

Receptor name	NO ₂				PM ₁₀		PM _{2.5}	
	With Reduction		No Reduction		2018	2021	2018	2021
	2018	2021	2018	2021	2018	2021	2018	2021
Resi 12	24.5	21.9	26.9	26.3	20.6	21.1	14.0	14.5
Resi 13	24.5	21.9	26.9	26.3	20.6	20.9	14.0	14.3
Resi 14	24.4	21.9	26.9	26.3	20.6	20.6	14.0	14.1
Fourteenth Floor Level (43.5m above the ground)								
Resi 1	24.2	21.8	26.6	26.1	20.5	21.1	14.0	14.6
Resi 2	24.3	21.8	26.7	26.1	20.6	21.3	14.0	14.8
Resi 3	24.3	21.8	26.7	26.2	20.6	21.5	14.0	15.0
Resi 4	24.3	21.9	26.8	26.2	20.6	21.7	14.0	15.1
Resi 5	24.3	21.8	26.7	26.1	20.6	20.9	14.0	14.3
Resi 6	24.3	21.8	26.8	26.2	20.6	21.0	14.0	14.4
Resi 7	24.4	21.9	26.8	26.3	20.6	21.6	14.0	15.0
Resi 8	24.4	21.9	26.8	26.3	20.6	21.7	14.0	15.1
Resi 9	24.4	21.9	26.9	26.3	20.6	21.4	14.0	14.8
Resi 10	24.4	21.9	26.9	26.3	20.6	21.4	14.0	14.8
Resi 11	24.4	21.9	26.8	26.2	20.6	21.4	14.0	14.8
Resi 12	24.4	21.8	26.8	26.2	20.6	21.2	14.0	14.6
Resi 13	24.4	21.8	26.8	26.2	20.6	20.9	14.0	14.3
Resi 14	24.3	21.8	26.8	26.2	20.6	20.7	14.0	14.1
Sixteenth Floor Level (49.5m above the ground)								
Resi 1	24.2	21.7	26.5	26.0	20.5	21.1	14.0	14.5
Resi 2	24.2	21.8	26.5	26.0	20.5	21.4	14.0	14.8
Resi 3	24.2	21.8	26.6	26.1	20.6	21.6	14.0	15.1
Resi 4	24.2	21.8	26.6	26.1	20.6	21.7	14.0	15.1
Resi 5	24.2	21.8	26.6	26.1	20.5	20.9	14.0	14.4
Resi 6	24.3	21.8	26.6	26.1	20.6	21.1	14.0	14.5

Receptor name	NO ₂				PM ₁₀		PM _{2.5}	
	With Reduction		No Reduction		2018	2021	2018	2021
	2018	2021	2018	2021	2018	2021	2018	2021
Resi 7	24.3	21.9	26.7	26.2	20.6	21.6	14.0	15.0
Resi 8	24.3	21.9	26.7	26.2	20.6	21.7	14.0	15.2
Resi 9	24.4	21.9	26.8	26.2	20.6	21.4	14.0	14.8
Resi 10	24.3	21.9	26.8	26.2	20.6	21.4	14.0	14.8
Resi 11	24.3	21.8	26.7	26.1	20.6	21.4	14.0	14.8
Resi 12	24.3	21.8	26.7	26.1	20.6	21.3	14.0	14.7
Resi 13	24.3	21.8	26.7	26.1	20.6	21.0	14.0	14.4
Resi 14	24.3	21.8	26.7	26.1	20.6	20.7	14.0	14.2
Eighteenth Floor Level (55.5m above the ground)								
Resi 1	24.1	21.8	26.4	25.9	20.5	21.3	13.9	14.8
Resi 2	24.1	21.8	26.5	26.0	20.5	21.4	14.0	14.9
Resi 3	24.2	21.8	26.5	26.0	20.5	21.5	14.0	15.0
Resi 4	24.2	21.8	26.5	26.1	20.6	21.5	14.0	14.9
Resi 5	24.2	21.8	26.5	26.0	20.5	21.1	14.0	14.5
Resi 6	24.2	21.8	26.6	26.0	20.6	21.2	14.0	14.6
Resi 7	24.2	21.9	26.6	26.1	20.6	21.3	14.0	14.8
Resi 8	24.3	22.0	26.6	26.3	20.6	21.4	14.0	14.9
Resi 9	24.3	22.0	26.7	26.3	20.6	21.1	14.0	14.6
Resi 10	24.3	21.9	26.7	26.2	20.6	21.1	14.0	14.6
Resi 11	24.2	21.8	26.6	26.1	20.6	21.2	14.0	14.6
Resi 12	24.2	21.8	26.6	26.0	20.6	21.2	14.0	14.7
Resi 13	24.2	21.8	26.6	26.0	20.6	21.0	14.0	14.5
Resi 14	24.2	21.8	26.6	26.0	20.6	21.0	14.0	14.4
Twentieth Floor Level (61.5m above the ground)								
Resi 1	24.0	21.8	26.3	25.9	20.5	21.7	13.9	15.2

Receptor name	NO ₂				PM ₁₀		PM _{2.5}	
	With Reduction		No Reduction		2018	2021	2018	2021
	2018	2021	2018	2021				
Resi 2	24.0	21.8	26.4	25.9	20.5	21.8	13.9	15.2
Resi 3	24.1	21.8	26.4	26.0	20.5	21.7	14.0	15.2
Resi 4	24.1	21.8	26.5	26.0	20.6	21.7	14.0	15.1
Resi 5	24.1	21.7	26.5	25.9	20.5	21.3	14.0	14.7
Resi 6	24.1	21.7	26.5	26.0	20.5	21.3	14.0	14.8
Resi 7	24.2	21.8	26.5	26.1	20.6	21.5	14.0	14.9
Resi 8	24.2	21.9	26.6	26.1	20.6	21.6	14.0	15.0
Resi 9	24.2	21.8	26.6	26.1	20.6	21.2	14.0	14.7
Resi 10	24.2	21.8	26.6	26.1	20.6	21.2	14.0	14.7
Resi 11	24.2	21.8	26.5	26.0	20.6	21.3	14.0	14.7
Resi 12	24.2	21.8	26.5	26.0	20.6	21.4	14.0	14.8
Resi 13	24.2	21.8	26.5	26.0	20.6	21.2	14.0	14.6
Resi 14	24.1	21.7	26.5	26.0	20.5	21.1	14.0	14.6
Twenty-Second Floor Level (67.5m above the ground)								
Resi 1	24.0	21.7	26.3	25.9	20.5	22.0	13.9	15.5
Resi 2	24.0	21.7	26.3	25.9	20.5	22.1	13.9	15.6
Resi 3	24.1	21.7	26.4	25.9	20.5	21.9	14.0	15.4
Resi 4	24.1	21.8	26.4	25.9	20.5	21.8	14.0	15.3
Resi 5	24.1	21.7	26.4	25.9	20.5	21.4	14.0	14.9
Resi 6	24.1	21.7	26.4	25.9	20.5	21.5	14.0	15.0
Resi 7	24.1	21.8	26.5	26.0	20.6	21.6	14.0	15.0
Resi 8	24.2	21.8	26.5	26.0	20.6	21.7	14.0	15.1
Resi 9	24.2	21.8	26.6	26.0	20.6	21.3	14.0	14.8
Resi 10	24.2	21.8	26.5	26.0	20.6	21.3	14.0	14.8
Resi 11	24.1	21.7	26.5	25.9	20.6	21.4	14.0	14.8

Receptor name	NO ₂				PM ₁₀			PM _{2.5}				
	With Reduction		No Reduction		2018		2021		2018		2021	
Resi 12	2018	2021	2018	2021	2018	2021	2018	2021	2018	2021	2018	2021
Resi 13	24.1	21.7	26.4	25.9	20.5	21.6	14.0	15.0	14.0	14.0	14.0	14.7
Resi 14	24.1	21.7	26.5	25.9	20.6	21.3	14.0	14.7	14.0	14.0	14.0	14.7
Resi 14	24.1	21.7	26.4	25.9	20.5	21.2	14.0	14.7	14.0	14.0	14.0	14.7
Twenty-Fourth Floor Level (73.5m above the ground)												
Resi 1	23.9	21.7	26.2	25.8	20.5	22.2	13.9	15.7	13.9	13.9	13.9	15.7
Resi 2	24.0	21.7	26.3	25.8	20.5	22.3	13.9	15.8	13.9	13.9	13.9	15.8
Resi 3	24.0	21.7	26.3	25.9	20.5	22.0	14.0	15.5	14.0	14.0	14.0	15.5
Resi 4	24.1	21.7	26.4	25.9	20.5	21.9	14.0	15.4	14.0	14.0	14.0	15.4
Resi 11	24.1	21.7	26.4	25.9	20.6	21.4	14.0	14.9	14.0	14.0	14.0	14.9
Resi 12	24.1	21.7	26.4	25.9	20.5	21.6	14.0	15.1	14.0	14.0	14.0	15.1
Resi 1	23.9	21.7	26.2	25.8	20.5	22.2	13.9	15.7	13.9	13.9	13.9	15.7
Resi 2	23.9	21.7	26.2	25.8	20.5	22.3	13.9	15.8	13.9	13.9	13.9	15.8
Resi 3	24.0	21.7	26.3	25.8	20.5	22.0	13.9	15.5	13.9	13.9	13.9	15.5
Resi 4	24.0	21.7	26.3	25.9	20.5	22.0	14.0	15.4	14.0	14.0	14.0	15.4
Resi 11	24.1	21.7	26.4	25.9	20.6	21.5	14.0	15.0	14.0	14.0	14.0	15.0
Resi 12	24.1	21.7	26.4	25.8	20.5	21.7	14.0	15.1	14.0	14.0	14.0	15.1
Resi 1	23.9	21.6	26.2	25.7	20.5	22.0	13.9	15.5	13.9	13.9	13.9	15.5
Resi 2	23.9	21.6	26.2	25.7	20.5	22.1	13.9	15.6	13.9	13.9	13.9	15.6
Resi 3	24.0	21.7	26.3	25.8	20.5	21.9	13.9	15.4	13.9	13.9	13.9	15.4
Resi 4	24.0	21.7	26.3	25.8	20.5	22.0	14.0	15.4	14.0	14.0	14.0	15.4
Resi 11	24.1	21.7	26.4	25.8	20.6	21.6	14.0	15.0	14.0	14.0	14.0	15.0
Resi 12	24.0	21.7	26.3	25.8	20.5	21.6	14.0	15.1	14.0	14.0	14.0	15.1
Twenty-Sixth Floor Level (79.5m above the ground)												
Resi 1	23.9	21.6	26.2	25.7	20.5	21.8	13.9	15.3	13.9	13.9	13.9	15.3
Resi 2	23.9	21.6	26.2	25.7	20.5	21.9	13.9	15.4	13.9	13.9	13.9	15.4

Receptor name	NO ₂				PM ₁₀		PM _{2.5}	
	With Reduction		No Reduction		2018	2021	2018	2021
	2018	2021	2018	2021				
Resi 3	24.0	21.6	26.3	25.7	20.5	21.8	13.9	15.2
Resi 4	24.0	21.7	26.3	25.8	20.5	22.0	14.0	15.5
Resi 11	24.0	21.7	26.3	25.8	20.5	21.7	14.0	15.1
Resi 12	24.0	21.6	26.3	25.8	20.5	21.5	14.0	15.0
Twenty-Eighth Floor Level (85.5m above the ground)								
Resi 3	24.0	21.6	26.2	25.7	20.5	21.5	13.9	15.0
Resi 4	24.0	21.7	26.3	25.8	20.5	21.7	14.0	15.2
Resi 11	24.0	21.6	26.3	25.8	20.5	21.4	14.0	14.8
Resi 12	24.0	21.6	26.3	25.7	20.5	21.3	14.0	14.8
Thirtieth Floor Level (91.5m above the ground)								
Resi 3	23.9	21.5	26.2	25.6	20.5	21.2	13.9	14.7
Resi 4	24.0	21.6	26.2	25.7	20.5	21.2	14.0	14.7
Resi 11	24.0	21.6	26.3	25.7	20.5	21.1	14.0	14.5
Resi 12	24.0	21.6	26.3	25.7	20.5	21.1	14.0	14.5
Thirty-Second Floor Level (97.5m above the ground)								
Resi 3	23.9	21.5	26.2	25.6	20.5	21.0	13.9	14.5
Resi 4	24.0	21.5	26.2	25.6	20.5	20.9	14.0	14.4
Resi 11	24.0	21.5	26.3	25.7	20.5	20.9	14.0	14.3
Resi 12	24.0	21.5	26.3	25.6	20.5	20.9	14.0	14.3
Thirty-Fourth Floor Level (103.5m above the ground)								
Resi 3	23.9	21.5	26.2	25.6	20.5	20.9	13.9	14.4
Resi 4	23.9	21.5	26.2	25.6	20.5	20.8	13.9	14.2
Resi 11	24.0	21.5	26.3	25.6	20.5	20.8	14.0	14.2
Resi 12	24.0	21.5	26.2	25.6	20.5	20.8	14.0	14.2
Roof Level								

Receptor name	NO ₂			PM ₁₀			PM _{2.5}		
	With Reduction		No Reduction	2018		2021	2018		2021
Resi 1	2018	2021	2018	2021	2018	2021	2018	2021	2021
Resi 2	23.9	21.6	26.1	25.7	20.5	21.6	13.9	13.9	15.1
Resi 3	23.9	21.6	26.2	25.7	20.5	21.7	13.9	13.9	15.2
Resi 4	24.0	21.6	26.2	25.7	20.5	21.6	13.9	13.9	15.1
Resi 5	24.0	21.7	26.3	25.8	20.5	21.9	14.0	14.0	15.4
Resi 6	24.1	21.7	26.4	25.9	20.5	21.4	14.0	14.0	14.9
Resi 7	24.1	21.7	26.4	25.9	20.5	21.5	14.0	14.0	15.0
Resi 8	24.1	21.8	26.5	26.0	20.6	21.6	14.0	14.0	15.1
Resi 9	24.1	21.8	26.5	26.0	20.6	21.7	14.0	14.0	15.2
Resi 10	24.2	21.8	26.5	26.0	20.6	21.4	14.0	14.0	14.8
Resi 11	24.2	21.8	26.5	26.0	20.6	21.4	14.0	14.0	14.8
Resi 12	24.0	22.0	26.3	26.1	20.5	25.7	14.0	14.0	19.2
Resi 13	24.0	21.8	26.2	25.9	20.5	24.7	13.9	13.9	18.2
Resi 14	24.1	21.7	26.5	25.9	20.6	21.3	14.0	14.0	14.8
Resi 14	24.1	21.7	26.4	25.9	20.5	21.2	14.0	14.0	14.7
Ground Level (1.5m above the ground)									
Extreme 1	26.7	23.8	30.1	29.7	21.1	22.1	14.3	14.3	15.3
Extreme 2	26.9	23.9	30.3	29.9	21.1	22.1	14.3	14.3	15.4
Extreme 3	28.8	26.0	32.8	33.4	21.5	22.3	14.5	14.5	15.4
Second Floor Level (7.5m above the ground)									
Extreme 1	26.6	23.7	29.9	29.5	21.0	22.0	14.2	14.2	15.3
Extreme 2	26.7	23.8	30.1	29.7	21.1	22.1	14.3	14.3	15.4
Extreme 3	28.6	25.7	32.5	32.9	21.5	22.3	14.5	14.5	15.3
Fourth Floor Level (13.5m above the ground)									
Extreme 1	26.4	23.5	29.6	29.2	21.0	22.0	14.2	14.2	15.3
Extreme 2	26.5	23.6	29.7	29.3	21.0	22.1	14.2	14.2	15.3

Receptor name	NO ₂				PM ₁₀		PM _{2.5}	
	With Reduction		No Reduction		2018	2021	2018	2021
Extreme 3	2018	2021	2018	2021	2018	2021	2018	2021
	28.2	25.4	32.0	32.4	21.4	22.2	14.5	15.3
Sixth Floor Level (19.5m above the ground)								
Extreme 1	26.1	23.3	29.2	28.8	20.9	22.0	14.2	15.3
Extreme 2	26.2	23.3	29.3	28.9	21.0	22.0	14.2	15.3
Extreme 3	27.9	25.2	31.6	32.0	21.4	22.1	14.4	15.3
Eighth Floor Level (25.5m above the ground)								
Extreme 1	25.8	23.0	28.8	28.3	20.9	21.9	14.2	15.2
Extreme 2	25.8	23.1	28.8	28.4	20.9	22.0	14.2	15.3
Extreme 3	25.8	23.0	28.8	28.3	20.9	21.7	14.2	15.0
Tenth Floor Level (31.5m above the ground)								
Extreme 1	25.5	22.8	28.4	27.9	20.8	21.9	14.1	15.2
Extreme 2	25.6	22.8	28.5	28.0	20.9	21.9	14.1	15.3
Extreme 3	25.5	22.8	28.4	27.9	20.9	21.7	14.1	15.0
Twelfth Floor Level (36.5m above the ground)								
Extreme 1	25.3	22.6	28.1	27.6	20.8	21.9	14.1	15.2
Extreme 2	25.3	22.6	28.1	27.6	20.8	21.9	14.1	15.3
Extreme 3	25.3	22.6	28.1	27.6	20.8	21.6	14.1	15.0
Fourteenth Floor Level (40.5m above the ground)								
Extreme 1	25.1	22.5	27.8	27.3	20.8	21.8	14.1	15.2
Extreme 2	25.1	22.5	27.8	27.3	20.8	21.9	14.1	15.2
Extreme 3	25.1	22.5	27.8	27.3	20.8	21.6	14.1	15.0
Sixteenth Floor Level (46.5m above the ground)								
Extreme 1	24.9	22.3	27.6	27.0	20.7	21.8	14.1	15.2
Extreme 2	24.9	22.3	27.6	27.1	20.7	21.9	14.1	15.2
Extreme 3	25.0	22.3	27.6	27.1	20.8	21.6	14.1	15.0

Receptor name	NO ₂		PM ₁₀		PM _{2.5}	
	With Reduction 2018	2021	No Reduction 2018	2021	2018	2021
Eighteenth Floor Level (49.5m above the ground)						
Extreme 1	24.8	22.2	27.4	26.9	20.7	21.8
Extreme 2	24.8	22.2	27.4	26.9	20.7	21.9
Extreme 3	24.8	22.2	27.4	26.9	20.7	21.6
Twentieth Floor Level (45.5m above the ground)						
Extreme 1	24.7	22.1	27.2	26.7	20.7	21.8
Extreme 2	24.7	22.1	27.2	26.7	20.7	21.8
Extreme 3	24.7	22.2	27.3	26.7	20.7	21.6
Twenty-second Floor Level (51.5m above the ground)						
Extreme 1	24.6	22.1	27.1	26.6	20.7	21.8
Extreme 2	24.6	22.1	27.1	26.6	20.7	21.8
Extreme 3	24.6	22.1	27.2	26.6	20.7	21.6
Twenty-fourth Floor Level (57.5m above the ground)						
Extreme 1	24.5	22.0	27.0	26.5	20.7	21.8
Extreme 2	24.5	22.0	27.0	26.5	20.7	21.8
Extreme 3	24.6	22.0	27.1	26.5	20.7	21.6
Twenty-sixth Floor Level (63.5m above the ground)						
Extreme 1	24.5	22.0	26.9	26.4	20.7	21.8
Extreme 2	24.5	22.0	26.9	26.4	20.7	21.8
Extreme 3	24.5	22.0	27.0	26.4	20.7	21.6
Twenty-eighth Floor Level (69.5m above the ground)						
Extreme 1	24.4	21.9	26.9	26.3	20.7	21.8
Extreme 2	24.4	22.0	26.9	26.3	20.7	21.8
Extreme 3	24.5	22.0	26.9	26.4	20.7	21.6
Thirtieth Floor Level (75.5m above the ground)						
Extreme 1	24.4	21.9	26.9	26.3	20.7	21.8
Extreme 2	24.4	22.0	26.9	26.3	20.7	21.8
Extreme 3	24.5	22.0	26.9	26.4	20.7	21.6

