Wakefield Five Towns
Cycleway Network
Feasibility Study

Train on the Pontefract train line

Cyclists enjoying the traffic free route along Halfpenny Lane

Report prepared for City of Wakefield Metropolitan District Council

Draft September 2011
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Report prepared for City of Wakefield Metropolitan District Council.
Written & surveyed by: Mike Babbitt and Jake Webster
Graphic design and illustrations prepared by Paul Boston

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REPORT INTENDED TO BE PRINTED IN FULL COLOUR ON A3 SIZE PAPER

Sustrans makes smarter travel choices possible, desirable and inevitable. We're a leading UK charity enabling people to travel by foot, bike or public transport for more of the journeys we make every day.

We work with families, communities, policy-makers and partner organisations so that people are able to choose healthier, cleaner and cheaper journeys, with better places and spaces to move through and live in. It's time we all began making smarter travel choices.
Wakefield Five Towns: Cycleway Network Feasibility Study

1 Introduction

The objective of this study is to assess the feasibility of developing a cycle network throughout the Five Towns area of the Wakefield District. Particular attention will be given to promoting sustainable access to the rail stations. Regular feeder services to Wakefield Kirkgate make Pontefract, Normanton, Knottingley, Featherstone and Stroodhouse rail stations ideal for commuters wanting to make local and regional journeys in a more sustainable manner. The walking and cycling routes highlighted in this report will help to make the journey from home to the station more accessible and attractive, particularly for novice cyclists. Details of the proposed cycle network in Castleford are available in a separate feasibility report published in 2010.

The Wakefield Five Towns’ area is located to the north east of the district and historically relied on mining and industry as a source of local employment. According to the ‘LSIF large project initial proposal’ (June 2011), a large proportion of the population within the Five Towns area have low travel horizons. Low travel horizons in towns where the traditional sources of local employment are in decline make it increasingly important that access to employment opportunities in areas such as Wakefield and Leeds is improved. Future housing growth is planned in the area which provides an exciting opportunity to regenerate disused brown field sites and generate investment in the sustainable transport network. Improvements in the local walking and cycling network are required to open up opportunities for commuters and the wider community to travel in ways which will benefit their health and the environment.
2. Policy context

National Policy:

Local Transport Plan 3 Guidance (DTI, 2008)

During the development of LTP3 local authorities were asked to consider how their plans would contribute to the delivery of the following 5 key national transport goals:

1. Supporting Economic Growth: The scheme will improve local connectivity, thereby improving the chances that local demand for employment, shops and services can be met by local supply.

2. Tackle Climate Change: Contribute to reducing greenhouse gas emissions by providing walking and cycling alternatives to the car. The UK Climate Change Act commits the UK to reductions in CO2 emissions of at least 26% by 2020 and a long term goal of 80% by 2050 compared to 1990 levels.

3. Promote equality of opportunity: The scheme will enhance social inclusion by improving access to employment, services and social networks – particularly for low socioeconomic groups and those without access to private vehicles.

4. Contribute to better safety, security and health: Well used routes are self policing (to an extent), and can improve the perceived safety of an area. The scheme will encourage increased physical activity and improve the health of the local population.

5. Improve quality of life: Providing attractive walking and cycling routes will provide more opportunities for social interaction, improve access to local facilities and connect the urban landscape with green spaces, all without any negative impact on the environment.

Local Policy:

West Yorkshire Local Transport Plan 3 (2011 – 2026)

Wider considerations (economic, climatic and social)

LTP3 highlights that future economic growth within West Yorkshire could be constrained by congestion and overcrowding on the existing transport network. It is estimated that the number of jobs and workers in West Yorkshire will increase by 18% over the next 15 years, leading to more trips, road congestion and rail overcrowding (LTP3, 2011). A number of housing growth points within the Five Towns area means that careful planning and investment is required to ensure that the inevitable growth in trips doesn’t lead to a damaging amount of congestion and delays. Currently levels of congestion already cost the UK economy billions of pounds every year (DTI, 2009).

LTP3 highlights that West Yorkshire is not as economically competitive as it could be because the current transport network limits access to job markets, services, housing and leisure opportunities. A report in 2008 by Yorkshire Forward highlighted that areas of Castleford, Pontefract and Knottingley are amongst some of the 10-20% most deprived areas in the country. Despite planned housing growth in these areas, deprivation was not attributed to lack of housing but to a lack of access to education, healthcare and employment. Future development of the local transport network is an opportunity to address some of these accessibility issues.

