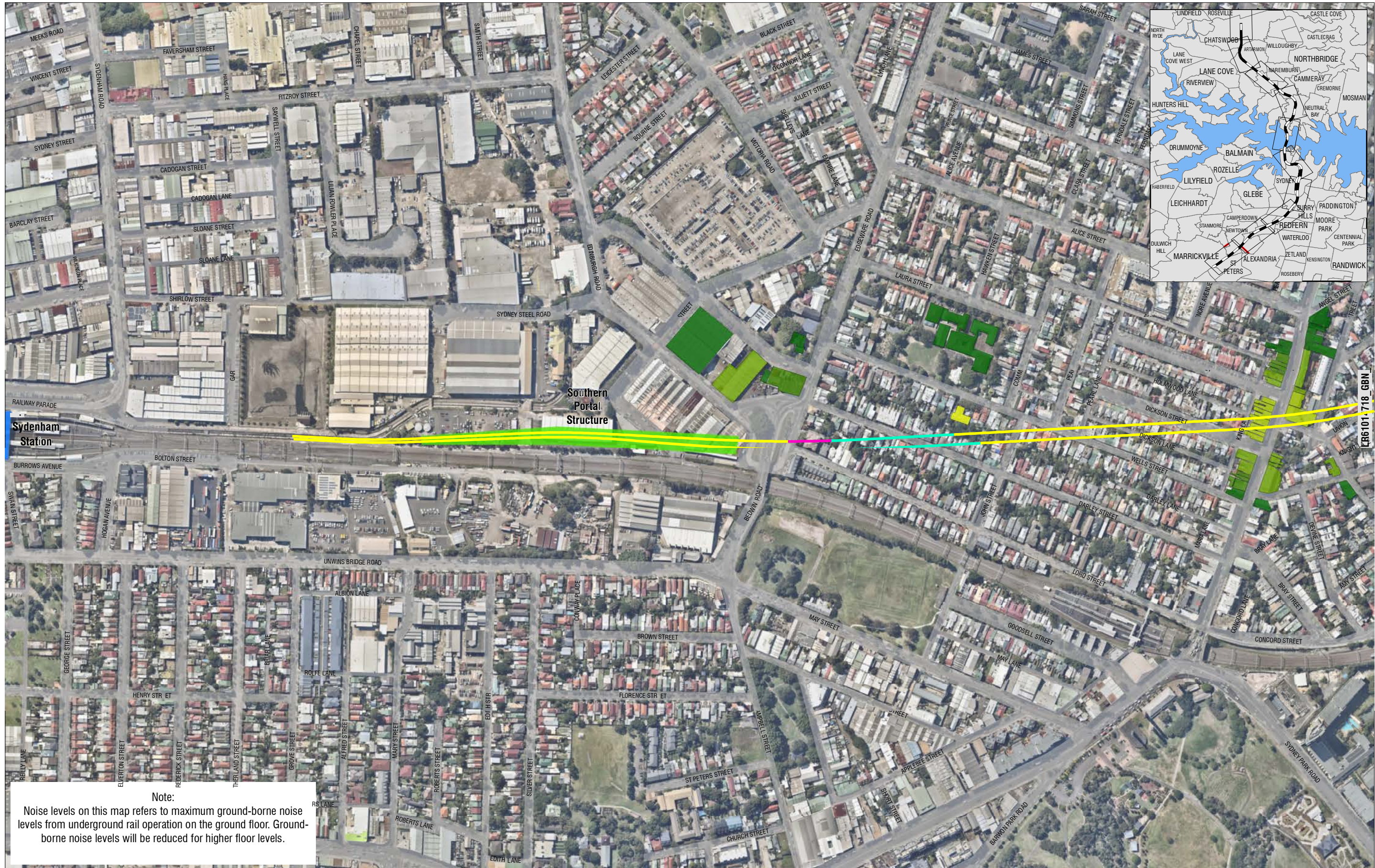


Appendix H2

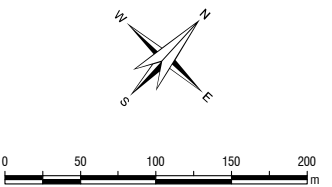
Report 610.14718R1
Operational Ground-borne Noise Predictions
Commercial



Note:
Noise levels on this map refers to maximum ground-borne noise levels from underground rail operation on the ground floor. Ground-borne noise levels will be reduced for higher floor levels.



