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GCSE Geography Coursework- Conclusion

My hypothesis is that "traffic congestion occurs on routes leading into Birmingham City Centre" and my own perception on this is that it is correct as do many commuters of Birmingham. Although I agree that traffic congestion is an issue it is not a constant problem, as there is not congestion at all times throughout the day. My outlook to this problem is that traffic congestion is only a minor problem and reaches its peak at certain times. These times are known as "rush hour" which are the few hours that workers are intending to get into the city to travel to their occupation or when the workers are travelling out of the city at the end of their work hours. As work hours are similar in the city this can cause problems on getting in or out of the city. However the congestion rate does surpass the saturation point of 1522 throughout the whole day.

A report from an Inspectors report from the Midland Metro suggests that since 1997-2007 there has been a significant increase of traffic coming into Birmingham City Centre via Sheepcote Street. Sheepcote Street which leads onto Broad Street has increased by between 78% and 364% depending on the time. This can clearly give us an image of the increase in traffic and congestion through the period of this time.

I agree with this hypothesis due to the evidence that I gathered via the questionnaire and the traffic count. Both of these results accumulated together supported this hypothesis in some aspects. For example, through the traffic count we can see that there are an enormous number of cars arriving into the city during mornings and vast quantities of vehicles leaving the city at lunch-time and in the afternoon. Both incoming and outgoing where mainly dominated by cars.

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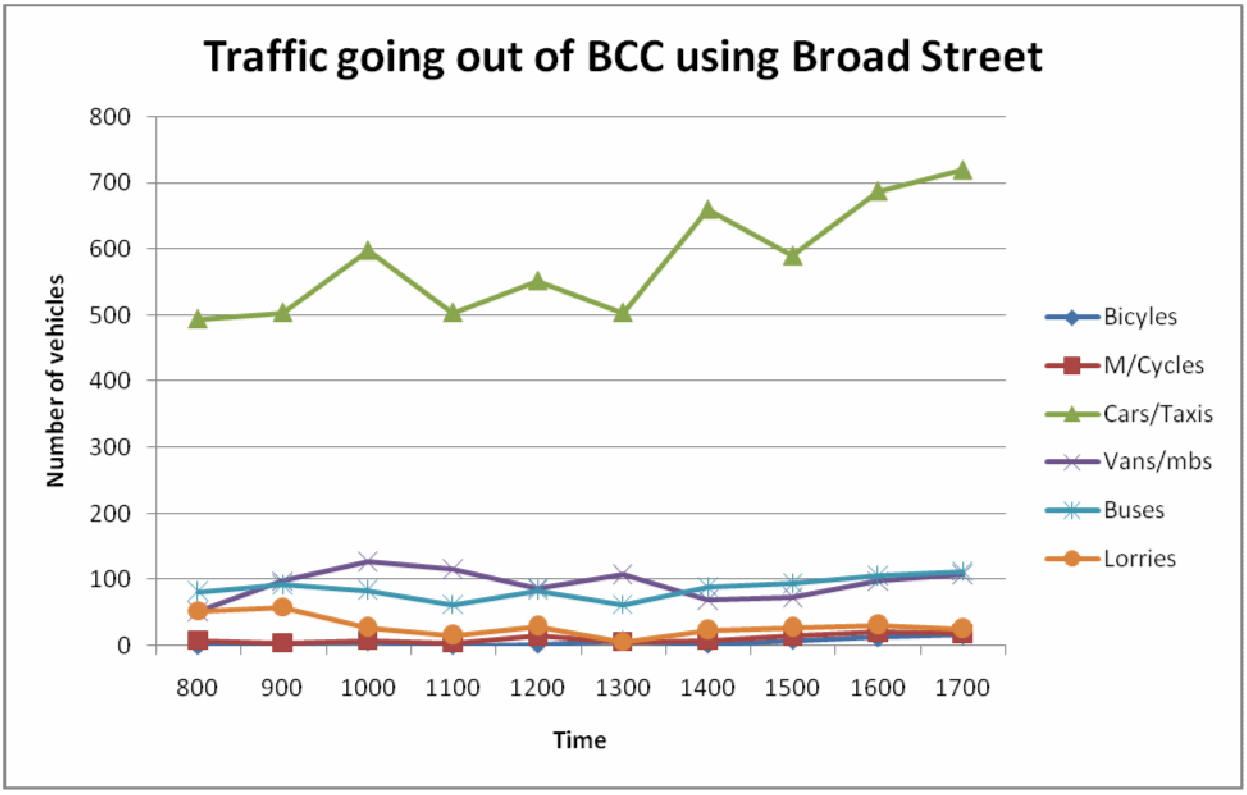

