

Report of the Strategic Director (Regeneration and Culture) to the meeting of the Keighley Area Committee to be held on 22 January 2015.

AH

Subject: Keighley Town Centre Traffic Management Measures

Summary statement:

This report provides information on progress on Traffic Management Measures and Highway Improvements in Keighley.

It recommends that the Area Committee supports the continued development of a clockwise gyratory scheme for the town centre and the implementation of experimental right turn bans on Hard Ings Road at its junctions with Lawkholme Lane, Back Byrl Street and Back Caledonia Road.

Wards: 15 Keighley Central
16 Keighley East
17 Keighley West

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Overview & Scrutiny Area:
Environment and Waste Management



1. SUMMARY

- 1.1 This report provides information on progress on proposed Traffic Management Measures and Highway Improvements in Keighley.
- 1.2 It recommends that the Area Committee supports the continued development of a clockwise gyratory scheme for the town centre and the implementation of experimental right turn bans on Hard Ings Road at its junctions with Lawkholme Lane, Back Byrl Street and Back Caledonia Road.

2. BACKGROUND

- 2.1 Keighley Town Centre experiences high levels of congestion in the morning and evening peak periods and often at other times of the day. The local highway network is constrained by physical features such as bridges and buildings and consequently there is limited scope to provide major highway improvements without significant cost and potential damage to the fabric of the town.
- 2.2 As reported to this Area Committee in April 2013 a Working Group comprised of Ward Members from Keighley Central, Keighley East and Keighley West, representatives of the Keighley Town Council Transport Advisory Panel and Bradford Council officers had considered a range of potential transport interventions that could assist in alleviating congestion in the town. A very detailed micro simulation model for the whole of the town centre was developed with the input of the Working Group and was used to test and inform potential schemes.
- 2.3 As also previously reported a number of minor interventions have been made to help address traffic congestion and safety issues in Keighley as a result of the above investigations. More radical changes are required, however, to further address the growing levels of traffic congestion in the town.

Keighley Gyratory

- 2.4 As reported in April 2013, the option that proved most effective in addressing congestion in Keighley Town Centre was a clockwise gyratory system using East Parade, Hanover Street and Cavendish Street. Since the date of that report, further model testing to refine this scheme and assess the impact of the emerging West Yorkshire Plus Transport Fund proposals for Hard Ings Road Improvement on the gyratory has been undertaken and a plan which further develops the proposal has been prepared. A diagrammatic version of that plan is appended to this report (Appendix 1) but a larger scale plan will be available for consideration at the meeting. The scheme now proposed would include the following key features:
 - East Parade one way southbound
 - Hanover Street one way northbound
 - Cavendish Street one way eastbound

- Exit from Gresley Road left turn only
 - Exit from Coney Lane into East Parade left turn only
 - Banned right turn into and out of Low Mill Lane (subject to further investigation)
 - New and relocated signalised and informal pedestrian crossing facilities
 - A 20mph speed limit (to assist with vehicle merges and ensure safety – extents to be determined)
- 2.5 Other work has also been undertaken including a refinement of the cost estimate, a final officer review of other potential options and consideration of alternative parking layouts (eg echelon parking on Cavendish Street which proved not to be feasible due to safety concerns). Further work is also being undertaken on identifying any opportunities for optimising signal control across the highway network in Keighley, particularly on North Street / Skipton Road and Bradford Road with the intention of easing traffic flow and further enhancing the benefits of the gyratory scheme.
- 2.6 The intention of this report is to provide an honest appraisal of the gyratory proposal so that the Area Committee is made fully aware of the benefits and disbenefits of the scheme before determining whether it wishes to express its support for the further development of the scheme to the consultation stage.
- 2.7 One issue that has arisen during the additional model testing is that, although the gyratory scheme would be initially effective in reducing congestion and accommodating traffic generated by the proposed retail and leisure development on Gresley Road, these benefits could potentially be eroded over future years if traffic growth increases at nationally forecast levels. In the recent past such forecasts of traffic growth have not materialised in reality but it is considered important to identify options to address any issues that would arise if they did.
- 2.8 It has been identified that the principal issue that would arise in the context of such future traffic growth is the limited capacity for left turning traffic from Cavendish Street into Bradford Road. The physical constraints of this junction and the adjacent highway network preclude altering the layout to provide additional capacity as part of the gyratory proposals primarily due to the major financial implications. Consequently, a further phase of improvement is being considered that would widen the railway bridge on Bradford Road thus providing additional capacity for left turning traffic. Initial model testing has suggested that there would be significant benefits that could be accrued from such a scheme. Work on this is at a very early stage, however, and the likely very high cost of the bridge widening would mean that consideration would need to be given to the possibility of including this scheme in the West Yorkshire Plus Transport Fund programme once more details have been developed.
- 2.9 Microsimulation traffic modelling and a basic cost benefit assessment have provided the following key result for the gyratory scheme. Future model tests have included the specific impacts of proposed retail and leisure development on Gresley Road (which has previously received planning permission) as well as the impacts of other traffic growth – further information is provided in Appendix 2.
- The overall reduction in journey time each day across the whole of Keighley Town Centre as a result of introducing the gyratory scheme at 2016 would be