Importance of promoting healthy living:

Regular cyclists typically enjoy a fitness level of a person 10 years younger (British Medical Journal, 1992). Regular activity also helps to reduce the risk of heart disease, burn excess fat and reduce stress. Increasing physical activity is central to the government’s battle to curb obesity, which is predicted to cost the UK economy £50 billion annually by 2050 (Department of Health, 2009).
3. Current barriers to walking and cycling in the Five Towns area

High traffic volumes

High traffic volumes do nothing to promote increased levels of walking and cycling. The table below shows the traffic counts on major roads in and around the Five Towns. Such high traffic volumes deter many cyclists and justify the need for alternative route provision highlighting the need for alternative route provision:

<table>
<thead>
<tr>
<th>Road</th>
<th>Town(s)</th>
<th>Vehicles per day</th>
</tr>
</thead>
<tbody>
<tr>
<td>A645</td>
<td>Knottingley, Pontefract</td>
<td>15,000 - 19,000</td>
</tr>
<tr>
<td>A639</td>
<td>Pontefract (west)</td>
<td>20,000</td>
</tr>
</tbody>
</table>

Severance

The Five Towns in Wakefield suffer from a variety of different severance issues that do little to encourage or facilitate walking and cycling trips in the local area. Intimidating barriers such as busy roads and rail with limited crossing points can make seemingly short journeys inconvenient, and circuitous. Within the Five Towns area, major barriers include the M62, the A1(M), the Aire and Calder Navigation east of Knottingley and the extensive rail network stemming from the region’s industrial past.

Lack of provision

The Five Towns area has very little visible infrastructure for cyclists. Any infrastructure it has is isolated and fails to create a continuous network that can provide complete end to end journeys.

Opportunities for increased levels of cycling

On average in West Yorkshire only 1% of peak hour trips are cycling; however in a city like York, approximately 18% of all commuter journeys are made by bike (City of York Council, 2010). LTP3 consultations showed that levels of cycling in West Yorkshire were unlikely to increase without intervention.

The success of York is largely down to interventions resulting from £3.68m worth of investment during its status as a ‘Cycling City’ between 2008 and 2011. York is an example of where, with investment and the necessary interventions, cycling can become a popular form of transport, particularly for short journeys. The DfT states that nationally, 41% of all journeys are less than 2 miles (DfT, 2008); a distance easily cycled within 15 minutes. The majority of the population within the Five Towns are located within 2 miles of a rail station; this gives huge potential for local and regional journeys to be conducted in a sustainable manner.
4. Maps with network proposals

The following series of eight maps provide a detailed overview of the opportunity to develop a continuous cycle network throughout the Five Towns.

Each of the eight maps are labelled with numbered reference points, which relate to the numbered text on the facing page of each map.

Section 6 shows details of estimated costs that can also be matched with each reference point.
Location Plan: Outline of the maps
Normanton is a small town in the city of Wakefield. With its excellent rail links to Wakefield, Leeds and the Sheffield Meadowhall interchange it is becoming an increasingly popular commuter suburb of the Leeds city region. Promoting sustainable access to the rail station is therefore an important part in the future growth and vitality of the town. Normanton is concentrated in an area approximately 1.8 by 1 mile(s), meaning that the majority of the town will be within 15 minutes cycle ride from the train station. The railway line, M62 and A655 are a few of the barriers that sever local journeys at present. With appropriate interventions the local walking and cycling network can be made far more convenient, safe and attractive for local residents.

