Park and Ride to the East of Bath

Response to Alliance Community Report

March 2016

Bath and North East Somerset Council

Mott MacDonald

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Contents

Chapter	Title	Page
1	Introduction	1
1.1	The Alliance Community Report	1
1.2	This Report	1
2	Background	2
2.1	Context – 'Getting Around Bath'	2
3	The Strategic Case	4
3.1	The Process Adopted	4
3.1.1	Defining Current and Future Transport-Related Problems	4
3.1.2	Understanding the Context: Local Stakeholders	4
3.1.3	The Need for Intervention: Strategic Stakeholders	5
3.1.4	Opportunities and Constraints	7
4	The Need for Park and Ride	8
4.1	Academic Studies	8
4.2	Traffic Modelling Undertaken	14
5	The New Evidence	16
5.1	The Basic Problems	16
5.2	Analysis of Current Park and Ride Sites	16
5.3	Air Quality	17
5.4	Environmental, Heritage and Visual Impacts	17
6	Community Proposal	20
6.1	A Potential Park and Ride Site in the Bathampton Basin	20
6.2	Expansion of Lansdown Park and Ride	20
6.3	Seasonal Demand Fluctuations	20
6.4	Sustainable Transport Solutions	21
7	Conclusion	23

1 Introduction

1.1 The Alliance Community Report

A number of local residents have expressed concern about the proposed creation of a Park and Ride site to the east of Bath in the area of Bathampton Meadows, otherwise known as the 'Meadows Basin' defined by the A4 Batheaston Bypass, London Road West through Batheaston, the A4 London Road/A46 roundabout at the western end of the area and the A4/London Road East/Bradford Road roundabout at the eastern end of the area. Those opposing the Park and Ride proposals have produced a report setting out their position[1] to which this report responds. The Alliance is a local community affiliation of individuals and representatives of organisations including Parish Councils and pressure groups.

The Alliance report refers to a 'controversial and emotive issue' and indicates that the range of views expressed range from those for whom the concept of Park and Ride is inappropriate to those who believe that it is part of a solution to Bath's transport problems if appropriately located and designed. The evidence has been collated in a spirit of cooperation with a view towards working collaboratively towards a solution.

1.2 This Report

This report has been produced by Mott MacDonald, an independent global consultancy business, for B&NES Council. Development of the transport strategy and the proposals within it has been undertaken by a team of technical experts with considerable experience in their respective disciplines ranging from transport policies and strategies, multi-modal transport modelling, traffic engineering, environmental analysis and mode specialists.

This report addresses the key issues raised by the Alliance report.

[1] The Alliance (February 2016) *A community report in response to B&NES' proposal to build a Park and Ride on the Bathampton Meadows.*

2 Background

2.1 Context – 'Getting Around Bath'

The promotion of schemes to improve access to Bath from the east forms part of the adopted transport strategy – 'Getting Around Bath'. The need for a strategy for the city was identified in light of the housing and economic growth proposed in the Council's Draft Core Strategy and the emerging Bath City Riverside Enterprise Area. The strategy is needed to support this growth agenda and to improve the environment within the city itself which is damaged by the impact of traffic and congestion. 'Getting Around Bath' sets out a long term vision for transport which will have broad and enduring agreement. The longevity of the strategy is key to providing a consistent vision for the city and to accommodate the ambitious housing and jobs targets set out in the Core Strategy. The strategy was generated in tandem with the Placemaking Plan in light of the interrelationship of the two initiatives.

'Getting Around Bath' was subject to public consultation during summer 2014 and launched by Sir Peter Hendy, chair of the Bath Transport Commission. The strategy had been reviewed by the Commission at several meetings and has received its support. Sir Peter Hendy in his foreword to the strategy noted that:

> 'Bringing about transport improvements and ones which support the Council's spatial and economic development plans will always be a challenge in an historic and beautiful city like Bath, so it is vital to have this blueprint for the future. In delivering this Strategy, we can ensure that the city is a great place to live and work, and equally welcoming to all visitors, whether on foot, bike, public transport or in a car. I applaud the work which Members of all parties have put into this consensual strategy; because of this, it will stand the test of time and be capable of guiding the Council and supporting the City's challenging and ambitious strategy for housing and job growth in its Core Strategy. 'Getting Around Bath' will help deliver, manage and support this growth.'

The final strategy received cross-party support and was approved unanimously by B&NES Cabinet in November 2014[2].

'Getting Around Bath' builds on existing initiatives including:

- The Bath Transportation Package which includes measures such as the expanded Park and Ride Sites, better bus routes, and traffic management measures;
- The Better Bus Area funding secured to provide further bus priority measures;
- The opportunities offered by Network Rail's electrification of Great Western Main Line; and
- The introduction of the MetroWest network of improved local rail services.

A vision for transport was a starting point:

[2] Bath North East Somerset Council, Cabinet, 3 November 2014
http://democracy.bathnes.gov.uk/documents/g3788/Public%20reports%20pack%2012th-Nov-2014%2013.00%20Cabinet.pdf?T=10

> "Bath will enhance its unique status by adopting measures that promote sustainable transport and reduce the intrusion of vehicles, particularly in the historic core. This will enable more economic activity and growth, while enhancing its special character and environment and improving the quality of life for local people."

The strategy notes that robust parking standards and improvements to public transport will be important in accommodating the planned growth. Key to this will be accommodating the increase in commuting into the city from surrounding areas. Improvement to the rail network and services will be complemented by other measures such as new and expanded Park and Ride. Within the city, walking and cycling together with improved bus services will be priorities. Off-street parking will remain important to supporting a strong city centre economy and a balanced approach is recommended.

Air quality is particularly important and almost all of the measures within the strategy will help address this objective. Measures to promote walking and cycling – making Bath Europe's most walkable city – emphasize the unique nature of the city and its surrounds. The strategy confirms the need for a new Park and Ride to the east of Bath as an essential complementary measure to accommodate the increased demand for travel from within the Enterprise Area. It is recognized that there are many advantages to a rail-based Park and Ride but the time that this might take to be brought forward may mean that an interim bus-based Park and Ride may be necessary. Accordingly, studies have been commissioned to update the transport model and identify transport and environmental issues affecting particular locations. In addition, there may be a need to expand the existing Park and Ride sites at some stage should demand continue to grow and be required and to minimise the impact of traffic generated by the development proposed by the Core Strategy and within the Enterprise Area.