Receptor name	NO ₂			PM ₁₀		PM _{2.5}		
	With Reduction 2018	With Reduction 2021	No Reduction 2018	No Reduction 2021	2018	2021	2018	2021
Extreme 1	24.4	21.9	26.8	26.3	20.6	21.8	14.0	15.2
Extreme 2	24.4	21.9	26.8	26.3	20.6	21.9	14.0	15.3
Extreme 3	24.4	21.9	26.8	26.3	20.7	21.6	14.0	15.0
Thirty-second Floor Level (81.5m above the ground)								
Extreme 1	24.3	21.9	26.8	26.2	20.6	21.8	14.0	15.2
Extreme 2	24.3	21.9	26.8	26.2	20.6	21.9	14.0	15.3
Extreme 3	24.4	21.9	26.8	26.3	20.7	21.6	14.0	15.0
Thirty-fourth Floor Level (87.5m above the ground)								
Extreme 1	24.3	22.0	26.7	26.3	20.6	21.8	14.0	15.2
Extreme 2	24.3	21.9	26.7	26.3	20.6	21.9	14.0	15.3
Extreme 3	24.3	22.1	26.7	26.4	20.6	21.6	14.0	15.0
Ground Level (1.5m above the ground)								
Hotel 1	26.9	23.9	30.4	30.0	21.1	22.2	14.3	15.5
Hotel 2	27.3	24.2	30.9	30.5	21.1	22.2	14.3	15.5
Hotel 3	28.8	25.5	32.9	32.7	21.4	21.7	14.5	14.8
Ground Level (1.5m above the ground)								
Hotel 1	26.8	23.8	30.2	29.8	21.1	22.2	14.3	15.5
Hotel 2	27.1	24.1	30.6	30.2	21.1	22.2	14.3	15.5
Hotel 3	28.3	25.0	32.2	31.9	21.4	21.6	14.4	14.8
Ground Level (1.5m above the ground)								
Hotel 1	26.5	23.6	29.8	29.4	21.0	22.2	14.2	15.5
Hotel 2	26.8	23.8	30.2	29.7	21.1	22.2	14.3	15.4
Hotel 3	27.5	24.4	31.2	30.8	21.2	21.5	14.3	14.7
Ground Level (1.5m above the ground)								
Hotel 1	26.2	23.4	29.4	28.9	21.0	22.1	14.2	15.4

Receptor name	NO ₂			PM ₁₀			PM _{2.5}		
	With Reduction		No Reduction						
	2018	2021	2018	2021	2018	2021	2018	2021	
Hotel 2	26.4	23.5	29.6	29.2	21.0	22.1	14.2	15.4	
Hotel 3	26.8	23.8	30.1	29.7	21.1	21.4	14.3	14.6	
	Ground Level (1.5m above the ground)								
Hotel 1	25.9	23.1	28.9	28.5	20.9	22.1	14.2	15.4	
Hotel 2	26.0	23.2	29.0	28.6	20.9	22.1	14.2	15.4	
Hotel 3	26.1	23.3	29.3	28.8	21.0	21.3	14.2	14.6	
	Ground Level (1.5m above the ground)								
Hotel 1	25.6	22.9	28.5	28.0	20.8	22.1	14.1	15.4	
Hotel 2	25.6	22.9	28.5	28.0	20.8	22.0	14.1	15.3	
Hotel 3	25.7	22.9	28.6	28.1	20.9	21.2	14.2	14.6	
	Ground Level (1.5m above the ground)								
Hotel 1	25.3	22.6	28.1	27.6	20.8	22.0	14.1	15.4	
Hotel 2	25.3	22.6	28.1	27.6	20.8	22.0	14.1	15.3	
Hotel 3	25.3	22.6	28.1	27.6	20.8	21.2	14.1	14.5	
	Ground Level (1.5m above the ground)								
Hotel 1	25.1	22.5	27.8	27.3	20.8	22.0	14.1	15.4	
Hotel 2	25.1	22.4	27.7	27.3	20.8	21.9	14.1	15.3	
Hotel 3	25.1	22.4	27.8	27.2	20.8	21.2	14.1	14.5	
	Ground Level (1.5m above the ground)								
Hotel 1	24.9	22.3	27.5	27.0	20.7	22.0	14.1	15.3	
Hotel 2	24.9	22.3	27.5	27.0	20.7	21.9	14.1	15.3	
Hotel 3	24.9	22.3	27.5	27.0	20.8	21.1	14.1	14.5	
	Ground Level (1.5m above the ground)								
Hotel 1	24.7	22.2	27.3	26.8	20.7	22.0	14.0	15.3	
Hotel 2	24.7	22.2	27.3	26.8	20.7	21.9	14.0	15.3	

Receptor name	NO ₂				PM ₁₀		PM _{2.5}	
	With Reduction		No Reduction		2018	2021	2018	2021
Hotel 3	2018	2021	2018	2021	2018	2021	2018	2021
	24.8	22.2	27.4	26.8	20.7	21.1	14.1	14.5
Ground Level (1.5m above the ground)								
Hotel 1	24.6	22.1	27.2	26.7	20.7	21.9	14.0	15.3
Hotel 2	24.6	22.1	27.2	26.6	20.7	21.9	14.0	15.3
Hotel 3	24.7	22.1	27.2	26.7	20.7	21.1	14.1	14.5
Ground Level (1.5m above the ground)								
Hotel 1	24.6	22.1	27.1	26.5	20.7	21.9	14.0	15.3
Hotel 2	24.5	22.0	27.0	26.5	20.7	21.9	14.0	15.3
Hotel 3	24.6	22.1	27.1	26.6	20.7	21.1	14.0	14.5
Ground Level (1.5m above the ground)								
Hotel 1	24.5	22.0	27.0	26.4	20.7	21.9	14.0	15.3
Hotel 2	24.5	22.0	26.9	26.4	20.7	21.9	14.0	15.3
Hotel 3	24.6	22.0	27.0	26.5	20.7	21.1	14.0	14.5
Ground Level (1.5m above the ground)								
Hotel 1	24.4	22.0	26.9	26.3	20.6	21.9	14.0	15.3
Hotel 2	24.4	21.9	26.9	26.3	20.6	21.9	14.0	15.3
Hotel 3	24.5	22.0	27.0	26.4	20.7	21.1	14.0	14.5
Ground Level (1.5m above the ground)								
Hotel 1	24.4	21.9	26.8	26.3	20.6	21.9	14.0	15.4
Hotel 2	24.4	21.9	26.8	26.3	20.6	21.9	14.0	15.3
Hotel 3	24.5	21.9	26.9	26.3	20.7	21.1	14.0	14.5
Ground Level (1.5m above the ground)								
Hotel 1	24.3	21.9	26.7	26.2	20.6	21.9	14.0	15.4
Hotel 2	24.3	21.9	26.7	26.2	20.6	21.9	14.0	15.3
Hotel 3	24.4	21.9	26.9	26.3	20.7	21.1	14.0	14.5

Receptor name	NO ₂			PM ₁₀			PM _{2.5}		
	With Reduction 2018	With Reduction 2021	No Reduction 2018 2021	2018	2021	2018	2021	2018	2021
Hotel 1	24.3	21.9	26.7	20.6	21.9	14.0	15.4		
Hotel 2	24.3	21.9	26.7	20.6	21.9	14.0	15.3		
Hotel 3	24.4	21.9	26.8	20.7	21.1	14.0	14.5		
Ground Level (1.5m above the ground)									
Hotel 1	24.3	21.9	26.7	20.6	21.9	14.0	15.4		
Hotel 2	24.3	21.9	26.6	20.6	21.9	14.0	15.3		
Hotel 3	24.4	21.9	26.8	20.7	21.1	14.0	14.5		
Ground Level (1.5m above the ground)									
Hotel 1	24.2	21.9	26.6	20.6	21.9	14.0	15.3		
Hotel 2	24.2	21.9	26.6	20.6	21.9	14.0	15.4		
Hotel 3	24.3	21.9	26.7	20.7	21.5	14.0	14.9		
Ground Level (1.5m above the ground)									
Hotel 1	24.2	21.9	26.6	20.6	22.0	14.0	15.5		
Hotel 2	24.2	21.9	26.6	20.6	22.1	14.0	15.5		
Hotel 3	24.3	21.9	26.7	20.7	21.5	14.0	14.9		
Ground Level (1.5m above the ground)									
Hotel 1	24.2	21.9	26.5	20.6	22.2	14.0	15.6		
Hotel 2	24.2	21.9	26.5	20.6	22.2	14.0	15.6		
Hotel 3	24.3	21.9	26.7	20.7	21.6	14.0	15.0		
Ground Level (1.5m above the ground)									
Hotel 1	24.2	21.9	26.5	20.6	22.3	14.0	15.7		
Hotel 2	24.2	21.9	26.5	20.6	22.3	14.0	15.7		
Hotel 3	24.3	21.9	26.6	20.6	21.7	14.0	15.1		
Ground Level (1.5m above the ground)									

Receptor name	NO ₂				PM ₁₀		PM _{2.5}	
	With Reduction		No Reduction		2018	2021	2018	2021
Hotel 1	24.2	21.9	26.5	26.1	20.6	22.3	14.0	15.8
Hotel 2	24.1	21.9	26.5	26.1	20.6	22.4	14.0	15.8
Hotel 3	24.3	21.9	26.6	26.2	20.6	21.7	14.0	15.1
Ground Level (1.5m above the ground)								
Hotel 1	24.1	21.9	26.5	26.1	20.6	22.4	14.0	15.8
Hotel 2	24.1	21.9	26.5	26.1	20.6	22.5	14.0	15.9
Hotel 3	24.2	21.9	26.6	26.1	20.6	21.8	14.0	15.2
Ground Level (1.5m above the ground)								
Hotel 1	24.1	21.8	26.4	26.0	20.6	22.4	14.0	15.8
Hotel 2	24.1	21.9	26.4	26.0	20.6	22.5	14.0	15.9
Hotel 3	24.2	21.9	26.6	26.1	20.6	21.8	14.0	15.2
Ground Level (1.5m above the ground)								
Hotel 1	24.1	21.8	26.4	26.0	20.6	22.4	14.0	15.8
Hotel 2	24.1	21.8	26.4	26.0	20.6	22.4	14.0	15.9
Hotel 3	24.2	21.9	26.5	26.1	20.6	21.8	14.0	15.2
Ground Level (1.5m above the ground)								
Hotel 1	24.1	21.8	26.4	26.0	20.6	22.3	14.0	15.7
Hotel 2	24.1	21.8	26.4	26.0	20.6	22.4	14.0	15.8
Hotel 3	24.2	21.9	26.5	26.1	20.6	21.8	14.0	15.2
Ground Level (1.5m above the ground)								
Hotel 1	24.1	21.8	26.4	26.0	20.6	22.6	14.0	16.1

Receptor name	NO ₂				PM ₁₀		PM _{2.5}	
	With Reduction		No Reduction		2018	2021	2018	2021
Hotel 2	24.1	21.8	26.4	26.0	20.6	22.6	14.0	16.0
Hotel 3	24.2	21.9	26.5	26.1	20.6	22.0	14.0	15.4
Ground Level (1.5m above the ground)								
Hotel 1	24.1	21.9	26.4	26.1	20.6	27.3	14.0	20.7
Hotel 2	24.1	21.9	26.4	26.0	20.6	24.0	14.0	17.4
Hotel 3	24.2	21.9	26.5	26.1	20.6	22.8	14.0	16.2
Ground Level (1.5m above the ground)								
Hotel 1	24.1	26.0	26.4	30.1	20.6	35.8	14.0	29.2
Hotel 2	24.1	22.4	26.4	26.6	20.6	26.2	14.0	19.7
Hotel 3	24.2	21.8	26.5	26.0	20.6	23.7	14.0	17.1

Table A6.9.9: Short-Term Impacts in 2021

Receptor Name	NO ₂ 1-hour 99.8 th Percentile Equivalent			PM ₁₀		
	With Reduction	No Reduction	Number of Days Headroom	Equivalent Headroom Percentile	Concentration for relevant percentile	
	Ground Level (1.5m above the ground)					
1	63.4	75.2	31	91.5	1.1	
2	69.9	82.1	31	91.5	1.3	
3	81.9	95.0	31	91.5	2.3	
4	86.6	101.8	30	91.8	2.8	
5	95.8	113.6	30	91.8	2.9	
6	95.0	114.3	30	91.8	2.8	
7	95.8	115.0	29	92.1	2.8	
8	105.3	129.9	28	92.3	2.9	

Receptor Name	NO ₂ 1-hour 99.8 th Percentile Equivalent		Number of Days Headroom	PM ₁₀		Concentration for relevant percentile
	With Reduction	No Reduction		Equivalent Headroom Percentile		
9	93.0	116.6	28	92.3	1.6	
10	95.1	120.7	28	92.3	1.5	
11	77.0	93.6	30	91.8	1.0	
12	69.8	84.5	30	91.8	0.7	
13	72.1	87.6	30	91.8	0.8	
14	80.1	100.1	29	92.1	1.1	
15	74.4	91.6	29	92.1	0.9	
16	78.6	101.1	28	92.3	0.8	
17	80.0	104.3	28	92.3	0.8	
18	85.4	115.1	26	92.9	0.7	
19	74.9	95.7	28	92.3	0.7	
20	73.5	92.3	29	92.1	0.8	
21	74.3	93.1	29	92.1	0.9	
22	73.5	90.8	29	92.1	0.9	
23	75.7	92.6	29	92.1	1.0	
24	92.0	115.1	28	92.3	1.3	
25	90.6	111.1	28	92.3	1.5	
26	95.9	117.8	27	92.6	1.7	
27	94.2	115.3	27	92.6	1.7	
28	92.7	113.4	28	92.3	1.7	
29	91.7	113.2	29	92.1	1.8	
30	91.3	111.5	29	92.1	2.0	
31	84.3	98.3	30	91.8	2.5	
32	90.7	103.0	31	91.5	3.0	
33	88.2	100.0	31	91.5	2.9	

J2299

165 of 200

September 2015

Receptor Name	NO ₂ 1-hour 99.8 th Percentile Equivalent		Number of Days Headroom	PM ₁₀	
	With Reduction	No Reduction		Equivalent Headroom Percentile	Concentration for relevant percentile
34	89.9	104.1	30	91.8	3.2
35	96.1	115.1	30	91.8	3.9
36	97.0	116.0	30	91.8	4.1
37	96.9	121.8	28	92.3	3.0
38	98.5	121.8	29	92.1	3.1
39	82.4	99.2	30	91.8	2.5
40	93.6	117.1	29	92.1	3.5
41	98.5	124.1	28	92.3	3.5
42	102.5	131.4	27	92.6	3.2
43	91.9	118.2	28	92.3	2.4
44	76.8	90.5	31	91.5	2.4
45	102.8	129.6	26	92.9	2.9
46	80.6	96.1	30	91.8	2.1
47	84.9	103.2	29	92.1	2.2
48	84.2	101.2	30	91.8	2.3
49	73.1	87.0	30	91.8	1.5
50	73.9	89.9	30	91.8	1.2
51	92.6	116.0	28	92.3	2.7
52	89.2	114.7	28	92.3	2.0
53	103.1	132.1	27	92.6	3.4
54	82.8	109.6	28	92.3	1.6
55	106.5	136.4	27	92.6	2.6
56	115.6	147.5	26	92.9	2.8
57	125.8	164.2	24	93.4	2.9
58	118.8	156.4	24	93.4	2.7

Receptor Name	NO ₂ 1-hour 99.8 th Percentile Equivalent		Number of Days Headroom	PM ₁₀		Concentration for relevant percentile
	With Reduction	No Reduction		Equivalent Headroom Percentile		
59	77.0	99.0	29	92.1		2.0
60	98.9	113.8	30	91.8		5.0
61	87.5	101.4	31	91.5		4.8
62	79.2	90.9	31	91.5		2.6
63	87.4	97.9	31	91.5		3.9
64	75.0	85.1	31	91.5		6.2
65	79.5	89.8	31	91.5		6.2
66	87.3	99.1	31	91.5		6.0
67	69.6	79.2	31	91.5		5.9
68	74.2	83.3	31	91.5		2.9
69	74.4	83.6	31	91.5		3.0
70	79.3	88.8	31	91.5		3.0
71	74.2	83.6	31	91.5		1.9
72	65.9	75.7	31	91.5		1.3
73	85.4	94.0	32	91.2		3.7
74	95.5	105.6	31	91.5		5.7
75	91.8	102.8	31	91.5		3.5
76	99.2	109.2	31	91.5		7.2
77	63.5	73.2	31	91.5		1.0
78	75.6	87.0	31	91.5		1.9
79	68.6	78.3	31	91.5		6.6
80	103.7	132.2	27	92.6		3.3
81	100.9	129.3	27	92.6		3.4
82	79.6	88.4	32	91.2		2.8
83	80.9	90.9	31	91.5		2.5

Receptor Name	NO ₂ 1-hour 99.8 th Percentile Equivalent		Number of Days Headroom	PM ₁₀	
	With Reduction	No Reduction		Equivalent Headroom Percentile	Concentration for relevant percentile
84	81.9	91.5	31	91.5	2.5
85	86.4	96.3	31	91.5	2.6
86	83.3	93.2	31	91.5	2.4
87	87.7	98.0	31	91.5	2.6
88	69.8	80.0	31	91.5	1.2
89	73.3	82.5	31	91.5	1.5
90	79.8	88.6	32	91.2	2.5
91	86.0	94.8	32	91.2	4.7
92	72.2	81.4	31	91.5	2.1
93	76.7	86.2	31	91.5	2.2
Ground Level (1.5m above the ground)					
1	63.0	74.6	31	91.5	1.1
2	69.4	81.3	31	91.5	1.3
3	81.3	93.9	31	91.5	2.3
4	85.9	100.5	30	91.8	2.8
5	93.8	110.0	30	91.8	2.9
6	92.3	109.4	30	91.8	2.8
7	93.1	110.1	30	91.8	2.8
8	98.5	118.0	29	92.1	2.9
9	88.4	108.3	29	92.1	1.6
10	89.1	110.6	29	92.1	1.5
11	75.5	90.9	30	91.8	1.0
12	68.5	82.1	30	91.8	0.7
13	70.7	85.1	30	91.8	0.8
14	78.1	96.5	29	92.1	1.1

Receptor Name	NO ₂ 1-hour 99.8 th Percentile Equivalent		Number of Days Headroom	PM ₁₀	
	With Reduction	No Reduction		Equivalent Headroom Percentile	Concentration for relevant percentile
15	73.2	89.5	30	91.8	0.9
16	74.7	93.9	29	92.1	0.8
17	74.8	94.8	29	92.1	0.8
18	82.5	110.1	26	92.9	0.7
19	71.3	89.0	29	92.1	0.7
20	71.1	87.7	29	92.1	0.8
21	71.9	88.6	29	92.1	0.9
22	71.9	87.7	29	92.1	0.9
23	74.4	90.1	30	91.8	1.0
24	87.8	108.3	28	92.3	1.3
25	86.8	104.9	29	92.1	1.5
26	92.7	112.7	28	92.3	1.6
27	91.2	110.5	28	92.3	1.7
28	88.3	106.5	29	92.1	1.7
29	88.4	107.4	29	92.1	1.8
30	88.1	105.7	29	92.1	2.0
31	83.5	96.8	30	91.8	2.5
32	90.4	102.4	31	91.5	3.0
33	87.9	99.6	31	91.5	3.0
34	88.9	102.2	31	91.5	3.2
35	92.9	109.5	30	91.8	3.9
36	93.8	110.4	30	91.8	4.1
37	91.6	112.9	29	92.1	3.0
38	94.8	115.5	29	92.1	3.1
39	80.2	95.2	30	91.8	2.5

