Client Requirements Document
Skelmersdale Rail Link

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Document History

Issue	Date	Originator	Modification

1 Purpose

This document is the Client Requirements Document (CRD) for the Skelmersdale Rail Link developed with Lancashire County Council, West Lancashire Borough Council and Merseytravel.

This CRD has been developed following workshops with Merseytravel and Merseyrail held 09/12/2016 and with Lancashire County Council and Merseytravel held 04/01/2017. Summaries of these two workshops are provided in Appendix E of this document.

The Purpose of this document is to outline the clients' requirements that define the scheme's output and realise the business case.

This CRD supersedes the previous remit for a Skelmersdale Rail Link, which was issued by Mark Cleave on 24/02/2014.

The work conducted as part of this project/programme will be conducted under the following Oracle Project Codes:

Project Code	Description
139606	Skelmersdale Rail Link

1.1 Background Information

Skelmersdale has been identified as the second most populous town in the North West region without a railway station. This has been linked to the high levels of deprevation in the town. Car ownership in Skelmersdale is below average along with poor provisions for public transport and an outdated road network have contributed to social isolation and high unemployment in the town.

Lancashire County Council and West Lancashire Borough Council aspire to redevelop the town and surrounding areas by creating a new transportation hub comprising of a rail station, bus interchange, cycling facilities and car park facilities within Skelmersdale town centre.

1.2 Stakeholders

The following stakeholders have been identified:

Name	Organisation and Role	Contact
Richard Watts	Rail Development Manager - Lancashire County Council	richard.watts@lancashire.gov.uk Phone: 01772 534582 Mobile: 07887 831126
Mark Cleave	Rail Development Officer - Merseytravel	mark.cleave@merseytravel.gov.uk Phone: 0151 330 1902
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Mike Froud	Designated Project Engineer - Networkrail	Mike.Froud@networkrail.co.uk

2 General Description of the Scheme

2.1 Business Objectives (Aspirations)

The project aspires to create a new transport hub at Skelmersdale to provide a direct rail link between Skelmersdale, Wigan and Liverpool. This aims to address issues of social deprivation and lack connectivity in Skelmersdale and improve the socio-economic status of the area.

The geographic scope of this work is limited to the line of route between Kirby Station and Wigan Wallgate Station (NW6015) and Skelmersdale town centre with new station buildings at Skelmersdale and Headbolt Lane.

This project is also the main element of West Lancashire's Highway and Transport Masterplan and is part of a wider scheme for Skelmersdale and West Lancashire which will transform the town and travel within the borough.

2.2 Scheme Definition

The scheme is to initially review the feasibility of creating a heavy rail link to the current network line connecting Wigan and Kirby and the creation of two new stations; one at Skelmerdale and other at Headbolt Lane.

The scheme will also review the feasibility of extending Merseytravel's 3rd rail network out from Kirby to Headbolt Lane and in to Skelmersdale.

The Scheme aims to provide new infrastructure to support two trains an hour Liverpool to Skelmersdale direction and one train an hour Wigan to Skelmersdale.

The scheme will be reviewed at end each GRIP stage for viability ahead of progression to the next GRIP stage.

2.3 Boundaries and Relationships

2.3.1 Client Relationships

The promoters for this scheme are Lancashire County Council, West Lancashire Borough Council and Merseytravel.

Lancashire County Council are the lead Client for this scheme and for contractual purposes with Networkrail.

Funding for this scheme will be provided by the promoters and will include Networkrail fees and an appropriate level of contingency.

Networkrail will notify the lead client of periodic spend and will communicate any variation from the estimate which may require additional funding. The issue will be discussed by all parties to reach a satisfactory resolution of either an amended client remit ro additional funding.

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2.3.2 Interfaces with other Projects

The Skelmersdale Rail Link project is known to interface with the following projects:

138514: Merseyrail New Rolling Stock

2.3.3 Geographical Boundaries

The new Skelmersdale Rail Link will connect to the WKL2 (Kirkby-Pemberton Junction) line. The precise junciton locations are yet to be determined. Additionally this project will carry out some works on the WKL2 line between Kirkby and Rainford stations.

