

# Chester Transport Strategy & Vision

## Options and Assessment Report

Theme	Ref:	Scheme	Type (MBU - Making Best Use; MD - Managing Demand; CE - Capacity Enhancements)	Spatial Dimension (HC - Historic Core; C - City; O - Outer Area)	Timescale (Short Term 1-2 years; Medium Term 3-5 years; Long Term >5years)	Issues Addressed (Reference Issues Paper)	STRATEGY & POLICY																DELIVERABILITY					COST		PERSON MOVEMENT IMPACT		TOTAL POINTS (Max = 20)	67th Percentile	Proceed to Short List (Yes/No)	Primary Reason for not Proceeding			
							CW&C Local Transport Plan Objectives								CW&C LTP POLICY POINTS	One City Plan Objectives								Public Acceptability	Acceptability to Other Stakeholders	Technical & Operational	Financial Affordability	Total (Max = 4)	DELIVERABILITY POINTS	Cost (1 = <£200K; 2 = £200K-£1M; 3 = £1M-£5M; 4 = £5M-£10M; 5 = >£10M)	COST POINTS					Impact (1 = Low; 2 = Medium; 3 = High; 4 = Vary High)	IMPACT POINTS	
							Provide and develop reliable and efficient transport networks which support sustainable economic growth in West Cheshire and the surrounding area.	Reduce carbon emissions from transport and take steps to adapt our transport networks to the effects of climate change.	Manage a well maintained transport network.	Contribute to safer and secure transport in West Cheshire and to promote types of transport which are beneficial to health.	Improve accessibility to jobs and key services which help support greater equality of opportunity.	Ensure that transport helps improve quality of life and enhances the local environment in West Cheshire.	Total (Max= 18)	Rank		Creating a leading regional economic driver	Providing for Modern Living	Developing and supporting a cultural, retail and visitor offer of the highest quality	Celebrating its long and varied history and heritage	Maximising the opportunities to use the network of green spaces and waterways	Total (Max = 12)	Rank	ONE CITY PLAN POLICY POINTS															
Integration	I01	Gorse Stacks Bus Station	CE	HC	Short	1, 6, 52	2	2	1	1	2	2	16	1	4	2	1	2	1	0	8	8	3	1	-1	1	-1	0	1	5	0	4	4	12	12	YES		
	I02	Alternative Bus Interchanges / Hubs: Foregate Street Bus Hub and Two-Way Bus Flow	MBU	HC	Medium	1, 52	1	2	0	0	1	1	9	79	2	1	1	0	1	0	0	3	100	1	1	-1	1	0	1	2	3	2	2	2	9	12	NO	Poor address of OCP objectives
	I03	Alternative Bus Interchanges / Hubs: Northgate Bus Hub	MBU	HC	Short	1, 52	1	2	0	0	1	1	9	79	2	1	1	1	0	0	4	79	1	1	0	1	0	2	2	3	2	2	2	9	12	NO	Poor address of OCP objectives	
	I04	Alternative Bus Interchanges / Hubs: Pepper Street Bus Hub	MBU	HC	Short	1, 52	1	2	0	0	1	1	9	79	2	1	0	1	0	0	3	100	1	1	0	1	0	2	2	3	2	2	2	9	12	NO	Poor address of OCP objectives	
	I05	Alternative Bus Interchanges / Hubs: George Street Bus Hub	MBU	HC	Medium	1, 52	1	2	0	0	1	1	9	79	2	1	1	0	0	0	3	100	1	1	-1	-1	0	-1	0	3	2	2	2	7	12	NO	Poor address of OCP objectives	
	I06	Bus/Rail Interchange and Layover	MBU	HC	Short	1, 17, 52	1	2	0	0	1	1	9	79	2	1	1	1	0	0	4	79	1	1	-1	1	0	1	2	3	2	2	2	9	12	NO	Poor address of OCP objectives	
	I07	Intermediate Park & Ride Stops at Key Locations (e.g. Central Business Quarter, Countess, University)	MBU	C	Short	9, 52	2	1	1	0	2	1	12	52	3	2	1	1	0	0	6	36	2	1	1	1	0	1	3	3	1	4	1	1	13	12	YES	
	I08	Coach Facilities at Bus Station	CE	HC	Short	5, 6, 78	1	0	-1	0	0	0	1	138	0	1	0	2	0	0	4	79	1	1	1	1	1	3	3	2	3	1	1	8	12	NO	Low impact and poor address of policy objectives	
	I09	Enhanced coach facility at Delamere Street	CE	HC	Short	5, 6	1	0	0	0	2	0	6	115	1	1	0	2	1	0	5	61	2	1	1	1	1	4	4	2	3	1	1	11	12	NO	Low impact and poor address of policy objectives	
Sustainability	I10	Enhanced Facilities at Park & Ride Sites	CE	C	Short	13, 15, 51, 52, 63, 78	1	1	1	0	1	2	9	79	2	1	1	2	1	0	6	36	2	1	1	1	1	4	4	2	3	1	1	12	12	YES		
	S01	Low carbon/hybrid bus fleet	CE	C	Medium	11, 48, 74, 75	0	2	1	0	0	1	6	115	1	0	0	0	0	0	0	137	0	1	1	1	0	3	3	3	2	2	2	8	12	NO	Poor address of policy objectives	
	S02	Electrification of rail routes (Borderlands, Crewe, Manchester via Warrington etc)	CE	O	Long	16, 23, 24, 27, 74	2	2	1	0	2	1	14	20	3	2	2	2	0	0	8	8	3	1	1	1	1	-1	2	2	5	0	4	4	12	12	YES	
	S03	Tourist Water Buses	CE	C	Short	78	1	1	1	0	0	1	6	115	1	1	-1	2	1	2	6	36	2	1	1	0	-1	1	2	4	1	2	2	8	12	NO	High cost and poor address of policy objectives	
	S04	Smarter Choices - Hearts & Minds Campaigns	MD	C	Short	9, 42, 43, 67, 68, 69, 71, 73, 74, 75, 77	0	2	1	2	1	1	10	73	2	0	1	0	0	2	3	100	1	1	1	1	1	4	4	1	4	1	1	12	12	YES		
	S05	Delivery of Residential PTP in Targeted Corridors	MD	C	Short	9, 42, 43, 67, 68, 69, 71, 73, 74, 75, 77	1	2	0	2	2	1	13	32	3	1	1	0	0	2	5	61	2	1	1	1	1	4	4	2	3	2	2	14	12	YES		
	S06	Development / Promotion of Car Clubs / Car Sharing	MD	C	Short	9, 43, 69, 70, 72, 73, 74, 77	1	1	0	-1	2	1	8	98	2	1	2	1	-1	0	4	79	1	1	1	1	1	4	4	2	3	1	1	11	12	NO	Low impact and poor address of policy objectives	
	S07	Workplace Travel Planning & Engagement	MD	C	Short	9, 42, 43, 69, 70, 71, 72, 73, 74, 75, 77	0	2	1	2	2	1	12	52	3	0	1	0	0	2	3	100	1	1	1	1	1	4	4	2	3	2	2	13	12	YES		
	S08	Workplace Parking Levy	MD	C	Short	43, 61, 66, 71, 74, 75, 76	1	1	1	0	-1	1	4	129	1	1	0	0	0	0	2	122	0	1	-1	1	1	2	2	1	4	1	1	8	12	NO	Low impact and poor address of policy objectives	
	S09	School Travel Planning - Continued Engagement / Refresh & New Schools (Free Schools / Private Schools)	MD	C	Short	42, 43, 44, 68, 69, 70, 71, 73, 74, 75, 76	0	2	1	2	2	1	12	52	3	0	1	0	0	2	3	100	1	1	1	1	1	4	4	2	3	2	2	13	12	YES		
	S10	Station Travel Plans	MD	O	Short	21, 69, 70, 71, 72, 73, 74, 75, 76, 77	1	2	1	1	2	1	13	32	3	1	1	0	0	2	5	61	2	1	1	1	1	4	4	2	3	2	2	14	12	YES		
	S11	Residential Travel Plans (New Build)	MD	C	Medium	42, 43, 44, 52, 68, 69, 72, 73, 74, 79	1	2	1	2	2	1	14	20	3	1	1	0	0	2	5	61	2	1	1	1	1	4	4	2	3	1	1	13	12	YES		
	S12	Business Grants for Sustainable Infrastructure	MD	C	Short	39, 42, 43, 74	1	2	2	0	2	1	13	32	3	1	1	0	0	0	3	100	1	1	1	1	1	4	4	2	3	1	1	12	12	YES		
	S13	Linked trip marketing / joint ticketing initiatives for leisure, retail, and cultural generators	MD	C	Short	43, 46, 66, 70, 73, 74, 78, 79	2	2	0	0	0	1	9	79	2	2	2	2	1	0	9	4	3	1	1	1	1	1	4	4	2	3	1	1	13	12	YES	
	S14	SmartCard Extension / Rollout	MD	C	Short	10, 73	2	0	2	0	2	1	11	68	2	2	2	2	0	0	8	8	3	1	1	0	1	3	3	2	3	2	2	13	12	YES		
	S15	Integrated Cross-Boundary Area Ticketing	MD	O	Medium	10, 70, 73	2	1	1	0	2	1	12	52	3	2	1	1	0	0	6	36	2	1	1	-1	1	2	2	2	3	2	2	12	12	YES		
S16	Delivery Collection Points at Park & Ride	MBU	C	Medium	13, 62, 63, 69	1	1	1	0	1	2	9	79	2	1	1	-1	1	0	3	100	1	1	-1	0	-1	-1	0	4	1	3	3	7	12	NO	Low deliverability and high cost		

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**Executive Summary**

Executive Summary

Background and Previous Work

Following on from the previously issued Chester Transport Strategy Baseline Report, this document provides information on the various options available to the Council and its partners in terms of addressing the comprehensive list of issues identified in the previous work and the comprehensive Stakeholder Engagement and Consultation that has already been undertaken for this and other closely related studies. These include the successful and well received One City Plan for Chester – a development and policy guidance document providing a framework for the future development of the city centre, a final version of which was released in early 2012; and the subsequent Bus and Parking related studies undertaken in its wake. Comments and concerns expressed during early Stakeholder Engagement on the Transport Strategy Baseline findings were also instrumental in establishing the list of transportation issues experienced within the Chester area and the wider sphere of influence.

List of Transportation Issues

Table E.1 presents the complete list of Transportation Issues identified within Chester during the previous Baseline stage and from previous public consultation and early stakeholder engagement. These are grouped by mode.

Mode	Issues
Bus / Coach	<div>1. Development pressures, poor quality bus station and two distinct hubs.</div> <div>2. Confusion over large number of route and operators.</div> <div>3. Low frequency services from/to rural areas.</div> <div>4. Limited routeing of City Rail Link Bus.</div> <div>5. Limited Coach drop-off facilities</div> <div>6. Limited long distance bus / coach facilities.</div> <div>7. Lack of bus priority infrastructure on core radials / corridor constraints.</div> <div>8. Limited weekend and evening bus provision on some routes / areas.</div>

Mode	Issues
	<div>9. Lack of direct bus services to number of key employment locations.</div> <div>10. Limited / slow roll-out of payment technologies.</div> <div>11. Low composition of high-performance units in local fleets.</div>
Park & Ride	<div>12. Lack of Park &amp; Ride facility serving the M53 corridor.</div> <div>13. Routing of services / hours of operation / and serving inter-nodal destinations / Lack of facilities at Park &amp; Ride sites for integration / interchange.</div> <div>14. Limited provision for rail based Park &amp; Ride.</div> <div>15. Limited incentive for upgrade of Park &amp; Ride facilities by operators.</div>
Rail	<div>16. Low frequency and long journey times by rail to/from Manchester / Manchester Airport.</div> <div>17. Poor integration between bus and rail services.</div> <div>18. No rail access from South / South-East Chester.</div> <div>19. Indirect access to Liverpool Airport / South Liverpool.</div> <div>20. Slow service to Liverpool City Centre.</div> <div>21. Lack of suburban stations within the Chester urban boundary.</div> <div>22. Limited car parking capacity at commuting rail stations.</div> <div>23. Incompatibility of Virgin Pendolinos with the Crewe – Chester line.</div> <div>24. Poor quality rolling stock, low frequencies, long journey time on the Borderlands Line.</div> <div>25. Variable / poor quality facilities at commuting stations.</div> <div>26. Indirect connectivity between Ellesmere Port and Chester.</div>

Mode	Issues
	<div>27. Lack of connectivity between Merseyside and North Wales.</div>
Pedestrian Movement	<div>28. Lack of priority for pedestrians / limited pedestrian only sections.</div> <div>29. Dominance of traffic on St. Werburgh Street and Northgate Street.</div> <div>30. Severance effect of the Inner Relief Road.</div> <div>31. Perceived and actual safety issues associated with subways.</div> <div>32. Poor quality public realm and lack of gateway from rail station.</div> <div>33. Station – City Centre link underwhelming.</div> <div>34. Limited connectivity to / from key traffic-free routes (actual and perceived).</div> <div>35. Limited opportunities to cross the River Dee for active modes.</div> <div>36. Insufficient signage on key routes (e.g. rail station to city centre, to / from river).</div> <div>37. Outdated / inconsistent pedestrian signage / way-finding.</div>
Cycling	<div>38. Cycling missing links.</div> <div>39. Variable provision of cycle parking (quantity, type and coverage).</div> <div>40. Lack of priority for cyclists.</div> <div>41. Lack of cycle hire facilities for tourists / visitors.</div> <div>42. Despite recent investment in infrastructure,</div>

Capabilities on project: Transportation

Mode	Issues
	participation levels are still relatively low.
Car / Highways	43. Rising congestion levels. 44. Car dependency in rural areas. 45. Congestion hotspots. 46. Lack of strategic approach to Event Management. 47. Lack of quality gateways into Chester (by road and also rail). 48. Air quality management issues (A51 Tarvin Road / A5115 Christleton Road (existing AQMA) and A540 Parkgate Road / A5116 Liverpool Road (Potential AQMA). 49. Confusion and inefficiency at A41 / A5115 'hamburger' roundabout. 50. Road safety issues. 51. Maintenance of highway assets (e.g. road and bridge). 52. Dominance of the private car for trips to a number of key trip generators / attractors.

Mode	Issues
Parking	53. Legibility / market segmentation of parking offer. 54. Location of key car parking facilities. 55. Variability in quality of facilities (between facilities and operators). 56. Blue Badge Parking in inappropriate locations. 57. Overspill parking in adjacent residential areas (e.g. Handbridge, Queen Park). 58. Accuracy/coverage of Variable Message Signs (VMS). 59. Uncertainty / confusion over appropriate cars parks for destinations. 60. Loss of revenue due to free on-street parking. 61. Availability of on-street parking spaces undermines wider efforts to promote sustainable transport trips.
Freight / Servicing	62. Servicing access and timings. 63. Inefficient delivery / servicing of city centre.
Taxis	64. Lack of clarity over function in transport system. 65. Difficulties of enforcement / control.
Wider Issues	66. Competing demands from tourism / business and commuters / residents. 67. Impacts of ageing population. 68. Proportion of population not meeting recommended activity levels – health and obesity issues. 69. Rural accessibility and linking adjacent satellite villages (e.g. Mickle Trafford & Guilden Sutton). 70. Cross-boundary issues (e.g. employment flows to Broughton). 71. Conflict between cars, cyclists and pedestrians.

Mode	Issues
	72. Varying accessibility to jobs and services. 73. Increasing cost of fuel and energy. 74. Impacts of Climate Change. 75. Impacts of noise and air pollution. 76. Road safety issues and general safety. 77. Challenges in providing equality of opportunity. 78. Demands from Regeneration / Tourism to maximise key assets including River Dee, Shropshire Union Canal, Castle, Grosvenor Museum, Amphitheatre and City Walls). 79. Supporting regeneration (e.g. Culture aspirations, Central Business Quarter and Northgate) and demands for new housing. 80. Large retail catchment and competition with Cheshire Oaks and Broughton Shopping Park. 81. Protecting heritage / cultural assets. 82. Visitor economy and impacts (e.g. Race Day, Zoo traffic, growing evening economy).

Table E.1: Key Emerging Issues from Earlier Stages

The 82 key issues noted above represent the key aspects of transport and travel within the existing Chester area that the ultimate transport strategy measures should seek to address. In subsequent sections, methodology for identifying the long list of measures, the appraisal process to produce a short list, and the packaging of options is discussed.



**Benchmarking of Other City Transport Strategies**

A review has been conducted of the Transport Strategies that have been completed, are nearing completion, or have begun to be implemented across a number of cities of comparable size to Chester in the UK and around the World. The types of schemes that were deemed as necessary, justified, and innovative but realistic in terms of deliverability were reviewed alongside the vision that led to the schemes and the progress towards delivery where applicable. In this way, a vision for Chester guided and influenced by the baseline findings and stakeholder engagement already undertaken, that utilises innovation and best practice from successful schemes around the world, but is routed in practicality can be produced. The vision will dictate a long list of potential measures for later appraisal.

It is clear that despite the geographical and operational variation observed within the comparator cities studied in this section, a number of key common themes were present in the transport strategies for each. Aspirations such as enhanced sustainability, economic prosperity and reduced social exclusion as a result of enhanced mobility and access to transport systems and networks were at the heart of many of the objectives detailed above, as they are at the heart of the Transport Strategy for Chester.

Just as the aims of each piece of work often share common themes, so too do the strategic philosophies behind the measures proposed, with enhanced accessibility by and better integration of sustainable modes central to many. It is now widely recognised that, despite its convenience and relative economy, the private car cannot be the whole solution to a city’s transport and access needs, and measures which help to provide travel choice and alternative options are clearly common to many transport strategies. In particular, schemes which reduce or restrict traffic flows within the city core via traffic management, and which promote the use of alternative modes via enhanced priority are common.

Enhanced public space, walking and cycling routes are widely included in comparator cities’ transport strategies with cross-city connectivity frequently linked with economic viability, and the potential for trip linkage – that is the ability of a visitor to utilise the full range of amenities on offer in a city centre be they retail, leisure, employment or educationally based.

Congestion relief is also a common theme amongst comparator areas with many schemes supporting pinchpoint relief or wider strategic schemes. These may include junction capacity enhancements, new links or sub-regional sustainable connections such as rapid transit. Most strategies agree that a mixed package of soft and hard, high and low intervention measures are often the most effective. This thinking will inform and influence the thinking

behind the transport strategy for Chester and will be utilised in scheme identification addressed in subsequent chapters.

**Long List of Schemes**

A large number of potential remedial measures from around the world, including a large number of transport strategy schemes from a variety of comparator cities, were examined. This allowed a pool of exemplar strategic schemes to be constructed from which to draw our long list of schemes. By choosing schemes that specifically target the issues listed above only, a long list of schemes for appraisal was produced.

The Long List derived for this project is composed of a series of 144 schemes and measures specifically chosen to address one or a number of the issues listed here. The measures were drawn from a pool of schemes identified during previous related work within Chester and the surrounding areas, from experience gained from work in other towns and cities within the UK and further afield, from examples of best practice identified from research into other transport strategies around the World, and from ideas provided by Council officers, stakeholders, elected members or the general public during one of the many ongoing consultation events for the study.

These issues are grouped according to the themes of Integration, Sustainability, Traffic Management and Congestion Relief, Ambience / Public Realm, Safety, Legibility, Tourism and Event Management, and Accessibility by Public Transport, Active Modes and otherwise. These are the key transportation themes for which it is clear that there is work to do in and around Chester, and relate to commonly occurring comments taken from conversations with affected or interested persons. In addition, each measure is ascribed a type (divided into schemes that make best use of existing facilities, demand management schemes, and capacity enhancement schemes), a spatial dimension (from schemes that influence the historic core only, to those that work at a city level, and those that impact upon the wider Outer area including areas of Flintshire, Wrexham and Wirral), and a timescale (relating to short-term:1-5 years, medium-term: 5-10 years, and long-term: more than 10 years).