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LEGEND

	Standard Attenuation Rail	Ground-borne Noise Level (dBA)		21 - 25		41 - 45
	High Attenuation Rail			26 - 30		46 - 50
	Very High Attenuation Rail			31 - 35		51 - 55
	Stations			36 - 40		56 - 60
	Portal Structure			≤ 15		
				16 - 20		

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FIGURE: SLR61014718_GBN_021

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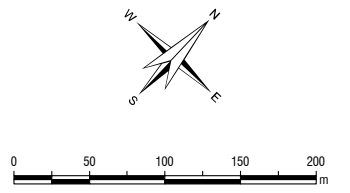


Note:
 Noise levels on this map refers to maximum ground-borne noise levels from underground rail operation on the ground floor. Ground-borne noise levels will be reduced for higher floor levels.

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LEGEND

	Standard Attenuation Rail		Ground-borne Noise Level (dBA) ≤ 15		41 - 45
	High Attenuation Rail		16 - 20		46 - 50
	Very High Attenuation Rail		21 - 25		51 - 55
	Stations		26 - 30		56 - 60
	Portal Structure		31 - 35		
			36 - 40		

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 FIGURE: SLR61014718_GBN_022



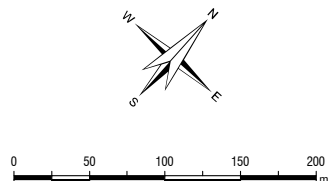
Note:
 Noise levels on this map refers to maximum ground-borne noise levels from underground rail operation on the ground floor. Ground-borne noise levels will be reduced for higher floor levels.

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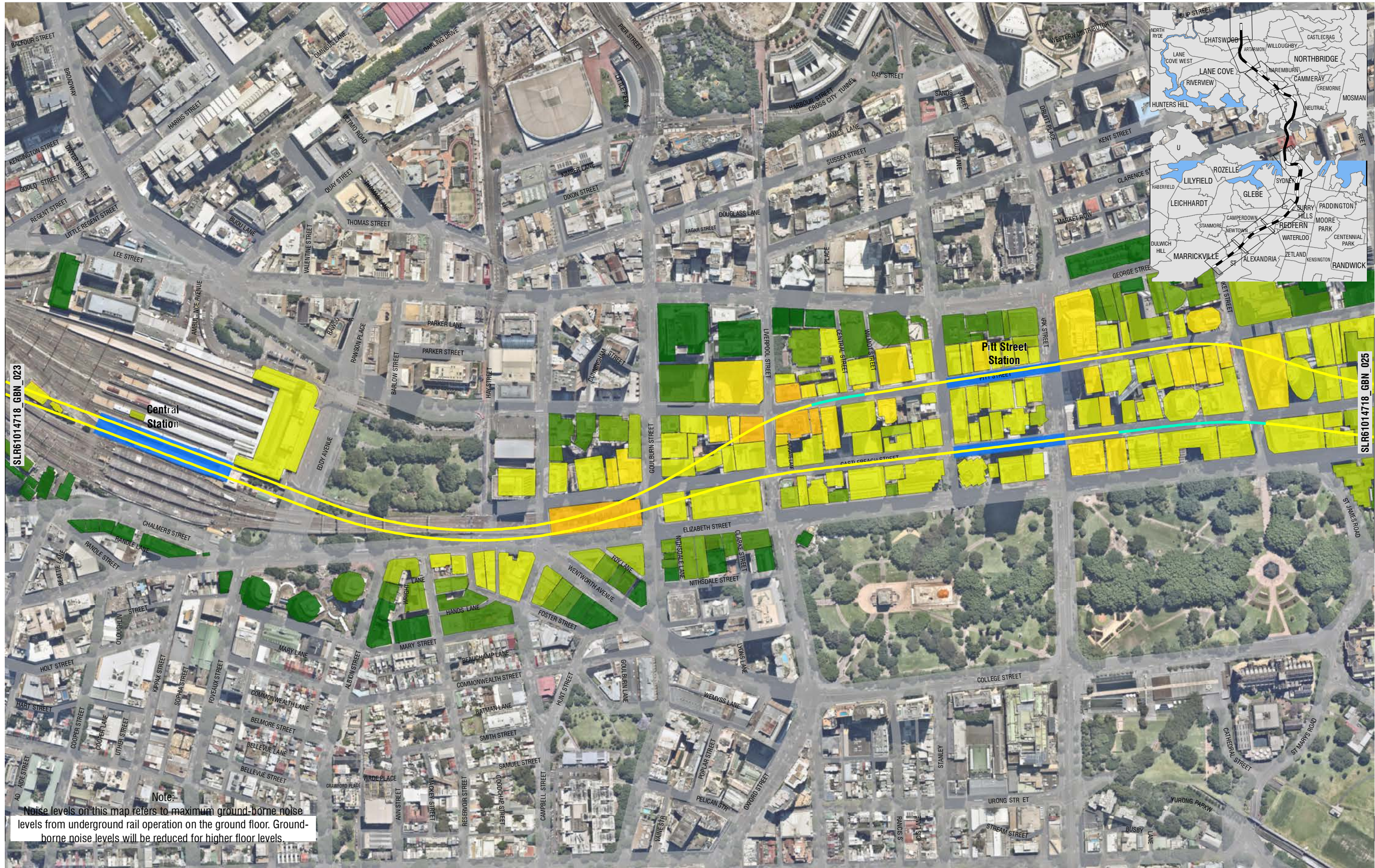
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LEGEND