100 hours in the am peak hour and 34 hours in the pm peak hour. This takes into account all traffic movements throughout the town centre between South Street / Worth Way and Hard Ings Road, some of which will not be impacted by the gyratory scheme or only marginally affected by it. The tables in Appendix 2 provide details of how journey time on key routes will change.

- The initial benefit cost ratio over 10 years to 2026 is positive at **1.4:1** (assessed from am and pm peak hour data) (Note – it is important to understand that this benefit cost ratio only takes into account journey times and does not consider wider benefits such as increase in economic performance due to facilitation of development.)

2.10 As with any major traffic management proposal there are other factors, both positive and negative, that require taking into account other than just journey time benefits when considering the overall impact of a scheme. These include the following:

- As shown in Appendix 2, although many journeys would benefit from the proposals, some journeys would generally take slightly longer than they would without the gyratory scheme
- There would be a significant increase in traffic volumes on Hanover Street as this would have to accommodate all northbound traffic that currently uses East Parade. This would increase pedestrian severance adjacent to the Airedale Shopping Centre although this has been addressed to some extent through the provision of signalised pedestrian crossing points at key locations (the location of the central crossing point shown on the plan can be varied to best meet pedestrian demand – subject to some technical requirements - and this would be an issue for discussion in the consultation process). Surveys of the Hanover Street carriageway has indicated that the highway structure and condition is in a poor condition and in order to address this, and avoid future maintenance problems, a sum to undertake a full reconstruction of the highway has been incorporated into the scheme budget. This had been identified as a known risk at the early stages of developing the proposal.
- To secure the efficient operation of the gyratory system right turn bans are likely to need to be implemented at the Bradford Road / Low Mill Lane as right turning traffic here would interrupts the traffic flow on Bradford Road and causes backups into Cavendish Street.
- Access to Cavendish Street for traffic entering the town centre via Bradford Road would be longer in distance and would take more time than with the existing situation. This is particularly an issue for vehicles seeking to access Sainsbury's supermarket as the only access to the store is from the eastern end of Cavendish Street and no opportunities for providing an alternative access have been identified.
- All traffic leaving Gresley Road, including that from the proposed leisure and retail development, would need to turn left as permitting a right turn here would severely

impact on the efficiency of the Bradford Rd / East Parade / Cavendish Street / Gresley Road junction

- There is likely to be limited opportunities to provide improved facilities for cyclists other than advanced stop lines at traffic signals and the introduction of a 20mph limit. It would only be possible to provide a contra flow cycle lane on Cavendish Street if parking on one side of the street was removed which it is recognised could have a significant impact on businesses. This has, therefore, not been proposed in the initial design. Westbound cyclists that previously used Cavendish Street would need to be directed to alternative routes. Provision for cyclists would need to be considered further as development work continued and it is intended to consult with the bSPOKE (the Bradford Cycling Forum) and other interested parties on this issue.
 - It is unlikely that there would be a significant change in the number of parking spaces available on the three streets affected by the gyratory but some spaces would be relocated. More details of parking arrangements will be developed in advance of the consultation process.
 - Traffic turning out of Coney Lane would only be able to turn left and follow the gyratory
- 2.11 If the Area Committee supports continued development work on the scheme, public and stakeholder consultation would commence in March once all the necessary consultation materials have been prepared. The outcome of that consultation would be presented to the Area Committee in the summer and, in the event of the scheme continuing to be supported at that stage, traffic regulation orders for the one way system and other necessary measures would be advertised to allow for any formal objections to be made. The Area Committee would need to consider any such objections in the autumn. In the event that objections are over ruled then the scheme would be submitted to the Council's Executive for final financial approval.
- 2.12 The timescale for delivering the gyratory project would be dependent on a number of issues including the outcome of consultation and traffic regulation order procedures but it is envisaged that an approved scheme should be deliverable in early to mid 2016.

