

Duffield Road Transport Improvements

15 Month Review

1.0 Background

A new inbound 24 hour experimental bus lane was introduced on 5 March 2007 from Church Lane to north of Broadway. At the same time parking was prohibited on Duffield Road and the speed limit reduced to 30mph from 40mph.

As part of the overall package of works changes have taken place at Broadway roundabout to help control traffic speeds, improve safety and assist pedestrians crossing Broadway and Duffield Road

Following the review in July 2007 it was agreed to retain the bus lane for a further trial period.

At this stage it is not possible to change the existing scheme under the powers covering experimental traffic orders and a decision is needed to make the scheme permanent or withdraw it.

This report sets out the impact of the scheme following its 15 month experimental period.

2.0 Results

The following information has been recorded to assess the operation of the trial scheme

- bus journey times
- car journey times
- bus occupancy
- road injury collisions
- economic benefit
- vehicle speeds
- through traffic in Darley Abbey
- traffic volumes

2.1 Bus Journey Times

Two sets of data have been recorded. One is based on bus journey time surveys of buses travelling between Church Lane and Broadway Roundabout and the other is based on fare stage information between stops at Ford Lane and Broadway, supplied by the bus operator.

From survey information the average morning peak journey time before the works was 7 minutes 2 seconds. The average recorded after 15 months was 2 minutes 48 seconds. This shows an overall saving of 4 minutes and 14 seconds making the morning peak bus journey 60% quicker. The bus journey

has also become much more reliable compared with previously. The maximum journey time fell from over 16 minutes to under 6 minutes following the introduction of the scheme.

From fare stage information the average morning peak journey time before the works was 15 minutes 12 seconds and the average after 15 months was 5 minutes 35 seconds. This shows savings of 9 minutes 46 seconds in the morning peak period making the journey 64% quicker than before.

2.2 Car Journey Times

Journey time surveys of car traffic were undertaken between Church Lane and Broadway roundabout. The average morning peak inbound journey before the works was just over six minutes. Surveys 15 months following the works showed this rose to seven minutes 50 seconds. Overall average journey times in the morning peak rose by 92 seconds, an average increase of 24%. The journey time was however more reliable with the maximum journey time following the scheme falling by nearly 4 minutes.

2.3 Bus Occupancy

Trent Barton have recorded bus passenger information from their ticket sales. This is based on all trips starting or finishing in Derby passing through Darley Abbey. This showed an increase in passenger journeys of 45,712 in March, April and May 2008 over the same period in 2006, equivalent to growth of 10.9%. In the same period passenger numbers grew by only 0.4% on the adjacent Kedleston Road routes.

Following the changes the Chesterfield Red Arrow and 6X Ripley Flier services have switched to using Duffield Road as a quicker route to Derby. These services are not included in any passenger information

2.4 Duffield Road Injury Collisions

In the five year period prior to the introduction of the scheme, there were 18 recorded personal injury collisions resulting in an average of between three and four a year. Of these, three involved pedal cyclists, once involved a pedestrian and one involved a rider of a powered two wheeler. Three minor injuries took place following the scheme over the 15 months where information is available.

All 18 injury collisions involved motor cars.

3/5/2007 17:36pm

Mileash Lane junction, a motor vehicle turning right into Mileash Lane was in conflict with a pedal cyclist travelling north to south on Duffield Road. The police recorded that there was no collision between the two vehicles. One person was slightly injured

24/7/2007 07:50am

Church Lane junction, this point is a few metres northeast of the start of the bus lane, a car turned left into Duffield Road and in doing so pulled into the path of a pedal cycle travelling northeast to southeast on Duffield Road. One person was slightly injured.

28/10/2007 17:00pm

Duffield Road south of Ferrers Way. A motor vehicle was travelling north to south when a pedestrian stepped into the road. One person was slightly injured.

2.5 Economic Benefit

Prior to implementation we estimated that time savings for bus passengers in the morning peak would generate benefits equivalent to £38,200 each year. Using actual data for bus journeys the benefit is estimated at £41,569. However, there is some disbenefit to car driver's equivalent to £31,455 each year. Overall the scheme generates positive time saving benefits equivalent to £10,000 per year.

2.6 Vehicle Speeds

Vehicle speeds in the morning peak are comparable with those recorded prior to the works. The average inbound speed between 8 and 9am was 21mph before and 19mph after. The average outbound speed over the same time fell from 26mph to 22mph following the changes.

2.7 Through Traffic in Darley Abbey Village

Prior to the changes there was some concern that the measures might result in additional through traffic using Church Lane and Mileash Lane to avoid delays on Duffield Road. Surveys undertaken in April and June 2007 showed traffic reduced by 147 vehicles (59%). Between 8 and 9 am car traffic reduced by 87 vehicles (58%).

