

# Blackburn with Darwen Borough Council, Local Cycling and Walking Infrastructure Plan

Leeds & Liverpool Canal: Access & Connectivity Plan

**Final Report** 

January 2023

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## **Executive Summary**

Completed in 1816, the Leeds & Liverpool Canal represented a great achievement for civil engineering and enabled the textile industry to grow exponentially and become central to the nation's prosperity. But two centuries later, needs have changed. Many people are out of work, climate change is wreaking havoc on the planet and public health is in crisis.

Through the BwD Local Cycling and Walking Infrastructure Plan (LCWIP) process the Leeds & Liverpool Canal has been identified as a high priority route for improvement. The route is currently underutilised but has significant potential to provide a high-quality core walking and cycling route that could act as a catalyst to active travel growth and the expansion of walking and cycling networks across the borough.

This report sits below the Blackburn with Darwen LCWIP and provides a programme of access and connectivity improvements along the Leeds & Liverpool Canal within Blackburn with Darwen. The proposals include 2 new bridges over the canal, 10 new access points to the canal and improvements to 14 existing access points. The proposals also include over 14km of improvements to routes connecting key origins and destinations to the canal towpath.

Improvements to the Leeds & Liverpool canal or the towpath have not been considered within this report. Discussions are currently taking place with the Canal & Rivers Trust and other local stakeholders to consider proposals to improve the canal including the Lancashire Linear Park. Further improvements are to be progressed using private sector funding through the planning process and existing maintenance budgets.

The proposals would (with support from partner agencies, authorities and stakeholders) see the realisation of the Leeds & Liverpool Canal as a walking and cycling corridor that would allow and encourage active travel choices benefiting health, the economy, the environment and quality of local life.

The circa £16m proposals seek to deliver an LCWIP priority project which complements our existing cycle network 'The Weavers Wheel' and other local proposals including the Southeast Blackburn Walking and Cycling Network (LUF Scheme and The Pennine Lancashire Linear Park<sup>1</sup> proposals.

The outcome is expected to be a significant contribution towards Blackburn with Darwen Borough Councils target to double the number of cycle trips within the borough by 2025 and significantly increase the number of walking trips by replacing a significant proportion of short journeys within the borough that are currently made by car. This will help us to tackle our climate emergency, increase levels of physical activity among residents and address local economic and health deprivation.

Expanding active travel networks across the borough supports national and local policy objectives contributing to a post Covid recovery; a carbon neutral future, a resilient economy and an improved quality of life for all those who live, work and play in the borough.

<sup>&</sup>lt;sup>1</sup> <u>210504\_0209\_Pennine-Lancashire-Linear-Park\_Digital.pdf (wpengine.com)</u>

## **1** Introduction

## 1.1 Background

- 1.1.1 The purpose of this Canal Access & Connectivity Plan is to build on the work undertaken as part of the Blackburn with Darwen LCWIP to develop proposals for the Leeds & Liverpool Canal. Identified as a priority route for improvement within the LCWIP, the Leeds & Liverpool canal already has significant value as a strategic waterway and sustainable transport corridor within the borough.
- 1.1.2 Through improvements to access and connectivity the canal towpath provides an opportunity for those who live, work and play in the borough to move around more by foot and by bicycle. In turn, an improved canal corridor could act as a catalyst for the creation of a coherent and comprehensive network of high-quality walking and cycling routes across BwD as identified in the LCWIP.
- 1.1.3 The outcome of this would be to make active travel possible, desirable and inevitable leading to:
  - An improvement to health and fitness of BwD residents and employees;
  - An improvement to the equality of access to opportunities for all by reducing severance;
  - A reduction in the number of road accidents by providing safe infrastructure for all users;
  - Sustainable economic growth through provision of viable transport options;
  - Protection of the environment by reducing greenhouse gases and noise, improving air quality and biodiversity and protecting our heritage, the landscape and townscapes.
- 1.1.4 The Department for Transports 'Gear Change: A bold vision for cycling and walking'<sup>2</sup> document identifies that the benefits of cycling and walking investment are significant and well proven and that well designed schemes can deliver results in the most challenging of areas.

## 1.2 The Challenge

- 1.2.1 The expected scheme outcomes would contribute to addressing a number of existing issues within Blackburn with Darwen. The BwD LCWIP Baseline Report provides more detail on these issues which can be summarised as follows:
  - **Severance**: Key features create barriers to movement across many desire lines including the M65, major A-roads, the Leeds & Liverpool canal, and rail lines
  - Low levels of physical activity: The 2020 Active Lives Survey for Sport England shows that Blackburn with Darwen was ranked eighth lowest amongst English local authorities for residents who have had one or more continuous walks for at least 10 minutes over the previous month and ranked lowest (out of 314) for participation in any cycling activity with a participation rate of just 5%<sup>3</sup>
  - **High levels of deprivation**: The borough contains some of the most deprived areas of the country as ranked by the Indices of Multiple Deprivation
  - **Poor health**: The towns of Blackburn and Darwen are within the 20% most health deprived areas in the country
  - **Poor air quality**: there are 4 AQMAs within the borough where air quality failed to meet the national health based annual targets for nitrogen dioxide, mainly because of road vehicle exhaust emissions
  - Lack of safe off-road routes: There are several busy, fast and congested A-roads in the area that are uninviting to non-motorised users and have a lack of safe crossing facilities.
  - Accidents, injury risks and perceptions: Over the past 5 years there have been 33 serious or fatal collisions involving cyclists and 128 involving pedestrians in Blackburn with Darwen

<sup>&</sup>lt;sup>2</sup> Gear change: a bold vision for cycling and walking (publishing.service.gov.uk)

<sup>&</sup>lt;sup>3</sup> Walking and cycling - Lancashire County Council

## 1.3 **Opportunities**

- 1.3.1 Blackburn with Darwen comprises compact urban areas with many trips between key origins and destinations within comfortable walking and cycling distances. The BwD LCWIP Baseline Report provides more detail on these opportunities which can be summarised as follows:
  - Blackburn with Darwen currently has significantly higher proportions of people travelling less than 2km (22%) and 5km (25%) to work than the Northwest (18%/21%) and England (17%/18%) averages
  - 67.2% of employed Blackburn with Darwen residents live and work in the borough; this is the largest proportion of all the local authorities that make up the Pennine Lancashire area
  - The proportion of BwD residents who currently walk to work is 12.3% which is higher than for the Northwest (10.1%) and England (9.8%)
  - The proportion of BwD residents who currently cycle to work is 1% which is lower than for the Northwest (2.1%) and England (2.9%)
  - The study area includes an extensive PROW network; this presents various opportunities to create more permeable walking and cycling networks away from vehicular routes, which can also enhance access longer distance recreational routes.
  - Population density is around twice that of the regional average, estimated at 1,092 persons per square km<sup>2</sup>.
  - The age structure for Blackburn with Darwen indicates that there is a younger age profile than average as 28% of the population is under 20 years old<sup>4</sup>.
  - With significant new development included within the new local plan to 2037, careful planning is required to integrate these developments into any networks and safely link them to local facilities such as schools, town centres, leisure facilities, etc.
  - A range of opportunities to develop leisure cycling through promotion of other existing longer distance and off-road routes.

## 1.4 Objectives

- 1.4.1 The primary objectives of the access & connectivity plan are as follows:
  - To make better use of an existing transport asset that is currently underutilised through improvement and promotion;
  - To provide safe and direct routes for pedestrians and cyclists connecting to education, employment and retail opportunities; and to
  - To minimise the risk of collisions between cyclist and motor vehicles on the road, by providing high quality access and connectivity for pedestrians and cyclists along the traffic free Leeds & Liverpool Canal.
- 1.4.2 The wider strategic objectives are as follows:
  - To improve the health of residents by allowing them to travel in a more sustainable manner, providing a low cost and credible alternative to private car travel;
  - To improve the safety and personal security of residents;
  - To improve the quality of life for residents by creating a more pleasant travelling environment;
  - To provide economic opportunities for residents and increase the labour pool for employers;
  - To benefit the wider environment and support the Climate Emergency by reducing carbon emissions, traffic pollutants and traffic noise as a result of more people walking and cycling;
  - Connecting the residential and employment developments to the wider existing walking and cycling network; and
  - To enhance the amenity and functional viability of a key green corridor to provide a key gateway.

<sup>&</sup>lt;sup>4</sup> Joint Strategic Needs Assessment (JSNA) 2020

## 1.5 Targets

- 1.5.1 There is significant political ambition and support for growing the levels of active travel as evidenced by the government's creation of Active Travel England and the Active Travel Fund. 'Gear Change' presents a government target to double cycling and increase walking, with the Active Travel Fund intended to support the Government's transformational long-term strategy for walking and cycling.
- 1.5.2 Evidence from the Gear Change: One Year On report and the Cycle City Ambition programme: 2013 to 2018 evaluation indicates that investment in cycle infrastructure is effective in not only increasing the number of cyclists but also in attracting a wider range of users. Increases across a variety of projects within the Cycle City Ambition programme range from +4% to +79% over a five-year period.
- 1.5.3 We are aware that other areas have set out ambitious targets for their authority areas and have given careful consideration to the following targets which reflect the ambitious plans outlined within our LCWIP. The target for cycling is based on the Propensity to Cycle tools Government Target (near market) scenario to double cycling levels nationally by 2025. The target for walking is based on what is required to meet the commitments originally set out in Gear change, the Transport decarbonisation plan and the Net zero strategy to increase the percentage of short journeys in towns and cities that are walked or cycled to 50% in 2030 and to 55% in 2035.

The targets for Blackburn with Darwen are as follows:

- Increasing 2021 cycle levels by 100% by 2026
- Increasing 2021 walking levels by 30% by 2026
- 1.5.4 In terms of the Leeds & Liverpool Canal towpath the targets can be applied as shown in Table 1.1 below. These are based on the annual Blackburn Town Centre cordon survey which records pedestrians and cyclists on the canal towpath entering and exiting the Blackburn town centre area.

Year	2021 Actual	2026 Target	% Increase
Pedestrians	226	294	30%
Cyclists	104	208	100%

## 2 Local and Government Policy

## 2.1 National

- 2.1.1 The development of opportunities to improve walking and cycling infrastructure is central to both local and national policy and provide a key tool to achieving ambitions for net zero, levelling up and build back better.
- 2.1.2 Central Government have set out their ambitions within the Department for Transports Cycling and Walking Investment Strategy 2 (2022) to increase the percentage of short journeys in towns and cities that are walked, wheeled or cycled and to increase the percentage of 5-10 year olds who usually walk to school.
- 2.1.3 The Cycling and Walking Investment Strategy was followed in 2020 by the Department for Transports 'Gear Change: A bold vision for cycling and walking' which paved the way for all Local Authorities to prepare LCWIPs to be eligible for future transport funding.
- 2.1.4 Guidance on the preparation of LCWIPs (2017) and Local Transport Note 1/20 on Cycle Infrastructure Design have provided further support to Local Authorities in developing plans for walking and cycling networks and provide a consistent set of design standards for all cycle schemes. The Manual for Streets documents provide guidance on providing for pedestrians on residential and busier urban streets. A new Manual for Streets document is anticipated in 2023.

## 2.2 Local

- 2.2.1 Cycling and Walking is prevalent in current and emerging Blackburn with Darwen policy being enshrined within both the existing and new local plan and other local policy documents.
- 2.2.2 The new local plan for Blackburn with Darwen up to 2037 sets out a vision for the borough where improved infrastructure will enhance connectivity and encourage modal shift to more sustainable modes of transport and have enhanced green infrastructure networks (including access to and use of its waterways).
- 2.2.3 Specific policies within the new local plan (<u>Regulation 19 Version</u>, July 2022) seek to protect the Leeds & Liverpool Canals historic environment (CP7 Part 3), require new developments to make a positive contribution to green and blue infrastructure through provision for active travel on foot or bicycle and physical and functional connections with neighbouring sites with connectivity into the Council's Public Rights of Way (PROW) and infrastructure networks (DM16 Part 1) and support tourism based development along the Leeds & Liverpool Canal (DM37).
- 2.2.4 Active Travel is supported through specific policies aimed at tackling health inequalities in the borough (CP3 Part 1) which requires new development (as far as is practicable) to support healthy lifestyles to make active travel an easy, practical and attractive choice and transport and accessibility specific policies (DM29 Part 1) which requires new development to include measures to encourage access on foot and by bicycle in accordance with the Local Cycling and Walking Infrastructure Plan, and in accordance with Healthy Streets principles where appropriate.
- 2.2.5 In July 2019 Blackburn with Darwen Borough Council declared a Climate Emergency and published the first draft of its Climate Emergency Action Plan in February 2020. The Action Plan sets out the objectives and actions that have been identified as necessary to contribute to the Council's ambition for a carbon neutral Borough and concentrates on activity that the Council can influence. This includes an action to provide facilities for cycling and walking in the borough using the Active Travel Fund to support access to key employment and education sites and increase levels of active travel for everyday journeys.

## **3 Other Local Transport Studies and Schemes**

## 3.1 Blackburn with Darwen Transport Strategies and Studies

### Blackburn with Darwen, Local Plan Transport Study (New Local Plan 2021-2037)

- 3.1.1 The canal corridors strength is its ability to link communities with key areas of open space, employment sites, service centres and other leisure opportunities. Within the new local plan provision is made for 198,000sqm of new employment floorspace and 7,152 new homes across Blackburn with Darwen between 2021 and 2037. In Blackburn this equates to 125,094 sqm of new employment floorspace and 4,851 new homes that could all benefit from an improved Leeds & Liverpool canal.
- 3.1.2 Through a combination of highway mitigation measures and sustainable transport mitigation measures, this study demonstrates that the impacts of the proposed Local Plan development can be mitigated to an acceptable degree, and that the Local Plan is therefore deliverable in a sustainable manner in transport terms, in accordance with NPPF.

### Blackburn with Darwen Local Transport Plan 3 (2011-2021)

3.1.3 The Blackburn with Darwen Local Transport Plan 3 (LTP) presents transportation priorities for ten years from 2011 to 2021. It sets out a strategy which pledges to support Blackburn with Darwen's economy, tackle deep-seated inequalities in people's life chances and to revitalise communities by providing safe high-quality neighbourhoods.

The LTP sets out the following priorities:

- Improve access to areas of regeneration and economic growth
- Reduce carbon emissions
- Improve road safety
- Improve access to education and employment
- Improve quality of life and wellbeing
- Maintain our transport assets in good condition
- 3.1.4 This LCWIP is considered to be consistent with the priorities of the LTP3 although this is expected to be replaced by an updated LTP4, later in 2023.

#### Blackburn with Darwen Local Transport Plan 4 (in preparation)

- 3.1.5 The LCWIP will contribute to the delivery of transport objectives outlined within an emerging LTP4 covering Lancashire, Blackburn with Darwen and Blackpool. These presently include, but are not limited to:
  - Reduce the impact of harmful emissions from transport, addressing air quality and climate change concerns;
  - To improve local public transport, networks and interchanges;
  - To improve public transport for better inter-urban and rural connectivity;
  - To deliver sustainable transport systems that are accessible and inclusive for all;
  - To transform our streets and places to enable an increase in active travel;
  - To reduce the need to travel by private car particularly for shorter journeys;
  - To reduce all road casualties and progress towards zero killed and seriously injured;
  - To facilitate economic growth and regeneration;
  - To manage our transport assets efficiently and effectively; and
  - To improve the efficiency of our local road networks.

## Bus Service Improvement Plan (BSIP) and Enhanced Partnership

3.1.3 Blackburn with Darwen Borough Council working collaboratively with Lancashire County Council have prepared a joint Bus Service Improvement Plan (BSIP). Each authority has its own Enhanced Partnership (EP) with local operators. Through the joint BSIP and EP Blackburn with Darwen Borough Council have received around £3.8m of BSIP funding to deliver a reformed bus network, improve public confidence and address misconceptions to encourage passengers back.