Receptor Name	NO ₂ 1-hour 99.8 ^m Percentile Equivalent		Number of Days Headroom	PM ₁₀		Concentration for relevant percentile
	With Reduction	No Reduction		Equivalent Headroom Percentile		
40	89.8	110.7	29	92.1	3.5	
41	89.2	111.8	29	92.1	3.1	
42	95.9	121.2	28	92.3	3.0	
43	86.6	110.3	28	92.3	2.4	
44	76.0	88.9	31	91.5	2.5	
45	100.2	125.5	27	92.6	2.9	
46	77.9	91.3	30	91.8	2.1	
47	80.2	95.3	30	91.8	2.1	
48	80.6	95.1	30	91.8	2.3	
49	71.3	84.0	31	91.5	1.4	
50	71.0	84.9	30	91.8	1.2	
51	89.4	110.8	29	92.1	2.7	
52	85.3	108.2	29	92.1	2.0	
53	95.6	120.2	28	92.3	3.2	
54	75.4	98.6	29	92.1	1.6	
55	100.3	126.0	28	92.3	2.6	
56	107.5	134.4	28	92.3	2.5	
57	115.8	148.3	26	92.9	2.9	
58	110.2	142.7	26	92.9	2.7	
59	74.8	95.9	29	92.1	2.0	
60	97.1	110.7	31	91.5	4.9	
61	86.9	99.7	31	91.5	4.9	
62	79.1	90.7	31	91.5	2.6	
63	87.6	98.0	31	91.5	4.0	
64	75.2	85.1	31	91.5	6.2	

Receptor Name	NO ₂ 1-hour 99.8 th Percentile Equivalent		Number of Days Headroom	PM ₁₀	
	With Reduction	No Reduction		Equivalent Headroom Percentile	Concentration for relevant percentile
65	79.3	89.5	31	91.5	6.2
66	86.6	97.9	31	91.5	6.0
67	69.5	79.1	31	91.5	5.9
68	74.2	83.3	31	91.5	2.9
69	74.4	83.6	31	91.5	3.0
70	79.3	88.7	31	91.5	3.0
71	74.9	84.2	31	91.5	2.0
72	65.8	75.5	31	91.5	1.3
73	85.4	93.9	32	91.2	3.7
74	95.7	105.7	31	91.5	5.7
75	91.6	102.6	31	91.5	3.5
76	99.2	109.2	31	91.5	7.3
77	63.5	73.1	31	91.5	1.0
78	75.4	86.8	31	91.5	1.9
79	68.5	78.2	31	91.5	6.6
80	97.8	122.8	28	92.3	2.9
81	93.8	118.0	28	92.3	3.1
82	79.7	88.5	32	91.2	2.9
83	80.9	90.9	31	91.5	2.6
84	81.9	91.5	31	91.5	2.5
85	86.3	96.2	31	91.5	2.6
86	83.3	93.2	31	91.5	2.4
87	87.7	97.9	31	91.5	2.6
88	69.8	80.0	31	91.5	1.2
89	73.2	82.4	31	91.5	1.5

J2299

171 of 200

September 2015

Receptor Name	NO ₂ 1-hour 99.8 ^m Percentile Equivalent		Number of Days Headroom	PM ₁₀	
	With Reduction	No Reduction		Equivalent Headroom Percentile	Concentration for relevant percentile
90	79.7	88.5	32	91.2	2.5
91	86.0	94.8	32	91.2	4.7
92	72.4	81.5	31	91.5	2.1
93	76.6	86.1	31	91.5	2.2
Ground Level (1.5m above the ground)					
1	62.8	74.0	31	91.5	1.1
2	68.9	80.5	31	91.5	1.3
3	80.7	92.9	31	91.5	2.3
4	85.2	99.0	30	91.8	2.9
5	91.1	105.1	30	91.8	2.9
6	89.1	103.3	30	91.8	2.8
7	89.7	103.9	30	91.8	2.8
8	91.8	105.9	30	91.8	2.9
9	84.5	101.4	30	91.8	1.6
10	84.3	102.0	29	92.1	1.5
11	73.5	87.4	30	91.8	1.0
12	66.8	79.2	30	91.8	0.7
13	69.0	82.0	30	91.8	0.8
14	75.3	91.4	30	91.8	1.1
15	71.5	86.3	30	91.8	0.9
16	70.3	85.6	30	91.8	0.8
17	69.4	84.6	30	91.8	0.8
18	80.0	105.8	27	92.6	0.7
19	67.5	81.7	30	91.8	0.7
20	68.3	82.4	30	91.8	0.8

Receptor Name	NO ₂ 1-hour 99.8 th Percentile Equivalent		Number of Days Headroom	PM ₁₀	
	With Reduction	No Reduction		Equivalent Headroom Percentile	Concentration for relevant percentile
21	69.2	83.3	30	91.8	0.8
22	69.8	83.8	30	91.8	0.9
23	72.6	86.7	30	91.8	1.0
24	83.8	101.7	29	92.1	1.3
25	83.7	100.0	29	92.1	1.5
26	90.2	108.7	28	92.3	1.6
27	88.9	106.7	28	92.3	1.7
28	84.9	100.9	29	92.1	1.7
29	85.6	102.5	30	91.8	1.7
30	85.6	101.2	30	91.8	2.0
31	82.4	94.6	31	91.5	2.5
32	89.8	101.3	31	91.5	3.0
33	87.5	98.7	31	91.5	3.0
34	87.4	99.6	31	91.5	3.2
35	90.3	104.9	30	91.8	3.9
36	91.2	105.8	30	91.8	4.1
37	87.5	105.9	30	91.8	3.0
38	91.7	110.1	30	91.8	3.0
39	77.4	90.2	31	91.5	2.5
40	86.6	105.2	30	91.8	3.2
41	84.5	104.2	30	91.8	3.0
42	89.3	111.1	29	92.1	3.0
43	82.8	104.1	29	92.1	2.4
44	75.0	86.9	31	91.5	2.5
45	97.8	121.7	27	92.6	2.9

Receptor Name	NO ₂ 1-hour 99.8 th Percentile Equivalent		Number of Days Headroom	PM ₁₀	
	With Reduction	No Reduction		Equivalent Headroom Percentile	Concentration for relevant percentile
46	75.0	86.3	31	91.5	2.0
47	75.6	87.2	31	91.5	1.8
48	77.0	88.7	31	91.5	2.2
49	69.3	80.4	31	91.5	1.4
50	67.8	79.3	31	91.5	1.2
51	86.9	106.4	29	92.1	2.7
52	82.5	103.1	29	92.1	2.1
53	88.3	108.6	29	92.1	3.2
54	72.1	92.2	29	92.1	1.7
55	95.4	117.1	29	92.1	2.6
56	100.5	122.6	29	92.1	2.6
57	107.6	135.0	28	92.3	2.8
58	103.2	131.1	28	92.3	2.4
59	74.7	94.9	29	92.1	2.0
60	95.7	108.1	31	91.5	4.9
61	86.7	98.5	31	91.5	5.2
62	79.5	91.0	31	91.5	2.7
63	87.8	98.1	31	91.5	4.0
64	75.1	85.0	31	91.5	6.2
65	79.1	89.1	31	91.5	6.2
66	85.8	96.4	31	91.5	6.0
67	69.4	78.9	31	91.5	5.9
68	75.0	84.0	31	91.5	2.8
69	74.4	83.6	31	91.5	3.0
70	79.2	88.6	31	91.5	3.0

Receptor Name	NO ₂ 1-hour 99.8 ^m Percentile Equivalent		Number of Days Headroom	PM ₁₀		Concentration for relevant percentile
	With Reduction	No Reduction		Equivalent Headroom Percentile		
71	74.8	84.1	31	91.5	2.0	
72	65.7	75.2	31	91.5	1.3	
73	85.4	93.9	32	91.2	3.6	
74	96.1	106.1	31	91.5	5.7	
75	91.4	102.2	31	91.5	3.6	
76	99.4	109.2	31	91.5	7.4	
77	63.4	73.1	31	91.5	1.1	
78	75.2	86.4	31	91.5	1.9	
79	68.4	77.9	31	91.5	6.6	
80	88.8	110.3	29	92.1	3.0	
81	87.4	107.6	29	92.1	3.1	
82	81.4	90.3	32	91.2	2.9	
83	81.0	90.9	31	91.5	2.6	
84	82.5	92.0	31	91.5	2.5	
85	86.2	96.0	31	91.5	2.7	
86	83.2	93.1	31	91.5	2.4	
87	87.6	97.8	31	91.5	2.6	
88	69.8	79.9	31	91.5	1.2	
89	73.2	82.3	31	91.5	1.5	
90	79.7	88.4	32	91.2	2.5	
91	85.9	94.7	32	91.2	4.8	
92	72.7	81.8	31	91.5	2.2	
93	76.6	86.1	31	91.5	2.3	
Ground Level (1.5m above the ground)						
1	62.7	73.8	31	91.5	1.1	

Receptor Name	NO ₂ 1-hour 99.8 th Percentile Equivalent		Number of Days Headroom	PM ₁₀		Concentration for relevant percentile
	With Reduction	No Reduction		Equivalent Headroom Percentile		
2	68.6	80.0	31	91.5	1.3	
3	80.3	92.2	31	91.5	2.3	
4	84.6	97.7	31	91.5	2.9	
5	88.8	101.0	31	91.5	2.9	
6	87.2	99.2	31	91.5	2.8	
7	87.5	99.6	31	91.5	2.8	
8	89.2	100.9	31	91.5	2.8	
9	79.7	92.6	30	91.8	1.6	
10	78.4	91.6	30	91.8	1.5	
11	72.1	84.7	30	91.8	1.0	
12	65.7	77.1	31	91.5	0.6	
13	67.7	79.8	30	91.8	0.8	
14	72.7	86.8	30	91.8	1.1	
15	69.9	83.2	30	91.8	0.9	
16	67.8	80.8	30	91.8	0.8	
17	66.9	79.7	30	91.8	0.8	
18	64.6	77.0	30	91.8	0.7	
19	65.5	78.0	30	91.8	0.7	
20	66.6	79.0	30	91.8	0.8	
21	67.4	79.9	30	91.8	0.8	
22	68.3	80.8	30	91.8	0.9	
23	71.1	83.8	30	91.8	1.0	
24	76.9	90.1	30	91.8	1.3	
25	77.8	90.1	30	91.8	1.5	
26	79.6	91.2	30	91.8	1.6	

Receptor Name	NO ₂ 1-hour 99.8 ^m Percentile Equivalent		Number of Days Headroom	PM ₁₀		Concentration for relevant percentile
	With Reduction	No Reduction		Equivalent Headroom Percentile		
27	79.2	90.8	30	91.8	1.7	
28	79.0	91.2	30	91.8	1.5	
29	80.3	92.8	30	91.8	1.8	
30	81.5	93.4	30	91.8	2.0	
31	81.7	93.0	31	91.5	2.5	
32	89.2	100.1	31	91.5	3.0	
33	87.0	97.7	31	91.5	3.0	
34	86.2	97.3	31	91.5	3.2	
35	86.0	97.2	31	91.5	3.8	
36	86.9	98.1	31	91.5	4.0	
37	78.5	90.0	31	91.5	2.9	
38	82.4	93.6	31	91.5	3.0	
39	75.7	87.2	31	91.5	2.6	
40	78.0	89.7	31	91.5	3.3	
41	74.4	86.7	31	91.5	3.0	
42	74.8	87.1	31	91.5	2.9	
43	69.1	81.2	31	91.5	2.4	
44	74.4	85.5	31	91.5	2.6	
45	77.4	87.9	31	91.5	2.5	
46	73.6	83.8	31	91.5	2.0	
47	73.7	84.1	31	91.5	1.8	
48	75.3	85.8	31	91.5	2.2	
49	67.9	78.1	31	91.5	1.4	
50	66.2	76.4	31	91.5	1.2	
51	75.4	86.8	31	91.5	2.8	

Receptor Name	NO ₂ 1-hour 99.8 ^m Percentile Equivalent		Number of Days Headroom	PM ₁₀	
	With Reduction	No Reduction		Equivalent Headroom Percentile	Concentration for relevant percentile
52	70.7	82.7	31	91.5	2.2
53	75.8	88.2	31	91.5	2.6
54	63.9	76.4	31	91.5	1.7
55	83.7	96.3	31	91.5	2.6
56	88.4	101.3	31	91.5	2.5
57	88.8	102.7	31	91.5	2.7
58	83.7	97.3	31	91.5	2.5
59	67.3	80.2	31	91.5	2.0
60	93.5	104.1	31	91.5	4.9
61	86.4	96.4	31	91.5	5.6
62	80.3	91.4	31	91.5	2.7
63	88.1	98.3	31	91.5	4.1
64	75.0	84.7	31	91.5	6.3
65	79.0	88.8	31	91.5	6.2
66	85.2	95.3	31	91.5	5.9
67	69.3	78.6	31	91.5	5.9
68	75.0	84.0	32	91.2	2.9
69	74.8	83.9	31	91.5	3.0
70	79.1	88.4	31	91.5	3.0
71	74.8	83.9	31	91.5	2.0
72	65.7	75.1	31	91.5	1.3
73	85.3	93.8	32	91.2	3.7
74	96.4	106.3	31	91.5	5.8
75	91.1	101.7	31	91.5	3.6
76	99.7	109.3	31	91.5	7.6

Receptor Name	NO ₂ 1-hour 99.8 th Percentile Equivalent		Number of Days Headroom	PM ₁₀		Concentration for relevant percentile
	With Reduction	No Reduction		Equivalent Headroom Percentile		
77	63.3	72.9	31	91.5	1.1	
78	75.0	85.9	31	91.5	1.9	
79	68.2	77.7	31	91.5	6.6	
80	73.8	86.2	31	91.5	2.5	
81	74.9	87.2	31	91.5	2.8	
82	81.5	90.3	32	91.2	3.0	
83	81.1	90.9	31	91.5	2.6	
84	82.9	92.5	31	91.5	2.5	
85	86.0	95.8	31	91.5	2.7	
86	83.2	93.0	31	91.5	2.4	
87	87.9	97.9	31	91.5	2.6	
88	69.7	79.8	31	91.5	1.2	
89	73.1	82.2	31	91.5	1.6	
90	79.6	88.3	32	91.2	2.5	
91	86.0	94.8	32	91.2	5.0	
92	73.0	82.1	31	91.5	2.2	
93	76.5	86.0	31	91.5	2.3	
Ground Level (1.5m above the ground)						
UTC	47.3	58.9	31	91.5	0.1	
UTC	47.2	58.5	31	91.5	0.1	
UTC	84.2	95.2	31	91.5	4.4	
Ground Level (1.5m above the ground)						
TA	86.2	95.9	31	91.5	5.8	
TB	81.8	93.1	31	91.5	3.0	
TC	77.2	88.0	31	91.5	2.4	

Receptor Name	NO ₂ 1-hour 99.8 th Percentile Equivalent		Number of Days Headroom	PM ₁₀	
	With Reduction	No Reduction		Equivalent Headroom Percentile	Concentration for relevant percentile
TD	75.2	86.6	31	91.5	2.2
TE1	86.3	101.5	30	91.8	2.0
TE2	80.9	94.7	30	91.8	2.0
Ground Level (1.5m above the ground)					
TA	87.1	96.5	31	91.5	6.0
TB	81.3	92.1	31	91.5	3.0
TC	76.9	87.4	31	91.5	2.4
TD	74.7	85.6	31	91.5	2.2
TE1	84.4	98.1	30	91.8	2.0
TE2	80.1	92.9	31	91.5	2.0
Ground Level (1.5m above the ground)					
TA	90.5	99.6	32	91.2	6.6
TB	80.7	90.8	31	91.5	3.0
TC	76.4	86.5	31	91.5	2.5
TD	74.4	84.5	31	91.5	2.3
TE1	82.1	93.8	31	91.5	2.1
TE2	79.2	90.7	31	91.5	2.0
Ground Level (1.5m above the ground)					
TA	93.1	101.9	32	91.2	7.6
TB	80.0	89.6	31	91.5	3.1
TC	78.2	87.8	31	91.5	2.6
TD	76.1	85.7	31	91.5	2.6
TE1	80.4	90.8	31	91.5	2.1
TE2	78.7	89.1	31	91.5	2.0
Ground Level (1.5m above the ground)					

Receptor Name	NO ₂ 1-hour 99.8 th Percentile Equivalent		Number of Days Headroom	PM ₁₀		Concentration for relevant percentile
	With Reduction	No Reduction		Equivalent Headroom Percentile		
TA	95.3	103.9	32	91.2		9.0
TB	79.9	89.1	31	91.5		3.2
TC	76.5	85.7	31	91.5		2.8
TD	76.0	85.2	31	91.5		2.7
TE1	81.9	91.5	31	91.5		2.1
TE2	79.3	88.9	31	91.5		2.1
Ground Level (1.5m above the ground)						
TA	99.1	107.5	32	91.2		10.5
TB	79.6	88.5	31	91.5		3.3
TC	78.6	87.6	31	91.5		3.2
TD	79.6	88.5	31	91.5		3.2
TE1	81.1	90.2	31	91.5		2.1
TE2	80.0	89.3	31	91.5		2.2
Ground Level (1.5m above the ground)						
TA	104.7	113.1	32	91.2		11.9
TB	79.7	88.4	31	91.5		3.5
TC	80.0	88.8	31	91.5		3.4
TD	79.6	88.3	31	91.5		3.5
TE1	82.4	91.3	31	91.5		2.2
TE2	80.6	89.5	31	91.5		2.2
Ground Level (1.5m above the ground)						
Stadium	76.9	87.4	31	91.5		7.9
Ground Level (1.5m above the ground)						
Stadium	121.1	129.5	31	91.5		13.0
Ground Level (1.5m above the ground)						

Receptor Name	NO ₂ 1-hour 99.8 th Percentile Equivalent		Number of Days Headroom	PM ₁₀		Concentration for relevant percentile
	With Reduction	No Reduction		Equivalent Headroom Percentile		
Walkway 1	86.2	99.3	31	91.5		4.1
Walkway 2	81.8	93.1	31	91.5		4.0
Walkway 3	79.2	89.9	31	91.5		3.6
Walkway 4	74.0	84.1	31	91.5		3.5
Walkway 5	70.0	79.8	31	91.5		2.7
Walkway 6	63.4	73.2	31	91.5		7.5
Walkway 7	77.7	88.6	31	91.5		8.6
Walkway 8	92.3	105.4	31	91.5		8.3
Walkway 9	104.3	131.1	28	92.3		3.9
Walkway 1	85.8	98.5	31	91.5		4.1
Walkway 2	81.7	92.9	31	91.5		4.0
Walkway 3	79.1	89.8	31	91.5		3.6
Walkway 4	74.0	84.1	31	91.5		3.5
Walkway 5	69.9	79.7	31	91.5		2.7
Walkway 6	63.4	73.1	31	91.5		7.5
Walkway 7	77.7	88.4	31	91.5		8.6
Walkway 8	91.9	104.8	31	91.5		8.3
Walkway 9	97.7	120.2	29	92.1		3.9
Ground Level (1.5m above the ground)						
NE Building 1	68.8	78.8	31	91.5		8.8
NE Building 2	65.4	75.3	31	91.5		6.7
NE Building 3	74.3	84.3	31	91.5		6.3
Ground Level (1.5m above the ground)						
NE Building 1	68.8	78.7	31	91.5		8.8
NE Building 2	65.4	75.2	31	91.5		6.7