	Standard Attenuation Rail	Ground-borne Noise Level (dBA)		21 - 25		41 - 45
	High Attenuation Rail		≤15		26 - 30	46 - 50
	Very High Attenuation Rail		16 - 20		31 - 35	51 - 55
	Stations		36 - 40		46 - 50	56 - 60
	Portal Structure					

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 FIGURE: SLR61014718_GBN_023



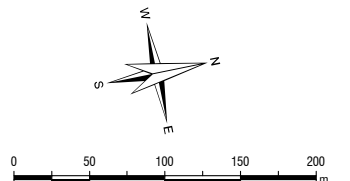
Note:
 Noise levels on this map refers to maximum ground-borne noise levels from underground rail operation on the ground floor. Ground-borne noise levels will be reduced for higher floor levels.

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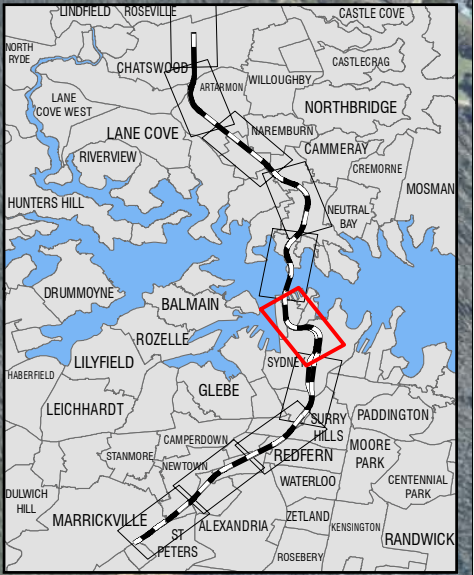
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LEGEND

	Standard Attenuation Rail	Ground-borne Noise Level (dBA)		21 - 25		41 - 45	
	High Attenuation Rail		26 - 30		46 - 50		
	Very High Attenuation Rail		≤ 15		31 - 35		51 - 55
	Stations		16 - 20		36 - 40		56 - 60
	Portal Structure						

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 FIGURE: SLR61014718_GBN_024



SLR61014718_GBN_024

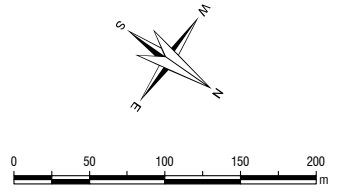
SLR61014718_GBN_026

Note:
Noise levels on this map refers to maximum ground-borne noise levels from underground rail operation on the ground floor. Ground-borne noise levels will be reduced for higher floor levels.

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LEGEND		Ground-borne Noise Level (dBA)	
	Standard Attenuation Rail		21 - 25
	High Attenuation Rail		26 - 30
	Very High Attenuation Rail		31 - 35
	Stations		36 - 40
	Portal Structure		41 - 45
			46 - 50
			≤15
			16 - 20
			46 - 50
			51 - 55
			56 - 60

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FIGURE: SLR61014718_GBN_025

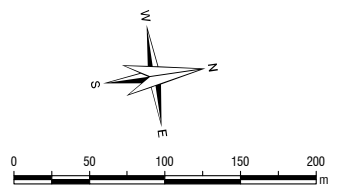


Note:
Noise levels on this map refers to maximum ground-borne noise levels from underground rail operation on the ground floor. Ground-borne noise levels will be reduced for higher floor levels.

