



Regeneration and Economic Development
Durham County Council
County Hall
Durham
DH1 5UL

22 May 2014

Dear Sir or Madam,

Re: Durham Bus Station relation proposals

I writing on behalf of Durham University Bicycle User Group (DBUG), a group of around 300 staff and students based at the Durham campuses of the university. Members have attended the exhibition held by the Council and have studied the plans. A number of us cycle through this area regularly so we know the area well. These comments have been circulated, revised and agreed by the group.

Outline of response

When drafting this response, we started by enumerating all the problems for cyclists with the proposed new road layout. It quickly became clear that the Council, by concentrating on the shopping development potential of the bus station relocation, was at risk of throwing away the chance of a transformational change in the city's cycling facilities. Since 1967, when the Milburngate Bridge was built, the A690 has been a huge barrier to cycling (and to a lesser degree walking) and with the subsequent pedestrianisation and other restrictions in the town centre there are many journeys which are simply not convenient by bicycle. With greater imagination on the part of the designers, these changes can be reversed, opening the way for cycling to regain the modal share it had in the 1950s and contribute to the reduction in congestion which Durham so badly needs.

We start with general points about the design brief, which has failed to consider cycling early enough or give it sufficient priority.

The main section sets forth a vision for what could be achieved for cycling if the Council is prepared to back up its policy statements on transport policy.

Finally in an appendix we detail the problems with the road design as it stands, but this in no

way endorses the option of making a few minor tweaks to the current design. There is also a comment on cycle parking provision.

Design brief

When members of DBUG visited the exhibition on 1st May we asked to see the design brief for the road designers. The council officer said she would arrange to publish it on the web but it has not yet been made available as far as we can tell.

In the 2012-15 County Durham Cycling Strategy, point 6.1.1, it is stated that the Council will “use and exceed, where possible, the existing good practice guidelines (Local Transport Note (LTN) 2/08 and the Dutch Design Manual for Bicycle Traffic (CROW)) to design cycle infrastructure”. These guidelines have not been followed in the design of the new road layout associated with the bus station scheme.

The only cycle provision on the plans so far released is a blue dashed line labelled “Cycle Route”. Our interpretation is that this is a rerouting of National Cycle Network (NCN) route 14 which currently passes along Atherton Street and across the mouth of the current bus station. With the blue-dashed line merely following the pavement, it looks like it has been put on as an afterthought, rather than being an integral part of the design brief.

There is no special provision for any other routes which people might wish to cycle through the area, and some existing routes used by cyclists are removed. With poor quality provision, current cyclists will probably just carry on using the main road. Children, the elderly and new cyclists may avoid the area, cutting the possible destinations open to them. This is how cycle demand continues to be suppressed.

According to LTN 2/08 for the volume of traffic found on the A690 cycle lanes or tracks should be provided. In a response to one of our members a Council officer stated “given the space restraints in the city centre it is unlikely that a segregated cycle lane can be incorporated into the design”. Given we are talking about one of the widest roads in the city the only explanation for this statement is that cycling continues to be disregarded as a mode of transport by the Council. If the priority in road design is always the free flow of motor traffic it is clear that active travel modes such as walking and cycling will continue to decline. With better infrastructure there is no reason why Durham should not see the cycling renaissance which is happening elsewhere, including in the hilly city of Bristol where a 12% cycle to work share has been achieved (compared to Durham’s 1.8%). Cycling itself is a powerful tool for economic regeneration.

Dave Wafer, Strategic Traffic Manager of Durham County Council has said that the plans are only preliminary, and for consultation, but if cycling provision is ever to be mainstreamed in Durham, highways proposals have to be designed with cycling in mind from the outset. Trying to make minor modifications later to squeeze in cycle infrastructure, or bolting on second-rate facilities later is not good enough.

We would be very keen to work with council officers from Traffic and Sustainable Transport to identify possible solutions which can be incorporated into the next round for consultation.

Vision for the cycle network

The Council needs to develop a wider vision for the cycle network in the city, and ensure that all new proposals support the realisation of that vision. A start has been made with the identification of strategic cycle routes in the County Durham Plan (see *Durham City Integrated Transport Approach*, p. 20), though as we have previously submitted several key routes in the city were not included. In the bus station plans, such vision is totally lacking.