Receptor Name	NO ₂ 1-hour 99.8 th Percentile Equivalent		Number of Days Headroom	PM ₁₀		Concentration for relevant percentile
	With Reduction	No Reduction		Equivalent Headroom Percentile		
NE Building 3	74.2	84.1	31	91.5		6.3
Ground Level (1.5m above the ground)						
NE Building 1	68.8	78.7	31	91.5		8.9
NE Building 2	65.3	75.0	31	91.5		6.7
NE Building 3	74.1	83.9	31	91.5		6.3
Ground Level (1.5m above the ground)						
NE Building 1	68.7	78.5	31	91.5		9.0
NE Building 2	65.2	74.8	31	91.5		6.7
NE Building 3	73.9	83.6	31	91.5		6.3
Ground Level (1.5m above the ground)						
Resi 1	73.2	83.5	31	91.5		2.8
Resi 2	71.2	81.1	31	91.5		2.9
Resi 3	73.9	83.9	31	91.5		2.9
Resi 4	75.8	86.0	31	91.5		3.4
Resi 5	66.4	78.2	31	91.5		1.7
Resi 6	66.7	77.0	31	91.5		2.0
Resi 7	77.2	87.8	31	91.5		3.1
Resi 8	77.7	88.8	31	91.5		3.3
Resi 9	81.9	95.0	31	91.5		2.8
Resi 10	79.7	92.3	31	91.5		2.9
Resi 11	78.2	88.8	31	91.5		3.1
Resi 12	72.1	82.5	31	91.5		2.2
Resi 13	60.6	72.8	31	91.5		1.7
Resi 14	61.0	73.3	31	91.5		1.2
Ground Level (1.5m above the ground)						

Receptor Name	NO ₂ 1-hour 99.8 th Percentile Equivalent		Number of Days Headroom	PM ₁₀	
	With Reduction	No Reduction		Equivalent Headroom Percentile	Concentration for relevant percentile
Resi 1	72.0	81.7	31	91.5	2.8
Resi 2	71.1	80.9	31	91.5	2.9
Resi 3	73.7	83.6	31	91.5	3.0
Resi 4	75.6	85.8	31	91.5	3.4
Resi 5	56.2	66.1	31	91.5	1.7
Resi 6	67.3	77.3	31	91.5	2.0
Resi 7	76.9	87.3	31	91.5	3.1
Resi 8	77.3	88.0	31	91.5	3.3
Resi 9	80.4	92.6	31	91.5	2.8
Resi 10	78.6	90.4	31	91.5	2.9
Resi 11	77.8	88.1	31	91.5	3.1
Resi 12	71.7	81.8	31	91.5	2.2
Resi 13	59.4	70.8	31	91.5	1.7
Resi 14	59.5	70.7	31	91.5	1.2
Ground Level (1.5m above the ground)					
Resi 1	71.7	81.1	31	91.5	2.8
Resi 2	70.8	80.3	31	91.5	2.9
Resi 3	73.4	83.1	31	91.5	3.0
Resi 4	75.7	85.6	31	91.5	3.4
Resi 5	56.1	65.6	31	91.5	1.7
Resi 6	66.8	76.4	31	91.5	2.1
Resi 7	76.3	86.4	31	91.5	3.1
Resi 8	76.7	86.9	31	91.5	3.3
Resi 9	77.7	88.0	31	91.5	2.8
Resi 10	76.1	86.1	31	91.5	2.9

Receptor Name	NO ₂ 1-hour 99.8 th Percentile Equivalent		Number of Days Headroom	PM ₁₀	
	With Reduction	No Reduction		Equivalent Headroom Percentile	Concentration for relevant percentile
Resi 11	77.3	87.2	31	91.5	3.2
Resi 12	71.4	81.1	31	91.5	2.3
Resi 13	56.9	66.6	31	91.5	1.7
Resi 14	57.5	67.0	31	91.5	1.2
Ground Level (1.5m above the ground)					
Resi 1	71.4	80.6	31	91.5	3.0
Resi 2	70.5	79.9	31	91.5	3.0
Resi 3	73.0	82.5	31	91.5	3.0
Resi 4	75.3	84.9	31	91.5	3.5
Resi 5	56.4	65.7	31	91.5	1.7
Resi 6	66.5	75.8	31	91.5	2.1
Resi 7	75.9	85.5	31	91.5	3.1
Resi 8	76.1	85.9	31	91.5	3.3
Resi 9	77.2	87.0	31	91.5	2.9
Resi 10	75.6	85.3	31	91.5	2.9
Resi 11	76.9	86.5	31	91.5	3.2
Resi 12	71.0	80.5	31	91.5	2.3
Resi 13	59.1	68.5	31	91.5	1.9
Resi 14	58.4	67.7	31	91.5	1.3
Ground Level (1.5m above the ground)					
Resi 1	71.2	80.2	31	91.5	3.0
Resi 2	72.6	81.7	31	91.5	3.0
Resi 3	73.0	82.1	31	91.5	3.2
Resi 4	75.0	84.2	31	91.5	3.5
Resi 5	58.7	67.8	31	91.5	1.8

Receptor Name	NO ₂ 1-hour 99.8 th Percentile Equivalent		Number of Days Headroom	PM ₁₀		Concentration for relevant percentile
	With Reduction	No Reduction		Equivalent Headroom Percentile		
Resi 6	60.4	69.6	31	91.5		1.9
Resi 7	75.5	84.8	31	91.5		3.3
Resi 8	75.6	85.0	31	91.5		3.5
Resi 9	76.7	86.2	31	91.5		3.0
Resi 10	75.3	84.6	31	91.5		2.9
Resi 11	76.4	85.7	31	91.5		3.2
Resi 12	70.5	79.7	31	91.5		2.3
Resi 13	60.7	69.9	31	91.5		1.9
Resi 14	62.5	71.7	31	91.5		1.5
Ground Level (1.5m above the ground)						
Resi 1	73.0	81.9	31	91.5		3.1
Resi 2	72.4	81.3	31	91.5		3.2
Resi 3	74.1	83.1	31	91.5		3.2
Resi 4	74.7	83.7	31	91.5		3.6
Resi 5	62.6	71.5	31	91.5		1.9
Resi 6	62.3	71.3	31	91.5		2.0
Resi 7	75.8	84.9	31	91.5		3.3
Resi 8	76.4	85.5	31	91.5		3.6
Resi 9	76.4	85.5	31	91.5		3.1
Resi 10	76.1	85.2	31	91.5		3.1
Resi 11	74.8	83.8	31	91.5		3.2
Resi 12	70.3	79.3	31	91.5		2.3
Resi 13	62.8	71.8	31	91.5		2.0
Resi 14	68.3	77.2	31	91.5		1.7
Ground Level (1.5m above the ground)						

Receptor Name	NO ₂ 1-hour 99.8 th Percentile Equivalent		Number of Days Headroom	PM ₁₀		Concentration for relevant percentile
	With Reduction	No Reduction		Equivalent Headroom Percentile		
Resi 1	74.3	83.0	31	91.5	3.2	
Resi 2	73.5	82.2	31	91.5	3.3	
Resi 3	75.6	84.4	31	91.5	3.4	
Resi 4	78.2	87.1	31	91.5	3.8	
Resi 5	67.5	76.3	31	91.5	2.1	
Resi 6	65.3	74.1	31	91.5	2.2	
Resi 7	75.6	84.5	31	91.5	3.5	
Resi 8	79.4	88.3	31	91.5	3.8	
Resi 9	76.5	85.4	31	91.5	3.2	
Resi 10	76.3	85.2	31	91.5	3.2	
Resi 11	74.3	83.1	31	91.5	3.2	
Resi 12	73.4	82.3	31	91.5	2.4	
Resi 13	66.2	75.0	31	91.5	2.1	
Resi 14	70.7	79.5	31	91.5	1.9	
Ground Level (1.5m above the ground)						
Resi 1	74.3	82.9	31	91.5	3.5	
Resi 2	77.1	85.8	31	91.5	3.6	
Resi 3	75.9	84.6	31	91.5	3.2	
Resi 4	78.0	86.7	31	91.5	3.9	
Resi 5	71.2	79.8	31	91.5	2.4	
Resi 6	72.0	80.7	31	91.5	2.2	
Resi 7	77.2	86.0	31	91.5	3.7	
Resi 8	83.5	92.2	31	91.5	4.0	
Resi 9	79.1	87.9	31	91.5	3.3	
Resi 10	76.6	85.4	31	91.5	3.3	

Receptor Name	NO ₂ 1-hour 99.8 th Percentile Equivalent		Number of Days Headroom	PM ₁₀	
	With Reduction	No Reduction		Equivalent Headroom Percentile	Concentration for relevant percentile
Resi 11	76.5	85.2	31	91.5	3.2
Resi 12	74.5	83.3	31	91.5	2.6
Resi 13	71.9	80.6	31	91.5	2.2
Resi 14	73.3	82.0	31	91.5	2.2
Ground Level (1.5m above the ground)					
Resi 1	78.2	86.7	31	91.5	3.1
Resi 2	81.7	90.2	31	91.5	3.3
Resi 3	80.6	89.2	31	91.5	3.3
Resi 4	84.2	92.8	31	91.5	3.8
Resi 5	76.2	84.7	31	91.5	2.7
Resi 6	78.8	87.4	31	91.5	2.6
Resi 7	82.2	90.8	31	91.5	3.8
Resi 8	87.9	96.5	31	91.5	4.1
Resi 9	84.3	93.0	31	91.5	3.4
Resi 10	81.1	89.7	31	91.5	3.4
Resi 11	80.9	89.5	31	91.5	3.3
Resi 12	78.5	87.1	31	91.5	2.9
Resi 13	76.2	84.8	31	91.5	2.5
Resi 14	75.5	84.1	31	91.5	2.6
Ground Level (1.5m above the ground)					
Resi 1	83.6	91.9	32	91.2	4.3
Resi 2	92.1	100.5	31	91.5	4.1
Resi 3	89.3	97.7	31	91.5	4.1
Resi 4	90.1	98.6	31	91.5	4.2
Resi 5	82.2	90.7	31	91.5	3.8

Receptor Name	NO ₂ 1-hour 99.8 ^m Percentile Equivalent		Number of Days Headroom	PM ₁₀	
	With Reduction	No Reduction		Equivalent Headroom Percentile	Concentration for relevant percentile
Resi 6	83.8	92.3	31	91.5	3.2
Resi 7	88.7	97.2	31	91.5	3.9
Resi 8	89.4	98.0	31	91.5	5.0
Resi 9	87.4	96.0	31	91.5	4.1
Resi 10	87.0	95.6	31	91.5	3.5
Resi 11	85.2	93.8	31	91.5	3.6
Resi 12	84.7	93.2	31	91.5	3.5
Resi 13	82.5	91.1	31	91.5	3.2
Resi 14	81.6	90.1	31	91.5	3.4
Ground Level (1.5m above the ground)					
Resi 1	90.8	99.1	32	91.2	5.6
Resi 2	100.0	108.4	31	91.5	5.9
Resi 3	91.0	99.4	31	91.5	5.1
Resi 4	95.6	104.1	31	91.5	5.4
Resi 5	87.4	95.9	31	91.5	4.5
Resi 6	88.1	96.5	31	91.5	4.2
Resi 7	92.9	101.4	31	91.5	5.0
Resi 8	99.1	107.6	31	91.5	5.6
Resi 9	89.5	98.0	31	91.5	4.7
Resi 10	89.1	97.6	31	91.5	4.3
Resi 11	90.4	98.8	31	91.5	4.3
Resi 12	88.0	96.4	31	91.5	4.3
Resi 13	85.1	93.5	31	91.5	3.8
Resi 14	84.1	92.5	31	91.5	4.2
Ground Level (1.5m above the ground)					

Receptor Name	NO ₂ 1-hour 99.8 th Percentile Equivalent		Number of Days Headroom	PM ₁₀	
	With Reduction	No Reduction		Equivalent Headroom Percentile	Concentration for relevant percentile
Resi 1	94.8	103.1	32	91.2	7.0
Resi 2	102.7	111.0	32	91.2	7.3
Resi 3	96.5	104.9	31	91.5	5.8
Resi 4	99.1	107.5	31	91.5	6.0
Resi 5	87.6	95.9	31	91.5	5.3
Resi 6	87.8	96.1	31	91.5	5.0
Resi 7	97.2	105.6	31	91.5	5.7
Resi 8	99.7	108.2	31	91.5	6.3
Resi 9	92.0	100.5	31	91.5	4.8
Resi 10	93.2	101.7	31	91.5	4.6
Resi 11	92.0	100.5	31	91.5	4.8
Resi 12	88.3	96.7	31	91.5	4.8
Resi 13	84.7	93.1	31	91.5	4.5
Resi 14	84.4	92.8	31	91.5	4.7
Ground Level (1.5m above the ground)					
Resi 1	101.8	110.0	32	91.2	8.3
Resi 2	100.2	108.4	32	91.2	8.0
Resi 3	97.1	105.4	31	91.5	6.0
Resi 4	98.4	106.8	31	91.5	6.1
Resi 11	90.8	99.1	31	91.5	4.8
Resi 12	91.2	99.6	31	91.5	5.0
Ground Level (1.5m above the ground)					
Resi 1	99.4	107.6	32	91.2	7.5
Resi 2	96.7	104.9	32	91.2	7.4
Resi 3	96.5	104.7	31	91.5	5.7

Receptor Name	NO ₂ 1-hour 99.8 th Percentile Equivalent		Number of Days Headroom	PM ₁₀	
	With Reduction	No Reduction		Equivalent Headroom Percentile	Concentration for relevant percentile
Resi 4	97.1	105.4	31	91.5	6.1
Resi 11	89.7	98.0	31	91.5	4.7
Resi 12	90.4	98.7	31	91.5	4.9
Ground Level (1.5m above the ground)					
Resi 1	91.4	99.5	32	91.2	6.6
Resi 2	91.4	99.6	32	91.2	6.7
Resi 3	90.8	99.0	31	91.5	5.2
Resi 4	92.9	101.2	31	91.5	5.5
Resi 11	87.4	95.7	31	91.5	4.6
Resi 12	87.0	95.3	31	91.5	4.5
Ground Level (1.5m above the ground)					
Resi 1	81.5	89.6	32	91.2	5.8
Resi 2	86.3	94.5	32	91.2	5.4
Resi 3	85.1	93.3	31	91.5	4.7
Resi 4	86.6	94.9	31	91.5	5.0
Resi 11	85.1	93.4	31	91.5	4.4
Resi 12	82.2	90.5	31	91.5	4.1
Ground Level (1.5m above the ground)					
Resi 3	78.0	86.2	31	91.5	3.9
Resi 4	80.7	89.0	31	91.5	4.4
Resi 11	83.5	91.8	31	91.5	3.8
Resi 12	79.3	87.6	31	91.5	3.4
Ground Level (1.5m above the ground)					
Resi 3	72.3	80.5	31	91.5	3.1
Resi 4	72.5	80.7	31	91.5	3.0

Receptor Name	NO ₂ 1-hour 99.8 th Percentile Equivalent		Number of Days Headroom	PM ₁₀	
	With Reduction	No Reduction		Equivalent Headroom Percentile	Concentration for relevant percentile
Resi 11	74.3	82.5	31	91.5	3.0
Resi 12	72.4	80.7	31	91.5	2.9
Ground Level (1.5m above the ground)					
Resi 3	64.7	72.9	31	91.5	2.4
Resi 4	64.6	72.8	31	91.5	2.3
Resi 11	66.7	74.9	31	91.5	2.4
Resi 12	68.1	76.3	31	91.5	2.4
Ground Level (1.5m above the ground)					
Resi 3	64.4	72.6	31	91.5	2.2
Resi 4	64.7	72.9	31	91.5	2.5
Resi 11	65.4	73.6	31	91.5	2.8
Resi 12	62.7	70.9	31	91.5	2.2
Ground Level (1.5m above the ground)					
Resi 1	76.5	84.6	32	91.2	5.1
Resi 2	83.7	91.8	32	91.2	4.6
Resi 3	82.5	90.7	31	91.5	4.3
Resi 4	83.7	92.0	31	91.5	5.0
Resi 5	87.6	95.9	31	91.5	5.3
Resi 6	88.0	96.3	31	91.5	5.1
Resi 7	97.2	105.7	31	91.5	5.7
Resi 8	100.4	108.9	31	91.5	6.2
Resi 9	92.8	101.3	31	91.5	4.9
Resi 10	93.2	101.7	31	91.5	4.7
Resi 11	140.0	148.2	31	91.5	27.0
Resi 12	133.3	141.5	31	91.5	21.3

Receptor Name	NO ₂ 1-hour 99.8 th Percentile Equivalent		Number of Days Headroom	PM ₁₀	
	With Reduction	No Reduction		Equivalent Headroom Percentile	Concentration for relevant percentile
Resi 13	84.6	93.0	31	91.5	4.5
Resi 14	84.4	92.8	31	91.5	4.7
Ground Level (1.5m above the ground)					
Extreme 1	81.9	93.7	31	91.5	3.7
Extreme 2	81.1	93.1	31	91.5	3.8
Extreme 3	84.5	99.2	30	91.8	3.4
Ground Level (1.5m above the ground)					
Extreme 1	81.7	93.3	31	91.5	3.7
Extreme 2	80.9	92.7	31	91.5	3.8
Extreme 3	84.0	98.3	30	91.8	3.4
Ground Level (1.5m above the ground)					
Extreme 1	81.4	92.8	31	91.5	3.7
Extreme 2	80.6	92.1	31	91.5	3.8
Extreme 3	83.4	97.3	30	91.8	3.4
Ground Level (1.5m above the ground)					
Extreme 1	81.2	92.1	31	91.5	3.7
Extreme 2	80.3	91.3	31	91.5	3.8
Extreme 3	82.9	96.4	30	91.8	3.4
Ground Level (1.5m above the ground)					
Extreme 1	80.9	91.5	31	91.5	3.7
Extreme 2	80.0	90.6	31	91.5	3.8
Extreme 3	78.6	89.2	31	91.5	3.4
Ground Level (1.5m above the ground)					
Extreme 1	80.7	91.0	31	91.5	3.7
Extreme 2	79.8	90.0	31	91.5	3.8

Receptor Name	NO ₂ 1-hour 99.8 th Percentile Equivalent		Number of Days Headroom	PM ₁₀	
	With Reduction	No Reduction		Equivalent Headroom Percentile	Concentration for relevant percentile
Extreme 3	78.3	88.5	31	91.5	3.5
Ground Level (1.5m above the ground)					
Extreme 1	80.5	90.4	31	91.5	3.8
Extreme 2	79.7	89.6	31	91.5	3.8
Extreme 3	77.9	87.8	31	91.5	3.5
Ground Level (1.5m above the ground)					
Extreme 1	80.2	89.8	31	91.5	3.8
Extreme 2	79.6	89.3	31	91.5	3.8
Extreme 3	77.6	87.2	31	91.5	3.6
Ground Level (1.5m above the ground)					
Extreme 1	79.9	89.3	31	91.5	3.8
Extreme 2	79.7	89.1	31	91.5	3.8
Extreme 3	77.3	86.8	31	91.5	3.6
Ground Level (1.5m above the ground)					
Extreme 1	79.7	89.0	31	91.5	3.8
Extreme 2	79.8	89.1	31	91.5	3.8
Extreme 3	77.1	86.4	31	91.5	3.6
Ground Level (1.5m above the ground)					
Extreme 1	79.5	88.6	31	91.5	3.8
Extreme 2	79.7	88.8	31	91.5	3.9
Extreme 3	76.9	86.1	31	91.5	3.6
Ground Level (1.5m above the ground)					
Extreme 1	79.4	88.4	31	91.5	3.8
Extreme 2	79.6	88.6	31	91.5	3.9
Extreme 3	76.9	85.9	31	91.5	3.7

Receptor Name	NO ₂ 1-hour 99.8 th Percentile Equivalent		Number of Days Headroom	PM ₁₀		Concentration for relevant percentile
	With Reduction	No Reduction		Equivalent Headroom Percentile		
Ground Level (1.5m above the ground)						
Extreme 1	80.4	89.3	31	91.5		3.9
Extreme 2	79.4	88.4	31	91.5		3.9
Extreme 3	78.3	87.3	31	91.5		3.7
Ground Level (1.5m above the ground)						
Extreme 1	80.6	89.4	31	91.5		4.0
Extreme 2	80.6	89.4	31	91.5		3.9
Extreme 3	79.5	88.3	31	91.5		3.7
Ground Level (1.5m above the ground)						
Extreme 1	82.5	91.3	31	91.5		4.0
Extreme 2	83.0	91.8	31	91.5		4.0
Extreme 3	80.1	88.9	31	91.5		3.7
Ground Level (1.5m above the ground)						
Extreme 1	86.2	94.9	31	91.5		4.0
Extreme 2	85.6	94.3	31	91.5		4.0
Extreme 3	84.9	93.6	31	91.5		3.8
Ground Level (1.5m above the ground)						
Extreme 1	88.0	96.7	31	91.5		4.3
Extreme 2	87.5	96.2	31	91.5		4.4
Extreme 3	86.0	94.7	31	91.5		3.8
Ground Level (1.5m above the ground)						
Extreme 1	89.8	98.5	31	91.5		4.9
Extreme 2	91.3	100.0	31	91.5		5.0
Extreme 3	87.8	96.4	31	91.5		4.2
Ground Level (1.5m above the ground)						