The inadequate nature of the national road network east of Bath has long been recognised and the Council has a long standing wish to remove 'through traffic', particularly heavy vehicles, from the city; the air quality benefits of this are well understood.

3 The Strategic Case

3.1 The Process Adopted

3.1.1 Defining Current and Future Transport-Related Problems

The Department for Transport's Transport Analysis Guidance (WebTAG) presents a systematic approach to identify the problems to be addressed, define some appropriate objectives and then put forward a list of options for consideration. This approach is an industry standard which is followed when major funding is required for transport schemes and supports business cases when public spending is anticipated.

Steps 1 to 4 of the WebTAG option development process require the following:

1) Understand the current and (2) future context and conditions in the study area;
3) Establish the need for intervention;
4a) Identify intervention-specific objectives to address the identified need; and
4b) Define geographical area for intervention to address.

The involvement of key stakeholders is an integral part of the approach. Following engagement on the 'Getting Around Bath' strategy, more specific engagement was sought for issues affecting access to the city from the east. This corresponds to part 1 of the option development process (understanding the current context) and part 2 (future context and conditions in the study area).

3.1.2 Understanding the Context: Local Stakeholders

It was felt important to enable local stakeholders to express their views at an early stage and a consultation event was held in October 2014. The views of Bathford, Bathampton, Batheaston and Claverton Parish Councils were obtained in addition to those of political interests and the Federation of Bath Residents' Associations. A summary of the opinions and experiences is set out below:

Traffic

- Too much traffic flowing into and through the World Heritage Site;
- Too much through traffic, particularly HGVs and North-South movements (A36 to A46);
- Traffic coming down London Road, through historic core of Bath, and out to the south;
- A lot of traffic is generated within the city – the problem is not just through traffic;
- Traffic is very bad in the mornings;
- Traffic problems haven't got worse because there is no capacity for them to get any worse;
- Traffic problems have an impact on child safety. Bath aspires to be a child friendly city;
- Parents dropping children at school and collecting them in the afternoon cause traffic problems;
- The traffic problems would be more severe without the recession. Traffic has declined nationally since 2007; and
- The current toll bridge on Mill Lane is used as an unofficial Bath eastern bypass (but not by HGVs).

Air quality

- Much of Bath is an Air Quality Management Area (AQMA);
- There is poor air quality in much of Bath;
- Bath is one of the 10 most polluted cities in the UK;
- The air is very unhealthy;
- Pollution is damaging buildings. World Heritage Site status is contingent on the built environment of the city, which is affected by transport problems;
- Traffic has gone down in the last 10 years but air quality has not improved; and
- Diesel vehicles (particularly HGVs) are the main cause of pollution.

Bus and rail services

- Buses are unreliable and there aren't enough bus lanes;
- Buses are unpredictable. Sometimes they can take 10 minutes; sometimes they can take far longer;
- One delegate had to wait an hour for a bus that should have been every 20 minutes;
- Train capacity is limited. Trains are often overcrowded; and
- Routes into city from Park & Ride sites are not wide enough for bus lanes; as a result buses are slow and unreliable.

Other

- The question was raised (playing devil's advocate) whether or not there really is an issue. Other World Heritage Sites, such as Rome, have worse traffic than Bath;
- Transport problems aren't predictable. The problems are not confined to rush hour traffic. During the day it can be just as unpredictable;
- One-off events, such as university open days, create problems. There is a lack of information about when such events are happening;
- Transport patterns on Saturdays are very different to weekdays but can be equally bad;
- Tourism during the summer creates difficulties;
- There is too much parking in the city centre;
- Elderly people and people with impaired mobility can be more reliant on cars for transport;
- Proposed developments within the city could have a detrimental impact on transport; and
- A large number of people live in Bath and work elsewhere. Building more housing could exacerbate the traffic problems.

3.1.3 The Need for Intervention: Strategic Stakeholders

For part 3 of the option development process, establishing the need for intervention, the involvement of a number of strategic stakeholders has been valuable. In addition to the Leader, Members and officers of B&NES plus representatives from the Highways England, Network Rail, First Great Western, Wiltshire Council (the adjacent authority) and the Department for Transport have attended numerous meetings with the result that all ideas have been shared and understood in their wider context. The key problems are set out below:

Current

- Poor air quality within the city with particular reference to London Road;
- Bath's air quality exceeds EU limits;
- Impacts of heavy goods vehicles travelling through the city;
- Congestion on key corridors within the city;
- Discontinuous Strategic Route network;
- The lack of ability to cater for tourism trade through the provision of long and short stay coach parking;
- Increasing journey times and worsening journey reliability; and
- Poor public transport access to the city from the east.

Future

- Congestion in key corridors will impact on the expansion of both housing and jobs in the city;
- Air quality may deteriorate further;
- Possible health implications associated with poor air quality;
- Volume of traffic travelling through the city is likely to increase;
- Growth in west Wiltshire towns will increase demand for travel to Bath;
- Congestion will make the city commercially less attractive;
- Increased journey times; and
- The city's trading is likely to become less attractive.

A number of underlying causes of these difficulties were identified:

- Incomplete strategic road network around the city;
- Incomplete coverage of P&R services – no service to the east of Bath;
- Bath's local topography reduces dispersion of pollutants;
- Demand to transport goods within the city;
- Highly populated / developed area;
- Desirable area of the country to live;
- High travel demand to/from the city for work;
- High housing costs in city (increases the amount of in-commuting);
- Located within an environmentally sensitive area;
- Bath attracts large numbers of visitors; and
- Low satisfaction ratings for bus services.

The Highways England recognizes a discontinuity in the Strategic Route Network which is causing serious air quality problems. The A36/A46 carries nationally significant traffic movements and its improvement would have wider benefits in addition to local benefits. South coast towns in Dorset see this as a main route to the Midlands and Wales. Removing such traffic from Bath would enhance the environment of the whole city.