In this section we explore some of the ideas that could contribute to that vision. With other major junction realignments currently being designed (such as Leazes Bowl Roundabout) the situation is urgent. If cycling is not to be sidelined for yet another generation, the cycling vision must be developed fast, so that the junction redesigns associated with SCOOT can be made compatible with the vision.

Identification of strategic routes through the site

A proper identification of strategic cycle routes would involve travel surveys and plenty of consultation. What we offer here is based on the local knowledge of a few individuals. The principle has to be to identify sources of journeys and destinations, and the most direct routes between them, irrespective of whether these routes are currently available to cyclists.

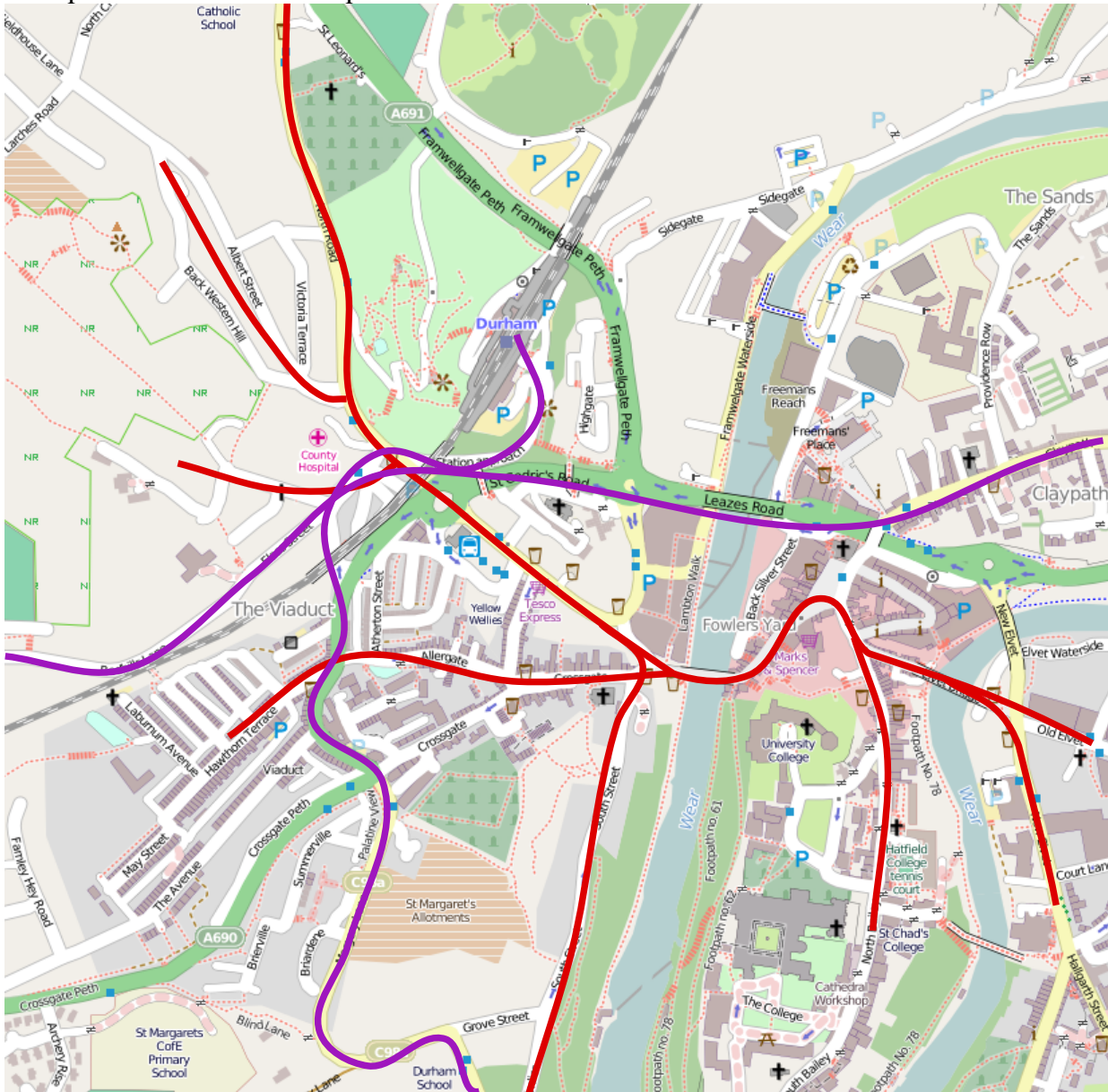
Before the current A690 was built, North Road ran uninterrupted from St Leonard's School to Framwellgate Bridge. This is still the most direct and obvious route into town for people living in North End and Western Hill, and in the areas near Flass Vale currently being developed for housing and student flats. The centre of town is a key destination. The railway station, which is close to this route, is both a destination and a source of journeys. Beyond the middle of town there are areas of employment (e.g. the prison, and offices on Old Elvet and Green Lane) and study (university buildings on New Elvet). Beyond St Leonard's School lie the hospital and the Aykley Heads site which is proposed for development as a business park. This axis is definitely one which should figure in any strategic cycle route provision.