Receptor Name	NO ₂ 1-hour 99.8 th Percentile Equivalent		Number of Days Headroom	PM ₁₀	
	With Reduction	No Reduction		Equivalent Headroom Percentile	Concentration for relevant percentile
Hotel 1	84.2	96.3	31	91.5	4.1
Hotel 2	86.0	98.6	31	91.5	4.0
Hotel 3	90.0	104.4	30	91.8	3.4
Ground Level (1.5m above the ground)					
Hotel 1	84.0	95.9	31	91.5	4.1
Hotel 2	85.7	98.0	31	91.5	4.0
Hotel 3	89.1	102.9	31	91.5	3.4
Ground Level (1.5m above the ground)					
Hotel 1	83.6	95.1	31	91.5	4.1
Hotel 2	85.2	97.1	31	91.5	4.0
Hotel 3	88.0	100.8	31	91.5	3.4
Ground Level (1.5m above the ground)					
Hotel 1	83.1	94.2	31	91.5	4.1
Hotel 2	84.6	95.9	31	91.5	4.0
Hotel 3	86.7	98.6	31	91.5	3.4
Ground Level (1.5m above the ground)					
Hotel 1	82.5	93.2	31	91.5	4.1
Hotel 2	83.9	94.7	31	91.5	4.0
Hotel 3	85.7	96.7	31	91.5	3.4
Ground Level (1.5m above the ground)					
Hotel 1	82.0	92.3	31	91.5	4.1
Hotel 2	83.3	93.6	31	91.5	4.1
Hotel 3	84.9	95.3	31	91.5	3.5
Ground Level (1.5m above the ground)					
Hotel 1	82.6	92.5	31	91.5	4.1

Receptor Name	NO ₂ 1-hour 99.8 th Percentile Equivalent		Number of Days Headroom	PM ₁₀	
	With Reduction	No Reduction		Equivalent Headroom Percentile	Concentration for relevant percentile
Hotel 2	82.9	92.8	31	91.5	4.1
Hotel 3	84.4	94.3	31	91.5	3.5
Ground Level (1.5m above the ground)					
Hotel 1	82.5	92.1	31	91.5	4.2
Hotel 2	82.6	92.2	31	91.5	4.1
Hotel 3	84.0	93.6	31	91.5	3.5
Ground Level (1.5m above the ground)					
Hotel 1	82.2	91.6	31	91.5	4.2
Hotel 2	82.5	91.9	31	91.5	4.1
Hotel 3	83.7	93.1	31	91.5	3.5
Ground Level (1.5m above the ground)					
Hotel 1	82.0	91.2	31	91.5	4.2
Hotel 2	82.5	91.6	31	91.5	4.2
Hotel 3	83.5	92.8	31	91.5	3.5
Ground Level (1.5m above the ground)					
Hotel 1	81.8	90.9	31	91.5	4.3
Hotel 2	82.4	91.5	31	91.5	4.2
Hotel 3	83.4	92.5	31	91.5	3.6
Ground Level (1.5m above the ground)					
Hotel 1	81.7	90.6	31	91.5	4.3
Hotel 2	82.3	91.2	31	91.5	4.3
Hotel 3	83.3	92.3	31	91.5	3.6
Ground Level (1.5m above the ground)					
Hotel 1	81.6	90.4	31	91.5	4.3
Hotel 2	83.2	92.0	31	91.5	4.3

Receptor Name	NO ₂ 1-hour 99.8 th Percentile Equivalent		Number of Days Headroom	PM ₁₀	
	With Reduction	No Reduction		Equivalent Headroom Percentile	Concentration for relevant percentile
Hotel 3	83.2	92.1	31	91.5	3.6
Ground Level (1.5m above the ground)					
Hotel 1	83.9	92.6	31	91.5	4.3
Hotel 2	85.5	94.3	31	91.5	4.3
Hotel 3	83.1	92.0	31	91.5	3.7
Ground Level (1.5m above the ground)					
Hotel 1	86.5	95.3	31	91.5	4.4
Hotel 2	90.5	99.2	31	91.5	4.3
Hotel 3	86.7	95.5	31	91.5	3.8
Ground Level (1.5m above the ground)					
Hotel 1	92.8	101.4	31	91.5	4.5
Hotel 2	94.6	103.2	31	91.5	4.8
Hotel 3	90.2	98.9	31	91.5	3.8
Ground Level (1.5m above the ground)					
Hotel 1	97.4	106.0	31	91.5	5.2
Hotel 2	98.0	106.6	31	91.5	5.3
Hotel 3	91.7	100.4	31	91.5	4.1
Ground Level (1.5m above the ground)					
Hotel 1	99.4	108.0	31	91.5	6.0
Hotel 2	101.5	110.1	31	91.5	6.3
Hotel 3	93.0	101.6	31	91.5	4.7
Ground Level (1.5m above the ground)					
Hotel 1	101.1	109.6	31	91.5	7.6
Hotel 2	101.9	110.5	31	91.5	7.8
Hotel 3	95.8	104.5	31	91.5	5.8

Receptor Name	NO ₂ 1-hour 99.8 th Percentile Equivalent		Number of Days Headroom	PM ₁₀		Concentration for relevant percentile
	With Reduction	No Reduction		Equivalent Headroom Percentile		
	Ground Level (1.5m above the ground)					
Hotel 1	104.6	113.1	31	91.5	8.2	
Hotel 2	103.8	112.3	31	91.5	8.5	
Hotel 3	97.3	105.9	31	91.5	6.1	
Ground Level (1.5m above the ground)						
Hotel 1	106.0	114.4	31	91.5	8.7	
Hotel 2	106.7	115.2	31	91.5	8.8	
Hotel 3	99.4	107.9	31	91.5	6.5	
Ground Level (1.5m above the ground)						
Hotel 1	105.6	114.1	31	91.5	9.1	
Hotel 2	107.7	116.2	31	91.5	9.5	
Hotel 3	99.5	108.1	31	91.5	6.7	
Ground Level (1.5m above the ground)						
Hotel 1	106.7	115.1	31	91.5	9.4	
Hotel 2	107.2	115.7	31	91.5	9.7	
Hotel 3	99.4	107.9	31	91.5	6.7	
Ground Level (1.5m above the ground)						
Hotel 1	107.4	115.8	31	91.5	9.5	
Hotel 2	107.8	116.2	31	91.5	10.2	
Hotel 3	99.6	108.1	31	91.5	6.9	
Ground Level (1.5m above the ground)						
Hotel 1	107.3	115.7	31	91.5	9.9	
Hotel 2	107.8	116.2	31	91.5	10.2	
Hotel 3	99.5	108.0	31	91.5	7.2	
Ground Level (1.5m above the ground)						

Receptor Name	NO ₂ 1-hour 99.8 th Percentile Equivalent		Number of Days Headroom	PM ₁₀	
	With Reduction	No Reduction		Equivalent Headroom Percentile	Concentration for relevant percentile
Hotel 1	107.0	115.4	31	91.5	10.0
Hotel 2	107.3	115.7	31	91.5	10.0
Hotel 3	99.2	107.7	31	91.5	7.2
Ground Level (1.5m above the ground)					
Hotel 1	106.0	114.4	31	91.5	9.7
Hotel 2	105.4	113.8	31	91.5	9.7
Hotel 3	100.2	108.6	31	91.5	7.2
Ground Level (1.5m above the ground)					
Hotel 1	105.0	113.3	31	91.5	9.4
Hotel 2	104.3	112.7	31	91.5	9.3
Hotel 3	100.5	109.0	31	91.5	7.7
Ground Level (1.5m above the ground)					
Hotel 1	102.6	110.9	31	91.5	8.9
Hotel 2	104.0	112.4	31	91.5	9.5
Hotel 3	108.4	116.9	31	91.5	9.7
Ground Level (1.5m above the ground)					
Hotel 1	114.7	123.1	31	91.5	18.8
Hotel 2	105.0	113.3	31	91.5	11.5
Hotel 3	120.0	128.4	31	91.5	13.9
Ground Level (1.5m above the ground)					
Hotel 1	176.6	185.0	31	91.5	43.1
Hotel 2	124.2	132.5	31	91.5	19.7
Hotel 3	127.6	136.0	31	91.5	17.8

A6.10 Construction Mitigation

A6.10.1 The following is a set of measures that should be incorporated into the specification for the works:

Site Management

- develop and implement a stakeholder communications plan that includes community engagement before work commences on site;
- develop a Dust Management Plan (DMP);
- display the name and contact details of person(s) accountable for air quality pollutant emissions and dust issues on the site boundary;
- display the head or regional office contact information;
- record and respond to all dust and air quality pollutant emissions complaints;
- make a complaints log available to the local authority when asked;
- carry out regular site inspections to monitor compliance with air quality and dust control procedures, record inspection results, and make an inspection log available to the Local Authority when asked;
- increase the frequency of site inspections by those accountable for dust and air quality pollutant emissions issues when activities with a high potential to produce dust and emissions are being carried out and during prolonged dry or windy conditions;
- record any exceptional incidents that cause dust and air quality pollutant emissions, either on or off the site, and ensure that the action taken to resolve the situation is recorded in the log book; and
- hold regular liaison meetings with other high risk construction sites within 500 m of the site boundary, to ensure plans are co-ordinated and dust and particulate matter emissions are minimised. It is important to understand the interactions of the off-site transport/deliveries which might be using the same strategic road network routes.

Preparing and Maintaining the Site

- Plan the site layout so that machinery and dust-causing activities are located away from receptors, as far as is possible;
- erect solid screens or barriers around dusty activities or the site boundary that are at least as high as any stockpiles on site;

- fully enclose site or specific operations where there is a high potential for dust production and the site is active for an extensive period;
- install green walls, screens or other green infrastructure to minimise the impact of dust and pollution;
- avoid site runoff of water or mud;
- keep site fencing, barriers and scaffolding clean using wet methods;
- remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If they are being re-used on-site cover as described below;
- cover, seed, or fence stockpiles to prevent wind whipping;
- carry out regular dust soiling checks of buildings within 100 m of site boundary and cleaning to be provided if necessary;
- provide showers and ensure a change of shoes and clothes are required before going off-site to reduce transport of dust;
- put in place real-time dust and air quality pollutant monitoring across the site and ensure they are maintained and the results are checked regularly;
- agree monitoring locations with the Local Authority; and
- where possible, commence baseline monitoring at least three months before phase begins.

Operating Vehicle/Machinery and Sustainable Travel

- Ensure all on-road vehicles comply with the requirements of the London Low Emission Zone;
- ensure all Non-road Mobile Machinery (NRMM) comply with the standards set within the GLA's Control of Dust and Emissions During Construction and Demolition SPG. This outlines that, from 1st September 2015, all NRMM of net power 37 kW to 560 kW used on the site of a major development in Greater London must meet Stage IIIA of EU Directive 97/68/EC (Directive 97/68/EC of the European Parliament and of the Council, 1997) and its subsequent amendments as a minimum. NRMM used on any site within the Central Activity Zone or Canary Wharf will be required to meet Stage IIIB of the Directive as a minimum. From 1st September 2020 NRMM used on any site within Greater London will be required to meet Stage IIIB of the Directive as a minimum, while NRMM used on any site within the Central Activity Zone or Canary Wharf will be required to meet Stage IV of the Directive as a minimum;
- ensure all vehicles switch off engines when stationary – no idling vehicles;

- avoid the use of diesel- or petrol-powered generators and use mains electricity or battery-powered equipment where practicable;
- impose and signpost a maximum-speed-limit of 10 mph on surfaced haul routes and work areas (if long haul routes are required these speeds may be increased with suitable additional control measures provided, subject to the approval of the nominated undertaker and with the agreement of the Local Authority, where appropriate);
- produce a Construction Logistics Plan to manage the sustainable delivery of goods and materials; and
- implement a Travel Plan that supports and encourages sustainable staff travel (public transport, cycling, walking, and car-sharing).

Operations

- Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems;
- ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using recycled water where possible and appropriate;
- use enclosed chutes, conveyors and covered skips;
- minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate; and
- ensure equipment is readily available on site to clean any dry spillages, and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.

Waste Management

- Reuse and recycle waste to reduce dust from waste materials; and
- avoid bonfires and burning of waste materials.

Measures Specific to Demolition

- Soft strip inside buildings before demolition (retaining walls and windows in the rest of the building where possible, to provide a screen against dust);
- ensure water suppression is used during demolition operations;
- avoid explosive blasting, using appropriate manual or mechanical alternatives; and
- bag and remove any biological debris or damp down such material before demolition.

Measures Specific to Earthworks

- Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable;
- use Hessian, mulches or trackifiers where it is not possible to re-vegetate or cover with topsoil, as soon as practicable; and
- only remove the cover from small areas during work, not all at once.

Measures Specific to Construction

- Avoid scabbling (roughening of concrete surfaces), if possible;
- ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place;
- ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery; and
- for smaller supplies of fine powder materials ensure bags are sealed after use and stored appropriately to prevent dust.

Measures Specific to Trackout

- Regularly use a water-assisted dust sweeper on the access and local roads, as necessary, to remove any material tracked out of the site;
- avoid dry sweeping of large areas;
- ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport;
- inspect on-site haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable;
- record all inspections of haul routes and any subsequent action in a site log book;
- install hard surfaced haul routes, which are regularly damped down with fixed or mobile sprinkler systems or mobile water bowsers, and regularly cleaned;
- implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable);
- ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permits;
- access gates should be located at least 10 m from receptors, where possible; and

- apply dust suppressants to locations where a large volume of vehicles enter and exit the construction site.

A6.11 Energy Plant Specifications

A6.10.1 The proposed development will be provided with condensing natural gas-fired boilers and several diesel generator sets. Specifications for these plant are shown in Table A6.11.1 and Table A6.11.2.

A6.10.2 In order to ensure that the final plant design does not lead to impacts greater than those modelled, it must adhere to the following minimum specifications:

- a stadium boiler system to be comprised of units totalling a maximum of 5600 kW fuel input that must share two common flue outlets; a residential boiler system to be comprised of units totalling a maximum of 4,400 kW fuel input with a single common flue outlet; a hotel boiler system to be comprised of units totalling a maximum of 3,200 kW fuel input with a single common flue outlet; an extreme sport boiler system to be comprised of units totalling a maximum of 564 kW fuel input with a single common flue outlet; all with a maximum exit diameter to ensure a minimum actual velocity of 7.5 m/s terminating at least 1 m above the roof level;
- the compression ignition diesel generators with a maximum NO_x emission limit of EU Stage IIIA generators (3.5 g/kWh of NO_x and 0.2 g/kWh of PM); the stadium generators will be comprised of two flues with an outlet velocity of 31 m/s;
- all stacks should discharge vertically upwards and be unimpeded by any fixture on top of the stack (e.g., rain cowls or 'Chinaman's Hats');
- the system must be designed to conform to the requirements of the GLA's guidance on sustainable design and construction (GLA, 2014a). The gas boilers will therefore conform to a maximum NO_x emission of <40 mg/kWh. The SPG makes clear that the emission standards are 'end-of-pipe' concentrations expressed at specific reference conditions for temperature, pressure, oxygen and moisture content. Compliance with these standards will be confirmed prior to occupation, based on:
 - monitoring undertaken on the actual installed plant; or
 - manufacturer guaranteed performance levels supported by type approval monitoring undertaken by the equipment supplier.
- in order to attain these values, relevant catalyst or alternative abatement will be required.

A6.10.3 If the design of the energy plant provision deviates significantly from the modelled specification, additional future modelling may be required.

A6.10.4 The GLA's Sustainable Design and Construction SPG (GLA, 2014a) also states that the measures set out in Technical Guidance Note D1 (Dispersion) (HMSO, 1993b) should also be adhered to, to ensure adequate dispersion of emissions from discharging stacks and vents. These include the following:

- Discharges should be vertically upwards and unimpeded by cowls or any other fixtures on top of the stack. However, the use of coning or of flame traps at the tops of stacks is acceptable. In the case of discharge stacks (whether single or multiple stack) with shrouds or casings around the stack(s), the stack(s) alone should extend above the shroud or casing. This extension should be at least 50% of the shroud or casing's greatest lateral dimension;
- Irrespective of the pollutant discharge, there are minimum discharge stack heights based on the heat release and the discharge momentum. These can be calculated following calculations set out in the guidance note, but the absolute minimum value is 1 m;
- No discharge stack should be less than 3 m above the ground or any adjacent area to which there is general access. For example, roof areas and elevated walkways;
- A discharge stack should never be less than the height of any building within a distance of 5 times the stack height; and
- A discharge stack should be at least 3 m above any opening windows or ventilation air inlets within a distance of 5 times the stack height.

A6.4. Table A6.11.1: Combined Boiler Plant Specifications

Parameter	Stadium	Residential	Hotel	Extreme	Restriction
Max Power Out (kWel)	5.350	4.264	3.152	555	-
Net Fuel Input of All Plant (kW)	5.600	4.400	3.208	564	Max
Gross Fuel Input for All Plant (kW)	6.200	4.880	3.554	624	Max
Excess Air (%)	27	27.5	34	34	Min
Condensing	Yes	Yes	Yes	Yes	-
Height of release (m)	56.3	121.0	90.2	54.2	Min
Actual Exhaust Velocity (Am/s) per stack	7.50	7.50	7.50	7.50	Min
Flue Diameter (m) per stack	0.45	0.58	0.49	0.20	Max
Normalised Flow rate per stack (Nm ³ /s) @ 0% O ₂ , 0 °C, 101.3kPa, dry.	0.83	1.31	1.00	0.18	Min
Actual Flow Rate per stack (Am ³ /s)	1.20	1.95	1.43	0.25	Min
Release Temperature per stack (°C)	68	62	69	61	Min
NOx Emission Rate (g/s)	0.069	0.054	0.040	0.007	Max

A6.5. Table A6.11.2: Combined Generator Plant Parameters

Parameter	Stadium	Residential	Hotel	Restriction
Max power out	1798 (kW/m)	264 (kWel)	264 (kWel)	-

Parameter	Stadium	Residential	Hotel	Restriction
Net Fuel Consumption of All Plant (litre per hour)	2037.5	68.2	68.2	Max
Net Fuel Input of All Plant (kW)	20600	690	690	Max
Gross Fuel Input for All Plant (kW)	21986	736	736	Max
Excess Air (%)	75	75	75	Min
Height (m)	56.2	121	90.2	Min
Actual Exhaust Velocity (Am/s)	31.1	7.50	7.50	Min
Flue Diameter (m)	0.40	0.25	0.25	Max
Normalised Flow rate per stack (Nm ³ /s) @ 0% O ₂ , 0 °C, 101.3kPa, dry.	2.73	0.28	0.28	Min
Actual Flow Rate per stack (Am ³ /s)	3.91	0.39	0.39	Min
Release Temperature per stack (°C)	61	80	80	Min
NOx Emission Rate (g/s)	21.375	0.716	0.716	Max
PM Emission Rate (g/s)	1.221	0.041	0.041	Max



Air Quality Assessment: Localised Impacts of Tottenham Hotspur Construction Compound

September 2015



Experts in air quality
management & assessment

Document Control

Client	Tottenham Hotspur	Principal Contact	Paul Phillips
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Job Number	J2357
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J2357/1/D1	16 September 2015	Final	Dr Ben Marner (Technical Director)

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Executive Summary

Concrete delivery is the source of the greatest anticipated number of vehicle movements to and from the Tottenham Hotspur Football Club (THFC) development site during the construction works. There are no local concrete batching plant within the borough. Batching concrete at the proposed construction compound on White Hart Lane would greatly reduce the distance the concrete delivery vehicles would have to travel and thus reduce the air quality impacts on the wider area. There are, however, likely to be some localised adverse impacts of this compound on the receptors along White Hart Lane; this is mainly due to rerouting the construction traffic.

