APPENDIX 21.12

Effect	Receptor and importance	Nature of Effect	Significance	Mitigation & Enhancement Measures	Residual Significance	Cumulative Effect	Significance (and Nature) of Cumulative Effect	Explanation
Construction Phase								
Construction Dust	Human and ecological receptors identified within 200 m of construction areas A to I, as identified in Table 19.9, High local importance.	Nuisance and Health Short to medium term Temporary Direct High magnitude	High negative significance	Mitigation as detailed in Section 19.8 and CEMP	Low Negative Significance	Construction Dust	Low Negative (Temporary, Short term, Direct)	Only one construction dust receptor identified in Chapter 19: Local Air Quality is located within 200m of a proposed development and the Project. Receptor 39 (Batherton Close), which lies 70 m from Construction Area C (Freight line to St Helen's Canal), is also adjacent to proposed development 3. If construction was to occur at the same time as the Project there would therefore be potential for negative cumulative effects from construction dust from both developments. A low negative significance has been assigned to the cumulative effect on the

Effect	Receptor and importance	Nature of Effect	Significance	Mitigation & Enhancement Measures	Residual Significance	Cumulative Effect	Significance (and Nature) of Cumulative Effect	Explanation
								basis that a CEMP (or similar) would be adhered to as part of the development 3.
Construction Traffic Emissions	Human and ecological receptors identified within 200 m of construction areas A to I, as identified in Table 19.9 High local importance.	Health Short to medium term Temporary Direct Very low magnitude	Low negative significance	Mitigation as detailed in Section 19.8 and CEMP	Low Negative Significance	Construction traffic emissions	Low Negative (Temporary, Short term, Direct)	The assessment of construction traffic emissions from the Project has not considered construction traffic emissions from other proposed developments. As such, where a receptor lies within 200 m of proposed developments and the Project (e.g. Receptor 39 - Batherton Close, which lies 70 m from construction area C and is also adjacent to proposed development 3) and the two developments coincide, then additional construction traffic emissions could cause cumulative effects.
Disruption to Traffic during Construction	Human and ecological receptors identified	Health Short term Temporary	High negative significance	Mitigation as detailed in Section 19.8 and CEMP	Moderate Negative Significance	Disruption to Traffic during Construction	Moderate Negative (Temporary, Short term,	Only one construction dust receptor identified in Chapter 19: Local Air Quality is located within

Effect	Receptor and importance	Nature of Effect	Significance	Mitigation & Enhancement Measures	Residual Significance	Cumulative Effect	Significance (and Nature) of Cumulative Effect	Explanation
	within 200 m of construction areas A to I, as identified in Table 19.9 High local importance.	Indirect High magnitude					Indirect)	200m of a proposed development and the Project. Receptor 39 (Batherton Close), which lies 70 m from construction area C (Freight line to St Helen's Canal), is also adjacent to proposed development 3 - the Widnes Waterfront Development. If construction was to occur at the same time as the Project there would therefore be potential for negative cumulative effects as a result of further disruption to traffic during construction
Operational Phase								
Silver Jubilee Bridge	Key sensitive receptors identified in Table 19.10 High local importance.	Health Long term Direct High magnitude (NO_2 and PM_{10})	High positive significance (NO_2) Moderate positive significance (PM_{10})	No further mitigation required	High positive significance (NO_2) Moderate positive significance (PM_{10})	Silver Jubilee Bridge, levels of NO_2 and PM_{10}	High positive significance (NO_2) Moderate positive significance (PM_{10}) (Long term,	There are a number of receptors within 200 m of proposed development 2 (the Halebank Regeneration Area). Significance of cumulative effect is unchanged from the residual significance as

Effect	Receptor and importance	Nature of Effect	Significance	Mitigation & Enhancement Measures	Residual Significance	Cumulative Effect	Significance (and Nature) of Cumulative Effect	Explanation
							Direct)	proposed development traffic has been included in the modelled road network.
A557 Weston Point Expressway	Key sensitive receptors identified in 19.10. High local importance	Health Long term Direct Moderate magnitude (NO_2 and PM_{10})	Moderate positive significance (NO_2) Low positive significance (PM_{10})	No further mitigation required	Moderate positive significance (NO_2) Low positive significance (PM_{10})	A557 Weston Point Expressway, levels of NO_2 and PM_{10}	Moderate positive significance (NO_2) Low positive significance (PM_{10}) (Long term, Direct)	There are a number of receptors within 200 m of proposed development 6 (the Heath). Significance of cumulative effect is unchanged from the residual significance as proposed development traffic has been included in the modelled road network.
A533 Central Expressway (Castlefields / Halton Brook / Southgate), Whitehouse Expressway (Palacefields) and the Mersey Gateway Bridge Corridor	Key sensitive receptors identified in 19.10. High local importance	Health Long term Direct Very low magnitude (NO_2 and PM_{10})	Low negative significance (NO_2) Not significant (PM_{10})	No further mitigation beyond indicative measures detailed in Section 19.8.	Low negative significance (NO_2) Not significant (PM_{10})	None	-	There are no key sensitive receptors within 200m of proposed developments and the Project at this location
M56 Motorway	Key sensitive receptors identified in 19.10. High local	Health Long term Direct Extremely	Low negative significance (NO_2) Not significant (PM_{10})	No further mitigation beyond indicative measures	Low negative significance (NO_2) Not significant	None	-	There are no key sensitive receptors within 200m of proposed developments and the Project at this

Effect	Receptor and importance	Nature of Effect	Significance	Mitigation & Enhancement Measures	Residual Significance	Cumulative Effect	Significance (and Nature) of Cumulative Effect	Explanation
	importance	low magnitude (NO_2 and PM_{10})		detailed in Section 19.8.	(PM_{10})			location
Deacon Road, Widnes	Key sensitive receptors identified in 19.10. High local importance	Health Long term Direct Very low magnitude (NO_2) Extremely low magnitude (PM_{10})	Low negative significance (NO_2) Not significant (PM_{10})	No further mitigation beyond indicative measures detailed in Section 19.8.	Low negative significance (NO_2) Not significant (PM_{10})	None	-	There are no key sensitive receptors within 200m of proposed developments and the Project at this location
Greenway Road, Runcorn	Key sensitive receptors identified in 19.10. High local importance	Health Long term Direct High magnitude (NO_2) Moderate magnitude (PM_{10})	High positive significance (NO_2) Low positive (PM_{10})	No further mitigation required	High positive significance (NO_2) Low positive (PM_{10})	None	-	There are no key sensitive receptors within 200m of proposed developments and the Project at this location
Changes in regional NOx, PM_{10} and CO_2 emissions from the modelled road network	Based on the length of the modelled road network. High regional importance	Health and climate change Long term Direct Very low magnitude	Low positive significance	No further mitigation required	Low Positive Significance	Changes in regional NOx, PM_{10} and CO_2 emissions from the modelled road network	Low Positive Significance (Long term, Direct)	Since modelled traffic data includes traffic from some other developments (see Table 21.1), changes in regional NOx, PM_{10} and CO_2 emissions from the

Effect	Receptor and importance	Nature of Effect	Significance	Mitigation & Enhancement Measures	Residual Significance	Cumulative Effect	Significance (and Nature) of Cumulative Effect	Explanation
								modelled road network considers the impact of proposed developments.

Table 21.12. Cumulative effects relating to Local Air Quality arising from the Project