3.1.4 Opportunities and Constraints

The options have taken into account a number of constraints and some potential opportunities:

- Located within Area of Outstanding Natural Beauty (AONB), Green Belt and Forest of Avon;
- City of Bath World Heritage Site;
- Bath Conservation Area;
- Bath Air Quality Management Area (AQMA) – it is acknowledged that this is a key issue;
- Bathampton Conservation Area;
- Bathampton residential development to the East of the City;
- Bathford Conservation Area;
- Batheaston Conservation Area;
- Hampton Rocks Cutting Site of Special Scientific Interest (SSSI);
- Kensington Meadows Local Nature Reserve (LNR);
- Combe Down & Bathampton Down Mines SSSI;
- Political support to improve access from the east of Bath and deal with through traffic;
- Bath transport strategy 'Getting Around Bath';
- Moderate amount of local opposition;
- Major development proposals, notably the Enterprise Area;
- The Great Western Main Line upgrade;
- The alignment of the Trowbridge rail line is a physical constraint;
- Limited train capacity on the Trowbridge rail line;
- Limited route capacity on the Great Western Main Line;
- MetroWest rail opportunities;
- The River Avon;
- High water table;
- Flood plain; and
- Topography and steep gradients could affect design, cost and environmental impacts of any solution.

4 The Need for Park and Ride

4.1 Academic Studies

Park and Ride schemes have become part of the established transport network for many urban areas in the UK. Bath's three schemes contribute to a reduction in traffic in the city centre by intercepting traffic on the approaches. On its own, Park and Ride is not a solution but it is part of a solution as described in the 'Getting Around Bath' strategy. Fundamentally, any solution to Bath's traffic problems must include measures to reduce the number of vehicles entering the city, an aim that Park and Ride addresses.

Concerns have been expressed by some academics regarding the efficacy of Park and Ride schemes. An isolated view, independent of their context, highlights any shortcomings. Each application has different characteristics which need to be taken into account but the extent to which Park and Ride is used and valued by users indicates their effectiveness. As with most transport schemes, their impacts are not always easy to assess given their inter-relationships with other measures and the uncertainties of travel behavioural decisions that people make. However, appropriate location and site design are important considerations.

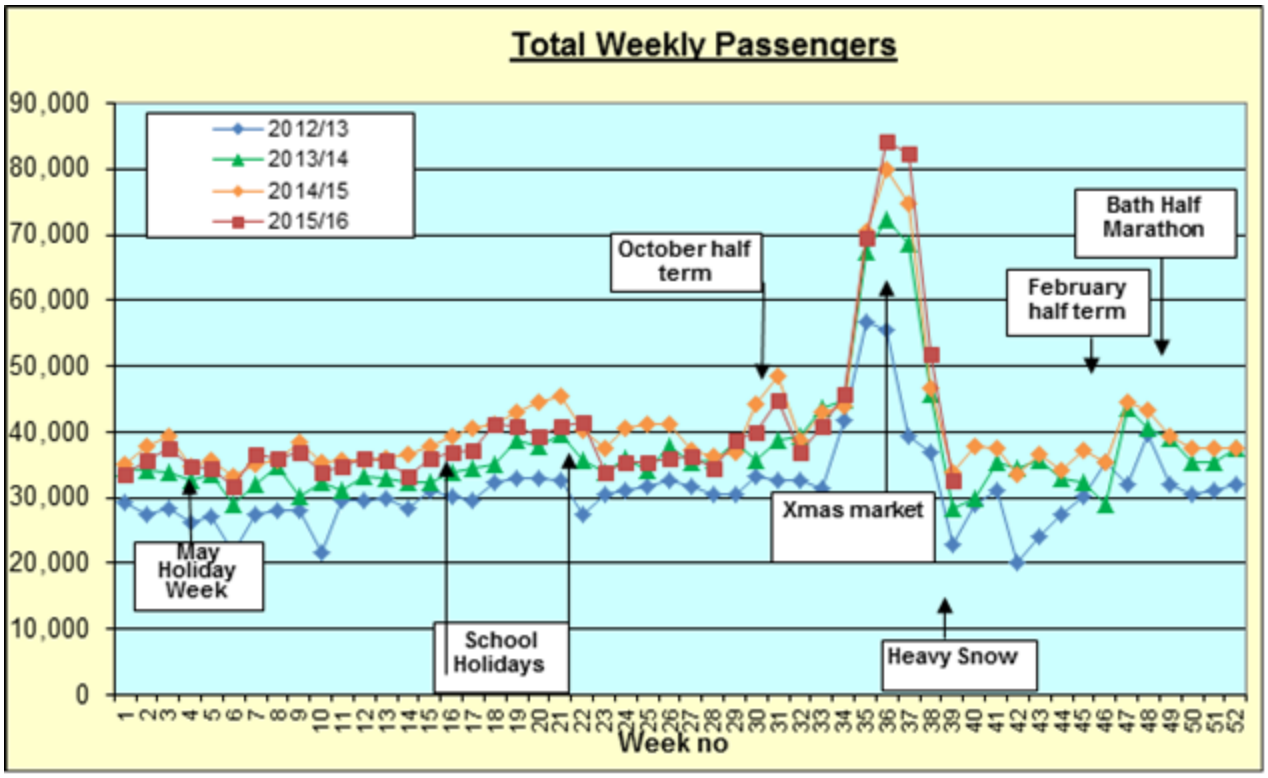
In accordance with the systematic approach prescribed, a number of objectives were determined:

- To reduce congestion within the city and around off-street car parking sites;
- To Improve the city's environment;
- To reduce car use into the city centre and improve the proportion of journeys made by public transport;
- To reduce carbon emissions from transport;
- To support the city's economic development and Enterprise Area; and
- To improve connectivity to support business and growth of the wider region.

The concept of Park and Ride is aimed at users who would otherwise drive into the central area. This does not define Park and Ride users as commuters alone as the Alliance report suggests. Of course commuters are an important target group as they typically travel at peak times and occupy a parking space at or near their destination for the whole working day. Bath's Park and Ride sites are used by visitors also who are important contributors to the economic activity of the city. As a result, the profile of Bath's Park and Ride users is not as pronounced as some other locations where commuting dominates. 2009 survey data from Bath's existing Park and Ride facilities show that 43% of weekday users were commuters compared with 28% shoppers. All Park and Ride users are motorists whose other options include driving into the city centre and in doing so are the wider target group. It should also be remembered that reducing peak traffic by a relatively small amount will be effective in addressing congestion.