#### LCWIP

3.1.4 Blackburn with Darwen Borough Council are currently preparing LCWIP reports for both Blackburn and Darwen to identify priorities for developing comprehensive, cohesive and joined up walking and cycling networks for both towns. The Leeds & Liverpool Canal corridor has been identified as an early priority for further development which can act as a catalyst to the growth and expansion of both walking and cycling networks across the borough.

#### Pennine Lancashire Linear Park – Super Slow Way

- 3.1.5 A joint partnership between Lancashire County Council, Canal & River Trust, The Super Slow Way, and the councils of Blackburn with Darwen, Hyndburn, Burnley, and Pendle, is looking to create the 'Pennine Lancashire Linear Park'.
- 3.1.6 The Pennine Lancashire Linear Park is a vision and programme for change along a 23-mile section of the Leeds and Liverpool Canal corridor between the Boroughs of Blackburn with Darwen and Pendle. It seeks to bring life back to the places and infrastructure that once supported thriving industry and created the places along its route. It seeks to marry physical improvement to landscape, infrastructure and buildings, to expansive programmes of environmental, cultural, leisure, education and economic activity. Funding has not yet been secured to deliver the project.

## 3.2 Blackburn with Darwen Funding Bids and Schemes

#### Blackburn with Darwen Levelling Up Fund Bids

3.2.1 Blackburn with Darwen Borough Council submitted two bids to the Levelling UP Fund Bid in 2022. Separate bids were submitted to cover regeneration and transport with the transport bid seeking to provide the transport infrastructure to support the delivery of the Strategic Employment Site (SES) at M65 Junction 5 and the regeneration project aimed at Blackburn town centre. The transport bid was approved for funding and includes the development of a walking and cycling network for Southeast Blackburn that links the Leeds & Liverpool Canal and Blackburn town centre with the SES and other key destinations including Royal Blackburn Hospital, Shadsworth Industrial Estate and Walker Business Park.

#### Darwen Town Deal – Destination Darwen

3.2.2 The Darwen Town Deal aims to kick-start the transformation of Darwen and the surrounding areas. The maximum bid of £25 million of Government funding has been secured for projects that will improve the lives of the town's residents and visitors including improvements to walking and cycling routes.

## 4 Consultation

## 4.1 Public Consultation

- 4.1.1 The LCWIP and the resulting network plans are founded on robust evidence, the research undertaken was supplemented by a range of data collection and consultation exercises, including:
  - Site Visits: Undertaken on foot and cycle to understand travelling around the study area as vulnerable road users.
  - Stakeholder Workshops: A number of stakeholder workshops have taken place with officers of Blackburn with Darwen Borough Council and selected community representatives in order to gain their input on the challenges and opportunities related to walking and cycling in the study area.
  - Public Consultation: Blackburn with Darwen Borough Council is currently undertaking an online public 'have your say' consultation on Walking and Cycling utilising an interactive map. The consultation calls on residents, and those who travel through the borough, to provide their ideas, comments and concerns on the use of the existing network and to propose new schemes / improvements. The ideas, comments and concerns received have been used to inform the development of the LCWIP.
  - Meetings / Conference Calls: As well as the stakeholder workshop, the project team have liaised with key internal stakeholders from BwDBC and attended workshops with neighbouring local authorities within Lancashire to gain a detailed insight to the work done relating to walking and cycle network planning and cross boundary issues and connectivity.
  - Meeting with BwDBC staff as both the local planning authority and highway authority also provided an opportunity to understand proposed and committed developments in the study area that may impact and influence the final network.
- 4.1.2 Further consultation and stakeholder engagement shall be undertaken as part of the network planning stages of preparing the LCWIP.

Key concerns highlighted from the LCWIP consultation undertaken to date include:

- Safety concerns and lack of or substandard cycle infrastructure (55)
- Substandard footpaths and poor maintenance (48)
- Lack of street lighting or other street furniture such as bins, seating, etc. (12)
- Pavement parking (11)
- Speeding (11)
- Accessibility for all (6)
- 4.1.3 Specific comments received in relation to the canal include:
  - Surfaces not suitable for road bikes or hybrid bikes with road tyres
  - Lack of litter bins and seating areas

## 4.2 Stakeholder Consultation

## Walking, Cycling and Wheeling Operational Group

4.2.1 The Blackburn with Darwen Walking, Cycling and Wheeling Operational Group is responsible for providing a strategic approach to the planning, development and delivery of safe walking and cycling routes contained within the Local Cycling and Walking Infrastructure Plan (LCWIP), to improve health and wellbeing through the promotion of active travel, to support the reduction of the borough's carbon footprint, reduce barriers and encourage interventions to promote active travel as part of a

healthy lifestyle and to ensure the provision of safe alternatives to vehicle use and promote safe and secure routes for walking and cycling.

4.2.2 The Blackburn with Darwen LCWIP and associated proposals have been referred to the Walking and Cycling Group. The prioritisation of schemes and inclusion of proposals within this Access and Connectivity plan have been referred to and agreed by the Walking and Cycling Operational Group.

## 4.3 **Future Consultation**

4.3.1 As part of the design process a number of 'Neighbourhood' community consultation events will be held in partnership with the Canal and River Trust.

## 5 Route & Scheme Identification

## 5.1 Route Identification

- 5.1.1 The Blackburn with Darwen LCWIP has identified the Leeds and Liverpool Canal as a primary route of an aspirational Cycle Network for Blackburn with Darwen. While the route already exists, it has been identified as a high priority for further development as it has the potential to deliver quick wins and to act as a catalyst to active travel and deliver a step-change in walking, wheeling and cycling within the borough.
- 5.1.2 To determine what improvements would be required to the route, consideration has been given to the following elements:
  - The canal towpath including surface, lighting and rest areas
  - Existing access points
  - Possible new access points
  - Connections to key origins and destinations close to the canal

## 5.2 Canal Towpath Improvements

- 5.2.1 The canal towpath varies in standard within the Blackburn with Darwen Borough Council with sections which are well maintained with lighting and others where the towpath is unlit and the surface is little more than a muddy track. A more detailed audit of the canal towpath is to be provided by the Canal & Rivers Trust.
- 5.2.2 The aspiration of this access and connectivity plan is to upgrade all of the canal towpath within Blackburn with Darwen to a smooth bituminous surface with lighting. Opportunities to provide rest places, improve the public realm or enhance biodiversity should also be considered as appropriate.

## 5.3 Existing Access Points

- 5.3.1 In addition to the towpath itself it is also important to consider the canal access points as being a part of the scheme. A mapping study was undertaken to identify the existing canal access points using the Canal and River Trusts accessibility map which also indicates the suitability of each access point for pedestrians, cyclists, wheelchairs and/or scooters.
- 5.3.2 Figure 5.1 illustrates the mapping of existing canal access points in Blackburn with Darwen. A total of thirty-seven existing access points were identified.



Figure 5.1: Map showing the existing towpath access points in Blackburn

#### Audit

- 5.3.3 An audit tool adapted from the Walking Route Audit Tool (WRAT)<sup>5</sup> was developed to assess how well each existing access point meets the desired design outcomes. The audit tool scoring criteria is provided in Appendix A and assesses the current conditions of each access points based on the following criteria:
  - coherence
  - directness
  - safety
  - comfort
  - attractiveness, and
  - deliverability
- 5.3.4 The lowest scoring access points were then considered along with the access points likely level of demand and connectivity with other LCWIP routes and key origins and destinations nearby in order to prioritise them for further consideration.
- 5.3.5 The access points were prioritised as follows:
  - Scores below 50% as High Priority
  - Scores between 50% and 80% as Medium Priority
  - Scores above 80% as Low Priority

<sup>&</sup>lt;sup>5</sup> walking-route-audit-tool.xlsx (live.com)

- 5.3.6 Access points with a score of 50% were categorised as high priority where there was a high level of demand and/or connectivity with another LCWIP primary route.
- 5.3.7 Table 5.1 below provides a summary of the audit scores for all existing access points and indicates the level of priority determined. The full audit scores are provided in Appendix B.

Table 5.1: Ranking and Prioritisation of Existing Canal Access Points

Ref	Score Ranking List	Score	Audit
	HIGH PRIORITY	,	
E13	Eanam Old Road (Car Park)	2	50%
E22	Bolton Road Bridge (West)	2	50%
E20	Highfield Road	2	72%
	Eden Street	3	28%
E14	Eanam Wharf (Euro Car Park)	3	31%
E17	Lower Audley Street	3	31%
E5	Davies Road	3	44%
E12	Eanam Old Road	3	50%
E19	Joiner's Row	3	53%
E24	Hollin Bridge Street	3	53%
E30	Shorrock Lane	3	63%
E27	King's Bridge Street	3	69%
	MEDIUM PRIORITY		
E11	Bancroft Street	4	47%
E16	Canalside (Merchants Landing)	4	59%
E15	Eleanor Street	4	59%
E18	St Marys Wharfe	4	59%
E7	Gorse Street	4	66%
E31	Speedwell Street	4	66%
E1	Trident Way	4	69%
E2	Hyndburn Retail Park- North	4	75%
E35	Cherry Tree Lane	4	81%
	LOW PRIORITY		
E6	Blakewater Road	5	38%
E8	Harwood Street	5	44%
E32	Fenisclife Drive	5	47%
E23	Bolton Road	5	50%
E26	Moorgate Street	5	50%
E37	Livesey Branch Road	5	53%
E36	Eclipse Road	5	53%
E34	Gladstone Terrace	5	56%
E4	Whitebirk Drive	5	59%
E21	Rockfield Street (Car Park)	5	78%
E9	Daisyfield Business Centre, Appleby Street	5	84%
E29	Stirling Street	6	19%
E3	Hyndburn Retail Park- South	6	38%
E33	Green Lane	6	41%
E28	Herschell Street	6	59%
E25	New Wellington Street	6	78%

## 5.4 **Possible New Access Points**

- 5.4.1 A further mapping study was undertaken to identify possible new access points that have the potential to improve connectivity between neighbourhoods and key destinations such as town centre, employment sites, train stations etc. or to help deliver a comprehensive and cohesive active travel network.
- 5.4.2 A total of seventeen new access points were identified, the locations of which are shown in Figure 5.2.



Figure 5.2: The mapping study of proposed canal access points

5.4.3 A separate audit tool was developed to assess the potential of each possible access point and the likelihood of delivery. The tool scores each of the proposed access points against the following criteria as shown in Table 5.2 below.

Criteria	2 (Green)	1 (Amber)	0 (Red)
	No land required	Likely to be	3rd Party Land
DELIVERABILITY - Land ownership	or land in BwD	achieveable by	purchase or CPO
	ownership/control	agreement	needed
DELIVERABILITY - Complexity of delivery	At grade	Level change	Bridge or other significant structure
ATTRACTIVENESS - Likely level of demand	Town centre	Suburbs	Rural or Sparse
COMFORT - Distance to the nearest access point	> 500 m	250 m - 500 m	< 250m

Table 5 2 -	Pronosed New	v Access Doir	nt Audit Scori	ng Framework
<i>Tuble 5.2</i> –	Proposed ivev	V ALLESS PUII	π Αυμπ Στοιπ	IY FIUITEWOIK

5.4.4 Table 5.3 lists the possible new access points in order of priority with those with the lowest score having a higher priority.

Ref	Access Point Name	Score
	High Priority	
P1	Lower Philips Road	25%
P6	Higher Audley	25%
P7	Lower Audley - North	25%
P8	Lower Audley - South	25%
P2	Cicely Lane	38%
P3	Cicely Lane Bridge - North	38%
P4	Cicely Lane Bridge - South	38%
P5	Railway Station	38%
P13	Cherry Tree Terrace	38%
P16	Sappi East	38%
	Medium/Low Priority	
P11	Asda	50%
P12	Moorgate Street	50%
P14	Preston Old Road	50%
P15	Coverdale Drive	50%
P17	Sappi West	50%
P9	Merchants Quay	63%
P10	Merchants Landing	63%

 Table 5.3: The ranking list of proposed access points to canal

## 5.5 **Connections to Key Origins and Destinations**

- 5.5.1 Consideration has been given to improving connectivity with the following key origins and destinations which are situated within 500m of the Leeds & Liverpool Canal towpath:
  - Key residential areas
  - Town centres
  - District centres
  - Transport Hubs
  - Employment areas
  - Primary Schools
  - Secondary Schools
  - Parks and other leisure destinations
- 5.5.2 The connectivity improvements identified are indicated by the yellow lines in Figure 5.3.





5.5.3 Further details of which key origins and destinations the connectivity improvement schemes relate to can be found in Appendix C.

## 5.6 Severance Assessment

5.6.1 An assessment has been undertaken to consider the possible severance effect of the Leeds & Liverpool Canal on the communities alongside it. The distance between canal crossing points has been measured and any distance more than 1.5 times the average distance highlighted to identify those stretches of the canal that are most likely to benefit from a new canal crossing. Table 5.3 below presents the distances between canal crossings points with those having a distance greater than 1.5 times the average highlighted with bold red font.

Start Bridge	End Bridge	Distance (m)
Whitebirk Drive	Davies Road	216
Davies Road	Gorse Street	733
Gorse Street	Harwood Street	443
Harwood Street	Eden Street	664
Eden Street	A6078 Higher Eanam	212
A6078 Higher Eanam	Eleanor Street Footbridge	223
Eleanor Street Footbridge	Cicely Lane	160
Cicely Lane	A6078 Lower Audley Street	522
A6078 Lower Audley Street	St Mary's Wharf Footbridge	316
St Mary's Wharf Footbridge	A6077 Grimshaw Park	207
A6077 Grimshaw Park	Highfield Road	353
Highfield Road	Hall Street	145
Hall Street	A666 Bolton Road	159
A666 Bolton Road	Longshaw Lane Footbridge	290
Longshaw Lane Footbridge	Hollin Bridge Street	133
Hollin Bridge Street	Aqueduct Road	143
Aqueduct Road	Albion Street	355
Albion Street	Moorgate Street	262
Moorgate Street	King's Bridge Street	187
King's Bridge Street	Shorrock Lane	266
Shorrock Lane	Green Lane	725
Green Lane	Cherry Tree Lane Footbridge	743
Cherry Tree Lane Footbridge	Livesey Branch Road	1000

Table 5.3:	The rankina	list of proposed	access points to	o canal
		1.00 0) p. 0 p 0 0 0 0		

- 5.6.2 As can be seen from Table 5.3 there are five stretches of the canal with over 550m between crossing points. The average distance between crossing points between Whitebirk Drive and Livesey Branch Road is 368m. The stretch of the canal between Cicely Lane and the A6078 Lower Audley Street has also been highlighted as the distance is over 520m in a town centre location.
- 5.6.3 Further consideration has been given to the need for additional crossing points and possible locations for new crossing points for each of these in the following sections.

## **Davies Road to Gorse Street**

5.6.4 This stretch of the Leeds & Liverpool Canal towpath passes through an area which is predominantly occupied by employment uses with a number of development sites with recent planning permissions. Existing residential properties along Burnley Road limit connectivity beyond Carl Fogarty Way to the south of the canal. As can be seen in Figure 5.4 below, a new bridge roughly equidistant from Gorse Street and Davies Road has the potential to link well with the existing link between the canal towpath and Blakewater Road and the small roundabout with an access stub on Carl Fogarty Way.





### 5.6.5 Key considerations:

- The current distance between bridges = 733m
- New distance between Bridges 370m/373m
- Likely level of demand is likely to be low but may increase as new development comes forward.
- The A678 Carl Fogarty Way and residential properties to the south limit onward connectivity to Whitebirk residential area.
- Land on either side of the canal is currently in BwDBC ownership.

#### 5.6.6 Summary recommendation:

A new bridge in this location is likely to be deliverable as the land either side of the canal is within the Councils ownership. However, limited onward connectivity to the south indicates that demand for a new crossing may be low until new development comes forward. It is recommended that a new canal crossing in this location is progressed as a medium priority through developer contributions as and when new developments come forward in the local area.

### Harwood Street to Eden Street

5.6.7 This stretch of canal also passes through an area dominated by employment uses. There is an access from the canal to Daisyfield Business Centre approximately halfway along this stretch. As shown in Figure 5.5 below a new crossing point close to the Daisyfield Business Centre connecting to Hutton Street / Ordnance Street would be a useful addition but would require use of 3<sup>rd</sup> party land.