Strategic Route:	LNW
Route Number:	NW6015
Operating Route:	WKL2

2.4 Assumptions, Dependencies, Constraints & Risks

2.4.1 Assumptions

Reference	Details

A-SKM-1	Scheme will be delivered by end of 2026.
A-SKM-2	

2.4.2 Dependencies

Reference	Details
D-SKM-1	Re-modelling of impacted roundabouts in Skelmersdale is a pre-requisite of this scheme.
D-SKM-2	The knock-on effect that the new services and stations will have on pre-existing stations (e.g. Upholland, Rainford, Burscough Bridge) is to be considered.
D-SKM-3	Land at Glenburn site belonging to Lancashire County Council to be passed as required to NR (i.e. the land required for the station, Park & Ride etc.)
D-SKM-4	Land transfers to be completed before any "spades in ground" for this scheme.

2.4.3 Constraints

Reference	Details
C-SKM-1	Railway needs to cross Grimshaw Street.
C-SKM-2	There are service pipelines at the proposed location of the chord from WKL2 into Skelmersdale.
C-SKM-3	Tight tunnel at Upholland may constrain or prevent electrification of Skelmersdale-Wigan Wallgate route.
C-SKM-4	Existing Merseyrail power supply at Bank Hall may be inadequate for the extension to Skelmersdale (available power reduces with distance from supply).
C-SKM-5	Bay platform at Wigan Wallgate is short - will limit options for a potential Skelmersdale-Wigan Wallgate shuttle service.
C-SKM-6	It will only be possible to run a second train per hour between Skelmersdale and Wigan Wallgate if this route is electrified or a bi-mode train is used.
C-SKM-7	Land restrictions ('clean-ness of title') on land passed over may constrain works.

2.4.4 Risks

Reference	Details
R-SKM-1	Inability to extend existing 3rd rail network beyond Kirkby caused by ORR policy resulting in alternative traction being required between Kirkby-Skelmersdale.
R-SKM-2	Inability to build on the land at proposed location for Headbolt Lane station caused by e.g. issues with land purchase from council.
R-SKM-3	Restrictions on design / functionality / capacity of Headbolt Lane station caused by proximity of site to existing freight headshunt.

2.5 Whole Life Cost Strategy

Whole life cost anaylsis will be produced as part of the Option Selection report and is required to inform the final option selection.

2.6 Scheme Key Milestones and Configuration States

The scheme will be reviewed for viability at the end each GRIP stage ahead of proceeding to the next GRIP stage. A detailed delivery programme with milestones will be produced for each GRIP stage and agreed with the clients.

3 Scheme Requirements

The requirements table located on the following pages contains all the requirements associated with this project at CRD level. These requirements are expected to be met throughout the ongoing development of this project and prior to entry into operational service. They are broadly categorised into the following subject areas:

Section 3.1 - Reference to Standards
Section 3.2 - Safety Requirements
Section 3.3 - Key Hazards
Section 3.4 - General Scheme Requirements
Section 3.5 - Performance Requirements
Section 3.6 - Strategic Maintenance Requirements

Reqt ID	Source Reference	Requirement and Heading	Acceptance Criteria	Supporting Information	Rationale
CRD-SKM-167		**3.1 Reference to Standards**			
CRD-SKM-168	Req's Policy	Standards, Policies and Legislation applicable to the project *shall* be identified and listed in Appendix D of this document.	Standards, Policies and Legislation applicable to the project will be identified and listed in Appendix D of this document.		This requirement is designed to ensure relevant standards and policies have been determined and recorded in this document. Note, the list is not exhaustive
CRD-SKM-169	Req's Policy	Project deliverables *shall* be compliant with the Standards, Policies and Legislation listed in Appendix D of this document.	Compliance with relevant Standards Policies and Legislation to be evidenced in accordance with the processes called on by the said documents.		It is not necessary, nor advisable to duplicate requirements contained in these documents This requirement is designed to ensure key Standards, Policies and Legislation will be verified throughout the project lifecycle.
CRD-SKM-170		**3.2 Safety Requirements**			
CRD-SKM-171	Safety by Design	Project Authorisation Strategy and the System Definition *shall* be produced and maintained throughout the lifecycle of the project/programme.	Current Project Authorisation Strategy and the System definition demonstrable		This requirement is designed to prompt start of key Safety by Design activities on the project