Figure 4.1 shows the weekly number of Park and Ride bus users. Over 30,000 journeys per week were made throughout the year with strong demand during the period of the Christmas Market (over 80,000 journeys per week). Without Park and Ride, motorists would have to find an alternative and many would involve driving further, adding to congestion.

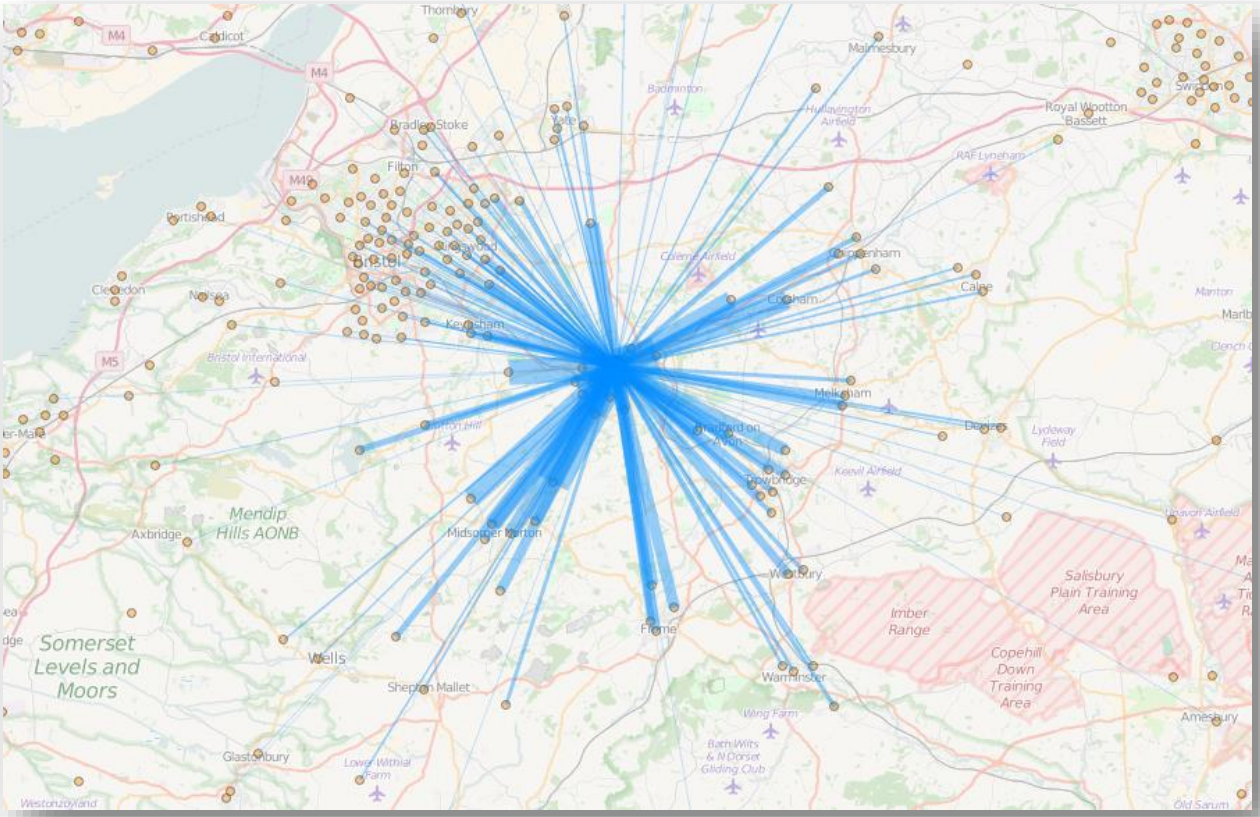
Figure 4.1: Weekly Bath Park and Ride users



Source: B&NES data.

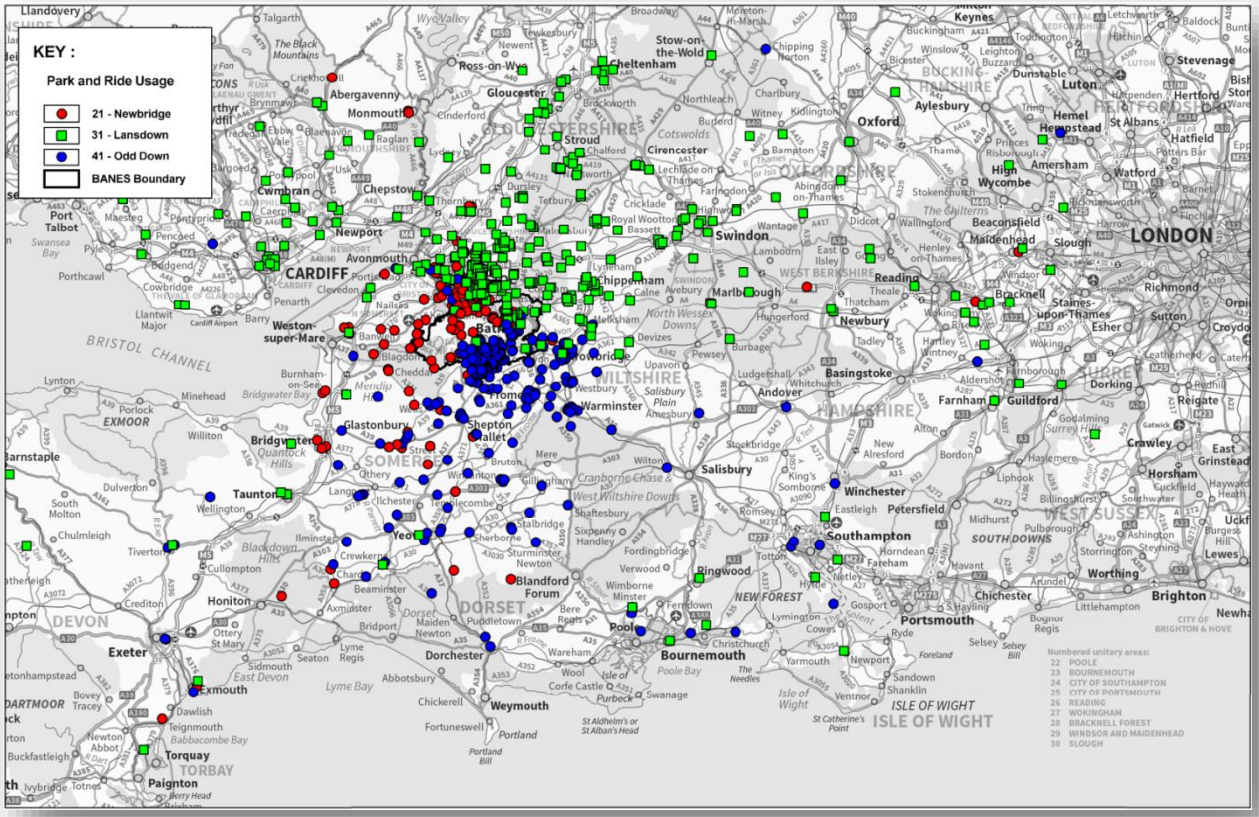
Figures 4.2 and 4.3 show the origins of current Park and Ride users in 2011 and 2015 respectively. This illustrates that people travel from all directions to the city including from the east, a demand that is expected in increase as the towns in west Wiltshire expand and more jobs are located in Bath.