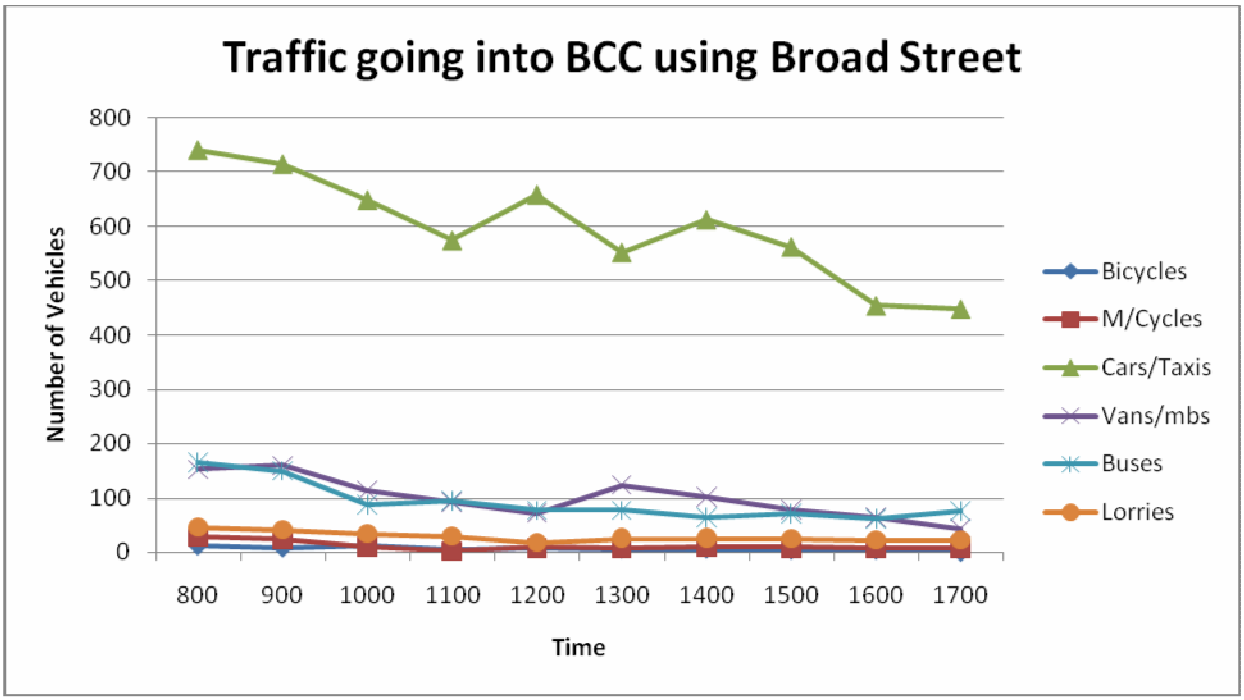

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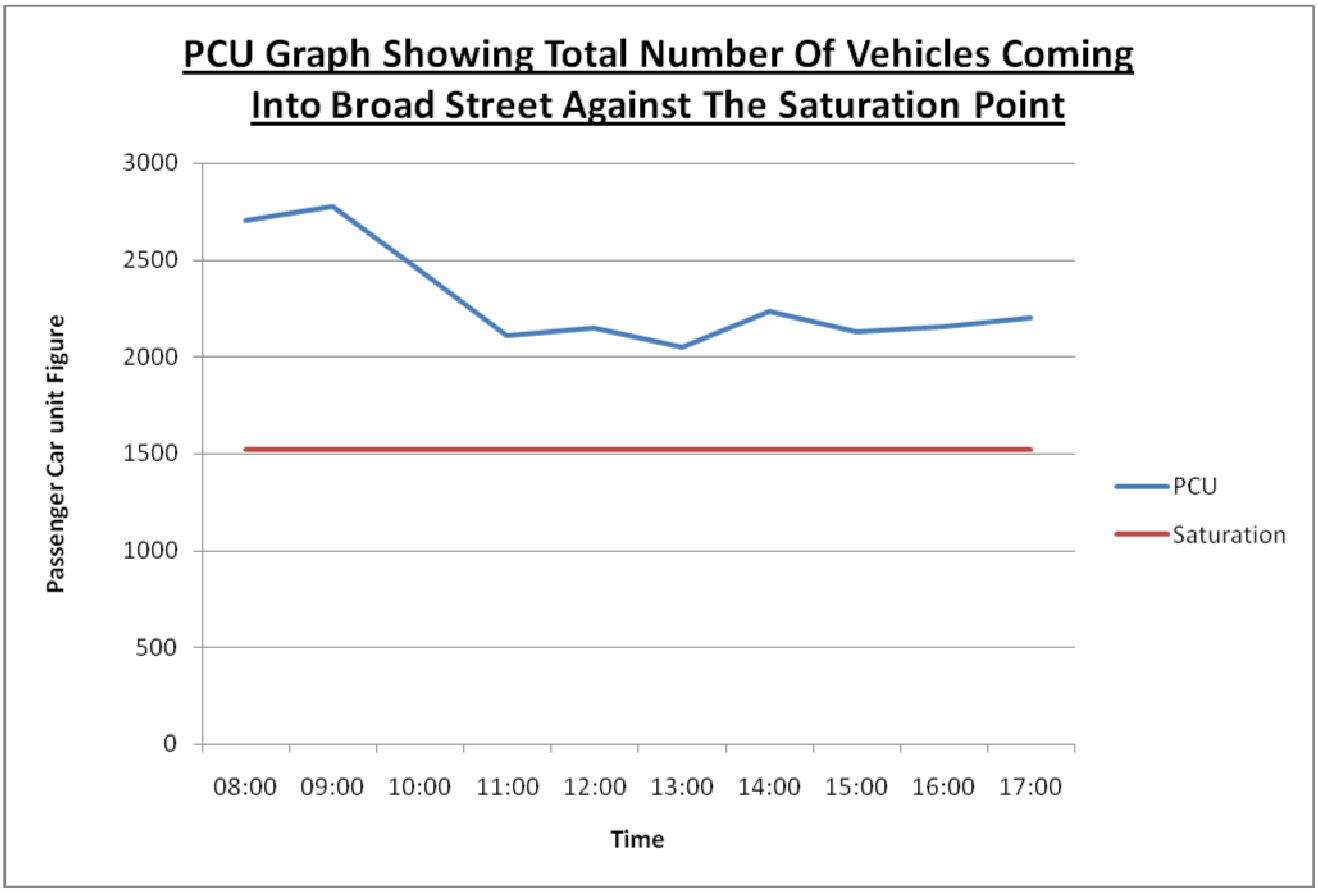
The two graphs show, traffic going into and out of Birmingham City Centre support the hypothesis as they clearly show, the vast number of vehicles entering and leaving the City Centre. As a result traffic congestion is produced.

In addition, another vital piece of evidence which I collected on my investigation, which proved my hypothesis correctly, was the PCU graph. The graph was created using the results of my traffic count; these were multiplied to achieve the PCU (Passenger Car Unit) amounts. The graph shows the amount of hours in which it was congested.



From looking at this graph we can clearly interpret that at all times throughout the day, Broad Street was congested. As a result Broad Street in particular gets an enormous amount of publicity because of the amounts of traffic congestion on this road.

