7139	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
603 604	3.62 3.61	0.7105 0.7080	4E-05 4E-05	5E-05	1E-05	1E-05 1E-05	2E-05 2E-05
605	3.60	0.7053	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05	2E-05 2E-05
606 607	3.58 3.56	0.7016 0.6981	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
608	3.56	0.6975	4E-05	5E-05	1E-05	1E-05	2E-05
609 610	3.54 3.52	0.6948 0.6900	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
611	3.50	0.6868	4E-05	5E-05	1E-05	1E-05	2E-05
612 613	3.55 3.52	0.6950 0.6897	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
614	3.51	0.6872	4E-05	5E-05	1E-05	1E-05	2E-05
615 616a	3.48 3.33	0.6815 0.6485	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
616b 617a	3.48 3.38	0.6827	4E-05	5E-05	1E-05	1E-05	2E-05
618a	3.36	0.6636 0.6587	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
618b 619	3.39 3.35	0.6641 0.6572	4E-05 4E-05	5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
621	3.33	0.6538	4E-05	5E-05 5E-05	1E-05	1E-05	2E-05
622a 623a	3.36 0.42	0.6582 0.0897	4E-05 5E-06	5E-05 7E-06	1E-05 2E-06	1E-05 2E-06	2E-05 3E-06
623b	3.31	0.6496	4E-05	5E-05	1E-05	1E-05	2E-05
630a 631	3.06 3.04	0.6008 0.5968	4E-05 4E-05	4E-05 4E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
632	3.07	0.6013	4E-05	4E-05	1E-05	1E-05	2E-05
648 649	3.20 3.23	0.6259 0.6319	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
650 651	3.25 3.21	0.6364 0.6282	4E-05	5E-05	1E-05	1E-05 1E-05	2E-05 2E-05
652	3.30	0.6464	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05	2E-05
653 654a	3.32 3.39	0.6492 0.6612	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
654b	3.31	0.6481	4E-05	5E-05	1E-05	1E-05	2E-05
655 658a	3.31 3.39	0.6484 0.6626	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
659	3.39	0.6634	4E-05	5E-05	1E-05	1E-05	2E-05
660a 660b	3.38 3.40	0.6618 0.6641	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
661	3.44	0.6722	4E-05	5E-05	1E-05	1E-05	2E-05
662 663	3.46 3.49	0.6762 0.6824	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
664 665a	3.52 3.61	0.6868 0.7046	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
665b	3.60	0.7037	4E-05	5E-05	1E-05	1E-05	2E-05
667a 667b	4.33 4.28	0.8418 0.8319	5E-05 5E-05	6E-05 6E-05	1E-05 1E-05	2E-05 2E-05	3E-05 3E-05
667c	4.32	0.8408	5E-05	6E-05	1E-05	2E-05	3E-05
667d 667e	4.32 4.29	0.8410 0.8356	5E-05 5E-05	6E-05 6E-05	1E-05 1E-05	2E-05 2E-05	3E-05 3E-05
667f	2.98	0.5769	3E-05	4E-05	1E-05	1E-05	2E-05
669 671	3.68 3.67	0.7175 0.7164	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
672	3.68	0.7168	4E-05	5E-05	1E-05	1E-05	2E-05
673 675	3.67 3.66	0.7163 0.7134	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
676	3.68	0.7168	4E-05	5E-05	1E-05	1E-05	2E-05
677 678	3.64 3.61	0.7101 0.7046	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
679	3.59	0.6990	4E-05	5E-05	1E-05	1E-05	2E-05
680	3.56	0.6940	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
681	3.53	0.6876					
681 682a	3.46	0.6751	4E-05	5E-05	1E-05	1E-05	2E-05
681			4E-05 4E-05	5E-05 5E-05	1E-05	1E-05 1E-05 1E-05	2E-05 2E-05 2E-05
681 682a 682b 683	3.46 3.46 3.44 3.39	0.6751 0.6745 0.6707 0.6607	4E-05 4E-05 4E-05 4E-05	5E-05 5E-05 5E-05 5E-05	1E-05 1E-05 1E-05	1E-05 1E-05 1E-05	2E-05 2E-05 2E-05
681 682a 682b 683	3.46 3.46 3.44	0.6751 0.6745 0.6707	4E-05 4E-05 4E-05	5E-05 5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05

Sensitive Receptors	Change in Annual Average PM10 Concentration (µg/m³)	Change in Annual Average PM2.5 Concentration (µg/m³)	Risk (PM <sub>2.5</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> CV Hospitalisations, >65 years)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)	Risk (PM <sub>10</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> Asthma ED admissions, 1-14 years)
689 690	3.50 3.45	0.6834 0.6737	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
691	3.39	0.6615	4E-05	5E-05	1E-05	1E-05	2E-05
692 693	3.39 3.30	0.6615 0.6441	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
694a	3.29	0.6430	4E-05	5E-05	1E-05	1E-05	2E-05
694b 695	3.25 3.30	0.6347 0.6441	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
697 698	3.29 3.22	0.6419 0.6295	4E-05	5E-05	1E-05	1E-05	2E-05
715	0.45	0.0952	4E-05 6E-06	5E-05 7E-06	1E-05 2E-06	1E-05 2E-06	2E-05 3E-06
728 729	3.22 3.25	0.6295 0.6346	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
730	3.28	0.6407	4E-05	5E-05	1E-05	1E-05	2E-05
731 732	3.30 3.30	0.6444 0.6442	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
733	3.29	0.6418	4E-05	5E-05	1E-05	1E-05	2E-05
735a 735b	3.29 3.31	0.6417 0.6454	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
736 737	3.24	0.6325	4E-05	5E-05	1E-05	1E-05	2E-05
738	3.30 3.30	0.6440 0.6433	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
739 740a	3.31 3.22	0.6457 0.6270	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
740b	3.25	0.6329	4E-05	5E-05	1E-05	1E-05	2E-05
740c 740d	3.28 3.28	0.6386 0.6385	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
740e	3.25	0.6337	4E-05	5E-05	1E-05	1E-05	2E-05
740f 741	3.22 3.34	0.6278 0.6508	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
742	3.36	0.6543	4E-05	5E-05	1E-05	1E-05	2E-05
743 744	3.37 3.30	0.6562 0.6436	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
745	3.28	0.6391	4E-05	5E-05	1E-05	1E-05	2E-05
746 747	3.25 3.23	0.6337 0.6285	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
748a	3.20	0.6235	4E-05	5E-05	1E-05	1E-05	2E-05
748b 749a	1.82 3.39	0.3539 0.6610	2E-05 4E-05	3E-05 5E-05	6E-06 1E-05	7E-06 1E-05	1E-05 2E-05
749b	3.37	0.6583	4E-05	5E-05	1E-05	1E-05	2E-05
750 751	3.38 3.38	0.6602 0.6586	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
752a	3.42	0.6674	4E-05	5E-05	1E-05	1E-05	2E-05
752b 753	3.42 3.44	0.6660 0.6715	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
754	3.47	0.6756	4E-05	5E-05	1E-05	1E-05	2E-05
755 756	3.49 3.52	0.6808 0.6859	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
757	3.54	0.6901	4E-05	5E-05	1E-05	1E-05	2E-05
758 759a	3.56 3.59	0.6941 0.6997	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
759b	3.60	0.7005	4E-05	5E-05	1E-05	1E-05	2E-05
760 761	3.61 3.64	0.7037 0.7084	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
762 763	3.68 3.67	0.7159 0.7147	4E-05	5E-05	1E-05	1E-05	2E-05
764	3.68	0.7169	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
765a 765b	3.67 3.68	0.7142 0.7174	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
766	3.67	0.7150	4E-05	5E-05	1E-05	1E-05	2E-05
767 768	3.67 3.67	0.7144 0.7148	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
769	3.58	0.6973	4E-05	5E-05	1E-05	1E-05	2E-05
770 771	3.67 3.67	0.7149 0.7151	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
772	3.68	0.7162	4E-05	5E-05	1E-05	1E-05	2E-05
773 774	3.68 3.62	0.7165 0.7044	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
775	3.63	0.7057	4E-05	5E-05	1E-05	1E-05	2E-05
776 777	3.69 3.67	0.7174 0.7131	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
778a	3.66 3.68	0.7108 0.7159	4E-05	5E-05	1E-05	1E-05	2E-05
778b 779a	3.65	0.7088	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
779b 780	3.60 3.67	0.7008 0.7128	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
781	3.69	0.7177	4E-05	5E-05	1E-05	1E-05	2E-05
782 783	3.68 3.69	0.7149 0.7168	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
784	3.38	0.6593	4E-05	5E-05	1E-05	1E-05	2E-05
785 786	3.38 3.41	0.6595 0.6655	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
787a	3.39	0.6603	4E-05	5E-05	1E-05	1E-05	2E-05
787b 788	3.46 3.40	0.6735 0.6623	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
789 790a	3.41 3.39	0.6643 0.6601	4E-05	5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
790b	3.42	0.6658	4E-05 4E-05	5E-05 5E-05	1E-05	1E-05	2E-05
791a 791b	3.39 3.42	0.6613 0.6668	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
792a	3.48	0.6785	4E-05	5E-05	1E-05	1E-05	2E-05
792b 793	3.41 3.40	0.6645 0.6629	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
794	3.42	0.6658	4E-05	5E-05	1E-05	1E-05	2E-05
795 796	3.44 3.46	0.6707 0.6739	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
797a	3.47	0.6757	4E-05	5E-05	1E-05	1E-05	2E-05
797b 798	3.51 3.50	0.6822 0.6806	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
801	3.56	0.6915	4E-05	5E-05	1E-05	1E-05	2E-05
802 803a	3.57 3.44	0.6945 0.6693	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
803b	3.43	0.6679	4E-05	5E-05	1E-05	1E-05	2E-05
804 805	3.42 3.40	0.6664 0.6628	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
806	3.11	0.6051	4E-05	4E-05	1E-05	1E-05	2E-05
807 808	3.11 3.11	0.6048 0.6045	4E-05 4E-05	4E-05 4E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
809	3.12	0.6064	4E-05	4E-05	1E-05	1E-05	2E-05
810 811	3.12 3.12	0.6059 0.6056	4E-05 4E-05	4E-05 4E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
812	3.12	0.6061	4E-05	4E-05	1E-05	1E-05	2E-05
	3.11	0.6046	4E-05	4E-05	1E-05	1E-05	2E-05
813 814						1F-05	2F-05
813 814 815a 815b	3.11 3.11 3.11	0.6040 0.6034 0.6041	4E-05 4E-05 4E-05	4E-05 4E-05 4E-05	1E-05 1E-05 1E-05	1E-05 1E-05 1E-05	2E-05 2E-05 2E-05

Sensitive Receptors	Change in Annual Average PM10 Concentration (μg/m³)	Change in Annual Average PM2.5 Concentration (µg/m³)	Risk (PM <sub>2.5</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> CV Hospitalisations, >65 years)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)	Risk (PM <sub>10</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> Asthma ED admissions, 1-14 years)
817	3.08	0.5979	4E-05	4E-05	1E-05	1E-05	2E-05
819	2.94	0.5696	3E-05	4E-05	1E-05	1E-05	2E-05
820a	2.91	0.5643	3E-05	4E-05	1E-05	1E-05	2E-05
820b	2.94	0.5702	3E-05	4E-05	1E-05	1E-05	2E-05
821	2.90	0.5614	3E-05	4E-05	1E-05	1E-05	2E-05
822	2.89	0.5586	3E-05	4E-05	1E-05	1E-05	2E-05
823a	2.87	0.5564	3E-05	4E-05	1E-05	1E-05	2E-05
823b	2.92	0.5645	3E-05	4E-05	1E-05	1E-05	2E-05
824	2.84	0.5496	3E-05	4E-05	9E-06	1E-05	2E-05
825	2.82	0.5460	3E-05	4E-05	9E-06	1E-05	2E-05
826	2.82	0.5448	3E-05	4E-05	9E-06	1E-05	2E-05
827	2.80	0.5420	3E-05	4E-05	9E-06	1E-05	2E-05
828	2.76	0.5337	3E-05	4E-05	9E-06	1E-05	2E-05
829a	2.73	0.5280	3E-05	4E-05	9E-06	1E-05	2E-05
829b	2.73	0.5286	3E-05	4E-05	9E-06	1E-05	2E-05
830	2.70	0.5232	3E-05	4E-05	9E-06	1E-05	2E-05
831 832	2.70 2.69	0.5224 0.5196	3E-05	4E-05	9E-06	1E-05	2E-05
833	2.67	0.5162	3E-05 3E-05	4E-05 4E-05	9E-06 9E-06	1E-05 1E-05	2E-05 2E-05
834	2.64	0.5112	3E-05	4E-05	9E-06	1E-05	2E-05
835	2.62	0.5071	3E-05	4E-05	9E-06	1E-05	2E-05
836	2.60	0.5034	3E-05	4E-05	9E-06	1E-05	2E-05
837	2.59	0.5008	3E-05	4E-05	9E-06	9E-06	2E-05
838	2.57	0.4962	3E-05	4E-05	8E-06	9E-06	2E-05
839	2.54	0.4912	3E-05	4E-05	8E-06	9E-06	2E-05
840	2.52	0.4880	3E-05	4E-05	8E-06	9E-06	2E-05
841	2.51	0.4850	3E-05	4E-05	8E-06	9E-06	2E-05
843a	2.43	0.4698	3E-05	3E-05	8E-06	9E-06	2E-05
843b	2.46	0.4752	3E-05	4E-05	8E-06	9E-06	2E-05
844a	2.30	0.4441	3E-05	3E-05	8E-06	8E-06	2E-05
845	2.15	0.4159	2E-05	3E-05	7E-06	8E-06	1E-05
846	2.13	0.4116	2E-05	3E-05	7E-06	8E-06	1E-05
847	2.12	0.4098	2E-05	3E-05	7E-06	8E-06	1E-05
848	2.09	0.4054	2E-05	3E-05	7E-06	8E-06	1E-05
849	2.08	0.4026	2E-05	3E-05	7E-06	8E-06	1E-05
850	2.06	0.3997	2E-05	3E-05	7E-06	8E-06	1E-05
853	1.99	0.3869	2E-05	3E-05	7E-06	7E-06	1E-05
854	1.97	0.3831	2E-05	3E-05	7E-06	7E-06	1E-05
855	1.96	0.3798	2E-05	3E-05	6E-06	7E-06	1E-05
856	1.94	0.3765	2E-05	3E-05	6E-06	7E-06	1E-05
857	1.92	0.3737	2E-05	3E-05	6E-06	7E-06	1E-05
858 859	1.91 1.89	0.3706 0.3670	2E-05	3E-05	6E-06 6E-06	7E-06 7E-06	1E-05 1E-05
860	1.88	0.3649	2E-05 2E-05	3E-05 3E-05	6E-06	7E-06	1E-05
861	1.86	0.3615	2E-05	3E-05	6E-06	7E-06	1E-05
862	1.84	0.3581	2E-05	3E-05	6E-06	7E-06	1E-05
863 864	1.80 1.78	0.3503 0.3464	2E-05	3E-05	6E-06	7E-06	1E-05
865	1.77	0.3442	2E-05 2E-05	3E-05 3E-05	6E-06 6E-06	7E-06 6E-06	1E-05 1E-05
866	1.65	0.3229	2E-05	2E-05	6E-06	6E-06	1E-05
867	1.64	0.3212	2E-05	2E-05	5E-06	6E-06	1E-05
868 870	1.63 1.62	0.3189 0.3159	2E-05	2E-05 2E-05	5E-06	6E-06	1E-05
871	1.60	0.3131	2E-05 2E-05	2E-05	5E-06 5E-06	6E-06 6E-06	1E-05 1E-05
872a	1.59	0.3116	2E-05	2E-05	5E-06	6E-06	1E-05
900a	0.41	0.0866	5E-06	6E-06	1E-06	1E-06	3E-06
900b 901	0.52 0.54	0.1088 0.1139	6E-06	8E-06	2E-06	2E-06	4E-06
902	0.54	0.1133	7E-06 7E-06	8E-06 8E-06	2E-06 2E-06	2E-06 2E-06	4E-06 4E-06
903	0.53	0.1124	7E-06	8E-06	2E-06	2E-06	4E-06
904	0.53	0.1115	7E-06	8E-06	2E-06	2E-06	4E-06
905	0.52	0.1107 0.1098	7E-06	8E-06	2E-06	2E-06	4E-06
906	0.52	0.1091	7E-06	8E-06	2E-06	2E-06	4E-06
907	0.52		6E-06	8E-06	2E-06	2E-06	4E-06
908	0.51	0.1082	6E-06	8E-06	2E-06	2E-06	4E-06
909	0.51	0.1068	6E-06	8E-06	2E-06	2E-06	4E-06
911 912	0.50 0.51	0.1047 0.1068	6E-06	8E-06	2E-06	2E-06	4E-06
913	0.49	0.1033	6E-06 6E-06	8E-06 8E-06	2E-06 2E-06	2E-06 2E-06	4E-06 3E-06
914	0.48	0.1025	6E-06	8E-06	2E-06	2E-06	3E-06
915	0.48	0.1020	6E-06	8E-06	2E-06	2E-06	3E-06
916	0.48	0.1010	6E-06	7E-06	2E-06	2E-06	3E-06
917	0.47	0.1000	6E-06	7E-06	2E-06	2E-06	3E-06
918	0.48	0.1016	6E-06	8E-06	2E-06	2E-06	3E-06
919	0.48	0.1023	6E-06	8E-06	2E-06	2E-06	3E-06
920	0.49	0.1031	6E-06	8E-06	2E-06	2E-06	3E-06
921	0.49	0.1038	6E-06	8E-06	2E-06	2E-06	4E-06
922	0.49	0.1046	6E-06	8E-06	2E-06	2E-06	4E-06
924	0.51	0.1076	6E-06	8E-06	2E-06	2E-06	4E-06
925	0.51	0.1084	6E-06	8E-06	2E-06	2E-06	4E-06
926	0.52	0.1093	7E-06	8E-06	2E-06	2E-06	4E-06
927	0.52	0.1102	7E-06	8E-06	2E-06	2E-06	4E-06
928	0.53	0.1111	7E-06	8E-06	2E-06	2E-06	4E-06
929	0.53	0.1123	7E-06	8E-06	2E-06	2E-06	4E-06
930	0.53	0.1110	7E-06	8E-06	2E-06	2E-06	4E-06
931	0.52	0.1102	7E-06	8E-06	2E-06	2E-06	4E-06
932a	0.51	0.1076	6E-06	8E-06	2E-06	2E-06	4E-06
932b	0.51	0.1070	6E-06	8E-06	2E-06	2E-06	4E-06
933	0.51	0.1071	6E-06	8E-06	2E-06	2E-06	4E-06
934	0.50	0.1062	6E-06	8E-06	2E-06	2E-06	4E-06
935a	0.50	0.1049	6E-06	8E-06	2E-06	2E-06	4E-06
935b	0.50	0.1056	6E-06	8E-06	2E-06	2E-06	4E-06
936	0.49	0.1036	6E-06	8E-06	2E-06	2E-06	4E-06
937	0.49	0.1046	6E-06	8E-06	2E-06	2E-06	4E-06
938	0.50	0.1055	6E-06	8E-06	2E-06	2E-06	4E-06
939	0.50	0.1060	6E-06	8E-06	2E-06	2E-06	4E-06
940	0.51	0.1069	6E-06	8E-06	2E-06	2E-06	4E-06
941	0.51	0.1075	6E-06	8E-06	2E-06	2E-06	4E-06
942	0.50	0.1053	6E-06	8E-06	2E-06	2E-06	4E-06
943	0.49	0.1044	6E-06	8E-06	2E-06	2E-06	4E-06
944	0.49	0.1037	6E-06	8E-06	2E-06	2E-06	4E-06
945a	0.49	0.1028	6E-06	8E-06	2E-06	2E-06	3E-06
945b	0.48	0.1022	6E-06	8E-06	2E-06	2E-06	3E-06
946	0.48	0.1021	6E-06	8E-06	2E-06	2E-06	3E-06
947	0.48	0.1014	6E-06	7E-06	2E-06	2E-06	3E-06
948	0.47	0.0989	6E-06	7E-06	2E-06	2E-06	3E-06
949	0.48	0.1006	6E-06	7E-06	2E-06	2E-06	3E-06
950	0.47	0.0999	6E-06	7E-06	2E-06	2E-06	3E-06
951	0.47	0.0986	6E-06	7E-06	2E-06	2E-06	3E-06
952	0.46	0.0979	6E-06	7E-06	2E-06	2E-06	3E-06
953	0.46	0.0969	6E-06	7E-06	2E-06	2E-06	3E-06
954	0.45	0.0962	6E-06	7E-06	2E-06	2E-06	3E-06
955	0.46	0.0978	6E-06	7E-06	2E-06	2E-06	3E-06
956	0.45	0.0949	6E-06	7E-06	2E-06	2E-06	3E-06
957a	0.42	0.0886	5E-06	7E-06	2E-06	2E-06	3E-06
957b	0.45	0.0955	6E-06	7E-06	2E-06	2E-06	3E-06
958	0.45	0.0961	6E-06	7E-06	2E-06	2E-06	3E-06

Sensitive Receptors	Change in Annual Average PM10 Concentration (µg/m³)	Change in Annual Average PM2.5 Concentration (µg/m³)	Risk (PM <sub>2.5</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> CV Hospitalisations, >65 years)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)	Risk (PM <sub>10</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> Asthma ED admissions, 1-14 years)
959	0.46	0.0967	6E-06	7E-06	2E-06	2E-06	3E-06
960	0.46	0.0974	6E-06	7E-06	2E-06	2E-06	3E-06
961	0.46	0.0981	6E-06	7E-06	2E-06	2E-06	3E-06
962	0.47	0.0990	6E-06	7E-06	2E-06	2E-06	3E-06
963	0.47	0.0999	6E-06	7E-06	2E-06	2E-06	3E-06
964	0.48	0.1009	6E-06	7E-06	2E-06	2E-06	3E-06
965	0.47	0.0997	6E-06	7E-06	2E-06	2E-06	3E-06
966	0.46	0.0983	6E-06	7E-06	2E-06	2E-06	3E-06
967a	0.46	0.0975	6E-06	7E-06	2E-06	2E-06	3E-06
967b	0.46	0.0969	6E-06	7E-06	2E-06	2E-06	3E-06
968	0.46	0.0970	6E-06	7E-06	2E-06	2E-06	3E-06
969	0.45	0.0961	6E-06	7E-06	2E-06	2E-06	3E-06
970	0.45	0.0956	6E-06	7E-06	2E-06	2E-06	3E-06
971 972	0.45 0.45	0.0951 0.0945	6E-06 6E-06	7E-06 7E-06	2E-06 2E-06	2E-06	3E-06
973	0.44	0.0940	6E-06	7E-06	2E-06	2E-06 2E-06	3E-06 3E-06
974	0.44	0.0934	6E-06	7E-06	2E-06	2E-06	3E-06
976	0.42	0.0898	5E-06	7E-06	2E-06	2E-06	3E-06
977a	0.42	0.0902	5E-06	7E-06	2E-06	2E-06	3E-06
977b	0.44	0.0928	6E-06	7E-06	2E-06	2E-06	3E-06
978	0.42	0.0890	5E-06	7E-06	2E-06	2E-06	3E-06
979a 979b	0.39	0.0835	5E-06	6E-06	1E-06	1E-06	3E-06
980	0.42	0.0884	5E-06	7E-06	2E-06	2E-06	3E-06
	0.41	0.0868	5E-06	6E-06	1E-06	1E-06	3E-06
981a	0.41	0.0871	5E-06	6E-06	1E-06	1E-06	3E-06
981b	0.41	0.0877	5E-06	6E-06	1E-06	2E-06	3E-06
982	0.41	0.0876	5E-06	6E-06	1E-06	2E-06	3E-06
983	0.41	0.0883	5E-06	7E-06	2E-06	2E-06	3E-06
984	0.42	0.0894	5E-06	7E-06	2E-06	2E-06	3E-06
985	0.42	0.0904	5E-06	7E-06	2E-06	2E-06	3E-06
986	0.42	0.0893	5E-06	7E-06	2E-06	2E-06	3E-06
987	0.42	0.0903	5E-06	7E-06	2E-06	2E-06	3E-06
988a	0.43	0.0906	5E-06	7E-06	2E-06	2E-06	3E-06
988b	0.43	0.0912	5E-06	7E-06	2E-06	2E-06	3E-06
989a	0.43	0.0912	5E-06	7E-06	2E-06	2E-06	3E-06
989b	0.43	0.0916	5E-06	7E-06	2E-06	2E-06	3E-06
990	0.43	0.0922	5E-06	7E-06	2E-06	2E-06	3E-06
991	0.44	0.0929	6E-06	7E-06	2E-06	2E-06	3E-06
992	0.44	0.0934	6E-06	7E-06	2E-06	2E-06	3E-06
993a	0.44	0.0938	6E-06	7E-06	2E-06	2E-06	3E-06
993b	0.44	0.0936	6E-06	7E-06	2E-06	2E-06	3E-06
994a	0.44	0.0939	6E-06	7E-06	2E-06	2E-06	3E-06
994b	0.44	0.0937	6E-06	7E-06	2E-06	2E-06	3E-06
995	0.44	0.0943	6E-06	7E-06	2E-06	2E-06	3E-06
997	0.45	0.0959	6E-06	7E-06	2E-06	2E-06	
998	0.45	0.0964	6E-06	7E-06	2E-06	2E-06	3E-06 3E-06
999	0.44	0.0937	6E-06	7E-06	2E-06	2E-06	3E-06
1000	0.43	0.0923	5E-06	7E-06	2E-06	2E-06	3E-06
1001	0.43	0.0915	5E-06	7E-06	2E-06	2E-06	3E-06
1002	0.43	0.0908	5E-06	7E-06	2E-06	2E-06	3E-06
1003	0.42	0.0902	5E-06	7E-06	2E-06	2E-06	3E-06
1004	0.42	0.0896	5E-06	7E-06	2E-06	2E-06	3E-06
1005	0.42	0.0890	5E-06	7E-06	2E-06	2E-06	3E-06
1006	0.41	0.0884	5E-06	7E-06	2E-06	2E-06	3E-06
1007 1008	0.41 0.41	0.0879 0.0873	5E-06	6E-06	2E-06	2E-06	3E-06
1009	0.40	0.0864	5E-06 5E-06	6E-06 6E-06	1E-06 1E-06	1E-06 1E-06	3E-06 3E-06
1010	0.41	0.0876	5E-06	6E-06	1E-06	2E-06	3E-06
1011	0.42	0.0886	5E-06	7E-06	2E-06	2E-06	3E-06
1012	0.42	0.0894	5E-06	7E-06	2E-06	2E-06	3E-06
1014	0.43	0.0909	5E-06	7E-06	2E-06	2E-06	3E-06
1015	0.43	0.0917	5E-06	7E-06	2E-06	2E-06	3E-06
1016	0.42	0.0901	5E-06	7E-06	2E-06	2E-06	3E-06
1017	0.42	0.0891	5E-06	7E-06	2E-06	2E-06	3E-06
1018	0.41	0.0879	5E-06	6E-06	2E-06	2E-06	3E-06
1019	0.41	0.0876	5E-06	6E-06	1E-06	2E-06	3E-06
1020	0.41	0.0868	5E-06	6E-06	1E-06	1E-06	3E-06
1021	0.40	0.0863	5E-06	6E-06	1E-06	1E-06	3E-06
1022	0.40	0.0857	5E-06	6E-06	1E-06	1E-06	3E-06
1023	0.40	0.0852	5E-06	6E-06	1E-06	1E-06	3E-06
1024	0.40	0.0846	5E-06	6E-06	1E-06	1E-06	3E-06
1025	0.41	0.0881	5E-06	7E-06	2E-06	2E-06	3E-06
1026	0.42	0.0892	5E-06	7E-06	2E-06	2E-06	3E-06
1027	0.42	0.0886	5E-06	7E-06	2E-06	2E-06	3E-06
1028	0.41	0.0875	5E-06	6E-06	1E-06	2E-06	3E-06
1029	0.40	0.0860	5E-06	6E-06	1E-06	1E-06	3E-06
1030	0.40	0.0857	5E-06	6E-06	1E-06	1E-06	3E-06
1031	0.39	0.0843	5E-06	6E-06	1E-06	1E-06	3E-06
1032	0.39	0.0836	5E-06	6E-06	1E-06	1E-06	3E-06
1033	0.39	0.0833	5E-06	6E-06	1E-06	1E-06	3E-06
1034	0.39	0.0824	5E-06	6E-06	1E-06	1E-06	3E-06
1035	0.38	0.0816	5E-06	6E-06	1E-06	1E-06	3E-06
	0.38	0.0810	5E-06	6E-06	1E-06	1E-06	3E-06
1036a 1036b	0.38	0.0819	5E-06	6E-06	1E-06	1E-06	3E-06
1037	0.39	0.0823	5E-06	6E-06	1E-06	1E-06	3E-06
1038	0.39	0.0830	5E-06	6E-06	1E-06	1E-06	3E-06
1039	0.39	0.0839	5E-06	6E-06	1E-06	1E-06	3E-06
1040	0.40	0.0845	5E-06	6E-06	1E-06	1E-06	3E-06
1041	0.40	0.0849	5E-06	6E-06	1E-06	1E-06	3E-06
1042	0.40	0.0853	5E-06	6E-06	1E-06	1E-06	3E-06
1043	0.41	0.0865	5E-06	6E-06	1E-06	1E-06	3E-06
1044	0.40	0.0859	5E-06	6E-06	1E-06	1E-06	3E-06
1045	0.38	0.0815	5E-06	6E-06	1E-06	1E-06	3E-06
1046	0.37	0.0800	5E-06	6E-06	1E-06	1E-06	3E-06
1077	0.39	0.0841	5E-06	6E-06	1E-06	1E-06	3E-06
1078	0.38	0.0817	5E-06	6E-06	1E-06	1E-06	3E-06
1079	0.37	0.0798	5E-06	6E-06	1E-06	1E-06	3E-06
1080	0.37	0.0787	5E-06	6E-06	1E-06	1E-06	3E-06
1081	0.38	0.0805	5E-06	6E-06	1E-06	1E-06	3E-06
1082a		0.0818	5E-06	6E-06	1E-06	1E-06	3E-06
1082b	0.39	0.0829	5E-06	6E-06	1E-06	1E-06	3E-06
1100a	0.11	0.0267	2E-06	2E-06	5E-07	4E-07	9E-07
1100b	0.11	0.0264	2E-06	2E-06	5E-07	4E-07	9E-07
Council/State-owned receptors							
286e	0.53	0.1056	6E-06	8E-06	2E-06	2E-06	4E-06
286f	0.49	0.0992	6E-06	7E-06	2E-06	2E-06	3E-06
N1	0.39	0.0840	5E-06	6E-06	1E-06	1E-06	3E-06
N2	0.39	0.0835	5E-06	6E-06	1E-06	1E-06	3E-06
N3	0.39	0.0831	5E-06	6E-06	1E-06	1E-06	3E-06
N4	0.39	0.0827	5E-06	6E-06	1E-06	1E-06	3E-06
N5	0.40	0.0852	5E-06	6E-06	1E-06	1E-06	3E-06
	0.40	0.0852	5E-06	6E-06	1E-06 1E-06	1E-06	3E-06
N6							
N7	0.40	0.0861	5E-06	6E-06	1E-06 1E-06	1E-06 1E-06	3E-06 3E-06
					1E-06 1E-06 1E-06 1E-06	1E-06 1E-06 1E-06 2E-06	3E-06 3E-06 3E-06 3E-06