Figure 4.2: Origins of Bath Park and Ride users 2011



Source: ONS 2011 Census.

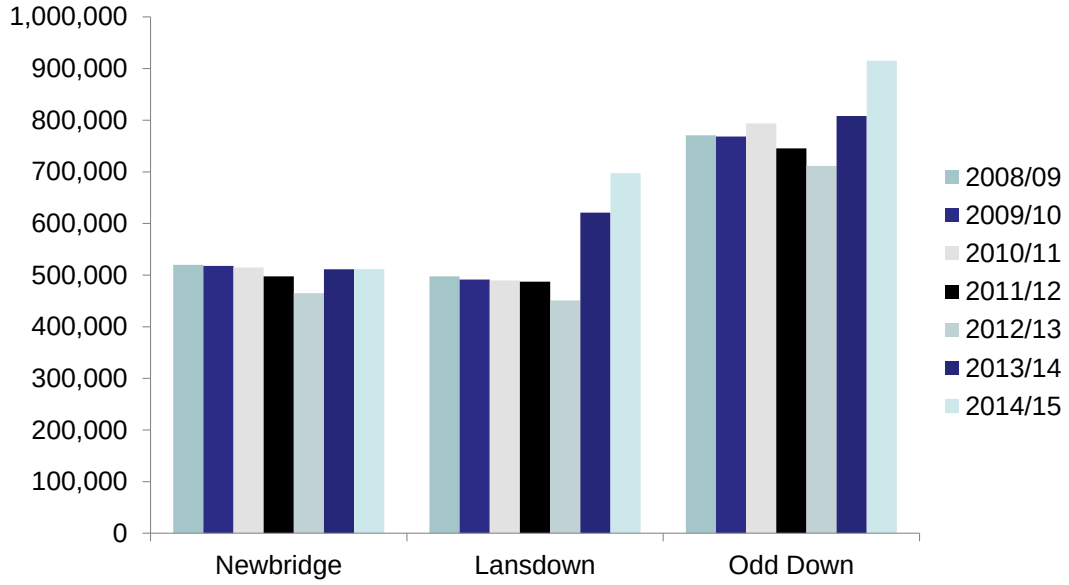
Figure 4.3: Origins of Bath Park and Ride users 2015



Source: B&NES surveys December 2015.

Figure 4.4 shows the number of Park and Ride users showing the hundreds of thousands of journeys intercepted.

Figure 4.4: Annual Park and Ride users 2008/09 to 2014/15



Source: B&NES Council.

The Alliance Report refers to a study of European Park and Ride sites (Zijlstra, Vamnouttrive and Verhetsel). It should be remembered that many European cities have far stronger transport policy measures than in many UK situations. Taking each of the assertions from that report:

- **Abstraction of demand from other P&R sites** – In Bath, the location of sites to the north (Lansdown), west (Newbridge) and south (Odd Down) means that motorists arrive from a given direction and are unlikely to wish to, or reasonably be able to, divert to another facility. The route options are limited and may require passing through the city to reach an alternative Park and Ride facility. A new site to the east would abstract some current Lansdown and Odd Down users because it would be more convenient for them given their origins. Demand for all sites is expected to grow so this will not undermine the viability of the current Park and Ride bus services.

- **Suppressed demand** – It is acknowledged that the road capacity freed up by motorists using Park and Ride could be filled over time. However, Park and Ride functions best in combination with other measures designed to reduce the attraction of driving into the city centre to park.

- **Land hungry sites –** Parking areas consume land at the urban periphery although this may be mitigated in whole or in part by sensitive planting and landscaping. Parking provision in the central area is an inefficient use of valuable space which could be used more productively.

- **Park and Ride will appeal to motorists who currently park on-street –** Agreed and a new Park and Ride will have the added appeal of a regular bus service.

In addition, it is claimed that some Park and Ride users will drive to the facility in preference to walking, cycling or bus use. Survey data from December 2015 shows that 55.4% of users would otherwise have driven into the city centre[3]; the number of respondents that would use another Park and Ride site was negligible. However, 13.7% indicated that they would otherwise travel by bus. This observation needs to be considered further, taking into account comparisons of journey times, service frequency and fares and it should be noted that expanding Park and Ride is one measure alongside improvements to local bus services.

The Alliance has raised the potential difficulties of introducing an additional Park and Ride site for Bath. This does not mean that the concept of Park and Ride is fundamentally flawed. In fact, many urban areas benefit from Park and Ride within the context of their adopted transport strategies. The reality is that more Park and Ride facilities are being introduced around the country as shown in Table 4.1.

