Commentary on Strategic Cycle Routes in Portsmouth

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Executive Summary

Background

This document provides an objective user's view of the key cycle routes in to and out of Portsmouth. It assesses their safety, their usability by all types of cyclist and how well they meet the Department for Transport (DfT) and Portsmouth City Council (PCC) aspirations for cycle infrastructure This document has been produced on behalf of CTC and Portsmouth Cycle Forum (PCF) as part of the Right to Ride (RtR) campaign [1] and the PCF's ongoing campaign for better cycle infrastructure in Portsmouth.

The DfT has defined a set of design principles for cycle facilities [2], which define a hierarchy of solutions for cycling facilities. The measures in this hierarchy are traffic reduction, speed reduction, tackle problem sites, redistribute the carriageway and finally provide segregated facilities.

The DfT defines a hierarchy of highway users, and a priority order in which their needs must be considered. This hierarchy is pedestrians and disabled people first, cyclists second, public transport users third, motorcyclists and taxis fourth, commercial and business vehicles fifth, car borne shoppers sixth and finally car borne commuters and visitors.

Portsmouth City Council has produced a draft cycling strategy [4] which states as its core objective to create a cycle network interconnecting all areas of the city. If this is to succeed then the existence of good quality, direct, safe and uninterrupted routes for cyclists in and out of the city is essential.

Strategic Cycle Routes

There are three major cyclist's routes in and out of the city of Portsmouth. All of these may be varied to a greater or lesser extent by incorporating diversions onto residential streets etc. For the purposes of this report the most direct, and if appropriate signed, route suitable for cyclists is taken. The routes are:

- Eastern Road, which runs from the Milton area of the city to Farlington largely on segregated cycle track adjacent to the Eastern Road.
- Copnor Road, which runs from the Milton area of the city to Cosham largely on road.
- Pilgrim's Way, which runs from The Hard to Cosham largely on quiet streets and segregated cycle tracks via the city centre.

Conclusions

The existing strategic routes in and out of Portsmouth have no consistency of design. Each falls well short of the standards laid down in the DfT checklist [5] and none of the routes supports well the needs of all types of cyclist, as defined in DfT LTN1-04 [3], well.

Support for cyclists at junctions is poor or non-existent. Where it does exist it has the appearance of having been added as an afterthought. Cyclists are routinely given lowest priority at junctions and in the allocation of road space despite PCC [4] and DfT [5] policy. Signing for cyclists is also very poor. Each of the routes is only really useable by cyclists who already know the way.

Road surfaces are, in general, well maintained and smooth in Portsmouth. However, this does not extend to off-road cycle routes where the surface is

generally poor. This slows cyclists, makes journeys uncomfortable and increases the likelihood of accidents.

The Eastern Road route has an excessive number of give-way points for cyclists, more than three times the number for motorised traffic. Many sections of this route are too narrow and inadequately protected from fast traffic. Where this route crosses major junctions the routing for cyclists is extremely tortuous.

The Copnor Road route offers the fastest route in and out of the city. However, the heavy traffic and frequent squeezing of cyclists by parked vehicles mean that this route is only really usable by experienced and confident cyclists. There is little if any consideration for cyclists at major junctions on this route.

The Pilgrim's Way route could be extremely valuable serving most of the important and popular destinations in the city. However, the difficulty of following the route and its slow, twisting, stop-start nature mean it is of little value to any cyclist who does not have time to spare. Some sections of the route are very pretty and therefore attractive to leisure cyclists but these sections are countered by several grim and threatening stretches.

The Eastern Road and Pilgrim's Way routes are largely off road. These routes offer few advantages over the on-road Copnor Road route, which is much faster. In their current state none of the routes is likely to prove attractive enough to persuade a car commuter to become a cycle commuter.

Recommendations

A consistent set of design principles (perhaps based on the DfT checklist) for city cycle routes should be developed. The design principles should be produced in consultation with and with support of stakeholders such as the Portsmouth Cycle Forum and CTC.

Following on from agreed design principles a plan can be defined stating how these principles can be applied to each route as a whole (rather than applied piecemeal and in isolation at particular trouble spots). This plan for implementation must be integrated with the wider highways maintenance plan.

A proper maintenance strategy must to be developed for off road cycle routes. Surfaces on these routes are deteriorating and in many places badly broken up by tree roots an so on. This compromises the safety, quality of experience and utility of the routes.