Existing air quality conditions have been described using the results of monitoring carried out by Haringey Council, information published by Defra, and detailed baseline dispersion modelling. The operational impacts have been assessed using detailed dispersion modelling. Concentrations of the key air pollutants associated with road traffic, i.e. nitrogen dioxide and fine particulate matter (PM₁₀ and PM_{2.5}), have been determined with and without the development. The predicted concentrations have been compared with air quality objectives set by the Government to protect human health.

The operational dust impacts have been assessed qualitatively, taking account of the design of the development and the use of best available techniques for such facilities as outlined in guidance published by Defra. The site will have electric power provision and no on-site power generation is required.

Existing conditions within the study area show poor quality, with concentrations of nitrogen dioxide exceeding the annual mean objective along High Road south of the development site. The site lies within an Air Quality Management Area.

The maximum daily average construction related traffic for the THFC site (assuming no construction compound) on High Road, of 41 HGVs, leads to moderate adverse impacts at locations along High Road. Use of the construction compound will lead to a small reduction in HGV movements along High Road north of White Hart Lane; this is unlikely, however, to remove the moderate adverse impacts. The additional traffic along White Hart Lane will introduce moderate adverse impacts along this road.

The assessment has demonstrated that use of the construction compound will give rise to no significant increase in concentrations of PM₁₀ and PM_{2.5} at relevant locations; concentrations will remain below the objectives (a maximum of 84 % of an objective) and the impacts will all be *negligible*. In the case of nitrogen dioxide, the percentage increases are predicted to range from 0% to 1%; annual mean concentrations will remain above the objective at the majority of the receptor locations (ranging between 78% and 159% of the objective), with the impacts ranging from *negligible* to *moderate adverse*. It should be noted that there are some reductions in concentrations in areas along High Road north of White Hart Lane (Receptors 13-16), although

these are rounded to 0% and therefore are not significant. The localised impacts will be in addition to the existing moderate adverse impacts associated with the introduction of construction traffic for the THFC development, but will be temporary in nature and should be recognised in the context of expected air quality benefits over the wider area.

The facility itself will be designed to include a high level of abatement, following Defra guidance on the best available techniques. It is thus judged that dust emissions from the site itself will be very low, and unlikely to have a significant adverse impact on sensitive receptors in the local area.

Overall, the localised operational air quality effects of the proposed compound are judged to be *significant*, but temporary.

The construction related traffic is expected to conform to the Euro VI emission standards. This will reduce the localised impacts in particular along White Hart Lane. It is not considered essential to provide any additional mitigation. It may also be possible to minimise the impacts by using hybrid or electric vehicles to transport the concrete from the construction site to the THFC development site. The feasibility of this is unknown and would need to be investigated; electric HGVs for movement of concrete may not be available commercially.

Contents

1	Introduction	5
2	Policy Context and Assessment Criteria	7
3	Assessment Approach	14
4	Site Description and Baseline Conditions	19
5	Impact Assessment	27
6	Mitigation	35
7	Conclusions	36
8	References	38
9	Glossary	40
10	Appendices	42
A1	London-Specific Policies and Measures	43
A2	Construction Dust Assessment Procedure	46
A3	EPUK & IAQM Planning for Air Quality Guidance	52
A4	Professional Experience	57
A5	Modelling Methodology	58
A6	Adjustment of Short-Term Data to Annual Mean	66

Tables

Table 1:	Air Quality Criteria for Nitrogen Dioxide, PM ₁₀ and PM _{2.5}	12
Table 2:	Summary of Nitrogen Dioxide (NO ₂) Monitoring (2009-2014) ^{a b}	20
Table 3:	Summary of PM ₁₀ and PM _{2.5} Automatic Monitoring (2009-2014)	22
Table 4:	Estimated Annual Mean Background Pollutant Concentrations in 2014 and 2016 (µg/m ³)	23
Table 5:	Modelled Annual Mean Baseline Concentrations of Nitrogen Dioxide (µg/m ³) at Existing Receptors ^{ab}	24
Table 6:	Modelled Annual Mean Baseline Concentrations of PM ₁₀ and PM _{2.5} at Existing Receptors (µg/m ³) ^a	25
Table 7:	Predicted Impacts on Annual Mean Nitrogen Dioxide Concentrations in 2016 (µg/m ³) ^{ab}	27
Table 8:	Predicted Impacts on Annual Mean PM ₁₀ Concentrations in 2016 (µg/m ³) ^a	28
Table 9:	Predicted Impacts on Annual Mean PM _{2.5} Concentrations in 2016 (µg/m ³) ^a	29
Table A2.1:	Examples of How the Dust Emission Magnitude Class May be Defined ...	47
Table A2.2:	Principles to be Used When Defining Receptor Sensitivities	49
Table A2.3:	Sensitivity of the Area to Effects on People and Property from Dust Soiling	50

Table A2.4:	Sensitivity of the Area to Human Health Effects	50
Table A2.5:	Sensitivity of the Area to Ecological Effects	51
Table A2.6:	Defining the Risk of Dust Impacts	51
Table A3.1:	Air Quality Impact Descriptors for Individual Receptors for All Pollutants ^a	55
Table A5.1:	Summary of Traffic Data used in the Assessment (AADT)	61
Table A5.2:	Background Concentrations used in the Verification for 2014	64
Table A6.1:	Data used to Adjust Short-term Nitrogen Dioxide Monitoring Data at Haringey Town Hall to Annual Mean	66
Table A6.2:	Data used to Adjust Short-term PM _{2.5} Monitoring Data at Haringey Town Hall to Annual Mean	67

Figures

Figure 1:	Receptor Locations	15
Figure 2:	Monitoring Locations	21
Figure A5.1:	Predicted Mapped versus Measured NO ₂ Concentrations at AURN Background Sites in 2014	59
Figure A5.2:	Modelled Road Network	63

1 Introduction

- 1.1 This report describes the potential local air quality impacts associated with the proposed construction compound at White Hart Lane in the London Borough (LB) of Haringey. The assessment has been carried out by Air Quality Consultants Ltd on behalf of Tottenham Hotspur Football Club (THFC).
- 1.2 The proposed development will consist of a purpose-built concrete batching plant, which will serve the THFC development. Without the compound, the only viable alternative would be to import concrete for the THFC development from outside of the borough, as there is no room for a concrete batching plant on the THFC site.
- 1.3 When compared with importing concrete from outside of the borough, use of the construction compound would greatly reduce the distance the concrete delivery vehicles would have to travel and thus reduce the adverse air quality impacts on the wider area. However, there are likely to be some localised adverse impacts on the receptors along White Hart Lane. This assessment considers these localised adverse impacts and compares the two scenarios: without construction compound versus with construction compound. While only the adverse impacts have been quantified, the findings should be recognised in the context of the wider benefits that are expected.
- 1.4 The batching plant within the construction compound will operate from late 2015 until 2017, and it is anticipated that 65,000 m³ of concrete will be produced within this time. Concrete will be produced from cement, ground granulated blast-furnace slag (GGBS), limestone fines, fine and coarse aggregates, water and admixture. Once all of the constituents have been mixed, the wet concrete will be discharged into a truck-mixer for transportation by road to the THFC development site located approximately 250 m away.
- 1.5 Traffic flows have been provided by Tim Spencer and Co and are based on the quantity of materials required. The proposed compound will lead to:
- *an increase in annual average daily traffic flows of construction related traffic of 28 HGVs along White Hart Lane;*
 - *a reduction in annual average daily traffic flows of construction related traffic along High Road north of White Hart Lane, from 41 HGVs to 31 HGVs; and*
 - *an increase in annual average daily traffic flows of construction related traffic along High Road south of White Hart Lane to the THFC site entrance, from 41 to 58 HGVs.*
- 1.6 The construction related traffic on High Road of 41 HGVs accessing the THFC site (assuming no construction compound) has been shown to lead to moderate adverse impacts at locations along High Road. The small reduction in vehicle movements along High Road north of White Hart Lane,

with the compound, is unlikely to remove these moderate adverse impacts. The additional traffic along White Hart Lane may introduce new adverse impacts.

- 1.7 This report focuses on the impacts of the changes in traffic emissions due to the construction compound on air quality at existing residential properties. The main air pollutants of concern related to traffic emissions are nitrogen dioxide and fine particulate matter (PM₁₀ and PM_{2.5}). There is also the potential for operational dust emissions to arise, given that one of the site's primary purposes is to handle powdered materials. Both of these potential impacts have been assessed.
- 1.8 The Greater London Authority's (GLA's) London Plan (GLA, 2015) requires certain developments to be assessed in terms of their air quality neutrality. The Supplementary Planning Guidance (SPG) on Sustainable Design and Construction (GLA, 2014a) details the methodology for this assessment. However, given that the proposed batching plant will only operate until 2017, it is judged to be not necessary to assess the air quality neutrality of this development.
- 1.9 It is understood that there will be no requirement for demolition, earthworks or construction at the proposed development site. All plant are understood to be 'mobile', with no permanent structural work required. Furthermore, there will be no unpaved ground at the site. It is therefore judged not necessary to assess the potential dust impacts from the installation phase.
- 1.10 It is understood that the concrete batching facility will use only electric-powered plant, with no diesel or gas-fired fixed plant utilised in the batching process. Thus, exhaust emissions from the compound are not considered further.
- 1.11 This report describes existing local air quality conditions (2014), and the predicted air quality in the future assuming that the proposed development does, or does not proceed. The assessment of traffic-related impacts focuses on 2016, which is the first full year of operation. The "Without Scheme" scenario for 2016 includes the construction traffic associated with the THFC development site, as well as the HGVs used to import concrete from outside of the borough, while the "With Scheme" scenario assumes that all concrete batching operations are undertaken at the proposed compound at White Hart Lane.
- 1.12 This report has been prepared taking into account all relevant local and national guidance and regulations.

2 Policy Context and Assessment Criteria

Air Quality Strategy

- 2.1 The Air Quality Strategy published by the Department for Environment, Food, and Rural Affairs (Defra) provides the policy framework (Defra, 2007) for air quality management and assessment in the UK. It provides air quality standards and objectives for key air pollutants, which are designed to protect human health and the environment. It also sets out how the different sectors: industry, transport and local government, can contribute to achieving the air quality objectives. Local authorities are seen to play a particularly important role. The strategy describes the Local Air Quality Management (LAQM) regime that has been established, whereby every authority has to carry out regular reviews and assessments of air quality in its area to identify whether the objectives have been, or will be, achieved at relevant locations, by the applicable date. If this is not the case, the authority must declare an Air Quality Management Area (AQMA), and prepare an action plan which identifies appropriate measures that will be introduced in pursuit of the objectives.

Planning Policy

National Policies

- 2.2 The National Planning Policy Framework (NPPF) (2012) sets out planning policy for England in one place. It places a general presumption in favour of sustainable development, stressing the importance of local development plans, and states that the planning system should perform an environmental role to minimise pollution. One of the twelve core planning principles notes that planning should “contribute to...reducing pollution”. To prevent unacceptable risks from air pollution, planning decisions should ensure that new development is appropriate for its location. The NPPF states that the effects of pollution on health and the sensitivity of the area and the development should be taken into account.
- 2.3 More specifically the NPPF makes clear that: *“Planning policies should sustain compliance with and contribute towards EU limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and the cumulative impacts on air quality from individual sites in local areas. Planning decisions should ensure that any new development in Air Quality Management Areas is consistent with the local air quality action plan”.*
- 2.4 The NPPF is now supported by Planning Practice Guidance (PPG) (DCLG, 2014), which includes guiding principles on how planning can take account of the impacts of new development on air quality. The PPG states that “Defra carries out an annual national assessment of air quality using modelling and monitoring to determine compliance with EU Limit Values” and “It is important that the potential impact of new development on air quality is taken into account ... where the national

assessment indicates that relevant limits have been exceeded or are near the limit". The role of the local authorities is covered by the LAQM regime, with the PPG stating that local authority Air Quality Action Plans "identify measures that will be introduced in pursuit of the objectives". In addition, the PPG makes clear that "Odour and dust can also be a planning concern, for example, because of the effect on local amenity".

- 2.5 The PPG states that *"Whether or not air quality is relevant to a planning decision will depend on the proposed development and its location. Concerns could arise if the development is likely to generate air quality impact in an area where air quality is known to be poor. They could also arise where the development is likely to adversely impact upon the implementation of air quality strategies and action plans and/or, in particular, lead to a breach of EU legislation (including that applicable to wildlife)".*
- 2.6 The PPG sets out the information that may be required in an air quality assessment, making clear that *"Assessments should be proportional to the nature and scale of development proposed and the level of concern about air quality".* It also provides guidance on options for mitigating air quality impacts, as well as examples of the types of measures to be considered. It makes clear that *"Mitigation options where necessary, will depend on the proposed development and should be proportionate to the likely impact".*

The London Plan

- 2.7 The London Plan (GLA, 2015) sets out the spatial development strategy for London consolidated with alterations made to the original plan since 2011. It brings together all relevant strategies, including those relating to air quality.
- 2.8 Policy 7.14, 'Improving Air Quality', addresses the spatial implications of the Mayor's Air Quality Strategy and how development and land use can help achieve its objectives. It recognises that Boroughs should have policies in place to reduce pollutant concentrations, having regard to the Mayor's Air Quality Strategy.
- 2.9 Policy 7.14B(c), requires that development proposals should be *"at least 'air quality neutral' and not lead to further deterioration of existing poor air quality (such as designated Air Quality Management Areas (AQMAs))".* Further details of the London Plan in relation to planning decisions are provided in Appendix A1.

The Mayor's Air Quality Strategy

- 2.10 The revised Mayor's Air Quality Strategy (MAQS) was published in December 2010 (GLA, 2010). The overarching aim of the Strategy is to reduce pollution concentrations in London to achieve compliance with the EU limit values as soon as possible. The Strategy commits to the continuation of measures identified in the 2002 MAQS, and sets out a series of additional measures. These additional measures and the role of the Low Emission Zone are described in Appendix A1.

GLA SPG: Sustainable Design and Construction

- 2.11 The GLA's SPG on Sustainable Design and Construction (GLA, 2014a) provides details on delivering some of the priorities in the London Plan. Section 4.3 covers Air Pollution. It defines when developers will be required to submit an air quality assessment, explains how location and transport measures can minimise emissions to air, and provides emission standards for gas-fired boilers, Combined Heat and Power (CHP) and biomass plant.

GLA SPG: The Control of Dust and Emissions During Construction and Demolition

- 2.12 The GLA's SPG on The Control of Dust and Emissions During Construction and Demolition (GLA, 2014b) outlines a risk assessment based approach to considering the potential for dust generation from a construction site, and sets out what mitigation measures should be implemented to minimise the risk of construction dust impacts, dependent on the outcomes of the risk assessment. This guidance is largely based on the Institute of Air Quality Management's (IAQM) 2014 guidance on the Assessment of dust from demolition and construction (Institute of Air Quality Management, 2014), and it states that *"the latest version of the IAQM Guidance should be used"*.

Local Transport Plan

- 2.13 The Haringey Local Implementation Plan (Haringey Council, 2011) sets out how the Mayor's Transport Strategy will be delivered within Haringey up until 2031. Air quality is referred to as one of the main transport challenges. It is the objective of the Council to: *'Improve air quality within the borough through initiatives to reduce and mitigate the effects of pollutant emissions from road and diesel operated rail transport.'*
- 2.14 The Council has set the challenge to improve air quality within the borough by reducing car use, it states that, *'Haringey Council will continue to introduce initiatives that reduce air pollutant emissions from road transport by promoting smarter travel choices, raising awareness and encouraging sustainable travel behaviour. These include promoting walking and cycling for short journeys, and increased use of public transport. More sustainable car use will be encourage through car clubs, car sharing, and the use of fuel efficient vehicles, such as electric vehicles, and smarter driving techniques'.*

Local Policies

- 2.15 Haringey's Local Plan (Haringey Council, 2013) was formally adopted in March 2013 and sets out the strategic policies within the borough for the period 2013 to 2016. The Local Plan Strategic Policy 7 Transport relates to air quality in its section on, *"Delivering Action on Climate Change and Quality and Healthy Places"* and states that it will work with its partners in the promotion of traffic management schemes such as:
- *"Minimising congestion and addressing the environmental impacts of travel;*

- *Promoting public transport, walking and cycling...*
- *...Seeking to locate major trip generating developments in locations with good access to public transport and so better integrate transport and land use planning.*
- *Adopting maximum car parking standards and car free housing wherever feasible;...*
- *...Supporting measures to influence behavioural change such as promoting low carbon vehicles..."*

2.16 A number of policies included within Haringey's Unitary Development Plan (Haringey Council, 2013) have been saved as part of the new local plan. A number of the saved policies refer to air quality and include:

"Policy UD1 Planning Statements:

Where appropriate, all development proposals (except 'householder development') are to be accompanied by one or more of the following:

i) air quality statement, for significant impact on air quality...

Policy UD3 General Principles:

"The Council will require development proposals to demonstrate that:

a) there is no significant adverse impact on residential amenity or other surrounding uses in terms of loss of daylight or sunlight, privacy, overlooking, aspect and the avoidance of air, water, light and noise, pollution (including from the contamination of groundwater/water courses or from construction noise) and of fume and smell nuisance; ..."

Policy ENV7 Air, Water and Light Pollution:

The Council will control potential pollution resulting from development in the Borough by:

b) requiring developments to include measures to avoid, reduce and only then mitigate the emissions of pollutants, where appropriate; ..."

2.17 Much of the detail to support the UDP policies is contained within accompanying Supplementary Planning Documents (SPDs), which are a material consideration for development control purposes. The Council adopted the Sustainable Design & Construction SPD in March 2013 (Haringey Council, 2013), Section 7 is on pollution and sets out the requirements for an air quality assessment and states that, *"Any mitigation measures should be incorporated into the design prior to submission"*.

Air Quality Action Plan

- 2.18 The London Borough of Haringey has declared an AQMA for nitrogen dioxide that covers the whole Borough. The Council has since developed an Air Quality Action Plan (Haringey Council, 2011). The main objectives of the Action Plan are to:
- *"demonstrate the Council's commitment to improving air quality and lead by example"*
 - *provide an overview of local key policies with respect to air quality*
 - *improve air quality whilst maintaining economic stability and to explore wider economic opportunities*
 - *involve all relevant Council departments and external agencies where appropriate, to ensure a balanced and integrated approach in Haringey*
 - *improve the quality of life and health of the residents and workforce of Haringey".*

Assessment Criteria

Health Criteria

- 2.19 The Government has established a set of air quality standards and objectives to protect human health. The 'standards' are set as concentrations below which effects are unlikely even in sensitive population groups, or below which risks to public health would be exceedingly small. They are based purely upon the scientific and medical evidence of the effects of an individual pollutant. The 'objectives' set out the extent to which the Government expects the standards to be achieved by a certain date. They take account of economic efficiency, practicability, technical feasibility and timescale. The objectives for use by local authorities are prescribed within the Air Quality (England) Regulations, 2000, Statutory Instrument 928 (2000) and the Air Quality (England) (Amendment) Regulations 2002, Statutory Instrument 3043 (2002).
- 2.20 The objectives for nitrogen dioxide and PM₁₀ were to have been achieved by 2005 and 2004 respectively, and continue to apply in all future years thereafter. The PM_{2.5} objective is to be achieved by 2020. Measurements across the UK have shown that the 1-hour nitrogen dioxide objective is unlikely to be exceeded where the annual mean concentration is below 60 µg/m³ (Defra, 2009). Therefore, 1-hour nitrogen dioxide concentrations will only be considered if the annual mean concentration is above this level. Measurements have also shown that the 24-hour PM₁₀ objective could be exceeded where the annual mean concentration is above 32 µg/m³ (Defra, 2009). The predicted annual mean PM₁₀ concentrations are thus used as a proxy to determine the likelihood of an exceedence of the 24-hour mean PM₁₀ objective. Where predicted annual mean concentrations are below 32 µg/m³ it is unlikely that the 24-hour mean objective will be exceeded.