The specific issues addressed by each measure were also identified. This provided a means to identify the number of issues addressed (at least partially) by each scheme, and which issues each measure was selected to address.

**Appraisal**

Having identified the noted Long List of schemes, the next stage of the process was to reduce this down to a smaller list comprising the most advantageous schemes in terms of their fit to policy, deliverability, impact etc. The Short List of schemes that results from this process was envisaged as being approximately 1/3 the length of the Long List in order to be manageable and packageable during the next stage. It is also designed to contain only the most strategically beneficial measures.

Following the awarding of marks, the total number of marks awarded across each category (out of a maximum of 20) was analysed. In order to select at least a third of the best scoring measures, the 67<sup>th</sup> percentile mark was determined which in the case of the appraisal was 12. Therefore all schemes scoring 12 or over were selected for the Short List. This methodology ensures that only schemes which score relatively highly in at least 4 out of the 5 categories can hope to proceed to the Short List.

The appraisal table used to appraise the long list of schemes is shown attached as **Appendix A** of this report. This process led to a set of rejected schemes which were reviewed by officers and members of Cheshire West and Chester Council, a process of sense-checking ensuring that no schemes with the potential for significant benefit were rejected at this stage, and conversely that no schemes considered totally impractical were progressed to the shortlist.

The following table shows the approved shortlist of 78 schemes which have been progressed as part of the Transport Strategy for Chester.

Capabilities on project: Transportation

Theme	Ref:	Scheme
Integration	I01	Gorse Stacks Bus Station
	I07	Intermediate Park & Ride Stops at Key Locations (e.g. Central Business Quarter, Countess, University)
	I10	Enhanced Facilities at Park & Ride Sites
Sustainability	S02	Electrification of rail routes (Borderlands, Crewe, Manchester via Warrington etc)
	S04	Smarter Choices - Hearts & Minds Campaigns
	S05	Delivery of Residential PTP in Targeted Corridors
	S07	Workplace Travel Planning & Engagement
	S09	School Travel Planning - Continued Engagement / Refresh & New Schools (Free Schools / Private Schools)
	S10	Station Travel Plans
	S11	Residential Travel Plans (New Build)
	S12	Business Grants for Sustainable Infrastructure
	S13	Linked trip marketing / joint ticketing initiatives for leisure, retail, and cultural generators
	S14	SmartCard Extension / Rollout
	S15	Integrated Cross-Boundary Area Ticketing
	C03	Western Relief Road Extension / Hawarden Airport Eastern Link Road (HAELR)
	C04	A55 / A483 (Wrexham Road) Pinch Point scheme
	C05	A41 (Ring Road) / A5115 (Whitchurch Road) revised layout
Traffic Management / Congestion Relief	C06	A540 Parkgate Road / A5116 Liverpool Road Gyratory / Northgate Roundabout - Junction Capacity Improvements
	C09	VMS extension and upgrade
	C10	Active Traffic Management (Improved / enhanced UTC)
	C13	Parking strategy implementation

Theme	Ref:	Scheme
Ambience / Public Realm Enhancement	A01	Inner Relief Road (IRR) Southern Arm Downgrading - Shared Space on Pepper Street / Little St. John Street / Vicar's Lane
	A02	Northgate Street / Town Hall Square / St. Werburgh Street Shared Space / Pedestrianisation (incorporating Cathedral area)
	A04	Frodsham Street Shared Space
	A08	Public Realm Enhancements - Pepper Street / Little St. John Street / Vicar's Lane
	A10	Hoole Bridge/Rail Station/Brook Street Masterplan
Safety	Sa01	At-grade crossings at large junctions on IRR / removal of subways
	Sa06	Adult and family cycle training
Legibility	L02	Review / Revise Pedestrian and Cycling Signage / Wayfinding Strategy (coherence, distances, times)
	L03	Improved public information of passenger transport and sustainable modes
	L07	Enhanced gateway treatment at City / District / City Centre boundaries
Tourism / Event Management	T01	Coach Strategy identifying new bespoke pick-up and drop-off locations and enhanced coach parking.
	T02	Enhanced coach facilities at Little Roodee including National Express
	T04	Race-day Park & Ride shuttles
	T05	Race-day City Centre Bus shuttles
	T07	Chester Racecourse walk routes
	T08	Match-day City Centre Bus shuttles
Accessibility Passenger / Public Transport	P01	Bus: City Rail Link Extension
	P02	Bus: Bus Priority on Liverpool Road, Parkgate Road, Hoole Road and Boughton
	P03	Bus: Increased weekend/evening bus provision

Theme	Ref:	Scheme
	P04	Bus: Express (Limited Stopping) bus services from urban fringe
	P05	Bus: Chester Joblink Shuttle Services
	P07	Bus: Rural Feeders to Park & Ride Hubs
	P08	Bus: Enhanced DRT Provision / Coverage
	P10	Bus: Routes to new housing developments
	P11	Bus: Express bus services from rural areas to the city centre
	P12	Improved station accessibility by non-car modes
	P13	Park & Ride: Cross City Transit System
	P14	Park & Ride: Central Hub / Interchange
	P15	Park & Ride: Bus-based Park & Ride at Hoole for M56 / M53 Traffic
	P16	Park & Ride: Increased weekend/evening provision
	P17	Park & Ride: Capacity increase at Park & Ride Sites
	P18	Rail: New stations on the Chester - Crewe line
	P23	Rail: Enhanced passenger facilities at Rail Stations
	P24	Rail: Enhanced car parking facilities at key commuting stations
	P25	Rail: Improved rolling stock on local services
	P26	Rail: Express services on Mid-Cheshire Line (Manchester to Chester)
	P27	Rail: Express rail service to Manchester Airport
	P28	Rail: Half hourly Shuttle Service on Wrexham-Chester Line
	P29	Rail: Halton Curve Reinstatement (Access to South Liverpool / LJLA)
	P30	Rail-based Motorway Park & Ride at Helsby, Frodsham or New Station at Daresbury
	P31	Rail-based Park & Ride at a new station at Queensferry (North Wales Coast Line)



Capabilities on project: Transportation

Theme		Ref:	Scheme
Active Modes	Active Modes	P32	Rail-based Park & Ride at a new station in Rossett (Shrewbury - Chester Line)
		P33	Tram-train on Mid-Cheshire Line
		Ac03	Ped/Cyc: Enhance accessibility to waterways and towpaths for use by cycles and pedestrians
		Ac04	Ped/Cyc: Improve surface of Towpath on Shropshire Union Canal
		Ac05	Ped/Cyc: Further restrict City Centre servicing hours to remove conflict
		Ac11	Ped/Cyc: Removal of vehicular traffic on Old Dee Bridge
		Ac14	Cycling: Chester - Broughton Cycle Links
		Ac15	Cycling: Sealand Road Cycle Links
		Ac21	Cycling: Introduce/expand cycle hire in the City Centre
		Ac22	Cycling: Secure City Centre Cycle Parking Hub / Additional cycle parking facilities in City Centre
		Ac24	Cycling: Wrexham to Chester Cycle Link - NCN5 Extension
		Ac25	Cycling: City Centre East-West Cycleway (Railway - Watergate)
	Other	O2	Residents city centre free/discounted short stay parking
		O3	Quality Bus Partnerships
		O4	Quality Contracts
		O6	Travel Training for vulnerable users
		O7	Increased taxi rank provision

Table E2: Approved Short List of Schemes

Short Listed Schemes

The table above lists the 78 measures that have passed the appraisal and sense-checking stages and therefore satisfy the requirements of the Transport Strategy in terms of policy objectives, deliverability, cost, and person movement impact. Furthermore a check of the issues satisfied by this set of measures confirms that all 82 identified issues are addressed or improved by the short listed schemes. These measures therefore will form the basis of the transport strategy.

The measures may be further grouped into a selection of 28 super schemes for the city by grouping related and geographically close measures into larger packages. Each of these super schemes is described in more detail, with initial ideas, plans and benchmark examples provided, within the scheme proformas included as **Appendix B**.

Scheme Categorisation

As noted previously, each scheme was ascribed a specific spatial dimension and timescale during the long list identification and appraisal stages. This categorisation allowed a 3x3 matrix to be produced which places each of the short-listed measures within one of nine squares as shown on the following page. The purpose of this is to identify which schemes should be researched and tested at each stage, and which model should be used to do this. The two models available are a Paramics micro-simulation traffic model for the city centre, and a Saturn strategic traffic model for the wider city and outer areas. For instance, scheme **A02: Northgate Street / Town Hall Square / St. Werburgh Street Shared Space / Pedestrianisation (incorporating Cathedral area)** will be tested using the city centre Paramics traffic model in the short-term scenario (assumed to be 2016 and to include traffic growth from the 2012 base model), whereas scheme **C03: Western Relief Road Extension / Hawarden Airport Eastern Link Road (HAELR)** will be tested using the strategic Saturn model using the long term 2026 modelling scenario. More details on the modelling of schemes will be presented in the forthcoming Strategy Report to be issued following consultation on strategy options.

Scheme Mapping

In addition to the categorisation described above, a scheme spatial mapping exercise was undertaken to attempt to place each measure more accurately in both space and time. This is done for phasing and costing purposes and will inform the forthcoming public consultation by providing a more detailed picture of the order by which schemes will come on stream. An early scheme map is shown in the adjacent image which shows the positioning of each scheme in terms of timescale and geography.

It is clear from this plan that there is a bias towards the short and medium-terms in the more central historic core and urban geography, indicating that the more central schemes are seen as being needed earlier in the strategy delivery process. Similarly, there is a bias towards long-term schemes for the outer area, at which large infrastructure interventions are required including the proposed Hawarden Airport Eastern Relief Road, and rail infrastructure improvement schemes.

	Short	Medium	Long
Historic Core	A02 Ac05 Ac21 I01 O2 T05 T07 T08	A01 A04 A10 Ac22 Ac25 C13 O7 P01 Sa01 T01 T02	
City	A08 Ac03 Ac04 C04 C09 I07 L02 L07 O6 S04 S09 S14 Sa06 T04	Ac11 Ac14 Ac15 C05 C06 C10 O3 O4 P02 P03 P05 P10 P16 S05 S11 S12	C03 P13
Outer Area	L03 P23 S07 S10 S13	Ac24 I10 P04 P07 P08 P11 P12 P14 P15 P17 P24 S15	P18 P25 P26 P27 P28 P29 P30 P31 P32 P33 S02

Figure E1: Early Scheme Mapping Exercise

Capabilities on project: Transportation

**Emerging Scheme Themes**

For the purposes of easier legibility and better presentation of the strategy to the public and key stakeholders, the short-listed schemes may also be separated according to primary theme. Given that this is done predominantly to highlight the particular area of Chester's existing offer that the scheme relates to, it is considered most beneficial to undertake this categorisation at higher Super Scheme level.

The main themes under which each scheme may be categorised are:

- 1. **Supporting city centre development and the aspirations of the One City Plan;**
- 2. **Enhancing transport connectivity to / from the rural hinterland, and across local, regional and national border (links to North East Wales in particular);**
- 3. **Improving Chester's sustainable accessibility and alternative transport offer;**
- 4. **Responding to changes in residential and other land use patterns;**
- 5. **Increasing the reliability, safety and efficiency of core transport networks for the city;**
- 6. **Safeguarding quality of life within Chester by securing the long term future of its environment; and**
- 7. **Responding to strategic transport changes.**

## 1 Introduction

# 1 Introduction

## 1.1 Background and Previous Work

Following on from the previously issued Chester Transport Strategy Baseline Report, this document provides information on the various options available to the Council and its partners in terms of addressing the comprehensive list of issues identified in the previous work and the comprehensive Stakeholder Engagement and Consultation that has already been undertaken for this and other closely related studies. These include the successful and well received One City Plan for Chester – a development and policy guidance document providing a framework for the future development of the city centre, a final version of which was released in early 2012; and the subsequent Bus and Parking related studies undertaken in its wake. Comments and concerns expressed during early Stakeholder Engagement on the Transport Strategy Baseline findings were also instrumental in establishing the list of transportation issues experienced within the Chester area and the wider sphere of influence.

The earlier Baseline Report reported on a series of key findings in relation to the city and wider area's existing transport provision and network. These key findings are summarised below

### Policy Factors

- The core objectives for the strategy need to focus on creating economic growth and reducing the carbon impact of transport.
- All potential objectives, aims and goals of the strategy must be measured against appropriate criteria, as indicated by the Eddington Transport Study.
- The strategy needs to be aligned closely to sub-regional policy and priorities.
- Key emphasis should be on supporting sustainable economic growth, set against a decrease in available budgets to spend on transport infrastructure and schemes. This necessitates an innovative approach to developing solutions to accessing existing funds and scheme delivery.
- The focus of local policy should be consistent with national goals and objectives, including reducing carbon emissions and the impact of climate change, ensuring a safe and secure transport system and promoting health, inclusiveness and equality.
- The Transport Strategy should help to deliver the aspirations for city centre development outlined in the One City Plan.
- The Transport Strategy should incorporate and test parking and bus related proposals identified in recent strategic assessments.
- The Transport Strategy should build on current planned investment in providing more sustainable connections from communities to areas of employment opportunity delivered through the LSTF.

- The Transport Strategy should build on proposals for connecting rural areas to employment and key services as identified in the Rural Regeneration Strategy and topic papers to inform the Local Plan.
- The Transport Strategy should inform and influence Local Transport Body (LTB) and Local Enterprise Partnership (LEP) decisions.

### Factors Related to Chester's Demographic Status

- The city of Chester is a net importer in terms of employment flows, although has significant levels of outbound commuting as well, with key inter-relationships with Flintshire, Ellesmere Port and Neston, Wrexham and the Wirral.
- It will be important to ensure the provision of appropriate and feasible public transport and walking and cycling options from areas of high unemployment / deprivation to major employment sites, consistent with working patterns.
- The Transport Strategy needs to consider the impacts of changes in healthcare provision and policy affecting school travel and transport, such as the creation of free schools.

### Tourism Related Factors

- The key transport related challenges facing the tourism sector in the Chester area are as follows:
  - o Accommodating more sustainable travel options to reach destinations and attractions.
  - o Balancing demands from the tourism sector and protecting Chester's unique heritage.
  - o Understanding role of the transport experience in supporting the overall visitor experience.
  - o Supporting the evolution / enhancement of existing major tourist attractions to ensure that they can continue to grow and attract visitors to the area.
- Tourism and leisure play an important role in the Chester and wider sub-region economy and this strategy should seek to support the visitor economy through the provision of a strong and legible transport infrastructure.
- It is important to work with the visitor economy and transport providers to offer more sustainable transport solutions.
- There is a need to investigate the potential for utilising and developing the waterways as part of the tourism offer and linking places and key destinations.
- Improvements to pre-arrival and arrival information are important in influencing visitor trip choices.

### Factors Relating to Housing and Employment Growth

- Up to 5,250 homes are estimated to be required in Chester between now and 2030. Around 40% of this is expected to be constructed on greenbelt sites which have little or no existing forms of access and movement infrastructure.
- Significant work is required in order to understand the impact of constructing housing in the greenbelt in terms of existing network loading points, flood risk, air quality and ecology. The question of vehicle loading is of particular concern to the Highways Agency which is interested in the interface with their existing network i.e. the M53, M56, A55 and (less relevantly to Chester the A550).
- Of the 60% of housing to be constructed within the existing urban boundary, 5,080 dwellings are either committed or identified within the SHLAA although not all of these will come forward. The greatest single part of the city for new housing is Blacon, the majority of which are likely to be delivered within 5 years, although Chester City, Boughton, Upton, and longer term Lache, Hoole and Newton, are all important.
- 280 Ha of employment land is estimated to be required across the borough between now and 2030. If the allocation between Local Areas is similar to housing, this would indicate that 70Ha will be required in Chester although it is likely that this is the minimum requirement due to Chester's position as the main employment centre in the sub-region;
- In terms of specific job creation sites, 1,600 jobs are expected to be created at Northgate as a result of the mixed-use development there, 1,100 at the Central Business Quarter, and more as a result of the proposed Theatre and Performing Arts Centre which will also attract an estimated 300,000 annual users.
- Just under 40 Ha of land are expected by the Local Plan team within the next 15 years, although 25 Ha of this is one site – the Bumpers Lane Tip site in Blacon.
- All of the potential options for housing development within the greenbelt will add significant amounts of traffic to the A483 and A55 routes and junctions. Of the three, Option 2 adds the least but loads additional traffic through the existing AQMA. Option 3 is the most balanced approach overall, but has an additional impact to the north of the city centre.

In addition, the following sections summarise the key opportunities for change as identified from the review of access and movement issues currently prevalent within the city. These are presented by mode:



### Highways

The key finding in relation to the highway network within and around the Chester Urban Area is that traffic characteristics are dominated by the constraints placed upon the network as a result of the city's modest size, rich historical heritage, and the transport measures of the past including pedestrianisation and the IRR. Flows are limited by a series of pinch points at key junctions limiting capacity on radial routes. It is clear that the city fulfils a role as both a local centre and source of employment, retail and leisure for a much wider catchment than is contained within the urban grain, with particular links to North Wales and Merseyside as stated.

Within the city centre, the IRR that surrounds the historic city core is the clear feature, with the pedestrian zone and adjacent restricted movement streets all contained within this collar. Both Northgate Street / Princess Street and Frodsham / Foregate Street are currently performing roles as 'city distributor' links reflecting their importance both in terms of buses and access for disabled persons and the Grosvenor Hotel, however stated aspirations exist for both of these to be made more pedestrian friendly, with possible future pedestrianisation scenarios being a key question to be addressed by the transport strategy.

The dominance of the effective outer ring road is clear at a wider scale, as is the web of radial routes into the city centre. It is evident that the areas to the north and west are best served by high capacity roads, with long aspirations to improve cross-city accessibility further via the proposed Western Relief Road. The areas east, and south east of the city are less well connected. This is clearly a reflection of the rural nature of this part of the borough, although it should be noted that the rural population makes up a significant proportion of the borough's people as a whole, and many of these rural communities rely on access to and from Chester City Centre for their essential business, leisure and shopping.

In terms of traffic flows, the busiest corridors are those from the east (representing a combination of the busy A51 Vicars Cross Road and the A5115 Christleton Road), from the south via Wrexham Road, and from the north including both the A540 and A5116 radial links. Whilst congestion is not a particular problem under normal conditions, the network is extremely busy and hence vulnerable when problems occur. As an example, Hoole Road represents the key link from the M53 motorway and is heavily used but constrained, leading to congestion should any blockage or other delay occur.

### Car Parking

Car parking was the subject of a recently produced strategy document on behalf of CW&C and the key findings of its baseline report included reference to issues and opportunities in 10 key areas. These related to control, pricing policy, signage, overnight parking, on-street charging, and quality amongst other things. In general, it was determined that the parking offer in the city was adequate in terms of numbers, but required rationalisation along a corridor based approach with improvements to quality, technology, signage and Park & Ride services. The report also made recommendations in relation to tariffs and on-street charges, to support the wider aspirations of the One City Plan and Local Transport Plan.

Many of the recommendations of the Car Parking Strategy are already in the process of being implemented. It is recommended that the strategy be completed in its entirety, however, as it is considered that many of the recommendations are inter-dependent – in other words, the whole is greater than the sum of its parts. Several of the measures will be investigated further as part of the Transport Strategy identification process.