Some significant improvements can be made quickly and relatively cheaply, such as an improvement in the standard of signing and the incorporation of existing cycle infrastructure, such as the A27 bridge on Peronne Road and the Moneyfields bus route, into the network.

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1 Introduction

1.1 Origin and Purpose

This document has been produced on behalf of CTC and Portsmouth Cycle Forum (PCF) as part of the Right to Ride (RtR) campaign [1] and the PCF's ongoing campaign for better cycle infrastructure in Portsmouth. Its purpose is to provide an objective user's view of the key cycle routes in to and out of Portsmouth and assess their usability and safety by all types of cyclist and how well they meet the Department for Transport (DfT) and Portsmouth City Council (PCC) aspirations for cycle infrastructure.

This document can be used to support cases for improvement of these cycling facilities.

1.2 Background

The DfT has defined a set of design principles for cycle facilities [2], which define a hierarchy of solutions for cycling facilities. These solutions align well with CTC policy and are thus taken as the ideal for this document. In brief this hierarchy is:

1. Traffic reduction;
2. Speed reduction;
3. Tackle problem sites;
4. Redistribute the carriageway;
5. Provide segregated facilities.

The DfT defines a hierarchy of road users, and a priority order in which their needs must be considered. In brief this hierarchy is:

1. Pedestrians and disabled people
2. Cyclists
3. Public transport users
4. Motorcyclists and taxis
5. Commercial and business vehicles
6. Car borne shoppers
7. Car borne commuters and visitors

Within this hierarchy 5 types of cyclist are identified [3], which should all be supported (there is no implied hierarchy of priority in this list):

- Fast commuter. Confident in most on-road situations, and will use a route with significant traffic volumes if it is more direct than a quieter route.
- Other utility cyclist. May seek some segregation at busy junctions and on links carrying high-speed traffic.
- Inexperienced utility commuter and leisure cyclist. May be willing to sacrifice directness in terms of both distance and time, for a route with less traffic and more places to stop and rest. May travel more slowly than regular cyclists.
- Child. May require segregated, direct routes from residential areas to schools, even where an on-road solution is available. Design needs to

take account of personal security issues. Child cyclists should be anticipated in all residential areas and on most leisure cycling routes.

- Users of specialised equipment. Includes disabled people using hand-cranked machines and users of trailers, trailer-cycles, tandems and tricycles. This group requires wide facilities free of sharp bends and an absence of pinch-points or any other features which force cyclists to dismount. Cycle tracks and lanes where adult cyclists frequently accompany young children should be sufficiently wide to allow for cycling two abreast. This enables the adult to ride on the offside of the child when necessary.

Portsmouth City Council has produced a draft cycling strategy [4] which describes PCC plans to deliver a cycling infrastructure. This document states PCC's vision for cycling:

> *"Portsmouth's vision for cycling is to promote cycling as a 'safe, quick and healthy' mode of transport. To make cycling the mode of choice for short trips that are not undertaken on foot and to fully integrate cycling with all forms of public transport."*

A core objective of the cycling strategy is the creation of a cycle network interconnecting all areas of the city. If this is to succeed then the existence of good quality, direct, safe and uninterrupted routes for cyclists in and out of the city is essential. This document will assess how well the current strategic cycle routes enable the vision and assist in the planning of remedial work.

1.3 Strategic Cycle Routes

There are three major cyclist's routes in and out for the city of Portsmouth. All of these may be varied to a greater or lesser extent by incorporating diversions onto residential streets etc. For the purposes of this report the most direct, and if appropriate signed, route suitable for cyclists is taken. The routes are:

- Eastern Road.
  Runs from the Milton area of the city to Farlington largely on segregated cycle track adjacent to the Eastern Road.
- Copnor Road.
  Runs from the Milton area of the city to Cosham largely on road.
- Pilgrim's Way
  Runs from The Hard to Cosham largely on quiet streets and segregated cycle tracks via the city centre.

These routes are discussed in more detail in sections 2, 3 and 4 respectively and simplistically assessed for:

- Accessibility. How easy it is to find and follow the route.
- Connectivity. How well the route links to other transport and destinations of interest.
- Safety. A measure of the actual hazards present on each route as well as how safe the route feels.
- Utility. How practical it is for the cyclist to use the route – for example the frequency with which the cyclist has to give way or dismount, the quality of surface, the safe speed at which a cyclist may travel.