Reqt ID	Source Reference	Requirement and Heading	Acceptance Criteria	Supporting Information	Rationale
CRD-SKM-172	Safety by Design	Interoperability status of the project *shall* be ascertained and maintained throughout the lifecycle of the project/programme.	Current status demonstrable		This requirement is designed to prompt start of key interoperability activities on the project
CRD-SKM-173	Safety by Design	The plan for entry into service *shall* be produced and maintained throughout the lifecycle of the project/programme.	Current plan for entry into service demonstrable		This requirement is designed to prompt start of key EiS activities on the project
CRD-SKM-174	Safety by Design	Independent Safety Advisor or an Assessment Body (AB) *shall* be appointed and related reports produced and maintained throughout the lifecycle of the project/programme.	Record of an Independent Safety Advisor or an ASBO and relevant reports demonstrable		This requirement is designed to prompt start of key Safety by Design activities on the project
CRD-SKM-175	Safety by Design	Declaration for control of risk *shall* be produced and maintained through the lifecycle of the project/programme	Declaration for control of risk will be produced and maintained through the lifecycle of the project/programme.		This requirement is designed to prompt start of key Safety by Design activities on the project
CRD-SKM-191		**3.3 General Scheme Requirements**			
CRD-SKM-286		**3.3.1 Skelmersdale Station**			
CRD-SKM-192	Lancs CC workshop 04/01/17	A new station *shall* be provided in Skelmersdale at the site of Glenburn college.		The Glenburn college site is assumed to comprise the space within the current boundaries of Glenburn college.	

Reqt ID	Source Reference	Requirement and Heading	Acceptance Criteria	Supporting Information	Rationale
CRD-SKM-289	Lancs CC workshop 04/01/17	Skelmersdale station *shall* comprise two platforms in an island formation.		It is expected that Liverpool-bound trains will use one side of the island platform and Wigan-bound trains will use the other. The exact nature of this arrangement will be determined at a later stage.	
CRD-SKM-308	Lancs CC workshop 04/01/17	Skelmersdale station *shall* have capacity for 500,000 passengers per year.		500,000 passengers per year is the estimated station usage after the initial 4-year 'ramp up'. The estimate assumes this to comprise 250,000 journey 'pairs', the majority of which will originate from Skelmersdale.	
CRD-SKM-285	Lancs CC workshop 04/01/17	A car park with space for a minimum of 250 cars *shall* be provided at Skelmersdale station.			
CRD-SKM-287	Lancs CC workshop 04/01/17	The new car park at Skelmersdale station *shall* have passive provision for a future capacity of at least 500 car parking spaces.		**TO DO** - clarification required on the extent of the passive provision.	
CRD-SKM-288	Lancs CC workshop 04/01/17	Skelmersdale station *shall* have provision for up to 4 buses to stand.			
CRD-SKM-291		**3.3.2 Headbolt Lane**			
CRD-SKM-292	Merseytravel / Merseyrail workshop 09/12/17	A new station *shall* be provided at Headbolt Lane.		Exact location depends on land arrangements with Knowlsley Council. Merseytravel to acquire land and confirm.	

Reqt ID	Source Reference	Requirement and Heading	Acceptance Criteria	Supporting Information	Rationale
CRD-SKM-295	Lancs CC workshop 04/01/17	The new station at Headbolt Lane *shall* be designed and delivered in such a way that does not impinge on the continuation of the railway to Skelmersdale.			This requirement addresses the potential scenario where the Headbolt Lane element of this scheme ends up being delivered in advance of the Skelmersdale element.
CRD-SKM-293	Merseytravel / Merseyrail workshop 09/12/17	The ability for trains to pass *shall* be provided in the Headbolt Lane area.		If the passing location encompasses Headbolt Lane station, then Headbolt Lane will be developed as a 2-platform station. Merseytravel have an aspiration to double the track between Fazakerley and Kirkby and to provide a second platform at Kirkby. This is to be developed as a costed option.	
CRD-SKM-418		**3.3.3 Rainford Station**			
CRD-SKM-419		A study will be carried out to determine the platform modifications that would be required at Rainford station to support the new rolling stock (see also CRD-SKM-311 and CRD-SKM-298)			