1. Widen existing link between Lower Station Road & Altofts Road to a minimum of 2.5m. This is important given the expected increase in train travel.
2. Highlighted informal crossing of Altofts Road.
3. Landowner negotiation required (presumed Network rail), to provide a new surfaced path.
4. New surfaced path on WMDC owned land following existing desire lines.
5. Surface new path through existing railway underbridge.
6. Surface existing well trodden path across field to provide a year round weatherproof route.
7. The path adjacent to the housing already boasts lighting. To facilitate shared use it would benefit from widening and resurfacing.
8. Signage of the route on quiet residential streets. Important to raise the profile of the route.
9. Surface Ellentree bridleway to link into the existing path network.
10. Surface path through railway underbridge and patch repair the existing link to Redruth Drive.
11. Widen and surface field edge track up to Ashgap Lane
12. Construct a new path following the avenue of trees along the boundary of Haw Hill Park.
13. Remove a section of pedestrian guard railing to allow a direct route for confident cyclists to cross and link into Cemetery Road. Less confident cyclists should be signed to use the pedestrian crossing 20 metres down Castleford Road.
14. Highlight crossing point between Beck Bridge Lane and Cemetery Road with high friction coloured surfacing.
15. Existing greenway provides a well used cross town link.
16. Signing of the cycle route through the industrial estate will provide a sense of continuity and raise awareness amongst drivers.
17. Provide a new two-stage toucan crossing of the A655 to provide a continuous link between the industrial estate and the existing cycle route alongside the A655.
18. New raised table crossing of Castleford Road, to both slow traffic speeds and provide route continuity.
19. Widen & resurface link to Mill Lane through M62 subway. Remove spoil & fly tipping to provide a valuable onward link towards Castleford.
20. Existing shared use footway adjacent to the A655. Currently accessed by an inadequate informal arrangement (hence the suggested toucan at point 17).
21. Existing high quality greenway & cycle route through to Church Lane.
22. Provide a build out to improve route continuity across Snydale Road, this will also slow traffic entering Normanton off the A655. Widen footway by 0.5m on the southern side as far as Whin Mount.
23. Signed routes through residential streets to ensure continuity.
24. Widen existing paths across open space.
25. Subject to negotiation with the landowner, a link through the cemetery is vital to provide a direct, continuous cross town route.
26. Extend ‘Keep Clear’ markings outside school on western side of the road, northwards, & designate as a 20 mph zone to benefit school & route crossing point.
27. Existing greenway.
28. Remove some pedestrian guard railing and flush the kerbs at the end of Church Lane to allow confident cyclists to cross directly over Queen Street. Less confident users can dismount and use the nearby pedestrian crossing.
29. Route to continue down Assembly Street onto Exchange Street. Allow cycling on pedestrianised areas as far as Market Street with cautionary signing.
30. Extend pedestrianised surfacing over part of Market Street to Lower Station Road & the station to provide continuity to/from the station and to slow traffic at this busy pedestrian crossing point.
Streethouse is a small settlement with its own rail station which is on the Pontefract line located 4 miles east of Wakefield Kirkgate station. With hourly services, Streethouse station has the potential to serve the residents of south Normanton, Sharlston and Crofton. These residents are within walking and cycling distance of the rail station. With the right infrastructure improvements these sustainable journeys could be expected to form part of daily life.

1. Route signage through quiet residential streets is important to ensure the cycle network is continuous.

2. Provide a new off road path alongside the football pitch following the necessary desire line.

3. Widen & resurface existing off-road path to improve access to the existing footbridge over the A655.

4. Realign public right of way (severed by A655) requiring negotiation with farmer. Widen & surface a link on the new footpath alignment and the existing footpath next to houses. This is important considering how the high quality footbridge is currently underused.

5. Resurface approach path from Elsicker Lane to footbridge.

6. Create new path on existing desire line across open green space (subject to landownership & negotiation).

7. New advisory cycle lanes both sides on Crossley Street over railway until 30mph zone at New Sharlston.

8. Highlight an informal crossing point to provide direct access to the footway on the southern side of High Street. A short section of shared use footway will allow less confident cyclists the opportunity to rejoin Cow Lane without the need for a right turn manoeuvre.

9. Advisory cycle lanes both sides along Cow Lane as far as the A645.

10. Provide a shared use footway around all sides of the roundabout, providing crossing points of the A655 in an area without many opportunities to cross at present.

11. New Road is an existing signed cycle route. Both New Road and Mill Lane would benefit from cyclist awareness raising measures (E.g. DfT diagram 1057 on signs or painted on carriageway).

12. Cyclist awareness raising measures & minor traffic calming measures on approaches to Streethouse Rail Station along Whinney Lane.

13. Widen existing footway by a minimum of 0.5m on the northern side of High Street as far as Hammer Lane to allow shared use.

14. Use existing track on Hammer Lane as shared use. Consider widening as usage increases.

15. Extend advisory cycle lanes along both sides of Wakefield Road as far as the Whinney Lane junction at Streethouse.
Sharlston and Crofton suffer from significant local severance; the A645 and Doncaster Road cut through the centre of the towns, while the Pontefract and Wakefield railway lines sandwich the two towns to the north and south respectively. To ensure local walking and cycling journeys become a convenient choice, particular attention should be given to providing access to overcome these barriers.