### Park & Ride

Issues associated with Park & Ride in Chester relate to apparent falls in both utilisation and revenue in recent years, possibly as a result of high levels of 'free' use provided to Council staff, and following the introduction of the 'Free After 3' scheme in the city centre. In addition the impact of increased competition from out-of-town retail areas such as Cheshire Oaks and Broughton Retail Park, and the increase in online purchasing, are likely to have reduced some of the retail-based demand for Park & Ride services. The Car Parking Strategy report made recommendations in the following areas:

- **Signage:** It is recommended that Upton Park & Ride be signed from M53 Southbound and the A55 Northbound, Boughton Park & Ride from both directions on the A55 at its junction with the A51, and Sealand from the A550 with an additional sign between the A550 and site. It is also recommended that Variable Message Signs (VMS) be extended for Park & Ride facilities, as well as city centre signage.
- **Location:** It is recommended that work be undertaken to maximise use of informal Park & Ride sites, such as station car parks along the Merseyrail and other rail routes. A new Park & Ride site could be constructed on the Hoole Road corridor with the potential to create drop-off / pick-up point in Hoole District Centre itself around the Faulkner Street area.
- **Optimising use of Resources:** It is recommended that the Park & Ride offer be diversified to include retail, cafe /

restaurant, cycle storage and hire uses etc. Carry out a comprehensive review of Park & Ride provision, including contractual arrangements, assessment of demand for a fifth Park & Ride site, alternative routeing and pick-up / drop-off options and a review of pricing structure, including concessionary fares.

### Rail Services

Rail services in Chester are in general frequent and good with regular electric local services to Liverpool, fast long distance services to London and fairly frequent services along the North Wales coast towards Llandudno and Holyhead. In addition, the line towards Wrexham is to be dualled as of autumn 2013 and services increased to half-hourly in frequency. Services towards Manchester are, however, relatively infrequent and slow, and services towards Wrexham and Crewe do not serve the local communities through which the rail lines pass with no suburban rail stations on these key lines.

The following opportunities for improvement were identified:

- An enhanced service between Chester and Manchester, possibly with through connections to Leeds and beyond, is a possible result of the Northern Hub package of measures due to be delivered before December 2019. In light of recent announcements on the electrification of the Chat Moss and North Trans-Pennine rail lines, there is the opportunity to look at further electrification following these projects.
- Reinstating the Halton Curve should be a key aspiration of both CW&C and North Wales authorities since it provides a direct link to Liverpool John Lennon Airport and a fast direct route into Liverpool City Centre.
- Electrification of the Ellesmere Port – Helsby Line could have beneficial impacts for the wider travel-to-work area of Chester as it could potentially enhance the quality, reliability of the service and provide a direct rail link between Ellesmere Port and Chester.
- Electrification of the North Wales line between Crewe and Holyhead via Chester, as recommended in an independent North Wales Rail study, would improve journey times and reliability, and increase the compatibility of the line for use with newer electric services including eventual High Speed 2 services.



Capabilities on project: Transportation

### Bus Services

The Pre-Feasibility Bus Strategy for Chester introduced a number of key issues and opportunities for bus services in Chester. Perhaps of most importance is the fact that bus penetration into the historic core is poor and there is little or no integration between the two primary bus hubs requiring long walks to interchange between buses or between buses and trains.

Proposals to relocate the bus station to Gorse Stacks appear workable from an operational standpoint and would offer improved integration between services and with the rail station, however network testing is required in order to instil confidence that the road network can cope with the network and traffic alterations. In addition, the findings of the recent Bus Strategy Pre-Feasibility Study, and concept design work on the new bus facility, present some wider strategic measures including the creation of several quality bus hubs around the city centre (in addition to a central interchange), and changes to routeing. These will be examined as part of the Transport Strategy identification process.

### Cycling and Walking

Whilst great strides forward in cycling provision have been made as a result of Chester's Cycle Demonstration Town status, cross-city connectivity remains difficult by sustainable modes due to the severance effect of the IRR and the lack of pedestrian routes through swathes of the city such as the Commonhall Street area. There is also a lack of permeability through the Grosvenor Shopping Centre after closure at around 18:00, and a general lack of available secure and sheltered cycle parking around the city.

Opportunities for change therefore include:

- Developments at Gorse Stacks and Delamere Street present the opportunities for the removal of severance on the IRR at the junctions of Hoole Way and the Fountains Roundabout. Pedestrian and cycle considerations need to form a key part of any resulting highways works.
- Enhancements of the canal environment both as part of the Central Business Quarter and further west, have the potential to improve cycle linkage across the city centre.
- A relaxation of the cycling restrictions in pedestrianised areas might help to improve permeability within the city centre, as might the creation of improved north-south walking and cycling routes.
- A resolution of the cycle parking issue in key locations such as the rail station could potentially promote Chester's impressive cycling credentials and legacy, however the impact on the station's exterior has so far proved divisive. At present, cycle parking is provided inside the building and is popular and well-

used, however a lack of space will ultimately require more permanent solutions to be found.

- The Cycle Strategy for Chester has a long-term aspiration for improvements to address key cycle pinch-points including the Hoole Road corridor (and specifically Hoole Bridge).

### Waterways

The river is currently removed from the city centre by illegibility of route, and severance created by the Vicars Street / Pepper Street corridor. Downgrading the link, as recommended by the One City Plan, would address this issue, however these proposals need to be tested to ensure workability. The canal environment is considered dark and oppressive particularly at night between Frodsham and Northgate Streets, however the improvements already undertaken to the east of the city centre have improved the environment substantially and further enhancements to the environment, potentially as part of other developments are recommended.

A separate Waterways Strategy is underway at present, commissioned by Chester Renaissance, and this will make recommendations on a number of key enhancements. Potential improvements that may be made include the following:

- The River Dee through Chester provides both a pleasant leisure and residential environment for visitors and locals alike, but also an important walking and cycling link to Chester's dependent areas to the west including Hawarden Bridge, Deeside Industrial Park and Queensferry.
- The Chester Canal (part of the Shropshire Union network) provides an important walking and cycling route across the city centre and to Ellesmere Port, via Chester Zoo.
- The potential exists, due to the navigability of the canal between Chester and Ellesmere Port, to introduce freight services between the Manchester Ship Canal (Liverpool and Manchester) and Chester, thus reducing road and rail freight requirements and utilising an underused asset.
- The introduction of pleasure waterbus services between the Zoo and city centre has long been discussed, but might be feasible in the context of the expansion programme at the Zoo and the need for sustainable alternative links between the attraction and the city centre.

### Servicing

The main issues associated with servicing in the city centre are as a result of conflict with other traffic and modes of travel during the hours or servicing within the pedestrian zone in morning and evening. Given the constrained nature of the city's historic retail core, it is unlikely that a more palatable solution can be found

without significant change in servicing culture and logistics. This may become more likely over time, however given the change already underway in the way we shop and buy goods. Opportunities as a result include the following:

- Future trends in terms of servicing nationally, indicate a movement towards more centralised, out-of-town servicing distribution with less of a need for large-scale town and city centre supply. Consequently service vehicles have moved towards the extremes of size with mid-range vehicles less frequently used.
- It may be possible to combine some servicing functionality with other transport improvements within the city such as the Park & Ride offer. By creating out-of-town hubs at which goods collection could take place, there may be a reduced need for servicing to occur within the city centre at all.
- The increase in popularity of internet shopping has the potential to change further the servicing culture and the transport strategy must account for this and provide a strategy that incorporates the potential for technological change.

### Air Quality

The city's air quality management strategy is currently concentrated at the one designated Air Quality Management Area (AQMA) along Boughton Road which has recently been revised and extended. However, a second area is under investigation and may lead to a further AQMA declaration at the junction of the A540 and A5116 to the north of the Fountain's Roundabout.

The air quality issue clearly highlights the need to reduce traffic flows into and out of the city centre and makes the case for projects which promote more sustainable modes of travel and bring about mode shift to walking cycling and public transport.

Capabilities on project: Transportation

**1.2 Options and Assessment Methodology**

In this report, the methodology used to develop and appraise a long list of schemes for the Chester Transport Strategy, which aim to tackle the key findings drawn from the baseline report, is discussed.

The Baseline findings, alongside the findings from previous public consultation events and an initial period of stakeholder engagement throughout January and February 2013, provide the basis for the long list of strategy measures identified. The measures have, in turn, been drawn from a wide pool of schemes used in transport strategies of other local authorities and representing some new advances in innovation and use of intelligent technology.

This document firstly notes the set of key emerging issues as identified by the baseline and consultation work already undertaken. It then presents the long list of schemes linked to these issues in order to better appreciate the rationale behind their selection. The appraisal process is then explained with a commentary on the criteria used and the scoring system that decides whether a scheme is considered beneficial enough to proceed to the packaging stage.

The report concludes by stating the short list of measures and packaging these according to zone of influence, timescale and theme. Completed proformas for each key scheme are also included to provide a greater degree of detail and some initial ideas in relation to each shortlisted scheme.

## **2 Emerging Transportation Issues in Chester**

2 Emerging Transportation Issues in Chester

2.1 Introduction

In this section, a comprehensive list of issues derived from the baseline analysis, previous consultation, and early Transport Strategy stakeholder engagement is presented. This is done by mode so as to ensure that all areas and potential issues are identified, although it is noted that the final list of schemes to be included in the Transport Strategy will not be modally based, but rather presented by geographical zone of influence, timescale and theme. By ensuring that all of the issues presented here are addressed by all of the schemes in the final strategy, however, it is possible to produce a solution that corresponds to all of the evidence, testimonials, growth projections and feedback received during earlier stages of the process, and to ensure that no network gap or strategic issue goes unaddressed by at least some component of the overall whole.

2.2 List of Transportation Issues

Table 2.1 presents the complete list of Transportation Issues identified within Chester during the Baseline Stage and from previous public consultation and early stakeholder engagement. These are grouped by mode.

Mode	Issues
Bus / Coach	<div>1. Development pressures, poor quality bus station and two distinct hubs.</div> <div>2. Confusion over large number of route and operators.</div> <div>3. Low frequency services from/to rural areas.</div> <div>4. Limited routeing of City Rail Link Bus.</div> <div>5. Limited Coach drop-off facilities</div> <div>6. Limited long distance bus / coach facilities.</div> <div>7. Lack of bus priority infrastructure on core radials / corridor constraints.</div> <div>8. Limited weekend and evening bus provision on some routes / areas.</div> <div>9. Lack of direct bus services to number of key employment locations.</div> <div>10. Limited / slow roll-out of payment technologies.</div> <div>11. Low composition of high-performance units in local fleets.</div>

Mode	Issues
Park & Ride	<div>12. Lack of Park &amp; Ride facility serving the M53 corridor.</div> <div>13. Routing of services / hours of operation / and serving inter-nodal destinations / Lack of facilities at Park &amp; Ride sites for integration / interchange.</div> <div>14. Limited provision for rail based Park &amp; Ride.</div> <div>15. Limited incentive for upgrade of Park &amp; Ride facilities by operators.</div>
Rail	<div>16. Low frequency and long journey times by rail to/from Manchester / Manchester Airport.</div> <div>17. Poor integration between bus and rail services.</div> <div>18. No rail access from South / South-East Chester.</div> <div>19. Indirect access to Liverpool Airport / South Liverpool.</div> <div>20. Slow service to Liverpool City Centre.</div> <div>21. Lack of suburban stations within the Chester urban boundary.</div> <div>22. Limited car parking capacity at commuting rail stations.</div> <div>23. Incompatibility of Virgin Pendolinos with the Crewe – Chester line.</div> <div>24. Poor quality rolling stock, low frequencies, long journey time on the Borderlands Line.</div> <div>25. Variable / poor quality facilities at commuting stations.</div> <div>26. Indirect connectivity between Ellesmere Port and Chester.</div> <div>27. Lack of connectivity between Merseyside and North Wales.</div>

Mode	Issues
Pedestrian Movement	<div>28. Lack of priority for pedestrians / limited pedestrian only sections.</div> <div>29. Dominance of traffic on St. Werburgh Street and Northgate Street.</div> <div>30. Severance effect of the Inner Relief Road.</div> <div>31. Perceived and actual safety issues associated with subways.</div> <div>32. Poor quality public realm and lack of gateway from rail station.</div> <div>33. Station – City Centre link underwhelming.</div> <div>34. Limited connectivity to / from key traffic-free routes (actual and perceived).</div> <div>35. Limited opportunities to cross the River Dee for active modes.</div> <div>36. Insufficient signage on key routes (e.g. rail station to city centre, to / from river).</div> <div>37. Outdated / inconsistent pedestrian signage / way-finding.</div>
Cycling	<div>38. Cycling missing links.</div> <div>39. Variable provision of cycle parking (quantity, type and coverage).</div> <div>40. Lack of priority for cyclists.</div> <div>41. Lack of cycle hire facilities for tourists / visitors.</div> <div>42. Despite recent investment in infrastructure, participation levels are still relatively low.</div>

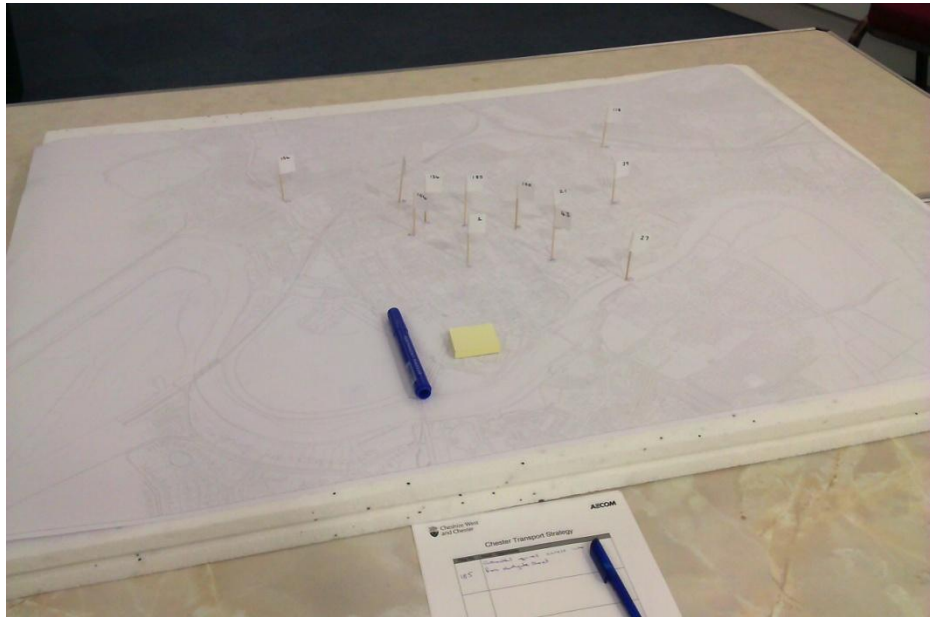
Mode	Issues
Car / Highways	43. Rising congestion levels. 44. Car dependency in rural areas. 45. Congestion hotspots. 46. Lack of strategic approach to Event Management. 47. Lack of quality gateways into Chester (by road and also rail). 48. Air quality management issues (A51 Tarvin Road / A5115 Christleton Road (existing AQMA) and A540 Parkgate Road / A5116 Liverpool Road (Potential AQMA). 49. Confusion and inefficiency at A41 / A5115 'hamburger' roundabout. 50. Road safety issues. 51. Maintenance of highway assets (e.g. road and bridge). 52. Dominance of the private car for trips to a number of key trip generators / attractors.
Parking	53. Legibility / market segmentation of parking offer. 54. Location of key car parking facilities. 55. Variability in quality of facilities (between facilities and operators). 56. Blue Badge Parking in inappropriate locations. 57. Overspill parking in adjacent residential areas (e.g. Handbridge, Queen Park). 58. Accuracy/coverage of Variable Message Signs (VMS). 59. Uncertainty / confusion over appropriate cars parks for destinations. 60. Loss of revenue due to free on-street parking. 61. Availability of on-street parking spaces undermines wider efforts to promote sustainable transport trips.

Mode	Issues
Freight / Servicing	62. Servicing access and timings. 63. Inefficient delivery / servicing of city centre.
Taxis	64. Lack of clarity over function in transport system. 65. Difficulties of enforcement / control.
Wider Issues	66. Competing demands from tourism / business and commuters / residents. 67. Impacts of ageing population. 68. Proportion of population not meeting recommended activity levels – health and obesity issues. 69. Rural accessibility and linking adjacent satellite villages (e.g. Mickle Trafford & Guilden Sutton). 70. Cross-boundary issues (e.g. employment flows to Broughton). 71. Conflict between cars, cyclists and pedestrians. 72. Varying accessibility to jobs and services. 73. Increasing cost of fuel and energy. 74. Impacts of Climate Change. 75. Impacts of noise and air pollution. 76. Road safety issues and general safety. 77. Challenges in providing equality of opportunity. 78. Demands from Regeneration / Tourism to maximise key assets including River Dee, Shropshire Union Canal, Castle, Grosvenor Museum, Amphitheatre and City Walls). 79. Supporting regeneration (e.g. Culture aspirations,

	Central Business Quarter and Northgate) and demands for new housing. 80. Large retail catchment and competition with Cheshire Oaks and Broughton Shopping Park. 81. Protecting heritage / cultural assets. 82. Visitor economy and impacts (e.g. Race Day, Zoo traffic, growing evening economy).
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Table 2.1: Key Emerging Issues from Earlier Stages

The 82 key issues noted above represent the key aspects of transport and travel within the existing Chester area that the ultimate transport strategy measures should seek to address. In subsequent sections, methodology for identifying the long list of measures, the appraisal process to produce a short list, and the packaging of options is discussed.



Issues Identified During Stakeholder Engagement



### **3    Benchmarking from Other City Transport Strategies**

3 Benchmarking from Other City Transport Strategies

3.1 Introduction

In this section, a review is conducted of the Transport Strategies that have been completed, are nearing completion, or have begun to be implemented across a number of cities of comparable size to Chester in the UK and around the World. The types of schemes that were deemed as necessary, justified, innovative but realistic in terms of deliverability are reviewed alongside the vision that led to the schemes and the progress towards delivery where applicable. In this way, a vision for Chester guided and influenced by the baseline findings and stakeholder engagement already undertaken, that utilises innovation and best practice from successful schemes around the world, but is routed in practicality can be produced. The vision will dictate a long list of potential measures for later appraisal.

3.2 Oxford Transport Strategy (Revised April 21012)

The goals of Oxford’s Transport Strategy 2011 – 2030 (produced in April 2011) are based upon the earlier Sustainable Communities Strategy, and Core Strategy, setting out a vision as follows:

*“Oxford will be a world-class city for everyone. Oxford as a city will build on its heritage and its international reputation as a place of learning and innovation to create high quality life outcomes for all those who live in the city. We shall develop a city that becomes carbon neutral with high eco standards that protect the health and wealth of all our citizens and which will be a model of good practice locally, nationally and internationally. We shall enhance the role of the city within Oxfordshire and the South East of England as a sub-regional capital assisting surrounding areas by the development of high quality, sub-regional and regional services and facilities.”*

In addition, the city’s Local Transport Plan calls for Oxford to take on a role a sub-regional capital, exhibiting good practice in all areas, locally, regionally, and nationally.

In the city centre, there is relatively low car use and there is a strong desire on the part of the city council to continue to reduce the mode share of the private car by providing enhanced walking and cycling linkages and enhancing the pedestrian environment of the main public spaces and open areas. The strategy for the city centre focuses on:

- Improving access via sustainable modes;
- Improving non-car cross-centre journeys including interchanges;
- Enhancing the pedestrian environment to facilitate interchange between modes and help the local economy;
- Improving air quality; and
- Reducing private car use relative to sustainable modes for journeys through the University science area.

Given that much of Oxford’s employment is concentrated in areas such as Cowley and Headington, there is a clear demand for car-based

transport to access these areas. Park & Ride services exist but are limited by capacity issues, and local congestion can affect service reliability for these and other local bus services. The inconsistency of local cycling infrastructure is such that it decreases the attractiveness of this as a mode. The strategy for these areas therefore involves:

- Delivering a form of high quality ‘rapid transit’ public transport (which could be high quality conventional bus, light rail or guided trolleybus), serving park and ride sites and major employment and housing areas in the Eastern Arc;
- Working with employers to develop travel plans and reduce the availability of car parking for staff;
- Improving the reliability of local bus services, and improving cycling links, to encourage mode switch away from car travel for shorter journeys;
- Investigating how bus interchange can be improved, potentially as part of the redevelopment of the city’s West End; and
- Tackling congestion at key junctions on the ring road.

Public Transport use in other parts of the city is limited, as is the use of other sustainable modes, leading to the need for improved access to the local centres by these modes.