Another key destination is the University Science Site. Students may be travelling from housing in the Viaduct area. Staff may arrive at the railway station or travel from Western Hill or North End, so the routes from the station to the Science Site must be considered. The shortest route from the station is via North Road, South Street, Pimlico and thence to the university via Quarryheads Lane. Another option is via Sutton Street and the A690, then along Margery Lane. Crossing the town centre is another possibility.

A large area of student housing to the south of the railway line is accessed via Cross Street, which meets the A690 opposite the end of Allergate. Students may wish to travel to the Science Site, which we have already covered, but another important axis leads via the town centre to the college and university buildings on the peninsular, to Elvet Riverside or the Leazes Road education campus. The most natural route is via Allergate and Crossgate to Framwellgate Bridge.

We have already mentioned the NCN 14 route. This serves another key axis through the site, linking Crossgate Moor and villages and towns along the Lanchester valley to locations on the eastern side of the city via the Milburngate Bridge.

If we put these routes on a map it looks like this:



Two routes have been marked in purple. **These are the only ones at present accessible by bicycle throughout their entire length.** The purple route from left to right, while accessible, is far from satisfactory. The route from the station to the science site could also be improved.

Suggested measures

To make the other routes marked in red available to cyclists, the following measures would be needed.

North Road from St Leonard's School to the new 'bus station junction'

This road is wide enough to accommodate a segregated two-way cycle lane. Some car parking might have to be relocated. At the top connection could be made to the path on the east side of the A691 to County Hall, so serving the proposed Aykley Heads business park.

Care would be needed to provide a safe route past the station approach road to the new signalised junction.

North Road to Framwellgate Bridge

Two-way access for cyclists should be provided here, including across the proposed pedestrian area in front of North Road Methodist Church. A cyclist phase would be required to allow cyclists in and out of North Road at the new junction.

At present, when North Road meets Milburngate, all traffic has to turn into Milburngate. Cyclists should be exempted from the No Right Turn.

Silver Street and Elvet Bridge

At peak commuting times when there are most cyclists these streets are fairly free of pedestrians. It should not be a problem reopening them to cyclists therefore, who will present far less a danger than the delivery vehicles. The 1993 TRL report *Cycling in pedestrian areas* found no problems allowing cycling in pedestrian areas, as cyclists tend to dismount when the street is too busy with people walking. The Council has acknowledged the problem of pedestrian and cyclist congestion on the Milburngate Bridge, so reopening the historic route through the Market Place to bicycles would be a good solution.

At the end of Elvet Bridge cyclists would need to be allowed to continue to Old Elvet and New Elvet where there is currently a mandatory left turn. Allowing cyclists to share the pedestrian phase at the crossings could be one solution. Could separate cycle lights also allow right turns from New Elvet to Old Elvet and allow cyclists to exit Old Elvet and cross to Elvet Bridge?

South Street

This road is currently one-way from south to north. Allowing two-way bicycle traffic should not be a problem on this quiet residential street, and would open up a lot more options to cyclists, providing an alternative to the A690 as well as a route out of the town centre. There is also a no-entry sign at the bottom of the street, preventing vehicles from turning into North Road. This should have a cycle exemption added.