Sensitive Receptors	Change in Annual Average PM10 Concentration (μg/m³)	Change in Annual Average PM2.5 Concentration (µg/m³)	Risk (PM <sub>2.5</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> CV Hospitalisations, >65 years)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)	Risk (PM <sub>10</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> Asthma ED admissions, 1-14 years)
N12	0.38	0.0805	5E-06	6E-06	1E-06	1E-06	3E-06
N13	0.38	0.0810	5E-06	6E-06	1E-06	1E-06	3E-06
N14	0.38	0.0820	5E-06	6E-06	1E-06	1E-06	3E-06
N15	0.39	0.0824	5E-06	6E-06	1E-06	1E-06	3E-06
N16	0.39	0.0829	5E-06	6E-06	1E-06	1E-06	3E-06
N17	0.39	0.0834	5E-06	6E-06	1E-06	1E-06	3E-06
N18	0.39	0.0840	5E-06	6E-06	1E-06	1E-06	3E-06
N19	0.40	0.0845	5E-06	6E-06	1E-06	1E-06	3E-06
N20	0.40	0.0851	5E-06	6E-06	1E-06	1E-06	3E-06
N21	0.41	0.0877	5E-06	6E-06	1E-06	2E-06	3E-06
N22	0.59	0.1185	7E-06	9E-06	2E-06	2E-06	4E-06
N23	0.58	0.1176	7E-06	9E-06	2E-06	2E-06	4E-06
N24	0.58	0.1168	7E-06	9E-06	2E-06	2E-06	4E-06
N25	0.49	0.0993	6E-06	7E-06	2E-06	2E-06	3E-06
N26	0.48	0.0990	6E-06	7E-06	2E-06	2E-06	3E-06
N27	0.48	0.0976	6E-06	7E-06	2E-06	2E-06	3E-06
Aged care receptors	1.51	0.2960	2E-05	2E-05	5E-06	6E-06	1E-05
658a	3.39	0.6626	4E-05	5E-05	1E-05	1E-05	2E-05
658b	3.24	0.6344	4E-05	5E-05	1E-05	1E-05	2E-05
658c	3.23	0.6317	4E-05	5E-05	1E-05	1E-05	2E-05
658d	3.24	0.6331	4E-05	5E-05	1E-05	1E-05	2E-05
658e	3.27	0.6389	4E-05	5E-05	1E-05	1E-05	2E-05
Prison receptors			0E+00	0E+00	0E+00	0E+00	0E+00
MP1	0.46	0.0932	6E-06	7E-06	2E-06	2E-06	3E-06
MP42	0.44	0.0890	5E-06	7E-06	2E-06	2E-06	3E-06
MP80	0.39	0.0801	5E-06	6E-06	1E-06	1E-06	3E-06
Commercial accomodation receptors							
622b	3.43	0.6717	4E-05	5E-05	1E-05	1E-05	2E-05
622c	3.43	0.6723	4E-05	5E-05	1E-05	1E-05	2E-05
622d	3.41	0.6681	4E-05	5E-05	1E-05	1E-05	2E-05
622e	3.40	0.6664	4E-05	5E-05	1E-05	1E-05	2E-05
622f	3.40	0.6650	4E-05	5E-05	1E-05	1E-05	2E-05
622g	3.39	0.6639	4E-05	5E-05	1E-05	1E-05	2E-05
622h	3.42	0.6692	4E-05	5E-05	1E-05	1E-05	2E-05
622i	3.42	0.6701	4E-05	5E-05	1E-05	1E-05	2E-05
622j	3.43	0.6716	4E-05	5E-05	1E-05	1E-05	2E-05
622k	3.43	0.6707	4E-05	5E-05	1E-05	1E-05	2E-05
622l	3.44	0.6727	4E-05	5E-05	1E-05	1E-05	2E-05
622m	3.44 3.43	0.6728	4E-05 4E-05	5E-05	1E-05 1E-05	1E-05 1E-05	2E-05
622n 622o	3.42	0.6726 0.6702	4E-05	5E-05 5E-05	1E-05	1E-05	2E-05 2E-05
622p	3.42	0.6695	4E-05	5E-05	1E-05	1E-05	2E-05
622q	3.41	0.6674	4E-05	5E-05	1E-05	1E-05	2E-05
622r	3.39	0.6644	4E-05	5E-05	1E-05	1E-05	2E-05
622s	3.37	0.6608	4E-05	5E-05	1E-05	1E-05	2E-05
622t	3.36	0.6592	4E-05	5E-05	1E-05	1E-05	2E-05
622u	3.47	0.6799	4E-05	5E-05	1E-05	1E-05	2E-05
622v	3.47	0.6794	4E-05	5E-05	1E-05	1E-05	2E-05
622w	3.35	0.6563	4E-05	5E-05	1E-05	1E-05	2E-05
622x	3.45	0.6755	4E-05	5E-05	1E-05	1E-05	2E-05
622y	3.42	0.6692	4E-05	5E-05	1E-05	1E-05	2E-05
622z	3.39	0.6643	4E-05	5E-05	1E-05	1E-05	2E-05
622aa	3.38	0.6616	4E-05	5E-05	1E-05	1E-05	2E-05
622ab	3.37	0.6599	4E-05	5E-05	1E-05	1E-05	2E-05
622ac	3.47	0.6790	4E-05	5E-05	1E-05	1E-05	2E-05
622ad	3.46	0.6782	4E-05	5E-05	1E-05	1E-05	2E-05
622ae	3.46	0.6774	4E-05	5E-05	1E-05	1E-05	2E-05
622af	3.45	0.6766	4E-05	5E-05	1E-05	1E-05	2E-05
622ag	3.45	0.6759	4E-05	5E-05	1E-05	1E-05	2E-05
975	0.43	0.0915	5E-06	7E-06	2E-06	2E-06	3E-06
Commercial receptors			0E+00	0E+00	0E+00	0E+00	0E+00
6	6.44	1.2639	8E-05	9E-05	2E-05	2E-05	4E-05
195e	1.22	0.2418	1E-05	2E-05	4E-06	4E-06	8E-06
140b-1	1.76	0.3424	2E-05	3E-05	6E-06	6E-06	1E-05
140b-2	1.75	0.3408	2E-05	3E-05	6E-06	6E-06	1E-05
140b-3	1.71	0.3340	2E-05	2E-05	6E-06	6E-06	1E-05
140b-4	1.76	0.3421	2E-05	3E-05	6E-06	6E-06	1E-05
202c	2.28	0.4407	3E-05	3E-05	8E-06	8E-06	1E-05
202d	2.38	0.4579	3E-05	3E-05	8E-06	9E-06	2E-05
202e	2.34	0.4513	3E-05	3E-05	8E-06	9E-06	2E-05
202f	2.29	0.4419	3E-05	3E-05	8E-06	8E-06	1E-05
202g	2.31	0.4450	3E-05	3E-05	8E-06	8E-06	2E-05
472d	0.24	0.0531	3E-06	4E-06	9E-07	9E-07	2E-06
472e	0.24	0.0527	3E-06	4E-06	9E-07	9E-07	2E-06
472f	0.25	0.0547	3E-06	4E-06	9E-07	9E-07	2E-06
472g	0.25	0.0552	3E-06	4E-06	9E-07	9E-07	2E-06
472h	0.25	0.0548	3E-06	4E-06	9E-07	9E-07	2E-06
472i	0.25	0.0544	3E-06	4E-06	9E-07	9E-07	2E-06
472j	0.24	0.0535	3E-06	4E-06	9E-07	9E-07	2E-06
472k	0.24	0.0527	3E-06	4E-06	9E-07	9E-07	2E-06
472l	0.26	0.0565	3E-06	4E-06	1E-06	9E-07	2E-06
472m	0.25	0.0558	3E-06	4E-06	1E-06	9E-07	2E-06
489	4.44	0.8782	5E-05	6E-05	2E-05	2E-05	3E-05
540	3.71	0.7280	4E-05	5E-05	1E-05	1E-05	2E-05
546a	4.20	0.8221	5E-05	6E-05	1E-05	2E-05	3E-05
546b	4.12	0.8062	5E-05	6E-05	1E-05	2E-05	3E-05
546c	4.11	0.8046	5E-05	6E-05	1E-05		3E-05
617b	3.41	0.6688	4E-05	5E-05	1E-05	2E-05 1E-05	2E-05
617c	3.50	0.6866	4E-05	5E-05	1E-05	1E-05	2E-05
617d	3.50	0.6863	4E-05	5E-05	1E-05	1E-05	2E-05
617e	3.52	0.6904	4E-05	5E-05	1E-05	1E-05	2E-05
617f	3.51	0.6881	4E-05	5E-05	1E-05	1E-05	2E-05
617g	3.41	0.6679	4E-05	5E-05	1E-05	1E-05	2E-05
617h	3.45	0.6769	4E-05	5E-05	1E-05	1E-05	2E-05
617i	3.44	0.6748	4E-05	5E-05	1E-05	1E-05	2E-05
620	3.30	0.6479	4E-05	5E-05	1E-05	1E-05	2E-05
622ah	3.42	0.6693	4E-05	5E-05	1E-05	1E-05	2E-05
622ai	3.41	0.6690	4E-05	5E-05	1E-05	1E-05	2E-05
611aj	3.36	0.6576	4E-05	5E-05	1E-05	1E-05	2E-05
622ak	3.33	0.6535	4E-05	5E-05	1E-05	1E-05	2E-05
625	3.27	0.6410	4E-05	5E-05	1E-05	1E-05	2E-05
629	3.23	0.6338	4E-05	5E-05	1E-05	1E-05	2E-05
626	3.26	0.6400	4E-05	5E-05	1E-05	1E-05	2E-05
627	3.25	0.6375	4E-05	5E-05	1E-05	1E-05	2E-05
628	3.24	0.6356	4E-05	5E-05	1E-05	1E-05	2E-05
630a	3.06	0.6008	4E-05	4E-05	1E-05	1E-05	2E-05
630b	3.20	0.6281	4E-05	5E-05	1E-05	1E-05	2E-05
630c	3.19	0.6267	4E-05	5E-05	1E-05	1E-05	2E-05
630d	3.14	0.6155	4E-05	5E-05	1E-05	1E-05	2E-05
656	3.31	0.6472	4E-05	5E-05	1E-05	1E-05	2E-05
674a	3.60	0.7027	4E-05	5E-05	1E-05	1E-05	2E-05
674b	3.66	0.7137	4E-05	5E-05	1E-05	1E-05	2E-05
818a	3.01	0.5823	3E-05	4E-05	1E-05	1E-05	2E-05
818b	3.01	0.5830	3E-05	4E-05	1E-05	1E-05	2E-05
844b	2.31	0.4472	3E-05	3E-05	8E-06	8E-06	2E-05

Sensitive Receptors	Change in Annual Average PM10 Concentration (μg/m³)	Change in Annual Average PM2.5 Concentration (µg/m³)	Risk (PM <sub>2.5</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> CV Hospitalisations, >65 years)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)	Risk (PM <sub>10</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> Asthma ED admissions, 1-14 years)
872b	1.60	0.3119	2E-05	2E-05	5E-06	6E-06	1E-05
1085	0.37	0.0795	5E-06	6E-06	1E-06	1E-06	3E-06
2ap	0.83	0.1717	1E-05	1E-05	3E-06	3E-06	6E-06
2aq	0.82	0.1701	1E-05	1E-05	3E-06	3E-06	6E-06
2ar	0.82	0.1694	1E-05	1E-05	3E-06	3E-06	6E-06
5h	0.24	0.0540	3E-06	4E-06	9E-07	9E-07	2E-06
5w	0.36	0.0773	5E-06	6E-06	1E-06	1E-06	3E-06
5an	0.25	0.0545	3E-06	4E-06	9E-07	9E-07	2E-06
5ao	0.24	0.0540	3E-06	4E-06	9E-07	9E-07	2E-06
5ap	0.36	0.0777	5E-06	6E-06	1E-06	1E-06	3E-06
8q	0.13	0.0297	2E-06	2E-06	5E-07	5E-07	1E-06
Mal4	0.51	0.1011	6E-06	7E-06	2E-06	2E-06	3E-06
Mal5	0.51	0.1014	6E-06	7E-06	2E-06	2E-06	3E-06
Mal6	0.52	0.1022	6E-06	8E-06	2E-06	2E-06	3E-06
UHSC2	0.56	0.1174	7E-06	9E-06	2E-06	2E-06	4E-06
UHSC3	0.55	0.1148	7E-06	8E-06	2E-06	2E-06	4E-06
UHSC4	0.55	0.1163	7E-06	9E-06	2E-06	2E-06	4E-06
N29	0.72	0.1449	9E-06	1E-05	2E-06	3E-06	5E-06
School receptors							
N30	3.59	0.7017	4E-05	5E-05	1E-05	1E-05	2E-05
N31	3.55	0.6931	4E-05	5E-05	1E-05	1E-05	2E-05
N32	3.54	0.6922	4E-05	5E-05	1E-05	1E-05	2E-05
N33	3.58	0.6992	4E-05	5E-05	1E-05	1E-05	2E-05
Church receptors							
520	1.10	0.2170	1E-05	2E-05	4E-06	4E-06	7E-06
658b	3.24	0.6344	4E-05	5E-05	1E-05	1E-05	2E-05
658c	3.23	0.6317	4E-05	5E-05	1E-05	1E-05	2E-05
616c	3.45	0.6759	4E-05	5E-05	1E-05	1E-05	2E-05
N34	0.48	0.0983	6E-06	7E-06	2E-06	2E-06	3E-06
Heritage receptors*							

<sup>\*</sup>No inhabited heritage receptors with elevated health risks identified.

# Quantification of Effects - $PM_{2.5}$ Mount Pleasant - Scenario 3 (incorporating proactive/reactive mitigation measures)

Air quality indicator:	PM <sub>2.5</sub>	PM <sub>2.5</sub>	PM <sub>2.5</sub>	PM <sub>2.5</sub>
Endpoint:	Mortality - All	Hospitalisation -	Hospitalisations -	Morbidity - Asthma
	Causes	Cardiovascular	Respiratory	ED Admissions
Effect Exposure Duration:	Long-term	Short-term	Short-term	Short-term
Age Group:	≥ 30 years	≥ 65 years	≥ 65 years	1-14 years
β (change in effect per 1 μg/m³) (as per Table 5.2)	0.0058	0.0008	0.00041	0.00148
Annual baseline incidence (per 100,000)	1026	9235	4168	2284
Baseline Incidence (per person per year)	0.01026	0.09235	0.04168	0.02284

Sensitive Receptors	Change in Annual Average PM <sub>2.5</sub> Concentration (µg/m³)	Risk (PM <sub>2.5</sub> Mortality all causes)	Risk( PM <sub>2.5</sub> CV Hospitalisations, > 65 years)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)	Risk (PM <sub>2.5</sub> Asthma ED admissions, 1- 14 years)
Privately-owned receptors					
20	1.3490	8E-05	1E-04	2E-05	5E-05
21	1.3859	8E-05	1E-04	2E-05	5E-05
23	1.3789	8E-05	1E-04	2E-05	5E-05
102	1.3941	8E-05	1E-04	2E-05	5E-05
108	1.4817	9E-05	1E-04	3E-05	5E-05
112	1.6039	1E-04	1E-04	3E-05	5E-05
118	1.5803	9E-05	1E-04	3E-05	5E-05
120	1.5499	9E-05	1E-04	3E-05	5E-05
121	1.5710	9E-05	1E-04	3E-05	5E-05
120c	1.6149	1E-04	1E-04	3E-05	5E-05
154	0.7796	5E-05	6E-05	1E-05	3E-05
154b	1.4904	9E-05	1E-04	3E-05	5E-05
153a	1.4711	9E-05	1E-04	3E-05	5E-05
156a	1.4534	9E-05	1E-04	2E-05	5E-05
157a	1.3712	8E-05	1E-04	2E-05	5E-05
158	1.1793	7E-05	9E-05	2E-05	4E-05

## Quantification of Effects - $PM_{2.5}$ and $PM_{10}$ Mount Pleasant - Scenario 4 (without proactive/reactive mitigation measures)

Air quality indicator:	PM <sub>2.5</sub>	PM <sub>2.5</sub>	PM <sub>2.5</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Endpoint:	Mortality - All	Hospitalisations -	Hospitalisations -	Mortality - All	Morbidity -
	Causes	Cardiovascular	Respiratory	Causes	Asthma ED
					Admissions
Effect Exposure Duration:	Long-term	Short-term	Short-term	Short-Term	Short-Term
Age Group:	≥ 30 years	≥ 65 years	≥ 65 years	All ages	1-14 years
β (change in effect per 1 μg/m³) (as per Table 5.2)	0.0058	0.0008	0.00041	0.0006	0.00148
Annual baseline incidence (per 100,000)	1026	9235	4168	610.5	2284
Baseline Incidence (per person per year)	0.01026	0.09235	0.04168	0.006105	0.02284

						,	•
Sensitive Receptors	Change in Annual Average PM10 Concentration (μg/m³)	Change in Annual Average PM2.5 Concentration (µg/m³)	Risk (PM <sub>2.5</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> CV Hospitalisations, >65 years)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)	Risk (PM <sub>10</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> Asthma ED admissions, 1-14 years)
Privately owned receptors							
4	4.17	0.8365	5E-05	6E-05	1E-05 2E-05	2E-05	3E-05
19 20	7.25 8.17	1.4538 1.6292	9E-05 1E-04	1E-04 1E-04	3E-05	3E-05 3E-05	5E-05 6E-05
21	8.37	1.6661	1E-04	1E-04	3E-05	3E-05	6E-05
35	6.34	1.3022	8E-05	1E-04	2E-05	2E-05	4E-05
35b 43	6.37 1.27	1.3085 0.2355	8E-05 1E-05	1E-04 2E-05	2E-05 4E-06	2E-05 5E-06	4E-05 8E-06
43b	0.66	0.1300	8E-06	1E-05	2E-06	2E-06	4E-06
45	0.63	0.1254	7E-06	9E-06	2E-06	2E-06	4E-06
45b	0.64	0.1264	8E-06	9E-06	2E-06	2E-06	4E-06
45c 47	0.64 0.64	0.1279 0.1224	8E-06 7E-06	9E-06 9E-06	2E-06 2E-06	2E-06 2E-06	4E-06 4E-06
67	7.09	1.4609	9E-05	1E-04	2E-05	3E-05	5E-05
74	6.78	1.3954	8E-05	1E-04	2E-05	2E-05	5E-05
77	5.87	1.2094	7E-05	9E-05	2E-05	2E-05	4E-05
79 82	5.15 4.03	1.0592 0.8285	6E-05 5E-05	8E-05 6E-05	2E-05 1E-05	2E-05 1E-05	4E-05 3E-05
83	4.19	0.8614	5E-05	6E-05	1E-05	2E-05	3E-05
84a	4.55	0.9364	6E-05	7E-05	2E-05	2E-05	3E-05
84b	1.14	0.2069	1E-05	2E-05	4E-06	4E-06	7E-06
86a 86b	6.00 2.43	1.2378 0.5039	7E-05 3E-05	9E-05 4E-05	2E-05 9E-06	2E-05 9E-06	4E-05 2E-05
96	8.30	1.7291	3E-05 1E-04	4E-05 1E-04	9E-06 3E-05	3E-05	6E-05
102	8.69	1.8150	1E-04	1E-04	3E-05	3E-05	6E-05
108	9.28	1.9427	1E-04	1E-04	3E-05	3E-05	7E-05
112	10.03	2.1023	1E-04	2E-04	4E-05	4E-05	7E-05
118 120	9.89 9.75	2.0764 2.0472	1E-04 1E-04	2E-04 2E-04	4E-05 3E-05	4E-05 4E-05	7E-05 7E-05
120c	9.75	2.0472	1E-04	2E-04 2E-04	4E-05	4E-05	7E-05
121	10.20	2.1455	1E-04	2E-04	4E-05	4E-05	7E-05
136	7.25	1.4961	9E-05	1E-04	3E-05	3E-05	5E-05
140a 140c	3.25 4.00	0.6794 0.8237	4E-05 5E-05	5E-05 6E-05	1E-05 1E-05	1E-05 1E-05	2E-05 3E-05
143a	3.48	0.7440	4E-05	5E-05	1E-05	1E-05	3E-05
143b	6.55	1.3911	8E-05	1E-04	2E-05	2E-05	5E-05
147	6.90	1.4666	9E-05	1E-04	3E-05	3E-05	5E-05
153a	5.68	1.0799	6E-05	8E-05	2E-05	2E-05	4E-05
154 154b	14.16 14.03	2.8594 2.8320	2E-04 2E-04	2E-04 2E-04	5E-05 5E-05	5E-05 5E-05	1E-04 1E-04
156a	10.87	2.2623	1E-04	2E-04	4E-05	4E-05	8E-05
156b	0.28	0.0586	3E-06	4E-06	1E-06	1E-06	2E-06
157a	9.45	1.9864	1E-04	1E-04	3E-05	3E-05	7E-05
157b	0.25	0.0530	3E-06	4E-06	9E-07	9E-07	2E-06
159 169	7.32 5.31	1.5532 1.0906	9E-05 6E-05	1E-04 8E-05	3E-05 2E-05	3E-05 2E-05	5E-05 4E-05
171	3.81	0.7892	5E-05	6E-05	1E-05	1E-05	3E-05
172	2.87	0.6005	4E-05	4E-05	1E-05	1E-05	2E-05
172b	2.76	0.5765	3E-05	4E-05	1E-05	1E-05	2E-05
172c 310	1.79 2.83	0.3790 0.5910	2E-05 4E-05	3E-05 4E-05	6E-06 1E-05	7E-06 1E-05	1E-05 2E-05
173	2.61	0.5428	3E-05	4E-05	9E-06	1E-05	2E-05
174	2.72	0.5641	3E-05	4E-05	1E-05	1E-05	2E-05
175	2.77	0.5757	3E-05	4E-05	1E-05	1E-05	2E-05
175b 175c	2.81 2.76	0.5841 0.5742	3E-05 3E-05	4E-05 4E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
176	2.82	0.5871	3E-05	4E-05	1E-05	1E-05	2E-05
177	2.44	0.5070	3E-05	4E-05	9E-06	9E-06	2E-05
178	1.46	0.3110	2E-05	2E-05	5E-06	5E-06	1E-05
179 180	1.59 1.47	0.3362 0.3119	2E-05 2E-05	2E-05 2E-05	6E-06 5E-06	6E-06 5E-06	1E-05 1E-05
180b	1.22	0.2617	2E-05	2E-05	4E-06	4E-06	9E-06
180c	0.90	0.1952	1E-05	1E-05	3E-06	3E-06	7E-06
181	0.78	0.1707	1E-05	1E-05	3E-06	3E-06	6E-06
181c 182	1.16 0.63	0.2531 0.1402	2E-05 8E-06	2E-05 1E-05	4E-06 2E-06	4E-06 2E-06	9E-06 5E-06
189	1.42	0.3074	2E-05	2E-05	5E-06	5E-06	1E-05
190	1.54	0.3315	2E-05	2E-05	6E-06	6E-06	1E-05
191 192	1.34	0.2895 0.3114	2E-05	2E-05	5E-06	5E-06	1E-05
192	1.45 1.31	0.3114	2E-05 2E-05	2E-05 2E-05	5E-06 5E-06	5E-06 5E-06	1E-05 1E-05
193c	0.98	0.2105	1E-05	2E-05	4E-06	4E-06	7E-06
194	1.38	0.2923	2E-05	2E-05	5E-06	5E-06	1E-05
195	1.52	0.3212	2E-05	2E-05	5E-06	6E-06	1E-05
197 196	1.83 1.76	0.3818 0.3679	2E-05 2E-05	3E-05 3E-05	7E-06 6E-06	7E-06 6E-06	1E-05 1E-05
195d	1.89	0.3930	2E-05 2E-05	3E-05	7E-06	7E-06	1E-05
198	2.25	0.4668	3E-05	3E-05	8E-06	8E-06	2E-05
198b	2.32	0.4805	3E-05	4E-05	8E-06	8E-06	2E-05
199 200	2.12 1.92	0.4390 0.3978	3E-05 2E-05	3E-05 3E-05	8E-06 7E-06	8E-06 7E-06	1E-05 1E-05
202	3.27	0.3978	2E-05 4E-05	3E-05 5E-05	7E-06 1E-05	7E-06 1E-05	1E-05 2E-05
202b	2.56	0.5274	3E-05	4E-05	9E-06	9E-06	2E-05
203	3.50	0.7220	4E-05	5E-05	1E-05	1E-05	2E-05
203b	3.42	0.7050	4E-05	5E-05	1E-05	1E-05	2E-05
203c 206	3.50 5.70	0.7203 1.1578	4E-05 7E-05	5E-05 9E-05	1E-05 2E-05	1E-05 2E-05	2E-05 4E-05
207	6.60	1.3313	8E-05	9E-05 1E-04	2E-05	2E-05	5E-05
212	5.42	1.0945	7E-05	8E-05	2E-05	2E-05	4E-05
212b	5.41	1.0930	7E-05	8E-05	2E-05	2E-05	4E-05
213 214	6.65 6.66	1.3322 1.3357	8E-05 8E-05	1E-04 1E-04	2E-05 2E-05	2E-05 2E-05	5E-05 5E-05
214	6.74	1.3357	8E-05 8E-05	1E-04 1E-04	2E-05 2E-05	2E-05 2E-05	5E-05 5E-05
216	6.78	1.3603	8E-05	1E-04	2E-05	2E-05	5E-05
216b	6.68	1.3413	8E-05	1E-04	2E-05	2E-05	5E-05
217	6.82	1.3681	8E-05	1E-04	2E-05	2E-05	5E-05
218	6.83	1.3671 1.3746	8E-05 8E-05	1E-04 1E-04	2E-05 2E-05	3E-05 3E-05	5E-05 5E-05
219	6.86						
219 220	6.86 6.91	1.3838	8E-05	1E-04	2E-05	3E-05	5E-05

Sensitive Receptors	Change in Annual Average PM10 Concentration (µg/m³)	Change in Annual Average PM2.5 Concentration (µg/m³)	Risk (PM <sub>2.5</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> CV Hospitalisations, >65 years)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)	Risk (PM <sub>10</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> Asthma ED admissions, 1-14 years)
222	7.04	1.4109	8E-05	1E-04	2E-05	3E-05	5E-05
223	7.13	1.4281	8E-05	1E-04	2E-05	3E-05	5E-05
223b	7.12	1.4273	8E-05	1E-04	2E-05	3E-05	5E-05
224	7.23	1.4474	9E-05	1E-04	2E-05	3E-05	5E-05
225	6.84	1.3735	8E-05	1E-04	2E-05	3E-05	5E-05
249	0.50	0.1055	6E-06	8E-06	2E-06	2E-06	4E-06
252	0.33	0.0702	4E-06	5E-06	1E-06	1E-06	2E-06
257	0.73	0.1460	9E-06	1E-05	2E-06	3E-06	5E-06
258a	0.62	0.1259	7E-06	9E-06	2E-06	2E-06	4E-06
258c	0.62	0.1245	7E-06	9E-06	2E-06	2E-06	4E-06
259	0.59	0.1203	7E-06	9E-06	2E-06	2E-06	4E-06
259b	0.56	0.1138	7E-06	8E-06	2E-06	2E-06	4E-06
260	0.62	0.1263	8E-06	9E-06	2E-06	2E-06	4E-06
260a	0.62	0.1248	7E-06	9E-06	2E-06	2E-06	4E-06
260b	0.61	0.1244	7E-06	9E-06	2E-06	2E-06	4E-06
261	0.53	0.1084	6E-06	8E-06	2E-06	2E-06	4E-06
261b	0.53	0.1086	6E-06	8E-06	2E-06	2E-06	4E-06
271	0.54	0.0966	6E-06	7E-06	2E-06	2E-06	3E-06
272b	0.90	0.1548	9E-06	1E-05	3E-06	3E-06	5E-06
272	0.91	0.1565	9E-06	1E-05	3E-06	3E-06	5E-06
273	0.66	0.1156	7E-06	9E-06	2E-06	2E-06	4E-06
273b	0.63	0.1111	7E-06	8E-06	2E-06	2E-06	4E-06
288	4.50	0.9235	5E-05	7E-05	2E-05	2E-05	3E-05
288b	4.49	0.9201	5E-05	7E-05	2E-05	2E-05	3E-05
289	5.38	1.1048	7E-05	8E-05	2E-05	2E-05	4E-05
292	0.40	0.0854	5E-06	6E-06	1E-06	1E-06	3E-06
292b	0.38	0.0817	5E-06	6E-06	1E-06	1E-06	3E-06
300	0.46	0.0971	6E-06	7E-06	2E-06	2E-06	3E-06
298	0.48	0.1016	6E-06	8E-06	2E-06	2E-06	3E-06
296a	0.53	0.1115	7E-06	8E-06	2E-06	2E-06	4E-06
296b	0.51	0.1083	6E-06	8E-06	2E-06	2E-06	4E-06
302a	0.38	0.0810	5E-06	6E-06	1E-06	1E-06	3E-06
302c	0.37	0.0789	5E-06	6E-06	1E-06	1E-06	3E-06
401	0.87	0.1546	9E-06	1E-05	3E-06	3E-06	5E-06
402	0.95	0.1714	1E-05	1E-05	3E-06	3E-06	6E-06
404	1.03	0.1851	1E-05	1E-05	3E-06	4E-06	6E-06
407	1.28	0.2340	1E-05	2E-05	4E-06	5E-06	8E-06
413b	0.62	0.1096	7E-06	8E-06	2E-06	2E-06	4E-06
415	0.58	0.1031	6E-06	8E-06	2E-06	2E-06	3E-06
417	0.51	0.0915	5E-06	7E-06	2E-06	2E-06	3E-06
418	0.43	0.0771	5E-06	6E-06	1E-06	2E-06	3E-06
418b	0.44	0.0799	5E-06	6E-06	1E-06	2E-06	3E-06
419	0.65	0.1139	7E-06	8E-06	2E-06	2E-06	4E-06
421	0.72	0.1268	8E-06	9E-06	2E-06	3E-06	4E-06
422a	2.94	0.5894	4E-05	4E-05	1E-05	1E-05	2E-05
436	0.72	0.1584	9E-06	1E-05	3E-06	3E-06	5E-06
437 441	0.76	0.1679	1E-05	1E-05	3E-06	3E-06	6E-06
442	0.50	0.1116	7E-06	8E-06	2E-06	2E-06	4E-06
	0.20	0.0440	3E-06	3E-06	8E-07	7E-07	1E-06
443 451	0.52 0.62	0.1146 0.1338	7E-06 8E-06	8E-06 1E-05	2E-06	2E-06 2E-06	4E-06
452	1.11	0.2337	1E-05	2E-05	2E-06 4E-06	4E-06	5E-06 8E-06
453a	0.45	0.0816	5E-06	6E-06	1E-06	2E-06	3E-06
453b	0.45	0.0814	5E-06	6E-06	1E-06	2E-06	3E-06
454	0.37	0.0681	4E-06	5E-06	1E-06	1E-06	2E-06
455	0.22	0.0411	2E-06	3E-06	7E-07	8E-07	1E-06
456	0.23	0.0432	3E-06	3E-06	7E-07	8E-07	1E-06
456b	0.23	0.0431	3E-06	3E-06	7E-07	8E-07	1E-06
458	0.32	0.0593	4E-06	4E-06	1E-06	1E-06	2E-06
460	0.15	0.0301	2E-06	2E-06	5E-07	5E-07	1E-06
460b	0.15	0.0299 0.0297	2E-06 2E-06	2E-06 2E-06	5E-07	5E-07	1E-06
461 462a	0.14 0.15	0.0297	2E-06 2E-06	2E-06	5E-07 5E-07	5E-07 5E-07	1E-06 1E-06
462b	0.15	0.0313	2E-06	2E-06	5E-07	5E-07	1E-06
462c	0.15	0.0313	2E-06	2E-06	5E-07	5E-07	1E-06
464	0.26	0.0537	3E-06	4E-06	9E-07	9E-07	2E-06
464b	0.26	0.0545	3E-06	4E-06	9E-07	1E-06	2E-06
465	0.22	0.0459	3E-06	3E-06	8E-07	8E-07	2E-06
466	0.27	0.0581	3E-06	4E-06	1E-06	1E-06	2E-06
467	0.40	0.0824	5E-06	6E-06	1E-06	1E-06	3E-06
467b	0.40	0.0816	5E-06	6E-06	1E-06	1E-06	3E-06
468a	0.24	0.0534	3E-06	4E-06	9E-07	9E-07	2E-06
468b	0.22	0.0508	3E-06	4E-06	9E-07	8E-07	2E-06
468c	0.25	0.0549	3E-06	4E-06	9E-07	9E-07	2E-06
468d	0.24	0.0535	3E-06	4E-06	9E-07	9E-07	2E-06
470	0.30	0.0663	4E-06	5E-06	1E-06	1E-06	2E-06
471	0.29	0.0636	4E-06	5E-06	1E-06	1E-06	2E-06
472a	0.30	0.0654	4E-06	5E-06	1E-06	1E-06	2E-06
472b	0.30	0.0665	4E-06	5E-06	1E-06	1E-06	2E-06
472c	0.28	0.0610	4E-06	5E-06	1E-06	1E-06	2E-06
474	0.26	0.0582	3E-06	4E-06	1E-06	1E-06	2E-06
475	0.39	0.0828	5E-06	6E-06	1E-06	1E-06	3E-06
475b	0.39	0.0828	5E-06	6E-06	1E-06	1E-06	3E-06
476	0.25	0.0566	3E-06	4E-06	1E-06	9E-07	2E-06
477a	0.30	0.0651	4E-06	5E-06	1E-06	1E-06	2E-06
477b	0.30	0.0648	4E-06	5E-06	1E-06	1E-06	2E-06
481	0.21	0.0464	3E-06	3E-06	8E-07	8E-07	2E-06
483	0.18	0.0405	2E-06	3E-06	7E-07	6E-07	1E-06
484	0.21	0.0466	3E-06	3E-06	8E-07	8E-07	2E-06
485a	0.16	0.0369	2E-06	3E-06	6E-07	6E-07	1E-06
485b	0.16	0.0370	2E-06	3E-06	6E-07	6E-07	1E-06
485c	0.16	0.0368	2E-06	3E-06	6E-07	6E-07	1E-06
485d	0.16	0.0365	2E-06	3E-06	6E-07	6E-07	1E-06
485e 485f	0.16	0.0366	2E-06	3E-06	6E-07	6E-07	1E-06
487	0.16	0.0371	2E-06	3E-06	6E-07	6E-07	1E-06
	0.60	0.1251	7E-06	9E-06	2E-06	2E-06	4E-06
488a	0.72	0.1487	9E-06	1E-05	3E-06	3E-06	5E-06
488b	0.78	0.1598	1E-05	1E-05	3E-06	3E-06	5E-06
515a	0.41	0.0888	5E-06	7E-06	2E-06	1E-06	3E-06
515b	0.31	0.0673	4E-06	5E-06	1E-06	1E-06	2E-06
516	0.26	0.0582	3E-06	4E-06	1E-06	1E-06	2E-06
517	0.34	0.0727	4E-06	5E-06	1E-06	1E-06	2E-06
518	0.39	0.0825	5E-06	6E-06	1E-06	1E-06	3E-06
519	0.30	0.0654	4E-06	5E-06	1E-06	1E-06	2E-06
522a	1.19	0.2491	1E-05	2E-05	4E-06	4E-06	8E-06
522b	3.76	0.7739	5E-05	6E-05	1E-05	1E-05	3E-05
522c	3.75	0.7706	5E-05	6E-05	1E-05	1E-05	3E-05
522d	3.73	0.7680	5E-05	6E-05	1E-05	1E-05	3E-05
526	5.26	1.0835	6E-05	8E-05	2E-05	2E-05	4E-05
527	4.67	0.9605	6E-05	7E-05	2E-05	2E-05	3E-05
528	4.63	0.9510	6E-05	7E-05	2E-05	2E-05	3E-05
529	4.58	0.9419	6E-05	7E-05	2E-05	2E-05	3E-05
530	4.50	0.9254	6E-05	7E-05	2E-05	2E-05	3E-05
531	4.49	0.9239	5E-05	7E-05	2E-05	2E-05	3E-05
531b	4.53	0.9317	6E-05	7E-05	2E-05	2E-05	3E-05
532	4.49	0.9226	5E-05	7E-05	2E-05	2E-05	3E-05
533	4.49	0.9227	5E-05	7E-05	2E-05	2E-05	3E-05