Park & Ride

- Expansion of Thornhill Park & Ride car park;
- Delivery of high quality mass ‘rapid transit’ Park & Ride access to major employment and housing areas in the Eastern Arc;
- The expansion, access improvements and changes to operations at other park and rides and potential additional sites (including remote sites), taking into account Water Eaton Rail Station and a new orbital service;
- The use of Park & Ride as interchanges, particularly into whether this would increase or decrease bus use from rural areas; and
- The business case for cycle hire/loan facilities at some or all of the Park & Ride sites to enable users to access a greater number of destinations than would be achievable by bus alone.

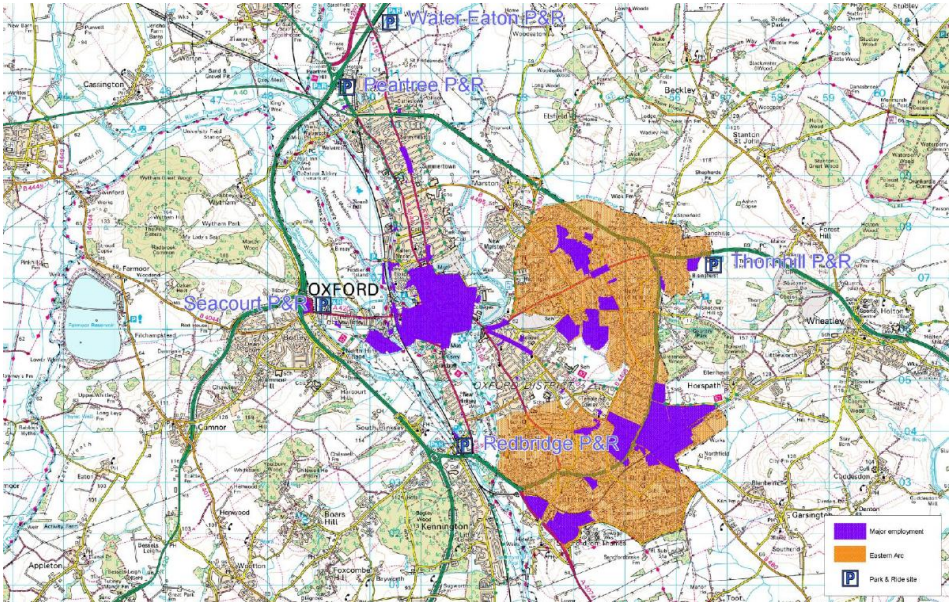


Figure 3.1: Oxford Key Transport Strategy Areas

Source: Newport Unlimited and Newport City Council

The schemes that are therefore proposed for Oxford to tackle the issues are summarised under the following headings:

Rail Strategy

- Oxford rail station forecourt improvements;
- Public realm schemes to improve conditions for pedestrians in Frideswide Square and approaches to it, George Street, Magdalen Street and St Giles; and
- Access to Water Eaton station from the road network as well as by public transport and cycling.

Traffic Management

- Public Square improvements;
- Slip road junction improvements;
- Improvements to city approaches;
- Investigation into measures to reduce the amount and/or the attractiveness of workplace parking;
- Extension of Controlled Parking Zones or other car parking management measures to mitigate the impacts of any reductions in commuter parking, including possible increase in on-street pay and display for short term parking; and
- Investigation into traffic management measures to improve bus reliability and reduce private car traffic.



Walking Strategy

Schemes associated with the walking strategy are mainly public realm enhancements in certain parts of the city, however the strategy also suggests specific schemes to improve interchange between orbital and radial bus routes, and associated with the proposed ‘Rapid Transit Park & Ride’ concept.

Cycling Strategy

- Cycle/pedestrian improvements on key links;
- Development of a cycle hub and improved cycle parking and management in the city centre;
- Cycle and footbridge over the Thames;
- Warneford Meadow cycle route; and
- Identification of ‘missing links’ and potential schemes to further join up the city’s cycle network.

Bus Strategy

- Re-routing of buses and coaches in the city centre;
- Schemes targeted at reducing congestion and giving buses priority where possible in the Eastern Arc;
- Better bus stops and information at local bus stops in the Eastern Arc, particularly at interchange points;
- Corridor improvements;
- Schemes arising from new housing development;
- Investigating an electric bus routes into the city centre; and
- Investigating a service to assist people with mobility difficulties in crossing the city centre.

Emissions Strategy

- Implementation of a Low Emission Zone (LEZ) for the city centre;
- Investigation into an LEZ covering the whole city;
- Investigation into options for reducing carbon emissions from goods and private vehicles in the city; and
- Investigation of options for more efficient logistics arrangements aimed at reducing freight traffic into the city centre.

Promoting Travel Choice

- Working with schools and businesses which are contributing to congestion on the strategic road network;
- Improving the information available on sustainable modes of transport;
- Working with health authorities to publicise through social marketing the health benefits of active travel;
- Ensuring behaviour change activities are co-ordinated with new infrastructure provision; and

- Investigating other behaviour change activities as appropriate.

3.3 Stirling City Transport Strategy (2007)

Stirling, in central Scotland, is an historic city surrounded by predominantly rural communities. The city is in close proximity to the National Park of Lake Lomond and the Trossachs and the Council has developed separate transport strategies for the smaller rural towns and areas covered by the National Park authority.

In terms of the city itself, the transport strategy aims to create:

*“An accessible Stirling with safe, integrated and reliable transport that supports economic growth, provides opportunities for all and is easy to use; a transport system that meets everyone’s needs, respects our environment and contributes to health; services recognised nationally for quality, technology and innovation, and for effective and well-maintained networks; a culture where fewer short journeys are made by car, where we favour public transport, walking and cycling because they are safe and sustainable and where transport providers and planners respond to the changing needs of businesses, communities and users.”*

This will be achieved by satisfying the following primary objectives:

- Promote safer travel for all;
- Maintain and manage the existing transport network effectively;
- Increase transport accessibility for people with restricted options;
- Increase travel choices and enhance linkages between different means of travel to reduce the need to for car use; and
- Support and enable future development through sustainable transport.

Stirling faces a number of challenges over the coming years. The population of the Stirling area continues to grow, unlike that of Scotland as a whole where the picture is one of population decline. Between 2004 and 2024 population growth is projected to increase by 5%. To accommodate some of this growth, plans are underway for a new Major Growth Area, to the east of Stirling, which will provide 2,500 new homes. Whilst this level of growth presents exciting opportunities for Stirling, the city faces a significant challenge in maintaining and enhancing the quality of life, while, at the same time, trying to ensure that this growth takes place in a sustainable manner.

The key transportation issues associated with this growth are congestion and the resultant impacts this has on the environment, the economy, integration, safety and accessibility/social inclusion which all contribute towards quality of life.

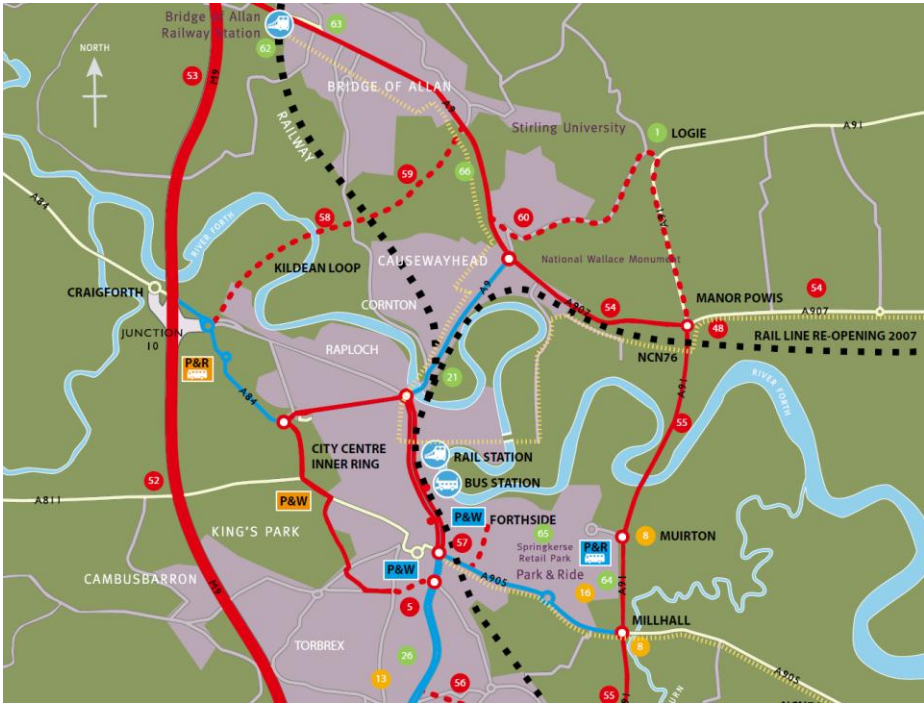


Figure 3.2: Stirling Transport Strategy Outer Cordon

In order to ensure that the approach taken in the City Transport Strategy (CTS) will achieve the Transport Vision for Stirling and meet the Local Transport Strategy (LTS) objectives, three strategies have been appraised, with two alternative strategies; Do Nothing Strategy and Road Capacity Strategy being rejected during the sifting process. The Scottish Transport Appraisal Guidance (STAG) was followed to develop the strategies using the government’s 5 key objectives; environment, economy, integration, safety and accessibility/social inclusion.

The strategies appraised were ‘Base Strategy’, ‘Do-Something Strategy’ and ‘Aspirational Strategy’. As an example of some of the key measures suggested as part of these, the Aspirational Strategy contained the following components:

A city centre that keeps its streets for people:

- Essential access only within city centre core area;
- Completion of all public realm and environmental improvements within the inner ring road creating a high quality pedestrian environment; and
- Rationalisation of off-street city centre parking.

Better choices for travel to the City:

- Supplement the existing bus service network by enhancing frequency and coverage to address latent demand and providing a real alternative to the car;

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- Deliver a lower fares strategy in partnership with bus operators and the Tayside and Central Scotland Transport Partnership (TACTRAN); and
- New Park & Walk site at Kings Park.

**The development and enhancement of an inner-city route:**

- Make provision for bus priority measures on inner ring road at key intersections; and
- Investigate options to increase capacity of Stevenson’s Bridge.

**The consolidation and improvement of an outer-strategic route:**

- Investigate in partnership with the Scottish Executive A811 southbound slips onto the M9; and
- Investigate 3 lane operational on A91 alternating between junctions using east and west bound lanes to facilitate High Occupancy Vehicles (HOVs).

**Distributor routes defined to connect outer and inner routes:**

- Investigate Kerse Road to Forthside sustainable transport link road; and
- Investigate further bus priority measures on A905 Kerse Road between Craigs roundabout and Broadleys roundabout.

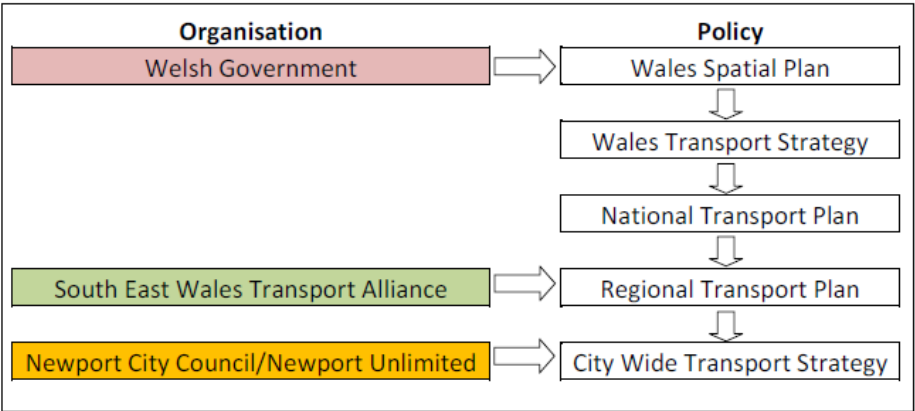
Delivering the strategy over the next 15 years will need to include a combination of:

- Hard measures such as new initiatives to deter use of the private car, for example bus lanes, pedestrian facilities, cycle routes and parking controls;
- Improved management of the highway network to allow additional capacity of existing infrastructure; and
- Encouraging smarter travel choices through promotion and advertising.

**3.4 Newport Transport Strategy (Refreshed 2011)**

The 2004 City Wide Transport Strategy outlined a comprehensive vision for the Newport transport network in 2020. This vision has been summarised to form a mission statement that defines the overarching function of the transport strategy:

*“The purpose of the Newport City Wide Transport Strategy is to support the development of Newport as a destination of choice for employment, education, retail and leisure through the provision of a transport network that provides opportunities to travel by the most appropriate mode.”*



**Figure 3.3: Wales Transport Policy Framework**

Following the refreshment exercise, the objectives of the strategy were updated. The revised objectives are summarised below:

- To develop a transport network that supports the ongoing regeneration of Newport;
- To maximise sustainable access to central Newport and its City Centre in order to support inward investment and tourism development on a regional and international scale;
- To reduce the impact of transport on greenhouse emissions;
- To introduce, support and promote sustainable forms of transport to encourage change in travel behaviour in and around Newport;
- To provide seamless accessibility between employment opportunities, healthcare, education, tourism and leisure facilities and the surrounding region for people and freight;
- To continue to promote and maintain a safe, convenient and attractive environment for walking and cycling in and around Newport;
- To maximise the capacity of the existing highway network in Newport to improve the efficient, reliable and sustainable movement of people and freight;
- To continue to promote and develop a safe, efficient and attractive public transport network to encourage greater use;

- To continue to use new information and communication technologies to increase awareness of sustainable transport alternatives to support change in travel behaviour;
- To develop transportation initiatives that are deliverable and provide user, environmental and economic benefits;
- To promote integration of transport networks and enhance service facilities to improve connectivity by sustainable modes between Newport, the rest of Wales, the UK and Europe; and
- To ensure developments are accessible and make the development of sustainable transport networks an integral part of the planning process.

It was evident that there is a perceived and actual lack of alternatives to private car travel in and around Newport; therefore strategy measures are designed to facilitate and promote travel by alternative modes. It was also essential to ensure the proposed suite of measures were consistent with National and Regional Policy.

The strategy is designed to address existing issues and provide options to travel by alternative modes. It also recognised that the city continues to evolve; therefore some Newport City Wide Transport Strategy Refresh supplementary mode specific strategy development was required. The specific schemes are as follows:

- Apply for Sustainable Travel Town status;
- Enhanced Bus Terminal Facilities;
- Old Green Interchange;
- George Street / Lower Dock Street Junction;
- Cardiff Road / Commercial Street Junction;
- Enhance Local Bus Services;
- Caerleon Road Bus Priority Measures;
- Corporation Road Bus Priority Measures;
- Expand the Real Time Passenger Information System;
- District Pedestrian Priority Measures;
- Individualised Travel Planning Programme for major travel generators;
- Introduce City Centre Cycle ‘Hub’ (Queensway / Rail station);
- Cycle Parking;
- Cycle Routes Serving New Developments;
- Introduce a Bike Hire Scheme;
- Produce a Parking strategy
- Produce a Taxi strategy;
- Produce a strategy for bus based Park & Ride;
- Provide a Routing / Signing Strategy; and
- Investigate the potential for creating a Car Club.



3.5 Lancaster and Morecambe Vision (2007)

Consultants were appointed in January 2007 to develop a comprehensive 15—20 year Transport Vision and Strategy for the Lancaster District. This work represented a first step in establishing a clear vision across a variety of agencies, most notably Lancashire County Council as the Highway Authority and Lancaster City Council as the Planning Authority, but with responsibility for certain key transport assets and Lancaster & Morecambe Vision who are driving the economic agenda. Success was clearly dependent on the level of cross agency co-operation and the ability to respond to opportunities as and when they are presented.

The key objectives outlined in the study brief and addressed in the report include:

- To assess the strengths and weaknesses of the existing transport network in the area and recommend future improvements and other measures to ensure the network fully responds to and supports the long term vision;
- To identify current and planned development opportunities on the road network;
- To identify the key strategic transportation issues emerging as a result of the proposed Lancaster City Centre Developments;
- To develop a range of deliverable transport solutions to facilitate economic growth and address social inclusion and accessibility; and
- To produce an implementation plan for the vision and strategy including phasing and prioritisation, potential early-wins, indicative costs and potential delivery mechanisms.

The key themes identified for the Lancaster District Transport Vision and Strategy are as follows:

- To reduce the influence of traffic that simply passes through Lancaster City Centre – the Heysham to M6 Link Road is a major building block towards this aim;
- To build upon the core existing transport assets of the city rather than create new, such as the west coast mainline and the M6;
- To intercept long-stay and long-distance visitors to Lancaster and Morecambe at the edges and offer them attractive alternatives to driving into the centre;
- To encourage greater use of more sustainable, high occupancy modes for longer trips (e.g. rail, bus, car clubs);
- To create a walkable and cycleable urban area, making greater use of natural resources such as the River Lune Corridor and Lancaster Canal corridors in particular; and
- To develop a climate that ‘raises the bar’ in terms of public transport.

The Coarse Appraisal process identified a number of schemes as suitable to progress to the Option Development stage. This list included both high intervention schemes from the UK and further afield, which should be developed further, and low intervention schemes with a multitude of examples nationwide to draw upon. In addition, several schemes were similar and complimentary in terms of theme and aim and as such, some of the measures noted were grouped into a single scheme. The short-list presented below shows the most significant interventions in terms of planning and implementation, and represents the final list of measures that were progressed to the option development stage.

- Red Routes and other Bus Priority Measures;
- Integrated Public Transport Ticketing;
- Lancaster City Centre Metro Shuttle;
- Public Transport Lune Bridge;
- Rapid Transit system;
- Rail Station Facility Upgrades;
- Lancaster to Morecambe Rail Signalling Improvements;
- Park & Ride;
- Lancaster City Centre One-Way System Review;
- Congestion Charging in the city centre;
- M6 Junction 33 Relocation/Modification;
- Interceptor Car Parks;
- Signage and Information Strategy;
- Dalton Square Enhancements;
- Morecambe Promenade Improvements;
- Cycle Facility Improvements; and
- Morecambe Town Centre Masterplan.



Figure 3.4: Morecambe Masterplan Concept

3.6 Waitakere, NZ Transport Strategy

Waitakere City Council's vision for transport is:

*“A sustainable multi-modal transport system that is integrated with land use and contributes to Waitakere City being an eco city.”*

This vision supports a change from single-occupancy vehicle use to more sustainable modes of travel. That shift is necessary to enhance the quality of life in the City, to create dynamic town centres and liveable communities, and to protect the natural environment. To cope with expected growth, without a corresponding increase in vehicles on the road, Waitakere City aims to make the transition to a more compact city which maximises the benefits of the rail line and its three main town centres.

The Waitakere City Transport Strategy aims to develop a sustainable integrated transport system that:

- Contributes to Waitakere City being an eco city;
- Provides attractive alternatives to the motor vehicle;
- Integrates land use and transport;
- Supports the development of the town centres and economic growth; and
- Manages traffic and congestion.

A costed 10-year transport programme proposes how the Council will implement the Strategy. The transport programme emphasises passenger transport and investment in the three main town centres and the northwest growth area.

The transport programme for Waitakere City focuses on the following:

- Commitment to the essentials – safety, maintenance of existing transport assets, existing commitments, and operation of traffic systems;
- A balance of investment in roads, footpaths, passenger transport infrastructure, walking and cycling initiatives, and travel demand management measures;
- A commitment to integration between different modes of transport, with rail providing the backbone of passenger transport services in Waitakere City;
- Planning for integration of transport and land use. This requires growth to be in the right places, with good urban design and appropriate roads, footpaths, cycleways, access to passenger transport and/or the state highway network; and
- Ensuring that the implementation of transport projects is smart, cost effective and well planned so that they directly contribute to the type of city that people want to live and do business in.





Source: [www.aucklandtransport.govt.nz](http://www.aucklandtransport.govt.nz)

Significant new features of the programme are:

- Passenger transport improvements;
- Bus priority measures on state highways and key arterial roads;
- Cycleways; and
- Travel demand management measures.