Allergate and Crossgate

These two roads are one-way in opposite directions, which has succeeded in eliminating their use as a rat run. Sadly it also prevents residents of the large area of terraced streets off Cross Street from using the most direct route to cycle into the town centre. Two-way access for bicycles should be permitted.

Feasibility

Most of the above measures are quite easy to achieve in terms of infrastructure, and if implemented as a package would give out a big message that the Council is serious about promoting cycling as a mode of travel. People are easily discouraged, however, if part of the route feels dangerous or if the cycling provision runs out or is disjointed. This is why it is so important to design the A690 / North Road junction well, giving top quality facilities for cyclists. It will be much cheaper to do it now than to have to make improvements later.

Suggestions for the new junction

Approximately 16,000 vehicles a day use the A690. Segregation is important, in time and in space, to protect vulnerable road users and encourage active travel modes. Provision should be simple and direct for cyclist and pedestrian, avoiding staggered crossings. Staggered crossings are hard to ride across, and are also worse for people pushing buggies and wheelchair and mobility scooter users.

Signalised junctions should reduce the waiting times for bicycles, by having more frequent but

shorter timings for cycle traffic. The bicycle traffic should have as direct a route over the junction as a car would.

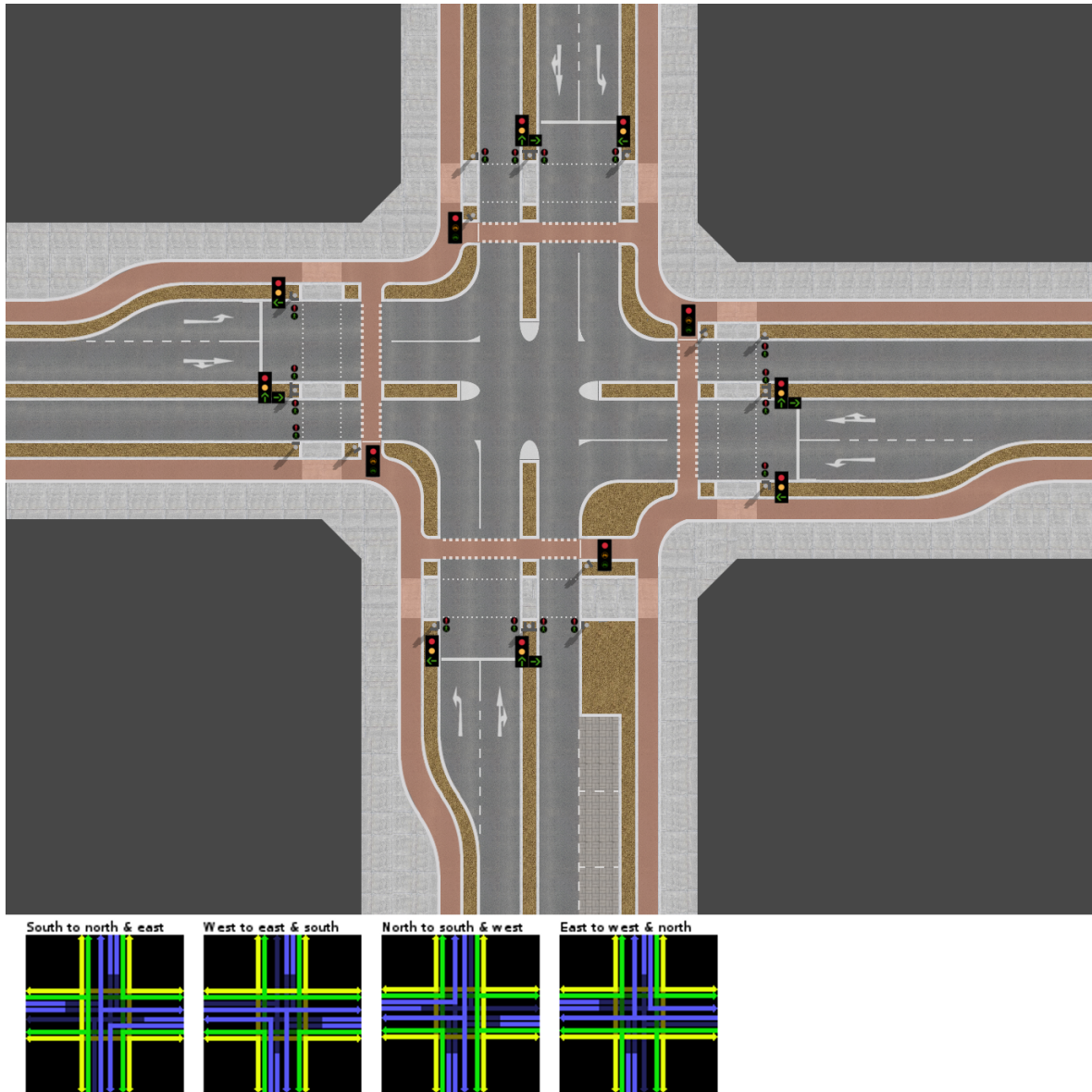
Designers should consider using innovative traffic signals such as (i) advanced green cycle signals, or (ii) simultaneous green phase for bicycles.

