

Calderdale Local Cycling and Walking Infrastructure Plan – Phase 1

Summary Document

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Introduction

In 2017 the Government published its first Cycling and Walking Investment Strategy, which sets out an ambition to make cycling and walking the natural choices for shorter journeys or as part of a longer journey. Local Cycling and Walking Infrastructure Plans (LCWIPs) form part of the Strategy and set out a new, strategic approach to identifying cycling and walking improvements required at the local level. They enable a long-term approach to developing cycling and walking networks so that the Government's objectives can be achieved.

The document provides a summary of the draft Calderdale LCWIP, which for its initial phase has been produced to cover certain geographic areas of focus (Brighouse for cycling; Halifax for walking). The plan has been developed through a process of stakeholder consultation (workshops and street audits), data analysis, and high level engineering assessment of potential improvements. The document provides a summary of the following key outputs contained within the draft LCWIP:

- **Network maps** for cycling and walking, which identifies preferred routes and core zones for further development;
- A **programme of infrastructure improvements** for future investment

A more detailed report is available on the Combined Authority's website, that sets out the underlying analysis carried out and a narrative to support the identified improvements

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Proposed Cycling Network for Brighouse

These network proposals include:

A Network Map, showing the main desire lines to provide connections across Brighouse– with two routes prioritised for further assessment in detail

Route alignments for the prioritised desire lines.

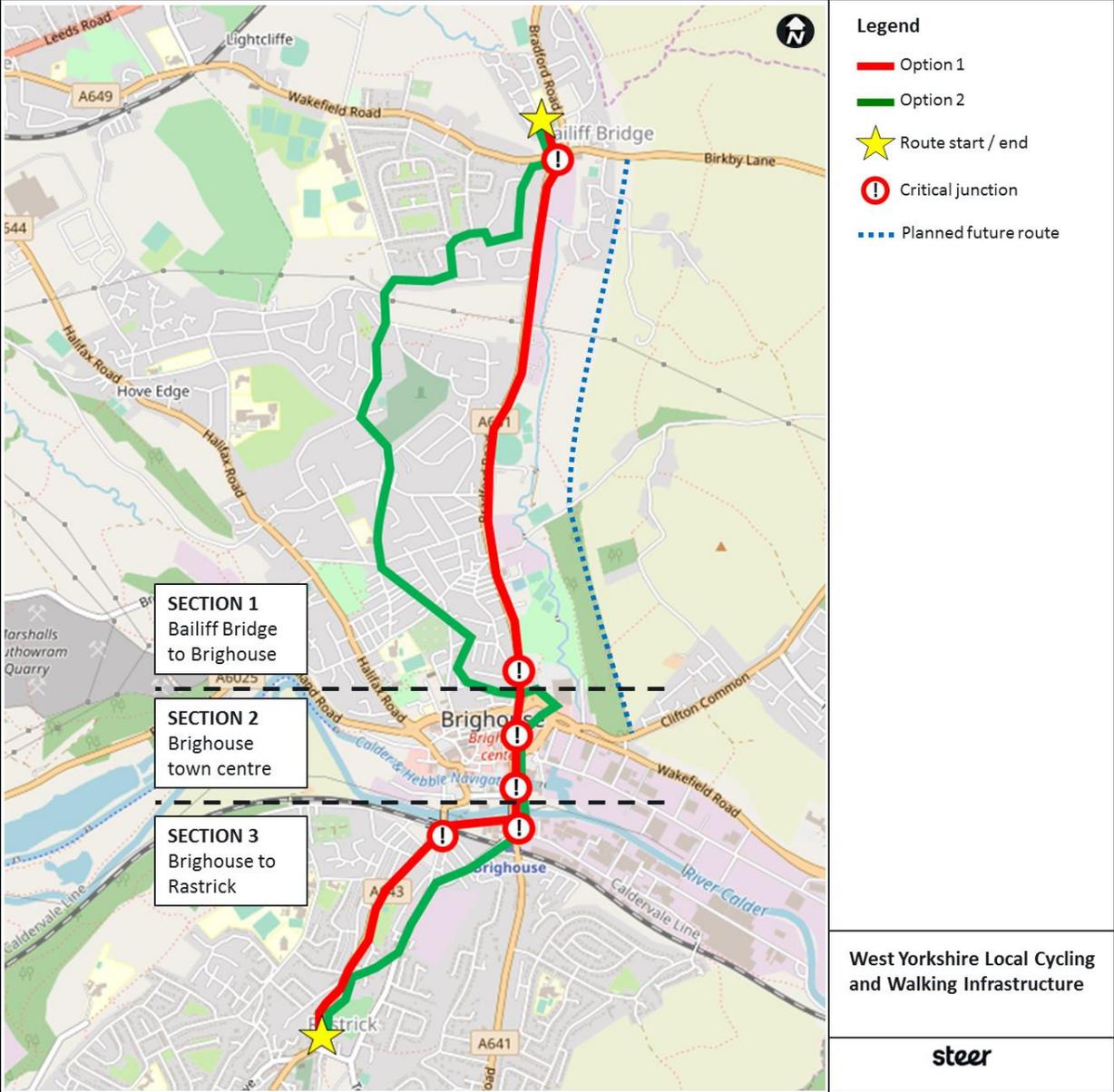
Two potential options were assessed for each route and will inform more detailed feasibility work to be carried out at a later stage. Further sections of route which could connect these route options to other communities and linking to other cycle routes will be considered in future stages of LCWIP development