The following paragraphs illustrate the role of modes within the strategy for Waitakere City.

**Roads and State Highways**

Completion of the state highways in Waitakere City and connectivity with the local road network are important to enable access between communities and destinations for work and leisure. The city’s strategy is to make the most of the existing network and provide for traffic, passenger transport, walking and cycling. These travel modes need to be appropriate for the type of road and surrounding land use. It is important to strike the best possible balance between the multiple competing needs in arterial road corridors.

**Passenger Transport**

Passenger transport is an efficient and environmentally friendly means of travel. The city’s strategy is to increase the patronage of train, bus and ferry services. People need to be encouraged to use passenger transport not only in the peak times when there is pressure on the road network, but also during the day as part of everyday travel. This is important for quality of life and the financial viability of passenger transport services.

**Rail**

Completion of double tracking of the western rail corridor and upgrade of stations and services is essential for achieving passenger transport, growth and employment objectives. This includes lowering the rail line at New Lynn, electrification of the rail network, and new rolling stock.

**Buses**

The city’s strategy is to upgrade bus stop infrastructure, establish effective bus interchanges and to work with Auckland Regional Transport Authority (ARTA) for improved routes, service quality and frequency. Bus priority measures are proposed on key arterial roads to encourage use of buses and car pooling.

**Ferry**

Ferry services currently operate at West Harbour and should extend to Hobsonville and Te Atatu. To support these services, the Council needs to improve the areas surrounding the ferry berths and provide parking facilities as appropriate.

**Walking and Cycling**

The city’s strategy is to promote the health benefits of walking and cycling and to reduce the negative impacts of motor vehicles. A safer cycle network needs to be established including provision for short trips, to work, school and for recreation.

**3.7 Conclusions**

To conclude, it is clear that despite the geographical and operational variation observed within the comparator cities studied in this section, a number of key common themes were present in the transport strategies for each. Aspirations such as enhanced sustainability, economic prosperity and reduced social exclusion as a result of enhanced mobility and access to transport systems and networks were at the heart of many of the objectives detailed above, as they are at the heart of the Transport Strategy for Chester.

Just as the aims of each piece of work often share common themes, so too do the strategic philosophies behind the measures proposed, with enhanced accessibility by and better integration of sustainable modes central to many. It is now widely recognised that, despite its convenience and relative economy, the private car cannot be the whole solution to a city’s transport and access needs, and measures which help to provide travel choice and alternative options are clearly common to many transport strategies. In particular, schemes which reduce or restrict traffic flows within the city core via traffic management, and which promote the use of alternative modes via enhanced priority are common.

Enhanced public space, walking and cycling routes are widely included in comparator cities’ transport strategies with cross-city connectivity frequently linked with economic viability, and the potential for trip linkage – that is the ability of a visitor to utilise the full range of amenities on offer in a city centre be they retail, leisure, employment or educationally based.

Congestion relief is also a common theme amongst comparator areas with many schemes supporting pinchpoint relief or wider strategic schemes. These may include junction capacity enhancements, new links or sub-regional sustainable connections such as rapid transit. Most strategies agree that a mixed package of soft and hard, high and low-intervention measures, are often the most effective. This thinking will inform and influence the thinking behind the transport strategy for Chester and will be utilised in scheme identification addressed in subsequent chapters.

4 Long List of Options

Capabilities on project: Transportation

4 Long List of Options

4.1 Recap of Issues for Transport Strategy to Address

**Table 2.1** summarises the issues that were identified for the Transport Strategy to tackle during the baseline stage including previous and new rounds of stakeholder engagement. It should be noted that, although formal consultation for the Transport Strategy will be undertaken on the preferred scheme package for the city, a good deal of consultation was undertaken for previous projects including the One City Plan, Theatre and Public Realm design studies and the Parking Strategy for the city. This previous consultation has contributed significantly to the identification of both issues and options for the strategy.

In total, there were 82 transport issues grouped by modes, which the Transport Strategy for Chester should seek to address, either directly or by means of demand management.

As described in previous sections, a large number of potential remedial measures from around the world, including a large number of transport strategy schemes from a variety of comparator cities, were examined. This allowed a pool of exemplar strategic schemes to be constructed from which to draw our long list of schemes. By choosing schemes that specifically target the issues listed above only, a long list of schemes for appraisal was produced.

The schemes that were chosen for this long list are listed in **Table 4.1**, along with their type (classified as ‘making the best use of existing infrastructure’, ‘managing demand’, and ‘capacity enhancing’), their spatial dimension (either within the ‘historic core’, the ‘city urban area’, or the wider ‘travel to work’ area), and their timescale (‘short’ = 1-5 years, ‘medium’ = 5 – 10 years, and ‘long’ = 10-15 years. To these, an additional column has been included which links each scheme to at least one of the issues listed in the introductory section and reproduced below, indicating the way in which each issue is proposed to be addressed. Unlike the issues, the schemes are categorised by theme, rather than mode, and in this way each scheme may satisfy more than one issue.

4.2 Long List of Schemes

The table presented on the following pages is composed of a series of 144 schemes and measures specifically chosen to address one or a number of the issues listed here. The measures were drawn from a pool of schemes identified during previous related work within Chester and the surrounding areas, from experience gained from work in other towns and cities within the UK and further afield, from examples of best practice identified from research into other transport strategies around the World, and from ideas provided by Council officers, stakeholders, elected members or the general public during one of the many ongoing consultation events for the study.

These issues are grouped according to the themes of Integration, Sustainability, Traffic Management and Congestion Relief, Ambience / Public Realm, Safety, Legibility, Tourism and Event Management, and Accessibility by Public Transport, Active Modes and otherwise. These

are the key transportation themes for which it is clear that there is work to do in and around Chester, and relate to commonly occurring comments taken from conversations with affected or interested persons. In addition, each measure is ascribed a type (divided into schemes that make best use of existing facilities, demand management schemes, and capacity enhancement schemes), a spatial dimension (from schemes that influence the historic core only, to those that work at a city level, and those that impact upon the wider Outer area including areas of Flintshire, Wrexham and Wirral), and a timescale (relating to short term:1-5 years, medium term: 5-10 years, and long term: more than 10 years).

The final column in the table relates to the specific issues addressed by each measure and the numbers relate to the issue numbers list in this section. This provides a means to identify the number of issues addressed (at least partially) by each scheme, and which issues each measure was selected to address.

Table 4.1: Long List of Schemes

Key	
Type	MBU - Making Best Use; MD - Managing Demand; CE - Capacity Enhancements
Spatial Dimension	HC - Historic Core; C - City; O - Outer Area
Timescale	Quick Win 12 months; Short Term 1-5 years; Medium Term 5-10 years; Long Term >10years
Issues Addressed	As per <b>Table 2.1</b> .
Capital / Revenue Implications	Revenue Schemes are marked with an Asterisk.

Theme	Ref:	Scheme	Type	Spatial Dimension	Timescale	Issues Addressed
Integration	I01	Gorse Stacks Bus Station	CE	HC	Short	1, 6, 52
	I02	Alternative Bus Interchanges / Hubs: Foregate Street Bus Hub and Two-Way Bus Flow	MBU	HC	Medium	1, 52
	I03	Alternative Bus Interchanges / Hubs: Northgate Bus Hub	MBU	HC	Short	1, 52
	I04	Alternative Bus Interchanges / Hubs: Pepper Street Bus Hub	MBU	HC	Short	1, 52
	I05	Alternative Bus Interchanges / Hubs: George Street Bus Hub	MBU	HC	Medium	1, 52
	I06	Bus/Rail Interchange and Layover	MBU	HC	Short	1, 17, 52
	I07	Intermediate Park & Ride Stops at Key Locations (e.g. Central Business Quarter, Countess, University)	MBU	C	Short	9, 52
	I08	Coach Facilities at Bus Station	CE	HC	Short	5, 6, 78
	I09	Enhanced coach facility at Delamere Street	CE	HC	Short	5, 6
	I10	Enhanced Facilities at Park & Ride Sites	CE	C	Short	13, 15, 51, 52, 63, 78
Sustainability	S01	Low carbon/hybrid bus fleet	CE	C	Medium	11, 48, 74, 75
	S02	Electrification of rail routes (Borderlands, Crewe, Manchester via Warrington etc)	CE	O	Long	16, 23, 24, 27, 74
	S03	Tourist Water Buses	CE	C	Short	78
	S04	Smarter Choices - Hearts & Minds Campaigns *	MD	C	Short	9, 42, 43, 67, 68, 69, 71, 73, 74, 75, 77
	S05	Delivery of Residential PTP in Targeted Corridors *	MD	C	Short	9, 42, 43, 67, 68, 69, 71, 73, 74, 75, 77
	S06	Development / Promotion of Car Clubs / Car Sharing*	MD	C	Short	9, 43, 69, 70, 72, 73, 74, 77
	S07	Workplace Travel Planning & Engagement*	MD	C	Short	9, 42, 43, 69, 70, 71, 72, 73, 74, 75, 77
	S08	Workplace Parking Levy	MD	C	Short	43, 61, 66, 71, 74, 75, 76
	S09	School Travel Planning - Continued Engagement / Refresh & New Schools (Free Schools / Private Schools)*	MD	C	Short	42, 43, 44, 68, 69, 70, 71, 73, 74, 75, 76



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Theme	Ref:	Scheme	Type	Spatial Dimension	Timescale	Issues Addressed
	S10	Station Travel Plans *	MD	O	Short	21, 69, 70, 71, 72, 73, 74, 75, 76, 77
	S11	Residential Travel Plans (New Build)*	MD	C	Medium	42, 43, 44, 52, 68, 69, 72, 73, 74, 79
	S12	Business Grants for Sustainable Infrastructure	MD	C	Short	39, 42, 43, 74
	S13	Linked trip marketing / joint ticketing initiatives for leisure, retail, and cultural generators*	MD	C	Short	43, 46, 66, 70, 73, 74, 78, 79, 82
	S14	SmartCard Extension / Rollout*	MD	C	Short	10, 73
	S15	Integrated Cross-Boundary Area Ticketing*	MD	O	Medium	10, 70, 73
	S16	Delivery Collection Points at Park & Ride	MBU	C	Medium	13, 62, 63, 69
Traffic Management / Congestion Relief	C01	Chester City Centre Congestion Charge	MD	C	Long	43, 61, 66, 71, 74, 75, 76, 81
	C02	High Occupancy Vehicle (HOV) Lanes	MD	C	Medium	43, 45, 71, 73, 74, 75
	C03	Western Relief Road Extension / Hawarden Airport Eastern Link Road (HAELR)	CE	C	Medium	30, 35, 43, 45, 48, 66, 71, 75, 76
	C04	A55 / A483 (Wrexham Road) Pinch Point scheme	CE	C	Short	43, 45, 47, 48, 70, 72
	C05	A41 (Ring Road) / A5115 (Whitchurch Road) revised layout	CE	C	Short	43, 45, 47, 49, 51
	C06	A540 Parkgate Road / A5116 Liverpool Road Gyratory / Northgate Roundabout - Junction Capacity Improvements	CE	C	Medium	43, 45, 47, 48
	C07	Overleigh Roundabout Junction Capacity Improvements	CE	C	Medium	43, 45
	C08	A5268 (St. Oswalds Way) / Hoole Way (A56) Junction Capacity Improvements	CE	C	Medium	28, 30, 31, 32, 33, 40, 76
	C09	VMS extension and upgrade	MBU	C	Short	43, 47, 51, 53, 54, 58, 59
	C10	Active Traffic Management (Improved / enhanced UTC)	MD	C	Medium	43, 47, 51, 53, 54, 58, 59
	C11	One Way System for River Crossing using Grosvenor and Old Dee Bridges	MBU	C	Medium	28, 30, 35, 40, 42
	C12	Freight Consolidation Centre	MD	HC	Medium	43, 62, 63
	C13	Parking strategy implementation	MBU	HC	Short	43, 48, 46, 53, 54, 55, 56, 57, 58, 59, 60, 61,

Theme	Ref:	Scheme	Type	Spatial Dimension	Timescale	Issues Addressed
						73, 74
	C15	Revision and enforcement of TROs	MBU	HC	Short	29, 32, 33, 40, 53, 56, 57, 66, 71
	C16	Consolidation of parking facilities	MD	HC	Medium	53, 54, 55, 59, 71
Ambience / Public Realm Enhancement	A01	IRR Southern Arm Downgrading - Shared Space on Pepper Street / Little St. John Street / Vicar's Lane	CE	C	Medium	28, 30, 34, 36, 40, 46, 50, 48, 71, 74, 75, 76
	A02	Northgate Street / Town Hall Square / St. Werburgh Street Shared Space / Pedestrianisation (incorporating Cathedral area)	MD	HC	Short	28, 29, 40, 56, 66, 71, 78, 79, 81
	A03	Lower Bridge Street / Pepper Street Pedestrianisation	MD	HC	Medium	28, 30, 66, 71, 78, 81
	A04	Frodsham Street Shared Space	MBU	HC	Medium	28, 40, 71
	A05	Nuns Road Shared Space / Pedestrianisation	MBU	HC	Medium	28, 40, 71
	A06	Expansion of shared space / pedestrianisation in city core - e.g. Grosvenor Street	MBU	HC	Medium	28, 40, 43, 68, 71, 75, 81
	A07	Public Realm Enhancements - City Road	MD	HC	Short	32, 33, 36, 71, 78, 79, 82
	A08	Public Realm Enhancements - Pepper Street / Little St. John Street / Vicar's Lane	MD	HC	Short	37, 51, 71, 78, 79, 82
	A09	Inner Ring Road 'Boulevard' Treatment (Median Greening, footway planters, special paving, street trees, build outs etc)	MBU	C	Medium	30, 78, 82
	A10	Hoole Bridge/Rail Station/Brook Street Masterplan	MBU	C	Medium	32, 33, 37, 40, 47, 51, 71, 76, 79, 82
	A11	A51 (Tarvin Road) / A5115 (Christleton Road) AQMA Remediation	MD	C	Short	43, 45, 48, 75,
	A12	A540 (Parkgate Road) / A5116 (Liverpool Road) AQMA Remediation	MD	C	Short	43, 45, 48, 75,
	A13	Relocate blue-badge parking opportunities from pedestrian zone to off-street locations	MD	HC	Short	28, 56, 67, 78, 81
	A14	Free waiting for taxis after hours in car parks	MD	HC	Short	65
	A15	Access restrictions on White Friars	MD	HC	Short	65, 66
Safety	Sa01	At-grade crossings at large junctions on the IRR / removal of subways	MBU	C	Short	28, 30, 31, 33, 68, 78
	Sa02	20mph in Residential Areas	MBU	C	Short	28, 40, 50, 71, 76
	Sa03	Hotspot prioritisation	MD	C	Short	50, 71, 76
	Sa04	Safe Routes to Schools Roll Out	MD	C	Short	28, 40, 50, 71, 76
	Sa05	Targeted education campaigns*	MD	C	Short	42, 50, 67,



Capabilities on project: Transportation

Theme		Ref:	Scheme	Type	Spatial Dimension	Timescale	Issues Addressed
							71
		Sa06	Adult and family cycle training*	MD	C	Short	42, 43, 44, 52, 68, 73, 74, 75
		Sa07	Increase transport maintenance budget	MD	C	Short	51, 74
Legibility		L01	Consolidation/Branding of Bus Routes	MBU	C	Short	2, 43, 52
		L02	Review / Revise Pedestrian and Cycling Signage / Wayfinding Strategy (coherence, distances, times etc)	MBU	C	Short	36, 37, 42, 52, 68, 73, 74
		L03	Improved public information of passenger transport and sustainable modes*	MD	C	Short	42, 43, 45, 46, 68, 73, 74
		L04	Real Time Passenger Information (RTPI) Roll Out	MBU	C	Medium	43
		L07	Enhanced gateway treatment at City / District / City Centre boundaries	MBU	C	Short	47, 51, 82
Tourism / Event Management		T01	Coach Strategy identifying new bespoke pick-up and drop-off locations and enhanced coach parking.	MBU	C	Short	5, 6, 66, 78, 82
		T02	Enhanced coach facilities at Little Roodee including National Express	CE	C	Short	6, 78, 82
		T03	Nicholas Street Coach Stop Enhancements	MBU	HC	Short	6, 78, 82
		T04	Race-day Park & Ride shuttles*	MD	C	Short	52, 66, 82
		T05	Race-day City Centre Bus shuttles*	MD	C	Short	52, 66, 82
		T06	Event travel ticketing	MD	C	Short	52, 66, 82
		T07	Chester Racecourse walk routes	MD	HC	Short	43, 45, 52, 66, 82
		T08	Match-day City Centre Bus shuttles*	MD	C	Short	43, 45, 52, 66, 82
		T09	Chester City FC walk routes	MD	C	Short	43, 45, 52, 66, 82
		T10	Visitor Access to Historic Core		HC	Short	13, 17, 32, 33, 34, 41, 47, 52, 66, 78, 81, 82
Accessibility	Passenger / Public Transport	P01	Bus: City Rail Link Extension*	MD	HC	Short	4, 17, 79, 80
		P02	Bus: Bus Priority on Liverpool Road, Parkgate Road, Hoole Road and Boughton	MD	C	Short	7, 12, 26, 43, 44, 45, 48, 73, 74, 75, 81
		P03	Bus: Increased weekend/evening bus provision*	MD	C	Short	3, 8, 44, 73
		P04	Bus: Express (Limited Stopping) bus services from urban fringe	MD	O	Short	9, 43, 72, 73
		P05	Bus: Chester Joblink Shuttle Services*	MD	C	Short	9, 43, 66, 72, 73, 79
		P06	Bus: Public Transport Bridge over River Dee adjacent to Grosvenor Bridge	CE	C	Long	7, 43, 45, 72, 73

Theme		Ref:	Scheme	Type	Spatial Dimension	Timescale	Issues Addressed
		P07	Bus: Rural Feeders to Park & Ride Hubs*	MD	O	Medium	2, 3, 69, 72, 73, 74, 77
		P08	Bus: Enhanced DRT Provision / coverage*	MD	C	Short	3, 8, 67, 69, 72
		P09	Bus: Bus Priority at the A483 / B5445 junction	MD	O	Medium	7, 74, 77
		P10	Bus: Routes to new housing developments*	MD	C	Medium	43, 79
		P11	Bus: Express bus services from rural areas to the city centre*	CE	O	Short	3, 8, 43, 44, 45, 67, 69, 72, 73, 74, 77
		P12	Improved station accessibility by non-car modes	MBU	O	Medium	3, 17, 25, 39, 41, 42, 43, 68, 69, 72, 73, 74, 76
		P13	Park & Ride: Cross City Transit System	MD	C	Medium	9, 13, 43, 45, 72, 73, 74
		P14	Park & Ride: Central Hub / Interchange	MBU	O	Medium	9, 13, 43, 45, 63, 72, 73, 74
		P15	Park & Ride: Bus-based Park & Ride at Hoole for M56 / M53 Traffic*	MD	O	Short	12, 13, 43, 45, 46, 73, 74, 75, 78, 81, 82
		P16	Park & Ride: Increased weekend/evening provision*	MD	C	Short	8, 46, 52, 66, 79, 82
		P17	Park & Ride: Capacity increase at Park & Ride Sites	CE	C	Medium	43, 66, 73, 74
		P18	Rail: New stations on the Chester - Crewe line	CE	O	Long	14, 18, 43, 44, 45, 48, 69, 72, 73, 74
		P19	Rail: New Rail Stations on the North Wales Coast Line (e.g. Deeside)	CE	O	Long	14, 43, 44, 45, 48, 70, 72, 73 & 74
		P20	Rail: North Wales linespeed improvements	CE	O	Medium	24, 43, 66
		P21	Rail: Helsby Chord for direct Chester - Ellesmere Port rail link	CE	O	Medium	26, 43, 45, 48, 72
		P22	Rail: Northgate Chord for direct Wirral Line - North Wales link	CE	O	Medium	27, 43, 45, 48, 72
		P23	Rail: Enhanced passenger facilities at Rail Stations	CE	O	Short	25, 43, 69, 73, 74
		P24	Rail: Enhanced car parking facilities at key commuting stations	MBU	O	Short	14, 22, 25, 43, 44, 45, 48, 69, 72, 73, 74, 75
		P25	Rail: Improved rolling stock on local services	CE	O	Medium	24, 79
		P26	Rail: Express services on Mid-Cheshire Line (Manchester to Chester)*	CE	O	Long	16, 43, 45, 48, 72, 73,