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LEGEND

	Standard Attenuation Rail	Ground-borne Noise Level (dBA)		21 - 25		41 - 45
	High Attenuation Rail		26 - 30		46 - 50	
	Very High Attenuation Rail		≤15		31 - 35	51 - 55
	Stations		16 - 20		36 - 40	56 - 60
	Portal Structure					

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 FIGURE: SLR61014718_GBN_026

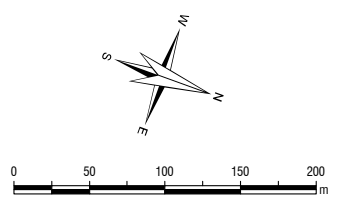


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Note:
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LEGEND		Ground-borne Noise Level (dBA)	
—	Standard Attenuation Rail	 	21 - 25
—	High Attenuation Rail	 	26 - 30
—	Very High Attenuation Rail	 	31 - 35
 	Stations	 	36 - 40
 	Portal Structure	 	41 - 45
		 	46 - 50
		 	51 - 55
		 	56 - 60
		 	≤15
		 	16 - 20

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 FIGURE: SLR61014718_GBN_027



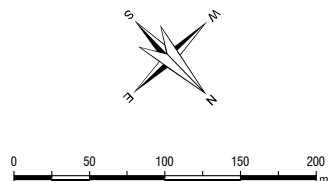
Note:
 Noise levels on this map refers to maximum ground-borne noise levels from underground rail operation on the ground floor. Ground-borne noise levels will be reduced for higher floor levels.

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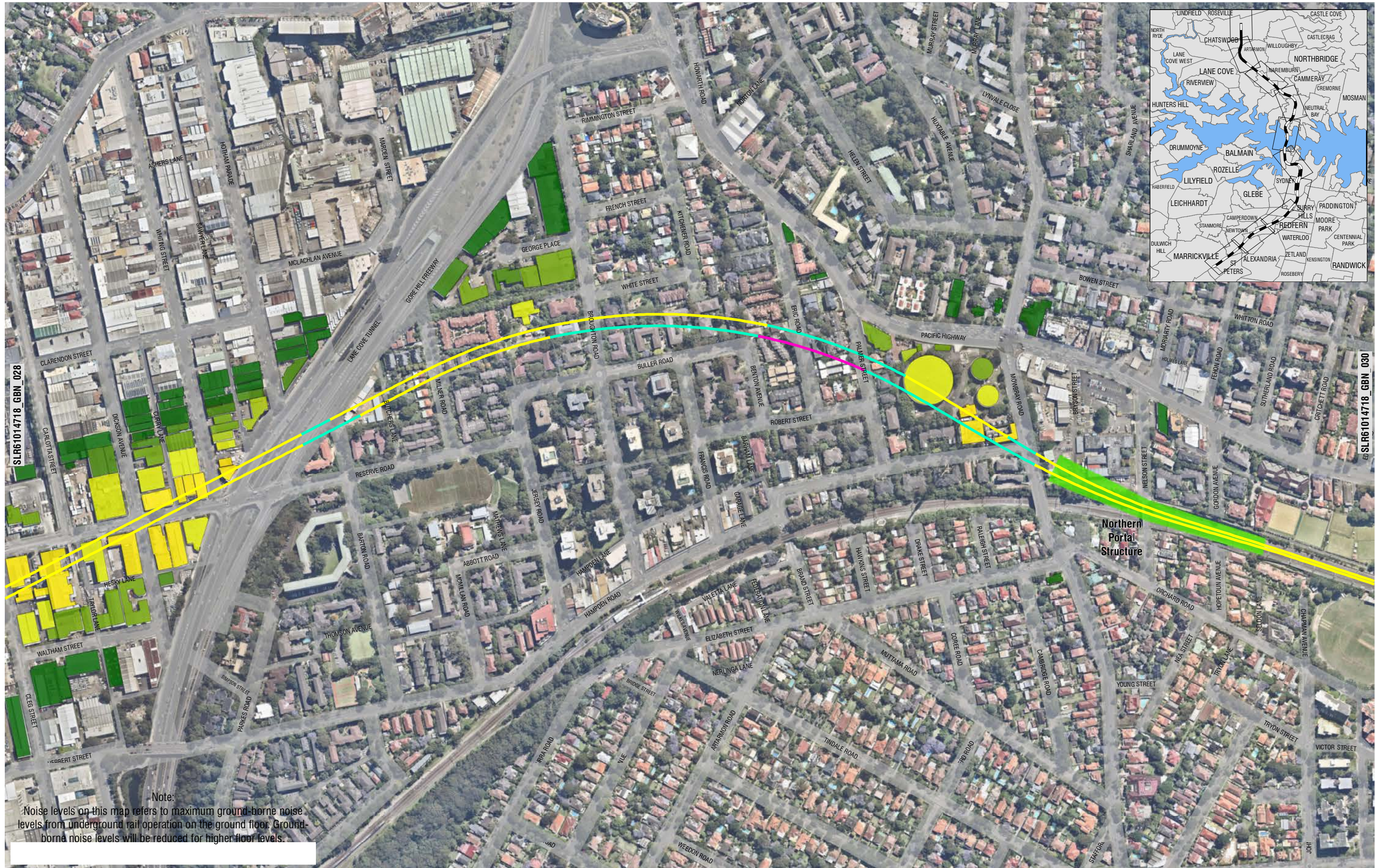
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LEGEND		Ground-borne Noise Level (dBA)	
	Standard Attenuation Rail		21 - 25
	High Attenuation Rail		26 - 30
	Very High Attenuation Rail		31 - 35
	Stations		36 - 40
	Portal Structure		41 - 45
			46 - 50
			51 - 55
			56 - 60
			≤15
			16 - 20