- 2.21 The objectives apply at locations where members of the public are likely to be regularly present and are likely to be exposed over the averaging period of the objective. Defra explains where these objectives will apply in its Local Air Quality Management Technical Guidance (Defra, 2009). The annual mean objectives for nitrogen dioxide and PM₁₀ are considered to apply at the façades of residential properties, schools, hospitals etc.; they do not apply at hotels. The 24-hour objective for PM₁₀ is considered to apply at the same locations as the annual mean objective, as well as in gardens of residential properties and at hotels. The 1-hour mean objective for nitrogen dioxide applies wherever members of the public might regularly spend 1-hour or more, including outdoor eating locations and pavements of busy shopping streets.
- 2.22 The European Union has also set limit values for nitrogen dioxide, PM₁₀ and PM_{2.5}. The limit values for nitrogen dioxide are the same numerical concentrations as the UK objectives, but achievement of these values is a national obligation rather than a local one (Directive 2008/50/EC of the European Parliament and of the Council, 2008). In the UK, only monitoring and modelling carried out by UK Central Government meets the specification required to assess compliance with the limit values. Central Government does not recognise local authority monitoring or local modelling studies when determining the likelihood of the limit values being exceeded.
- 2.23 The relevant air quality criteria for this assessment are provided in Table 1.

Table 1: Air Quality Criteria for Nitrogen Dioxide, PM₁₀ and PM_{2.5}

Pollutant	Time Period	Objective
Nitrogen Dioxide	1-hour Mean	200 µg/m ³ not to be exceeded more than 18 times a year
	Annual Mean	40 µg/m ³
Fine Particles (PM ₁₀)	24-hour Mean	50 µg/m ³ not to be exceeded more than 35 times a year
	Annual Mean	40 µg/m ³ ^b
Fine Particles (PM _{2.5}) ^a	Annual Mean	25 µg/m ³

^a The PM_{2.5} objective, which is to be met by 2020, is not in Regulations and there is no requirement for local authorities to meet it.

^b A proxy value of 32 µg/m³ as an annual mean is used in this assessment to assess the likelihood of the 24-hour mean PM₁₀ objective being exceeded. Measurements have shown that, above this concentration, exceedences of the 24-hour mean PM₁₀ objective are possible (Defra, 2009).

Dust Criteria

- 2.24 There are no formal assessment criteria for dust. It is thus typical to take a qualitative approach, considering the scale of the likely emissions and the distances over which impacts are likely. The

approach developed by the Institute of Air Quality Management¹ (2014) (IAQM), on which the assessment methodology outlined in the GLA's SPG (GLA, 2014b) is based, has been incorporated into the operational dust impact assessment.

Descriptors for Air Quality Impacts and Assessment of Significance

Operational Dust Significance

- 2.25 Guidance from the IAQM (Institute of Air Quality Management, 2014) is that, with appropriate mitigation in place, the impacts of dust will be 'not significant'. The assessment thus focuses on determining the appropriate level of mitigation so as to ensure that impacts will normally be 'not significant'.

Operational Significance

Health

- 2.26 There is no official guidance in the UK on how to describe air quality impacts, nor how to assess their significance. The approach developed jointly by Environmental Protection UK (EPUK) and the IAQM (EPUK & IAQM, 2015) has therefore been used. This includes defining descriptors of the impacts at individual receptors, which take account of the percentage change in concentrations relative to the relevant air quality objective, rounded to the nearest whole number, and the absolute concentration relative to the objective. The overall significance of the air quality impacts is determined using professional judgement, taking account of the impact descriptors. Full details of the EPUK/IAQM approach are provided in Appendix A3. The approach includes elements of professional judgement, and the experience of the consultants preparing the report is set out in Appendix A4.

¹ The IAQM is the professional body for air quality practitioners in the UK.

3 Assessment Approach

Existing Conditions

- 3.1 Existing sources of emissions within the study area have been defined using a number of approaches. Industrial and waste management sources that may affect the area have been identified using Defra's Pollutant Release and Transfer Register (Defra, 2015a). Local sources have also been identified through examination of the Council's Air Quality Review and Assessment reports.
- 3.2 Information on existing air quality has been obtained by collating the results of monitoring carried out by the local authority. This covers both the study area and nearby sites, the latter being used to provide context for the assessment. The background concentrations across the study area have been defined using the national pollution maps published by Defra (2015b). These cover the whole country on a 1x1 km grid. Current exceedences of the annual mean EU limit value for nitrogen dioxide have been identified using the maps of roadside concentrations published by Defra (2015c). These are the maps, currently based on 2012 data, used by the UK Government, together with the results from national AURN monitoring sites that operate to EU data quality standards, to report exceedences of the limit value to the EU.

Operational Dust Impacts

- 3.3 The potential for dust impacts has been assessed qualitatively, taking account of the design of the development and the use of best available techniques for such facilities as outlined in guidance published by Defra (Defra, 2012). The IAQM construction dust guidance (Institute of Air Quality Management, 2014) has also been adapted and applied to further assess the potential for operational dust impacts.

Road Traffic Impacts

Sensitive Locations

- 3.4 Concentrations of nitrogen dioxide, PM₁₀ and PM_{2.5} have been predicted at a number of locations close to the proposed development. Receptors have been identified to represent worst-case exposure within these locations. When selecting these receptors, particular attention has been paid to assessing impacts close to junctions, where traffic may become congested, and where there is a combined effect of several road links. The receptors have been located on the façades of the properties closest to the sources.
- 3.5 Nineteen existing residential properties have been identified as receptors for the assessment. These locations are shown in Figure 1. In addition, concentrations have been modelled at the

automatic monitoring site located at High Road, Haringey (HGY1), in order to verify the modelled results (see Appendix A5 for verification method).

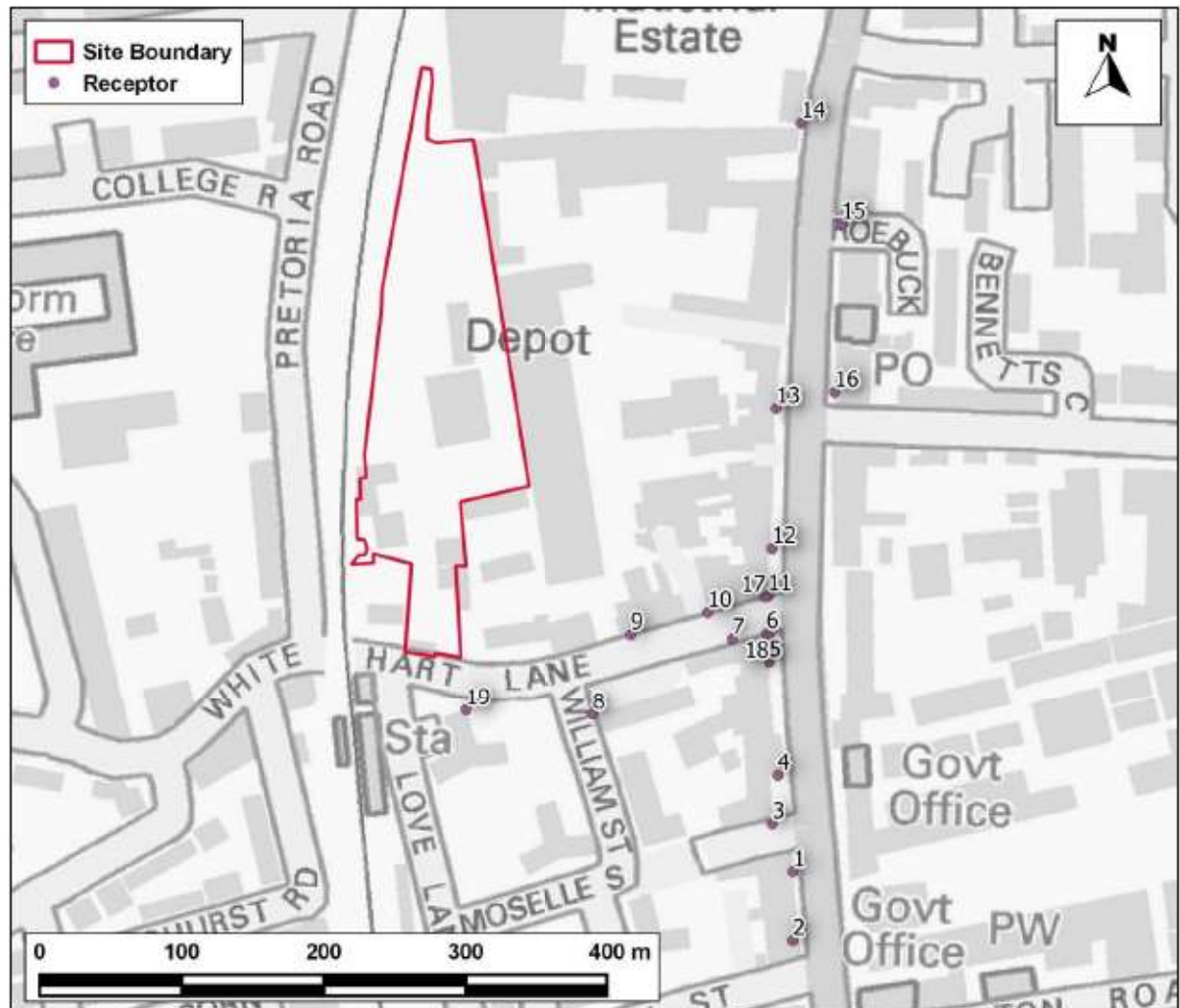


Figure 1: Receptor Locations

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Assessment Scenarios

- 3.6 Predictions of nitrogen dioxide, PM₁₀ and PM_{2.5} concentrations have been carried out for a base year (2014), and the first proposed full year of operation (2016). For 2016, predictions have been made assuming both that the development does proceed (With Scheme), and does not proceed (Without Scheme). The Without Scheme scenario assumes that construction traffic travels directly to the THFC development site from outside the borough. A further 2016 sensitivity test has been carried out for nitrogen dioxide that involves assuming no reduction in emission factors for road traffic from the baseline year. This is to address the issue identified by Defra (Carslaw et al., 2011)

that road traffic emissions have not been declining as expected (see later section on uncertainty). Nitrogen dioxide concentrations in 2016 with and without the scheme are thus presented for two scenarios: 'With Emissions Reduction' and 'Without Emissions Reduction'.

- 3.7 The "Without Scheme" scenarios for 2016 include the construction traffic (including the import of concrete) for the THFC development site at High Road, while the "With Scheme" scenarios assume that all concrete batching operations are undertaken at the proposed compound at White Hart Lane.

Modelling Methodology

- 3.8 Concentrations have been predicted using the ADMS-Roads dispersion model. Details of the model inputs and the model verification are provided in Appendix A5, together with the method used to derive current and future year background nitrogen dioxide concentrations. The air quality modelling has been carried out based on a number of assumptions that have had to be made, detailed further in Appendix A5. The main variable for road traffic modelling is the traffic data on which the model is based. Where possible a realistic worst-case approach has been adopted.

Uncertainty

- 3.9 There are many components that contribute to the uncertainty of modelling predictions. The road traffic emissions model used in this assessment is dependent upon the traffic data that have been input, which will have inherent uncertainties associated with them. There are then additional uncertainties, as the model is required to simplify real-world conditions into a series of algorithms. An important stage in the process is model verification, which involves comparing the model output with measured concentrations (see Appendix A5). This can only be done for the road traffic model. The level of confidence in the verification process is necessarily enhanced when data from an automatic analyser have been used, as has been the case for this assessment (see Appendix A5). Because the model has been verified and adjusted, there can be reasonable confidence in the prediction of current year (2014) concentrations.
- 3.10 Predicting pollutant concentrations in a future year will always be subject to greater uncertainty. For obvious reasons, the model cannot be verified in the future, and it is necessary to rely on a series of projections provided by DfT and Defra as to what will happen to traffic volumes, background pollutant concentrations and vehicle emissions.
- 3.11 Historically, large reductions in nitrogen oxides emissions have been projected, which has led to significant reductions in nitrogen dioxide concentrations from one year to the next being predicted. Over time, it was found that trends in measured concentrations did not reflect the rapid reductions that Defra and the DfT had predicted (Carslaw et al., 2011). This was evident across the UK, although the effect appeared to be greatest in inner London; there was also considerable inter-site variation. Emission projections over the 6 to 8 years prior to 2009 suggested that both annual

mean nitrogen oxides and nitrogen dioxide concentrations should have fallen by around 15-25%, whereas monitoring data showed that concentrations remained relatively stable, or even showed a slight increase. Analysis of more recent data for 23 roadside sites in London covering the period 2003 to 2012 showed a weak downward trend of around 5% over the ten years (Carslaw and Rhys-Tyler, 2013), but this still falls short of the improvements that had been predicted at the start of this period. This pattern of no clear, or limited, downward trend is mirrored in the monitoring data from the HGY1 monitor assembled for this study, as set out in Paragraph 4.5.

- 3.12 The reason for the disparity between the expected concentrations and those measured relates to the on-road performance of modern diesel vehicles. New vehicles registered in the UK have had to meet progressively tighter European type approval emissions categories, referred to as "Euro" standards. While the nitrogen oxides emissions from newer vehicles should be lower than those from equivalent older vehicles, the on-road performance of some modern diesel vehicles has often been no better than that of earlier models. This has been compounded by an increasing proportion of nitrogen dioxide in the nitrogen oxides emissions, i.e. primary nitrogen dioxide, which has a significant effect on roadside concentrations (Carslaw et al., 2011) (Carslaw and Rhys-Tyler, 2013).
- 3.13 Defra has attempted to account for the historical discrepancies in its latest emissions factors published in 2014 and incorporated in the Emission Factor Toolkit v6.0.2 used in this study. The new factors now show only limited reductions in overall vehicle emissions prior to 2014, but project some large improvements thereafter. This is principally because, where previous standards had limited on-road success, the best current evidence is that the 'Euro VI' and 'Euro 6' standards that new vehicles had to comply with from 2013/15² will deliver real improvements, as, for the first time, they will be compliant with the World Harmonized Test Cycle, which better represents real-world driving conditions³ and also includes a separate slow-speed cycle for heavy duty vehicles. There is, nevertheless, limited information on whether the full improvements expected are being, and will be, delivered, so there remains some uncertainty as to whether emissions will reduce at the rates set out in Defra's Emission Factors Toolkit (Defra, 2015b).
- 3.14 To account for the remaining uncertainty over future vehicle emissions of nitrogen oxides and nitrogen dioxide, a sensitivity test has been conducted assuming that the future (2016) road traffic emissions per vehicle are unchanged from 2014 values (without emissions reduction). The predictions within this sensitivity test will almost certainly be over-pessimistic, as new Euro VI and Euro 6 vehicles will make up roughly 35% of HDVs and 20% of LDVs on the road in 2016, according to Defra's Emission Factors Toolkit (Defra, 2015b). Future concentrations due to road

² Euro VI refers to heavy duty vehicles, while Euro 6 refers to light duty vehicles. The timings for meeting the standards vary with vehicle type and whether the vehicle is a new model or existing model.

³ The test cycle for real-world emissions for Euro 6 vehicles will not be implemented until about 2017. However, there is still expected to be a substantial improvement in NOx emissions from Euro 6 vehicles (as compared with Euro 5) from 2015 onwards.

traffic emissions will therefore be below the 'without emissions reduction' values, but may be above Defra's 'with emissions reduction' values i.e. they will lie between the two sets of values, but are likely to be closer to those derived using the official Defra values than those in the 'no emissions reduction' sensitivity test. Furthermore, the 'without emissions reduction' scenario is likely to be over-pessimistic as it is understood that the planned fleet of construction vehicles will be at least Euro IV, with the additional possibility of the use of hybrid-engine vehicles.

- 3.15 In addition, the dispersion modelling has assumed that sections of White Hart Lane and High Road are street canyons, which is precautionary as the model assumes that only limited dispersion occurs within the canyon. In reality, dispersion does occur within street canyons, particularly those which are wide and shallow, with uneven or broken facades on one or both sides, such as is the case with White Hart Lane and High Road. The consequence of this is that modelled nitrogen dioxide concentrations at the façades of properties within the canyons are likely to be higher than will occur in practice.

4 Site Description and Baseline Conditions

- 4.1 The proposed development site is located approximately 250 m by road to the west of the THFC development site. The site is bounded by White Hart Lane and the Lea Valley railway line to the south and west, respectively, and an existing industrial estate to the north and east. The site is currently unused, however it has previously been used as a car breakers yard.
- 4.2 There are existing residential properties immediately to the south of the site, as well as to the west on the opposite side of the railway line. A number of residential properties are also located to the east along High Road.

Air Quality Review and Assessment

- 4.3 The LB of Haringey has investigated air quality within its area as part of its responsibilities under the LAQM regime. In July 2001 an AQMA was declared across the whole borough for exceedences of the annual mean nitrogen dioxide and 24-hour mean PM₁₀ objectives.

Local Air Quality Monitoring

- 4.4 Haringey Council operates two automatic monitoring stations within its area. The Haringey High Road roadside automatic monitoring site is located approximately 700 m southeast of the development site. The Council also operates a number of nitrogen dioxide monitoring sites using diffusion tubes prepared and analysed by Lambeth Scientific Services (using the 50% TEA in acetone method). In 2014 diffusion tube monitoring was completed at four sites within approximately 1.5 km of the proposed batching plant (HR07 closed in September 2014). Results for the years 2009 to 2014 are summarised in Table 2 and the monitoring locations are shown in Figure 2.

Table 2: Summary of Nitrogen Dioxide (NO₂) Monitoring (2009-2014) ^{ab}

Site No.	Site Type	Location	2009	2010	2011	2012	2013	2014
Automatic Monitor - Annual Mean (µg/m ³) ^a								
HGY1	Roadside	High Road	42	45	38	42	43	44 ^c
Objective			40					
Automatic Monitor - No. of Hours > 200 µg/m ³								
HGY1	Roadside	High Road	0	0	0	0	1	0
Objective			18					
Diffusion Tubes - Annual Mean (µg/m ³)								
HR07	Urban Background	Park View Road	34	38	33	32	29	25
HR14	Roadside	High Road	48	47	44	46	39	37
HR23	Roadside	High Street	-	-	42	37	41	30
HR25	Roadside	White Hart Lane	-	-	36	37	34	34
Objective			40					

^a Exceedences of the objectives are shown in bold.

^b 2009 and 2010 data have been taken from the 2010 Air Quality Progress Report (Haringey Council, 2011), 2011 to 2014 data have been taken from the Air Quality Updating and Screening Assessment for 2014 (Haringey Council, 2015).

^c Data capture was 64 % in 2014 and therefore results have been annualised in accordance with Box 3.2 in LAQM.TG(09) (Defra, 2009) (see Appendix A6).

- 4.5 Concentrations have exceeded or been close to exceeding the annual mean nitrogen dioxide objective at the roadside monitoring locations; these measured concentrations are considered to be representative of baseline conditions across the proposed development site. At the urban background diffusion tube monitoring site annual mean concentrations have been well below the annual mean objective.
- 4.6 Annual mean concentrations at the HR07 urban background site and the HR14 roadside site suggest an overall downward trend over the past six years. However, examining the data for the roadside automatic monitoring site, HGY1, which provides more accurate data, there is no significant trend in monitoring results over the last 10 years. This contrasts with the expected decline due to the progressive introduction of new vehicles operating to more stringent standards. The implications of this are discussed in Section 5 of this report.