Capabilities on project: Transportation

Theme	Ref:	Scheme	Type	Spatial Dimension	Timescale	Issues Addressed
Active Modes						74, 79
	P27	Rail: Express rail service to Manchester Airport*	CE	O	Medium	16, 72, 79
	P28	Rail: Half hourly Shuttle Service on Wrexham-Chester Line*	CE	O	Long	18, 43, 44, 45, 72
	P29	Rail: Halton Curve Reinstatement (Access to South Liverpool / LJLA)	CE	O	Medium	19, 20, 27, 43, 79
	P30	Rail-based Motorway Park & Ride at Helsby, Frodsham or New Station at Daresbury*	CE	O	Medium	14, 43, 45, 73, 74, 79
	P31	Rail-based Park & Ride at a new station at Queensferry (North Wales Coast Line)*	CE	O	Long	14, 43, 44, 45, 52, 70, 72, 79
	P32	Rail-based Park & Ride at a new station in North Wrexham / Rossett (Shrewsbury - Chester Line)*	CE	O	Long	14, 18, 43, 44, 45, 69, 72, 73, 74
	P33	Tram-train on Mid-Cheshire Line*	CE	O	Long	16, 43, 45, 48, 72, 73, 74, 79
	Ac01	Ped/Cyc: Pedestrian/Cycle Bridge over River Dee (Saighton / Huntingdon to City / Chester Business Park)	CE	C	Medium	35, 38, 42, 43, 50, 68, 71, 72, 73, 74, 77
	Ac02	Ped/Cyc: Pedestrian/Cycle Bridge at Hoole	CE	C	Short	38, 40, 42, 50, 68, 71, 73, 74, 76
	Ac03	Ped/Cyc: Enhance accessibility to waterways and towpaths for use by cycles and pedestrians	MBU	C	Short	34, 38, 42, 43, 71, 73, 74, 76, 77, 78
	Ac04	Ped/Cyc: Improve surface of Towpath on Shropshire Union Canal	MBU	C	Short	42, 43, 73, 74, 76, 78
	Ac05	Ped/Cyc: Further restrict City Centre servicing hours to remove conflict	MD	HC	Short	28, 29, 40, 62, 71, 78
	Ac06	Ped/Cyc: Shared-use of Queens Park Bridge	MBU	C	Short	40, 42, 68
	Ac07	Ped/Cyc: Hoole Way/St, Oswalds Way Junction Improvements	MBU	C	Short	30, 50, 71, 76
	Ac08	Ped/Cyc: Bridge Street / Pepper Street / Grosvenor Street Junction Improvements	MBU	HC	Short	30, 50, 71, 76
	Ac09	Ped/Cyc: Grosvenor Roundabout junction changes	MBU	C	Short	40, 42, 50, 68, 71, 76
	Ac10	Ped/Cyc: Bars Gyratory Junction Improvements	MBU	C	Medium	30, 31, 32, 33, 40, 42, 50, 71, 76
	Ac11	Ped/Cyc: Removal of vehicular traffic on Old Dee Bridge	MD	C	Short	28, 34, 35, 40, 42, 68, 71, 81
	Ac12	Ped: St. Martin's Way Pedestrian Crossing Improvements	MBU	C	Short	30, 34, 50, 71, 76
	Ac13	Ped: St. Oswald's Way Pedestrian Crossing Improvements	MBU	C	Short	30, 31, 76

Theme	Ref:	Scheme	Type	Spatial Dimension	Timescale	Issues Addressed
Other	Ac14	Cycling: Chester - Broughton Cycle Links	CE	C	Short	38, 42, 43, 45, 52, 70, 74, 75, 78
	Ac15	Cycling: Sealand Road Cycle Links	CE	C	Short	38, 42, 43, 45, 48, 50, 52, 71, 72, 73, 74
	Ac16	Cycling: Cycle provision at Fountain's Roundabout	CE	C	Short	40, 42, 43, 45, 48, 50, 68, 71, 74, 75, 76
	Ac17	Cycling: Hoole Corridor cycle links (Upton / Newton incl. Brook Lane)	CE	C	Short	38, 40, 42, 43, 45, 50, 66, 68, 71, 74, 76, 77
	Ac18	Cycling: Two-way cycle provision on Frodsham Street / Foregate Street	CE	HC	Short	38, 40, 42
	Ac19	Cycling: Two-way cycle provision on Eastgate Street / Watergate Street /St. Werburgh St.	CE	HC	Short	38, 40, 42
	Ac20	Cycling: Cycle provision at Overleigh Roundabout (A483/A5104)	CE	C	Short	40, 42, 50, 68, 71, 76
	Ac21	Cycling: Introduce/expand cycle hire in the City Centre	MD	C	Short	41, 42, 43, 52, 68, 73, 74, 78, 81, 82
	Ac22	Cycling: Secure City Centre Cycle Parking Hub / Additional cycle parking facilities in City Centre	CE	HC	Short	39, 42, 43, 52, 68, 73, 74, 75, 79, 81
	Ac23	Cycling: Contraflow cycle lanes in City Centre one-way streets	MBU	C	Short	38, 40, 42, 43, 68, 73, 74
	Ac24	Cycling: Wrexham to Chester Cycle Link - NCN5 Extension	CE	O	Medium	38, 42, 44, 68, 69, 73, 74, 79
	Ac25	Cycling: City Centre East-West Cycleway (Railway - Watergate)	MBU	HC	Short	38, 40, 42, 66, 68, 71, 74, 79
	O1	Resident's Parking Zone extensions	MD	C	Short	52, 57, 60, 61, 66
	O2	Residents city centre free/discounted short stay parking*	MBU	C	Short	66
	O3	Quality Bus Partnerships*	MBU	C	Short	7, 11, 43, 73, 74
	O4	Quality Contracts*	MBU	C	Medium	7, 11, 43, 73, 75
	O6	Travel Training for vulnerable users*	MD	C	Short	2, 44, 50, 67, 68, 76, 77
	O7	Increased taxi rank provision	MD	HC	Short	64, 65, 66
	O8	Review and optimisation of taxi licensing	MD	C	Short	64, 65

5 Appraisal of Options

5 Appraisal of Options

5.1 Introduction

Having identified the noted Long List of schemes, the next stage of the process was to reduce this down to a smaller list comprising the most advantageous schemes in terms of their fit to policy, deliverability, impact etc. The Short List of schemes that results from this process was envisaged as being approximately 1/3 the length of the Long List in order to be manageable and allow for scheme ‘packaging’ during the next stage. It is also designed to contain only the most strategically beneficial measures.

The appraisal process used to identify the Short List of schemes for packaging and testing purposes, is described in the following sub-sections.

5.2 Policy Fit

The first two categories under which the Long List schemes are appraised both relate to the fit of each scheme with local policy. The first of the categories refers to the fit of the scheme with the current *Cheshire West and Chester Local Transport Plan* objectives which are:

- Provide and develop reliable and efficient transport networks which support sustainable economic growth in West Cheshire and the surrounding area (2);
- Reduce carbon emissions from transport and take steps to adapt our transport networks to the effects of climate change (2);
- Manage a well maintained transport network (1);
- Contribute to safer and secure transport in West Cheshire and to promote types of transport which are beneficial to health (1);
- Improve accessibility to jobs and key services which help support greater equality of opportunity (2); and
- Ensure that transport helps improve quality of life and enhances the local environment in West Cheshire (1).

For each of these, each scheme was awarded a score between 2 (indicating a high level of agreement between the policy and the measure), and -2 (indicating a high level of disagreement) with 0 representing no correspondence either positive or negative between the scheme and the policy. To add further depth to this analysis, each individual policy was ascribed a weighting of either 1 or 2 with 2 representing a weighting in the final score double that of policies weighted 1. The weightings for each policy are shown in the bracketed figures after each policy above.

The maximum score possible for this category is therefore out of 18 with a minimum score of -18. Scores of less than 3 were awarded 0 marks to count towards the final evaluation, scores between 4 and 7 were awarded 1 mark, scores between 8 and 11 were awarded 2 marks, scores between 12 and 14 were awarded 3 marks. Finally, scores of 15 or over were awarded 4 marks.

The second category in the Policy Fit section of the appraisal was related to consistency with *Chester One City Plan* objectives. These specific objectives and the weighting applied to each are as follows:

- Creating a leading regional economic driver (2);
- Providing for Modern Living (1);
- Developing and supporting a cultural, retail and visitor offer of the highest quality (1);
- Celebrating its long and varied history and heritage (1); and
- Maximising the opportunities to use the network of green spaces and waterways (1).

As before, each scheme was awarded a score of between -2 and 2 for correspondence with each of these, which gave a total score for this category out of 12. Scores of less than 2 were awarded 0 marks, scores of 3 or 4 were awarded 1 mark, scores of between 5 and 7 were awarded 2 marks, scores of 8 or 9 were awarded 3 marks and scores of 10 or over received 4 marks to be carried forward to the evaluation.

5.3 Deliverability

Each scheme was then appraised against four distinct aspects of deliverability which, in this case, were each weighted equivalently. These aspects are:

- Public Acceptability;
- Acceptability to Other Stakeholders;
- Technical & Operational; and
- Financial Affordability.

Each scheme was ascribed a score of 1, 0 or -1 for each of these aspects with 1 representing a good level of deliverability, and -1 indicating a poor level of deliverability (0 indicating a level of deliverability that was neither particularly good or bad). The total score for this section was therefore out of 4 with a minimum possible score of -4. To provide the number of marks for each scheme to carry forward to evaluation, all scores of less than 0 were awarded 0 marks, scores of 0 received 1 mark, scores of either 1 or 2 were awarded 2 marks, scores of 3 received 3 marks and scores of 4 were awarded 4 marks.

5.4 Cost

The next category against which each scheme was appraised is cost. For this, the approximate cost of each scheme was estimated and divided into five bands. Schemes costing less than £200,000, schemes costing between £200,000 and £1million, schemes costing between £1million and £5million, schemes costing between £5million and £10 million and schemes costing more than £10 million. Each of the schemes was therefore awarded a mark between 0 and 4 inclusive

with schemes in the first of these bands scoring 4, and schemes in the last of these scoring 0.

5.5 Person Movement Impact

Finally each scheme was appraised against its effectiveness in terms of person movement impact with a direct score of 1 to 4 marks awarded for respectively low, medium, high and very high impacts. This is considered more of a qualitative category based not just on ability of the scheme to move a larger number of people, but also on the respective journey quality, ambience and safety of said journey. Whilst, therefore, a scheme such as the Western Relief Road / Hawarden Airport Eastern Link Road may have a very high impact due to the capacity of the link, a scheme such as Gorse Stacks bus station which delivers a significantly improved passenger experience and a wider regeneration and public realm benefit will also score highly.

5.6 Selection of Short List

Following the awarding of marks, the total number of marks awarded across each category (out of a maximum of 20) was analysed. In order to select at least a third of the best scoring measures, the 67<sup>th</sup> percentile mark was determined which in the case of the appraisal was 12. Therefore all schemes scoring 12 or over were selected for the Short List. This methodology ensures that only schemes which score relatively highly in at least 4 out of the 5 categories can hope to proceed to the Short List. In addition, a comprehensive process of sense-checking ensured that no schemes with the potential for significant benefit were rejected at this stage.

The appraisal table used to appraise the long list of schemes is shown attached as **Appendix A** of this report. This process led to the derivation of the following short list of 78 schemes.



Theme		Ref:	Scheme
Ambience / Public Realm Enhancement		A01	IRR Southern Arm Downgrading - Shared Space on Pepper Street / Little St. John Street / Vicar's Lane
		A02	Northgate Street / Town Hall Square / St. Werburgh Street Shared Space / Pedestrianisation (incorporating Cathedral area)
		A04	Frodsham Street Shared Space
		A08	Public Realm Enhancements - Pepper Street / Little St. John Street / Vicar's Lane
		A10	Hoole Bridge/Rail Station/Brook Street Masterplan
Safety		Sa01	At-grade crossings at large junctions on IRR / removal of subways
		Sa06	Adult and family cycle training
Legibility		L02	Review / Revise Pedestrian and Cycling Signage / Wayfinding Strategy (coherence, distances, times)
		L03	Improved public information of passenger transport and sustainable modes
		L07	Enhanced gateway treatment at City / District / City Centre boundaries
Tourism / Event Management		T01	Coach Strategy identifying new bespoke pick-up and drop-off locations and enhanced coach parking.
		T02	Enhanced coach facilities at Little Roodee including National Express
		T04	Race-day Park & Ride shuttles
		T05	Race-day City Centre Bus shuttles
		T07	Chester Racecourse walk routes
		T08	Match-day City Centre Bus shuttles
Accessibility	Passenger / Public Transport	P01	Bus: City Rail Link Extension
		P02	Bus: Bus Priority on Liverpool Road, Parkgate Road, Hoole Road and Boughton
		P03	Bus: Increased weekend/evening bus provision
		P04	Bus: Express (Limited Stopping) bus services from urban fringe
		P05	Bus: Chester Joblink Shuttle Services
		P07	Bus: Rural Feeders to Park & Ride Hubs
		P08	Bus: Enhanced DRT Provision / Coverage
		P10	Bus: Routes to new housing developments
			Bus: Express bus services from rural areas to the city

Theme	Ref:	Scheme
Active Modes	P12	Improved station accessibility by non-car modes
	P13	Park & Ride: Cross City Transit System
	P14	Park & Ride: Central Hub / Interchange
	P15	Park & Ride: Bus-based Park & Ride at Hoole for M56 / M53 Traffic
	P16	Park & Ride: Increased weekend/evening provision
	P17	Park & Ride: Capacity increase at Park & Ride Sites
	P18	Rail: New stations on the Chester - Crewe line
	P23	Rail: Enhanced passenger facilities at Rail Stations
	P24	Rail: Enhanced car parking facilities at key commuting stations
	P25	Rail: Improved rolling stock on local services
	P26	Rail: Express services on Mid-Cheshire Line (Manchester to Chester)
	P27	Rail: Express rail service to Manchester Airport
	P28	Rail: Half hourly Shuttle Service on Wrexham-Chester Line
	P29	Rail: Halton Curve Reinstatement (Access to South Liverpool / LJLA)
	P30	Rail-based Motorway Park & Ride at Helsby, Frodsham or New Station at Daresbury
	P31	Rail-based Park & Ride at a new station at Queensferry (North Wales Coast Line)
	P32	Rail-based Park & Ride at a new station in Rossett (Shrewsbury - Chester Line)
	P33	Tram-train on Mid-Cheshire Line
	Ac03	Ped/Cyc: Enhance accessibility to waterways and towpaths for use by cycles and pedestrians
	Ac04	Ped/Cyc: Improve surface of Towpath on Shropshire Union Canal
	Ac05	Ped/Cyc: Further restrict City Centre servicing hours to remove conflict
	Ac11	Ped/Cyc: Removal of vehicular traffic on Old Dee Bridge
	Ac14	Cycling: Chester - Broughton Cycle Links
	Ac15	Cycling: Sealand Road Cycle Links
	Ac21	Cycling: Introduce/expand cycle hire in the City Centre
	Ac22	Cycling: Secure City Centre Cycle Parking Hub / Additional cycle parking facilities in City Centre
	Ac24	Cycling: Wrexham to Chester Cycle Link - NCN5 Extension
	Ac25	Cycling: City Centre East-West Cycleway (Railway - Watergate)



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Theme		Ref:	Scheme
	Other	O2	Residents city centre free/discounted short stay parking
		O3	Quality Bus Partnerships
		O4	Quality Contracts
		O6	Travel Training for vulnerable users
		O7	Increased taxi rank provision

Table 5.1: Approved Short List of Schemes

Capabilities on project: Transportation

5.7 Short Listed Schemes

The table above lists the 78 measures that have passed the appraisal stage and therefore satisfy the requirements of the Transport Strategy in terms of policy objectives, deliverability, cost, and person movement impact. Furthermore a check of the issues satisfied by this set of measures confirms that all 82 identified issues are addressed or improved by the short listed schemes. These measures therefore will form the basis of the transport strategy.

As part of the process the schemes that were rejected were reviewed by a number of independent sources to ensure that no schemes of significant potential value to the strategy were being discounted. In

addition, the sense-checking also removed a number of schemes not felt to be significantly developed, beneficial, or deliverable to be taken forward. It is also expected, as options are taken forward and tested using modelling software, that some additional shortlisted schemes may be deemed unviable, and other schemes may be found to become more necessary as a result of the wider network changes. These changes will be noted within the final strategy report for the project.

The measures may be further grouped into a selection of super schemes for the city by grouping related and geographically close measures into larger packages. The following table (Table 5.2) shows

how the 78 short listed measures noted above can be grouped into 25 super schemes, with a further 3 added by officers as part of the sense-checking and member consultation process.

Each of these super schemes is described in more detail, with initial ideas, plans and benchmark examples provided, within the scheme proformas included as Appendix B.

Ref	Name	Comprises Schemes:	Spatial Dimension	Phasing and Timeframe	Theme
1	Northgate St / St Werburgh St / Cathedral Area.	A02	HC	All Phases: Short	6
2	Gorse Stacks Bus Station and Hoole Way Roundabout pedestrian/cycle accessibility improvements.	I01, Sa01	HC	Bus Station: Short Junction Improvements: Medium	1
3	Amphitheatre Area Public Ream Enhancements / Shared Space.	A01, A08	HC	Public Realm Improvements: Short Full Shared-Space Scheme: Medium	6
4	Mobility Impaired Access / Shopmobility / Dial-a-Ride.	Officer Addition	HC	All Phases: Short	3
5	The Bars pedestrian/cycle accessibility improvements.	Sa01, Ac25	HC	All Phases: Medium	6
6	Northgate Junction Area Improvements.	C06, Sa01	HC	All Phases: Medium	5
7	Coach Strategy and Little Roodee enhancement of coach facilities.	T01, T02	HC	Strategy: Short Delivery: Medium	1
8	City Centre Pedestrian / Cycle Enhancements (Frodsham Street shared space, east-west cycleway, improved access and quality of towpaths, extended servicing restrictions and cycle hire).	A04, Ac03, Ac04, Ac05, Ac21, Ac22	HC	Towpaths, Cycle Hire, Servicing Restrictions: Short Cycle Links, Cycle Hub: Medium	1
9	Active Traffic Management including VMS, UTC enhancements, and Gateway Treatment.	C09, C10, L07	HC / C	VMS and Gateway Treatment: Short Active Traffic Management and UTC: Medium	5
10	Chester Parking Strategy.	C13, P07, P14, P15, P17, O2	HC / C	City Centre Measures: Short Park and Ride Measures: Medium	2
11	Junction Hotspots.	Officer Addition	C	Studies and Design: Short Delivery: Medium	4
12	Race and match day sustainable access from city centre.	T04, T05, T06, T07	C	All Phases: Short	3
13	Pedestrian and Cycle Access: Hoole to City Centre.	A10	C	Masterplan: Short Delivery: Medium	1
14	Bus Priority on Parkgate Road, Liverpool Road, Hoole Road and Boughton.	P02	C	All Phases: Medium	5
15	Park & Ride Enhancements / Cross City Transit.	I07, I10, C13, P07, P13, P14, P16, P17	C	Enhanced facilities, service improvements: Medium Cross City Transit System: Long	2

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Ref	Name	Comprises Schemes:	Spatial Dimension	Phasing and Timeframe	Theme
16	Travel Planning Package.	S05, S07, S09, S10, S11	C / OA	Workplace, School and Station: Short Residential Travel Plans and PTP: Medium	4
17	SmartCard development for cross boundary, linked trip and joint event ticketing.	S13, S14, S15	C / OA	SmartCard Development: Short Cross Boundary Ticketing: Medium	3
18	Enhanced Cycle Priority: Chester to Sealand, Broughton and Wrexham.	Ac14, Ac15, Ac24	OA	All Phases: Short	3
19	Bus Service Improvements (City Rail Link extension, frequency and hours of operation, express and feeder services, DRT enhancement, and Quality Partnerships/Contracts).	P01, P03, P04, P05, P07, P08, P10, P11, O3, O4	OA	Quality Bus Partnerships: Short All Other Phases: Medium	2
20	Enhanced station facilities and car parking.	P23, P24	OA	Passenger Facilities: Short Car Parking Capacity: Medium	2
21	New Park and Ride at Hoole Road.	P15	OA	All Phases: Medium	7
22	Cross Border Connectivity.	Officer Addition	OA	Integrated Ticketing: Medium Delivery of Integrated Network: Long	3
23	Chester Western Relief Road.	C03	OA	All Phases: Long	4
24	Rail Electrification.	S02	OA	All Phases: Long	7
25	New Park and Ride rail stations at Rossett, Queensferry, Waverton and Daresbury.	P18, P30, P31, P32	OA	All Phases: Long	4
26	Rail Service Enhancements (rolling stock, airport express services, mid-Cheshire and Wrexham line service improvements).	P25, P26, P27, P28, P33	OA	All Phases: Long	5
27	Halton Curve Reinstatement.	P29	OA	All Phases: Long	7
28	Smarter Choices Package (cycle training, wayfinding, public information, travel training and transport node accessibility).	S04, S12, Sa06, L02, L03, P12, O6	ALL	Cycle Training, Wayfinding, Information, Travel Training: Short Business Grants, Transport Node Accessibility: Medium	6

Table 5.2: Shortlisted Superschemes

The super schemes shown in the table above have each been ascribed a primary spatial dimension and phasing timeframe and these will form the schemes that will be tested and consulted upon as the Transport Strategy for Chester.