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 FIGURE: SLR61014718_GBN_028



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SLR61014718_GBN_028

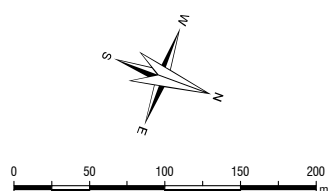
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Note:
Noise levels on this map refers to maximum ground-borne noise levels from underground rail operation on the ground floor. Ground-borne noise levels will be reduced for higher floor levels.




















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LEGEND

	Standard Attenuation Rail		Ground-borne Noise Level (dBA)		21 - 25		41 - 45
	High Attenuation Rail		≤ 15		26 - 30		46 - 50
	Very High Attenuation Rail		16 - 20		31 - 35		51 - 55
	Stations				36 - 40		56 - 60
	Portal Structure						


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 FIGURE: SLR61014718_GBN_029



Northern Portal Structure

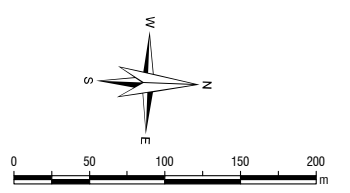
Note:
Noise levels on this map refers to maximum ground-borne noise levels from underground rail operation on the ground floor. Ground-borne noise levels will be reduced for higher floor levels.

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





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LEGEND

	Standard Attenuation Rail	Ground-borne Noise Level (dBA)		21 - 25		41 - 45
	High Attenuation Rail		26 - 30		46 - 50	
	Very High Attenuation Rail		≤15		31 - 35	51 - 55
	Stations		16 - 20		36 - 40	56 - 60
	Portal Structure					