Each route is evaluated as good, fair or poor in each category.

A detailed commentary on each of the routes is provided in the appendices.

2 Eastern Road Route

This route runs from the junction of Milton Road and Velder Avenue to the junction of Eastern Road with Havant Road. It initially runs as an advisory cycle lane on the road before mounting the pavement to become an unsegregated pedestrian/cycle path. After a short distance it crosses the Eastern Road and as a shared pedestrian/cycle path for the remainder of the distance. In some stretches this is segregated.

There appears to have been little consideration of the DfT hierarchy of solutions in the design of this facility, which is provided in it's entirety by segregation. There has been no apparent attempt to reduce traffic volumes or speed, tackle problem junctions or redistribute carriageway space.

2.1 Accessibility

There are no signs to lead a cyclist to the route. This route can only be found by a cyclist with prior knowledge of it's existence. Accessing the route from any point other then the very beginning or very end is problematic as it lies on the Eastern side of the the Eastern Road which is a busy dual carriageway and virtually everything else in the city is on the Western side. Very little provision is made to enable cyclists to cross the Eastern Road to access the path.

Once on the route it is relatively straight forward to follow.

2.2 Connectivity

There is no connectivity to any public transport from the route. Railway stations at Fratton, Hilsea, Cosham, Bedhampton and Havant are within reach but none are signposted.

There is potentially good connectivity to places of employment and retail premises at Ocean Park but this is let down by the difficulty of crossing the Eastern Road and the lack of signs. These locations can only be accessed by committed cyclists who already know the way.

There is no consideration of onward connectivity at either end of the cycle route. At both ends the route terminates with 'End of Route' signs (the DfT states these should only be used where there is a proven need [5]). There is no onward signing to major destinations such as the Seafront, Historic Dockyard or City Centre heading south or Cosham, Farlington Marshes, Havant or the South Downs going north.

2.3 Safety

For long stretches this is a very good cycle path but there are a number of issues:

- Junctions: There are a number locations when the cyclist has to cross major roads at toucan crossings. The waiting times for these are very long meaning the cyclist is very likely to take risks either by crossing against the lights or using improvised routes across junctions.
- Dangerous bends: There are tight corners in the Swordsands road area and a blind bend just south of Farlington roundabout.
- Entrance to petrol station/hotel at Farlington. The cyclist has to cross entry/exit slip roads to a garage and hotel as fast traffic decelerates in

and accelerates out. This is particularly hazardous for cyclists heading south as the traffic is approaching them from the rear.

- Conflict with pedestrians: There are a number of points at which cyclists and pedestrians come into conflict – notably where unsegregated pavement cycling facilities are obstructed by bus stops and other road furniture.
- Narrow path: There are some significant stretches where the route becomes very narrow and is less than one metre from heavy traffic travelling in excess of 50mph. With cyclists travelling both ways as well as pedestrians this leaves very little room for error, and means that the consequences of any error are grave.

2.4 Utility

Again for long stretches this is a good cycle route but cyclists seem to have the lowest priority at junctions and there an unreasonably large number of points at which the cyclist is expected to give way. Between Milton Rd and Havant Rd there are 10 points (all traffic light controlled) at which motor traffic may have to give way; by contrast there are 31 points at which cyclists must give way. There are some junctions (obvious examples being the entrance to the Harvester Pub and the entrance to the Outdoor Centre) where cyclists could be given priority to reduce this issue.

The time taken to navigate some junctions (notably Fitzherbert Road, Farlington roundabout and the Kirpal Road toucan crossing) is very long. As noted above this means that regular uses who wish to travel quickly are likely to take improvised shortcuts.

There are significant stretches where the surface is poor, either due to erosion or to tree roots.