Figure 5.5 – Harwood Street to Eden Street, New Crossing Opportunities



#### 5.6.8 Key considerations:

- The current distance between bridges = 664m
- New distance between bridges = 334m/330m
- Likely level of demand is low as employment uses on both sides of the canal.
- The railway limits onward connectivity to the north although there are railway crossings nearby at Fort Street and Clinton Street.
- There is limited space on the canal towpath close to Daisyfield Mill to accommodate a bridge structure.
- Land to the South of the canal is not in BwDBC ownership.

#### 5.6.9 Summary recommendation:

A new bridge crossing in this location is likely to have several delivery challenges due to the limited width of the canal towpath and the 3<sup>rd</sup> party ownership of land on the south side of the canal. Combined with the fact that the benefits to delivering a new bridge in this location are likely to be small, it is recommended that delivering a new crossing in this location is given a low priority.

## **Cicely Lane to A6078 Lower Audley Street**

5.6.10 This stretch of the canal is situated close to Blackburn town centre with employment, leisure and residential areas adjacent. The canal is also close to Blackburn train station with no direct access from the canal towpath to the station. Figure 5.6 below shows the existing routes to the train station from a point on the canal towpath closest to it. These are both over 1km and could be reduced to around 150m with a new link. Onward connectivity would also be enhanced by the introduction of a new bridge crossing and connection to Higher Audley Street.



Figure 5.6 – Cicely Lane to Lower Audley Street, New Crossing Opportunities

- 5.6.11 Key considerations:
  - The current distance between bridges = 522m

- New distance between bridges = 225m/297m
- Significant level change between the canal towpath and the car park to the rear of the station
- Likely level of demand is high as would provide a more direct link between canal towpath, Higher Audley and Blackburn train station/town centre.
- Land to the West of the canal is not in BwDBC ownership
- Land to the East of the canal is in BwDBC ownership
- 5.6.12 Summary recommendation:

A new bridge crossing in this location is likely to have several delivery challenges due to the level difference and the 3<sup>rd</sup> party ownership of land on the West side of the canal. However, there is the potential for significant benefits to those travelling between Blackburn train station and town centre and those areas to the East of Blackburn town centre such as Higher Audley and Queens Park. Given the potential for a high level of demand and improved connectivity between areas to the East of Blackburn town centre and train station, a new canal crossing and connection to the rear of the station should be given a high priority.

### Shorrock Lane to Green Lane

5.6.13 This stretch of the canal is to the West of Blackburn town centre with residential areas to the south. The railway runs roughly parallel to the canal along this stretch with employment uses and allotments in between. To the north of the railway there are residential areas, employment areas and playing field. There are two existing crossings of the railway but no canal crossings a crossing in either of the locations indicated in Figure 5.7 below would help to reduce the severance effect of the canal in this area.





### 5.6.14 Key considerations:

- The current distance between bridges = 725m
- New distance between bridges = 455m/270m
- Likely level of demand is relatively limited due to predominantly residential uses on both sides of the canal although some potential for longer trips to leisure (Witton Park) and employment uses.
- Limited width on the canal towpath opposite Millwood Close
- Land opposite Amberwood Drive in BwDBC ownership
- Potential to form part of a longer cycle route connecting areas south of the A6062 Livesey Branch Road including Waterloo and Moorgate to Witton Park via PROW to the East of Hustwood Avenue.
- 5.6.15 Summary recommendation:

A new canal crossing from Amberwood Drive is likely to be more deliverable than from Millwood as the site is less constrained in terms of the space available to accommodate a new structure. Given the low level of demand it is recommended that a new crossing in this location be given a low level of priority unless progressed as part of the development of a longer distance route linking areas south of A6062 Livesey Branch Road with Witton Park (and other cycle routes accessible from there).

#### **Green Lane to Cherry Tree Footbridge**

5.6.16 This section of the canal towpath runs parallel with the A674 Preston Old Road in the West of Blackburn. There is a small area of mixed employment on the north side of the canal towards Green Lane but the areas north and south of the canal are predominantly residential. As can be seen in Figure 5.8, St. Francis Primary School and Cherry Tree Cricket Club are situated adjacent to the canal towpath on the north side of the canal and would both benefit from better access to the canal. There is potential to link a new crossing to a quiet road route via Old Gates Drive and/or an off-road route around St. Bede's High School.



Figure 5.8 – Green Lane to Cherry Tree Footbridge, New Crossing Opportunities

### 5.6.17 Key considerations:

- The current distance between bridges = 743m
- New distance between bridges = 431m/312m
- Likely level of demand could be quite high due to the retail and education uses nearby with large residential areas on both sides of the canal.
- There is also some potential for longer trips to leisure (Witton Park) and employment uses.
- There is land at the end of Melfort Close in BwDBC ownership.
- There is likely to be sufficient width on the canal towpath side to accommodate a structure although there is likely to be some impact on trees.
- 5.6.18 Summary recommendation:

There is potential for a new crossing in this location to be well used due to the proximity of key attractors. Together with improved access and routes to St. Francis Primary School, St. Bede's High School, Cherry Tree Cricket Club and Sainsbury's Local it is recommended that a new crossing in this location be given a medium/high priority.

### Cherry Tree Footbridge to Livesey Branch Road

5.6.19 Figure 5.9 shows the distance between crossings on this stretch of the canal is 1km, as the Cherry Tree Footbridge does not accommodate vehicles it also forms together with the previous section of 1.75km without a vehicular crossing point. The areas to the north and south of the canal are predominantly residential with Witton Park and open countryside beyond.





#### 5.6.20 Key considerations:

- The current distance between bridges = 1000m
- New distance between bridges = 425m/575m
- Likely level of demand is quite low although there is potential to form part of a longer leisure route linking with Witton Park and Witton Weavers Way.
- Potential to create a link to Witton Park using the Three Arches Bridge (aka Feniscowles Viaduct) although a small strip of 3<sup>rd</sup> party land may be required to link to the Crescent.
- Land north (disused railway) and south (adjacent to Coverdale Drive) of the canal is not in BwDBC ownership.
- Land to the West (green area between canal and Park Farm Road) of the canal is in BwDBC ownership.

### 5.6.21 Summary recommendation:

There potential demand for a new crossing in this location is likely to be low although there is the potential for a new crossing to become part of a longer distance walking/cycling route along quiet roads and off-road routes linking the Witton Weavers Way and Witton Park. It is recommended that the crossing be given a medium priority.

### 5.6.22 Summary of Recommendations

A new crossing between Cicely Lane and A6078 Lower Audley Street to the rear of Blackburn Train Station is the highest priority followed by one between Green Lane and Cherry Tree footbridge. These new crossings are to be considered a high priority for inclusion within the access and connectivity improvements within the following section. New crossings between Davies Road and Gorse Street and Cherry Tree Lane Footbridge and Livesey Branch Road shall also be considered particularly where there is potential for the crossings to support the creation of longer distance walking/cycling routes. New crossings between Harwood Street and Eden Street and Shorrock Lane and Green Lane are not likely to be progressed any further unless they form a significant element of a priority longer distance walking or cycling route.

## 6 Detailed Maps

## 6.1 Range of Maps

- 6.1.1 The following maps provide detailed commentary on the key elements of the improvement scheme and key links being proposed as part of this plan. Viable solutions to challenges that exist are proposed, providing a clear vision of how a high-quality walking and cycling network can be delivered in Blackburn with Darwen. Each map shows numbered reference points which relate to the numbered text associated with each map. The maps as shown in Figure 5.1 below are titled as follows:
  - Map 1: Whitebirk Industrial Estate
  - Map 2: Whitebirk & Little Harwood
  - Map 3: Blackburn Town Centre
  - Map 4: Townsmoor
  - Map 5: Hollins Bank
  - Map 6: Mill Hill
  - Map 7: Cherry Tree
  - Map 8: Feniscowles
  - Map 9: Star Lane
- 6.1.2 The extent of the highway and land ownership has been considered in reviewing the proposals. Land ownership plans showing the extents of the adopted highway and areas of land owned by Blackburn with Darwen Borough Council are provided in Appendix D.



Figure 5.1 – Overview Plan



### Map 1: Whitebirk Industrial Estate

## 6.1.3 Map 1 improvements for Whitebirk Industrial Estate:

1	Improve crossing provision for pedestrians and cyclists at the A6119 Whitebirk Drive / Philips Road Junction to improve connectivity to Weavers Wheel and LCWIP Priority Route 2 (proposed).
2	New segregated cycle route between A6119 and Lower Philips Road. Includes side road treatment at side roads and site accesses.
3	New segregated cycle route between Philips Road and the Leeds & Liverpool Canal. Includes side road treatment at side roads and site accesses.
4	New pedestrian & cycle access (P1) to the Canal towpath from the new route/Whitebirk Industrial Estate.
6	Extend segregated cycle provision around Cunliffe Road and Crofthead Road (light blue) to improve accessibility to the rest of the Whitebirk Estate.
7	Extend segregated cycle provision around Lower Philips Road (dark blue) to improve accessibility to the rest of the Whitebirk Estate.



## Map 2: Whitebirk & Little Harwood

## 6.1.4 Map 2 improvements for Whitebirk & Little Harwood:

1	New controlled crossings for pedestrians and cyclists at the Red Lion Roundabout .
2i	Improved access to the canal towpath from Davies Road (E5) to shared use step free.
2ii	Introduce provision for pedestrians and cyclists along Davies Road between Blakewater Road and Red Lion roundabout.
3	Widen the existing link between the canal towpath and Blakewater Road to 3m for shared use to improve access to the canal from Blakewater Road (E6).
4	Improvements to walking and cycling provision along Blakewater Road.
5	Improvements for pedestrians and cyclists at Philips Road / Blakewater Road roundabout.
6	Improve access to canal towpath from Harwood Street (E8) for pedestrians and cyclists.
7	Improve the route between the canal and Jamiatul IIm Wal Huda (and on to Phillips Road) for pedestrians and cyclists.
8	Create new entry to Imperial Mill. Part of the Lancashire Linear Park proposals.



## Map 3: Blackburn Town Centre

6.1.5 Map 3 improvements for Blackburn Town Centre:

1	Improve canal access from Eden Street (E9) to shared use step free.
1i	Improve pedestrian and cycle provision over the Eden Street Canal bridge to Copy
	Nook.
2	Improvements to pedestrian crossings across Higher Eanam and Higher Audley Street to include provision for cyclists to provide a continuous route between Audley Lane and
	Eden Street.
3	Improvements to the link between the canal towpath and Bancroft Street (E10) and improvements to the pedestrian and cycle provision connecting the towpath link with footways along Eanam.
4	Improvements for pedestrians and cyclists along Bancroft Street and Birley Street to connect to another LCWIP Primary Cycle Route along Cleaver Street.
5	Improvements for pedestrians and cyclists at the Eanam Roundabout which may benefit from signalisation.
6ii	Improvements to the NCN Route 6 between the canal towpath and Eanam/Salford.
6ii	Improvements to the canal access points along Eanam Old Road (E11) to shared use step free.

7i	Improve the NCN Route 6 route along Eanam and Salford to provide a 3m Two-way segregated cycle track.
7ii	New crossing across Eanam
7iii	Improvements to walking and cycling provision along Barbara Castle Way between Eanam Roundabout and Larkhill junction.
7iv	Improvements to pedestrian crossings at the Larkhill junction to include provision for cyclists to provide a continuous route along Barbara Castle Way and link to Whalley New Road.
8	Create a new connection for pedestrians and cyclists from the canal towpath to the rear of Blackburn Train Station (P5). This would likely be a zig-zag ramp due to the level change but may also be a bridge structure or similar.
9i	Provide a new link between the canal towpath and Higher Audley Street via new bridge (9iii).
9ii	New crossing for pedestrians and cyclists across Higher Audley Street.
9iii	New canal crossing between Cicely Lane and Lower Audley creating access from Higher Audley Street (P6).
10	Create a new canal access point from Cicely Lane (P2/P3/P4).

#### Map 4: Townsmoor



6.1.6 Map 4 improvements for Townsmoor area:

1	Introduce new canal access points from Lower Audley Street (P7/P8).
2	Create access to canal from Merchants Quay.
3	Improvements to the existing canal access from Canalside (Merchants Landing) (E12).
4i	Improvements to the existing canal access from St. Mary's Wharfe (E14).
4ii	Improvements to walking and cycling provision along the route from St. Mary's Wharfe to Blackburn Central High School.
4iii	New crossing for pedestrians and cyclists across Bennington Street.
5	Improvements to the existing canal access from Lower Audley Street (E13).
6	Improvements to the existing canal access from Joiner's Row (E15).

## Map 5: Hollins Bank



6.1.7 Map 5 improvements for Hollins Bank area:

1i	Improve access to the canal from Highfield Road (both sides)
1ii	Introduce a controlled crossing facility as there is no towpath route under the bridge. i.e. all canal users are forced to cross Highfield Road where there are no current facilities.
1iii	Improve Highfield Road between the canal towpath and the A666 for pedestrians and cyclists.
2	New crossing for pedestrians and cyclists across A666.
3	Improve facilities for pedestrians and cyclists along Chadwick Street and Lower Hollin Bank Street particularly over the railway bridge.
4	Improve facilities for pedestrians and cyclists along Taylor Street and Galligreaves Way.
5	Improve facilities for pedestrians and cyclists to improve connectivity with St. Wilfrid's Church of England Academy.
6	Improve facilities for pedestrians and cyclists to improve connectivity with Tauheedul Islam Boys High School.

### Map 6: Mill Hill



## 6.1.8 Map 6 improvements for Mill Hill area:

1i	Improve access to canal towpath from Hollins Bridge Street.
1ii	Improve the route between the A666 and Hamilton Street for pedestrians and cyclists.
2i	Improve facilities on the A666 Bolton Road for pedestrians and cyclists.
2ii	Introduction of a new controlled crossing facility across the A666 or upgrade the existing crossing close to Longshaw Street.
3	Improve the off-road route from the A666 to the rear of Ewood Park. Consider increasing width, improving lighting and introducing rest places, etc.
4	Improve access to Ewood Park for pedestrians and cyclists and provide destination facilities including sheltered and secure cycle parking.
5	Improve access to Mill Hill Rail Station for pedestrians and cyclists and provide destination facilities including sheltered and secure cycle parking.
6	Improve facilities for pedestrians and cyclists along Queens Terrace and New Chapel Street.
7	Improve access to the canal from Kings Bridge Street.
8	Improve facilities for pedestrians and cyclists between the canal towpath and the A6062 Livesey Branch Road .



## Map 7: Cherry Tree

## 6.1.9 Map 7 improvements for Cherry Tree area:

1	New bridge connection over the canal from Amberwood Drive.
2	Improve Speedwell Street for Pedestrians and Cyclists.
3	Improve the path through the playing field for pedestrians and cyclists.
4	Improvements for pedestrians and cyclists crossing A674 Preston Old Road and on link between Witton Park entrance and the link to Speedwell Street.
5	Improve the route from Amberwood Drive to Shorrock Lane for pedestrians and cyclists.
6i	Improve the section of Green Lane between A674 Preston Old Road and Rannoch Drive for pedestrians and cyclists.
6ii	Improve access to the canal from Green Lane for pedestrians and cyclists.
7	Improve the route from Rannock Drive to A6062 via Old Gates Drive for pedestrians and cyclists and links to St. Bede's.
8	Improve the route from Green Lane along Fielding Crescent and Railton Avenue for pedestrians and cyclists.
9i	Improve access from the canal to St Francis Primary School for movements to/from the East.
9ii	Improve access from the canal to Cherry Tree Cricket Club and or Cherry Tree Terrace (P14).
10	New canal pedestrian/cycle bridge from Old Gates Drive to canal towpath.