Programmes of improvements for cycling on the detailed route alignments

These improvements have been identified through high level assessment and further feasibility work is required to be carried out. The types of cycling provision proposed are based on route types identified in government guidance, and approximate costs based on typical costs for this type of provision provided in government guidance.

Proposed Cycling Network: Detailed Route Alignment

Bailiff Bridge to Rastrick via Brighouse



Proposed Cycling Network: Programme of improvements

Direct Route (Option 1)

Route section	Proposed provision	Indicative Cost
1 Bailiff Bridge to Brighouse	Mixed cycle route Empire Court to A649 (115m)	£0.1m
	Segregated cycle route, on highway Bradford Road (2.15km)	£2.5m
2 Brighouse Town Centre	Mixed cycle route Bradford Rd to A641/Bethel St roundabout (281m)	£0.2m
	Segregated cycle route, on highway A641/Bethel St roundabout to Cliffe Rd (294m)	£0.3m
	Remodelling of one major junction A641/Bethel St roundabout	£1.6m
3 Brighouse to Rastrick	Mixed cycle route Cliffe Rd to Bramston St (396m)	£0.3m
	Segregated cycle route, on highway Bramston St to A643/Ogden Ln roundabout (~1km)	£1.1m

Alternative (Option 2)

Route section	Proposed provision	Indicative Cost
1 Bailiff Bridge to Brighouse	Mixed cycle route Empire Court to Bradford Road (3.23km)	£2.2m
2 Brighouse Town Centre	Mixed cycle route Bradford Rd to A641/Bethel St roundabout (281m)	£0.2m
	Segregated cycle route, on highway A641/Bethel St roundabout to Cliffe Rd (294m)	£0.3m
	Remodelling of one major junction A641/Bethel St roundabout	£1.6m
3 Brighouse to Rastrick	Mixed cycle route Cliffe Rd to A643 (983m)	£0.7m
	Segregated cycle route, on highway A643 to A643/Ogden Ln roundabout (~1km)	£0.3m

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Proposed Walking Network: Halifax

These network proposals include:

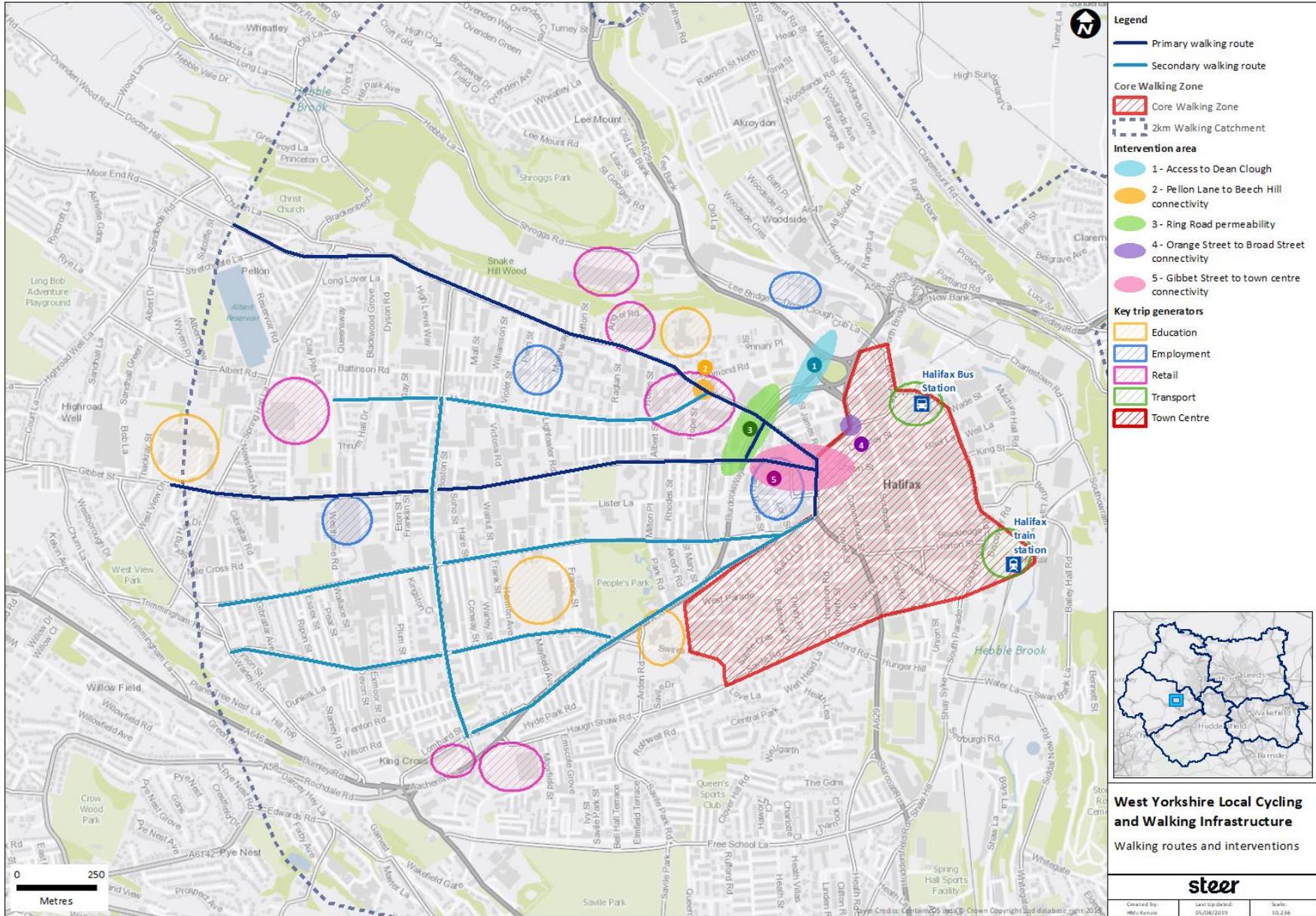
A Network Map, showing the main routes for walking (“Primary” routes) and other important pedestrian routes (“secondary”), as well as a central destination area for walking trips (“Core Walking Zone”)