It is recognised that traffic congestion on Duffield Road is variable and this influences decisions on whether or not to rat run through the village. The journey time information suggests that Duffield Road is less prone to severe delays following the scheme and as a consequence rat running is less regular than before.

2.8 Traffic Volumes

A comparison between traffic volumes before and after the introduction of the scheme has taken place. This shows little variation in the average morning peak hour flows. However, the average evening peak hour shows a reduction

in two way flows of 179 vehicles (13%). The average day time 12 hour two way flows show a rise of 2011 vehicles (19%).

There seems little evidence to suggest that motorists have avoided using Duffield Road in the morning peak but motorists may be using alternative routes in the evening peak. Increase in the daytime flows may suggest peak hour spread to avoid more congested periods.

3.0 Consideration of objections

3.1 Representations and Comments

Duffield Road Action Group has formed in opposition to the proposals. They are supported by the Broadway Action group. We have also received 55 written comments, 35 of which objected to or raised concerns about the changes.

The issues raised included the following:-

1. the lane widths are too narrow
2. there is insufficient visibility of oncoming traffic when turning out of drives
3. difficulty turning into drives
4. difficult for motorists turning right into Mileash Lane
5. there is insufficient road space to pass slow moving cyclists/overtaking into oncoming traffic
6. turning out of Ferrers Way is hazardous
7. ponding water in northbound lane is a problem
8. too much conflict at school arrival and dispersal times
9. transfer of parking problems to Windley Crescent and Askerfield Drive
10. motorbikes should be allowed in the bus lane
11. shorten the bus lane or change the times it operates

A petition signed by 160 people has also been received which supports the bus lane and asks the Council to make it permanent. We received a further 20 written comments in support of the scheme.

1. Road Widths/Heavy Goods Vehicles

The bus lane on Duffield Road has been installed at or above the Department for Transport's minimum recommended road width of 3.0m but below the preferred minimum of 4.0m. The measured lane width varies between 3.01m and 3.24m and the average width is 3.10m. The remaining road width is divided between the two other lanes. The total maximum road width is 9.59m and the minimum is 8.99m and the average 9.27m

Duffield Road has an environmental weight limit restricting heavy goods vehicles from driving through the City Centre. Approximately 1% of all trips

involve HGVs. The average inbound and outbound flow between 8 and 9am Monday to Friday is 7 vehicles in each direction.

The speed limit has been reduced to control traffic speeds and parking has been prohibited. The road has good visibility and relatively few junctions. In conclusion the road width is considered suitable to operate two lanes of traffic and a bus lane although it is accepted that motorists need to modify their behaviour to suit the changed circumstances.

2. Poor visibility coming out of drives

The exit visibility at private drives has not changed following the scheme and drivers on Duffield Road have good forward visibility of emerging vehicles. However, it is recognised that more vehicles will be closer to the western carriageway edge than previous. The majority of drives are set back at or greater than 2m from the kerb line. However on the west side of Duffield Road between Broadway and Mileash Lane the footway width is between 1.6m and 1.75m wide and 11 properties have relatively poor exit visibility.

It is accepted that a small number of properties have limited visibility exiting their drives but this has not changed following the introduction of the scheme. The existing road layout is considered acceptable.

3. Difficulty turning into and out of drives

The majority of houses have adequate drive widths to manoeuvre into and out of their properties. For a small number of properties the changes require drivers to briefly cross the centre line of the road when turning left into or out of their properties. Some accommodation works have taken place to improve manoeuvrability for residents.

Any turning improvements within private land are the responsibility of the householder. The existing road layout is considered acceptable.

4. Difficulty turning right into Mileash Lane

The new layout requires motorists turning right into Mileash Lane to take a gap in traffic. Whilst this is similar to before, motorists need to turn right against a traffic and bus lane. It is accepted that this is a more complex situation than before but is not an unreasonably difficult manoeuvre. However right turners may feel pressured into taking gaps that they wouldn't have done before because they are aware that ahead traffic can no longer pass by on the inside.

The existing road layout is considered acceptable

5. Insufficient road space to pass slow moving cyclists/overtaking into oncoming vehicles

The new traffic lane widths do not permit cars to pass slow moving cyclists without crossing the centre line. A number of cyclists have raised concerns and consider that the situation makes them more vulnerable than previously. Derby Cycling Group support the bus lane but would like to see further improvements for north bound cyclists.

Motorists would be expected to overtake only when it is safe to do so which is the situation at many other locations in the City. Whilst the road layout is considered acceptable consideration is being given to further improvements recently suggested by Derby Cycling Group.

6. Turning out of Ferrers Way is hazardous

In the morning peak prior to the works, traffic frequently formed two lanes coming into Derby one waiting to turn right into Ferrers Way and one queueing into the City. The new road layout also marks out two lanes coming into the City, a bus lane and a main traffic lane.

This situation is largely the same as previously. The new layout has removed the unsafe practice of right turners into Ferrers Way travelling for some considerable distance on the wrong side of the road past queueing traffic.