Based on my questionnaire, it was fairly even in terms of whom had experienced traffic congestion whilst travelling into the Birmingham City Centre. However there was a slight advantage in the favour of those who answered "yes".

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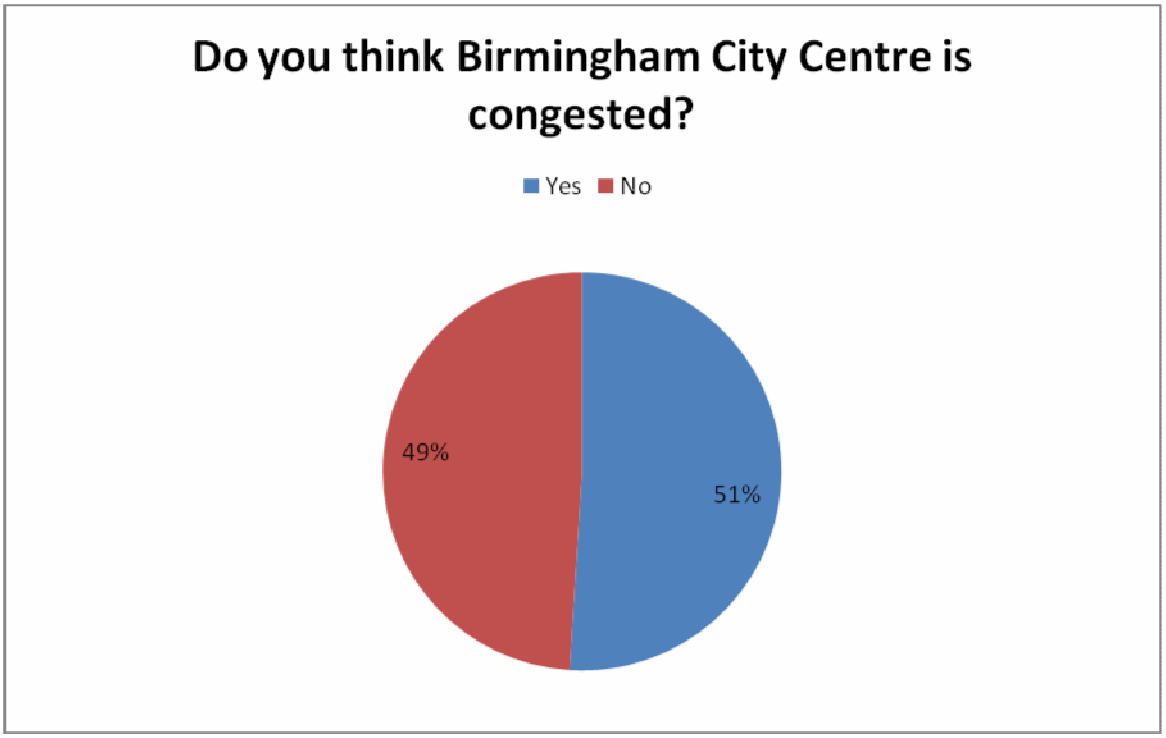

The graph showed the interpretation of results which I collected during the investigation through my questionnaire. The graph shows how close it was between the two options (yes and no). As a result this gives us a somewhat equivalent outcome.

However, my hypothesis doesn't state a specific time. As a result an argument could be raised against the hypothesis as the traffic count shows during the time scale used (8:00AM-5:00PM) there are not many vehicles that enter or leave the City centre. This could have been avoided if there was a specific time or a certain amount of hours per day in our hypothesis. As for the questionnaire there were just less than half the interviewees that suggested they had not experienced problems getting into Birmingham due to traffic congestion.