1. Advisory cycle lanes along Cow Lane as far as the A645 (cost has been split between Map 2 and 3).
2. Signed route through residential streets to include the route to Sharlston Community Primary School.
3. Widen existing footway on the northern side of Weeland Road and designate as shared use as far as the central refuge near Birkwood House Farm access track. Modify the central refuge, skewing if necessary to accommodate cyclists.
4. Widen and resurface path to allow shared use to Doncaster Road - allow for negotiation.
5. Install a new toucan crossing of Doncaster Road, allow for alterations to the junction and bus stop to accommodate crossing.
6. Awareness raising measures along Slack Lane until the existing 20mph zone (this assumes the 20mph zone cannot be extended further towards Doncaster Road).
7. Existing 20mph zones.
8. Extend 20mph zone to include access to Brand Hill Drive & Thorntree Avenue.
9. Cyclist awareness raising measures along Santingley Lane, advisory cycle lanes could be installed at the expense of the central hatching.
10. Resurface (all weather) existing track between New Crofton & Foulby.
11. Reduce speed limit from 40 to 30mph & consider traffic calming to benefit the village and the cycle route through Foulby.
12. Surface farm track to a standard suitable for walking, cycling and farm vehicles.
13. Create a new path on desire line across the green. An avenue of trees or planting could create a feature on the route.
14. Widen & surface existing path past the playground.
15. Convert existing pelican to toucan crossing. Allow for a short section of shared use path on the northern side of Weeland Road to improve access into Wood Street.
Map 3: Sharlston and Crofton

Key
- Key route
- Link route
- Existing route
- Wakefield loop

Wakefield Five Towns: Cycling Network Feasibility Study

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Map 4: Featherstone

Featherstone and North Featherstone have a population of approximately 16,000 (ONS, 2009). The majority of this population is within an area of no more than 1.8 by 1.5 miles, meaning that most people are within a 10-15 minute cycle ride of the rail station. The former colliery land north of Green Lane Industrial Park provides an exciting opportunity to develop an attractive, traffic free route north of Green Lane Industrial Park provides an exciting cycle ride of the rail station. The former colliery land

1. Cycle facilities on the A645 Wakefield Road need extending & improvement to provide a continuous route from Streethouse to Featherstone. As a minimum, advisory cycle lanes should be added where the existing cycling facilities end.

2. On western side of the school field resurface the existing path and allow for construction of a new cut and fill 1:20 ramp to replace steps.

3. Create a new path around playing field linking to Alison Street.

4. Cyclist awareness raising measures along Station Lane (e.g. diagram 1057).

5. Road width would allow advisory cycle lanes on both sides of Featherstone Lane would greatly benefit north / south movements.

6. Increase cut through at unmade section of Green Lane.

7. Future development of Green Lane should include 2-way cycle track on northern side.

8. Create shared use route around the roundabout on Common Side Lane.

9. Provide an all weather surface on the existing path to provide a practical, greenway style route to North Featherstone.

10. Most direct route to north Featherstone, however the transition at the northern end (see map 5) is difficult due to a pinch point between land ownership boundaries. Route to be surfaced with an all weather treatment.

11. Alternative route alignment if route option ‘10’ is not possible. Advisory cycle lanes on both sides of Featherstone Lane would greatly benefit north / south movements.

12. Surfacing this track will improve access through the valuable green space and improve linkages to the west of Featherstone.

13. New earthwork ramp opposite war memorial in existing green space - allow for earthworks.

14. New greenway route through green space on alignment of existing desire lines, linking to the railway level crossing & Halfpenny Lane.

15. Halfpenny Lane, an existing high quality shared use route. Allow for relocating bollards eastwards as far as the Prince of Wales Hospice to deter fly tipping.

16. Re-grade ramped access to level crossing in open green space and create a new surfaced path towards the stadium.

17. Create new surfaced path following desire line alongside the stadium.

18. General maintenance & some resurfacing is required to bring the path linking to Pontefract Road up to shared use standard.

19. Convert existing pelican to toucan crossing.

20. Allow for contra flow route up Ackworth Road (currently 1-way). Could be achieved by widening footway by 0.5m.

21. Section of Pontefract Road between Hall Street & Chris Moyles path needs provision for cyclists travelling eastwards due to the one way nature of Ackworth Road. Works could include a right turn cyclist filter pocket.

22. Use (with permission) access road to car park.

23. Create a new path & provide new entrance to the park through existing fencing.

24. New toucan crossing of Ackworth Road, and allow for bus stop rearrangement. Designate a short section of footway as shared use to provide a complete link to Wentbridge Road.