The Eastern road cycle route falls short of the DfT design checklist for cycle facilities, in particular against points (the numbers given here refere to the point numbers in the DfT design checklist [5]:

- B.01 Connections and Links: Additional off-carriageway links can offer enhanced permeability, potentially safer routes for cyclists and advantageous journey times compared to motor traffic. These need to be designed, built and maintained so that they achieve their intention of drawing cyclists away from less attractive routes on the carriageway. **The measures available to create cycle links can range from a cycle gap in a road closure to the construction of a new bridge. To be effective, cycle links should be clearly signed, direct and relevant to cyclists' needs**.
- B.02 Road Crossings – Side Roads: Maintaining the continuity of cycle tracks is important if they are to provide an attractive alternative to being on road. Consideration should be given to the use of cycle priority crossings where they cross minor roads where daily traffic flows are below 2000 vehicles per day.
- B.04 Junction and Forward Visibility: Adequate visibility (20m where the design speed is 12mph) should be provided or measures to manage speed considered.
- B.06 Flush Kerbs: ***FLUSH*** kerbs, i.e. with no upstand between abutting surfaces, should be provided at all transition points.

- C.03 Signs: The use of “CYCLISTS DISMOUNT” and “END OF ROUTE” signs should always be avoided unless there is a proven need. The use of advance directions signs, particularly map-type where this will direct cyclists through complex junctions, can help cyclists conserve energy lost when stopping to read signs erected at junctions. Posts and sign faces should not reduce the effective width of a cycle track by being placed in the path of pedestrians or cyclists. Where possible, sign posts and lamp columns should be set back 500mm beyond the edge of a cycle track. Where walls or fences prevent this they should be placed tight up against them.
- C.11 Cyclists and Junctions: All junction designs should seek to give priority to cyclists where practicable, and minimise delay and maximise cyclists’ safety and comfort in all cases (see also A.08 Signal Controlled Junctions and A.13 Roundabouts).

2.5 Conclusions on the Eastern Road Route

The Eastern Road cycle route is rated as follows:

Criterion	Rating	Notes
Accessibility	Poor	Could easily be improved with better signing
Connectivity	Poor	Could be improved with better signing and modification of junctions.
Safety	Fair	Segregated facility but at times dangerously close to fast traffic.
Utility	Fair	The large number of cyclist give way points significantly lengthens journey times. Surfaces could be improved.

Table 2-1: Evaluation of the Eastern Road Cycle Route

The Eastern Road cycle path is an attractive route but is poorly signed and in places hazardous. It is primarily useful to leisure cyclists as it is largely off the road and offers access to Farlington Marshes and onward to Havant. However, none of this is signed.

It is less attractive to commuters due to the poor surface, large number of stopping points and difficulty of accessing premises west of the Eastern Road.

The lack of adequate signing makes this route useless to cyclists unfamiliar with local geography.

3 Copnor Road

This route runs from Central Southsea, Eastern Southsea, Eastney and Milton to Cosham. As this route is almost entirely based on road it can start at virtually any point in those areas. For the purposes of this document a starting point of the junction of Milton Road and Velder Avenue is taken. The route runs almost entirely on road until it reaches Hilsea roundabout, with a few short sections of advisory cycle path.

This route is not currently promoted by PCC as a cycle route but it is widely used by commuter cyclists wishing to get in and out of the city quickly and to reach retail/industrial areas such as Burrfields Road and Ocean Park. This route is the fastest central route on and off of Portsea Island and the cyclist is expected to stop relatively infrequently when compared to the other routes considered herein. It is, however, only really suitable for confident, experienced cyclists as traffic is heavy and the cyclist is frequently squeezed into the traffic by parked cars.

3.1 Accessibility

There are no signs leading cyclists to this route or to enable cyclists to follow it (excepting those on the shared foot/cycle path ay Hilsea Roundabout). It is therefore only suitable for cyclists who are already familiar with local geography. There are no destination signs or advice on safe onward routing at either end of this route; nor are there any signs for any of the potential cyclist destinations en-route.

At the junction of Milton Rd/Velder Ave/Rodney Rd the lights are controlled by sensors in the road at off-peak times – this means that unless a motor vehicle happens to be going the same way the lights will not turn green for cyclists.

3.2 Connectivity

Once again there is no direct connectivity to any public transport from the route. Railway stations at Fratton, Hilsea and Cosham are within easy reach but none are signposted from the route.

There is good connectivity to places of employment and retail premises at Ocean Park, Airport Industrial Estate and Norway Road but this is spoilt by the lack of signs and the lack of provision for cyclists at Burrfields Road and Norway Road junctions. These locations can only be accessed by committed cyclists who already know the way.

There is no consideration of onward connectivity at either end of the cycle route. At Cosham the route terminates with an 'End of Route' sign and at Milton it just ceases to meaningfully exist. There is no onward signing to major destinations such as the Seafront, Historic Dockyard or City Centre heading south or Cosham, Farlington Marshes, QA Hospital, Portsdown Hill, Southdowns or Highbury Colleges going north.