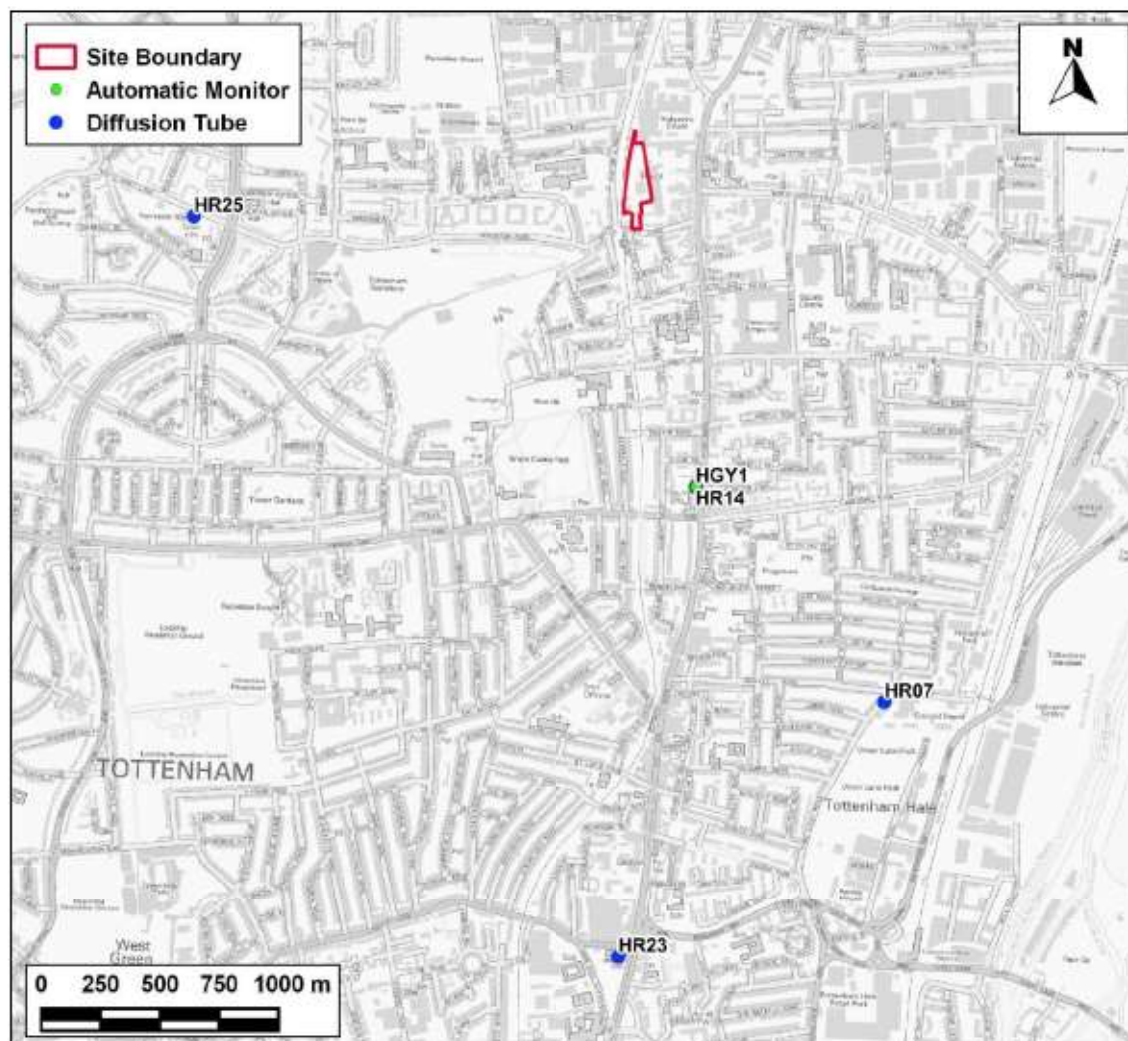


Figure 2: Monitoring Locations

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- 4.7 The Haringey HGY1 automatic monitoring station, located on High Road, measured PM_{10} concentrations from 2009 to 2013; PM_{10} monitoring ceased at this site in 2014. There are no other sites in Haringey which measure PM_{10} . Results for the years 2009 to 2013 are summarised in Table 3. $PM_{2.5}$ concentrations are also measured at this automatic monitor. Data for 2009-2014 are also presented in Table 3. Measured concentrations of both PM_{10} and $PM_{2.5}$ have consistently been well below the relevant objectives and have remained relatively stable.

Table 3: Summary of PM₁₀ and PM_{2.5} Automatic Monitoring (2009-2014)

Site No.	Site Type	Location	2009	2010	2011	2012	2013	2014
PM ₁₀ Annual Mean (µg/m ³) ^a								
HGY1	Roadside	High Road	21	23	-	23	25	-
Objective			40					
PM ₁₀ No. Days >50 µg/m ³								
HGY1	Roadside	High Road	5	9	-	11	13	-
Objective			35					
PM _{2.5} Annual Mean (µg/m ³)								
HGY1	Roadside	High Road	15	18	-	18	18	16 ^b
Objective			25					

^a In 2011 the data were affected by the Tottenham riots.

^b Reference equivalent. Data capture was 82% in 2014, and thus the results have been annualised in accordance with Box 3.2 in LAQM.TG(09) (Defra, 2009) (see Appendix 6.8).

Exceedences of EU Limit Value

- 4.8 There are several AURN monitoring sites within the Greater London Urban Area that have measured exceedences of the annual mean nitrogen dioxide limit value. Furthermore, the national map of roadside annual mean nitrogen dioxide concentrations (Defra, 2015c), used to report exceedences of the limit value to the EU, identifies exceedences of this limit value in 2012 along many roads in London, including the High Road approximately 130 m to the east of the proposed development site. The Greater London Urban Area has thus been reported to the EU as exceeding the limit value for annual mean nitrogen dioxide concentrations. The national maps of roadside PM₁₀ and PM_{2.5} concentrations show no exceedences of the limit values anywhere in London. These maps are for 2012 concentrations; detailed maps of predicted future year exceedences are not available (Defra, 2015c).

Background Concentrations

National Background Pollution Maps

- 4.9 In addition to these locally measured concentrations, estimated background concentrations in the study area have been determined for 2014 and the first full operational year of 2016 (Table 4). In the case of nitrogen dioxide, two sets of future-year backgrounds are presented to take into account uncertainty in future year vehicle emission factors. The derivation of background concentrations is described in Appendix A5. The background concentrations are all well below the objectives.

Table 4: Estimated Annual Mean Background Pollutant Concentrations in 2014 and 2016 ($\mu\text{g}/\text{m}^3$)

Year	NO ₂	PM ₁₀	PM _{2.5}
2014 ^a	27.5 - 27.6	21.4	14.7
2016 – Without Reductions in Traffic Emissions ^b	26.6 - 26.8	n/a	n/a
2016 – With Reductions in Traffic Emissions ^c	25.7 – 25.8	20.8 – 20.9	14.2 – 14.3
Objectives	40	40	25

n/a = not applicable. The range of values is for the different 1x1 km grid squares covering the study area.

^a This assumes that road vehicle emission factors in 2014 remain the same as in 2011 (See Appendix A5).

^b This assumes that road vehicle emission factors in 2016 remain the same as in 2011.

^c This assumes that road vehicle emission factors reduce between 2014 and 2016 at the current 'official' rates.

Baseline Dispersion Model Results

- 4.10 Baseline concentrations of nitrogen dioxide, PM₁₀ and PM_{2.5} have been modelled at each of the existing receptor locations (see Figure 1). The results, which cover both the existing (2014) and future year (2016) baseline (Without Scheme), are set out in Table 5 and Table 6. The future baseline for nitrogen dioxide covers the two scenarios: with the official reductions in vehicle emission factors and without these reductions. The modelled road components of nitrogen oxides concentrations have been adjusted by a factor of 1.89, which was derived during the model verification process (see Appendix A5 for details of the model verification). The modelled road components of PM₁₀ and PM_{2.5} concentrations have been adjusted by a factor of 2.31.

Table 5: Modelled Annual Mean Baseline Concentrations of Nitrogen Dioxide ($\mu\text{g}/\text{m}^3$) at Existing Receptors ^{ab}

Receptor	2014	2016 Without Scheme ^e	
		With 'Official' Emissions Reduction ^c	Without Emissions Reduction ^d
1	46.7	42.8	46.2
2	44.6	41.0	44.1
3	37.1	34.3	36.5
4	45.0	41.4	44.5
5	47.7	43.8	47.2
6	53.0	48.7	52.4
7	46.4	42.8	45.8
8	33.8	31.4	33.1
9	46.3	42.6	45.6
10	48.8	44.9	48.2
11	52.4	48.1	51.9
12	49.0	44.9	48.4
13	52.7	48.2	52.2
14	55.3	50.6	54.9
15	63.9	58.4	63.6
16	62.9	57.5	62.6
17	47.8	44.0	47.3
18	46.1	42.4	45.7
19	34.0	31.5	33.3
Objective	40		

^a Exceedences of the objective are shown in bold.

^b The highest concentration from any height with relevant exposure is shown.

^c This assumes that road vehicle emission factors reduce between 2014 and 2016 at the current 'official' rates.

^d This assumes that road vehicle emission factors in 2016 remain the same as in 2014.

^e The 'Without Scheme' scenario is the 'With Scheme' scenario used in the construction-traffic assessment of the THFC stadium development.

Table 6: Modelled Annual Mean Baseline Concentrations of PM₁₀ and PM_{2.5} at Existing Receptors (µg/m³)^a

Receptor ^b	PM ₁₀ ^a		PM _{2.5}	
	2014	2016 Without Scheme ^e	2014	2016 Without Scheme ^e
1	24.3	23.6	16.6	15.9
2	24.0	23.3	16.4	15.7
3	22.8	22.2	15.6	15.0
4	24.1	23.4	16.4	15.8
5	24.5	23.8	16.7	16.0
6	25.5	24.7	17.4	16.6
7	24.4	23.6	16.6	15.9
8	22.3	21.7	15.3	14.8
9	24.4	23.6	16.6	15.9
10	24.8	24.0	16.9	16.2
11	25.4	24.6	17.3	16.5
12	24.7	24.0	16.8	16.1
13	25.4	24.6	17.3	16.5
14	25.9	25.1	17.6	16.8
15	27.7	26.7	18.7	17.8
16	27.5	26.5	18.6	17.7
17	24.6	23.8	16.8	16.1
18	24.3	23.5	16.6	15.9
19	22.5	21.9	15.4	14.8
Objective	32^b		25	

^a The highest concentration from any height with relevant exposure is shown.

^b While the annual mean PM₁₀ objective is 40 µg/m³, 32 µg/m³ is the annual mean concentration above which an exceedance of the 24-hour mean PM₁₀ concentration is possible, as outlined in LAQM.TG(09) (Defra, 2009). A value of 32 µg/m³ is thus used as a proxy to determine the likelihood of exceedance of the 24-hour mean PM₁₀ objective, as recommended in EPUK & IAQM guidance (EPUK & IAQM, 2015).

^e The 'Without Scheme' scenario is the 'With Scheme' scenario used in the construction-traffic assessment of the THFC stadium development.

2014 Baseline

- 4.11 The predicted annual mean concentrations of nitrogen dioxide are above the objective at 16 of the 19 receptors. PM₁₀ and PM_{2.5} are below the objective in 2014 at all receptors. Furthermore, the

annual mean PM_{10} concentrations are below $32 \mu g/m^3$ and therefore is it unlikely that the 24-hour mean PM_{10} will be exceeded.

2016 Baseline With 'Official' Emission Reduction

- 4.12 The predicted annual mean concentrations of nitrogen dioxide are above the objective at 16 of the 19 receptor locations. All of the predictions for PM_{10} and $PM_{2.5}$ are well below the objectives. Furthermore, the annual mean PM_{10} concentrations are below $32 \mu g/m^3$ and therefore is it unlikely that the 24-hour mean PM_{10} will be exceeded.

2016 Baseline Without Emission Reduction

- 4.13 The predicted annual mean concentrations of nitrogen dioxide are above the objective at 16 of the 19 receptor locations.
- 4.14 These results are consistent with the conclusions of the LB of Haringey in the outcome of its air quality review and assessment work.

5 Impact Assessment

Road Traffic Impacts

- 5.1 Predicted annual mean concentrations of nitrogen dioxide, PM₁₀ and PM_{2.5} are set out in Table 7, Table 8 and Table 9 for both the "Without Scheme" and "With Scheme" scenarios. These tables also describe the impacts of using the construction compound over not using the construction compound, as part of the THFC development, at each receptor using the impact descriptors given in Appendix A3. For nitrogen dioxide, results are presented for two scenarios to reflect current uncertainty in Defra's future-year vehicle emission factors.

Table 7: Predicted Impacts on Annual Mean Nitrogen Dioxide Concentrations in 2016 (µg/m³)^{ab}

Receptor	With 'Official' Emissions Reduction ^c				Without Emissions Reduction ^d			
	Without Scheme	With Scheme	% Change ^e	Impact Descriptor	Without Scheme	With Scheme	% Change ^e	Impact Descriptor
1	42.8	42.9	0	Negligible	46.2	46.3	0	Negligible
2	41.0	41.0	0	Negligible	44.1	44.2	0	Negligible
3	34.3	34.3	0	Negligible	36.5	36.5	0	Negligible
4	41.4	41.4	0	Negligible	44.5	44.6	0	Negligible
5	43.8	43.9	0	Negligible	47.2	47.3	0	Negligible
6	48.7	48.9	0	Negligible	52.4	52.7	1	Moderate Adverse
7	42.8	42.9	0	Negligible	45.8	46.0	0	Negligible
8	31.4	31.4	0	Negligible	33.1	33.2	0	Negligible
9	42.6	42.8	1	Moderate Adverse	45.6	45.9	1	Moderate Adverse
10	44.9	45.1	1	Moderate Adverse	48.2	48.4	1	Moderate Adverse
11	48.1	48.1	0	Negligible	51.9	52.0	0	Negligible
12	44.9	44.9	0	Negligible	48.4	48.5	0	Negligible
13	48.2	48.2	0	Negligible	52.2	52.2	0	Negligible
14	50.6	50.5	0	Negligible	54.9	54.8	0	Negligible
15	58.4	58.3	0	Negligible	63.6	63.5	0	Negligible
16	57.5	57.5	0	Negligible	62.6	62.5	0	Negligible

Receptor	With 'Official' Emissions Reduction ^c				Without Emissions Reduction ^d			
	Without Scheme	With Scheme	% Change ^e	Impact Descriptor	Without Scheme	With Scheme	% Change ^e	Impact Descriptor
17	44.0	44.2	0	Negligible	47.3	47.5	1	Moderate Adverse
18	42.4	42.6	0	Negligible	45.7	45.8	0	Negligible
19	31.5	31.5	0	Negligible	33.3	33.3	0	Negligible
Objective	40		-	-	40		-	-

^a Exceedences of the objective are shown in bold.

^b The highest concentration from any height with relevant exposure is shown.

^c This assumes that road vehicle emission factors reduce between 2014 and 2016 at the current 'official' rates.

^d This assumes that road vehicle emission factors in 2016 remain the same as in 2014.

^e % changes are relative to the objective and have been rounded to the nearest whole number.

Table 8: Predicted Impacts on Annual Mean PM₁₀ Concentrations in 2016 (µg/m³) ^a

Receptor	Annual Mean PM ₁₀ (µg/m ³)			
	Without Scheme	With Scheme	% Change ^b	Impact Descriptor
1	23.6	23.6	0	Negligible
2	23.3	23.3	0	Negligible
3	22.2	22.2	0	Negligible
4	23.4	23.4	0	Negligible
5	23.8	23.8	0	Negligible
6	24.7	24.7	0	Negligible
7	23.6	23.6	0	Negligible
8	21.7	21.8	0	Negligible
9	23.6	23.6	0	Negligible
10	24.0	24.0	0	Negligible
11	24.6	24.6	0	Negligible
12	24.0	24.0	0	Negligible
13	24.6	24.6	0	Negligible
14	25.1	25.1	0	Negligible
15	26.7	26.7	0	Negligible

Receptor	Annual Mean PM ₁₀ (µg/m ³)			
	Without Scheme	With Scheme	% Change ^b	Impact Descriptor
16	26.5	26.5	0	Negligible
17	23.8	23.8	0	Negligible
18	23.5	23.6	0	Negligible
19	21.9	21.9	0	Negligible
Objective	32 ^c		-	-

^a The highest concentration from any height with relevant exposure is shown.

^b % changes are relative to the criterion and have been rounded to the nearest whole number.

^c While the annual mean PM₁₀ objective is 40 µg/m³, 32 µg/m³ is the annual mean concentration above which an exceedance of the 24-hour mean PM₁₀ concentration is possible, as outlined in LAQM.TG(09) (Defra, 2009). A value of 32 µg/m³ is thus used as a proxy to determine the likelihood of exceedance of the 24-hour mean PM₁₀ objective, as recommended in EPUK & IAQM guidance (EPUK & IAQM, 2015).

Table 9: Predicted Impacts on Annual Mean PM_{2.5} Concentrations in 2016 (µg/m³) ^a

Receptor	Annual Mean PM _{2.5} (µg/m ³)			
	Without Scheme	With Scheme	% Change ^b	Impact Descriptor
1	15.9	15.9	0	Negligible
2	15.7	15.7	0	Negligible
3	15.0	15.0	0	Negligible
4	15.8	15.8	0	Negligible
5	16.0	16.0	0	Negligible
6	16.6	16.6	0	Negligible
7	15.9	16.0	0	Negligible
8	14.8	14.8	0	Negligible
9	15.9	16.0	0	Negligible
10	16.2	16.2	0	Negligible
11	16.5	16.5	0	Negligible
12	16.1	16.1	0	Negligible
13	16.5	16.5	0	Negligible
14	16.8	16.8	0	Negligible
15	17.8	17.8	0	Negligible
16	17.7	17.7	0	Negligible
17	16.1	16.1	0	Negligible

Receptor	Annual Mean PM _{2.5} (µg/m ³)			
	Without Scheme	With Scheme	% Change ^b	Impact Descriptor
18	15.9	15.9	0	Negligible
19	14.8	14.8	0	Negligible
Objective	25		-	-

^a The highest concentration from any height with relevant exposure is shown.

^b % changes are relative to the criterion and have been rounded to the nearest whole number.

Nitrogen Dioxide With 'Official' Emissions Reduction

- 5.2 The predicted annual mean nitrogen dioxide concentrations are above the objective at 16 of the 19 receptor locations, whether the scheme is developed or not. These receptors are all within the AQMA.
- 5.3 The percentage changes in concentrations, relative to the air quality objective (when rounded), are predicted to be zero at 15 of the receptors and 1 % at the remaining four receptors. Using the matrix in Table A3.1 (Appendix A3), these impacts are described as *negligible to moderate*. It should be noted that there are some reductions in concentrations in areas along High Road north of White Hart Lane (Receptors 13-16) although these are rounded to 0% and therefore are not significant reductions. It should also be noted that these impacts are not those of the construction related traffic for the THFC development. They are the comparison of the situation without the construction compound versus that with the construction compound.

Nitrogen Dioxide Without Emissions Reduction

- 5.4 Assuming no reduction in vehicle emissions, the predicted annual mean nitrogen dioxide concentrations are above the objective at 16 of the 19 receptor locations, whether the scheme is developed or not. These receptors are all within the AQMA.
- 5.5 The percentage changes in concentrations, relative to the air quality objective (when rounded), are predicted to be zero at 16 of the receptors and 1 % at the remaining three receptors. Using the matrix in Table A3.1 (Appendix A3), these impacts are described as *negligible to moderate*. Again, it should be noted that there are some reductions in concentrations in areas along High Road north of White Hart Lane (Receptors 13-16) although these are rounded to 0% and therefore not significant reductions. Once again, it should be noted that these impacts are not those of the construction related traffic for the THFC development. They are the comparison of the situation without construction compound versus that with the construction compound.
- 5.6 This scenario is based on worst-case assumptions regarding reductions in vehicle emissions and is unlikely to be realistic. In reality, some reduction in vehicle emissions between 2014 and 2016 is expected. The actual concentrations will most likely lie somewhere between this and the 'with