During the investigation I found a number of problems that could be the cause for the huge amounts of congestion on the routes leading into Birmingham City Centre. However, in my opinion the main source of traffic congestion on routes leading into Birmingham City Centre is the lack of use of "car-sharing". I say this because of the fact vast amounts of workers travel alone. As a result the amount of cars on the road would increase. This could be avoided if the workers within the same work place travel together. This would mean fewer cars on the road thus reducing traffic congestion. From the commuters I interviewed, there was a large agreement over the fact that over half of the interviewees supported the view that the main source of traffic congestion was vehicles. This has been put into a sub-headed column on my questionnaire as there

were many different reasons for traffic congestion but the majority could be sub-headed under "vehicles". From looking at my data the main vehicle that caused traffic congestion was cars. Another suggestion that the public raised for the rise in congestion is due to the increase in bus fares. Studies show that the price of bus fares have risen by 20% over the last 5 years. This is a factor that discourages public transport users to return back to personal transport because of the fact it would be a lot cheaper.

Many different measures have been taken to tackle this growing problem of congestion in not only Birmingham but throughout the nation. Some of the methods that have been implemented in
Birmingham are:

- Red routes
- Bus Lanes
- Toll Roads installed
- Pedestrianisation
- Railway and bus park and ride

Although the red route has already been installed, it's not working to the effect it can in the aim to reduce traffic congestion. The red route is a marked off area where any means of stopping is prohibited. In addition, this system has already been implemented but according to a news article it is not working effectively. A news article from the Midland Metro suggests, "Traffic wardens patrolling Birmingham's controversial Stratford Road red route issued almost 7,000 parking tickets in just 10 months, generating about £400,000 in fines for the city council." That is approximately 24 tickets daily, which clearly shows that the red route is not being applied well or is just not being followed by the general public. One way in which I think will reduce this number is by the government raising the penalty. This will keep the drivers aware of what they are getting into and will make them think twice before thinking about breaking this law again.

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This image shows a red route. The image was taken in Birmingham.

In addition, another solution that has been tried out by the government is bus lanes. Bus lanes are lanes that are restricted to only buses, although in some cases taxis and cyclists may use this lane as well. The lanes help to stifle the flow of congestion on a road. The usage of this lane is to allow traffic to flow more fluently, hence reducing traffic congestion as buses are large vehicles and take up a lot of room. However carry vast amount of people. As a result of this measure being implemented, buses have a lot of advantages. Firstly, the bus lane allows there to be less or no delays in the buses. Therefore no hold ups on the routes which could potentially cause traffic congestion. Although these bus lanes have been created, an argument could be raised about the efficiency of this use of transport and if it is worth spending additional government funds on the scheme. The reduction in use of buses has risen a lot because of vandalism and misuse of this method of transport.

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This is an image of a bus

This part of the road is the bus lane. Only buses are allowed to use this part of the road.

In addition pedestrianisation is a key aspect of reducing congestion as it encourages people to walk to the Birmingham City Centre for those who live close to the Birmingham City Centre. Research suggests that 42% of commuters travel to Birmingham from 2KM or less, and as studies suggest by doctors, 2KM is the optimum amount of walking on a daily scale. With approximately 20% of all journeys into Birmingham are made by foot it is still at a low compared to years previously. (Statistics from Birmingham Council website-Birmingham.gov.uk).

Finally Railway Park and ride is a solution which has been raised to some extent even though it has been implemented. The aim of the railway park and ride is to encourage

commuters to park their cars in a car park located near a railway station, and then to travel via train. If used correctly, there would be a significant decrease of car users on roads. This would lead to a decrease in traffic congestion. In addition, facilities such as passenger waiting areas and toilets are available. Park and ride facilities may suit commuters with alternative fuel vehicles, which often have a reduced range, since they may be closer to home than to where they want to travel. They also are useful as a meeting place for those car-sharing. Similarly, the Bus Park and ride works in the same way. The two solutions are not only cheaper but also quicker to travel to the Birmingham City Centre. However not many people are using these two valuable solutions. I think this because; firstly it is not being promoted a lot. In addition, many commuters who have used cars to travel to the City Centre may not want to change or may not feel confident enough to use public transport. However this is a very attractive solution for commuters who do not want to be stuck in traffic for example during the rush hour.