There are opportunities to improve access to Ocean Park/Burrfields Rd/Airport Industrial estate by capitalising on the existing bus route through the allotments on Moneyfield Avenue. Access to Cosham and Highbury could be vastly improved by capitalising on the pedestrian/cycle bridge over the A27 from Peronne Road.

3.3 Safety

This route can feel intimidating due to heavy traffic on Milton/Copnor Road but is not intrinsically unsafe. This does, however, mean it is not well suited for use by inexperienced cyclists, children and users of specialist equipment (e.g. cyclists with disabilities).

Particular hazards are:

- The competition for road space brought about by parked cars, particularly on the narrow section north of Copnor bridge and southbound on Baffins Road where echelon parking is in place;
- The junction of Copnor Road with Stubbington Avenue and Burrfields Road, where there are two lanes of traffic approaching the lights and no adequate facilities for cyclists to reach the advanced stop lines;
- The junction of Copnor Road and Norway Road, where there is no provision for cyclists at all;
- The junction at St Mary's Hospital where multiple lanes of traffic are squeezed into a narrow stretch of road eliminating all road space for cyclists;
- The one way system from Copnor Road through Old London Road to London Road, which has multiple lanes of heavy traffic with no provision for cyclists.

3.4 Utility

This route provides a straightforward, fast and efficient route in and out of the city for the experienced cyclist. The number of points at which a cyclist is expected to give way is on a par with motor traffic (14 as opposed to 12) meaning that unnecessary stopping and starting is minimised. The fact that the vast majority of this route is on road means that problems negotiating minor road junctions, bus stops, sign posts and bollards are avoided. The major drawbacks to the utility of this route are:

- The difficulty of passing queues of traffic at the junctions with St Mary's Hospital, Burrfields Rd and Norway Road;
- The confusing southbound cycle route from Northern Road in Cosham past Hilsea Roundabout.

The majority of the route, which is on road, has some particula shortcomings against the DfT Design Checklist [5]:

- A.04 Clear space: Carriageway profiles (including those at pinch points created by build-outs and refuges) should be chosen to create adequate space for cyclists to be passed by other roads users in safety and comfort.
- A.08 Signal Controlled Junctions: Cyclists' needs should be considered as part of the design of all signalised junctions and, whenever possible, provided with an advantage over motorists.
- A.09 Advanced Stop Lines (ASLs): ASLs should be considered at all signal controlled junctions.
- A.11 Cycle Lanes: Where provided, **cycle lanes should be a minimum of 1.5m wide**, continuous, made conspicuous across side roads at junctions and not abandon cyclists where roads become narrow, for example at right turning lanes.

- C.11 Cyclists and Junctions: All junction designs should seek to give priority to cyclists where practicable, and minimise delay and maximise cyclists' safety and comfort in all cases

The northern section of the route, around Hilsea roundabout, is off road and has the following shortcomings against the DfT Design Checklist [5]:

- B.04 Junction and Forward Visibility: Adequate visibility (20m where the design speed is 12mph) should be provided or measures to manage speed considered.
- B.06 Flush Kerbs: ***FLUSH*** kerbs, i.e. with no upstand between abutting surfaces, should be provided at all transition points.
- B.07 Cycle Track Junctions: Adequate corner radii should be provided at junctions between cycle tracks (minimum 2m).
- B.08 Access and Speed Controls: There should be a presumption against the use of any access barriers on a cycle track/shared-use path until/unless there is a proven need because of the difficulties they can cause all users. Where it is necessary to reduce the speed of cyclists, 2 rows of staggered bollards are preferred.
- B.09 Obstruction of cycle track accesses: Where cycle tracks emerge onto the carriageway, suitable arrangements should be put in place to prevent parked vehicles obstructing access and to ensure adequate visibility.
- C.03 Signs: The use of "CYCLISTS DISMOUNT" and "END OF ROUTE" signs should always be avoided unless there is a proven need. The use of advance directions signs, particularly map-type where this will direct cyclists through complex junctions, can help cyclists conserve energy lost when stopping to read signs erected at junctions. Posts and sign faces should not reduce the effective width of a cycle track by being placed in the path of pedestrians or cyclists. Where possible, sign posts and lamp columns should be set back 500mm beyond the edge of a cycle track. Where walls or fences prevent this they should be placed tight up against them.
- C.11 Cyclists and Junctions: All junction designs should seek to give priority to cyclists where practicable, and minimise delay and maximise cyclists' safety and comfort in all cases