Programmes of improvements for walking within the Core Walking Zone

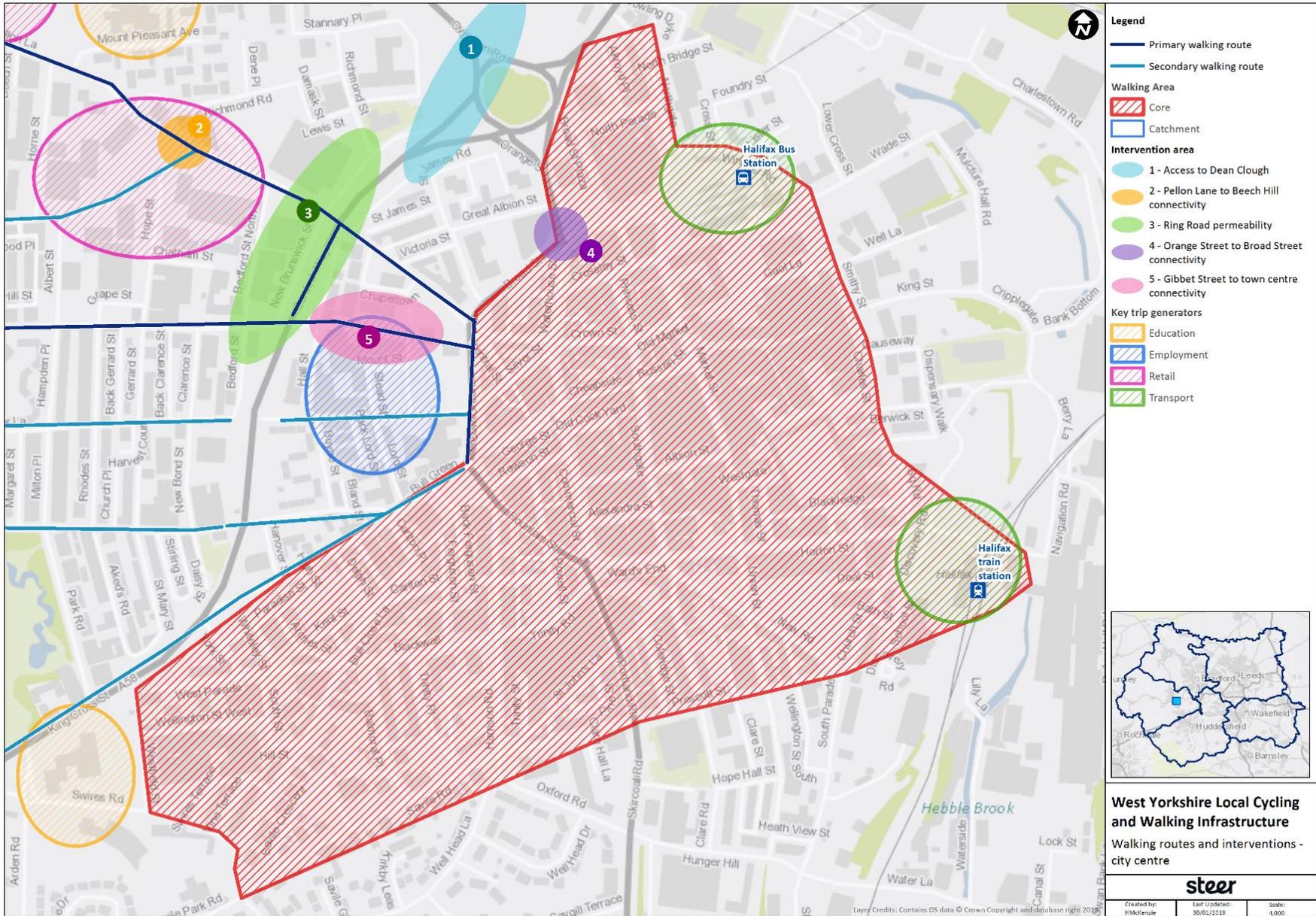
These improvements have been identified through a community street audit which allowed local stakeholders to provide feedback on the local walking environment, with a follow up workshop.

The proposed walking infrastructure could also be accompanied by a range of complementary measures to be defined in further stages of LCWIP development. Complementary measures could include new waiting/loading restrictions; improved enforcement of existing waiting/loading restrictions; behaviour change programmes; restrictions to general traffic; improved landscaping and lighting and accessible seating.