One option which could work very well in this situation would be the simultaneous green phase. This is common in the Netherlands and is now being used in North America. It would require a segregated lane approaching from each direction, with a set of lights for cyclists. For one of the phases, all motor traffic is halted, and all the cycle lights are green. By allowing cyclists from all directions all possible movements simultaneously while the rest of the traffic is stationary, the cycle traffic can pass through the junction very quickly, safely and efficiently. It avoids the need for more complex solutions involving many more cycle turning lanes, and saves road space compared with the default British option of advanced stop lines, producing far greater safety benefits.

See <http://www.aviewfromthecyclepath.com/2014/05/the-best-traffic-light-solution-for.html> for a further explanation.

There is some debate as to whether the simultaneous green design can be achieved in current British traffic signal regulations but the revision coming into force for 2015 may assist.

Without simultaneous green it is still possible to provide segregated crossings which are efficient for cyclist and motor traffic. An example cross-roads is shown below. The diagrams under the plan show how the phases are sequenced. Note that the two-stage right-turn for the cyclists is facilitated by the sequencing.



The A690 / North Road junction would be a T-junction, with the addition of access into the bus station for buses only, and access into and out of the southern part of North Road for cyclists.

Other possibilities that could be of help include altering the footbridge from the west end of Castle Chare to the station approach road to make it suitable for bicycles, providing grade separation for the route from the station to the centre of town and the NCN 14.

Plans also need to be made for improving the NCN route towards Milburngate Bridge and navigation of that junction by cyclists. The short distance between the bus station junction and Milburngate roundabout require that they are considered together. The pavement on the south side of the A690 is quite wide so in this case a shared use pavement could be a worthwhile option, given the other constraints.

Routes through the Milburngate roundabout are far from ideal at present. There are crossings on only three of the four arms of the junction. Only two of those crossings are toucan crossings, and they are staggered rather than direct. Only the route north along the east side of the A691 is up to an acceptable standard. This should be looked at if possible. It is a great shame that buses will still be routed down North Road and out via Milburngate as this junction could have been simplified.

Summary

We believe that to remove the barrier to cycling and pedestrians formed by the A690 much more needs to be done to make the junction safe and convenient. We have demonstrated the possibilities of re-opening the historic routes through town to cycle traffic. We urge the Council to replan the junction to facilitate through cycle traffic, segregated from the motor traffic and pedestrians to a high standard consistent with best practice such as the CROW manuals.

An appendix follows which goes into the problems with the current proposals in detail, but we consider that major redesign is the only acceptable way forward.

Yours faithfully,

Matthew Phillips

(on behalf of Durham University Bicycle User Group)

Appendix: Problems with the proposed road layout

In this section we list some of the problems identified by members of DBUG. These have been relegated to an appendix because, in essence, we believe there is little that can be done to modify the current plans to produce an acceptable outcome for cycling. The vision for the wider cycle network must instead be recognised and the junction redesigned from scratch to facilitate the vision.