The next step is to package the schemes into manageable sets based upon spatial dimension, timescale and theme, and this is addressed in the following section.

5.8 Local Transport Body (LTB) Major Scheme Fund

The schemes highlighted in orange relate to the Phase One ‘Quick Win’ schemes that were submitted to the LTB Devolved Major Scheme Fund for prioritisation. Due to their relative lack of development in relation to other major schemes, only Gorse Stacks Bus Interchange was considered a high priority scheme in the recent announcement, and the measure should therefore receive a share of its design and construction costs ensuring delivery during the 2015 – 2019 period. Following consultation and modelling, development work on the other schemes is set to continue, and further options for funding will be sought as more information becomes available for each. Funding sources will be discussed further in the Final Report for Chester Transport Strategy due in early 2014.

## **6 Packaging of Shortlisted Options**



6Packaging of Shortlisted Options

6.1Introduction

In this final section of the Options and Assessment Report, the methodology for packaging schemes for testing and consultation purposes is presented. Having decided upon the schemes (and super scheme groups) which will form the Transport Strategy for Chester, the packaging will separate the measures according to spatial dimension, timescale, and theme. This will allow modelling of schemes to be undertaken and compared with the baseline traffic situation, for the short, medium and long-term future scenarios, at both a historic core scale (using a Paramics model of the city centre) and a strategic level using the Saturn model for Chester.

The grouping of scheme in this way also allows a plan of the strategy interventions at each of the three spatial dimensions discussed earlier, to be produced. This allows easy visualisation of the phasing of the strategy and will be invaluable during consultation with the public in explaining the build up over a 15 year timeframe to the ultimate strategy for the city.

6.2Scheme Categorisation

As noted previously, each scheme was ascribed a specific spatial dimension and timescale during the long list identification and appraisal stages. This categorisation allowed a 3x3 matrix to be produced which places each of the short-listed measures within one of nine squares as shown on the following page. The purpose of this is to identify which schemes should be researched and tested at each stage, and which model should be used to do this. The two models available are a Paramics microsimulation traffic model for the city centre, and a Saturn strategic traffic model for the wider city and outer areas. For instance, scheme **A02: Northgate Street / Town Hall Square / St. Werburgh Street Shared Space / Pedestrianisation (incorporating Cathedral area)** will be tested using the city centre Paramics traffic model in the short term scenario (assumed to be 2016 and to include traffic growth from the 2012 base model), whereas scheme **C03: Western Relief Road Extension / Hawarden Airport Eastern Link Road (HAELR)** will be tested using the strategic Saturn model using the long term 2026 modelling scenario . More details on the modelling of schemes will be presented in the forthcoming Final Report to be issued following consultation on strategy options.

6.3Scheme Mapping

In addition to the categorisation described above, a scheme spatial mapping exercise was undertaken to attempt to place each measure more accurately in both space and time. This is done for phasing and costing purposes and will inform the forthcoming public consultation by

providing a more detailed picture of the order by which schemes will come on stream. A scheme map is shown in the following image which shows the positioning of each scheme in terms of timescale and geography. The full matrix listing scheme names is shown overleaf:

	Short	Medium	Long
Historic Core	A02 Ac05 Ac21 I01 O2 T05 T07 T08	A01 A04 A10 Ac22 Ac25 C13 O7 P01 Sa01 T01 T02	
City	A08 Ac03 Ac04 C04 C09 I07 L02 L07 O6 S04 S09 S14 Sa06 T04	Ac11 Ac14 Ac15 C05 C06 C10 O3 O4 P02 P03 P05 P10 P16 S05 S11 S12	C03 P13
Outer Area	L03 P23 S07 S10 S13	Ac24 I10 P04 P07 P08 P11 P12 P14 P15 P17 P24 S15	P18 P25 P26 P27 P28 P29 P30 P31 P32 P33 S02

Figure 6.1: Early Scheme Mapping Exercise

It is clear from this plan that there is a bias towards the short and medium-terms in the more central historic core and urban geography, indicating that the more central schemes are seen as being needed earlier in the strategy delivery process. Similarly, there is a bias towards long-term schemes for the outer area, at which large infrastructure interventions are required including the proposed Western Relief Road / Hawarden Airport Eastern Relief Road, and rail infrastructure improvement schemes.

6.4Emerging Scheme Themes

For the purposes of easier legibility and better presentation of the strategy to the public and key stakeholders, the short-listed schemes may also be separated according to primary theme. Given that this is done predominantly to highlight the particular area of Chester’s existing offer that the scheme relates to, it is considered most beneficial to undertake this categorisation at higher Super Scheme level.

The main themes under which each scheme may be categorised are:

1. Supporting city centre development and the aspirations of the One City Plan;
2. Enhancing public transport connectivity to and from the rural hinterland, and across local, regional and national border (links to North East Wales in particular);
3. Improving Chester’s sustainable accessibility and alternative transport offer;
4. Responding to changes in residential and other land use patterns;
5. Increasing the reliability, safety and efficiency of core transport networks for the city;
6. Safeguarding quality of life within Chester by securing the long term future of its environment; and
7. Responding to strategic transport changes.

The final column in **Table 5.2** highlights which of these themes each super scheme predominantly relates to.

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	Short	Medium	Long
Historic Core	A02: Northgate Street / Town Hall Square / St. Werburgh Street Shared Space / Pedestrianisation (incorporating Cathedral area) Ac05: Ped/Cyc: Further restrict City Centre servicing hours to remove conflict Ac21: Cycling: Introduce/expand cycle hire in the City Centre I01: Gorse Stacks Bus Station O2: Residents city centre free/discounted short stay parking T05: Race-day City Centre Bus shuttles T07: Chester Racecourse walk routes T08: Match-day City Centre Bus shuttles	A01: IRR Southern Arm Downgrading - Shared Space on Pepper Street / Little St. John Street / Vicar's Lane A04: Frodsham Street Shared Space A10: Hoole Bridge/Rail Station/Brook Street Masterplan Ac22: Cycling: Secure City Centre Cycle Parking Hub / Additional cycle parking facilities in City Centre Ac25: Cycling: City Centre East-West Cycleway (Railway - Watergate) C13: Parking strategy implementation O7: Increased taxi rank provision P01: Bus: City Rail Link Extension Sa01: At-grade crossings at large junctions on IRR / removal of subways T01: Coach Strategy identifying new bespoke pick-up and drop-off locations and enhanced coach parking. T02: Enhanced coach facilities at Little Roodee including National Express	
City	A08: Public Realm Enhancements - Pepper Street / Little St. John Street / Vicar's Lane Ac03: Ped/Cyc: Enhance accessibility to waterways and towpaths for use by cycles and pedestrians Ac04: Ped/Cyc: Improve surface of Towpath on Shropshire Union Canal C04: A55 / A483 (Wrexham Road) Pinch Point scheme C09: VMS extension and upgrade I07: Intermediate Park & Ride Stops at Key Locations (e.g. Central Business Quarter, Countess, University) L02: Review / Revise Pedestrian and Cycling Signage / Wayfinding Strategy (coherence, distances, times etc) L07: Enhanced gateway treatment at City / District / City Centre boundaries O6: Travel Training for vulnerable users S04: Smarter Choices - Hearts & Minds Campaigns S09: School Travel Planning - Continued Engagement / Refresh & New Schools (Free Schools / Private Schools) S14: SmartCard Extension / Rollout Sa06: Adult and family cycle training T04: Race-day Park & Ride shuttles	Ac11: Ped/Cyc: Removal of vehicular traffic on Old Dee Bridge Ac14: Cycling: Chester - Broughton Cycle Links Ac15: Cycling: Sealand Road Cycle Links C05: A41 (Ring Road) / A5115 (Whitchurch Road) revised layout C06: A540 Parkgate Road / A5116 Liverpool Road Gyratory / Northgate Roundabout - Junction Capacity Improvements C10: Active Traffic Management (Improved / enhanced UTC) O3: Quality Bus Partnerships O4: Quality Contracts P02: Bus: Bus Priority on Liverpool Road, Parkgate Road, Hoole Road and Boughton P03: Bus: Increased weekend/evening bus provision P05: Bus: Chester Joblink Shuttle Services P10: Bus: Routes to new housing developments P16: Park & Ride: Increased weekend/evening provision S05: Delivery of Residential PTP in Targeted Corridors S11: Residential Travel Plans (New Build) S12: Business Grants for Sustainable Infrastructure	C03: Western Relief Road Extension / Hawarden Airport Eastern Link Road (HAELR) P13: Park & Ride: Cross City Transit System
Outer Area	L03: Improved public information of passenger transport and sustainable modes P23: Rail: Enhanced passenger facilities at Rail Stations S07: Workplace Travel Planning & Engagement S10: Station Travel Plans S13: Linked trip marketing / joint ticketing initiatives for leisure, retail, and cultural generators	Ac24: Cycling: Wrexham to Chester Cycle Link - NCN5 Extension I10: Enhanced Facilities at Park & Ride Sites P04: Bus: Express (Limited Stopping) bus services from urban fringe P07: Bus: Rural Feeders to Park & Ride Hubs P08: Bus: Enhanced DRT Provision / Coverage P11: Bus: Express bus services from rural areas to the city centre P12: Improved station accessibility by non-car modes P14: Park & Ride: Central Hub / Interchange P15: Park & Ride: Bus-based Park & Ride at Hoole for M56 / M53 Traffic P17: Park & Ride: Capacity increase at Park & Ride Sites P24: Rail: Enhanced car parking facilities at key commuting stations S15: Integrated Cross-Boundary Area Ticketing	P18: Rail: New stations on the Chester - Crewe line P25: Rail: Improved rolling stock on local services P26: Rail: Express services on Mid-Cheshire Line (Manchester to Chester) P27: Rail: Express rail service to Manchester Airport P28: Rail: Half hourly Shuttle Service on Wrexham-Chester Line P29: Rail: Halton Curve Reinstatement (Access to South Liverpool / LJLA) P30: Rail-based Motorway Park & Ride at Helsby, Frodsham or New Station at Daresbury P31: Rail-based Park & Ride at a new station at Queensferry (North Wales Coast Line) P32: Rail-based Park & Ride at a new station in Rossett (Shrewbury - Chester Line) P33: Tram-train on Mid-Cheshire Line S02: Electrification of rail routes (Borderlands, Crewe, Manchester via Warrington etc)

Table 6.1: Scheme Categorisation Matrix

## Appendices

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Appendix A: Long List Appraisal Table

Theme	Ref:	Scheme	Type (MBU - Making Best Use; MD - Managing Demand; CE - Capacity Enhancements)	Spatial Dimension (HC - Historic Core; C - City; O - Outer Area)	Timescale (Short Term 1-2 years; Medium Term 3-5 years; Long Term >5years)	Issues Addressed (Reference Issues Paper)	CW&C LTP POLICY POINTS	ONE CITY PLAN POLICY POINTS	DELIVERABILITY POINTS	COST POINTS	IMPACT POINTS	TOTAL POINTS (Max = 20)	67th Percentile	Proceed to Short List (Yes/No)	Primary Reason for not Proceeding
Integration	I01	Gorse Stacks Bus Station	CE	HC	Short	1, 6, 52	4	3	1	0	4	12	12	YES	
	I02	Alternative Bus Interchanges / Hubs: Foregate Street Bus Hub and Two-Way Bus Flow	MBU	HC	Medium	1, 52	2	1	2	2	2	9	12	NO	Poor address of OCP objectives
	I03	Alternative Bus Interchanges / Hubs: Northgate Bus Hub	MBU	HC	Short	1, 52	2	1	2	2	2	9	12	NO	Poor address of OCP objectives
	I04	Alternative Bus Interchanges / Hubs: Pepper Street Bus Hub	MBU	HC	Short	1, 52	2	1	2	2	2	9	12	NO	Poor address of OCP objectives
	I05	Alternative Bus Interchanges / Hubs: George Street Bus Hub	MBU	HC	Medium	1, 52	2	1	0	2	2	7	12	NO	Poor address of OCP objectives
	I06	Bus/Rail Interchange and Layover	MBU	HC	Short	1, 17, 52	2	1	2	2	2	9	12	NO	Poor address of OCP objectives
	I07	Intermediate Park & Ride Stops at Key Locations (e.g. Central Business Quarter, Countess, University)	MBU	C	Short	9, 52	3	2	3	4	1	13	12	YES	
	I08	Coach Facilities at Bus Station	CE	HC	Short	5, 6, 78	0	1	3	3	1	8	12	NO	Low impact and poor address of policy objectives
	I09	Enhanced coach facility at Delamere Street	CE	HC	Short	5, 6	1	2	4	3	1	11	12	NO	Low impact and poor address of policy objectives
	I10	Enhanced Facilities at Park & Ride Sites	CE	C	Short	13, 15, 51, 52, 63, 78	2	2	4	3	1	12	12	YES	
Sustainability	S01	Low carbon/hybrid bus fleet	CE	C	Medium	11, 48, 74, 75	1	0	3	2	2	8	12	NO	Poor address of policy objectives
	S02	Electrification of rail routes (Borderlands, Crewe, Manchester via Warrington etc)	CE	O	Long	16, 23, 24, 27, 74	3	3	2	0	4	12	12	YES	
	S03	Tourist Water Buses	CE	C	Short	78	1	2	2	1	2	8	12	NO	High cost and poor address of policy objectives
	S04	Smarter Choices - Hearts & Minds Campaigns	MD	C	Short	9, 42, 43, 67, 68, 69, 71, 73, 74, 75, 77	2	1	4	4	1	12	12	YES	
	S05	Delivery of Residential PTP in Targeted Corridors	MD	C	Short	9, 42, 43, 67, 68, 69, 71, 73, 74, 75, 77	3	2	4	3	2	14	12	YES	
	S06	Development / Promotion of Car Clubs / Car Sharing	MD	C	Short	9, 43, 69, 70, 72, 73, 74, 77	2	1	4	3	1	11	12	NO	Low impact and poor address of



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															policy objectives
	S07	Workplace Travel Planning & Engagement	MD	C	Short	9, 42, 43, 69, 70, 71, 72, 73, 74, 75, 77	3	1	4	3	2	13	12	YES	
	S08	Workplace Parking Levy	MD	C	Short	43, 61, 66, 71, 74, 75, 76	1	0	2	4	1	8	12	NO	Low impact and poor address of policy objectives
	S09	School Travel Planning - Continued Engagement / Refresh & New Schools (Free Schools / Private Schools)	MD	C	Short	42, 43, 44, 68, 69, 70, 71, 73, 74, 75, 76	3	1	4	3	2	13	12	YES	
	S10	Station Travel Plans	MD	O	Short	21, 69, 70, 71, 72, 73, 74, 75, 76, 77	3	2	4	3	2	14	12	YES	
	S11	Residential Travel Plans (New Build)	MD	C	Medium	42, 43, 44, 52, 68, 69, 72, 73, 74, 79	3	2	4	3	1	13	12	YES	
	S12	Business Grants for Sustainable Infrastructure	MD	C	Short	39, 42, 43, 74	3	1	4	3	1	12	12	YES	
	S13	Linked trip marketing / joint ticketing initiatives for leisure, retail, and cultural generators	MD	C	Short	43, 46, 66, 70, 73, 74, 78, 79, 82	2	3	4	3	1	13	12	YES	
	S14	SmartCard Extension / Rollout	MD	C	Short	10, 73	2	3	3	3	2	13	12	YES	
	S15	Integrated Cross-Boundary Area Ticketing	MD	O	Medium	10, 70, 73	3	2	2	3	2	12	12	YES	
	S16	Delivery Collection Points at Park & Ride	MBU	C	Medium	13, 62, 63, 69	2	1	0	1	3	7	12	NO	Low deliverability and high cost
Traffic Management / Congestion Relief	C01	Chester City Centre Congestion Charge	MD	C	Long	43, 61, 66, 71, 74, 75, 76, 81	3	2	0	1	4	10	12	NO	Low deliverability and high cost
	C02	High Occupancy Vehicle (HOV) Lanes	MD	C	Medium	43, 45, 71, 73, 74, 75	2	1	0	3	2	8	12	NO	Low deliverability and poor address of policy objectives
	C03	Western Relief Road Extension / Hawarden Airport Eastern Link Road (HAELR)	CE	C	Medium	30, 35, 43, 45, 48, 66, 71, 75, 76	2	3	2	1	4	12	12	YES	
	C04	A55 / A483 (Wrexham Road) Pinch Point scheme	CE	C	Short	43, 45, 47, 48, 70, 72	3	1	4	3	2	13	12	YES	
	C05	A41 (Ring Road) / A5115 (Whitchurch Road) revised layout	CE	C	Short	43, 45, 47, 49, 51	3	2	2	3	3	13	12	YES	
	C06	A540 Parkgate Road / A5116 Liverpool Road Gyratory / Northgate Roundabout - Junction Capacity Improvements	CE	C	Medium	43, 45, 47, 48	2	1	2	3	4	12	12	YES	
	C07	Overleigh Roundabout Junction Capacity Improvements	CE	C	Medium	43, 45	2	1	2	3	2	10	12	NO	Poor address of policy objectives
	C08	A5268 (St. Oswalds Way) / Hoole Way (A56) Junction Capacity Improvements	CE	C	Medium	28, 30, 31, 32, 33, 40, 76	2	2	0	1	3	8	12	NO	Low deliverability and high cost
	C09	VMS extension and upgrade	MBU	C	Short	43, 47, 51, 53, 54, 58, 59	2	2	4	3	2	13	12	YES	