3.5 Conclusions on the Copnor Road Route

The Copnor Road cyclist's route is rated as follows:

Criterion	Rating	Notes
Accessibility	Poor	Could be improved with signing and designation of appropriate routes to major destinations.
Connectivity	Fair	Could be improved with better signing and better exploitation of existing facilities such as the A27 bridge at Peronne Road.
Safety	Poor	Only suited to experienced & confident cyclists. Hazards from heavy traffic on narrow sections and excessive parking. Poor
Utility	Fair	This is a speedy route in and out of the city. However, the off-road section at Hilsea is badly designed, confusing and awkward to use.

Table 3-1: Evaluation of the Copnor Road Cycle Route

The Copnor Road route provides a fast, well-surfaced route in and out of the city but competition for scarce road space with motorised traffic can be intense. This problem is compounded by frequent on street parking.

There is a lack of consideration for cyclists at junctions, which can be very busy especially at peak times. There is a complete absence of any cyclist-specific signage except on the northern off-road section at Hilsea roundabout.

The off-road sections of this route are badly laid out, narrow and frequently obstructed.

4 Pilgrim's Way Route

This route runs from The Hard via the City Centre to Cosham. This route is largely off road or on quiet residential streets. This route is widely used and provides access to the major visitor attractions in Portsmouth and to ferry ports.

There is an alternative to the northern section of the route, from Rudmore roundabout, which runs on-road along Twyford Avenue and Northern Parade. This is considerably faster. As with Copnor Road this is better suited to experienced, confident cyclists. This road-based alternative is not discussed further in this document as it ceases to exist south of Rudmore Roundabout.

4.1 Accessibility

This route is very easy to pick up at the northern end (Hilsea Roundabout) where it is well signposted, although the destination signs are outdated (they don't mention Gunwharf Quays for example). At the southern end the route is signposted from the Hard but the sign can be hard to see as it is set back from the road in a very visually cluttered environment. There are no signs leading the cyclist to this route from the Seafront, Old Portsmouth or the Isle of Wight car ferry.

The route is very difficult to follow. Its twists and turns are disorientating and not intuitive even to local residents. The route has a somewhat piecemeal feel to it, with a multitude of design approaches being taken along the length adding to the confusion. Even an experienced local cyclist can expect to make several attempts at this route before being able to follow it with certainty.

The most obvious example to illustrate these problems is at the junction of Market Way and Unicorn Road. A cyclist heading south is likely to think that the route terminates at this point and that they must somehow cross the 4 lanes of traffic on Market Way to continue as they are confronted by 'End of Route' signs. However, there is in fact an underpass on Unicorn Road that takes cyclists to Edinburgh Road. This underpass is not obvious and the one sign is difficult to spot (it is certainly less prominent than the 'End of Route' sings).

4.2 Connectivity

This route has excellent connectivity to the public transport. It passes closely to Cosham, Portsmouth and Southsea and Portsmouth Harbour stations. It also passes closely to the Continental ferry port, the Isle of Wight Catamaran and the Gosport ferry. It is within easy reach of the Isle of Wight car ferry. Unfortunately signage for these transport links is at best confusing and at worst non-existent. For example:

Cyclists are directed to the continental ferry port via a pedestrian route rather than via the (admittedly poor) cycle route from Rudmore roundabout;

- Cyclists leaving the continental ferry port are given no direction out of the city or toward railway stations;
- Railway stations are rarely signed at all;
- There is no signage from The Hard to the Isle of Wight Car Ferry.

The route also has excellent connectivity to places of employment at The Hard, City Centre and Whale Island and to retail areas of the city. Signs for all of these exist but are somewhat sporadic.