25. Signage throughout the residential streets to ensure route continuity.

26. Widen & resurface a section of Gimhill Lane heading west from Katrina Grove.

27. Signed route through residential streets to ensure continuity.

28. Widen existing cut through at end of Granville Street into green space.

29. Designate footway as shared use & install new toucan crossing between council service access point & the school.

30. Extend shared use footway up to toucan crossing.
Wakefield Five Towns: Cycling Network Feasibility Study

Map 5: North Featherstone

Park Lane provides a valuable link between North Featherstone and Pontefract, however improving accessibility to local shops and services in Featherstone itself needs attention.

1. Most direct route to north Featherstone, however the connection at the northern end is difficult due to a pinch point between land ownership boundaries. Route to be surfaced with an all weather treatment - see Map 4 point 10.

2. Useful link allowing access to the west requires the track to be surfaced to an all weather standard - see Map 4 point 12.

3. Alignment option if route option ‘10’ is not possible - see map 4 point 11.

4. Narrow pinch point will require land owner negotiation to determine if there is potential to widen the existing public access, giving shared use access to Church Lane.

5. Sign a circular route around the village, including cyclist awareness raising measures on the carriageway.

6. Use existing track past Parkfield Farm. Resurface where necessary to a standard suitable for walking, cycling and farm vehicles.

7. Negotiation would be required to achieve a new path around the field edge. However provision of a shared use route to the existing high quality ramp and footbridge over the M62 would overcome a major severance in local journeys northwards from North Featherstone.

8. Existing bridleway route linking to Castleford, consider resurfacing to make a weatherproof route.

9. Provide an all weather surface on the existing route to link into the existing route around Pontefract Park.

10. Regrade path to ramp up to Whistler Drive. Designate footway as shared use to improve access to the rail station at Xscape.
Map 6: Pontefract (South)

Pontefract has a total population of approximately 30,442 (ONS, 2007), the majority of whom reside in an area 2 miles by 1.8 miles, meaning most key services and transport links should be accessible to most within a 15 minute cycle ride. Pontefract has three rail stations: Tanshelf and Monkhill are the two most popular stations located on the Pontefract line. At the time of writing, Tanshelf station has hourly services to Wakefield Kirkgate, whereas Monkhill has two services to Leeds every hour (one via Kirkgate), these make it the most popular station of the three.

1. Designate existing 2 –2.5m footway as shared use.
2. Designate and widen sections of footway by 1.5m to designate as shared use.
3. New ramp arrangement to allow route permeability at the end of Colonel’s Walk which is currently a dead end due to the steep, cobbled embankment. A new ramp could create 1:20 gradient.

   Reassign highway to Stuart Road towards Tanshelf Station.

   Illustration showing how a new 1:20 ramp could be achieved at the end of Colonel’s Walk.

4. Resurface and tidy subway.
   Existing subway under rail line

5. New contra flow to allow two-way cycling on Sessions House Yard.

6. Allow cycling in pedestrian areas with precautionary signing, even if initially on a trial basis.

7. Convert existing pedestrian on the A645 to a toucan crossing. This will be an important element in promoting access to/from Baghill train station.

8. Remove parking and create a 2-way cycle route.

9. Provide a right turn filter pocket to aid cyclists travelling toward the train station.

10. Downhill direction, keep cyclists on Broad Lane to cross Thackray Lane.

11. Uphill direction, takes cyclists up Robinson Street, move stop line for cars back and add an ASL to receive cyclists.

12. Use Valley Road to access footway upgraded to shared use on north side of Southgate.

13. Install a new toucan over Southgate and use existing footway as shared use to link to the existing ramp into Friarwood Park.

14. Use existing paths through the park to reach Mayor’s Walk - allow for cautionary signing such as ‘Cyclists give way to pedestrians’.

15. Mayor’s Walk Avenue, widen existing cut through to Carleton Glen.

16. Provide advisory cycle lanes on both sides of Carleton Road.

17. Existing signal controlled crossing of the railway on carriageway.
   Signal controlled crossing of railway on Carleton Road

18. Modify the existing central refuge on Hardwick Road to accommodate cyclists (minimum width = 2m) and widen the footway on the western side of Hardwick Road by 0.5m to allow shared use. Provide new advisory cycle lanes on Ackworth Road and provide a right turn pocket to link to Highfield Road.