## Map 8: Feniscowles



6.1.10 Map 8 improvements for Feniscowles area:

1	Improve access to the canal towpath from Livesey Branch Road (E30).
2	Improve access to the canal from Eclipse Road.
2ii	Improve route along Eclipse Road between the canal towpath and A674 Preston Old Road for pedestrians and cyclists.
3	Provide a new path linking the canal towpath to Witton Park via the disused railway line over the Three Arch Bridge (aka Feniscowles Viaduct).
4	The route may need to connect to Woodlands Avenue via ramps to the underpass on the route of the disused railway line.
5i	Improve the route from the A674 to St. Paul's RC Primary School for pedestrians and cyclists.
5ii	Introduce a new controlled crossing facility across the A674 Preston Old Road on the desire line for St. Paul's Primary School.
6i	Relocation of the existing zebra crossings on Preston Old Road.
6ii	Convert the pedestrian crossing on Livesey Branch Road to a signal controlled crossings on key desire lines to serve demand associated with local primary schools.
#### Map 9: Star Lane



6.1.11 Map 9 improvements for Star Lane area:

1 – New access to the canal towpath from the new residential development on Star Drive.

2 – Improved access to the canal towpath from a potential new employment development close to M65 Junction 3 (subject to delivery of the proposed development).

# 7 Estimated Costs

### 7.1 Introduction

7.1.1 This section of the report outlines the input preliminary cost estimates for the scheme proposals outlined in the detailed maps provided in the previous section.

## 7.2 Cost Estimate – Cycle Infrastructure

- 7.2.1 Scheme cost estimates have been based on 'Typical Costs of Cycling Interventions Interim analysis of Cycle City Ambition schemes', DfT 2017, and increased by 38% to allow for inflation (to current year at 2023) based on the construction output price indices<sup>6</sup>. They exclude design, surveys, land, TROs and consultation. Cost estimates for individual interventions have also been checked with the Councils Highways services division and adjustments have been made where appropriate.
- 7.2.2 A summary of the individual intervention cost estimates is provided in Table 7.1 below.

Table 7.1 – Leeds & Liverpool Canal Access & Connectivity Interventions Cost Estimate Summary

Price (per Km) 2023	
Quiet Road (20mph including traffic calming)	£18,000
Quiet Road (20mph without traffic calming)	£3,600
New 3m shared cycle footway	£1,375,000
Off Highway 3m Shared Route with Lighting	£925,940
3m Segregated Two-Way Cycle Track	£1,000,000
Resurface existing Cycle Route	£262,580
Mixed Strategic Cycle Route	£925,940
Cycle Superhighway (Segregated) Two-way	£2,003,900
Comprehensive Cycle Route Signage	£16,584
Price (Per Intervention)	
Zebra or Parallel Crossing	£65,000
Standard Toucan including high friction surfacing	£140,000
Cycle Crossing at Major Road	£193,480
Remodelling Existing Junction including crossings	£331,680
Modal Filter	£45,000
Improve existing at grade access	£10,000
Improve existing grade seperated access	£75,000
Create new at grade access point	£25,000
Create new grade seperated access point	£150,000
New bridge over the canal	£1,000,000
Cycle Storage - Workplace	£8,983
Cycle Storage - School and College	£11,056
Automatic Cycle Counters - Per Route	£38,696
Automatic Cycle Counters - Per Counter	£8,292

7.2.3 The cost estimates for individual elements have been applied to the scheme proposals for each route map as shown in Table 7.2 below.

<sup>&</sup>lt;sup>6</sup> Construction output price indices - Office for National Statistics

Мар	Total Map Costs
Map 1	£2,491,663
Map 2	£1,187,101
Мар 3	£2,859,816
Map 4	£589,244
Map 5	£307,010
Map 6	£891,892
Map 7	£2,847,580
Map 8	£1,750,550
Мар 9	£50,000
Destination Facilities	£290,220
Signage	£16,584
TOTAL	£13,281,660

 Table 7.2 – Leeds & Liverpool Canal Access & Connectivity Interventions Base Cost Estimates

- 7.2.4 A review of the proposals on each map has been undertaken to determine if all proposals would remain a priority if some of the proposals could be delivered or if the proposals could potentially be considered alternatives with a preferrable proposal retained in each case.
- 7.2.5 Where some of the proposals would not be a priority should other proposals be delivered the cost estimate has been revised to remove the lower priority proposals in Table 7.3 below. The table has also been updated to consider potential sources of match funding including s106 developer contributions, the Levelling Up Fund and Bus Service Improvement Plan funding.

Мар	Total Map Costs	Match Funding	Outstanding
Map 1	£1,149,050	£50,000	£1,099,050
Map 2	£480,421	£210,000	£270,421
Мар 3	£2,859,816	£2,034,680	£825,136
Map 4	£564,244	£0	£564,244
Map 5	£307,010	£0	£307,010
Map 6	£891,892	£0	£891,892
Map 7	£1,607,950	£0	£1,607,950
Map 8	£1,750,550	£376,000	£1,374,550
Map 9	£50,000	£50,000	£0
Destination Facilities	£290,220		£290,220
Signage	£16,584		£16,584
Sub Total	£9,967,737	£2,720,680	£7,247,057

Table 7.3 – Leeds & Liverpool Canal Access & Connectivity Interventions Revised Cost Estimates

7.2.6 The derived scheme costs for the access and connectivity improvement proposals do not include any allowance for contingency, risk and inflation or scheme development (e.g. design fee, commissioning and works management). A more detailed breakdown of the review is provided in Appendix E.

## 7.3 Funding

- 7.3.1 The phasing of scheme delivery is currently unknown. It is anticipated that those schemes which require negotiation with landowners or Traffic Regulation Orders, etc. will take longer to deliver.
- 7.3.2 At the current time s106 developer contributions have been secured towards Map 1 (Whitebirk Industrial Estate) improvements and Map 2 (Whitebirk & Little Harwood) improvements to the Red

Lion roundabout. New access points to the canal from the Star Lane residential development shall be delivered by the developer. There is also potential for a new employment development at M65 Junction 3 to make developer contributions towards the relocation and upgrade of pedestrian crossings proposed in Map 8 (Feniscowles).

- 7.3.3 Blackburn with Darwen Borough Council have submitted a Levelling Up Fund bid which includes a package of cycle network improvements across Southeast Blackburn. Some of the improvements within Map 3 (Blackburn Town Centre) are also included within the LUF proposals. It has recently been announced that the LUF bid has been successful with around £1.14m of LUF funding towards the Map 2 & Map 3 proposals. There is also Bus Service Improvement Funding secured to deliver an improvement scheme at the Larkhill junction (Map 3).
- 7.3.4 In summary the potential sources of funding for the scheme are as follows:
  - Levelling Up Fund £1,143,000
  - S106 Developer Contributions £330,000
  - Bus Service Improvement Plan £331,680
- 7.3.5 Blackburn with Darwen Borough Council shall continue to seek s106 developer contributions from new developments coming forward towards the Leeds & Liverpool Canal access and connectivity improvements to fund further enhancements or reduce the burden on the Active Travel Fund.

#### 7.4 Phased Delivery

- 7.4.1 At this stage it is difficult to come up with a realistic programme of works as there is no confirmed source of funding. This document has been produced to enable discussion, revision and adoption of the proposals. Once this has been done, elements of the project can be put forward for the sources of funding identified in the previous section.
- 7.4.2 It is therefore sensible to break the whole project into phases for ease of delivery. Each phase should be able to stand alone, make a positive contribution and achieve high quality standards so that it creates the catalyst required to develop future phases.
- 7.4.3 The project could be broken down into the map phases shown within the detailed maps provided. Alternatively, further consideration should be given to any dependencies such as 3<sup>rd</sup> party land requirements and permissions so that quick win schemes can be delivered early and progress made on any agreements and or permissions required to deliver other scheme elements.
- 7.4.4 The cost estimates have been derived from the cost estimate sheets provided in Appendix C. They are approximations only at the time of writing of this report and each element will need to be verified as the schemes are developed in more detail.

## 8 Conclusions

- 8.1.1 This report sets out the proposals in some detail for creating a high-quality network centred around the upgraded towpath of the Leeds Liverpool Canal. The towpath would undoubtedly become a popular route. This is an exciting opportunity to create sustainable transport infrastructure that will benefit utility, leisure and tourist journeys.
- 8.1.2 Implementation of the schemes as proposed in this access and connectivity development plan will provide the infrastructure to enable a significant change in travel behaviour in the borough of Blackburn with Darwen.

# APPENDIX A – Existing Canal Access Point Audit Scoring Criteria

Criteria	2 (Green)	1 (Amber)	0 (Red)
ATTRACTIVENESS			C (new)
maintenance	footways well maintained, with no significant issues noted	Minor littering. Overgrown vegetation. Dtreet furniture falling into minor disrepair (e.g. peeling paint)	Littering and/or dog mess prevalent. Seriously overgrown vegetation, including low branches. Street furniture falling into major
fear of crime - antisocial behaviour?	with appropriate natural surveillance	minor vandalism. Lack of active frontage and natural surveillance (e.g. houses set back or back onto street)	Major or prevalent vandalism. Evidence of criminal/antisocial activity. Route is isolated, not subject to natural surveillance (including where sight lines are inadequate
traffic noise & pollution	Traffic noise and pollution do not affect the attractiveness	Levels of traffic noise and/or pollution could be improved	Severe traffic pollution and/or severe traffic noise
accessibility for all users	Easily accessible by all users (i.e. pedestrian, cyclists, wheelchair) - no obstruction	A part of users can access	Not all user types can access easily (only cyclist/only pedestrians/only wheelchairs?)
COMFORT			
condition (in good condition/some defects/uneven surface)	Footways level and in good condition, with no trip hazards.	Some defects noted, typically isolated (such as trenching or patching) or minor (such as cracked, but level pavers). Defects unlikely to result in trips or difficulty for wheelchairs, prams etc. Some footway crossovers resulting in uneven surface.	Large number of footway crossovers resulting in uneven surface, subsided or fretted pavement, or significant uneven patching or trenching.
footway width (excess of 2m/ btwn 1.5-2m/ <1.5m)	Able to accommodate all users without 'give and take' between users or walking on roads. Footway widths generally in excess of 2m.	Footway widths of between approximately 1.5m and 2m. Occasional need for 'give and take' between users and walking on roads.	Footway widths of less than 1.5m (i.e. standard wheelchair width). Limited footway width requires users to 'give and take' frequently, walk on roads and/or results in crowding/delay.
obstructions (restricting access)	No obstruction restricting access	Temporary obstructions restricting clearance width	Barriers/gates/shelters restricting access
gradient (no slope/<8% slope/>8% slope)	There are no slopes on footway.	Slopes exist but gradients do not exceed 8 per cent (1 in 12).	Gradients exceed 8 per cent (1 in 12).
SAFETY traffic volume	Traffic volume low, or pedestrians can keep distance from moderate traffic volumes.	Traffic volume moderate and pedestrians in close proximity.	High traffic volume, with pedestrians unable to keep their distance from traffic.
traffic speed	Traffic speeds low, or pedestrians can keep distance from moderate traffic speeds.	Traffic speeds moderate and pedestrians in close proximity.	High traffic speeds, with pedestrians unable to keep their distance from traffic.
visibility (2mx25m good / 1mx10m okay / anything less poor	Good visibility for all users.	Visibility could be somewhat improved but unlikely to result in collisions.	Poor visibility, likely to result in collisions.
DIRECTNESS			
gaps in traffic (where no controlled crossings present)	Crossing of road easy, direct, and comfortable and without delay (< 5s average).	Crossing of road direct, but associated with some delay (up to 15s average).	Crossing of road associated indirect, or associated with significant delay (>15s average).
provision of crossings for pedestrians/cyclists	controlled crossing (pelican - puffin -zebra - toucan etc.)	uncontrolled crossing with dropped kerbs and tactile pavings	no provision
DELIVERABILITY	,		
impact on scheme cost	No need to major improvement	Requires moderate improvement	Require major improvement
COHERENCE			
dropped kerbs	Adequate dropped kerb provision.	Dropped kerbs, albeit not to current standards.	Dropped kerbs absent or incorrect.
tactile paving	Adequate tactile paving provision.	Tactile paving provided, albeit not to current standards.	Tactile paving absent or incorrect.

## APPENDIX B – Existing Canal Access Scores

#### Blackburn with Darwen - Leeds & Liverpool Canal Existing Access Point Audit

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LIKELY LEVEL OF DEMAND (CWZ)

TOWPATH CROSSES HIGHWAY

TOTAL

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  | E21  | E22  | E23  | E24  | E25  | E26   
   
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   | E35  | E36  |
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  | E21  | E22  | E23  | E24  | E25  | E26   
   
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   | E28  | E29  
   | E30  | E31   | E32  | E33   | E34   
   | E35  | E36  |
| 22       | 24   | 12  | 19  | 14  | 12  | 21  | 14   
   
   
  | 27  | 9   | 15   
   
  | 16  | 16   
  | 10  | 19  | 19  | 10   
   
  |  |  | 23   
   
  | 25   | 16   | 16   | 17   | 25   | 16  
   
  | 22   
   | 19   | 6  
   | 20   | 21  | 15   | 13  | 18  
   | 26   | 17   |
| 69%      | 75%  | 38%   | 59%   | 44%   | 38%   | 66%   | 44%  
   
   
  | 84%   | 28%   | 47%  
   
  | 50%   | 50%  
  | 31%   | 59%   | 59%   | 31%  
   
  | 59%  | 53%  | 72%  
   
  | 78%  | 50%  | 50%  | 53%  | 78%  | 50%   
   
  | 69%  
   | 59%  | 19%  
   | 63%  | 66%   | 47%  | 41%   | 56%   
   | 81%  | 53%  |
| 69%      | 1370   | 20%   | 33/0  | 44/0  | 30/0  | 00/0  | 4470   
   
   
  | 0.70  | 20/0  | 4770   
   
  | 00/0  | 00/0   
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| 69%      | 13%  | 30%   | 3570  | 4470  | 13070   | 0070  | 4470   
   