Table 4.1: UK Park and Ride sites: changes since 2010[4]

Location	P&R Site	Date	Capacity (spaces)	Notes
New Bus-Based Park and Ride				
Truro	Tregurra Park	Oct 2015	1,000+	
Leeds	Elland Road	June 2014	800	
Reading	Mereoak	Aug 2015	573	
Wokingham	Winnersh	Oct 2015	400	Relocated from Loddon Bridge
York	Askham Bar	Jun 2014	1,100	
	Poppleton Bar	Jun 2014	600	UK's first site with all electric buses
Belfast	Dundonald	Dec 2014	520	Sites open but amenities buildings closed 2015
	Cairnshill	2010	735	
Winchester	Hockley Link	Apr 2010	864	Additional to established sites
	Winchester Village	2016	200	Supplementary to Hockley Link site
Colchester	A12 Junction 28	Apr 2015	1,000	
Guildford	Onslow	Nov 2013	550	Additional to three sites already operational
Glasgow	Port Glasgow	2012	1,150	
West Dunbartonshire	Five sites	2012	306 total	
Cardiff	Cardiff East	Jan 2016	Unknown	
Dunfermline	Halbeath	Nov 2013	1,000+	
Whitby	A171/B1460 junction	Apr 2014	Unknown	
Bicester	Kingsmere	Nov 2015	580	

[3] B&NES (December 2015) question: 'If no park and ride were available, how else would you have made your journey today?' Sample nearly 2,200 interviews.

[4] Information is compiled from various search engines and is not necessarily exhaustive.

Location	P&R Site	Date	Capacity (spaces)	Notes
Portsmouth	Tipner	Apr 2014	650	
New LRT-Based Park and Ride				
Sheffield Supertram	Unknown	Unknown	104	
Nottingham Express Transit	Toton Lane	Nov 2015?	1,400	
	Clifton South	Nov 2015?	1,000	
Planned Bus-Based Park and Ride				
Aberdeen	Dyce	Aug 2016	1,000	
High Wycombe	Coachway	Feb 2016	400	Site relocation and improvement
Leeds	Temple Green	2016	1,000	
Cambridge	A428/A1303 Madingley Road	After 2016	unknown	Supplements large scale P&R provision
Other Bus-Based Park and Ride Investments				
Chelmsford	Chelmer Valley	Nov 2015	1,003	New Broomfield Hospital service
Norwich	various	Sep 2015	unknown	Multi-million pound improvements
Bus-Based Park and Ride Closures				
Worcester	Perdiswell	Unknown	Unknown	Result of budget cuts; site undermined by Town Council reducing parking charges
	Sixways	Unknown	Unknown	Result of budget cuts; retains bus to hospital funded by NHS
Maidstone	Sittingbourne Road	Feb 2016	506	Borough Council unable to reach agreement with landowner regarding renewal of lease

Source: B&NES from desktop research in Jan/Feb 2015.

It is evident that Park and Ride is a valuable component of transport strategies for many urban areas and that there have been a number of recent expansions and new facilities.

It can be concluded that in the context of Bath, Park and Ride intercepts motorists, many of whom would otherwise drive into the central area in search of a parking space and adding to congestion. Hence Park and Ride reduces car kilometres travelled and the vehicle emissions associated with those journeys. The geography of the city's road network suggests that diversions from one site to another would be limited.

4.2 Traffic Modelling Undertaken

Application of the transport modelling process has provided an indication of the expected capacity for each of the possible Park and Ride locations as shown in Table 4.2. This indicates that a site to the east of the city would require considerable capacity, particularly if an additional bus service to the Royal United Hospital were introduced (as at Odd Down).

Table 4.2: Predicted Capacity for Park and Ride sites 2029 (pcu)

P&R Site	Current Capacity	Do Minimum	With A4 Eastern Site
Odd Down	1,230	1,308	1,319
Newbridge	698	606	542
Lansdown	878	985	649
A4 Eastern	--	--	848-977
A4 Eastern with RUH service	--	--	1,225-1,411

Source: Mott MacDonald.

5 The New Evidence

5.1 The Basic Problems

The Alliance Report makes the connections between the two main issues of concern – traffic congestion and air quality. To understand the latter it is necessary to understand the former. The location and quantity of traffic is not a matter for supposition as it is possible to test traffic movement using the transport model described earlier. This takes into account the decisions made by people travelling based on the options available to them, particularly focusing on relative journey times and costs. This process also takes into account changes in traffic levels over time and the effects of predicted development; for a site to the east of Bath, demand is expected to originate from the growth planned for the west Wiltshire towns.

The location of a Park and Ride site to the east determines how many motorists will use it. If the facility addresses demand from more than one corridor then it will be busier and more effective than one which is located further away from the city and addressing demand from a single corridor. The number of users and their routes will influence traffic levels and the consequent vehicle emissions. Any Park and Ride site on the periphery will reduce the number of vehicles travelling into the city and hence the air quality will be improved, at least in the shorter term. The Air Quality Management Zone (AQMA) is closely related to vehicle emissions and therefore the main thrust of addressing air quality problems is to reduce the amount of vehicles, particularly queuing traffic.

Introducing an additional Park and Ride bus service will involve more bus journeys. Modern buses have stringent emission controls and there are hybrid diesel electric options available. Replacing multiple car journeys with a few bus journeys is a better use of road space and reduces emissions.

The data presented in the Alliance Report (section 4.3) is supposition. As indicated above, abstraction from other Park and Ride sites and from public transport is small and the proportion of users who are commuters is not a prime concern. Suggesting that an additional 1,000 car trips will occur to the east of Bath as a consequence of a Park and Ride site is misleading – there will be additional demand but the effect of Park and Ride is to reduce car journeys by intercepting them rather than by generating them.

5.2 Analysis of Current Park and Ride Sites

Bath and North East Somerset Council have undertaken a full assessment of the future needs of the city through our Getting Around Bath Transport Strategy adopted by the full Council in November 2014. This work has been updated by the production of a forecast report on future P&R demand based on the Council's adopted Core Strategy and ambitious plans for economic growth base on our Enterprise Area.

5.3 Air Quality

Issues of vehicle-related emissions are considered in some depth by The Alliance. However, there needs to be clarity about the routes taken by motorists accessing a Park and Ride site. In considering air quality impacts, there needs to be quantification of the number of vehicles on the road network and their routes, the type of vehicles and the extent to which traffic queues.