19. Signed route through residential area to achieve continuity.

20. Allow for junction alteration works where Westbourne Road junction meets Wakefield Road. Works should enable shared use footway both sides of the existing zebra crossing (cycling permitted) to provide a continuous route and crossing to Fairfield Avenue.

21. Existing Halfpenny Lane route to overbridge and into Pontefract town centre.

22. Signed route through residential streets to achieve route continuity.

23. Advisory cycle lanes both sides on Grove Road from Churchbalk Lane up to Friarwood Lane.

24. Resurface off road link to Carleton Glen.

Existing path would benefit from a sealed surface

25. Use existing cut throughs.

26. Awareness raising measures along short section of Eastbourne View to access bridleway.

27. Resurface bridleway as far as Trinity Farm (which has surfaced road leading down to J33 roundabout). This would improve year round access to the underused bridge over the A1 (M).

Existing bridge over the A1 (M)

NOTE: Land around Trinity Farm is included in Wakefield’s Local Development Framework. Any development should take into account the proposed network. (See map 8, Knottingley form LDF map).

28. Surface bridleway adjacent to the school up to Coblens Lane.

29. Cyclist awareness measures on Western Avenue up to Northfield Drive.

30. Use existing cyclist facility on Baghill Lane bridge over the railway.

31. Use Northfield Drive to access existing underbridge, allow for widening of off-road section.

32. Use existing traffic free path on Atkinson Lane. However the current access barriers currently prevent legitimate users with bikes or pushchairs and will need modifying.

33. Allow for creation of a two way shared use route linking the pedestrian area through Trinity Street. Modify the bus parking area, and the brick wall to improve access to the crossing. Allow for the pedestrian crossing to be converted to a toucan. Create a new shared use footway on eastern side of Skinner Lane. Width created by removing one lane from the carriageway.
The M62 provides a major barrier to local journeys to the northern and eastern sides of Pontefract. The existing crossing points are currently underutilised and not as conveniently accessed as possible. Monkhill rail station, with its direct service to Leeds is not surprisingly a key destination. This map highlights the details of route improvements to the rail station and options to improve access across the M62.

1. Skinner Lane railway under bridge is currently single lane due to its limited width and as a result the ‘Give way to oncoming vehicles’ arrangement acts as traffic calming that would help cyclists using this route. A new traffic free path alongside the football and cricket pitches would improve access to Beechnut Lane, Tanshelf Station & the Pontefract Park route.

2. To improve connectivity with Monkhill station the route should follow Denwell Terrace, before resurfacing and widening the link towards Black Walk behind the allotments and residential housing. A short section of new path to Cromwell Mount would provide a direct link to Monkhill station. NOTE: This is subject to negotiation.

3. Ensure proposed residential development includes a route for cycling and pedestrian access to the train station that uses the existing bridge over Monkhill Lane. (An alternative route would use Ferrybridge Road and Blackwalk).

4. Lengthen and stagger existing central refuge on Bondgate to facilitate crossing onto Box Lane for less confident cyclists who do not want to make direct crossing.

5. Use existing traffic free path on Atkinson Lane. Remove or modify existing access barriers.

6. Cyclist awareness raising measures under rail bridge from Box Lane up to Water Lane.

7. Signed route through residential streets.

8. Existing traffic free ramp linking to Orchard Head primary school - allow for modification of barrier.

9. Resurface bridleway (Orchard Head Lane) between Monkhill Lane and Orchard Head Lane with an all weather surface.

10. Advisory cycle lanes both sides on Monkhill Lane as far as existing route adjacent to M62.

11. The existing route adjacent to the M62 is surfaced with loose stone for the majority of its length. It would benefit from a sealed weatherproof surface, as part of an important link to Castleford. Minor earthworks would be required to ramp up to the cycle facilities on the A639 roundabout.

12. Surface where necessary, Holmefield Lane, as far as Sheepwalk Lane. Vital to make use of the existing underpass and footbridge over the M62.

13. Highlighted informal crossing with warning signs of Sheepwalk Lane.

14. Continue shared use footway towards Castleford within wide north-side verge.

15. Although <2m wide, given the wide verge on both sides and expected levels of usage the existing footway between Holmfield Lane and Ferrybridge should be designated as shared use.

16. Following a well trodden desire line, surfacing a new off road route to link Darkfield Lane & Holmfield Lane would provide the most direct link to the bridleway route crossing the M62 on Holmfield Lane. Subject to negotiation with landowner.