   
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     1       2       2       1       1       1       2       1       1       1       0       2       1       1       0       0       2       1       1       0       0       2       1       1       0       0       1       1       0       0       1<!--</td--><td>2       2       1       1       0       0       2       2       2       1       2         2       1       2       1       1       0       2       2       2       1       2         2       2       2       0       2       2       2       1       2       2       1       2         2       2       1       2       1       0       2       1       2       2       1         2       2       1       1       1       1       2       1       2       0       2         8       7       6       4       4       2       8       6       8       4       7         2       2       1       1       1       1       2       1       2       1       1       1       0       0       0       0       0       0       0       0       0       1       &lt;</td><td>2       2       1       1       0       0       2       2       2       1       2       2         2       1       2       1       1       0       2       2       2       1       2       2         2       2       2       0       2       2       2       1       2       2       1       1       1         2       2       1       2       1       1       1       2       2       1       1       1         2       2       1       1       1       1       2       1       2       1       2       1       2       1       2       1       2       1       1       1       2       1       1       1       2       1       1       1       1       1       1       0       1</td><td>2       2       1       1       0       0       2       2       2       1       2       2       2         2       1       2       1       1       0       2       2       2       1       2       2       2         2       2       2       0       2       2       2       1       2       2       1       1       1         2       2       1       2       1       0       2       1       2       1       1       1         2       2       1       1       1       1       2       1       2       1       2       1       1       1       1         2       2       1       1       1       1       2       1       2       1       1       1         1       1       0       1       0       1       &lt;</td><td>2       2       1       1       0       0       2       2       2       1       2       2       2       1         2       1       2       1       1       0       2       2       2       1       2       2       2       1</td><td>2       2       1       1       0       0       2       2       2       1       2       2       2       1      
1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1</td><td>2       2       1       1       0       0       2       2       2       1       2       2       1       1       0         2       1       2       1       1       0       2       2       2       1       2       2       2       0       2       2         2       2       1       2       1       0       2       1       2       2       1       1       1       1       1       2       2         2       2       1       2       1       2       1       2       1       1       1       1       1       1       1       1       2       1       2       1<!--</td--><td>E1       E2       E3       E4       E5       E6       E7       E8       E9       E10       E11       E12       E13       E14       E15       E16       E17         2       2       1       1       0       0       2       2       2       1       2       2       2       1       1       1       0       0         2       2       1       1       0       2       2       2       1       1       1       1       1       0       0       0         2       2       1       2       1       2       1       2       1       1       1       1       1       1       1       1       2       2       1</td><td>E1         E2         E3         E4         E5         E6         E7         E8         E9         E10         E11         E12         E13         E14         E15         E16         E17         E18           2         2         1         1         0         0         2         2         2         1         2         2         1         1         0         0         2           2         1         2         1         1         2         2         1         1         1         1         0         2         1         2         2         1         1         1         1         0         2         2         1</td><td>E1         E2         E3         E4         E5         E6         E7         E8         E9         E10         E11         E12         E13         E14         E15         E16         E17         E18         E19           2         2         1         1         0         0         2         2         2         1         2         2         1         1         0         0         2         1         1         2         2         1         1         0         1         1         1         0         2         1         2         0         2         1         1         0         1         <t< td=""><td>E1       E2       E3       E4       E5       E6       E7       E8       E9       E10       E11       E12       E13       E14       E15       E16       E17       E18       E19       E20         2       2       1       1       0       0       2       2       2       1       2       2       2       1       1       0       0       2       1       2         2       2       1       1       0       2       2       2       1</td><td>E1         E2         E3         E4         E5         E6         F7         E8         E9         E10         E11         E12         E13         E14         E15         E16         E17         E18         E19         E20         E21           2         2         1         1         0         0         2         2         2         1         1         0         0         2         1         2         2         1         1         1         0         2         2         2         1         1         1         0         2         1         2         2         1         1         1         0         2         1</td><td>E1         E2         E3         E4         E5         E6         E7         E8         E9         E10         E11         E12         E13         E14         E15         E16         E17         E18         E19         E20         E21         E22         2         1         1         0         0         2         2         2         1         1         0         0         2         1         2         2         2         1         1         1         0         0         2         1         2         2         1         1         1         0         0         2         1         2         2         1         1         1         1         1         1         2         2         2         1         2         1</td><td>E1         E2         E3         E4         E5         E6         E7         E8         E9         E10         E11         E12         E13         E14         E15         E16         E17         E18         E19         E20         E21         E22         E23           2         1         1         0         0         2         2         2         1         1         0         0         2         1         2         2         1         1         0         0         2         1         2         2         1         1         1         1         0         1         1         1         1         1         1         1         1         2         2         1         1         2         2         1</td><td>E1         E2         E3         E4         E5         E6         E7         E8         E9         E10         E11         E12         E13         E14         E15         E16         E17         E18         E19         E20         E21         E22         E23         E24           2         2         1         2         2         2         1         2         2         1         1         0         0         2         1         2         2         1         1         1         1         1         2         2         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         2         2         1</td><td>E1         E2         E3         E4         E5         E6         E7         E8         E9         E10         E11         E12         E13         E14         E15         E16         E17         E18         E19         E20         E21         E22         E23         E24         E23           2         1         1         0         0         2         1         2         2         1         1         0         0         2         1         2         2         1         1         1         0         1         1         1   
     2         2         1<td>E1         E2         E3         E4         E5         E6         E7         E8         E9         E10         E11         E12         E13         E14         E15         E16         E17         E18         E19         E20         E21         E22         E23         E24         E25         E26           2         2         1         1         0         0         2         2         2         2         1         1         0         0         2         2         2         2         2         2         2         2         2         2         2         2         2         2         1         1         1         0         2         1         2         1<!--</td--><td>E1         E2         E3         E4         E5         E6         E7         E8         E9         E10         E11         E12         E13         E14         E15         E16         E17         E18         E19         E20         E21         E22         E23         E24         E25         E26         E27           2         1         1         0         0         2         2         1         2         2         1         1         0         2         2         2         1         2         2         1         2         1         1         1         0         2         2         1         2         1</td><td>E1         E2         E3         E4         E5         E6         E7         E8         E9         E10         E11         E12         E13         E14         E15         E16         E17         E18         E19         E20         E21         E22         E23         E24         E25         E26         E27         E28           2         1         1         0         0         2         1         2         2         1         2         1         2         2         1         2         2         1         2         2         1         2         1         2         2         1         <td< td=""><td>E1       E2       E3       E4       E5       E6       E7       E8       E9       E10       E11       E12       E13       E14       E15       E16       E17       E18       E19       E20       E21       E22       E23       E24       E25       E26       E27       E28       E29         2       1       1       0       2       2       1       2       2       1       2       2       1       2       1       2       1       2       1       2       1       2       1       2       1</td><td>E1       E2       E3       E4       E5       E6       E7       E8       E9       E10       E11       E12       E13       E14       E15       E16       E17       E18       E19       E20       E21       E22       E23       E24       E25       E26       E27       E28       E29       E30       C2       2       1       1       0       0       2       1       2       1       2       1       2       1       2       1       2       1       2       1       2       1       2       1       2       1       2       1       2       1</td><td>E1       E2       E3       E4       E5       E6       E7       E8       E9       E10       E11       E12       E13       E14       E15       E16       E17       E18       E19       E20       E21       E22       E23       E24       E25       E26       E27       E28       E29       E30       E31         2       1       1       0       2       2       1       1       0       0       2       1       2       2       1       2       2       1       2       2       1       2       2       1       1       2       1</td></td<><td>E1       E2       E3       E4       E5       E6       E7       E8       E9       E10       E11       E12       E13       E14       E15       E16       E17       E18       E19       E20       E21       E22       E23       E24       E25       E26       E27       E28       E29       E30       E31       E12       E13       E14       E15       E16       E17       E18       E19       E20       E21       E22       E23       E24       E26       E27       E28       E29       E30       E31       E13       E14       E15       E16       E17       E18       E19       E30       C1       1       1       1       2       2       1       1       2       1       1       2       1       1       2       1<!--</td--><td>E1       E2       E3       E4       E5       E6       E7       E8       E9       E0       E1       E2       <the2< th="">       E2       E2       <the< td=""><td>E1       E2       E3       E4       E5       E6       E7       E8       E9       E0       E1       E2       E3       E4       E5       E6       E7       E8       E9       E0       E1       E2       E2       E2       E2       E2       E2       E2       E2       E2       E3       <th< td=""><td>E1       E2       E3       E4       E5       E6       F7       E8       E9       E10       E11       E12       E13       E14       E15       E16       E17       E18       E19       E20       E21       E22       E24       E24</td></th<></td></the<></the2<></td></td></td></td></td></t<></td></td></td></t<> | 2       2       1       1       0       0       2       2         2       1       2       1       1       0       2       2       2         2       2       2       2       2       1       1       0       2       2         2       2       2       1       2       1       0       2       1         2       2       1       2       1       1       1       2       1         8       7       6       4       4       2       8       6 | 2       2       1       1       0       0       2       2       2         2       1       2       1       1       0       2       2       2         2       2       2       0       2       2       2       1       2         2       2       1       2       1       0       2       2       2         2       2       1       2       1       0       2       1       2         8       7       6       4       4       2       8       6       8         7       6       4       4       2       8       6       1       2         1       1       0       1       0       0       2       0       1         2       2       1       1       1       2       1       1       1         7       5       5       5       4       4       7       3       6 | 2       2       1       1       0       0       2       2       2       1         2       1       2       1       1       0       2       2       2       1         2       2       2       0       2       2       2       1       2       2       2       1         2       2       1       2    
  1       0       2       1       2       2       2       1       2       2       2       1       2       2       2       1       2       2       2       1       1       1       2       2       1       1       1       2       1       1       1       0       2       1       1       0       0       2       1       1       0       0       2       1       1       0       0       1       1       0       0       1 </td <td>2       2       1       1       0       0       2       2       2       1       2         2       1       2       1       1       0       2       2       2       1       2         2       2       2       0       2       2       2       1       2       2       1       2         2       2       1       2       1       0       2       1       2       2       1         2       2       1       1       1       1       2       1       2       0       2         8       7       6       4       4       2       8       6       8       4       7         2       2       1       1       1       1       2       1       2       1       1       1       0       0       0       0       0       0       0       0       0       1       &lt;</td> <td>2       2       1       1       0       0       2       2       2       1       2       2         2       1       2       1       1       0       2       2       2       1       2       2         2       2       2       0       2       2       2       1       2       2       1       1       1         2       2       1       2       1       1       1       2       2       1       1       1         2       2       1       1       1       1       2       1       2       1       2       1       2       1       2       1       2       1       1       1       2       1       1       1       2       1       1       1       1       1       1       0       1</td> <td>2       2       1       1       0       0       2       2       2       1       2       2       2         2       1       2       1       1       0       2       2       2       1       2       2       2         2       2       2       0       2       2       2       1       2       2       1       1       1         2       2       1       2       1       0       2       1       2       1       1       1         2       2       1       1       1       1       2       1       2       1       2       1       1       1       1         2       2       1       1       1       1       2       1       2       1       1       1         1       1       0       1       0       1       &lt;</td> <td>2       2       1       1       0       0       2       2       2       1       2       2       2       1         2       1       2       1       1       0       2       2       2       1       2       2       2       1</td> <td>2       2       1       1       0       0       2       2       2       1       2       2       2       1</td> <td>2       2       1       1       0       0       2       2       2       1       2       2       1       1       0         2       1       2       1       1       0       2       2       2       1       2       2       2       0       2       2         2       2       1       2       1       0       2       1       2       2       1       1       1       1       1       2       2         2       2       1       2       1       2       1       2       1       1       1       1       1       1       1       1       2       1       2       1<!--</td--><td>E1       E2       E3       E4       E5       E6       E7       E8       E9       E10       E11       E12       E13       E14       E15       E16       E17         2       2       1       1       0       0       2       2       2       1       2       2       2       1       1       1       0       0         2       2       1       1       0       2       2       2       1       1       1       1       1       0       0       0         2       2       1       2       1       2       1       2       1       1       1       1       1       1       1       1       2       2       1</td><td>E1         E2         E3         E4         E5         E6         E7         E8         E9         E10         E11         E12         E13         E14         E15         E16         E17         E18           2         2         1         1         0         0         2         2         2         1         2         2         1         1         0         0         2           2         1         2         1         1         2         2         1         1         1         1         0         2         1         2         2         1         1         1         1         0         2         2         1</td><td>E1         E2         E3         E4         E5         E6         E7         E8         E9         E10         E11         E12         E13         E14         E15         E16         E17         E18         E19           2         2         1         1         0         0         2         2         2         1         2         2         1         1         0         0         2         1         1         2         2         1         1         0         1         1         1         0         2         1         2         0         2         1         1         0         1         <t< td=""><td>E1       E2       E3       E4       E5       E6       E7       E8       E9       E10       E11       E12       E13       E14       E15       E16       E17       E18       E19       E20         2       2       1       1       0       0       2       2       2       1       2       2       2       1       1       0       0       2       1       2         2       2       1       1       0       2       2       2       1      
1       1</td><td>E1         E2         E3         E4         E5         E6         F7         E8         E9         E10         E11         E12         E13         E14         E15         E16         E17         E18         E19         E20         E21           2         2         1         1         0         0         2         2         2         1         1         0         0         2         1         2         2         1         1         1         0         2         2         2         1         1         1         0         2         1         2         2         1         1         1         0         2         1</td><td>E1         E2         E3         E4         E5         E6         E7         E8         E9         E10         E11         E12         E13         E14         E15         E16         E17         E18         E19         E20         E21         E22         2         1         1         0         0         2         2         2         1         1         0         0         2         1         2         2         2         1         1         1         0         0         2         1         2         2         1         1         1         0         0         2         1         2         2         1         1         1         1         1         1         2         2         2         1         2         1</td><td>E1         E2         E3         E4         E5         E6         E7         E8         E9         E10         E11         E12         E13         E14         E15         E16         E17         E18         E19         E20         E21         E22         E23           2         1         1         0         0         2         2         2         1         1         0         0         2         1         2         2         1         1         0         0         2         1         2         2         1         1         1         1         0         1         1         1         1         1         1         1         1         2         2         1         1         2         2         1</td><td>E1         E2         E3         E4         E5         E6         E7         E8         E9         E10         E11         E12         E13         E14         E15         E16         E17         E18         E19         E20         E21         E22         E23         E24           2         2         1         2         2         2         1         2         2         1         1         0         0         2         1         2         2         1         1         1         1         1         2         2         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         2         2         1</td><td>E1         E2         E3         E4         E5         E6         E7         E8         E9         E10         E11         E12         E13         E14         E15         E16         E17         E18         E19         E20         E21         E22         E23         E24         E23           2         1         1         0         0         2         1         2         2         1         1         0         0         2         1         2         2         1         1         1         0         1         1         1         2         2         1<td>E1         E2         E3         E4         E5         E6         E7         E8         E9         E10         E11         E12         E13         E14         E15         E16         E17         E18         E19         E20         E21         E22         E23         E24         E25         E26           2         2         1         1         0         0         2         2         2         2         1         1         0         0         2         2         2         2         2         2         2         2         2         2         2         2         2         2         1         1         1         0         2         1         2         1<!--</td--><td>E1         E2         E3         E4         E5         E6         E7         E8         E9         E10         E11         E12         E13         E14         E15         E16         E17         E18         E19         E20         E21         E22         E23         E24         E25         E26         E27           2         1         1         0         0         2         2         1         2         2         1         1         0         2         2         2         1         2         2         1         2         1         1         1         0         2         2         1         2         1</td><td>E1         E2         E3         E4         E5         E6         E7         E8         E9         E10         E11         E12         E13         E14         E15         E16         E17         E18         E19         E20         E21         E22         E23         E24         E25         E26         E27         E28           2         1         1         0         0         2         1         2         2         1         2         1         2         2         1         2         2         1         2         2         1         2         1         2         2         1         <td< td=""><td>E1       E2       E3       E4       E5       E6       E7       E8       E9       E10       E11       E12       E13       E14       E15       E16       E17       E18       E19       E20       E21       E22       E23       E24       E25       E26       E27       E28       E29         2       1       1       0       2       2       1       2       2       1       2       2       1       2       1       2       1       2       1       2       1       2       1       2       1</td><td>E1       E2       E3       E4       E5    
  E6       E7       E8       E9       E10       E11       E12       E13       E14       E15       E16       E17       E18       E19       E20       E21       E22       E23       E24       E25       E26       E27       E28       E29       E30       C2       2       1       1       0       0       2       1       2       1       2       1       2       1       2       1       2       1       2       1       2       1       2       1       2       1       2       1       2       1</td><td>E1       E2       E3       E4       E5       E6       E7       E8       E9       E10       E11       E12       E13       E14       E15       E16       E17       E18       E19       E20       E21       E22       E23       E24       E25       E26       E27       E28       E29       E30       E31         2       1       1       0       2       2       1       1       0       0       2       1       2       2       1       2       2       1       2       2       1       2       2       1       1       2       1</td></td<><td>E1       E2       E3       E4       E5       E6       E7       E8       E9       E10       E11       E12       E13       E14       E15       E16       E17       E18       E19       E20       E21       E22       E23       E24       E25       E26       E27       E28       E29       E30       E31       E12       E13       E14       E15       E16       E17       E18       E19       E20       E21       E22       E23       E24       E26       E27       E28       E29       E30       E31       E13       E14       E15       E16       E17       E18       E19       E30       C1       1       1       1       2       2       1       1       2       1       1       2       1       1       2       1<!--</td--><td>E1       E2       E3       E4       E5       E6       E7       E8       E9       E0       E1       E2       <the2< th="">       E2       E2       <the< td=""><td>E1       E2       E3       E4       E5       E6       E7       E8       E9       E0       E1       E2       E3       E4       E5       E6       E7       E8       E9       E0       E1       E2       E2       E2       E2       E2       E2       E2       E2       E2       E3       <th< td=""><td>E1       E2       E3       E4       E5       E6       F7       E8       E9       E10       E11       E12       E13       E14       E15       E16       E17       E18       E19       E20       E21       E22       E24       E24</td></th<></td></the<></the2<></td></td></td></td></td></t<></td></td> | 2       2       1       1       0       0       2       2       2       1       2         2       1       2       1       1       0       2       2       2       1       2         2       2       2       0       2       2       2       1       2       2       1       2         2       2       1       2       1       0       2       1       2       2       1         2       2       1       1       1       1       2       1       2       0       2         8       7       6       4       4       2       8       6       8       4       7         2       2       1       1       1       1       2       1       2       1       1       1       0       0       0       0       0       0       0       0       0       1       < | 2       2       1       1       0       0       2       2       2       1       2       2         2       1       2       1       1       0       2       2       2       1       2       2         2       2       2       0       2       2       2       1       2       2       1       1       1         2       2       1       2       1       1       1       2       2       1       1       1         2       2       1       1       1       1       2       1       2       1       2       1       2       1       2       1       2       1       1       1       2       1       1       1       2       1       1       1       1       1       1       0       1 | 2       2       1       1       0       0       2       2       2       1       2       2       2         2       1       2       1       1       0       2       2       2       1       2       2       2         2       2       2       0       2       2       2       1       2       2       1       1       1         2       2       1       2       1       0       2       1       2       1       1       1         2       2       1       1       1       1       2       1       2       1       2       1       1       1       1         2       2       1       1       1       1       2       1       2       1       1       1         1       1       0       1       0       1       < | 2       2       1       1       0       0       2       2       2       1       2       2       2       1         2       1       2       1       1       0       2       2       2       1       2       2       2       1 | 2       2       1       1       0       0       2       2       2       1       2       2       2       1 | 2       2       1       1       0       0       2       2       2       1       2       2       1       1       0         2       1       2       1       1       0       2       2       2       1       2       2       2       0       2       2         2       2       1       2       1       0       2       1       2       2       1       1       1       1       1       2       2         2       2       1       2       1       2       1       2       1       1       1       1       1       1       1       1       2       1       2       1 </td <td>E1       E2       E3       E4       E5       E6       E7       E8       E9       E10       E11       E12       E13       E14       E15       E16       E17         2       2       1       1       0       0       2       2       2       1       2       2       2       1       1       1       0       0         2       2       1       1       0       2       2       2       1       1       1       1       1       0       0       0         2       2       1       2       1       2       1       2       1       1       1       1       1       1       1       1       2       2       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1