At the time of its inception, the 'Getting Around Bath' strategy did not have the benefit of the transport model in the present form. Since then, considerable work has been undertaken to update the model using recent and extensive survey data commissioned for the purpose to test the scenarios that could emerge from the strategy and hence to indicate the range of measures that could be introduced and to predict their impacts. The wider strategy is expected to address the additional issues raised including the impact of school-related traffic and heavy vehicles, particularly those affecting London Road. Of course Park and Ride will not address either but other measures within the strategy will do so. The extent to which the key problems of congestion and pollution will be addressed is dependent on the extent to which the number of vehicle movements can be reduced. This requires a range of approaches involving initiatives to influence travel behaviour, promote walking, cycling and bus use and better traffic management. Park and Ride has a role to play alongside these types of measure.

5.4 Environmental, Heritage and Visual Impacts

The Alliance presents strong views on the detrimental visual and landscape impacts of any development in the Bathampton Basin area. Analysis undertaken to date has identified a number of issues and further assessment requirements, which are summarised in Table 5.2. A RAG rating has been applied for each Site to assist in highlighting potential environmental issues and risks for each location. Table 5.1 below presents the criteria which have been used to determine the RAG ratings for each environmental topic.

Table 5.1 RAG criteria used for each environmental topic

Table 5.1: Insert Table Title here

RAG Rating	Criteria for each rating
Red	A Red rating is for those environmental topics in which overall environmental risks (during construction and/ or operation phases) would be significant and cannot be addressed using established and readily available design solutions or mitigation, subsequently posing a threat to the delivery of the Scheme.
Amber	An Amber rating has been given to environmental topics where overall environmental risks (during construction and operation phases) are likely to be significant, however are likely to be resolvable through mitigation measures. There could still be implications for the programme and budget.
Green	A Green rating has been attributed to environmental topics where overall environmental risks (both construction and operation phase) are likely to be minimal and easily resolvable or mitigated.

Table 5.2: Summary of Environmental Risk

Environmental Topic	Site A	Site B	Site F	Site H+
Archaeology and Cultural Heritage	Red	Amber	Amber	Amber
Landscape and Visual	Amber	Amber	Amber	Amber
Biodiversity	Amber	Amber	Amber	Amber
Noise and Vibration	Amber	Amber	Amber	Green
Water: Flood Risk, Hydrology and drainage	Amber	Green	Green	Amber
Socio-economic and community impacts	Amber	Green	Green	Green
Soils and geology	Green	Green	Green	Green
Summary	Located within the Bath WHS, an AQMA and also predominantly within Flood Zone 3 and immediately adjacent to the River Avon. Partially located on recreational ground. The River Avon SNCI is located adjacent.	Located within 150m of the WHS. The River Avon SNCI is located within 200m. Entirely located in Flood Zone 1.	Located within 150m of the WHS. The River Avon SNCI is located within 200m. Partially located in Flood Zone2 and the remainder in Flood Zone 1.	Located within an AONB. Predominantly located in Flood Zone 3. PRoW present

On balance, the environmental risk of each of the proposed sites at this stage is considered to be Amber/ Green for all sites except for Site A, which is considered to be Amber. This is based on the assumption that appropriate mitigation would be included as part of the Scheme design and construction methodology, and would be fully developed as the Scheme progresses. Mitigation may take the form of a CEMP to be implemented by the Contractor during construction, and a fully integrated landscape and ecological design, which would minimise long term adverse effects upon nature conservation and the local landscape, and would provide opportunities for biodiversity enhancements. The proposed park and ride sites would be designed to minimise environmental impacts from the outset, making an allowance for environmental mitigation to be integrated within the site. This would include native tree and shrub planting providing landscape integration and screening function to nearby receptors, as well as providing biodiversity value. It will be essential to screen from within the site and this would be achieved through the introduction of standard trees throughout the parking area. In addition species rich grassland plots and aquatic features could also be included to enhance biodiversity potential.

However, residual risks remain that would require further investigation/ environmental assessment, to fully determine the likely scope and scale of mitigation requirements, such as the potential requirement for acoustic attenuation or archaeological investigations. Protected species surveys may also be required, which would inform the potential requirement for works to be progressed under a derogation licence to be granted by Natural England (where protected species are present), with appropriate mitigation and monitoring in place.

It should be noted that the preliminary assessment work has identified that there are a number of additional constraints for Site A when compared to Sites B, F and H+ that present a greater risk to the delivery of the Scheme. Site A is located within the Bath WHS, and also predominantly within Flood Zone 3 and immediately adjacent to the River Avon. This site is also partially located on recreational ground. As a result, the environmental risk for this site is (on balance) considered to be Amber.

6 Community Proposal

6.1 A Potential Park and Ride Site in the Bathampton Basin

The site options for a potential Park and Ride site to the east of city were considered by the Halcrow report of 2013. In addition, further site proposals have been put forward for consideration although for locations further from the city, it is acknowledged that demand for Park and Ride will be lower than a site at the periphery and the associated bus service will be more costly to operate if a similar service frequency to the current sites is to be operated due to the greater distance involved. The option to consider a number of linked sites has also been investigated further.

Informal Park and Ride based on existing bus services would be dependent on a number of factors:

- An improved frequency of service – Park and Ride is typically every ten minutes at peak times;
- Upgrading those services to a standard that would appeal to motorists who are not habitual bus users;
- A level of payment that is attractive; and
- Availability of adequate capacity on the buses;

6.2 Expansion of Lansdown Park and Ride

The expansion of Lansdown Park and Ride is suggested by the Alliance which rightly points out that road access is poor and the signing is could be improved. It is accepted that the roads leading to Lansdown are not suitable for high volumes of traffic and that the junctions can be difficult to negotiate. While some improvements may be possible, not all the locations affected are within the B&NES area and are under South Gloucestershire Council's administration. Signing to the Park and Ride site could be improved in terms of their location, conspicuity and stating that the facility is for Bath rather than simply Lansdown P&R. The Alliance also suggests improvements to other information sources which currently do not highlight Park and Ride options. These could be improved, supplemented by variable message signing on the approaches to the city.