National Cycle Network route (NCN 14)

The proposals show this route coming down the A690 from the Sutton Street junction via the existing pavement by the railway viaduct, and then crossing in three stages (at crossings shared with pedestrians) to gain the south side of the A690, rejoining the existing NCN route past the footbridge and along Castle Chare. Problems with this proposal:

- Pavements with use shared between pedestrians and cyclists are unpopular with cyclists and pedestrians alike. Elderly people feel particularly vulnerable in this environment. As this would be the only footway along this stretch of the A690 it would be preferable to segregate pedestrians and cyclists. See p. 10 of LTN 2/08 (the “hierarchy of provision”) where shared-use paths are given as the last resort.
- Segregating pedestrians and cyclists is particularly important on a route which has a pronounced downhill gradient. Cyclists would be aiming to gain momentum going down-hill. Combine this with the blind exits that emerge from steps the other side of the viaduct in one or two places and you have a real problem with perceptions of safety.
- At the new junction replacing the roundabout, the route is shown crossing to Castle Chare in three stages. An important principle of promoting cycling is to ensure that all cycle routes are at least as convenient as the main road alternative. At these traffic lights, the road traffic waits for a green light once, and then proceeds all the way through the junction. Potentially having to wait three times to continue along NCN 14 is a profound disincentive to cyclists.
- Between two of the stages a staggered route is shown, typical of the kind of provision which relies on guard rails to control pedestrians in a car-priority environment. These are hard to negotiate by bike. Routes for pedestrians and cyclists should be designed to be straight and direct, with users not having to wait several times to complete a crossing of the road.
- Once the south side of the A690 is reached, the cycle route continues along the pavement to Castle Chare. The pavement has been further narrowed here to accommodate a new bus stop.

We are aware that the County Council has aspirations to re-route the NCN route via Lowes Barn Bank, Prebends Bridge and the Bailey, but there will remain the need for a good network towards Crossgate Moor and Langley Park, so the issues with the current route will, in any case, need to be addressed. As we noted in our submission to the County Durham Plan consultation in December, the bus station relocation would be an ideal opportunity to provide for the strategic cycle network needs in the area, but to do this the Council needs to have a wider vision to work towards.

Atherton Street

At present, cyclists coming from the east may choose to pass under Hopper House or past the

back of the bus station and join Atherton Street to cycle up the hill towards the A690 junction at the end of Margery Lane. This offers a useful quiet alternative to the A690 for people cycling to the University science site. Atherton Street joins Allergate and from the end of Allergate up the A690 there is an on-road cycle lane as far as the traffic lights.

In the proposals, Atherton Street is cut at the bottom end of the terraced housing, with no through route being available. This removes a safe route up the hill for cyclists. The proposed shared-use pavement on the viaduct side of the A690 does not address the need, as it would involve multiple crossings of the main road to complete the journey.

The route is cut to allow the buses access to the new bus station and to exit round the back of North Road Methodist Church into North Road. This also means that the inhabitants of the 24 houses in Mitchell Street have no road access except via the new road, which will predominantly be used by buses, taxis and delivery vehicles. The buses will very much dominate this road. Only 1% of road traffic is buses, but buses are involved in 6% of cyclist deaths so there will be an increased risk to the inhabitants of this road, many of whom are students and more likely to want to use a bicycle.

North Road

At present cyclists can travel two-way along North Road from the roundabout as far as Neville Street, and then one-way from there to the junction with Milburngate. This gives convenient access to shops. It is not clear from the plans whether cycling will be allowed in the newly pedestrianised area in front of North Road Methodist Church. The visualisations displayed in the exhibition were completely devoid of cyclists, even on the roads or marked cycle routes.

We would urge that cycling be allowed in this area, because the alternative, of cyclists using the new route round the back of North Road Methodist Church, would be less direct and less safe. In fact, we hope that two-way access for cycling along the whole length of North Road could be restored as part of this scheme. (See the main vision above.)

We were told when visiting the exhibition that the Council had looked at closing North Road entirely to buses, and had considered other possible locations for the bus station, but nothing else would work. We were informed that the number of buses using North Road would be reduced from 70 an hour to 50. As the main impetus for moving the bus station is to improve the viability of North Road shops by attracting a large “anchor store”, we would question whether this will be sufficient if more is not done to make the street attractive for pedestrians. By placing the exit from the new bus station to North Road nearer the top of the road, the volume of traffic on the stretch of road past the front of the redeveloped bus station site could actually be increased over current levels! Other problems with the shopping ambience of North Road is the large amount of space devoted to parking taxis, and the lack of enforcement of current restrictions on other motor vehicles.