      1       1</td> <td>E1         E2         E3         E4         E5         E6         E7         E8         E9         E10         E11         E12         E13         E14         E15         E16         E17         E18           2         2         1         1         0         0         2         2         2         1         2         2         1         1         0         0         2           2         1         2         1         1         2         2         1         1         1         1         0         2         1         2         2         1         1         1         1         0         2         2         1</td> <td>E1         E2         E3         E4         E5         E6         E7         E8         E9         E10         E11         E12         E13         E14         E15         E16         E17         E18         E19           2         2         1         1         0         0         2         2         2         1         2         2         1         1         0         0         2         1         1         2         2         1         1         0         1         1         1         0         2         1         2         0         2         1         1         0         1         <t< td=""><td>E1       E2       E3       E4       E5       E6       E7       E8       E9       E10       E11       E12       E13       E14       E15       E16       E17       E18       E19       E20         2       2       1       1       0       0       2       2       2       1       2       2       2       1       1       0       0       2       1       2         2       2       1       1       0       2       2       2       1</td><td>E1         E2         E3         E4         E5         E6         F7         E8         E9         E10         E11         E12         E13         E14         E15         E16         E17         E18         E19         E20         E21           2         2         1         1         0         0         2         2         2         1         1         0         0         2         1         2         2         1         1         1         0         2         2         2         1         1         1         0         2         1         2         2         1         1         1         0         2         1</td><td>E1         E2         E3         E4         E5         E6         E7         E8         E9         E10         E11         E12         E13         E14         E15         E16         E17         E18         E19         E20         E21         E22         2         1         1         0         0         2         2         2         1         1         0         0         2         1         2         2         2         1         1         1         0         0         2         1         2         2         1         1         1         0         0         2         1         2         2         1         1         1         1         1         1         2         2         2         1         2         1</td><td>E1         E2         E3         E4         E5         E6         E7         E8         E9         E10         E11         E12         E13         E14         E15         E16         E17         E18         E19         E20         E21         E22         E23           2         1         1         0         0         2         2         2         1         1         0         0         2         1         2         2         1         1         0         0         2         1         2         2         1         1         1         1         0         1         1         1         1         1         1         1         1         2         2         1         1         2         2         1</td><td>E1         E2         E3         E4         E5         E6         E7         E8         E9         E10         E11         E12         E13         E14         E15         E16         E17         E18         E19         E20         E21         E22         E23         E24           2         2         1         2         2         2         1         2         2         1         1         0         0         2         1         2         2         1         1         1         1         1         2         2         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         2         2         1</td><td>E1         E2         E3         E4         E5         E6         E7         E8         E9         E10         E11         E12         E13         E14         E15         E16         E17         E18         E19         E20         E21         E22         E23         E24         E23           2         1         1         0         0         2         1         2         2         1         1         0         0         2         1         2         2         1         1         1         0         1         1         1         2         2         1<td>E1         E2         E3         E4         E5         E6         E7         E8         E9         E10         E11         E12         E13         E14         E15         E16         E17         E18         E19         E20         E21         E22         E23         E24         E25         E26           2         2         1         1         0         0         2         2         2         2         1         1         0         0         2         2         2         2         2         2         2         2         2         2         2         2         2         2         1         1         1         0         2         1         2         1<!--</td--><td>E1         E2         E3         E4         E5         E6         E7         E8         E9         E10         E11         E12         E13         E14         E15         E16         E17   
     E18         E19         E20         E21         E22         E23         E24         E25         E26         E27           2         1         1         0         0         2         2         1         2         2         1         1         0         2         2         2         1         2         2         1         2         1         1         1         0         2         2         1         2         1</td><td>E1         E2         E3         E4         E5         E6         E7         E8         E9         E10         E11         E12         E13         E14         E15         E16         E17         E18         E19         E20         E21         E22         E23         E24         E25         E26         E27         E28           2         1         1         0         0         2         1         2         2         1         2         1         2         2         1         2         2         1         2         2         1         2         1         2         2         1         <td< td=""><td>E1       E2       E3       E4       E5       E6       E7       E8       E9       E10       E11       E12       E13       E14       E15       E16       E17       E18       E19       E20       E21       E22       E23       E24       E25       E26       E27       E28       E29         2       1       1       0       2       2       1       2       2       1       2       2       1       2       1       2       1       2       1       2       1       2       1       2       1</td><td>E1       E2       E3       E4       E5       E6       E7       E8       E9       E10       E11       E12       E13       E14       E15       E16       E17       E18       E19       E20       E21       E22       E23       E24       E25       E26       E27       E28       E29       E30       C2       2       1       1       0       0       2       1       2       1       2       1       2       1       2       1       2       1       2       1       2       1       2       1       2       1       2       1       2       1</td><td>E1       E2       E3       E4       E5       E6       E7       E8       E9       E10       E11       E12       E13       E14       E15       E16       E17       E18       E19       E20       E21       E22       E23       E24       E25       E26       E27       E28       E29       E30       E31         2       1       1       0       2       2       1       1       0       0       2       1       2       2       1       2       2       1       2       2       1       2       2       1       1       2       1</td></td<><td>E1       E2       E3       E4       E5       E6       E7       E8       E9       E10       E11       E12       E13       E14       E15       E16       E17       E18       E19       E20       E21       E22       E23       E24       E25       E26       E27       E28       E29       E30       E31       E12       E13       E14       E15       E16       E17       E18       E19       E20       E21       E22       E23       E24       E26       E27       E28       E29       E30       E31       E13       E14       E15       E16       E17       E18       E19       E30       C1       1       1       1       2       2       1       1       2       1       1       2       1       1       2       1<!--</td--><td>E1       E2       E3       E4       E5       E6       E7       E8       E9       E0       E1       E2       <the2< th="">       E2       E2       <the< td=""><td>E1       E2       E3       E4       E5       E6       E7       E8       E9       E0       E1       E2       E3       E4       E5       E6       E7       E8       E9       E0       E1       E2       E2       E2       E2       E2       E2       E2       E2       E2       E3       <th< td=""><td>E1       E2       E3       E4       E5       E6       F7       E8       E9       E10       E11       E12       E13       E14       E15       E16       E17       E18       E19       E20       E21       E22       E24       E24</td></th<></td></the<></the2<></td></td></td></td></td></t<></td> | E1       E2       E3       E4       E5       E6       E7       E8       E9       E10       E11       E12       E13       E14       E15       E16       E17         2       2       1       1       0       0       2       2       2       1       2       2       2       1       1       1       0       0         2       2       1       1       0       2       2       2       1       1       1       1       1       0       0       0         2       2       1       2       1       2       1       2       1       1       1       1       1       1       1       1       2       2       1 | E1         E2         E3         E4         E5         E6         E7         E8         E9         E10         E11         E12         E13         E14         E15         E16         E17         E18           2         2         1         1         0         0         2         2         2         1         2         2         1         1         0         0         2           2         1         2         1         1         2         2         1         1         1         1         0         2         1         2         2         1         1         1         1         0         2         2         1 | E1         E2         E3         E4         E5         E6         E7         E8         E9         E10         E11         E12         E13         E14         E15         E16         E17         E18         E19           2         2         1         1         0         0         2         2         2         1         2         2         1         1         0         0         2         1         1         2         2         1         1         0         1         1         1         0         2         1         2         0         2         1         1         0         1 <t< td=""><td>E1       E2       E3       E4       E5       E6       E7       E8       E9       E10       E11       E12       E13       E14       E15       E16       E17       E18       E19       E20         2       2       1       1       0    
  0       2       2       2       1       2       2       2       1       1       0       0       2       1       2         2       2       1       1       0       2       2       2       1</td><td>E1         E2         E3         E4         E5         E6         F7         E8         E9         E10         E11         E12         E13         E14         E15         E16         E17         E18         E19         E20         E21           2         2         1         1         0         0         2         2         2         1         1         0         0         2         1         2         2         1         1         1         0         2         2         2         1         1         1         0         2         1         2         2         1         1         1         0         2         1</td><td>E1         E2         E3         E4         E5         E6         E7         E8         E9         E10         E11         E12         E13         E14         E15         E16         E17         E18         E19         E20         E21         E22         2         1         1         0         0         2         2         2         1         1         0         0         2         1         2         2         2         1         1         1         0         0         2         1         2         2         1         1         1         0         0         2         1         2         2         1         1         1         1         1         1         2         2         2         1         2         1</td><td>E1         E2         E3         E4         E5         E6         E7         E8         E9         E10         E11         E12         E13         E14         E15         E16         E17         E18         E19         E20         E21         E22         E23           2         1         1         0         0         2         2         2         1         1         0         0         2         1         2         2         1         1         0         0         2         1         2         2         1         1         1         1         0         1         1         1         1         1         1         1         1         2         2         1         1         2         2         1</td><td>E1         E2         E3         E4         E5         E6         E7         E8         E9         E10         E11         E12         E13         E14         E15         E16         E17         E18         E19         E20         E21         E22         E23         E24           2         2         1         2         2         2         1         2         2         1         1         0         0         2         1         2         2         1         1         1         1         1         2         2         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         2         2         1</td><td>E1         E2         E3         E4         E5         E6         E7         E8         E9         E10         E11         E12         E13         E14         E15         E16         E17         E18         E19         E20         E21         E22         E23         E24         E23           2         1         1         0         0         2         1         2         2         1         1         0         0         2         1         2         2         1         1         1         0         1         1         1         2         2         1<td>E1         E2         E3         E4         E5         E6         E7         E8         E9         E10         E11         E12         E13         E14         E15         E16         E17         E18         E19         E20         E21         E22         E23         E24         E25         E26           2         2         1         1         0         0         2         2         2         2         1         1         0         0         2         2         2         2         2         2         2         2         2         2         2         2         2         2         1         1         1         0         2         1         2         1<!--</td--><td>E1         E2         E3         E4         E5         E6         E7         E8         E9         E10         E11         E12         E13         E14         E15         E16         E17         E18         E19         E20         E21         E22         E23         E24         E25         E26         E27           2         1         1         0         0         2         2         1         2         2         1         1         0         2         2         2         1         2         2         1         2         1         1         1         0         2         2         1         2         1</td><td>E1         E2         E3         E4         E5         E6         E7         E8         E9         E10         E11         E12         E13         E14         E15         E16         E17         E18         E19         E20         E21         E22         E23         E24         E25         E26         E27         E28           2         1         1         0         0         2         1         2         2         1         2         1         2         2         1         2         2         1         2         2         1         2         1         2         2         1         <td< td=""><td>E1       E2       E3       E4       E5       E6       E7       E8       E9       E10       E11       E12       E13       E14       E15       E16       E17       E18       E19       E20       E21       E22       E23       E24       E25       E26       E27       E28       E29         2       1       1       0       2       2       1       2       2       1       2       2       1       2       1       2       1       2       1       2       1       2       1       2       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1      
1       1</td><td>E1       E2       E3       E4       E5       E6       E7       E8       E9       E10       E11       E12       E13       E14       E15       E16       E17       E18       E19       E20       E21       E22       E23       E24       E25       E26       E27       E28       E29       E30       C2       2       1       1       0       0       2       1       2       1       2       1       2       1       2       1       2       1       2       1       2       1       2       1       2       1       2       1       2       1</td><td>E1       E2       E3       E4       E5       E6       E7       E8       E9       E10       E11       E12       E13       E14       E15       E16       E17       E18       E19       E20       E21       E22       E23       E24       E25       E26       E27       E28       E29       E30       E31         2       1       1       0       2       2       1       1       0       0       2       1       2       2       1       2       2       1       2       2       1       2       2       1       1       2       1</td></td<><td>E1       E2       E3       E4       E5       E6       E7       E8       E9       E10       E11       E12       E13       E14       E15       E16       E17       E18       E19       E20       E21       E22       E23       E24       E25       E26       E27       E28       E29       E30       E31       E12       E13       E14       E15       E16       E17       E18       E19       E20       E21       E22       E23       E24       E26       E27       E28       E29       E30       E31       E13       E14       E15       E16       E17       E18       E19       E30       C1       1       1       1       2       2       1       1       2       1       1       2       1       1       2       1<!--</td--><td>E1       E2       E3       E4       E5       E6       E7       E8       E9       E0       E1       E2       <the2< th="">       E2       E2       <the< td=""><td>E1       E2       E3       E4       E5       E6       E7       E8       E9       E0       E1       E2       E3       E4       E5       E6       E7       E8       E9       E0       E1       E2       E2       E2       E2       E2       E2       E2       E2       E2       E3       <th< td=""><td>E1       E2       E3       E4       E5       E6       F7       E8       E9       E10       E11       E12       E13       E14       E15       E16       E17       E18       E19       E20       E21       E22       E24       E24</td></th<></td></the<></the2<></td></td></td></td></td></t<> | E1       E2       E3       E4       E5       E6       E7       E8       E9       E10       E11       E12       E13       E14       E15       E16       E17       E18       E19       E20         2       2       1       1       0       0       2       2       2       1       2       2       2       1       1       0       0       2       1       2         2       2       1       1       0       2       2       2       1 | E1         E2         E3         E4         E5         E6         F7         E8         E9         E10         E11         E12         E13         E14         E15         E16         E17         E18         E19         E20         E21           2         2         1         1         0         0         2         2         2         1         1         0         0         2         1         2         2         1         1         1         0         2         2         2         1         1         1         0         2         1         2         2         1         1         1         0         2         1 | E1         E2         E3         E4         E5         E6         E7         E8         E9         E10         E11         E12         E13         E14         E15         E16         E17         E18         E19         E20         E21         E22         2         1         1         0         0         2         2         2         1         1         0         0         2         1         2         2         2         1         1         1         0         0         2         1         2         2         1         1         1         0         0         2         1         2         2         1         1         1         1         1         1         2         2         2         1         2         1 | E1         E2         E3         E4         E5         E6         E7         E8         E9         E10         E11         E12         E13         E14         E15         E16         E17         E18         E19         E20         E21         E22         E23           2         1         1         0         0         2         2         2         1         1         0         0         2         1         2         2         1         1         0         0         2         1         2         2         1         1         1         1         0         1         1         1         1         1         1         1         1         2         2         1         1         2         2         1 | E1         E2         E3         E4         E5         E6         E7         E8         E9         E10         E11         E12         E13         E14         E15         E16         E17         E18         E19         E20         E21         E22         E23         E24           2         2         1         2         2         2         1         2         2         1         1         0         0         2         1         2         2         1         1         1         1         1         2         2         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         2         2         1 | E1         E2         E3         E4         E5         E6         E7         E8         E9         E10         E11         E12         E13         E14         E15         E16         E17         E18         E19         E20         E21         E22         E23         E24         E23           2         1         1         0         0         2         1         2         2         1         1         0         0         2         1         2         2         1         1         1         0         1         1         1         2         2         1         1         1         1         1         1         1         1         1         1        
1         1 <td>E1         E2         E3         E4         E5         E6         E7         E8         E9         E10         E11         E12         E13         E14         E15         E16         E17         E18         E19         E20         E21         E22         E23         E24         E25         E26           2         2         1         1         0         0         2         2         2         2         1         1         0         0         2         2         2         2         2         2         2         2         2         2         2         2         2         2         1         1         1         0         2         1         2         1<!--</td--><td>E1         E2         E3         E4         E5         E6         E7         E8         E9         E10         E11         E12         E13         E14         E15         E16         E17         E18         E19         E20         E21         E22         E23         E24         E25         E26         E27           2         1         1         0         0         2         2         1         2         2         1         1         0         2         2         2         1         2         2         1         2         1         1         1         0         2         2         1         2         1</td><td>E1         E2         E3         E4         E5         E6         E7         E8         E9         E10         E11         E12         E13         E14         E15         E16         E17         E18         E19         E20         E21         E22         E23         E24         E25         E26         E27         E28           2         1         1         0         0         2         1         2         2         1         2         1         2         2         1         2         2         1         2         2         1         2         1         2         2         1         <td< td=""><td>E1       E2       E3       E4       E5       E6       E7       E8       E9       E10       E11       E12       E13       E14       E15       E16       E17       E18       E19       E20       E21       E22       E23       E24       E25       E26       E27       E28       E29         2       1       1       0       2       2       1       2       2       1       2       2       1       2       1       2       1       2       1       2       1       2       1       2       1</td><td>E1       E2       E3       E4       E5       E6       E7       E8       E9       E10       E11       E12       E13       E14       E15       E16       E17       E18       E19       E20       E21       E22       E23       E24       E25       E26       E27       E28       E29       E30       C2       2       1       1       0       0       2       1       2       1       2       1       2       1       2       1       2       1       2       1       2       1       2       1       2       1       2       1       2       1</td><td>E1       E2       E3       E4       E5       E6       E7       E8       E9       E10       E11       E12       E13       E14       E15       E16       E17       E18       E19       E20       E21       E22       E23       E24       E25       E26       E27       E28       E29       E30       E31         2       1       1       0       2       2       1       1       0       0       2       1       2       2       1       2       2       1       2       2       1       2       2       1       1       2       1</td></td<><td>E1       E2       E3       E4       E5       E6       E7       E8       E9       E10       E11       E12       E13       E14       E15       E16       E17       E18       E19       E20       E21       E22       E23       E24       E25       E26       E27       E28       E29       E30       E31       E12       E13       E14       E15       E16       E17       E18       E19       E20       E21       E22       E23       E24       E26       E27       E28       E29       E30       E31       E13       E14       E15       E16       E17       E18  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# APPENDIX C – Connectivity Improvements