7. Ponding in northbound traffic lane

The capacity of the drains on the western side of the road is unable to cope with run off in heavy rain. On occasions this results in ponding mainly on the western side of the road near to St Benedict School. As a result of the changes traffic is closer to the western kerb line and pedestrians are at risk from being splashed by passing traffic.

This is currently being investigated and a solution is being drawn up for implementation subject to funding being approved by Cabinet in the future.

8. Conflict at school arrival and dispersal times

Inevitably St Benedict School generates a significant amount of traffic movement at school arrival and departure times. A large number of pupils arrive by bus and prior to the scheme, improvements took place within the school grounds to increase the number of bus stops. Pick up and drop off by service buses on Duffield Road causes a small degree of congestion.

The introduction of waiting restrictions has removed all day parking on Duffield Road outside the school.

The picking up and setting down of pupils from cars on Duffield Road is less desirable as cars obstruct the outbound traffic lane. As a result more parents choose to wait on nearby roads. The school has provided opportunity for parents to enter the school to pick children up after the main school dispersal time. There also opportunities for children to enter the school at the rear using the path that runs from Broadway to Alstonefield Drive. The waiting

restrictions have been welcomed by a number of residents. The existing situation is considered acceptable.

9. Transfer of parking problems to Windley Crescent and Alstonfield Drive

All day parking on Duffield Road is no longer permitted. Complaints have been received that parking has subsequently increased on Windley Crescent and Alstonfield Drive.

Observations on a number of occasions have shown some parking occurs on these roads but that drivers did not park obstructively. Further action is not recommended at this time.

10. Motorbikes should be allowed in the bus lane

Advice from the Department for Transport suggests that powered two wheeled vehicles should not be permitted to use bus lanes. As motorcycles have more power than pedal cycles they can maintain their position in the traffic stream and are not at risk from passing traffic in the same way as motorcycles. However the Council recognises the benefits of promoting motorcycle usage and is currently monitoring the use of motorcycles in two bus lanes in the City.

Any relaxation of the existing bus lane restrictions to allow motorcycle use would be considered as part of a citywide review of the issues.

11. Shorten the bus lane or reduce the times it operates

Consideration was given to shortening the bus lane so it stopped at Mileash Lane. This would provide opportunity to return to a single lane in both directions beyond this point. It was also suggested that the bus lane should operate only during peak times. This would allow other traffic to utilise the bus lane when it was less busy.

Shortening the bus lane would reduce the overall time savings for buses and weaken the economic case for the scheme. However, the evidence from through traffic surveys in Darley Abbey Village suggests that rat running has reduced considerably following the scheme. Shortening the bus lane is likely to result in motorists reverting back to the previous situation. This would have a detrimental impact in the village and significantly delay motorists and buses using Duffield Road.

Guidance from the Department for Transport suggests that withflow bus lanes should be provided all day unless other requirements such as loading preclude it. All day bus lanes are easier for motorists to understand and are less likely to be violated.

In conclusion it is recommended that the bus lane remain over its present length and continue as a 24 hour bus lane.

4.0 Summary Discussion

The scheme has clearly benefited bus passengers and helped to promote modal shift. Additional bus services have transferred to the route and there is potential to increase bus services in the future. There has been some disbenefit to car users but this does not appear to have resulted in further rat running in Darley Abbey Village. Some residents feel that the scheme has made access to and from their property more difficult and this is most acute for residents living between Broadway and St Benedict School. The road layout is more complex following the scheme but no more so than where other bus lanes operate. There have been three road injuries reported to the Police following the changes. This compares favourably with the 5 year average before the scheme was implemented.

Cyclists generally support the inbound bus lane but feel uncomfortable using the northbound traffic lane. Parking has been displaced from Duffield Road and has become more of a nuisance for some residents nearby.

5.0 Options

A number of options are available for consideration

- remove the bus lane and revert back to previous design
- make the bus lane permanent
- make the bus lane permanent and commit to investigating and implementing, if appropriate, further improvements

Remove the bus lane

This would severely impact on bus services and result in the congestion problems that previously occurred. The cost of removing the bus lane would be relatively inexpensive.

Make the bus lane permanent

Bus patronage has increased significantly on this route and the bus lane secures bus journey time reliability without seriously affecting car journey time. Overall it is considered the benefits of the scheme outweigh the disbenefits and it is recommended that the scheme be made permanent.

Make the bus lane permanent and consider further improvements

Investigations into drainage problems have taken place and the detailed design of remedial measures has been commissioned. When cost estimates have been determined further works will be considered, subject to funding, as part of next year's Local Transport Plan programme.

Derby Cycling Group have suggested a number of improvements to support north bound cyclists. Consideration should be given to investigating these options, and where appropriate, providing improvements as part of the future Local Transport Plan programme.