4.3 Safety

This route is largely off road but there are a number of particular hazards:

- On Queen Street the route is on-road via a narrow advisory cycle lane. This can be busy and squeezed by traffic and parked cars.
- The route past Unicorn Gate is poorly thought out and cyclists entering/leaving the underpass have no visibility of traffic leaving the dockyard. This is compounded by a poorly placed traffic hump.
- The route along Market Way and Hope Street is a very narrow shared pavement. Two-way cycling is allowed on this stretch with the dockyard wall on one side and an extremely busy road on the other. The route has blind bends and is frequently fouled by signs and lamp posts on the path and fortifications extruding from the dockyard wall.
- The underpasses from Flathouse Quay to Buckland and around the Rudmore Roundabout are grim and threatening. These do not feel like a safe lace to be at any time of day or night. To compound this those at Rudmore roundabout have poor cycle lanes and barriers impeding access.
- The surface in many places, particularly the on road sections in Buckland, the path through Stamshaw Park and the path behind the Greyhound Stadium are very poor.
- The path being Portsmouth Greyhound Track is desolate and intimidating. It is obstructed by poorly placed bollards and unlit.
- The route along the shore near Hilsea Lido is pleasant in daylight but at night it is very hard to see pedestrians and the sharp bends make cycling into the sea a real danger.

4.4 Utility

This route is somewhat tortuous and time consuming to follow. It is narrow in places and poorly sighted at many points. It is much better suited to leisure cyclists than to commuter cyclists, which is unfortunate as it provides access to most of the important transport connections and places of employment in the city. This route can be extremely frustrating to the cyclist in a hurry and is unlikely to prove attractive enough convert a car commuter into a cycle commuter.

Notable conflicts with the DfT Design Checklist [5] are:

- A.08 Signal Controlled Junctions: Cyclists' needs should be considered as part of the design of all signalised junctions and, whenever possible, provided with an advantage over motorists.
- A.11 Cycle Lanes: Where provided, cycle lanes should be a minimum of 1.5m wide, continuous, made conspicuous across side roads at junctions and not abandon cyclists where roads become narrow, for example at right turning lanes.
- B.01 Connections and Links: ... To be effective, cycle links should be clearly signed, direct and relevant to cyclists' needs.
- B.04 Junction and Forward Visibility: Adequate visibility (20m where the design speed is 12mph) should be provided or measures to manage speed considered.
- B.06 Flush Kerbs: ***FLUSH*** kerbs, i.e. with no upstand between abutting surfaces, should be provided at all transition points.

- B.07 Cycle Track Junctions: Adequate corner radii should be provided at junctions between cycle tracks (minimum 2m).
- B.08 Access and Speed Controls: There should be a presumption against the use of any access barriers on a cycle track/shared-use path until/unless there is a proven need because of the difficulties they can cause all users. Where it is necessary to reduce the speed of cyclists, 2 rows of staggered bollards are preferred.
- B.09 Obstruction of cycle track accesses: Where cycle tracks emerge onto the carriageway, suitable arrangements should be put in place to prevent parked vehicles obstructing access and to ensure adequate visibility.
- C.02 Surfaces: Surfaces should be chosen with due regard to whole-life costs (off-carriageway as well as on). Materials should always be machine laid to ensure a smooth running surface.
- C.03 Signs: The use of “CYCLISTS DISMOUNT” and “END OF ROUTE” signs should always be avoided unless there is a proven need. The use of advance directions signs, particularly map-type where this will direct cyclists through complex junctions, can help cyclists conserve energy lost when stopping to read signs erected at junctions. Posts and sign faces should not reduce the effective width of a cycle track by being placed in the path of pedestrians or cyclists. Where possible, sign posts and lamp columns should be set back 500mm beyond the edge of a cycle track. Where walls or fences prevent this they should be placed tight up against them.
- C.04 Cycle parking: The inclusion of ‘Sheffield’ type cycle parking stands should be considered in all highway traffic management and maintenance schemes.
- C.10 Lighting: Off-road routes which cyclists are encouraged to use after dark should be lit. Note: Even lit facilities remote from passive surveillance are unlikely to be used and a lit on-road alternative should be identified. Consider the provision of floodlighting where cycle routes cross roads.
- C.11 Cyclists and Junctions: All junction designs should seek to give priority to cyclists where practicable, and minimise delay and maximise cyclists’ safety and comfort in all cases.

4.5 Conclusions of the Pilgrim's Way Route

The Pilgrim's Way route is evaluated as follows:

Criterion	Rating	Notes
Accessibility	Poor	The route is fairly easy to find from the end points but confusing and difficult to follow.
Connectivity	Good	This route connects most of the important locations in the city, however there is room for improvement in signing.
Safety	Poor	There are some sections of this route, notably at Portsmouth Greyhound Stadium, Rudmore Roundabout and Hope Street/Market Way that are positively hazardous.
Utility	Poor	The route is tortuous and time consuming. Surfaces are poor and little thought has been given to cyclists needs in design.