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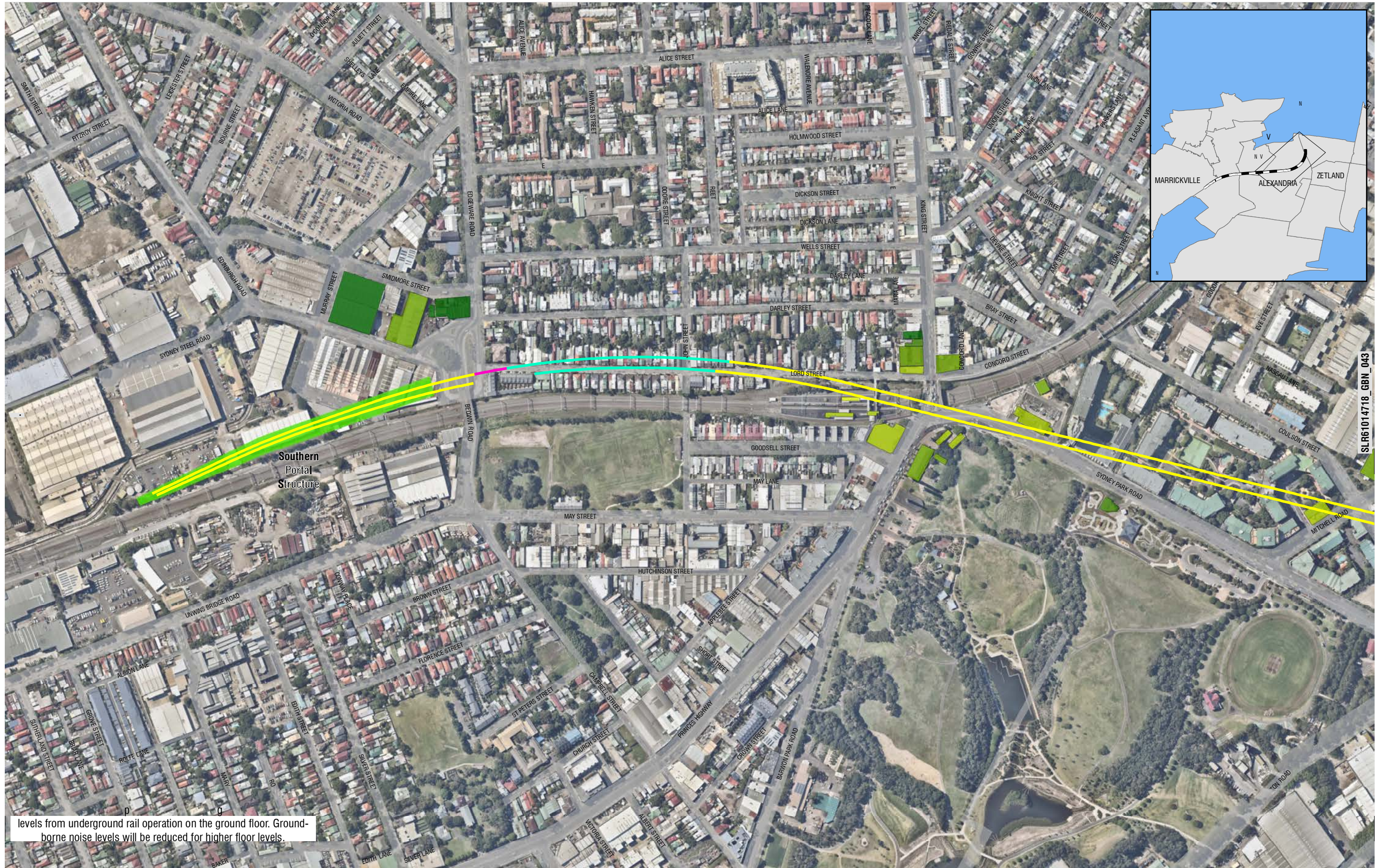
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FIGURE: SLR61014718_GBN_030



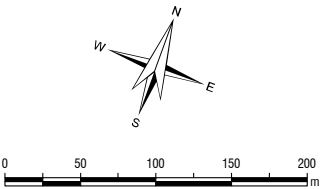
levels from underground rail operation on the ground floor. Ground-borne noise levels will be reduced for higher floor levels.

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LEGEND		Ground-borne Noise Level (dBA)	
—	Standard Attenuation Rail	■	21 - 25
—	High Attenuation Rail	■	26 - 30
—	Very High Attenuation Rail	■	31 - 35
■	Stations	■	36 - 40
■	Portal Structure	■	41 - 45
		■	46 - 50
		■	51 - 55
		■	56 - 60
		■	≤15
		■	16 - 20