Hard Ings Road – Banned Right Turns

- 2.13 A scheme to improve Hard Ings Road has been included in the West Yorkshire Plus Transport Fund programme with completion of this project being currently predicted for 2017/18 though this could change subject to the outcome of consultation and other processes. A number of options are under consideration and consultation on this project is expected to take place later in 2015 or early in 2016.
- 2.14 A proposal to ban the right turn from Hard Ings Road into Lawkholme Lane and nearby side roads was one of the options identified to reduce congestion in Keighley by the Working Group referred to earlier, in this case on Hard Ings Road itself. The banning of the right turns would reduce queuing back onto the Victoria Park Roundabout caused by westbound drivers stopping to let right turning drivers make their manoeuvre and thus

would both improve traffic flow on Hard Ings Road and reduce the likelihood of the roundabout locking up.

- 2.15 Origin / destination surveys revealed that around 50% of the approximately 200 drivers making this manoeuvre in each peak period were rat running through the Lawkholme Lane area and thus the proposal would also reduce traffic flows and improve safety in this residential area, though there would be a small increase in traffic on both Bradford Road and North Street. Model tests indicated that the additional traffic on Bradford Road and North Street would have only a very minor impact on overall journey times on those roads. It was recognised that a significant number of local residents of the Lawkholme Lane area would be affected by this project and local Ward Members on the above mentioned Working Group advised that, if the proposal was to be progressed, they would prefer to see an experimental order implemented to assess the success or otherwise of the proposals. It is proposed therefore to introduce a three month experimental order and submit a report on its performance to this Area Committee before the expiration of the experimental order period to seek approval for either the retention of the turning bans or to recommend the removal of the bans. It should be noted that, dependent on the configuration of the Hard Ings Road Improvement scheme, it may be possible to re-allow the right turn into Lawkholme Lane when that scheme is complete due to the additional highway capacity that would be provided.
- 2.16 Further consideration of the experimental scheme by officers has determined that a right turn ban using signs only as originally conceived would be open to abuse and would prevent an accurate assessment of the impacts of the ban to be made. Consequently a revised scheme has been prepared (as shown in Appendix 3) that would prevent the right turns whilst still allowing the other permitted movements to take place (note the right turn out of Lawkholme Lane is already banned). The estimated cost of this proposal would be £11,500.
- 2.17 Although a detailed benefit / cost calculation has not been undertaken on this scheme the modelling demonstrated that the overall reduction of delay for the large number of drivers that use Hard Ings Road would far outweigh the overall extra journey time experienced by the comparatively small number of people who currently access Lawkholme Lane by making this right turn. Taking into account peak hour traffic only, a total of 27 hours journey time would be saved by westbound traffic on Hard Ings Road each day whilst the total lost time for people that would have previously turned right into Lawkholme Lane would be 6.5 hours. This would give a net time saving of 20.5 hours per day in peak period journey time.

3. OTHER CONSIDERATIONS

- 3.1 A number of options for improving the junction of West Lane and Oakworth Road have also been considered but the only identified affordable scheme that would provide significant benefits would involve the signalisation of the West Lane / Oakworth Road junction and this would require the banning of the right turn from West Lane into Suresnes Road which would:

- disbenefit a significant number of local residents
- potentially create access problems for larger vehicles and
- result in additional vehicles using North Street thus creating additional congestion in the town centre

In view of this no further action is proposed for this junction at the current time.

4. FINANCIAL & RESOURCE APPRAISAL

4.1 Financial Appraisal

- 4.1.1 At its meeting on 12 March 2013 the Council's Executive made an allocation of £1.168m towards a scheme for Keighley Town Centre from Department for Transport funding allocated to the Council by the former Regional Transport Board. Executive had previously resolved that this funding should be used to support locally important transport schemes. An allocation of £200,000 had also previously been made in the Local Transport Plan Implementation Plan 1 to help begin to deliver improvements in Keighley and a developer contribution of £50,000 has also been secured. Additionally the provision of pedestrian crossings on East Parade would be funded from the development as well as Variable Message Signs at strategic locations in the town to help manage traffic flows and provide alerts of major incidents affecting traffic. Although some funding has already been spent in the development of the scheme, the funding available is sufficient to cover the cost of the gyratory scheme and infrastructure required to implement the right turn ban on Hard Ings Road at the current estimated costs.