A street environment which minimises the motor traffic tends to be most popular with shoppers, hence improving the viability of the shops. The following measures should be considered:

- limiting the taxis to a much shorter taxi rank (e.g. four during the daytime, but a longer rank for the evenings)
- other vehicles only being allowed access for delivery at restricted times, like Silver Street
- reducing bus volumes as much as possible, with pedestrian priority at all crossings and low speeds

Access to the railway station

At present, motor vehicles coming down the A690 from Neville's Cross travelling towards the railway station (or further up North Road towards County Hall) will usually continue on the A690 as far as the present roundabout and turn left up North Road there. In the plans, this movement appears to be prohibited, except to buses. This will mean a great deal more traffic passing via Sutton Street, which is currently relatively quiet for a city-centre street. Sutton Street is used a lot in both directions by cyclists, however, as it avoids the roundabout and part of the hill. So this change will make the key route to the railway station less safe for cyclists.

In the past, members of DBUG have suggested providing a signalised crossing to help pedestrians and cyclists cross to the station approach road from Sutton Street, as this junction has poor visibility in each direction of travel. This has been rejected by council officers on the grounds that it would be too close to the roundabout and would cause problems at that junction. With the roundabout being converted to a signalised T-junction it would be possible to revisit this, with the phases of the lights being co-ordinated to avoid problems.

For a cyclist approaching from Milburngate Bridge, whether via the main road or via NCN 14 along Castle Chare, there is little or no assistance if the destination is the railway station. On the main road the cyclist has to move into the right hand lane approaching the lights, which is hard to do in heavy traffic after travelling slowly uphill. On the route via Castle Chare, the cyclist may proceed on the pavement under the footbridge, and then cross two stages of pedestrian crossing, presumably starting to cross the third but leaving it to rejoin the road. Cycle routes should be at least as direct and convenient as the motor vehicle route, and this fails that test.

Before the A690 was driven through, Castle Chare used to connect to the station approach road part way up, and there is now the footbridge on roughly the same alignment. Would it be feasible to provide a shared pedestrian and cycle bridge instead? How useful this would be would depend on the design of the rest of the network, but grade separation of cycles from the road network is often used in the Netherlands to improve facilities and should be borne in mind in this design, particularly as the topography could actually be of assistance in this case.

Other issues

There is a left-turn bus lane shown with a very long taper approaching the lights. See the top-right of the following excerpt from the plans. One of the most common types of collision involving pedal cycles is the "left hook" where a motor vehicle overtakes and then turns left crossing the path of the cyclist. Long tapers put cyclists at greater risk of collision so this design is dangerous. As previously observed, with poor quality cycle provision as currently exemplified by the plans, many cyclists will continue to use the main road, so the argument that "the cyclists should be on the pavement there" does not deal with the safety issue.

Similarly, cyclists will be vulnerable cycling across the entry mouth of the new bus station, which is very wide, and at the new junction further along the A690 where buses can exit the bus station or enter the new route through to North Road. There is a very long distance shown between the stop line heading south-west at that junction and the mouth of the new road. This would present grave problems of signal timing for any cyclist passing this light towards the end of the phase.



The above excerpt also shows a problem for pedestrian access. There is a long landscaped barrier, presumably partly to improve the view as you walk down from the railway station, but it is marked “no pedestrian access”. The suggested route for pedestrians is convoluted. Pedestrians, like cyclists, also prefer direct routes, and are even more likely to flout barriers and signs in order to take them. A pedestrian might well want to walk along this side of the road, as they can do now. To make matters worse there is no provision made for crossing the road at the point the routes diverge, which will lead to frustration and risk-taking.

It is certainly more convenient for the road designer if pedestrians and cyclists can be excluded from the major road network, but it is widely recognised now that the convenience of the pedestrian and the cyclist should have priority if we are to turn the tide of car dependence and encourage active travel.

Cycle parking

Currently one of the largest bank of cycle racks in the town centre is at the back of the bus station, accommodating up to 20 cycles. There are stands for 4 cycles near the west end of

Framwellgate Bridge but there are no others serving the North Road shopping area.

The Council must provide a similar quantity of cycle parking at the new bus station to provide for integrated transport using cycle plus bus. There is also a need for extra provision at various points along North Road, to allow for people going shopping to lock up their bikes.