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FIGURE: SLR61014718_GBN_042

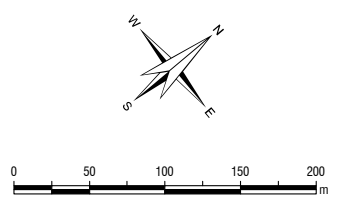


Note:
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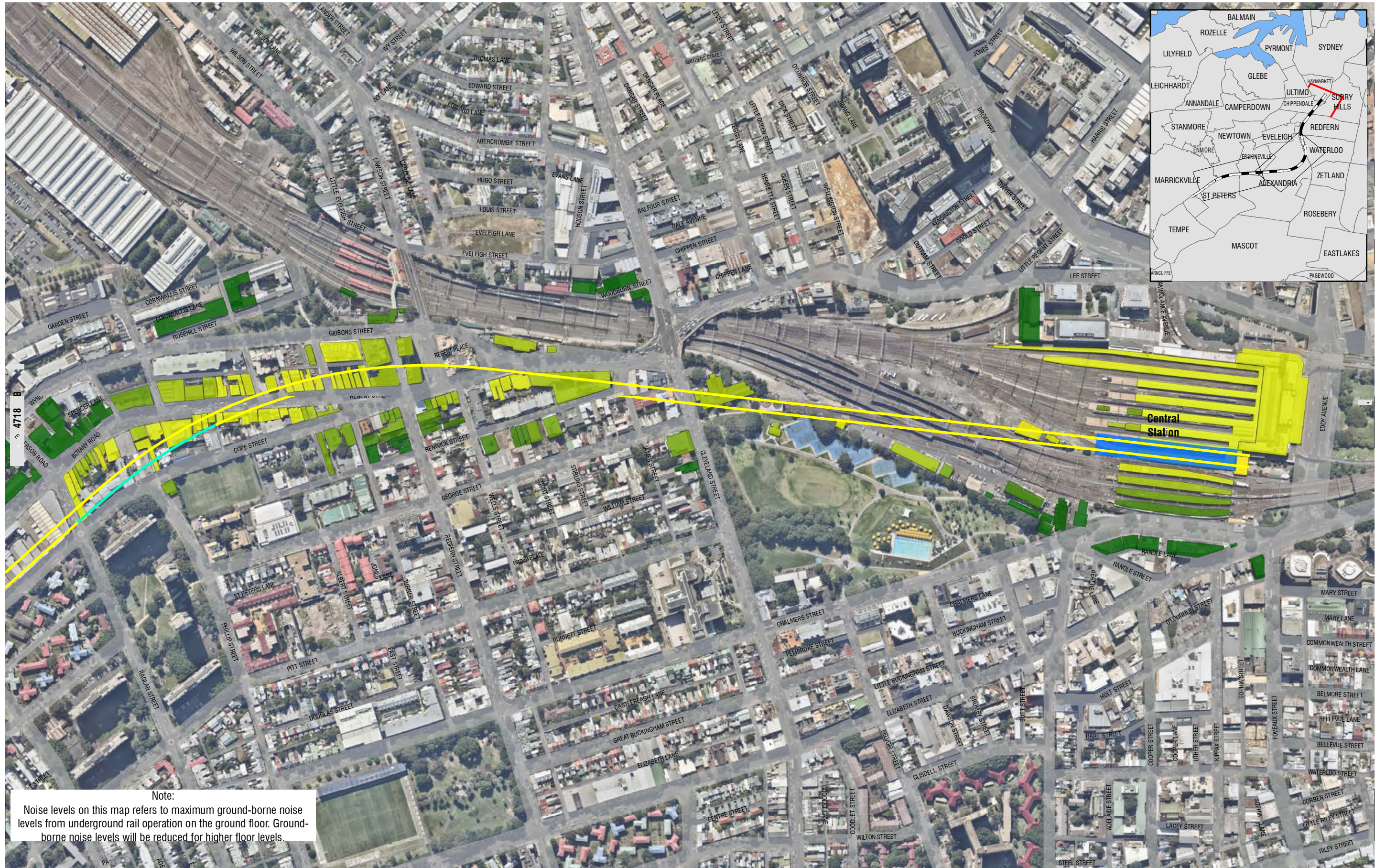


LEGEND

	Standard Attenuation Rail	Ground-borne Noise Level (dBA)		21 - 25		41 - 45
	High Attenuation Rail		26 - 30			46 - 50
	Very High Attenuation Rail		≤15			51 - 55
	Stations		16 - 20			56 - 60
	Portal Structure					

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Operation - Waterloo
Commercial Ground-borne Noise Levels

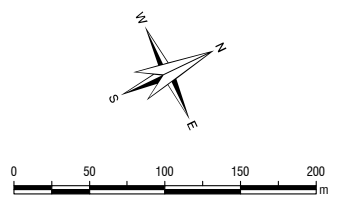


Note:
Noise levels on this map refers to maximum ground-borne noise levels from underground rail operation on the ground floor. Ground-borne noise levels will be reduced for higher floor levels.

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LEGEND		Ground-borne Noise Level (dBA)	
—	Standard Attenuation Rail	■	21 - 25
—	High Attenuation Rail	■	26 - 30
—	Very High Attenuation Rail	■	31 - 35
■	Stations	■	36 - 40
■	Portal Structure	■	41 - 45
		■	46 - 50
		■	51 - 55
		■	56 - 60
		■	≤ 15
		■	16 - 20

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FIGURE: SLR61014718_GBN_044