17. Allow for removal of eastern footway and create contra flow along short section at the bottom of Darkfield Lane.

18. Allow for a raised table across the mouth of Stumpcross Lane.

19. Resurface the subway at the bottom of Stumpcross Lane.

20. The existing loose gravel surface on Sowgate Lane is usable but would benefit from a sealed wearing course. Costs could be justified because Sowgate Lane provides cycling access to an underpass of the M62 and a footbridge over the A1, two key severances to local journeys.

21. Cyclist awareness measures on Water Lane at railway under bridge.

22. Sustrans owned land, possible development site.
Map 8 : Knottingley

This map highlights opportunities to improve the walking and cycling network in Knottingley. Knottingley is severed from neighbouring services and towns by rail, road and river, thus making any crossing points particularly important. With two services per hour to Leeds, Knottingley rail station is also a key destination. The majority of the population (13,258, (ONS, 2007)) is within an area 2 miles by 1 mile, thus making cycling a realistic way to expect people to access local services in Knottingley.

1. Use existing bridge over A1, parapets at 1.4m high. Allow for cautionary signing.
2. New shared use footway up to Pontefract Road. Widen by 1m full length.
3. Pontefract Road is 30mph. Allow for junction redesign & crossing of Pontefract Road. This expense should be justified by vastly improving access to a currently underused bridge over the A1.
4. Signed route through residential streets.
5. Install feeder lanes to allow shared use of the existing footbridges over the railway. Allow for cautionary signing.
6. Subject to negotiation with the landowner, a direct link to Knottingley station could be achieved in between the railway and the haulage yard. An earthwork ramp would be required to link up to Headlands Lane.
7. Allow for an advanced stop line (ASL) and 1.5m feeder lanes at all four junctions. Widen and designate the footway near the rail station as shared use.
8. Remove central hatching and install mandatory cycle lanes on both sides.
9. Use existing footway as shared use into Ferrybridge.
10. Widen existing footway by 1m to complete a shared use link to Brotherton & Byram. This link makes use of the historical bridge.
11. Residential streets signed link to the river Aire path.
12. Surface (weatherproof) existing route between Mill Bridge & Jackson Bridge on the riverside path.
13. New vital ramp link to ‘Rope walk’. Allow for earthwork ramp.
15. Widen existing path from Springfields to Wormersley Road. Allow for modification of access control.
16. Use existing traffic calmed Spawdbone Lane
17. Resurface track from England Lane across the level crossing to Hazel Road.
18. Hazel Road, traffic calmed with existing consideration for cyclists.
19. Make new link from cul-de-sac from existing traffic calmed Windermere Drive to link to bridge off Cattlelath Lane. Resurface track to all weather standard.
20. Existing quiet road link to Ferrybridge services & junction 33 roundabout.
21. Create a new shared use cycleway on eastern and southern side of junction 33 roundabout to make a vital link to Grovehall Lane.
22. Resurface useful existing link.

Existing footbridge over the A1

Existing footbridges on Headlands Lane

Proposed development land. Any development should accomodate the proposed cycle network.
5. Technical notes

Path Surface
Path surfacing is probably the single most critical element determining the popularity of Greenways! A surface which is smooth, firm and dry throughout the year and throughout its lifetime will generate far higher levels of use than will any sort of informal surface which is prone to damage from water, erosion and even horses. On this project we recommend laying a dense bitumen macadam (DBM) surface. This should always be machine laid and generally a single 60mm layer is the most appropriate solution. (If a second layer is used then the weight of the construction vehicles laying this second layer may well damage the first layer, especially on soft ground).

2.5-3m
1m
2.5m

2500mm

Horses wear out narrow path in grass verge

25mm central camber or 40mm cross fall

50mm base course: 38mm type 1 or have a single sub-base layer 150mm-200mm thick

100mm sub-base: ballast, scalings or planings

Verges flush with surface

Geotextile (polypropylene) poor soils only

Shared cycle/ walkway with separate bridle path

Seat as bike rack: Robert Kilvington

Seat as story: The Tarka Trail near Torrington: Katy Hallett

Seat as shelter and look out Phoenix Trail: Angus Ross

The seat as a framed picture on the Phoenix Trail: Leigh Roberts

The seat for meetings at Whithaven: John Naylor and John Grimshaw

The convivial Simplicity Bench: Yumiko Aoyagi

The popular recycled sleeper seat: Jim Partridge and Liz Walmley

The seat for Rangers: Sustrans

Standard One Sleeper and 2 Halves, near Derby

A seat for perching and looking at Didcot: Dominic Clutterbuck

Seats
Part and parcel of walking and cycling is stopping and resting. Seats should always be carefully positioned so they have a particular view, or are under a particular tree. Therefore every seat is a place where a person may want to stop and, perhaps even more importantly, a destination a person might want to reach and a locality where they can meet friends. At entrances, or in areas likely to be used by a fair number of elderly or disabled people, seats should be close together, no more than 200–300m apart, because even these distances might present quite a challenge for some. Seats should be positioned not only so they have an attractive view out over the vista either side of the path but also along the path so that their very presence and indeed occupancy leads to informal surveillance of the Greenway itself.
Access