4.2 Resource Appraisal

- 4.2.1 The staff resources required to develop the proposals described in this report would be funded through the capital budget allocated to the project.

5. RISK MANAGEMENT

- 5.1 The Council has performance management processes to manage risk in a timely and effective manner. The proposals included in this report will be subject to these processes.

6. LEGAL APPRAISAL

- 6.1 The proposals identified in this report can be implemented through the Council's role as Highway and Traffic Regulation Authority.

7. OTHER IMPLICATIONS

7.1 EQUALITY AND DIVERSITY

- 7.1.1 The proposals referred to in this report will take into account the needs of people with specific access needs and vulnerable road users. The project consultation process will be undertaken, and recommended scheme determined, with due regard to Section 149 of the Equality Act 2010.

7.2 SUSTAINABILITY IMPLICATIONS

- 7.2.1 The proposals will assist in the regeneration and sustainability of Keighley by reducing the overall level of traffic congestion in the town centre from that which would have occurred without the scheme.

7.3 GREENHOUSE GAS EMISSIONS IMPACTS

- 7.3.1 A detailed assessment has not been made on the impacts of the proposals on CO2 emissions. It is considered, however, that there could be some additional emissions from the longer journeys that would need to be made by some vehicles but this will be mitigated to some extent by reduced levels of congestion.

7.4 COMMUNITY SAFETY IMPLICATIONS

- 7.4.1 The safety of all road users will be considered during the detailed design of the proposals. The provision of safe pedestrian crossing points in the town centre has been a priority in the initial development of the gyratory scheme. The proposal to ban the right turn into Lawkholme Lane would be likely to reduce the risk of road casualties occurring in that area due to reduced traffic volumes.

7.5 HUMAN RIGHTS ACT

- 7.5.1 There are no implications on the Human Rights Act.

7.6 TRADE UNION

- 7.6.1 There are no Trade Union implications.

7.7 WARD IMPLICATIONS

- 7.7.1 This report has described many of the impacts of the proposals on local wards. Ward Members and the Area Committee will be consulted on the proposals throughout their development.

8. NOT FOR PUBLICATION DOCUMENTS

- 8.1 None

9. OPTIONS

- 9.1 The Area Committee could support the continued development of a clockwise gyratory scheme for the town centre and the implementation of experimental right turn bans on Hard Ings Road at its junctions with Lawkholme Lane, Back Byrl Street and Back Caledonia Road.
- 9.2 The Area Committee could decide not to support the measures being proposed and refer the schemes back to the Executive for further consideration. It should be noted, however, that without the schemes the current levels of congestion in Keighley will continue to increase and no other appropriate schemes have been identified that would provide the benefits that these projects would deliver.