Sensitive Receptors	Change in Annual Average PM10 Concentration (µg/m³)	Change in Annual Average PM2.5 Concentration (µg/m³)	Risk (PM <sub>2.5</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> CV Hospitalisations, >65 years)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)	Risk (PM <sub>10</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> Asthma ED admissions, 1-14 years)
534	4.49	0.9229	5E-05	7E-05	2E-05	2E-05	3E-05
535	4.50	0.9254	6E-05	7E-05	2E-05	2E-05	3E-05
536	4.49	0.9221	5E-05	7E-05	2E-05	2E-05	3E-05
537	4.48	0.9218	5E-05	7E-05	2E-05	2E-05	3E-05
538	4.48	0.9196	5E-05	7E-05	2E-05	2E-05	3E-05
539	4.42	0.9068	5E-05	7E-05	2E-05	2E-05	3E-05
541	4.37	0.8965	5E-05	7E-05	2E-05	2E-05	3E-05
542	4.39	0.9000	5E-05	7E-05	2E-05	2E-05	3E-05
543	4.41	0.9054	5E-05	7E-05	2E-05	2E-05	3E-05
543b	4.47	0.9160	5E-05	7E-05	2E-05	2E-05	3E-05
544	4.44	0.9100	5E-05	7E-05	2E-05	2E-05	3E-05
545	4.46	0.9142	5E-05	7E-05	2E-05	2E-05	3E-05
547	1.35	0.2859	2E-05	2E-05	5E-06	5E-06	1E-05
549	0.58	0.1189	7E-06	9E-06	2E-06	2E-06	4E-06
550	0.65	0.1331	8E-06	1E-05	2E-06	2E-06	4E-06
552	0.64	0.1327	8E-06	1E-05	2E-06	2E-06	4E-06
553	0.66	0.1348	8E-06	1E-05	2E-06	2E-06	5E-06
554	0.73	0.1504	9E-06	1E-05	3E-06	3E-06	5E-06
557	0.64	0.1304	8E-06	1E-05	2E-06	2E-06	4E-06
559	0.57	0.1158	7E-06	9E-06	2E-06	2E-06	4E-06
560	0.59	0.1197	7E-06	9E-06	2E-06	2E-06	4E-06
561 562	0.61	0.1240	7E-06	9E-06	2E-06	2E-06	4E-06
563	0.57	0.1164	7E-06	9E-06	2E-06	2E-06	4E-06
	0.52	0.1063	6E-06	8E-06	2E-06	2E-06	4E-06
564	0.56	0.1153	7E-06	9E-06	2E-06	2E-06	4E-06
565	0.61	0.1239	7E-06	9E-06	2E-06	2E-06	4E-06
566	0.58	0.1186	7E-06	9E-06	2E-06	2E-06	4E-06
569	0.62	0.1289	8E-06	1E-05	2E-06	2E-06	4E-06
570	0.64	0.1320	8E-06	1E-05	2E-06	2E-06	4E-06
571	0.71	0.1459	9E-06	1E-05	2E-06	3E-06	5E-06
572	0.64	0.1332	8E-06	1E-05	2E-06	2E-06	5E-06
573	0.68	0.1413	8E-06	1E-05	2E-06	3E-06	5E-06
574	0.70	0.1450	9E-06	1E-05	2E-06	3E-06	5E-06
575	0.73	0.1499	9E-06	1E-05	3E-06	3E-06	5E-06
576	0.74	0.1533	9E-06	1E-05	3E-06	3E-06	5E-06
577a 577b	0.80	0.1649	1E-05	1E-05	3E-06	3E-06	6E-06
578	0.79	0.1624	1E-05	1E-05	3E-06	3E-06	5E-06
	0.81	0.1675	1E-05	1E-05	3E-06	3E-06	6E-06
583	0.41	0.0872	5E-06	6E-06	1E-06	1E-06	3E-06
586	0.24	0.0537	3E-06	4E-06	9E-07	9E-07	2E-06
587a	0.20	0.0454	3E-06	3E-06	8E-07	7E-07	2E-06
587b	0.20	0.0454	3E-06	3E-06	8E-07	7E-07	2E-06
588	0.23	0.0516	3E-06	4E-06	9E-07	9E-07	2E-06
600a	4.31	0.8855	5E-05	7E-05	2E-05	2E-05	3E-05
600b	4.35	0.8931	5E-05	7E-05	2E-05	2E-05	3E-05
601	4.29	0.8813	5E-05	7E-05	2E-05	2E-05	3E-05
602 603	4.27 4.25	0.8777 0.8737	5E-05	6E-05	1E-05	2E-05	3E-05
604	4.24	0.8708	5E-05 5E-05	6E-05 6E-05	1E-05 1E-05	2E-05 2E-05	3E-05 3E-05
605	4.22	0.8676	5E-05	6E-05	1E-05	2E-05	3E-05
606	4.20	0.8630	5E-05	6E-05	1E-05	2E-05	3E-05
607	4.18	0.8588	5E-05	6E-05	1E-05	2E-05	3E-05
608	4.18	0.8583	5E-05	6E-05	1E-05	2E-05	3E-05
609	4.16	0.8551	5E-05	6E-05	1E-05	2E-05	3E-05
610	4.13	0.8492	5E-05	6E-05	1E-05	2E-05	3E-05
611	4.11	0.8454	5E-05	6E-05	1E-05	2E-05	3E-05
612	4.17	0.8563	5E-05	6E-05	1E-05	2E-05	3E-05
613	4.13	0.8495	5E-05	6E-05	1E-05	2E-05	3E-05
614	4.12	0.8463	5E-05	6E-05	1E-05	2E-05	3E-05
615	4.08	0.8390	5E-05	6E-05	1E-05	1E-05	3E-05
616a	4.01	0.8244	5E-05	6E-05	1E-05	1E-05	3E-05
616b	4.09	0.8415	5E-05	6E-05	1E-05	1E-05	3E-05
617a	3.98	0.8179	5E-05	6E-05	1E-05	1E-05	3E-05
618a	3.95	0.8120	5E-05	6E-05	1E-05	1E-05	3E-05
618b	3.98	0.8187	5E-05	6E-05	1E-05	1E-05	3E-05
619	3.94	0.8104	5E-05	6E-05	1E-05	1E-05	3E-05
621	3.92	0.8072	5E-05	6E-05	1E-05	1E-05	3E-05
622a	3.95	0.8129	5E-05	6E-05	1E-05	1E-05	3E-05
623a 623b	0.54 3.90	0.1192 0.8030	7E-06 5E-05	9E-06	2E-06 1E-05	2E-06 1E-05	4E-06
630a	3.61	0.7444	4E-05	6E-05 5E-05	1E-05	1E-05	3E-05 3E-05
631	3.59	0.7398	4E-05	5E-05	1E-05	1E-05	3E-05
632	3.62	0.7458	4E-05	6E-05	1E-05	1E-05	3E-05
648	3.78	0.7793	5E-05	6E-05	1E-05	1E-05	3E-05
649	3.82	0.7866	5E-05	6E-05	1E-05	1E-05	3E-05
650	3.85	0.7921	5E-05	6E-05	1E-05	1E-05	3E-05
651	3.80	0.7831	5E-05	6E-05	1E-05	1E-05	3E-05
652	3.91	0.8045	5E-05	6E-05	1E-05	1E-05	3E-05
653	3.93	0.8085	5E-05	6E-05	1E-05	1E-05	3E-05
654a	4.03	0.8297	5E-05	6E-05	1E-05	1E-05	3E-05
654b	3.92	0.8075	5E-05	6E-05	1E-05	1E-05	3E-05
655	3.92	0.8080	5E-05	6E-05	1E-05	1E-05	3E-05
658a	4.02	0.8278	5E-05	6E-05	1E-05	1E-05	3E-05
659	4.02	0.8264	5E-05	6E-05	1E-05	1E-05	3E-05
660a	4.01	0.8254	5E-05	6E-05	1E-05	1E-05	3E-05
660b	4.03	0.8289	5E-05	6E-05	1E-05	1E-05	3E-05
661	4.08	0.8403	5E-05	6E-05	1E-05	1E-05	3E-05
662	4.11	0.8457	5E-05	6E-05	1E-05	2E-05	3E-05
663	4.15	0.8533	5E-05	6E-05	1E-05	2E-05	3E-05
664	4.17	0.8587	5E-05	6E-05	1E-05	2E-05	3E-05
665a	4.28	0.8806	5E-05	7E-05	2E-05	2E-05	3E-05
665b	4.27	0.8785	5E-05	6E-05	2E-05	2E-05	3E-05
667a	5.13	1.0543	6E-05	8E-05	2E-05	2E-05	4E-05
667b	5.08	1.0430	6E-05	8E-05	2E-05	2E-05	4E-05
667c	5.13	1.0529	6E-05	8E-05	2E-05	2E-05	4E-05
667d	5.12	1.0527	6E-05	8E-05	2E-05	2E-05	4E-05
667e	5.09	1.0462	6E-05	8E-05	2E-05	2E-05	4E-05
667f	3.63	0.7475	4E-05	6E-05	1E-05	1E-05	3E-05
669	4.37	0.8988	5E-05	7E-05	2E-05	2E-05	3E-05
671	4.37	0.8981	5E-05	7E-05	2E-05	2E-05	3E-05
672	4.37	0.8988	5E-05	7E-05	2E-05	2E-05	3E-05
673	4.37	0.8987	5E-05	7E-05	2E-05	2E-05	3E-05
675	4.36	0.8967	5E-05	7E-05	2E-05	2E-05	3E-05
676	4.39	0.9018	5E-05	7E-05	2E-05	2E-05	3E-05
677	4.34	0.8934	5E-05	7E-05	2E-05	2E-05	3E-05
678	4.31	0.8866	5E-05	7E-05	2E-05	2E-05	3E-05
679	4.28	0.8799	5E-05	7E-05	2E-05	2E-05	3E-05
680	4.25	0.8736	5E-05	6E-05	1E-05	2E-05	3E-05
681	4.21	0.8659	5E-05	6E-05	1E-05	2E-05	3E-05
682a	4.13	0.8506	5E-05	6E-05	1E-05	2E-05	3E-05
682b	4.13	0.8494	5E-05	6E-05	1E-05	2E-05	3E-05
683	4.11	0.8450	5E-05	6E-05	1E-05	2E-05	3E-05
684	4.04	0.8323	5E-05	6E-05	1E-05	1E-05	3E-05
685	4.02	0.8284	5E-05	6E-05	1E-05	1E-05	3E-05
686	4.03	0.8288	5E-05	6E-05	1E-05	1E-05	3E-05
	4.02	0.8282	5E-05	6E-05	1E-05	1E-05	3E-05
687 688	4.02	0.8303	5E-05	6E-05	1E-05	1E-05	3E-05

Sensitive Receptors	Change in Annual Average PM10 Concentration (µg/m³)	Change in Annual Average PM2.5 Concentration (µg/m³)	Risk (PM <sub>2.5</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> CV Hospitalisations, >65 years)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)	Risk (PM <sub>10</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> Asthma ED admissions, 1-14 years)
689	4.16	0.8561	5E-05	6E-05	1E-05	2E-05	3E-05
690 691	4.10 4.03	0.8443 0.8288	5E-05 5E-05	6E-05 6E-05	1E-05 1E-05	2E-05 1E-05	3E-05 3E-05
692 693	4.03 3.93	0.8292 0.8093	5E-05 5E-05	6E-05 6E-05	1E-05 1E-05	1E-05 1E-05	3E-05 3E-05
694a	3.93	0.8087	5E-05	6E-05	1E-05	1E-05	3E-05
694b 695	3.87 3.94	0.7982 0.8105	5E-05 5E-05	6E-05 6E-05	1E-05 1E-05	1E-05 1E-05	3E-05 3E-05
697	3.93	0.8089	5E-05	6E-05	1E-05	1E-05	3E-05
698 715	3.85 0.57	0.7934 0.1268	5E-05 8E-06	6E-05 9E-06	1E-05 2E-06	1E-05 2E-06	3E-05 4E-06
728 729	3.86 3.89	0.7946 0.8012	5E-05 5E-05	6E-05 6E-05	1E-05 1E-05	1E-05 1E-05	3E-05 3E-05
730	3.93	0.8086	5E-05	6E-05	1E-05	1E-05	3E-05
731 732	3.95 3.95	0.8134 0.8140	5E-05 5E-05	6E-05 6E-05	1E-05 1E-05	1E-05 1E-05	3E-05 3E-05
733	3.94	0.8114	5E-05	6E-05	1E-05	1E-05	3E-05
735a 735b	3.95 3.97	0.8132 0.8177	5E-05 5E-05	6E-05 6E-05	1E-05 1E-05	1E-05 1E-05	3E-05 3E-05
736	3.90	0.8024	5E-05	6E-05	1E-05	1E-05	3E-05
737 738	3.97 3.97	0.8167 0.8163	5E-05 5E-05	6E-05 6E-05	1E-05 1E-05	1E-05 1E-05	3E-05 3E-05
739	3.98	0.8198	5E-05	6E-05	1E-05	1E-05	3E-05
740a 740b	3.87 3.91	0.7969 0.8043	5E-05 5E-05	6E-05 6E-05	1E-05 1E-05	1E-05 1E-05	3E-05 3E-05
740c	3.94	0.8114	5E-05	6E-05	1E-05	1E-05	3E-05
740d 740e	3.94 3.91	0.8108 0.8048	5E-05 5E-05	6E-05 6E-05	1E-05 1E-05	1E-05 1E-05	3E-05 3E-05
740f	3.87	0.7974	5E-05	6E-05	1E-05	1E-05	3E-05
741 742	4.02 4.04	0.8266 0.8314	5E-05 5E-05	6E-05 6E-05	1E-05 1E-05	1E-05 1E-05	3E-05 3E-05
743	4.05	0.8340	5E-05	6E-05	1E-05	1E-05	3E-05
744 745	3.98 3.95	0.8185 0.8130	5E-05 5E-05	6E-05 6E-05	1E-05 1E-05	1E-05 1E-05	3E-05 3E-05
746	3.92	0.8062	5E-05	6E-05	1E-05	1E-05	3E-05
747 748a	3.89 3.86	0.7998 0.7937	5E-05 5E-05	6E-05 6E-05	1E-05 1E-05	1E-05 1E-05	3E-05 3E-05
748b	2.30	0.4742	3E-05	4E-05	8E-06	8E-06	2E-05
749a 749b	4.05 4.04	0.8341 0.8308	5E-05 5E-05	6E-05 6E-05	1E-05 1E-05	1E-05 1E-05	3E-05 3E-05
750 751	4.05 4.04	0.8336 0.8320	5E-05 5E-05	6E-05 6E-05	1E-05 1E-05	1E-05 1E-05	3E-05 3E-05
752a	4.04	0.8423	5E-05	6E-05	1E-05	1E-05	3E-05
752b 753	4.09 4.12	0.8411 0.8473	5E-05	6E-05	1E-05	1E-05	3E-05
754	4.12	0.8525	5E-05 5E-05	6E-05 6E-05	1E-05 1E-05	2E-05 2E-05	3E-05 3E-05
755 756	4.18 4.21	0.8590	5E-05	6E-05	1E-05	2E-05	3E-05
757	4.23	0.8651 0.8704	5E-05 5E-05	6E-05 6E-05	1E-05 1E-05	2E-05 2E-05	3E-05 3E-05
758 759a	4.26 4.29	0.8754 0.8822	5E-05	6E-05	1E-05	2E-05	3E-05
759b	4.30	0.8836	5E-05 5E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
760 761	4.31 4.34	0.8871 0.8929	5E-05	7E-05	2E-05	2E-05	3E-05
762	4.39	0.9021	5E-05 5E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
763 764	4.38 4.40	0.9009 0.9039	5E-05 5E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
765a	4.40	0.9010	5E-05	7E-05	2E-05	2E-05	3E-05
765b 766	4.40 4.39	0.9051 0.9023	5E-05 5E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
767	4.39	0.9021	5E-05	7E-05	2E-05	2E-05	3E-05
768 769	4.39 4.29	0.9032 0.8823	5E-05 5E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
770	4.40	0.9039	5E-05	7E-05	2E-05	2E-05	3E-05
771 772	4.40 4.41	0.9048 0.9066	5E-05 5E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
773	4.41	0.9072	5E-05	7E-05	2E-05	2E-05	3E-05
774 775	4.34 4.35	0.8928 0.8947	5E-05 5E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
776	4.42	0.9096	5E-05	7E-05	2E-05	2E-05	3E-05
777 778a	4.40 4.39	0.9047 0.9024	5E-05 5E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
778b	4.42	0.9086	5E-05	7E-05	2E-05	2E-05	3E-05
779a 779b	4.38 4.33	0.9001 0.8901	5E-05 5E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
780	4.40 4.44	0.9054	5E-05	7E-05	2E-05	2E-05	3E-05
781 782	4.42	0.9118 0.9088	5E-05 5E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
783 784	4.43 4.05	0.9115 0.8332	5E-05 5E-05	7E-05 6E-05	2E-05 1E-05	2E-05 1E-05	3E-05 3E-05
785	4.05	0.8339	5E-05	6E-05	1E-05	1E-05	3E-05
786 787a	4.09 4.06	0.8418 0.8357	5E-05 5E-05	6E-05 6E-05	1E-05 1E-05	1E-05 1E-05	3E-05 3E-05
787b	4.14	0.8522	5E-05	6E-05	1E-05	2E-05	3E-05
788 789	4.08 4.09	0.8386 0.8416	5E-05 5E-05	6E-05 6E-05	1E-05 1E-05	1E-05 1E-05	3E-05 3E-05
790a	4.07	0.8368	5E-05	6E-05	1E-05	1E-05	3E-05
790b 791a	4.10 4.07	0.8440 0.8385	5E-05 5E-05	6E-05 6E-05	1E-05 1E-05	2E-05 1E-05	3E-05 3E-05
791b	4.11	0.8455	5E-05	6E-05	1E-05	2E-05	3E-05
792a 792b	4.18 4.10	0.8605 0.8430	5E-05 5E-05	6E-05 6E-05	1E-05 1E-05	2E-05 2E-05	3E-05 3E-05
793	4.09	0.8414	5E-05	6E-05	1E-05	1E-05	3E-05
794 795	4.11 4.14	0.8453 0.8518	5E-05 5E-05	6E-05 6E-05	1E-05 1E-05	2E-05 2E-05	3E-05 3E-05
796	4.16	0.8561	5E-05	6E-05	1E-05	2E-05	3E-05
797a 797b	4.17 4.22	0.8586 0.8669	5E-05 5E-05	6E-05 6E-05	1E-05 1E-05	2E-05 2E-05	3E-05 3E-05
798	4.21	0.8652	5E-05	6E-05	1E-05	2E-05	3E-05
801 802	4.28 4.30	0.8798 0.8839	5E-05 5E-05	6E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
803a	4.14	0.8519	5E-05	6E-05	1E-05	2E-05	3E-05
803b 804	4.13 4.12	0.8504 0.8480	5E-05 5E-05	6E-05 6E-05	1E-05 1E-05	2E-05 2E-05	3E-05 3E-05
805	4.10	0.8432	5E-05	6E-05	1E-05	2E-05	3E-05
806 807	3.77 3.77	0.7768 0.7768	5E-05 5E-05	6E-05 6E-05	1E-05 1E-05	1E-05 1E-05	3E-05 3E-05
808	3.77	0.7766	5E-05	6E-05	1E-05	1E-05	3E-05
809 810	3.79 3.79	0.7794 0.7790	5E-05 5E-05	6E-05 6E-05	1E-05 1E-05	1E-05 1E-05	3E-05 3E-05
811	3.79	0.7794	5E-05	6E-05	1E-05	1E-05	3E-05
812 813	3.79 3.78	0.7803 0.7788	5E-05 5E-05	6E-05 6E-05	1E-05 1E-05	1E-05 1E-05	3E-05 3E-05
814	3.78	0.7782	5E-05	6E-05	1E-05	1E-05	3E-05
815a 815b	3.78 3.78	0.7781 0.7786	5E-05 5E-05	6E-05 6E-05	1E-05 1E-05	1E-05 1E-05	3E-05 3E-05
	3.78	0.7777	5E-05	6E-05	1E-05	1E-05	3E-05

Sensitive Receptors	Change in Annual Average PM10 Concentration (µg/m³)	Change in Annual Average PM2.5 Concentration (μg/m³)	Risk (PM <sub>2.5</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> CV Hospitalisations, >65 years)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)	Risk (PM <sub>10</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> Asthma ED admissions, 1-14 years)
817	3.75	0.7723	5E-05	6E-05	1E-05	1E-05	3E-05
819	3.59	0.7380	4E-05	5E-05	1E-05	1E-05	2E-05
820a	3.56	0.7317	4E-05	5E-05	1E-05	1E-05	2E-05
820b	3.60	0.7396	4E-05	5E-05	1E-05	1E-05	3E-05
821	3.54	0.7282	4E-05	5E-05	1E-05	1E-05	2E-05
822	3.52	0.7247	4E-05	5E-05	1E-05	1E-05	2E-05
823a	3.51	0.7222	4E-05	5E-05	1E-05	1E-05	2E-05
823b	3.57	0.7334	4E-05	5E-05	1E-05	1E-05	2E-05
824	3.47	0.7137	4E-05	5E-05	1E-05	1E-05	2E-05
825	3.45	0.7093	4E-05	5E-05	1E-05	1E-05	2E-05
826	3.44	0.7079	4E-05	5E-05	1E-05	1E-05	2E-05
827	3.43	0.7043	4E-05	5E-05	1E-05	1E-05	2E-05
828	3.38	0.6944	4E-05	5E-05	1E-05	1E-05	2E-05
829a	3.35	0.6876	4E-05	5E-05	1E-05	1E-05	2E-05
829b	3.35	0.6887	4E-05	5E-05	1E-05	1E-05	2E-05
830	3.32	0.6816	4E-05	5E-05	1E-05	1E-05	2E-05
831	3.31	0.6808	4E-05	5E-05	1E-05	1E-05	2E-05
832	3.30	0.6775	4E-05	5E-05	1E-05	1E-05	2E-05
833	3.28	0.6736	4E-05	5E-05	1E-05	1E-05	2E-05
834	3.25	0.6677	4E-05	5E-05	1E-05	1E-05	2E-05
835	3.23	0.6627	4E-05	5E-05	1E-05	1E-05	2E-05
836	3.21	0.6583	4E-05	5E-05	1E-05	1E-05	2E-05
837	3.19	0.6550	4E-05	5E-05	1E-05	1E-05	2E-05
838	3.17	0.6500	4E-05	5E-05	1E-05	1E-05	2E-05
839	3.14	0.6438	4E-05	5E-05	1E-05	1E-05	2E-05
840	3.12	0.6398	4E-05	5E-05	1E-05	1E-05	2E-05
841	3.10	0.6364	4E-05	5E-05	1E-05	1E-05	2E-05
843a	3.01	0.6184	4E-05	5E-05	1E-05	1E-05	2E-05
843b	3.05	0.6258	4E-05	5E-05	1E-05	1E-05	2E-05
844a	2.86	0.5871	3E-05	4E-05	1E-05	1E-05	2E-05
845	2.69	0.5526	3E-05	4E-05	9E-06	1E-05	2E-05
846	2.66	0.5472	3E-05	4E-05	9E-06	1E-05	2E-05
847	2.65	0.5450	3E-05	4E-05	9E-06	1E-05	2E-05
848	2.62	0.5394	3E-05	4E-05	9E-06	1E-05	2E-05
849	2.61	0.5359	3E-05	4E-05	9E-06	1E-05	2E-05
850	2.59	0.5329	3E-05	4E-05	9E-06	9E-06	2E-05
853	2.51	0.5162	3E-05	4E-05	9E-06	9E-06	2E-05
854	2.48	0.5114	3E-05	4E-05	9E-06	9E-06	2E-05
855	2.46	0.5071	3E-05	4E-05	9E-06	9E-06	2E-05
856	2.44	0.5028	3E-05	4E-05	9E-06	9E-06	2E-05
857	2.42	0.4995	3E-05	4E-05	9E-06	9E-06	2E-05
858	2.40	0.4954	3E-05	4E-05	8E-06	9E-06	2E-05
859	2.38	0.4908	3E-05	4E-05	8E-06	9E-06	2E-05
860	2.37	0.4882	3E-05	4E-05	8E-06	9E-06	2E-05
861	2.35	0.4838	3E-05	4E-05	8E-06	9E-06	2E-05
862	2.32	0.4795	3E-05	4E-05	8E-06	9E-06	2E-05
863	2.28	0.4697	3E-05	3E-05	8E-06	8E-06	2E-05
864	2.25	0.4646	3E-05	3E-05	8E-06	8E-06	2E-05
865	2.24	0.4618	3E-05	3E-05	8E-06	8E-06	2E-05
866	2.11	0.4358	3E-05	3E-05	7E-06	8E-06	1E-05
867	2.10	0.4338	3E-05	3E-05	7E-06	8E-06	1E-05
868	2.08	0.4310	3E-05	3E-05	7E-06	8E-06	1E-05
870	2.07	0.4274	3E-05	3E-05	7E-06	8E-06	1E-05
871	2.05 2.04	0.4240 0.4223	3E-05 3E-05	3E-05 3E-05	7E-06 7E-06	8E-06	1E-05 1E-05
872a 900a	0.52	0.1150	7E-06	8E-06	2E-06	7E-06 2E-06	4E-06
900b	0.66	0.1459	9E-06	1E-05	2E-06	2E-06	5E-06
901	0.69	0.1532	9E-06	1E-05	3E-06	3E-06	5E-06
902	0.69	0.1523	9E-06	1E-05	3E-06	3E-06	5E-06
903	0.68	0.1511	9E-06	1E-05	3E-06	3E-06	5E-06
904	0.68	0.1498	9E-06	1E-05	3E-06	2E-06	5E-06
905	0.67	0.1487	9E-06	1E-05	3E-06	2E-06	5E-06
906	0.67	0.1474	9E-06	1E-05	3E-06	2E-06	5E-06
907	0.66	0.1464	9E-06	1E-05	3E-06	2E-06	5E-06
908	0.66	0.1452	9E-06	1E-05	2E-06	2E-06	5E-06
909	0.65	0.1433	9E-06	1E-05	2E-06	2E-06	5E-06
911 912	0.63 0.65	0.1403 0.1432	8E-06	1E-05	2E-06	2E-06 2E-06	5E-06
913	0.62	0.1432	9E-06 8E-06	1E-05 1E-05	2E-06 2E-06	2E-06	5E-06 5E-06
914	0.62	0.1373	8E-06	1E-05	2E-06	2E-06	5E-06
915	0.62	0.1365	8E-06	1E-05	2E-06	2E-06	5E-06
916	0.61	0.1351	8E-06	1E-05	2E-06	2E-06	5E-06
917	0.60	0.1336	8E-06	1E-05	2E-06	2E-06	5E-06
918	0.61	0.1358	8E-06	1E-05	2E-06	2E-06	5E-06
919	0.62	0.1369	8E-06	1E-05	2E-06	2E-06	5E-06
920	0.62	0.1381	8E-06	1E-05	2E-06	2E-06	5E-06
921	0.63	0.1390	8E-06	1E-05	2E-06	2E-06	5E-06
922	0.63	0.1402	8E-06	1E-05	2E-06	2E-06	5E-06
924	0.65	0.1443	9E-06	1E-05	2E-06	2E-06	5E-06
925	0.66	0.1454	9E-06	1E-05	2E-06	2E-06	5E-06
926	0.66	0.1467	9E-06	1E-05	3E-06	2E-06	5E-06
927	0.67	0.1480	9E-06	1E-05	3E-06	2E-06	5E-06
928	0.68	0.1492	9E-06	1E-05	3E-06	2E-06	5E-06
929	0.68	0.1509	9E-06	1E-05	3E-06	3E-06	5E-06
930	0.67	0.1490	9E-06	1E-05	3E-06	2E-06	5E-06
931	0.67	0.1479		1E-05	3E-06	2E-06	5E-06
932a	0.65	0.1443	9E-06	1E-05	2E-06	2E-06	5E-06
932b	0.65	0.1434	9E-06	1E-05	2E-06	2E-06	5E-06
933	0.65	0.1436	9E-06	1E-05	2E-06	2E-06	5E-06
934 935a	0.64	0.1423 0.1405	8E-06	1E-05	2E-06	2E-06	5E-06
935b	0.63 0.64	0.1415	8E-06 8E-06	1E-05 1E-05	2E-06 2E-06	2E-06 2E-06	5E-06 5E-06
936	0.63	0.1387	8E-06	1E-05	2E-06	2E-06	5E-06
937	0.63	0.1401	8E-06	1E-05	2E-06	2E-06	5E-06
938	0.64	0.1412	8E-06	1E-05	2E-06	2E-06	5E-06
939	0.64	0.1420	8E-06	1E-05	2E-06	2E-06	5E-06
940	0.65	0.1433	9E-06	1E-05	2E-06	2E-06	5E-06
941	0.65	0.1441	9E-06	1E-05	2E-06	2E-06	5E-06
942	0.64	0.1409	8E-06	1E-05	2E-06	2E-06	5E-06
943	0.63	0.1396	8E-06	1E-05	2E-06	2E-06	5E-06
944	0.63	0.1387	8E-06	1E-05	2E-06	2E-06	5E-06
945a	0.62	0.1373	8E-06	1E-05	2E-06	2E-06	5E-06
945b	0.62	0.1365	8E-06	1E-05	2E-06	2E-06	5E-06
946	0.62	0.1364	8E-06	1E-05	2E-06	2E-06	5E-06
947	0.61	0.1354	8E-06	1E-05	2E-06	2E-06	5E-06
948	0.60	0.1319	8E-06	1E-05	2E-06	2E-06	4E-06
949	0.61	0.1343	8E-06	1E-05	2E-06	2E-06	5E-06
950	0.60	0.1334	8E-06	1E-05	2E-06	2E-06	5E-06
951	0.59	0.1316	8E-06	1E-05	2E-06	2E-06	4E-06
952	0.59	0.1306	8E-06	1E-05	2E-06	2E-06	4E-06
953 954	0.58 0.58	0.1291 0.1281	8E-06	1E-05	2E-06	2E-06	4E-06
955	0.59	0.1304	8E-06 8E-06	9E-06 1E-05	2E-06 2E-06	2E-06 2E-06	4E-06 4E-06
956	0.57	0.1262	8E-06	9E-06	2E-06	2E-06	4E-06
957a	0.53	0.1179	7E-06	9E-06	2E-06	2E-06	4E-06
957b	0.57	0.1271	8E-06	9E-06	2E-06	2E-06	4E-06
958	0.58	0.1280	8E-06	9E-06	2E-06	2E-06	4E-06

Sensitive Receptors	Change in Annual Average PM10 Concentration (µg/m³)	Change in Annual Average PM2.5 Concentration (µg/m³)	Risk (PM <sub>2.5</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> CV Hospitalisations, >65 years)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)	Risk (PM <sub>10</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> Asthma ED admissions, 1-14 years)
959	0.58	0.1288	8E-06	1E-05	2E-06	2E-06	4E-06
960	0.58	0.1297	8E-06	1E-05	2E-06	2E-06	4E-06
961	0.59	0.1307	8E-06	1E-05	2E-06	2E-06	4E-06
962	0.59	0.1318	8E-06	1E-05	2E-06	2E-06	4E-06
963	0.60	0.1331	8E-06	1E-05	2E-06	2E-06	4E-06
964	0.61	0.1345	8E-06	1E-05	2E-06	2E-06	5E-06
965	0.60	0.1327	8E-06	1E-05	2E-06	2E-06	4E-06
966	0.59	0.1306	8E-06	1E-05	2E-06	2E-06	4E-06
967a	0.58	0.1297	8E-06	1E-05	2E-06	2E-06	4E-06
967b	0.58	0.1288	8E-06	1E-05	2E-06	2E-06	4E-06
968	0.58	0.1289	8E-06	1E-05	2E-06	2E-06	4E-06
969	0.58	0.1277	8E-06	9E-06	2E-06	2E-06	4E-06
970	0.57	0.1271	8E-06	9E-06	2E-06	2E-06	4E-06
971	0.57	0.1264	8E-06	9E-06	2E-06	2E-06	4E-06
972	0.57	0.1255	7E-06	9E-06	2E-06	2E-06	4E-06
973	0.56	0.1248	7E-06	9E-06	2E-06	2E-06	4E-06
974	0.56	0.1240	7E-06	9E-06	2E-06	2E-06	4E-06
976	0.54	0.1191	7E-06	9E-06	2E-06	2E-06	4E-06
977a	0.54	0.1202	7E-06	9E-06	2E-06	2E-06	4E-06
977b	0.56	0.1233	7E-06	9E-06	2E-06	2E-06	4E-06
978	0.53	0.1179	7E-06	9E-06	2E-06	2E-06	4E-06
979a	0.50	0.1106	7E-06	8E-06	2E-06	2E-06	4E-06
979b	0.53	0.1171	7E-06	9E-06	2E-06	2E-06	4E-06
980	0.52	0.1150	7E-06	8E-06	2E-06	2E-06	4E-06
981a	0.52	0.1154	7E-06	9E-06	2E-06	2E-06	4E-06
981b	0.52	0.1162	7E-06	9E-06	2E-06	2E-06	4E-06
982	0.52	0.1161	7E-06	9E-06	2E-06	2E-06	4E-06
983	0.53	0.1171	7E-06	9E-06	2E-06	2E-06	4E-06
984	0.53	0.1186	7E-06	9E-06	2E-06	2E-06	4E-06
985	0.54	0.1200	7E-06	9E-06	2E-06	2E-06	4E-06
986	0.53	0.1187	7E-06	9E-06	2E-06	2E-06	4E-06
987	0.54	0.1200	7E-06	9E-06	2E-06	2E-06	4E-06
988a	0.54	0.1205	7E-06	9E-06	2E-06	2E-06	4E-06
988b	0.55	0.1212	7E-06	9E-06	2E-06	2E-06	4E-06
989a	0.55	0.1214	7E-06	9E-06	2E-06	2E-06	4E-06
989b	0.55	0.1219	7E-06	9E-06	2E-06	2E-06	4E-06
990	0.55	0.1227	7E-06	9E-06	2E-06	2E-06	4E-06
991	0.56	0.1236	7E-06	9E-06	2E-06	2E-06	4E-06
992	0.56	0.1243	7E-06	9E-06	2E-06	2E-06	4E-06
993a	0.56	0.1248	7E-06	9E-06	2E-06	2E-06	4E-06
993b	0.56	0.1246	7E-06	9E-06	2E-06	2E-06	4E-06
994a	0.56	0.1251	7E-06	9E-06	2E-06	2E-06	4E-06
994b	0.56	0.1248	7E-06	9E-06	2E-06	2E-06	4E-06
995	0.57	0.1256	7E-06	9E-06	2E-06	2E-06	4E-06
997	0.58	0.1279	8E-06	9E-06	2E-06	2E-06	4E-06
998	0.58	0.1285	8E-06	9E-06	2E-06	2E-06	4E-06
999	0.56	0.1250	7E-06	9E-06	2E-06	2E-06	4E-06
1000	0.55	0.1231	7E-06	9E-06	2E-06	2E-06	4E-06
1001	0.55	0.1219	7E-06	9E-06	2E-06	2E-06	4E-06
1002	0.54	0.1210	7E-06	9E-06	2E-06	2E-06	4E-06
1003	0.54	0.1202	7E-06	9E-06	2E-06	2E-06	4E-06
1004	0.54	0.1193	7E-06	9E-06	2E-06	2E-06	4E-06
1005	0.53	0.1185	7E-06	9E-06	2E-06	2E-06	4E-06
1006	0.53	0.1177	7E-06	9E-06	2E-06	2E-06	4E-06
1007	0.52	0.1170	7E-06	9E-06	2E-06	2E-06	4E-06
1008	0.52	0.1170	7E-06	9E-06	2E-06	2E-06	4E-06
1009	0.52	0.1149	7E-06	8E-06	2E-06	2E-06	4E-06
1010	0.52	0.1165	7E-06	9E-06	2E-06	2E-06	4E-06
1011	0.53	0.1179	7E-06	9E-06	2E-06	2E-06	4E-06
1012	0.53	0.1190	7E-06	9E-06	2E-06	2E-06	4E-06
1014	0.54	0.1212	7E-06	9E-06	2E-06	2E-06	4E-06
1015	0.55	0.1222	7E-06	9E-06	2E-06	2E-06	4E-06
1016	0.54	0.1199	7E-06	9E-06	2E-06	2E-06	4E-06
1017	0.53	0.1186	7E-06	9E-06	2E-06	2E-06	4E-06
1018	0.53	0.1170	7E-06	9E-06	2E-06	2E-06	4E-06
1019	0.52	0.1165	7E-06	9E-06	2E-06	2E-06	4E-06
1020	0.52	0.1154	7E-06	9E-06	2E-06	2E-06	4E-06
1021	0.51	0.1147	7E-06	8E-06	2E-06	2E-06	4E-06
1022	0.51	0.1139	7E-06	8E-06	2E-06	2E-06	4E-06
1023	0.51	0.1132	7E-06	8E-06	2E-06	2E-06	4E-06
1024	0.50	0.1123	7E-06	8E-06	2E-06	2E-06	4E-06
1025	0.53	0.1171	7E-06	9E-06	2E-06	2E-06	4E-06
1026	0.53	0.1186	7E-06	9E-06	2E-06	2E-06	4E-06
1027	0.53	0.1177	7E-06	9E-06	2E-06	2E-06	4E-06
1028	0.52	0.1162	7E-06	9E-06	2E-06	2E-06	4E-06
1029	0.51	0.1142	7E-06	8E-06	2E-06	2E-06	4E-06
1030	0.51	0.1137	7E-06	8E-06	2E-06	2E-06	4E-06
1031	0.50	0.1118	7E-06	8E-06	2E-06	2E-06	4E-06
1032	0.50	0.1109	7E-06	8E-06	2E-06	2E-06	4E-06
1033	0.50	0.1105	7E-06	8E-06	2E-06	2E-06	4E-06
1034	0.49	0.1092	6E-06	8E-06	2E-06	2E-06	4E-06
1035	0.48	0.1081	6E-06	8E-06	2E-06	2E-06	4E-06
1036a	0.48	0.1072	6E-06	8E-06	2E-06	2E-06	4E-06
1036b	0.49	0.1084	6E-06	8E-06	2E-06	2E-06	4E-06
1037	0.49	0.1090	6E-06	8E-06	2E-06	2E-06	4E-06
1038	0.49	0.1099	7E-06	8E-06	2E-06	2E-06	4E-06
1039	0.50	0.1112	7E-06	8E-06	2E-06	2E-06	4E-06
1040	0.50	0.1120	7E-06	8E-06	2E-06	2E-06	4E-06
1041	0.51	0.1125	7E-06	8E-06	2E-06	2E-06	4E-06
1042	0.51	0.1131	7E-06	8E-06	2E-06	2E-06	4E-06
1043	0.52	0.1147	7E-06	8E-06	2E-06	2E-06	4E-06
1044	0.51	0.1138	7E-06	8E-06	2E-06	2E-06	4E-06
1045	0.48	0.1078	6E-06	8E-06	2E-06	2E-06	4E-06
1046	0.47	0.1057	6E-06	8E-06	2E-06	2E-06	4E-06
1077	0.50	0.1110	7E-06	8E-06	2E-06	2E-06	4E-06
1078	0.48	0.1075	6E-06	8E-06	2E-06	2E-06	4E-06
1079	0.47	0.1047	6E-06	8E-06	2E-06	2E-06	4E-06
1080	0.46	0.1032	6E-06	8E-06	2E-06	2E-06	3E-06
1081	0.48	0.1060	6E-06	8E-06	2E-06	2E-06	4E-06
1082a	0.48	0.1078	6E-06	8E-06	2E-06	2E-06	4E-06
1082b	0.49	0.1095	7E-06	8E-06	2E-06	2E-06	4E-06
1100a	0.14	0.0324	2E-06	2E-06	6E-07	5E-07	1E-06
1100b	0.14	0.0320	2E-06	2E-06	5E-07	5E-07	1E-06
Council/State-owned receptors							
286e	0.62	0.1286	8E-06	1E-05	2E-06	2E-06	4E-06
286f	0.59	0.1213	7E-06	9E-06	2E-06	2E-06	4E-06
N1	0.50	0.1115	7E-06	8E-06	2E-06	2E-06	4E-06
N2	0.50	0.1109	7E-06	8E-06	2E-06	2E-06	4E-06
N3	0.49	0.1102	7E-06	8E-06	2E-06	2E-06	4E-06
N4	0.49	0.1096	7E-06	8E-06	2E-06	2E-06	4E-06
N5	0.51	0.1131	7E-06	8E-06	2E-06	2E-06	4E-06
N6	0.51	0.1136	7E-06	8E-06	2E-06	2E-06	4E-06
N7	0.51	0.1143	7E-06	8E-06	2E-06	2E-06	4E-06
N8	0.52	0.1151	7E-06	9E-06	2E-06	2E-06	4E-06
N9	0.52	0.1156	7E-06	9E-06	2E-06	2E-06	4E-06
N10	0.52	0.1166	7E-06	9E-06	2E-06	2E-06	4E-06
N11	0.53	0.1171	7E-06	9E-06	2E-06	2E-06	4E-06
INTT	0.55	0.1171	/ ⊏-∪0	9E-00	ZE-U0	∠⊑-U0	4E-U0