Reqt ID	Source Reference	Requirement and Heading	Acceptance Criteria	Supporting Information	Rationale
CRD-SKM-315		**3.3.4 Alignment**			
CRD-SKM-316	Merseytravel / Merseyrail workshop 09/12/17	The alignment of the new rail link into Skelmersdale *shall* be from the south i.e. connecting to the existing Wigan-Kirkby line (ELR:WKL2).			
CRD-SKM-317	Merseytravel / Merseyrail workshop 09/12/17	The alignment of the new rail link into Skelmersdale from WKL2 *shall* follow the Tawd Valley.		The intention is to exploit the pre-existing M58 overbridge across Whiteledge Road between Junctions 4 & 5	
CRD-SKM-296		**3.3.5 Timetable & Journey Time**			
CRD-SKM-429		Timetable modelling will be carried out using the latest base timetable available (currently expected to be the December 2017 timetable at the time the modelling for this scheme will be carried out).			
CRD-SKM-320	Merseytravel / Merseyrail workshop 09/12/17	Skelmersdale station *shall* replace Kirkby station as the interchange point for passenger journeys between Liverpool and Wigan Wallgate (or any cross-network part thereof) on the WKL2 route.		The current passenger interchange point between the Merseytravel and Northern networks on this route is Kirkby station.	
CRD-SKM-298	Lancs CC workshop 04/01/17	There *shall* be 2 trains per hour in each direction between Headbolt Lane and Skelmersdale.		These will be Merseytravel services. Options for service calls at Rainford station (which is likely to be the only station between Headbolt Lane and Skelmersdale) will be evaluated as part of timetable modelling.	

Reqt ID	Source Reference	Requirement and Heading	Acceptance Criteria	Supporting Information	Rationale
CRD-SKM-299	Lancs CC workshop 04/01/17	There *shall* be 4 trains per hour in each direction between Liverpool and Headbolt Lane, 2 of which are continuations of the trains to/from Skelmersdale.		These will be Merseytravel services.	
CRD-SKM-300	Lancs CC workshop 04/01/17	There *shall* be 1 train per hour in each direction between Wigan Wallgate and Skelmersdale.		These will be Northern franchise services. The aspiration is for 2 trains per hour in each direction between Wigan Wallgate and Skelmersdale. The feasibility of this is to be explored during timetable modelling.	
CRD-SKM-301	Lancs CC workshop 04/01/17	The scheduled interval between trains in a 2 trains per hour service *shall* be 30 minutes ± 5 minutes .			
CRD-SKM-302	Lancs CC workshop 04/01/17	The scheduled interval between trains in a 1 train per hour service *shall* be 1 hour ± 0 minutes .			
CRD-SKM-303	Lancs CC workshop 04/01/17	Passengers interchanging at Skelmersdale station, from every alternate service originating from Liverpool to the hourly service heading towards Wigan, *shall* have a scheduled waiting time of no more than 10 minutes.			As the Skelmersdale to Wigan service will be one train per hour, the requirement for a maximum 10 minute interchange time can only apply to one of the two trains per hour arriving from Liverpool.

Reqt ID	Source Reference	Requirement and Heading	Acceptance Criteria	Supporting Information	Rationale
CRD-SKM-304	Lancs CC workshop 04/01/17	The journey time in either direction between Skelmersdale and Liverpool *shall* be no more than 35 minutes.			
CRD-SKM-305	Lancs CC workshop 04/01/17	The journey time in either direction between Skelmersdale and Liverpool should be no more than 30 minutes.			
CRD-SKM-306	Lancs CC workshop 04/01/17	The journey time in either direction between Skelmersdale and Manchester *shall* be no more than 60 minutes.			
CRD-SKM-307	Lancs CC workshop 04/01/17	The journey time in either direction between Skelmersdale and Manchester should be no more than 45 minutes.		If 2 trains per hour run between Skelmersdale and Manchester, the expectation is for one to be a "fast" service with approx. 45 minutes journey time and one a "stopping" service with approx. 60 minutes journey time.	
CRD-SKM-309		**3.3.6 Traction & rolling stock**			
CRD-SKM-311	Lancs CC workshop 04/01/17	The route and infrastructure between Skelmersdale and Kirkby *shall* be capable of running Merseyrail's new Stadler rolling stock type. (**TO DO** - a reference to the issued design specification for the new rolling stock type is to be added to this requirement).		Unit length is 65m (1x2 car unit)	