6.3 Seasonal Demand Fluctuations

As the data shows, demand for Park and Ride varies over the year. Bath is very constrained when events take place and any coincidence of events such as sports fixtures/market/festival has the potential to create major problems. The capacity available in the Park and Ride sites is invaluable on these occasions. However, over time and as development takes place both in the city and beyond with more people coming into Bath, demand for Park and Ride is expected to increase. This will be particularly evident when parking capacity in the central area is reduced.

There may be scope for overspill sites to be used such as at the Racecourse. For this to be effective, additional bus capacity is needed (the Lansdown facility would be very busy when demand is high) and

adequate provision needs to be made for buses to load and unload at the site with hard standing and shelter for users.

6.4 Sustainable Transport Solutions

The Alliance invites the Council and others to work with the community to develop transport solutions. This is very much welcomed and fulfils the expectations of the 'Getting Around Bath' strategy. The comment that local people 'should be considered part of the solution not part of the problem' recognizes that addressing the key problems is desirable and achievable. In this respect, the 'alternative' transport strategy presented is entirely compatible with that adopted by the Council. Furthermore, the delivery of the adopted strategy is overseen by the Bath Transport Commission which comprises independent, experienced advisors in line with the Alliance's aspiration for scrutiny and involvement.

The proposals put forward include those outlined in 'Getting Around Bath':

- **Reducing the cost of public transport use** – Dialogue with operators to support more use of services is underway as it both addresses the objectives of the strategy and makes business sense. It should be noted that only operators can determine fares for local bus services under the current regulatory framework.

- **Improved local rail services** – The MetroWest will improve local services by expanding the range of journey options and coupled with electrification of the Great Western Main Line (which will improve journey times and capacity) will upgrade the local network considerably. However, the implications of any rail proposals need to be understood given their widespread impacts on services and infrastructure requirements.

- **Investing in walking and cycling** – This is very much at the core of 'Getting Around Bath'.

- **Improving local bus services including those from surrounding settlements** – Again this is a matter for operators with the support of the community and Council. In a deregulated context with declining Council revenue support, services need to be self-funding through fare revenue.

- **Low Emission Zone and/or emission controls** – Such measures are desirable but strongly linked with reducing the number of vehicle movements in the city. New buses are less polluting than older vehicles and operators are upgrading their fleets. Greater use of the shared delivery facility (Urban Consolidation Centre) will help reduce the number of large vehicles. However, the greatest impacts are likely to be achieved by reducing or removing vehicles, mainly cars, from the city's road network.

- **Travel planning** – Journeys to school have been identified as a problem and many can be shifted to walking, cycling, bus and car share if there are willing participants supported by other measures such as improved routes and services. However, school bus fares need to reflect the cost of provision and

further subsidy is not an option. School travel plans are an acknowledged means of addressing traffic problems and creating a healthier culture. Workplaces may also benefit from travel plans, working with staff to understand their travel options and facilitate change.

- **Cycling** – Cycling infrastructure can be provided in some locations but it is also evident that the uptake of cycling is a response to lower traffic levels. Safety is a prime concern and less traffic and slower vehicles supports a better cycling environment. In addition, measures such as secure cycle parking and cycle training support a shift from car to regular cycle use. 'Getting Around Bath' emphasizes the importance of walking as a major component of the strategy.

- **Heavy vehicles** – Concerns are evident regarding the impact of large vehicles in terms of intrusion, safety and emissions. Some large vehicles make deliveries to Bath businesses and further restrictions are likely to increase the costs to operators and ultimately customers. However, there are a number of initiatives underway throughout the country to address such concerns that could be adopted in Bath.

A criticism by the Alliance is that 'Getting Around Bath' does not yet have an implementation plan, defined targets for reducing congestion or improving air quality or for monitoring. Given the complexity of introducing some of the initiatives, this will take time but the strategy is clear and agreed and includes targets and performance indicators against which progress can be measured although of course these can be refined over time as required. With the upgrade of the transport model completed, it is now possible to test the impacts of various interventions both individually and in combination.

'Getting Around Bath' includes a number of initiatives in addition to those raised by the Alliance including the need to promote sustainable development, especially in the central area where space is at a premium, better traffic management and ensuring that people with mobility impairments have equal access to opportunities. In addition, the supply and pricing of car parking is a key issue that is closely related to Park and Ride provision and effectiveness. In addition to the proposed initiatives discussed above, it would be possible to consider others such as a Congestion Charge –as suggested by the Alliance – and/or Workplace Parking Levy to discourage long stay parking in the central area and to raise funding for other transport schemes and further traffic management measures to restrict vehicular access in some locations.

It is evident that many of the aims of the Alliance correspond with those of the Council and that the need to deliver a range of measures as defined by the agreed transport strategy is now acute and supported widely. Successful delivery also relies on an appropriate level of funding, political commitment and, significantly, the successful engagement of the community.

7 Conclusion

The Alliance Report raises a number of key issues for dialogue and determination which are summarised below:

- **Need for Park and Ride** – Park and Ride is a well-established initiative in Bath and for many other urban areas. Evidence shows that the concept remains applicable when delivered appropriately and within the context of a wider strategy. Intercepting motorists at the periphery is one means of reducing traffic levels, a fundamental necessity in addressing traffic problems;

- **Traffic-related emissions** – Cars generate pollution and removing some journeys from the most congested areas helps to improve air quality in those areas. Diverting journeys to a Park and Ride facility reduces vehicle kilometres and hence reduced emissions; emissions only increase in the vicinity of a Park and Ride site if motorists divert in substantial numbers which the modelling shows is not the case;

- **Need to deliver a range of measures within an integrated transport strategy** – 'Getting Around Bath', the agreed transport strategy sets out possible initiatives that will be required to enable change. The proposals put forward by the Alliance reflect these intentions. The strategy is in place and the various initiatives within it will now need to be delivered which are expected to include an additional Park and Ride facility; and

- **Collaborative working** – The Alliance has expressed a willingness to work with the Council and others to address the problems faced. This is very welcome and implementation of the strategy will be most effective if all stakeholders are engaged fully.