Sensitive Receptors	Change in Annual Average PM10 Concentration (µg/m³)	Change in Annual Average PM2.5 Concentration (µg/m³)	Risk (PM <sub>2.5</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> CV Hospitalisations, >65 years)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)	Risk (PM <sub>10</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> Asthma ED admissions, 1-14 years)
N12 N13	0.48 0.48	0.1064 0.1071	6E-06 6E-06	8E-06 8E-06	2E-06 2E-06	2E-06 2E-06	4E-06 4E-06
N14	0.49	0.1084	6E-06	8E-06	2E-06	2E-06	4E-06
N15 N16	0.49 0.49	0.1090 0.1096	6E-06 7E-06	8E-06 8E-06	2E-06 2E-06	2E-06 2E-06	4E-06 4E-06
N17 N18	0.50 0.50	0.1104 0.1111	7E-06 7E-06	8E-06 8E-06	2E-06 2E-06	2E-06 2E-06	4E-06 4E-06
N19	0.50	0.1118	7E-06	8E-06	2E-06	2E-06	4E-06
N20 N21	0.51 0.52	0.1126 0.1162	7E-06 7E-06	8E-06 9E-06	2E-06 2E-06	2E-06 2E-06	4E-06 4E-06
N22	0.76	0.1607	1E-05	1E-05	3E-06	3E-06	5E-06
N23 N24	0.75 0.75	0.1595 0.1584	9E-06 9E-06	1E-05 1E-05	3E-06 3E-06	3E-06 3E-06	5E-06 5E-06
N25 N26	0.63 0.63	0.1349 0.1345	8E-06 8E-06	1E-05 1E-05	2E-06 2E-06	2E-06 2E-06	5E-06 5E-06
N27	0.62	0.1326	8E-06	1E-05	2E-06	2E-06	4E-06
N28 Aged care receptors	1.95	0.4029	2E-05	3E-05	7E-06	7E-06	1E-05
658a	4.02	0.8278	5E-05	6E-05	1E-05	1E-05	3E-05
658b 658c	3.85 3.83	0.7933 0.7887	5E-05 5E-05	6E-05 6E-05	1E-05 1E-05	1E-05 1E-05	3E-05 3E-05
658d	3.84	0.7901	5E-05	6E-05	1E-05	1E-05	3E-05
658e Prison receptors	3.87	0.7972	5E-05 0E+00	6E-05 0E+00	1E-05 0E+00	1E-05 0E+00	3E-05 0E+00
MP1	0.59	0.1262	8E-06	9E-06	2E-06	2E-06	4E-06
MP42 MP80	0.56 0.50	0.1202 0.1075	7E-06 6E-06	9E-06 8E-06	2E-06 2E-06	2E-06 2E-06	4E-06 4E-06
Commercial accomodation	1			1			
receptors 622b	4.05	0.8326	5E-05	6E-05	1E-05	1E-05	3E-05
622c	4.05	0.8332	5E-05	6E-05	1E-05	1E-05	3E-05
622d 622e	4.02 4.01	0.8279 0.8259	5E-05 5E-05	6E-05 6E-05	1E-05 1E-05	1E-05 1E-05	3E-05 3E-05
622f	4.01	0.8243	5E-05	6E-05	1E-05	1E-05	3E-05
622g 622h	4.00 4.03	0.8230 0.8291	5E-05 5E-05	6E-05 6E-05	1E-05 1E-05	1E-05 1E-05	3E-05 3E-05
622i	4.04	0.8301	5E-05	6E-05	1E-05	1E-05	3E-05
622j 622k	4.04 4.04	0.8317 0.8307	5E-05 5E-05	6E-05 6E-05	1E-05 1E-05	1E-05 1E-05	3E-05 3E-05
6221	4.05	0.8328	5E-05	6E-05	1E-05	1E-05	3E-05
622m 622n	4.05 4.05	0.8329 0.8324	5E-05 5E-05	6E-05 6E-05	1E-05 1E-05	1E-05 1E-05	3E-05 3E-05
6220	4.03	0.8291	5E-05	6E-05	1E-05	1E-05	3E-05
622p 622q	4.03 4.01	0.8281 0.8254	5E-05 5E-05	6E-05 6E-05	1E-05 1E-05	1E-05 1E-05	3E-05 3E-05
622r	3.99	0.8216	5E-05	6E-05	1E-05	1E-05	3E-05
622s 622t	3.97 3.96	0.8172 0.8151	5E-05 5E-05	6E-05 6E-05	1E-05 1E-05	1E-05 1E-05	3E-05 3E-05
622u	4.08	0.8398	5E-05	6E-05	1E-05	1E-05	3E-05
622v 622w	4.08 3.94	0.8394 0.8116	5E-05 5E-05	6E-05 6E-05	1E-05 1E-05	1E-05 1E-05	3E-05 3E-05
622x	4.06	0.8343	5E-05	6E-05	1E-05	1E-05	3E-05
622y 622z	4.02 3.99	0.8266 0.8205	5E-05 5E-05	6E-05 6E-05	1E-05 1E-05	1E-05 1E-05	3E-05 3E-05
622aa	3.97	0.8174	5E-05	6E-05	1E-05	1E-05	3E-05
622ab 622ac	3.96 4.08	0.8154 0.8389	5E-05 5E-05	6E-05 6E-05	1E-05 1E-05	1E-05 1E-05	3E-05 3E-05
622ad	4.07	0.8381	5E-05	6E-05	1E-05	1E-05	3E-05
622ae 622af	4.07 4.07	0.8372 0.8365	5E-05 5E-05	6E-05 6E-05	1E-05 1E-05	1E-05 1E-05	3E-05 3E-05
622ag	4.06	0.8357 0.1215	5E-05	6E-05	1E-05	1E-05	3E-05
975 Commercial receptors	0.55	0.1215	7E-06 0E+00	9E-06 0E+00	2E-06 0E+00	2E-06 0E+00	4E-06 0E+00
6	7.10 1.63	1.4019 0.3423	8E-05 2E-05	1E-04 3E-05	2E-05 6E-06	3E-05	5E-05
195e 140b-1	2.23	0.4609	3E-05	3E-05	8E-06	6E-06 8E-06	1E-05 2E-05
140b-2 140b-3	2.22 2.18	0.4581 0.4499	3E-05 3E-05	3E-05 3E-05	8E-06 8E-06	8E-06 8E-06	2E-05 2E-05
140b-4	2.23	0.4611	3E-05	3E-05	8E-06	8E-06	2E-05
202c 202d	2.95 3.08	0.6090 0.6345	4E-05 4E-05	4E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
202e	3.04	0.6270	4E-05	5E-05	1E-05	1E-05	2E-05
202f 202g	2.98 3.00	0.6136 0.6174	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
472d	0.28	0.0627	4E-06	5E-06	1E-06	1E-06	2E-06
472e 472f	0.28 0.29	0.0622 0.0644	4E-06 4E-06	5E-06 5E-06	1E-06 1E-06	1E-06 1E-06	2E-06 2E-06
472g	0.30	0.0650	4E-06	5E-06	1E-06	1E-06	2E-06
472h 472i	0.29 0.29	0.0646 0.0641	4E-06 4E-06	5E-06 5E-06	1E-06 1E-06	1E-06 1E-06	2E-06 2E-06
472j 472k	0.29 0.28	0.0631 0.0622	4E-06 4E-06	5E-06 5E-06	1E-06 1E-06	1E-06 1E-06	2E-06 2E-06
4721	0.30	0.0664	4E-06	5E-06	1E-06	1E-06	2E-06
472m 489	0.30 4.89	0.0657 0.9157	4E-06 5E-05	5E-06 7E-05	1E-06 2E-05	1E-06 2E-05	2E-06 3E-05
540	4.36	0.8946	5E-05	7E-05	2E-05	2E-05	3E-05
546a 546b	4.93 4.83	1.0089 0.9895	6E-05 6E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
546c	4.82	0.9879	6E-05	7E-05	2E-05	2E-05	3E-05
617b 617c	4.01 4.12	0.8247 0.8473	5E-05 5E-05	6E-05 6E-05	1E-05 1E-05	1E-05 2E-05	3E-05 3E-05
617d	4.12	0.8464	5E-05	6E-05	1E-05	2E-05	3E-05
617e 617f	4.14 4.13	0.8516 0.8488	5E-05 5E-05	6E-05 6E-05	1E-05 1E-05	2E-05 2E-05	3E-05 3E-05
617g	4.00	0.8232	5E-05	6E-05	1E-05	1E-05	3E-05
617h 617i	4.06 4.05	0.8344 0.8323	5E-05 5E-05	6E-05 6E-05	1E-05 1E-05	1E-05 1E-05	3E-05 3E-05
620	3.89	0.7996	5E-05	6E-05	1E-05	1E-05	3E-05
622ah 622ai	4.02 4.02	0.8271 0.8270	5E-05 5E-05	6E-05 6E-05	1E-05 1E-05	1E-05 1E-05	3E-05 3E-05
611aj	3.95	0.8129	5E-05	6E-05	1E-05	1E-05	3E-05
622ak 625	3.93 3.85	0.8080 0.7927	5E-05 5E-05	6E-05 6E-05	1E-05 1E-05	1E-05 1E-05	3E-05 3E-05
629	3.80	0.7831	5E-05	6E-05	1E-05	1E-05	3E-05
626 627	3.84 3.82	0.7902 0.7873	5E-05 5E-05	6E-05 6E-05	1E-05 1E-05	1E-05 1E-05	3E-05 3E-05
628	3.81	0.7851	5E-05	6E-05	1E-05	1E-05	3E-05
630a 630b	3.61 3.77	0.7444 0.7771	4E-05 5E-05	5E-05 6E-05	1E-05 1E-05	1E-05 1E-05	3E-05 3E-05
630c	3.76	0.7747	5E-05	6E-05	1E-05	1E-05	3E-05
630d 656	3.70 3.92	0.7621 0.8068	5E-05 5E-05	6E-05 6E-05	1E-05 1E-05	1E-05 1E-05	3E-05 3E-05
674a	4.29	0.8829	5E-05	7E-05	2E-05	2E-05	3E-05
674b 818a	4.36 3.67	0.8963 0.7542	5E-05 4E-05	7E-05 6E-05	2E-05 1E-05	2E-05 1E-05	3E-05 3E-05
818b	3.67	0.7548	4E-05	6E-05	1E-05	1E-05	3E-05
844b	2.88	0.5909	4E-05	4E-05	1E-05	1E-05	2E-05

Sensitive Receptors	Change in Annual Average PM10 Concentration (μg/m³)	Change in Annual Average PM2.5 Concentration (µg/m³)	Risk (PM <sub>2.5</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> CV Hospitalisations, >65 years)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)	Risk (PM <sub>10</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> Asthma ED admissions, 1-14 years)
872b	2.04	0.4230	3E-05	3E-05	7E-06	7E-06	1E-05
1085	0.47	0.1048	6E-06	8E-06	2E-06	2E-06	4E-06
2ap	0.97	0.1939	1E-05	1E-05	3E-06	4E-06	7E-06
2aq	0.96	0.1915	1E-05	1E-05	3E-06	4E-06	6E-06
2ar	0.96	0.1908	1E-05	1E-05	3E-06	4E-06	6E-06
5h	0.29	0.0642	4E-06	5E-06	1E-06	1E-06	2E-06
5w	0.42	0.0892	5E-06	7E-06	2E-06	2E-06	3E-06
5an	0.29	0.0647	4E-06	5E-06	1E-06	1E-06	2E-06
5ao	0.29	0.0641	4E-06	5E-06	1E-06	1E-06	2E-06
5ap	0.43	0.0895	5E-06	7E-06	2E-06	2E-06	3E-06
8q	0.15	0.0359	2E-06	3E-06	6E-07	6E-07	1E-06
Mal4	0.60	0.1210	7E-06	9E-06	2E-06	2E-06	4E-06
Mal5	0.60	0.1214	7E-06	9E-06	2E-06	2E-06	4E-06
Mal6	0.61	0.1224	7E-06	9E-06	2E-06	2E-06	4E-06
UHSC2	0.72	0.1581	9E-06	1E-05	3E-06	3E-06	5E-06
UHSC3	0.70	0.1544	9E-06	1E-05	3E-06	3E-06	5E-06
UHSC4	0.71	0.1565	9E-06	1E-05	3E-06	3E-06	5E-06
N29	0.93	0.1969	1E-05	1E-05	3E-06	3E-06	7E-06
School receptors							
N30	4.26	0.8764	5E-05	6E-05	1E-05	2E-05	3E-05
N31	4.21	0.8658	5E-05	6E-05	1E-05	2E-05	3E-05
N32	4.21	0.8652	5E-05	6E-05	1E-05	2E-05	3E-05
N33	4.25	0.8742	5E-05	6E-05	1E-05	2E-05	3E-05
Church receptors							
520	1.40	0.2927	2E-05	2E-05	5E-06	5E-06	1E-05
658b	3.85	0.7933	5E-05	6E-05	1E-05	1E-05	3E-05
658c	3.83	0.7887	5E-05	6E-05	1E-05	1E-05	3E-05
616c	4.05	0.8330	5E-05	6E-05	1E-05	1E-05	3E-05
N34	0.63	0.1335	8E-06	1E-05	2E-06	2E-06	5E-06
Heritage receptors*							

<sup>\*</sup>No inhabited heritage receptors with elevated health risks identified.

# Quantification of Effects - $PM_{2.5}$ Mount Pleasant - Scenario 4 (incorporating proactive/reactive mitigation measures)

Air quality indicator:	PM <sub>2.5</sub>	PM <sub>2.5</sub>	PM <sub>2.5</sub>	PM <sub>2.5</sub>
Endpoint:	,	•	Hospitalisations - Respiratory	Morbidity - Asthma ED Admissions
F# 45 B 6		0	01 11	0
Effect Exposure Duration: Age Group:	,	Short-term ≥ 65 years	Short-term ≥ 65 vears	Short-term 1-14 vears
β (change in effect per 1 μg/m³) (as per Table 5.2)	,		0.00041	0.00148
Annual baseline incidence (per 100,000)	1026	9235	4168	2284
Baseline Incidence (per person per year)	0.01026	0.09235	0.04168	0.02284

Sensitive Receptors	Change in Annual Average PM <sub>2.5</sub> Concentration (µg/m³)	Risk (PM <sub>2.5</sub> Mortality all causes)	Risk( PM <sub>2.5</sub> CV Hospitalisations, > 65 years)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)		Risk (PM <sub>2.5</sub> Asthma ED admissions, 1- 14 years)
Privately-owned receptors					Ш	
20	1.5453	9E-05	1E-04	3E-05	П	5E-05
21	1.5686	9E-05	1E-04	3E-05		5E-05
23	1.6088	1E-04	1E-04	3E-05		5E-05
102	1.6808	1E-04	1E-04	3E-05	П	6E-05
108	1.7963	1E-04	1E-04	3E-05	П	6E-05
112	1.9420	1E-04	1E-04	3E-05		7E-05
118	1.9143	1E-04	1E-04	3E-05		6E-05
120	1.8859	1E-04	1E-04	3E-05	П	6E-05
120c	1.9193	1E-04	1E-04	3E-05		6E-05
121	1.9436	1E-04	1E-04	3E-05	П	7E-05
153a	1.0629	6E-05	8E-05	2E-05		4E-05
154	2.4427	1E-04	2E-04	4E-05		8E-05
154b	2.4194	1E-04	2E-04	4E-05	П	8E-05
156a	1.9283	1E-04	1E-04	3E-05	П	7E-05
157a	1.7056	1E-04	1E-04	3E-05	П	6E-05
158	1.5194	9E-05	1E-04	3E-05	П	5E-05

## Quantification of Effects - $PM_{2.5}$ and $PM_{10}$ Mount Pleasant - Scenario 5 (without proactive/reactive mitigation measures)

Air quality indicator:	PM <sub>2.5</sub>	PM <sub>2.5</sub>	PM <sub>2.5</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Endpoint:	Mortality - All	Hospitalisations -	Hospitalisations -	Mortality - All	Morbidity -
	Causes	Cardiovascular	Respiratory	Causes	Asthma ED
					Admissions
Effect Exposure Duration:	Long-term	Short-term	Short-term	Short-Term	Short-Term
Age Group:	≥ 30 years	≥ 65 years	≥ 65 years	All ages	1-14 years
β (change in effect per 1 μg/m³) (as per Table 5.2)	0.0058	0.0008	0.00041	0.0006	0.00148
Annual baseline incidence (per 100,000)	1026	9235	4168	610.5	2284
Baseline Incidence (per person per year)	0.01026	0.09235	0.04168	0.006105	0.02284

		(F F F F F F F F F				L	
Sensitive Receptors	Change in Annual Average PM10 Concentration (μg/m³)	Change in Annual Average PM2.5 Concentration (µg/m³)	Risk (PM <sub>2.5</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> CV Hospitalisations, >65 years)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)	Risk (PM <sub>10</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> Asthma ED admissions, 1-14 years)
Privately owned receptors							
19	4.34 7.34	0.9509 1.5886	6E-05 9E-05	7E-05 1E-04	2E-05 3E-05	2E-05 3E-05	3E-05 5E-05
20	8.16	1.7623	1E-04	1E-04	3E-05	3E-05	6E-05
21	8.33	1.7987	1E-04	1E-04	3E-05	3E-05	6E-05
35 35b	6.73 6.76	1.4617 1.4693	9E-05	1E-04 1E-04	2E-05 3E-05	2E-05 2E-05	5E-05 5E-05
43	1.38	0.2838	9E-05 2E-05	2E-05	5E-06	5E-06	1E-05
43b	0.73	0.1596	9E-06	1E-05	3E-06	3E-06	5E-06
45	0.71	0.1558	9E-06	1E-05	3E-06	3E-06	5E-06
45b 45c	0.71 0.72	0.1570 0.1589	9E-06 9E-06	1E-05 1E-05	3E-06 3E-06	3E-06 3E-06	5E-06 5E-06
47	0.69	0.1459	9E-06	1E-05	2E-06	3E-06	5E-06
67	7.51	1.6342	1E-04	1E-04	3E-05	3E-05	6E-05
74 77	7.18 6.22	1.5619	9E-05	1E-04 1E-04	3E-05	3E-05	5E-05
79	5.48	1.3533 1.1923	8E-05 7E-05	9E-05	2E-05 2E-05	2E-05 2E-05	5E-05 4E-05
82	4.33	0.9436	6E-05	7E-05	2E-05	2E-05	3E-05
83	4.50	0.9787	6E-05	7E-05	2E-05	2E-05	3E-05
84a 84b	4.87 1.36	1.0605 0.2623	6E-05 2E-05	8E-05 2E-05	2E-05 4E-06	2E-05 5E-06	4E-05 9E-06
86a	6.31	1.3753	8E-05	1E-04	2E-05	2E-05	5E-05
86b	2.56	0.5590	3E-05	4E-05	1E-05	9E-06	2E-05
96	8.49	1.8618	1E-04	1E-04	3E-05	3E-05	6E-05
102 108	8.82 9.44	1.9374 2.0760	1E-04 1E-04	1E-04 2E-04	3E-05 4E-05	3E-05 3E-05	7E-05 7E-05
112	10.27	2.0760	1E-04	2E-04 2E-04	4E-05 4E-05	4E-05	7E-05 8E-05
118	9.94	2.1910	1E-04	2E-04	4E-05	4E-05	7E-05
120	9.64	2.1249	1E-04	2E-04	4E-05	4E-05	7E-05
120c 121	9.81 10.07	2.1628 2.2217	1E-04 1E-04	2E-04 2E-04	4E-05 4E-05	4E-05 4E-05	7E-05 8E-05
136	6.26	1.3710	8E-05	1E-04	4E-05 2E-05	4E-05 2E-05	8E-05 5E-05
140a	3.18	0.7032	4E-05	5E-05	1E-05	1E-05	2E-05
140c 143a	3.96	0.8626	5E-05	6E-05	1E-05	1E-05	3E-05
143b	3.29 5.05	0.7412 1.1337	4E-05 7E-05	5E-05 8E-05	1E-05 2E-05	1E-05 2E-05	3E-05 4E-05
147	5.46	1.2231	7E-05	9E-05	2E-05	2E-05	4E-05
153a	9.71	1.9354	1E-04	1E-04	3E-05	4E-05	7E-05
154 154b	11.55	2.5058	1E-04	2E-04	4E-05	4E-05	8E-05
156a	11.59 7.45	2.5135 1.6593	1E-04 1E-04	2E-04 1E-04	4E-05 3E-05	4E-05 3E-05	8E-05 6E-05
156b	0.32	0.0712	4E-06	5E-06	1E-06	1E-06	2E-06
157a	6.56	1.4675	9E-05	1E-04	3E-05	2E-05	5E-05
157b 159	0.28 5.52	0.0648 1.2376	4E-06	5E-06	1E-06	1E-06	2E-06
169	4.80	1.0489	7E-05 6E-05	9E-05 8E-05	2E-05 2E-05	2E-05 2E-05	4E-05 4E-05
171	3.47	0.7640	5E-05	6E-05	1E-05	1E-05	3E-05
172	2.68	0.5951	4E-05	4E-05	1E-05	1E-05	2E-05
172b 172c	2.59 1.77	0.5741 0.3985	3E-05 2E-05	4E-05 3E-05	1E-05 7E-06	9E-06 6E-06	2E-05 1E-05
310	2.65	0.5877	3E-05	4E-05	1E-05	1E-05	2E-05
173	2.52	0.5554	3E-05	4E-05	9E-06	9E-06	2E-05
174 175	2.60 2.65	0.5736 0.5834	3E-05 3E-05	4E-05 4E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
175b	2.69	0.5924	4E-05	4E-05	1E-05	1E-05	2E-05
175c	2.63	0.5805	3E-05	4E-05	1E-05	1E-05	2E-05
176	2.68	0.5904	4E-05	4E-05	1E-05	1E-05	2E-05
177 178	2.43 1.48	0.5342 0.3355	3E-05 2E-05	4E-05 2E-05	9E-06 6E-06	9E-06 5E-06	2E-05 1E-05
179	1.59	0.3569	2E-05	3E-05	6E-06	6E-06	1E-05
180	1.49	0.3350	2E-05	2E-05	6E-06	5E-06	1E-05
180b 180c	1.28 0.99	0.2918 0.2285	2E-05 1E-05	2E-05 2E-05	5E-06 4E-06	5E-06	1E-05
181	0.87	0.2014	1E-05	1E-05	3E-06	4E-06 3E-06	8E-06 7E-06
181c	1.25	0.2850	2E-05	2E-05	5E-06	5E-06	1E-05
182	0.71	0.1658	1E-05	1E-05	3E-06	3E-06	6E-06
189 190	1.51 1.61	0.3421 0.3649	2E-05 2E-05	3E-05 3E-05	6E-06 6E-06	6E-06 6E-06	1E-05 1E-05
191	1.45	0.3286	2E-05 2E-05	2E-05	6E-06	5E-06	1E-05
192	1.54	0.3498	2E-05	3E-05	6E-06	6E-06	1E-05
193 193c	1.44	0.3249	2E-05	2E-05	6E-06 4E-06	5E-06 4E-06	1E-05
193c 194	1.11	0.2504 0.3386	1E-05 2E-05	2E-05 3E-05	4E-06 6E-06	4E-06 6E-06	8E-06 1E-05
195	1.66	0.3695	2E-05	3E-05	6E-06	6E-06	1E-05
197	1.97	0.4344	3E-05	3E-05	7E-06	7E-06	1E-05
196 195d	1.91 2.04	0.4206 0.4465	3E-05 3E-05	3E-05 3E-05	7E-06 8E-06	7E-06 7E-06	1E-05 2E-05
198	2.04	0.5221	3E-05	4E-05	9E-06	9E-06	2E-05
198b	2.45	0.5358	3E-05	4E-05	9E-06	9E-06	2E-05
199	2.26	0.4941	3E-05	4E-05	8E-06	8E-06	2E-05
200	2.06 3.35	0.4518 0.7281	3E-05 4E-05	3E-05 5E-05	8E-06 1E-05	8E-06 1E-05	2E-05 2E-05
202b	2.70	0.7261	3E-05	4E-05	1E-05	1E-05	2E-05
203	3.55	0.7726	5E-05	6E-05	1E-05	1E-05	3E-05
203b	3.48	0.7573	5E-05	6E-05	1E-05	1E-05	3E-05
203c 206	3.54 5.95	0.7708 1.2900	5E-05 8E-05	6E-05 1E-04	1E-05 2E-05	1E-05 2E-05	3E-05 4E-05
207	6.77	1.4666	9E-05	1E-04	3E-05	2E-05	5E-05
212	5.61	1.2204	7E-05	9E-05	2E-05	2E-05	4E-05
212b	5.60	1.2187	7E-05	9E-05	2E-05	2E-05	4E-05
213	6.77 6.78	1.4665 1.4700	9E-05 9E-05	1E-04 1E-04	3E-05 3E-05	2E-05 2E-05	5E-05 5E-05
215	6.86	1.4750	9E-05	1E-04	3E-05	3E-05	5E-05
216	6.90	1.4947	9E-05	1E-04	3E-05	3E-05	5E-05
216b	6.81	1.4753	9E-05	1E-04	3E-05	2E-05	5E-05
217	6.94 6.93	1.5025 1.5019	9E-05 9E-05	1E-04 1E-04	3E-05 3E-05	3E-05 3E-05	5E-05 5E-05
219	6.97	1.5094	9E-05	1E-04	3E-05	3E-05	5E-05
220 221	7.01 7.08	1.5183 1.5337	9E-05 9E-05	1E-04 1E-04	3E-05 3E-05	3E-05 3E-05	5E-05 5E-05

Sensitive Receptors	Change in Annual Average PM10 Concentration (µg/m³)	Change in Annual Average PM2.5 Concentration (µg/m³)	Risk (PM <sub>2.5</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> CV Hospitalisations, >65 years)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)	Risk (PM <sub>10</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> Asthma ED admissions, 1-14 years)
222	7.14	1.5456	9E-05	1E-04	3E-05	3E-05	5E-05
223	7.22	1.5628	9E-05	1E-04	3E-05	3E-05	5E-05
223b	7.22	1.5620	9E-05	1E-04	3E-05	3E-05	5E-05
224	7.31	1.5821	9E-05	1E-04	3E-05	3E-05	5E-05
225	6.96	1.5079	9E-05	1E-04	3E-05	3E-05	5E-05
249	0.56	0.1313	8E-06	1E-05	2E-06	2E-06	4E-06
252	0.37	0.0866	5E-06	6E-06	1E-06	1E-06	3E-06
257	0.81	0.1833	1E-05	1E-05	3E-06	3E-06	6E-06
258a	0.70	0.1579	9E-06	1E-05	3E-06	3E-06	5E-06
258c 259	0.69 0.67	0.1562 0.1508	9E-06	1E-05 1E-05	3E-06	3E-06 2E-06	5E-06 5E-06
259b	0.63	0.1425	8E-06	1E-05	3E-06 2E-06	2E-06	5E-06
260	0.70	0.1583	9E-06	1E-05	3E-06	3E-06	5E-06
260a	0.69	0.1563	9E-06	1E-05	3E-06	3E-06	5E-06
260b	0.69	0.1558	9E-06	1E-05	3E-06	3E-06	5E-06
261	0.59	0.1354	8E-06	1E-05	2E-06	2E-06	5E-06
261b	0.59	0.1356	8E-06	1E-05	2E-06	2E-06	5E-06
271	0.58	0.1114	7E-06	8E-06	2E-06	2E-06	4E-06
272b	0.95	0.1772	1E-05	1E-05	3E-06	3E-06	6E-06
272	0.96	0.1790	1E-05	1E-05	3E-06	4E-06	6E-06
273	0.71	0.1341	8E-06	1E-05	2E-06	3E-06	5E-06
273b 288	0.68 4.80	0.1286 1.0462	8E-06	9E-06	2E-06	2E-06	4E-06
288b	4.78	1.0428	6E-05 6E-05	8E-05 8E-05	2E-05 2E-05	2E-05 2E-05	4E-05 4E-05
289	5.76	1.2518	7E-05	9E-05	2E-05	2E-05	4E-05
292	0.45	0.1059	6E-06	8E-06	2E-06	2E-06	4E-06
292b 300	0.43 0.52	0.1012 0.1212	6E-06	7E-06	2E-06	2E-06	3E-06
298	0.54	0.1269	7E-06 8E-06	9E-06 9E-06	2E-06 2E-06	2E-06 2E-06	4E-06 4E-06
296a	0.60	0.1396	8E-06	1E-05	2E-06	2E-06	5E-06
296b	0.58	0.1355	8E-06	1E-05	2E-06	2E-06	5E-06
302a 302c	0.43 0.41	0.1005 0.0979	6E-06	7E-06	2E-06	2E-06	3E-06
401	0.98	0.1871	6E-06 1E-05	7E-06 1E-05	2E-06 3E-06	2E-06 4E-06	3E-06 6E-06
402	1.11	0.2139	1E-05	2E-05	4E-06	4E-06	7E-06
404	1.20	0.2293	1E-05	2E-05	4E-06	4E-06	8E-06
407 413b	1.57	0.3067 0.1290	2E-05	2E-05	5E-06	6E-06	1E-05
415	0.64	0.1209	8E-06 7E-06	1E-05 9E-06	2E-06 2E-06	3E-06 2E-06	4E-06 4E-06
417	0.56	0.1068	6E-06	8E-06	2E-06	2E-06	4E-06
418	0.46	0.0898	5E-06	7E-06	2E-06	2E-06	3E-06
418b 419	0.48	0.0930	6E-06	7E-06	2E-06	2E-06	3E-06
421	0.71	0.1338	8E-06	1E-05	2E-06	3E-06	5E-06
	0.78	0.1476	9E-06	1E-05	3E-06	3E-06	5E-06
422a	4.15	0.8698	5E-05	6E-05	1E-05	2E-05	3E-05
436	0.82	0.1908	1E-05	1E-05	3E-06	3E-06	6E-06
437 441	0.87	0.2012	1E-05	1E-05	3E-06	3E-06	7E-06
442	0.57	0.1331	8E-06	1E-05	2E-06	2E-06	4E-06
	0.23	0.0548	3E-06	4E-06	9E-07	8E-07	2E-06
443	0.58	0.1366	8E-06	1E-05	2E-06	2E-06	5E-06
451	0.72	0.1633	1E-05	1E-05	3E-06	3E-06	6E-06
452 453a	1.25	0.2750	2E-05	2E-05	5E-06	5E-06	9E-06
453b	0.49	0.0944	6E-06	7E-06	2E-06	2E-06	3E-06
	0.49	0.0943	6E-06	7E-06	2E-06	2E-06	3E-06
454	0.40	0.0787	5E-06	6E-06	1E-06	1E-06	3E-06
455	0.24	0.0479	3E-06	4E-06	8E-07	9E-07	2E-06
456 456b	0.25	0.0503	3E-06	4E-06	9E-07	9E-07	2E-06
458	0.25	0.0502	3E-06	4E-06	9E-07	9E-07	2E-06
	0.34	0.0685	4E-06	5E-06	1E-06	1E-06	2E-06
460	0.16	0.0360	2E-06	3E-06	6E-07	6E-07	1E-06
460b	0.16	0.0357	2E-06	3E-06	6E-07	6E-07	1E-06
461	0.16	0.0355	2E-06	3E-06	6E-07	6E-07	1E-06
462a	0.17	0.0375	2E-06	3E-06	6E-07	6E-07	1E-06
462b	0.17	0.0376	2E-06	3E-06	6E-07	6E-07	1E-06
462c	0.17	0.0376	2E-06	3E-06	6E-07	6E-07	1E-06
464	0.29	0.0655	4E-06	5E-06	1E-06	1E-06	2E-06
464b	0.29	0.0664	4E-06	5E-06	1E-06	1E-06	2E-06
465	0.24	0.0557	3E-06	4E-06	1E-06	9E-07	2E-06
466	0.31	0.0716	4E-06	5E-06	1E-06	1E-06	2E-06
467	0.45	0.1019	6E-06	8E-06	2E-06	2E-06	3E-06
467b	0.45	0.1009	6E-06	7E-06	2E-06	2E-06	3E-06
468a	0.27	0.0652	4E-06	5E-06	1E-06	1E-06	2E-06
468b	0.25	0.0619	4E-06		1E-06	9E-07	2E-06
468c	0.28	0.0671	4E-06	5E-06 5E-06	1E-06	1E-06	2E-06
468d	0.27	0.0653	4E-06	5E-06	1E-06	1E-06	2E-06
470	0.34	0.0814	5E-06	6E-06	1E-06	1E-06	3E-06
471	0.33	0.0780	5E-06	6E-06	1E-06	1E-06	3E-06
472a	0.33	0.0803	5E-06	6E-06	1E-06	1E-06	3E-06
472b	0.34	0.0817	5E-06	6E-06	1E-06	1E-06	3E-06
472c	0.31	0.0748	4E-06	6E-06	1E-06	1E-06	3E-06
474	0.29	0.0713	4E-06	5E-06	1E-06	1E-06	2E-06
475	0.44	0.1028	6E-06	8E-06	2E-06	2E-06	3E-06
475b	0.44	0.1029	6E-06	8E-06	2E-06	2E-06	3E-06
476 477a	0.29	0.0694	4E-06	5E-06	1E-06	1E-06	2E-06
477b	0.34	0.0803	5E-06	6E-06	1E-06	1E-06	3E-06
	0.34	0.0800	5E-06	6E-06	1E-06	1E-06	3E-06
481	0.23	0.0568	3E-06	4E-06	1E-06	9E-07	2E-06
483	0.20	0.0493	3E-06	4E-06	8E-07	7E-07	2E-06
484 485a	0.23	0.0571	3E-06 3E-06	4E-06 3E-06	1E-06 8E-07	9E-07 7E-07	2E-06 2E-06
485b	0.18 0.18	0.0450 0.0452	3E-06	3E-06	8E-07	7E-07	2E-06
485c	0.18	0.0449	3E-06	3E-06	8E-07	7E-07	2E-06
485d	0.18	0.0446	3E-06	3E-06	8E-07	7E-07	2E-06
485e	0.18	0.0447	3E-06	3E-06	8E-07	7E-07	2E-06
485f	0.18	0.0454	3E-06	3E-06	8E-07	7E-07	2E-06
487	0.68	0.1569	9E-06	1E-05	3E-06	2E-06	5E-06
488a	0.82	0.1872	1E-05	1E-05	3E-06	3E-06	6E-06
488b	0.88	0.2010	1E-05	1E-05	3E-06	3E-06	7E-06
515a	0.47	0.1085	6E-06	8E-06	2E-06	2E-06	4E-06
515b	0.36	0.0825	5E-06	6E-06	1E-06	1E-06	3E-06
516	0.31	0.0717	4E-06	5E-06	1E-06	1E-06	2E-06
517	0.39	0.0897	5E-06	7E-06	2E-06	1E-06	3E-06
518	0.45	0.1025	6E-06	8E-06	2E-06	2E-06	3E-06
519 522a	0.35	0.0802 0.2914	5E-06 2E-05	6E-06 2E-05	1E-06 5E-06	1E-06 5E-06	3E-06
522b	4.02	0.8757	5E-05	6E-05	1E-05	1E-05	1E-05 3E-05
522c	4.01	0.8725	5E-05	6E-05	1E-05	1E-05	3E-05
522d	3.99	0.8693	5E-05	6E-05	1E-05	1E-05	3E-05
526	5.60	1.2175	7E-05	9E-05	2E-05	2E-05	4E-05
527	5.04	1.0965	7E-05	8E-05	2E-05	2E-05	4E-05
528	4.99	1.0861	6E-05	8E-05	2E-05	2E-05	4E-05
529	4.94	1.0760	6E-05	8E-05	2E-05	2E-05	4E-05
530	4.86	1.0579	6E-05	8E-05	2E-05	2E-05	4E-05
531	4.85	1.0563	6E-05	8E-05	2E-05	2E-05	4E-05
531b	4.89	1.0649	6E-05	8E-05	2E-05	2E-05	4E-05
532	4.85	1.0550	6E-05	8E-05	2E-05	2E-05	4E-05
533	4.85	1.0552	6E-05	8E-05	2E-05	2E-05	4E-05