Proposed Walking Network Map



Proposed Walking Network Map



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Proposed Walking Network: Programme of improvements

	Intervention	Intervention	Indicative Costs	Time scale
1	Improve access from town centre to Dean Clough and Beech Hill areas	Pedestrian overbridge	£1m-£1.5m	L
		Surface level signalised crossing points	£50k-£62k each	M
		Reduce foliage and repaint subways	£5k-10k	S
		Open out subway entrances and exits	Further study required	S
		Wayfinding and interpretation boards	Further study required	M
2	Improve pedestrian access across Pellon Lane and connection to Beech Hill	Zebra crossing at Hanson Lane	£20k-£33k	M
3	Improve pedestrian access along Gibbet Street, Pellon Lane and along New Brunswick Street and Burdock Way to enhance connectivity around ring road and along key routes	Raised table crossing with markings at New Brunswick Street/Gibbet Street	£14k	M
		Build outs to reduce junction width at New Brunswick Street/Gibbet Street	Further study required	M
		Signalised pedestrian crossings at Burdock Way/Pellon Lane on all arms	£50k-£62k each	M
		Restrict access to vehicles from Richmond Street to New Brunswick Street	Further study required	S
		Continuous footway across Richmond Street	£10k-£20k	M
		Modal filter cell for cycle access	£150-350 each	M
4	Adjust signal timings to improve accessibility at Broad Street / Orange Street intersection	Reduce pedestrian wait time and lengthen pedestrian green phase	Further study required	S
		Introduce pedestrian all-green phase with diagonal crossing markings	Further study required	S
5	Improve access and amenity at eastern end of Gibbet Street	Brighter LED lighting	£2.6k-3.2k per column	M
		Sealed path to north of tower block connecting to new crossing point	£200 per metre	S
		Wayfinding along length of Gibbet Street	Further study required	M
		Local business engagement	Further study required	S

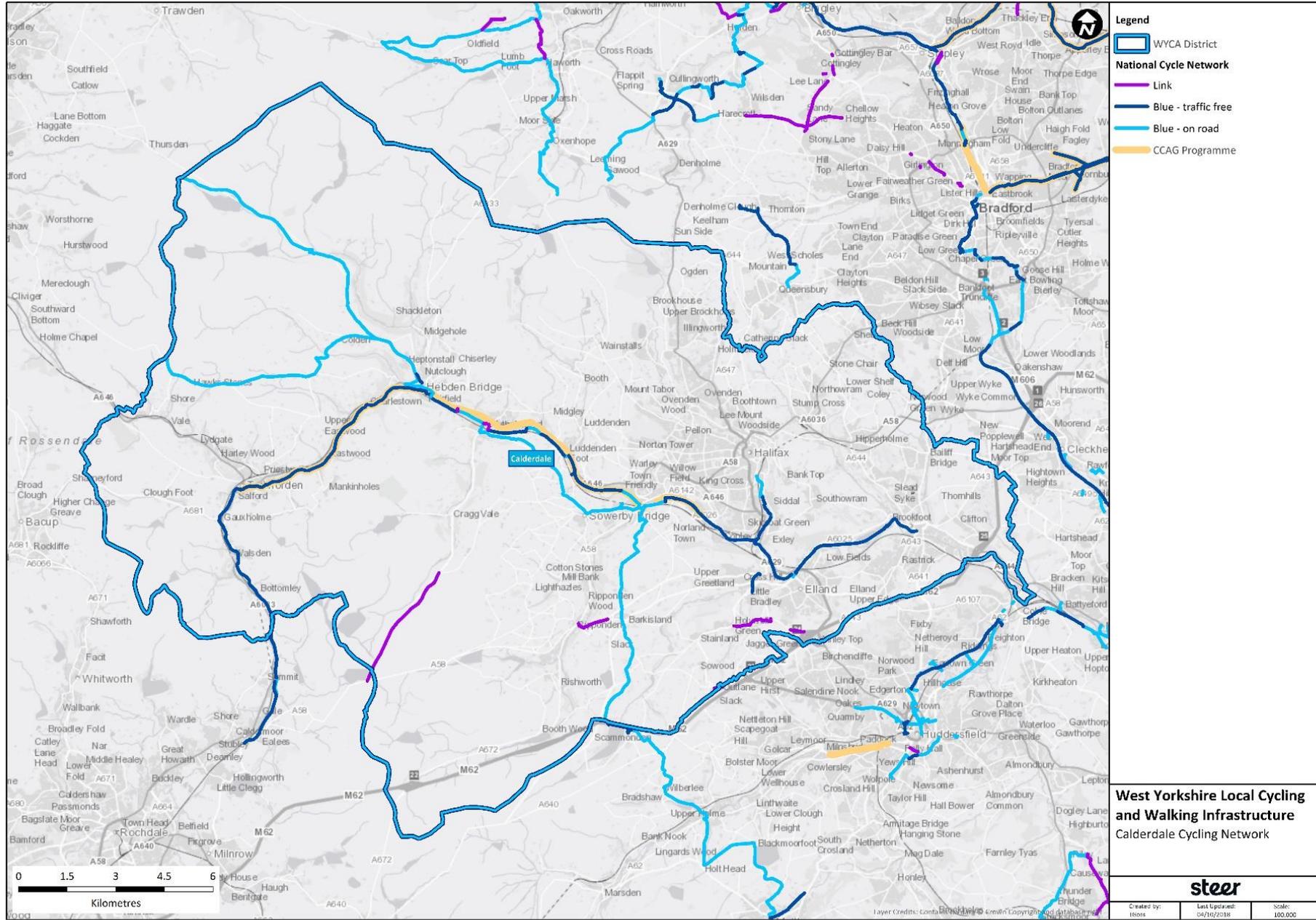
Proposed Walking Network: Programme of improvements