10. RECOMMENDATIONS

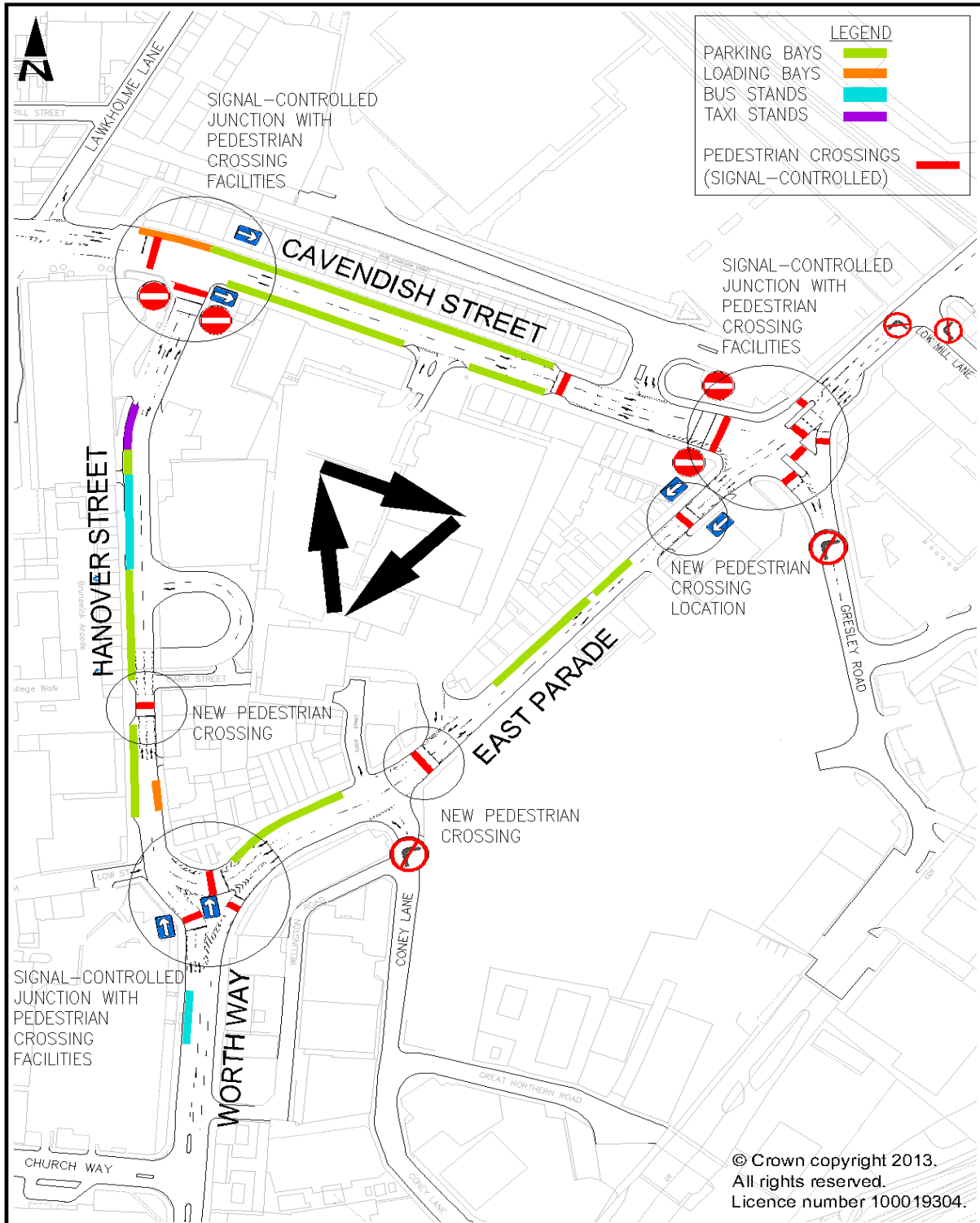
- 10.1 That this Area Committee support the continued development of a clockwise gyratory scheme for Keighley Town Centre and the implementation of experimental right turn bans on Hard Ings Road at its junctions with Lawkholme Lane, Back Byrl Street and Back Caledonia Road.
- 10.2 That a consultation is undertaken on the gyratory scheme and the outcome of the consultation be reported back to this Area Committee.
- 10.3 That subject to consultation with the emergency services a three month experimental traffic regulation order be introduced on Hard Ings Road, Keighley the effect of which would be to ban the right turn into Lawkholme Lane, Back Byrl Street and Back Caledonia Road and that the impacts of the experimental order on congestion on Hard Ings Road and other local roads be reported back to this Area Committee.

11. APPENDICES

- 11.1 Appendix 1 - Keighley Town Centre Gyratory – Layout Plan
- 11.2 Appendix 2 - Keighley Town Centre Gyratory – Journey Times
- 11.3 Appendix 3 - Hard Ings Road / Lawkholme Lane – Experimental Order – No Right Turn - Plan

12. BACKGROUND DOCUMENTS

- 12.1 Report to Keighley Area Committee – 11 April 2013 - Keighley Transport Improvements



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City of Bradford MDC www.bradford.gov.uk Department of Regeneration and Culture Strategic Director: Neil Vero MA CMAA FRSA		Design: NTS Drawn: RTB Checked: JAG Released: AS Date: DEC 2014	Project: KEIGHLEY TOWN CENTRE GYRATORY Drawing Title: APPENDIX 1 GENERAL LAYOUT Drawing No: MH/101986/GL-1A
Original: AS Date: 22/12/14 Revision: Inits Date:	To: See to Contract	Drawing No:	Drawing Title:

MICROSIMULATION MODELLING RESULTS JOURNEY TIMES

Total Journey Time Saving Across Keighley Town Centre

AM Peak hour

100 hours

PM Peak hour

34 hours

Note: these figures include all vehicles in the town centre even those not affected or only marginally affected by gyratory and are provided to demonstrate that over the network taken as a whole there is a beneficial impact.