Sensitive Receptors	Change in Annual Average PM10 Concentration (μg/m³)	Change in Annual Average PM2.5 Concentration (µg/m³)	Risk (PM <sub>2.5</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> CV Hospitalisations, >65 years)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)	Risk (PM <sub>10</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> Asthma ED admissions, 1-14 years)
534	4.85	1.0553	6E-05	8E-05	2E-05	2E-05	4E-05
535	4.86	1.0581	6E-05	8E-05	2E-05	2E-05	4E-05
536	4.84	1.0545	6E-05	8E-05	2E-05	2E-05	4E-05
537	4.84	1.0541	6E-05	8E-05	2E-05	2E-05	4E-05
538	4.79	1.0440	6E-05	8E-05	2E-05	2E-05	4E-05
539	4.72	1.0301	6E-05	8E-05	2E-05	2E-05	3E-05
541	4.67	1.0185	6E-05	8E-05	2E-05	2E-05	3E-05
542	4.68	1.0221	6E-05	8E-05	2E-05	2E-05	3E-05
543	4.71	1.0277	6E-05	8E-05	2E-05	2E-05	3E-05
543b	4.77	1.0394	6E-05	8E-05	2E-05	2E-05	4E-05
544	4.73	1.0324	6E-05	8E-05	2E-05	2E-05	
545	4.75	1.0367	6E-05	8E-05	2E-05	2E-05	3E-05 4E-05
547	1.49	0.3319	2E-05	2E-05	6E-06	5E-06	1E-05
549	0.65	0.1419	8E-06	1E-05	2E-06	2E-06	5E-06
550	0.73	0.1586	9E-06	1E-05	3E-06	3E-06	5E-06
552	0.72	0.1582	9E-06	1E-05	3E-06	3E-06	5E-06
553	0.74	0.1612	1E-05	1E-05	3E-06	3E-06	5E-06
554	0.81	0.1790	1E-05	1E-05	3E-06	3E-06	6E-06
557	0.71	0.1557	9E-06	1E-05	3E-06	3E-06	5E-06
559	0.63	0.1384	8E-06	1E-05	2E-06	2E-06	5E-06
560	0.65	0.1428	9E-06	1E-05	2E-06	2E-06	5E-06
561 562	0.68 0.64	0.1478 0.1389	9E-06	1E-05	3E-06	2E-06	5E-06
563	0.58	0.1269	8E-06 8E-06	1E-05 9E-06	2E-06 2E-06	2E-06 2E-06	5E-06 4E-06
564	0.63	0.1376	8E-06	1E-05	2E-06	2E-06	5E-06
565	0.68	0.1480	9E-06	1E-05	3E-06	2E-06	5E-06
566 569	0.64 0.69	0.1417 0.1534	8E-06	1E-05	2E-06	2E-06	5E-06
570	0.71	0.1567	9E-06 9E-06	1E-05 1E-05	3E-06 3E-06	3E-06 3E-06	5E-06 5E-06
571	0.78	0.1715	1E-05	1E-05	3E-06	3E-06	6E-06
572	0.71	0.1577	9E-06	1E-05	3E-06	3E-06	5E-06
573	0.76	0.1670	1E-05	1E-05	3E-06	3E-06	6E-06
574	0.78	0.1711	1E-05	1E-05	3E-06	3E-06	6E-06
575	0.80	0.1765	1E-05	1E-05	3E-06	3E-06	6E-06
576	0.82	0.1802	1E-05	1E-05	3E-06	3E-06	6E-06
577a	0.88	0.1937	1E-05	1E-05	3E-06	3E-06	7E-06
577b	0.87	0.1909	1E-05	1E-05	3E-06	3E-06	6E-06
578	0.89	0.1966	1E-05	1E-05	3E-06	3E-06	7E-06
583	0.48	0.1078	6E-06	8E-06	2E-06	2E-06	4E-06
586	0.28	0.0660	4E-06	5E-06	1E-06	1E-06	2E-06
587a	0.24	0.0562	3E-06	4E-06	1E-06	9E-07	2E-06
587b	0.24	0.0562	3E-06	4E-06	1E-06	9E-07	2E-06
588	0.27	0.0634	4E-06	5E-06	1E-06	1E-06	2E-06
600a	4.61	1.0071	6E-05	7E-05	2E-05	2E-05	3E-05
600b	4.66	1.0159	6E-05	8E-05	2E-05	2E-05	3E-05
601	4.59	1.0026	6E-05	7E-05	2E-05	2E-05	3E-05
602	4.58	0.9989	6E-05	7E-05	2E-05	2E-05	3E-05
603	4.56	0.9946	6E-05	7E-05	2E-05	2E-05	3E-05
604	4.54	0.9916	6E-05	7E-05	2E-05	2E-05	3E-05
605	4.53	0.9883	6E-05	7E-05	2E-05	2E-05	3E-05
606	4.50	0.9834	6E-05	7E-05	2E-05	2E-05	3E-05
607	4.48	0.9788	6E-05	7E-05	2E-05	2E-05	3E-05
608	4.48	0.9785	6E-05	7E-05	2E-05	2E-05	3E-05
609	4.46	0.9751	6E-05	7E-05	2E-05	2E-05	3E-05
610	4.44	0.9688	6E-05	7E-05	2E-05	2E-05	3E-05
611	4.42	0.9647	6E-05	7E-05	2E-05	2E-05	3E-05
612	4.47	0.9771	6E-05	7E-05	2E-05	2E-05	3E-05
613	4.44	0.9697	6E-05	7E-05	2E-05	2E-05	3E-05
614	4.42	0.9660	6E-05	7E-05	2E-05	2E-05	3E-05
615	4.38	0.9579	6E-05	7E-05	2E-05	2E-05	3E-05
616a	4.32	0.9408	6E-05	7E-05	2E-05	2E-05	3E-05
616b	4.40	0.9611	6E-05	7E-05	2E-05	2E-05	3E-05
617a	4.28	0.9352	6E-05	7E-05	2E-05	2E-05	3E-05
618a	4.25	0.9289	6E-05	7E-05	2E-05	2E-05	3E-05
618b	4.28	0.9363	6E-05	7E-05	2E-05	2E-05	3E-05
619	4.24	0.9274	6E-05	7E-05	2E-05	2E-05	3E-05
621	4.23	0.9243	6E-05	7E-05	2E-05	2E-05	3E-05
622a	4.26	0.9307	6E-05	7E-05	2E-05	2E-05	3E-05
623a	0.61	0.1436	9E-06	1E-05	2E-06	2E-06	5E-06
623b	4.21	0.9202	5E-05	7E-05	2E-05	2E-05	3E-05
630a	3.91	0.8563	5E-05	6E-05	1E-05	1E-05	3E-05
631	3.89	0.8512	5E-05	6E-05	1E-05	1E-05	3E-05
632	3.92	0.8581	5E-05	6E-05	1E-05	1E-05	3E-05
648	4.10	0.8948	5E-05	7E-05	2E-05	2E-05	3E-05
649	4.13	0.9029	5E-05	7E-05	2E-05	2E-05	3E-05
650	4.16	0.9091	5E-05	7E-05	2E-05	2E-05	3E-05
651	4.12	0.8988	5E-05	7E-05	2E-05	2E-05	3E-05
652	4.23	0.9231	5E-05	7E-05	2E-05	2E-05	3E-05
653	4.25	0.9275	6E-05	7E-05	2E-05	2E-05	3E-05
654a	4.36	0.9513	6E-05	7E-05	2E-05	2E-05	3E-05
654b	4.24	0.9263	6E-05	7E-05	2E-05	2E-05	3E-05
655	4.25	0.9269	6E-05	7E-05	2E-05	2E-05	3E-05
658a	4.35	0.9491	6E-05	7E-05	2E-05	2E-05	3E-05
659	4.34	0.9475	6E-05	7E-05	2E-05	2E-05	3E-05
660a	4.34	0.9464	6E-05	7E-05	2E-05	2E-05	3E-05
660b	4.36	0.9503	6E-05	7E-05	2E-05	2E-05	3E-05
661	4.42	0.9634	6E-05	7E-05	2E-05	2E-05	3E-05
662	4.45	0.9694	6E-05	7E-05	2E-05	2E-05	3E-05
663	4.49	0.9780	6E-05	7E-05	2E-05	2E-05	3E-05
664	4.51	0.9839	6E-05	7E-05	2E-05	2E-05	3E-05
665a	4.63	1.0082	6E-05	7E-05	2E-05	2E-05	3E-05
665b	4.61	1.0057	6E-05	7E-05	2E-05	2E-05	3E-05
667a	5.51	1.1978	7E-05	9E-05	2E-05	2E-05	4E-05
667b	5.45	1.1857	7E-05	9E-05	2E-05	2E-05	4E-05
667c	5.50	1.1963	7E-05	9E-05	2E-05	2E-05	4E-05
667d	5.50	1.1960	7E-05	9E-05	2E-05	2E-05	4E-05
667e	5.47	1.1891	7E-05	9E-05	2E-05	2E-05	4E-05
667f	3.88	0.8441	5E-05	6E-05	1E-05	1E-05	3E-05
669	4.72	1.0287	6E-05	8E-05	2E-05	2E-05	3E-05
671	4.72	1.0280	6E-05	8E-05	2E-05	2E-05	3E-05
672	4.72	1.0288	6E-05	8E-05	2E-05	2E-05	3E-05
673	4.72	1.0287	6E-05	8E-05	2E-05	2E-05	3E-05
675	4.71	1.0264	6E-05	8E-05	2E-05	2E-05	3E-05
676	4.74	1.0318	6E-05	8E-05	2E-05	2E-05	3E-05
677	4.70	1.0226	6E-05	8E-05	2E-05	2E-05	3E-05
678 679	4.66 4.63	1.0151 1.0077	6E-05	7E-05	2E-05	2E-05	3E-05
680	4.60	1.0007	6E-05 6E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
681	4.56	0.9921	6E-05	7E-05	2E-05	2E-05	3E-05
682a	4.48	0.9750	6E-05	7E-05	2E-05	2E-05	3E-05
682b	4.47 4.45	0.9738	6E-05	7E-05	2E-05	2E-05	3E-05
683	4.38	0.9685	6E-05	7E-05	2E-05	2E-05	3E-05
684		0.9539	6E-05	7E-05	2E-05	2E-05	3E-05
685	4.36	0.9495	6E-05	7E-05	2E-05	2E-05	3E-05
686	4.36	0.9501	6E-05	7E-05	2E-05	2E-05	3E-05
687	4.36	0.9495	6E-05	7E-05	2E-05	2E-05	3E-05
688	4.37	0.9520	6E-05	7E-05	2E-05	2E-05	3E-05

Sensitive Receptors	Change in Annual Average PM10 Concentration (µg/m³)	Change in Annual Average PM2.5 Concentration (µg/m³)	Risk (PM <sub>2.5</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> CV Hospitalisations, >65 years)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)	Risk (PM <sub>10</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> Asthma ED admissions, 1-14 years)
689 690	4.50 4.44	0.9813 0.9681	6E-05 6E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
691	4.36	0.9504	6E-05	7E-05	2E-05	2E-05	3E-05
692 693	4.36 4.26	0.9509 0.9278	6E-05 6E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
694a 694b	4.25 4.20	0.9269 0.9149	6E-05 5E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
695	4.26	0.9288	6E-05	7E-05	2E-05	2E-05	3E-05
697 698	4.25 4.17	0.9266 0.9087	6E-05 5E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
715	0.65	0.1523	9E-06	1E-05	3E-06	2E-06	5E-06
728 729	4.17 4.21	0.9097 0.9172	5E-05 5E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
730 731	4.25 4.27	0.9259 0.9312	6E-05 6E-05	7E-05 7E-05	2E-05 2E-05	2E-05	3E-05
732	4.28	0.9317	6E-05	7E-05	2E-05	2E-05 2E-05	3E-05 3E-05
733 735a	4.26 4.27	0.9285 0.9296	6E-05 6E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
735b	4.29	0.9348	6E-05	7E-05	2E-05	2E-05	3E-05
736 737	4.21 4.29	0.9170 0.9333	5E-05 6E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
738	4.28	0.9326	6E-05	7E-05	2E-05	2E-05	3E-05
739 740a	4.30 4.18	0.9362 0.9099	6E-05 5E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
740b	4.22	0.9183	5E-05	7E-05	2E-05	2E-05	3E-05
740c 740d	4.25 4.25	0.9264 0.9261	6E-05 6E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
740e 740f	4.22	0.9192	5E-05	7E-05	2E-05	2E-05	3E-05
741	4.18 4.33	0.9108 0.9437	5E-05 6E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
742 743	4.36 4.37	0.9488 0.9517	6E-05 6E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
744	4.29	0.9340	6E-05	7E-05	2E-05	2E-05	3E-05
745 746	4.26 4.22	0.9277 0.9199	6E-05 5E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
747	4.19	0.9126	5E-05	7E-05	2E-05	2E-05	3E-05
748a 748b	4.16 2.47	0.9057 0.5374	5E-05 3E-05	7E-05 4E-05	2E-05 9E-06	2E-05 9E-06	3E-05 2E-05
749a	4.39	0.9554	6E-05	7E-05	2E-05	2E-05	3E-05
749b 750	4.37 4.38	0.9515 0.9545	6E-05 6E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
751	4.37	0.9525	6E-05	7E-05	2E-05	2E-05	3E-05
752a 752b	4.43 4.42	0.9648 0.9631	6E-05 6E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
753 754	4.46 4.48	0.9706 0.9766	6E-05	7E-05	2E-05	2E-05	3E-05
755	4.46	0.9840	6E-05 6E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
756 757	4.55 4.58	0.9908 0.9966	6E-05 6E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
758	4.60	1.0021	6E-05	7E-05	2E-05 2E-05	2E-05	3E-05 3E-05
759a 759b	4.64 4.64	1.0097 1.0111	6E-05 6E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
760	4.66	1.0151	6E-05	7E-05	2E-05	2E-05	3E-05
761 762	4.69 4.74	1.0216 1.0317	6E-05 6E-05	8E-05 8E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
763	4.73	1.0303	6E-05	8E-05	2E-05	2E-05	3E-05
764 765a	4.75 4.73	1.0335 1.0302	6E-05 6E-05	8E-05 8E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
765b	4.75	1.0346	6E-05	8E-05	2E-05	2E-05	3E-05
766 767	4.74 4.74	1.0315 1.0310	6E-05 6E-05	8E-05 8E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
768 769	4.74 4.63	1.0319 1.0085	6E-05	8E-05	2E-05	2E-05	3E-05
770	4.74	1.0324	6E-05 6E-05	7E-05 8E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
771 772	4.75 4.76	1.0330 1.0347	6E-05 6E-05	8E-05 8E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
773	4.76	1.0352	6E-05	8E-05	2E-05	2E-05	3E-05
774 775	4.68 4.69	1.0189 1.0208	6E-05 6E-05	8E-05 8E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
776	4.77	1.0371	6E-05	8E-05	2E-05	2E-05	4E-05
777 778a	4.74 4.73	1.0314 1.0287	6E-05 6E-05	8E-05 8E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
778b	4.76	1.0355	6E-05	8E-05	2E-05	2E-05	4E-05
779a 779b	4.72 4.67	1.0260 1.0150	6E-05 6E-05	8E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
780 781	4.74 4.78	1.0317 1.0386	6E-05 6E-05	8E-05 8E-05	2E-05 2E-05	2E-05 2E-05	3E-05 4E-05
782	4.76	1.0350	6E-05	8E-05	2E-05	2E-05	3E-05
783 784	4.77 4.38	1.0378 0.9537	6E-05 6E-05	8E-05 7E-05	2E-05 2E-05	2E-05 2E-05	4E-05 3E-05
785	4.38	0.9543	6E-05	7E-05	2E-05	2E-05	3E-05
786 787a	4.42 4.39	0.9632 0.9560	6E-05 6E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
787b 788	4.48 4.40	0.9750 0.9591	6E-05 6E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
789	4.42	0.9622	6E-05	7E-05	2E-05	2E-05	3E-05
790a 790b	4.39 4.43	0.9564 0.9646	6E-05 6E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
791a	4.40	0.9582	6E-05	7E-05	2E-05	2E-05	3E-05
791b 792a	4.44 4.52	0.9661 0.9831	6E-05 6E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
792b	4.42	0.9630	6E-05	7E-05	2E-05	2E-05	3E-05
793 794	4.41 4.43	0.9609 0.9651	6E-05 6E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
795	4.47	0.9723	6E-05	7E-05	2E-05	2E-05	3E-05
796 797a	4.49 4.50	0.9770 0.9797	6E-05 6E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
797b 798	4.54 4.54	0.9890 0.9870	6E-05	7E-05	2E-05	2E-05	3E-05
801	4.61	1.0028	6E-05 6E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
802 803a	4.63 4.46	1.0073 0.9714	6E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
803b	4.45	0.9695	6E-05 6E-05	7E-05	2E-05	2E-05	3E-05
804 805	4.44 4.42	0.9671 0.9618	6E-05 6E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
806	4.06	0.8840	5E-05	7E-05	2E-05	1E-05	3E-05
807 808	4.06 4.05	0.8835 0.8831	5E-05 5E-05	7E-05 7E-05	2E-05 2E-05	1E-05 1E-05	3E-05 3E-05
809	4.07	0.8861	5E-05	7E-05	2E-05	1E-05	3E-05
810 811	4.06 4.06	0.8853 0.8851	5E-05 5E-05	7E-05 7E-05	2E-05 2E-05	1E-05 1E-05	3E-05 3E-05
812	4.07	0.8860	5E-05	7E-05	2E-05	1E-05	3E-05
813 814	4.06 4.05	0.8839 0.8830	5E-05 5E-05	7E-05 7E-05	2E-05 2E-05	1E-05 1E-05	3E-05 3E-05
815a	4.05	0.8823	5E-05	7E-05	2E-05	1E-05	3E-05
815b 816	4.05 4.05	0.8832 0.8817	5E-05 5E-05	7E-05 7E-05	2E-05 2E-05	1E-05 1E-05	3E-05 3E-05
•	,	0.0017	OL-00	,	£L 00	11-00	. 00-00

Sensitive Receptors	Change in Annual Average PM10 Concentration (μg/m³)	Change in Annual Average PM2.5 Concentration (µg/m³)	Risk (PM <sub>2.5</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> CV Hospitalisations, >65 years)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)	Risk (PM <sub>10</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> Asthma ED admissions, 1-14 years)
817	4.02	0.8748	5E-05	6E-05	1E-05	1E-05	3E-05
819	3.83	0.8334	5E-05	6E-05	1E-05	1E-05	3E-05
820a	3.79	0.8257	5E-05	6E-05	1E-05	1E-05	3E-05
820b	3.83	0.8344	5E-05	6E-05	1E-05	1E-05	3E-05
821	3.77	0.8215	5E-05	6E-05	1E-05	1E-05	3E-05
822	3.76	0.8176	5E-05	6E-05	1E-05	1E-05	3E-05
823a	3.74	0.8145	5E-05	6E-05	1E-05	1E-05	3E-05
823b	3.80	0.8263	5E-05	6E-05	1E-05	1E-05	3E-05
824	3.70	0.8046	5E-05	6E-05	1E-05	1E-05	3E-05
825	3.67	0.7993	5E-05	6E-05	1E-05	1E-05	3E-05
826	3.66	0.7975	5E-05	6E-05	1E-05	1E-05	
827	3.65	0.7933	5E-05	6E-05	1E-05	1E-05	3E-05 3E-05
828	3.59	0.7813	5E-05	6E-05	1E-05	1E-05	3E-05
829a	3.55	0.7733	5E-05	6E-05	1E-05	1E-05	3E-05
829b	3.56	0.7742	5E-05	6E-05	1E-05	1E-05	3E-05
830	3.52	0.7665	5E-05	6E-05	1E-05	1E-05	3E-05
831	3.52	0.7654	5E-05	6E-05	1E-05	1E-05	3E-05
832	3.50	0.7615	5E-05	6E-05	1E-05	1E-05	3E-05
833	3.48	0.7569	5E-05	6E-05	1E-05	1E-05	3E-05
834	3.45	0.7501	4E-05	6E-05	1E-05	1E-05	3E-05
835	3.42	0.7444	4E-05	5E-05	1E-05	1E-05	3E-05
836 837	3.40 3.38	0.7393 0.7357	4E-05	5E-05	1E-05	1E-05	2E-05
838	3.36	0.7298	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
839	3.33	0.7230	4E-05	5E-05	1E-05	1E-05	2E-05
840	3.31	0.7185	4E-05	5E-05	1E-05	1E-05	2E-05
841 843a	3.29 3.20	0.7146 0.6941	4E-05	5E-05	1E-05	1E-05	2E-05
843b	3.23	0.7019	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
844a	3.04	0.6591	4E-05	5E-05	1E-05	1E-05	2E-05
845	2.86	0.6214	4E-05	5E-05	1E-05	1E-05	2E-05
846 847	2.83 2.82	0.6156 0.6132	4E-05	5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
848	2.79	0.6072	4E-05 4E-05	5E-05 4E-05	1E-05	1E-05	2E-05
849	2.78	0.6035	4E-05	4E-05	1E-05	1E-05	2E-05
850	2.76	0.6000	4E-05	4E-05	1E-05	1E-05	2E-05
853	2.68	0.5823	3E-05	4E-05	1E-05	1E-05	2E-05
854	2.65	0.5771	3E-05	4E-05	1E-05	1E-05	2E-05
855	2.63	0.5726	3E-05	4E-05	1E-05	1E-05	2E-05
856	2.61	0.5680	3E-05	4E-05	1E-05	1E-05	2E-05
857	2.59	0.5644	3E-05	4E-05	1E-05	1E-05	2E-05
858 859	2.57	0.5600	3E-05	4E-05	1E-05	9E-06	2E-05
860	2.55	0.5551	3E-05	4E-05	9E-06	9E-06	2E-05
	2.54	0.5524	3E-05	4E-05	9E-06	9E-06	2E-05
861	2.52	0.5477	3E-05	4E-05	9E-06	9E-06	2E-05
862	2.49	0.5431	3E-05	4E-05	9E-06	9E-06	2E-05
863	2.45	0.5326	3E-05	4E-05	9E-06	9E-06	2E-05
864	2.42	0.5272	3E-05	4E-05	9E-06	9E-06	2E-05
865	2.41	0.5242	3E-05	4E-05	9E-06	9E-06	2E-05
866	2.27	0.4962	3E-05	4E-05	8E-06	8E-06	2E-05
867	2.26	0.4940	3E-05	4E-05	8E-06	8E-06	2E-05
868	2.25	0.4911	3E-05	4E-05	8E-06	8E-06	2E-05
870	2.23	0.4872	3E-05	4E-05	8E-06	8E-06	2E-05
871	2.22	0.4835	3E-05	4E-05	8E-06	8E-06	2E-05
872a	2.21	0.4816	3E-05	4E-05	8E-06	8E-06	2E-05
900a	0.59	0.1391	8E-06	1E-05	2E-06	2E-06	5E-06
900b	0.75	0.1734	1E-05	1E-05	3E-06	3E-06	6E-06
901	0.79	0.1823	1E-05	1E-05	3E-06	3E-06	6E-06
902	0.78	0.1814	1E-05	1E-05	3E-06	3E-06	6E-06
903	0.78	0.1801	1E-05	1E-05	3E-06	3E-06	6E-06
904	0.77	0.1788	1E-05	1E-05	3E-06	3E-06	6E-06
905	0.77	0.1776	1E-05	1E-05	3E-06	3E-06	6E-06
906	0.76	0.1763	1E-05	1E-05	3E-06	3E-06	6E-06
907	0.75	0.1753	1E-05	1E-05	3E-06	3E-06	6E-06
908	0.75	0.1740	1E-05	1E-05	3E-06	3E-06	6E-06
909	0.74	0.1719	1E-05	1E-05	3E-06	3E-06	6E-06
911	0.72	0.1685	1E-05	1E-05	3E-06	3E-06	6E-06
912	0.74	0.1716	1E-05	1E-05	3E-06	3E-06	6E-06
913	0.71	0.1661	1E-05	1E-05	3E-06	3E-06	6E-06
914	0.71	0.1647	1E-05	1E-05	3E-06	3E-06	6E-06
915	0.70	0.1637	1E-05	1E-05	3E-06	3E-06	6E-06
916	0.70	0.1619	1E-05	1E-05	3E-06	3E-06	5E-06
917	0.69	0.1600	1E-05	1E-05	3E-06	3E-06	5E-06
918	0.70	0.1624	1E-05	1E-05	3E-06	3E-06	5E-06
919	0.70	0.1636	1E-05	1E-05	3E-06	3E-06	6E-06
920	0.71	0.1651	1E-05	1E-05	3E-06	3E-06	6E-06
921	0.71	0.1663	1E-05	1E-05	3E-06	3E-06	6E-06
922	0.72	0.1678	1E-05	1E-05	3E-06	3E-06	6E-06
924	0.74	0.1724	1E-05	1E-05	3E-06	3E-06	6E-06
925	0.75	0.1736	1E-05	1E-05	3E-06	3E-06	6E-06
926	0.75	0.1750	1E-05	1E-05	3E-06	3E-06	6E-06
927	0.76	0.1764	1E-05	1E-05	3E-06	3E-06	6E-06
928	0.77	0.1777	1E-05	1E-05	3E-06	3E-06	6E-06
929	0.77	0.1795	1E-05	1E-05	3E-06	3E-06	6E-06
930	0.76	0.1772	1E-05	1E-05	3E-06	3E-06	6E-06
931	0.76	0.1758	1E-05	1E-05	3E-06	3E-06	6E-06
932a	0.74	0.1718	1E-05	1E-05	3E-06	3E-06	6E-06
932b	0.73	0.1706	1E-05	1E-05	3E-06	3E-06	6E-06
933	0.74	0.1712	1E-05	1E-05	3E-06	3E-06	6E-06
934	0.73	0.1698	1E-05	1E-05	3E-06	3E-06	6E-06
935a	0.72	0.1678	1E-05	1E-05	3E-06	3E-06	6E-06
935b	0.73	0.1690	1E-05	1E-05	3E-06	3E-06	6E-06
936	0.71	0.1654	1E-05	1E-05	3E-06	3E-06	6E-06
937	0.72	0.1669	1E-05	1E-05	3E-06	3E-06	6E-06
938	0.72	0.1681	1E-05	1E-05	3E-06	3E-06	6E-06
939	0.73	0.1689	1E-05	1E-05	3E-06	3E-06	6E-06
940	0.73	0.1703	1E-05	1E-05	3E-06	3E-06	6E-06
941	0.74	0.1710	1E-05	1E-05	3E-06	3E-06	6E-06
942	0.72	0.1670	1E-05	1E-05	3E-06	3E-06	6E-06
943	0.71	0.1656	1E-05	1E-05	3E-06	3E-06	6E-06
944	0.71	0.1647	1E-05	1E-05	3E-06	3E-06	6E-06
945a	0.70	0.1632	1E-05	1E-05	3E-06	3E-06	6E-06
945b	0.70	0.1623	1E-05	1E-05	3E-06	3E-06	5E-06
946	0.70	0.1622	1E-05	1E-05	3E-06	3E-06	5E-06
947	0.69	0.1612	1E-05	1E-05	3E-06	3E-06	5E-06
948	0.67	0.1570	9E-06	1E-05	3E-06	2E-06	5E-06
949	0.69	0.1601	1E-05	1E-05	3E-06	3E-06	5E-06
950	0.68	0.1592	9E-06	1E-05	3E-06	3E-06	5E-06
951	0.67	0.1573	9E-06	1E-05	3E-06	2E-06	5E-06
952	0.67	0.1561	9E-06	1E-05	3E-06	2E-06	5E-06
953	0.66	0.1542	9E-06	1E-05	3E-06	2E-06	5E-06
954	0.65	0.1529	9E-06	1E-05	3E-06	2E-06	5E-06
955	0.67	0.1552	9E-06	1E-05	3E-06	2E-06	5E-06
956	0.64	0.1504	9E-06	1E-05	3E-06	2E-06	5E-06
957a	0.61	0.1433	9E-06	1E-05	2E-06	2E-06	5E-06
957b	0.65	0.1513	9E-06	1E-05	3E-06	2E-06	5E-06
958	0.65	0.1522	9E-06	1E-05	3E-06	2E-06	5E-06

Sensitive Receptors	Change in Annual Average PM10 Concentration (μg/m³)	Change in Annual Average PM2.5 Concentration (µg/m³)	Risk (PM <sub>2.5</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> CV Hospitalisations, >65 years)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)	Risk (PM <sub>10</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> Asthma ED admissions, 1-14 years)
959	0.66	0.1531	9E-06	1E-05	3E-06	2E-06	5E-06
960	0.66	0.1540	9E-06	1E-05	3E-06	2E-06	5E-06
961	0.66	0.1551	9E-06	1E-05	3E-06	2E-06	5E-06
962	0.67	0.1563	9E-06	1E-05	3E-06	2E-06	5E-06
963	0.68	0.1576	9E-06	1E-05	3E-06	2E-06	5E-06
964	0.68	0.1591	9E-06	1E-05	3E-06	2E-06	5E-06
965	0.67	0.1567	9E-06	1E-05	3E-06	2E-06	5E-06
966	0.66	0.1542	9E-06	1E-05	3E-06	2E-06	5E-06
967a	0.66	0.1533	9E-06	1E-05	3E-06	2E-06	5E-06
967b	0.65	0.1522	9E-06	1E-05	3E-06	2E-06	5E-06
968	0.65	0.1526	9E-06	1E-05	3E-06	2E-06	5E-06
969	0.65	0.1512	9E-06	1E-05	3E-06	2E-06	5E-06
970	0.64	0.1506	9E-06	1E-05	3E-06	2E-06	5E-06
971	0.64	0.1499	9E-06	1E-05	3E-06	2E-06	5E-06
972	0.64	0.1490	9E-06	1E-05	3E-06	2E-06	5E-06
973	0.63	0.1483	9E-06	1E-05	3E-06	2E-06	5E-06
974	0.63	0.1475	9E-06	1E-05	3E-06	2E-06	5E-06
976	0.61	0.1425	8E-06	1E-05	2E-06	2E-06	5E-06
977a	0.63	0.1462	9E-06	1E-05	2E-06	2E-06	5E-06
977b	0.63	0.1475	9E-06	1E-05	3E-06	2E-06	5E-06
978	0.60	0.1411	8E-06	1E-05	2E-06	2E-06	5E-06
979a 979b	0.57 0.60	0.1338 0.1403	8E-06	1E-05	2E-06	2E-06	5E-06
980	0.59	0.1380	8E-06 8E-06	1E-05 1E-05	2E-06 2E-06	2E-06 2E-06	5E-06 5E-06
981a	0.59	0.1386	8E-06	1E-05	2E-06	2E-06	5E-06
981b	0.60	0.1395	8E-06	1E-05	2E-06	2E-06	5E-06
982	0.60	0.1396	8E-06	1E-05	2E-06	2E-06	5E-06
983	0.60	0.1409	8E-06	1E-05	2E-06	2E-06	5E-06
984	0.61	0.1423	8E-06	1E-05	2E-06	2E-06	5E-06
985	0.62	0.1440	9E-06	1E-05	2E-06	2E-06	5E-06
986	0.61	0.1429	9E-06	1E-05	2E-06	2E-06	5E-06
987 988a	0.62 0.62	0.1447 0.1454	9E-06	1E-05	2E-06	2E-06	5E-06
988b	0.63	0.1461	9E-06 9E-06	1E-05 1E-05	2E-06 2E-06	2E-06 2E-06	5E-06 5E-06
989a	0.63	0.1465	9E-06	1E-05	3E-06	2E-06	5E-06
989b	0.63	0.1470	9E-06	1E-05	3E-06	2E-06	5E-06
990	0.63	0.1479	9E-06	1E-05	3E-06	2E-06	5E-06
991	0.64	0.1489	9E-06	1E-05	3E-06	2E-06	5E-06
992	0.64	0.1496	9E-06	1E-05	3E-06	2E-06	5E-06
993a	0.64	0.1495	9E-06	1E-05	3E-06	2E-06	5E-06
993b	0.64	0.1495	9E-06	1E-05	3E-06	2E-06	5E-06
994a	0.64	0.1504	9E-06	1E-05	3E-06	2E-06	5E-06
994b	0.64	0.1499	9E-06	1E-05	3E-06	2E-06	5E-06
995	0.65	0.1509	9E-06	1E-05	3E-06	2E-06	5E-06
997	0.66	0.1534	9E-06	1E-05	3E-06	2E-06	5E-06
998	0.66	0.1541	9E-06	1E-05	3E-06	2E-06	5E-06
999	0.65	0.1524	9E-06	1E-05	3E-06	2E-06	5E-06
1000	0.64	0.1498	9E-06	1E-05	3E-06	2E-06	5E-06
1001	0.64	0.1485	9E-06	1E-05	3E-06	2E-06	5E-06
1002	0.63	0.1475	9E-06	1E-05	3E-06	2E-06	5E-06
1003	0.63	0.1466	9E-06	1E-05	3E-06	2E-06	5E-06
1004	0.62	0.1456	9E-06	1E-05	2E-06	2E-06	5E-06
1005	0.62	0.1447	9E-06	1E-05	2E-06	2E-06	5E-06
1006	0.62	0.1439	9E-06	1E-05	2E-06	2E-06	5E-06
1007	0.61	0.1432	9E-06	1E-05	2E-06	2E-06	5E-06
1008	0.61	0.1422	8E-06	1E-05	2E-06	2E-06	5E-06
1009	0.60	0.1405	8E-06	1E-05	2E-06	2E-06	5E-06
1010	0.61	0.1422	8E-06	1E-05	2E-06	2E-06	5E-06
1011	0.61	0.1437	9E-06	1E-05	2E-06	2E-06	5E-06
1012	0.62	0.1450	9E-06	1E-05	2E-06	2E-06	5E-06
1014	0.63	0.1473	9E-06	1E-05	3E-06	2E-06	5E-06
1015	0.64	0.1483	9E-06	1E-05	3E-06	2E-06	5E-06
1016	0.62	0.1455	9E-06	1E-05	2E-06	2E-06	5E-06
1017	0.62	0.1441	9E-06	1E-05	2E-06	2E-06	5E-06
1018	0.61	0.1423	8E-06	1E-05	2E-06	2E-06	5E-06
1019	0.61	0.1419	8E-06	1E-05	2E-06	2E-06	5E-06
1020	0.60	0.1406	8E-06	1E-05	2E-06	2E-06	5E-06
1021	0.60	0.1398	8E-06	1E-05	2E-06	2E-06	5E-06
1022	0.59	0.1390	8E-06	1E-05	2E-06	2E-06	5E-06
1023	0.59	0.1382	8E-06	1E-05	2E-06	2E-06	5E-06
1024	0.58	0.1367	8E-06	1E-05	2E-06	2E-06	5E-06
1025	0.61	0.1419	8E-06	1E-05	2E-06	2E-06	5E-06
1026	0.61	0.1435	9E-06	1E-05	2E-06	2E-06	5E-06
1027	0.61	0.1424	8E-06	1E-05	2E-06	2E-06	5E-06
1028	0.60	0.1404	8E-06	1E-05	2E-06	2E-06	
1029	0.59	0.1382	8E-06	1E-05	2E-06	2E-06	5E-06 5E-06
1030	0.59	0.1377	8E-06	1E-05	2E-06	2E-06	5E-06
1031	0.58	0.1357	8E-06	1E-05	2E-06	2E-06	5E-06
1032	0.57	0.1346	8E-06	1E-05	2E-06	2E-06	5E-06
1033	0.57	0.1342	8E-06	1E-05	2E-06	2E-06	5E-06
1034	0.57	0.1328	8E-06	1E-05	2E-06	2E-06	4E-06
1035	0.56	0.1313	8E-06	1E-05	2E-06	2E-06	4E-06
1036a	0.55	0.1301	8E-06	1E-05	2E-06	2E-06	4E-06
1036b	0.56	0.1314	8E-06	1E-05	2E-06	2E-06	4E-06
1037	0.56	0.1321	8E-06	1E-05	2E-06	2E-06	4E-06
1038	0.57	0.1332	8E-06	1E-05	2E-06	2E-06	5E-06
1039	0.57	0.1344	8E-06	1E-05	2E-06	2E-06	5E-06
1040	0.58	0.1354	8E-06	1E-05	2E-06	2E-06	5E-06
1041	0.58	0.1359	8E-06	1E-05	2E-06	2E-06	5E-06
1042	0.58	0.1366	8E-06	1E-05	2E-06	2E-06	5E-06
1043	0.59	0.1384	8E-06	1E-05	2E-06	2E-06	5E-06
1044	0.59	0.1371	8E-06	1E-05	2E-06	2E-06	5E-06
1045	0.55	0.1303	8E-06	1E-05	2E-06	2E-06	4E-06
1046	0.55	0.1281	8E-06	9E-06	2E-06	2E-06	4E-06
1077	0.57	0.1328	8E-06	1E-05	2E-06	2E-06	4E-06
1078	0.55	0.1283	8E-06	9E-06	2E-06	2E-06	4E-06
1079	0.53	0.1246	7E-06	9E-06	2E-06	2E-06	4E-06
1080	0.52	0.1230	7E-06	9E-06	2E-06	2E-06	4E-06
1081	0.54	0.1267	8E-06	9E-06	2E-06	2E-06	4E-06
1082a	0.55	0.1290	8E-06	1E-05	2E-06	2E-06	4E-06
1082b	0.56	0.1314	8E-06	1E-05	2E-06	2E-06	4E-06
1100a	0.15	0.0391	2E-06	3E-06	7E-07	6E-07	1E-06
1100b	0.15	0.0386	2E-06	3E-06	7E-07	6E-07	1E-06
Council/State-owned receptors		0.1536	9E-06	1E-05	3E-06	3E-06	5E-06
286e 286f	0.66	0.1448	9E-06	1E-05	2E-06	2E-06	5E-06
N1	0.58	0.1358	8E-06	1E-05	2E-06	2E-06	5E-06
N2	0.58	0.1350	8E-06	1E-05	2E-06	2E-06	5E-06
N3	0.57 0.57	0.1341 0.1333	8E-06 8E-06	1E-05 1E-05	2E-06 2E-06	2E-06 2E-06	5E-06
N4 N5	0.59	0.1375	8E-06	1E-05	2E-06	2E-06	5E-06 5E-06
N6	0.59	0.1382	8E-06	1E-05	2E-06	2E-06	5E-06
N7	0.59	0.1389	8E-06	1E-05	2E-06	2E-06	5E-06
N8	0.60 0.60	0.1397 0.1403	8E-06	1E-05	2E-06	2E-06	5E-06
N9 N10	0.60	0.1414	8E-06 8E-06	1E-05 1E-05	2E-06 2E-06	2E-06 2E-06	5E-06 5E-06
N11	0.60	0.1415	8E-06	1E-05	2E-06	2E-06	5E-06