	Intervention	Intervention	Indicative Costs	Time scale
6	Improve perception of safety through brighter lighting	Install LED lighting across the core walking zone and surrounding area with supplementary task lighting where required	£2.6-3.2k per column	M
7	Improve perception of safety and walkability through footway maintenance and repair	Audit all existing footway to identify areas requiring repair or maintenance and locations lacking level access	Further study required	S
		Repairs to footway and crossing points	£200 per metre	M
		Raised table crossings at side roads to replace dropped kerbs	£14k per crossing	M
8	Enhance sense of community and reduce vehicle speeds through Park Ward	Gateway treatments at key access routes to Park Ward	£7-8k	M
		Modal filter treatment across Park Ward to restrict vehicle access, including pedestrianisation of lower portion of Hopwood Road	Further study required	L

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Supporting information

Existing Cycle Network



Cycling – principles of design

Core Design Outcomes are well established principles for cycling infrastructure set out in Government's LCWIP guidance, which have informed the proposed infrastructure improvements and associated cost estimates, to ensure that proposals meet the appropriate quality of infrastructure provision needed to increase cycling. These Core Design Principles have been used to shape the development the proposals in this summary document.

A set of principles for walking and cycling design is being developed locally by West Yorkshire partners which will inform the basis of further development of the schemes identified through this LCWIP.

Coherent	The network must be coherent: it must link all the places cyclists want to start and finish their journeys with a route quality that is consistent and easy to navigate. Abrupt changes in the level of provision for cyclists will mean that an otherwise serviceable route becomes disjointed and unusable by the majority of potential users
Direct	<p>Routes for cyclists must provide direct and fast routes from origin to destination. In order to make cycling preferable to driving, routes for cyclists must be at least as direct – and preferably more direct – than that available for private motor vehicles.</p> <p>And indirect route for cyclists may result in some of them choosing the more direct, faster route, even if it is unsuitable for cycling.</p>
Safe	Cycle networks must not only improve cyclists' safety, but also their feeling of how safe the environment is. Consideration must be given to reducing the speeds of motor vehicles to acceptable levels, particularly when cyclists are expected to share the carriageway. The needs for cyclists to come into close proximity and conflict with motor traffic must be removed, particularly at junctions, where the majority of crashes occur.
Comfortable	Smooth surfaces, with minimal stopping and starting, without the need to ascend or descend steep gradients and which present few conflicts with others users creates comfortable conditions that are more conducive to cycling. The presence of high speed, high volume motor traffic affects both the safety and the comfort of the user.
Attractive	Cyclists are more aware of the environment they are moving through than people in cars or other motor vehicles. Cycling is a pleasurable activity, in part because it involves such close contact with the surroundings. The attractiveness of the route itself will therefore affect whether users choose to cycle.

