

APPENDIX 21.9

Effect	Receptor and importance	Nature of Effect	Significance	Mitigation & Enhancement Measures	Residual Significance	Cumulative Effect	Significance (and Nature) of Cumulative Effect	Explanation
Construction Phase								
Areas A, B & C The cumulative effects of traffic generated by construction operations, and waste disposal activities together with traffic management and phasing of the works will result in delays to vehicular traffic.	Strategic Highway Network User High	Temporary High magnitude Short Term Direct	High Negative Significance	The effectiveness of the traffic management and signing strategy will be monitored regularly and adjustments made to reduce the effect on vehicle users. An extensive publicity campaign will give users advance warning of the road works. The works are to be carried out in phases with the	Moderate Negative Significance.	Areas A, B & C The cumulative effects of traffic generated by construction operations, and waste disposal activities together with traffic management and phasing of the works will result in delays to vehicular traffic.	Moderate Negative (Short term, Temporary, Direct)	The traffic assessment for construction effects included other proposed developments. Proposed developments near to this area and therefore likely to have an effect are developments 4, 2, 3, 10, 127, 128, 130, 131, 132 and 133. Therefore the residual effects are in fact cumulative effects. For further details see Chapter 16: Transport
	Local Highway Network User High	Temporary High magnitude Short Term Direct	High Negative Significance					
	Bus User High	Temporary High magnitude Short Term Direct	High Negative Significance					
Areas A, B & C Removal of the PRoW linking Cross Street	Pedestrians High	Permanent High Magnitude Short Term	High Negative Significance		Moderate Negative Significance.	Areas A, B & C Disruption to the PRoW linking Cross Street	Moderate Negative Significance (Short term,	The PRoW linking Cross St and Ashley Way with Spike Island could be affected by

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and Ashley Way with Spike Island and the Trans Pennine Trail and effect of construction works on the cycleway along Ditton Road, Ashley Way and Victoria Road.		Direct		diverted PRoWs planned with minimum additional journey lengths.		and Ashley Way with Spike Island.	Temporary, Direct)	<p>Development 3 if construction works occur before it is removed and a new diversion established, causing additional disruption to users.</p> <p>There are no developments likely to affect the Ditton Rd or Victoria Rd. However developments 4 and 10 are located on or very close to PRoW and although not directly effected by the Project, any disruption to these PRoW during the construction phases of these developments will reduce the availability of PRoW in the vicinity.</p> <p>This text has been deleted because there are currently no proposed developments with the potential to affect PRoW in these locations.</p>

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	Cyclists High	Temporary High Magnitude Short Term Direct	High Negative Significance	Traffic management and phasing of the works to take into account the requirements for cyclists (road widths and signing).	Moderate Negative Significance	Areas A, B & C Disruption to the PRoW linking Cross Street and Ashley Way with Spike Island, and to the cycleway on Ashley Way.	Moderate Negative Significance (Short term, Temporary, Direct)	There are no developments likely to affect the Ditton Rd or Victoria Rd. However developments 131 and 132 1, 2, 3 and 10 have potential to affect the on road or segregated cycle network, including the PRoW linking Cross St and Ashley Way with Spike Island and the Ashley Way cycleway, due to their locations on or close to these cycleways. The nature of disruption will depend on the length and nature of construction periods. Therefore there is potential for a moderate negative cumulative effect.
Areas A, B & C Effect on the Freight Line during construction of the Freight Line	Rail Network User High	Temporary Moderate Magnitude Short Term Direct	Moderate Negative Significance	The closures will be during quiet periods (weekends/night-time) on the Freight Line.	Low Negative Significance	Areas A, B & C Effect on the Freight Line.	Low Negative (Short term, Temporary, Direct)	There is potential that development 1 (Ditton Strategic Rail Freight Park) may affect rail users if closures of the line are required during

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Bridge will necessitate 10 closures of the Freight Line.								construction. Any effects would be temporary and of low significance.
Area D Traffic generated by construction and waste disposal activities together with the cumulative effects of construction and waste disposal activities at other works areas will result in delays to vehicular traffic.	Strategic Highway Network User High	Temporary High magnitude Short Term Direct	High Negative Significance	The effectiveness of the traffic management, phasing and signing strategy can be monitored and adjusted to reduce delays to vehicular traffic. An extensive publicity campaign will give users advance warning of the road works. Construction activities to be staggered and carried out in two phases.	Moderate Negative Significance	Area D Traffic generated by construction and waste disposal activities together with the cumulative effects of construction and waste disposal activities at other works areas will result in delays to vehicular traffic.	Moderate Negative (Short term, Temporary, Direct)	The traffic assessment for construction effects included other proposed developments. The only proposed development near to this area and therefore likely to have an effect is development 3. Therefore the residual effects are in fact cumulative effects. For further details see Chapter 16: Transport
	Local Highway Network User High	Temporary High magnitude Short Term Direct	High Negative Significance					
	Bus User High	Temporary High magnitude Short Term Direct	High Negative Significance					
Area D The effect of construction activities on the PRoW along	Pedestrians High	Temporary High magnitude Short Term Direct	High Negative Significance	Construction activities to be staggered and carried out in two phases.	Moderate Negative	None	-	There are no other proposed developments which may effect these PRoWs.