Sensitive Receptors	Change in Annual Average PM10 Concentration (µg/m³)	Change in Annual Average PM2.5 Concentration (µg/m³)	Risk (PM <sub>2.5</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> CV Hospitalisations, >65 years)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)	Risk (PM <sub>10</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> Asthma ED admissions, 1-14 years)
N12 N13	0.55 0.55	0.1288 0.1295	8E-06 8E-06	1E-05 1E-05	2E-06 2E-06	2E-06 2E-06	4E-06 4E-06
N14	0.56	0.1309	8E-06	1E-05	2E-06	2E-06	4E-06
N15 N16	0.56 0.56	0.1316 0.1322	8E-06 8E-06	1E-05 1E-05	2E-06 2E-06	2E-06 2E-06	4E-06 4E-06
N17 N18	0.57 0.57	0.1330 0.1338	8E-06 8E-06	1E-05 1E-05	2E-06 2E-06	2E-06 2E-06	4E-06 5E-06
N19	0.57	0.1345	8E-06	1E-05	2E-06	2E-06	5E-06
N20 N21	0.58 0.59	0.1355 0.1393	8E-06 8E-06	1E-05 1E-05	2E-06 2E-06	2E-06 2E-06	5E-06 5E-06
N22	0.87	0.1941	1E-05	1E-05	3E-06	3E-06	7E-06
N23 N24	0.86 0.86	0.1927 0.1915	1E-05 1E-05	1E-05 1E-05	3E-06 3E-06	3E-06 3E-06	7E-06 6E-06
N25	0.73	0.1642	1E-05	1E-05	3E-06	3E-06	6E-06
N26 N27	0.73 0.72	0.1636 0.1614	1E-05 1E-05	1E-05 1E-05	3E-06 3E-06	3E-06 3E-06	6E-06 5E-06
N28 Aged care receptors	2.11	0.4603	3E-05	3E-05	8E-06	8E-06	2E-05
658a	4.35	0.9491	6E-05	7E-05	2E-05	2E-05	3E-05
658b 658c	4.17 4.15	0.9100 0.9048	5E-05 5E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
658d	4.15	0.9064	5E-05	7E-05	2E-05	2E-05	3E-05
658e Prison receptors	4.19	0.9144	5E-05 0E+00	7E-05 0E+00	2E-05 0E+00	2E-05 0E+00	3E-05 0E+00
MP1	0.69	0.1540	9E-06	1E-05	3E-06	3E-06	5E-06
MP42 MP80	0.65 0.59	0.1470 0.1317	9E-06 8E-06	1E-05 1E-05	3E-06 2E-06	2E-06 2E-06	5E-06 4E-06
Commercial accomodation				1			
receptors 622b	4.37	0.9537	6E-05	7E-05	2E-05	2E-05	3E-05
622c	4.37	0.9543	6E-05	7E-05	2E-05	2E-05	3E-05
622d 622e	4.34 4.33	0.9486 0.9464	6E-05 6E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
622f	4.33	0.9447	6E-05	7E-05	2E-05	2E-05	3E-05
622g 622h	4.32 4.35	0.9433 0.9498	6E-05 6E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
622i	4.35	0.9509	6E-05	7E-05	2E-05	2E-05	3E-05
622j 622k	4.36 4.36	0.9525 0.9514	6E-05 6E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
6221	4.37	0.9536	6E-05	7E-05	2E-05	2E-05	3E-05
622m 622n	4.37 4.36	0.9536 0.9530	6E-05 6E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
622o 622p	4.35 4.34	0.9492 0.9481	6E-05 6E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
622q	4.33	0.9451	6E-05	7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
622r 622s	4.31 4.28	0.9409 0.9361	6E-05 6E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
622t	4.27	0.9337	6E-05	7E-05	2E-05	2E-05	3E-05
622u 622v	4.40 4.40	0.9603 0.9599	6E-05 6E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
622w	4.26	0.9298	6E-05	7E-05	2E-05	2E-05	3E-05
622x 622y	4.37 4.33	0.9542 0.9459	6E-05 6E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
622z	4.30	0.9392	6E-05	7E-05	2E-05	2E-05	3E-05
622aa 622ab	4.28 4.27	0.9358 0.9337	6E-05 6E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
622ac	4.39	0.9595	6E-05	7E-05	2E-05	2E-05	3E-05
622ad 622ae	4.39 4.39	0.9586 0.9578	6E-05 6E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
622af	4.38	0.9571	6E-05	7E-05	2E-05	2E-05	3E-05
622ag 975	4.38 0.62	0.9563 0.1452	6E-05 9E-06	7E-05 1E-05	2E-05 2E-06	2E-05 2E-06	3E-05 5E-06
Commercial receptors	7.44	4.5400	0E+00	0E+00	0E+00	0E+00	0E+00
195e	7.14 1.77	1.5490 0.3914	9E-05 2E-05	1E-04 3E-05	3E-05 7E-06	3E-05 6E-06	5E-05 1E-05
140b-1 140b-2	2.40 2.39	0.5230 0.5201	3E-05 3E-05	4E-05 4E-05	9E-06 9E-06	9E-06 9E-06	2E-05 2E-05
140b-3	2.35	0.5113	3E-05	4E-05	9E-06	9E-06	2E-05
140b-4 202c	2.40 3.07	0.5231 0.6671	3E-05 4E-05	4E-05 5E-05	9E-06 1E-05	9E-06 1E-05	2E-05 2E-05
202d	3.18	0.6911	4E-05	5E-05	1E-05	1E-05	2E-05
202e 202f	3.14 3.08	0.6832 0.6704	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
202g	3.10	0.6742	4E-05	5E-05	1E-05	1E-05	2E-05
472d 472e	0.32 0.32	0.0769 0.0763	5E-06 5E-06	6E-06 6E-06	1E-06 1E-06	1E-06 1E-06	3E-06 3E-06
472f	0.33	0.0790	5E-06	6E-06	1E-06	1E-06	3E-06
472g 472h	0.33 0.33	0.0797 0.0792	5E-06 5E-06	6E-06 6E-06	1E-06 1E-06	1E-06 1E-06	3E-06 3E-06
472i 472j	0.33 0.32	0.0786 0.0774	5E-06 5E-06	6E-06 6E-06	1E-06 1E-06	1E-06 1E-06	3E-06 3E-06
472k	0.32	0.0762	5E-06	6E-06	1E-06	1E-06	3E-06
472l 472m	0.34 0.34	0.0815 0.0806	5E-06 5E-06	6E-06 6E-06	1E-06 1E-06	1E-06 1E-06	3E-06 3E-06
489	5.15	1.1047	7E-05	8E-05	2E-05	2E-05	4E-05
540 546a	4.66 5.23	1.0166 1.1380	6E-05 7E-05	8E-05 8E-05	2E-05 2E-05	2E-05 2E-05	3E-05 4E-05
546b	5.13	1.1175	7E-05	8E-05	2E-05	2E-05	4E-05
546c 617b	5.12 4.32	1.1160 0.9429	7E-05 6E-05	8E-05 7E-05	2E-05 2E-05	2E-05 2E-05	4E-05 3E-05
617c	4.43	0.9680	6E-05	7E-05	2E-05	2E-05	3E-05
617d 617e	4.43 4.45	0.9669 0.9726	6E-05 6E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
617f	4.44	0.9696	6E-05	7E-05	2E-05	2E-05	3E-05
617g 617h	4.31 4.36	0.9411 0.9533	6E-05 6E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
617i	4.35	0.9513	6E-05	7E-05	2E-05	2E-05	3E-05
620 622ah	4.19 4.33	0.9158 0.9466	5E-05 6E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
622ai 611aj	4.33 4.26	0.9465 0.9312	6E-05	7E-05	2E-05 2E-05	2E-05 2E-05	3E-05
622ak	4.24	0.9259	6E-05 6E-05	7E-05 7E-05	2E-05	2E-05	3E-05 3E-05
625 629	4.16 4.11	0.9091 0.8981	5E-05	7E-05	2E-05	2E-05	3E-05
626	4.14	0.9058	5E-05 5E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
627 628	4.13 4.12	0.9027 0.9003	5E-05 5E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
630a	3.91	0.8563	5E-05	6E-05	1E-05	1E-05	3E-05
630b 630c	4.08 4.07	0.8921 0.8892	5E-05 5E-05	7E-05 7E-05	2E-05 2E-05	1E-05 1E-05	3E-05 3E-05
630d	4.00	0.8757	5E-05	6E-05	1E-05	1E-05	3E-05
656 674a	4.24 4.64	0.9254 1.0111	6E-05 6E-05	7E-05 7E-05	2E-05 2E-05	2E-05 2E-05	3E-05 3E-05
674b	4.71	1.0260	6E-05	8E-05	2E-05	2E-05	3E-05
818a 818b	3.91 3.92	0.8520 0.8529	5E-05 5E-05	6E-05 6E-05	1E-05 1E-05	1E-05 1E-05	3E-05 3E-05
844b	3.05	0.6633	4E-05	5E-05	1E-05	1E-05	2E-05

Sensitive Receptors	Change in Annual Average PM10 Concentration (μg/m³)	Change in Annual Average PM2.5 Concentration (µg/m³)	Risk (PM <sub>2.5</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> CV Hospitalisations, >65 years)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)	Risk (PM <sub>10</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> Asthma ED admissions, 1-14 years)
872b	2.21	0.4823	3E-05	4E-05	8E-06	8E-06	2E-05
1085	0.54	0.1260	8E-06	9E-06	2E-06	2E-06	4E-06
2ap	1.09	0.2449	1E-05	2E-05	4E-06	4E-06	8E-06
2aq	1.07	0.2411	1E-05	2E-05	4E-06	4E-06	8E-06
2ar	1.07	0.2401	1E-05	2E-05	4E-06	4E-06	8E-06
5h	0.33	0.0790	5E-06	6E-06	1E-06	1E-06	3E-06
5w	0.47	0.1107	7E-06	8E-06	2E-06	2E-06	4E-06
5an	0.33	0.0797	5E-06	6E-06	1E-06	1E-06	3E-06
5ao	0.33	0.0790	5E-06	6E-06	1E-06	1E-06	3E-06
5ap	0.48	0.1111	7E-06	8E-06	2E-06	2E-06	4E-06
8q	0.17	0.0434	3E-06	3E-06	7E-07	6E-07	1E-06
Mal4	0.67	0.1457	9E-06	1E-05	2E-06	2E-06	5E-06
Mal5	0.68	0.1462	9E-06	1E-05	2E-06	2E-06	5E-06
Mal6	0.68	0.1474	9E-06	1E-05	3E-06	2E-06	5E-06
UHSC2	0.81	0.1882	1E-05	1E-05	3E-06	3E-06	6E-06
UHSC3	0.79	0.1842	1E-05	1E-05	3E-06	3E-06	6E-06
UHSC4	0.80	0.1864	1E-05	1E-05	3E-06	3E-06	6E-06
N29	1.06	0.2352	1E-05	2E-05	4E-06	4E-06	8E-06
School receptors	İ						
N30	4.60	1.0034	6E-05	7E-05	2E-05	2E-05	3E-05
N31	4.55	0.9917	6E-05	7E-05	2E-05	2E-05	3E-05
N32	4.55	0.9911	6E-05	7E-05	2E-05	2E-05	3E-05
N33	4.59	1.0012	6E-05	7E-05	2E-05	2E-05	3E-05
Church receptors							
520	1.55	0.3399	2E-05	3E-05	6E-06	6E-06	1E-05
658b	4.17	0.9100	5E-05	7E-05	2E-05	2E-05	3E-05
658c	4.15	0.9048	5E-05	7E-05	2E-05	2E-05	3E-05
616c	4.36	0.9517	6E-05	7E-05	2E-05	2E-05	3E-05
N34	0.72	0.1625	1E-05	1E-05	3E-06	3E-06	5E-06
Heritage receptors*							

<sup>\*</sup>No inhabited heritage receptors with elevated health risks identified.

## Quantification of Effects - $PM_{2.5}$ Mount Pleasant - Scenario 5 (incorporating proactive/reactive mitigation measures)

Air quality indicator:	PM <sub>2.5</sub>	PM <sub>2.5</sub>	PM <sub>2.5</sub>	PM <sub>2.5</sub>
Endpoint:	Mortality - All	Hospitalisation -	Hospitalisations -	Morbidity - Asthma
	Causes	Cardiovascular	Respiratory	ED Admissions
Effect Exposure Duration:	Long-term	Short-term	Short-term	Short-term
Age Group:	≥ 30 years	≥ 65 years	≥ 65 years	1-14 years
β (change in effect per 1 μg/m³) (as per Table 5.2)	0.0058	0.0008	0.00041	0.00148
Annual baseline incidence (per 100,000)	1026	9235	4168	2284
Baseline Incidence (per person per year)	0.01026	0.09235	0.04168	0.02284

Sensitive Receptors	Change in Annual Average PM <sub>2.5</sub> Concentration (µg/m³)	Risk (PM <sub>2.5</sub> Mortality all causes)	Risk( PM <sub>2.5</sub> CV Hospitalisations, > 65 years)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)	Risk (PM <sub>2.5</sub> Asthma ED admissions, 1- 14 years)
Privately-owned receptors					
20	1.6478	1E-04	1E-04	3E-05	6E-05
21	1.6698	1E-04	1E-04	3E-05	6E-05
23	1.7004	1E-04	1E-04	3E-05	6E-05
102	1.7734	1E-04	1E-04	3E-05	6E-05
108	1.8749	1E-04	1E-04	3E-05	6E-05
112	2.0408	1E-04	2E-04	3E-05	7E-05
118	1.9750	1E-04	1E-04	3E-05	7E-05
120	1.9155	1E-04	1E-04	3E-05	6E-05
120c	1.9488	1E-04	1E-04	3E-05	7E-05
121	2.0003	1E-04	1E-04	3E-05	7E-05
153a	1.8580	1E-04	1E-04	3E-05	6E-05
154	2.1333	1E-04	2E-04	4E-05	7E-05
154b	2.1403	1E-04	2E-04	4E-05	7E-05
156a	1.4616	9E-05	1E-04	2E-05	5E-05
157a	1.3277	8E-05	1E-04	2E-05	4E-05
158	1.2031	7E-05	9E-05	2E-05	4E-05

## Quantification of Effects - $PM_{2.5}$ and $PM_{10}$ Mount Pleasant - Scenario 6 (without proactive/reactive mitigation measures)

Air quality indicator:	PM <sub>2.5</sub>	PM <sub>2.5</sub>	PM <sub>2.5</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Endpoint:	Mortality - All	Hospitalisations -	Hospitalisations -	Mortality - All	Morbidity -
	Causes	Cardiovascular	Respiratory	Causes	Asthma ED
					Admissions
Effect Exposure Duration:	Long-term	Short-term	Short-term	Short-Term	Short-Term
Age Group:	≥ 30 years	≥ 65 years	≥ 65 years	All ages	1-14 years
β (change in effect per 1 μg/m³) (as per Table 5.2)	0.0058	0.0008	0.00041	0.0006	0.00148
Annual baseline incidence (per 100,000)	1026	9235	4168	610.5	2284
Baseline Incidence (per person per year)	0.01026	0.09235	0.04168	0.006105	0.02284

		(F- F F- 7 )					
Sensitive Receptors	Change in Annual Average PM10 Concentration (μg/m³)	Change in Annual Average PM2.5 Concentration (µg/m³)	Risk (PM <sub>2.5</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> CV Hospitalisations, >65 years)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)	Risk (PM <sub>10</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> Asthma ED admissions, 1-14 years)
Privately owned receptors							
19	3.67 6.16	0.7729 1.2748	5E-05 8E-05	6E-05 9E-05	1E-05 2E-05	1E-05 2E-05	3E-05 4E-05
20	6.75	1.3957	8E-05	1E-04	2E-05	2E-05	5E-05
21	6.87	1.4189	8E-05	1E-04	2E-05	3E-05	5E-05
35 35b	5.78 5.80	1.1948 1.1997	7E-05	9E-05 9E-05	2E-05 2E-05	2E-05	4E-05 4E-05
43	1.27	0.2594	7E-05 2E-05	9E-05 2E-05	4E-06	2E-05 5E-06	9E-06
43b	0.68	0.1450	9E-06	1E-05	2E-06	2E-06	5E-06
45	0.65	0.1418	8E-06	1E-05	2E-06	2E-06	5E-06
45b 45c	0.66 0.67	0.1429 0.1447	9E-06 9E-06	1E-05 1E-05	2E-06 2E-06	2E-06 2E-06	5E-06 5E-06
47	0.63	0.1301	8E-06	1E-05	2E-06	2E-06	4E-06
67	6.37	1.3166	8E-05	1E-04	2E-05	2E-05	4E-05
74 77	6.09 5.29	1.2596	7E-05	9E-05	2E-05	2E-05	4E-05
79	4.69	1.0943 0.9701	7E-05 6E-05	8E-05 7E-05	2E-05 2E-05	2E-05 2E-05	4E-05 3E-05
82	3.75	0.7781	5E-05	6E-05	1E-05	1E-05	3E-05
83	3.88	0.8039	5E-05	6E-05	1E-05	1E-05	3E-05
84a 84b	4.19 1.31	0.8677 0.2463	5E-05 1E-05	6E-05 2E-05	1E-05 4E-06	2E-05 5E-06	3E-05 8E-06
86a	5.34	1.1047	7E-05	8E-05	2E-05	2E-05	4E-05
86b	2.17	0.4573	3E-05	3E-05	8E-06	8E-06	2E-05
96	6.88	1.4303	9E-05	1E-04	2E-05	3E-05	5E-05
102 108	7.09 7.54	1.4737 1.5678	9E-05 9E-05	1E-04 1E-04	3E-05 3E-05	3E-05 3E-05	5E-05 5E-05
112	8.19	1.7029	9E-05 1E-04	1E-04	3E-05	3E-05 3E-05	6E-05
118	7.82	1.6297	1E-04	1E-04	3E-05	3E-05	6E-05
120	7.55	1.5734	9E-05	1E-04	3E-05	3E-05	5E-05
120c 121	7.66 7.83	1.5974 1.6331	1E-04 1E-04	1E-04 1E-04	3E-05 3E-05	3E-05 3E-05	5E-05 6E-05
136	4.77	1.0130	6E-05	7E-05	2E-05	2E-05	3E-05
140a	2.63	0.5613	3E-05	4E-05	1E-05	1E-05	2E-05
140c 143a	3.25	0.6797	4E-05	5E-05	1E-05	1E-05	2E-05
143b	2.65 3.56	0.5694 0.7668	3E-05 5E-05	4E-05 6E-05	1E-05 1E-05	1E-05 1E-05	2E-05 3E-05
147	3.97	0.8487	5E-05	6E-05	1E-05	1E-05	3E-05
153a	11.89	2.2576	1E-04	2E-04	4E-05	4E-05	8E-05
154 154b	6.95 7.00	1.4793 1.4896	9E-05	1E-04	3E-05	3E-05	5E-05
156a	4.86	1.4896	9E-05 6E-05	1E-04 8E-05	3E-05 2E-05	3E-05 2E-05	5E-05 4E-05
156b	0.28	0.0618	4E-06	5E-06	1E-06	1E-06	2E-06
157a	4.47	0.9555	6E-05	7E-05	2E-05	2E-05	3E-05
157b 159	0.25 3.89	0.0562 0.8343	3E-06 5E-05	4E-06 6E-05	1E-06 1E-05	9E-07 1E-05	2E-06 3E-05
169	3.28	0.7015	4E-05	5E-05	1E-05	1E-05	2E-05
171	2.47	0.5315	3E-05	4E-05	9E-06	9E-06	2E-05
172	1.98	0.4277	3E-05	3E-05	7E-06	7E-06	1E-05
172b 172c	1.92 1.38	0.4146 0.3010	2E-05 2E-05	3E-05 2E-05	7E-06 5E-06	7E-06 5E-06	1E-05 1E-05
310	1.96	0.4233	3E-05	3E-05	7E-06	7E-06	1E-05
173	1.88	0.4041	2E-05	3E-05	7E-06	7E-06	1E-05
174 175	1.93 1.96	0.4157 0.4218	2E-05 3E-05	3E-05 3E-05	7E-06 7E-06	7E-06 7E-06	1E-05 1E-05
175b	1.99	0.4278	3E-05	3E-05	7E-06	7E-06	1E-05
175c	1.95	0.4198	2E-05	3E-05	7E-06	7E-06	1E-05
176	1.98	0.4259	3E-05	3E-05	7E-06	7E-06	1E-05
177 178	1.83 1.18	0.3928 0.2585	2E-05 2E-05	3E-05 2E-05	7E-06 4E-06	7E-06 4E-06	1E-05 9E-06
179	1.25	0.2729	2E-05	2E-05	5E-06	5E-06	9E-06
180	1.18	0.2582	2E-05	2E-05	4E-06	4E-06	9E-06
180b 180c	1.04 0.83	0.2296 0.1851	1E-05 1E-05	2E-05 1E-05	4E-06 3E-06	4E-06 3E-06	8E-06 6E-06
181	0.75	0.1671	1E-05	1E-05	3E-06	3E-06	6E-06
181c	1.04	0.2281	1E-05	2E-05	4E-06	4E-06	8E-06
182	0.62	0.1391	8E-06	1E-05	2E-06	2E-06	5E-06
189 190	1.33 1.41	0.2894 0.3060	2E-05 2E-05	2E-05 2E-05	5E-06 5E-06	5E-06 5E-06	1E-05 1E-05
191	1.29	0.2795	2E-05 2E-05	2E-05 2E-05	5E-06	5E-06	9E-06
192	1.37	0.2956	2E-05	2E-05	5E-06	5E-06	1E-05
193 193c	1.28 1.01	0.2762 0.2176	2E-05	2E-05	5E-06 4E-06	5E-06 4E-06	9E-06 7E-06
193c 194	1.01	0.2176 0.2861	1E-05 2E-05	2E-05 2E-05	4E-06 5E-06	4E-06 5E-06	7E-06 1E-05
195	1.46	0.3107	2E-05	2E-05	5E-06	5E-06	1E-05
197	1.71	0.3623	2E-05	3E-05	6E-06	6E-06	1E-05
196 195d	1.67 1.76	0.3523 0.3725	2E-05 2E-05	3E-05 3E-05	6E-06 6E-06	6E-06 6E-06	1E-05 1E-05
198	2.05	0.3725	3E-05	3E-05	7E-06	7E-06	1E-05
198b	2.09	0.4405	3E-05	3E-05	8E-06	8E-06	1E-05
199	1.95	0.4094	2E-05	3E-05	7E-06	7E-06	1E-05
200	1.79 2.81	0.3777 0.5866	2E-05 3E-05	3E-05 4E-05	6E-06 1E-05	7E-06 1E-05	1E-05 2E-05
202b	2.31	0.4839	3E-05	4E-05	8E-06	8E-06	2E-05
203	2.96	0.6184	4E-05	5E-05	1E-05	1E-05	2E-05
203b	2.91	0.6077	4E-05	4E-05	1E-05	1E-05	2E-05
203c 206	2.95 5.09	0.6169 1.0580	4E-05 6E-05	5E-05 8E-05	1E-05 2E-05	1E-05 2E-05	2E-05 4E-05
207	5.74	1.1893	7E-05	9E-05	2E-05	2E-05	4E-05
212	4.77	0.9945	6E-05	7E-05	2E-05	2E-05	3E-05
212b	4.76	0.9922	6E-05	7E-05	2E-05	2E-05	3E-05
213 214	5.67 5.69	1.1770 1.1802	7E-05 7E-05	9E-05 9E-05	2E-05 2E-05	2E-05 2E-05	4E-05 4E-05
215	5.75	1.1939	7E-05	9E-05	2E-05	2E-05	4E-05
216	5.79	1.2016	7E-05	9E-05	2E-05	2E-05	4E-05
216b	5.72	1.1872	7E-05	9E-05	2E-05	2E-05	4E-05
217	5.83 5.80	1.2086 1.2036	7E-05 7E-05	9E-05 9E-05	2E-05 2E-05	2E-05 2E-05	4E-05 4E-05
219	5.83	1.2097	7E-05	9E-05	2E-05	2E-05	4E-05
	5.87	1.2179	7E-05	9E-05	2E-05	2E-05	4E-05
220 221	5.94	1.2311	7E-05	9E-05	2E-05	2E-05	4E-05

Sensitive Receptors	Change in Annual Average PM10 Concentration (µg/m³)	Change in Annual Average PM2.5 Concentration (µg/m³)	Risk (PM <sub>2.5</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> CV Hospitalisations, >65 years)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)	Risk (PM <sub>10</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> Asthma ED admissions, 1-14 years)
222	5.99	1.2413	7E-05	9E-05	2E-05	2E-05	4E-05
223	6.05	1.2537	7E-05	9E-05	2E-05	2E-05	4E-05
223b	6.04	1.2520	7E-05	9E-05	2E-05	2E-05	4E-05
224	6.12	1.2675	8E-05	9E-05	2E-05	2E-05	4E-05
225	5.85	1.2139	7E-05	9E-05	2E-05	2E-05	4E-05
249	0.48	0.1081	6E-06	8E-06	2E-06	2E-06	4E-06
252	0.33	0.0747	4E-06	6E-06	1E-06	1E-06	3E-06
257	0.72	0.1582	9E-06	1E-05	3E-06	3E-06	5E-06
258a	0.63	0.1387	8E-06	1E-05	2E-06	2E-06	5E-06
258c	0.62	0.1373	8E-06	1E-05	2E-06	2E-06	5E-06
259	0.60	0.1320	8E-06	1E-05	2E-06	2E-06	4E-06
259b	0.56	0.1252	7E-06	9E-06	2E-06	2E-06	4E-06
260	0.62	0.1375	8E-06	1E-05	2E-06	2E-06	5E-06
260a	0.61	0.1358	8E-06	1E-05	2E-06	2E-06	5E-06
260b	0.61	0.1354	8E-06	1E-05	2E-06	2E-06	5E-06
261	0.53	0.1179	7E-06	9E-06	2E-06	2E-06	4E-06
261b	0.53	0.1180	7E-06	9E-06	2E-06	2E-06	4E-06
271	0.43	0.0815	5E-06	6E-06	1E-06	2E-06	3E-06
272b	0.68	0.1243	7E-06	9E-06	2E-06	3E-06	4E-06
272	0.69	0.1257	7E-06	9E-06	2E-06	3E-06	4E-06
273	0.53	0.0986	6E-06	7E-06	2E-06	2E-06	3E-06
273b	0.50	0.0935	6E-06	7E-06	2E-06	2E-06	3E-06
288	4.17	0.8707	5E-05	6E-05	1E-05	2E-05	3E-05
288b	4.16	0.8680	5E-05	6E-05	1E-05	2E-05	3E-05
289	4.96	1.0267	6E-05	8E-05	2E-05	2E-05	3E-05
292	0.38	0.0872	5E-06	6E-06	1E-06	1E-06	3E-06
292b	0.37	0.0835	5E-06	6E-06	1E-06	1E-06	3E-06
300	0.44	0.0989	6E-06	7E-06	2E-06	2E-06	3E-06
298	0.46	0.1033	6E-06	8E-06	2E-06	2E-06	3E-06
296a	0.50	0.1033	7E-06	8E-06	2E-06	2E-06	4E-06
296b	0.49	0.1099	7E-06	8E-06	2E-06	2E-06	4E-06
302a	0.37	0.0830	5E-06	6E-06	1E-06	1E-06	3E-06
302c	0.36	0.0808	5E-06	6E-06	1E-06	1E-06	3E-06
401	0.89	0.1656	1E-05	1E-05	3E-06	3E-06	6E-06
402	1.05	0.1983	1E-05	1E-05	3E-06	4E-06	7E-06
404	1.12	0.2106	1E-05	2E-05	4E-06	4E-06	7E-06
407	1.56	0.2956	2E-05	2E-05	5E-06	6E-06	1E-05
413b	0.55	0.1017	6E-06	8E-06	2E-06	2E-06	3E-06
415	0.49	0.0916	5E-06	7E-06	2E-06	2E-06	3E-06
417	0.43	0.0801	5E-06	6E-06	1E-06	2E-06	3E-06
418	0.36	0.0681	4E-06	5E-06	1E-06	1E-06	2E-06
418b	0.37	0.0702	4E-06	5E-06	1E-06	1E-06	2E-06
419	0.56	0.1034	6E-06	8E-06	2E-06	2E-06	3E-06
421	0.60	0.1108	7E-06	8E-06	2E-06	2E-06	4E-06
422a	3.97	0.7961	5E-05	6E-05	1E-05	1E-05	3E-05
436	0.71	0.1582	9E-06	1E-05	3E-06	3E-06	5E-06
437	0.74	0.1655	1E-05	1E-05	3E-06	3E-06	6E-06
441	0.50	0.1135	7E-06	8E-06	2E-06	2E-06	4E-06
442	0.22	0.0499	3E-06	4E-06	9E-07	8E-07	2E-06
443 451	0.52	0.1162	7E-06	9E-06	2E-06	2E-06	4E-06
452	0.67	0.1446	9E-06	1E-05	2E-06	2E-06	5E-06
	1.13	0.2392	1E-05	2E-05	4E-06	4E-06	8E-06
453a	0.37	0.0706	4E-06	5E-06	1E-06	1E-06	2E-06
453b	0.37	0.0706	4E-06	5E-06	1E-06	1E-06	2E-06
454	0.31	0.0600	4E-06	4E-06	1E-06	1E-06	2E-06
455	0.19	0.0382	2E-06	3E-06	7E-07	7E-07	1E-06
456	0.20	0.0399	2E-06	3E-06	7E-07	7E-07	1E-06
456b	0.20	0.0399	2E-06	3E-06	7E-07	7E-07	1E-06
458	0.27	0.0537	3E-06	4E-06	9E-07	1E-06	2E-06
460	0.14	0.0305	2E-06	2E-06	5E-07	5E-07	1E-06
460b	0.14	0.0302	2E-06	2E-06	5E-07	5E-07	1E-06
461	0.14	0.0302	2E-06	2E-06	5E-07	5E-07	1E-06
462a	0.15	0.0320	2E-06	2E-06	5E-07	5E-07	1E-06
462b	0.15	0.0320	2E-06	2E-06	5E-07	5E-07	1E-06
462c	0.15	0.0320	2E-06	2E-06	5E-07	5E-07	1E-06
464	0.26	0.0568	3E-06	4E-06	1E-06	9E-07	2E-06
464b	0.26	0.0576	3E-06	4E-06	1E-06	1E-06	2E-06
465	0.22	0.0484	3E-06	4E-06	8E-07	8E-07	2E-06
466	0.28	0.0628	4E-06	5E-06	1E-06	1E-06	2E-06
467	0.41	0.0901	5E-06	7E-06	2E-06	1E-06	3E-06
467b	0.40	0.0893	5E-06	7E-06	2E-06	1E-06	3E-06
468a	0.23	0.0550	3E-06	4E-06	9E-07	9E-07	2E-06
468b	0.22	0.0524	3E-06	4E-06	9E-07	8E-07	2E-06
468c	0.24	0.0567	3E-06	4E-06	1E-06	9E-07	2E-06
468d	0.23	0.0551	3E-06	4E-06	9E-07	9E-07	2E-06
470	0.30	0.0692	4E-06	5E-06	1E-06	1E-06	2E-06
471	0.29	0.0666	4E-06	5E-06	1E-06	1E-06	2E-06
472a	0.29	0.0680	4E-06	5E-06	1E-06	1E-06	2E-06
472b	0.30	0.0693	4E-06	5E-06	1E-06	1E-06	2E-06
472c 474	0.27 0.26	0.0631 0.0599	4E-06	5E-06	1E-06	1E-06 9E-07	2E-06
475	0.37	0.0847	4E-06 5E-06	4E-06 6E-06	1E-06 1E-06	1E-06	2E-06 3E-06
475b	0.37	0.0848	5E-06	6E-06	1E-06	1E-06	3E-06
476	0.25	0.0581	3E-06	4E-06	1E-06	9E-07	2E-06
477a	0.29	0.0669	4E-06	5E-06	1E-06	1E-06	2E-06
477b	0.29	0.0666	4E-06	5E-06	1E-06	1E-06	2E-06
481	0.20	0.0478	3E-06	4E-06	8E-07	7E-07	2E-06
483	0.17	0.0416	2E-06	3E-06	7E-07	6E-07	1E-06
484	0.20	0.0481	3E-06	4E-06	8E-07	8E-07	2E-06
485a	0.16	0.0380	2E-06	3E-06	7E-07	6E-07	1E-06
485b	0.16	0.0382	2E-06	3E-06	7E-07	6E-07	1E-06
485c	0.16	0.0379	2E-06		6E-07	6E-07	1E-06
485d	0.16	0.0376	2E-06	3E-06 3E-06	6E-07	6E-07	1E-06
485e	0.16	0.0378	2E-06	3E-06	6E-07	6E-07	1E-06
485f	0.16	0.0383	2E-06	3E-06	7E-07	6E-07	1E-06
487	0.57	0.1258	7E-06	9E-06	2E-06	2E-06	4E-06
488a	0.67	0.1488	9E-06	1E-05	3E-06	2E-06	5E-06
488b	0.72	0.1580	9E-06	1E-05	3E-06	3E-06	5E-06
515a	0.44	0.0966	6E-06	7E-06	2E-06	2E-06	3E-06
515b	0.33	0.0737	4E-06	5E-06	1E-06	1E-06	2E-06
516	0.29	0.0643	4E-06	5E-06	1E-06	1E-06	2E-06
517	0.37	0.0808	5E-06	6E-06	1E-06	1E-06	3E-06
518	0.43	0.0923	5E-06	7E-06	2E-06	2E-06	3E-06
519	0.32	0.0719	4E-06	5E-06	1E-06	1E-06	2E-06
522a	1.20	0.2537	2E-05	2E-05	4E-06	4E-06	9E-06
522b	3.46	0.7186	4E-05	5E-05	1E-05	1E-05	2E-05
522c	3.45	0.7167	4E-05	5E-05	1E-05	1E-05	2E-05
522d 526	3.44 4.78	0.7141 0.9895	4E-05	5E-05	1E-05 2E-05	1E-05	2E-05
527	4.35	0.9025	6E-05 5E-05	7E-05 7E-05	2E-05	2E-05 2E-05	3E-05 3E-05
528	4.31	0.8942	5E-05	7E-05	2E-05	2E-05	3E-05
529	4.27	0.8863	5E-05	7E-05	2E-05	2E-05	3E-05
530	4.20	0.8721	5E-05	6E-05	1E-05	2E-05	3E-05
531	4.19	0.8710	5E-05	6E-05	1E-05	2E-05	3E-05
531b	4.23	0.8779	5E-05	6E-05	2E-05	2E-05	3E-05
532	4.19	0.8702	5E-05	6E-05	1E-05	2E-05	3E-05
533	4.19	0.8705	5E-05	6E-05	1E-05	2E-05	3E-05