There are many potential solutions that could reduce congestion overall within the city centre of Birmingham. However the local government has not yet tried all these methods, and in this section I intend to raise some possible ways in which some methods can reduce traffic congestion.

My first suggestion is the use of a monorail which in my opinion will reduce traffic congestion by a substantial amount. The use of a monorail would mean transport would be elevated above ground level in the aim to reduce any traffic congestion. The benefits of installing this system is that, in areas where there are insufficient space to build railway lines or roads the monorails can be installed at these places and therefore these areas are being used effectively. However there is a drawback on the monorail as it expensive to build and maintain. Furthermore, the systems success is not guaranteed so it's a gamble in a sense. Another disadvantage is that in the case of emergencies the passengers on board the monorail cannot exit their compartments as the monorail is suspended. Therefore a rescue team such as fire fighters or a rescue train comes to aid. However, the image below shows the simplicity of how the monorail can travel quicker than those in a car.

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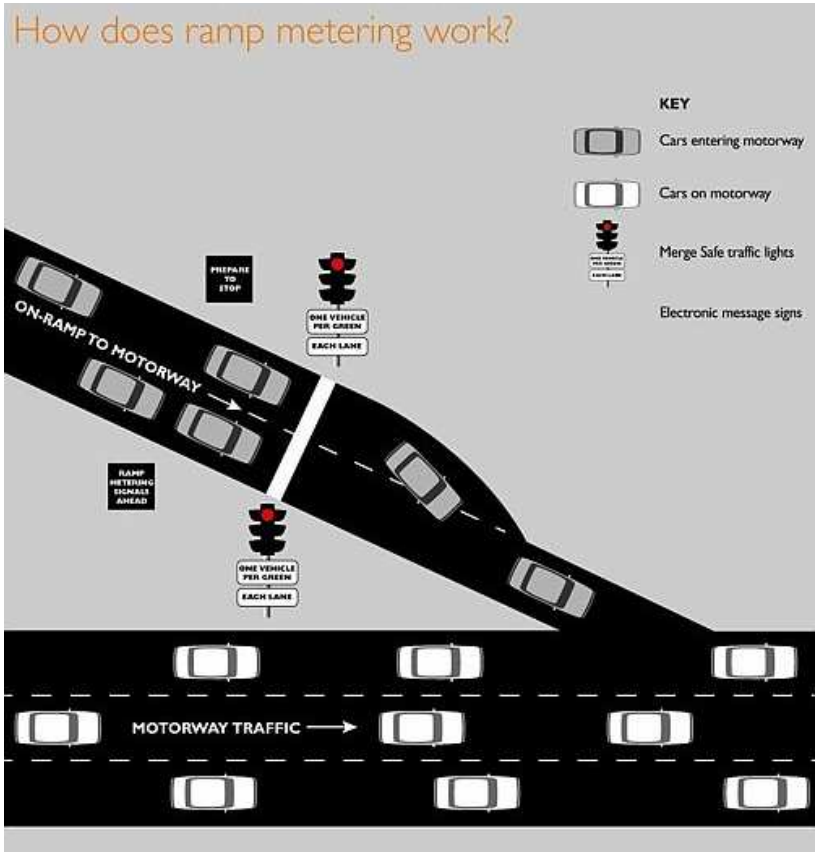
Another proposition I would like to bring forward is the idea of having a ramp meter or other whys known as ramp signal. A ramp signal is based upon a two colour lighting system (normally red and green) where one light would indicate for one car to go through to the main road. This is used vastly throughout the United States. However it has been tried out in the UK but only to a bare minimum. If used effectively and in the correct areas it can prove to really reduce congestion. However the line waiting to enter the main road may build up dramatically.

This image shows how the ramp metering system works



In my opinion this system should be used on all the routes to that lead into Birmingham City Centre as it will reduce the traffic congestion coming into the centre of demand in one big bulk. Although this is a cheap system to install it is quite frustrating for drivers to wait their turn, hence the council could get a lot of complaints and grief from drivers.