Map Ref	Origins	Destinations	Connections to other Routes
1		Whitebirk Industrial Estate	Weavers Wheel
T			LCWIP Primary Route 2 - Little Harwood
	Little Harwood	Green Bank Industrial Estate	Weavers Wheel
		Glenfield Business Park	LCWIP Primary Route 2 - Little Harwood
2		Jamiatal Ilm Wal Huda School	
Z		Imperial Mill (Future)	
		Harwood Street Indu	
		Police HQ	
	Higher Audley	Eanam Wharf	LCWIP Primary Route 2 - Little Harwood
	Lower Audley	Blackburn Town Centre	LCWIP Primary Route 2b - Barbara Castle Way
3	Brookhouse	Blackburn Rail Station	
3		Blackburn Bus Station	
		The Peel Centre (Retail & Leisure)	
		Morrisons Supermarket	
	Queens Park	The Peel Centre (Retail & Leisure)	Southeast Blackburn Route 1
	Grimshaw Park	Blackburn Central High School	A6077 Commuter Fast
4		Royal Blackburn Hospital	
		Audley Community Primary School	
		Towns Moor Retail (inc. ASDA)	
	Bank Top	St Wilfreds CofE Academy	Southeast Blackburn Route 5
5	Hollin Bank	Tauheedul Islam Boys High School	A666 Commuter Fast
	The Wrangling	Nova Scotia Retail Park	
	Mill Hill	Ewood Park (Blackburn Rovers FC)	Weavers Wheel
6	Hollin Bank	Mill Hill District Centre	LCWIP Primary Route 3 - St. Bede's to Town Centre
6	Ewood	Mill Hill Rail Station	A666 Commuter Fast
	Moorgate	St. Aiden's Primary School	
	Cherry Tree	Witton Park	LCWIP Primary Route 3 - St. Bede's to Town Centre
	Green Lane	St. Beded's RC High School	LCWIP Primary Route 4 - West Blackburn
7	Feniscliffe	Cherry Tree Cricket Ground	LCWIP Primary Route 6 - Brokenstone Road to A666
/	Mill Hill	St Francis Primary School	A674 Fast Commuter
	Witton	St Peter's RC Primary School	
		Meadowhead Primary School	
	Cherry Tree	Feniscowles Recreation Ground	National Cycle Network Route 6
0	Feniscowles	St Pauls RC Primary School	A674 Fast Commuter
8	Higher Broadhalgh	Feniscowles Primary School	
		Witton Park	
9	Star Lane Residential Development	M65 Junction 3 Employment Site (Proposed)	