Sensitive Receptors	Change in Annual Average PM10 Concentration (μg/m³)	Change in Annual Average PM2.5 Concentration (µg/m³)	Risk (PM <sub>2.5</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> CV Hospitalisations, >65 years)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)	Risk (PM <sub>10</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> Asthma ED admissions, 1-14 years)
534	4.19	0.8707	5E-05	6E-05	1E-05	2E-05	3E-05
535	4.20	0.8731	5E-05	6E-05	1E-05	2E-05	3E-05
536	4.19	0.8705	5E-05	6E-05	1E-05	2E-05	3E-05
537	4.19	0.8704	5E-05	6E-05	1E-05	2E-05	3E-05
538	4.16	0.8686	5E-05	6E-05	1E-05	2E-05	3E-05
539	4.11	0.8576	5E-05	6E-05	1E-05	2E-05	3E-05
541	4.06	0.8485	5E-05	6E-05	1E-05	1E-05	3E-05
542	4.08	0.8514	5E-05	6E-05	1E-05	1E-05	3E-05
543	4.10	0.8559	5E-05	6E-05	1E-05	2E-05	3E-05
543b	4.14	0.8651	5E-05	6E-05	1E-05	2E-05	3E-05
544	4.12	0.8597	5E-05	6E-05	1E-05	2E-05	3E-05
545	4.13	0.8630	5E-05	6E-05	1E-05	2E-05	3E-05
547	1.31	0.2807	2E-05	2E-05	5E-06	5E-06	9E-06
549	0.59	0.1243	7E-06	9E-06	2E-06	2E-06	4E-06
550	0.66	0.1389	8E-06	1E-05	2E-06	2E-06	5E-06
552	0.65	0.1392	8E-06	1E-05	2E-06	2E-06	5E-06
553	0.67	0.1411	8E-06	1E-05	2E-06	2E-06	5E-06
554	0.74	0.1577	9E-06	1E-05	3E-06	3E-06	5E-06
557	0.65	0.1364	8E-06	1E-05	2E-06	2E-06	5E-06
559	0.58	0.1214	7E-06	9E-06	2E-06	2E-06	4E-06
560	0.59	0.1253	7E-06	9E-06	2E-06	2E-06	4E-06
561	0.61	0.1294	8E-06	1E-05	2E-06	2E-06	4E-06
562	0.58	0.1218	7E-06	9E-06	2E-06	2E-06	4E-06
563	0.53	0.1112	7E-06	8E-06	2E-06	2E-06	4E-06
564	0.57	0.1205	7E-06	9E-06	2E-06	2E-06	4E-06
565	0.61	0.1297	8E-06	1E-05	2E-06	2E-06	4E-06
566	0.59	0.1243	7E-06	9E-06	2E-06	2E-06	4E-06
569	0.63	0.1349	8E-06	1E-05	2E-06	2E-06	5E-06
570	0.65	0.1377	8E-06	1E-05	2E-06	2E-06	5E-06
571	0.70	0.1492	9E-06	1E-05	3E-06	3E-06	5E-06
572	0.65	0.1382	8E-06	1E-05	2E-06	2E-06	5E-06
573	0.69	0.1461	9E-06	1E-05	2E-06	3E-06	5E-06
574	0.70	0.1495 0.1540	9E-06	1E-05	3E-06	3E-06	5E-06
575	0.72	0.1569	9E-06	1E-05	3E-06	3E-06	5E-06
576	0.74		9E-06	1E-05	3E-06	3E-06	5E-06
577a	0.79	0.1688	1E-05	1E-05	3E-06	3E-06	6E-06
577b	0.78	0.1662	1E-05	1E-05	3E-06	3E-06	6E-06
578	0.81	0.1710	1E-05	1E-05	3E-06	3E-06	6E-06
583	0.45	0.0971	6E-06	7E-06	2E-06	2E-06	3E-06
586	0.27	0.0595	4E-06	4E-06	1E-06	1E-06	2E-06
587a	0.23	0.0509	3E-06	4E-06	9E-07	8E-07	2E-06
587b	0.23	0.0510	3E-06	4E-06	9E-07	8E-07	2E-06
588	0.26	0.0572	3E-06	4E-06	1E-06	9E-07	2E-06
600a	4.02	0.8394	5E-05	6E-05	1E-05	1E-05	3E-05
600b	4.05	0.8461	5E-05	6E-05	1E-05	1E-05	3E-05
601	4.00	0.8358	5E-05	6E-05	1E-05	1E-05	3E-05
602 603	3.99	0.8329	5E-05	6E-05	1E-05	1E-05	3E-05
604	3.97	0.8296	5E-05	6E-05	1E-05	1E-05	3E-05
	3.96	0.8271	5E-05	6E-05	1E-05	1E-05	3E-05
605 606	3.95 3.93	0.8244 0.8205	5E-05 5E-05	6E-05	1E-05	1E-05 1E-05	3E-05
607	3.91	0.8169	5E-05 5E-05	6E-05 6E-05	1E-05 1E-05	1E-05	3E-05 3E-05
608	3.91	0.8166	5E-05	6E-05	1E-05	1E-05	3E-05
609	3.89	0.8139	5E-05	6E-05	1E-05	1E-05	3E-05
610	3.87	0.8089	5E-05	6E-05	1E-05	1E-05	3E-05
611	3.85	0.8057	5E-05	6E-05	1E-05	1E-05	3E-05
612	3.90	0.8153	5E-05	6E-05	1E-05	1E-05	3E-05
613	3.87	0.8094	5E-05	6E-05	1E-05	1E-05	3E-05
614	3.86	0.8066	5E-05	6E-05	1E-05	1E-05	3E-05
615	3.83	0.8001	5E-05	6E-05	1E-05	1E-05	3E-05
616a	3.75	0.7790	5E-05	6E-05 6E-05	1E-05	1E-05	3E-05
616b	3.84	0.8026	5E-05	6E-05	1E-05	1E-05	3E-05
617a	3.74	0.7821	5E-05		1E-05	1E-05	3E-05
618a	3.71	0.7770	5E-05	6E-05	1E-05	1E-05	3E-05
618b	3.74	0.7830	5E-05	6E-05	1E-05	1E-05	3E-05
619	3.71	0.7756	5E-05	6E-05	1E-05	1E-05	3E-05
621	3.69	0.7727	5E-05	6E-05	1E-05	1E-05	3E-05
622a	3.72	0.7776	5E-05	6E-05	1E-05	1E-05	3E-05
623a	0.54	0.1220	7E-06	9E-06	2E-06	2E-06	4E-06
623b	3.68	0.7690	5E-05	6E-05	1E-05	1E-05	3E-05
630a	3.42	0.7164	4E-05	5E-05	1E-05	1E-05	2E-05
631	3.40	0.7122 0.7175	4E-05	5E-05	1E-05	1E-05	2E-05
632	3.43	0.7469	4E-05	5E-05	1E-05	1E-05	2E-05
648	3.57		4E-05	6E-05	1E-05	1E-05	3E-05
649	3.61	0.7535	4E-05	6E-05	1E-05	1E-05	3E-05
650	3.63	0.7583	5E-05	6E-05	1E-05	1E-05	3E-05
651	3.59	0.7501	4E-05	6E-05	1E-05	1E-05	3E-05
652	3.69	0.7695	5E-05	6E-05	1E-05	1E-05	3E-05
653	3.70	0.7729	5E-05	6E-05	1E-05	1E-05	3E-05
654a	3.79	0.7898	5E-05	6E-05	1E-05	1E-05	3E-05
654b	3.70	0.7720	5E-05	6E-05	1E-05	1E-05	3E-05
655	3.70	0.7724	5E-05	6E-05	1E-05	1E-05	3E-05
658a	3.79	0.7893	5E-05	6E-05	1E-05	1E-05	3E-05
659	3.78	0.7888	5E-05	6E-05	1E-05	1E-05	3E-05
660a	3.78	0.7877	5E-05	6E-05	1E-05	1E-05	3E-05
660b	3.79	0.7905	5E-05	6E-05	1E-05	1E-05	3E-05
661	3.84	0.8002	5E-05	6E-05	1E-05	1E-05	3E-05
662	3.86	0.8047	5E-05	6E-05	1E-05	1E-05	3E-05
663	3.90	0.8114	5E-05	6E-05	1E-05	1E-05	3E-05
664	3.92	0.8162	5E-05	6E-05	1E-05	1E-05	3E-05
665a	4.01	0.8352	5E-05	6E-05	1E-05	1E-05	3E-05
665b	4.00	0.8338	5E-05	6E-05	1E-05	1E-05	3E-05
667a	4.74	0.9833	6E-05	7E-05	2E-05	2E-05	3E-05
667b	4.69	0.9731	6E-05	7E-05	2E-05	2E-05	3E-05
667c	4.74	0.9822	6E-05	7E-05	2E-05	2E-05	
667d	4.74	0.9823	6E-05	7E-05	2E-05	2E-05	3E-05 3E-05
667e	4.71	0.9767	6E-05	7E-05	2E-05	2E-05	3E-05
667f	3.33	0.6926	4E-05	5E-05	1E-05	1E-05	2E-05
669	4.09	0.8505	5E-05	6E-05	1E-05	1E-05	3E-05
671	4.09	0.8496	5E-05	6E-05	1E-05	1E-05	3E-05
672	4.09	0.8502	5E-05	6E-05	1E-05	1E-05	3E-05
673	4.09	0.8499	5E-05	6E-05	1E-05	1E-05	3E-05
675	4.08	0.8476	5E-05	6E-05	1E-05	1E-05	3E-05
676	4.10	0.8516	5E-05	6E-05	1E-05	2E-05	3E-05
677	4.06	0.8443	5E-05	6E-05	1E-05	1E-05	3E-05
678	4.03	0.8384	5E-05	6E-05	1E-05	1E-05	3E-05
679	4.00	0.8325	5E-05	6E-05	1E-05	1E-05	3E-05
680	3.98	0.8272	5E-05	6E-05	1E-05	1E-05	3E-05
681	3.94	0.8204	5E-05	6E-05	1E-05	1E-05	3E-05
682a	3.88	0.8068	5E-05	6E-05	1E-05	1E-05	3E-05
682b	3.87	0.8059	5E-05	6E-05	1E-05	1E-05	3E-05
683	3.85	0.8018	5E-05	6E-05	1E-05	1E-05	3E-05
684	3.80	0.7909	5E-05	6E-05	1E-05	1E-05	3E-05
685 686	3.78	0.7877	5E-05	6E-05	1E-05	1E-05	3E-05
687	3.79	0.7883	5E-05	6E-05	1E-05	1E-05	3E-05
	3.78	0.7879	5E-05	6E-05	1E-05	1E-05	3E-05
688	3.79	0.7900	5E-05	6E-05	1E-05	1E-05	3E-05

Sensitive Receptors	Change in Annual Average PM10 Concentration (µg/m³)	Change in Annual Average PM2.5 Concentration (µg/m³)	Risk (PM <sub>2.5</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> CV Hospitalisations, >65 years)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)	Risk (PM <sub>10</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> Asthma ED admissions, 1-14 years)
689	3.91	0.8134	5E-05	6E-05	1E-05	1E-05	3E-05
690	3.86	0.8030	5E-05	6E-05	1E-05	1E-05	3E-05
691	3.79	0.7894 0.7897	5E-05	6E-05 6E-05	1E-05 1E-05	1E-05	3E-05
692 693	3.79 3.70	0.7713	5E-05 5E-05	6E-05	1E-05	1E-05 1E-05	3E-05 3E-05
694a	3.70	0.7705	<u>5E-05</u>	6E-05	1E-05	1E-05	3E-05
694b	3.65	0.7614	5E-05	6E-05	1E-05	1E-05	3E-05
695	3.70	0.7719	5E-05	6E-05	1E-05	1E-05	3E-05
697	3.70	0.7700	5E-05	6E-05	1E-05	1E-05	3E-05
698	3.63	0.7565	5E-05	6E-05	1E-05	1E-05	3E-05
715	0.57	0.1289	8E-06	1E-05	2E-06	2E-06	4E-06
728	3.63	0.7570	5E-05	6E-05	1E-05	1E-05	3E-05
729	3.66	0.7628	5E-05	6E-05	1E-05	1E-05	3E-05
730	3.69	0.7693	5E-05	6E-05	1E-05	1E-05	3E-05
731	3.71	0.7733	5E-05	6E-05	1E-05	1E-05	3E-05
732	3.72	0.7735	5E-05	6E-05	1E-05	1E-05	3E-05
733	3.70	0.7709	5E-05	6E-05	1E-05	1E-05	3E-05
735a	3.71	0.7713	5E-05	6E-05	1E-05	1E-05	3E-05
735b	3.73	0.7753	5E-05	6E-05	1E-05	1E-05	3E-05
736	3.66	0.7615	5E-05	6E-05	1E-05	1E-05	3E-05
737	3.72	0.7739	5E-05	6E-05	1E-05	1E-05	3E-05
738	3.72	0.7732	5E-05	6E-05	1E-05	1E-05	3E-05
739	3.73	0.7759	5E-05	6E-05	1E-05	1E-05	3E-05
740a	3.63	0.7555	4E-05	6E-05	1E-05	1E-05	3E-05
740b	3.66	0.7620	5E-05	6E-05	1E-05	1E-05	3E-05
740c	3.69	0.7682	5E-05	6E-05	1E-05	1E-05	3E-05
740d	3.69	0.7682	5E-05	6E-05	1E-05	1E-05	3E-05
740e	3.67	0.7629	5E-05	6E-05	1E-05	1E-05	3E-05
740f	3.63	0.7564	5E-05	6E-05	1E-05	1E-05	3E-05
741	3.76	0.7815	5E-05	6E-05	1E-05	1E-05	3E-05
742	3.78	0.7853	5E-05	6E-05	1E-05	1E-05	3E-05
743	3.79	0.7874	5E-05	6E-05	1E-05	1E-05	3E-05
744	3.72	0.7736	5E-05	6E-05	1E-05	1E-05	3E-05
745	3.70	0.7688	5E-05	6E-05	1E-05	1E-05	3E-05
746	3.67	0.7629	5E-05	6E-05	1E-05	1E-05	3E-05
747	3.64	0.7571	5E-05	6E-05	1E-05	1E-05	3E-05
748a	3.61	0.7516	4E-05	6E-05	1E-05	1E-05	3E-05
748b	2.15	0.4490	3E-05	3E-05	8E-06	8E-06	2E-05
749a	3.81	0.7918	5E-05	6E-05	1E-05	1E-05	3E-05
749b	3.79	0.7888	5E-05	6E-05	1E-05	1E-05	3E-05
750	3.80	0.7910	5E-05	6E-05	1E-05	1E-05	3E-05
751	3.79	0.7894	5E-05	6E-05	1E-05	1E-05	3E-05
752a	3.84	0.7989	5E-05	6E-05	1E-05	1E-05	3E-05
752b	3.83	0.7975	5E-05	6E-05	1E-05	1E-05	3E-05
753	3.86	0.8033	5E-05	6E-05	1E-05	1E-05	3E-05
754	3.88	0.8077	5E-05	6E-05	1E-05	1E-05	3E-05
755	3.91	0.8135	5E-05	6E-05	1E-05	1E-05	3E-05
756	3.94	0.8190	5E-05	6E-05	1E-05	1E-05	3E-05
757	3.96	0.8236	5E-05	6E-05	1E-05	1E-05	3E-05
758	3.98	0.8280	5E-05	6E-05	1E-05	1E-05	3E-05
759a	4.01	0.8340	5E-05	6E-05	1E-05	1E-05	3E-05
759b	4.02	0.8349	5E-05	6E-05	1E-05	1E-05	3E-05
760	4.03	0.8382	5E-05	6E-05	1E-05	1E-05	3E-05
761	4.06	0.8430	5E-05	6E-05	1E-05	1E-05	3E-05
762	4.10	0.8511	5E-05	6E-05	1E-05	2E-05	3E-05
763	4.09	0.8499	5E-05	6E-05	1E-05	1E-05	3E-05
764	4.10	0.8523	5E-05	6E-05	1E-05	2E-05	3E-05
765a	4.09	0.8498	5E-05	6E-05	1E-05	1E-05	3E-05
765b	4.11	0.8530	5E-05	6E-05	1E-05	2E-05	3E-05
766	4.10	0.8507	5E-05	6E-05	1E-05	2E-05	3E-05
767	4.09	0.8502	5E-05	6E-05	1E-05	1E-05	3E-05
768	4.10	0.8508	5E-05	6E-05	1E-05	2E-05	3E-05
769	4.01	0.8321	5E-05	6E-05	1E-05	1E-05	3E-05
770	4.10	0.8510	5E-05	6E-05	1E-05	2E-05	3E-05
771	4.10	0.8513	5E-05	6E-05	1E-05	2E-05	3E-05
772	4.11	0.8526	5E-05	6E-05	1E-05	2E-05	3E-05
773	4.11	0.8529	5E-05	6E-05	1E-05	2E-05	3E-05
774	4.05	0.8399	5E-05	6E-05	1E-05	1E-05	3E-05
775	4.05	0.8413	5E-05	6E-05	1E-05	1E-05	3E-05
776	4.12	0.8539	5E-05	6E-05	1E-05	2E-05	3E-05
777	4.09	0.8493	5E-05	6E-05	1E-05	1E-05	3E-05
778a	4.08	0.8469	5E-05	6E-05	1E-05	1E-05	3E-05
778b	4.11	0.8523	5E-05	6E-05	1E-05	2E-05	3E-05
779a	4.07	0.8447	5E-05	6E-05	1E-05	1E-05	3E-05
779b	4.03	0.8361	5E-05	6E-05	1E-05	1E-05	3E-05
780	4.09	0.8489	5E-05	6E-05	1E-05	1E-05	3E-05
781	4.12	0.8542	5E-05	6E-05	1E-05	2E-05	3E-05
782	4.10	0.8513	5E-05	6E-05	1E-05	2E-05	3E-05
783	4.11	0.8533	5E-05	6E-05	1E-05	2E-05	3E-05
784	3.80	0.7903	5E-05	6E-05	1E-05	1E-05	3E-05
785	3.80	0.7906	5E-05	6E-05	1E-05	1E-05	3E-05
786	3.83	0.7974	5E-05	6E-05	1E-05	1E-05	3E-05
787a	3.81	0.7917	5E-05	6E-05	1E-05	1E-05	3E-05
787b	3.88	0.8063	5E-05	6E-05	1E-05	1E-05	3E-05
788	3.82	0.7940	5E-05	6E-05	1E-05	1E-05	3E-05
789	3.83	0.7963	5E-05	6E-05	1E-05	1E-05	3E-05
790a	3.81	0.7917	5E-05	6E-05	1E-05	1E-05	3E-05
790b	3.84	0.7980	5E-05	6E-05	1E-05	1E-05	3E-05
791a	3.81	0.7930	5E-05	6E-05	1E-05	1E-05	3E-05
791b	3.85	0.7992	5E-05	6E-05	1E-05	1E-05	3E-05
792a	3.91	0.8121	5E-05	6E-05	1E-05	1E-05	3E-05
792b	3.83	0.7967	5E-05	6E-05	1E-05	1E-05	3E-05
793	3.82	0.7949	5E-05	6E-05	1E-05	1E-05	3E-05
794	3.84	0.7981	5E-05	6E-05	1E-05	1E-05	3E-05
795	3.87	0.8035	5E-05	6E-05	1E-05	1E-05	3E-05
796	3.89	0.8070	5E-05	6E-05	1E-05	1E-05	3E-05
797a	3.90	0.8090	5E-05	6E-05	1E-05	1E-05	3E-05
797b	3.93	0.8161	5E-05	6E-05	1E-05	1E-05	3E-05
798	3.92	0.8143	5E-05	6E-05	1E-05	1E-05	3E-05
801	3.98	0.8260	5E-05	6E-05	1E-05	1E-05	3E-05
802	4.00	0.8293	5E-05	6E-05	1E-05	1E-05	3E-05
803a	3.86	0.8020	5E-05	6E-05	1E-05	1E-05	3E-05
803b	3.85	0.8004	5E-05	6E-05	1E-05	1E-05	3E-05
804	3.85	0.7988	5E-05	6E-05	1E-05	1E-05	3E-05
805	3.83	0.7948	5E-05	6E-05	1E-05	1E-05	3E-05
806	3.51	0.7300	4E-05	5E-05	1E-05	1E-05	2E-05
807	3.51	0.7295	4E-05	5E-05	1E-05	1E-05	2E-05
808	3.51	0.7290	4E-05	5E-05	1E-05	1E-05	2E-05
809	3.52	0.7310	4E-05	5E-05	1E-05	1E-05	2E-05
810	3.51	0.7302	4E-05	5E-05	1E-05	1E-05	2E-05
811	3.51	0.7294	4E-05	5E-05	1E-05	1E-05	2E-05
812	3.51	0.7298	4E-05	5E-05	1E-05	1E-05	2E-05
813	3.50	0.7279	4E-05	5E-05	1E-05	1E-05	2E-05
814	3.50	0.7269	4E-05	5E-05	1E-05	1E-05	2E-05
815a	3.49	0.7258	4E-05	5E-05	1E-05	1E-05	2E-05
815b	3.50	0.7269	4E-05	5E-05	1E-05	1E-05	2E-05
815b 816	3.49	0.7269	4E-05 4E-05	5E-05 5E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
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Sensitive Receptors	Change in Annual Average PM10 Concentration (µg/m³)	Change in Annual Average PM2.5 Concentration (µg/m³)	Risk (PM <sub>2.5</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> CV Hospitalisations, >65 years)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)	Risk (PM <sub>10</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> Asthma ED admissions, 1-14 years)
817	3.46	0.7188	4E-05	5E-05	1E-05	1E-05	2E-05
819	3.29	0.6845	4E-05	5E-05	1E-05	1E-05	2E-05
820a	3.26	0.6783	4E-05	5E-05	1E-05	1E-05	2E-05
820b	3.29	0.6847	4E-05	5E-05	1E-05	1E-05	2E-05
821	3.25	0.6749	4E-05	5E-05	1E-05	1E-05	2E-05
822	3.23	0.6717	4E-05	5E-05	1E-05	1E-05	2E-05
823a	3.22	0.6691	4E-05	5E-05	1E-05	1E-05	2E-05
823b	3.26	0.6775	4E-05	5E-05	1E-05	1E-05	2E-05
824	3.18	0.6613	4E-05	5E-05	1E-05	1E-05	2E-05
825	3.16	0.6572	4E-05	5E-05	1E-05	1E-05	2E-05
826	3.15	0.6557	4E-05	5E-05		1E-05	2E-05
827	3.14	0.6525	4E-05	5E-05	1E-05 1E-05	1E-05	2E-05
828	3.09	0.6431	4E-05	5E-05	1E-05	1E-05	2E-05
829a	3.06	0.6367	4E-05	5E-05	1E-05	1E-05	2E-05
829b	3.06	0.6372	4E-05	5E-05	1E-05	1E-05	2E-05
830	3.04	0.6315	4E-05	5E-05	1E-05	1E-05	2E-05
831	3.03	0.6305	4E-05	5E-05	1E-05	1E-05	2E-05
832	3.02	0.6274	4E-05	5E-05	1E-05	1E-05	2E-05
833	3.00	0.6237	4E-05	5E-05	1E-05	1E-05	2E-05
834	2.97	0.6182	4E-05	5E-05	1E-05	1E-05	2E-05
835	2.95	0.6137	4E-05	5E-05	1E-05	1E-05	2E-05
836 837	2.93 2.92	0.6097 0.6068	4E-05	5E-05	1E-05	1E-05	2E-05
838	2.89	0.6019	4E-05 4E-05	4E-05 4E-05	1E-05 1E-05	1E-05 1E-05	2E-05 2E-05
839	2.87	0.5965	4E-05	4E-05	1E-05	1E-05	2E-05
840	2.85	0.5930	4E-05	4E-05	1E-05	1E-05	2E-05
841	2.84	0.5897	4E-05	4E-05	1E-05	1E-05	2E-05
843a	2.76	0.5733	3E-05	4E-05	1E-05	1E-05	2E-05
843b	2.78	0.5790	3E-05	4E-05	1E-05	1E-05	2E-05
844a	2.62	0.5458	3E-05	4E-05	9E-06	1E-05	2E-05
845	2.48	0.5156	3E-05	4E-05	9E-06	9E-06	2E-05
846	2.45	0.5110	3E-05	4E-05	9E-06	9E-06	2E-05
847	2.44	0.5091	3E-05	4E-05	9E-06	9E-06	2E-05
848	2.42	0.5044	3E-05	4E-05	9E-06	9E-06	2E-05
849	2.41	0.5014	3E-05	4E-05	9E-06	9E-06	2E-05
850	2.39	0.4984	3E-05	4E-05	9E-06	9E-06	2E-05
853	2.32	0.4847	3E-05	4E-05	8E-06	9E-06	2E-05
854	2.30	0.4806	3E-05	4E-05	8E-06	8E-06	2E-05
855	2.29	0.4769	3E-05	4E-05	8E-06	8E-06	2E-05
856	2.27	0.4733	3E-05	3E-05	8E-06	8E-06	2E-05
857	2.25	0.4704	3E-05	3E-05	8E-06	8E-06	2E-05
858	2.24	0.4670	3E-05	3E-05	8E-06	8E-06	2E-05
859	2.22	0.4632	3E-05	3E-05	8E-06	8E-06	2E-05
860	2.21	0.4609	3E-05	3E-05	8E-06	8E-06	2E-05
861	2.19	0.4572	3E-05	3E-05	8E-06	8E-06	2E-05
862	2.17	0.4535	3E-05	3E-05	8E-06	8E-06	2E-05
863	2.13	0.4451	3E-05	3E-05	8E-06	8E-06	2E-05
864	2.11	0.4409	3E-05	3E-05	8E-06	8E-06	1E-05
865	2.10	0.4385	3E-05	3E-05	7E-06	8E-06	1E-05
866 867	1.99 1.98	0.4158 0.4140	2E-05	3E-05	7E-06	7E-06	1E-05
868	1.96	0.4116	2E-05 2E-05	3E-05 3E-05	7E-06 7E-06	7E-06 7E-06	1E-05 1E-05
870	1.95	0.4084	2E-05	3E-05	7E-06	7E-06	1E-05
871	1.93	0.4055	2E-05	3E-05	7E-06	7E-06	1E-05
872a 900a	1.93	0.4040 0.1183	2E-05	3E-05	7E-06	7E-06	1E-05
900b	0.52 0.65	0.1454	7E-06 9E-06	9E-06 1E-05	2E-06 2E-06	2E-06 2E-06	4E-06 5E-06
901	0.68	0.1527	9E-06	1E-05	3E-06	3E-06	5E-06
902	0.68	0.1520	9E-06	1E-05	3E-06	2E-06	5E-06
903 904	0.68	0.1510	9E-06	1E-05	3E-06	2E-06	5E-06
905	0.67	0.1499	9E-06	1E-05	3E-06	2E-06	5E-06
	0.67	0.1490	9E-06	1E-05	3E-06	2E-06	5E-06
906	0.66	0.1479	9E-06	1E-05	3E-06	2E-06	5E-06
907	0.66	0.1470	9E-06	1E-05	3E-06	2E-06	5E-06
908	0.65	0.1460	9E-06	1E-05	2E-06	2E-06	5E-06
909	0.65	0.1443	9E-06	1E-05	2E-06	2E-06	5E-06
911	0.63	0.1416	8E-06	1E-05	2E-06	2E-06	5E-06
912	0.64	0.1441	9E-06	1E-05	2E-06	2E-06	5E-06
913	0.62	0.1397	8E-06	1E-05	2E-06	2E-06	5E-06
914 915	0.62	0.1386	8E-06	1E-05	2E-06	2E-06	5E-06
916	0.61	0.1378	8E-06	1E-05	2E-06	2E-06	5E-06
	0.61	0.1364	8E-06	1E-05	2E-06	2E-06	5E-06
917	0.60	0.1349	8E-06	1E-05	2E-06	2E-06	5E-06
918	0.61	0.1367	8E-06	1E-05	2E-06	2E-06	5E-06
919 920	0.61	0.1376	8E-06	1E-05	2E-06	2E-06	5E-06
921	0.62	0.1389	8E-06	1E-05	2E-06	2E-06	5E-06
	0.62	0.1399	8E-06	1E-05	2E-06	2E-06	5E-06
922	0.63	0.1410	8E-06	1E-05	2E-06	2E-06	5E-06
924	0.65	0.1447	9E-06	1E-05	2E-06	2E-06	5E-06
925	0.65	0.1457	9E-06	1E-05	2E-06	2E-06	5E-06
926	0.66	0.1468		1E-05	3E-06	2E-06	5E-06
927	0.66	0.1479	9E-06	1E-05	3E-06	2E-06	5E-06
928	0.67	0.1489	9E-06	1E-05	3E-06	2E-06	5E-06
929	0.67	0.1503	9E-06	1E-05	3E-06	2E-06	5E-06
930	0.66	0.1484	9E-06	1E-05	3E-06	2E-06	5E-06
931	0.66	0.1473		1E-05	3E-06	2E-06	5E-06
932a	0.64	0.1441	9E-06	1E-05	2E-06	2E-06	5E-06
932b	0.64	0.1432	9E-06	1E-05	2E-06	2E-06	5E-06
933	0.64	0.1437	9E-06	1E-05	2E-06	2E-06	5E-06
934	0.64	0.1426	8E-06	1E-05	2E-06	2E-06	5E-06
935a	0.63	0.1410	8E-06	1E-05	2E-06	2E-06	5E-06
935b	0.63	0.1420	8E-06	1E-05	2E-06	2E-06	5E-06
936	0.62	0.1390	8E-06	1E-05	2E-06	2E-06	5E-06
937	0.63	0.1402	8E-06	1E-05	2E-06	2E-06	5E-06
938	0.63	0.1412	8E-06	1E-05	2E-06	2E-06	5E-06
939	0.63	0.1418	8E-06	1E-05	2E-06	2E-06	5E-06
940	0.64	0.1428	8E-06	1E-05	2E-06	2E-06	5E-06
941	0.64	0.1434	9E-06	1E-05	2E-06	2E-06	5E-06
942	0.63	0.1401	8E-06	1E-05	2E-06	2E-06	5E-06
943	0.62	0.1390	8E-06	1E-05	2E-06	2E-06	5E-06
944	0.62	0.1383	8E-06	1E-05	2E-06	2E-06	5E-06
945a	0.61	0.1371	8E-06	1E-05	2E-06	2E-06	5E-06
945b	0.61	0.1364	8E-06	1E-05	2E-06	2E-06	5E-06
946	0.61	0.1364	8E-06	1E-05	2E-06	2E-06	5E-06
947	0.60	0.1356	8E-06	1E-05	2E-06	2E-06	5E-06
948	0.59	0.1322	8E-06	1E-05	2E-06	2E-06	4E-06
949	0.60	0.1348	8E-06	1E-05	2E-06	2E-06	5E-06
950	0.60	0.1341	8E-06	1E-05	2E-06	2E-06	5E-06
951	0.59	0.1327	8E-06	1E-05	2E-06	2E-06	4E-06
952	0.59	0.1317	8E-06	1E-05	2E-06	2E-06	4E-06
953	0.58	0.1302	8E-06	1E-05	2E-06	2E-06	4E-06
954	0.57	0.1291	8E-06	1E-05	2E-06	2E-06	4E-06
955	0.58	0.1309	8E-06	1E-05	2E-06	2E-06	4E-06
956	0.57	0.1271	8E-06	9E-06	2E-06	2E-06	4E-06
957a	0.54	0.1217	7E-06	9E-06	2E-06	2E-06	4E-06
957b	0.57	0.1279	8E-06	9E-06	2E-06	2E-06	4E-06
958	0.57	0.1285	8E-06	9E-06	2E-06	2E-06	4E-06