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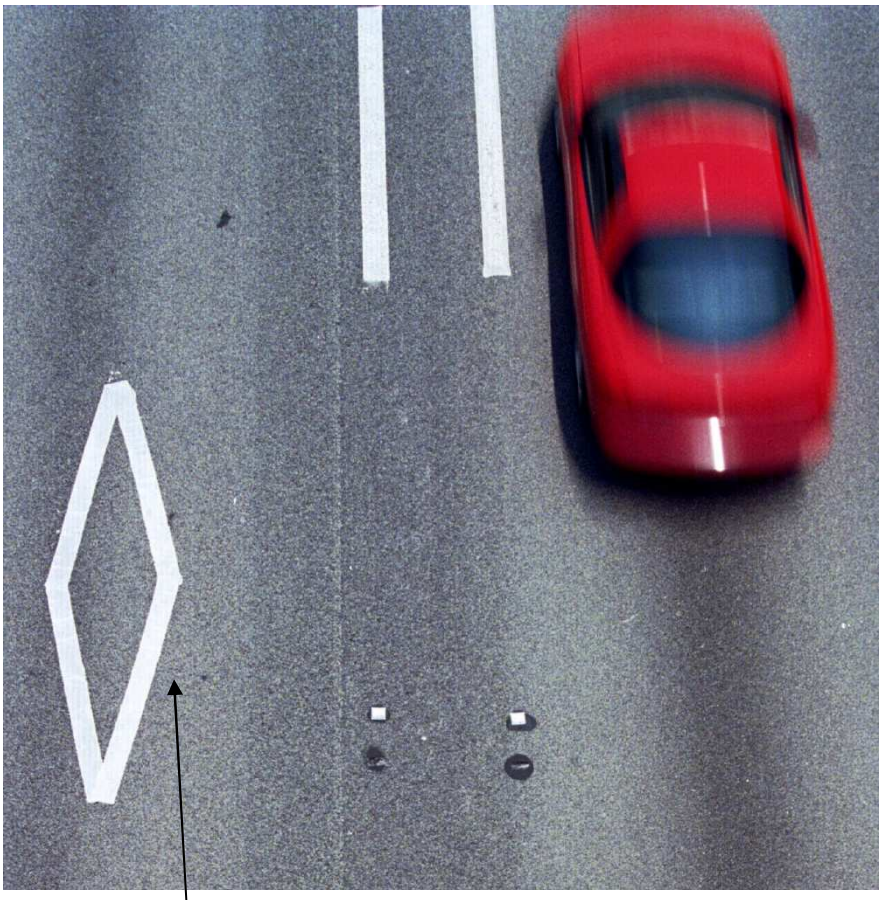
The final suggestion I would put forth is HOV (high occupancy vehicles) lanes. This particular lane is especially for vehicles with normally occupy 2/3 + passengers. As HOV lanes only cater for 2/3+ occupants. This will encourage those travelling alone to start to travel alongside colleagues. By doing so, this will increase the amount of car-sharing. Thus taking more cars of the road, and people would start to travel effectively. For example travelling alone in a five seated car would be a bad idea. However, travelling with 3 or 4 co-workers that also travel via car would reduce the amount of cars on the road. This system is used mainly in the United States and it has proven that many people use dummies to deceive the cameras to think it is a person when however it is really a driver trying to take the benefits of the HOV lane. If these criminals where to be caught a serious fine would be put on their head. In my opinion this method of reducing traffic congestion should be introduced on the main routes that lead into Birmingham City Centre.



This image shows a HOV (high occupancy vehicles lane)

HOV (high occupancy vehicles) symbol.

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My view on the problem of traffic congestion is that it is possible to be reduced. However the local authorities must be willing to spend vast amounts of money if they intend to resolve this situation. As expected not one solution individually will terminate congestion completely. It would require a number of methods being introduced and the existing ones to be improved on. Another aspect that the council and government need to brush up on is their advertising of car sharing and other solutions such as park and ride. As these schemes have been put in place and in my eyes have the potential to be very successful. However the council and government need to publicise it more alongside other congestion cutting schemes.