Table 4-1: Evaluation of the Pilgrim's Way Road Cycle Route

This route could be extremely valuable serving most of the important and popular destinations in the city. However, the difficulty of following the route and its slow, twisting, stop-start nature mean it is of little value to any cyclist who does not have time to spare. Some sections of the route are very pretty and therefore attractive to leisure cyclists but these sections are countered by several grim and threatening stretches.

Were a regular car commuter to try this route it would serve to confirm their worst expectations of cycle commuting.

5 Conclusions

PCC has stated in its cycling strategy [4] that it aims to establish a network of cycle routes interconnecting all of Portsmouth. Efficient, cycle friendly routes in and out of the city are a pre-requisite of this.

The current cyclist's routes in and out of the city are the Eastern Road, Copnor Road and Pilgrim's Way. These routes have no consistency of design and each falls well short of the standards laid down in the DfT checklist [5] and each offers only limited support for the DfT defined 5 cyclist types [3].

In general support for cyclists at junctions is poor or non-existent. Where it does exist it has the appearance of having been added as an afterthought. Cyclists are routinely given lowest priority at junctions and in the allocation of road space despite stated PCC [4] and DfT [5] policy.

Signing for cyclists is also very poor. Each of the routes is only really usable by cyclists who already know the way.

Road surfaces are, in general, well maintained and smooth in Portsmouth. However, this does not extend to off-road cycle routes where the surface is generally poor. This slows cyclists, makes journeys uncomfortable and increases the likelihood of accidents.

The Eastern Road route has an excessive number of give-way points for cyclists, more than three times the number for motorised traffic. Many sections of this route are too narrow and inadequately protected from fast traffic. Where this route crosses major junctions the routing for cyclists is extremely tortuous.

The Copnor Road route offers the fastest route in and out of the city. However, the heavy traffic and frequent squeezing of cyclists by parked vehicles mean that this route is only really usable by experienced and confident cyclists. There is little if any consideration for cyclists at major junctions on this route.

The Pilgrim's Way route could be extremely valuable serving most of the important and popular destinations in the city. However, the difficulty of following the route and its slow, twisting, stop-start nature mean it is of little value to any cyclist who does not have time to spare. Some sections of the route are very pretty and therefore attractive to leisure cyclists but these sections are countered by several grim and threatening stretches.

The Eastern Road and Pilgrim's Way routes are largely off road. These routes offer few advantages over the on-road Copnor Road route, which is much faster. In their current state none of the routes is likely to prove attractive enough to persuade a car commuter to become a cycle commuter.

6 Recommendations

A consistent set of design principles (perhaps based on the DfT checklist) for city cycle routes should be developed. The design principles should be produced in consultation with and with support of stakeholders such as the Portsmouth Cycle Forum and CTC.

Following on from agreed design principles a plan can be defined stating how these principles can be applied to each route as a whole (rather than applied piecemeal and in isolation at particular trouble spots). This plan for implementation must be integrated with the wider highways maintenance plan.

A proper maintenance strategy must to be developed for off road cycle routes. Surfaces on these routes are deteriorating and in many places badly broken up by tree roots an so on. This compromises the quality of experience and utility of the routes.

Some significant improvements can be made quickly and relatively cheaply:

- Review signing on cycle routes and introduce consistent signs along each route guiding cyclists to important destinations in the city;
- Incorporate existing pieces of cycle infrastructure, such as the A27 bridge on Peronne Road and the Moneyfields bus route, into the routes in and out of the city.
- Prepare a prioritised plan of required improvements by area to be ready to take advantage of opportunities for implementation as part of other developments or highway works.

7 References

[1] CTC Right to Ride, http://bit.ly/oj05Y.
[2] Department for Transport Cycling England Design Principles, http://bit.ly/HLjSR.
[3] Department for Transport Local Transport Note LTN 1-04, http://bit.ly/2TAlS9.
[4] Portsmouth City Council Cycle Strategy, http://bit.ly/17Ejqa.
[5] Department for Transport Cycling England Design Checklist, http://bit.ly/1ryNqG.

Initial distribution list

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