# APPENDIX D – Land Ownership and Adopted Highway

KEY FOR ALL

ADOPTED HIGHWAY LAND OWNED BY BLACKBURN WITH DARWEN BOROUGH COUNCIL LAND LEASED BY BLACKBURN WITH DARWEN BOROUGH COUNCIL

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Map 1 Land Ownership and Adopted Highway



Map 2 Land Ownership and Adopted Highway



Map 3 Land Ownership and Adopted Highway



Map 4 Land Ownership and Adopted Highway



Map 5 Land Ownership and Adopted Highway



Map 6 Land Ownership and Adopted Highway



Map 7 Land Ownership and Adopted Highway



Map 7 Land Ownership and Adopted Highway



Map 9 Land Ownership and Adopted Highway

# APPENDIX E – Scheme Design Review and Cost Estimates

Improve crossing provision for pedestrians and cyclists at the A6119 Whitebirk Drive / Philips Road Junction to improve connectivity to Weavers Wheel and LCWIP Priority	Cost Estimate P	Match Funding £50,000	Distance (m)	Land	Priority YES	ATF Bid	Design Check ATE Crossing Selector Tool	Preferred Treatment 1.15 Cycle track offset	Alternative Treatment	Design Check Notes Proposed treatment seems achievable subject to land ownership. Alternative treatment may need considered subject to site constraints.
Route 2 (proposed). New segregated cycle route between A6119 and Lower Philips Road. Includes side road treatment at side roads and site accesses.	£490.748		530	Yes	YES		ATE Route Cross Section Check	3m Two-way Segregated Cycle Track	Shared use footway or Quiet Road	Potential for £50k from s106 (10/22/0517) Desirable minimum achievable subject to further checks on site constraints. Alternative treatment
New segregated cycle route between Philips Road and the Leeds & Liverpool Canal. Includes side road treatment at side roads and site accesses.	£439,822		475	No	YES	-		3m Two-way Segregated Cycle Track	Shared use footway, quiet road or	to be considered. Connects to Weavers Wheel along A6119 and LCWIP Primary Route 2 (Propose Insufficient space for desirable or absolute minimum so will likely require alternative route to the Dishter Exercise Will use the automated for absolute will be and Owner
New pedestrian & cycle access (P1) to the Canal towpath from the new route/Whitebirk Industrial Estate. Extend segregated cycle provision around Cunliffe Road and Crofthead Road (light blue) to improve accessibility to the rest of the Whitebirk Estate.	£25,000 £925,940		0	No	YES	~	and ATE Path Check Canal Access Point Assessment		alternative off highway shared route Stepped access or adverse gradient.	Rishton Floorcraft. Will require agreement/negotiation with Land Owner. Will require agreement/negotiation with Land Owner. Signage and lighting to be included. NA
Extend segregated cycle provision around Culture Road and Crotthead Road (light blue) to improve accessionity to the rest of the Whitebirk Estate. Extend segregated cycle provision around Lower Philips Road (dark blue) to improve accessibility to the rest of the Whitebirk Estate.	£416,673 £2,491,663	£50.000	450	Yes	NO	× × £1.149.05	NA	NA	NA	NA NA
New controlled crossings for pedestrians and cyclists at the Red Lion Roundabout .	£222,502	£180,000		Yes	YES			1.15 Cycle track offset	1.16 Shared use offset	Proposed treatment for controlled crossing across the dual carriageway link to M65 Junction 6 or kerbs and tactiles to be provided for pedestrians only on other arms. To be funded through s106
Improved access to the canal towpath from Davies Road (E5) to shared use step free.	£75,000			Yes	YES	~	Canal Access Point Assessment	Shared use step free access point.	Stepped access or adverse gradient.	Contributions (£180k). Constrained site. Subject to more detailed feasibility study. Improvements to Davies Road likely to be quiet road or provision of a single shared use footway
Introduce provision for pedestrians and cyclists along Davies Road between Blakewater Road and Red Lion roundabout.	£3,600		200	Yes	YES	~		Segregated or shared provision for cyclists on Davies Road.	Shared use footway or quiet road.	due to restricted width. Currently a cul-de-sac used for on-street parking associated with nearby employment/retail. Potential to be used for access to development site.
Widen the existing link between the canal towpath and Blakewater Road to 3m for shared use to improve access to the canal from Blakewater Road (E6).	£138,891		150	Yes	YES	~	ATE Path Check	Off highway 3m shared route	Off highway <3m shared route	Desirable treatment achievable within BwD land. Also, an opportunity to introduce a resting plac biodiversity net gain. Consider transition for cyclists at Blakewater Road.
Improvements to walking and cycling provision along Blakewater Road.	£350,000		1000	Yes	NO			NA	NA	Likely to require shared use or quiet road due to restricted width available in places. Deliver as p or through s106. Railway bridge is a constraint.
Improvements for pedestrians and cyclists at Philips Road / Blakewater Road roundabout.	£331,680 £30,528	£30.000		Yes	YES	×	NA	NA New grade seperated, shared use,	NA Shared use step free access point. 1.5m wide route between Harwood Street and	Consider as part of LCWIP Primary Route 2 proposals. New pedestrian crossings and transitions for cyclists between towpath link and Harwood Street.
and have a second stable of the second field on the second stable of the second s		£30,000				`	Canal Access Point Assessment		the canal towpath.	bin and introduce crossing points, dropped kerbs, etc. as appropriate. Insufficient space for desirable or absolute minimum so quiet road approach with improvements
Improve the route between the canal and Jamiatul Ilm Wal Huda (and on to Phillips Road) for pedestrians and cyclists. Create new entry to Imperial Mill. Part of the Lancashire Linear Park proposals.	£9,900 £25,000		550	Yes	YES	×	ATE Route Cross Section Check	3m Two-way Segregated Cycle Track	Shared use footway or Quiet Road	pedestrians. Included within the Lancashire Linear Park Proposals. (Not currently committed)
Improve canal access from Eden Street (E9) to shared use step free.	£1,187,101 £75,000	£210,000		Yes	YES	£480,42		Shared use step free access point.	Stepped access or adverse gradient.	Constrained site. Subject to more detailed feasibility study. Included in LUF bid.
Improve pedestrian and cycle provision over the Eden Street Canal bridge to Copy Nook. Improvements to pedestrian crossings across Higher Eanam and Higher Audley Street to include provision for cyclists to provide a continuous route between Audley Lane	£2,700 £331,680	£403,000	150	Yes	YES	-	ATE Route Cross Section Check ATE Crossing Selector Tool	3m Two-way Segregated Cycle Track 2.17 Cycle track parallel	Shared use footway or quiet road. 2.18i Shared Use	Likely to require shared use or quiet road due to restricted width available in places. Included in May not be able to provide a straight crossing without introducing an all red stage. Included in I
and Eden Street. Improvements to the link between the canal towpath and Bancroft Street (E10) and improvements to the pedestrian and cycle provision connecting the towpath link with	£26,258		100	Yes	YES		ATE Route Cross Section Check	Provides shared use path and	Shared use footway, quiet road or new connection between canal link and	Links to LUF bid proposals Provide footway of minimum width (1.5m) linking canal access path to Eanam or new link in adv Bancroft Street to Eanam via existing grass embankment. Levels may be an issue. Subject to mo
footways along Eanam. Improvements for pedestrians and cyclists along Bancroft Street and Birley Street to connect to another LCWIP Primary Cycle Route along Cleaver Street.	£5,400		300	Yes	YES	-		footway. 3m Two-way Segregated Cycle Track	Eanam.	feasibility. Minimum width 9.2m so only option is Quiet Road.
Improvements for pedestrians and cyclists at the Eanam Roundabout which may benefit from signalisation.	£331,680		150	Yes	YES	~	ATE Crossing Selector Tool		1.16 Shared use offset	Convert rounadbout to signalised roundabout with controlled crossings as appropriate. Subject modelling etc.
Improvements to Eanam Old Road between the canal towpath and Eanam/Salford.	£16,938		250	Yes	YES	~	ATE Route Cross Section Check	3m Two-way Segregated Cycle Track	Shared use footway or quiet road.	Insufficient space for provision along Eanam. Use alternative Eanam Old Road route. The towpa to Eanam Wharf buildings could be reopened with an improved step free access point onto Ean.
Improvements to the canal access points along Eanam Old Road (E11) to shared use step free.	£95,000			Yes	YES	~	Canal Access Point Assessment	Shared use step free access point.	Stepped access or adverse gradient.	in place of the existing steps. Constrained site. Subject to more detailed feasibility study. May be more work involved to converse stepped access to shared use step free.
improve the NCN Route 6 route along Eanam and Salford to provide a 3m Two-way segregated cycle track.	£390,000	£390,000	390	Yes	YES		ATE Route Cross Section Check	3m Two-way segregated cycle track.	Shared use footway or Quiet Road	scepped access to snared use step nee. Proposed treatment should be achievable with use of land to back of footway (part of Morrison masterplan).
		2330,000	390			-	ATE Crossing Selector Tool			Improvement linked to Morrisons TA. Proposed treatment should be achievable.
lew crossing across Eanam mprovements to walking and cycling provision along Barbara Castle Way between Eanam Roundabout and Larkhill junction.	£193,480 £200,000	£200,000	200	Yes	YES	-		1.12 Filter both 3m Two-way segregated cycle track.	1.1 Parallel Crossing (filter both) Sbared use footway or quiet road	Improvement linked to Morrisons TA. Proposed treatment should be achievable.
nprovements to walking and cycling provision along Barbara Castle Way between Eanam Roundabout and Larkhill junction. nprovements to pedestrian crossings at the Larkhill junction to include provision for cyclists to provide a continuous route along Barbara Castle Way and link to Whalley		£331,680	200	Yes	YES	-		3m Two-way segregated cycle track. 1.15 Cycle track offset	Shared use footway or quiet road.	Larkhill improvement linked to Morrisons TA. Existing shared use provision along Barbara Castle Way. Potential for BSIP Funding.
ew Road. reate a new connection for pedestrians and cyclists from the canal towpath to the rear of Blackburn Train Station (P5). This would likely be a zig-zag ramp due to the								Shared use step free access point and	Shared use stepped access point	Publicat to more detailed feasibility study.
vel change but may also be a bridge structure or similar.	£100,000 £30,000	£100,000 £30,000	200	No	YES			off highway 3m shared route.	(Structure required) and off highway 3m shared route.	Included in SE Blackburn LUF Bid. Included in SE Blackburn LUF Bid.
rovide a new link between the canal towpath and Higher Audley Street via new bridge (9iii). ew crossing for pedestrians and cyclists across Higher Audley Street.	£80,000	£80,000	175	Yes	YES	Ĵ	ATE Crossing Selector Tool	Off highway 3m shared route 1.12 Filter both New shared use step free bridge over	Off highway <3m shared route 1.1 Parallel Crossing (filter both)	Included in SE Blackburn LUF Bid.
ew canal crossing between Cicely Lane and Lower Audley creating access from Higher Audley Street (P6).	£500,000	£500,000		Yes	YES	~	Severance Assessment	the canal.	Stepped bridge over the canal.	Included in SE Blackburn LUF Bid. Constrained site. Subject to more detailed feasibility study.
eate a new canal access point from Cicely Lane (P2/P3/P4).	£150,000 £2,859,816	£2,034,680		No	YES	£2,859,81		Shared use step free access point.	Stepped access or adverse gradient.	May be a lower priority if new link can be provided to the rear of train station.
troduce new canal access points from Lower Audiey Street (P7/P8).	£150,000			Yes	YES	~	Canal Access Point Assessment	Shared use step free access point.	Feasible improvements to existing acces point.	IS Constrained site. Subject to more detailed feasibility study.
eate access to canal from Merchants Quay. sprovements to the existing canal access from Canatside (Merchants Landing) (E12).	£25,000 £10,000			No Yes	NO YES	×		NA Shared use step free access point.	NA Feasible improvements to existing acces	NA <sup>IS</sup> Will require agreement/negotiation with Land Owner
provements to the existing canal access from SL Mary's Wharfe (E14).	£10,000			Yes	YES	-		Shared use step free access point.	point. Feasible improvements to existing acces	<sup>15</sup> Constrained. Subject to more detailed feasibility.
provements to walking and cycling provision along the route from St. Mary's Wharfe to Blackburn Central High School. w crossing for pedestrians and cyclists across Benninaton Street.	£13,500		750	Yes	YES	~		3m Two-way Segregated Cycle Track	Shared use footway or quiet road.	Desirable and absolute minimum unachievable but quiet road approach is likely to be approp
w crossing for pedestrans and cyclists across bennington street. sprovements to the existing canal access from Lower Audley Street (E13).	£65,000 £240,744		260	Yes	YES	-	Canal Access Point Assessment	Off highway 3m shared route with step free access.	2.18j Shared Use Feasible improvements to existing acces	Toucan crossing or parallel crossing subject to more detailed feasibility study.
sprovements to the existing canal access from Joiner's Row (E15).	£75,000			Yes	YES	~		Shared use step free access point.	Feasible improvements to existing acces point.	IS Constrained site. Subject to more detailed feasibility study.
	£589,244 £20,000	£O			1000	£564,24				is Canal towpath route crosses highway with no formal provision. Subject to more detailed site fe
nprove access to the canal from Highfield Road (both sides) stroduce a controlled crossing facility as there is no towpath route under the bridge. i.e. all canal users are forced to cross Highfield Road where there are no current	\$20,000			Yes	YES	-		Shared use step free access point.	point. 1.12 Crossroad: Signalise (filter both)	Canal towpath route crosses highway with no formal provision. Subject to more detailed site re Parallel preferred over signalised due to lower number of users as compared to 5.3.
cilities. nprove Highfield Road between the canal towpath and the A666 for pedestrians and cyclists.	£3,150		175	Yes	YES		-	3m Two-way Segregated Cycle Track		It may be possible to provide a shared use footway on one side (desirable minimum) but this is
·····			1.0							impact on on-street parking provision. Quiet road approach likely to be the most viable option. There is no towpath route under the bridge so all canal users are forced to cross the A666 Bol
ew crossing for pedestrians and cyclists across A666 and reconfigure A666 Bolton Road / Infirmary Road Junction.	£193,480		0	Yes	YES	ř	ATE Crossing Selector Tool	1.12 Crossroad: Signalise (filter both)	1.1 Crossroad: Parallel (filter both)	nearest crossing facility is at the A666/Infirmary Road junction which is a 200m detour and no line. Signalised crossing preferred due to high traffic flows on A666 and potential for high den crossing point.
sprove facilities for pedestrians and cyclists along Chadwick Street and Lower Hollin Bank Street particularly over the railway bridge.	£7,740		430	Yes	YES	~	ATE Route Cross Section Check	3m Two-way Segregated Cycle Track	Shared use footway or Quiet Road	Insufficient space for preferred or absolute minimum so quiet road approach with improvement pedestrians at junctions, side roads and accesses.
nprove facilities for pedestrians and cyclists along Taylor Street and Galligreaves Way.	£9,540		530	Yes	YES	~	ATE Route Cross Section Check	3m Two-way Segregated Cycle Track	Shared use footway or Quiet Road	Insufficient space for preferred or absolute minimum so quiet road approach with improveme pedestrians at junctions, side roads and accesses.
nprove facilities for pedestrians and cyclists to improve connectivity with St. Wilfrid's Church of England Academy.	£4,500		250	Yes	YES	~	ATE Route Cross Section Check	3m Two-way Segregated Cycle Track	Shared use footway or Quiet Road	Insufficient space for preferred or absolute minimum so quiet road approach with improvement pedestrians at junctions, side roads and accesses.
mprove facilities for pedestrians and cyclists to improve connectivity with Tauheedul Islam Boys High School.	£3,600	60	200	Yes	YES	£307,01		3m Two-way Segregated Cycle Track	Shared use footway or Quiet Road	Insufficient space for preferred or absolute minimum so quiet road approach with improvement pedestrians at junctions, side roads and accesses.
mprove access to canal towpath from Hollins Bridge Street.	£10,000	LO		Yes	NO			Shared use step free access point.	Feasible improvements to existing acces	<sup>15</sup> Not a priority location for treatment but may benefit from some minor improvements.
nprove the route between the A666 and Hamilton Street for pedestrians and cyclists.	£3,960		220	Yes	YES	~	ATE Route Cross Section Check	3m Two-way Segregated Cycle Track	Shared use footway or Quiet Road	Insufficient space for preferred or absolute minimum so quiet road approach with improvement pedestrians at junctions, side roads and accesses.
nprove facilities on the A666 Bolton Road for pedestrians and cyclists.	£194,447		210	Yes	YES		ATE Route Cross Section Check	3m Two-way Segregated Cycle Track	Shared use footway or Quiet Road	Insufficient space for proposed treatment. The absolute minimum shared footway or quiet roa- could be accommodated with improvements for pedestrians at junctions, side roads and acces
	-									Land adjacent to the A666 is in BwDBC ownership so preferred option may be deliverable althe likely to be some level issues and tree constraints. Subject to more detailed feasibility. Signalised crossing oreferred due to high traffic flows on A666 and optential for high demance the state of the state
torduction of a new controlled crossing facility across the A666 or upgrade the existing crossing close to Longshaw Street. nprove the off-road route from the A666 to the rear of Ewood Park. Consider increasing width, improving lighting and introducing rest places, etc.	£193,480 £388,895		0 420	Yes	YES	-	ATE Crossing Selector Tool ATE Path Check	1.12 Filter both Off highway 3m shared route	1.16j Shared use Off highway <3m shared route	point. Connects into proposed SE Blackburn Network.
nprove access to Ewood Park for pedestrians and cyclists and provide destination facilities including sheltered and secure cycle parking.	£10,000			Yes	YES		Destination	Shared use step free access point. Sheltered, secure cycle parking	Stepped access or adverse gradient.	Will require agreement/negotiation with Land Owner. Facilities improvements not included in c
								facility. Shared use step free access point.	Sheltered, secure cycle parking. Stepped access or adverse gradient.	
prove access to Mill Hill Rail Station for pedestrians and cyclists and provide destination facilities including sheltered and secure cycle parking.	£75,000			Yes	YES	~	Destination	Sheltered, secure cycle parking facility.	Stepped access or adverse gradient. Sheltered, secure cycle parking.	Will require agreement/negotiation with Land Owner. Facilities improvements not included in o
sprove facilities for pedestrians and cyclists along Queens Terrace and New Chapel Street.	£6,570		365	Yes	YES	~		3m Two-way Segregated Cycle Track		Insufficient space for preferred or absolute minimum so quiet road approach with improveme pedestrians at junctions, side roads and accesses.
prove access to the canal from Kings Bridge Street.	£10,000			Yes	YES	~		Shared use step free access point.	point.	Is Constrained site. Remove A frame. Widen footway beteen Kings Bridge Street and canal access Street. Subject to more detailed feasibility study. Insufficient space for preferred or absolute minimum so quiet road approach with improvement of the street state of the street state of the street state of the street state of the street state street st
sprove facilities for pedestrians and cyclists between the canal towpath and the A6062 Livesey Branch Road .	£9,540 £891,892	EO	530	Yes	YES	£891,89	2	3m Two-way Segregated Cycle Track	Shared use footway or Quiet Road	pedestrians at junctions, side roads and accesses.
w bridge connection over the canal from Amberwood Drive.	£1,000,000 £4,500		250	Yes	NO YES	×	Severance Assessment	NA 3m Two-way Segregated Cycle Track	NA Shared use forbrau or Origin Dand	Not a priority location for a new bridge. New bridge from Melford Close or Old Gates Drive pre Insufficient space for preferred or absolute minimum so quiet road approach with improveme
prove Speedwell Street for Pedestrians and Cyclists. sprove the path through the playing field for pedestrians and cyclists.	£4,500 £462,970		250 500	Yes	YES				Shared use footway or Quiet Road Off highway <3m shared route	pedestrians at junctions, side roads and accesses. Will require agreement/negotiation with Land Owner.
sprovements for pedestrians and cyclists crossing A674 Preston Old Road and on Link between Witton Park entrance and the link to Speedwell Street.	£193,480			Yes	NO	×	NA	NA	NA	There is an existing Toucan Crossing and shared (separated on footway by white line) cycle pro southside footway of the A674 along this length. Potential to upgrade both subject to more de foreit-line.
prove the route from Amberwood Drive to Shorrock Lane for pedestrians and cyclists.	£10,620		590	Yes	NO	×	NA	NA	NA	feasibility. Not without new bridge from Amblewood Drive unless alternative route. Insufficient space for preferred or absolute minimum so quiet road approach with improveme
prove the section of Green Lane between A674 Preston Old Road and Rannoch Drive for pedestrians and cyclists.	£3,150		175	Yes	YES	~		3m Two-way Segregated Cycle Track	Shared use footway or Quiet Road Stepped access or adverse gradient.	pedestrians at junctions, side roads and accesses.
nprove access to the canal from Green Lane for pedestrians and cyclists.	£75,000			Yes	YES	~		Shared use step free access point.	Sheltered, secure cycle parking.	Constrained site. Subject to more detailed feasibility study. Insufficient space for preferred or absolute minimum so quiet road approach with improvement
prove the route from Rannock Drive to A6062 via Old Gates Drive for pedestrians and cyclists and links to St. Bede's. prove the route from Green Lane along Fielding Crescent and Railton Avenue for pedestrians and cyclists.	£12,330 £10,530		685 585	Yes	YES	×		3m Two-way Segregated Cycle Track	NA	pedestrians at junctions, side roads and accesses. Not without new bridge from Amblewood Drive unless alternative route.
prove access from the canal to St Francis Primary School for movements to/from the East	£25,000			Yes	NO	×		Shared use step free access point.	Feasible improvements to existing access point.	
prove access from the canal to Cherry Tree Cricket Club and or Cherry Tree Terrace (P14).	£50,000			Yes	YES	~	Canal Access Point Assessment	step free shared access point	Off highway shared <3m route with stepped access	Proposed treatment should be achieveable. Will require agreement/negotiation with land own BwDBC land available at the end of Melford Close. A bridge from the end of Old Gates Drive w
w canal pedestrian/cycle bridge from Old Gates Drive to canal towpath.	£1,000,000 £2,847,580	£0		Yes	YES	£1.607.95		New Cycle / Foot Bridge over canal	New stepped bridge over canal	BwDBC land available at the end of Melford Close. A bridge from the end of Old Gates Drive wi agreement with 3rd party land owner.
prove access to the canal towpath from Livesey Branch Road (E30).	\$85,000	£50,000		Yes	YES	~	Canal Access Point Assessment	Shared use step free access.	Feasible improvements to existing acces	
									point. Feasible improvements to existing acces	Junction 3 or other West Blackburn residential developments. Not a priority access for improvement but as linked to a connectivity improvement included in .
prove access to the canal from Eclipse Road.	£75,000			Yes	YES	~	Canal Access Point Assessment	Shared use step free access.	Feasible improvements to existing acces point.	The current access is stepped and there appears to be limited opportunity to provide step free Improvements subject to more detailed feasibility.
prove route along Eclipse Road between the canal towpath and A674 Preston Old Road for pedestrians and cyclists.	£6,300		350	Yes	YES	-		3m Two-way Segregated Cycle Track		Insufficient space for preferred or absolute minimum so quiet road approach with improvement pedestrians at junctions, side roads and accesses.
ovide a new path linking the canal towpath to Witton Park via the disused railway line over the Three Arch Bridge (aka Feniscowles Viaduct).	£912,970		500	No	YES	J		Off highway 3m shared route with step free access.	Feasible improvements to existing acces point.	vegetation over the years. £450,000 estimate for structural inspections, arbonicultural, ecologic
re route may need to connect to Woodlands Avenue via ramps to the underpass on the route of the disused railway line.	£150.000			No	YES		Destination Access	Shared use step free access point. Sheltered, secure cycle parking	Stepped access or adverse gradient.	included. Will require agreement/negotiation with Land Owner.
						-		facility.	Sheltered, secure cycle parking.	Will require agreement/negotiation with Land Owner. Insufficient space for preferred or absolute minimum so quiet road approach with improvement
sprove the route from the A674 to St. Paul's RC Primary School for pedestrians and cyclists.	£1,800		100	Yes	YES	~		3m Two-way Segregated Cycle Track		Insumcient space for preferred or absolute minimum so quiet read approach with improvement pedestrians at junctions, side roads and accesses. Signalised crossing ordered due to high traffic flows on A674 and potential for high demand
troduce a new controlled crossing facility across the A674 Preston Old Road on the desire line for 5L Paul's Primary School.	£193,480			Yes	YES	~	ATE Crossing Selector Tool	3.13 Cycle track	3.14j Shared use	point. Insufficient width on A674 for shared use facilities so crossing to be provided for pedes
elocation of the existing zebra crossings on Preston Old Road.	£186,000	£186,000		Yes	YES	v	ATE Crossing Selector Tool	1.12 Filter both	1.1 Parallel Crossing (filter both)	Signalised crossing preferred due to high traffic flows on A6062 & A674 and potential for high crossing point.
onvert the pedestrian crossing on Livesey Branch Road to a signal controlled crossings on key desire lines to serve demand associated with local primary schools.	£140,000	£140,000 £376.000		Yes	YES			1.12 Filter both	1.1 Parallel Crossing (filter both)	Signalised crossing preferred due to high traffic flows on A6062 & A674 and potential for high crossing point.
						£1,750,55		1	Stepped access or adverse gradient.	To be delivered as part of Sappi Development.
w access to the canal towpath from the new residential development on Star Drive (P18). proved access to the canal towpath from a potential new employment development close to M65 Junction 3 (subject to delivery of the proposed development).	£1,750,550 £25,000 £25,000	£25,000 £25,000		No No	YES YES		Canal Access Point Assessment	Shared use step free access point. Shared use step free access point.		To be delivered as part of Sappi Development. To be delivered as part of Sappi Development (In LCC)