Although our ambition is that all Greenways should be freely open for walkers and cyclists without barriers, there are many instances where stiles, gates or access controls of some kind or other are required. These are needed for the control of livestock where the Greenway passes in and out of grazed areas, for the provision of maintenance vehicles which require larger entrances than walkers and cyclists themselves, or for arrangements of various kinds to deter motorcycles.

Bollards with a spacing of 1.20 – 1.50m can be used to prevent motorised vehicles accessing Greenways or other physically separated paths while still allowing comfortable access by cyclists, pedestrians and wheelchair users. Locked removable bollards can be used to allow access by maintenance vehicles. If the Greenway is also used by equestrians on the same alignment, the bollards need to be 1.80m apart.

Other types of access barriers should preferably be avoided. While it is recognised that use of motorcycles presents a problem on some sections of the National Cycle Network, the use of other types of access barriers restricts and deters legitimate users such as cyclists and wheelchair users as much as they do motorcycles.

Where motorcycle abuse is anticipated then “A” frames are widely used to inhibit motorcyclists whose wide handlebars are blocked, whilst still allowing wheelchairs through. The best designs are adjustable so that as the problem of motorcyclists is overcome through a combination of high levels of public use, informal surveillance and clear signage with the backing of the local police, then the gap can be widened to minimise the inconvenience to legitimate users.

Anti motorcycle access barriers can be absurdly complex and are a complete obstacle to legitimate users. Bollards should be used to prevent vehicular access – York University. Note the removable unit for vehicle access.

Similar effects can be realised by the use of rocks with similar spacing or by creating chicanes with rocks.

Open access without barriers at the Eden Project’s access road shows the ideal entrance to a Greenway - both unrestricted and with a priority crossing of the road.

At Workington large local rocks have been used to define the route and create chicanes.

View of typical “A” frame access control, with adjacent horse “box”, from the Great Northern Trail in Bradford.

View of partially “opened out” A frame control at the end of Cullingworth Viaduct.
Views

Views can be divided into those along the Greenway in the direction of travel and those to one side or the other of the route itself. The pictures in this section are all taken from a single Greenway – the railway path from Drumgelloch on the outskirts of Glasgow to Bathgate on the way to Edinburgh. As this was a relatively straight railway traversing a somewhat bleak landscape, considerable effort was devoted to making it as interesting and memorable as possible.

The path was moved from side to side to break up long forward views. The route was moved to the boundary to give clear views over interesting countryside, or raised onto adjacent ground for the same reason. The photographs and text here describe these devices which have wide applicability,
Sculpture and Site Specific Works

Sustrans has had a long tradition of commissioning artists and sculptors to work on its projects. From the beginning the objective has been to:

1. Articulate the whole length of the Greenway and to give rhythm and points of focus on otherwise relatively featureless routes such as derelict railways.
2. Mark out the mileposts.
3. Provide local historical and geographical interpretation to enhance users’ knowledge of the location.

4. Create a memorable route one would want to visit again.
5. Make local destinations that local people could be proud of.
6. Create a way for the community to be involved in the making of their Greenway by artists working locally with schools and others to create and maintain their own pieces, promoting the feeling of ownership of the Greenway.

Fencing

Stock fences are usually post and wire. It is best to install 7-wire mesh with 2 lines of barbed wire above. The mesh ensures that dogs don’t get through to worry stock. The barbed wire should always be on the stock side of the posts with one line of smooth on the public side to reduce the likelihood of injury if a member of the public accidentally crashed into the wire.

The fence should always be as far from the path as possible so it is not casually tampered with. A minimum of 1m is highly desirable.

A post and wire stock-proof fence on a rural path at Chedzoy in Somerset. Note that fence is set 1m from path.

Another view of the field fence at Chedzoy.

On the Gloucester and Higham path a top rail was added to assist people with disabilities near to the village.