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	C10	Active Traffic Management (Improved / enhanced UTC)	MD	C	Medium	43, 47, 51, 53, 54, 58, 59	3	2	3	2	2	12	12	YES	
	C11	One Way System for River Crossing using Grosvenor and Old Dee Bridges	MBU	C	Medium	28, 30, 35, 40, 42	0	0	2	4	1	7	12	NO	Poor address of policy objectives
	C12	Freight Consolidation Centre	MD	HC	Medium	43, 62, 63	2	2	2	0	4	10	12	NO	Low deliverability and high cost
	C13	Parking strategy implementation	MBU	HC	Short	43, 48, 46, 53, 54, 55, 56, 57, 58, 59, 60, 61, 73, 74	4	2	2	3	3	14	12	YES	
	C15	Revision and enforcement of TROs	MBU	HC	Short	29, 32, 33, 40, 53, 56, 57, 66, 71	1	0	4	4	1	10	12	NO	Low impact and poor address of policy objectives
	C16	Consolidation of parking facilities	MD	HC	Medium	53, 54, 55, 59, 71	1	2	3	2	1	9	12	NO	Low impact and poor address of policy objectives
Ambience / Public Realm Enhancement	A01	IRR Southern Arm Downgrading - Shared Space on Pepper Street / Little St. John Street / Vicar's Lane	CE	C	Medium	28, 30, 34, 36, 40, 46, 50, 48, 71, 74, 75, 76	2	4	1	3	3	13	12	YES	
	A02	Northgate Street / Town Hall Square / St. Werburgh Street Shared Space / Pedestrianisation (incorporating Cathedral area)	MD	HC	Short	28, 29, 40, 56, 66, 71, 78, 79, 81	2	3	2	3	2	12	12	YES	
	A03	Lower Bridge Street / Pepper Street Pedestrianisation	MD	HC	Medium	28, 30, 66, 71, 78, 81	1	2	1	3	2	9	12	NO	Low deliverability
	A04	Frodsham Street Shared Space	MBU	HC	Medium	28, 40, 71	2	3	2	3	2	12	12	YES	
	A05	Nuns Road Shared Space / Pedestrianisation	MBU	HC	Medium	28, 40, 71	2	2	3	3	1	11	12	NO	Low impact
	A06	Expansion of shared space / pedestrianisation in city core - e.g Grosvenor Street	MBU	HC	Medium	28, 40, 43, 68, 71, 75, 81	1	1	1	3	1	7	12	NO	Low impact and poor address of policy objectives
	A07	Public Realm Enhancements - City Road	MD	HC	Short	32, 33, 36, 71, 78, 79, 82	2	2	1	3	2	10	12	NO	Low deliverability
	A08	Public Realm Enhancements - Pepper Street / Little St. John Street / Vicar's Lane	MD	HC	Short	37, 51, 71, 78, 79, 82	3	4	2	3	3	15	12	YES	
	A09	Inner Ring Road 'Boulevard' Treatment (Median Greening, footway planters, special paving, street trees, build outs etc)	MBU	C	Medium	30, 78, 82	0	1	2	2	4	9	12	NO	Poor address of policy objectives
	A10	Hoole Bridge/Rail Station/Brook Street Masterplan	MBU	C	Medium	32, 33, 37, 40, 47, 51, 71, 76, 79, 82	3	2	3	2	2	12	12	YES	
	A11	A51 (Tarvin Road) / A5115 (Christleton Road) AQMA Remediation	MD	C	Short	43, 45, 48, 75,	1	0	2	2	3	8	12	NO	Poor address of policy objectives
	A12	A540 (Parkgate Road) / A5116 (Liverpool Road) AQMA Remediation	MD	C	Short	43, 45, 48, 75,	1	0	2	2	3	8	12	NO	Poor address of policy objectives
	A13	Relocate blue-badge parking opportunities from ped zone to off-street locations	MD	HC	Short	28, 56, 67, 78, 81	2	1	2	4	2	11	12	NO	Poor address of OCP objectives
	A14	Free waiting for taxis after hours in car parks	MD	HC	Short	65	0	0	4	4	1	9	12	NO	Poor address of policy objectives
	A15	Access restrictions on White Friars	MD	HC	Short	65, 66	0	0	2	4	1	7	12	NO	
Safety	Sa01	At-grade crossings at large junctions on the IRR / removal of subways	MBU	C	Short	28, 30, 31, 33, 68, 78	1	1	4	4	2	12	12	YES	

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	Sa02	20mph in Residential Areas	MBU	C	Short	28, 40, 50, 71, 76	1	0	4	4	2	11	12	NO	Poor address of policy objectives
	Sa03	Hotspot prioritisation	MD	C	Short	50, 71, 76	2	0	4	3	2	11	12	NO	Poor address of OCP objectives
	Sa04	Safe Routes to Schools Roll Out	MD	C	Short	28, 40, 50, 71, 76	2	0	4	3	2	11	12	NO	Poor address of OCP objectives
	Sa05	Targeted education campaigns	MD	C	Short	42, 50, 67, 71	1	0	4	3	1	9	12	NO	Poor address of OCP objectives
	Sa06	Adult and family cycle training	MD	C	Short	42, 43, 44, 52, 68, 73, 74, 75	2	1	4	3	2	12	12	YES	
	Sa07	Increase transport maintenance budget	MD	C	Short	51, 74	2	2	2	1	3	10	12	NO	High cost and low deliverability
Legibility	L01	Consolidation/Branding of Bus Routes	MBU	C	Short	2, 43, 52	1	1	4	3	2	11	12	NO	Poor address of policy objectives
	L02	Review / Revise Pedestrian and Cycling Signage / Wayfinding Strategy (coherence, distances, times etc)	MBU	C	Short	36, 37, 42, 52, 68, 73, 74	3	3	3	2	2	13	12	YES	
	L03	Improved public information of passenger transport and sustainable modes	MD	C	Short	42, 43, 45, 46, 68, 73, 74	2	2	4	3	2	13	12	YES	
	L04	Real Time Passenger Information (RTPI) Roll Out	MBU	C	Medium	43	1	1	3	2	2	9	12	NO	Poor address of policy objectives
	L07	Enhanced gateway treatment at City / District / City Centre boundaries	MBU	C	Short	47, 51, 82	1	2	4	3	2	12	12	YES	
Tourism / Event Management	T01	Coach Strategy identifying new bespoke pick-up and drop-off locations and enhanced coach parking.	MBU	C	Short	5, 6, 66, 78, 82	2	2	4	4	2	14	12	YES	
	T02	Enhanced coach facilities at Little Roodee including National Express	CE	C	Short	6, 78, 82	1	2	4	3	2	12	12	YES	
	T03	Nicholas Street Coach Stop Enhancements	MBU	HC	Short	6, 78, 82	1	1	3	4	1	10	12	NO	Low impact and poor address of policy objectives
	T04	Race-day Park & Ride shuttles	MD	C	Short	52, 66, 82	4	2	4	4	1	15	12	YES	
	T05	Race-day City Centre Bus shuttles	MD	C	Short	52, 66, 82	4	2	4	4	2	16	12	YES	
	T06	Event travel ticketing	MD	C	Short	52, 66, 82	1	1	3	4	1	10	12	NO	Low impact and poor address of policy objectives
	T07	Chester Racecourse walk routes	MD	HC	Short	43, 45, 52, 66, 82	2	2	4	3	2	13	12	YES	
	T08	Match-day City Centre Bus shuttles	MD	C	Short	43, 45, 52, 66, 82	3	2	4	4	2	15	12	YES	
	T09	Chester City FC walk routes	MD	C	Short	43, 45, 52, 66, 82	1	1	4	3	1	10	12	NO	
	T10	Visitor Access to Historic Core		HC	Short	13, 17, 32, 33, 34, 41, 47, 52, 66, 78, 81, 82	0	3	3	3	1	10	12	NO	Low impact and poor address of LTP objectives
Accessibility Passenger / Public Transport	P01	Bus: City Rail Link Extension	MD	HC	Short	4, 17, 79, 80	4	2	3	2	2	13	12	YES	
	P02	Bus: Bus Priority on Liverpool Road, Parkgate Road, Hoole Road and Boughton	MD	C	Short	7, 12, 26, 43, 44, 45, 48, 73, 74, 75, 81	4	2	2	3	2	13	12	YES	
	P03	Bus: Increased weekend/evening bus provision	MD	C	Short	3, 8, 44, 73	3	2	3	2	2	12	12	YES	
	P04	Bus: Express (Limited Stopping) bus services from urban fringe	MD	O	Short	9, 43, 72, 73	4	3	2	2	2	13	12	YES	

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		P05	Bus: Chester Joblink Shuttle Services	MD	C	Short	9, 43, 66, 72, 73, 79	4	2	3	2	2	13	12	YES	
		P06	Bus: Public Transport Bridge over River Dee adjacent to Grosvenor Bridge	CE	C	Long	7, 43, 45, 72, 73	3	2	1	0	4	10	12	NO	High cost and low deliverability
		P07	Bus: Rural Feeders to Park & Ride Hubs	MD	O	Medium	2, 3, 69, 72, 73, 74, 77	3	2	2	3	3	13	12	YES	
		P08	Bus: Enhanced DRT Provision / coverage	MD	C	Short	3, 8, 67, 69, 72	3	2	2	3	2	12	12	YES	
		P09	Bus: Bus Priority at the A483 / B5445 junction	MD	O	Medium	7, 74, 77	2	0	2	3	2	9	12	NO	Poor address of OCP objectives
		P10	Bus: Routes to new housing developments	MD	C	Medium	43. 79	3	1	3	3	2	12	12	YES	
		P11	Bus: Express bus services from rural areas to the city centre	CE	O	Short	3, 8, 43, 44, 45, 67. 69, 72, 73, 74, 77	3	2	3	3	2	13	12	YES	
		P12	Improved station accessibility by non-car modes	MBU	O	Medium	3, 17, 25, 39, 41, 42, 43, 68, 69, 72, 73, 74, 76	3	2	4	3	2	14	12	YES	
		P13	Park & Ride: Cross City Transit System	MD	C	Medium	9, 13, 43, 45, 72, 73, 74	4	3	3	3	4	17	12	YES	
		P14	Park & Ride: Central Hub / Interchange	MBU	O	Medium	9, 13, 43, 45, 63, 72, 73, 74	3	2	2	2	3	12	12	YES	
		P15	Park & Ride: Bus-based Park & Ride at Hoole for M56 / M53 Traffic	MD	O	Short	12, 13, 43, 45, 46, 73, 74, 75, 78, 81, 82	4	4	3	2	4	17	12	YES	
		P16	Park & Ride: Increased weekend/evening provision	MD	C	Short	8, 46, 52, 66, 79, 82	3	2	3	2	2	12	12	YES	
		P17	Park & Ride: Capacity increase at Park & Ride Sites	CE	C	Medium	43, 66, 73, 74	3	3	2	2	2	12	12	YES	
		P18	Rail: New stations on the Chester - Crewe line	CE	O	Long	14, 18, 43, 44, 45, 48, 69, 72, 73, 74	3	2	2	1	4	12	12	YES	
		P19	Rail: New Rail Stations on the North Wales Coast Line (e.g. Deeside)	CE	O	Long	14, 43, 44, 45, 48, 70, 72, 73 & 74	3	2	2	1	3	11	12	NO	High cost and low deliverability
		P20	Rail: North Wales linespeed improvements	CE	O	Medium	24, 43, 66	4	3	1	1	2	11	12	NO	High cost and low deliverability
		P21	Rail: Helsby chord for direct Chester - Ellesmere Port rail link	CE	O	Medium	26, 43, 45, 48, 72	3	1	2	1	2	9	12	NO	High cost and poor address of OCP objectives
		P22	Rail: Northgate Chord for direct Wirral Line - North Wales link	CE	O	Medium	27, 43, 45, 48, 72	3	1	2	1	2	9	12	NO	High cost and poor address of OCP objectives
		P23	Rail: Enhanced passenger facilities at Rail Stations	CE	O	Short	25, 43, 69, 73, 74	2	1	4	3	2	12	12	YES	
		P24	Rail: Enhanced car parking facilities at key commuting stations	MBU	O	Short	14, 22, 25, 43, 44, 45, 48, 69, 72, 73, 74, 75	3	2	4	3	2	14	12	YES	
		P25	Rail: Improved rolling stock on local services	CE	O	Medium	24, 79	3	3	2	1	3	12	12	YES	
		P26	Rail: Express services on Mid-Cheshire Line (Manchester to Chester)	CE	O	Long	16, 43, 45, 48, 72, 73, 74, 79	4	3	2	2	4	15	12	YES	



Capabilities on project: Transportation

		P27	Rail: Express rail service to Manchester Airport	CE	O	Medium	16, 72, 79	4	3	3	3	4	17	12	YES	
		P28	Rail: Half hourly Shuttle Service on Wrexham-Chester Line	CE	O	Long	18, 43, 44, 45, 72	4	2	2	2	2	12	12	YES	
		P29	Rail: Halton Curve Reinstatement (Access to South Liverpool / LJLA)	CE	O	Medium	19, 20, 27, 43, 79	4	3	2	1	4	14	12	YES	
		P30	Rail-based Motorway Park & Ride at Helsby, Frodsham or New Station at Daresbury	CE	O	Medium	14, 43, 45, 73, 74, 79	3	3	1	1	4	12	12	YES	
		P31	Rail-based Park & Ride at a new station at Queensferry (North Wales Coast Line)	CE	O	Long	14, 43, 44, 45, 52, 70, 72, 79	4	3	1	1	3	12	12	YES	
		P32	Rail-based Park & Ride at a new station in Rossett (Shrewbury - Chester Line)	CE	O	Long	14, 18, 43, 44, 45, 69, 72, 73, 74	4	3	1	1	3	12	12	YES	
		P33	Tram-train on Mid-Cheshire Line	CE	O	Long	16, 43, 45, 48, 72, 73, 74, 79	4	3	2	0	4	13	12	YES	
		Ac01	Ped/Cyc: Pedestrian/Cycle Bridge over River Dee (Saughton / Huntingdon to City / Chester Business Park)	CE	C	Medium	35, 38, 42, 43, 50, 68, 71, 72, 73, 74, 77	3	2	1	0	2	8	12	NO	High cost and low deliverability
		Ac02	Ped/Cyc: Pedestrian/Cycle Bridge at Hoole	CE	C	Short	38, 40, 42, 50, 68, 71, 73, 74, 76	3	2	2	1	3	11	12	NO	High cost and low deliverability
		Ac03	Ped/Cyc: Enhance accessibility to waterways and towpaths for use by cycles and pedestrians	MBU	C	Short	34, 38, 42, 43, 71, 73, 74, 76, 77, 78	3	2	3	2	2	12	12	YES	
		Ac04	Ped/Cyc: Improve surface of Towpath on Shropshire Union Canal	MBU	C	Short	42, 43, 73, 74, 76, 78	3	2	3	2	2	12	12	YES	
		Ac05	Ped/Cyc: Further restrict City Centre servicing hours to remove conflict	MD	HC	Short	28, 29, 40, 62, 71, 78	1	2	3	4	2	12	12	YES	
		Ac06	Ped/Cyc: Shared-use of Queens Park Bridge	MBU	C	Short	40, 42, 68	2	1	2	4	1	10	12	NO	Low impact and poor address of OCP objectives
		Ac07	Ped/Cyc: Hoole Way/St, Oswalds Way Junction Improvements	MBU	C	Short	30, 50, 71, 76	2	0	1	1	3	7	12	NO	Poor address of OCP objectives
	Active Modes	Ac08	Ped/Cyc: Bridge Street / Pepper Street / Grosvenor Street Junction Improvements	MBU	HC	Short	30, 50, 71, 76	2	0	2	3	1	8	12	NO	Poor address of OCP objectives
		Ac09	Ped/Cyc: Grosvenor Roundabout junction changes	MBU	C	Short	40, 42, 50, 68, 71, 76	2	0	2	3	2	9	12	NO	Poor address of OCP objectives
		Ac10	Ped/Cyc: Bars Gyratory Junction Improvements	MBU	C	Medium	30, 31, 32, 33, 40, 42, 50, 71, 76	2	2	0	1	3	8	12	NO	Low deliverability
		Ac11	Ped/Cyc: Removal of vehicular traffic on Old Dee Bridge	MD	C	Short	28, 34, 35, 40, 42, 68, 71, 81	3	3	2	2	3	13	12	YES	
		Ac12	Ped: St. Martin's Way Pedestrian Crossing Improvements	MBU	C	Short	30, 34, 50, 71, 76	0	0	2	4	1	7	12	NO	Poor address of policy objectives
		Ac13	Ped: St. Oswald's Way Pedestrian Crossing Improvements	MBU	C	Short	30, 31, 76	0	0	2	4	1	7	12	NO	Poor address of policy objectives
		Ac14	Cycling: Chester - Broughton Cycle Links	CE	C	Short	38, 42, 43, 45, 52, 70, 74, 75, 78	3	1	3	3	2	12	12	YES	

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		Ac15	Cycling: Sealand Road Cycle Links	CE	C	Short	38, 42, 43, 45, 48, 50, 52, 71, 72, 73, 74	3	1	3	3	2	12	12	YES	
		Ac16	Cycling: Cycle provision at Fountain's Roundabout	CE	C	Short	40, 42, 43, 45, 48, 50, 68, 71, 74, 75, 76	2	1	2	3	2	10	12	NO	Poor address of OCP objectives
		Ac17	Cycling: Hoole Corridor cycle links (Upton / Newton incl. Brook Lane)	CE	C	Short	38, 40, 42, 43, 45, 50, 66, 68, 71, 74, 76, 77	3	1	2	3	2	11	12	NO	Poor address of OCP objectives
		Ac18	Cycling: Two-way cycle provision on Frodsham St/Foregate St	CE	HC	Short	38, 40, 42	1	0	1	3	2	7	12	NO	Poor address of OCP objectives
		Ac19	Cycling: Two-way cycle provision on Eastgate St/Watergate St/St. Werburgh St.	CE	HC	Short	38, 40, 42	1	0	1	3	2	7	12	NO	Poor address of OCP objectives
		Ac20	Cycling: Cycle provision at Overleigh Roundabout (A483/A5104)	CE	C	Short	40, 42, 50, 68, 71, 76	2	1	2	3	2	10	12	NO	Poor address of OCP objectives
		Ac21	Cycling: Introduce/expand cycle hire in the City Centre	MD	C	Short	41, 42, 43, 52, 68, 73, 74, 78, 81, 82	3	2	4	3	2	14	12	YES	
		Ac22	Cycling: Secure City Centre Cycle Parking Hub / Additional cycle parking facilities in City Centre	CE	HC	Short	39, 42, 43, 52, 68, 73, 74, 75, 79, 81	3	2	4	3	2	14	12	YES	
		Ac23	Cycling: Contraflow cycle lanes in City Centre one-way streets	MBU	C	Short	38, 40, 42, 43, 68, 73, 74	1	0	2	3	2	8	12	NO	Poor address of OCP objectives
		Ac24	Cycling: Wrexham to Chester Cycle Link - NCN5 Extension	CE	O	Medium	38, 42, 44, 68, 69, 73, 74, 79	3	1	3	3	2	12	12	YES	
		Ac25	Cycling: City Centre East-West Cycleway (Railway - Watergate)	MBU	HC	Short	38, 40, 42, 66, 68, 71, 74, 79	3	1	3	3	2	12	12	YES	
	Other	O1	Resident's Parking Zone extensions	MD	C	Short	52, 57, 60, 61, 66	1	0	4	4	1	10	12	NO	Poor address of OCP objectives
		O2	Residents city centre free/discounted short stay parking	MBU	C	Short	66	2	1	4	4	1	12	12	YES	
		O3	Quality Bus Partnerships	MBU	C	Short	7, 11, 43, 73, 74	3	1	4	3	2	13	12	YES	
		O4	Quality Contracts	MBU	C	Medium	7, 11, 43, 73, 75	4	3	2	2	2	13	12	YES	
		O6	Travel Training for vulnerable users	MD	C	Short	2, 44, 50, 67, 68, 76, 77	2	1	4	4	1	12	12	YES	
		O7	Increased taxi rank provision	MD	HC	Short	64, 65, 66	3	1	2	4	2	12	12	YES	
		O8	Review and optimisation of taxi licensing	MD	C	Short	64, 65	1	1	4	4	1	11	12	NO	Low impact and poor address of policy objectives
Total:														79		

Appendix B: Scheme Proformas