Sensitive Receptors	Change in Annual Average PM10 Concentration (µg/m³)	Change in Annual Average PM2.5 Concentration (µg/m³)	Risk (PM <sub>2.5</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> CV Hospitalisations, >65 years)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)	Risk (PM <sub>10</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> Asthma ED admissions, 1-14 years)
959	0.57	0.1292	8E-06	1E-05	2E-06	2E-06	4E-06
960	0.58	0.1299	8E-06	1E-05	2E-06	2E-06	4E-06
961	0.58	0.1307	8E-06	1E-05	2E-06	2E-06	4E-06
962	0.59	0.1316	8E-06	1E-05	2E-06	2E-06	4E-06
963	0.59	0.1327	8E-06	1E-05	2E-06	2E-06	4E-06
964	0.60	0.1338	8E-06	1E-05	2E-06	2E-06	5E-06
965	0.59	0.1319	8E-06	1E-05	2E-06	2E-06	4E-06
966	0.58	0.1300	8E-06	1E-05	2E-06	2E-06	4E-06
967a	0.58	0.1292	8E-06	1E-05	2E-06	2E-06	4E-06
967b	0.57	0.1284	8E-06	9E-06	2E-06	2E-06	4E-06
968	0.57	0.1287	8E-06	1E-05	2E-06	2E-06	4E-06
969	0.57	0.1276	8E-06	9E-06	2E-06	2E-06	4E-06
970	0.57	0.1272	8E-06	9E-06	2E-06	2E-06	4E-06
971	0.56	0.1267	8E-06	9E-06	2E-06	2E-06	4E-06
972	0.56	0.1259	7E-06	9E-06	2E-06	2E-06	4E-06
973	0.56	0.1255	7E-06	9E-06	2E-06	2E-06	4E-06
974	0.55	0.1248	7E-06	9E-06	2E-06	2E-06	4E-06
976	0.54	0.1210	7E-06	9E-06	2E-06	2E-06	4E-06
977a	0.55	0.1240	7E-06	9E-06	2E-06	2E-06	4E-06
977b 978	0.56 0.53	0.1250 0.1199	7E-06	9E-06	2E-06 2E-06	2E-06	4E-06
979a	0.53	0.1141	7E-06 7E-06	9E-06 8E-06	2E-06 2E-06	2E-06 2E-06	4E-06 4E-06
979b	0.53	0.1193	7E-06	9E-06	2E-06	2E-06	4E-06
980	0.52	0.1174	7E-06	9E-06	2E-06	2E-06	4E-06
981a	0.52	0.1180	7E-06	9E-06	2E-06	2E-06	4E-06
981b	0.53	0.1187	7E-06	9E-06	2E-06	2E-06	4E-06
982	0.53	0.1187	7E-06	9E-06	2E-06	2E-06	4E-06
983	0.53	0.1198	7E-06	9E-06	2E-06	2E-06	4E-06
984	0.54	0.1210	7E-06	9E-06	2E-06	2E-06	4E-06
985	0.54	0.1223	7E-06	9E-06	2E-06	2E-06	4E-06
986	0.54	0.1214	7E-06	9E-06	2E-06	2E-06	4E-06
987	0.55	0.1229	7E-06	9E-06	2E-06	2E-06	4E-06
988a	0.55	0.1235	7E-06	9E-06	2E-06	2E-06	4E-06
988b	0.55	0.1240	7E-06	9E-06	2E-06	2E-06	4E-06
989a	0.55	0.1244	7E-06	9E-06	2E-06	2E-06	4E-06
989b	0.55	0.1248	7E-06	9E-06	2E-06	2E-06	4E-06
990	0.56	0.1255	7E-06	9E-06	2E-06	2E-06	4E-06
991	0.56	0.1263	8E-06	9E-06	2E-06	2E-06	4E-06
992	0.56	0.1268	8E-06	9E-06	2E-06	2E-06	4E-06
993a	0.56	0.1265	8E-06	9E-06	2E-06	2E-06	4E-06
993b	0.56	0.1266	8E-06	9E-06	2E-06	2E-06	4E-06
994a	0.57	0.1274	8E-06	9E-06	2E-06	2E-06	4E-06
994b	0.56	0.1270	8E-06	9E-06	2E-06	2E-06	4E-06
995	0.57	0.1278	8E-06	9E-06	2E-06	2E-06	4E-06
997	0.58	0.1297	8E-06	1E-05	2E-06	2E-06	4E-06
998	0.58	0.1302	8E-06	1E-05	2E-06	2E-06	4E-06
999	0.57	0.1289	8E-06	1E-05	2E-06	2E-06	4E-06
1000	0.56	0.1269	8E-06	9E-06	2E-06	2E-06	4E-06
	0.56	0.1258	7E-06	9E-06	2E-06	2E-06	4E-06
1002 1003	0.56 0.55	0.1250 0.1243	7E-06	9E-06	2E-06 2E-06	2E-06	4E-06 4E-06
1004	0.55	0.1235	7E-06 7E-06	9E-06 9E-06	2E-06	2E-06 2E-06	4E-06
1005	0.55	0.1228	7E-06	9E-06	2E-06	2E-06	4E-06
1006	0.54	0.1221	7E-06	9E-06	2E-06	2E-06	4E-06
1007	0.54	0.1216	7E-06	9E-06	2E-06	2E-06	4E-06
1008	0.54	0.1208	7E-06	9E-06	2E-06	2E-06	4E-06
1009	0.53	0.1194	7E-06	9E-06	2E-06	2E-06	4E-06
1010	0.54	0.1208	7E-06	9E-06	2E-06	2E-06	4E-06
1011	0.54	0.1220	7E-06	9E-06	2E-06	2E-06	4E-06
1012	0.55	0.1230	7E-06	9E-06	2E-06	2E-06	4E-06
1014	0.55	0.1249	7E-06	9E-06	2E-06	2E-06	4E-06
1015	0.56	0.1257	7E-06	9E-06	2E-06	2E-06	4E-06
1016	0.55	0.1235	7E-06	9E-06	2E-06	2E-06	4E-06
1017	0.54	0.1223	7E-06	9E-06	2E-06	2E-06	4E-06
1018	0.54	0.1210	7E-06	9E-06	2E-06	2E-06	4E-06
1019	0.54	0.1206	7E-06	9E-06	2E-06	2E-06	4E-06
1020	0.53	0.1195	7E-06	9E-06	2E-06	2E-06	4E-06
1021	0.53	0.1189	7E-06	9E-06	2E-06	2E-06	4E-06
1022	0.52	0.1182	7E-06	9E-06	2E-06	2E-06	4E-06
1023	0.52	0.1176	7E-06	9E-06	2E-06	2E-06	4E-06
1024	0.52	0.1164	7E-06	9E-06	2E-06	2E-06	4E-06
1025	0.54	0.1207	7E-06	9E-06	2E-06	2E-06	4E-06
1026	0.54	0.1219	7E-06	9E-06	2E-06	2E-06	4E-06
1027	0.54	0.1210	7E-06	9E-06	2E-06	2E-06	4E-06
1028	0.53	0.1194	7E-06	9E-06	2E-06	2E-06	4E-06
1029	0.52	0.1176	7E-06	9E-06	2E-06	2E-06	4E-06
1030	0.52	0.1172	7E-06	9E-06	2E-06	2E-06	4E-06
1031	0.51	0.1156	7E-06	9E-06	2E-06	2E-06	4E-06
1032	0.51	0.1147	7E-06	8E-06	2E-06	2E-06	4E-06
1033	0.51	0.1144	7E-06	8E-06	2E-06	2E-06	4E-06
1034	0.50	0.1132	7E-06	8E-06	2E-06	2E-06	4E-06
1035	0.50	0.1120	7E-06	8E-06	2E-06	2E-06	4E-06
1036a	0.49	0.1110	7E-06	8E-06	2E-06	2E-06	4E-06
1036b	0.50	0.1121	7E-06	8E-06	2E-06	2E-06	4E-06
1037	0.50	0.1127	7E-06	8E-06	2E-06	2E-06	4E-06
1038	0.50	0.1135	7E-06	8E-06	2E-06	2E-06	4E-06
1039	0.51	0.1146	7E-06	8E-06	2E-06	2E-06	4E-06
1040	0.51	0.1154	7E-06	9E-06	2E-06	2E-06	4E-06
1041	0.51	0.1158	7E-06	9E-06	2E-06	2E-06	4E-06
1042	0.52	0.1163	7E-06	9E-06	2E-06	2E-06	4E-06
1043	0.52	0.1178	7E-06	9E-06	2E-06	2E-06	4E-06
1044	0.52	0.1167	7E-06	9E-06	2E-06	2E-06	4E-06
1045	0.49	0.1112	7E-06	8E-06	2E-06	2E-06	4E-06
1046	0.48	0.1094	7E-06	8E-06	2E-06	2E-06	4E-06
1077	0.50	0.1132	7E-06	8E-06	2E-06	2E-06	4E-06
1078 1079	0.48 0.47	0.1095 0.1065	7E-06	8E-06	2E-06	2E-06	4E-06
1080	0.46	0.1052	6E-06 6E-06	8E-06 8E-06	2E-06 2E-06	2E-06 2E-06	4E-06 4E-06
1081	0.48	0.1082	6E-06	8E-06	2E-06	2E-06	4E-06
1082a	0.49	0.1102	7E-06	8E-06	2E-06	2E-06	4E-06
1082b	0.50	0.1121	7E-06	8E-06	2E-06	2E-06	4E-06
1100a	0.14	0.0331	2E-06	2E-06	6E-07	5E-07	1E-06
1100b	0.13	0.0327	2E-06	2E-06	6E-07	5E-07	1E-06
Council/State-owned receptors							
286e	0.63	0.1350	8E-06	1E-05	2E-06	2E-06	5E-06
286f	0.60	0.1273	8E-06	9E-06	2E-06	2E-06	4E-06
N1	0.51	0.1157	7E-06	9E-06	2E-06	2E-06	4E-06
N2	0.51	0.1150	7E-06	8E-06	2E-06	2E-06	4E-06
N3	0.51	0.1143	7E-06	8E-06	2E-06	2E-06	4E-06
N4	0.50	0.1137	7E-06	8E-06	2E-06	2E-06	4E-06
N5	0.52	0.1171	7E-06	9E-06	2E-06	2E-06	4E-06
N6	0.52	0.1176	7E-06	9E-06	2E-06	2E-06	4E-06
N7	0.52	0.1182	7E-06	9E-06	2E-06	2E-06	4E-06
N8	0.53	0.1188	7E-06	9E-06	2E-06	2E-06	4E-06
	0.53	0.1193	7E-06	9E-06	2E-06	2E-06	4E-06
N9 N10	0.53	0.1202	7E-06	9E-06	2E-06	2E-06	4E-06

1	Sensitive Receptors	Change in Annual Average PM10 Concentration (μg/m³)	Change in Annual Average PM2.5 Concentration (µg/m³)	Risk (PM <sub>2.5</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> CV Hospitalisations, >65 years)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)	Risk (PM <sub>10</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> Asthma ED admissions, 1-14 years)
1	N12 N13							
1.	N14	0.49	0.1117	7E-06	8E-06	2E-06	2E-06	4E-06
1	N16	0.50	0.1128	7E-06	8E-06	2E-06	2E-06	4E-06
	N17 N18							
1.   1.   1.   1.   1.   1.   1.   1.	N19 N20	0.51		7E-06	8E-06	2E-06	2E-06	
1.	N21	0.53	0.1185	7E-06	9E-06	2E-06	2E-06	4E-06
1.	N22 N23							
10	N24 N25							
1.00	N26	0.67	0.1445	9E-06	1E-05	2E-06	2E-06	5E-06
March   Marc	N27 N28							
1.	Aged care receptors			5E 05				3E 05
1.00	658b	3.64	0.7588	5E-05	6E-05	1E-05	1E-05	3E-05
10	658c 658d							
	658e			5E-05	6E-05	1E-05	1E-05	3E-05
	MP1				1E-05	2E-06		
	MP42 MP80							
2.25	Commercial accomodation	0.00	0.1170	72 00	02 00	22 00	22 00	42 00
1.	receptors 622b	3.81	0.7947	5E-05	6E-05	1E-05	1E-05	3E-05
222	622c	3.81	0.7953	5E-05	6E-05	1E-05	1E-05	3E-05
1.       1.     1.     1.     1.     1.     1.     1.     1.     1.     1.     1.     1.     1.     1.     1.     1.     1.     1.       1.	622e	3.78	0.7888	5E-05	6E-05	1E-05	1E-05	3E-05
27	622f 622g			5E-05	6E-05			
201	622h	3.79	0.7917	5E-05	6E-05	1E-05	1E-05	3E-05
1.00	622i 622j	3.80	0.7941	5E-05	6E-05	1E-05	1E-05	3E-05
230	622k	3.80	0.7932	5E-05	6E-05	1E-05	1E-05	3E-05
2.10	622m	3.81	0.7952	5E-05	6E-05	1E-05	1E-05	3E-05
2.10	622n 622o							
232   3.76	622p	3.79	0.7910	5E-05	6E-05	1E-05	1E-05	3E-05
232   3.73	622r							
232   3.84	622s							
271   27764   56.05   56.05   16.05   15.05	622u	3.84	0.8014	5E-05	6E-05	1E-05	1E-05	3E-05
3   1	622v 622w							
375	622x	3.81	0.7965	5E-05	6E-05	1E-05	1E-05	3E-05
2328	622z				6E-05	1E-05		
3.63	622aa 622ah							
3,82	622ac	3.83	0.8006	5E-05	6E-05	1E-05	1E-05	3E-05
2329	622ad 622ae							
192	622af			5E-05	6E-05	1E-05	1E-05	3E-05
5.78	975			7E-06	9E-06	2E-06	2E-06	4E-06
1.54	Commercial receptors	5.78	1 1993					
1902   2.08	195e	1.54	0.3279	2E-05	2E-05	6E-06	6E-06	1E-05
100-14   2.09	140b-2							
026         2,60         0,5430         SE-05         4E-05         19-06         1E-05         2E-05           026         2,68         0,5607         SE-05         4E-05         9E-06         1E-05         2E-05           027         2,60         0,5443         SE-05         4E-05         9E-06         1E-05         2E-05           038         2,62         0,5443         SE-05         4E-05         9E-06         1E-05         2E-05           038         2,62         0,5443         SE-06         4E-05         9E-06         1E-05         2E-06           040         2,62         0,5443         SE-06         4E-05         9E-06         1E-06         2E-06           1272         0,28         0,0445         4E-06         SE-06         1E-06         1E-06         2E-06           1274         0,29         0,0686         4E-06         SE-06         1E-06         1E-06         2E-06           128         0,29         0,0666         4E-06         SE-06         1E-06         1E-06         2E-06           129         0,0666         4E-06         SE-06         1E-06         1E-06         2E-06         1E-06         1E-06         1E-06<	140b-3 140b-4							
2,65	202c	2.60	0.5430	3E-05	4E-05	9E-06	1E-05	2E-05
2.60	202d 202e							
	202f							
	472d	0.28	0.0650	4E-06	5E-06	1E-06	1E-06	2E-06
72g         0.29         0.0674         4E-06         5E-06         1E-06         1E-06         2E-06           72h         0.29         0.0660         4E-06         5E-06         1E-06         1E-06         2E-06           72l         0.28         0.0666         4E-06         5E-06         1E-06         1E-06         2E-06           72k         0.28         0.0647         4E-06         5E-06         1E-06         1E-06         2E-06           72l         0.30         0.0690         4E-06         5E-06         1E-06         1E-06         2E-06           72m         0.29         0.0683         4E-06         5E-06         1E-06         1E-06         2E-06           89         3.74         0.7667         5E-05         6E-05         1E-05         1E-05         3E-05           40         4.06         0.8470         5E-05         6E-05         1E-05         1E-05         3E-05           468         4.53         0.9429         6E-05         7E-05         2E-05         2E-05         2E-05         4E-05	472e 472f							
	472g	0.29	0.0674	4E-06	5E-06	1E-06	1E-06	2E-06
	472i	0.29	0.0666	4E-06	5E-06	1E-06	1E-06	2E-06
	472j 472k							
3.74	4721	0.30	0.0690	4E-06	5E-06	1E-06	1E-06	2E-06
406   0.8470   5E-05   6E-05   1E-05   3E-05   3E-05	489	3.74			6E-05			
445   0,9268   6E-05   7E-05   2E-05   3E-05   3E-05     444   0,9256   6E-05   6E-05   7E-05   2E-05   3E-05     176   3.77   0,7880   5E-05   6E-05   1E-05   1E-05   3E-05     176   3.87   0,8079   3E-05   6E-05   1E-05   1E-05   3E-05     176   3.88   0,8071   3E-05   6E-05   1E-05   1E-05   3E-05     176   3.88   0,8117   5E-05   6E-05   1E-05   1E-05   3E-05     177   3.88   0,8117   5E-05   6E-05   1E-05   1E-05   3E-05     178   3.87   0,8092   5E-05   6E-05   1E-05   1E-05   3E-05     179   3.76   0,7866   5E-05   6E-05   1E-05   1E-05   3E-05     170   3.80   0,7944   5E-05   6E-05   1E-05   1E-05   3E-05     170   3.80   0,7946   5E-05   6E-05   1E-05   1E-05   3E-05     180   3.78   0,7902   5E-05   6E-05   1E-05   1E-05   3E-05     180   3.72   0,7776   5E-05   6E-05   1E-05   1E-05   3E-05     180   3.59   0,7512   4E-05   6E-05   1E-05   1E-05   3E-05     22ak   3.70   0,7752   3E-05   6E-05   1E-05   1E-05   3E-05     225   3.63   0,7599   5E-05   6E-05   1E-05   1E-05   3E-05     226   3.61   0,7551   4E-05   6E-05   1E-05   1E-05   3E-05     228   3.61   0,7551   4E-05   6E-05   1E-05   1E-05   3E-05     328   3.63   0,7388   4E-05   6E-05   1E-05   1E-05   3E-05     320   3.55   0,7438   4E-05   6E-05   1E-05   1E-05   3E-05     320   3.56   0,7459   4E-05   5E-05   1E-05   1E-05   3E-05     320   3.56   0,7459   4E-05   5E-05   1E-05   1E-05   3E-05     320   3.56   0,7459   4E-05   5E-05   1E-05   1E-05   3E-05     320   3.56   0,7438   4E-05   5E-05   1E-05   1E-05   3E-05     320   320	540 546a							
17b	546b	4.45	0.9268	6E-05	7E-05	2E-05	2E-05	3E-05
17c	546c 617b							
17e   3.88	617c	3.87	0.8079	5E-05	6E-05	1E-05	1E-05	3E-05
17g   3.76	617e	3.88	0.8117	5E-05	6E-05	1E-05	1E-05	3E-05
17h	617f 617g							
20         3.66         0.7661         5E-05         6E-05         1E-05         3E-05           22ah         3.78         0.7902         5E-05         6E-05         1E-05         1E-05         3E-05           22al         3.78         0.7900         5E-05         6E-05         1E-05         1E-05         3E-05           11aj         3.72         0.7776         5E-05         6E-05         1E-05         1E-05         3E-05           22ak         3.70         0.7732         5E-05         6E-05         1E-05         1E-05         3E-05           25         3.63         0.7599         5E-05         6E-05         1E-05         1E-05         3E-05           29         3.59         0.7512         4E-05         6E-05         1E-05         1E-05         3E-05           26         3.62         0.7577         5E-05         6E-05         1E-05         1E-05         3E-05           27         3.61         0.7551         4E-05         6E-05         1E-05         1E-05         3E-05           28         3.60         0.7531         4E-05         6E-05         1E-05         1E-05         3E-05           28         3.53	617h	3.81	0.7964	5E-05	6E-05	1E-05	1E-05	3E-05
22ah         3.78         0.7902         5E-05         6E-05         1E-05         3E-05           22ai         3.78         0.7900         5E-05         6E-05         1E-05         1E-05         3E-05           21ai         3.72         0.7776         5E-05         6E-05         1E-05         3E-05           22ak         3.70         0.7732         5E-05         6E-05         1E-05         3E-05           25         3.63         0.7599         5E-05         6E-05         1E-05         1E-05         3E-05           29         3.59         0.7591         4E-05         6E-05         1E-05         1E-05         3E-05           26         3.62         0.7577         5E-05         6E-05         1E-05         1E-05         3E-05           27         3.61         0.7551         4E-05         6E-05         1E-05         1E-05         3E-05           28         3.60         0.7551         4E-05         6E-05         1E-05         1E-05         3E-05           30a         3.53         0.7388         4E-05         5E-05         1E-05         1E-05         3E-05           30b         3.56         0.7459         4E-05	617i 620	3.66	0.7661	5E-05	6E-05	1E-05	1E-05	3E-05
11aj   3.72	622ah 622ai			5E-05	6E-05			3E-05
25         3.63         0.7599         5E-05         6E-05         1E-05         3E-05           29         3.59         0.7512         4E-05         6E-05         1E-06         1E-05         3E-05           26         3.62         0.7577         5E-05         6E-05         1E-05         3E-05           27         3.61         0.7551         4E-05         6E-05         1E-05         1E-05         3E-05           28         3.60         0.7531         4E-05         6E-05         1E-05         1E-05         3E-05           30a         3.53         0.7388         4E-05         5E-05         1E-05         1E-05         3E-05           30b         3.56         0.7459         4E-05         6E-05         1E-05         1E-05         3E-05           30c         3.55         0.7438         4E-05         5E-05         1E-05         1E-05         3E-05           30d         3.50         0.7324         4E-05         5E-05         1E-05         1E-05         3E-05           30d         3.50         0.77324         4E-05         5E-05         1E-05         1E-05         3E-05           56         3.69         0.7712         <	611aj	3.72	0.7776	5E-05	6E-05	1E-05	1E-05	3E-05
29         3.59         0.7512         4E-05         6E-05         1E-05         3E-05           26         3.62         0.7577         5E-05         6E-05         1E-05         1E-05         3E-05           27         3.61         0.7551         4E-05         6E-05         1E-05         3E-05           28         3.60         0.7531         4E-05         6E-05         1E-05         1E-05         3E-05           30a         3.53         0.7388         4E-05         5E-05         1E-05         1E-05         3E-05           30b         3.56         0.7459         4E-05         5E-05         1E-05         1E-05         3E-05           30c         3.55         0.7438         4E-05         5E-05         1E-05         1E-05         3E-05           30d         3.50         0.7324         4E-05         5E-05         1E-05         1E-05         3E-05           30d         3.50         0.7324         4E-05         5E-05         1E-05         1E-05         3E-05           30d         3.69         0.7712         5E-05         6E-05         1E-05         1E-05         3E-05           74a         4.02         0.8357	622ak 625							
27         3.61         0.7551         4E-05         6E-05         1E-05         3E-05           28         3.60         0.7531         4E-05         6E-05         1E-05         3E-05           30a         3.53         0.7388         4E-05         5E-05         1E-05         1E-05         2E-05           30b         3.56         0.7459         4E-05         6E-05         1E-05         1E-05         2E-05           30c         3.55         0.7438         4E-05         5E-05         1E-05         1E-05         3E-05           30d         3.50         0.7324         4E-05         5E-05         1E-05         1E-05         3E-05           36e         0.7712         5E-05         6E-05         1E-05         1E-05         2E-05           56         3.69         0.7712         5E-05         6E-05         1E-05         1E-05         3E-05           74a         4.02         0.8357         5E-05         6E-05         1E-05         1E-05         3E-05           74b         4.08         0.8475         5E-05         6E-05         1E-05         1E-05         3E-05           18a         3.36         0.6991         4E-05	629	3.59	0.7512	4E-05	6E-05	1E-05	1E-05	3E-05
28         3.60         0.7531         4E-05         6E-05         1E-05         3E-05           30a         3.53         0.7388         4E-05         5E-05         1E-05         1E-05         2E-05           30b         3.56         0.7459         4E-05         6E-05         1E-05         1E-05         3E-05           30c         3.55         0.7438         4E-05         5E-05         1E-05         1E-05         3E-05           30d         3.50         0.7324         4E-05         5E-05         1E-05         1E-05         3E-05           56         3.69         0.7712         5E-05         6E-05         1E-05         1E-05         3E-05           74a         4.02         0.8357         5E-05         6E-05         1E-05         1E-05         3E-05           74b         4.08         0.8475         5E-05         6E-05         1E-05         1E-05         3E-05           18a         3.36         0.6991         4E-05         5E-05         1E-05         1E-05         2E-05           18b         3.37         0.7002         4E-05         5E-05         1E-05         1E-05         2E-05	626 627	3.61	0.7551	4E-05	6E-05			
30b         3.56         0.7459         4E-05         6E-05         1E-05         1E-05         3E-05           30c         3.55         0.7438         4E-05         5E-05         1E-05         1E-05         3E-05           30d         3.50         0.7324         4E-05         5E-05         1E-05         1E-05         2E-05           56         3.69         0.7712         5E-05         6E-05         1E-05         1E-05         3E-05           74a         4.02         0.8357         5E-05         6E-05         1E-05         1E-05         3E-05           74b         4.08         0.8475         5E-05         6E-05         1E-05         1E-05         3E-05           18a         3.36         0.6991         4E-05         5E-05         1E-05         1E-05         2E-05           18b         3.37         0.7002         4E-05         5E-05         1E-05         1E-05         2E-05	628 630a	3.60		4E-05	6E-05	1E-05	1E-05	3E-05
30d         3.50         0.7324         4E-05         5E-05         1E-05         2E-05           56         3.69         0.7712         5E-05         6E-05         1E-05         1E-05         3E-05           74a         4.02         0.8357         5E-05         6E-05         1E-05         1E-05         3E-05           74b         4.08         0.8475         5E-05         6E-05         1E-05         1E-05         3E-05           18a         3.36         0.6991         4E-05         5E-05         1E-05         1E-05         2E-05           18b         3.37         0.7002         4E-05         5E-05         1E-05         1E-05         2E-05	630b	3.56	0.7459	4E-05	6E-05	1E-05	1E-05	3E-05
56         3.69         0.7712         5E-05         6E-05         1E-05         1E-05         3E-05           74a         4.02         0.8357         5E-05         6E-05         1E-05         1E-05         3E-05           74b         4.08         0.8475         5E-05         6E-05         1E-05         1E-05         3E-05           18a         3.36         0.6991         4E-05         5E-05         1E-05         1E-05         2E-05           18b         3.37         0.7002         4E-05         5E-05         1E-05         1E-05         2E-05	630c 630d							
74b     4.08     0.8475     5E-05     6E-05     1E-05     1E-05     3E-05       18a     3.36     0.6991     4E-05     5E-05     1E-05     1E-05     2E-05       18b     3.37     0.7002     4E-05     5E-05     1E-05     1E-05     2E-05       2E-05	656	3.69	0.7712	5E-05	6E-05	1E-05	1E-05	3E-05
18a         3.36         0.6991         4E-05         5E-05         1E-05         1E-05         2E-05           18b         3.37         0.7002         4E-05         5E-05         1E-05         1E-05         2E-05	674b	4.08	0.8475	5E-05	6E-05	1E-05	1E-05	3E-05
	818a 818h				5E-05		1E-05	
22.00	8180 844b							

Sensitive Receptors	Change in Annual Average PM10 Concentration (µg/m³)	Change in Annual Average PM2.5 Concentration (µg/m³)	Risk (PM <sub>2.5</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> CV Hospitalisations, >65 years)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)	Risk (PM <sub>10</sub> Mortality all causes)	Risk (PM <sub>2.5</sub> Asthma ED admissions, 1-14 years)
872b	1.93	0.4045	2E-05	3E-05	7E-06	7E-06	1E-05
1085	0.48	0.1078	6E-06	8E-06	2E-06	2E-06	4E-06
2ap	0.89	0.1937	1E-05	1E-05	3E-06	3E-06	7E-06
2aq	0.89	0.1928	1E-05	1E-05	3E-06	3E-06	7E-06
2ar	0.88	0.1921	1E-05	1E-05	3E-06	3E-06	6E-06
5h	0.28	0.0658	4E-06	5E-06	1E-06	1E-06	2E-06
5w	0.42	0.0951	6E-06	7E-06	2E-06	2E-06	3E-06
5an	0.29	0.0663	4E-06	5E-06	1E-06	1E-06	2E-06
Sao	0.28	0.0658	4E-06	5E-06	1E-06	1E-06	2E-06
5ap	0.42	0.0954	6E-06	7E-06	2E-06	2E-06	3E-06
8q	0.15	0.0367	2E-06	3E-06	6E-07	6E-07	1E-06
Mal4	0.61	0.1270	8E-06	9E-06	2E-06	2E-06	4E-06
Mal5	0.61	0.1274	8E-06	9E-06	2E-06	2E-06	4E-06
Mal6	0.61	0.1284	8E-06	9E-06	2E-06	2E-06	4E-06
UHSC2	0.71	0.1573	9E-06	1E-05	3E-06	3E-06	5E-06
UHSC3	0.69	0.1542	9E-06	1E-05	3E-06	3E-06	5E-06
UHSC4	0.70	0.1559	9E-06	1E-05	3E-06	3E-06	5E-06
N29	0.96	0.2051	1E-05	2E-05	4E-06	4E-06	7E-06
School receptors							
N30	3.99	0.8319	5E-05	6E-05	1E-05	1E-05	3E-05
N31	3.95	0.8226	5E-05	6E-05	1E-05	1E-05	3E-05
N32	3.95	0.8219	5E-05	6E-05	1E-05	1E-05	3E-05
N33	3.99	0.8298	5E-05	6E-05	1E-05	1E-05	3E-05
Church receptors							
520	1.39	0.2928	2E-05	2E-05	5E-06	5E-06	1E-05
658b	3.67	0.7649	5E-05	6E-05	1E-05	1E-05	3E-05
658c	3.66	0.7637	5E-05	6E-05	1E-05	1E-05	3E-05
616c	3.80	0.7951	5E-05	6E-05	1E-05	1E-05	3E-05
N34	0.67	0.1436	9E-06	1E-05	2E-06	2E-06	5E-06
Heritage receptors*							

<sup>\*</sup>No inhabited heritage receptors with elevated health risks identified.

## Quantification of Effects - $PM_{2.5}$ Mount Pleasant - Scenario 6 (incorporating proactive/reactive mitigation measures)

Air quality indicator:	PM <sub>2.5</sub>	PM <sub>2.5</sub>	PM <sub>2.5</sub>	PM <sub>2.5</sub>
Endpoint:	Mortality - All	Hospitalisation -	Hospitalisations -	Morbidity - Asthma
	Causes	Cardiovascular	Respiratory	ED Admissions
Effect Exposure Duration:	Long-term	Short-term	Short-term	Short-term
Age Group:	≥ 30 years	≥ 65 years	≥ 65 years	1-14 years
β (change in effect per 1 μg/m³) (as per Table 5.2)	0.0058	0.0008	0.00041	0.00148
Annual baseline incidence (per 100,000)	1026	9235	4168	2284
Baseline Incidence (per person per year)	0.01026	0.09235	0.04168	0.02284

Change in Annual Sensitive Receptors Average PM <sub>2.5</sub> Concentration (µg/m³)		Risk (PM <sub>2.5</sub> Mortality all causes)	Risk( PM <sub>2.5</sub> CV Hospitalisations, > 65 years)	Risk (PM <sub>2.5</sub> Resp Hospitalisations, >65 years)		Risk (PM <sub>2.5</sub> Asthma ED admissions, 1- 14 years)
Privately-owned receptors						
20	1.3260	8E-05	1E-04	2E-05	П	4E-05
21	1.3436	8E-05	1E-04	2E-05		5E-05
23	1.4031	8E-05	1E-04	2E-05	П	5E-05
102	1.4081	8E-05	1E-04	2E-05	П	5E-05
108	1.4858	9E-05	1E-04	3E-05		5E-05
112	1.6128	1E-04	1E-04	3E-05		5E-05
118	1.5430	9E-05	1E-04	3E-05	П	5E-05
120	1.4896	9E-05	1E-04	3E-05	П	5E-05
120c	1.5120	9E-05	1E-04	3E-05		5E-05
121	1.5450	9E-05	1E-04	3E-05	П	5E-05
153a	2.1513	1E-04	2E-04	4E-05		7E-05
154	1.3160	8E-05	1E-04	2E-05	П	4E-05
154b	1.3213	8E-05	1E-04	2E-05	П	4E-05
156a	0.9836	6E-05	7E-05	2E-05	П	3E-05
157a	0.9169	5E-05	7E-05	2E-05	П	3E-05
158	0.8538	5E-05	6E-05	1E-05		3E-05

## Assessment of Increased Incidence - $PM_{2.5}$ and $PM_{10}$ Mount Pleasant (without proactive/reactive mitigation measures)

		Primary Indicator	s	Secondary Indicators		
Health Endpoint:	Causes, Long- term	Cardiovascular, Short-term	Respiratory, Short-term	All Causes, Short-term	Morbidity - Asthma ED Admissions - Short-term	
Age Group:	≥ 30 years	≥ 65 years	≥ 65 years	All ages	1-14 years	
β (change in effect per 1 μg/m³ PM) (as per Table 5.3)		0.0008	0.00041	0.0006	0.00148	
Scenario 1 (Year 4) Total Population in study area:		2507.5	2507.5	2507.5	2597.5	
% population in assessment age-group:	2597.5 49%		2597.5 13%	2597.5 100%	23%	
Average change Δx (μg/m³):	0.352		0.352	1.641	0.352	
Baseline Incidence (per 100,000) (as per Table 4.4)	1026		4168	610.5	2284.0	
Baseline Incidence (per person)				0.00611	0.02284	
Relative Risk:	1.002041		1.000144	1.000985	1.000520	
Attributable fraction (AF):	2.0E-03		1.4E-04	9.8E-04	5.2E-04	
Increased number of cases in population: Risk:	0.026 2.1E-05		0.0020 6.0E-06	0.016 6.0E-06	0.0069 1.2E-05	
Scenario 2 (Year 6)		2.0E-03	0.0E-00	0.0E-00	1.2E-00	
Total Population in study area:	2597.5	2597.5	2597.5	2597.5	2597.5	
% population in assessment age-group:	49%		13%		23%	
Average change Δx (μg/m³):	0.428	0.428	0.428	2.009	0.428	
Baseline Incidence (per 100,000) (as per Table 4.4)					2284.0	
Baseline Incidence (per person)	0.01026		0.04168		0.02284	
Relative Risk:	1.002483		1.000175		1.000633	
Attributable fraction (AF):  Increased number of cases in population:	2.5E-03 0.032		1.8E-04 0.0024	1.2E-03 0.019	6.3E-04 0.0084	
Risk:	2.5E-05			7.4E-06	1.4E-05	
Scenario 3 (Year 9)		3.ZL-03	7.3L-00	7.4L-00	1.4L-00	
Total Population in study area:	2597.5	2597.5	2597.5	2597.5	2597.5	
% population in assessment age-group:	49%		13%	100%	23%	
Average change Δx (μg/m³):	0.4119				0.4119	
Baseline Incidence (per 100,000) (as per Table 4.4)	1026				2284.0	
Baseline Incidence (per person)	0.01026				0.02284	
Relative Risk:	1.002392				1.000610	
Attributable fraction (AF):  Increased number of cases in population:	2.4E-03 0.031		1.7E-04 0.0024	1.3E-03 0.020	6.1E-04 0.0081	
Risk:	2.5E-05			7.7E-06	1.4E-05	
Scenario 4 (Year 12)		0.02 00	7.02.00	00	2 00	
Total Population in study area:	2597.5		2597.5			
% population in assessment age-group:	49%		13%		23%	
Average change Δx (μg/m³):	0.522		0.522	2.532	0.522	
Baseline Incidence (per 100,000) (as per Table 4.4)	1026					
Baseline Incidence (per person) Relative Risk:					0.02284 1.000773	
Attributable fraction (AF):	3.0E-03		2.1E-04	1.5E-03	7.7E-04	
Increased number of cases in population:	0.039		0.0030		0.010	
Risk:	3.1E-05		8.9E-06		1.8E-05	
Scenario 5 (Year 19)						
Total Population in study area:	2597.5				2597.5	
% population in assessment age-group:	49%				23%	
Average change Δx (μg/m³): Baseline Incidence (per 100,000) (as per Table 4.4)	0.588 1026				0.588 2284.0	
Baseline incidence (per 100,000) (as per 1able 4.4)  Baseline Incidence (per person)					0.02284	
Relative Risk:	1.003415			1.001612	1.000870	
Attributable fraction (AF):			2.4E-04	1.6E-03	8.7E-04	
Increased number of cases in population:	0.044	0.015	0.0034	0.026	0.012	
Risk	3.5E-05	4.3E-05	1.0E-05	9.8E-06	2.0E-05	
Scenario 6 (Year 22)		0507.5	0507.5	0507.5	0507.5	
Total Population in study area: % population in assessment age-group:	2597.5 49%				2597.5 23%	
% population in assessment age-group.  Average change Δx (μg/m³):	0.482				0.482	
Average change Δx (μg/m ).  Baseline Incidence (per 100,000) (as per Table 4.4)				610.5	2284.0	
Baseline Incidence (per reson)					0.02284	
Relative Risk:						
Attributable fraction (AF):	2.8E-03	3.9E-04	2.0E-04	1.4E-03	7.1E-04	
Increased number of cases in population:	0.036			0.022		
Risk:	2.9E-05	3.6E-05	8.2E-06	8.4E-06	1.6E-05	