Cycling provision - Definitions

The definitions provided below for different types of cycle route provision identified in the Programme of Improvements are taken from Government's LCWIP guidance and research commissioned by the Department for Transport.

Segregated cycle route, on highway

Referred to as Cycle-Superhighway in guidance. An extended cycle route that enables direct, rapid, safe cycle trips largely segregated from traffic along an arterial route e.g. a 10km route following an A-road from outer suburbs to a city centre.

Typical features:

- Physically protected segregation from traffic and pedestrians for much of the route, using kerbs, paving level differences or other physical means.
- Sufficient width to accommodate large flows of cyclists.
- Cyclist priority at side roads with speed tables to slow cars. • Clearway orders to prevent parking in the cycle lane.
- Cyclist 'bypasses' to the rear of bus stops forming passenger waiting 'islands'.
- Dedicated cycle crossing facilities across major roads, signalised where necessary.
- A feeling of safety so that unconfident cyclists feel comfortable using the route

Mixed cycle route

Referred to as "Mixed Strategic cycle route" in guidance. An extended cycle route to facilitate cycling along a strategic corridor, comprising a mixture of: signed route without dedicated lanes along quieter roads; on-road lanes without physical segregation; physically segregated cycle lanes along busier roads; marked cycle routes away from roads where such alignments are available.

Typical features:

- Continuous clear signage from one end to the other.
- Routing and provision of segregation and crossings so the whole route can be cycled without encountering major obstacles or having to battle with fast traffic on a busy road.
- Deviations from the fastest most direct route to follow parallel quieter roads or paths through parks and green corridors.
- Speed restrictions such as 20mph zones and traffic calming.

Toucan Crossing

A Toucan crossing is a shared signal-controlled crossing for pedestrians and cyclists, linking cycle track and pedestrian routes on opposite sides of a carriageway

Sources: LCWIP Technical Guidance, Department for Transport, 2017
Typical Costs of Cycling Interventions, Transport for Quality of Life (for DfT), 2016
Local Transport Note 2/95 "The Design of Pedestrian Crossings", Department for Transport 1995

Walking - principles of design

The **Core Design Outcomes** are well established principles for cycling infrastructure set out in Government's LCWIP guidance, which have informed the proposed infrastructure improvements and associated cost estimates, to ensure that proposals meet the appropriate quality of infrastructure provision needed to increase cycling.

A set of principles for walking and cycling design is being developed locally by West Yorkshire partners which will inform the basis of further development of the schemes identified through this LCWIP.

Comfort	Footways level and in good condition, with no trip hazards.
	Footway widths generally in excess of 2m effective width
	Width on staggered crossings/pedestrian islands/refuges able to accommodate all users without 'give and take' between users or walking on roads. Widths generally in excess of 2m to accommodate wheel-chair users.
	No instances of vehicles parking on footways.
	Clearance widths generally in excess of 2m between permanent obstructions.
Directness	Footways are provided to cater for pedestrian desire lines (e.g. adjacent to road).
	Crossings follow desire lines.
	Crossing of road easy, direct, and comfortable and without delay (< 5s average).
	Crossings are single phase pelican/puffin or zebra crossings.
	Diagonal crossing (pedestrian and all-green phase) available at intersections
	Green man time is of sufficient length to cross comfortably (presume 0.8m/s)
Coherence	Walking network developed to link key trip generators, public transport and residential areas
	Adequate dropped kerb and appropriate tactile paving provision.
	Comprehensive wayfinding with walking times installed throughout core walking zone and along key routes
	Footway and crossing materials consistent throughout core walking zone and along key walking routes
Safety	Appropriate formal crossing points installed at all major road crossings
	Continuous network of footway available throughout core walking zone and along key walking routes
	Appropriate street lighting installed along all key routes
	Footway network maintained to avoid trip hazards
	Traffic calming measures in place in areas of higher pedestrian vulnerability e.g. schools, residential care homes, hospitals etc
Attractiveness	Footway and street furniture maintained to a good standard (clean, safe and accessible)
	Regular litter and waste collection to ensure clean street
	Planting and greenery installed where possible, also to provide shade