Reqt ID	Source Reference	Requirement and Heading	Acceptance Criteria	Supporting Information	Rationale
CRD-SKM-313	Lancs CC workshop 04/01/17	The route and infrastructure between Skelmersdale and Kirkby *shall* be capable of running trains at least 130 metres in length.		This length is based on a formation comprising 2 coupled 65m (4 car) units. Merseytravel advise that the new rolling stock needs minimum platform length of 122m, as calculated using the front cab door and back passenger door of a two unit train.	
CRD-SKM-314	Lancs CC workshop 04/01/17	The route and infrastructure between Skelmersdale and Wigan *shall* be capable of running trains at least 192 metres in length.			
CRD-SKM-327	Lancs CC workshop 04/01/17	Traction power between Kirkby and Skelmersdale *shall* be either 3rd rail DC or overhead line AC; the preference is for 3rd rail provided this is agreed by the ORR.		The scheme will evaluate the options of extending the third rail line (with ORR approval)and of using OLE power between Kirby and Skelmersdale as part of the option selection report	
CRD-SKM-321		**3.3.7 Freight**			
CRD-SKM-322	Lancs CC workshop 04/01/17	Capacity *shall* be provided for two freight trains to pass between the Liverpool and Wigan boundaries of this scheme - one in either direction - every two hours.			
CRD-SKM-323		**3.3.8 Interfaces**			
CRD-SKM-326		No major new projects (rail, road, housing) that would interface with this scheme are currently anticipated.			

Reqt ID	Source Reference	Requirement and Heading	Acceptance Criteria	Supporting Information	Rationale
CRD-SKM-324	Lancs CC workshop 04/01/17	Existing pipelines within the boundaries of this scheme *shall* be protected or diverted from the works carried out by, and outputs delivered by, this scheme.			
CRD-SKM-325	Lancs CC workshop 04/01/17	The route of Grimshaw Street *shall* be unaltered by this scheme.			
CRD-SKM-329		**3.3.9 Land**			
CRD-SKM-330	Lancs CC workshop 04/01/17	The new station at Headbolt Lane *shall* be owned by Network Rail and operated by Merseyrail.			
CRD-SKM-331	Lancs CC workshop 04/01/17	The new station at Skelmersdale *shall* be owned by Network Rail and operated by the franchise operator (currently Northern).			
CRD-SKM-332	Lancs CC workshop 04/01/17	Statutory powers *shall* be obtained to acquire the land required for this scheme and subsequently operate the railway			
CRD-SKM-193		**3.4 Performance Requirements**			
CRD-SKM-194	Lancs CC workshop 04/01/17	Operational integrity of the two systems (Merseyrail and Northern) *shall* remain independent of one another.		**TO DO** - determine whether a valid additional requirement based on performance under perturbations / PPM can be agreed.	
CRD-SKM-195		**3.5 Strategic Maintenance Requirements**			
CRD-SKM-196		An agreement regarding maintenance of the new infrastructure introduced by this scheme will be developed at a later stage.			

4 Appendices

4.1 Appendix A - Deliverables

The project will produce deliverable documents in accordance with GRIP, CSM and any additional deliverables listed in this Appendix.

No additional deliverables have been identified at this time.

4.2 Appendix B - References

Appendix B details the references to associated documents, drawings and other useful material used within this document. This section should not be used to list standards; Appendix D is to be used to capture applicable standards.

(1) Client To Sponsor Remit - Project: Skelmersdale Rail Link; Mark Cleave (Merseytravel); 24/02/2014.

(2) Stadler rolling stock specification - see CRD-SKM-311.

(3) Summary of Merseytravel and Lancs CC workshops - see Appendix E.