Average Journey Times

Note: The routes referred to in these tables refer to those shown on the plans on the following pages. Negative figures in the right hand column indicate routes where benefits would accrue from the scheme. **All figures are in seconds**

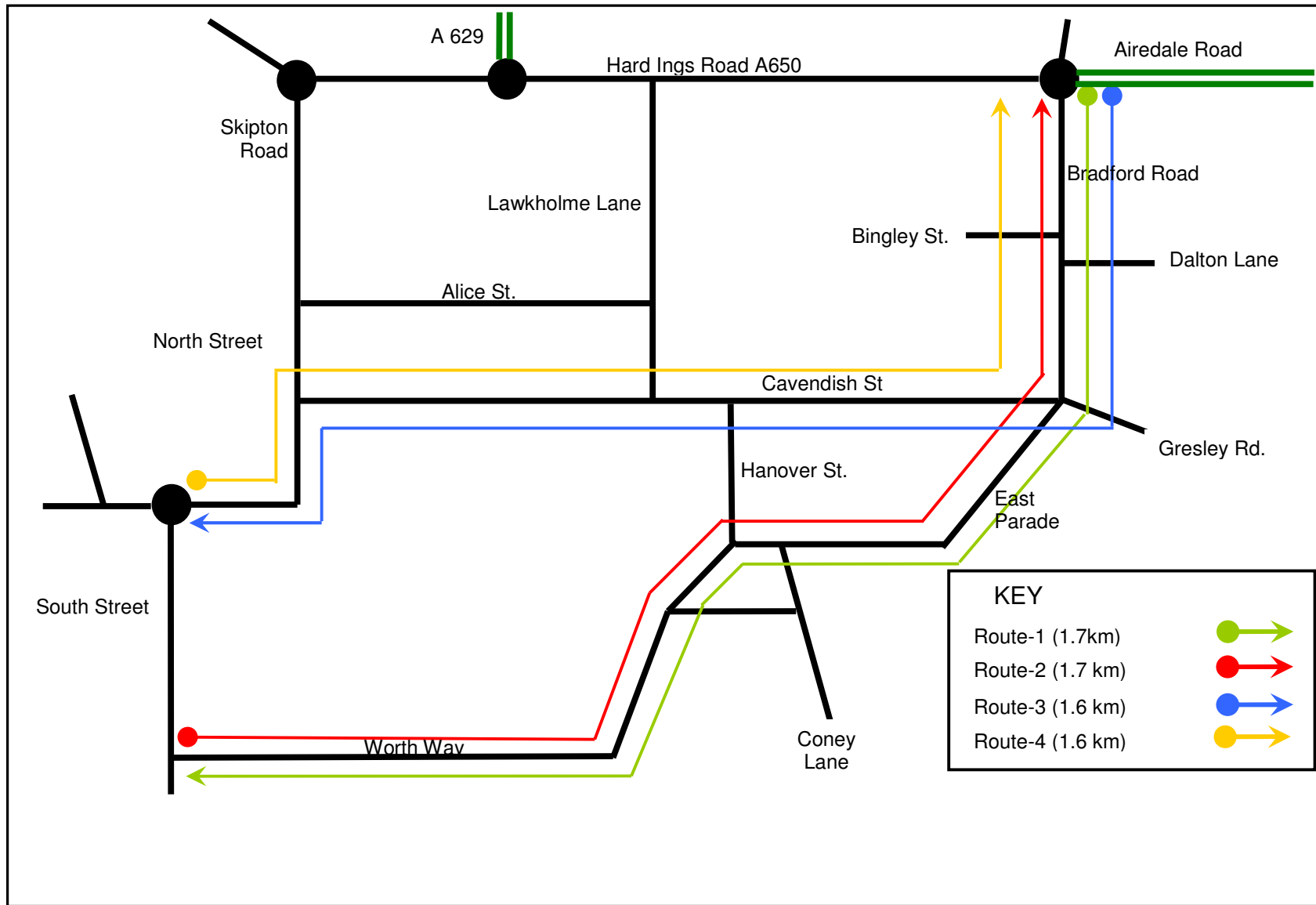
Morning Peak

Route	Existing 2014	No gyratory 2016	With gyratory 2016	Gyratory benefits / disbenefits in 2016
Route 1	257	293	241	-52
Route 2	252	272	277	5
Route 3	334	350	352	2
Route 4	388	408	334	-74

Evening Peak

Route	Existing 2014	No gyratory 2016	With gyratory 2016	Gyratory benefits / disbenefits in 2016
Route 1	336	389	278	-111
Route 2	312	323	298	-25
Route 3	348	368	373	5
Route 4	321	335	331	-4

ROUTE MAP Without Gyratory



ROUTE MAP With Gyratory