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the Manchester Ship Canal and desire lines along Wigg Island will require closures of stretches of the paths.	Cyclists High	Temporary High magnitude Short Term Direct	High Negative Significance	During the first phase the PROW can be diverted via desire lines along Wigg Island and in phase two the desire lines can be diverted via the Manchester Ship Canal.	Moderate Negative			
<u>Areas E, F, G and H</u> Delays to vehicular traffic as a result of the following: Increase in traffic as a result of construction and waste disposal activity and phasing of the construction work at Astmoor Junction. Construction of	Strategic Highway Network User High Local Highway Network User High Bus User High	Temporary High magnitude Short Term Direct Temporary High magnitude Short Term Direct Temporary High magnitude Short Term Direct	High Negative Significance High Negative Significance High Negative Significance	The traffic management and phasing of works employed at Astmoor junction, Weston link junction, Weston Point junction, M56 junction 12 and the Central Expressway distributor road works will	Moderate Negative	<u>Areas E, F, G and H</u> Delays to vehicular traffic as a result of the following: Increase in traffic as a result of construction and waste disposal activity and phasing of the construction work at Astmoor Junction. Construction of distributor roads	Moderate Negative (Short term, Temporary, Direct)	The traffic assessment for construction effects included other proposed developments. Proposed developments near to this area and therefore likely to have an effect are developments 5 and 6 is development 128 . Therefore the residual effects are in fact cumulative effects. For further details see

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<p>distributor roads along the Central Expressway between Halton Brow and Halton Lea. Construction of Western link junction and Weston Point Expressway junction.</p>				<p>be monitored and the phasing and traffic management adjusted to reduce delays to vehicular traffic.</p> <p>The Astmoor Road diversion will be via Daresbury Expressway and Bridgewater Expressway. The length of the diversion will be kept to a minimum and closures carried out during quiet periods (weekends, night-time) to reduce overall effect.</p>		<p>along the Central Expressway between Halton Brow and Halton Lea. Construction of Western link junction and Weston Point Expressway junction.</p>		<p>Chapter 16: Transport</p>

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				An extensive publicity campaign will give users advanced warning of the road works.				
Areas E, F, G and H Effect of the junction remodelling work on the surrounding PROWs, cycleways and bridleways.	Pedestrians High	Temporary High magnitude Short Term Direct	High Negative Significance	The Astmoor Road and footpath closure to be carried out during quiet periods (weekend, night-time) to minimise impact to pedestrians and cyclists.	Moderate Negative	None	-	PROWs in this vicinity are unlikely to be affected by any proposed developments.
	Cyclists High	Temporary High magnitude Short Term Direct	High Negative Significance		Moderate Negative	None	-	
Area I Closure of the SJB to all vehicular traffic for bridge reconfiguration work after opening of the New Bridge.	Strategic Highway Network User High	Temporary High magnitude Short Term Direct	High Negative Significance	Diversions via the New Bridge will be maintained and advance signing used to route traffic onto the New Bridge.	Moderate Negative Significance.	None	-	There are no other proposed developments which may affect the operation of the SJB.
	Local Highway Network User High	Temporary High magnitude Short Term Direct	High Negative Significance					

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	Bus User High	Temporary High magnitude Short Term Direct	High Negative Significance	An extensive publicity campaign will give advanced warning of the road works.				
Operational Phase								
Improved journey times and an improved journey for strategic trips.	Strategic Highway Network User High	Permanent High magnitude Direct Long term	High Positive significance	None	High Positive Significance	Improved journey times and improved journey for strategic trips.	High Positive (Permanent, Long-term, Direct)	The traffic assessment for operational effect included other proposed developments. Proposed developments near to this area include developments 127 and 130 , and therefore likely to have an effect are developments 1, 2 and 3.
Improved journey times and an increase in journey for cross-river trips.	Local Highway Network User High	Permanent High magnitude Direct Long term	High Positive significance	None	High Positive Significance	Improved journey times and an increase in journey for cross-river trips.	High Positive (Permanent, Long-term, Direct)	
Improved bus journey times and an increase in journey for cross-river trips.	Bus User High	Permanent High magnitude Direct Long term	Moderate Positive significance	Enhanced bus journey facilities following SUB de-linking.	High Positive Significance	Improved bus journey times and an increase in journey for cross-river trips.	High Positive (Permanent, Long-term, Direct)	Therefore the residual effects are in fact cumulative effects. For further details see Chapter 16: Transport

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No significant change in bus journey times or journey ambience for non cross-river traffic as a result of the Project.	Bus User High	Permanent Low magnitude Indirect Long term	Not significant	Supports implementation of Halton wide Sustainable Transport Strategy enhancement.	High Positive Significance	Support of the implementation of Halton wide Sustainable Transport Strategy enhancement	High Positive (Permanent, Long-term, Direct)	Other proposed developments are also likely to be part of Halton wide Sustainable Transport Strategy enhancement therefore there is a potential for positive cumulative effects.
Overall significant change in pedestrian movements or access to local facilities for non cross-river trips as a result of the Project, but localised effects at Widnes Loops Junction.	Pedestrian High	Permanent Low magnitude Direct Long term	Low Negative significance	3 PRoW may be affected by construction of Speke Road Toll Plaza (St Michael's Golf Course) and Widnes Loops Junctions. Alternative routes will maintain access. Supports implementation of Halton wide Sustainable Transport Strategy enhancement.	Moderate Positive Significance	None	-	There are no proposed developments that are likely to interfere with these PRoWs.

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Overall significant change in cycle movements or access to local facilities for non cross-river trips as a result of the Project, but localised effect by Hallwood Park and Widnes Loops junction.	Cyclists High	Permanent Low magnitude Direct Long term	Low Negative significance	Proposed diversion of Hallwood Park cycleway near the junction between the Central Expressway and the Southern Expressway due to Lodge Lane Junction infrastructure. Supports implementation of Halton wide Sustainable Transport Strategy enhancement.	Moderate Positive Significance	None	-	There are no other proposed developments in the vicinity of Hallwood Park.

Table 21.9. Cumulative effects relating to Transport arising from the Project