4.3 Appendix C - Glossary

Terms, Symbols and Abbreviations	Description
AB	Assessment Body
CDM	Construction Design and Management
CRD	Client Requirements Document
CSM-RA	Common Safety Method for Risk evaluation and Assessment. EU Regulation 402/2013
DRRD	Detailed Route Requirements Document
GRIP	Governance for Railway Investment Projects
H	High
IP	Infrastructure Projects
L	Low
M	Medium
May	Denotes a non-mandatory, non-binding suggestion or allowance of this specification
RAM	Route Asset Manager
RRD	Route Requirements Document
RSSB	Rail Safety and Standards Board
S	Safety
Shall	Denotes a mandatory, binding provision of this specification
Should	Denotes a desired, non-mandatory, non-binding preference or goal of this specification.
TSI	Technical Specifications for Interoperability
WLC	Whole Life Cost

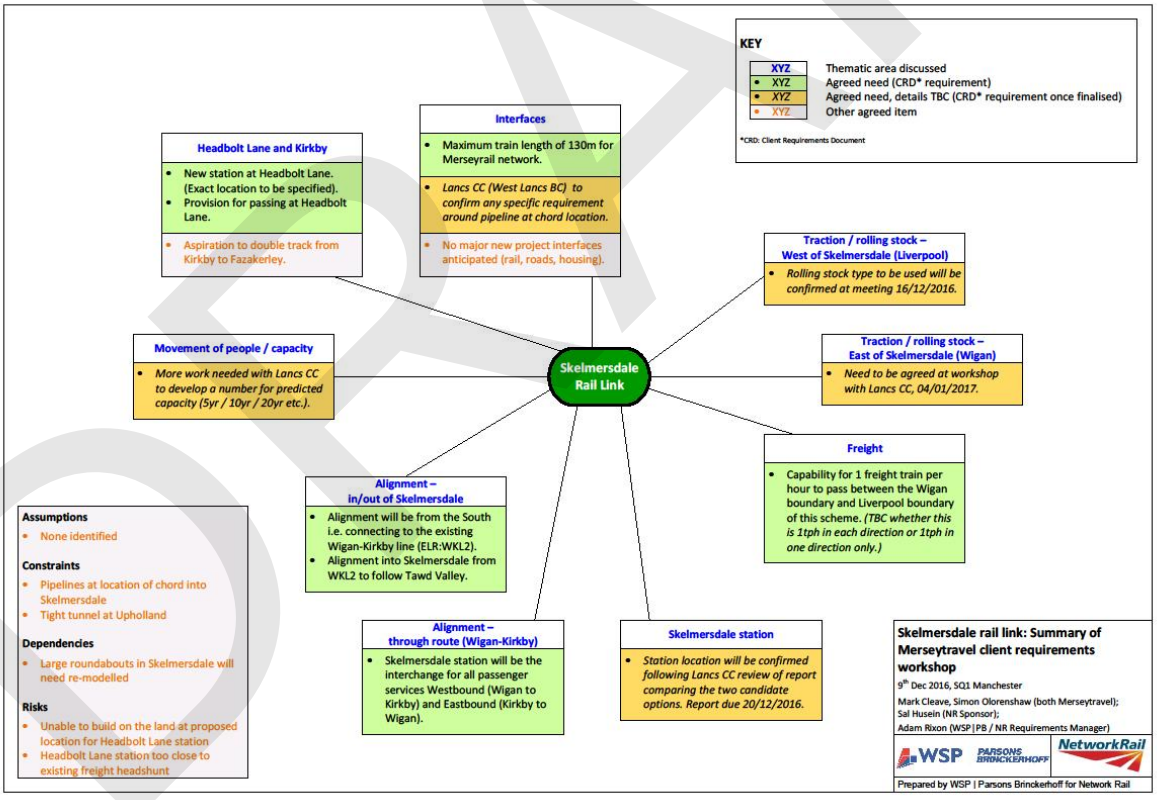
4.4 Appendix D - Applicable Standards

All standards to be are accessed via the link: http://networkrailstandards/bsi/Index.aspx

Network Rail Standard Reference Number	Network Rail Standard Title/description
NR/L1/INI/CP0095	Network Rail Requirements Policy
NR/L1/INI/PM/GRIP/100	Governance of Railway Investment Projects (GRIP) – Policy
NR/L2/INI/02009	Engineering Management for Projects
NR/L2/RSE/100/02	Application of the Common Safety Method for Risk Evaluation and Assessment
NR/L3/INI/PG115/PS/018	Management of Change to Authorised Baselines (Project Change Control) including Contingency Management

4.5 Appendix E - Minutes of Client Requirement Elicitation Workshops

4.5.1 Merseytravel / Merseyrail Workshop 09/12/2016



4.5.2 Lancashire County Council / Merseytravel Workshop 04/01/2017